FINAL
2003 ANNUAL AS/SVE MONITORING REPORT
HADNOT POINT FUEL FARM/BUILDING 1115 SITES
MARINE CORPS BASE, CAMP LEJEUNE
ONSLOW COUNTY, NORTH CAROLINA

Prepared for:

Commander
Naval Facilities Engineering Command

Atlantic Division
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Building A (South East Wing) 3rd Floor
Norfolk, Virginia 24311-6287

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Project No. 844098
March 2004

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March 2004
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TABLE OF CONTENTS

1.0 INTRODUCTION 1-1

1.1 CAMP LEJEUNE MARINE BASE LOCATION AND DESCRIPTION 1-1
1.2 SITE GEOLOGY/HYDROGEOLOGY 1-1
1.3 HADNOT POINT BUILDING 1115 FUEL FARM SITE DESCRIPTION 1-2
1.3.1 Hadnot Point Fuel Farm Area 1-2
1.3.2 Building 1115 Area 1-3

2.0 CONTAMINATION INVESTIGATION HISTORY 2-1

2.1 HADNOT POINT FUEL FARM AREA 2-1
2.2 BUILDING 1115 AREA 2-1
2.3 CORRECTIVE ACTION PLAN 2-2
2.4 GEOPHYSICAL INVESTIGATION 2-3
2.5 ADDITIONAL SOIL SAMPLING AND ANALYSIS 2-5

3.0 SYSTEM OPERATION AND RESULTS 3-1

3.1 BUILDING 1115 AREA (NORTHWEST COMPOUND) 3-1
3.2 HPFF FUEL FARM AREA (SOUTHEAST COMPOUND) 3-2
3.2.1 Field #1 Motor Pool Area 3-4
3.2.2 Field #2 Fuel Farm 3-4
3.3 AGGRESSIVE FLUID/VAPOR RECOVERY (AFVR) 3-5
3.4 FREE PRODUCT RECOVERY SYSTEM 3-6
3.5 AIR SPARGE SYSTEM EVALUATION 3-7
3.5.1 Air Sparge System Cessation Evaluation 3-7
3.5.2 Air Sparge System Startup 3-9

4.0 GROUNDWATER MONITORING RESULTS 4-1

4.1 GROUNDWATER ELEVATION MEASUREMENTS 4-1
4.1.1 Building 1115 Area (Northwest Compound) 4-1
4.1.2 HPFF Fuel Farm Area (Southeast Compound) 4-2
4.2 GROUNDWATER SAMPLE COLLECTION AND ANALYSIS 4-3
4.2.1 Building 1115 Area (Northwest Compound) 4-3
4.2.2 HPFF Fuel Farm Area (Southeast Compound) 4-5

5.0 CONCLUSIONS 5-1

5.1 AFVR EVENTS 5-1
5.2 GROUNDWATER ELEVATION MEASUREMENTS 5-1
5.2.1 Building 1115 Area (Northwest Compound) 5-1
5.2.2 HPFF Fuel Farm Area (Southeast Compound) 5-2
5.3 GROUNDWATER ANALYTICAL RESULTS 5-3
5.3.1 Building 1115 Area (Northwest Compound) 5-3
5.3.2 HPFF Fuel Farm Area (Southeast Compound) 5-4
5.3.3 Monitored Natural Attenuation (MNA) Parameters 5-7

6.0 RECOMMENDATIONS 6-1

6.1 BUILDING 1115 AREA (NORTHWEST COMPOUND) 6-1
6.2 HPFF FUEL FARM AREA (SOUTHEAST COMPOUND) 6-3

Tables

Table 2.1: Site Rehabilitation Goals
Table 3.1: Cumulative Mass of Recovered Volatile Hydrocarbons Northwest
Table 3.2: Cumulative Mass of Recovered Volatile Hydrocarbons Southeast (Field #1)
Table 3.3: Cumulative Mass of Recovered Volatile Hydrocarbons Southeast (Field #2)
Table 4.1: Groundwater Elevation Table, Northwest
Table 4.2: Groundwater Elevation Table, Southeast
Table 4.3: Northwest Compound Groundwater Analytical Results, February 2003
Table 4.4: Northwest Compound Groundwater Analytical Results, August 2003
Table 4.5: Southeast Compound Groundwater Analytical Results, February 2003
Table 4.6: Southeast Compound Groundwater Analytical Results, August 2003
Table 6.1: Northwest Compound Groundwater Sample Collection and Analysis
Table 6.2: Southeast Compound Groundwater Sample Collection and Analysis

Figures

Figure 1.1: Vicinity Map
Figure 1.2: Site Location Map
Figure 3.1: Existing AS/SVE Remedial System, NW Compound
Figure 3.2: Existing AS/SVE Remedial System, SE Compound
Figure 4.1: Groundwater Elevations, NW Compound February 2003
Figure 4.2: Groundwater Elevations, NW Compound August 2003
Figure 4.3: Groundwater Elevations, SE Compound February 2003
Figure 4.4: Groundwater Elevations, SE Compound August 2003
Figure 4.5A: Shallow Groundwater Elevation Contour Map, February 2003
Figure 4.5B: Intermediate Groundwater Elevation Contour Map, February 2003
Figure 4.5C: Deep Groundwater Elevation Contour Map, February 2003
Figure 4.6A: Shallow Groundwater Elevation Contour Map, August 2003
Figure 4.6B: Intermediate Groundwater Elevation Contour Map, August 2003
Figure 4.6C: Deep Groundwater Elevation Contour Map, August 2003
Figure 4.7: Groundwater Analytical Results, NW Compound
Figure 4.8: Groundwater Analytical Results, SE Compound
Figure 5.1: Estimated Extent Dissolved Benzene & Free Product, Aug-03
Figure 5.2: Estimated Extent Dissolved Benzene & Free Product, Aug-02
Figure 5.3: Estimated Extent Dissolved Benzene & Free Product, Jul-01
Figure 5.4: Estimated Extent Dissolved Benzene & Free Product, Jul-00
Figure 5.5: Estimated Extent Dissolved Benzene & Free Product, Jul-99
Figure 5.6:Statistical Distributions of Total BTEX Concentration by Sample Event
Figure 5.7: Dissolved oxygen vs. Total BTEX
Figure 5.8: ORP versus Total BTEX
Figure 5.9: Methane versus Total BTEX
Figure 5.10: Ethane vs. Total BTEX
Figure 5.11: Ethene vs. Total BTEX

Appendix A: Aggressive Fluid Vapor Recovery (AFVR) Summary Table

Appendix B: Historical Groundwater Analytical Results

Appendix C: Laboratory Groundwater Analytical Reports, Northwest Compound

Appendix D: Groundwater Sample Collection Field Logs

Appendix E: Laboratory Groundwater Analytical Reports, Southeast Compound

Appendix F: Hydrographs with Groundwater Analytical Results

TITLE PAGE

The facility name, UST owner, UST operator, and UST information is provided below:

UST Location:	Hadnot Point Industrial Area Former Hadnot Point Fuel Farm Along Ash Street Building 1115 Near Holcomb Boulevard and Ash Street Onslow County Camp Lejeune, NC 28562
UST Incident Number:	3671, 10615 and 22788
Facility ID Number:	0-002740
Risk Classification:	Intermediate
Land Use Category:	Industrial/Commercial
UST Owner:	Commanding General, MCB I&E/EMD/EQB PSC Box 20004 Onslow County Camp Lejeune, NC 28542 (910) 451-5068
UST Operator:	Commanding General, MCB I&E/EMD/EQB PSC Box 20004 Onslow County Camp Lejeune, NC 28542 (910) 451-5068
Primary Responsible Party Contact:	Nikki Hall Thomas Burton Environmental Engineer I&E/EMD/EQB PSC Box 20004 Camp Lejeune, NC 28542 (910) 451-5068
Date of Release:	Unknown
Quantity of Release:	Unknown
Source of Release:	UST system along with one AST
Latitude and Longitude:	34° 40’ 18.891” N 77° 19’ 56.7026” W

Tank Number	Installation Date	Tank Capacity	Tank Dimensions	Last Contents	Previous Contents
HPFF-1	Around 1941	12000	Unknown	Petroleum Products	Petroleum Products
HPFF-2	Around 1941	12000	Unknown	Petroleum Products	Petroleum Products
HPFF-3	Around 1941	12000	Unknown	Petroleum Products	Petroleum Products
HPFF-4	Around 1941	12000	Unknown	Petroleum Products	Petroleum Products
HPFF-5	Around 1941	12000	Unknown	Petroleum Products	Petroleum Products
HPFF-6	Around 1941	12000	Unknown	Petroleum Products	Petroleum Products
HPFF-7	Around 1941	15000	Unknown	Petroleum Products	Petroleum Products
HPFF-8	Around 1941	15000	Unknown	Petroleum Products	Petroleum Products
HPFF-9	Around 1941	15000	Unknown	Petroleum Products	Petroleum Products
HPFF-10	Around 1941	15000	Unknown	Petroleum Products	Petroleum Products
HPFF-11	Around 1941	15000	Unknown	Petroleum Products	Petroleum Products
HPFF-12	Around 1941	15000	Unknown	Petroleum Products	Petroleum Products
HPFF-13	Around 1941	15000	Unknown	Petroleum Products	Petroleum Products
HPFF-14	Around 1941	15000	Unknown	Petroleum Products	Petroleum Products
HPFF-15	Around 1941	600000 (AST)	Unknown	Petroleum Products	Petroleum Products
1100-1	1942	1000	Unknown	Gasoline	Petroleum Products
1100-2	1942	3000	Unknown	Gasoline	Petroleum Products
1100-3	1942	3000	Unknown	Gasoline	Petroleum Products
1100-4	1942	5000	Unknown	Unknown	Unknown
1100-5	1942	5000	Unknown	Unknown	Unknown
1100-6	1942	5000	Unknown	Unknown	Unknown
1100-7	1942	5000	Unknown	Unknown	Unknown

1.0 INTRODUCTION

This annual monitoring report presents the monitoring results collected from September 2002 through August 2003, describes current groundwater contamination conditions, and provides recommendations for the Air Sparge (AS)/Soil Vapor Extraction (SVE) treatment system located at Building 1115 and the former Hadnot Point Fuel Farm (HPFF) site. The report is submitted per the Corrective Action Plan (CAP) dated April 4, 1998 to remediate a release of petroleum and is in compliance with *Groundwater Section Guidelines for the Investigation and Remediation of Soil and Groundwater, Volume II, Petroleum Underground Storage Tanks*, published by the State of North Carolina's Department of Environment and Natural Resources (NCDENR) Division of Water Quality dated April 2001.

The report provides a brief account of the environmental history of the site, summarizes the CAP, and describes the installation and operation of the recommended remedial alternative. The report provides a discussion of monitoring results of the AS/SVE system's operation and the current status of groundwater quality compared to baseline data. The report also presents conclusions about remedial progress to date and makes recommendations for further system operation.

1.1 CAMP LEJEUNE MARINE BASE LOCATION AND DESCRIPTION

Located in Onslow County, North Carolina, Marine Corps Base (MCB) Camp Lejeune is a training base for the United States Marine Corps. The base covers approximately 236 square miles (153,000 acres) and includes 14 miles of coastline. MCB Camp Lejeune is bound to the southeast by the Atlantic Ocean and to the northeast by State Route 24. Wooded areas are located north, east, and west of the site. The town of Jacksonville, North Carolina, is located north of the base (*Figure 1.1).*

1.2 SITE GEOLOGY/HYDROGEOLOGY

The project area is dominated by relatively flat topography. The nearest mapped body of surface water is Beaverdam Creek, located approximately 1,400 feet to the west of the Hadnot Point Fuel Farm/Building 1115 area. Surface water runoff from the site is diverted into a network of storm drains and shallow drainage ditches located across the site. Storm water collected by this system of drains and ditches ultimately discharges to the New River.

Sediment and stratigraphy at the site indicate a marine or near shore environment of deposition. Interfingering layers of very fine to fine grained sand, silty sand, and clayey sand occurs to a depth of approximately 12 feet below land surface (bls). Thin discontinuous beds of very fine to medium-grained sand, silty sand, sandy clay, and clay and peat with limited lateral continuity have been identified from 12 to 25 feet bls. Medium- to fine-grained sandy clay, sand with minor silts, and clay with minor silts are typically encountered from below 25 feet bls to the limestone interface at an approximate depth of 40 feet bls. No continuous, confining layer has been identified during contamination assessment work at the site. However, numerous discontinuous thin beds of clay, sandy clay, and silty sand have been identified in the subsurface and may act as localized, small-scale confining units.

The groundwater aquifer is classified as GA groundwaters according to the North Carolina Administrative Code (NCAC) Title 2L Subchapter 15A, Section .0201 Groundwater Classifications. A Potential Receptor survey completed by CATLIN in 1998 did not identify any active potable water supply wells within 1,500 feet of the site, or the potential to impact surface water bodies near the site ("Leaking Underground Storage Tank Corrective Action Plan" dated 1998). Depth to groundwater ranges from 4 to 12 feet bls in shallow Type II monitoring wells. In general, the direction of groundwater flow at the site is to the west.

1.3 HADNOT POINT BUILDING 1115 FUEL FARM SITE DESCRIPTION

The site is located in the Hadnot Point "mainside" area of MCB Camp Lejeune, North Carolina *(Figure 1.2)*. The project area, the Hadnot Point Fuel Farm/Building 1115, is generally bound by Holcomb Boulevard to the north, Michael Road to the south, Birch Street to the west, and the Vehicle Ready Fuel Storage facility and Temporary Fuel Farm (off Michael Road) to the east.

The project area consists of two primary source areas: the HPFF (Southeast Compound) and the former underground storage tanks (USTs) associated with Building 1115 (Northwest Compound). Free-phased product has been observed and dissolved-phase contamination appears to have migrated from the source areas and commingled to form a continuous plume of groundwater contamination.

1.3.1 Hadnot Point Fuel Farm Area

The HPFF was constructed in about 1941 and consisted of 15 fuel storage tanks including: one 600,000-gallon aboveground storage tank, six 12,000-gallon USTs, and

eight 15,000-gallon USTs. The tanks contained diesel fuel, gasoline, unleaded gasoline, and kerosene. There have been numerous recorded losses of product including diesel and unleaded gasoline. Most of the losses likely occurred because of leaks in transfer lines or transfer line valves. Leaks in the fuel lines and tanks were documented as early as 1979.

1.3.2 Building 1115 Area

Building 1115 was constructed as a fleet service and refueling area. Seven USTs were located west of the building. Three of the USTs contained gasoline and the other four contained either diesel or gasoline. There have been no reports of known releases from the tanks or distribution system associated with Building 1115. Closure of the seven USTs, which consisted of excavation and removal, was completed in March 1993. Free-phase product was observed in the tank excavation during the UST closure activities.

2.0 CONTAMINATION INVESTIGATION HISTORY

2.1 HADNOT POINT FUEL FARM AREA

The HPFF area has been the focus of numerous soil and groundwater investigations. A Verification Step Study for the Hadnot Point Industrial Area (HPIA) was completed in 1985, and a Characterization Step Report for the HPIA was completed during 1988. These investigations identified the presence of dissolved fuel constituents and/or free product associated with the shallow groundwater.

A Contaminated Groundwater Study was completed in December 1988 to investigate the site hydrogeology and delineate the contaminated groundwater plume. The study identified the presence of free product and dissolved contaminants of concern (COCs) that included: benzene, toluene, ethylbenzene and xylenes (BTEX); methyl tertiary butyl ether (MTBE); trichloroethene (TCE); and tetrachloroethane (PCA).

In 1991, a free-product recovery system consisting of five free-product recovery wells was installed at the HPFF. The system was operated through 1997 when it was discontinued in favor of Aggressive Fluid/Vapor Recovery (AFVR) activities. An estimated 27,000 gallons of free product were recovered by the system. In September 1999 three of the recovery wells (16R, RW4, and RW5) were brought back on line.

A Comprehensive Site Assessment (CSA) was completed in June 1997. Results of this investigation identified soil contamination, free-phase product contamination, and dissolved-phase groundwater contamination at the HPFF. However, the CSA did not delineate the extent of the soil contaminant plume, the downgradient extent of the free product, or the downgradient and vertical extent of the dissolved contaminant plume.

2.2 BUILDING 1115 AREA

A limited site assessment consisting of 10 monitoring wells was completed in October 1993. The findings of the assessment revealed that soil contamination, free-phase product contamination, and dissolved-phase groundwater contamination existed at the site. Additional contamination assessment work completed from 1993 through 1995 required the installation of monitoring wells to depths ranging from 10 feet deep (shallow), 50 feet deep (intermediate), and 100 feet deep (deep aquifer). Soil and groundwater analytical results provided additional information (but did not completely

delineate) on the extent of the soil contamination, and the existence of free-phase product, as well as the horizontal and vertical extent of dissolved contamination. Subsequent contamination assessment investigations completed in 1997 further defined the extent of contamination at the site. This information was used to develop the CAP that was submitted and subsequently approved by the NCDENR in April 1998.

2.3 CORRECTIVE ACTION PLAN

A potential receptor survey was performed during preparation of the CAP. No active water supply wells were identified within 1,500 feet of the site. The nearest active supply well at the base, HP-642, is located upgradient of the groundwater flow approximately 2,600 feet east-southeast of the project site. The nearest mapped body of surface water is Beaverdam Creek, located approximately 1,400 feet to the west of the site. A Natural Attenuation Fate and Transport Study determined contaminants at the site would not adversely affect the surface waters of the creek.

The remedial goals of the CAP are as follows:

- Contain the free-product plumes to prevent further migration and remove accumulations of free product to the extent practicable.
- Reduce levels of unsaturated zone soil contamination in selected areas to less than the Action Levels as specified by the NCDENR.
- Prevent further migration of contaminated groundwater in the core or "hot spot" of the upper portion of the plume (less than 50 feet deep) through active remediation. The goal is to contain the "hot spots" and reduce their impact on the quality of the surrounding groundwater, as well as reduce contaminant concentrations to a level that natural degradation and attenuation can complete the remediation process.
- Reduce groundwater contamination in the "hot spots" of the lower portion of the dissolved plume (below 50 feet deep).
- Demonstrate that the natural processes of degradation and attenuation of contaminants is occurring in the fringe areas of both the upper and lower dissolved contaminant plumes.

Table 2.1 provides Site Rehabilitation Goals presented in the CAP. Contaminants identified in the CAP above State Action Levels and NCAC T15A:02L Groundwater Quality Standards at the site include:

- Gasoline-range Organic Total Petroleum Hydrocarbons (TPH-GRO) and Diesel-range Organic Total Petroleum Hydrocarbons (TPH-DRO)
- BTEX
- Naphthalene
- Tetrachloroethene (PCE)
- 1,2-Dichloroethene (DCE)
- Trichloroethene (TCE)
- 1,2-Dichloropropane
- trans-1,2-Dichloroethene

Based on the remedial technology screening process completed during development of the CAP, the most cost-effective remediation strategy for the HPFF/Building 1115 site included the following:

- AFVR for removal of free product
- Installation of free product recovery trenches along the leading edge of the free-product plumes to augment the AFVR (The trenches at the NW compound were not installed because free-phase product was not observed during system installation). The trenches at the SE compound were replaced with a dedicated free product recovery system comprised of existing and some new recovery wells.
- Soil vapor extraction for reduction of unsaturated soil remediation
- Air sparging for the containment and reduction of "shallow" dissolved hydrocarbons coupled with vapor collection and discharge to the atmosphere of petroleum hydrocarbon vapors
- Biosparging for reduction of "deep" dissolved hydrocarbons
- Natural attenuation of low concentrations of dissolved-phase petroleum constituents in the "shallow" and "deep" portions of the aquifer

2.4 GEOPHYSICAL INVESTIGATION

A geophysical investigation was initiated in December 2001 and completed in May 2002 to better understand the site hydrogeologic characteristics that might be influencing both free product and high dissolved contaminant concentrations observed in the deep aquifer

(greater than 70 feet below the groundwater surface) at the Hadnot Point Fuel Farm. The working hypothesis developed to explain these conditions included:

- Dissolution of limestone
- Formation of voids and channels that "trap" fuel and serve as protected environments to weathering
- Depth of fuel observed at the site enhanced by drought conditions and aggressive pumping from "deep" water supply wells at the base
- Heavy rain events (i.e., hurricanes) result in flooding of voids
- Re-introduction of contaminants into the aquifer

It should be noted that the Air Injection and Bio-Sparge component of the remedial system was shut down November 26, 2001 to avoid interference during geophysical data collection activities. The system was restarted on January 30, 2003. Section 3.5.2 discusses the Air Sparge system startup. Geophysical investigation methods employed at the site included:

- Borehole methods (natural gamma/caliper, optical televiewer, full waveform sonics, EM induction)
- Vertical Seismic Profile (VSP)
- Multiazimuth-multioffset
- DC Resistivity (DCRES)
- Surface Reflection Seismic Profiling
- Drilling log data
- SCAPS Direct Push Method (Laser Induced Fluorescence [LIF], Cone Penetrometer Test [CPT], video probe)

Results of the geophysical investigation are presented in the report titled *"Geophysical Investigation at the Former Fuel Farm Facility and Surrounding Areas, Hadnot Point, MCB Camp Lejeune, North Carolina"*, dated May 2002 as completed by Geophex, Ltd, located in Raleigh, North Carolina. Conclusions developed from the geophysical investigation indicate:

- The subsurface can be divided into two units; an upper unit of unconsolidated, inter-fingering peat, sands, silts, and clays: a lower unit comprising of all semi-consolidated and consolidated sediments below the top of the Castle Hayne.

- No discernable, laterally continuous layers occur within the upper unit of sediments. However, the resistivity profiles delineate zones of decreased electrical resistivity that are interpreted to indicate increased hydrologic conductivity. These zones are predominantly logged as well sorted fine sands in drill logs.
- The top of the Castle Hayne Formation is clearly discernable from the seismic reflection data. The interpreted Castle Hayne reflection horizon displays erosional undulations, and offsets due to near vertical faulting or fracturing. Fault/fracture zones are interpreted to represent potential pathways for both horizontal and vertical migration of groundwater contaminants.
- Vertical seismic profiles indicate that the largest amplitude reflections at Hadnot Point correlate to limestones, but facies changes from silty sand to well sorted sand also produce observable reflections.
- Multichannel Analysis of Surface Waves (MASW) data illustrate the occurrence of a collapse feature in the western corner of the site, near Holcomb Boulevard.
- The potential for contaminant migration to depth exists in two main locations: 1) where zones of high hydrologic conductivity coincide with zones of vertical faults/fractures in the Castle Hayne, near the intersection of East Road and Ash Street; and 2) in the northwest corner of the site where a subsurface void or collapse was drilled and confirmed by MASW data. This feature is also overlain by conductive sediments.
- The permeable pathway identified in the resistivity data appears to be bound to the east and west (and possibly the south), but continues to the northwest. The southern extent coincides with the most fractured area of the Castle Hayne.

2.5 ADDITIONAL SOIL SAMPLING AND ANALYSIS

As requested during the February 28, 2002 Partnering Meeting an additional soil sampling and analysis investigation was completed at the former UST basin area at the former Hadnot Point Fuel Farm UST site during the week of June 17, 2002. Soil samples were collected using a hand auger from 0 to 14 feet bls. A sample was collected at 2 feet depth intervals. The soil sample was placed in a plastic bag, allowed to equilibrate for 15 minutes, then screened using an organic vapor analyzer (OVA) equipped with a flame ionization detector (FID). The sample with the highest FID reading was then tested on-site for total petroleum hydrocarbons (TPH) using an Ensys™ Petro Soil Test by EPA Method 4030.Additionally, 17 samples were sent to Accutest Laboratory located in Orlando, Florida for analysis using MADEP EPH, VPH, and total petroleum hydrocarbons. Laboratory results correlated well with field data.

Field and laboratory analytical results suggest the presence of high levels of soil contamination starting at approximately six feet bls. This contamination appears to increase with depth. Results of the additional soil investigation have been submitted in a letter report from the United States Marine Corps to the NCDENR.

Catlin Engineers and Scientists submitted a CAP Addendum to the NCDENR titled "*Revised Corrective Action Plan for Hadnot Point Fuel Farm"* and dated June 13, 2003. The addendum was prepared following additional soil and groundwater investigation work completed by Catlin. Recommendations of the CAP included continued operation ot he existing AS/SVE systems, continued AFVR events, installation of a Bio-Pulse Sparging system, and installation of a groundwater recovery well..

3.0 SYSTEM OPERATION AND RESULTS

3.1 BUILDING 1115 AREA (NORTHWEST COMPOUND)

OHM installed a network of five, 50-feet deep AS wells to inject air into the subsurface groundwater. To recover volatile organic hydrocarbons (VOHs) from the unsaturated zone, an SVE well consisting of four 20-foot sections of horizontal screen set up in a cross pattern was installed at each AS well and at four additional locations. Twelve additional 80-feet deep biosparging wells and four 100-feet-deep biosparging wells were also installed (*Figure 3.1)*. Operational data collection from the AS/SVE system began on February 11, 1999 and has continued at regular intervals to the present.

This report discusses the system's operation and monitoring results collected from September 2002 through August 2003. The Air Sparge component of the system was shutdown November 26, 2001 to avoid interference during geophysical data collection activities at the site. Information obtained from the geophysical investigation and additional monitoring well installation by CATLIN, suggested that the air sparging may be contributing to lateral migration of the contaminant plume. Therefore, following completion of the geophysical investigation in March 2002 the air sparge system remained off. In response to a request by the NCDENR, the air sparge system was restarted in February 2003.

During the time period from September 1, 2002 through August 31, 2003, no significant downtime (exceeding several days) of the SVE system occurred. Minor downtime periods ranging from one day to a few days duration occurred as a result of excessive groundwater entrainment, minor equipment repairs, and routine maintenance. The remedial system was in operation a total of 278 days for an operational efficiency of 76 percent.

Remedial system monitoring was conducted at least weekly during this operational period. During site inspections, a checklist was used to record operational measurements and conditions such as vacuum blower meter hours, inlet filter differential pressure, and bleed air valve positions. This information was used to identify areas requiring maintenance (such as filter replacement) and to fine-tune the system's operation.

The AS/SVE system was inspected on a weekly basis. Each individual well vault was examined. The system's components were checked and indicators of operational performance (such as vacuum, air velocity, and temperature) were recorded. These inspections help to identify equipment maintenance needs. Additional monitoring of the system included the measurement of organic vapor concentrations in the system's effluent.

Hydrocarbon recovery from the system is calculated from operational parameters such as organic vapor concentrations, exhaust stack pressure, velocity, and temperature. These parameters were used to compute the cumulative mass of hydrocarbons recovered. Since system startup, a total of 14,212 pounds of hydrocarbons has been recovered from the Building 1115 Area (Northwest Compound) (*Table 3.1*). During this monitoring period, a total of 537 pounds of hydrocarbons were recovered. Hydrocarbon recovery rates ranged from 7 pounds per day (lbs/day) to less than 1.0 lb/day when the system was operating. The average recovery rate was 1.9 lbs/day. This is a decrease in hydrocarbon recovery from the previous year. In 2002, a total of 900 lbs of hydrocarbons were recovered with hydrocarbon recovery rates ranging from 12 lbs/day to less than 1.0 lbs/day.

A descending trend in recovery rates from start-up to the present can be observed in the data. During 1999, a total of 10,300 lbs of hydrocarbons was recovered. The recovery rate decreased to 3,540 lbs recovered in 2000, 1,900 lbs recovered in 2001, 900 lbs recovered in 2002 and 537 lbs recovered during this operating time period. This represents a decrease of 95% from initial system vapor recovery rates. This trend is typical of the operation of SVE systems. As adsorbed-phase petroleum compounds are removed from the unsaturated zone, recovered hydrocarbon vapor concentrations will decrease.

Other than re-starting the air sparge component of the remedial system on January 30, 2003, no major changes were made to the system's configuration or equipment during this operating time period.

3.2 HPFF FUEL FARM AREA (SOUTHEAST COMPOUND)

OHM installed a network of thirty, 50-foot-deep AS wells to inject air into the subsurface groundwater. To recover VOHs from the unsaturated zone, an SVE well consisting of four 20-foot sections of horizontal screen set up in a cross pattern were installed at each AS well and at six additional locations. Ten additional 85-foot-deep biosparging wells

were also installed. For operational purposes, the southeast compound's system has been subdivided into a northern Field #1 (Motor Pool) and a southern Field #2 (Fuel Farm) (*Figure 3.2)*.

Operational data collection from both the Field #1 and Field #2 AS/SVE systems began on April 4, 1999 and has continued at regular intervals to the present. This report discusses the system's operation and results collected from September 2002 through August 2003. The Air Sparge component of the system was shutdown November 26, 2001 to avoid interference during geophysical data collection activities at the site. Information obtained from the geophysical investigation and additional monitoring well installation by CATLIN, suggested that the air sparging may be contributing to lateral migration of the contaminant plume. Therefore, following completion of the geophysical investigation in March 2002 the air sparge system remained off. In response to a request by the NCDENR, the air sparge system was restarted on January 30, 2003.

During the time period from September 2002 through August 2003 no significant downtime of the SVE system (exceeding several days) occurred. Minor downtime periods ranging from one day to a few days duration occurred as a result of excessive groundwater entrainment, minor equipment repairs and routine maintenance. The remedial system was in operation a total of 330 days for an operational efficiency of 91 percent.

Remedial system monitoring was conducted at least weekly during this operational period. During site inspections, a checklist was used to record operational measurements and conditions such as vacuum blower meter hours, inlet filter differential pressure, and bleed air valve positions. This information was used to identify areas requiring maintenance (such as filter replacement, hour meter replacement) and to fine-tune the system's operation.

The AS/SVE system was also inspected on a weekly basis. Each individual well vault was examined. The system components were checked and indicators of operational performance (such as vacuum, air velocity, and temperature) were recorded. These inspections help to identify equipment maintenance needs. Additional monitoring of the system included the measurement of organic vapor concentrations in the system's effluent.

Hydrocarbon recovery from the system was calculated from operational parameters such as organic concentrations, exhaust stack pressure, velocity and temperature. These parameters were used to compute the cumulative mass of hydrocarbons recovered. Since startup, the HPFF Southeast Compound remedial system has recovered approximately 856,000 pounds of hydrocarbons.

3.2.1 Field #1 Motor Pool Area

Since system startup, the Field #1 (Motor Pool) remedial system has recovered approximately 179,500 pounds *(Table 3.2)* of hydrocarbons. During this operating time period a total of 2,700 lbs of hydrocarbons was recovered. Hydrocarbon recovery rates ranged from 22 lbs/day to 4 lbs/day when the system was operating. The average recovery rate was 8 lbs/day. This is a decrease in hydrocarbon recovery from the previous year. In 2002, a total of 7,200 lbs of hydrocarbons was recovered with hydrocarbon recovery rates ranging from 100 lbs/day to 11 lbs/day.

A descending trend in recovery rates from start-up to the present can be observed in the data. During 1999, a total of 92,500 lbs of hydrocarbons was recovered. The recovery rate decreased to 62,000 lbs recovered in 2000, 12,700 lbs recovered in 2001, 7,200 lbs recovered in 2002 and 2,700 lbs/day during this operating time period. This represents a decrease of 97% from initial system vapor recovery rates. This trend is typical of the operation of SVE systems. As adsorbed-phase petroleum compounds are removed from the unsaturated zone, recovered hydrocarbon vapor concentrations will decrease.

3.2.2 Field #2 Fuel Farm

Since system startup, the Field #2 (Fuel Farm) remedial system has recovered approximately 676,000 pounds of hydrocarbons *(Table 3.3*). During this operating time period, a total of 13,000 lbs of hydrocarbons were recovered. Hydrocarbon recovery rates ranged from 95 lbs/day to 15 lbs/day when the system was operating. The average recovery rate was 40 lbs/day. This is a decrease in hydrocarbon recovery from the previous year. In 2002, a total of 47,700 pounds of hydrocarbons were recovered with hydrocarbon recovery rates ranging from 265 lbs/day to 36 lbs/day.

A descending trend in recovery rates from start-up to the present can be observed in the data. During 1999, a total of 117,000 pounds of hydrocarbons was recovered. The recovery rate increased to 374,500 pounds recovered in 2000, decreased substantially to 75,400 pounds recovered in 2001, continued the decreasing trend to 47,700 lbs recovered in 2002, and 13,000 lbs recovered during this operating time period. This represents a decrease of 96% from system vapor recovery rates observed during 2000. This trend is

expected to persist with continued operation of the SVE systems. As adsorbed-phase petroleum compounds are removed from the unsaturated zone, recovered hydrocarbon vapor concentrations will decrease.

3.2.3 Vapor Treatment System

A catalytic oxidation (Catox) unit was installed at the southeast compound in January 2002 to treat hydrocarbon vapors recovered by the SVE system prior to discharge to the atmosphere. A vapor sample was collected from the influent into the Catox and an effluent sample was collected to evaluate the destruction efficiency of the Catox unit. The samples were collected February 21, 2002 using a summa canister and shipped to Severn Trent Laboratories, Inc. located in Pensacola, Florida for analysis. The vapor samples were analyzed for total petroleum hydrocarbons-gasoline range organics (TPH-GRO) using Method 8015M, volatile organic compounds using Method 8260B-ModAir, and methane, ethane and ethene using Method ASTM D1946.

The vapor analytical results indicated a greater than 90% reduction in TPH-GRO concentrations (589 mg/m^3 to <100 mg/m^3) was achieved by the Catox unit. In addition, a reduction of BTEX concentrations ranged from approximately 90% for xylenes to greater than 99% for benzene.

3.3 AGGRESSIVE FLUID/VAPOR RECOVERY (AFVR)

In addition to routinely monitoring the AS/SVE system's operation, select monitoring wells that have displayed the presence of free-phase product have been monitored on a weekly basis for the presence of product. If free-phase product is observed in a well, an AFVR event is completed to remove the product from the well by vacuum lift using a vacuum recovery truck. An AFVR event consists of the removal of total fluids from an existing well that has demonstrated the presence of free-phase product. An estimated 2,000 gallons of free product was recovered during 2000 from these monitoring wells. During 2001 an estimated 1,387 gallons of free product was recovered. During 2002 an estimated 900 gallons of free product was recovered. During this monitoring period an estimated 170 gallons of free product was recovered. The total gallons of product recovered are calculated from liquid and vapor removal measurements of hydrocarbons from the well.

During this monitoring period, a total of 11 AFVR events were completed at the HPFF Fuel Farm area (Southeast Compound). This is a substantial reduction in events from the

previous year (i.e., 41 events). AFVR events were conducted at MW-18 (five events), HPFF-15 (six events), and HPFF-72 (five events). AFVR events were not completed at MW-2, MW-12, MW-15 and HPFF-28 from September 1, 2002 through August 31, 2003. These monitoring wells had at least one AFVR event during 2002. These wells will continue to be monitored for product thickness. A summary table of the AFVR reports is provided in *Appendix A.*

During 2000, monitoring well MW-15 displayed the greatest amount of product throughout the year with a thickness greater than 8 feet in January 2000. During 2001, product thickness in the wells (including MW-15) ranged from a sheen to less than 1 foot. During 2002 monitoring well HPFF-15 demonstrated the greatest product thickness, ranging from 0.2 feet to 1.3 feet. During this monitoring period HPFF-15 continued to display product thickness ranging from 0.3 feet to 1.5 feet. Product was not observed in MW-15 during this monitoring period, however, product was observed in nearby monitoring well HPFF-72 (2.83 feet) for the first time on July 1, 2003. Subsequent AFVR events reduced the product thickness to 0.73 feet as measured on September 3, 2003.

3.4 FREE PRODUCT RECOVERY SYSTEM

Three free product recovery pumps (16R, RW4, and RW5) have been in operation since September 1999 at the HPFF Southeast compound. During this monitoring period product was not observed in RW4. Product thickness ranged from a sheen to 1.09 feet in 16R and up to 0.97 feet in RW5. An estimated 132 gallons of product was recovered from these wells during this monitoring period. This is essentially the same volume of product recovered during the previous year (i.e., 130 gallons recovered).

During 2002, product thickness in these recovery wells ranged from a sheen to 0.8 feet in 16R, 0.3 feet in RW4 and 0.5 feet in RW5. During 2001 product thickness ranged from 0.5 feet in 16R, 0.2 feet in RW4 and 0.8 feet in RW5. During 2000, product thickness in these wells ranged from a sheen to 4.2 feet in 16R, 2.5 feet in RW-4, and 2.0 feet in RW5. As much as 12.5 feet of product was measured in 16R in 1999.

Product recovery decreased from a high of 18 gallons per month during March 2003 to 1 gallon during June 2003. This is a decrease from the previous year's high of 46 gallons recovered in September 2002. The product recovery system continues to be successful in reducing the volume of free phase product in the vicinity of the recovery wells.

3.5 AIR SPARGE SYSTEM EVALUATION

3.5.1 Air Sparge System Cessation Evaluation

The air sparge system was shut down November 26, 2001 to avoid interference during geophysical data collection activities performed at the site. The investigation was completed to better understand site hydrogeologic characteristics that might be influencing both free product and high dissolved contaminant concentrations observed in the deep aquifer (greater than 70 feet below the groundwater surface).

3.5.1.1 Northwest Compound

The SVE vapor flow recovery rate remained essentially unchanged (ranging from 50-100 scfm) following the shut down of the AS system. However, the hydrocarbon vapor recovery concentration measured from the system manifold decreased from 100 ppmV to 20 ppmV. This decrease is probably due to a combination of decreasing contaminant concentrations in the unsaturated zone, coupled with a decrease in the volatilization of contaminants from groundwater that was occurring when the AS system was in operation.

In general, dissolved oxygen (DO) concentrations demonstrated a decrease since the air sparge system was turned off November 26, 2001. DO concentrations in the shallow, intermediate and deep zones demonstrated a significant decrease in all wells sampled (with the exception of shallow well 1115-02 and intermediate well 1115-13) between the Feb-02 and Aug-02 sampling events. The intermediate wells decreased to below 0.5 mg/l while the deep wells decreased to 0 mg/l.

A review of dissolved oxygen (DO) concentrations in groundwater since July 2001 indicate a decrease in DO concentrations in all wells at the site since the AS component of the system was shutdown on November 26, 2001. During July 2001 DO concentrations in monitoring wells ranged from 3.21 mg/l to 0 mg/l with an overall average of 1.45 mg/l. DO concentrations demonstrated an overall increase during the February 2002 sampling event with concentrations ranging from 4.26 mg/l to 1.48 mg/l with an overall average of 2.59 mg/l. This is probably related to the continued influence of the air sparge system following shutdown and the decreasing concentrations of BTEX at the site.

DO concentrations demonstrated a significant decrease during the August 2002 sampling event with concentrations ranging from 2.95 mg/l to 0 mg/l with an overall average of

0.56 mg/l. This decrease in DO concentrations is probably due to a combination of a decrease in the rate of addition of O_2 following shutdown of the air sparging system, plus natural diffusion and advection, as well as rates of consumption by chemical reactions and microbial activity. The DO concentrations in a number of wells have decreased to levels that are not conducive to aerobic biologic degradation of BTEX contaminants observed at the site (i.e., <0.5 mg/l).

3.5.1.2 Southeast Compound

DO concentrations in the shallow, intermediate and deep zones demonstrated a significant decrease in all wells sampled (with the exception of shallow well MW-10R) since the air sparge system was turned off November 26, 2001. Between the Feb-02 and Aug-02 sampling events all but two wells (MW-10R and HPFF-1) in the shallow aquifer decreased to less than 0.5 mg/l. While the intermediate and deep wells decreased to 0 mg/l.

The SVE vapor flow recovery rate remained essentially unchanged (ranging from 200-300 scfm) following shut down of the AS system. However, the hydrocarbon vapor recovery concentration measured from the system manifold decreased from 1000 ppmV to 200 ppmV. This decrease is probably due to a combination of decreasing contaminant concentrations in the unsaturated zone, coupled with a decrease in the volatilization of contaminants from groundwater that was occurring when the AS system was in operation.

A review of dissolved oxygen (DO) concentrations in groundwater since July 2001 indicate a significant decrease in DO concentrations in all wells at the site since the AS component of the system was shutdown on November 26, 2001. During July 2001 DO concentrations in monitoring wells ranged from 7.21 mg/l to 1.39 mg/l with an overall average of 4.4 mg/l.

DO concentrations demonstrated a significant decrease during the February 2002 sampling event with concentrations ranging from 2.07 mg/l to 0 mg/l with an overall average of 0.3 mg/l. DO concentrations continued this trend during the August 2002 sampling event with concentrations ranging from 2.95 mg/l to 0 mg/l with an overall average of 0.56 mg/l. Because free phase product persists in portions of the site high BTEX concentrations will continue to persist in these areas. This decrease in DO concentrations is probably due to a combination of a decrease in the rate of addition of O_2 following shutdown of the air sparging system, plus natural diffusion and advection, as well as

rates of consumption by chemical reactions and microbial activity. The DO concentrations in a number of monitoring wells have decreased to levels that are not conducive to aerobic biologic degradation of BTEX contaminants observed at the site (i.e., <0.5 mg/l).

3.5.2 Air Sparge System Startup

Following completion of the geophysical investigation in March 2002 the air sparge system remained off. In response to a request by the NCDENR, the air sparge system was restarted on January 30, 2003. Prior to air sparge system start-up, DO measurements were collected from the following select monitoring wells on January 29, 2003:

- At the northwest compound a total of nine monitoring wells (1115-4, 1115-17, 1115-22, 1115-10, 1115-13, 1115-25, 1115-2, 1115-21, 1115-24, 78GW22-2, 1115-18 and 1115-23) were measured. Only two (1115-10, 0.62 mg/l; and 1115-2, 1.68 mg/l) had DO concentrations above zero.
- At the southwest compound a total of eight monitoring wells (1115-3, 1115-20, HPFF-5, HPFF-9, 1115-7, 1115-19, 78GW32-2 and 78GW32-3) were measured. Only three (1115-3, 2.62 mg/l; HPFF-5, 1.11 mg/l; and HPFF-9, 0.44 mg/l) had DO concentrations above zero.

The systems at the northwest and southeast compounds were brought back on line in a phased approach that initially started the deep biosparge wells. Hydrocarbon vapor recovery was monitored in the system manifold to determine the effect of contaminant volatilization from groundwater (if any) due to the biosparge wells. DO concentrations were also monitored in the above select monitoring wells to determine influence of the biosparge wells. Following this initial phase the intermediate depth sparge wells were then turned on, with sparge wells that have the least possibility of impacting occupied structures activated first.

To decrease the possibility of preferential air flow (i.e., channeling) from the air sparge wells, the air sparge system was operated on an intermittent basis. The system was set up to operate 24 hours and then be shut off for 24 hours. This cycling of air flow will provide time for contaminated groundwater that has been treated with sparged air to equilibrate following treatment. This will allow for more efficient treatment of the groundwater (i.e., hydrocarbon volatilization and DO transfer) when the system is cycled on. Additionally, when the air flow stops, any channels that have formed that allow preferential air flow will collapse minimizing the channeling affects that may develop during continuous air sparging operation.

3.5.2.1 Northwest Compound Air Sparge System Start-up

The SVE vapor flow recovery rate remained essentially unchanged (ranging from 50-100 scfm) following start-up of the AS system. However, the hydrocarbon vapor recovery concentration measured from the system manifold demonstrated a slight increase with concentrations ranging from 10 ppmV to 56 ppmV.

In general, dissolved oxygen (DO) concentrations demonstrated a decrease when the air sparge system was turned off November 26, 2001. DO concentrations in the shallow, intermediate and deep zones demonstrated a significant decrease in all wells sampled (with the exception of shallow well 1115-02 and intermediate well 1115-13) between the Feb-02 and Aug-02 sampling events. The intermediate wells decreased to below 0.5 mg/l while the deep wells decreased to 0 mg/l.

Following system start-up on January 30, 2003, the semi-annual groundwater sampling event was completed two weeks later during the week of February 16, 2003. A slight increase in DO concentrations in the monitoring wells sampled was observed. The following bullets present the change in DO measurements from August 2002 to February 2003:

- Shallow wells: 1115-01 (0.6 to 1.96 mg/l), 1115-04 (0.83 to 6.44 mg/l), GT-1 (0.17 to 0.55 mg/l), GT-7 (1.31 to 0.74 mg/l), GT-9 (0.36 to 0.31 mg/l) and 78GW22-2 (0.0 to 0.43 mg/l).
- Intermediate wells: 1115-13 (1.72 to 0.28 mg/l) and 1115-21 (0.1 to 0.3 mg/l). Monitoring well 1115-18 could not be tested because of bubbling in the well.
- Deep wells: 1115-22 (0.0 to 0.21 mg/l), 1115-23 (0.0 to 0.7 mg/l), 1115-24 (0.05 to 0.39 mg/l) and 1115-25 (0.0 to 0.25 mg/l).

Measurements collected during the August 2003 groundwater sampling event indicated a significant increase in DO concentrations in the monitoring wells sampled. The following bullets present the change in DO measurements from February 2003 to August 2003:

- Shallow wells: 1115-01 (1.96 to 3.76 mg/l), 1115-04 (6.44 to 8.76 mg/l), GT-1 (0.55 to 1.94 mg/l), GT-7 (0.74 to 2.87 mg/l), GT-9 (0.31 to 2.87 mg/l) and 78GW22-2 (0.43 to 2.99 mg/l).
- Intermediate wells: 1115-13 (0.28 3.78 mg/l), 1115-17 (0.33 to 3.28 mg/l), and 1115-21 (0.3 to 4.03 mg/l).

- Deep wells: 1115-22 (0.21 to 2.92 mg/l), 1115-23 (0.7 to 3.81 mg/l), 1115-24 (0.39 to 3.46 mg/l) and 1115-25 (0.25 to 1.92 mg/l).

3.5.2.2 Southeast Compound Air Sparge System Start-up

The SVE vapor flow recovery rate remained essentially unchanged (ranging from 200-300 scfm) following start-up of the AS system. However, the hydrocarbon vapor recovery concentration measured from the system manifold demonstrated a slight increase with measured concentrations ranging from 150 ppmV to 500 ppmV.

DO concentrations in the shallow, intermediate and deep zones demonstrated a significant decrease in all wells sampled (with the exception of shallow well MW-10R) following shutdown of the air sparge system on November 26, 2001. Between the Feb-02 and Aug-02 sampling events all but two wells (MW-10R and HPFF-1) in the shallow aquifer decreased to less than 0.5 mg/l. While the intermediate and deep wells decreased to 0 mg/l.

Following system start-up on January 30, 2003, the semi-annual groundwater sampling event was completed two weeks later during the week of February 16, 2003. A slight increase in DO concentrations in the monitoring wells sampled was observed. The following bullets present the change in DO measurements from August 2002 to February 2003:

- Shallow wells: MW-1 (0.22 to 0.36 mg/l), MW-10R (0.83 to 6.44 mg/l), MW-17A (0.0 to 0.28 mg/l), MW-18 (0.0 to 0.49 mg/l), HPFF-1 (2.57 to 1.52 mg/l), HPFF-5 (0.1 to 3.98 mg/l), HPFF-19 (0.49 to 0.36 mg/l) and HPFF-20 (0.0 to 0.39 mg/l).
- Intermediate wells: HPFF-7 (0.0 to 0.22 mg/l), HPFF-8 (0.0 to 0.15 mg/l). and HPFF-9 (0.0 to 0.18 mg/l).
- Deep wells: HPFF-11 (0.0 to 0.24 mg/l), 78GW32-2 (0.0 to 0.46 mg/l), and 78GW32-3 (0.0 to 0.13 mg/l).

Measurements collected during the August 2003 groundwater sampling event indicated a majority of the wells sampled demonstrated a significant increase in DO concentrations. Only one shallow well (HPFF-20) and two deep wells (78GW32-2 and 78GW32-3) had DO at concentrations less than optimum for biologic degradation (i.e., <0.5 m/l). The following bullets present the change in DO measurements from February 2003 to August 2003:

- Shallow wells: MW-1 (0.36 to 0.33mg/l), MW-10R (6.44 to 3.19 mg/l), MW-17A (0.28 to 1.93 mg/l), HPFF-1 (1.52 to 5.34 mg/l), HPFF-5 (3.98 to 1.13 mg/l), HPFF-19 (0.36 to 3.06 mg/l) and HPFF-20 (0.39 to 0.22 mg/l).
- Intermediate wells: HPFF-7 (0.22 to 2.26 mg/l), HPFF-8 (0.15 to 0.9 mg/l). and HPFF-9 (0.18 to 1.32 mg/l).
- Deep wells: HPFF-11 (0.24 to 1.32 mg/l), 78GW32-2 (0.46 to 0.33 mg/l), and 78GW32-3 (0.13 to 0.13 mg/l).

4.0 GROUNDWATER MONITORING RESULTS

4.1 GROUNDWATER ELEVATION MEASUREMENTS

4.1.1 Building 1115 Area (Northwest Compound)

Groundwater level measurements at the HPFF Building 1115 Northwest compound were collected from 22 monitoring wells in February and August 2003. Measurements were recorded from 11 "shallow" (less than 50 feet deep) monitoring wells (1115-1, 1115-2, 1115-4, 1115-5, 1115-9, 1115-10, 1115-11, 1115-12, 78GW22-2, GT-1, and GT-9); six "intermediate" (screened from 50 to 70 feet bls) monitoring wells (1115-13, 1115-14, 1115-15, 1115-17, 1115-18, and 1115-21); and five "deep" (greater than 70 feet deep) monitoring wells (1115-22, 1115-23, 1115-24, 1115-25, and 78-GW-19). Groundwater level measurements are presented in *Table 4.1*.

The groundwater measurement results from the February 2003 gauging event are summarized below:

- Depth to groundwater in the "shallow" wells ranged from 2.1 feet bls in 1115-4 to 9.78 feet bls in 78GW22-2. Groundwater elevations ranged from 17.06 feet National Geodetic Vertical Datum (NGVD) in 1115-1 to 25.21 feet NGVD in 1115-4.

- Depth to groundwater in the "intermediate" wells ranged from 8.82 feet bls in 1115-21 to 12.01 feet bls in 1115-14. Groundwater elevations ranged from 15.94 feet NGVD in 1115-13 to 17.07 feet NGVD in 1115-21.

- Depth to groundwater in the "deep" wells ranged from 7.78 feet bls in 78-GW-19 to 12.34 feet bls in 1115-22. Groundwater elevations ranged from 15.03 feet NGVD in 1115-24 to 21.4 feet NGVD in 78-GW-19. *Figure 4.1* presents groundwater elevations in February 2003 in the "shallow," "intermediate," and "deep" monitoring wells respectively at the Building 1115 area.

The groundwater measurement results from the August 2003 gauging event are summarized below:

- Depth to groundwater in the "shallow" wells ranged from 1.82 feet bls in 1115-4 to 8.26 feet bls in 1115-9. Groundwater elevations ranged from 19.45 feet NGVD in 1115-1 to 25.49 feet NGVD in 1115-4.

- Depth to groundwater in the "intermediate" wells ranged from 7.42 feet bls in 1115-21 to 8.82 feet bls in 1115-18. Groundwater elevations ranged from 17.88 feet NGVD in 1115-17 to 20.47 feet NGVD in 1115-14.

- Depth to groundwater in the "deep" wells ranged from 6.22 feet bls in 78-GW-19 to 9.96 feet bls in 1115-22. Groundwater elevations ranged from 17.37 feet NGVD in 1115-24 to 22.96 feet NGVD in 78-GW-19. *Figure 4.2* presents groundwater elevations in August 2003 in the "shallow," "intermediate," and "deep" monitoring wells respectively at the Building 1115 area.

4.1.2 HPFF Fuel Farm Area (Southeast Compound)

Groundwater level measurements at the HPFF Fuel Farm Area Southeast compound were collected from 23 monitoring wells in February and August 2003. Measurements were recorded from 15 "shallow" monitoring wells (HPFF-1, HPFF-3, HPFF-14, HPFF-19, HPFF-20, HPFF-24, HPFF-28, HPFF-30, HPFF-42, MW-1, MW-6, MW10R, MW-17A, MW18, and MW-19), three "intermediate" monitoring wells (HPFF-7, HPFF-8, and HPFF-9), and five "deep" monitoring wells (78GW32-2, 78GW32-3, HPFF-10, HPFF-11, and HPFF-12). Groundwater level measurements are presented in *Table 4.2*.

The groundwater measurement results from the February 2003 gauging event are summarized below:

- Depth to groundwater in the "shallow" wells ranged from 3.94 feet bls in HPFF-30 to 13.47 feet bls in MW-10R. Groundwater elevations ranged from 19.55 feet NGVD in MW-17 to 23.13 feet NGVD in HPFF-1. It should be noted that 0.25 feet of product was observed in MW-18 during the February 2003 gauging event. This is a reduction from 0.9 feet observed during the February 2002 monitoring event.

- Depth to groundwater in the "intermediate" wells ranged from 9.07 feet bls in HPFF-9 to 16.11 feet bls in HPFF-8. Groundwater elevations ranged from 7.56 feet NGVD in HPFF-9 to 13.46 feet NGVD in HPFF-8.

- Depth to groundwater in the "deep" wells ranged from 9.78 feet bls in 78GW32-2 to 14.47 feet bls in HPFF-11. Groundwater elevations ranged from 17.04 feet NGVD in 78GW-32-3 to 18.15 feet NGVD in HPFF-10. *Figure 4.3* presents groundwater elevations in February 2003 in the "shallow," "intermediate," and "deep" monitoring wells respectively at the Fuel Farm area.

The groundwater measurement results from the August 2003 gauging event are summarized below:

- Depth to groundwater in the "shallow" wells ranged from 2.92 feet bls in HPFF-1 to 11.24 feet bls in MW-10R. Groundwater elevations ranged from 18.56 feet NGVD in HPFF-19 to 25.54 feet NGVD in HPFF-1.

- Depth to groundwater in the "intermediate" wells ranged from 7.56 feet bls in HPFF-9 to 13.46 feet bls in HPFF-8. Groundwater elevations ranged from 19.57 feet NGVD in HPFF-9 to 21.44 feet NGVD in HPFF-8.

- Depth to groundwater in the "deep" wells ranged from 6.89 feet bls in 78GW32-2 to 11.99 feet bls in HPFF-10. Groundwater elevations ranged from 19.35 feet NGVD in 78GW32-3 to 20.51 feet NGVD in HPFF-10. *Figure 4.4* presents groundwater elevations in the "shallow," "intermediate," and "deep" monitoring wells respectively at the Fuel Farm Southeast Compound area.

4.2 GROUNDWATER SAMPLE COLLECTION AND ANALYSIS

4.2.1 Building 1115 Area (Northwest Compound)

Groundwater sample collection and analysis was completed in February and August 2003. The samples were analyzed for volatile organic aromatics (VOAs) using Method 602 and polynuclear aromatic hydrocarbons (PAHs) using Method 610. A total of seven "shallow" wells (MW-1115-01, MW-1115-02, MW-1115-04, 78GW22-2, MW-GT-1, MW-GT-7 and MW-GT-9), four "intermediate" wells (MW-1115-13, MW-1115-17, MW-1115-18 [not sampled in February 2003], and MW-1115-21) and four "deep" wells (MW-1115-22, MW-1115-23, MW-1115-24, and MW-1115-25) were sampled. All but one monitoring well (MW-1115-23) sampled displayed COCs of at least one contaminant in excess of North Carolina's Groundwater Quality Standards (NCGQS) during the February 2003 sampling event. Analytical results from the February 2003 sampling event indicated concentrations of COCs above NCGQS in the following monitoring wells:

- "shallow" 1115-01 (187 micrograms per liter [µg/L], benzene)
- "shallow" 1115-02 (125 µg/L, benzene)
- "shallow" 1115-04 (128 µg/L, benzene; 21.2 µg/L, naphthalene)
- "shallow" MW-GT-1 (80 µg/L, benzene; 41 µg/L, ethylbenzene)
- "shallow" 78GW22-2 (41.1 µg/L, benzene)
- "shallow" MW-GT-7 (205 µg/L, benzene)
- "shallow" MW-GT-9 (21.1 µg/L, benzene)
- "intermediate" 1115-13 (872 µg/L, benzene; 62.2 µg/L, ethylbenzene; and 152 µg/L, naphthalene)
- "intermediate" 1115-17 (3,490 µg/L, benzene; 196 µg/L, ethylbenzene; and 270 µg/L, naphthalene)
- "intermediate" 1115-21 (727 µg/L, benzene)
- "deep" 1115-22 (1,320 µg/L, benzene)
- "deep" 1115-24 (4,120 µg/L, benzene; and 23.6 µg/L, naphthalene)
- "deep" 1115-25 (3.1 µg/L, benzene)

Groundwater analytical results of the COCs for the February 2003 sampling event are presented in *Table 4.3*. Historical groundwater analytical results are provided in *Appendix B.* Groundwater analytical results for all monitoring wells (shallow, intermediate, and deep) are presented on *Figure 4.5*. The complete laboratory analytical reports showing all detections are provided in *Appendix C.* The groundwater sample collection field logs are provided in *Appendix D.*

The second semiannual sampling event in 2003 was completed in August 2003. A total of 15 monitoring wells were sampled during this event. Monitoring wells MW-GT-7 and MW-GT-9 were added to the sampling program in August 2002 to better delineate the eastern extent of shallow groundwater contamination. The samples were analyzed for VOAs using Method 602 and PAHs using Method 610. Eleven of the 15 monitoring wells sampled displayed at least one COCs in excess of NCGQS during the August 2003 sampling event. Analytical results from the sampling event indicated concentrations of COCs above NCGQS in the following monitoring wells:

- "shallow" MW-GT-7 (235 µg/L, benzene)
- "shallow" 1115-02 (3.1 µg/L, benzene)
- "shallow" 78GW22-2 (17.2 µg/L, benzene)

- "intermediate" 1115-13 (340 µg/L, benzene; 72.4 µg/L, ethylbenzene; and 155 µg/L, naphthalene)
- "intermediate" 1115-17 (84.3 µg/L, benzene; 63.4 µg/L, ethylbenzene; and 332 µg/L, naphthalene)
- "intermediate" 1115-18 (215 µg/L, benzene)
- "intermediate" 1115-21 (485 µg/L, benzene)
- "deep" 1115-22 (1,930 µg/L, benzene)
- "deep" 1115-23 (260 µg/L, benzene)
- "deep" 1115-24 (3,990 µg/L, benzene)
- "deep" 1115-25 (3,300 µg/L, benzene)

Groundwater analytical results of the COCs for the August 2003 sampling event are presented in *Table 4.4*. Historical groundwater analytical results are provided in *Appendix B.* Groundwater analytical results for all monitoring wells (shallow, intermediate, and deep) are presented on *Figure 4.5*. The complete laboratory analytical reports showing all detections are provided in *Appendix C.* The groundwater sample collection field logs are provided in *Appendix D.* Hydrographs compared with analytical results from select monitoring wells that have displayed COCs in excess of NCGQS are provided in *Appendix F*.

4.2.2 HPFF Fuel Farm Area (Southeast Compound)

Groundwater sample collection and analysis was completed in February and August 2003. The samples were analyzed for VOAs using Method 602 and PAHs using Method 610. In February 2003 a total of 10 "shallow" wells (HPFF-1, HPFF-4, HPFF-5, HPFF-19, HPFF-20, MW-1, MW-10R, MW-11, MW-17A, and MW-18), three "intermediate" wells (HPFF-7, HPFF-8, and HPFF-9) and three "deep" wells (HPFF-11, 78GW32-2 and 78GW32-3) were sampled. Monitoring wells HPFF-4 (shallow), HPFF-5 (shallow), HPFF-9 (intermediate), and HPFF-11 (deep) were added to the sampling program in August 2002 to better delineate the vertical and horizontal extent of groundwater contamination.

All but one (HPFF-4) of the monitoring wells sampled in February 2003 displayed at least one of the COCs in excess of NCGQS. Analytical results from the February 2003 groundwater sampling event detected concentrations of COCs above NCGQS in the following monitoring wells:

- "shallow" HPFF-1 (32.3 µg/L, benzene)

- "shallow" HPFF-5 (674 µg/L, benzene; and 33.6 µg/L, ethylbenzene)
- "shallow" HPFF-19 (16,300 µg/L, benzene; 1,420 µg/L, ethylbenzene; 17,800 µg/L, toluene; 6,630 µg/L total xylenes; and 220 µg/L, naphthalene)
- "shallow" HPFF-20 (3,280 µg/L, benzene; 551 µg/L, ethylbenzene; 7,630 µg/L, toluene; 2,330 µg/L total xylenes; and 104 µg/L, naphthalene)
- "shallow" MW-1 (5,380 µg/L, benzene; 2,280 µg/L, ethylbenzene; 22,000 µg/L, toluene; 11,600 µg/L total xylenes; and 415 µg/L, naphthalene)
- "shallow" MW-10R (2,340 µg/L, benzene; 352 µg/L, ethylbenzene; 2,380 µg/L, toluene; 2,260 µg/L total xylenes; and 55.5 µg/L, naphthalene)
- "shallow" MW-11 (274 µg/L, benzene; 98.3 µg/L, ethylbenzene; and 1,160 µg/L, toluene)
- "shallow" MW-17A (5,720 µg/L, benzene; 3,260 µg/L, ethylbenzene; 22,800 µg/L, toluene; 11,300 µg/L total xylenes; and 415 µg/L, naphthalene)
- "shallow" MW-18 (16,900 µg/L, benzene; 1,370 µg/L, ethylbenzene; 30,000 µg/L, toluene; 7,670 µg/L total xylenes; and 464 µg/L, naphthalene)
- "intermediate" HPFF-7 (9.5 µg/L, benzene)
- "intermediate" HPFF-8 (10,900 µg/L, benzene; 878 µg/L, ethylbenzene; 2,150 µg/L, toluene; 2,610 µg/L, total xylenes; and 173 µg/L, naphthalene)
- "intermediate" HPFF-9 (22,600 µg/L, benzene; 363 µg/L, ethylbenzene; and 70.1 µg/L, naphthalene)
- "deep" HPFF-11 (489 µg/L, benzene; 63.6 µg/L, ethylbenzene; and 580 µg/L, toluene)
- "deep" 78GW32-2 (109 µg/L, benzene)
- "deep" 78GW32-3 (7.1 µg/L, benzene)

Groundwater analytical results of the COCs for the February 2003 sampling event are presented in *Table 4.5*. Groundwater analytical results for all monitoring wells (shallow, intermediate, and deep) are presented on *Figure 4.6.* Historical groundwater analytical results are provided in *Appendix B.* The groundwater sample collection field logs are provided in *Appendix D.* The complete laboratory analytical reports showing all detections are provided in *Appendix E.* Hydrographs compared with analytical results from select monitoring wells that have displayed COCs in excess of NCGQS are provided in *Appendix F*.

In August 2003 a total of nine "shallow" wells (HPFF-1, HPFF-5, HPFF-19, HPFF-20, MW-1, MW-10R, MW-11, MW-17A, and MW-18), three "intermediate" wells (HPFF-7,

HPFF-8 and HPFF-9) and three "deep" wells (HPFF-11, 78GW32-2 and 78GW32-3) were sampled. Twelve of the 15 monitoring wells sampled in August 2003 displayed at least one of the COCs in excess of NCGQS. Moniotring wells HPFF-1 (shallow), HPFF-7 (intermediate) and GW-32-3 (deep) did not display COCs above their NCGQS. Analytical results from the August 2003 groundwater sampling event detected concentrations of COCs above NCGQS in the following monitoring wells:

- "shallow" HPFF-5 (44.2 µg/L, benzene)
- "shallow" HPFF-19 (7,760 µg/L, benzene; 481 µg/L, ethylbenzene; 10,600 µg/L, toluene; 12,800 µg/L total xylenes; and 266 µg/L, naphthalene)
- "shallow" HPFF-20 (6,020 µg/L, benzene; 112 µg/L, ethylbenzene; 8,790 µg/L, toluene; and 6,770 µg/L total xylenes)
- "shallow" MW-1 (6,670 µg/L, benzene; 3,950 µg/L, ethylbenzene; 26,200 µg/L, toluene; 17,200 µg/L total xylenes; and 417 µg/L, naphthalene)
- "shallow" MW-10R (2,830 µg/L, benzene; 843 µg/L, ethylbenzene; 5,070 µg/L, toluene; 4,830 µg/L total xylenes; and 212 µg/L, naphthalene)
- "shallow" MW-11 (957 µg/L, benzene)
- "shallow" MW-17A (6,830 µg/L, benzene; 3,860 µg/L, ethylbenzene; 27,200 µg/L, toluene; 13,900 µg/L total xylenes; and 415 µg/L, naphthalene)
- "shallow" MW-18 (5,440 µg/L, benzene; 1,930 µg/L, ethylbenzene; 26,200 µg/L, toluene; 17,200 µg/L total xylenes; and 417 µg/L, naphthalene)
- "intermediate" HPFF-8 (7,420 µg/L, benzene; 740 µg/L, ethylbenzene; 1,690 µg/L toluene; 2,130 µg/L total xylenes; and 184 µg/L, naphthalene)
- "intermediate" HPFF-9 (4,090 µg/L, benzene; and 96.4 µg/L, ethylbenzene)
- "deep" HPFF-11 (348 µg/L, benzene)
- "deep" 78GW32-2 (176 µg/L, benzene)

Groundwater analytical results of the contaminants of concern for the August 2003 sampling event are presented in *Table 4.6.* Groundwater analytical results for all monitoring wells (shallow, intermediate, and deep) are presented on *Figure 4.6.* Historical groundwater analytical results are provided in *Appendix B.* The groundwater sample collection field logs are provided in *Appendix D.* The complete laboratory analytical reports showing all detections are provided in *Appendix E.* Hydrographs compared with analytical results from select monitoring wells that have displayed COCs in excess of NCGQS are provided in *Appendix F.*

5.0 CONCLUSIONS

5.1 AFVR EVENTS

During the reporting period from September 2002 through August 2003, a total of 16 AFVR events were completed at the HPFF Fuel Farm area (Southeast Compound), recovering an estimated 170 gallons of free product. During this monitoring period, AFVR events were conducted at the following monitoring wells: MW-18 (five events), HPFF-15 (six events), and HPFF-72 (five events). Monitoring wells MW-2, MW-12, MW-15, HPFF-28, and HPGW32-3 did not display the presence of product during this monitoring period.

Through August 2003, AFVR events have reduced the product thickness to less than 1-foot in wells displaying free product. The AFVR events continue to be effective in removing free phase product from the subsurface.

5.2 GROUNDWATER ELEVATION MEASUREMENTS

5.2.1 Building 1115 Area (Northwest Compound)

Differences in elevations from the different depth intervals indicate a significant downward vertical hydraulic gradient at the site (*Figures 4.1 and 4.2)*. This downward gradient is probably responsible for the dissolved COCs detected in the monitoring wells that are screened at the deeper depth intervals.

Figures 4.5A and *4.6A* present groundwater elevation contour maps for February and August 2003 respectively produced from groundwater elevations from the shallow monitoring wells. The groundwater flow direction appears to be to the south and east from a groundwater mound in the northwestern portion of the site. The groundwater flow direction in the southern portion of the site appears to be toward the west with a hydraulic gradient of 0.01 ft/ft.

Figures 4.5B and *4.6B* present groundwater elevation contour maps for February and August 2003 respectively produced from groundwater elevations from the intermediate monitoring wells. The groundwater flow direction appears to be to the west with a hydraulic gradient of 0.003 ft/ft.

Figures 4.5C and *4.6C* present groundwater elevation contour maps for February and August 2003 respectively produced from groundwater elevations from the deep monitoring wells. The groundwater flow direction appears to be to the south-southwest with a hydraulic gradient of 0.03 ft/ft.

As a result of abundant rainfall (56.3 inches from January to August 2003) at the site, groundwater elevations have increased from 1 to 3 feet across the site. Groundwater elevations observed during 2003 were comparable to elevations observed during 2001.

5.2.2 HPFF Fuel Farm Area (Southeast Compound)

As observed at the northwest compound, differences in elevations from the different depth intervals indicate a significant downward vertical hydraulic gradient at the site (*Figures 4.3 and 4.4)*. This downward gradient is probably responsible for the dissolved COCs detected in the monitoring wells that are screened at the deeper depth intervals.

Figures 4.5A and *4.6A* present groundwater elevation contour maps for February and August 2003 respectively produced from groundwater elevations from the shallow monitoring wells. The groundwater flow direction appears to be to the south-southwest with a hydraulic gradient of 0.007 ft/ft.

Figures 4.5B and *4.6B* present groundwater elevation contour maps for February and August 2003 respectively produced from groundwater elevations from the intermediate monitoring wells. The groundwater flow direction appears to be to the north and west with a hydraulic gradient of 0.003 ft/ft.

Figures 4.5C and *4.6C* present groundwater elevation contour maps for February and August 2003 respectively produced from groundwater elevations from the deep monitoring wells. Because of the limited number of deep wells that were gauged it is difficult to determine the direction of groundwater flow, however, it appears to be to the south and west.

As a result of abundant rainfall (56.3 inches from January to August 2003) at the site, groundwater elevations have increased from 1 to 3 feet across the site. Groundwater elevations observed during 2003 were comparable to elevations observed during 2001.

5.3 GROUNDWATER ANALYTICAL RESULTS

5.3.1 Building 1115 Area (Northwest Compound)

5.3.1.1 Shallow Monitoring Wells: Shallow monitoring wells GT-1, 78GW22-2, 1115-01, 1115-02, and 1115-04 have been sampled semiannually since January 1999. To better define the horizontal extent of contamination on the north and east area of the site, monitoring wells GT-7 and GT-9 were added during the August 2002 sampling event. All seven of these monitoring wells displayed benzene concentrations above the NCGQS during the February sampling event. During the August 2003 sampling event only monitoring wells GT-7 (235 µg/L), 78GW22-2 (17.2 µg/L) and 1115-02 (3.1 µg/L) displayed benzene above the NCGQS. .

The February 2003 sampling event demonstrated an increase in benzene concentrations from the August 2002 sampling event. However, during the August 2003 sampling event benzene concentrations decreased to below NCGQS in all monitoring wells with the exception of GT-7, 78GW22-2 and 1115-02. *Figure 4.7* presents groundwater analytical results from the last four monitoring events dating back to February 2002. Groundwater analytical results for this monitoring period are presented in *Tables 4.3* and *4.4.* Historical groundwater analytical results are provided in *Appendix B.*

5.3.1.2 Intermediate Monitoring Wells: Intermediate monitoring wells MW-1115-13, 1115-17, 1115-18, and 1115-21, have been sampled semiannually since January 1999. All four of these monitoring wells have consistently displayed dissolved COC concentrations above NCGQS over this period. Dissolved benzene concentrations continue to persist in all four wells at relatively high concentrations, and naphthalene concentrations continue to persist at relatively high concentrations in monitoring wells 1115-17 and 1115-18. Monitoring well 1115-17 continues to demonstrate a decreasing trend in contaminant concentrations.

As dissolved contaminants in the shallow monitoring wells continue to decrease, a reduction in dissolved contaminant concentrations in the intermediate wells is expected to begin occurring at an accelerated rate. *Figure 4.7* presents groundwater analytical results from the last four monitoring events dating back to February 2002. Groundwater analytical results for this monitoring period are presented in *Tables 4.3* and *4.4.* Historical groundwater analytical results are provided in *Appendix B.*

5.3.1.3 Deep Monitoring Wells: Deep monitoring wells MW1115-22, 1115-23, 1115-24, and 1115-25 have been sampled semiannually since January 1999. Monitoring well 1115-22 continues to display a decreasing trend in COC concentrations over this operating time period. However, benzene continues to exceed NCGQS in this monitoring well. Concentrations of COCs in monitoring well 1115-23 continue to fluctuate slightly but remains over the NCGQS. Concentrations of COCs in monitoring wells 1115-24 and 1115-25 demonstrated an increase in benzene concentrations during 2002 and continued the increasing trend during this monitoring period. *Figure 4.7* presents groundwater analytical results from the last four monitoring events dating back to February 2002. Groundwater analytical results for 2003 are presented in *Tables 4.3* and *4.4*. Historical groundwater analytical results are provided in *Appendix B.*

5.3.1.4 Groundwater Analytical Results Summary: It appears that free-phase product has been removed from the groundwater surface in this area of the site. This is evidenced by the absence of AFVR events dating back to 2000 and the decreasing trend of dissolved COCs in the "shallow" (less than 50 feet bls) surficial aquifer. However, the significant downward vertical hydraulic gradient observed at the site appears to be transporting dissolved COCs into the deeper groundwater zones. The vertical extent of dissolved COC compounds has not been delineated at the site. *Figure 5.1* presents the estimated extent of dissolved benzene in the "shallow" zone in August 2003 at the northwest compound. For comparison purposes, *Figures 5.2, 5.3, 5.4* and *5.5* present the estimated extent of dissolved benzene in August 2002, July 2001, July 2000, and July 1999 respectively.

The "intermediate" (50 to 70 feet bls) and "deep" zones continue to display the highest dissolved concentrations of COCs. This indicates that natural attenuation and the AS/SVE system are operating as expected to reduce contaminant levels in the shallow aquifer at the site. However, natural attenuation appears to be occurring at a much slower rate at depths greater than 50 feet bls. As concentrations of COCs in the "shallow" zone continue to decrease, the deeper zones should begin to demonstrate a similar trend. Another year of groundwater monitoring should be completed to provide information to determine if the decreasing trend continues.

5.3.2 HPFF Fuel Farm Area (Southeast Compound)

5.3.2.1 Shallow Monitoring Wells: Shallow monitoring wells MW-1, MW-10R, MW-11, MW-17A, MW-18, HPFF-1, HPFF-19, and HPFF-20 have been sampled semiannually

since January 1999. Monitoring well HPFF-5 was sampled for the first time in August 2002 to better define the horizontal extent of contamination at the western plume boundary. Analytical results from HPFF-5 were below NCGQS for all compounds during the August 2002 sampling event. However, benzene was detected at concentrations above the NCGQS during both sampling events completed in 2003 (674 µg/L, February 2003; and 44.2 µg/L, August 2003).

Concentrations of COCs in most of the monitoring wells continue to fluctuate slightly, but in general, have not decreased significantly since the remedial system was placed in operation. The concentrations remain very high compared to the NCGQS. Monitoring well HPFF-1 were below NCGQS for all COCs during the August 2003 sampling event. *Figure 4.8* presents groundwater analytical results from the last four monitoring events dating back to February 2002. Groundwater analytical results for 2003 are presented in *Tables 4.5* and *4.6*. Historical groundwater analytical results are provided in *Appendix B.*

5.3.2.2 *Intermediate Monitoring Wells*: Intermediate monitoring wells HPFF-7 and HPFF-8 have been sampled semiannually since January 1999. Of these monitoring wells, HPFF-7 continues to display a decreasing trend in concentrations. Benzene concentrations in HPFF-7 have decreased from 79 µg/L (January 1999) to <1 µg/L (August 2003). The monitoring well appears to be on the northern fringe of the dissolved contaminant plume. Monitoring well HPFF-8 continues to display BTEX concentrations well above the NCGQS. Monitoring well HPFF-9 was sampled for the first time in August 2002 to evaluate contamination at the intermediate depth on the western portion of the site. Analytical results have consistently detected BTEX concentrations well above the NCGQS.

Figure 4.8 presents groundwater analytical results from the last four monitoring events dating back to February 2002. Groundwater analytical results for 2003 are presented in *Tables 4.5* and *4.6*. Historical groundwater analytical results are provided in *Appendix B.*

5.3.2.3 *Deep Monitoring Wells*: Deep monitoring wells 78GW32-2 and 78GW32-3 have been sampled semiannually since January 1999. Monitoring well 78GW32-2 continues to display benzene at concentrations above the NCGQS. The benzene concentration in monitoring well 78GW32-3 decreased from 124 µg/L (August 2002) to <1.0 µg/L (August 2003). These monitoring wells appear to be on the vertical fringe of the dissolved contaminant plume. Monitoring well HPFF-11 was sampled for the first time in August 2002 to evaluate the vertical extent of contamination in the central portion of the

site. Analytical results detected benzene (809 µg/L) and ethylbenzene (52.1 µg/L) at concentrations above the NCGQS. During the February 2003 sampling event benzene and ethylbenzene concentrations decreased to below NCGQS, however, the benzene concentration rebounded to 348 µg/L during the August 2003 sampling event.

Figure 4.8 presents groundwater analytical results from the last four monitoring events dating back to February 2002. Groundwater analytical results for 2003 are presented in *Tables 4.5* and *4.6*. Historical groundwater analytical results are provided in *Appendix B.*

5.3.2.4 *Groundwater Analytical Results Summary:* Free-phase product continues to persist on the groundwater surface in isolated areas of the site. Free product continues to be detected in monitoring wells MW-18, HPFF-15 and HPFF-72 and recovery wells RW4, RW5 and 16R. When free product is detected in a monitoring well in excess of several inches an AFVR event is performed at that monitoring well. The number of AFVR events performed at a particular well throughout the year is a good indicator of the volume of product remaining in the vicinity of a monitoring well (i.e., fewer numbers of AFVR events means longer product recharge time, indicating less free product in the area of the well). Free product was not observed in MW-2, MW-12, and MW-15 during this monitoring period. Continued AFVR events and operation of the remedial system may remove measurable product from these wells in the next year.

AFVR events in select wells have reduced free product in the wells from greater than 8 feet (MW-15 in 1999) to less than 1 foot in all wells (with the exception of HPFF-72, 2.8 feet on July 1, 2003), with a majority of the wells displaying less than 0.5 foot of product. High concentrations of dissolved-phase COCs will continue to persist in the shallow groundwater until the free-phase product has been removed. AFVR events will continue to be performed on monitoring wells displaying the presence of free-phase product. The significant downward vertical hydraulic gradient observed at the site appears to be transporting dissolved COCs into the deeper groundwater zones. *Figure 5.1* presents the estimated extent of dissolved benzene and free product in the "shallow" zone in August 2003 at the HPFF. For comparison purposes, *Figures 5.2, 5.3, 5.4* and *5.5* present the estimated extent of dissolved benzene and free product in August 2002, July 2001, July 2000 and July 1999, respectively.

The “intermediate” (50 to 70 feet bls) zone continues to display high dissolved concentrations of COCs. While concentrations continue to exceed NCGQS in the “deep” (greater than 70 feet bls) zone, a decreasing trend has developed. As the AS/SVE

remedial system continues to reduce contaminant concentrations in the upper portion of the aquifer, natural attenuation is expected to reduce COCs concentrations to below NCGQS in the "deep" zone. Therefore, additional "deep" monitoring wells are not required to delineate the vertical extent of dissolved contaminants at the site at this time.

5.3.3 Monitored Natural Attenuation (MNA) Parameters

The most conclusive evidence for natural attenuation of BTEX compounds in groundwater is the direct observation of an overall decrease in concentrations within the plume over time. If the plume is migrating as it is attenuating, then wells at the advancing edge of the plume may show increases over time, and wells at the trailing edge may show decreases over time, but the average concentrations within the plume should decrease. A decrease in concentration at a single monitoring location may thus be due to either attenuation or plume migration. An overall decrease in concentrations between sampling rounds when averaged across the plume, however, is strong evidence for the occurrence of one or more attenuation processes. Natural attenuation processes may include adsorption, dilution, dispersion, volatilization, and chemical degradation, as well as biodegradation.

Figure 5.6 provides the minimum, median, mean, and maximum total BTEX concentrations observed across all of the wells that were sampled during each of the last nine rounds. Note that a logarithmic concentration scale is used on the graph so that the full range of concentrations can be seen, and that non-detects were set equal to one-half of the reporting limit. The trends over the 4.6-year monitoring period show an overall decrease in BTEX concentrations during this time. These results are however not definitive proof that natural attenuation is occurring for a number of reasons:

- An unequal number of wells (between 23 and 32) were sampled each round, which may introduce some bias in the apparent trend. For instance, if sampling of some wells that never had detectable concentrations was discontinued at some point, then that would cause an apparent increase in the mean. Likewise, sampling of new wells in areas of known contamination would cause an apparent increase in the mean. Bias introduced by this factor can be minimized by consistently sampling the same set of wells each round.

- The well locations may introduce a bias if most of the wells are near the advancing or trailing edge of the plume.

- The 4.6-year monitoring period may not be long enough to accurately determine a trend.

- Some (or all) of the observed decreases may be due to active remediation rather than natural attenuation.

Despite these limitations, the maximum, mean, and median BTEX concentrations in each of the nine sampling rounds do indicate a steadily decreasing trend.

Somewhat different trends emerge when the shallow, intermediate, and deep wells are grouped separately. The shallow wells tend to show decreases in total BTEX concentrations, and the deeper wells tend to show steady or increasing total BTEX concentrations over the 4.6-year monitoring period. This observation implies that the plume is migrating downward in response to vertical hydrologic gradients in the aquifer as it is attenuating.

Indirect evidence for natural attenuation is based on evaluation of the "natural attenuation parameters", which change in response to microbial degradation of fuel hydrocarbons as discussed below. A set of natural attenuation parameters has been obtained from 18 wells during the February 2003 sample round, and 19 wells during the August 2003 sampling round. *Tables 4.4 and 4.6* present natural attenuation parameter analytical results for the northwest and southeast compounds respectively. A preliminary evaluation of the analytical results for dissolved oxygen; oxidation-reduction potential; and dissolved methane, ethane, and ethene is provided below. Nitrate, nitrite, and sulfate were also analyzed but were not evaluated due to high percentages of non-detect results.

Dissolved Oxygen: When fuel hydrocarbons are initially released to groundwater, aerobic microbes start to oxidize the hydrocarbon compounds to produce carbon dioxide and consume dissolved oxygen (DO) in the process. For instance, approximately three milligrams of oxygen is required to completely metabolize one milligram of benzene. Aerobic activity is identified, in part, by a local depression in dissolved oxygen within the impacted areas. The subsurface environment can become devoid of oxygen quickly, at which point the rate of aerobic degradation will be limited by oxygen supply. One of the objectives of the active air sparging systems besides stripping the contaminants from the aqueous phase into the gas phase, is to increase the DO concentrations so that aerobic degradation can proceed at a maximum rate.

Figure 5.7 shows the correlation between dissolved oxygen and the sum of the BTEX compounds in the February 2003 (diamonds) and August 2003 (squares) sample events. The graph shows a general decrease in DO as total BTEX increases, suggesting that anaerobic degradation of the contaminants is occurring.

Oxidation/Reduction Potential: The oxidation/reduction (redox) potential (ORP) of groundwater is a measure of electron activity, and is an indicator of the relative tendency of a solution to accept or transfer electrons. Redox reactions in groundwater contaminated with petroleum hydrocarbons are usually biologically mediated, and therefore, the redox potential of a groundwater system depends upon and influences rates of biodegradation. Once the dissolved oxygen is depleted by aerobic microbes, then anaerobic microbial activity can occur. This evolution is marked by a series of progressively decreasing ORP conditions related to nitrate reduction, sulfate reduction, and methanogenesis. If anaerobic microbes are actively degrading fuel, then one would expect local ORP depressions in fuel-impacted areas.

Figure 5.8 shows the correlation between ORP and total BTEX concentrations in the February 2003 and August 2003 sample events. All of the samples with total BTEX concentrations above 1,000 ug/L have negative potentials. The negative slope of the trend indicates that the fuel, where present, has stimulated microbial activity that is consuming oxygen and lowering the redox potential in impacted locations.

Methane: During methanogenesis (an anaerobic biodegradation process), carbon dioxide (or acetate) is used as an electron acceptor, and methane is produced. Methanogenesis generally occurs after oxygen, nitrate, bio-available iron (III), and sulfate have been depleted in the impacted zone. The presence of methane in groundwater is indicative of strongly reducing conditions. Because methane is not present in fuel, the presence of methane in groundwater above background concentrations in contact with fuels is evidence of microbial degradation of fuel hydrocarbons.

Figure 5.9 shows the correlation between dissolved methane concentrations and total BTEX in the February and August 2003 sample events. The positive slope of the trend indicates that methane is being generated from the degradation of fuel hydrocarbons within the impacted areas. The concentrations of ethane and ethene parallel those of methane (*Figures 5.10 and 5.11*), and provide independent evidence for microbial degradation of BTEX.

6.0 RECOMMENDATIONS

CATLIN has completed additional contamination assessment work as well as a remedial technology evaluation at both the Building 1115 (northwest compound) and Hadnot Point Fuel Farm (southeast compound). This work involved monitoring well installation and groundwater sample collection to more fully characterize the contaminant plume (both horizontal and vertical) and hydrogeologic conditions at the site. In addition, a Bio-Pulse Sparging pilot test was completed Results of this additional assessment work were used to develop a CAP Addendum designed to remediate the deep contamination observed at the site.

The selected remedial technology presented in the *Revised Corrective Action Plan (CAP) for Hadnot Point Fuel Farm*, prepared by CATLIN (dated June 2003) recommended continued AFVR events to recover free phase product from monitoring wells, continued operation of the AS/SVE system for groundwater treatment (10 to 50 feet bls) and hydrocarbon vapor control, completing a Bio-Pulse Sparge pilot test to treat groundwater to depths of 150 feet bls, and installing one groundwater recovery well (30 gpm design recovery rate) to ensure hydraulic control at the site. To facilitate implementation of the pilot test the air sparge and bio-sparge wells at the southeast compound were shutdown November 18, 2003 and the bio-sparge wells at the northeast compound were shut down on November 18, 2003. The sparge wells will remain off until completion of the Bio-Pulse Sparge pilot test evaluation. The tentative system restart is expected to occur the first week of March 2004 contingent upon results of CATLIN's last data review (data collected the week of February 17, 2004).

6.1 BUILDING 1115 AREA (NORTHWEST COMPOUND)

Natural attenuation and the remedial system appear to be operating as expected to reduce contaminant levels in the shallow aquifer at the site. However, natural attenuation appears to be occurring at a much slower rate at depths greater than 50 feet bls. When the air sparge portion of the remedial system was brought back on line in February 2003, select monitoring wells were tested to determine if air sparging does, in fact, increase the dissolved oxygen concentration in groundwater in the shallow, intermediate and deep zones. Results of this testing demonstrated an increase in dissolved oxygen concentrations in shallow, intermediate and deep monitoring wells following startup of the air sparging system.

As concentrations of COCs in the "shallow" zone continue to decrease, the deeper zones should begin to demonstrate a similar trend. To assist in the evaluation of natural attenuation processes, groundwater samples should be analyzed for the following natural attenuation parameters in select monitoring wells:

- Field Screened: temperature, conductivity, turbidity, pH, dissolved oxygen, and oxidation-reduction parameters (ORP)
- Method RSK-175: ethane, ethene and methane
- Method 354.1: nitrite, nitrogen
- Method 353.2: nitrite-nitrate, nitrogen and nitrate, nitrogen
- Method 375.4: sulfate
- Method 415.1: total organic carbon (TOC)

The following sampling schedule should be implemented during the next semiannual monitoring event scheduled for February 2004:

- Type II monitoring wells: Seven monitoring wells (MW-1115-01, MW-1115-02, MW-1115-04, MW-GT-1, MW-GT-7, MW-GT-9 and 78GW22-2) will be sampled. The samples will be analyzed for VOAs using EPA Method 602 and for PAHs using EPA Method 610. Additionally, samples from monitoring wells MW-1115-02, MW-1115-04 and MW-GT9 will be analyzed for the above-listed natural attenuation parameters.
- Type III "intermediate" monitoring wells: Four monitoring wells (MW-1115-13, MW-1115-17, MW-1115-18, and MW-1115-21) will be sampled. The samples will be analyzed for VOAs using EPA Method 602, for PAHs using EPA Method 610, and for natural attenuation parameters.
- Type III "deep" monitoring wells: Four monitoring wells (MW-1115-22, MW-1115-23, MW-1115-24, MW-1115-25 will be sampled. The samples will be analyzed for VOAs using EPA Method 602 and for PAHs using EPA Method 610. Additionally, samples from MW-1115-22, MW-1115-24 and MW-1115-25 will be analyzed for the natural attenuation parameters.

A depth to groundwater/product survey should be completed at select monitoring wells at the site on a semi-annual schedule. The survey will be completed just prior to each semi-annual sampling event. Results of this survey will provide a comprehensive groundwater elevation contour map of the site, as well as the current extent of free phase product.

Analytical results from the February and August 2004 sampling events will be reviewed and recommendations for future remedial work at the site will be developed as appropriate. *Table 6.1* presents the monitoring wells to be sampled and analytical parameters for each semi-annual sampling event.

6.2 HPFF FUEL FARM AREA (SOUTHEAST COMPOUND)

Continue AFVR events at select monitoring wells that demonstrate the presence of free-phase product as needed. At a minimum, the following monitoring wells will be gauged weekly for the presence of free-phase product: HPFF-15, HPFF-72, MW-12, MW-2, MW-15, and MW-18.

Natural attenuation processes may be equally as effective as observed at the Northwest Compound, however, due to the persistence of free-phase product at the site that will continually contribute to the dissolved phase concentrations, a net reduction in concentration is not occurring. High dissolved BTEX concentrations will continue to persist, particularly in the vicinity of free phase product. Once free product has been removed from the subsurface, a similar trend as that observed in the northwest compound should develop.

To assist in the evaluation of natural attenuation processes, the following natural attenuation parameters should be analyzed for in select monitoring wells:

- Field Screened: temperature, conductivity, turbidity, pH, dissolved oxygen, chloride, ORP and Iron II
- Method RSK-175: ethane, ethene and methane
- Method 354.1: nitrite, nitrogen
- Method 353.2: nitrite-nitrate, nitrogen and nitrate, nitrogen
- Method 375.4: sulfate
- Method 415.1: TOC

To better define the horizontal and vertical extent of the dissolved contaminant plume the same sampling schedule will be followed during the next semi-annual monitoring event scheduled for February 2004:

- Type II monitoring wells: Nine monitoring wells (MW-1, MW-10R, MW-11, MW-17A, MW-18, HPFF-1, HPFF-5, HPFF-19, and HPFF-20) will be sampled. The samples will be analyzed for VOAs using EPA Method 602 and for PAHs using EPA

Method 610. Additionally, monitoring wells HPFF-1, HPFF-5, and MW-17A will be analyzed for the above listed natural attenuation parameters.

- Type III "intermediate" monitoring wells: Three monitoring wells (HPFF-7, HPFF-8 and HPFF-9) will be sampled. The samples will be analyzed for VOAs using EPA Method 602, for PAHs using EPA Method 610, and for natural attenuation parameters.
- Type III "deep" monitoring wells: Three monitoring wells (78GW32-2, 78GW32-3 and HPFF-11) will be sampled. The samples will be analyzed for VOAs using EPA Method 602, for PAHs using EPA Method 610 and for natural attenuation parameters.

A depth to groundwater/product survey will be completed at select monitoring wells at the site on a semiannual schedule. The survey will be completed just prior to each semiannual sampling event. Results of this survey will provide a comprehensive groundwater elevation contour map of the site, as well as the current extent of free-phase product.

Analytical results from the February and August 2004 sampling events will be reviewed and recommendations for future remedial work at the site will be developed as appropriate. *Table 6.2* presents the monitoring wells to be sampled and analytical parameters for each semi-annual sampling event.

TABLES

Table 3.1
Cumulative Mass of Volatile Hydrocarbons Recovered
Air Sparge / Soil Vapor Extraction System
MCB Camp Lejeune - Hadnot Point Fuel Farm, North West
SVE Stack

Date	Time	SVE Blower Hour Meter (Hrs)	TH Conc ($PPM_{measured}$) (PPMv)	Vapor Velocity (V) (ft/min)	Absolute Temperature (Rankine)	Calculated Vapor Flowrate (Q) (SCFM)	TH Conc (C) (mg/l)	TH Discharge Rate (M) (lb/day)	Cumulative Mass of Hydrocarbons Discharged (lbs)	Comments
11/07/01	14:14	18991	54	8800	577	708	0.29	18.19	11700.96	
11/13/01	13:09	19134	66	8600	568	703	0.35	22.08	11820.93	
11/19/01	13:36	19277	41	9500	575	770	0.22	15.02	11931.44	
11/27/01	13:36	19469	62	9200	576	742	0.33	21.89	12079.06	
12/04/01	12:40	19621	63	9400	568	771	0.34	23.11	12221.56	
12/12/01	12:39	19813	55	9300	563	769	0.29	20.14	12394.56	
12/19/01	8:30	19977	31	9100	559	758	0.16	11.18	12501.57	
12/26/01	15:36	20152	16	7900	552	666	0.09	5.07	12560.82	
01/04/02	16:10	20368	30	8100	545	691	0.16	9.87	12628.06	
01/11/02	10:10	20530	39	9200	566	757	0.21	14.05	12708.78	
01/25/02	12:25	20868	16	8200	557	685	0.09	5.22	12844.41	
01/30/02	11:00	20987	19	10200	577	822	0.10	7.44	12875.78	
02/06/02	13:35	21155	13	8500	552	717	0.07	4.44	12917.33	
02/11/02	15:10	21261	12	9600	555	805	0.06	4.60	12937.28	
02/22/02	10:50	21519	12	9200	559	766	0.06	4.37	12985.48	
03/01/02	11:20	21688	10	8900	547	757	0.05	3.60	13013.57	
03/07/02	13:02	21811	12	9800	562	812	0.06	4.64	13034.68	
03/13/02	11:52	21952	16	9700	561	805	0.09	6.13	13066.31	
03/21/02	15:54	22105	12	9800	553	825	0.06	4.71	13100.86	
03/25/02	15:25	22201	8	9100	576	734	0.04	2.79	13115.86	
04/02/02	8:40	22386	9	8600	567	706	0.05	3.02	13138.29	
04/09/02	11:40	22555	8	8700	572	707	0.04	2.69	13158.40	
04/17/02	9:58	22743	11	10100	575	818	0.06	4.28	13185.71	
04/23/02	14:51	22892	7	8300	570	678	0.04	2.26	13206.00	
05/01/02	14:10	23082	11	8200	572	667	0.06	3.49	13228.76	
05/09/02	14:33	23275	11	9100	581	729	0.06	3.82	13258.15	
05/14/02	16:05	23396	3	10100	567	829	0.02	1.18	13270.75	
05/20/02	13:15	23538	9	10400	566	855	0.05	3.66	13285.09	
05/28/02	11:30	23728	6	10200	573	828	0.03	2.37	13308.94	
06/04/02	14:02	23899	16	11700	582	936	0.09	7.13	13342.76	
06/11/02	16:05	24069	13	9100	575	736	0.07	4.56	13384.13	
06/17/02	14:15	24182	16	9700	581	777	0.09	5.92	13408.78	
06/24/02	13:30	24285	14	9400	587	745	0.07	4.97	13432.13	
07/01/02	15:25	24454	16	10400	586	826	0.09	6.29	13471.77	
07/09/02	15:37	24647	12	11600	585	923	0.06	5.27	13518.27	
07/17/02	10:15	24830	9	9400	581	753	0.05	3.23	13550.67	
07/23/02	14:40	24977	7	9100	586	721	0.04	2.40	13567.91	

Table 3.1
Cumulative Mass of Volatile Hydrocarbons Recovered
Air Sparge / Soil Vapor Extraction System
MCB Camp Lejeune - Hadnot Point Fuel Farm, North West
SVE Stack

Date	Time	SVE Blower Hour Meter (Hrs)	TH Conc ($PPM_{measured}$) (PPMv)	Vapor Velocity (V) (ft/min)	Absolute Temperature (Rankine)	Calculated Vapor Flowrate (Q) (SCFM)	TH Conc (C) (mg/l)	TH Discharge Rate (M) (lb/day)	Cumulative Mass of Hydrocarbons Discharged (lbs)	Comments
08/01/02	11:45	25187	12	9900	588	784	0.06	4.48	13598.00	
08/08/02	15:05	25356	8	9300	581	745	0.04	2.84	13623.75	
08/14/02	11:18	25497	8	9400	582	752	0.04	2.86	13640.49	
08/21/02	12:40	25665	5	9400	584	749	0.03	1.78	13656.74	
08/28/02	15:20	25830	10	9300	576	751	0.05	3.58	13675.16	
09/04/02	15:15	25928	4	9400	588	744	0.02	1.42	13685.36	
09/12/02	11:22	26072	11	9200	581	737	0.06	3.86	13701.18	
09/18/02	10:54	26208	4	9700	583	772	0.02	1.47	13716.28	
09/25/02	12:35	26376	6	9300	576	751	0.03	2.15	13728.94	
10/01/02	16:05	26523	5	9400	583	750	0.03	1.79	13740.98	
10/08/02	16:04	26689	6	9200	574	746	0.03	2.13	13754.52	
10/16/02	13:25	26883	5	9200	565	758	0.03	1.80	13770.41	
10/23/02	12:16	27048	2	8600	570	701	0.01	0.67	13778.91	
10/30/02	15:40	27220	6	8500	558	709	0.03	2.02	13788.55	
11/08/02	10:20	27432	3	9100	565	750	0.02	1.07	13802.22	
11/15/02	13:25	27601	5	9100	569	744	0.03	1.77	13812.23	
11/22/02	13:35	27723	1	7900	561	654	0.01	0.31	13817.52	
11/25/02	11:10	27792	2	8600	566	707	0.01	0.67	13818.93	
12/06/02	13:10	28057	3	8400	544	718	0.02	1.03	13828.31	
12/14/02	12:45	28238	4	8400	553	706	0.02	1.34	13837.25	
12/18/02	12:10	28323	2	8300	552	699	0.01	0.67	13840.81	
12/23/02	14:10	28443	2	8300	558	692	0.01	0.66	13844.12	
01/03/03	14:02	28670	2	8600	564	709	0.01	0.67	13850.43	
01/08/03	14:20	28790	2	8100	560	672	0.01	0.64	13853.72	
01/15/03	10:50	28955	1	7800	543	667	0.01	0.32	13857.01	
01/22/03	13:49	29126	2	7300	543	624	0.01	0.59	13860.26	
02/05/03	14:31	29399	3	7900	555	661	0.02	0.94	13869.01	
02/12/03	9:00	29562	5	7800	550	660	0.03	1.57	13877.54	
02/21/03	8:20	29746	10	8200	546	698	0.05	3.32	13896.29	
02/24/03	13:10	29803	12	8600	565	706	0.06	4.03	13905.03	
03/04/03	15:00	29961	3	8300	560	688	0.02	0.98	13921.54	
03/12/03	16:00	30050	6	9800	569	799	0.03	2.28	13927.59	
03/18/03	15:30	30107	5	8900	572	723	0.03	1.72	13932.35	
03/27/03	12:40	30189	2	7200	561	596	0.01	0.57	13936.25	
04/02/03	10:55	30286	3	8200	566	673	0.02	0.96	13939.34	
04/16/03	12:00	30453	15	9600	576	774	0.08	5.52	13961.91	
04/23/03	8:25	30556	6	9600	557	801	0.03	2.29	13978.67	

Table 3.1
Cumulative Mass of Volatile Hydrocarbons Recovered
Air Sparge / Soil Vapor Extraction System
MCB Camp Lejeune - Hadnot Point Fuel Farm, North West
SVE Stack

Date	Time	SVE Blower Hour Meter (Hrs)	TH Conc ($PPM_{measured}$) (PPMv)	Vapor Velocity (V) (ft/min)	Absolute Temperature (Rankine)	Calculated Vapor Flowrate (Q) (SCFM)	TH Conc (C) (mg/l)	TH Discharge Rate (M) (lb/day)	Cumulative Mass of Hydrocarbons Discharged (lbs)	Comments
04/29/03	7:40	30666	10	8200	574	663	0.05	3.16	13991.14	
05/07/03	12:15	30816	3	9100	578	731	0.02	1.04	14004.27	
05/14/03	11:30	30983	14	9100	574	736	0.07	4.91	14024.97	
05/25/03	11:06	31196	14	8900	581	711	0.07	4.74	14067.78	
05/31/03	10:30	31268	10	8800	590	692	0.05	3.29	14079.83	
06/03/03	14:40	31338	7	9400	583	748	0.04	2.49	14088.26	
06/12/03	11:45	31557	3	9600	598	746	0.02	1.06	14104.49	
06/20/03	11:30	31678	6	9600	585	762	0.03	2.17	14112.65	
06/25/03	11:00	31733	6	9900	591	778	0.03	2.22	14117.69	
06/30/03	11:30	31866	6	9800	581	783	0.03	2.24	14130.04	
07/08/03	12:00	31950	4	9700	583	773	0.02	1.47	14136.53	
07/18/03	10:00	32162	8	8800	578	707	0.04	2.69	14154.92	
07/26/03	8:10	32297	3	9200	580	737	0.02	1.05	14165.45	
07/29/03	11:00	32349	17	9300	592	729	0.09	5.90	14172.98	
08/07/03	12:30	32495	8	10100	584	802	0.04	3.05	14200.22	
08/12/03	15:05	32504	5	9600	590	755	0.03	1.80	14201.13	
08/21/03	14:00	32506	17	11300	595	882	0.09	7.13	14201.50	
08/29/03	9:00	32573	0	12300	586	975	0.00	0.00	14211.46	
08/31/03	9:00	32580	8	10825	589	853	0.04	3.05	14211.91	Extrapolated Data

Notes:

$_{measured}$) x K x (M_g/K_g) / 1000

C: vapor concentration (mg/l)

$PPM_{measured}$: FID reading (PPM)

K: number of carbon atoms in calibration gas (1 in methane)

TH: total hydrocarbons calculated as gasoline (GRO)

percent water vapor by volume	0.003
SVE Stack pipe diameter	4

$Q = (1-B) \times V \times A \times (P/P_{std}) \times (T_{std}/T)$

Q: vapor flowrate (SCFM)

B: percent water vapor in flowstream

V: vapor velocity (ft/min)

A: cross-sectional area (sq. ft)

P: absolute pressure of flowstream (" Hg)

P_{std}: standard pressure (29.92" Hg)

T: absolute temperature of flowstream (degrees Rankine)

T_{std}: standard temperature (528 degrees Rankine) at 68 degrees F (from Perry's handbook)

* Estimated value due to malfunctioning instrument

M = Q x C x 0.0895

M: hydrocarbon recovery rate (lb/day)

CM = [delta (blower meter hours)/24] * [(Mprevious + Mcurrent)/2] + CMprevious

Assumptions:

Mg = 128 mg/mg-mole

Kg = 24.07 dsm^3/10^6 gm -mole

B = 0.003 from Perry's Chemical Handbook

A = 0.0873 sq. ft

Table 3.2

Cumulative Mass of Recovered Volatile Hydrocarbons
Air Sparging (AS) / Soil Vapor Extraction (SVE) System
MCB CAMP LEJEUNE - Hadnot Point Fuel Farm, South East
AS/SVE Field #1 (Motor Pool)

Date	Time	SVE Blower Hour Meter (Hrs)	TH Conc ($PPM_{measured}$) (PPMv)	Vapor Flowrate (Q) (pitot tube) (SCFM)	TH Conc (C) (mg/l)	TH Recovery Rate (M) (lb/day)	Mass of Hydrocarbons Recovered (CM) (lbs)	Comments
03/29/99	0:00	0	0	0	0.00	0.00		System Start-Up
03/30/99	7:30	0	0	0	0.00	0.00		Start-Up, Troubleshoot electrical problems
04/01/99	10:30	213	16138	39	85.82	298.49	1,324.54	0.0
04/02/99	10:00	236	7242	683	38.51	2352.95	2,595.02	0.0
04/09/99	8:00	304	26110	173	138.85	2151.99	8,977.02	0.0
04/16/99	9:30	402	24803	181	131.90	2132.05	17,723.58	0.0
04/23/99	8:30	485	4644	422	24.70	932.87	23,023.34	0.0
05/06/99	10:15	563	11722	952	62.34	5312.16	33,171.52	0.0
05/13/99	8:30	584	7448	751	39.61	2660.56	36,659.59	0.0
05/19/99	8:30	652	1764	613	9.38	514.87	41,158.11	0.0
06/02/99	11:00	937	2601	0	13.83	0.00	44,215.13	Water in line, *Suspect data not used in calcs
06/09/99	11:00	1005	13228	0	70.34	0.00	44,215.13	Water in line, *Suspect data not used in calcs
06/18/99	8:50	1105	13913	500	73.99	3312.51	51,116.19	0.0
06/24/99	12:30	1251	2929	0	15.58	0.00	61,191.73	Water in line
07/07/99	13:00	1505	642	813	3.41	248.28	62,505.53	0.0
07/15/99	11:00	1626	1795	168	9.55	143.31	63,492.65	0.0
07/21/99	9:00	1766	1314	741	6.99	463.17	65,261.54	0.0
08/02/99	9:50	2055	2247	821	11.95	877.49	73,333.45	0.0
08/12/99	9:35	2295	1734	617	9.22	509.46	80,268.24	0.0
08/19/99	10:00	2463	1101	616	5.85	322.63	83,180.57	0.0
08/25/99	7:30	2607	1509	0	8.02	0.00	84,148.47	Water in line
09/01/99	13:45	2849	1642	0	8.73	0.00	84,148.47	Water in line
09/10/99	13:45	3012	1600	559	8.51	425.43	85,593.15	Extrapolated Data
09/13/99	9:30	3043	0	0	0.00	0.00	85,867.91	Water in line
09/23/99	9:30	3283	1600	553	8.51	421.28	87,974.32	Extrapolated Data
10/06/99	12:30	3395	976	0	5.19	0.00	88,957.31	Water in line
10/14/99	9:19	3584	579	0	3.08	0.00	88,957.31	Water in line
10/22/99	8:01	3734	1211	0	6.44	0.00	88,957.31	Water in line
10/28/99	13:11	3877	571	0	3.04	0.00	88,957.31	Water in line
11/04/99	12:00	4045	0	0	0.00	0.00	88,957.31	Water in line
11/12/99	7:52	4237	1374	521	7.31	340.73	90,320.24	Water in line
11/16/99	9:28	4333	2224	0	11.83	0.00	91,001.71	Water in line
11/22/99	10:30	4477	308	483	1.64	70.74	91,213.94	Water in line, Flow velocity data estimated
12/02/99	10:13	4588	121	215	0.64	12.37	91,406.13	0.0
12/08/99	11:33	4730	780	486	4.15	180.30	91,976.09	0.0
12/17/99	9:40	4856	449	198	2.39	42.28	92,560.36	0.0
01/08/00	8:15	5360	1720	171	9.15	140.10	94,475.40	0.0
01/12/00	13:23	5461	1585	227	8.43	171.54	95,131.15	Water in line, flow and temp estimated.
01/21/00	9:35	5664	119	300	0.63	17.01	95,928.56	0.0
01/27/00	10:31	5729	671	246	3.57	78.52	96,057.93	Water in line, flow and temp estimated.
02/01/00	10:01	5826	691	393	3.67	129.18	96,477.67	0.0
02/04/00	10:15	5893	284	517	1.51	69.91	96,755.56	0.0
02/07/00	9:55	5961	207	577	1.10	56.88	96,935.18	0.0
02/11/00	10:23	6051	101	699	0.54	33.61	97,104.84	0.0
02/15/00	13:53	6146	94	832	0.50	37.21	97,245.00	0.0
02/18/00	12:41	6201	367	394	1.95	68.74	97,366.41	0.0
02/25/00	14:39	6352	244	881	1.30	102.31	97,904.53	0.0
03/07/00	12:50	6557	128	607	0.68	36.97	98,499.39	0.0
03/13/00	15:30	6660	1000	428	5.32	203.67	99,015.75	FID estimated
03/22/00	9:00	6864	698	642	3.71	213.34	100,788.02	0.0
03/29/00	9:55	7029	663	282	3.53	89.13	101,827.76	0.0
04/07/00	10:30	7245	620	654	3.30	193.08	103,097.70	0.0
04/12/00	7:30	7362	0	420	0.00	0.00	103,568.33	Header reading taken twice to confirm
04/18/00	10:00	7508	3	785	0.01	1.01	103,571.40	0.0
04/28/00	7:30	7745	350	449	1.86	74.76	103,945.49	Vaccuum Estimated
05/04/00	10:00	7820	0	150	0.00	0.00	104,062.30	0.0
05/11/00	9:00	7988	545	543	2.90	140.89	104,555.43	0.0
05/15/00	8:00	8106	420	166	2.23	33.20	104,983.39	0.0
05/23/00	8:30	8274	404	468	2.15	89.96	105,414.44	0.0
05/31/00	8:15	8466	799	279	4.25	105.99	106,198.26	0.0
06/05/00	10:30	8589	733	427	3.90	148.91	106,851.44	0.0
06/14/00	9:13	8782	212	540	1.13	54.53	107,669.45	0.0

Table 3.2

Cumulative Mass of Recovered Volatile Hydrocarbons
Air Sparging (AS) / Soil Vapor Extraction (SVE) System
MCB CAMP LEJEUNE - Hadnot Point Fuel Farm, South East
AS/SVE Field #1 (Motor Pool)

Date	Time	SVE Blower Hour Meter (Hrs)	TH Conc ($PPM_{measured}$) (PPMv)	Vapor Flowrate (Q) (pitot tube) (SCFM)	TH Conc (C) (mg/l)	TH Recovery Rate (M) (lb/day)	Mass of Hydrocarbons Recovered (CM) (lbs)	Comments
06/23/00	15:37	9004	209	442	1.11	44.00	108,125.14	Water in line, flow and temp estimated.
06/27/00	12:47	9097	650	727	3.46	224.82	108,645.97	0.0
07/03/00	11:16	9165	5100	615	27.12	1493.41	111,080.12	0.0
07/12/00	13:53	9381	3165	542	16.83	816.15	121,473.14	0.0
07/21/00	12:03	9586	761	452	4.05	163.65	125,657.71	0.0
07/26/00	11:16	9660	2461	394	13.09	461.56	126,621.58	0.0
08/10/00	12:24	9946	1705	317	9.07	257.49	130,905.97	0.0
08/16/00	9:15	10087	649	519	3.45	160.37	132,133.45	0.0
08/22/00	10:23	10121	668	647	3.55	205.63	132,392.70	0.0
08/28/00	10:29	10265	544	642	2.89	166.10	133,507.92	0.0
09/07/00	7:45	10446	983	474	5.23	221.98	134,971.32	0.0
09/11/00	11:32	10545	984	432	5.23	202.54	135,846.90	0.0
09/21/00	8:09	10716	1844	408	9.81	358.32	137,844.97	0.0
09/28/00	10:36	10818	3118	543	16.58	806.06	140,319.27	0.0
10/03/00	8:34	10926	2983	412	15.86	585.52	143,450.31	0.0
10/11/00	9:18	11094	1659	578	8.82	456.06	147,095.85	0.0
10/16/00	11:25	11216	1367	477	7.27	310.46	149,044.09	0.0
10/25/00	9:35	11430	686	502	3.65	164.06	151,159.64	0.0
10/31/00	12:34	11576	471	633	2.50	141.92	152,090.32	0.0
11/06/00	9:04	11716	358	520	1.90	88.60	152,762.67	0.0
11/15/00	9:59	11930	307	379	1.63	55.44	153,404.85	0.0
11/21/00	8:20	12073	443	507	2.36	106.99	153,888.76	0.0
11/28/00	11:23	12199	342	511	1.82	83.25	154,388.15	0.0
12/08/00	11:35	12385	325	460	1.73	71.16	154,986.48	0.0
12/15/00	8:47	12531	281	467	1.49	62.46	155,392.88	0.0
12/22/00	10:10	12661	531	290	2.82	73.41	155,760.84	0.0
12/27/00	11:00	12783	547	293	2.91	76.29	156,141.32	0.0
01/04/01	8:55	13067	179	223	0.95	19.02	156,705.20	0.0
01/10/01	8:20	13211	160	276	0.85	21.04	156,825.38	0.0
01/17/01	8:25	13363	152	445	0.81	32.19	156,993.94	0.0
01/23/01	8:50	13456	226	388	1.20	41.73	157,137.16	0.0
02/02/01	8:25	13502	247	334	1.31	39.32	157,214.84	0.0
02/08/01	10:15	13640	179	625	0.95	53.25	157,480.98	0.0
02/20/01	10:40	13827	264	604	1.40	75.89	157,984.09	0.0
03/01/01	12:45	14035	224	565	1.19	60.27	158,574.14	0.0
03/06/01	10:04	14115	157	607	0.83	45.34	158,750.16	0.0
03/14/01	14:10	14296	274	411	1.46	53.56	159,123.11	0.0
03/19/01	11:04	14414	259	393	1.38	48.43	159,373.83	0.0
03/28/01	14:39	14625	284	523	1.51	70.65	159,897.26	0.0
04/04/01	11:21	14756	296	572	1.57	80.54	160,309.88	0.0
04/11/01	10:20	14922	269	452	1.43	57.85	160,788.48	0.0
04/17/01	11:25	14777	361	233	1.92	40.06	160,492.71	0.0
04/26/01	12:19	14995	441	341	2.35	71.63	160,999.95	0.0
05/01/01	13:12	15115	244	138	1.30	16.05	161,219.14	0.0
05/09/01	9:43	15303	247	170	1.31	20.03	161,360.46	0.0
05/18/01	7:55	15496	372	278	1.98	49.14	161,638.60	0.0
05/25/01	9:19	15665	315	169	1.68	25.40	161,901.06	0.0
05/31/01	12:17	15802	341	118	1.81	19.18	162,028.30	0.0
06/07/01	7:58	15937	354	205	1.88	34.55	162,179.42	0.0
06/12/01	7:36	16058	375	374	1.99	66.79	162,434.87	0.0
06/20/01	10:50	16235	392	205	2.08	38.26	162,822.23	0.0
06/28/01	10:50	16407	366	302	1.95	52.64	163,147.95	0.0
07/06/01	6:59	16575	601	535	3.20	153.06	163,867.92	0.0
07/11/01	8:06	16694	1011	277	5.38	133.09	164,577.34	0.0
07/16/01	10:40	16816	331	201	1.76	31.63	164,996.01	0.0
07/27/01	9:53	16985	356	118	1.89	20.00	165,177.82	0.0
08/02/01	10:50	17131	375	191	1.99	34.08	165,342.32	0.0
08/10/01	7:53	17318	902	141	4.80	60.73	165,711.70	0.0
08/17/01	10:49	17489	316	137	1.68	20.59	166,001.41	0.0
08/25/01	7:41	17677	283	139	1.50	18.68	166,155.22	0.0
08/29/01	9:42	17758	374	193	1.99	34.35	166,244.72	0.0
09/06/01	7:41	17904	295	89	1.57	12.45	166,387.09	0.0
09/13/01	8:36	18065	251	102	1.33	12.23	166,469.86	0.0
09/21/01	8:44	18275	221	106	1.18	11.17	166,572.23	0.0
09/27/01	11:05	18372	277	104	1.47	13.65	166,622.39	0.0
10/04/01	8:11	18538	230	138	1.22	15.13	166,721.91	0.0
10/11/01	8:06	18705	229	125	1.22	13.67	166,822.09	0.0
10/18/01	7:53	18873	173	157	0.92	12.94	166,915.19	0.0

Table 3.2

Cumulative Mass of Recovered Volatile Hydrocarbons
Air Sparging (AS) / Soil Vapor Extraction (SVE) System
MCB CAMP LEJEUNE - Hadnot Point Fuel Farm, South East
AS/SVE Field #1 (Motor Pool)

Date	Time	SVE Blower Hour Meter (Hrs)	TH Conc ($PPM_{measured}$) (PPMv)	Vapor Flowrate (Q) (pitot tube) (SCFM)	TH Conc (C) (mg/l)	TH Recovery Rate (M) (lb/day)	Mass of Hydrocarbons Recovered (CM) (lbs)	Comments
10/26/01	10:10	19067	280	221	1.49	29.50	167,086.71	0.0
10/31/01	8:14	19186	257	242	1.37	29.61	167,233.24	0.0
11/09/01	8:22	19399	304	157	1.62	22.66	167,465.16	0.0
11/13/01	8:04	19493	336	107	1.79	17.08	167,542.99	0.0
11/21/01	12:55	19689	313	140	1.66	20.86	167,697.91	0.0
11/29/01	13:16	19880	471	156	2.50	34.96	167,919.99	0.0
12/04/01	9:45	19990	455	141	2.42	30.48	168,069.94	0.0
12/14/01	14:20	20234	526	141	2.80	35.37	168,404.68	0.0
12/21/01	14:25	20401	373	123	1.98	21.76	168,603.46	0.0
12/29/01	7:58	20589	277	163	1.47	21.52	168,772.99	0.0
01/02/02	11:28	20687	269	130	1.43	16.67	168,850.96	0.0
01/10/02	12:10	20874	349	107	1.86	17.72	168,984.95	0.0
01/25/02	12:05	21236	657	241	3.49	75.28	169,686.31	0.0
01/30/02	13:42	21357	377	157	2.00	28.13	169,946.99	0.0
02/08/02	14:56	21573	484	144	2.57	33.20	170,222.99	0.0
02/22/02	12:10	21811	291	124	1.55	17.15	170,472.64	0.0
02/27/02	13:50	21882	254	163	1.35	19.66	170,527.08	0.0
03/08/02	10:20	22089	328	146	1.74	22.72	170,709.84	0.0
03/11/02	15:10	22164	328	147	1.74	22.91	170,781.13	0.0
03/22/02	13:07	22428	792	183	4.21	68.87	171,285.91	0.0
03/28/02	7:51	22567	876	240	4.66	100.18	171,775.45	0.0
04/02/02	10:10	22688	323	122	1.72	18.80	172,075.36	0.0
04/09/02	13:00	22857	337	137	1.79	21.93	172,218.74	0.0
04/17/02	11:25	23046	306	122	1.63	17.72	172,374.85	0.0
04/23/02	10:10	23189	315	160	1.68	23.92	172,498.91	0.0
05/01/02	10:05	23381	384	104	2.04	19.05	172,670.81	0.0
05/08/02	12:44	23551	333	237	1.77	37.53	172,871.21	0.0
05/15/02	11:21	23718	355	172	1.89	29.08	173,102.97	0.0
05/22/02	9:15	23884	361	106	1.92	18.28	173,266.76	0.0
05/28/02	13:43	24032	431	189	2.29	38.76	173,442.65	0.0
06/04/02	9:30	24196	589	173	3.13	48.60	173,741.15	
06/14/02	10:10	24436	401	190	2.13	36.32	174,165.74	
06/20/02	10:40	24580	515	123	2.74	30.10	174,365.00	
06/28/02	10:18	24772	428	152	2.28	30.87	174,608.87	
07/03/02	10:50	24892	395	150	2.10	28.23	174,756.61	
07/10/02	9:25	25059	393	138	2.09	25.73	174,944.36	
07/20/02	12:04	25270	280	186	1.49	24.77	175,166.37	
07/28/02	8:10	25448	315	157	1.68	23.48	175,345.30	
07/31/02	9:56	25521	355	121	1.89	20.47	175,412.14	
08/08/02	10:45	25711	288	119	1.53	16.36	175,557.93	
08/13/02	8:50	25828	213	139	1.13	14.07	175,632.11	
08/20/02	14:20	26002	264	137	1.40	17.24	175,745.60	
08/30/02	14:25	26230	277	157	1.47	20.66	175,925.62	
09/06/02	13:10	26400	174	137	0.93	11.35	176,038.99	
09/09/02	8:07	26467	174	175	0.93	14.51	176,075.08	
09/19/02	14:15	26665	229	137	1.22	14.98	176,196.73	
09/25/02	7:30	26802	284	123	1.51	16.68	176,287.09	
10/01/02	13:40	26952	182	138	0.97	11.94	176,376.51	
10/08/02	9:05	27116	196	141	1.04	13.13	176,462.15	
10/17/02	13:10	27329	161	156	0.86	11.96	176,573.49	
10/26/02	10:36	27542	169	124	0.90	10.00	176,670.92	
11/01/02	13:05	27672	121	144	0.64	8.29	176,720.47	
11/08/02	13:38	27840	141	179	0.75	12.02	176,791.57	
11/15/02	14:40	27994	114	160	0.61	8.66	176,857.92	
11/22/02	10:26	28157	110	143	0.58	7.49	176,912.77	
11/25/02	14:56	28233	110	194	0.58	10.16	176,940.72	
12/04/02	13:12	28448	69	129	0.37	4.25	177,005.25	
12/14/02	14:10	28683	95	144	0.51	6.51	177,057.93	
12/19/02	14:10	28792	101	163	0.54	7.83	177,090.51	
12/23/02	8:05	28882	118	168	0.63	9.44	177,122.91	
12/31/02	11:52	29078	127	142	0.68	8.57	177,196.49	
01/09/03	13:05	29275	86	195	0.46	7.99	177,264.48	
01/15/03	13:45	29420	81	108	0.43	4.17	177,301.23	
01/22/03	14:10	29490	96	130	0.51	5.92	177,315.95	Hard calculate for hour meter
02/01/03	13:05	29490	116	146	0.62	8.08	177,336.36	
02/05/03	14:50	29490	113	164	0.60	8.80	177,360.97	
02/14/03	13:10	0.7	122	182	0.65	10.56	177,389.20	
02/21/03	14:30	23	130	126	0.69	7.77	177,397.72	
02/26/03	7:50	132	154	129	0.82	9.47	177,436.86	

Table 3.2

Cumulative Mass of Recovered Volatile Hydrocarbons
Air Sparging (AS) / Soil Vapor Extraction (SVE) System
MCB CAMP LEJEUNE - Hadnot Point Fuel Farm, South East
AS/SVE Field #1 (Motor Pool)

Date	Time	SVE Blower Hour Meter (Hrs)	TH Conc ($PPM_{measured}$) (PPMv)	Vapor Flowrate (Q) (pitot tube) (SCFM)	TH Conc (C) (mg/l)	TH Recovery Rate (M) (lb/day)	Mass of Hydrocarbons Recovered (CM) (lbs)	Comments
03/09/03	10:30	390	126	147	0.67	8.79	177,535.04	System start-up
03/13/03	8:15	485	101	144	0.54	6.93	177,566.16	
03/19/03	11:20	630	133	161	0.71	10.17	177,617.82	
03/28/03	12:10	847	127	145	0.68	8.76	177,703.42	
04/02/03	12:40	954	106	126	0.56	6.34	177,737.08	
04/13/03	12:45	1207	141	154	0.75	10.35	177,825.04	
04/16/03	13:30	1262	164	139	0.87	10.87	177,849.35	
04/23/03	9:00	1420	167	141	0.89	11.22	177,922.06	
05/01/03	14:05	1617	182	142	0.97	12.31	178,018.63	
05/08/03	14:40	1786	159	104	0.85	7.87	178,089.67	
05/14/03	12:40	1927	107	138	0.57	7.02	178,133.41	
05/25/03	9:05	2183	105	139	0.56	6.92	178,207.77	
05/30/03	9:40	2306	162	123	0.86	9.45	178,249.72	
06/03/03	11:30	2348	212	138	1.13	13.97	178,270.21	
06/13/03	10:00	2557	241	139	1.28	15.91	178,400.30	
06/20/03	12:45	2725	211	152	1.12	15.30	178,509.54	
06/27/03	8:15	2819	291	139	1.55	19.20	178,577.10	
07/01/03	8:50	2915	142	171	0.76	11.57	178,638.63	
07/08/03	12:45	2995	144	137	0.77	9.42	178,673.60	
07/18/03	13:55	3219	194	208	1.03	19.22	178,807.25	
07/26/03	10:25	3394	183	138	0.97	11.99	178,921.05	
07/29/03	13:30	3473	260	154	1.38	19.06	178,972.16	unable to sample 8/8/03
08/14/03	14:00	3830	188	190	1.00	16.99	179,240.29	
08/21/03	15:10	3950	210	187	1.12	18.66	179,329.42	
08/29/03	13:30	4138	388	119	2.06	21.94	179,488.48	
08/31/03	13:30	4179	262	168	1.39	20.90	179,525.13	Extrapolated Data

Notes:

$C = (PPM_{measured}) \times K \times (M_g/K_g) / 1000$

C: vapor concentration (mg/l)

$PPM_{measured}$: FID reading (PPM)

K: number of carbon atoms in calibration gas

(1 in methane)

TH: total hydrocarbons calculated as gasoline (GRO)

$Q = (1\text{-}B) \times V \times A \times (P/P_{std}) \times (T_{std}/T)$

Q: vapor flowrate (SCFM)

B: percent water vapor in flowstream

V: vapor velocity (ft/min)

A: cross-sectional area (sq. ft)

P: gauge pressure of flowstream (" Hg)

P_{std}: standard pressure (29.92" Hg)

T: absolute temperature of flowstream (degrees Rankine)

T_{std}: standard temperature (528 degrees Rankine)

* = Estimated value

M = Q x C x 0.0895

M: hydrocarbon recovery rate (lb/day)

CM = [delta (blower meter hours)/24] * [(Mprevious + Mcurrent)/2] + CMprevious

Assumptions:

Mg = 128 mg/mg-mole

Kg = 24.07 dsm^3/10^6 gm -mole

A = 0.196 sq.ft

Table 3.3

Cumulative Mass of Recovered Volatile Hydrocarbons
Air Sparging (AS) / Soil Vapor Extraction (SVE) System
MCB CAMP LEJEUNE - Hadnot Point Fuel Farm, South East
AS/SVE Field #2 (Fuel Farm)

Date	Time	SVE Blower Hour Meter (Hrs)	TH Conc ($PPM_{measured}$) (PPMv)	Calculated Vapor Flowrate (Q) (pitot tube) (SCFM)	TH Conc (C) (mg/l)	TH Recovery Rate (M) (lb/day)	Cumulative Mass of Hydrocarbons Recovered (lbs)	Comments
03/29/99	0:00	0	0	0	0.00	0.00		System Start-Up
03/30/99	7:30	0	0	0	0.00	0.00		0.0
04/01/99	10:30	213	21030	629	111.83	6292.71	27,923.88	0.0
04/02/99	10:00	236	6088	183	32.37	530.22	31,193.20	0.0
04/09/99	8:00	304	2887	104	15.35	142.42	32,146.09	0.0
04/16/99	9:30	402	2539	96	13.50	116.59	32,674.89	0.0
04/23/99	8:30	485	2043	947	10.86	920.35	34,467.93	0.0
05/06/99	10:15	563	3364	1052	17.89	1683.64	38,699.43	0.0
05/13/99	8:30	584	4787	1492	25.46	3398.91	40,923.04	0.0
05/19/99	8:30	652	3577	625	19.02	1064.41	47,246.08	0.0
06/02/99	11:00	937	1080	1471	5.74	756.21	58,056.02	0.0
06/09/99	11:00	1005	806	1643	4.29	630.45	60,020.46	0.0
06/18/99	8:50	1105	2325	0	12.36	0.00	61,333.90	Water in line
06/24/99	12:30	1251	1023	0	5.44	0.00	61,333.90	Water in line
07/07/99	13:00	1505	2288	1453	12.17	1582.54	69,708.16	0.0
07/15/99	11:00	1626	782	119	4.16	44.31	73,809.16	0.0
07/21/99	9:00	1766	134	0	0.71	0.00	73,938.39	Water in line
08/02/99	9:50	2055	1141	1578	6.07	856.93	79,097.85	0.0
08/12/99	9:35	2295	1838	920	9.77	804.48	87,404.90	0.0
08/19/99	10:00	2463	6156	0	32.74	0.00	90,220.57	Water in line
08/25/99	7:30	2607	6772	0	36.01	0.00	90,220.57	Water in line
09/01/99	13:45	2849	13842	0	73.61	0.00	90,220.57	Water in line
09/10/99	13:45	3012	1500	914	7.98	652.18	92,435.25	Extrapolated Data
09/13/99	9:30	3043	1133	0	6.03	0.00	92,856.45	Water in line
09/23/99	9:30	3283	1500	922	7.98	658.04	96,146.67	Extrapolated Data
10/06/99	12:30	3395	3820	0	20.31	0.00	97,682.11	Water in line
10/14/99	9:19	3584	1231	0	6.55	0.00	97,682.11	Water in line
10/22/99	8:01	3734	0	0	0.00	0.00	97,682.11	Water in line
10/28/99	13:11	3877	1584	0	8.42	0.00	97,682.11	Water in line
11/04/99	12:00	4045	0	0	0.00	0.00	97,682.11	Water in line
11/12/99	7:52	4237	0	0	0.00	0.00	97,682.11	Water in line
11/16/99	9:28	4333	12789	0	68.01	0.00	97,682.11	Water in line
11/22/99	10:30	4477	308	864	1.64	126.61	98,061.94	Water in line, Flow velocity data estimated.
12/02/99	10:13	4588	332	324	1.77	51.22	98,473.18	0.0
12/08/99	11:33	4730	3087	926	16.42	1360.31	102,648.96	Water in line, Flow velocity data estimated.
12/17/99	9:40	4856	8514	983	45.28	3983.81	116,677.27	Water in line, Flow velocity data estimated.
01/08/00	8:15	5360	6812	820	36.23	2658.85	186,425.15	Water in line, flow and temp estimated.
01/12/00	13:23	5461	11152	780	59.30	4140.03	200,731.13	Water in line, suspect data not included.
01/21/00	9:35	5664	2825	874	15.02	1175.04	223,209.45	Water in line, flow and temp estimated.
01/27/00	10:31	5729	5087	867	27.05	2099.62	227,643.88	Water in line, flow and temp estimated.
02/01/00	10:01	5826	5247	846	27.90	2113.46	236,157.83	Water in line, flow and temp estimated.
02/04/00	10:15	5893	2832	802	15.06	1081.09	240,616.89	0.0
02/07/00	9:55	5961	2243	1119	11.93	1194.22	243,840.25	0.0
02/11/00	10:23	6051	1894	1037	10.07	934.75	247,832.07	0.0
02/15/00	13:53	6146	1363	695	7.25	450.68	250,574.06	Water in line, flow estimated.
02/18/00	12:41	6201	1732	324	9.21	267.07	251,396.48	0.0
02/25/00	14:39	6352	988	688	5.25	323.42	253,254.08	Water in line, flow estimated.
03/07/00	12:50	6557	662	769	3.52	242.43	255,670.73	Water in line, flow, etc.. Estimated
03/13/00	15:30	6660	1000	722	5.32	343.52	256,928.08	FID estimated
03/22/00	9:00	6864	8047	1150	42.79	4404.38	277,106.63	0.0
03/29/00	9:55	7029	50	879	0.27	20.92	292,318.59	FID estimated
04/07/00	10:30	7245	750	1019	3.99	363.80	294,049.83	0.0
04/12/00	7:30	7362	1538	1069	8.18	782.32	296,843.50	0.0
04/18/00	10:00	7508	8887	294	47.26	1244.11	303,007.26	0.0
04/28/00	7:30	7745	540	874	2.87	224.61	310,259.09	0.0
05/04/00	10:00	7820	0	270	0.00	0.00	310,610.05	0.0
05/11/00	9:00	7988	1748	659	9.30	547.91	312,527.73	Water in line, flow and temp estimated.
05/15/00	8:00	8106	910	2048	4.84	887.31	316,055.96	0.0
05/23/00	8:30	8274	1162	1123	6.18	621.22	321,335.82	0.0
05/31/00	8:15	8466	4843	533	25.75	1229.48	328,738.64	0.0

Table 3.3

Cumulative Mass of Recovered Volatile Hydrocarbons
Air Sparging (AS) / Soil Vapor Extraction (SVE) System
MCB CAMP LEJEUNE - Hadnot Point Fuel Farm, South East
AS/SVE Field #2 (Fuel Farm)

Date	Time	SVE Blower Hour Meter (Hrs)	TH Conc ($PPM_{measured}$) (PPMv)	Calculated Vapor Flowrate (Q) (pitot tube) (SCFM)	TH Conc (C) (mg/l)	TH Recovery Rate (M) (lb/day)	Cumulative Mass of Hydrocarbons Recovered (lbs)	Comments
06/05/00	10:30	8589	5303	300	28.20	756.62	333,828.01	0.0
06/14/00	9:13	8782	441	1060	2.35	222.44	337,764.61	0.0
06/23/00	15:37	9004	527	2169	2.80	544.11	341,309.88	0.0
06/27/00	12:47	9097	2077	540	11.05	534.22	343,399.14	0.0
07/03/00	11:16	9165	1000	1080	5.32	513.93	344,884.01	Water in line, flow and temp estimated.
07/12/00	13:53	9381	6048	1310	32.16	3769.75	364,160.54	0.0
07/21/00	12:03	9586	2035	941	10.82	911.76	384,154.49	0.0
07/26/00	11:16	9660	1000	814	5.32	387.56	386,157.62	FID estimated
08/10/00	12:24	9946	3726	836	19.81	1482.39	397,299.44	0.0
08/16/00	9:15	10087	2789	982	14.83	1304.12	405,484.83	0.0
08/22/00	10:23	10121	3447	1274	18.33	2090.55	407,889.39	0.0
08/28/00	10:29	10265	2537	897	13.49	1082.85	417,409.59	0.0
09/07/00	7:45	10446	4538	1099	24.13	2372.72	430,439.96	0.0
09/11/00	11:32	10545	2995	1119	15.93	1595.54	438,624.49	0.0
09/21/00	8:09	10716	9218	1158	49.02	5078.29	462,399.99	0.0
09/28/00	10:36	10818	6014	1218	31.98	3485.58	480,598.19	0.0
10/03/00	8:34	10926	5277	1262	28.06	3168.67	495,570.24	0.0
10/11/00	9:18	11094	4268	1154	22.70	2343.70	514,863.54	0.0
10/16/00	11:25	11216	3118	1130	16.58	1676.90	525,082.57	0.0
10/25/00	9:35	11430	1492	1270	7.93	901.64	536,578.53	0.0
10/31/00	12:34	11576	947	1069	5.04	481.67	540,786.10	0.0
11/06/00	9:04	11716	904	1121	4.81	482.14	543,597.22	0.0
11/15/00	9:59	11930	891	1103	4.74	467.74	547,832.09	0.0
11/21/00	8:20	12073	1102	1193	5.86	625.59	551,089.32	0.0
11/28/00	11:23	12199	1491	688	7.93	488.03	554,012.58	0.0
12/08/00	11:35	12385	682	1006	3.63	326.59	557,169.24	0.0
12/15/00	8:47	12531	501	384	2.66	91.63	558,441.35	0.0
12/22/00	10:10	12661	501	392	2.66	93.41	558,942.50	0.0
12/27/00	11:00	12783	872	749	4.64	310.79	559,969.82	0.0
01/04/01	8:55	13067	564	825	3.00	221.56	563,119.54	0.0
01/10/01	8:20	13211	584	894	3.11	248.55	564,529.86	0.0
01/17/01	8:25	13363	909	1054	4.83	455.79	566,760.25	0.0
01/23/01	8:50	13456	832	1151	4.42	455.67	568,526.19	0.0
02/02/01	8:25	13502	781	788	4.15	293.01	569,243.67	0.0
02/08/01	10:15	13640	589	997	3.13	279.48	570,889.58	0.0
02/20/01	10:40	13827	827	886	4.40	348.62	573,336.53	0.0
03/01/01	12:45	14035	606	1097	3.22	316.27	576,217.72	0.0
03/06/01	10:04	14115	704	1281	3.74	429.11	577,460.02	0.0
03/14/01	14:10	14296	839	1009	4.46	402.79	580,597.01	0.0
03/19/01	11:04	14414	895	1077	4.76	458.70	582,714.83	0.0
03/28/01	14:39	14625	841	1088	4.47	435.45	586,645.36	0.0
04/04/01	11:21	14756	924	1056	4.91	464.36	589,101.09	0.0
04/11/01	10:20	14922	722	960	3.84	330.04	591,848.37	0.0
04/17/01	11:25	14777	624	602	3.32	178.68	590,311.61	0.0
04/26/01	12:19	14995	619	550	3.29	162.16	591,859.62	0.0
05/01/01	13:12	15115	795	338	4.23	127.93	592,584.84	0.0
05/09/01	9:43	15303	622	307	3.31	90.89	593,441.87	0.0
05/18/01	7:55	15496	819	614	4.36	239.26	594,769.34	0.0
05/25/01	9:19	15665	741	210	3.94	74.09	595,872.60	0.0
05/31/01	12:17	15802	1023	330	5.44	160.87	596,543.20	0.0
06/07/01	7:58	15937	859	489	4.57	199.79	597,557.54	0.0
06/12/01	7:36	16058	731	790	3.89	274.76	598,753.78	0.0
06/20/01	10:50	16235	802	304	4.26	116.05	600,194.89	0.0
06/28/01	10:50	16407	718	713	3.82	243.65	601,483.84	0.0
07/06/01	6:59	16575	807	1048	4.29	402.43	603,745.12	0.0
07/11/01	8:06	16694	1011	737	5.38	354.55	605,621.81	0.0
07/16/01	10:40	16816	632	625	3.36	187.99	607,000.78	0.0
07/27/01	9:53	16985	881	509	4.69	213.51	608,414.41	0.0
08/02/01	10:50	17131	904	581	4.81	250.14	609,824.68	0.0
08/10/01	7:53	17318	902	344	4.80	147.51	611,373.87	0.0
08/17/01	10:49	17489	1509	336	8.02	241.41	612,759.39	0.0
08/25/01	7:41	17677	1264	340	6.72	204.69	614,506.60	0.0
08/29/01	9:42	17758	2048	465	10.89	453.57	615,617.42	0.0
09/06/01	7:41	17904	1532	254	8.15	184.92	617,559.52	0.0
09/13/01	8:36	18065	1840	274	9.78	239.82	618,984.17	0.0
09/21/01	8:44	18275	1072	345	5.70	176.17	620,804.13	0.0
09/27/01	11:05	18372	1354	413	7.20	265.94	621,697.56	0.0
10/04/01	8:11	18538	991	275	5.27	129.74	623,065.95	0.0

Table 3.3

Cumulative Mass of Recovered Volatile Hydrocarbons
Air Sparging (AS) / Soil Vapor Extraction (SVE) System
MCB CAMP LEJEUNE - Hadnot Point Fuel Farm, South East
AS/SVE Field #2 (Fuel Farm)

Date	Time	SVE Blower Hour Meter (Hrs)	TH Conc ($PPM_{measured}$) (PPMv)	Calculated Vapor Flowrate (Q) (pitot tube) (SCFM)	TH Conc (C) (mg/l)	TH Recovery Rate (M) (lb/day)	Cumulative Mass of Hydrocarbons Recovered (lbs)	Comments
10/11/01	8:06	18705	1205	286	6.41	164.10	624,088.27	0.0
10/18/01	7:53	18873	978	310	5.20	144.13	625,167.05	0.0
10/26/01	10:10	19067	1031	392	5.48	192.48	626,527.48	0.0
10/31/01	8:14	19186	995	399	5.29	188.94	627,473.07	0.0
11/09/01	8:22	19399	1006	277	5.35	132.85	628,901.02	0.0
11/13/01	8:04	19493	1006	159	5.35	76.05	629,310.12	0.0
11/21/01	12:55	19689	1061	278	5.64	140.55	630,194.55	0.0
11/29/01	13:16	19880	1484	247	7.89	174.26	631,447.22	0.0
12/04/01	9:45	19990	1402	220	7.46	146.49	632,182.27	0.0
12/14/01	14:20	20234	1941	221	10.32	204.14	633,964.60	0.0
12/21/01	14:25	20401	1339	217	7.12	138.59	635,156.99	0.0
12/29/01	7:58	20589	995	225	5.29	106.47	636,116.80	0.0
01/02/02	11:28	20687	860	198	4.57	81.11	636,499.78	0.0
01/10/02	12:10	20874	1114	222	5.92	117.61	637,273.94	0.0
01/25/02	12:05	21236	1694	396	9.01	319.30	640,568.96	0.0
01/30/02	13:42	21357	1457	248	7.75	171.91	641,807.23	0.0
02/08/02	14:56	21573	1514	255	8.05	183.62	643,407.11	0.0
02/22/02	12:10	21811	841	345	4.47	138.00	645,001.79	0.0
02/27/02	13:50	21882	901	353	4.79	151.45	645,429.93	0.0
03/08/02	10:20	22089	863	290	4.59	119.01	646,596.26	0.0
03/11/02	15:10	22164	863	293	4.59	120.26	646,970.12	0.0
03/22/02	13:07	22428	337	228	1.79	36.57	647,832.74	0.0
03/28/02	7:51	22567	259	362	1.38	44.60	648,067.80	0.0
04/02/02	10:10	22688	810	344	4.31	132.80	648,515.01	0.0
04/09/02	13:00	22857	692	305	3.68	100.37	649,335.98	0.0
04/17/02	11:25	23046	604	247	3.21	71.10	650,011.14	0.0
04/23/02	10:10	23189	622	348	3.31	102.94	650,529.62	0.0
05/01/02	10:05	23381	622	216	3.31	63.88	651,196.91	0.0
05/08/02	12:44	23551	715	419	3.80	142.56	651,928.07	0.0
05/15/02	11:21	23718	587	365	3.12	102.01	652,778.98	0.0
05/22/02	9:15	23884	611	189	3.25	54.90	653,321.63	0.0
05/28/02	13:43	24032	784	335	4.17	124.86	653,875.89	0.0
06/04/02	9:30	24196	927	307	4.93	135.46	654,765.31	
06/14/02	10:10	24436	637	369	3.39	111.90	656,002.10	
06/20/02	10:40	24580	933	249	4.96	110.49	656,669.27	
06/28/02	10:18	24772	896	332	4.76	141.39	657,676.78	
07/03/02	10:50	24892	812	295	4.32	113.96	658,315.16	
07/10/02	9:25	25059	836	245	4.45	97.37	659,050.39	
07/20/02	12:04	25270	604	389	3.21	111.87	659,970.18	
07/28/02	8:10	25448	662	307	3.52	96.73	660,743.76	
07/31/02	9:56	25521	694	244	3.69	80.68	661,013.58	
08/08/02	10:45	25711	621	242	3.30	71.40	661,615.56	
08/13/02	8:50	25828	455	247	2.42	53.48	661,919.96	
08/20/02	14:20	26002	547	242	2.91	63.13	662,342.67	
08/30/02	14:25	26230	592	340	3.15	95.68	663,097.00	
09/06/02	13:10	26400	453	305	2.41	65.71	663,668.60	
09/09/02	8:07	26467	412	405	2.19	79.45	663,871.21	
09/19/02	14:15	26665	408	335	2.17	65.10	664,467.45	
09/25/02	7:30	26802	477	282	2.54	63.95	664,835.78	
10/01/02	13:40	26952	406	336	2.16	64.97	665,238.66	
10/08/02	9:05	27116	387	250	2.06	46.00	665,617.81	
10/17/02	13:10	27329	322	339	1.71	52.01	666,052.72	
10/26/02	10:36	27542	323	316	1.72	48.57	666,499.02	
11/01/02	13:05	27672	198	352	1.05	33.19	666,720.45	
11/08/02	13:38	27840	245	384	1.30	44.81	666,993.44	
11/15/02	14:40	27994	252	347	1.34	41.68	667,270.91	
11/22/02	10:26	28157	226	285	1.20	30.63	667,516.46	
11/25/02	14:56	28233	197	344	1.05	32.26	667,616.04	
12/04/02	13:12	28448	136	263	0.72	17.06	667,836.92	
12/14/02	14:10	28683	141	352	0.75	23.63	668,036.10	
12/19/02	14:10	28792	162	354	0.86	27.30	668,151.77	
12/23/02	8:05	28882	184	365	0.98	31.92	668,262.82	
12/31/02	11:52	29078	143	284	0.76	19.36	668,472.23	
01/09/03	13:05	29275	127	347	0.68	20.98	668,637.80	
01/15/03	13:45	29420	127	257	0.68	15.55	668,748.14	
01/22/03	14:10	29490	119	296	0.63	16.79	668,795.30	Hard calculate for hour meter
02/01/03	13:05	29490	163	358	0.87	27.79	668,860.32	
02/05/03	14:50	29490	136	388	0.72	25.14	668,937.52	
02/14/03	13:10	0.7	158	389	0.84	29.28	669,016.89	

Table 3.3

Cumulative Mass of Recovered Volatile Hydrocarbons
Air Sparging (AS) / Soil Vapor Extraction (SVE) System
MCB CAMP LEJEUNE - Hadnot Point Fuel Farm, South East
AS/SVE Field #2 (Fuel Farm)

Date	Time	SVE Blower Hour Meter (Hrs)	TH Conc ($PPM_{measured}$) (PPMv)	Calculated Vapor Flowrate (Q) (pitot tube) (SCFM)	TH Conc (C) (mg/l)	TH Recovery Rate (M) (lb/day)	Cumulative Mass of Hydrocarbons Recovered (lbs)	Comments
02/21/03	14:30	23	167	321	0.89	25.55	669,042.36	
02/26/03	7:50	132	166	329	0.88	25.97	669,159.34	
03/09/03	10:30	390	159	326	0.85	24.65	669,431.44	System start-up
03/13/03	8:15	485	152	258	0.81	18.64	669,517.12	
03/19/03	11:20	630	166	350	0.88	27.69	669,657.05	
03/28/03	12:10	847	278	355	1.48	46.94	669,994.45	
04/02/03	12:40	954	174	320	0.93	26.50	670,158.18	
04/13/03	12:45	1207	217	427	1.15	44.15	670,530.56	
04/16/03	13:30	1262	277	373	1.47	49.20	670,637.52	
04/23/03	9:00	1420	212	346	1.13	34.92	670,914.41	
05/01/03	14:05	1617	255	411	1.36	49.85	671,262.31	
05/08/03	14:40	1786	231	340	1.23	37.39	671,569.44	
05/14/03	12:40	1927	182	308	0.97	26.66	671,757.59	
05/25/03	9:05	2183	222	371	1.18	39.17	672,108.69	
05/30/03	9:40	2306	258	223	1.37	27.34	672,279.11	
06/03/03	11:30	2348	374	308	1.99	54.75	672,350.94	
06/13/03	10:00	2557	308	339	1.64	49.69	672,805.69	
06/20/03	12:45	2725	366	272	1.95	47.44	673,145.63	
06/27/03	8:15	2819	518	246	2.75	60.73	673,357.46	
07/01/03	8:50	2915	216	364	1.15	37.43	673,553.78	
07/08/03	12:45	2995	206	246	1.10	24.07	673,656.28	
07/18/03	13:55	3219	360	249	1.91	42.61	673,967.45	
07/26/03	10:25	3394	279	370	1.48	49.19	674,302.15	
07/29/03	13:30	3473	373	333	1.98	59.14	674,480.44	unable to sample 8/8/03
08/14/03	14:00	3830	315	278	1.68	41.73	675,230.68	
08/21/03	15:10	3950	436	332	2.32	68.82	675,507.06	
08/29/03	13:30	4138	501	275	2.66	65.48	676,033.06	
08/31/03	13:30	4179	417	300	2.22	59.61	676,140.08	Extrapolated Data

Notes:

$C = (PPM_{measured}) \times K \times (M_g/K_g) / 1000$

C: vapor concentration (mg/l)

$PPM_{measured}$: FID reading (PPM)

K: number of carbon atoms in calibration gas (1 in methane)

TH: total hydrocarbons calculated as gasoline (GRO)

$Q = (1-B) \times V \times A \times (P/P_{std}) \times (T_{std}/T)$

Q: vapor flowrate (SCFM)

B: percent water vapor in flowstream

V: vapor velocity (ft/min)

A: cross-sectional area (sq. ft)

P: gauge pressure of flowstream (" Hg)

P_{std}: standard pressure (29.92" Hg)

T: absolute temperature of flowstream (degrees Rankine)

T_{std}: standard temperature (528 degrees Rankine)

* = Estimated value

M = Q x C x 0.0895

M: hydrocarbon recovery rate (lb/day)

CM = [delta (blower meter hours)/24]
* [(Mprevious + Mcurrent)/2] + CMprevious

Assumptions:

Mg = 128 mg/mg-mole

Kg = 24.07 dsm^3/10^6 gm -mole

A = 0.349 sq.ft

Table 4.1

Groundwater Elevation Table

Hadnot Point Fuel Farm - North West

Camp Lejeune, North Carolina

Well No.	Well Type (depth)	Top of Casing	Date Measured	Depth (BTC)	Elev. (NGVD)	Date Measured	Depth (BTC)	Elev. (NGVD)	Date Measured	Depth (BTC)	Elev. (NGVD)	Date Measured	Depth (BTC)	Elev. (NGVD)	Date Measured	Depth (BTC)	Elev. (NGVD)	Date Measured	Depth (BTC)	Elev. (NGVD)
1115-1	shallow	26.11	Jan-01	7.41	18.70	Jul-01	7.82	18.29	Feb-02	9.86	16.25	Aug-02	9.36	16.75	Feb-03	9.05	17.06	Aug-03	6.66	19.45
1115-2	shallow	25.97	Jan-01	7.52	18.45	Jul-01	7.97	18.00	Feb-02	10.03	15.94	Aug-02	9.45	16.52	Feb-03	8.84	17.13	Aug-03	6.25	19.72
1115-4	shallow	27.31	Jan-01	4.67	22.64	Jul-01	5.09	22.22	Feb-02	5.87	21.44	Aug-02	2.50	24.81	Feb-03	2.10	25.21	Aug-03	1.82	25.49
1115-5	shallow	26.37	Jan-01	4.47	21.90	Jul-01	4.9	21.47	Feb-02	8.52	17.85	Aug-02	5.41	20.96	Feb-03	4.83	21.54	Aug-03	3.59	22.78
1115-7	shallow	26.28	Jan-01	NM	NM	Jul-01	NM	NM	Feb-02	7.98	18.30	Aug-02	7.36	18.92	Feb-03	NM	NM	Aug-03	NM	NM
1115-9	shallow	28.48	Jan-01	9.69	18.79	Jul-01	10.09	18.39	Feb-02	11.85	16.63	Aug-02	11.16	17.32	Feb-03	9.19	19.29	Aug-03	8.26	20.22
1115-10	shallow	25.92	Jan-01	5.34	20.58	Jul-01	5.75	20.17	Feb-02	7.49	18.43	Aug-02	6.53	19.39	Feb-03	5.64	20.28	Aug-03	4.08	21.84
1115-11	shallow	27.89	Jan-01	7.89	20.00	Jul-01	8.34	19.55	Feb-02	10.12	17.77	Aug-02	9.26	18.63	Feb-03	8.25	19.64	Aug-03	6.59	21.30
1115-12	shallow	26.17	Jan-01	5.01	21.16	Jul-01	5.4	20.77	Feb-02	6.71	19.46	Aug-02	5.89	20.28	Feb-03	5.05	21.12	Aug-03	3.68	22.49
GT-1	shallow	26.75	Jan-01	3.86	22.89	Jul-01	4.3	22.45	Feb-02	6.02	20.73	Aug-02	3.79	22.96	Feb-03	5.64	21.11	Aug-03	2.36	24.39
GT-9	shallow	26.48	Jan-01	4.76	21.72	Jul-01	5.18	21.30	Feb-02	6.73	19.75	Aug-02	5.90	20.58	Feb-03	5.22	21.26	Aug-03	4.19	22.29
78GW22-2	shallow	28.93	Jan-01	7.41	21.52	Jul-01	7.8	21.13	Feb-02	9.27	19.66	Aug-02	8.41	20.52	Feb-03	9.78	19.15	Aug-03	6.83	22.10
1115-13	intermediate	25.90	Jan-01	7.91	17.99	Jul-01	8.35	17.55	Feb-02	10.17	15.73	Aug-02	10.09	15.81	Feb-03	9.96	15.94	Aug-03	7.59	18.31
1115-14	intermediate	27.96	Jan-01	1.38	26.58	Jul-01	1.4	26.56	Feb-02	12.40	15.56	Aug-02	12.15	15.81	Feb-03	12.01	15.95	Aug-03	7.49	20.47
1115-15	intermediate	25.93	Jan-01	7.82	18.11	Jul-01	NM	NM	Feb-02	10.02	15.91	Aug-02	10.17	15.76	Feb-03	8.97	16.96	Aug-03	7.44	18.49
1115-17	intermediate	26.19	Jan-01	NM	NM	Jul-01	NM	NM	Feb-02	11.22	14.97	Aug-02	11.00	15.19	Feb-03	10.59	15.60	Aug-03	8.31	17.88
1115-18	intermediate	27.61	Jan-01	NM	NM	Jul-01	NM	NM	Feb-02	11.22	16.39	Aug-02	10.97	16.64	Feb-03	10.69	16.92	Aug-03	8.82	18.79
1115-21	intermediate	25.89	Jan-01	8.2	17.69	Jul-01	8.59	17.30	Feb-02	10.56	15.33	Aug-02	10.15	15.74	Feb-03	8.82	17.07	Aug-03	7.42	18.47
1115-22	deep	27.48	Jan-01	10.79	16.69	Jul-01	11.17	16.31	Feb-02	12.97	14.51	Aug-02	12.73	14.75	Feb-03	12.34	15.14	Aug-03	9.96	17.52
1115-23	deep	27.90	Jan-01	9.83	18.07	Jul-01	10.25	17.65	Feb-02	12.19	15.71	Aug-02	12.02	15.88	Feb-03	11.23	16.67	Aug-03	9.25	18.65
1115-24	deep	26.18	Jan-01	9.62	16.56	Jul-01	10	16.18	Feb-02	11.82	14.36	Aug-02	11.45	14.73	Feb-03	11.15	15.03	Aug-03	8.81	17.37
1115-25	deep	26.16	Jan-01	8.76	17.40	Jul-01	9.15	17.01	Feb-02	10.65	15.51	Aug-02	10.83	15.33	Feb-03	10.55	15.61	Aug-03	8.07	18.09
78-GW-19	deep	29.18	Jan-01	7.44	21.74	Jul-01	7.91	21.27	Feb-02	10.50	18.68	Aug-02	10.03	19.15	Feb-03	7.78	21.40	Aug-03	6.22	22.96

NM = Not Measured
All elevations are in feet above National Geodetic Vertical Datum (NGVD)

Table 4.2

Groundwater Elevation Table

Hadnot Point Fuel Farm - South East

Camp Lejeune, North Carolina

Well No.	Well Type (depth)	Top of Casing	Date Measured	Depth (BTC)	Elev. (NGVD)	Date Measured	Depth (BTC)	Elev. (NGVD)	Date Measured	Depth (BTC)	Elev. (NGVD)	Date Measured	Depth (BTC)	Elev. (NGVD)	Date Measured	Depth (BTC)	Elev. (NGVD)	Date Measured	Depth (BTC)	Elev. (NGVD)
HPFF-1	shallow	28.46	Jan-01	NM	NM	Jul-01	NM	NM	Feb-02	6.17	22.29	Aug-02	5.39	23.07	Feb-03	5.33	23.13	Aug-03	2.92	25.54
HPFF-3	shallow	31.21	Jan-01	8.79	22.42	Jul-01	9.15	22.06	Feb-02	11.89	19.32	Aug-02	11.17	20.04	Feb-03	10.71	20.50	Aug-03	8.03	23.18
HPFF-14	shallow	27.02	Jan-01	4.86	22.16	Jul-01	5.24	21.78	Feb-02	6.86	20.16	Aug-02	6.09	20.93	Feb-03	5.20	21.82	Aug-03	3.65	23.37
HPFF-17	shallow	27.61	Jan-01	NM	NM	Jul-01	NM	NM	Feb-02	11.22	16.39	Aug-02	10.59	17.02	Feb-03	NM	NM	Aug-03	NM	NM
HPFF-19	shallow	26.43	Jan-01	4.44	21.99	Jul-01	4.85	21.58	Feb-02	7.19	19.24	Aug-02	6.39	20.04	Feb-03	5.66	20.77	Aug-03	7.87	18.56
HPFF-20	shallow	28.74	Jan-01	6.29	22.45	Jul-01	6.72	22.02	Feb-02	9.68	19.06	Aug-02	8.92	19.82	Feb-03	8.67	20.07	Aug-03	6.29	22.45
HPFF-22	shallow	26.82	Jan-01	3.76	23.06	Jul-01	4.16	22.66	Feb-02	12.81	14.01	Aug-02	12.09	14.73	Feb-03	NM	NM	Aug-03	NM	NM
HPFF-24	shallow	31.37	Jan-01	10.27	21.10	Jul-01	10.68	20.69	Feb-02	11.82	19.55	Aug-02	11.16	20.21	Feb-03	11.74	19.63	Aug-03	9.92	21.45
HPFF-28	shallow	27.48	Jan-01	5.32	22.16	Jul-01	5.75	21.73	Feb-02	8.40	19.08	Aug-02	7.36	20.12	Feb-03	6.75	20.73	Aug-03	5.52	21.96
HPFF-30	shallow	26.80	Jan-01	3.62	23.18	Jul-01	3.89	22.91	Feb-02	6.59	20.21	Aug-02	5.39	21.41	Feb-03	3.94	22.86	Aug-03	3.90	22.90
HPFF-42	shallow	27.71	Jan-01	5.42	22.29	Jul-01	5.81	21.90	Feb-02	7.99	19.72	Aug-02	7.22	20.49	Feb-03	6.56	21.15	Aug-03	4.09	23.62
MW-1	shallow	30.18	Jan-01	7.99	22.19	Jul-01	8.42	21.76	Feb-02	11.00	19.18	Aug-02	10.39	19.79	Feb-03	9.52	20.66	Aug-03	7.39	22.79
MW-6	shallow	30.10	Jan-01	7.85	22.25	Jul-01	8.23	21.87	Feb-02	10.34	19.76	Aug-02	9.60	20.50	Feb-03	8.85	21.25	Aug-03	7.17	22.93
MW-10R	shallow	33.96	Jan-01	11.15	22.81	Jul-01	11.58	22.38	Feb-02	13.83	20.13	Aug-02	13.80	20.16	Feb-03	13.47	20.49	Aug-03	11.24	22.72
MW-17	shallow	31.33	Jan-01	9.69	21.64	Jul-01	10.15	21.18	Feb-02	12.85	18.48	Aug-02	12.09	19.24	Feb-03	11.78	19.55	Aug-03	9.62	21.71
MW-18	shallow	31.97	Jan-01	10.14	21.83	Jul-01	10.61	21.36	Feb-02	13.20/14.10*	19.37	Aug-02	12.64	19.33	Feb-03	11.93/12.18*	19.79	Aug-03	9.82	22.15
MW-19	shallow	32.18	Jan-01	10.57	21.61	Jul-01	11.01	21.17	Feb-02	13.91	18.27	Aug-02	9.25	22.93	Feb-03	12.43	19.75	Aug-03	9.07	23.11
HPFF-7	intermediate	28.28	Jan-01	8.46	19.82	Jul-01	8.92	19.36	Feb-02	11.00	17.28	Aug-02	10.79	17.49	Feb-03	9.85	18.43	Aug-03	8.12	20.16
HPFF-8	intermediate	34.90	Jan-01	14.33	20.57	Jul-01	14.76	20.14	Feb-02	17.37	17.53	Aug-02	16.64	18.26	Feb-03	16.11	18.79	Aug-03	13.46	21.44
HPFF-9	intermediate	27.13	Jan-01	6.81	20.32	Jul-01	7.22	19.91	Feb-02	10.49	16.64	Aug-02	9.78	17.35	Feb-03	9.07	18.06	Aug-03	7.56	19.57
78GW32-2	deep	26.87	Jan-01	8.12	18.75	Jul-01	8.52	18.35	Feb-02	10.73	16.14	Aug-02	11.23	15.64	Feb-03	9.78	17.09	Aug-03	6.89	19.98
78GW32-3	deep	27.20	Jan-01	8.46	18.74	Jul-01	8.94	18.26	Feb-02	11.22	15.98	Aug-02	10.70	16.50	Feb-03	10.16	17.04	Aug-03	7.85	19.35
HPFF-10	deep	32.50	Jan-01	13.01	19.49	Jul-01	13.46	19.04	Feb-02	15.86	16.64	Aug-02	15.70	16.80	Feb-03	14.35	18.15	Aug-03	11.99	20.51
HPFF-11	deep	32.28	Jan-01	12.76	19.52	Jul-01	13.23	19.05	Feb-02	15.55	16.73	Aug-02	15.08	17.20	Feb-03	14.47	17.81	Aug-03	11.81	20.47
HPFF-12	deep	27.12	Jan-01	8.33	18.79	Jul-01	8.74	18.38	Feb-02	10.77	16.35	Aug-02	15.01	12.11	Feb-03	10.05	17.07	Aug-03	7.68	19.44

NM = Not Measured
All elevations are in feet above National Geodetic Vertical Datum (NGVD)

CLJ - Hadnot Point - Bldg. 1115
Project #824603

Table 4.3
Analytical Data Summary
NW Sampling Event **February 2003 Organics**

Sampling Event:		2003-A	2003-A	2003-A	2003-A	2003-A	2003-A	2003-A	2003-A
Well ID:		MW-1115-23	MW-1115-18	78GW22-2	MW-1115-24	MW-1115-02	MW-1115-22	MW-1115-17	MW-1115-21
Well Depth:		Deep	Intermediate	Shallow	Deep	Shallow	Deep	Intermediate	Intermediate
Laboratory Sample ID:		F16645-4	N/A	F16645-2	F16662-2	F16662-3	F16662-4	F16662-5	F16662-1
Date Sampled:		02/18/03	02/20/03	02/17/03	02/19/03	02/19/03	02/19/03	02/19/03	02/19/03
Analyte (ug/l)	**Action Level**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
VOA EPA 602									
Benzene	1	**0.98 J**	N/A	**41.1**	**4120**	**125**	**1320**	**3490**	**727**
Ethylbenzene	29	<5.0	N/A	<1.0	<50	**6.6**	<20	**196**	**11.7**
Toluene	1000	<1.0	N/A	**0.65 J**	<50	**6.4**	**21**	<50	**7.8 J**
Xylenes (total)	530	<15.0	N/A	<3.0	<150	**3.7 J**	<60	<150	<30
Total BTEX		**0.98**		**41.75**	**4120**	**141.7**	**1341**	**3686**	**746.5**
PAH EPA 610									
Naphthalene	21	<5.1	N/A	<5.1	**23.6**	**11.2**	<5.1	**270**	**19.9**
		Bold type indicates detectable concentrations.							
		Shaded area indicates detectable concentrations above the groundwater quality standards.							

J= estimated
B= detected in blank
N/A= not applicable (unable to sample well MW-1115-18)

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Table 4.3
Analytical Data Summary
NW Sampling Event **February 2003 Organics**

Sampling Event:		2003-A	2003-A	2003-A	2003-A	2003-A	2003-A	2003-A
Well ID:		MW-1115-04	MW-1115-13	MW-1115-25	MW-GT-1	MW-1115-01	MW-GT-7	MW-GT-9
Well Depth:		Shallow	Intermediate	Deep	Shallow	Shallow	Shallow	Shallow
Laboratory Sample ID:		F16662-6	F16662-8	F16662-7	F16645-1	F16645-5	F16645-6	F16692-10
Date Sampled:		02/19/03	02/19/03	02/19/03	02/18/03	02/17/03	02/17/03	02/21/03
Analyte (ug/l)	**Action Level**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
VOA EPA 602								
Benzene	1	**128**	**872**	**2840**	**80**	**187**	**205**	**21.1**
Ethylbenzene	29	**13.7**	**62.2**	<50	**41**	<1.0	<1.0	**2**
Toluene	1000	**3.8**	**28.3**	**150**	**557**	**1.0**	<1.0	**2.5**
Xylenes (total)	530	<6.0	**21.5 J**	<150	**201**	**1.6 J**	<3.0	**1.3 J**
Total BTEX		**145.5**	**984**	**2990**	**879**	**189.6**	**205**	**26.9**
PAH EPA 610								
Naphthalene	21	**21.2**	**152**	**10**	**6.6**	<5.1	<5.4	**4.5 J**
		Bold type indicates detectable concentrations.						
		Shaded area indicates detectable concentrations above the groundwater quality standards.						

J= estimated
B= detected in blank
N/A= not applicable (unable to sample well MW-1115-18)

Printed: 12/10/2003
Samples analyzed by Accutest

CLJ - Hadnot Point - Bldg. 1115
Project #824603

Table 4.3
Analytical Data Summary
NW Sampling Event **February 2003 Natural Atten**

Sampling Event:		2003-A	2003-A	2003-A	2003-A	2003-A	2003-A	2003-A	2003-A	2003-A	2003-A
Well ID:		MW-1115-18	MW-1115-24	MW-1115-02	MW-1115-22	MW-1115-17	MW-1115-21	MW-1115-04	MW-1115-13	MW-1115-25	MW-GT-9
Well Depth:		Intermediate	Deep	Shallow	Deep	Intermediate	Intermediate	Shallow	Intermediate	Deep	Shallow
Laboratory Sample ID:		N/A	F16662-2	F16662-3	F16662-4	F16662-5	F16662-1	F16662-6	F16662-8	F16662-7	F16692-10
Date Sampled:		02/20/03	02/19/03	02/19/03	02/19/03	02/19/03	02/19/03	02/19/03	02/19/03	02/19/03	02/21/03
Analyte	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Field Parameters											
Depth to Water	feet	10.69	11.15	8.84	12.34	10.59	8.82	2.10	9.96	10.55	5.22
Temperature	°C	N/A	22.00	18.49	19.60	19.12	22.09	13.65	24.91	23.42	16.74
Conductivity	mS/m	N/A	0.645	0.114	0.437	2.007	0.124	0.149	4.599	0.473	0.571
Turbidity	NTU	N/A	0	215	0.8	17	177.1	7.1	63.8	2.1	96.2
pH	-	N/A	6.85	4.94	7.19	5.83	5.21	4.69	4.10	7.22	5.88
Dissolved Oxygen	mg/L	N/A	0.39	2.87	0.21	0.33	0.3	6.44	0.28	0.25	0.31
Oxidation-Reduction Potentia	mV	N/A	-125.2	215	-137.6	-91.8	33.8	168.2	184.5	-144.6	22.9
Laboratory Parameters											
Dissolved Ethane (RSK-175)	ug/L	N/A	**7.25**	<1.0	**11.2**	**2.22**	**3.4**	<1.0	**1.54**	**6.7**	<1.0
Dissolved Ethene (RSK-175)	ug/L	N/A	**1.08**	<1.0	**1.18**	<1.0	**3.4**	<1.0	<1.0	**8.28**	<1.0
Dissolved Methane (RSK-175	ug/L	N/A	**156**	**2.91**	**32.0**	**43.4**	**15.8**	**1.0**	**65.1**	**30.5**	**4.17**
Nitrate (9056)	mg/L	N/A	<0.10	**1.0**	<0.10	<0.10	<0.10	**0.11**	<0.10	<0.10	<0.10
Nitrite (9056)	mg/L	N/A	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.20	<0.10	<0.10
Nitrate-Nitrite (Calculation)	mg/L	N/A	<0.20	**1.0**	<0.20	<0.20	<0.20	<0.20	<0.30	<0.20	<0.20
Sulfate (9056)	mg/L	N/A	<20	**33.6**	<20	**1200**	**28.2**	**28.1**	**4340**	<20	**164**
TOC (415.1)	mg/L	N/A	**7.0**	**1.6**	**5.5**	**13.8**	**2.1**	**2.0**	**18.0**	**5.4**	**4.2**
Bold type indicates detectable concentrations.											

J= estimated
B= detected in blank
N/A= not applicable (unable to sample well MW-1115-18)

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Samples analyzed by Accutest

Table 4.3
Analytical Data Summary
NW Sampling Event **February 2003 Field Parameters**

Sampling Event:		2003-A	2003-A	2003-A	2003-A	2003-A
Well ID:		MW-1115-1	MW-GT-1	MW-1115-23	78GW22-2	MW-GT-7
Well Depth:		Shallow	Shallow	Deep	Shallow	Shallow
Date Sampled:		02/17/03	02/18/03	02/16/03	02/17/03	02/17/03
Analyte	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**
Field Parameters						
Depth to Water	feet	9.05	5.64	11.23	9.78	5.03
Temperature	°C	16.01	17.25	20.60	14.80	15.69
Conductivity	mS/m	0.17	0.2	7.603	0.456	0.19
Turbidity	NTU	153.1	1698	422	27.8	774
pH	-	4.78	5.18	6.37	5.99	5.41
Dissolved Oxygen	mg/L	1.96	0.55	0.7	0.43	0.74
Oxidation-Reduction Potentia	mV	307	116.1	-102.3	-29.2	23.3

J= estimated
B= detected in blank
N/A= not applicable (unable to sample well MW-1115-18)

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Samples analyzed by Accutest

CLJ - Hadnot Point - Bldg. 1115
Project #824603

Table 4.4
Analytical Data Summary
NW Sampling Event **August 2003 Organics**

Sampling Event:		2003-C	2003-C	2003-C	2003-C	2003-C	2003-C	2003-C	2003-C
Well ID:		MW-1115-23	MW-1115-18	78GW22-2	MW-1115-24	MW-1115-02	MW-1115-22	MW-1115-17	MW-1115-21
Well Depth:		Deep	Intermediate	Shallow	Deep	Shallow	Deep	Intermediate	Intermediate
Laboratory Sample ID:		F19133-7	F19133-3	F19133-8	F19117-2	F19117-3	F19117-4	F19117-5	F19117-1
Date Sampled:		08/20/03	08/20/03	08/20/03	08/19/03	08/19/03	08/19/03	08/19/03	08/19/03
Analyte (ug/l)	**Action Level**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
VOA EPA 602									
Benzene	1	**260**	**215**	**17.2**	**3990**	**3.1**	**1930**	**84.3**	**485**
Ethylbenzene	29	**5.2**	**4.1**	<1.0	<50	<1.0	**4.4**	**63.4**	<1.0
Toluene	1000	**2.2**	**1.4 J**	<1.0	<50	<1.0	<10	<2.0	<1.0
Xylenes (total)	530	**7.6**	**4.6 J**	<3.0	<150	<3.0	**1.0 J**	<5.0	<3.0
Total BTEX		**275**	**225.1**	**17.2**	**3990**	**3.1**	**1935.4**	**147.7**	**485**
PAH EPA 610									
Naphthalene	21	<5.4	**2.7 J**	<5.2	**6.7**	<5.3	**4.8 J**	**332**	**7.0**
		Bold type indicates detectable concentrations.							
		Shaded area indicates detectable concentrations above the groundwater quality standards.							

J= estimated
B= detected in blank

Printed: 12/10/2003
Samples analyzed by Accutest

Table 4.4
Analytical Data Summary
NW Sampling Event **August 2003 Organics**

Sampling Event:		2003-C	2003-C	2003-C	2003-C	2003-C	2003-C	2003-C
Well ID:		MW-1115-04	MW-1115-13	MW-1115-25	MW-GT-1	MW-1115-01	MW-GT-7	MW-GT-9
Well Depth:		Shallow	Intermediate	Deep	Shallow	Shallow	Shallow	Shallow
Laboratory Sample ID:		F19117-6	F19133-6	F19187-1	F19187-2	F19133-1	F19133-2	F19133-4
Date Sampled:		08/19/03	08/20/03	08/22/03	08/22/03	08/20/03	08/20/03	08/20/03
Analyte (ug/l)	**Action Level**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
VOA EPA 602								
Benzene	1	<1.0	**340**	**3300**	<1.0	<1.0	**235**	<1.0
Ethylbenzene	29	<1.0	**72.4**	**8.2**	<1.0	<1.0	**0.63 J**	<1.0
Toluene	1000	<1.0	<2.0	**292**	<1.0	<1.0	**0.65 J**	<1.0
Xylenes (total)	530	<3.0	**16.6**	**15.3**	<3.0	<3.0	<3.0	<3.0
Total BTEX			**429**	**3615.5**			**236.28**	
PAH EPA 610								
Naphthalene	21	<5.5	**155**	<5.2	<5.4	<5.3	<5.0	<5.3
		Bold type indicates detectable concentrations.						
		Shaded area indicates detectable concentrations above the groundwater quality standards.						

J= estimated
B= detected in blank

Printed: 12/10/2003
Samples analyzed by Accutest

CLJ - Hadnot Point - Bldg. 1115
Project #824603

Table 4.4
Analytical Data Summary
NW Sampling Event **August 2003 Natural Atten**

Sampling Event:		2003-C	2003-C	2003-C	2003-C	2003-C	2003-C	2003-C	2003-C	2003-C	2003-C
Well ID:		MW-1115-18	MW-1115-24	MW-1115-02	MW-1115-22	MW-1115-17	MW-1115-21	MW-1115-04	MW-1115-13	MW-1115-25	MW-GT-9
Well Depth:		Intermediate	Deep	Shallow	Deep	Intermediate	Intermediate	Shallow	Intermediate	Deep	Shallow
Laboratory Sample ID:		F19133-3	F19117-2	F19117-3	F19117-4	F19117-5	F19117-1	F19117-6	F19133-6	F19187-1	F19133-4
Date Sampled:		08/20/03	08/19/03	08/19/03	08/19/03	08/19/03	08/19/03	08/19/03	08/20/03	08/22/03	08/20/03
Analyte	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Field Parameters											
Depth to Water	feet	8.82	8.81	6.25	9.96	8.31	7.42	1.82	7.59	8.07	4.19
Temperature	°C	20.94	22.79	26.02	20.63	20.06	23.06	24.18	26.01	24.00	23.02
Conductivity	mS/m	1.215	0.534	0.96	0.377	2.43	0.109	0.128	3.592	0.414	0.351
Turbidity	NTU	70.4	0	11.3	0	0	1.6	0	35.6	3.2	225.3
pH	-	6.45	6.79	4.88	7.08	5.79	5.13	4.91	3.96	7.09	5.77
Dissolved Oxygen	mg/L	1.87	3.46	5.18	2.92	3.28	4.05	8.76	3.78	1.92	2.87
Oxidation-Reduction Potentia	mV	-48.2	-86.1	238.5	-125.6	3.3	96.4	184.3	204.8	-150.4	43.9
Laboratory Parameters											
Dissolved Ethane (RSK-175)	ug/L	<1.0	**7.36**	<1.0	**9.54**	**3.26**	**0.73 J**	<1.0	**2.0**	**11.6**	<1.0
Dissolved Ethene (RSK-175)	ug/L	<1.0	<1.0	<1.0	**2.2**	<1.0	<1.0	<1.0	<1.0	**9.5**	<1.0
Dissolved Methane (RSK-175	ug/L	**5.53**	**183**	<0.5	**36.7**	**120**	**23.7**	**27.3**	**77.9**	**47.6**	**31.6**
Nitrate (9056)	mg/L	<0.1	<0.1	**0.53**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite (9056)	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2.5	<0.1	<0.1
Nitrate-Nitrite (Calculation)	mg/L	<0.2	<0.2	**0.53**	<0.2	<0.2	<0.2	<0.2	<2.6	<0.2	<0.2
Sulfate (9056)	mg/L	**371**	<20	**37**	<20	**2010**	**31.2**	**35**	**4280**	<20	**117**
TOC (415.1)	mg/L	**21.8**	**6.3**	<1.0	**4.5**	**18.7**	<1.0	<1.0	**18.2**	**6.0**	**2.1**
Bold type indicates detectable concentrations.											

J= estimated
B= detected in blank

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Table 4.4
Analytical Data Summary
NW Sampling Event **August 2003 Field Parameters**

Sampling Event:		2003-C	2003-C	2003-C	2003-C	2003-C
Well ID:		MW-1115-1	MW-GT-1	MW-1115-23	78GW22-2	MW-GT-7
Well Depth:		Shallow	Shallow	Deep	Shallow	Shallow
Date Sampled:		08/20/03	08/22/03	08/20/03	08/20/03	08/20/03
Analyte	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**
Field Parameters						
Depth to Water	feet	6.66	2.36	9.25	6.83	3.59
Temperature	°C	26.78	28.64	21.06	22.81	26.99
Conductivity	mS/m	0.151	0.225	2.151	0.271	0.116
Turbidity	NTU	14.1	48.2	10.6	8.7	1552.4
pH	-	4.51	4.78	6.33	5.70	6.20
Dissolved Oxygen	mg/L	3.76	1.94	3.81	2.99	9.29
Oxidation-Reduction Potentia	mV	349.5	169.8	-52.6	55.8	63.7

J= estimated
B= detected in blank

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Samples analyzed by Accutest

CLJ - Hadnot Point - Bldg. 1115
Project #824603

Table 4.5
Analytical Data Summary
SE Sampling Event **February 2003 Organics**

Sampling Event:		2003-A	2003-A	2003-A	2003-A	2003-A	2003-A	2003-A	2003-A
Well ID:		HPFF-20	MW-11	HPFF-7	HPFF-1	MW-1	MW-18	GW-32-2	GW-32-3
Well Depth:		Shallow	Shallow	Intermediate	Shallow	Shallow	Shallow	Deep	Deep
Laboratory Sample ID:		F16645-15	F16645-14	F16692-9	F16692-1	F16645-12	F16645-9	F16692-6	F16692-7
Date Sampled:		02/18/03	02/18/03	02/21/03	02/21/03	02/17/03	02/18/03	02/21/03	02/21/03
Analyte (ug/l)	**Action Level**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
VOA EPA 602									
Benzene	1	**3280**	**274**	**9.5**	**32.3**	**5380**	**16900**	**109**	**7.1**
Ethylbenzene	29	**551**	**98.3**	**5.4**	**2.4**	**2280**	**1370**	**1.9**	**1.3**
Toluene	1000	**7630**	**1160**	**1.8**	**4.5**	**22000**	**30000**	**1.7**	**1.2**
Xylenes (total)	530	**2330**	**501**	**1.2 J**	**2.4 J**	**11600**	**7670**	**1.7 J**	<3.0
Total BTEX		**13791**	**2033.3**	**17.9**	**41.6**	**41260**	**55940**	**114.3**	**9.6**
PAH EPA 610									
Naphthalene	21	**104**	**7.5**	**3.2 J**	**6.1**	**415**	**464**	<5.1	**2.7 J**
		Bold type indicates detectable concentrations.							
		Shaded area indicates detectable concentrations above the groundwater quality standards.							

J= estimated
B= detected in blank

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Table 4.5
Analytical Data Summary
SE Sampling Event **February 2003 Organics**

Sampling Event:		2003-A	2003-A	2003-A	2003-A	2003-A	2003-A	2003-A	2003-A
Well ID:		HPFF-19	MW-17A	HPFF-8	MW-10R	HPFF-5	HPFF-9	HPFF-11	HPFF-4
Well Depth:		Shallow	Shallow	Intermediate	Shallow	Shallow	Intermediate	Deep	Shallow
Laboratory Sample ID:		F16645-10	F16692-4	F16692-2	F16645-11	F16692-5	F16692-6	F16692-3	F16645-8
Date Sampled:		02/18/03	02/21/03	02/21/03	02/17/03	02/21/03	02/21/03	02/21/03	02/18/03
Analyte (ug/l)	**Action Level**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
VOA EPA 602									
Benzene	1	**16300**	**5720**	**10900**	**2340**	**674**	**22600**	**489**	<1.0
Ethylbenzene	29	**1420**	**3260**	**878**	**352**	**33.6**	**363**	**63.6**	<1.0
Toluene	1000	**17800**	**22800**	**2150**	**2380**	**4.6**	**62.4**	**580**	<1.0
Xylenes (total)	530	**6630**	**11300**	**2610**	**2260**	**9.9**	**137 J**	**187**	<3.0
Total BTEX		**42150**	**43080**	**16538**	**7332**	**722.1**	**23162.4**	**1319.6**	
PAH EPA 610									
Naphthalene	21	**220**	**415**	**173**	**55.5**	**6.4**	**70.1**	**8**	<5.1
		Bold type indicates detectable concentrations.							
		Shaded area indicates detectable concentrations above the groundwater quality standards.							

J= estimated
B= detected in blank

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Samples analyzed by Accutest

Table 4.5
Analytical Data Summary
SE Sampling Event **February 2003 Natural Atten**

Sampling Event:		2003-A	2003-A	2003-A	2003-A	2003-A	2003-A	2003-A	2003-A	2003-A
Well ID:		HPFF-7	HPFF-1	GW-32-2	GW-32-3	MW-17A	HPFF-8	HPFF-5	HPFF-9	HPFF-11
Well Depth:		Intermediate	Shallow	Deep	Deep	Shallow	Intermediate	Shallow	Intermediate	Deep
Laboratory Sample ID:		F16692-9	F16692-1	F16692-6	F16692-7	F16692-4	F16692-2	F16692-5	F16692-6	F16692-3
Date Sampled:		02/21/03	02/21/03	02/21/03	02/21/03	02/21/03	02/21/03	02/21/03	02/21/03	02/21/03
Analyte	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Field Parameters										
Depth to Water	feet	9.85	5.33	9.78	10.16	11.78	16.11	7.99	9.07	14.47
Temperature	°C	19.22	16.44	22.36	21.06	17.82	20.25	18.06	21.02	20.50
Conductivity	mS/m	0.793	0.137	0.608	0.315	0.29	0.489	0.206	0.747	0.459
Turbidity	NTU	11	103.9	3.1	0	23.8	18	327	100	173
pH	-	6.65	5.04	7.01	7.52	6.37	6.63	5.73	6.90	8.72
Dissolved Oxygen	mg/L	0.22	1.52	0.46	0.11	0.28	0.15	3.98	0.18	0.24
Oxidation-Reduction Potentia	mV	-93	221.9	-101.8	-157.3	-80.7	-119	-4.8	-151.9	-148
Laboratory Parameters										
Dissolved Ethane (RSK-175)	ug/L	<1.0	<1.0	**2.1**	<1.0	**13.4**	**10.7**	**0.66 J**	**6.06**	**1.1**
Dissolved Ethene (RSK-175)	ug/L	<1.0	<1.0	<1.0	<1.0	**6.05**	**12.2**	<1.0	**0.84**	**0.82 J**
Dissolved Methane (RSK-175	ug/L	**65.5**	**0.35 J**	**16.9**	**5.63**	**326**	**38.4**	**42.3**	**190**	**13.5**
Nitrate (9056)	mg/L	<0.10	**0.75**	<0.10	<0.10	<0.10	<0.10	<0.10	**0.1**	<0.10
Nitrite (9056)	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Nitrate-Nitrite (Calculation)	mg/L	<0.20	**0.75**	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Sulfate (9056)	mg/L	**50.8**	**44**	<20	<20	<20	<20	**41.4**	**27.2**	**32.4**
TOC (415.1)	mg/L	**2.6**	**4.7**	**6.7**	**1.3**	**59.4**	**37.4**	**16.2**	**18.7**	**3.4**
Bold type indicates detectable concentrations.										

J= estimated
B= detected in blank

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Samples analyzed by Accutest

Table 4.5
Analytical Data Summary
SE Sampling Event **February 2003 Field Parameters**

Sampling Event:		2003-A	2003-A	2003-A	2003-A	2003-A	2003-A
Well ID:		MW-11	HPFF-19	HPFF-20	MW-1	MW-10R	MW-18
Well Depth:		Shallow	Shallow	Shallow	Shallow	Shallow	Shallow
Date Sampled:		02/18/03	02/18/03	02/18/03	02/17/03	02/17/03	02/18/03
Analyte	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Field Parameters							
Depth to Water	feet	7.94	5.66	8.67	9.52	13.47	12.18
Temperature	°C	14.08	14.70	15.19	14.94	12.82	18.87
Conductivity	mS/m	0.545	0.216	0.262	0.116	0.888	0.156
Turbidity	NTU	1180	223	71.3	77.8	254.3	1
pH	-	5.58	5.78	5.95	5.60	6.18	5.37
Dissolved Oxygen	mg/L	1.23	0.36	0.39	0.36	5.81	0.49
Oxidation-Reduction Potentia	mV	37.7	-79	-78.1	56.3	-49.4	98.6

J= estimated
B= detected in blank

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Samples analyzed by Accutest

CLJ - Hadnot Point - Bldg. 1115
Project #824603

Table 4.6
Analytical Data Summary
SE Sampling Event **August 2003 Organics**

Sampling Event:		2003-C	2003-C	2003-C	2003-C	2003-C	2003-C	2003-C	2003-C
Well ID:		HPFF-20	MW-11	HPFF-7	HPFF-1	MW-1	MW-18	GW-32-2	GW-32-3
Well Depth:		Shallow	Shallow	Intermediate	Shallow	Shallow	Shallow	Deep	Deep
Laboratory Sample ID:		F19271-1	F19188-4	F19188-2	F19188-1	F19271-5	F19271-4	F19208-5	F19234-1
Date Sampled:		08/27/03	08/22/03	08/22/03	08/22/03	08/27/03	08/27/03	08/25/03	08/26/03
Analyte (ug/l)	**Action Level**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
VOA EPA 602									
Benzene	1	**6020**	**957**	**0.79 J**	<1.0	**6670**	**5440**	**176**	**0.64 J**
Ethylbenzene	29	**112**	**19.5**	**1.1**	<1.0	**3950**	**1930**	<5.0	**1.4**
Toluene	1000	**8790**	**319**	<1.0	<1.0	**26200**	**15100**	**3.5 J**	**2.4**
Xylenes (total)	530	**6770**	**378**	<3.0	<3.0	**17200**	**11700**	<15	**10.5**
Total BTEX		**21692**	**1673.5**	**1.89**		**54020**	**34170**	**179.5**	**14.94**
PAH EPA 610									
Naphthalene	21	<5.1	<5.4	<5.8	<5.2	**417**	**768**	<5.1	<5.5
		Bold type indicates detectable concentrations.							
		Shaded area indicates detectable concentrations above the groundwater quality standards.							

J= estimated
B= detected in blank

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Samples analyzed by Accutest

Table 4.6
Analytical Data Summary
SE Sampling Event **August 2003 Organics**

Sampling Event:		2003-C	2003-C	2003-C	2003-C	2003-C	2003-C	2003-C
Well ID:		HPFF-19	MW-17A	HPFF-8	MW-10R	HPFF-5	HPFF-9	HPFF-11
Well Depth:		Shallow	Shallow	Intermediate	Shallow	Shallow	Intermediate	Deep
Laboratory Sample ID:		F19271-2	F19208-4	F19208-3	F19271-3	F19208-1	F19188-3	F19208-2
Date Sampled:		08/27/03	08/25/03	08/25/03	08/27/03	08/25/03	08/22/03	08/25/03
Analyte (ug/l)	**Action Level**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
VOA EPA 602								
Benzene	1	**7760**	**6830**	**7420**	**2830**	**44.2**	**4090**	**348**
Ethylbenzene	29	**481**	**3860**	**740**	**843**	**5.2**	**96.4**	<5.0
Toluene	1000	**10600**	**27200**	**1690**	**5070**	**13.4**	<5.0	<5.0
Xylenes (total)	530	**12800**	**13900**	**2130**	**4830**	**7.4**	**9.2 J**	<15
Total BTEX		**31641**	**51790**	**11980**	**13573**	**70.2**	**4195.6**	**348**
PAH EPA 610								
Naphthalene	21	**266**	**415**	**184**	**212**	<5.3	**13.6**	<5.2
		Bold type indicates detectable concentrations.						
		Shaded area indicates detectable concentrations above the groundwater quality standards.						

J= estimated
B= detected in blank

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Table 4.6
Analytical Data Summary
SE Sampling Event **August 2003 Natural Atten**

Sampling Event:		2003-C	2003-C	2003-C	2003-C	2003-C	2003-C	2003-C	2003-C	2003-C
Well ID:		HPFF-7	HPFF-1	GW-32-2	GW-32-3	MW-17A	HPFF-8	HPFF-5	HPFF-9	HPFF-11
Well Depth:		Intermediate	Shallow	Deep	Deep	Shallow	Intermediate	Shallow	Intermediate	Deep
Laboratory Sample ID:		F19188-2	F19188-1	F19208-5	F19234-1	F19208-4	F19208-3	F19208-1	F19188-3	F19208-2
Date Sampled:		08/22/03	08/22/03	08/25/03	08/26/03	08/25/03	08/25/03	08/25/03	08/22/03	08/25/03
Analyte	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Field Parameters										
Depth to Water	feet	8.12	2.92	6.89	7.85	9.62	13.46	5.27	7.56	11.81
Temperature	°C	19.91	23.45	22.92	21.20	22.89	20.13	28.66	22.75	21.03
Conductivity	mS/m	0.712	0.15	0.697	0.341	0.264	0.543	0.291	0.743	0.612
Turbidity	NTU	3.7	11.6	4.5	2.9	27.8	2.5	9	35.5	10
pH	-	6.49	4.53	6.81	7.44	5.99	6.43	5.69	6.62	7.01
Dissolved Oxygen	mg/L	2.26	5.34	0.33	0.13	1.93	0.9	1.13	1.32	1.32
Oxidation-Reduction Potentia	mV	-56.6	215.2	-96.4	-186.1	-31	-130.7	11.5	-73.7	-109.3
Laboratory Parameters										
Dissolved Ethane (RSK-175)	ug/L	<1.0	<1.0	**3.42**	<1.0	**14.2**	**8.84**	**0.65 J**	**6.94**	<1.0
Dissolved Ethene (RSK-175)	ug/L	<1.0	<1.0	<1.0	<1.0	**6.51**	**9.55**	<1.0	<1.0	<1.0
Dissolved Methane (RSK-175	ug/L	**67.8**	**5.05**	**24.6**	**8.94**	**274**	**38.2**	**83.5**	**187**	**14.2**
Nitrate (9056)	mg/L	<0.1	**2.0**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite (9056)	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrate-Nitrite (Calculation)	mg/L	<0.2	**2.0**	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Sulfate (9056)	mg/L	**71.6**	**55.6**	<20	<20	<20	<20	**50.7**	**93.3**	**38.5**
TOC (415.1)	mg/L	**1.8**	**2.9**	**12**	<1.0	**55.9**	**55.5**	**4.9**	**23.1**	**2.5**
Bold type indicates detectable concentrations.										

J= estimated
B= detected in blank

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Samples analyzed by Accutest

Table 4.6
Analytical Data Summary
SE Sampling Event **August 2003 Field Parameter**

Sampling Event:		2003-C	2003-C	2003-C	2003-C	2003-C	2003-C
Well ID:		MW-11	HPFF-19	HPFF-20	MW-1	MW-10R	MW-18
Well Depth:		Shallow	Shallow	Shallow	Shallow	Shallow	Shallow
Date Sampled:		08/22/03	08/27/03	08/27/03	08/27/03	08/27/03	08/27/03
Analyte	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Field Parameters							
Depth to Water	feet	5.46	7.87	6.29	7.39	11.24	9.82
Temperature	°C	23.97	27.18	24.52	23.31	23.57	NA
Conductivity	mS/m	0.521	0.165	0.204	0.119	1.047	NA
Turbidity	NTU	67	115.6	36.6	14.2	6.3	NA
pH	-	3.53	5.91	6.32	5.15	6.36	NA
Dissolved Oxygen	mg/L	13.8	3.06	0.22	0.33	3.19	NA
Oxidation-Reduction Potentia	mV	369.5	2.5	-118.6	75.1	-111.1	NA

J= estimated
B= detected in blank

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Samples analyzed by Accutest

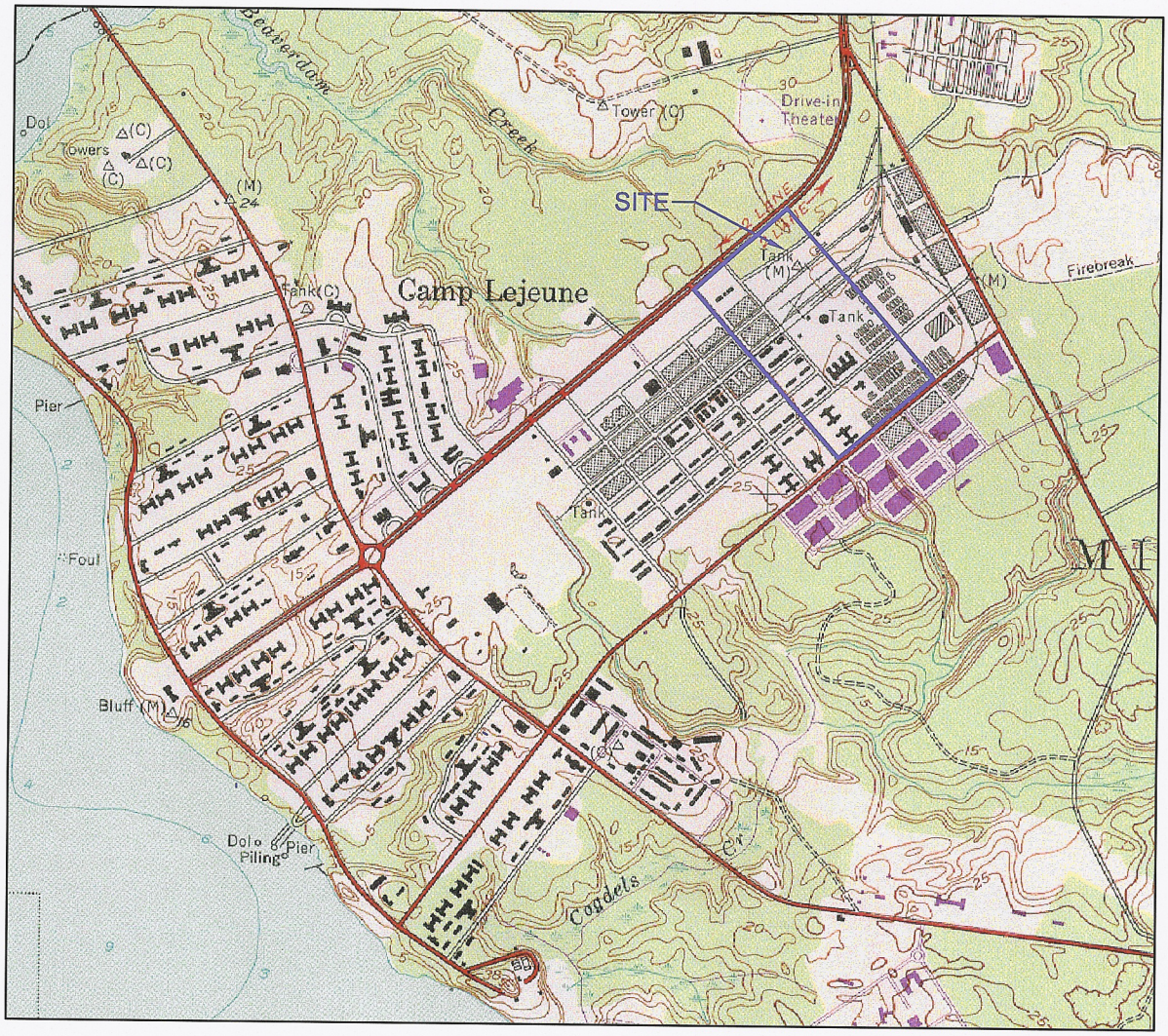
Table 6.1
Hadnot Point Fuel Farm, Northwest Compound
Groundwater Sample Collection and Analysis Table

Analysis	Type II Shallow Monitoring Wells						Type III Intermediate Monitoring Wells				Type III Deep Monitoring Wells			
	MW-1111-01	MW-1115-02	MW-1115-04	MW-GT-1	MW-GT-7	78GW22-2	MW-1115-13	MW-1115-17	MW-1115-18	MW-1115-21	MW-1115-22	MW-1115-23	MW-1115-24	MW-1115-25
Field Screening														
Temperature	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Conductivity	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Turbidity	X	X	X	X	X	X	X	X	X	X	X	X	X	X
pH	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Dissolved Oxygen	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ORP	X	X	X	X	X	X	X	X	X	X	X	X	X	X
VOAs Method 602	X	X	X	X	X	X	X	X	X	X	X	X	X	X
PAHs Method 610	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Natural Attenuation														
Ethane RSK-175		X	X			X	X	X	X	X	X		X	X
Ethene RSK-175		X	X			X	X	X	X	X	X		X	X
Methane RSK-175		X	X			X	X	X	X	X	X		X	X
Nitrite 354.1		X	X			X	X	X	X	X	X		X	X
Nitrate 353.2		X	X			X	X	X	X	X	X		X	X
Nitrite-Nitrate 353.2		X	X			X	X	X	X	X	X		X	X
Sulfate 375.4		X	X			X	X	X	X	X	X		X	X
Total Organic Carbon 415.1		X	X			X	X	X	X	X	X		X	X

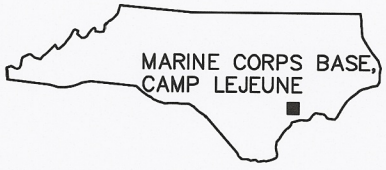
Table 6.2
Hadnot Point Fuel Farm, Southeast Compound
Groundwater Sample Collection and Analysis Table

Analysis	Type II Shallow Monitoring Wells									Type III Intermediate Wells			Type III Deep Wells		
	MW-1	MW-10R	MW-11	MW-17A	MW-18	HPFF-1	HPFF-5	HPFF-19	HPFF-20	HPFF-7	HPFF-8	HPFF-9	78GW32-2	78GW32-3	HPFF-11
Field Screening															
Temperature	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Conductivity	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Turbidity	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
pH	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Dissolved Oxygen	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ORP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
VOAs Method 602	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
PAHs Method 610	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Natural Attenuation															
Ethane RSK-175				X		X	X			X	X	X	X	X	X
Ethene RSK-175				X		X	X			X	X	X	X	X	X
Methane RSK-175				X		X	X			X	X	X	X	X	X
Nitrite 354.1				X		X	X			X	X	X	X	X	X
Nitrate 353.2				X		X	X			X	X	X	X	X	X
Nitrite-Nitrate 353.2				X		X	X			X	X	X	X	X	X
Sulfate 375.4				X		X	X			X	X	X	X	X	X
Total Organic Carbon 415.1				X		X	X			X	X	X	X	X	X

FIGURES



SCALE: 1" = 2000'



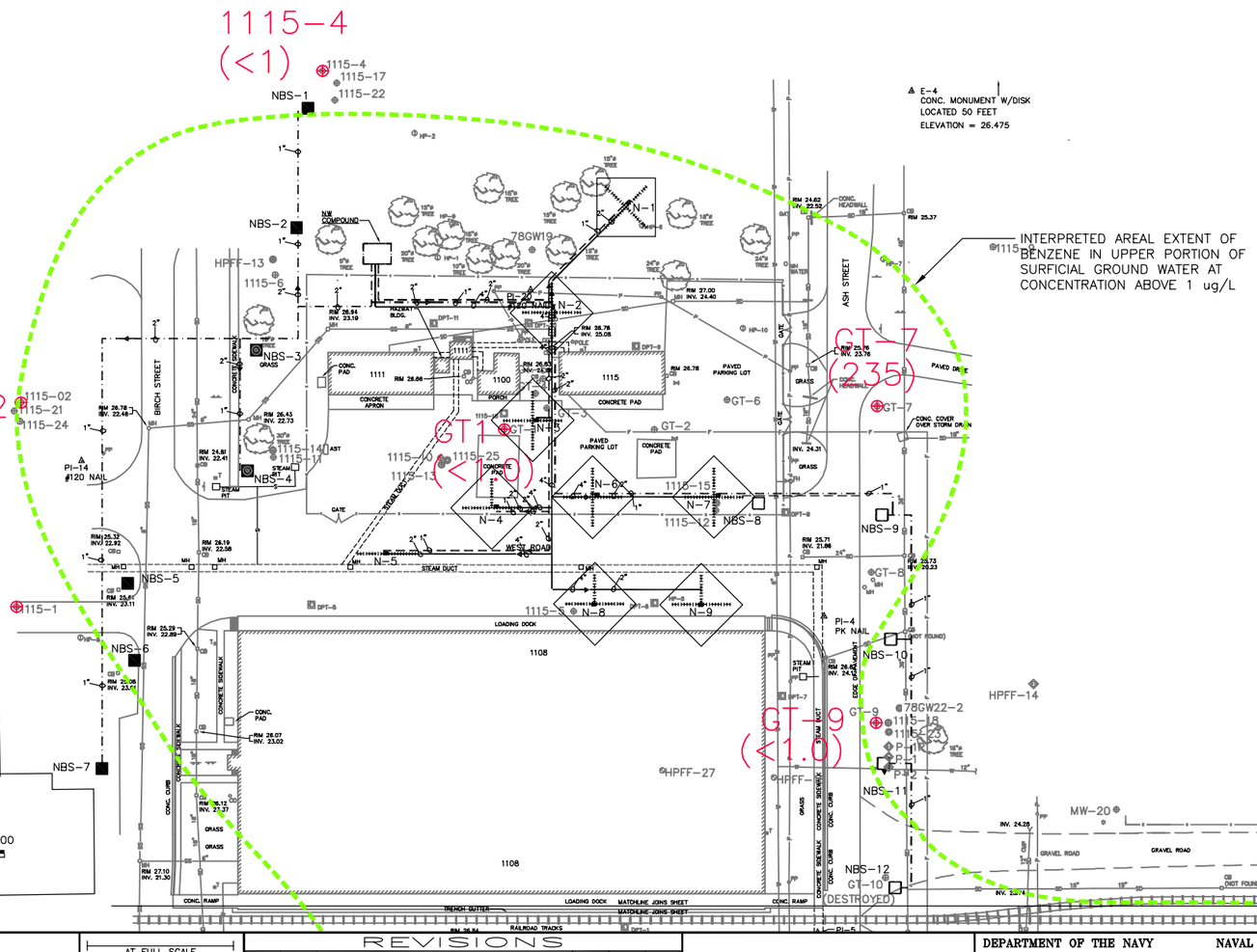
SOURCE:
U.S.G.S 7 1/2 MINUTE QUADRANGLE
MAP CAMP LEJEUNE, N.C.

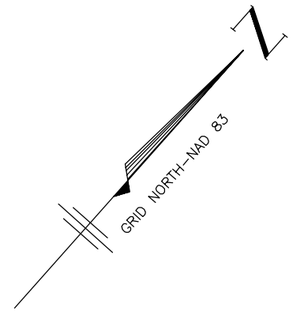
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DRAWN BY	J. LANGE	9/22/00
CHECKED BY	T. McCRORY	9/22/00
APPROVED BY	J. DUNN	9/22/00

REV.	SHEET #	PROJECT NO.
0	–	

FIGURE 1.2
LOCATION MAP
HADNOT POINT FUEL FARM
MARINE CORPS BASE
CAMP LEJEUNE





LEGEND

- HORIZONTAL VAPOR COLLECTION LINE
- D — FREE PRODUCT PLUME AREA
- ESTIMATED EXTENT OF FREE PRODUCT PLUME BASED ON LATEST WELL INFORMATION
- INTERPRETED AREAL EXTENT OF BENZENE IN UPPER PORTION OF SURFICAL GROUND WATER AT CONCENTRATION ABOVE 1 ug/L
- 1115-4 (<1) — BENZENE ug/l (August 2003)

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DESIGNED: BOB BROWN
CHECKED: RON KENYON
CHECKED: JIM DUNN

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DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING COMMAND

ATLANTIC DIVISION

NAVAL STATION — NORFOLK, VIRGINIA

CONTRACT N62470-97-D-5000 — TASK ORDER NO. 0014

OHM PROJECT No. 827235 — MARINE CORPS, CAMP LEJEUNE, N.C.

FIGURE 3.1
EXISTING AS/SVE REMEDIAL SYSTEM
NW COMPOUND
HADNOT POINT FUEL FARM

DRAWING NUMBER:

SHEET NUMBER: of

DATE: 10/10/03

INTERPRETED AREAL EXTENT OF BENZENE IN UPPER PORTION OF SURFICIAL GROUND WATER AT CONCENTRATIONS ABOVE 1 ug/L

MW-11 (957)

HPFF-1 (<1.0)

HPFF-5 (44.2)

HPFF-19 (7,760)

HPFF-15

MW-10R (2,830)

MW-1 (6,670)

HPFF-72

HPFF-20 (6,020)

C

D

INTERPRETED AREAL EXTENT OF BENZENE IN UPPER PORTION OF SURFICIAL GROUND WATER AT CONCENTRATIONS ABOVE 1 ug/L

GRID NORTH-NAD 83

LEGEND

- HORIZONTAL VAPOR COLLECTION LINE
- ESTIMATED EXTENT OF FREE PRODUCT PLUME BASED ON LATEST WELL INFORMATION
- INTERPRETED AREAL EXTENT OF BENZENE IN UPPER PORTION OF SURFICAL GROUND WATER AT CONCENTRATION ABOVE 1 ug/L
- MW-1 (7,700) BENZENE ug/l (August 2003)

0 50 100
SCALE IN FEET

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DESIGNED: BOB BROWN
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ATLANTIC DIVISION

NAVAL STATION NORFOLK, VIRGINIA

CONTRACT N62470-97-D-5000 TASK ORDER NO. 0014

OHM PROJECT No. 827235 MARINE CORPS, CAMP LEJEUNE, N.C.

FIGURE 3.2
EXISTING AS/SVE REMEDIAL SYSTEM
SE COMPOUND
HADNOT POINT FUEL FARM

DRAWING NUMBER:

SHEET NUMBER: of

DATE: 10/10/03

LEGEND:

(20.86) SHALLOW MONITORING WELL

(18.61) INTERMEDIATE MONITORING WELL

(19.22) DEEP MONITORING WELL

(25.21)
1115-4
1115-17 (15.60)
1115-22
(15.14)

NBS-1
NBS-2
NBS-3
NBS-4
NBS-5
NBS-6
NBS-7
NBS-8
NBS-9
NBS-10
NBS-11
NBS-12

NW COMPOUND
78GW19
HPFF-13
1115-6
20"ø TREE
HAZMAT BLDG.
N-1
N-2
N-3
N-4
N-5
N-6
N-7
N-8
N-9
1111
1100
1115
1108
CONC. PAD
CONCRETE APRON
PORCH
CONCRETE PAD
PAVED PARKING LOT
GRASS
GATE
CONCRETE SIDEWALK
CONC. CURB
CONC. RAMP
LOADING DOCK
STEAM PIT
STEAM DUCT
WEST ROAD
TRENCH GUTTER
MATCHLINE JOINS SHEET
CONC. COVER OVER STORM DRAIN
PAVED DRIVE
GRAVEL ROAD
EDGE OF PAVEMENT
AST
MH

BIRCH STREET
ASH STREET

(17.13)
1115-02
1115-21 (17.07)
1115-24
(15.03)

1115-14
1115-11
1115-10
1115-25 (15.61)
1115-13
(15.94)
(21.11)
GT-1
GT-2
GT-3
GT-4
GT-5
GT-6
GT-7
GT-8
1115-15
1115-12
1115-1
(17.06)
1115-5
1115-9
HPFF-27
HPFF-16
(21.26)
GT-9
(19.50)
78GW22-2
(16.92)
1115-18
1115-23 (16.67)
HPFF-14
P-1R
P-1
P-2
MW-20
GT-10
(DESTROYED)

1200

40 0 30 60
SCALE IN FEET

GRID NORTH-NAD 83

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ATLANTIC DIVISION

NAVAL STATION NORFOLK, VIRGINA

CONTRACT N62470-97-D-5000 TASK ORDER NO. 0014

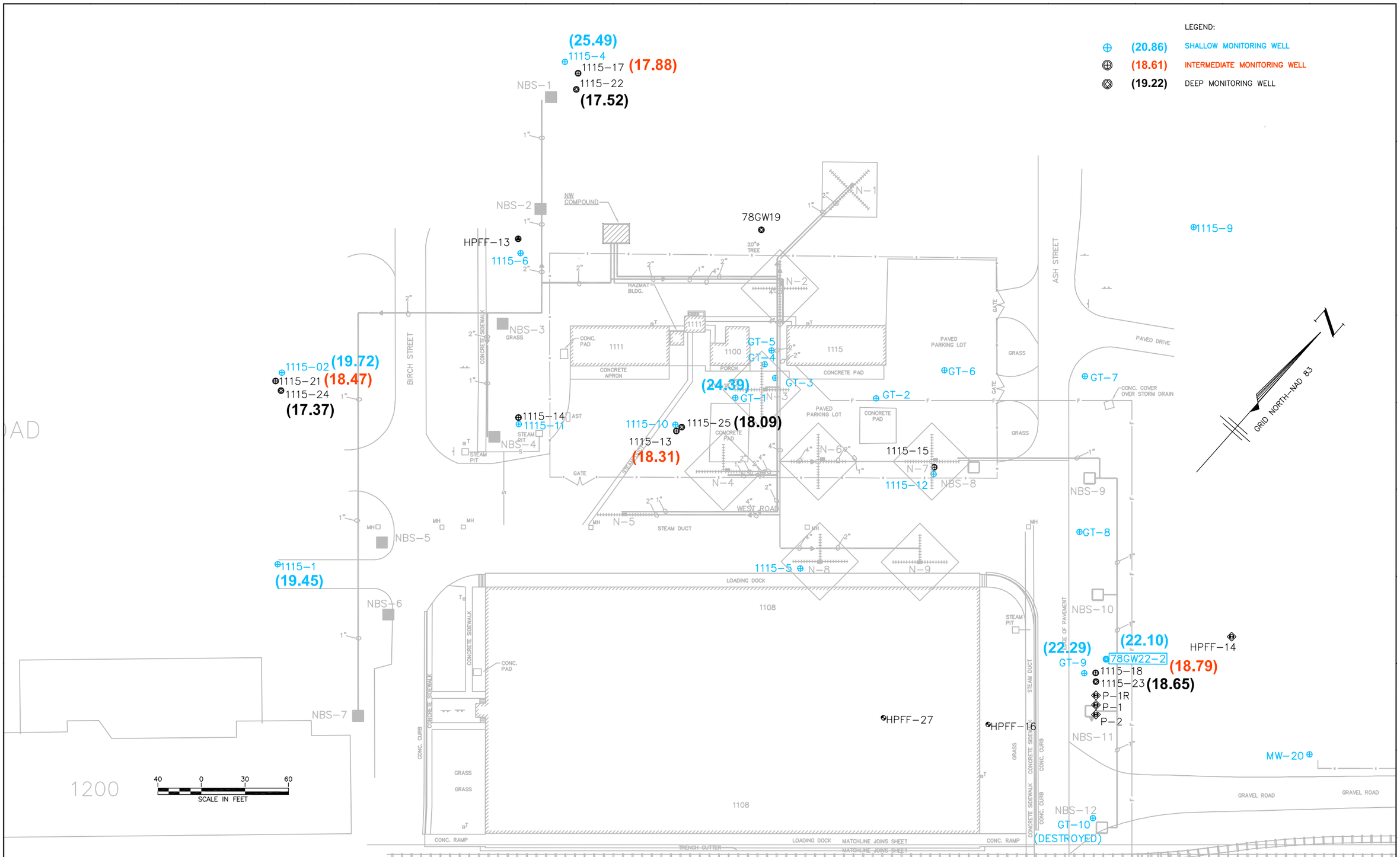
OHM PROJECT No. 827235 MARINE CORPS, CAMP LEJEUNE, N.C.

FIGURE 4.1
GROUNDWATER ELEVATIONS
FEBRUARY, 2003
HPFF NORTH WEST

DRAWING NUMBER:

SHEET NUMBER: of

DATE: 10/10/03



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CONTRACT N62470-97-D-5000 TASK ORDER NO. 0014

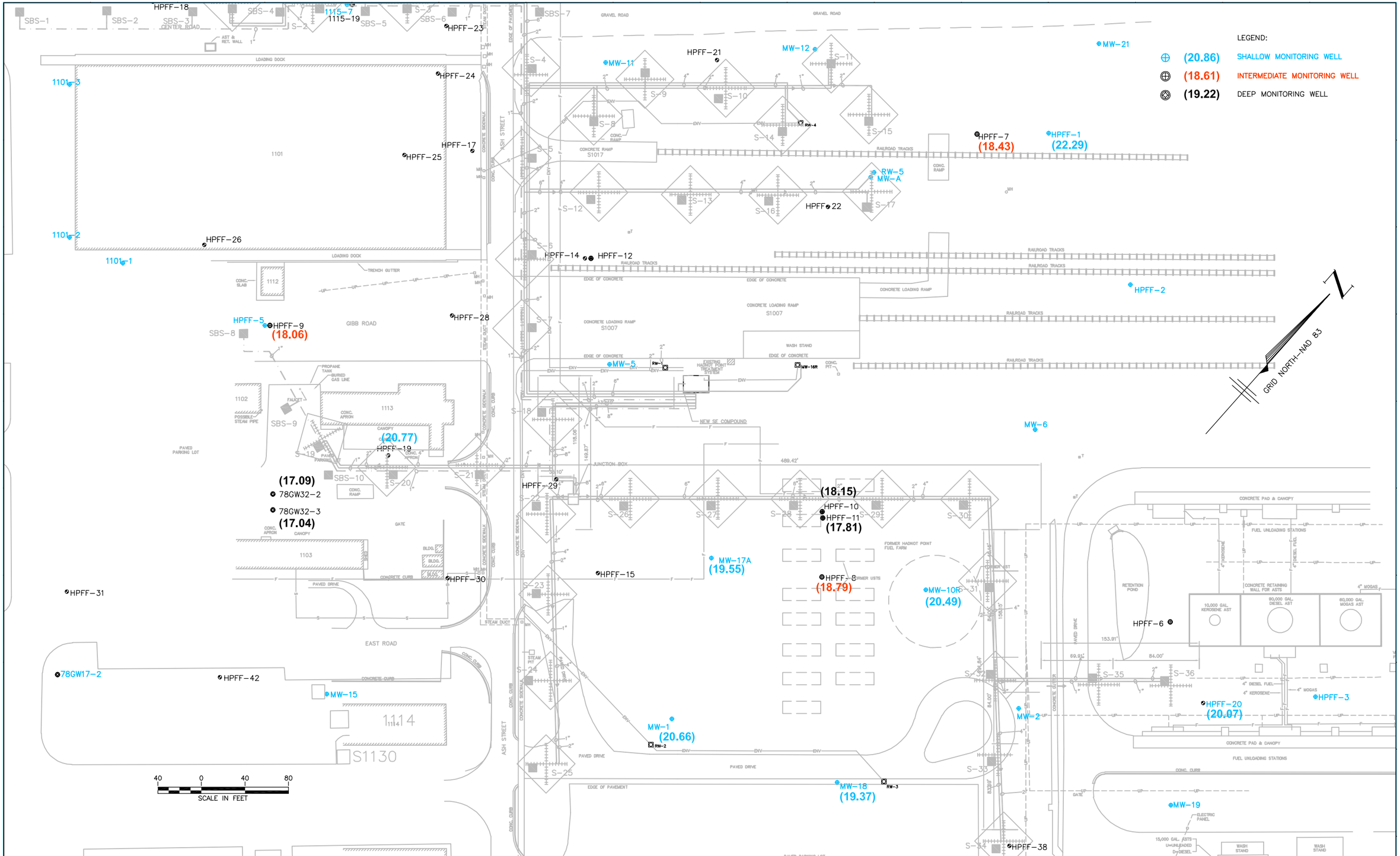
OHM PROJECT No. 827235 MARINE CORPS, CAMP LEJEUNE, N.C.

FIGURE 4.2
GROUNDWATER ELEVATIONS
AUGUST, 2003
HPFF NORTH WEST

DRAWING NUMBER:

SHEET NUMBER: of

DATE: 10/10/03



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APPROVED: _____ SR. PROJECT ENGINEER _____ DATE: _____	DRAWN: _____						
APPROVED: _____ DEPT. MANAGER _____ DATE: _____	DESIGNED: _____						
	CHECKED: _____						
	CHECKED: _____						

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ATLANTIC DIVISION

NAVAL STATION — NORFOLK, VIRGINA

CONTRACT N62470-97-D-5000 — TASK ORDER NO. 0014

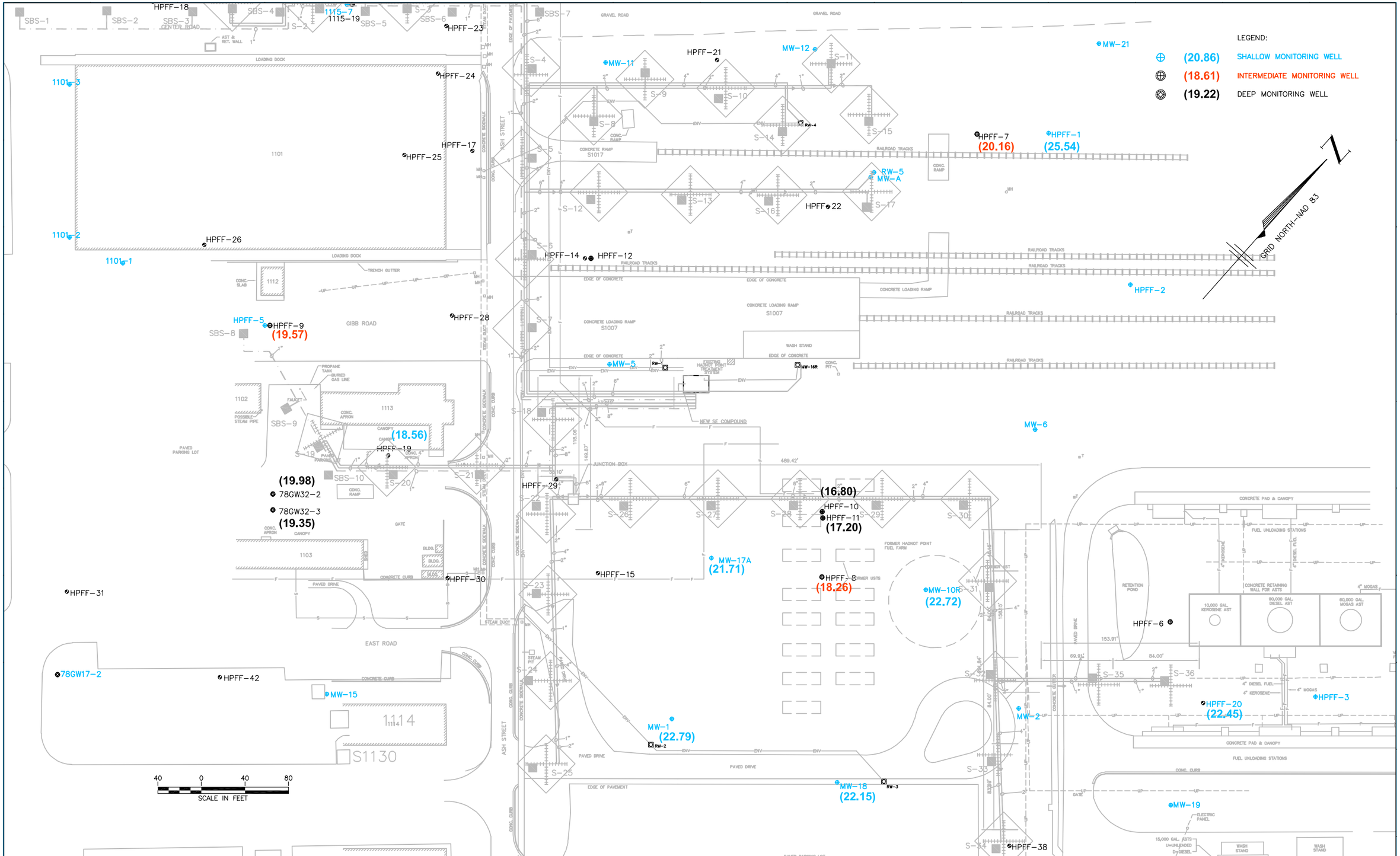
OHM PROJECT No. 827235 — MARINE CORPS, CAMP LEJEUNE, N.C.

FIGURE 4.3
GROUNDWATER ELEVATIONS
FEBRUARY, 2003
HPFF SOUTH EAST

DRAWING NUMBER:

SHEET NUMBER: of

DATE: 10/10/03



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APPROVED: _____ DEPT. MANAGER _____ DATE: _____

AT FULL SCALE (IF NOT 1"-SCALE ACCORDINGLY)
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ATLANTIC DIVISION

NAVAL STATION — NORFOLK, VIRGINIA

CONTRACT N62470-97-D-5000 — TASK ORDER NO. 0014

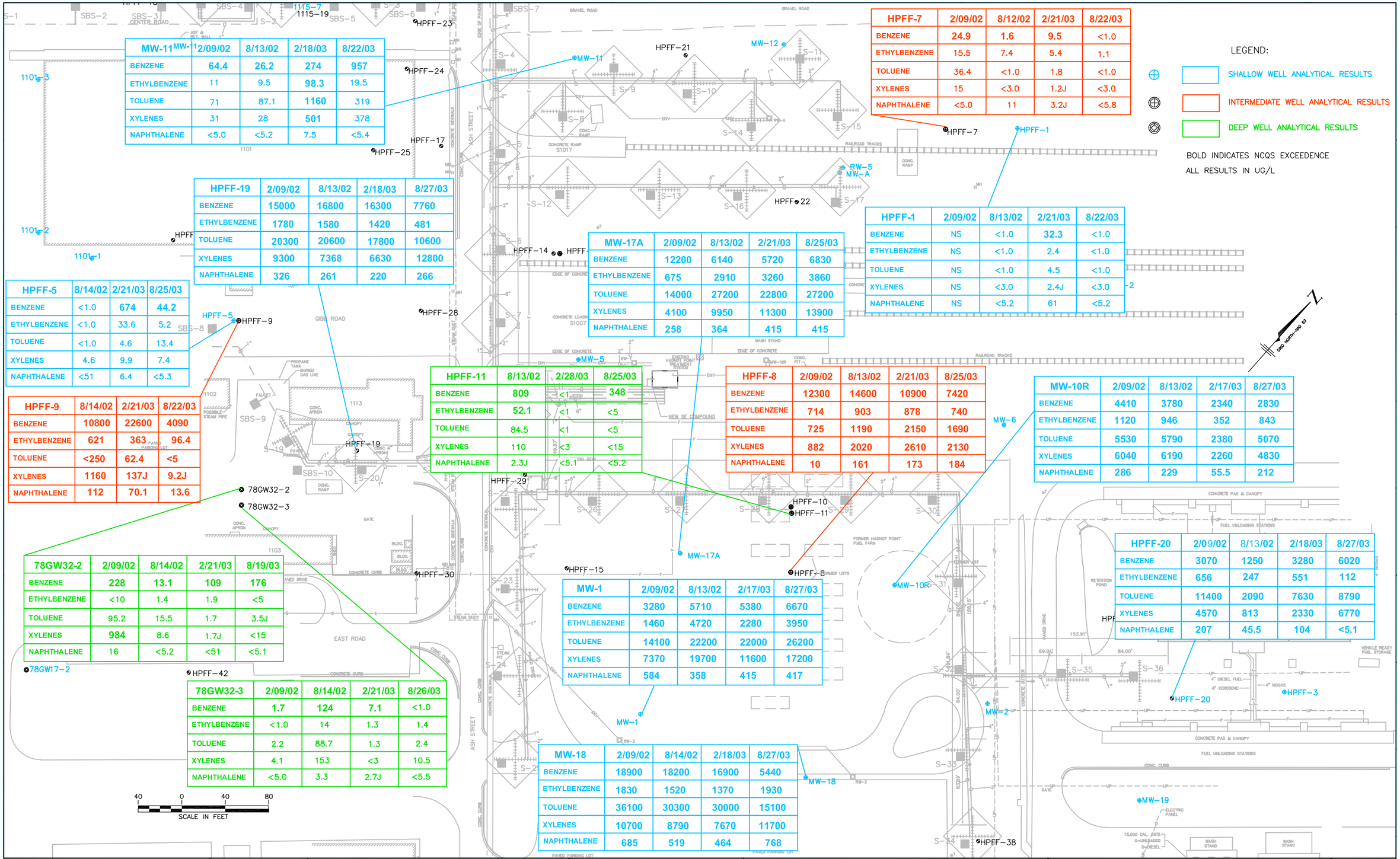
OHM PROJECT No. 827235 — MARINE CORPS, CAMP LEJEUNE, N.C.

FIGURE 4.4
GROUNDWATER ELEVATIONS
AUGUST, 2003
HPFF SOUTH EAST

DRAWING NUMBER:

SHEET NUMBER: of

DATE: 10/10/03



MW-11	2/09/02	8/13/02	2/18/03	8/22/03
BENZENE	64.4	26.2	274	957
ETHYLBENZENE	11	9.5	98.3	19.5
TOLUENE	71	87.1	1160	319
XYLENES	31	28	501	378
NAPHTHALENE	<5.0	<5.2	7.5	<5.4

HPFF-19	2/09/02	8/13/02	2/18/03	8/27/03
BENZENE	15000	16800	16300	7760
ETHYLBENZENE	1780	1580	1420	481
TOLUENE	20300	20600	17800	10600
XYLENES	9300	7368	6630	12800
NAPHTHALENE	326	261	220	266

HPFF-5	8/14/02	2/21/03	8/25/03
BENZENE	<1.0	674	44.2
ETHYLBENZENE	<1.0	33.6	5.2
TOLUENE	<1.0	4.6	13.4
XYLENES	4.6	9.9	7.4
NAPHTHALENE	<51	6.4	<5.3

HPFF-9	8/14/02	2/21/03	8/22/03
BENZENE	10800	22600	4090
ETHYLBENZENE	621	363	96.4
TOLUENE	<250	62.4	<5
XYLENES	1160	137J	9.2J
NAPHTHALENE	112	70.1	13.6

78GW32-2	2/09/02	8/14/02	2/21/03	8/19/03
BENZENE	228	13.1	109	176
ETHYLBENZENE	<10	1.4	1.9	<5
TOLUENE	95.2	15.5	1.7	3.5J
XYLENES	984	8.6	1.7J	<15
NAPHTHALENE	16	<5.2	<51	<5.1

78GW32-3	2/09/02	8/14/02	2/21/03	8/26/03
BENZENE	1.7	124	7.1	<1.0
ETHYLBENZENE	<1.0	14	1.3	1.4
TOLUENE	2.2	88.7	1.3	2.4
XYLENES	4.1	153	<3	10.5
NAPHTHALENE	<5.0	3.3	2.7J	<5.5

HPFF-11	8/13/02	2/28/03	8/25/03
BENZENE	809	<1	348
ETHYLBENZENE	52.1	<1	<5
TOLUENE	84.5	<1	<5
XYLENES	110	<3	<15
NAPHTHALENE	2.3J	<5.1	<5.2

MW-17A	2/09/02	8/13/02	2/21/03	8/25/03
BENZENE	12200	6140	5720	6830
ETHYLBENZENE	675	2910	3260	3860
TOLUENE	14000	27200	22800	27200
XYLENES	4100	9950	11300	13900
NAPHTHALENE	258	364	415	415

MW-1	2/09/02	8/13/02	2/17/03	8/27/03
BENZENE	3280	5710	5380	6670
ETHYLBENZENE	1460	4720	2280	3950
TOLUENE	14100	22200	22000	26200
XYLENES	7370	19700	11600	17200
NAPHTHALENE	584	358	415	417

MW-18	2/09/02	8/14/02	2/18/03	8/27/03
BENZENE	18900	18200	16900	5440
ETHYLBENZENE	1830	1520	1370	1930
TOLUENE	36100	30300	30000	15100
XYLENES	10700	8790	7670	11700
NAPHTHALENE	685	519	464	768

HPFF-8	2/09/02	8/13/02	2/21/03	8/25/03
BENZENE	12300	14600	10900	7420
ETHYLBENZENE	714	903	878	740
TOLUENE	725	1190	2150	1690
XYLENES	882	2020	2610	2130
NAPHTHALENE	10	161	173	184

HPFF-7	2/09/02	8/12/02	2/21/03	8/22/03
BENZENE	24.9	1.6	9.5	<1.0
ETHYLBENZENE	15.5	7.4	5.4	1.1
TOLUENE	36.4	<1.0	1.8	<1.0
XYLENES	15	<3.0	1.2J	<3.0
NAPHTHALENE	<5.0	11	3.2J	<5.8

HPFF-1	2/09/02	8/13/02	2/21/03	8/22/03
BENZENE	NS	<1.0	32.3	<1.0
ETHYLBENZENE	NS	<1.0	2.4	<1.0
TOLUENE	NS	<1.0	4.5	<1.0
XYLENES	NS	<3.0	2.4J	<3.0
NAPHTHALENE	NS	<5.2	61	<5.2

MW-10R	2/09/02	8/13/02	2/17/03	8/27/03
BENZENE	4410	3780	2340	2830
ETHYLBENZENE	1120	946	352	843
TOLUENE	5530	5790	2380	5070
XYLENES	6040	6190	2260	4830
NAPHTHALENE	286	229	55.5	212

HPFF-20	2/09/02	8/13/02	2/18/03	8/27/03
BENZENE	3070	1250	3280	6020
ETHYLBENZENE	656	247	551	112
TOLUENE	11400	2090	7630	8790
XYLENES	4570	813	2330	6770
NAPHTHALENE	207	45.5	104	<5.1

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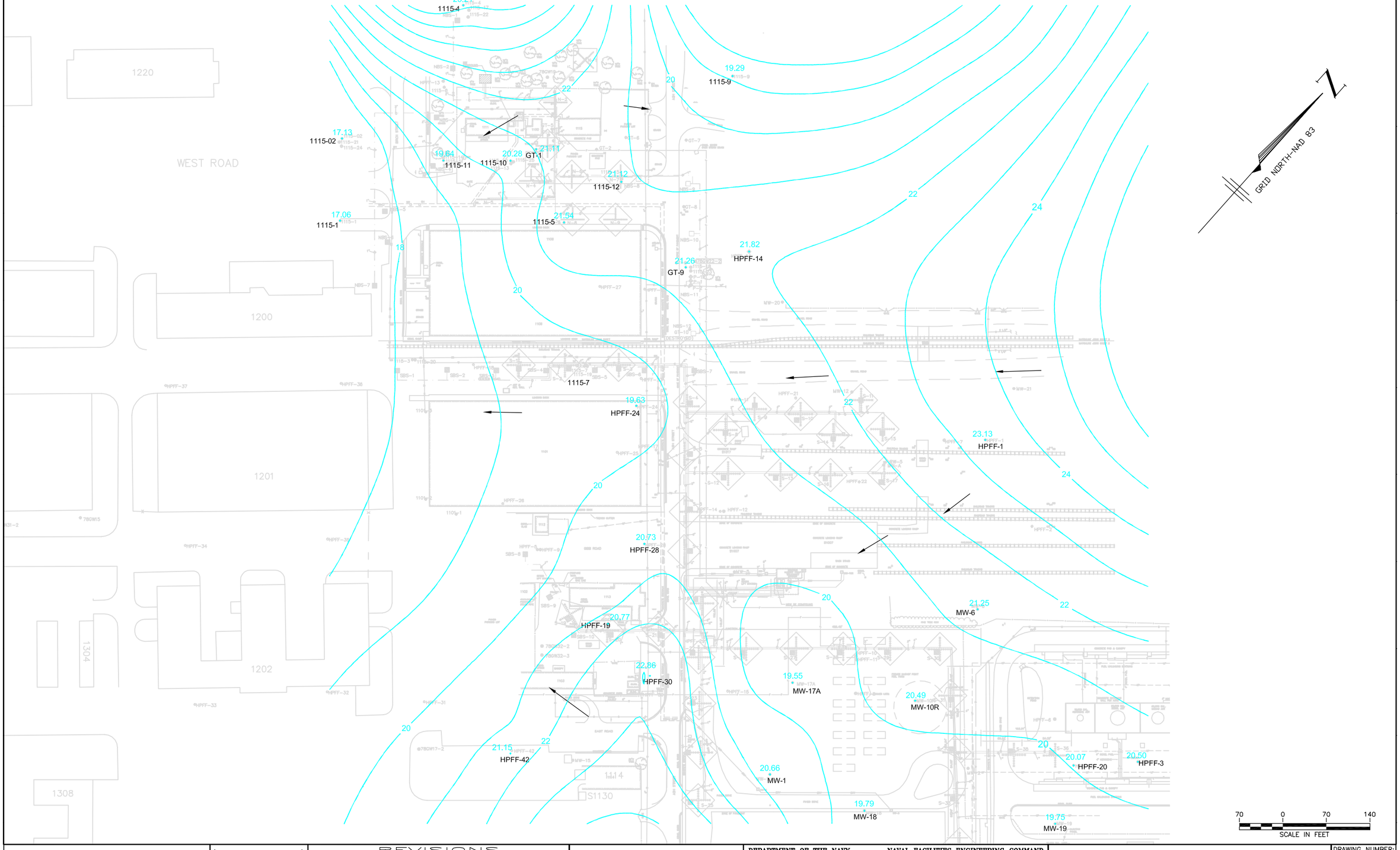
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ATLANTIC DIVISION
NAVAL STATION NORFOLK, VIRGINIA
CONTRACT N62470-97-D-5000 DELIVERY ORDER NO. 0014
OHM PROJECT No. 827235 MARINE CORPS, CAMP LEJEUNE, N.C.

FIGURE 4-8
GROUNDWATER ANALYTICAL RESULTS
FUEL FARM
HADNOT POINT SOUTH EAST

DRAWING NUMBER:
SHEET NUMBER: of
DATE: 10/10/03



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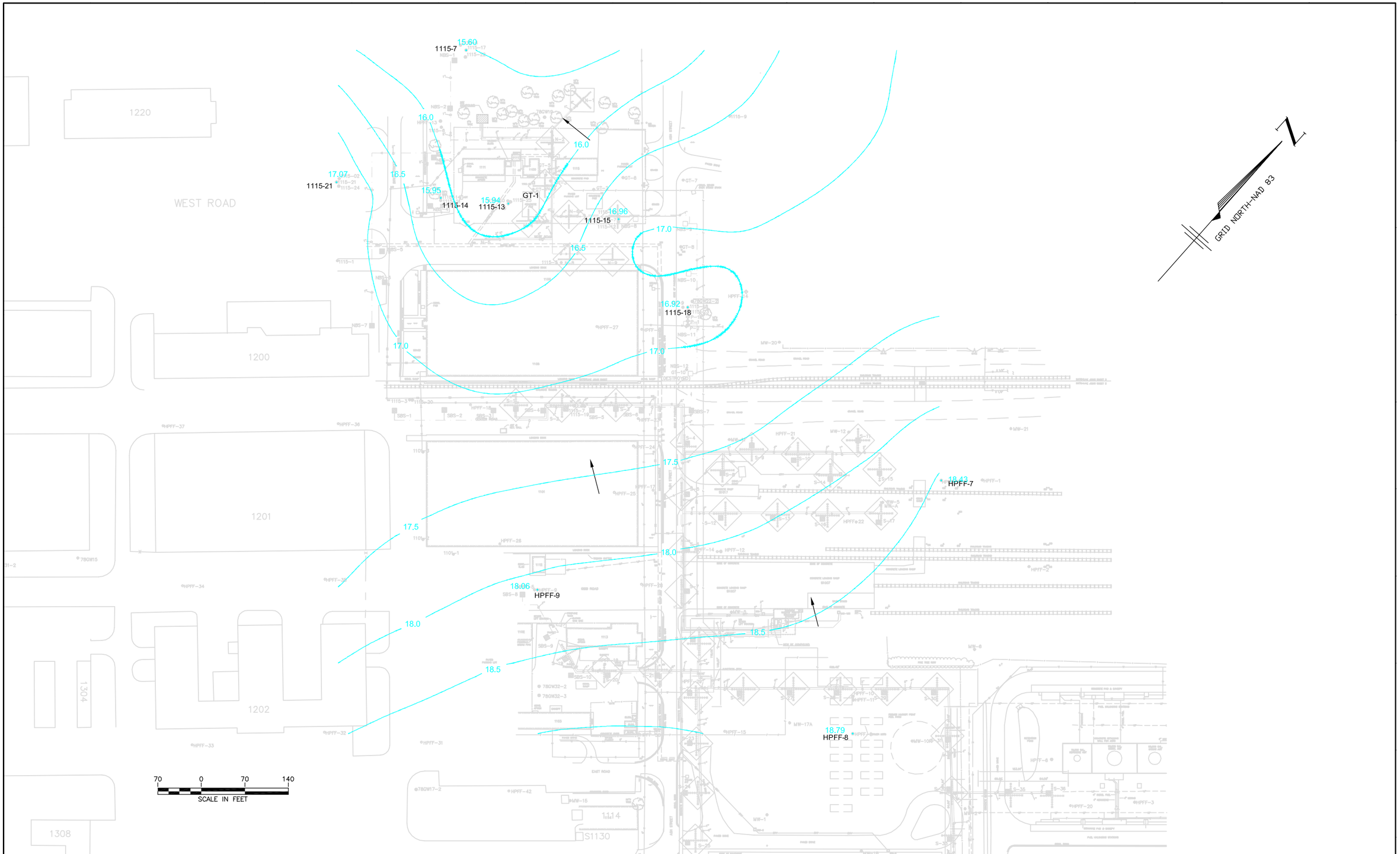
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ATLANTIC DIVISION
NAVAL STATION NORFOLK, VIRGINIA
CONTRACT N62470-97-D-5000 TASK ORDER NO. 0014
OHM PROJECT No. 827235 MARINE CORPS, CAMP LEJEUNE, N.C.

FIGURE 4.5A
SHALLOW GROUNDWATER ELEVATION MAP
FEBRUARY 2003
HADNOT POINT FUEL FARM

DRAWING NUMBER:
SHEET NUMBER: of
DATE: 10/10/03



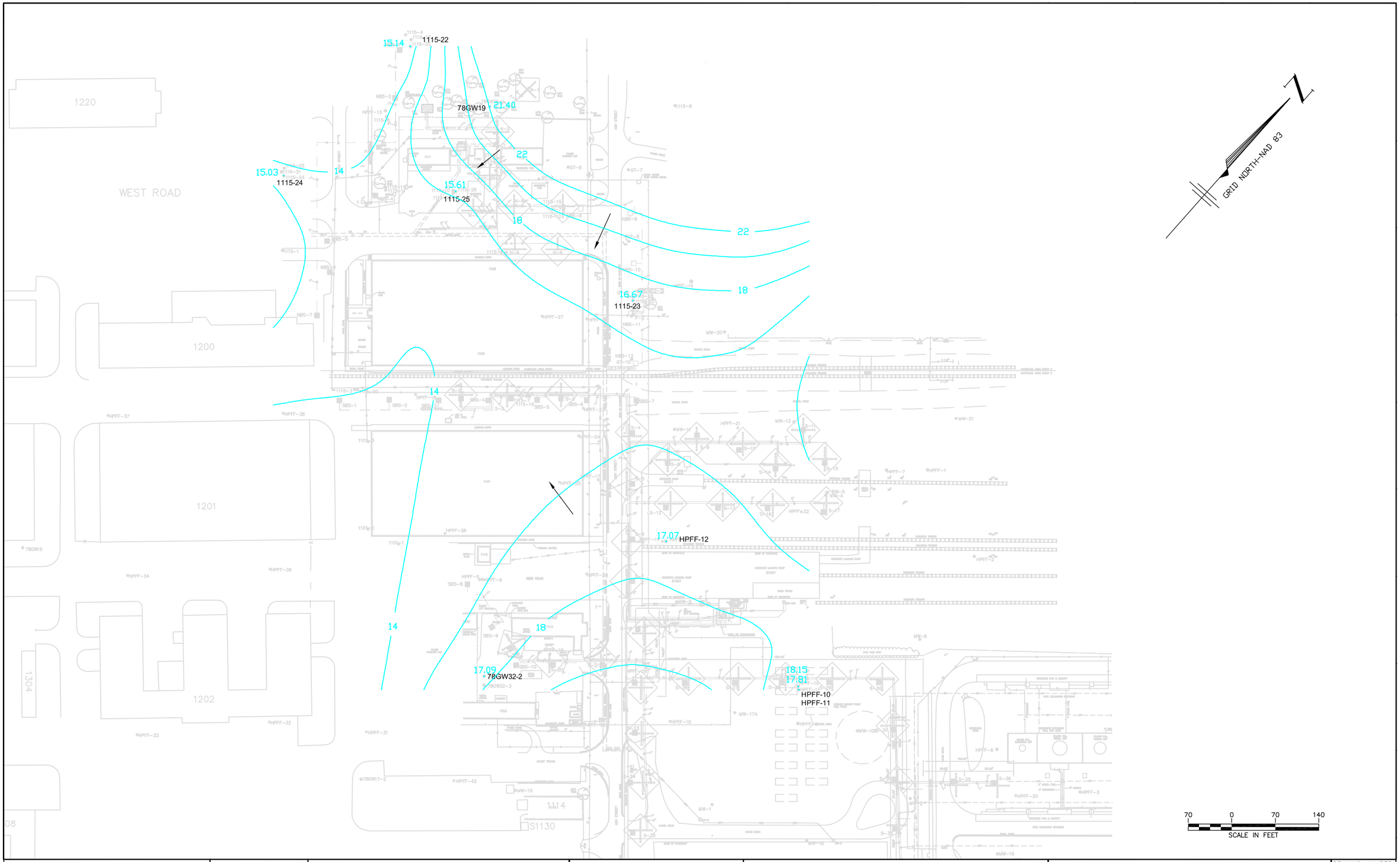
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APPROVED: _____ DEPT. MANAGER _____ DATE: _____	DESIGNED: _____							CONTRACT N62470-97-D-5000 TASK ORDER NO. 0014
	CHECKED: _____							OHM PROJECT No. 827235 MARINE CORPS, CAMP LEJEUNE, N.C.
	CHECKED: _____							

FIGURE 4.5B
INTERMEDIATE GROUNDWATER ELEVATION MAP
FEBRUARY 2003
HADNOT POINT FUEL FARM

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DATE: 9/09/02



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AT FULL SCALE (IF NOT 1"-SCALE ACCORDINGLY)
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ATLANTIC DIVISION

NAVAL STATION NORFOLK, VIRGINA

CONTRACT N62470-97-D-5000 TASK ORDER NO. 0014

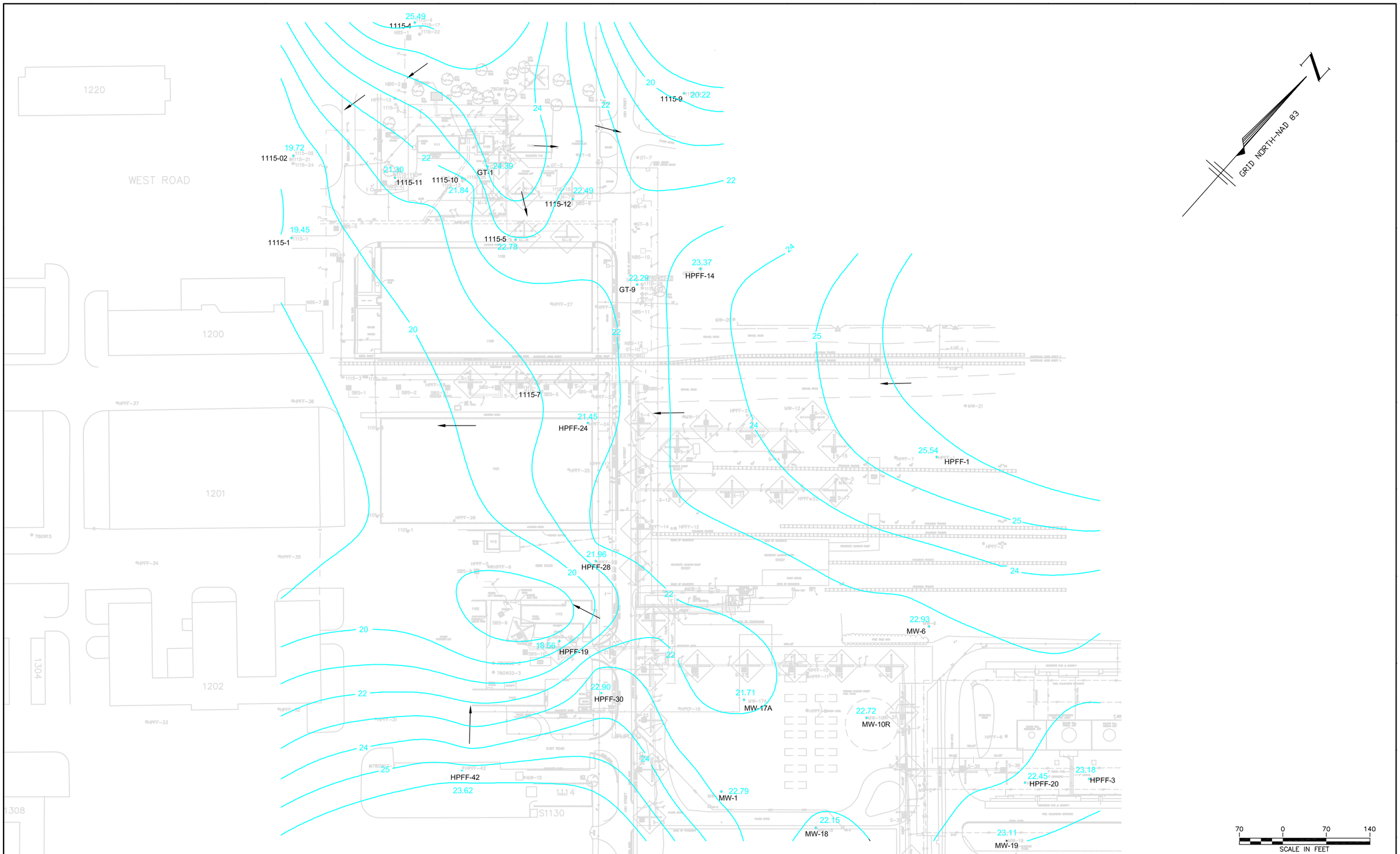
OHM PROJECT No. 827235 MARINE CORPS, CAMP LEJEUNE, N.C.

FIGURE 4.5C
DEEP GROUNDWATER ELEVATION MAP
FEBRUARY 2003
HADNOT POINT FUEL FARM

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SHEET NUMBER: of

DATE: 10/10/03



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APPROVED: _____ DATE: _____
DEPT. MANAGER

AT FULL SCALE
(IF NOT 1"-SCALE ACCORDINGLY)

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CONTRACT N62470-97-D-5000 TASK ORDER NO. 0014

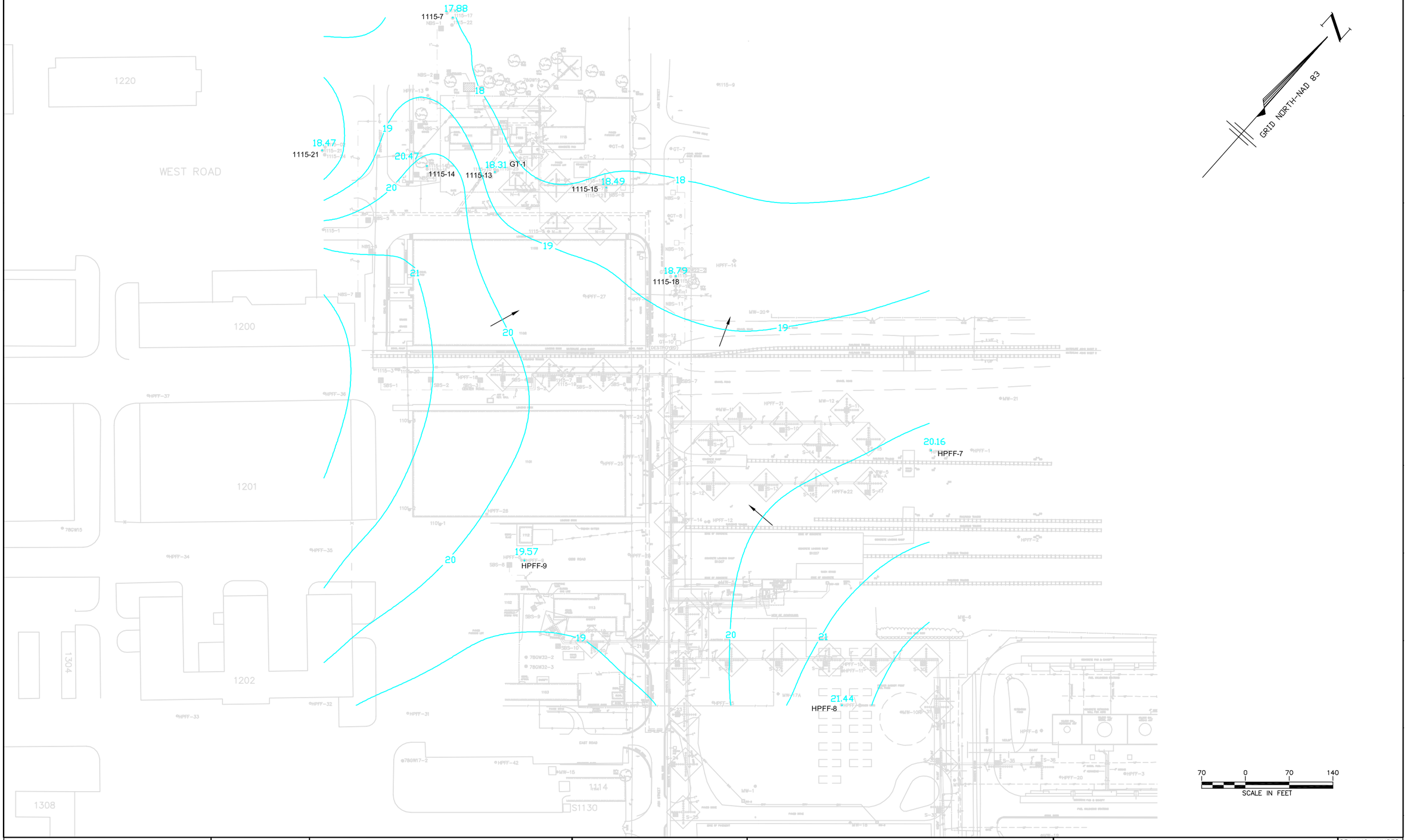
OHM PROJECT No. 827235 MARINE CORPS, CAMP LEJEUNE, N.C.

FIGURE 4.6A
SHALLOW GROUNDWATER ELEVATION MAP
AUGUST 2003
HADNOT POINT FUEL FARM

DRAWING NUMBER:

SHEET NUMBER:
of

DATE:
10/10/03



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AT FULL SCALE (IF NOT 1"-SCALE ACCORDINGLY)
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CHECKED: _____
CHECKED: _____

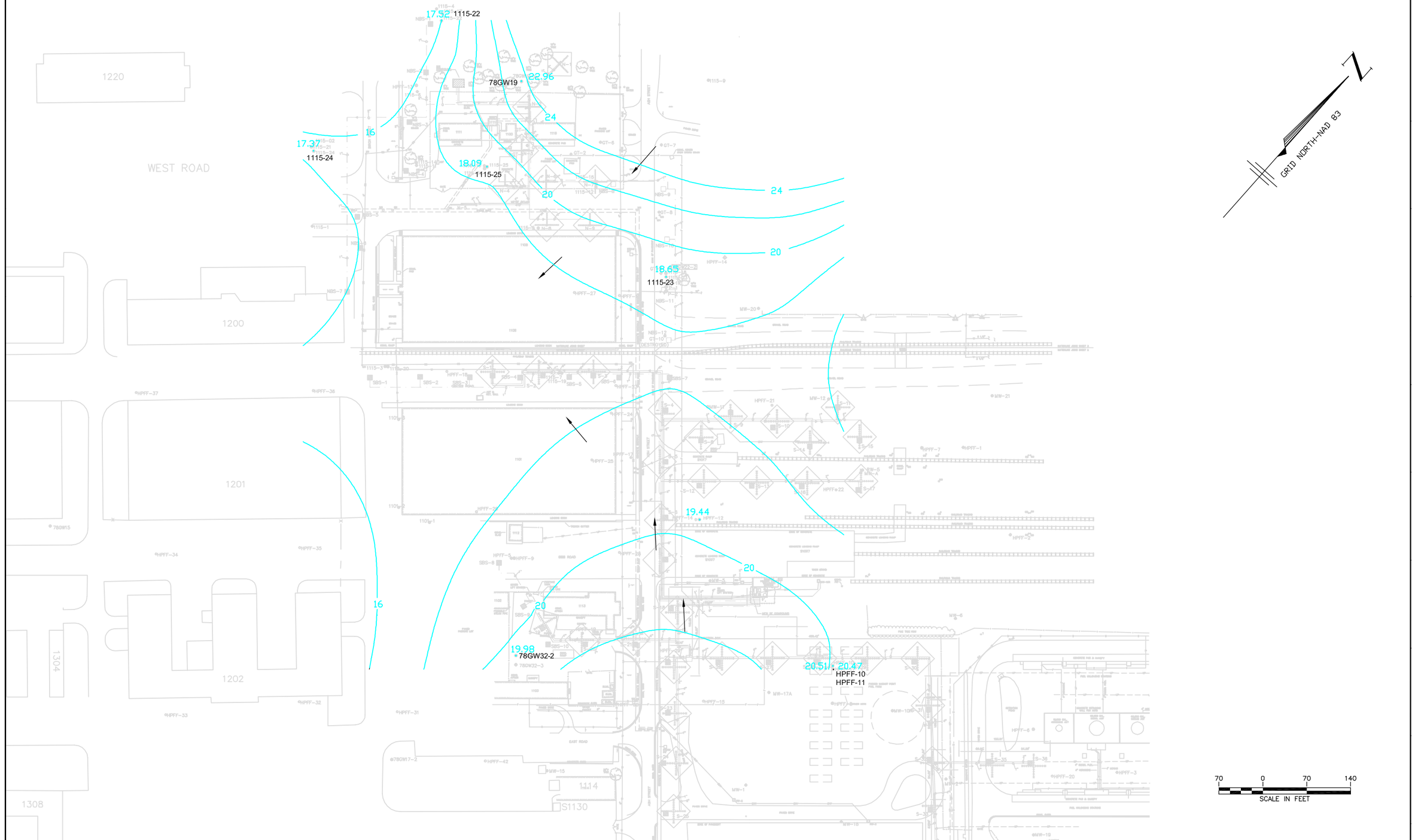
REVISIONS

ZONE	REV.	DESCRIPTION	BY	DATE	APP.

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
ATLANTIC DIVISION
NAVAL STATION NORFOLK, VIRGINIA
CONTRACT N62470-97-D-5000 TASK ORDER NO. 0014
OHM PROJECT No. 807235 MARINE CORPS, CAMP LEJEUNE, N.C.

FIGURE 4.6B
INTERMEDIATE GROUNDWATER ELEVATION MAP
AUGUST 2003
HADNOT POINT FUEL FARM

DRAWING NUMBER:
SHEET NUMBER: of
DATE: 10/10/03



Shaw
Shaw Environmental, Inc.

SUBMITTED: _____ DATE: _____
PROJECT MANAGER:
APPROVED: _____ DATE: _____
SR. PROJECT ENGINEER
APPROVED: _____ DATE: _____
DEPT. MANAGER

AT FULL SCALE
(IF NOT 1"-SCALE ACCORDINGLY)

CADD FILE: _____
DRAWN: _____
DESIGNED: _____
CHECKED: _____
CHECKED: _____

REVISIONS

ZONE	REV.	DESCRIPTION	BY	DATE	APP.

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND

ATLANTIC DIVISION

NAVAL STATION NORFOLK, VIRGINIA

CONTRACT N62470-97-D-5000 DELIVERY ORDER NO. 0014

OHM PROJECT No. 827235 MARINE CORPS, CAMP LEJEUNE, N.C.

FIGURE 4.6C
DEEP GROUNDWATER ELEVATION MAP
AUGUST 2003
HADNOT POINT FUEL FARM

DRAWING NUMBER:

SHEET NUMBER:
of

DATE:
10/09/03

LEGEND:

SHALLOW WELL ANALYTICAL RESULTS

INTERMEDIATE WELL ANALYTICAL RESULTS

DEEP WELL ANALYTICAL RESULTS

BOLD INDICATES NCQS EXCEEDENCE

ALL RESULTS IN UG/L

GRID NORTH-NAD 83

1115-04	2/02/02	8/07/02	2/19/03	8/19/03
BENZENE	**22.6**	**31.5**	**128**	<1.0
ETHYLBENZENE	2.1	2.7	13.7	<1.0
TOLUENE	<1.0	<1.0	3.8	<1.0
XYLENES	1.7J	3.1	<6	<3
NAPHTHALENE	<5.5	7.3	21.2	<5.5

1115-17	2/02/02	8/07/02	2/19/03	8/19/03
BENZENE	**8670**	**7770**	**3490**	**84.3**
ETHYLBENZENE	**973**	**76.3**	**196**	**63.4**
TOLUENE	<100	10	<5.0	<2
XYLENES	**1050**	99.4	<150	<5
NAPHTHALENE	**31.2**	**250**	**270**	**332**

1115-22	2/02/02	9/03/02	2/19/03	8/19/03
BENZENE	**1250**	**251**	**1320**	**19.30**
ETHYLBENZENE	3.4	<5.0	<20	4.4
TOLUENE	3.5	<5.0	21	<10
XYLENES	<3.0	<15	<60	1.0J
NAPHTHALENE	<5.0	NA	<5.1	4.8J

GT-1	2/02/02	8/05/02	2/18/03	8/22/03
BENZENE	**4.0**	<1.0	**80**	<1.0
ETHYLBENZENE	3.0	1.9	41	<1.0
TOLUENE	<1.0	<1.0	557	<1.0
XYLENES	1.4J	<3.0	201	<3.0
NAPHTHALENE	8.4	<5.2	6.6	<5.4

1115-02	2/02/02	8/07/02	2/19/03	8/19/03
BENZENE	**11.9**	**9.3**	**125**	**3.1**
ETHYLBENZENE	<1.0	<1.0	6.6	<1.0
TOLUENE	<1.0	<1.0	6.4	<1.0
XYLENES	<3.0	<3.0	3.7J	<3.0
NAPHTHALENE	12.5	<5.1	11.2	<5.3

1115-21	2/02/02	8/06/02	2/19/03	8/19/03
BENZENE	**1920**	**620**	**727**	**485**
ETHYLBENZENE	<5.0	<1.0	11.7	<1.0
TOLUENE	<5.0	<1.0	7.8J	<1.0
XYLENES	<15	<3.0	<30	<3.0
NAPHTHALENE	8.1	4.0J	19.9	7.0

GT-7	8/12/02	2/17/03	8/20/03
BENZENE	**2.9**	**205**	**235**
ETHYLBENZENE	1.6	<1.0	<1.0
TOLUENE	<1.0	<1.0	<1.0
XYLENES	<3.0	<3.0	<3.0
NAPHTHALENE	8.9	<5.4	<5.0

GT-9	8/07/02	2/21/03	8/20/03
BENZENE	<1.0	**21.1**	<1.0
ETHYLBENZENE	<1.0	2	<1.0
TOLUENE	<1.0	2.5	<1.0
XYLENES	<3.0	1.3J	<3.0
NAPHTHALENE	<5.0	4.5J	<5.3

78GW22-2	2/02/02	8/05/02	2/17/03	8/20/03
BENZENE	**22.8**	**28.3**	**41.1**	**17.2**
ETHYLBENZENE	<1.0	<1.0	<1.0	<1.0
TOLUENE	<1.0	<1.0	<1.0	<1.0
XYLENES	<3.0	<3.0	<3.0	<3.0
NAPHTHALENE	<5.0	<5.2	<5.1	<5.2

1115-24	2/02/02	8/06/02	2/19/03	8/19/03
BENZENE	**2480**	**3060**	**4120**	**3990**
ETHYLBENZENE	5.2	1.5	<50	<50
TOLUENE	<5.0	0.76J	<50	<50
XYLENES	<15	1.0J	<150	<150
NAPHTHALENE	<5.0	<5.0	**23.6**	6.7

1115-01	2/02/02	8/05/02	2/17/03	8/20/03
BENZENE	**6.0**	<1.0	**187**	<1.0
ETHYLBENZENE	<1.0	<1.0	<1.0	<1.0
TOLUENE	<1.0	<1.0	1.0	<1.0
XYLENES	<3.0	<3.0	1.6J	<3.0
NAPHTHALENE	6	<5.1	<5.1	<5.3

1115-13	2/02/02	8/12/02	2/19/03	8/20/03
BENZENE	**298**	**95.5**	**872**	**340**
ETHYLBENZENE	**40.9**	**40.1**	**62.2**	**72.4**
TOLUENE	2.7	<5.0	28.3	<2.0
XYLENES	16.5	16.8	21.5J	16.6
NAPHTHALENE	**79.4**	**197**	**152**	**155**

1115-25	2/02/02	9/03/02	2/19/03	8/22/03
BENZENE	**3.1**	**1850**	**2840**	**3300**
ETHYLBENZENE	0.57J	<20	<50	8.2
TOLUENE	<1.0	37.1	150	292
XYLENES	<3.0	<60	<150	15.3
NAPHTHALENE	3.67	<5.2	10	<5.2

1115-18	2/02/02	8/07/02	2/20/03	8/20/03
BENZENE	**30.2**	**33.8**	NA	**215**
ETHYLBENZENE	1.3	2.1	NA	4.1
TOLUENE	1.2	1.5	NA	1.4J
XYLENES	<3.0	5.1	NA	4.6J
NAPHTHALENE	<5.0	<5.0	NA	2.7J

1115-23	2/02/02	8/05/02	2/18/03	8/20/03
BENZENE	**22**	**17.8**	<1	**260**
ETHYLBENZENE	<5	1.7	<5	5.2
TOLUENE	<5	1.3	<1	2.2
XYLENES	<15	7.3	<15	7.6
NAPHTHALENE	<5.5	<5.3	<5.1	<5.4

1115-1, 1115-2, 1115-4, 1115-5, 1115-6, 1115-9, 1115-10, 1115-11, 1115-12, 1115-14, 1115-15, 1115-16, 1115-17, 1115-18, 1115-21, 1115-22, 1115-23, 1115-24, 1115-25, 78GW22-2, GT-1, GT-2, GT-3, GT-4, GT-5, GT-6, GT-7, GT-8, GT-9, GT-10 (DESTROYED), HPFF-13, HPFF-14, HPFF-16, HPFF-27, MW-20, R-1R, P-1, P-2, NBS-1, NBS-2, NBS-3, NBS-4, NBS-5, NBS-6, NBS-7, NBS-8, NBS-9, NBS-10, NBS-11, NBS-12, N-1, N-2, N-3, N-4, N-5, N-6, N-7, N-8, N-9, 1200

BIRCH STREET, ASH STREET, PAVED DRIVE, HAZMAT BLDG., CONCRETE APRON, CONCRETE PAD, PAVED PARKING LOT, GRASS, GATE, CONCRETE SIDEWALK, CONC. CURB, CONC. PAD, PORCH, STEAM PIT, STEAM DUCT, WEST ROAD, LOADING DOCK, CONC. RAMP, CONC. COVER OVER STORM DRAIN, EDGE OF PAVEMENT, GRAVEL ROAD, TRENCH CUTTER, MATCHLINE JOINS SHEET

30 0 30 60
SCALE IN FEET

Shaw Environmental, Inc.

SUBMITTED: _____ PROJECT MANAGER: _____ DATE: _____
APPROVED: _____ SR. PROJECT ENGINEER _____ DATE: _____
APPROVED: _____ DEPT. MANAGER _____ DATE: _____

AT FULL SCALE (IF NOT 1"-SCALE ACCORDINGLY)
CADD FILE: _____
DRAWN: _____
DESIGNED: _____
CHECKED: _____
CHECKED: _____

REVISIONS

ZONE	REV.	DESCRIPTION	BY	DATE	APP.

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND

ATLANTIC DIVISION

NAVAL STATION NORFOLK, VIRGINIA

CONTRACT N62470-97-D-5000 DELIVERY ORDER NO. 0014

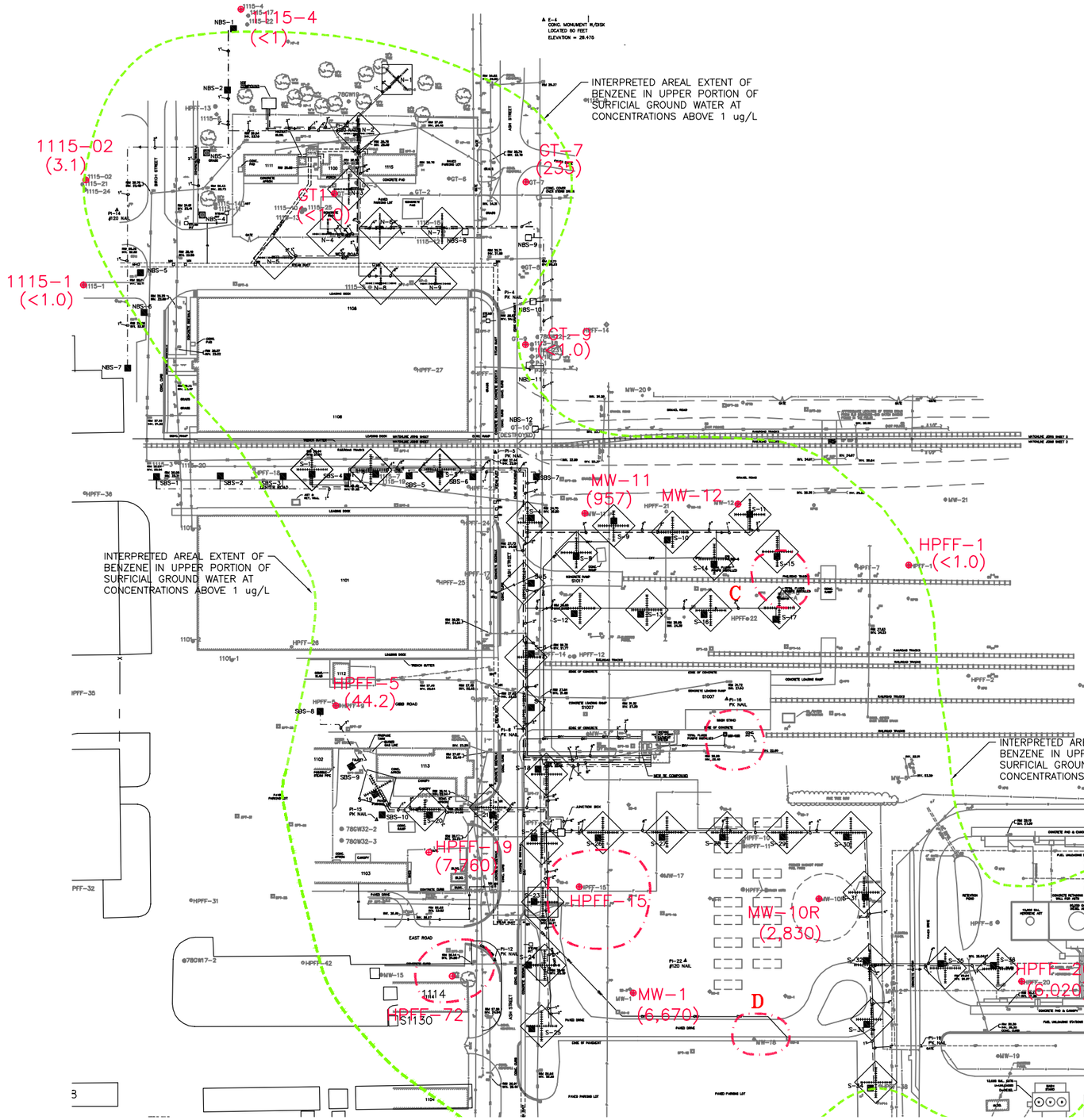
OHM PROJECT No. 827235 MARINE CORPS, CAMP LEJEUNE, N.C.

FIGURE 4-7
GROUNDWATER ANALYTICAL RESULTS
BUILDING 1115
HADNOT POINT NORTH WEST

DRAWING NUMBER:

SHEET NUMBER: of

DATE: 10/10/03



L E G E N D

EXISTING	NEW	DESCRIPTION
—S—		STEAM LINE
—SS—O—	MH	SANITARY SEWER WITH MANHOLE
—SD—O—	MH	STORM DRAIN
—W—		WATERLINE W/VALVE
—P—		POWER LINE W/POLE
—UP—O—	MH	UNDERGROUND POWER WITH MANHOLE
—COM—O—	MH	COMMUNICATIONS LINE WITH MANHOLE
—F—		FUEL LINE
—ENV—		ENVIRONMENTAL–EXISTING GROUND WATER TREATMENT SYSTEM LINES
	—FM—	FORCE MAIN
	T	TELEPHONE RISER
	FH	FIRE HYDRANT
	MH	MANHOLE
	MH	STEAM MANHOLE
		AREA LIGHT
	CB	CATCH BASIN
	CO	CLEAN OUT
		CHAIN LINK FENCE
GA		GUY ANCHOR
		SIGNS
		TYPE II WELL
		TYPE III WELL (50' DEEP)
		TYPE III WELL (70'–90' DEEP)
		TYPE III WELL (GREATER THAN 90' DEEP)
		HYDROPUNCH
		SOIL BORING
		PUMPING WELL
		DPT PROBE
		JUNCTION BOX
		SHALLOW AIR SPARGE WELL
		DEEP BIOSPARGE WELL (80' DEEP)
		DEEP BIOSPARGE WELL (100' DEEP)
		HORIZONTAL VAPOR COLLECTION LINE
D		FREE PRODUCT PLUME AREA
		ESTIMATED EXTENT OF FREE PRODUCT PLUME BASED ON LATEST WELL INFORMATION
		INTERPERATED AREAL EXTENT OF BENZENE IN UPPER PORTION OF SURFICAL GROUND WATER AT CONCENTRATION ABOVE 1 ug/L
MW-1 (7,700)		BENZENE ug/l

Shaw Environmental, Inc.

SUBMITTED: _____ PROJECT MANAGER: _____ DATE: _____
APPROVED: _____ SR. PROJECT ENGINEER _____ DATE: _____
APPROVED: _____ DEPT. MANAGER _____ DATE: _____

AT FULL SCALE (IF NOT 1"–SCALE ACCORDINGLY)
CADD FILE: _____
DRAWN: L. SHULMAN
DESIGNED: BOB BROWN
CHECKED: RON KENYON
CHECKED: JIM DUNN

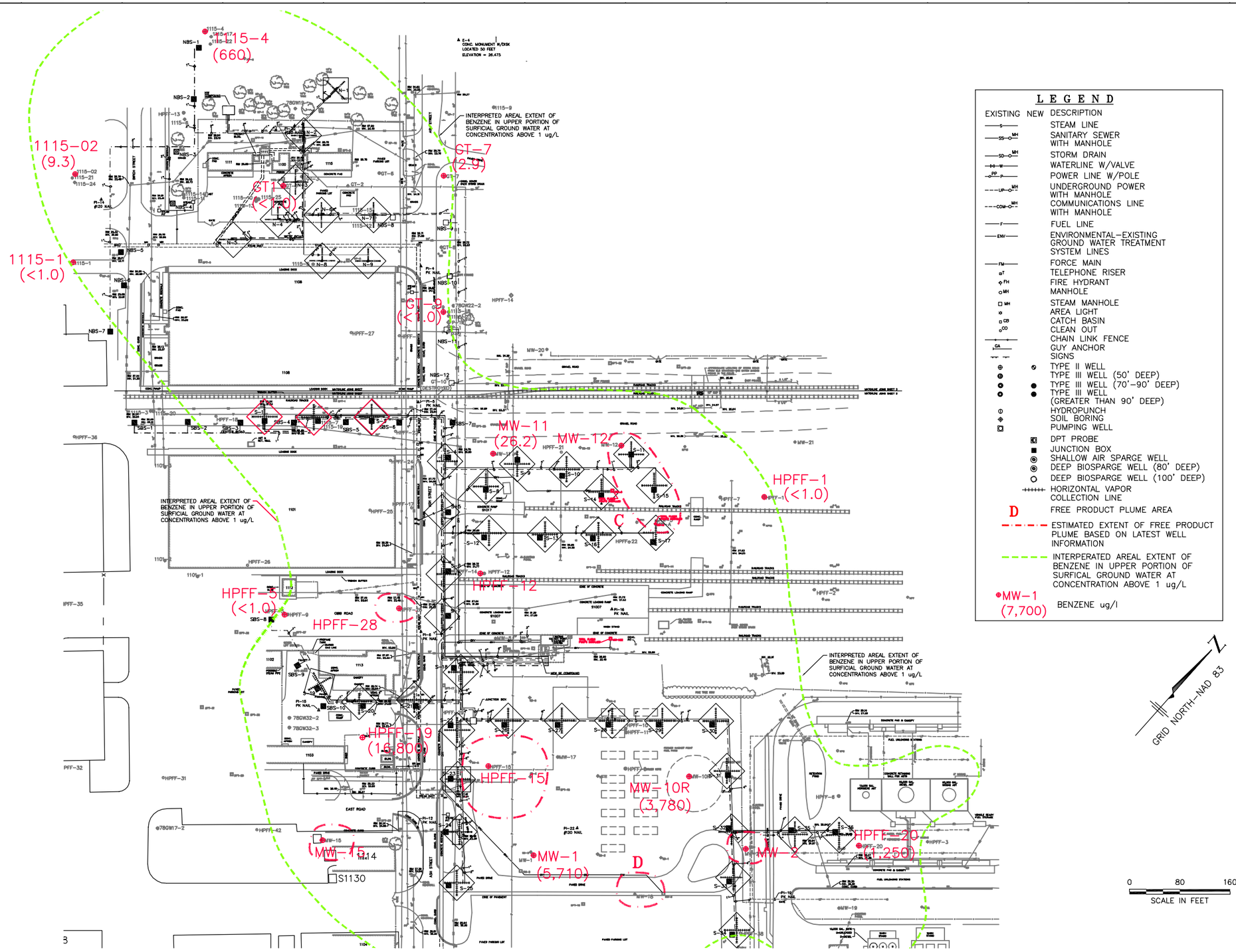
REVISIONS

ZONE	REV.	DESCRIPTION	BY	DATE	APP.

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
ATLANTIC DIVISION
NAVAL STATION NORFOLK, VIRGINIA
CONTRACT N62470-97-D-5000 TASK ORDER NO. 0014
OHM PROJECT No. 827235 MARINE CORPS, CAMP LEJEUNE, N.C.

FIGURE 5.1
BUILDING 1115 (NW COMPOUND) & HPFF (SE COMPOUND) AREAL EXTENT OF SHALLOW GROUNDWATER & FREE PRODUCT CONTAMINATION AUGUST 2003
HADNOT POINT FUEL FARM / BUILDING 1115

DRAWING NUMBER:
SHEET NUMBER: of
DATE: 10/10/03



LEGEND

EXISTING	NEW	DESCRIPTION
		STEAM LINE
		SANITARY SEWER WITH MANHOLE
		STORM DRAIN
		WATERLINE W/VALVE
		POWER LINE W/POLE
		UNDERGROUND POWER WITH MANHOLE
		COMMUNICATIONS LINE WITH MANHOLE
		FUEL LINE
		ENVIRONMENTAL–EXISTING GROUND WATER TREATMENT SYSTEM LINES
		FORCE MAIN
		TELEPHONE RISER
		FIRE HYDRANT
		MANHOLE
		STEAM MANHOLE
		AREA LIGHT
		CATCH BASIN
		CLEAN OUT
		CHAIN LINK FENCE
		GUY ANCHOR
		SIGNS
		TYPE II WELL
		TYPE III WELL (50' DEEP)
		TYPE III WELL (70'–90' DEEP)
		TYPE III WELL (GREATER THAN 90' DEEP)
		HYDROPUNCH
		SOIL BORING
		PUMPING WELL
		DPT PROBE
		JUNCTION BOX
		SHALLOW AIR SPARGE WELL
		DEEP BIOSPARGE WELL (80' DEEP)
		DEEP BIOSPARGE WELL (100' DEEP)
		HORIZONTAL VAPOR COLLECTION LINE
	D	FREE PRODUCT PLUME AREA
		ESTIMATED EXTENT OF FREE PRODUCT PLUME BASED ON LATEST WELL INFORMATION
		INTERPERATED AREAL EXTENT OF BENZENE IN UPPER PORTION OF SURFICAL GROUND WATER AT CONCENTRATION ABOVE 1 ug/L
	MW-1 (7,700)	BENZENE ug/l

Shaw Environmental, Inc.

SUBMITTED: _____ DATE: _____ PROJECT MANAGER:
APPROVED: _____ DATE: _____ SR. PROJECT ENGINEER
APPROVED: _____ DATE: _____ DEPT. MANAGER

AT FULL SCALE (IF NOT 1"–SCALE ACCORDINGLY)
CADD FILE: _____
DRAWN: L. SHULMAN
DESIGNED: BOB BROWN
CHECKED: RON KENYON
CHECKED: JIM DUNN

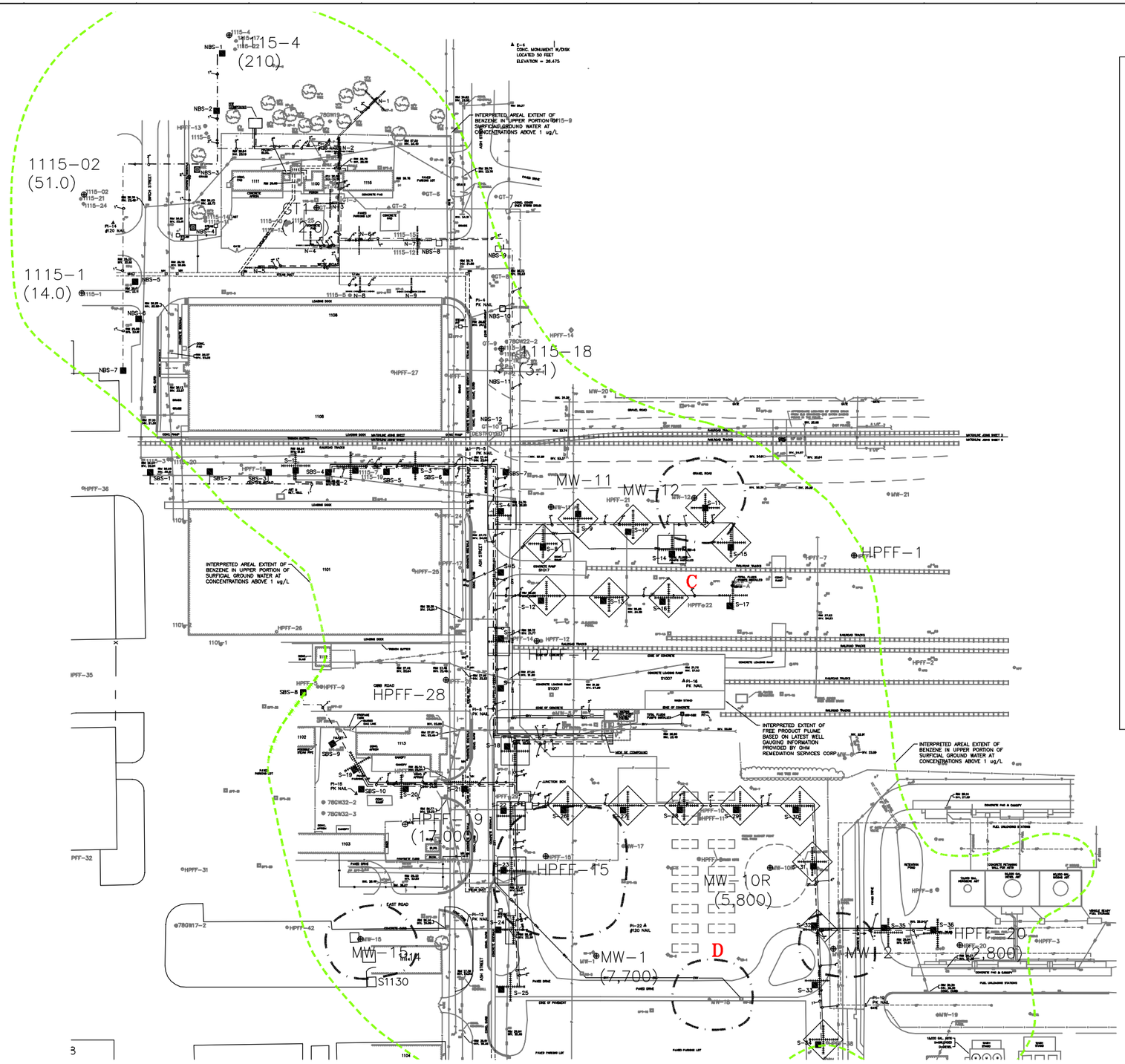
REVISIONS

ZONE	REV.	DESCRIPTION	BY	DATE	APP.

DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING COMMAND
ATLANTIC DIVISION
NAVAL STATION — NORFOLK, VIRGINIA
CONTRACT N62470-97-D-5000 — TASK ORDER NO. 0014
OHM PROJECT No. 827235 — MARINE CORPS, CAMP LEJEUNE, N.C.

FIGURE 5.2
BUILDING 1115 (NW COMPOUND)
& HPFF (SE COMPOUND)
AREAL EXTENT OF SHALLOW GROUNDWATER
& FREE PRODUCT CONTAMINATION
AUGUST 2002
HADNOT POINT FUEL FARM / BUILDING 1115

DRAWING NUMBER:
SHEET NUMBER: of
DATE: 3/20/02



LEGEND

EXISTING	NEW	DESCRIPTION
S		STEAM LINE
SS—MH		SANITARY SEWER WITH MANHOLE
SD—MH		STORM DRAIN
W		WATERLINE W/VALVE
PP—P		POWER LINE W/POLE
UP—MH		UNDERGROUND POWER WITH MANHOLE
COM—MH		COMMUNICATIONS LINE WITH MANHOLE
F		FUEL LINE
ENV		ENVIRONMENTAL–EXISTING GROUND WATER TREATMENT SYSTEM LINES
FM		FORCE MAIN
T		TELEPHONE RISER
FH		FIRE HYDRANT
MH		MANHOLE
MH		STEAM MANHOLE
		AREA LIGHT
CB		CATCH BASIN
CO		CLEAN OUT
		CHAIN LINK FENCE
GA		GUY ANCHOR
		SIGNS
		TYPE II WELL
		TYPE III WELL (50' DEEP)
		TYPE III WELL (70'–90' DEEP)
		TYPE III WELL (GREATER THAN 90' DEEP)
		HYDROPUNCH
		SOIL BORING
		PUMPING WELL
		DPT PROBE
		JUNCTION BOX
		SHALLOW AIR SPARGE WELL
		DEEP BIOSPARGE WELL (80' DEEP)
		DEEP BIOSPARGE WELL (100' DEEP)
		HORIZONTAL VAPOR COLLECTION LINE
D		FREE PRODUCT PLUME AREA
		ESTIMATED EXTENT OF FREE PRODUCT PLUME BASED ON LATEST WELL INFORMATION
		INTERPERATED AREAL EXTENT OF BENZENE IN UPPER PORTION OF SURFICAL GROUND WATER AT CONCENTRATION ABOVE 1 ug/L
MW-1 (7,700)		BENZENE ug/l

Shaw
Shaw Environmental, Inc.

SUBMITTED: _____ DATE: _____ PROJECT MANAGER:
APPROVED: _____ DATE: _____ SR. PROJECT ENGINEER
APPROVED: _____ DATE: _____ DEPT. MANAGER

AT FULL SCALE (IF NOT 1"-SCALE ACCORDINGLY)
CADD FILE: _____
DRAWN: L. SHULMAN
DESIGNED: PAUL MATZ
CHECKED: K. MAK
CHECKED: JIM DUNN

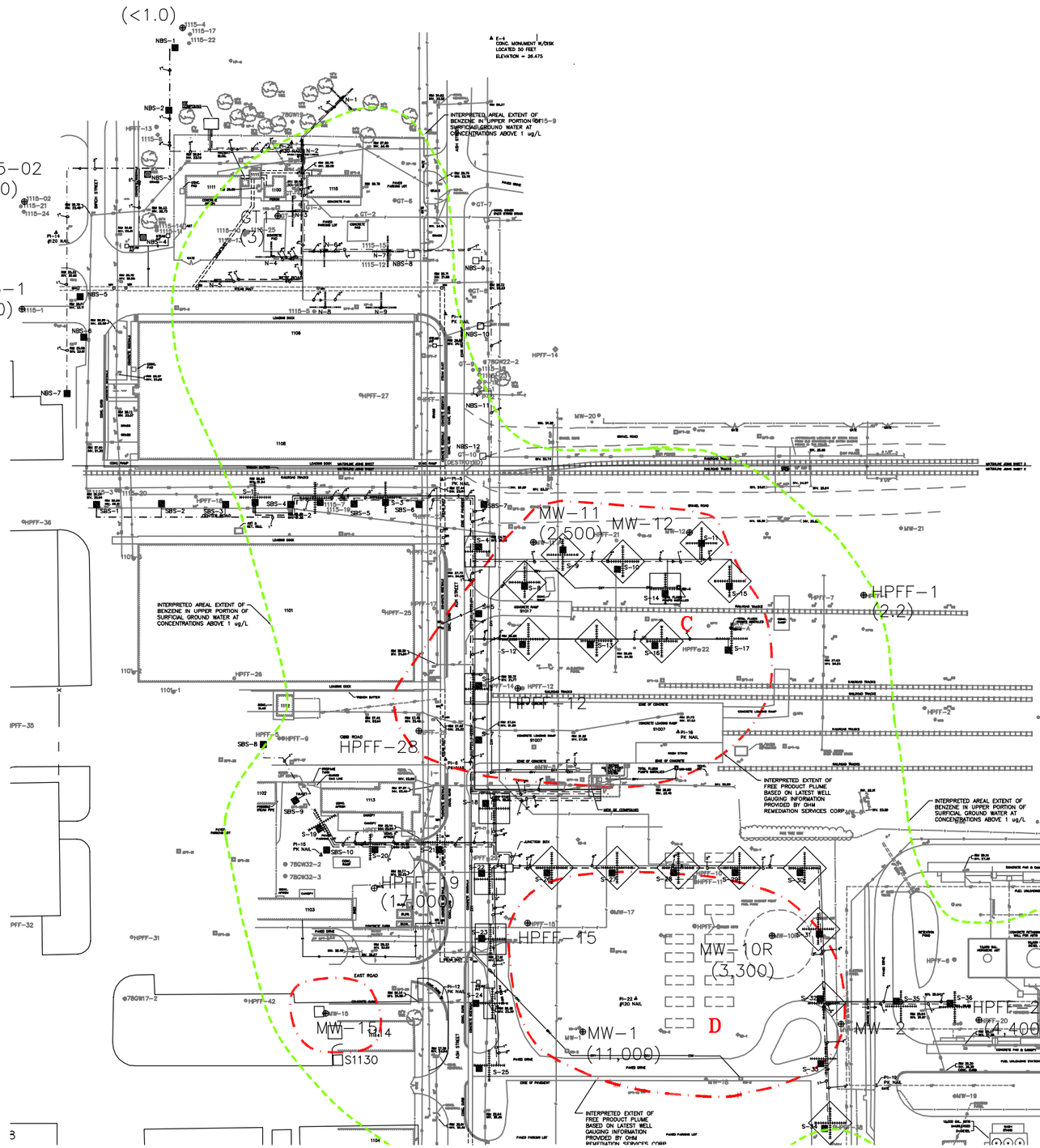
REVISIONS

ZONE	REV.	DESCRIPTION	BY	DATE	APP.

DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING COMMAND
ATLANTIC DIVISION
NAVAL STATION — NORFOLK, VIRGINIA
CONTRACT N62470-97-D-5000 — DELIVERY ORDER NO. 0014
OHM PROJECT No. 827235 — MARINE CORPS, CAMP LEJEUNE, N.C.

FIGURE 5.3
BUILDING 1115 (NW COMPOUND)
& HPFF (SE COMPOUND)
AREAL EXTENT OF SHALLOW GROUNDWATER
& FREE PRODUCT CONTAMINATION
JULY 2001
HADNOT POINT FUEL FARM / BUILDING 1115

DRAWING NUMBER:
SHEET NUMBER: of
DATE: 3/20/02



LEGEND

EXISTING	NEW	DESCRIPTION
S		STEAM LINE
SS–MH		SANITARY SEWER WITH MANHOLE
SD–MH		STORM DRAIN
W		WATERLINE W/VALVE
PP–P		POWER LINE W/POLE
UP–MH		UNDERGROUND POWER WITH MANHOLE
COM–MH		COMMUNICATIONS LINE WITH MANHOLE
F		FUEL LINE
ENV		ENVIRONMENTAL–EXISTING GROUND WATER TREATMENT SYSTEM LINES
FM		FORCE MAIN
T		TELEPHONE RISER
FH		FIRE HYDRANT
MH		MANHOLE
MH		STEAM MANHOLE
		AREA LIGHT
CB		CATCH BASIN
CO		CLEAN OUT
		CHAIN LINK FENCE
GA		GUY ANCHOR
		SIGNS
		TYPE II WELL
		TYPE III WELL (50' DEEP)
		TYPE III WELL (70'-90' DEEP)
		TYPE III WELL (GREATER THAN 90' DEEP)
		HYDROPUNCH
		SOIL BORING
		PUMPING WELL
		DPT PROBE
		JUNCTION BOX
		SHALLOW AIR SPARGE WELL
		DEEP BIOSPARGE WELL (80' DEEP)
		DEEP BIOSPARGE WELL (100' DEEP)
		HORIZONTAL VAPOR COLLECTION LINE
D		FREE PRODUCT PLUME AREA
		ESTIMATED EXTENT OF FREE PRODUCT PLUME BASED ON LATEST WELL INFORMATION
		INTERPERATED AREAL EXTENT OF BENZENE IN UPPER PORTION OF SURFICAL GROUND WATER AT CONCENTRATION ABOVE 1 ug/L
HPFF-1 (2.2)		BENZENE (ug/l)

Shaw Environmental, Inc.

SUBMITTED: _____ DATE: _____ PROJECT MANAGER:
APPROVED: _____ DATE: _____ SR. PROJECT ENGINEER
APPROVED: _____ DATE: _____ DEPT. MANAGER

AT FULL SCALE (IF NOT 1"-SCALE ACCORDINGLY)

CADD FILE: _____
DRAWN: L. SHULMAN
DESIGNED: BOB BROWN
CHECKED: RON KENYON
CHECKED: JIM DUNN

REVISIONS

ZONE	REV.	DESCRIPTION	BY	DATE	APP.

DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING COMMAND

ATLANTIC DIVISION

NAVAL STATION — NORFOLK, VIRGINIA

CONTRACT N62470-97-D-5000 — DELIVERY ORDER NO. 0014

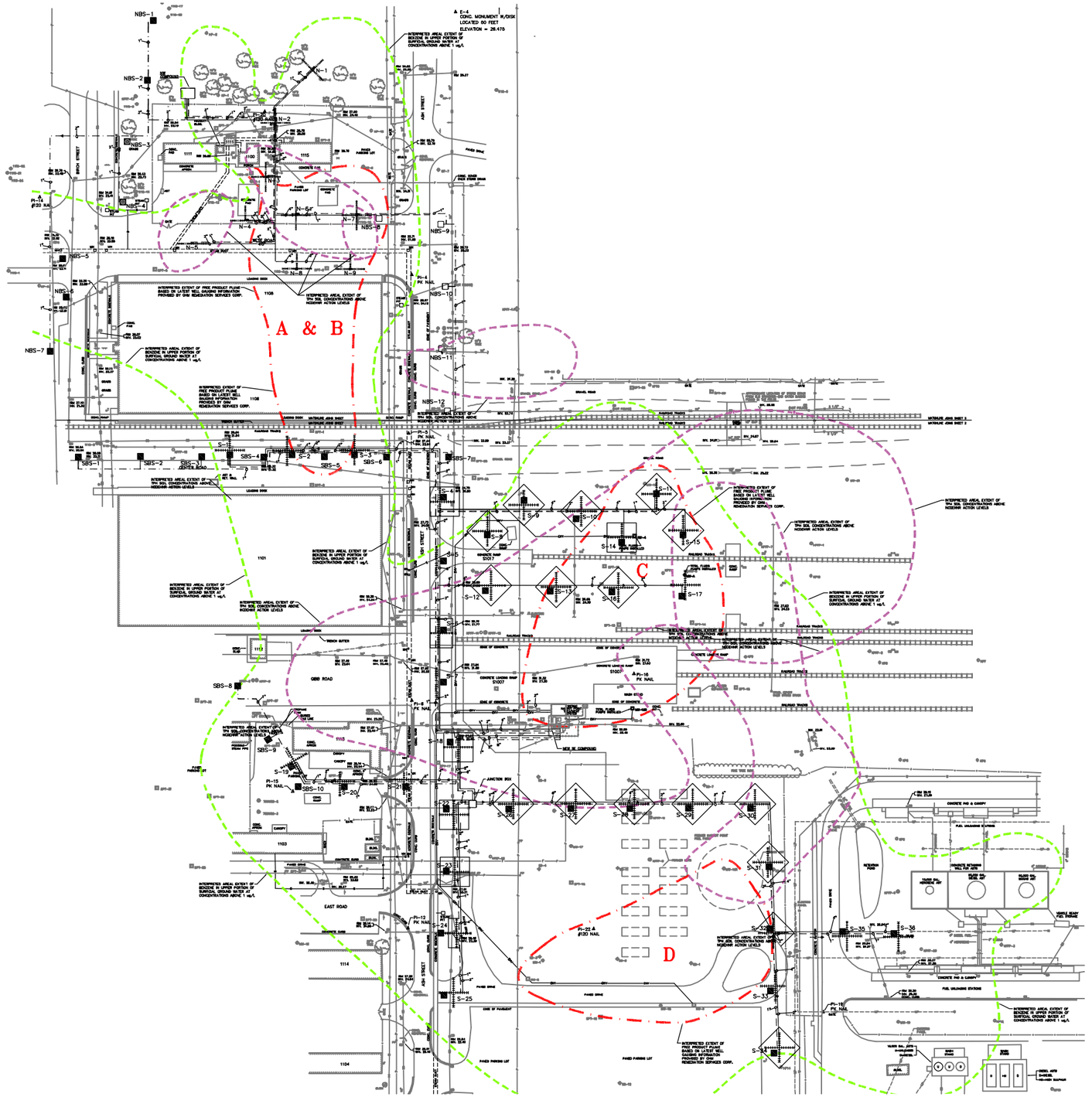
OHM PROJECT No. 827235 — MARINE CORPS, CAMP LEJEUNE, N.C.

FIGURE 5.4
BUILDING 1115 (NW COMPOUND) & HPFF (SE COMPOUND) AREAL EXTENT OF SHALLOW GROUNDWATER & FREE PRODUCT CONTAMINATION JULY 2000
HADNOT POINT FUEL FARM / BUILDING 1115

DRAWING NUMBER:

SHEET NUMBER: of

DATE: 3/20/02



LEGEND

EXISTING	NEW	DESCRIPTION
—S—		STEAM LINE
—SS—MH		SANITARY SEWER WITH MANHOLE
—SD—MH		STORM DRAIN
—W—		WATERLINE W/VALVE
PP —P—		POWER LINE W/POLE
—UP—MH		UNDERGROUND POWER WITH MANHOLE
—COM—MH		COMMUNICATIONS LINE WITH MANHOLE
—F—		FUEL LINE
—ENV—		ENVIRONMENTAL-EXISTING GROUND WATER TREATMENT SYSTEM LINES
—FM—		FORCE MAIN
T		TELEPHONE RISER
FH		FIRE HYDRANT
MH		MANHOLE
MH		STEAM MANHOLE
		AREA LIGHT
CB		CATCH BASIN
CO		CLEAN OUT
		CHAIN LINK FENCE
GA		GUY ANCHOR
		SIGNS
		TYPE II WELL
		TYPE III WELL (50' DEEP)
		TYPE III WELL (70'-90' DEEP)
		TYPE III WELL (GREATER THAN 90' DEEP)
		HYDROPUNCH
		SOIL BORING
		PUMPING WELL
		DPT PROBE
		JUNCTION BOX
		SHALLOW AIR SPARGE WELL
		DEEP BIOSPARGE WELL (80' DEEP)
		DEEP BIOSPARGE WELL (100' DEEP)
		HORIZONTAL VAPOR COLLECTION LINE
D		FREE PRODUCT PLUME AREA
		ESTIMATED EXTENT OF FREE PRODUCT PLUME BASED ON LATEST WELL INFORMATION
		INTERPRETED AREAL EXTENT OF TPH SOIL CONCENTRATIONS ABOVE NCDEHR ACTION LEVELS
		INTERPERATED AREAL EXTENT OF BENZENE IN UPPER PORTION OF SURFICAL GROUND WATER AT CONCENTRATION ABOVE 1 ug/L

N
GRID NORTH-NAD 83

0 80 160
SCALE IN FEET

Shaw
Shaw Environmental, Inc.

SUBMITTED: _____ DATE: _____
PROJECT MANAGER:
APPROVED: _____ DATE: _____
SR. PROJECT ENGINEER
APPROVED: _____ DATE: _____
DEPT. MANAGER

AT FULL SCALE
(IF NOT 1"-SCALE ACCORDINGLY)

CADD FILE: _____
DRAWN: L. SHULMAN
DESIGNED: BOB BROWN
CHECKED: RON KENYON
CHECKED: JIM DUNN

REVISIONS

ZONE	REV.	DESCRIPTION	BY	DATE	APP.

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND

ATLANTIC DIVISION

NAVAL STATION NORFOLK, VIRGINA

CONTRACT N62470-97-D-5000 DELIVERY ORDER NO. 0014

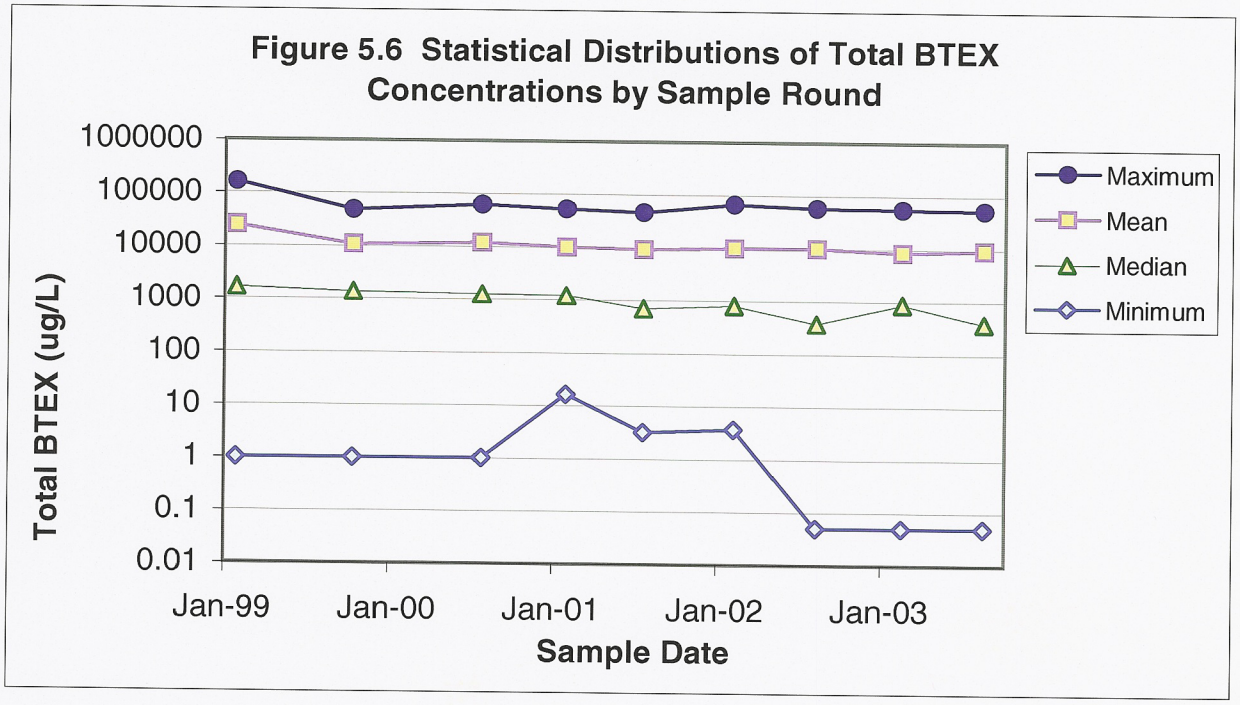
OHM PROJECT No. 827235 MARINE CORPS, CAMP LEJEUNE, N.C.

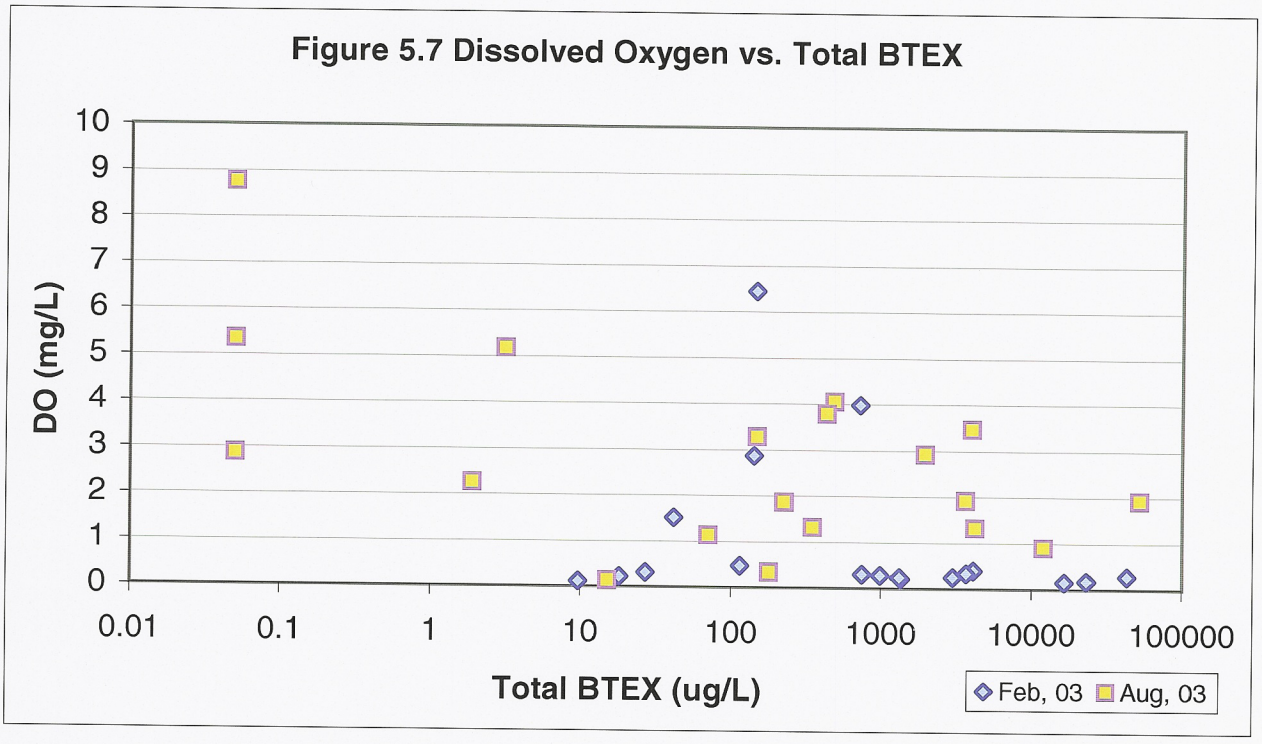
FIGURE 5.5
BUILDING 1115 (NW COMPOUND)
& HPFF (SE COMPOUND)
AREAL EXTENT OF SHALLOW GROUNDWATER, SOIL
& FREE PRODUCT CONTAMINATION
JULY 1999
HADNOT POINT FUEL FARM / BUILDING 1115

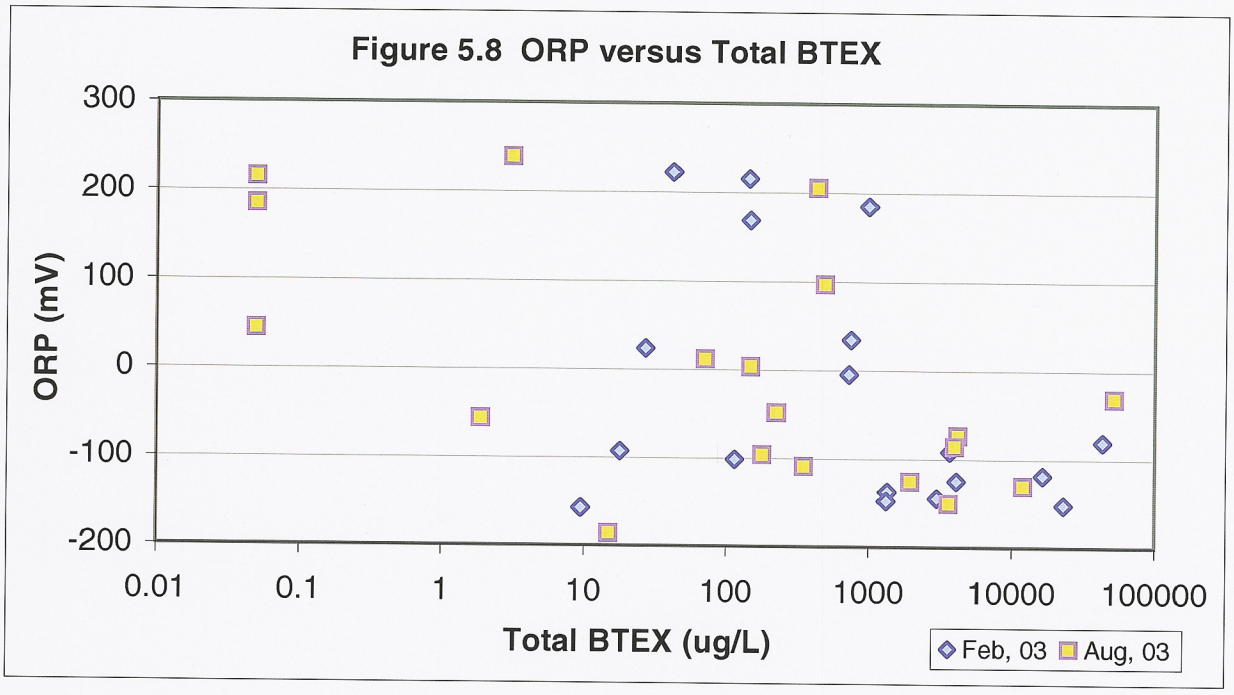
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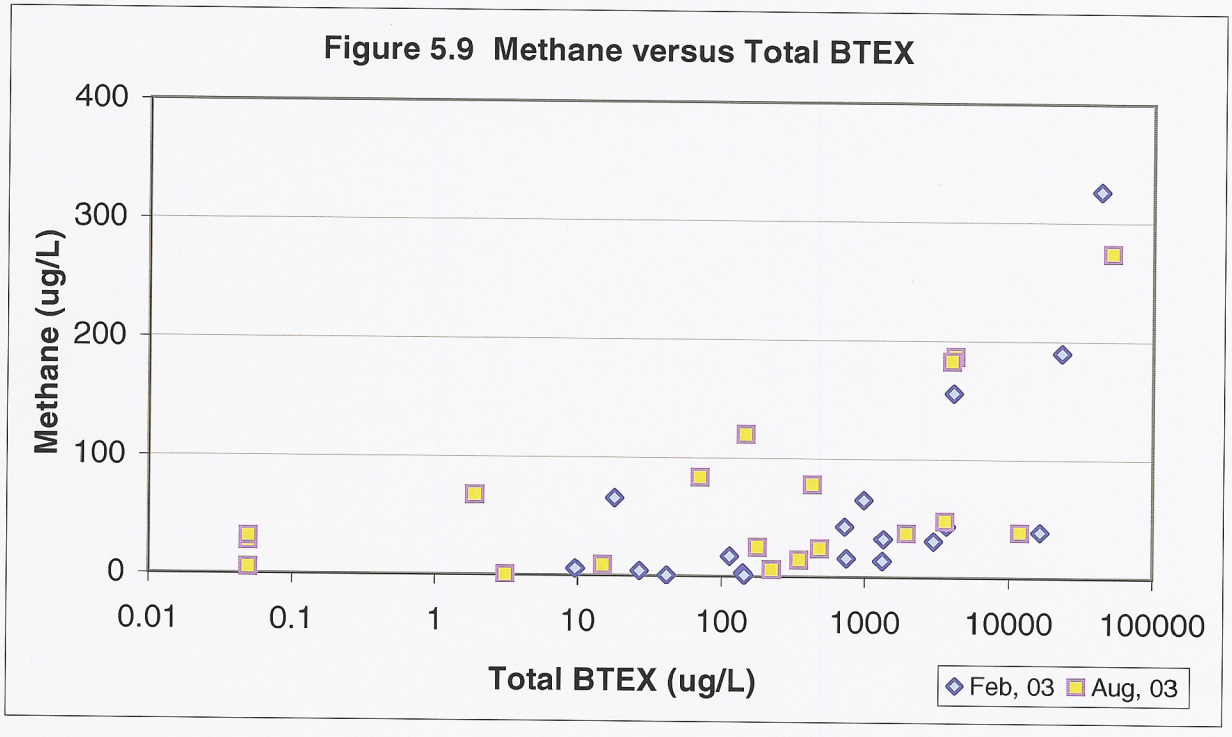
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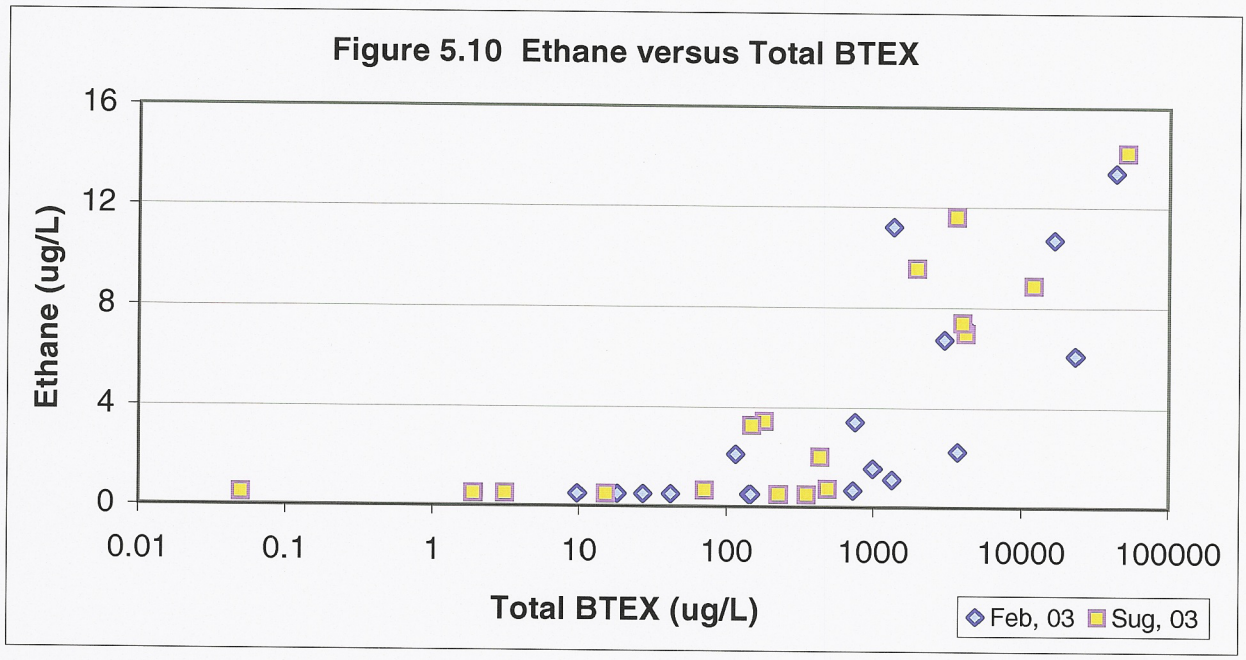
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3/20/02

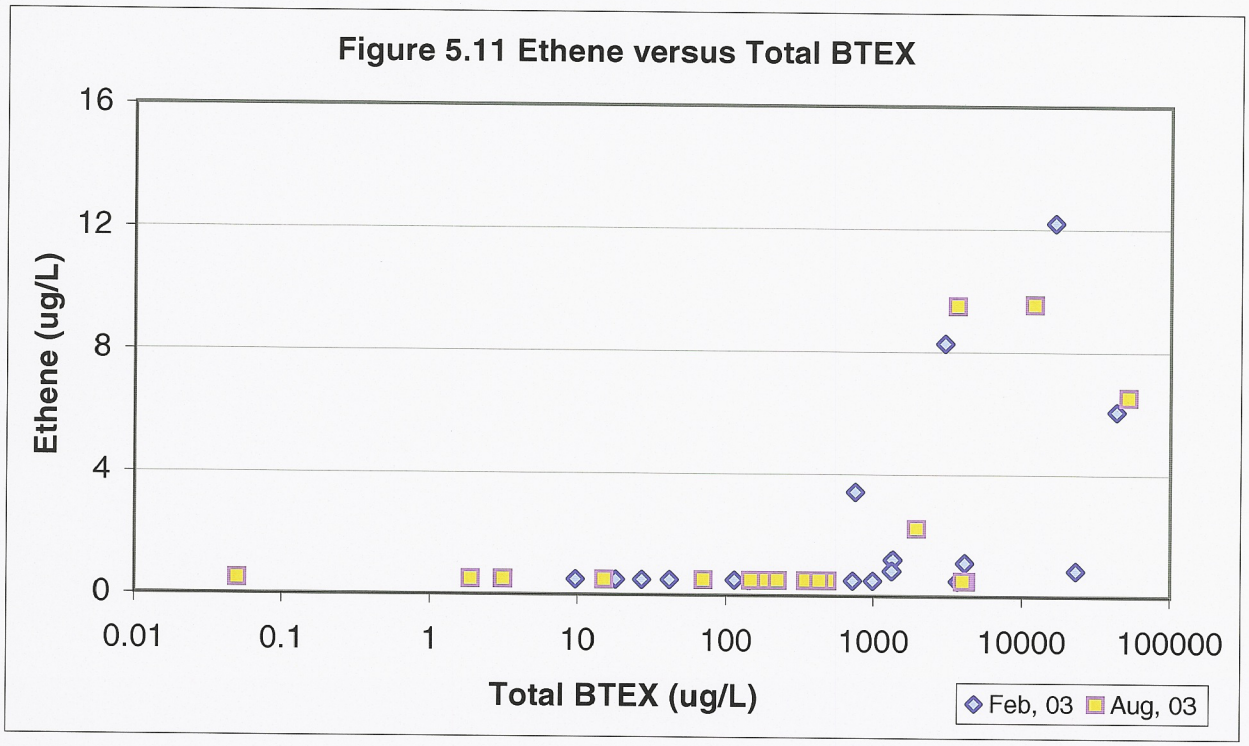

Figure 5.6 Statistical Distributions of Total BTEX Concentrations by Sample Round
1000000
100000
10000
1000
100
10
1
0.1
0.01
Total BTEX (ug/L)
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Sample Date
Maximum
Mean
Median
Minimum


Figure 5.7 Dissolved Oxygen vs. Total BTEX
10
9
8
7
6
5
4
3
2
1
0
DO (mg/L)
0.01
0.1
1
10
100
1000
10000
100000
Total BTEX (ug/L)
Feb, 03
Aug, 03


Figure 5.8 ORP versus Total BTEX
300
200
100
0
-100
-200
ORP (mV)
0.01
0.1
1
10
100
1000
10000
100000
Total BTEX (ug/L)
Feb, 03
Aug, 03


Figure 5.9 Methane versus Total BTEX
400
300
200
100
0
Methane (ug/L)
0.01
0.1
1
10
100
1000
10000
100000
Total BTEX (ug/L)
Feb, 03
Aug, 03


Figure 5.10 Ethane versus Total BTEX
16
12
8
4
0
Ethane (ug/L)
0.01
0.1
1
10
100
1000
10000
100000
Total BTEX (ug/L)
Feb, 03
Sug, 03


Figure 5.11 Ethene versus Total BTEX
16
12
8
4
0
Ethene (ug/L)
0.01
0.1
1
10
100
1000
10000
100000
Total BTEX (ug/L)
Feb, 03
Aug, 03

APPENDIX A

AGGRESSIVE FLUID/VAPOR RECOVERY (AFVR) SUMMARY TABLE

Aggressive Fluid Vapor Recovery Report

MCB Camp Lejeune, North Carolina

Site Name: Hadnot Point Fuel Farm /1115
Site Location: Area D
Work Plan Ref: August, 1997

Incident #: _____
Site Priority Rank: _____

Report Date: 10/28/2002
Event #: 254
Event Date: 10/22/2002

Free Prod Type: Gasoline

Wells Gauged:	MW-1	MW-2	78-GW-17-2	HPFF-15	HPFF-28	MW-18	HPGW 32-2	MW-15	HPGW-32-3	MW-10R
Free Prod. Thickness:	0.00			0.60		0.52				
AFVR Wells Selected:				X		X				
Observ. Wells Selected:	X									

Event Duration: 2.50 hour(s)
Stack TPH Recovery (lbs): 87.0 vapor + 28.4 liquid = 115.4
Stack TPH Recovery (gals): 13.9 vapor + 4.50 liquid = 18.4
Total Est. Fluids Rec.: 235 gals

Conclusions and Recommendations:

A total of 115.4 pounds or 18.4 gallons of gasoline were removed from the site during this AFVR event. A free product volume of 4.5 gallons was detected floating in the vacuum truck at the end of the event. OHM is evaluating different combinations of AFVR recovery wells in an attempt to maximize product recovery and to provide coverage of the area impacted by free phase hydrocarbons. All recovery well combinations in Area "D" produce high vapor concentrations. Some extracted vapor concentrations measured during this AFVR event were greater then 200,000 ppm so estimated total hydrocarbon extraction for this event is considered conservative. OHM recommends continued AFVR events in this area.

Prepared By: Betsy McDaniel

Reviewed By: James A. Dunn, Jr., P.E.
OHM / IT Remediation Services _____

Attachments: Tables 1, 2, 3, 4.

Aggressive Fluid Vapor Recovery Report

MCB Camp Lejeune, North Carolina

Site Name: Hadnot Point Fuel Farm /1115
Site Location: Area D
Work Plan Ref: August, 1997

Incident #: _____
Site Priority Rank: _____

Report Date: 11/12/2002
Event #: 255
Event Date: 11/12/2002

Free Prod Type: Gasoline

Wells Gauged:	MW-1	MW-2	78-GW-17-2	HPFF-15	HPFF-28	MW-18	HPGW 32-2	MW-15	HPGW-32-3	MW-10R
Free Prod. Thickness:	0.00			0.92		0.30				
AFVR Wells Selected:				X		X				
Observ. Wells Selected:	X									

Event Duration: 3.00 hour(s)
Stack TPH Recovery (lbs): 99.2 vapor + 28.4 liquid = 127.6
Stack TPH Recovery (gals): 15.8 vapor + 4.50 liquid = 20.3
Total Est. Fluids Rec.: 255 gals

Conclusions and Recommendations:

A total of 127.6 pounds or 20.3 gallons of gasoline were removed from the site during this AFVR event. A free product volume of 4.5 gallons was detected floating in the vacuum truck at the end of the event. OHM is evaluating different combinations of AFVR recovery wells in an attempt to maximize product recovery and to provide coverage of the area impacted by free phase hydrocarbons. All recovery well combinations in Area "D" produce high vapor concentrations. Some extracted vapor concentrations measured during this AFVR event were greater then 200,000 ppm so estimated total hydrocarbon extraction for this event is considered conservative. OHM recommends continued AFVR events in this area.

Prepared By: Betsy McDaniel

Reviewed By: James A. Dunn, Jr., P.E.
OHM / IT Remediation Services

Attachments: Tables 1, 2, 3, 4.

Aggressive Fluid Vapor Recovery Report

MCB Camp Lejeune, North Carolina

Site Name: Hadnot Point Fuel Farm /1115
Site Location: Area D
Work Plan Ref: August, 1997

Incident #: _____
Site Priority Rank: _____

Report Date: 12/9/2002
Event #: 256
Event Date: 12/3/2002

Free Prod Type: Gasoline

Wells Gauged:	MW-1	MW-2	78-GW-17-2	HPFF-15	HPFF-28	MW-18	HPGW 32-2	MW-15	HPGW-32-3	MW-10R
Free Prod. Thickness:	0.00			0.40		0.25				
AFVR Wells Selected:				X		X				
Observ. Wells Selected:	X									

Event Duration: 3.00 hour(s)
Stack TPH Recovery (lbs): 100.8 vapor + 12.6 liquid = 113.4
Stack TPH Recovery (gals): 16.1 vapor + 2.00 liquid = 18.1
Total Est. Fluids Rec.: 332 gals

Conclusions and Recommendations:

A total of 113.4 pounds or 18.1 gallons of gasoline were removed from the site during this AFVR event. A free product volume of 2 gallons was detected floating in the vacuum truck at the end of the event. OHM is evaluating different combinations of AFVR recovery wells in an attempt to maximize product recovery and to provide coverage of the area impacted by free phase hydrocarbons. All recovery well combinations in Area "D" produce high vapor concentrations. Some extracted vapor concentrations measured during this AFVR event were greater then 200,000 ppm so estimated total hydrocarbon extraction for this event is considered conservative. OHM recommends continued AFVR events in this area.

Prepared By: Betsy McDaniel

Reviewed By: James A. Dunn, Jr., P.E.
OHM / IT Remediation Services

_____

Attachments: Tables 1, 2, 3, 4.

Aggressive Fluid Vapor Recovery Report

MCB Camp Lejeune, North Carolina

Site Name: Hadnot Point Fuel Farm /1115 ***Incident #:***
Site Location: Area D ***Site Priority Rank:***
Work Plan Ref: August, 1997

Report Date: 12/23/2002
Event #: 257
Event Date: 12/19/2002

Free Prod Type: Gasoline

Wells Gauged:	MW-1	MW-2	78-GW-17-2	HPFF-15	HPFF-28	MW-18	HPGW 32-2	MW-15	HPGW-32-3	MW-10R
Free Prod. Thickness:	0.00			0.52		0.22				
AFVR Wells Selected:				X		X				
Observ. Wells Selected:	X									

Event Duration: 2.50 hour(s)
Stack TPH Recovery (lbs): 82.3 vapor + 18.9 liquid = 101.2
Stack TPH Recovery (gals): 13.1 vapor + 3.00 liquid = 16.1
Total Est. Fluids Rec.: 288 gals

Conclusions and Recommendations:

A total of 101.2 pounds or 16.1 gallons of gasoline were removed from the site during this AFVR event. A free product volume of 3 gallons was detected floating in the vacuum truck at the end of the event. OHM is evaluating different combinations of AFVR recovery wells in an attempt to maximize product recovery and to provide coverage of the area impacted by free phase hydrocarbons. All recovery well combinations in Area "D" produce high vapor concentrations. Some extracted vapor concentrations measured during this AFVR event were greater then 200,000 ppm so estimated total hydrocarbon extraction for this event is considered conservative. OHM recommends continued AFVR events in this area.

Prepared By: Betsy McDaniel

Reviewed By: James A. Dunn, Jr., P.E.
OHM / IT Remediation Services

Attachments: Tables 1, 2, 3, 4.

Aggressive Fluid Vapor Recovery Report

MCB Camp Lejeune, North Carolina

Site Name: Hadnot Point Fuel Farm /1115 **Incident #:**
Site Location: Area D **Site Priority Rank:**
Work Plan Ref: August, 1997

Report Date: 1/29/2003
Event #: 258
Event Date: 1/27/2003

Free Prod Type: Gasoline

Wells Gauged:	MW-1	MW-2	78-GW-17-2	HPFF-15	HPFF-28	MW-18	HPGW 32-2	MW-15	HPGW-32-3	MW-10R
Free Prod. Thickness:	0.00			0.82		0.20				
AFVR Wells Selected:				X		X				
Observ. Wells Selected:	X									

Event Duration: 1.50 hour(s)

Stack TPH Recovery (lbs):	57.1 vapor	+	25.2 liquid =	82.3
Stack TPH Recovery (gals):	9.1 vapor	+	4.00 liquid =	13.1

Total Est. Fluids Rec.: 254 gals

Conclusions and Recommendations:

A total of 82.3 pounds or 13.1 gallons of gasoline were removed from the site during this AFVR event. A free product volume of 4 gallons was detected floating in the vacuum truck at the end of the event. OHM is evaluating different combinations of AFVR recovery wells in an attempt to maximize product recovery and to provide coverage of the area impacted by free phase hydrocarbons. All recovery well combinations in Area "D" produce high vapor concentrations. Some extracted vapor concentrations measured during this AFVR event were greater then 200,000 ppm so estimated total hydrocarbon extraction for this event is considered conservative. OHM recommends continued AFVR events in this area.

Prepared By: Betsy McDaniel

Reviewed By: James A. Dunn, Jr., P.E.
Shaw Environmental

Attachments: Tables 1, 2, 3, 4.

Aggressive Fluid Vapor Recovery Report

MCB Camp Lejeune, North Carolina

Site Name: Hadnot Point Fuel Farm /1115
Site Location: Area D
Work Plan Ref: August, 1997

Incident #:
Site Priority Rank:

Report Date: 7/7/2003
Event #: 259
Event Date: 7/1/2003

Free Prod Type: Gasoline

	MW-1	MW-2	78-GW-17-2	HPFF-15	HPFF-28	MW-18	HPGW 32-2	MW-15	HPGW-32-3	MW-10R	HPFF-72
Wells Gauged:											
Free Prod. Thickness:								0.00			2.83
AFVR Wells Selected:											X
Observ. Wells Selected:								X			

Event Duration: 3.00 hour(s)

Stack TPH Recovery (lbs):	98.0 vapor	+	44.2	liquid =	142.1
Stack TPH Recovery (gals):	15.6 vapor	+	7.00	liquid =	22.6

Total Est. Fluids Rec.: 197 gals

Conclusions and Recommendations:

A total of 142.1 pounds or 22.6 gallons of gasoline were removed from the site during this AFVR event. A free product volume of 7 gallons was detected floating in the vacuum truck at the end of the event. Shaw is evaluating different combinations of AFVR recovery wells in an attempt to maximize product recovery and to provide coverage of the area impacted by free phase hydrocarbons. All recovery well combinations in Area "D" produce high vapor concentrations. Some extracted vapor concentrations measured during this AFVR event were greater then 200,000 ppm, so estimated total hydrocarbon extraction for this event is considered conservative. Shaw recommends continued AFVR events in this area.

Prepared By: Betsy McDaniel

Reviewed By: James A. Dunn, Jr., P.E.
Shaw Environmental

Attachments: Tables 1, 2, 3, 4.

Aggressive Fluid Vapor Recovery Report

MCB Camp Lejeune, North Carolina

Site Name: Hadnot Point Fuel Farm /1115
Site Location: Area D
Work Plan Ref: August, 1997

Incident #:
Site Priority Rank:

Report Date: 7/14/2003
Event #: 260
Event Date: 7/11/2003

Free Prod Type: Gasoline

Wells Gauged:	MW-1	MW-2	78-GW-17-2	HPFF-15	HPFF-28	MW-18	HPGW 32-2	MW-15	HPGW-32-3	MW-10R	HPFF-72
Free Prod. Thickness:								0.00			1.04
AFVR Wells Selected:											X
Observ. Wells Selected:								X			

Event Duration: 2.50 hour(s)

Stack TPH Recovery (lbs):	81.9 vapor	+	12.6 liquid =	94.5
Stack TPH Recovery (gals):	13.0 vapor	+	2.00 liquid =	15.0

Total Est. Fluids Rec.: 172 gals

Conclusions and Recommendations:

A total of 94.5 pounds or 15.0 gallons of gasoline were removed from the site during this AFVR event. A free product volume of 2 gallons was detected floating in the vacuum truck at the end of the event. Shaw is evaluating different combinations of AFVR recovery wells in an attempt to maximize product recovery and to provide coverage of the area impacted by free phase hydrocarbons. All recovery well combinations in Area "D" produce high vapor concentrations. Some extracted vapor concentrations measured during this AFVR event were greater then 200,000 ppm, so estimated total hydrocarbon extraction for this event is considered conservative. Shaw recommends continued AFVR events in this area.

Prepared By: Betsy McDaniel

Reviewed By: James A. Dunn, Jr., P.E.
Shaw Environmental

Attachments: Tables 1, 2, 3, 4.

Aggressive Fluid Vapor Recovery Report

MCB Camp Lejeune, North Carolina

Site Name: Hadnot Point Fuel Farm /1115
Site Location: Area D
Work Plan Ref: August, 1997

Incident #: _____
Site Priority Rank: _____

Report Date: 7/14/2003
Event #: 261
Event Date: 7/11/2003

Free Prod Type: Gasoline

Wells Gauged:	MW-1	MW-2	78-GW-17-2	HPFF-15	HPFF-28	MW-18	HPGW 32-2	MW-15	HPGW-32-3	MW-10R	HPFF-72
Free Prod. Thickness:	0.00			0.20							
AFVR Wells Selected:				X							
Observ. Wells Selected:	X										

Event Duration: 2.00 hour(s)

Stack TPH Recovery (lbs):	67.2 vapor	+	3.2	liquid =	70.3
Stack TPH Recovery (gals):	10.7 vapor	+	0.50	liquid =	11.2
Total Est. Fluids Rec.:	151 gals				

Conclusions and Recommendations:

A total of 70.3 pounds or 11.2 gallons of gasoline were removed from the site during this AFVR event. A free product volume of 0.5 gallons was detected floating in the vacuum truck at the end of the event. Shaw is evaluating different combinations of AFVR recovery wells in an attempt to maximize product recovery and to provide coverage of the area impacted by free phase hydrocarbons. All recovery well combinations in Area "D" produce high vapor concentrations. Some extracted vapor concentrations measured during this AFVR event were greater then 200,000 ppm, so estimated total hydrocarbon extraction for this event is considered conservative. Shaw recommends continued AFVR events in this area.

Prepared By: Betsy McDaniel

Reviewed By: James A. Dunn, Jr., P.E.
Shaw Environmental

_____

Attachments: Tables 1, 2, 3, 4.

Aggressive Fluid Vapor Recovery Report

MCB Camp Lejeune, North Carolina

Site Name: Hadnot Point Fuel Farm /1115
Site Location: Area D
Work Plan Ref: August, 1997

Incident #:
Site Priority Rank:

Report Date: 7/24/2003
Event #: 262
Event Date: 7/23/2003

Free Prod Type: Gasoline

Wells Gauged:	MW-1	MW-2	78-GW-17-2	HPFF-15	HPFF-28	MW-18	HPGW 32-2	MW-15	HPGW-32-3	MW-10R	HPFF-72
Free Prod. Thickness:								0			0.76
AFVR Wells Selected:											X
Observ. Wells Selected:								X			

Event Duration: 2.00 hour(s)

Stack TPH Recovery (lbs):	66.4 vapor	+	9.5	liquid =	75.8
Stack TPH Recovery (gals):	10.6 vapor	+	1.50	liquid =	12.1
Total Est. Fluids Rec.:	152 gals				

Conclusions and Recommendations:

A total of 75.8 pounds or 12.1 gallons of gasoline were removed from the site during this AFVR event. A free product volume of 1.5 gallons was detected floating in the vacuum truck at the end of the event. Shaw is evaluating different combinations of AFVR recovery wells in an attempt to maximize product recovery and to provide coverage of the area impacted by free phase hydrocarbons. All recovery well combinations in Area "D" produce high vapor concentrations. Some extracted vapor concentrations measured during this AFVR event were greater then 200,000 ppm, so estimated total hydrocarbon extraction for this event is considered conservative. Shaw recommends continued AFVR events in this area.

Prepared By: Betsy McDaniel

Reviewed By: James A. Dunn, Jr., P.E.
Shaw Environmental

Attachments: Tables 1, 2, 3, 4.

Aggressive Fluid Vapor Recovery Report

MCB Camp Lejeune, North Carolina

Site Name: Hadnot Point Fuel Farm /1115 ***Incident #:***
Site Location: Area D ***Site Priority Rank:***
Work Plan Ref: August, 1997

Report Date: 8/4/2003
Event #: 263
Event Date: 8/1/2003

Free Prod Type: Gasoline

Wells Gauged:	MW-1	MW-2	78-GW-17-2	HPFF-15	HPFF-28	MW-18	HPGW 32-2	MW-15	HPGW-32-3	MW-10R	HPFF-72
Free Prod. Thickness:								0			0.68
AFVR Wells Selected:											X
Observ. Wells Selected:								X			

Event Duration: 2.00 hour(s)
Stack TPH Recovery (lbs): 66.2 vapor + 9.5 liquid = 75.7
Stack TPH Recovery (gals): 10.5 vapor + 1.50 liquid = 12.0
Total Est. Fluids Rec.: 162 gals

Conclusions and Recommendations:

A total of 75.7 pounds or 12.0 gallons of gasoline were removed from the site during this AFVR event. A free product volume of 1.5 gallons was detected floating in the vacuum truck at the end of the event. Shaw is evaluating different combinations of AFVR recovery wells in an attempt to maximize product recovery and to provide coverage of the area impacted by free phase hydrocarbons. All recovery well combinations in Area "D" produce high vapor concentrations. Some extracted vapor concentrations measured during this AFVR event were greater then 200,000 ppm, so estimated total hydrocarbon extraction for this event is considered conservative. Shaw recommends continued AFVR events in this area.

Prepared By: Betsy McDaniel

Reviewed By: James A. Dunn, Jr., P.E.
Shaw Environmental

Attachments: Tables 1, 2, 3, 4.

Aggressive Fluid Vapor Recovery Report

MCB Camp Lejeune, North Carolina

Site Name: Hadnot Point Fuel Farm /1115 ***Incident #:***
Site Location: Area D ***Site Priority Rank:***
Work Plan Ref: August, 1997

Report Date: 9/8/2003
Event #: 264
Event Date: 9/3/2003

Free Prod Type: Gasoline

Wells Gauged:	MW-1	MW-2	78-GW-17-2	HPFF-15	HPFF-28	MW-18	HPGW 32-2	MW-15	HPGW-32-3	MW-10R	HPFF-72
Free Prod. Thickness:								0			0.73
AFVR Wells Selected:											X
Observ. Wells Selected:								X			

Event Duration: 2.00 hour(s)
Stack TPH Recovery (lbs): 66.7 vapor + 9.5 liquid = 76.2
Stack TPH Recovery (gals): 10.6 vapor + 1.50 liquid = 12.1
Total Est. Fluids Rec.: 172 gals

Conclusions and Recommendations:

A total of 76.2 pounds or 12.1 gallons of gasoline were removed from the site during this AFVR event. A free product volume of 1.5 gallons was detected floating in the vacuum truck at the end of the event. Shaw is evaluating different combinations of AFVR recovery wells in an attempt to maximize product recovery and to provide coverage of the area impacted by free phase hydrocarbons. All recovery well combinations in Area "D" produce high vapor concentrations. Some extracted vapor concentrations measured during this AFVR event were greater then 200,000 ppm, so estimated total hydrocarbon extraction for this event is considered conservative. Shaw recommends continued AFVR events in this area.

Prepared By: Betsy McDaniel

Reviewed By: James A. Dunn, Jr., P.E.
Shaw Environmental

Attachments: Tables 1, 2, 3, 4.

APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

Analytical Data Summary

SE Shallow Well **HPFF-11**

Sample ID:		HPFF-HPFF11-02C	HPFF-HPFF11-03A	HPFF-11-03C
Date Sampled:		08/13/02	02/21/03	08/25/03
Analyte (ug/l)	**Action Level**	**Result**	**Result**	**Result**
VOA EPA 602				
Benzene	1	**809**	**489**	**348**
Ethylbenzene	29	**52.1**	**63.6**	<5.0
Toluene	1000	**84.5**	**580**	<5.0
Xylenes (total)	530	**110**	**187**	<15
Total BTEX		**1055.6**	**1319.6**	**348**
PAH EPA 610				
Naphthalene	21	**2.3 J**	**8.0**	<5.2
		Bold type indicates detectable concentrations.		
		Shaded area indicates detectable concentrations above the groundwater quality st		

J= estimated
B= detected in blank

Printed: 12/10/2003
Samples analyzed by STL or Accutest

Analytical Data Summary

SE Shallow Well **HPFF-9**

Sample ID:		HPFF-HPFF09-02C	HPFF-HPFF09-03A	HPFF-9-03C
Date Sampled:		08/14/02	02/21/03	08/22/03
Analyte (ug/l)	**Action Level**	**Result**	**Result**	**Result**
VOA EPA 602				
Benzene	1	**10800**	**22600**	**4090**
Ethylbenzene	29	**621**	**363**	**96.4**
Toluene	1000	<250	**62.4**	<5.0
Xylenes (total)	530	**1160**	**137 J**	**9.2 J**
Total BTEX		**12581**	**23162.4**	**4195.6**
PAH EPA 610				
Naphthalene	21	**112**	**70.1**	**13.6**
		Bold type indicates detectable concentrations.		
		Shaded area indicates detectable concentrations above the groundwater quality st		

J= estimated
B= detected in blank

Analytical Data Summary

SE Shallow Well **HPFF-5**

Sample ID:		HPFF-HPFF05-02C	HPFF-HPFF05-03A	HPFF-5-03C
Date Sampled:		08/14/02	02/21/03	08/25/03
Analyte (ug/l)	**Action Level**	**Result**	**Result**	**Result**
VOA EPA 602				
Benzene	1	**0.7 J**	**674**	**44.2**
Ethylbenzene	29	**0.53 J**	**33.6**	**5.2**
Toluene	1000	<1.0	**4.6**	**13.4**
Xylenes (total)	530	**4.6**	**9.9**	**7.4**
Total BTEX		**5.83**	**722.1**	**70.2**
PAH EPA 610				
Naphthalene	21	<5.1	**6.4**	<5.3
		Bold type indicates detectable concentrations.		
		Shaded area indicates detectable concentrations above the groundwater quality st		

J= estimated
B= detected in blank

Printed: 12/10/2003
Samples analyzed by STL or Accutest

Analytical Data Summary

SE Deep Well **GW-32-3**

Sample ID:		CLJ-0011-008-GW-32-3	CLJ-0011-025-GW-32-3	CLJ-0011-042-GW-32-3	CLJ-0011-58	HPFF-78GW323-01C	HPFF-78GW323-02A	HPFF-78GW323-02C	HPFF-78GW323-03A	GW-32-3-03C
Date Sampled:		01/28/99	10/15/99	07/19/00	01/31/01	07/22/01	02/09/02	08/14/02	02/21/03	08/26/03
Analyte (ug/l)	**Action Level**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
VOA EPA 602										
Benzene	1	**84**	<1.0	**25**	**7.3**	**98**	**2.7**	**124**	**7.1**	**0.64 J**
Ethylbenzene	29	**5.6**	<1.0	**110**	**31**	<10	<1.0	**14**	**1.3**	**1.4**
Toluene	1000	**120**	<1.0	**310**	**82**	<10	**2.2**	**88.7**	**1.2**	**2.4**
Xylenes (total)	530	**35**	<1.0	**420**	**120**	<10	**4.1**	**153**	<3.0	**10.5**
Total BTEX		**244.6**		**865**	**240.3**	**98**	**9**	**379.7**	**9.6**	**14.94**
PAH EPA 610										
Naphthalene	21	**2.7**	<2.0	**12**	**3.4**	<2.0	<5.0	**3.3 J**	**2.7 J**	<5.5
		Bold type indicates detectable concentrations.								
		Shaded area indicates detectable concentrations above the groundwater quality standards.								

J= estimated
B= detected in blank

Printed: 12/10/2003
Samples analyzed by STL or Accutest

CLJ - Hadnot Point - Bldg. 1115
Project #824603

Analytical Data Summary

SE Deep Well **GW-32-2**

Sample ID:		CLJ-0011-007-GW-32-2	CLJ-0011-024-GW-32-2	CLJ-0011-041-GW-32-2	CLJ-0011-57	HPFF-78GW322-01C	HPFF-78GW322-02A	HPFF-78GW322-02C	HPFF-78GW322-03A	GW-32-2-03C
Date Sampled:		01/28/99	10/15/99	07/20/00	01/31/01	07/22/01	02/09/02	08/14/02	02/21/03	08/25/03
Analyte (ug/l)	**Action Level**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
VOA EPA 602										
Benzene	1	**170**	<1.0	**8.9**	**39**	**1.9**	**228**	**13.1**	**109**	**176**
Ethylbenzene	29	**18**	<1.0	<1.0	**30**	**2.9**	<10	**1.4**	**1.9**	<5.0
Toluene	1000	**190**	<1.0	**1.1**	**86**	**8**	**95.2**	**15.5**	**1.7**	**3.5 J**
Xylenes (total)	530	**94**	<1.0	**1.2**	**120**	**9.2**	**984**	**8.6**	**1.7 J**	<15
Total BTEX		**472**		**11.2**	**275**	**22**	**1307.2**	**38.6**	**114.3**	**179.5**
PAH EPA 610										
Naphthalene	21	**5.2**	<2.0	<2.0	**2.4**	<2.0	**16**	<5.2	<5.1	<5.1
		Bold type indicates detectable concentrations.								
		Shaded area indicates detectable concentrations above the groundwater quality standards.								

J= estimated
B= detected in blank

Printed: 12/10/2003
Samples analyzed by STL or Accutest

CLJ - Hadnot Point - Bldg. 1115
Project #824603

Analytical Data Summary

SE Shallow Well **MW-18**

Sample ID:		CLJ-0011-006-MW-18	CLJ-0011-023-MW-18	CLJ-0011-040-MW-18	CLJ-0011-62	HPFF-MW18-01C	HPFF-MW18-02A	HPFF-MW18-02C	HPFF-MW18-03A	MW-18-03C
Date Sampled:		01/28/99	10/18/99	07/26/00	01/31/01	07/22/01	02/09/02	08/14/02	02/18/03	08/27/03
Analyte (ug/l)	**Action Level**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
VOA EPA 602										
Benzene	1	**28000**	**15000**	**16000**	**12000**	**11000**	**18900**	**18200**	**16900**	**5440**
Ethylbenzene	29	**12000**	**1400**	**1400**	**1300**	**1100**	**1830**	**1520**	**1370**	**1930**
Toluene	1000	**65000**	**25000**	**29000**	**24000**	**22000**	**36100**	**30300**	**30000**	**15100**
Xylenes (total)	530	**46000**	**7300**	**8000**	**8000**	**7400**	**10700**	**8790**	**7670**	**11700**
Total BTEX		**151000**	**48700**	**54400**	**45300**	**41500**	**67530**	**58810**	**55940**	**34170**
PAH EPA 610										
Naphthalene	21	**1300**	**460**	**330**	**550**	**410**	**685**	**519**	**464**	**768**
		Bold type indicates detectable concentrations.								
		Shaded area indicates detectable concentrations above the groundwater quality standards.								

J= estimated
B= detected in blank

Printed: 12/10/2003
Samples analyzed by STL or Accutest

CLJ - Hadnot Point - Bldg. 1115
Project #824603

Analytical Data Summary
SE Shallow Well **MW-17A**

Sample ID:		CLJ-0011-010-MW-17A	CLJ-0011-027-MW-17A	CLJ-0011-044-MW-17A	CLJ-0011-66	HPFF-MW17-01C	HPFF-MW17-02A	HPFF-MW17-02C	HPFF-MW17-03A	MW-17A-03C
Date Sampled:		01/28/99	10/18/99	07/24/00	01/31/01	07/22/01	02/09/02	08/13/02	02/21/03	08/25/03
Analyte (ug/l)	**Action Level**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
VOA EPA 602										
Benzene	1	**7700**	**5400**	**6700**	**16000**	**12000**	**12200**	**6140**	**5720**	**6830**
Ethylbenzene	29	**23000**	**2400**	**2500**	**620**	<1000	**675**	**2910**	**3260**	**3860**
Toluene	1000	**46000**	**25000**	**25000**	**13000**	**7500**	**14000**	**27200**	**22800**	**27200**
Xylenes (total)	530	**84000**	**9800**	**10000**	**4200**	**2600**	**4100**	**9950**	**11300**	**13900**
Total BTEX		**160700**	**42600**	**44200**	**33820**	**22100**	**30975**	**46200**	**43080**	**51790**
PAH EPA 610										
Naphthalene	21	**1300**	**420**	**420**	**230**	**130**	**258**	**364**	**415**	**415**
		Bold type indicates detectable concentrations.								
		Shaded area indicates detectable concentrations above the groundwater quality standards.								

J= estimated
B= detected in blank

Printed: 12/10/2003
Samples analyzed by STL or Accutest

Analytical Data Summary

SE Shallow Well **MW-11**

Sample ID:		CLJ-0011-002-MW-11	CLJ-0011-019-MW-11	CLJ-0011-036-MW-11	CLJ-0011-59	HPFF-MW11-02A	HPFF-MW11-02C	HPFF-MW11-03A	MW-11-03C
Date Sampled:		01/27/99	10/18/99	07/26/00	02/01/01	02/09/02	08/13/02	02/18/03	08/22/03
Analyte (ug/l)	**Action Level**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
VOA EPA 602									
Benzene	1	**1.2**	**40**	**2500**	**480**	**64.4**	**26.2**	**274**	**957**
Ethylbenzene	29	<1.0	**16**	**430**	**140**	**11**	**9.5**	**98.3**	**19.5**
Toluene	1000	<1.0	**140**	**4300**	**450**	**71**	**87.1**	**1160**	**319**
Xylenes (total)	530	<1.0	**94**	**3000**	**580**	**31**	**28**	**501**	**378**
Total BTEX		**1.2**	**290**	**10230**	**1650**	**177.4**	**150.8**	**2033.3**	**1673.5**
PAH EPA 610									
Naphthalene	21	<2.0	**2.4**	<2.0	<2.0	<5.0	<5.2	**7.5**	<5.4
		Bold type indicates detectable concentrations.							
		Shaded area indicates detectable concentrations above the groundwater quality standards.							

J= estimated
B= detected in blank

Printed: 12/10/2003
Samples analyzed by STL or Accutest

Analytical Data Summary

SE Shallow Well **MW-10R**

Sample ID:		CLJ-0011-012-MW-10	LJ-0011-029-MW-10	LJ-0011-046-MW-10	CLJ-0011-68	HPFF-MW10R-01C	HPFF-MW10R-02A	HPFF-MW10R-02C	HPFF-MW10R-03A	MW-10R-03C
Date Sampled:		01/28/99	10/18/99	07/24/00	01/31/01	07/22/01	02/09/02	08/13/02	02/17/03	08/27/03
Analyte (ug/l)	**Action Level**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
VOA EPA 602										
Benzene	1	**5200**	**2200**	**3300**	**5200**	**5800**	**4410**	**3780**	**2340**	**2830**
Ethylbenzene	29	**1900**	**610**	**770**	**1100**	**1200**	**1120**	**946**	**352**	**843**
Toluene	1000	**15000**	**7500**	**7900**	**5900**	**5800**	**5530**	**5790**	**2380**	**5070**
Xylenes (total)	530	**8300**	**5000**	**3300**	**5300**	**6100**	**6040**	**6190**	**2260**	**4830**
Total BTEX		**30400**	**15310**	**15270**	**17500**	**18900**	**17100**	**16706**	**7332**	**13573**
PAH EPA 610										
Naphthalene	21	**880**	**400**	**150**	**210**	**180**	**286**	**229**	**55.5**	**212**
		Bold type indicates detectable concentrations.								
		Shaded area indicates detectable concentrations above the groundwater quality standards.								

J= estimated
B= detected in blank

Printed: 12/10/2003
Samples analyzed by STL or Accutest

Analytical Data Summary

SE Shallow Well **MW-1**

Sample ID:		CLJ-0011-005-MW-1	CLJ-0011-022-MW-1	CLJ-0011-039-MW-1	CLJ-0011-60	HPFF-MW01-01C	HPFF-MW01-02A	HPFF-MW01-02C	HPFF-MW01-03A	MW-1-03C
Date Sampled:		01/27/99	10/18/99	07/26/00	01/31/01	07/22/01	02/09/02	08/13/02	02/17/03	08/27/03
Analyte (ug/l)	**Action Level**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
VOA EPA 602										
Benzene	1	**16000**	**9400**	**11000**	**8300**	**7700**	**3280**	**5710**	**5380**	**6670**
Ethylbenzene	29	**6100**	**2400**	**4500**	**2700**	**2600**	**1460**	**4720**	**2280**	**3950**
Toluene	1000	**41000**	**24000**	**29000**	**25000**	**25000**	**14100**	**22200**	**22000**	**26200**
Xylenes (total)	530	**26000**	**10000**	**17000**	**12000**	**11000**	**7370**	**19700**	**11600**	**17200**
Total BTEX		**89100**	**45800**	**61500**	**48000**	**46300**	**26210**	**52330**	**41260**	**54020**
PAH EPA 610										
Naphthalene	21	**760**	**410**	**280**	**450**	**330**	**584**	**358**	**415**	**417**
		Bold type indicates detectable concentrations.								
		Shaded area indicates detectable concentrations above the groundwater quality standards.								

J= estimated
B= detected in blank

Printed: 12/10/2003
Samples analyzed by STL or Accutest

Analytical Data Summary

SE Shallow Well **HPFF-20**

Sample ID:		CLJ-0011-001-HPFF-2	LJ-0011-018-HPFF-2	LJ-0011-035-HPFF-2	CLJ-0011-54	HPFF-HPFF20-01C	HPFF-HPFF20-02A	HPFF-HPFF20-02C	HPFF-HPFF20-03A	HPFF-20-03C
Date Sampled:		01/27/99	10/15/99	07/20/00	02/01/01	07/22/01	02/09/02	08/14/02	02/18/03	08/27/03
Analyte (ug/l)	**Action Level**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
VOA EPA 602										
Benzene	1	**2600**	**3400**	**4400**	**4700**	**2800**	**3070**	**1250**	**3280**	**6020**
Ethylbenzene	29	**1000**	**500**	**770**	**430**	<400	**656**	**247**	**551**	**112**
Toluene	1000	**10000**	**8600**	**1100**	**9200**	**6400**	**11400**	**2090**	**7630**	**8790**
Xylenes (total)	530	**3300**	**2200**	**3600**	**2900**	**2500**	**4570**	**813**	**2330**	**6770**
Total BTEX		**16900**	**14700**	**9870**	**17230**	**11700**	**19696**	**4400**	**13791**	**21692**
PAH EPA 610										
Naphthalene	21	**180**	**50**	**130**	**62**	**56**	**207**	**45.5**	**104**	<5.1
		Bold type indicates detectable concentrations.								
		Shaded area indicates detectable concentrations above the groundwater quality standards.								

J= estimated
B= detected in blank

Printed: 12/10/2003
Samples analyzed by STL or Accutest

Analytical Data Summary

SE Shallow Well **HPFF-19**

Sample ID:		CLJ-0011-009-HPFF-1	LJ-0011-026-HPFF-1	LJ-0011-043-HPFF-1	CLJ-0011-65	HPFF-HPFF19-01C	HPFF-HPFF19-02A	HPFF-HPFF19-02C	HPFF-HPFF19-03A	HPFF-19-03C
Date Sampled:		01/28/99	10/15/99	07/26/00	01/31/01	07/22/01	02/09/02	08/13/02	02/18/03	08/27/03
Analyte (ug/l)	**Action Level**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
VOA EPA 602										
Benzene	1	**28000**	**12000**	**17000**	**19000**	**13000**	**15000**	**16800**	**16300**	**7760**
Ethylbenzene	29	**3100**	**2000**	**2100**	**2000**	**1600**	**1780**	**1580**	**1420**	**481**
Toluene	1000	**32000**	**23000**	**26000**	**23000**	**19000**	**20300**	**20600**	**17800**	**10600**
Xylenes (total)	530	**12000**	**7900**	**9600**	**9000**	**8100**	**9300**	**7360**	**6630**	**12800**
Total BTEX		**75100**	**44900**	**54700**	**53000**	**41700**	**46380**	**46340**	**42150**	**31641**
PAH EPA 610										
Naphthalene	21	**370**	**260**	**280**	**390**	**290**	**326**	**261**	**220**	**266**
		Bold type indicates detectable concentrations.								
		Shaded area indicates detectable concentrations above the groundwater quality standards.								

J= estimated
B= detected in blank

Printed: 12/10/2003
Samples analyzed by STL or Accutest

Analytical Data Summary

SE Intermediate Well **HPFF-8**

Sample ID:		CLJ-0011-011-HPFF-8	CLJ-0011-028-HPFF-8	CLJ-0011-045-HPFF-8	CLJ-0011-67	HPFF-HPFF8-01C	HPFF-HPFF8-02A	HPFF-HPFF8-02C	HPFF-HPFF8-03A	HPFF-8-03C
Date Sampled:		01/28/99	10/18/99	07/24/00	01/31/01	07/22/01	02/09/02	08/13/02	02/21/03	08/25/03
Analyte (ug/l)	**Action Level**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
VOA EPA 602										
Benzene	1	**1300**	**8000**	**7100**	**7700**	**10000**	**12300**	**14600**	**10900**	**7420**
Ethylbenzene	29	<50	**730**	**480**	**540**	**590**	**714**	**903**	**878**	**740**
Toluene	1000	**170**	**1900**	**720**	**1100**	**1900**	**725**	**1190**	**2150**	**1690**
Xylenes (total)	530	**160**	**1800**	**980**	**1100**	**1700**	**882**	**2020**	**2610**	**2130**
Total BTEX		**1630**	**12430**	**9280**	**10440**	**14190**	**14621**	**18713**	**16538**	**11980**
PAH EPA 610										
Naphthalene	21	<2.0	**140**	**110**	**130**	**130**	**10**	**161**	**173**	**184**
		Bold type indicates detectable concentrations.								
		Shaded area indicates detectable concentrations above the groundwater quality standards.								

J= estimated
B= detected in blank

Printed: 12/10/2003
Samples analyzed by STL or Accutest

Analytical Data Summary

SE Intermediate Well **HPFF-7**

Sample ID:		CLJ-0011-003-HPFF-7	CLJ-0011-020-HPFF-7	CLJ-0011-037-HPFF-7	CLJ-0011-55	HPFF-HPFF07-01C	HPFF-HPFF07-02A	HPFF-HPFF07-02C	HPFF-HPFF07-03A	HPFF-7-03C
Date Sampled:		01/27/99	10/18/99	07/20/00	02/01/01	07/22/01	02/09/02	08/12/02	02/21/03	08/22/03
Analyte (ug/l)	**Action Level**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
VOA EPA 602										
Benzene	1	**79**	**63**	**23**	**13**	**4.2**	**24.9**	**1.6**	**9.5**	**0.79 J**
Ethylbenzene	29	**100**	**91**	**58**	**28**	**27**	**15.5**	**7.4**	**5.4**	**1.1**
Toluene	1000	**10**	**41**	**2.7**	**26**	<1.0	**36.4**	<1.0	**1.8**	<1.0
Xylenes (total)	530	**36**	**41**	**4.4**	**28**	<1.0	**15**	<3.0	**1.2 J**	<3.0
Total BTEX		**225**	**236**	**88.1**	**95**	**31.2**	**91.8**	**9**	**17.9**	**1.89**
PAH EPA 610										
Naphthalene	21	**3.5**	**6.6**	<2.0	**1.5 J**	<2.0	<5.0	**11**	**3.2 J**	<5.8
		Bold type indicates detectable concentrations.								
		Shaded area indicates detectable concentrations above the groundwater quality standards.								

J= estimated
B= detected in blank

Printed: 12/10/2003
Samples analyzed by STL or Accutest

Analytical Data Summary

SE Shallow Well **HPFF-1**

Sample ID:		CLJ-0011-004-HPFF-1	CLJ-0011-021-HPFF-1	CLJ-0011-038-HPFF-1	CLJ-0011-56	HPFF-HPFF01-02C	HPFF-HPFF01-03A	HPFF-1-03C
Date Sampled:		01/27/99	10/18/99	07/20/00	02/01/01	08/13/02	02/21/03	08/22/03
Analyte (ug/l)	**Action Level**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
VOA EPA 602								
Benzene	1	<1.0	**5.4**	**2.2**	**42**	<1.0	**32.3**	<1.0
Ethylbenzene	29	<1.0	**13**	**3.5**	**16**	<1.0	**2.4**	<1.0
Toluene	1000	<1.0	**42**	**13**	**120**	<1.0	**4.5**	<1.0
Xylenes (total)	530	<1.0	**40**	**14**	**81**	<3.0	**2.4 J**	<3.0
Total BTEX			**100.4**	**32.7**	**259**		**41.6**	
PAH EPA 610								
Naphthalene	21	<2.0	<2.0	<2.0	**2.3**	<5.2	**6.1**	<5.2
		Bold type indicates detectable concentrations.						
		Shaded area indicates detectable concentrations above the groundwater quality standards.						

J= estimated
B= detected in blank

CLJ - Hadnot Point - Bldg. 1115
Project #824603

Analytical Data Summary

NW Shallow Well **78GW22-2**

Sample ID:		UST111522-299C4	UST111522-299C3	UST111522-200C2	UST111522-201C1	UST111522-201C	UST1115-22-2-02A	UST1115-22-2-02C	UST1115-22-2-03A	78GW22-2-03C
Date Sampled:		01/06/99 & 01/19/99	08/12/99	05/26/00	01/22/01	07/27/01	02/02/02	08/05/02	02/17/03	08/20/03
Analyte (ug/l)	**Action Level**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
VOA EPA 602										
Benzene	1	**320**	**69**	**28**	**50**	**3.2**	**22.8**	**28.3**	**41.1**	**17.2**
Ethylbenzene	29	**44**	**3.5**	<1.0	**2.4**	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	1000	**160**	**3.6**	**1.4**	**0.37 J**	<1.0	<1.0	<1.0	**0.65 J**	<1.0
Xylenes (total)	530	**130**	**9.3**	**1.1**	**0.82 J**	<1.0	<3.0	<3.0	<3.0	<3.0
Total BTEX		**654**	**85.4**	**30.5**	**53.59**	**3.2**	**22.8**	**28.3**	**41.75**	**17.2**
PAH EPA 610										
Naphthalene	21	**11**	NS	<2.0	<2.0	<2.0	<5.0	<5.2	<5.1	<5.2
		Bold type indicates detectable concentrations.								
		Shaded area indicates detectable concentrations above the groundwater quality standards.								

J= estimated
B= detected in blank
NS= not sampled

Printed: 12/10/2003
Samples analyzed by STL or Accutest

Analytical Data Summary

NW Deep Well **MW-1115-25**

Sample ID:		UST11152599C4	UST11152599C3	UST11152500C2	UST11152501C1	UST11152501C	UST1115-25-02A	UST1115-25-02C	UST1115-25-02C (Resample)	UST1115-25-03A	MW-1115-25-03C
Date Sampled:		01/07/99	08/12/99	05/26/00	01/24/01	07/29/01	02/02/02	08/12/02	09/04/02	02/19/03	08/22/03
Analyte (ug/l)	**Action Level**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
VOA EPA 602											
Benzene	1	**63 B**	**240**	**650**	**1100**	**29**	**3.1**	**1850**	**1660**	**2840**	**3300**
Ethylbenzene	29	**20**	**39**	**29**	**53**	**15**	**0.57 J**	<20	<20	<50	**8.2**
Toluene	1000	**13 B**	**6.4**	<10	**15**	**3.1**	<1.0	**37.1**	**47.9**	**150**	**292**
Xylenes (total)	530	**44 B**	**73**	**32**	**33**	**7.9**	<3.0	<60	<60	<150	**15.3**
Total BTEX		**140**	**358.4**	**711**	**1201**	**55**	**3.67**	**1887.1**	**1707.9**	**2990**	**3615.5**
PAH EPA 610											
Naphthalene	21	**16**	<2.1	**10**	**39**	**11**	<5.0	<5.2	NA	**10**	<5.2
		Bold type indicates detectable concentrations.									
		Shaded area indicates detectable concentrations above the groundwater quality standards.									

J= estimated
B= detected in blank
NS= not sampled

Printed: 12/10/2003
Samples analyzed by STL or Accutest

CLJ - Hadnot Point - Bldg. 1115
Project #824603

Analytical Data Summary

NW Deep Well **MW-1115-24**

Sample ID:		UST11152499C4	UST11152499C3	UST11152400C2	UST11152401C1	UST11152401C	UST1115-24-02A	UST1115-24-02C	UST1115-24-03A	MW-1115-24-03C
Date Sampled:		01/06/99	08/12/99	05/26/00	01/24/01	07/29/01	02/02/02	08/06/02	02/19/03	08/19/03
Analyte (ug/l)	**Action Level**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
VOA EPA 602										
Benzene	1	**1800**	**2400**	**3200**	**2700**	**2900**	**2480**	**3060**	**4120**	**3990**
Ethylbenzene	29	**22 J**	<40	<40	**49**	**13 J**	**5.2**	**1.5**	<50	<50
Toluene	1000	**55**	<40	<40	**32 J**	<50	<5.0	**0.76 J**	<50	<50
Xylenes (total)	530	**64**	<40	<40	**89**	<50	<15	**1.0 J**	<150	<150
Total BTEX		**1941**	**2400**	**3200**	**2870**	**2913**	**2485.2**	**3063.26**	**4120**	**3990**
PAH EPA 610										
Naphthalene	21	**9.7**	<2.0	**6.1**	**30**	<2.0	<5.0	<5.0	**23.6**	**6.7**
		Bold type indicates detectable concentrations.								
		Shaded area indicates detectable concentrations above the groundwater quality standards.								

J= estimated
B= detected in blank
NS= not sampled

Printed: 12/10/2003
Samples analyzed by STL or Accutest

Analytical Data Summary

NW Deep Well **MW-1115-23**

Sample ID:		UST11152399C4	UST11152399C3	UST11152300C2	UST11152301C1	UST11152301C	UST1115-23-02A	UST1115-23-02C	UST1115-23-03A	MW-1115-23-03C
Date Sampled:		01/06/99 & 01/19/99	08/12/99	05/26/00	01/22/01	07/29/01	02/02/02	08/05/02	02/18/03	08/20/03
Analyte (ug/l)	**Action Level**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
VOA EPA 602										
Benzene	1	**15000**	**5000**	**270**	**4.7 J**	**13**	**22**	**17.8**	**0.98 J**	**260**
Ethylbenzene	29	**500**	**140**	**34**	**4.9 J**	**1.1**	<5.0	**1.7**	<5.0	**5.2**
Toluene	1000	**5700**	**180**	<25	**1.1 J**	**2.8**	<5.0	**1.3**	<1.0	**2.2**
Xylenes (total)	530	**1900**	**420**	**40**	**5.6**	**2.2**	<15	**7.3**	<15	**7.6**
Total BTEX		**23100**	**5740**	**344**	**16.3**	**19.1**	**22**	**28.1**	**0.98**	**275**
PAH EPA 610										
Naphthalene	21	**11**	<2.1	<2.0	<2.0	<2.0	<5.5	<5.3	<5.1	<5.4
		Bold type indicates detectable concentrations.								
		Shaded area indicates detectable concentrations above the groundwater quality standards.								

J= estimated
B= detected in blank
NS= not sampled

Printed: 12/10/2003
Samples analyzed by STL or Accutest

CLJ - Hadnot Point - Bldg. 1115
Project #824603

Analytical Data Summary
NW Deep Well **MW-1115-22**

Sample ID:		UST11152299C4	UST11152299C3	UST11152200C2	UST11152201C1	UST11152201C	UST1115-22-02A	UST1115-22-02C	UST1115-22-02C (Resample)	UST1115-22-03A	MW-1115-22-03C
Date Sampled:		01/07/99	08/12/99 & 08/26/99	05/26/00	01/23/01	07/27/01	02/02/02	08/07/02	09/04/02	02/19/03	08/19/03
Analyte (ug/l)	**Action Level**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
VOA EPA 602											
Benzene	1	**460**	**1100**	**900**	**940**	**700**	**1250**	<1.0	**251**	**1320**	**1930**
Ethylbenzene	29	<5.0	<20	<10	**5.6 J**	<40	**3.4**	<1.0	<5.0	<20	**4.4**
Toluene	1000	**1.4 J**	<20	<10	**4.2 J**	<40	**3.5**	<1.0	<5.0	**21**	<10
Xylenes (total)	530	<5.0	**29**	<10	<10	<40	<3.0	<3.0	<15	<60	**1.0 J**
Total BTEX		**461.4**	**1129**	**900**	**949.8**	**700**	**1256.9**		**251**	**1341**	**1935.4**
PAH EPA 610											
Naphthalene	21	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	<5.1	NA	<5.1	**4.8 J**
		Bold type indicates detectable concentrations.									
		Shaded area indicates detectable concentrations above the groundwater quality standards.									

J= estimated
B= detected in blank
NS= not sampled

Printed: 12/10/2003
Samples analyzed by STL or Accutest

Analytical Data Summary

NW Intermediate Well **MW-1115-21**

Sample ID:		UST11152199C4	UST11152199C3	UST11152100C2	UST11152101C1	UST11152101C	UST1115-21-02A	UST1115-21-02C	UST1115-21-03A	MW-1115-21-03C
Date Sampled:		01/06/99	08/12/99 & 08/26/99	05/26/00	01/24/01	07/29/01	02/02/02	08/06/02	02/19/03	08/19/03
Analyte (ug/l)	**Action Level**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
VOA EPA 602										
Benzene	1	**2000**	**1600**	**2200**	**1200**	**960**	**1920**	**620**	**727**	**485**
Ethylbenzene	29	<50	<20	<25	**55**	**5.2 J**	<5.0	<1.0	**11.7**	<1.0
Toluene	1000	**21 J**	<20	<25	**4.4 J**	<20	<5.0	<1.0	**7.8 J**	<1.0
Xylenes (total)	530	**27 J**	<20	<25	**21**	<20	<15	<3.0	<3.0	<3.0
Total BTEX		**2048**	**1600**	**2200**	**1280.4**	**965.2**	**1920**	**620**	**746.5**	**485**
PAH EPA 610										
Naphthalene	21	**15**	**10**	**8.6**	**18**	<2.0	**8.1**	**4.0 J**	**19.9**	**7.0**
		Bold type indicates detectable concentrations.								
		Shaded area indicates detectable concentrations above the groundwater quality standards.								

J= estimated
B= detected in blank
NS= not sampled

Printed: 12/10/2003
Samples analyzed by STL or Accutest

Analytical Data Summary

NW Intermediate Well **MW-1115-18**

Sample ID:		UST11151899C4	UST11151899C3	UST11151800C2	UST11151801C1	UST11151801C	UST1115-18-02A	UST1115-18-02C	UST1115-18-03A	MW-1115-18-03C
Date Sampled:		01/06/99	08/12/99	05/26/00	01/22/01	07/29/01	02/02/02	08/07/02	02/20/03	08/20/03
Analyte (ug/l)	**Action Level**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
VOA EPA 602										
Benzene	1	**16000**	**990**	**1200**	**420**	**3.1**	**30.2**	**33.8**	NS	**215**
Ethylbenzene	29	**850**	**63**	**53**	**21**	**0.51 J**	**1.3**	**2.1**	NS	**4.1**
Toluene	1000	**2100**	**17**	<20	**2.3 J**	**2.1**	**1.2**	**1.5**	NS	**1.4 J**
Xylenes (total)	530	**1800**	**70**	<20	**6.9**	**1.4**	<3.0	**5.1**	NS	**4.6 J**
Total BTEX		**20750**	**1140**	**1253**	**450.2**	**7.11**	**32.7**	**42.5**		**225.1**
PAH EPA 610										
Naphthalene	21	**190**	<2.3	**6.7**	<2.0	<2.0	<5.0	<5.0	NS	**2.7 J**
		Bold type indicates detectable concentrations.								
		Shaded area indicates detectable concentrations above the groundwater quality standards.								

J= estimated
B= detected in blank
NS= not sampled

Printed: 12/10/2003
Samples analyzed by STL or Accutest

Analytical Data Summary

NW Intermediate Well **MW-1115-17**

Sample ID:		UST11151799C4	UST11151799C3	UST11151700C2	UST11151701C1	UST11151701C	UST1115-17-02A	UST1115-17-02C	UST1115-17-03A	MW-1115-17-03C
Date Sampled:		01/07/99	08/12/99	05/26/00	01/23/01	07/27/01	02/02/02	08/07/02	02/19/03	08/19/03
Analyte (ug/l)	**Action Level**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
VOA EPA 602										
Benzene	1	**9200**	**9200**	**8900**	**7900**	**7400**	**8670**	**7770**	**3490**	**84.3**
Ethylbenzene	29	**830**	**100**	**780**	**750**	**840**	**973**	**76.3**	**196**	**63.4**
Toluene	1000	**140**	**100**	<150	**56 J**	<400	<100	**10**	<50	<2.0
Xylenes (total)	530	**1700**	**100**	**880**	**400**	**670**	**1050**	**99.4**	<150	<5.0
Total BTEX		**11870**	**9500**	**10560**	**9106**	**8910**	**10693**	**7955.7**	**3686**	**147.7**
PAH EPA 610										
Naphthalene	21	**530**	**340**	**360**	**340**	**570**	**31.2**	**250**	**270**	**332**
		Bold type indicates detectable concentrations.								
		Shaded area indicates detectable concentrations above the groundwater quality standards.								

J= estimated
B= detected in blank
NS= not sampled

Printed: 12/10/2003
Samples analyzed by STL or Accutest

Analytical Data Summary

NW Intermediate Well **MW-1115-13**

Sample ID:		UST11151399C4	UST11151399C3	UST11151300C2	UST11151301C1	UST11151301C	UST1115-13-02A	UST1115-13-02C	UST1115-13-03A	MW-1115-13-03C
Date Sampled:		01/07/99	08/12/99	05/26/00	01/24/01	07/29/01	02/02/02	08/12/02	02/19/03	08/20/03
Analyte (ug/l)	**Action Level**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
VOA EPA 602										
Benzene	1	**15000 B**	**230**	**13000**	**6400**	**2300**	**298**	**95.5**	**872**	**340**
Ethylbenzene	29	**930**	**30**	**770**	**460**	**230**	**40.9**	**40.1**	**62.2**	**72.4**
Toluene	1000	**220 JB**	**5.0**	<200	**39 J**	**8.7 J**	**2.7**	<5.0	**28.3**	<2.0
Xylenes (total)	530	**1500 B**	**56**	**910**	**210**	**56**	**16.5**	**16.8**	**21.5 J**	**16.6**
Total BTEX		**17650**	**321**	**14680**	**7109**	**2594.7**	**358.1**	**152.4**	**984**	**429**
PAH EPA 610										
Naphthalene	21	**660**	**18**	**420**	**330**	**230**	**79.4**	**197**	**152**	**155**
		Bold type indicates detectable concentrations.								
		Shaded area indicates detectable concentrations above the groundwater quality standards.								

J= estimated
B= detected in blank
NS= not sampled

Printed: 12/10/2003
Samples analyzed by STL or Accutest

Analytical Data Summary

NW Shallow Well **MW-1115-04**

Sample ID:		UST11150499C4	UST11150499C3	UST11150400C2	UST11150401C1	UST11150401C	UST1115-04-02A	UST1115-04-02C	UST1115-04-03A	MW-1115-04-03C
Date Sampled:		01/07/99	08/12/99	05/26/00	01/23/01	07/27/01	02/02/02	08/07/02	02/19/03	08/19/03
Analyte (ug/l)	**Action Level**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
VOA EPA 602										
Benzene	1	**190 B**	**28**	<1.0	**660**	**210**	**22.6**	**31.5**	**128**	<1.0
Ethylbenzene	29	**43**	**1.9**	<1.0	**140**	**76**	**2.1**	**2.7**	**13.7**	<1.0
Toluene	1000	**24 B**	**1**	<1.0	**7.6 J**	<10	<1.0	<1.0	**3.8**	<1.0
Xylenes (total)	530	**91 B**	**5.5**	<1.0	**66**	**65**	**1.7 J**	**3.1**	<6.0	<3.0
Total BTEX		**348**	**36.5**		**873.6**	**351**	**26.4**	**37.3**	**145.5**	
PAH EPA 610										
Naphthalene	21	**23**	<2.1	<2.0	**32**	**54**	<5.5	**7.3**	**21.2**	<5.5
		Bold type indicates detectable concentrations.								
		Shaded area indicates detectable concentrations above the groundwater quality standards.								

J= estimated
B= detected in blank
NS= not sampled

Printed: 12/10/2003
Samples analyzed by STL or Accutest

Analytical Data Summary

NW Shallow Well **MW-1115-02**

Sample ID:		UST11150299C4	UST11150299C3	UST11150200C2	UST11150201C1	UST11150201C	UST1115-02-02A	UST1115-02-02C	UST1115-02-03A	MW-1115-02-03C
Date Sampled:		01/06/99	08/12/99 & 08/26/99	05/26/00	01/24/01	07/29/01	02/02/02	08/06/02	02/19/03	08/19/03
Analyte (ug/l)	**Action Level**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
VOA EPA 602										
Benzene	1	**29**	**53**	<1.0	**150**	**51**	**11.9**	**9.3**	**125**	**3.1**
Ethylbenzene	29	**7.2**	**3.5**	<1.0	**16**	**0.24 J**	**0.6**	<1.0	**6.6**	<1.0
Toluene	1000	**20**	**1.9**	<1.0	**1.2 J**	**0.87 J**	<1.0	<1.0	**6.4**	<1.0
Xylenes (total)	530	**22**	**9.6**	<1.0	**4.5**	<1.0	<3.0	<3.0	**3.7 J**	<3.0
Total BTEX		**78.2**	**68**		**171.7**	**52.11**	**12.5**	**9.3**	**141.7**	**3.1**
PAH EPA 610										
Naphthalene	21	**2.4**	<2.0	<2.0	**27**	<2.0	<5.0	<5.1	**11.2**	<5.3
		Bold type indicates detectable concentrations.								
		Shaded area indicates detectable concentrations above the groundwater quality standards.								

J= estimated
B= detected in blank
NS= not sampled

Printed: 12/10/2003
Samples analyzed by STL or Accutest

Analytical Data Summary

NW Shallow Well **MW-1115-01**

Sample ID:		UST11150199C4	UST11150100C2	UST11150101C1	UST11150101C	UST1115-01-02A	UST1115-01-02C	UST1115-01-03A
Date Sampled:		01/07/99 & 01/12/99	05/30/00	01/24/01	07/29/01	02/02/02	08/05/02	02/17/03
Analyte (ug/l)	**Action Level**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
VOA EPA 602								
Benzene	1	**310 B**	<1.0	**32**	**14**	**6.0**	<1.0	**187**
Ethylbenzene	29	**56**	<1.0	**5.3**	**0.27 J**	<1.0	<1.0	<1.0
Toluene	1000	**29 B**	<1.0	**0.39 J**	**1.1**	<1.0	<1.0	**1.0**
Xylenes (total)	530	**100 B**	<1.0	**1.4**	<1.0	<3.0	<3.0	**1.6 J**
Total BTEX		**495**		**39.09**	**15.37**	**6**		**189.6**
PAH EPA 610								
Naphthalene	21	<2.0	<2.0	**3.9**	<2.0	<5.0	<5.1	<5.1
		Bold type indicates detectable concentrations.						
		Shaded area indicates detectable concentrations above the groundwater quality standards.						

J= estimated
B= detected in blank
NS= not sampled

Printed: 12/10/2003
Samples analyzed by STL or Accutest

Analytical Data Summary

NW Shallow Well **MW-GT-9**

Sample ID:		UST1115-T9-02C	UST1115-T9-03A	MW-GT-9-03C
Date Sampled:		08/07/02	02/21/03	08/20/03
Analyte (ug/l)	**Action Level**	**Result**	**Result**	**Result**
VOA EPA 602				
Benzene	1	**0.92 J**	**21.1**	<1.0
Ethylbenzene	29	<1.0	**2.0**	<1.0
Toluene	1000	<1.0	**2.5**	<1.0
Xylenes (total)	530	<3.0	**1.3 J**	<3.0
Total BTEX		**0.92**	**26.9**	
PAH EPA 610				
Naphthalene	21	<5.0	**4.5 J**	<5.3
Bold type indicates detectable concentrations.				
Shaded area indicates detectable concentrations above the groundwater quality standards.				

J= estimated
B= detected in blank
NS= not sampled

Printed: 12/10/2003
Samples analyzed by STL or Accutest

Analytical Data Summary

NW Shallow Well **MW-GT-7**

Sample ID:		UST1115-T7-02C	UST1115-T7-03A	MW-GT-7-03C
Date Sampled:		08/12/02	02/17/03	08/20/03
Analyte (ug/l)	**Action Level**	**Result**	**Result**	**Result**
VOA EPA 602				
Benzene	1	**2.9**	**205**	**235**
Ethylbenzene	29	**1.6**	<1.0	**0.63 J**
Toluene	1000	<1.0	<1.0	**0.65 J**
Xylenes (total)	530	<3.0	<3.0	<3.0
Total BTEX		**4.5**	**205**	**236.28**
PAH EPA 610				
Naphthalene	21	**8.9**	<5.4	<5.0
Bold type indicates detectable concentrations.				
Shaded area indicates detectable concentrations above the groundwater quality standards.				

J= estimated
B= detected in blank
NS= not sampled

CLJ - Hadnot Point - Bldg. 1115
Project #824603

Analytical Data Summary
NW Shallow Well **MW-GT-1**

Sample ID:		UST1115T199C4	UST1115T199C3	UST1115T100C2	UST1115T101C1	UST1115T101C	UST1115-T1-02A	UST1115-T1-02C	UST1115-T1-03A	MW-GT-1-03C
Date Sampled:		01/07/99	08/12/99	05/26/00	01/24/01	07/29/01	02/02/02	08/05/02	02/18/03	08/22/03
Analyte (ug/l)	**Action Level**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
VOA EPA 602										
Benzene	1	**310 B**	**8300**	**13**	**25**	**12**	**4.0**	**0.88 J**	**80**	<1.0
Ethylbenzene	29	**56**	**730**	**8.7**	**7**	**10**	**3.0**	**1.9**	**41**	<1.0
Toluene	1000	**19 B**	**130**	**7.5**	**1.3**	**1.3**	<1.0	<1.0	**557**	<1.0
Xylenes (total)	530	**86 B**	**1400**	**32**	**7.8**	**14**	**1.4 J**	<3.0	**201**	<3.0
Total BTEX		**471**	**10560**	**61.2**	**41.1**	**37.3**	**8.4**	**2.78**	**879**	
PAH EPA 610										
Naphthalene	21	**30**	**13**	<2.0	<2.0	**2.3**	<5.0	<5.2	**6.6**	<5.4
		Bold type indicates detectable concentrations.								
		Shaded area indicates detectable concentrations above the groundwater quality standards.								

J= estimated
B= detected in blank
NS= not sampled

Printed: 12/10/2003
Samples analyzed by STL or Accutest

APPENDIX C

LABORATORY GROUNDWATER ANALYTICAL REPORTS, NORTHWEST COMPOUND

Southeast ACCUTEST Laboratories

09/10/03

Technical Report for

Shaw E & I, Inc.

Camp Lejeune-SE

824603

Accutest Job Number: F19208

Report to:

Shaw E & I, Inc.

natasha.sullivan@shawgrp.com

ATTN: Natasha Sullivan

Total number of pages in report: 61

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Harry Behzadi, Ph.D.
Laboratory Director

Certifications: FL (DOH E83510), NC (573), NJ (FL002), MA (FL946), IA (366), LA (03051), KS (E-10327), SC, AK

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Sample Summary

Shaw E & I, Inc.

Job No: F19208

Camp Lejeune-SE
Project No: 824603

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
F19208-1	08/25/03	09:10	MM	08/26/03	AQ	Ground Water	USTHPFF-MWHPFF05
F19208-2	08/25/03	10:30	MM	08/26/03	AQ	Ground Water	USTHPFF-MWHPFF11
F19208-3	08/25/03	11:25	MM	08/26/03	AQ	Ground Water	USTHPFF-MWHPFF08
F19208-4	08/25/03	12:15	MM	08/26/03	AQ	Ground Water	USTHPFF-MW17A
F19208-5	08/25/03	14:40	MM	08/26/03	AQ	Ground Water	UST1115-MW78GW3202
F19208-6	08/25/03	00:00	MM	08/26/03	AQ	Trip Blank Water	TRIP BLANK-082503

Report of Analysis

Client Sample ID: USTHPFF-MWHPFF05
Lab Sample ID: F19208-1
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-SE

Date Sampled: 08/25/03
Date Received: 08/26/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR018509.D	1	09/04/03	RA	n/a	n/a	GQR767
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	44.2	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	5.2	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	2.2	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	8.4	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	13.4	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	4.3	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF05		
Lab Sample ID:	F19208-1	**Date Sampled:**	08/25/03
Matrix:	AQ - Ground Water	**Date Received:**	08/26/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	7.4	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	97%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	103%		74-127%
563-58-6	1,1-Dichloropropene	94%		87-120%
563-58-6	1,1-Dichloropropene	96%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF05		
Lab Sample ID:	F19208-1	**Date Sampled:**	08/25/03
Matrix:	AQ - Ground Water	**Date Received:**	08/26/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY011434.D	1	08/27/03	CV	n/a	n/a	GXY305
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	83.5	0.50	0.30	ug/l	
74-84-0	Ethane	0.65	1.0	0.60	ug/l	J
74-85-1	Ethene	ND	1.0	0.80	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: USTHPFF-MWHPFF05
Lab Sample ID: F19208-1
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-SE

Date Sampled: 08/25/03
Date Received: 08/26/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ18309.D	1	09/02/03	MRE	08/29/03	OP8399	GIJ875
Run #2							

	Initial Volume	Final Volume
Run #1	950 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.3	2.1	ug/l	
208-96-8	Acenaphthylene	ND	5.3	2.1	ug/l	
120-12-7	Anthracene	ND	5.3	2.1	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.3	2.1	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.3	2.1	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.3	2.1	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.3	2.1	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.3	2.1	ug/l	
218-01-9	Chrysene	ND	5.3	2.1	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.3	2.1	ug/l	
206-44-0	Fluoranthene	ND	5.3	2.1	ug/l	
86-73-7	Fluorene	ND	5.3	2.1	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.3	2.1	ug/l	
91-20-3	Naphthalene	ND	5.3	2.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.3	2.1	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.3	2.1	ug/l	
85-01-8	Phenanthrene	ND	5.3	2.1	ug/l	
129-00-0	Pyrene	ND	5.3	2.1	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	73%		41-139%
84-15-1	o-Terphenyl	84%		46-135%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF05		
Lab Sample ID:	F19208-1	**Date Sampled:**	08/25/03
Matrix:	AQ - Ground Water	**Date Received:**	08/26/03
		Percent Solids:	n/a
Project:	Camp Lejeune-SE		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	< 0.10	0.10	mg/l	1	08/26/03 13:56	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	< 0.20	0.20	mg/l	1	08/26/03 13:56	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 0.10	0.10	mg/l	1	08/26/03 13:56	LL	EPA 300/SW846 9056
Sulfate	50.7	20	mg/l	1	08/26/03 13:56	LL	EPA 300/SW846 9056
Total Organic Carbon	4.9	1.0	mg/l	1	09/09/03	LE	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID: USTHPFF-MWHPFF11
Lab Sample ID: F19208-2
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-SE

Date Sampled: 08/25/03
Date Received: 08/26/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR018510.D	5	09/04/03	RA	n/a	n/a	GQR767
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	348	5.0	2.5	ug/l	
75-27-4	Bromodichloromethane	ND	5.0	2.5	ug/l	
75-25-2	Bromoform	ND	5.0	2.5	ug/l	
74-83-9	Bromomethane	ND	5.0	2.5	ug/l	
56-23-5	Carbon tetrachloride	ND	5.0	2.5	ug/l	
108-90-7	Chlorobenzene	ND	5.0	2.5	ug/l	
124-48-1	Dibromochloromethane	ND	5.0	2.0	ug/l	
75-00-3	Chloroethane	ND	5.0	2.5	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	5.0	2.5	ug/l	
67-66-3	Chloroform	ND	5.0	2.5	ug/l	
74-87-3	Chloromethane	ND	5.0	2.5	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5.0	2.5	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.0	2.5	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.0	2.5	ug/l	
75-71-8	Dichlorodifluoromethane	ND	5.0	2.5	ug/l	
75-34-3	1,1-Dichloroethane	ND	5.0	2.5	ug/l	
107-06-2	1,2-Dichloroethane	9.2	5.0	2.5	ug/l	
75-35-4	1,1-Dichloroethene	ND	5.0	2.5	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	5.0	2.5	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	5.0	2.5	ug/l	
78-87-5	1,2-Dichloropropane	ND	5.0	2.5	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.5	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.5	ug/l	
100-41-4	Ethylbenzene	ND	5.0	2.5	ug/l	
75-09-2	Methylene chloride	ND	25	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	2.5	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	5.0	2.5	ug/l	
108-88-3	Toluene	ND	5.0	2.5	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	5.0	2.5	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	5.0	2.5	ug/l	
79-01-6	Trichloroethene	ND	5.0	2.5	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF11		
Lab Sample ID:	F19208-2	**Date Sampled:**	08/25/03
Matrix:	AQ - Ground Water	**Date Received:**	08/26/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	5.0	2.5	ug/l	
75-01-4	Vinyl chloride	ND	5.0	2.5	ug/l	
1330-20-7	Xylenes (total)	ND	15	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	92%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	99%		74-127%
563-58-6	1,1-Dichloropropene	92%		87-120%
563-58-6	1,1-Dichloropropene	98%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF11		
Lab Sample ID:	F19208-2	**Date Sampled:**	08/25/03
Matrix:	AQ - Ground Water	**Date Received:**	08/26/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY011435.D	1	08/27/03	CV	n/a	n/a	GXY305
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	14.2	0.50	0.30	ug/l	
74-84-0	Ethane	ND	1.0	0.60	ug/l	
74-85-1	Ethene	ND	1.0	0.80	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: USTHPFF-MWHPFF11
Lab Sample ID: F19208-2
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-SE

Date Sampled: 08/25/03
Date Received: 08/26/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ18310.D	1	09/02/03	MRE	08/29/03	OP8399	GIJ875
Run #2							

	Initial Volume	Final Volume
Run #1	970 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.2	2.1	ug/l	
208-96-8	Acenaphthylene	ND	5.2	2.1	ug/l	
120-12-7	Anthracene	ND	5.2	2.1	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.2	2.1	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.2	2.1	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.2	2.1	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.2	2.1	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.2	2.1	ug/l	
218-01-9	Chrysene	ND	5.2	2.1	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.2	2.1	ug/l	
206-44-0	Fluoranthene	ND	5.2	2.1	ug/l	
86-73-7	Fluorene	ND	5.2	2.1	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.2	2.1	ug/l	
91-20-3	Naphthalene	ND	5.2	2.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.2	2.1	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.2	2.1	ug/l	
85-01-8	Phenanthrene	ND	5.2	2.1	ug/l	
129-00-0	Pyrene	ND	5.2	2.1	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	84%		41-139%
84-15-1	o-Terphenyl	85%		46-135%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF11		
Lab Sample ID:	F19208-2	**Date Sampled:**	08/25/03
Matrix:	AQ - Ground Water	**Date Received:**	08/26/03
		Percent Solids:	n/a
Project:	Camp Lejeune-SE		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	< 0.10	0.10	mg/l	1	08/26/03 14:11	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	< 0.20	0.20	mg/l	1	08/26/03 14:11	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 0.10	0.10	mg/l	1	08/26/03 14:11	LL	EPA 300/SW846 9056
Sulfate	38.5	20	mg/l	1	08/26/03 14:11	LL	EPA 300/SW846 9056
Total Organic Carbon	2.5	1.0	mg/l	1	09/09/03	LE	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID: USTHPFF-MWHPFF08
Lab Sample ID: F19208-3
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-SE

Date Sampled: 08/25/03
Date Received: 08/26/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR018492.D	100	09/03/03	RA	n/a	n/a	GQR766
Run #2	QR018511.D	200	09/04/03	RA	n/a	n/a	GQR767

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	7420 [a]	200	100	ug/l	
75-27-4	Bromodichloromethane	ND	100	50	ug/l	
75-25-2	Bromoform	ND	100	50	ug/l	
74-83-9	Bromomethane	ND	100	50	ug/l	
56-23-5	Carbon tetrachloride	ND	100	50	ug/l	
108-90-7	Chlorobenzene	ND	100	50	ug/l	
124-48-1	Dibromochloromethane	ND	100	40	ug/l	
75-00-3	Chloroethane	ND	100	50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	100	50	ug/l	
67-66-3	Chloroform	ND	100	50	ug/l	
74-87-3	Chloromethane	ND	100	50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	100	50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	100	50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	100	50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	100	50	ug/l	
75-34-3	1,1-Dichloroethane	ND	100	50	ug/l	
107-06-2	1,2-Dichloroethane	301	100	50	ug/l	
75-35-4	1,1-Dichloroethene	ND	100	50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	100	50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	100	50	ug/l	
78-87-5	1,2-Dichloropropane	ND	100	50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	100	30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	100	30	ug/l	
100-41-4	Ethylbenzene	740	100	50	ug/l	
75-09-2	Methylene chloride	ND	500	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	100	50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	100	20	ug/l	
127-18-4	Tetrachloroethene	ND	100	50	ug/l	
108-88-3	Toluene	1690	100	50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	100	50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	100	50	ug/l	
79-01-6	Trichloroethene	ND	100	50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF08		
Lab Sample ID:	F19208-3	**Date Sampled:**	08/25/03
Matrix:	AQ - Ground Water	**Date Received:**	08/26/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	100	50	ug/l	
75-01-4	Vinyl chloride	ND	100	50	ug/l	
1330-20-7	Xylenes (total)	2130	300	100	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	96%	95%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	107%	99%	74-127%
563-58-6	1,1-Dichloropropene	93%	94%	87-120%
563-58-6	1,1-Dichloropropene	97%	98%	87-120%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF08		
Lab Sample ID:	F19208-3	**Date Sampled:**	08/25/03
Matrix:	AQ - Ground Water	**Date Received:**	08/26/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY011437.D	1	08/27/03	CV	n/a	n/a	GXY305
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	38.2	0.50	0.30	ug/l	
74-84-0	Ethane	8.84	1.0	0.60	ug/l	
74-85-1	Ethene	9.55	1.0	0.80	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: USTHPFF-MWHPFF08
Lab Sample ID: F19208-3
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-SE

Date Sampled: 08/25/03
Date Received: 08/26/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	IJ18313.D	1	09/03/03	MRE	08/29/03	OP8399	GIJ875
Run #2 [a]	IJ18333.D	5	09/03/03	MRE	08/29/03	OP8399	GIJ876

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2	980 ml	1.0 ml

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.1	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.1	2.0	ug/l	
120-12-7	Anthracene	ND	5.1	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.1	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.1	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.1	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.1	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.1	2.0	ug/l	
218-01-9	Chrysene	ND	5.1	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.1	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.1	2.0	ug/l	
86-73-7	Fluorene	ND	5.1	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.1	2.0	ug/l	
91-20-3	Naphthalene	184 [b]	26	10	ug/l	
90-12-0	1-Methylnaphthalene	11.6	5.1	2.0	ug/l	
91-57-6	2-Methylnaphthalene	25.6	5.1	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.1	2.0	ug/l	
129-00-0	Pyrene	ND	5.1	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	106%	104%	41-139%
84-15-1	o-Terphenyl	86%	92%	46-135%

(a) All hits confirmed by dual column analysis.
(b) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF08		
Lab Sample ID:	F19208-3	**Date Sampled:**	08/25/03
Matrix:	AQ - Ground Water	**Date Received:**	08/26/03
		Percent Solids:	n/a
Project:	Camp Lejeune-SE		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	< 0.10	0.10	mg/l	1	08/26/03 14:25	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	< 0.20	0.20	mg/l	1	08/26/03 14:25	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 0.10	0.10	mg/l	1	08/26/03 14:25	LL	EPA 300/SW846 9056
Sulfate	< 20	20	mg/l	1	08/26/03 14:25	LL	EPA 300/SW846 9056
Total Organic Carbon	55.5	1.0	mg/l	1	09/09/03	LE	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID: USTHPFF-MW17A
Lab Sample ID: F19208-4
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-SE

Date Sampled: 08/25/03
Date Received: 08/26/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR018493.D	100	09/03/03	RA	n/a	n/a	GQR766
Run #2	QR018515.D	500	09/04/03	RA	n/a	n/a	GQR767

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	6830	100	50	ug/l	
75-27-4	Bromodichloromethane	ND	100	50	ug/l	
75-25-2	Bromoform	ND	100	50	ug/l	
74-83-9	Bromomethane	ND	100	50	ug/l	
56-23-5	Carbon tetrachloride	ND	100	50	ug/l	
108-90-7	Chlorobenzene	ND	100	50	ug/l	
124-48-1	Dibromochloromethane	ND	100	40	ug/l	
75-00-3	Chloroethane	ND	100	50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	100	50	ug/l	
67-66-3	Chloroform	ND	100	50	ug/l	
74-87-3	Chloromethane	ND	100	50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	100	50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	100	50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	100	50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	100	50	ug/l	
75-34-3	1,1-Dichloroethane	ND	100	50	ug/l	
107-06-2	1,2-Dichloroethane	145	100	50	ug/l	
75-35-4	1,1-Dichloroethene	ND	100	50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	100	50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	100	50	ug/l	
78-87-5	1,2-Dichloropropane	ND	100	50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	100	30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	100	30	ug/l	
100-41-4	Ethylbenzene	3860	100	50	ug/l	
75-09-2	Methylene chloride	ND	500	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	286	100	50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	100	20	ug/l	
127-18-4	Tetrachloroethene	ND	100	50	ug/l	
108-88-3	Toluene	27200 [a]	500	250	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	100	50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	100	50	ug/l	
79-01-6	Trichloroethene	ND	100	50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MW17A		
Lab Sample ID:	F19208-4	**Date Sampled:**	08/25/03
Matrix:	AQ - Ground Water	**Date Received:**	08/26/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	100	50	ug/l	
75-01-4	Vinyl chloride	ND	100	50	ug/l	
1330-20-7	Xylenes (total)	13900	300	100	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	105%	101%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	113%	106%	74-127%
563-58-6	1,1-Dichloropropene	95%	94%	87-120%
563-58-6	1,1-Dichloropropene	98%	96%	87-120%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MW17A		
Lab Sample ID:	F19208-4	**Date Sampled:**	08/25/03
Matrix:	AQ - Ground Water	**Date Received:**	08/26/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY011438.D	1	08/27/03	CV	n/a	n/a	GXY305
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	274	0.50	0.30	ug/l	
74-84-0	Ethane	14.2	1.0	0.60	ug/l	
74-85-1	Ethene	6.51	1.0	0.80	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MW17A		
Lab Sample ID:	F19208-4	**Date Sampled:**	08/25/03
Matrix:	AQ - Ground Water	**Date Received:**	08/26/03
Method:	EPA 610 EPA 610	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ18314.D	1	09/03/03	MRE	08/29/03	OP8399	GIJ875
Run #2	IJ18334.D	20	09/03/03	MRE	08/29/03	OP8399	GIJ876

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2	980 ml	1.0 ml

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.1	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.1	2.0	ug/l	
120-12-7	Anthracene	ND	5.1	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.1	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.1	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.1	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.1	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.1	2.0	ug/l	
218-01-9	Chrysene	ND	5.1	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.1	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.1	2.0	ug/l	
86-73-7	Fluorene	3.5	5.1	2.0	ug/l	J
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.1	2.0	ug/l	
91-20-3	Naphthalene	415 [a]	100	41	ug/l	
90-12-0	1-Methylnaphthalene	65.7 [a]	100	41	ug/l	J
91-57-6	2-Methylnaphthalene	117 [a]	100	41	ug/l	
85-01-8	Phenanthrene	3.2	5.1	2.0	ug/l	J
129-00-0	Pyrene	ND	5.1	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	106%	0% [b]	41-139%
84-15-1	o-Terphenyl	89%	0% [b]	46-135%

(a) Result is from Run# 2
(b) Outside control limits due to dilution.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MW17A		
Lab Sample ID:	F19208-4	**Date Sampled:**	08/25/03
Matrix:	AQ - Ground Water	**Date Received:**	08/26/03
		Percent Solids:	n/a
Project:	Camp Lejeune-SE		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	< 0.10	0.10	mg/l	1	08/26/03 14:40	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	< 0.20	0.20	mg/l	1	08/26/03 14:40	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 0.10	0.10	mg/l	1	08/26/03 14:40	LL	EPA 300/SW846 9056
Sulfate	< 20	20	mg/l	1	08/26/03 14:40	LL	EPA 300/SW846 9056
Total Organic Carbon	55.9	1.0	mg/l	1	09/09/03	LE	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID: UST1115-MW78GW3202
Lab Sample ID: F19208-5
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-SE

Date Sampled: 08/25/03
Date Received: 08/26/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR018491.D	5	09/03/03	RA	n/a	n/a	GQR766
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	176	5.0	2.5	ug/l	
75-27-4	Bromodichloromethane	ND	5.0	2.5	ug/l	
75-25-2	Bromoform	ND	5.0	2.5	ug/l	
74-83-9	Bromomethane	ND	5.0	2.5	ug/l	
56-23-5	Carbon tetrachloride	ND	5.0	2.5	ug/l	
108-90-7	Chlorobenzene	ND	5.0	2.5	ug/l	
124-48-1	Dibromochloromethane	ND	5.0	2.0	ug/l	
75-00-3	Chloroethane	ND	5.0	2.5	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	5.0	2.5	ug/l	
67-66-3	Chloroform	ND	5.0	2.5	ug/l	
74-87-3	Chloromethane	ND	5.0	2.5	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5.0	2.5	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.0	2.5	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.0	2.5	ug/l	
75-71-8	Dichlorodifluoromethane	ND	5.0	2.5	ug/l	
75-34-3	1,1-Dichloroethane	ND	5.0	2.5	ug/l	
107-06-2	1,2-Dichloroethane	87.5	5.0	2.5	ug/l	
75-35-4	1,1-Dichloroethene	ND	5.0	2.5	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	5.0	2.5	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	5.0	2.5	ug/l	
78-87-5	1,2-Dichloropropane	ND	5.0	2.5	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.5	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.5	ug/l	
100-41-4	Ethylbenzene	ND	5.0	2.5	ug/l	
75-09-2	Methylene chloride	ND	25	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	2.5	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	5.0	2.5	ug/l	
108-88-3	Toluene	3.5	5.0	2.5	ug/l	J
71-55-6	1,1,1-Trichloroethane	ND	5.0	2.5	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	5.0	2.5	ug/l	
79-01-6	Trichloroethene	ND	5.0	2.5	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW78GW3202		
Lab Sample ID:	F19208-5	**Date Sampled:**	08/25/03
Matrix:	AQ - Ground Water	**Date Received:**	08/26/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	5.0	2.5	ug/l	
75-01-4	Vinyl chloride	ND	5.0	2.5	ug/l	
1330-20-7	Xylenes (total)	ND	15	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	93%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	97%		74-127%
563-58-6	1,1-Dichloropropene	95%		87-120%
563-58-6	1,1-Dichloropropene	96%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW78GW3202		
Lab Sample ID:	F19208-5	**Date Sampled:**	08/25/03
Matrix:	AQ - Ground Water	**Date Received:**	08/26/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY011439.D	1	08/27/03	CV	n/a	n/a	GXY305
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	24.6	0.50	0.30	ug/l	
74-84-0	Ethane	3.42	1.0	0.60	ug/l	
74-85-1	Ethene	ND	1.0	0.80	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-MW78GW3202
Lab Sample ID: F19208-5
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-SE

Date Sampled: 08/25/03
Date Received: 08/26/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ18315.D	1	09/03/03	MRE	08/29/03	OP8399	GIJ875
Run #2							

	Initial Volume	Final Volume
Run #1	990 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.1	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.1	2.0	ug/l	
120-12-7	Anthracene	ND	5.1	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.1	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.1	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.1	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.1	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.1	2.0	ug/l	
218-01-9	Chrysene	ND	5.1	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.1	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.1	2.0	ug/l	
86-73-7	Fluorene	ND	5.1	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.1	2.0	ug/l	
91-20-3	Naphthalene	ND	5.1	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.1	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.1	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.1	2.0	ug/l	
129-00-0	Pyrene	ND	5.1	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	78%		41-139%
84-15-1	o-Terphenyl	84%		46-135%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW78GW3202		
Lab Sample ID:	F19208-5	**Date Sampled:**	08/25/03
Matrix:	AQ - Ground Water	**Date Received:**	08/26/03
		Percent Solids:	n/a
Project:	Camp Lejeune-SE		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	< 0.10	0.10	mg/l	1	08/26/03 14:54	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	< 0.20	0.20	mg/l	1	08/26/03 14:54	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 0.10	0.10	mg/l	1	08/26/03 14:54	LL	EPA 300/SW846 9056
Sulfate	< 20	20	mg/l	1	08/26/03 14:54	LL	EPA 300/SW846 9056
Total Organic Carbon	12.0	1.0	mg/l	1	09/09/03	LE	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID: TRIP BLANK-082503
Lab Sample ID: F19208-6
Matrix: AQ - Trip Blank Water
Method: EPA 601/602
Project: Camp Lejeune-SE

Date Sampled: 08/25/03
Date Received: 08/26/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR018486.D	1	09/03/03	RA	n/a	n/a	GQR766
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK-082503		
Lab Sample ID:	F19208-6	**Date Sampled:**	08/25/03
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/26/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	91%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	95%		74-127%
563-58-6	1,1-Dichloropropene	95%		87-120%
563-58-6	1,1-Dichloropropene	95%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Blank Spike Summary

Job Number: F19208
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR766-BS	QR018472.D	1	09/03/03	RA	n/a	n/a	GQR766

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19208-3, F19208-4, F19208-5, F19208-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	19.2	96	88-121
75-27-4	Bromodichloromethane	20	20.1	101	79-121
75-25-2	Bromoform	20	20.0	100	61-135
74-83-9	Bromomethane	20	20.6	103	44-154
56-23-5	Carbon tetrachloride	20	21.7	109	81-127
108-90-7	Chlorobenzene	20	21.4	107	87-120
124-48-1	Dibromochloromethane	20	21.4	107	71-125
75-00-3	Chloroethane	20	20.7	104	68-146
110-75-8	2-Chloroethylvinyl ether	20	20.9	105	39-148
67-66-3	Chloroform	20	20.6	103	87-116
74-87-3	Chloromethane	20	21.1	106	34-188
95-50-1	1,2-Dichlorobenzene	20	22.3	112	81-119
541-73-1	1,3-Dichlorobenzene	20	20.6	103	82-120
106-46-7	1,4-Dichlorobenzene	20	22.0	110	81-120
75-71-8	Dichlorodifluoromethane	20	19.7	99	43-179
75-34-3	1,1-Dichloroethane	20	23.1	116	83-126
107-06-2	1,2-Dichloroethane	20	20.2	101	83-110
75-35-4	1,1-Dichloroethene	20	23.3	117	78-148
156-59-2	cis-1,2-Dichloroethene	20	19.8	99	86-134
156-60-5	trans-1,2-Dichloroethene	20	22.4	112	86-129
78-87-5	1,2-Dichloropropane	20	20.9	105	80-110
10061-01-5	cis-1,3-Dichloropropene	20	22.6	113	68-129
10061-02-6	trans-1,3-Dichloropropene	20	20.4	102	62-132
100-41-4	Ethylbenzene	20	20.3	102	86-125
75-09-2	Methylene chloride	20	23.1	116	74-130
1634-04-4	Methyl Tert Butyl Ether	20	19.2	96	80-117
79-34-5	1,1,2,2-Tetrachloroethane	20	22.0	110*	77-108
127-18-4	Tetrachloroethene	20	21.7	109	85-123
108-88-3	Toluene	20	19.4	97	89-123
71-55-6	1,1,1-Trichloroethane	20	21.3	107	86-123
79-00-5	1,1,2-Trichloroethane	20	21.0	105	81-109
79-01-6	Trichloroethene	20	21.8	109	85-117
75-69-4	Trichlorofluoromethane	20	21.1	106	74-149
75-01-4	Vinyl chloride	20	21.0	105	72-138
1330-20-7	Xylenes (total)	60	59.1	99	89-124

Blank Spike Summary

Job Number: F19208
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR766-BS	QR018472.D	1	09/03/03	RA	n/a	n/a	GQR766

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19208-3, F19208-4, F19208-5, F19208-6

CAS No.	Surrogate Recoveries	BSP	Limits
352-33-0	1-Chloro-4-fluorobenzene	109%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	113%	74-127%
563-58-6	1,1-Dichloropropene	96%	87-120%
563-58-6	1,1-Dichloropropene	98%	87-120%

Blank Spike Summary

Job Number: F19208
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR767-BS	QR018506.D	1	09/04/03	RA	n/a	n/a	GQR767

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19208-1, F19208-2, F19208-3, F19208-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	20.5	103	88-121
75-27-4	Bromodichloromethane	20	19.9	100	79-121
75-25-2	Bromoform	20	19.3	97	61-135
74-83-9	Bromomethane	20	20.6	103	44-154
56-23-5	Carbon tetrachloride	20	22.1	111	81-127
108-90-7	Chlorobenzene	20	21.2	106	87-120
124-48-1	Dibromochloromethane	20	21.2	106	71-125
75-00-3	Chloroethane	20	20.9	105	68-146
110-75-8	2-Chloroethylvinyl ether	20	20.4	102	39-148
67-66-3	Chloroform	20	20.4	102	87-116
74-87-3	Chloromethane	20	20.0	100	34-188
95-50-1	1,2-Dichlorobenzene	20	21.4	107	81-119
541-73-1	1,3-Dichlorobenzene	20	20.2	101	82-120
106-46-7	1,4-Dichlorobenzene	20	20.2	101	81-120
75-71-8	Dichlorodifluoromethane	20	19.5	98	43-179
75-34-3	1,1-Dichloroethane	20	22.5	113	83-126
107-06-2	1,2-Dichloroethane	20	20.4	102	83-110
75-35-4	1,1-Dichloroethene	20	23.6	118	78-148
156-59-2	cis-1,2-Dichloroethene	20	19.4	97	86-134
156-60-5	trans-1,2-Dichloroethene	20	21.3	107	86-129
78-87-5	1,2-Dichloropropane	20	20.6	103	80-110
10061-01-5	cis-1,3-Dichloropropene	20	21.7	109	68-129
10061-02-6	trans-1,3-Dichloropropene	20	20.3	102	62-132
100-41-4	Ethylbenzene	20	21.5	108	86-125
75-09-2	Methylene chloride	20	20.9	105	74-130
1634-04-4	Methyl Tert Butyl Ether	20	20.3	102	80-117
79-34-5	1,1,2,2-Tetrachloroethane	20	20.8	104	77-108
127-18-4	Tetrachloroethene	20	21.8	109	85-123
108-88-3	Toluene	20	20.9	105	89-123
71-55-6	1,1,1-Trichloroethane	20	21.3	107	86-123
79-00-5	1,1,2-Trichloroethane	20	20.6	103	81-109
79-01-6	Trichloroethene	20	21.0	105	85-117
75-69-4	Trichlorofluoromethane	20	19.9	100	74-149
75-01-4	Vinyl chloride	20	18.8	94	72-138
1330-20-7	Xylenes (total)	60	63.0	105	89-124

Blank Spike Summary

Job Number: F19208
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR767-BS	QR018506.D	1	09/04/03	RA	n/a	n/a	GQR767

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19208-1, F19208-2, F19208-3, F19208-4

CAS No.	Surrogate Recoveries	BSP	Limits
352-33-0	1-Chloro-4-fluorobenzene	109%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	111%	74-127%
563-58-6	1,1-Dichloropropene	95%	87-120%
563-58-6	1,1-Dichloropropene	95%	87-120%

Blank Spike Summary

Job Number: F19208
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GXY305-BS	XY011433.D	1	08/27/03	CV	n/a	n/a	GXY305

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F19208-1, F19208-2, F19208-3, F19208-4, F19208-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
74-82-8	Methane	108	113	105	50-126
74-84-0	Ethane	219	231	105	49-135
74-85-1	Ethene	290	306	106	56-130

Duplicate Summary

Job Number: F19208
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19208-1DUP	XY011440.D	1	08/27/03	CV	n/a	n/a	GXY305
F19208-1	XY011434.D	1	08/27/03	CV	n/a	n/a	GXY305

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F19208-1, F19208-2, F19208-3, F19208-4, F19208-5

CAS No.	Compound	F19208-1 ug/l	Q	DUP ug/l	Q	RPD	Limits
74-82-8	Methane	83.5		102		20	29
74-84-0	Ethane	0.65	J	ND		26*	24
74-85-1	Ethene	ND		ND		nc	23

Duplicate Summary

Job Number: F19208
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19208-4DUP	QR018516.D	500	09/04/03	RA	n/a	n/a	GQR767
F19208-4	QR018515.D	500	09/04/03	RA	n/a	n/a	GQR767

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19208-1, F19208-2, F19208-3, F19208-4

CAS No.	Compound	F19208-4 ug/l	Q	DUP ug/l	Q	RPD	Limits
71-43-2	Benzene	5830		6180		6	
75-27-4	Bromodichloromethane	ND		ND		nc	
75-25-2	Bromoform	ND		ND		nc	
74-83-9	Bromomethane	ND		ND		nc	
56-23-5	Carbon tetrachloride	ND		ND		nc	
108-90-7	Chlorobenzene	ND		ND		nc	
124-48-1	Dibromochloromethane	ND		ND		nc	
75-00-3	Chloroethane	ND		ND		nc	
110-75-8	2-Chloroethylvinyl ether	ND		ND		nc	
67-66-3	Chloroform	ND		ND		nc	
74-87-3	Chloromethane	ND		ND		nc	
95-50-1	1,2-Dichlorobenzene	ND		ND		nc	
541-73-1	1,3-Dichlorobenzene	ND		ND		nc	
106-46-7	1,4-Dichlorobenzene	ND		ND		nc	
75-71-8	Dichlorodifluoromethane	ND		ND		nc	
75-34-3	1,1-Dichloroethane	ND		ND		nc	
107-06-2	1,2-Dichloroethane	ND		ND		nc	
75-35-4	1,1-Dichloroethene	ND		ND		nc	
156-59-2	cis-1,2-Dichloroethene	ND		ND		nc	
156-60-5	trans-1,2-Dichloroethene	ND		ND		nc	
78-87-5	1,2-Dichloropropane	ND		ND		nc	
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	
100-41-4	Ethylbenzene	3130		3270		4	
75-09-2	Methylene chloride	ND		ND		nc	
1634-04-4	Methyl Tert Butyl Ether	ND		ND		nc	
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	
127-18-4	Tetrachloroethene	ND		ND		nc	
108-88-3	Toluene	27200		28800		6	
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	
79-01-6	Trichloroethene	ND		ND		nc	
75-69-4	Trichlorofluoromethane	ND		ND		nc	
75-01-4	Vinyl chloride	ND		ND		nc	
1330-20-7	Xylenes (total)	11400		11900		4	

Duplicate Summary

Job Number: F19208
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19208-4DUP	QR018516.D	500	09/04/03	RA	n/a	n/a	GQR767
F19208-4	QR018515.D	500	09/04/03	RA	n/a	n/a	GQR767

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19208-1, F19208-2, F19208-3, F19208-4

CAS No.	Surrogate Recoveries	DUP	F19208-4	Limits
352-33-0	1-Chloro-4-fluorobenzene	101%	101%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	103%	106%	74-127%
563-58-6	1,1-Dichloropropene	94%	94%	87-120%
563-58-6	1,1-Dichloropropene	98%	96%	87-120%

Duplicate Summary

Job Number: F19208
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19234-1DUP	QR018481.D	1	09/03/03	RA	n/a	n/a	GQR766
F19234-1	QR018480.D	1	09/03/03	RA	n/a	n/a	GQR766

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19208-3, F19208-4, F19208-5, F19208-6

CAS No.	Compound	F19234-1 ug/l	Q	DUP ug/l	Q	RPD	Limits
71-43-2	Benzene	0.64	J	0.61	J	5	
75-27-4	Bromodichloromethane	ND		ND		nc	
75-25-2	Bromoform	ND		ND		nc	
74-83-9	Bromomethane	ND		ND		nc	
56-23-5	Carbon tetrachloride	ND		ND		nc	
108-90-7	Chlorobenzene	ND		ND		nc	
124-48-1	Dibromochloromethane	ND		ND		nc	
75-00-3	Chloroethane	ND		ND		nc	
110-75-8	2-Chloroethylvinyl ether	ND		ND		nc	
67-66-3	Chloroform	ND		ND		nc	
74-87-3	Chloromethane	ND		ND		nc	
95-50-1	1,2-Dichlorobenzene	ND		ND		nc	
541-73-1	1,3-Dichlorobenzene	ND		ND		nc	
106-46-7	1,4-Dichlorobenzene	ND		ND		nc	
75-71-8	Dichlorodifluoromethane	ND		ND		nc	
75-34-3	1,1-Dichloroethane	ND		ND		nc	
107-06-2	1,2-Dichloroethane	ND		ND		nc	
75-35-4	1,1-Dichloroethene	ND		ND		nc	
156-59-2	cis-1,2-Dichloroethene	ND		ND		nc	
156-60-5	trans-1,2-Dichloroethene	ND		ND		nc	
78-87-5	1,2-Dichloropropane	ND		ND		nc	
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	
100-41-4	Ethylbenzene	1.4		1.3		7	
75-09-2	Methylene chloride	ND		ND		nc	
1634-04-4	Methyl Tert Butyl Ether	ND		ND		nc	
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	
127-18-4	Tetrachloroethene	ND		ND		nc	
108-88-3	Toluene	2.4		2.3		4	
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	
79-01-6	Trichloroethene	ND		ND		nc	
75-69-4	Trichlorofluoromethane	ND		ND		nc	
75-01-4	Vinyl chloride	ND		ND		nc	
1330-20-7	Xylenes (total)	10.5		10.1		4	

Duplicate Summary

Job Number: F19208
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19234-1DUP	QR018481.D	1	09/03/03	RA	n/a	n/a	GQR766
F19234-1	QR018480.D	1	09/03/03	RA	n/a	n/a	GQR766

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19208-3, F19208-4, F19208-5, F19208-6

CAS No.	Surrogate Recoveries	DUP	F19234-1	Limits
352-33-0	1-Chloro-4-fluorobenzene	97%	97%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	101%	102%	74-127%
563-58-6	1,1-Dichloropropene	96%	95%	87-120%
563-58-6	1,1-Dichloropropene	98%	99%	87-120%

Method Blank Summary

Job Number: F19208
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR766-MB	QR018471.D	1	09/03/03	RA	n/a	n/a	GQR766

The QC reported here applies to the following samples: **Method:** SW846 8021B

F19208-3, F19208-4, F19208-5, F19208-6

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

Method Blank Summary

Job Number: F19208
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR766-MB	QR018471.D	1	09/03/03	RA	n/a	n/a	GQR766

The QC reported here applies to the following samples: **Method:** SW846 8021B

F19208-3, F19208-4, F19208-5, F19208-6

CAS No.	Surrogate Recoveries		Limits
352-33-0	1-Chloro-4-fluorobenzene	90%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	91%	74-127%
563-58-6	1,1-Dichloropropene	96%	87-120%
563-58-6	1,1-Dichloropropene	96%	87-120%

Method Blank Summary

Job Number: F19208
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR767-MB	QR018505.D	1	09/04/03	RA	n/a	n/a	GQR767

The QC reported here applies to the following samples: **Method:** SW846 8021B

F19208-1, F19208-2, F19208-3, F19208-4

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

Method Blank Summary

Job Number: F19208
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR767-MB	QR018505.D	1	09/04/03	RA	n/a	n/a	GQR767

The QC reported here applies to the following samples: **Method:** SW846 8021B

F19208-1, F19208-2, F19208-3, F19208-4

CAS No.	Surrogate Recoveries		Limits
352-33-0	1-Chloro-4-fluorobenzene	92%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	93%	74-127%
563-58-6	1,1-Dichloropropene	95%	87-120%
563-58-6	1,1-Dichloropropene	96%	87-120%

Method Blank Summary

Job Number: F19208
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GXY305-MB	XY011432.D	1	08/27/03	CV	n/a	n/a	GXY305

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F19208-1, F19208-2, F19208-3, F19208-4, F19208-5

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	0.50	0.30	ug/l	
74-84-0	Ethane	ND	1.0	0.60	ug/l	
74-85-1	Ethene	ND	1.0	0.80	ug/l	

Matrix Spike Summary

Job Number: F19208
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19208-2MS	XY011436.D	1	08/27/03	CV	n/a	n/a	GXY305
F19208-2	XY011435.D	1	08/27/03	CV	n/a	n/a	GXY305

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F19208-1, F19208-2, F19208-3, F19208-4, F19208-5

CAS No.	Compound	F19208-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
74-82-8	Methane	14.2		108	97.4	77	50-150 [a]
74-84-0	Ethane	0.49		219	176	80	50-150 [a]
74-85-1	Ethene	ND		290	227	78	50-150 [a]

(a) Advisory control limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F19208
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19208-3MS	QR018512.D	200	09/04/03	RA	n/a	n/a	GQR767
F19208-3MSD	QR018513.D	200	09/04/03	RA	n/a	n/a	GQR767
F19208-3	QR018511.D	200	09/04/03	RA	n/a	n/a	GQR767

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19208-1, F19208-2, F19208-3, F19208-4

CAS No.	Compound	F19208-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	7420		4000	10900	87	10600	80	3	77-127/9
75-27-4	Bromodichloromethane	ND		4000	3760	94	3890	97	3	78-122/9
75-25-2	Bromoform	ND		4000	3810	95	3970	99	4	57-140/22
74-83-9	Bromomethane	ND		4000	3980	100	4080	102	2	27-159/21
56-23-5	Carbon tetrachloride	ND		4000	4280	107	4220	106	1	79-127/14
108-90-7	Chlorobenzene	ND		4000	3970	99	4140	104	4	82-122/10
124-48-1	Dibromochloromethane	ND		4000	4100	103	4210	105	3	69-127/14
75-00-3	Chloroethane	ND		4000	4080	102	4010	100	2	51-180/17
110-75-8	2-Chloroethylvinyl ether	ND		4000	3460	87	3510	88	1	10-158/13
67-66-3	Chloroform	ND		4000	3950	99	3960	99	0	82-118/9
74-87-3	Chloromethane	ND		4000	3920	98	3980	100	2	11-193/31
95-50-1	1,2-Dichlorobenzene	ND		4000	4170	104	4240	106	2	69-133/13
541-73-1	1,3-Dichlorobenzene	ND		4000	3960	99	4080	102	3	77-123/13
106-46-7	1,4-Dichlorobenzene	ND		4000	4160	104	4200	105	1	73-127/13
75-71-8	Dichlorodifluoromethane	ND		4000	3840	96	3810	95	1	14-176/25
75-34-3	1,1-Dichloroethane	ND		4000	4310	108	4370	109	1	80-127/10
107-06-2	1,2-Dichloroethane	227		4000	4110	97	4230	100	3	74-116/14
75-35-4	1,1-Dichloroethene	ND		4000	4710	118	4590	115	3	72-163/16
156-59-2	cis-1,2-Dichloroethene	ND		4000	3720	93	3790	95	2	83-139/9
156-60-5	trans-1,2-Dichloroethene	ND		4000	4320	108	4150	104	4	82-131/11
78-87-5	1,2-Dichloropropane	ND		4000	4080	102	4100	103	0	77-112/8
10061-01-5	cis-1,3-Dichloropropene	ND		4000	4140	104	4330	108	4	65-131/17
10061-02-6	trans-1,3-Dichloropropene	ND		4000	3880	97	4030	101	4	53-140/21
100-41-4	Ethylbenzene	531		4000	4600	102	4490	99	2	68-136/11
75-09-2	Methylene chloride	ND		4000	3900	98	4110	103	5	60-145/12
1634-04-4	Methyl Tert Butyl Ether	ND		4000	3880	97	3840	96	1	71-124/14
79-34-5	1,1,2,2-Tetrachloroethane	ND		4000	4160	104	4400	110	6	72-114/8
127-18-4	Tetrachloroethene	ND		4000	4180	105	4270	107	2	85-124/13
108-88-3	Toluene	1080		4000	4970	97	4860	95	2	78-128/9
71-55-6	1,1,1-Trichloroethane	ND		4000	4100	103	4160	104	1	83-123/12
79-00-5	1,1,2-Trichloroethane	ND		4000	3940	99	4100	103	4	78-111/7
79-01-6	Trichloroethene	ND		4000	4120	103	4210	105	2	82-119/11
75-69-4	Trichlorofluoromethane	ND		4000	3930	98	3750	94	5	76-147/15
75-01-4	Vinyl chloride	ND		4000	3840	96	4060	102	6	72-139/14
1330-20-7	Xylenes (total)	1450		12000	13300	99	13000	96	2	71-136/11

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F19208
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19208-3MS	QR018512.D	200	09/04/03	RA	n/a	n/a	GQR767
F19208-3MSD	QR018513.D	200	09/04/03	RA	n/a	n/a	GQR767
F19208-3	QR018511.D	200	09/04/03	RA	n/a	n/a	GQR767

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19208-1, F19208-2, F19208-3, F19208-4

CAS No.	Surrogate Recoveries	MS	MSD	F19208-3	Limits
352-33-0	1-Chloro-4-fluorobenzene	110%	110%	95%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	106%	111%	99%	74-127%
563-58-6	1,1-Dichloropropene	94%	94%	94%	87-120%
563-58-6	1,1-Dichloropropene	94%	95%	98%	87-120%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F19208
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19220-2MS	QR018477.D	1	09/03/03	RA	n/a	n/a	GQR766
F19220-2MSD	QR018478.D	1	09/03/03	RA	n/a	n/a	GQR766
F19220-2	QR018474.D	1	09/03/03	RA	n/a	n/a	GQR766

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19208-3, F19208-4, F19208-5, F19208-6

CAS No.	Compound	F19220-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		20	19.7	99	19.6	98	1	77-127/9
75-27-4	Bromodichloromethane	ND		20	20.2	101	19.9	100	1	78-122/9
75-25-2	Bromoform	ND		20	19.5	98	19.7	99	1	57-140/22
74-83-9	Bromomethane	ND		20	20.3	102	20.7	104	2	27-159/21
56-23-5	Carbon tetrachloride	ND		20	22.5	113	22.2	111	1	79-127/14
108-90-7	Chlorobenzene	ND		20	21.6	108	21.2	106	2	82-122/10
124-48-1	Dibromochloromethane	ND		20	21.2	106	21.1	106	0	69-127/14
75-00-3	Chloroethane	ND		20	20.8	104	20.7	104	0	51-180/17
110-75-8	2-Chloroethylvinyl ether	ND		20	ND	0*	ND	0*	nc	10-158/13
67-66-3	Chloroform	ND		20	21.3	107	20.8	104	2	82-118/9
74-87-3	Chloromethane	ND		20	20.2	101	20.2	101	0	11-193/31
95-50-1	1,2-Dichlorobenzene	ND		20	21.6	108	21.8	109	1	69-133/13
541-73-1	1,3-Dichlorobenzene	ND		20	21.4	107	21.4	107	0	77-123/13
106-46-7	1,4-Dichlorobenzene	ND		20	21.2	106	21.2	106	0	73-127/13
75-71-8	Dichlorodifluoromethane	ND		20	19.7	99	20.2	101	3	14-176/25
75-34-3	1,1-Dichloroethane	ND		20	23.2	116	22.4	112	4	80-127/10
107-06-2	1,2-Dichloroethane	ND		20	21.3	107	21.0	105	1	74-116/14
75-35-4	1,1-Dichloroethene	ND		20	23.5	118	22.8	114	3	72-163/16
156-59-2	cis-1,2-Dichloroethene	ND		20	19.9	100	19.3	97	3	83-139/9
156-60-5	trans-1,2-Dichloroethene	ND		20	21.8	109	22.7	114	4	82-131/11
78-87-5	1,2-Dichloropropane	ND		20	21.2	106	21.5	108	1	77-112/8
10061-01-5	cis-1,3-Dichloropropene	ND		20	22.2	111	21.7	109	2	65-131/17
10061-02-6	trans-1,3-Dichloropropene	ND		20	21.1	106	20.5	103	3	53-140/21
100-41-4	Ethylbenzene	ND		20	20.6	103	20.6	103	0	68-136/11
75-09-2	Methylene chloride	ND		20	22.5	113	23.2	116	3	60-145/12
1634-04-4	Methyl Tert Butyl Ether	ND		20	19.3	97	19.4	97	1	71-124/14
79-34-5	1,1,2,2-Tetrachloroethane	ND		20	22.3	112	20.6	103	8	72-114/8
127-18-4	Tetrachloroethene	ND		20	22.9	115	22.1	111	4	85-124/13
108-88-3	Toluene	ND		20	19.5	98	19.7	99	1	78-128/9
71-55-6	1,1,1-Trichloroethane	ND		20	21.5	108	21.8	109	1	83-123/12
79-00-5	1,1,2-Trichloroethane	ND		20	21.2	106	20.3	102	4	78-111/7
79-01-6	Trichloroethene	ND		20	21.7	109	20.6	103	5	82-119/11
75-69-4	Trichlorofluoromethane	ND		20	20.4	102	20.8	104	2	76-147/15
75-01-4	Vinyl chloride	ND		20	20.1	101	19.5	98	3	72-139/14
1330-20-7	Xylenes (total)	ND		60	59.4	99	59.4	99	0	71-136/11

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F19208
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19220-2MS	QR018477.D	1	09/03/03	RA	n/a	n/a	GQR766
F19220-2MSD	QR018478.D	1	09/03/03	RA	n/a	n/a	GQR766
F19220-2	QR018474.D	1	09/03/03	RA	n/a	n/a	GQR766

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19208-3, F19208-4, F19208-5, F19208-6

CAS No.	Surrogate Recoveries	MS	MSD	F19220-2	Limits
352-33-0	1-Chloro-4-fluorobenzene	108%	109%	91%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	110%	110%	96%	74-127%
563-58-6	1,1-Dichloropropene	96%	96%	96%	87-120%
563-58-6	1,1-Dichloropropene	99%	96%	99%	87-120%

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Blank Spike Summary

Job Number: F19208
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8399-BS	IJ18307.D	1	09/02/03	MRE	08/29/03	OP8399	GIJ875

The QC reported here applies to the following samples: **Method:** EPA 610

F19208-1, F19208-2, F19208-3, F19208-4, F19208-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	25	28.0	112	59-114
208-96-8	Acenaphthylene	25	25.1	100	58-109
120-12-7	Anthracene	25	26.7	107	63-110
56-55-3	Benzo(a)anthracene	25	27.6	110	74-111
50-32-8	Benzo(a)pyrene	25	26.6	106	71-110
205-99-2	Benzo(b)fluoranthene	25	27.8	111	75-112
191-24-2	Benzo(g,h,i)perylene	25	26.9	108	66-114
207-08-9	Benzo(k)fluoranthene	25	25.8	103	73-111
218-01-9	Chrysene	25	26.9	108	73-112
53-70-3	Dibenzo(a,h)anthracene	25	26.3	105	67-111
206-44-0	Fluoranthene	25	27.7	111	74-113
86-73-7	Fluorene	25	27.2	109	67-113
193-39-5	Indeno(1,2,3-cd)pyrene	25	27.5	110	68-115
91-20-3	Naphthalene	25	26.1	104	52-113
90-12-0	1-Methylnaphthalene	25	28.7	115	55-117
91-57-6	2-Methylnaphthalene	25	26.2	105	50-115
85-01-8	Phenanthrene	25	27.8	111	70-111
129-00-0	Pyrene	25	27.3	109	73-115

CAS No.	Surrogate Recoveries	BSP	Limits
321-60-8	2-Fluorobiphenyl	108%	41-139%
84-15-1	o-Terphenyl	106%	46-135%

Duplicate Summary

Job Number: F19208
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8399-DUP	IJ18338.D	40	09/03/03	MRE	08/29/03	OP8399	GIJ876
F19271-4 [a]	IJ18337.D	40	09/03/03	MRE	08/29/03	OP8399	GIJ876

The QC reported here applies to the following samples: **Method:** EPA 610

F19208-1, F19208-2, F19208-3, F19208-4, F19208-5

CAS No.	Compound	F19271-4 ug/l	Q	DUP ug/l	Q	RPD	Limits
83-32-9	Acenaphthene	ND		ND		nc	
208-96-8	Acenaphthylene	ND		ND		nc	
120-12-7	Anthracene	ND		ND		nc	
56-55-3	Benzo(a)anthracene	ND		ND		nc	
50-32-8	Benzo(a)pyrene	ND		ND		nc	
205-99-2	Benzo(b)fluoranthene	ND		ND		nc	
191-24-2	Benzo(g,h,i)perylene	ND		ND		nc	
207-08-9	Benzo(k)fluoranthene	ND		ND		nc	
218-01-9	Chrysene	ND		ND		nc	
53-70-3	Dibenzo(a,h)anthracene	ND		ND		nc	
206-44-0	Fluoranthene	ND		ND		nc	
86-73-7	Fluorene	ND		ND		nc	
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ND		nc	
91-20-3	Naphthalene	768		787		2	
90-12-0	1-Methylnaphthalene	85.3	J	90.6	J	6	
91-57-6	2-Methylnaphthalene	163	J	180	J	10	
85-01-8	Phenanthrene	ND		ND		nc	
129-00-0	Pyrene	ND		ND		nc	

CAS No.	Surrogate Recoveries	DUP	F19271-4	Limits
321-60-8	2-Fluorobiphenyl	0%* [b]	0%* [b]	41-139%
84-15-1	o-Terphenyl	0%* [b]	0%* [b]	46-135%

(a) All hits confirmed by dual column analysis.
(b) Outside control limits due to dilution.

Method Blank Summary

Job Number: F19208
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8399-MB	IJ18308.D	1	09/02/03	MRE	08/29/03	OP8399	GIJ875

The QC reported here applies to the following samples: **Method:** EPA 610

F19208-1, F19208-2, F19208-3, F19208-4, F19208-5

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	2.0	ug/l	
120-12-7	Anthracene	ND	5.0	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	2.0	ug/l	
218-01-9	Chrysene	ND	5.0	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	2.0	ug/l	
86-73-7	Fluorene	ND	5.0	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	2.0	ug/l	
129-00-0	Pyrene	ND	5.0	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
321-60-8	2-Fluorobiphenyl	87%	41-139%
84-15-1	o-Terphenyl	83%	46-135%

Method Blank Summary

Job Number: F19208
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8399-MB	IJ18332.D	1	09/03/03	MRE	08/29/03	OP8399	GIJ876

The QC reported here applies to the following samples: **Method:** EPA 610

F19208-1, F19208-2, F19208-3, F19208-4, F19208-5

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	2.0	ug/l	
120-12-7	Anthracene	ND	5.0	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	2.0	ug/l	
218-01-9	Chrysene	ND	5.0	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	2.0	ug/l	
86-73-7	Fluorene	ND	5.0	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	2.0	ug/l	
129-00-0	Pyrene	ND	5.0	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
321-60-8	2-Fluorobiphenyl	95%	41-139%
84-15-1	o-Terphenyl	91%	46-135%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F19208
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8399-MS	IJ18311.D	1	09/02/03	MRE	08/29/03	OP8399	GIJ875
OP8399-MSD	IJ18312.D	1	09/03/03	MRE	08/29/03	OP8399	GIJ875
F19208-2	IJ18310.D	1	09/02/03	MRE	08/29/03	OP8399	GIJ875

The QC reported here applies to the following samples: **Method:** EPA 610

F19208-1, F19208-2, F19208-3, F19208-4, F19208-5

CAS No.	Compound	F19208-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		53.2	48.4	91	50.2	94	4	36-143/21
208-96-8	Acenaphthylene	ND		53.2	44.0	83	46.0	86	4	59-108/22
120-12-7	Anthracene	ND		53.2	45.7	86	47.9	90	5	61-113/22
56-55-3	Benzo(a)anthracene	ND		53.2	47.0	88	49.7	93	6	69-111/17
50-32-8	Benzo(a)pyrene	ND		53.2	45.8	86	48.3	91	5	71-109/22
205-99-2	Benzo(b)fluoranthene	ND		53.2	47.8	90	50.2	94	5	63-116/19
191-24-2	Benzo(g,h,i)perylene	ND		53.2	46.8	88	48.6	91	4	54-123/19
207-08-9	Benzo(k)fluoranthene	ND		53.2	44.7	84	47.4	89	6	66-114/16
218-01-9	Chrysene	ND		53.2	46.2	87	48.7	92	5	65-116/15
53-70-3	Dibenzo(a,h)anthracene	ND		53.2	45.9	86	48.2	91	5	52-130/24
206-44-0	Fluoranthene	ND		53.2	47.7	90	50.0	94	5	73-113/16
86-73-7	Fluorene	ND		53.2	46.9	88	49.1	92	5	63-114/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		53.2	47.7	90	50.3	95	5	43-133/24
91-20-3	Naphthalene	ND		53.2	45.8	86	48.7	92	6	40-130/27
90-12-0	1-Methylnaphthalene	ND		53.2	50.9	96	54.6	103	7	50-128/25
91-57-6	2-Methylnaphthalene	ND		53.2	45.8	86	49.3	93	7	32-148/26
85-01-8	Phenanthrene	ND		53.2	47.5	89	49.9	94	5	44-136/19
129-00-0	Pyrene	ND		53.2	46.5	87	49.1	92	5	71-116/16

CAS No.	Surrogate Recoveries	MS	MSD	F19208-2	Limits
321-60-8	2-Fluorobiphenyl	87%	93%	84%	41-139%
84-15-1	o-Terphenyl	84%	88%	85%	46-135%

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F19208
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-SE

Analyte	Batch ID	RL	MB Result	Units	BSP %Recov	QC Limits
Nitrogen, Nitrate	GP4413/GN12510	0.10	<0.10	mg/l	103.0	90-110%
Nitrogen, Nitrite	GP4413/GN12510	0.10	<0.10	mg/l	107.0	90-110%
Sulfate	GP4413/GN12510	20	<20	mg/l	102.0	90-110%
Total Organic Carbon	GN12632	1.0	<1.0	mg/l	105.0	86-116%

Associated Samples:
Batch GN12632: F19208-1, F19208-2, F19208-3, F19208-4, F19208-5
Batch GP4413: F19208-1, F19208-2, F19208-3, F19208-4, F19208-5

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F19208
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-SE

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Nitrogen, Nitrate	GP4413/GN12510	F19208-1	mg/l	<0.10	<0.10	0.0	0-20%
Nitrogen, Nitrite	GP4413/GN12510	F19208-1	mg/l	<0.10	<0.10	0.0	0-20%
Sulfate	GP4413/GN12510	F19208-1	mg/l	50.7	50.5	0.4	0-20%
Total Organic Carbon	GN12632	F19208-1	mg/l	4.9	4.8	1.0	0-20%

Associated Samples:
Batch GN12632: F19208-1, F19208-2, F19208-3, F19208-4, F19208-5
Batch GP4413: F19208-1, F19208-2, F19208-3, F19208-4, F19208-5

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F19208
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-SE

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Nitrogen, Nitrate	GP4413/GN12510	F19208-1	mg/l	<0.10	1	1.1	110.0	90-110%
Nitrogen, Nitrite	GP4413/GN12510	F19208-1	mg/l	<0.10	1	1.0	100.0	90-110%
Sulfate	GP4413/GN12510	F19208-1	mg/l	50.7	100	152	101.3	90-110%
Total Organic Carbon	GN12632	F19208-1	mg/l	4.9	50	60.8	112.0	76-118%

Associated Samples:
Batch GN12632: F19208-1, F19208-2, F19208-3, F19208-4, F19208-5
Batch GP4413: F19208-1, F19208-2, F19208-3, F19208-4, F19208-5

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F19208
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-SE

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Total Organic Carbon	GN12632	F19208-1	mg/l	4.9	50	60.4	0.7	

Associated Samples:
Batch GN12632: F19208-1, F19208-2, F19208-3, F19208-4, F19208-5

COC Number:
824603-SE-082503

CHAIN-OF-CUSTODY RECORD F19208

Shaw™
Shaw Environmental & Infrastructure, Inc.

Shaw Environmental & Infrastructure, Inc. - Piney Green Rd. Lot 203 Bld 626 - 910-451-2390

Receiving Lab: ACCUTEST

Project Name	Project Location
CAMP LEJEUNE - SE	CAMP LEJEUNE, NC

Project Number	Contact	PO Number
824603	Mark Martin	209378

Client Rep	Project Manager
US NAVY - LANTDIV	Ron Kenyon

Item No.	Sample Number	Date	Time	Comp	Grab	Sample Description	Number of Containers	Analysis Desired: VOA 601/602	PAH 610	Dissolved Gasses RSK-175	NO3,NO2,NO3-NO2 BY 353.2-354.1	SO4 BY 375.4	TOC BY 415.1									
1	USTHPFF-MWHPFF05	8/25/03	0910		X	USTHPFF-MWHPFF05	10	X	X	X	X	X	X									
2	USTHPFF-MWHPFF11	8/25/03	1030		X	USTHPFF-MWHPFF11	10	X	X	X	X	X	X									
3	USTHPFF-MWHPFF08	8/25/03	1125		X	USTHPFF-MWHPFF08	10	X	X	X	X	X	X									
4	USTHPFF-MW17A	8/25/03	1215		X	USTHPFF-MW17A	10	X	X	X	X	X	X									
5	UST1115-MW78GW3202	8/25/03	1440		X	UST1115-MW78GW3202	10	X	X	X	X	X	X									
6	Trip Blank-082503	8/25/03	—		X	Trip Blank	2	X														
7																						
8																						
9																						
10																						

Transfer Number	Item Number	Transfers Relinquished By	Transfers Accepted By	Date	Time	Remarks
1	1 – 6	[signature]	Fed Ex 8369 1400 2853	8/25/03	18:00	Please E-mail results to Mark.Martin@Shawgrp.com
2		FED EX	Muna Mohamma[illegible]	8/26/03	0930	21 Day TAT

3.0, 2.4

ACCUTEST LABORATORIES SOUTHEAST SAMPLE RECEIPT CONFIRMATION

Accutest's Job Number: F19208

Client: Shaw **Project:** Camp Lejeune-SE

Date Received: 8/26/03 **Time Received:** 0930

of Coolers Received: 2 **Cooler Temperatures:** 3.0; 2.4

Delivery Method: (FedEx) UPS Accutest Courier Greyhound Delivery Other

Air Bill Number: 8369 1400 2853

Cooler Custody Seals Intact ?	(Yes)	No	
Chain of Custody Provided ?	(Yes)	No	
COC Match Bottle Label ID's ?	(Yes)	No	
Sample Labels Present on all bottles ?	(Yes)	No	
All Analyses Marked On COC ?	(Yes)	No	
Are All Bottles Intact ?	(Yes)	No	
Samples Preserved Correctly ?	(Yes)	No	
Correct Number of Containers Used ?	(Yes)	No	
Sufficient Sample Volume ?	(Yes)	No	
Trip Blank Provided ?	(Yes)	No	
Trip Blank on COC ?	(Yes)	No	
Trip Blank Intact ?	(Yes)	No	N/A
Trip Blank Matrix ?	Soil	(Water)	N/A
Number of Encores ?	0		
Number of Soil Field Kits ?	0		

Summary of Comments:

Signature: Muna Mohammed **Date:** 8/26/03

Southeast ACCUTEST Laboratories

09/08/03

Technical Report for

Shaw E & I, Inc.

Camp Lejeune-NW

824603 PO#209378

Accutest Job Number: F19187

Report to:

Shaw E & I, Inc.

natasha.sullivan@shawgrp.com

ATTN: Natasha Sullivan

Total number of pages in report: 42

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Harry Behzadi, Ph.D.
Laboratory Director

Certifications: FL (DOH E83510), NC (573), NJ (FL002), MA (FL946), IA (366), LA (03051), KS (E-10327), SC, AK

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Sample Summary

Shaw E & I, Inc.

Job No: F19187

Camp Lejeune-NW
Project No: 824603 PO#209378

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
F19187-1	08/22/03	11:20	MM	08/23/03	AQ	Ground Water	UST1115-MW111525
F19187-2	08/22/03	10:40	MM	08/23/03	AQ	Ground Water	UST1115-GT01

Report of Analysis

Client Sample ID: UST1115-MW111525
Lab Sample ID: F19187-1
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-NW

Date Sampled: 08/22/03
Date Received: 08/23/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR018416.D	1	08/29/03	BM	n/a	n/a	GQR763
Run #2	QR018433.D	50	09/02/03	RA	n/a	n/a	GQR764

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	3300 [a]	50	25	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	175 [a]	50	25	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	2.3	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	8.2	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	292 [a]	50	25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111525		
Lab Sample ID:	F19187-1	**Date Sampled:**	08/22/03
Matrix:	AQ - Ground Water	**Date Received:**	08/23/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	15.3	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	78%	92%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	108%	101%	74-127%
563-58-6	1,1-Dichloropropene	72% [b]	94%	87-120%
563-58-6	1,1-Dichloropropene	102%	100%	87-120%

(a) Result is from Run# 2
(b) Outside control limits due to matrix interference.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111525		
Lab Sample ID:	F19187-1	**Date Sampled:**	08/22/03
Matrix:	AQ - Ground Water	**Date Received:**	08/23/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY011421.D	1	08/25/03	CV	n/a	n/a	GXY304
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	47.6	0.50	0.30	ug/l	
74-84-0	Ethane	11.6	1.0	0.60	ug/l	
74-85-1	Ethene	9.50	1.0	0.80	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-MW111525
Lab Sample ID: F19187-1
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-NW

Date Sampled: 08/22/03
Date Received: 08/23/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ18298.D	1	09/02/03	MRE	08/26/03	OP8355	GIJ875
Run #2							

	Initial Volume	Final Volume
Run #1	960 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.2	2.1	ug/l	
208-96-8	Acenaphthylene	ND	5.2	2.1	ug/l	
120-12-7	Anthracene	ND	5.2	2.1	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.2	2.1	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.2	2.1	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.2	2.1	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.2	2.1	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.2	2.1	ug/l	
218-01-9	Chrysene	ND	5.2	2.1	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.2	2.1	ug/l	
206-44-0	Fluoranthene	ND	5.2	2.1	ug/l	
86-73-7	Fluorene	ND	5.2	2.1	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.2	2.1	ug/l	
91-20-3	Naphthalene	ND	5.2	2.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.2	2.1	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.2	2.1	ug/l	
85-01-8	Phenanthrene	ND	5.2	2.1	ug/l	
129-00-0	Pyrene	ND	5.2	2.1	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	79%		41-139%
84-15-1	o-Terphenyl	82%		46-135%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111525		
Lab Sample ID:	F19187-1	**Date Sampled:**	08/22/03
Matrix:	AQ - Ground Water	**Date Received:**	08/23/03
		Percent Solids:	n/a
Project:	Camp Lejeune-NW		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	< 0.10	0.10	mg/l	1	08/25/03 11:21	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	< 0.20	0.20	mg/l	1	08/25/03 11:21	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 0.10	0.10	mg/l	1	08/25/03 11:21	LL	EPA 300/SW846 9056
Sulfate	< 20	20	mg/l	1	08/25/03 11:21	LL	EPA 300/SW846 9056
Total Organic Carbon	6.0	1.0	mg/l	1	09/05/03	SL	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID:	UST1115-GT01		
Lab Sample ID:	F19187-2	**Date Sampled:**	08/22/03
Matrix:	AQ - Ground Water	**Date Received:**	08/23/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR018411.D	1	08/29/03	BM	n/a	n/a	GQR763
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.52	1.0	0.20	ug/l	J
127-18-4	Tetrachloroethene	2.3	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	1.5	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-GT01		
Lab Sample ID:	F19187-2	**Date Sampled:**	08/22/03
Matrix:	AQ - Ground Water	**Date Received:**	08/23/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	97%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	94%		74-127%
563-58-6	1,1-Dichloropropene	100%		87-120%
563-58-6	1,1-Dichloropropene	102%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-GT01
Lab Sample ID: F19187-2
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-NW

Date Sampled: 08/22/03
Date Received: 08/23/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ18300.D	1	09/02/03	MRE	08/26/03	OP8355	GIJ875
Run #2							

	Initial Volume	Final Volume
Run #1	930 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.4	2.2	ug/l	
208-96-8	Acenaphthylene	ND	5.4	2.2	ug/l	
120-12-7	Anthracene	ND	5.4	2.2	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.4	2.2	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.4	2.2	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.4	2.2	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.4	2.2	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.4	2.2	ug/l	
218-01-9	Chrysene	ND	5.4	2.2	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.4	2.2	ug/l	
206-44-0	Fluoranthene	ND	5.4	2.2	ug/l	
86-73-7	Fluorene	ND	5.4	2.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.4	2.2	ug/l	
91-20-3	Naphthalene	ND	5.4	2.2	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.4	2.2	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.4	2.2	ug/l	
85-01-8	Phenanthrene	ND	5.4	2.2	ug/l	
129-00-0	Pyrene	ND	5.4	2.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	84%		41-139%
84-15-1	o-Terphenyl	85%		46-135%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Blank Spike Summary

Job Number: F19187
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR763-BS	QR018399.D	1	08/29/03	BM	n/a	n/a	GQR763

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19187-1, F19187-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	20.0	100	88-121
75-27-4	Bromodichloromethane	20	17.2	86	79-121
75-25-2	Bromoform	20	17.2	86	61-135
74-83-9	Bromomethane	20	20.3	102	44-154
56-23-5	Carbon tetrachloride	20	20.5	103	81-127
108-90-7	Chlorobenzene	20	20.4	102	87-120
124-48-1	Dibromochloromethane	20	18.1	91	71-125
75-00-3	Chloroethane	20	20.1	101	68-146
110-75-8	2-Chloroethylvinyl ether	20	17.6	88	39-148
67-66-3	Chloroform	20	18.6	93	87-116
74-87-3	Chloromethane	20	21.0	105	34-188
95-50-1	1,2-Dichlorobenzene	20	20.5	103	81-119
541-73-1	1,3-Dichlorobenzene	20	20.1	101	82-120
106-46-7	1,4-Dichlorobenzene	20	20.1	101	81-120
75-71-8	Dichlorodifluoromethane	20	18.8	94	43-179
75-34-3	1,1-Dichloroethane	20	21.2	106	83-126
107-06-2	1,2-Dichloroethane	20	19.3	97	83-110
75-35-4	1,1-Dichloroethene	20	22.5	113	78-148
156-59-2	cis-1,2-Dichloroethene	20	17.9	90	86-134
156-60-5	trans-1,2-Dichloroethene	20	21.1	106	86-129
78-87-5	1,2-Dichloropropane	20	20.1	101	80-110
10061-01-5	cis-1,3-Dichloropropene	20	21.0	105	68-129
10061-02-6	trans-1,3-Dichloropropene	20	19.4	97	62-132
100-41-4	Ethylbenzene	20	21.3	107	86-125
75-09-2	Methylene chloride	20	21.0	105	74-130
1634-04-4	Methyl Tert Butyl Ether	20	19.3	97	80-117
79-34-5	1,1,2,2-Tetrachloroethane	20	19.7	99	77-108
127-18-4	Tetrachloroethene	20	20.4	102	85-123
108-88-3	Toluene	20	20.5	103	89-123
71-55-6	1,1,1-Trichloroethane	20	19.0	95	86-123
79-00-5	1,1,2-Trichloroethane	20	19.3	97	81-109
79-01-6	Trichloroethene	20	20.6	103	85-117
75-69-4	Trichlorofluoromethane	20	21.8	109	74-149
75-01-4	Vinyl chloride	20	17.4	87	72-138
1330-20-7	Xylenes (total)	60	62.0	103	89-124

Blank Spike Summary

Job Number: F19187
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR763-BS	QR018399.D	1	08/29/03	BM	n/a	n/a	GQR763

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19187-1, F19187-2

CAS No.	Surrogate Recoveries	BSP	Limits
352-33-0	1-Chloro-4-fluorobenzene	106%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	97%	74-127%
563-58-6	1,1-Dichloropropene	99%	87-120%
563-58-6	1,1-Dichloropropene	94%	87-120%

Blank Spike Summary

Job Number: F19187
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR764-BS	QR018427.D	1	09/02/03	RA	n/a	n/a	GQR764

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19187-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	21.0	105	88-121
107-06-2	1,2-Dichloroethane	20	21.5	108	83-110
108-88-3	Toluene	20	21.5	108	89-123

CAS No.	Surrogate Recoveries	BSP	Limits
352-33-0	1-Chloro-4-fluorobenzene	110%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	114%	74-127%
563-58-6	1,1-Dichloropropene	96%	87-120%
563-58-6	1,1-Dichloropropene	101%	87-120%

Blank Spike Summary

Job Number: F19187
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GXY304-BS	XY011397.D	1	08/22/03	CV	n/a	n/a	GXY304

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F19187-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
74-82-8	Methane	108	86.8	80	50-126
74-84-0	Ethane	219	189	86	49-135
74-85-1	Ethene	290	249	86	56-130

Blank Spike Summary

Job Number: F19187
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GXY304-BS	XY011420.D	1	08/25/03	CV	n/a	n/a	GXY304

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F19187-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
74-82-8	Methane	108	91.3	85	50-126
74-84-0	Ethane	219	187	85	49-135
74-85-1	Ethene	290	248	86	56-130

Duplicate Summary

Job Number: F19187
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19141-2DUP	XY011405.D	1	08/22/03	CV	n/a	n/a	GXY304
F19141-2	XY011404.D	1	08/22/03	CV	n/a	n/a	GXY304

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F19187-1

CAS No.	Compound	F19141-2 ug/l	Q	DUP ug/l	Q	RPD	Limits
74-82-8	Methane	11.2		11.8		5	29
74-84-0	Ethane	ND		ND		nc	24
74-85-1	Ethene	0.81		0.89		9	23

Duplicate Summary

Job Number: F19187
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19188-2DUP	XY011425.D	1	08/25/03	CV	n/a	n/a	GXY304
F19188-2	XY011424.D	1	08/25/03	CV	n/a	n/a	GXY304

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F19187-1

CAS No.	Compound	F19188-2 ug/l	Q	DUP ug/l	Q	RPD	Limits
74-82-8	Methane	67.8		72.5		7	29
74-84-0	Ethane	ND		ND		nc	24
74-85-1	Ethene	ND		ND		nc	23

Duplicate Summary

Job Number: F19187
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19188-4DUP	QR018415.D	1	08/29/03	BM	n/a	n/a	GQR763
F19188-4	QR018414.D	1	08/29/03	BM	n/a	n/a	GQR763

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19187-1, F19187-2

CAS No.	Compound	F19188-4 ug/l	Q	DUP ug/l	Q	RPD	Limits
71-43-2	Benzene	618	E	613	E	1	
75-27-4	Bromodichloromethane	ND		ND		nc	
75-25-2	Bromoform	ND		ND		nc	
74-83-9	Bromomethane	ND		ND		nc	
56-23-5	Carbon tetrachloride	ND		ND		nc	
108-90-7	Chlorobenzene	ND		ND		nc	
124-48-1	Dibromochloromethane	ND		ND		nc	
75-00-3	Chloroethane	ND		ND		nc	
110-75-8	2-Chloroethylvinyl ether	ND		ND		nc	
67-66-3	Chloroform	ND		ND		nc	
74-87-3	Chloromethane	ND		ND		nc	
95-50-1	1,2-Dichlorobenzene	ND		ND		nc	
541-73-1	1,3-Dichlorobenzene	ND		ND		nc	
106-46-7	1,4-Dichlorobenzene	ND		ND		nc	
75-71-8	Dichlorodifluoromethane	ND		ND		nc	
75-34-3	1,1-Dichloroethane	ND		ND		nc	
107-06-2	1,2-Dichloroethane	113	E	115	E	2	
75-35-4	1,1-Dichloroethene	ND		ND		nc	
156-59-2	cis-1,2-Dichloroethene	ND		ND		nc	
156-60-5	trans-1,2-Dichloroethene	ND		ND		nc	
78-87-5	1,2-Dichloropropane	3.7		3.7		0	
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	
100-41-4	Ethylbenzene	19.5		19.5		0	
75-09-2	Methylene chloride	ND		ND		nc	
1634-04-4	Methyl Tert Butyl Ether	6.3		6.3		0	
79-34-5	1,1,2,2-Tetrachloroethane	1.5		1.5		0	
127-18-4	Tetrachloroethene	ND		ND		nc	
108-88-3	Toluene	271	E	269	E	1	
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	
79-01-6	Trichloroethene	ND		ND		nc	
75-69-4	Trichlorofluoromethane	ND		ND		nc	
75-01-4	Vinyl chloride	ND		ND		nc	
1330-20-7	Xylenes (total)	346	E	345	E	0	

Duplicate Summary

Job Number: F19187
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19188-4DUP	QR018415.D	1	08/29/03	BM	n/a	n/a	GQR763
F19188-4	QR018414.D	1	08/29/03	BM	n/a	n/a	GQR763

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19187-1, F19187-2

CAS No.	Surrogate Recoveries	DUP	F19188-4	Limits
352-33-0	1-Chloro-4-fluorobenzene	99%	100%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	108%	111%	74-127%
563-58-6	1,1-Dichloropropene	88%	88%	87-120%
563-58-6	1,1-Dichloropropene	103%	104%	87-120%

Duplicate Summary

Job Number: F19187
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19188-4DUP	QR018446.D	20	09/02/03	RA	n/a	n/a	GQR764
F19188-4	QR018445.D	20	09/02/03	RA	n/a	n/a	GQR764

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19187-1

CAS No.	Compound	F19188-4 ug/l	Q	DUP ug/l	Q	RPD	Limits
71-43-2	Benzene	957		930		3	
107-06-2	1,2-Dichloroethane	138		135		2	
108-88-3	Toluene	319		310		3	

CAS No.	Surrogate Recoveries	DUP	F19188-4	Limits
352-33-0	1-Chloro-4-fluorobenzene	96%	96%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	101%	102%	74-127%
563-58-6	1,1-Dichloropropene	94%	94%	87-120%
563-58-6	1,1-Dichloropropene	102%	99%	87-120%

Method Blank Summary

Job Number: F19187
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR763-MB	QR018400.D	1	08/29/03	BM	n/a	n/a	GQR763

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19187-1, F19187-2

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

Method Blank Summary

Job Number: F19187
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR763-MB	QR018400.D	1	08/29/03	BM	n/a	n/a	GQR763

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19187-1, F19187-2

CAS No.	Surrogate Recoveries		Limits
352-33-0	1-Chloro-4-fluorobenzene	89%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	91%	74-127%
563-58-6	1,1-Dichloropropene	99%	87-120%
563-58-6	1,1-Dichloropropene	102%	87-120%

Method Blank Summary

Job Number: F19187
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR764-MB	QR018428.D	1	09/02/03	RA	n/a	n/a	GQR764

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19187-1

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	

CAS No.	Surrogate Recoveries		Limits
352-33-0	1-Chloro-4-fluorobenzene	92%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	100%	74-127%
563-58-6	1,1-Dichloropropene	96%	87-120%
563-58-6	1,1-Dichloropropene	101%	87-120%

Method Blank Summary

Job Number: F19187
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GXY304-MB	XY011396.D	1	08/22/03	CV	n/a	n/a	GXY304

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F19187-1

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	0.50	0.30	ug/l	
74-84-0	Ethane	ND	1.0	0.60	ug/l	
74-85-1	Ethene	ND	1.0	0.80	ug/l	

Method Blank Summary

Job Number: F19187
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GXY304-MB	XY011419.D	1	08/25/03	CV	n/a	n/a	GXY304

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F19187-1

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	0.50	0.30	ug/l	
74-84-0	Ethane	ND	1.0	0.60	ug/l	
74-85-1	Ethene	ND	1.0	0.80	ug/l	

Matrix Spike Summary

Job Number: F19187
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19133-6MS	XY011402.D	1	08/22/03	CV	n/a	n/a	GXY304
F19133-6	XY011401.D	1	08/22/03	CV	n/a	n/a	GXY304

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F19187-1

CAS No.	Compound	F19133-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
74-82-8	Methane	77.9		108	188	102	50-150 [a]
74-84-0	Ethane	2.0		219	274	124	50-150 [a]
74-85-1	Ethene	ND		290	353	122	50-150 [a]

(a) Advisory control limits.

Matrix Spike Summary

Job Number: F19187
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19188-1MS	XY011423.D	1	08/25/03	CV	n/a	n/a	GXY304
F19188-1	XY011422.D	1	08/25/03	CV	n/a	n/a	GXY304

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F19187-1

CAS No.	Compound	F19188-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
74-82-8	Methane	5.05		108	107	94	50-150 [a]
74-84-0	Ethane	ND		219	220	100	50-150 [a]
74-85-1	Ethene	ND		290	291	100	50-150 [a]

(a) Advisory control limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F19187
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19161-2MS	QR018438.D	50	09/02/03	RA	n/a	n/a	GQR764
F19161-2MSD	QR018439.D	50	09/02/03	RA	n/a	n/a	GQR764
F19161-2	QR018432.D	50	09/02/03	RA	n/a	n/a	GQR764

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19187-1

CAS No.	Compound	F19161-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	2260		1000	2890	63* [a]	2920	66* [a]	1	77-127/9
107-06-2	1,2-Dichloroethane	ND		1000	1010	101	1080	108	7	74-116/14
108-88-3	Toluene	52.7		1000	1140	109	1160	111	2	78-128/9

CAS No.	Surrogate Recoveries	MS	MSD	F19161-2	Limits
352-33-0	1-Chloro-4-fluorobenzene	108%	107%	96%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	110%	107%	104%	74-127%
563-58-6	1,1-Dichloropropene	95%	95%	94%	87-120%
563-58-6	1,1-Dichloropropene	96%	95%	101%	87-120%

(a) Outside control limits due to high level in sample relative to spike amount.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F19187
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19187-2MS	QR018412.D	1	08/29/03	BM	n/a	n/a	GQR763
F19187-2MSD	QR018413.D	1	08/29/03	BM	n/a	n/a	GQR763
F19187-2	QR018411.D	1	08/29/03	BM	n/a	n/a	GQR763

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19187-1, F19187-2

CAS No.	Compound	F19187-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		20	20.1	101	20.4	102	1	77-127/9
75-27-4	Bromodichloromethane	ND		20	17.8	89	18.6	93	4	78-122/9
75-25-2	Bromoform	ND		20	17.5	88	17.8	89	2	57-140/22
74-83-9	Bromomethane	ND		20	19.8	99	20.6	103	4	27-159/21
56-23-5	Carbon tetrachloride	ND		20	20.7	104	21.4	107	3	79-127/14
108-90-7	Chlorobenzene	ND		20	20.6	103	21.0	105	2	82-122/10
124-48-1	Dibromochloromethane	ND		20	19.0	95	19.7	99	4	69-127/14
75-00-3	Chloroethane	ND		20	20.0	100	20.6	103	3	51-180/17
110-75-8	2-Chloroethylvinyl ether	ND		20	ND	0*	ND	0*	nc	10-158/13
67-66-3	Chloroform	ND		20	18.7	94	19.1	96	2	82-118/9
74-87-3	Chloromethane	ND		20	20.0	100	21.4	107	7	11-193/31
95-50-1	1,2-Dichlorobenzene	ND		20	21.6	108	22.2	111	3	69-133/13
541-73-1	1,3-Dichlorobenzene	ND		20	20.4	102	21.2	106	4	77-123/13
106-46-7	1,4-Dichlorobenzene	ND		20	21.4	107	21.4	107	0	73-127/13
75-71-8	Dichlorodifluoromethane	ND		20	17.5	88	18.7	94	7	14-176/25
75-34-3	1,1-Dichloroethane	ND		20	22.0	110	21.9	110	0	80-127/10
107-06-2	1,2-Dichloroethane	ND		20	20.0	100	20.6	103	3	74-116/14
75-35-4	1,1-Dichloroethene	ND		20	22.4	112	22.8	114	2	72-163/16
156-59-2	cis-1,2-Dichloroethene	ND		20	19.4	97	19.1	96	2	83-139/9
156-60-5	trans-1,2-Dichloroethene	ND		20	21.2	106	21.5	108	1	82-131/11
78-87-5	1,2-Dichloropropane	ND		20	20.5	103	20.7	104	1	77-112/8
10061-01-5	cis-1,3-Dichloropropene	ND		20	21.1	106	21.7	109	3	65-131/17
10061-02-6	trans-1,3-Dichloropropene	ND		20	19.7	99	20.2	101	3	53-140/21
100-41-4	Ethylbenzene	ND		20	22.1	111	22.4	112	1	68-136/11
75-09-2	Methylene chloride	ND		20	20.0	100	20.1	101	0	60-145/12
1634-04-4	Methyl Tert Butyl Ether	ND		20	19.8	99	20.0	100	1	71-124/14
79-34-5	1,1,2,2-Tetrachloroethane	0.52	J	20	23.6	115*	23.7	116*	0	72-114/8
127-18-4	Tetrachloroethene	2.3		20	24.1	109	24.2	110	0	85-124/13
108-88-3	Toluene	ND		20	20.4	102	20.7	104	1	78-128/9
71-55-6	1,1,1-Trichloroethane	ND		20	20.2	101	20.7	104	2	83-123/12
79-00-5	1,1,2-Trichloroethane	ND		20	19.4	97	20.5	103	6	78-111/7
79-01-6	Trichloroethene	1.5		20	22.8	107	23.1	108	1	82-119/11
75-69-4	Trichlorofluoromethane	ND		20	18.9	95	20.1	101	6	76-147/15
75-01-4	Vinyl chloride	ND		20	19.5	98	21.0	105	7	72-139/14
1330-20-7	Xylenes (total)	ND		60	62.0	103	62.9	105	1	71-136/11

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F19187
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19187-2MS	QR018412.D	1	08/29/03	BM	n/a	n/a	GQR763
F19187-2MSD	QR018413.D	1	08/29/03	BM	n/a	n/a	GQR763
F19187-2	QR018411.D	1	08/29/03	BM	n/a	n/a	GQR763

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19187-1, F19187-2

CAS No.	Surrogate Recoveries	MS	MSD	F19187-2	Limits
352-33-0	1-Chloro-4-fluorobenzene	111%	111%	97%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	104%	109%	94%	74-127%
563-58-6	1,1-Dichloropropene	101%	100%	100%	87-120%
563-58-6	1,1-Dichloropropene	100%	98%	102%	87-120%

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Blank Spike Summary

Job Number: F19187
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8355-BS	IJ18284.D	1	09/02/03	MRE	08/26/03	OP8355	GIJ875

The QC reported here applies to the following samples: **Method:** EPA 610

F19187-1, F19187-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	25	21.7	87	59-114
208-96-8	Acenaphthylene	25	19.5	78	58-109
120-12-7	Anthracene	25	20.8	83	63-110
56-55-3	Benzo(a)anthracene	25	21.3	85	74-111
50-32-8	Benzo(a)pyrene	25	20.6	82	71-110
205-99-2	Benzo(b)fluoranthene	25	21.3	85	75-112
191-24-2	Benzo(g,h,i)perylene	25	20.8	83	66-114
207-08-9	Benzo(k)fluoranthene	25	20.3	81	73-111
218-01-9	Chrysene	25	20.8	83	73-112
53-70-3	Dibenzo(a,h)anthracene	25	20.4	82	67-111
206-44-0	Fluoranthene	25	21.4	86	74-113
86-73-7	Fluorene	25	21.1	84	67-113
193-39-5	Indeno(1,2,3-cd)pyrene	25	21.5	86	68-115
91-20-3	Naphthalene	25	20.2	81	52-113
90-12-0	1-Methylnaphthalene	25	22.2	89	55-117
91-57-6	2-Methylnaphthalene	25	20.2	81	50-115
85-01-8	Phenanthrene	25	21.5	86	70-111
129-00-0	Pyrene	25	21.1	84	73-115

CAS No.	Surrogate Recoveries	BSP	Limits
321-60-8	2-Fluorobiphenyl	82%	41-139%
84-15-1	o-Terphenyl	82%	46-135%

Duplicate Summary

Job Number: F19187
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8355-DUP	IJ18299.D	1	09/02/03	MRE	08/26/03	OP8355	GIJ875
F19187-1	IJ18298.D	1	09/02/03	MRE	08/26/03	OP8355	GIJ875

The QC reported here applies to the following samples: **Method:** EPA 610

F19187-1, F19187-2

CAS No.	Compound	F19187-1 ug/l	Q	DUP ug/l	Q	RPD	Limits
83-32-9	Acenaphthene	ND		ND		nc	
208-96-8	Acenaphthylene	ND		ND		nc	
120-12-7	Anthracene	ND		ND		nc	
56-55-3	Benzo(a)anthracene	ND		ND		nc	
50-32-8	Benzo(a)pyrene	ND		ND		nc	
205-99-2	Benzo(b)fluoranthene	ND		ND		nc	
191-24-2	Benzo(g,h,i)perylene	ND		ND		nc	
207-08-9	Benzo(k)fluoranthene	ND		ND		nc	
218-01-9	Chrysene	ND		ND		nc	
53-70-3	Dibenzo(a,h)anthracene	ND		ND		nc	
206-44-0	Fluoranthene	ND		ND		nc	
86-73-7	Fluorene	ND		ND		nc	
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ND		nc	
91-20-3	Naphthalene	ND		ND		nc	
90-12-0	1-Methylnaphthalene	ND		ND		nc	
91-57-6	2-Methylnaphthalene	ND		ND		nc	
85-01-8	Phenanthrene	ND		ND		nc	
129-00-0	Pyrene	ND		ND		nc	

CAS No.	Surrogate Recoveries	DUP	F19187-1	Limits
321-60-8	2-Fluorobiphenyl	94%	79%	41-139%
84-15-1	o-Terphenyl	95%	82%	46-135%

Method Blank Summary

Job Number: F19187
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8355-MB	IJ18285.D	1	09/02/03	MRE	08/26/03	OP8355	GIJ875

The QC reported here applies to the following samples: **Method:** EPA 610

F19187-1, F19187-2

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	2.0	ug/l	
120-12-7	Anthracene	ND	5.0	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	2.0	ug/l	
218-01-9	Chrysene	ND	5.0	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	2.0	ug/l	
86-73-7	Fluorene	ND	5.0	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	2.0	ug/l	
129-00-0	Pyrene	ND	5.0	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
321-60-8	2-Fluorobiphenyl	79%	41-139%
84-15-1	o-Terphenyl	83%	46-135%

Method Blank Summary

Job Number: F19187
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8355-MB	IJ18327.D	1	09/03/03	MRE	08/26/03	OP8355	GIJ876

The QC reported here applies to the following samples: **Method:** EPA 610

F19187-1, F19187-2

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	2.0	ug/l	
120-12-7	Anthracene	ND	5.0	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	2.0	ug/l	
218-01-9	Chrysene	ND	5.0	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	2.0	ug/l	
86-73-7	Fluorene	ND	5.0	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	2.0	ug/l	
129-00-0	Pyrene	ND	5.0	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
321-60-8	2-Fluorobiphenyl	78%	41-139%
84-15-1	o-Terphenyl	76%	46-135%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F19187
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8355-MS	IJ18329.D	4	09/03/03	MRE	08/26/03	OP8355	GIJ876
OP8355-MSD	IJ18330.D	4	09/03/03	MRE	08/26/03	OP8355	GIJ876
F19133-6 [a]	IJ18291.D	1	09/02/03	MRE	08/26/03	OP8355	GIJ875
F19133-6 [a]	IJ18328.D	5	09/03/03	MRE	08/26/03	OP8355	GIJ876

The QC reported here applies to the following samples: **Method:** EPA 610

F19187-1, F19187-2

CAS No.	Compound	F19133-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	15.4		52.1	66.5	98	65.4	96	2	36-143/21
208-96-8	Acenaphthylene	ND		52.1	40.0	77	40.4	78	1	59-108/22
120-12-7	Anthracene	ND		52.1	46.3	89	45.5	87	2	61-113/22
56-55-3	Benzo(a)anthracene	ND		52.1	43.7	84	43.5	84	0	69-111/17
50-32-8	Benzo(a)pyrene	ND		52.1	43.4	83	43.4	83	0	71-109/22
205-99-2	Benzo(b)fluoranthene	ND		52.1	41.6	80	40.8	78	2	63-116/19
191-24-2	Benzo(g,h,i)perylene	ND		52.1	44.7	86	45.3	87	1	54-123/19
207-08-9	Benzo(k)fluoranthene	ND		52.1	48.1	92	48.8	94	1	66-114/16
218-01-9	Chrysene	ND		52.1	47.9	92	47.1	90	2	65-116/15
53-70-3	Dibenzo(a,h)anthracene	ND		52.1	47.2	91	48.2	93	2	52-130/24
206-44-0	Fluoranthene	ND		52.1	45.7	88	45.8	88	0	73-113/16
86-73-7	Fluorene	3.1	J	52.1	46.6	84	46.8	84	0	63-114/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		52.1	41.9	80	41.7	80	0	43-133/24
91-20-3	Naphthalene	155 [c]		52.1	252	186* [b]	244	171* [b]	3	40-130/27
90-12-0	1-Methylnaphthalene	17.8		52.1	74.4	109	73.5	107	1	50-128/25
91-57-6	2-Methylnaphthalene	27.8		52.1	77.7	96	76.5	94	2	32-148/26
85-01-8	Phenanthrene	ND		52.1	44.2	85	44.1	85	0	44-136/19
129-00-0	Pyrene	ND		52.1	46.9	90	46.7	90	0	71-116/16

CAS No.	Surrogate Recoveries	MS	MSD	F19133-6	F19133-6	Limits
321-60-8	2-Fluorobiphenyl	78%	78%	69%	57%	41-139%
84-15-1	o-Terphenyl	82%	82%	78%	73%	46-135%

(a) All hits confirmed by dual column analysis.
(b) Outside control limits due to high level in sample relative to spike amount.
(c) Result is from Run #2.

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F19187
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-NW

Analyte	Batch ID	RL	MB Result	Units	BSP %Recov	QC Limits
Nitrogen, Nitrate	GP4409/GN12496	0.10	<0.10	mg/l	104.0	90-110%
Nitrogen, Nitrite	GP4409/GN12496	0.10	<0.10	mg/l	103.0	90-110%
Sulfate	GP4409/GN12496	20	<20	mg/l	102.0	90-110%
Total Organic Carbon	GN12599	1.0	<1.0	mg/l	108.0	86-116%

Associated Samples:
Batch GN12599: F19187-1
Batch GP4409: F19187-1

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F19187
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-NW

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Nitrogen, Nitrate	GP4409/GN12496	F19187-1	mg/l	<0.10	<0.10	0.0	0-20%
Nitrogen, Nitrite	GP4409/GN12496	F19187-1	mg/l	<0.10	<0.10	0.0	0-20%
Sulfate	GP4409/GN12496	F19187-1	mg/l	<20	<20	0.0	0-20%
Total Organic Carbon	GN12599	F19177-1	mg/l	65.1	66.2	1.6	0-20%

Associated Samples:
Batch GN12599: F19187-1
Batch GP4409: F19187-1

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F19187
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-NW

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Nitrogen, Nitrate	GP4409/GN12496	F19187-1	mg/l	<0.10	1	1.0	100.0	90-110%
Nitrogen, Nitrite	GP4409/GN12496	F19187-1	mg/l	<0.10	1	0.98	98.0	90-110%
Sulfate	GP4409/GN12496	F19187-1	mg/l	<20	100	100	100.0	90-110%
Total Organic Carbon	GN12599	F19177-1	mg/l	65.1	50.0	117	104.0	76-118%

Associated Samples:
Batch GN12599: F19187-1
Batch GP4409: F19187-1

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F19187
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-NW

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Total Organic Carbon	GN12599	F19177-1	mg/l	65.1	50.0	116	0.4	

Associated Samples:
Batch GN12599: F19187-1

F19187

COC Number:
824603-NW-082203

Shaw
Shaw Environmental & Infrastructure, Inc.

CHAIN-OF-CUSTODY RECORD

Shaw Environmental & Infrastructure, Inc. - Piney Green Rd. Lot 203 Bld 626 - 910-451-2390

Receiving Lab: ACCUTEST

Project Name	Project Location
CAMP LEJEUNE - NW	CAMP LEJEUNE, NC

Project Number	Contact	PO Number
824603	Mark Martin	209378

Client Rep	Project Manager
US NAVY - LANTDIV	Ron Kenyon

Item No.	Sample Number	Date	Time	Comp	Grab	Sample Description	Number of Containers	VOA 601/602	PAH 610	Dissolved Gasses RSK-175	NO3,NO2,NO3-NO2 BY 353.2-354.1	SO4 BY 375.4	TOC BY 415.1	Analysis Desired
1	UST1115-MW111525	8/22/03	1120		X	UST1115-MW111525	10	X	X	X	X	X	X	
2	UST1115-GT01	8/22/03	1040		X	UST1115-GT01	6	X	X					
3														
4														
5														
6														
7														
8														
9														
10														
11														

Transfer Number	Item Number	Transfers Relinquished By	Transfers Accepted By	Date	Time	Remarks
1	1 – 2		Fed Ex 8369 1400 2831	8/22/03	18:00	Please E-mail results to Mark.Martin@Shawgrp.com
2		FED EX	Muna Mohammed	8/23/03	1000	21 Day TAT

3.0, 2.4

ACCUTEST LABORATORIES SOUTHEAST SAMPLE RECEIPT CONFIRMATION

Accutest's Job Number: F19187

Client: Shaw **Project:** Camp Lejeune-NW

Date Received: 8/23/03 **Time Received:** 1000

of Coolers Received: 2 **Cooler Temperatures:** 3.0, 2.4

Delivery Method: (FedEx) UPS Accutest Courier Greyhound Delivery Other

Air Bill Number:

Cooler Custody Seals Intact ?	(Yes)	No	
Chain of Custody Provided ?	(Yes)	No	
COC Match Bottle Label ID's ?	(Yes)	No	
Sample Labels Present on all bottles ?	(Yes)	No	
All Analyses Marked On COC ?	(Yes)	No	
Are All Bottles Intact ?	(Yes)	No	
Samples Preserved Correctly ?	(Yes)	No	
Correct Number of Containers Used ?	(Yes)	No	
Sufficient Sample Volume ?	(Yes)	No	
Trip Blank Provided ?	Yes	(No)	
Trip Blank on COC ?	Yes	(No)	
Trip Blank Intact ?	Yes	No	(N/A)
Trip Blank Matrix ?	Soil	Water	(N/A)
Number of Encores ?	(0)		
Number of Soil Field Kits ?	(0)		

Summary of Comments:

Signature: Nuna Mohammed **Date:** 8/23/03

Southeast ACCUTEST Laboratories

09/04/03

Technical Report for

Shaw E & I, Inc.

Camp Lejeune-NW

824603 P.O. 209378

Accutest Job Number: F19133

Report to:

Shaw E & I, Inc.

natasha.sullivan@shawgrp.com

ATTN: Natasha Sullivan

Total number of pages in report: 79

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Harry Behzadi, Ph.D.
Laboratory Director

Certifications: FL (DOH E83510), NC (573), NJ (FL002), MA (FL946), IA (366), LA (03051), KS (E-10327), SC, AK

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Sample Summary

Shaw E & I, Inc.

Job No: F19133

Camp Lejeune-NW
Project No: 824603 P.O. 209378

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
F19133-1	08/20/03	08:10	MM	08/21/03	AQ	Ground Water	UST1115-MW111501
F19133-2	08/20/03	08:50	MM	08/21/03	AQ	Ground Water	UST1115-GT07
F19133-3	08/20/03	11:05	MM	08/21/03	AQ	Ground Water	UST1115-MW111518
F19133-4	08/20/03	12:00	MM	08/21/03	AQ	Ground Water	UST1115-GT09
F19133-5	08/20/03	12:10	MM	08/21/03	AQ	Ground Water	UST1115-GT09D
F19133-6	08/20/03	15:30	MM	08/21/03	AQ	Ground Water	UST1115-MW111513
F19133-7	08/20/03	12:50	MM	08/21/03	AQ	Ground Water	UST1115-MW111523
F19133-8	08/20/03	14:00	MM	08/21/03	AQ	Ground Water	UST1115-MW78GW2202
F19133-9	08/20/03	14:10	MM	08/21/03	AQ	Ground Water	UST1115-MW78GW2202D
F19133-10	08/20/03	00:00	MM	08/21/03	AQ	Trip Blank Water	TRIP BLANK-082003

Report of Analysis

Client Sample ID: UST1115-MW111501
Lab Sample ID: F19133-1
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-NW

Date Sampled: 08/20/03
Date Received: 08/21/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	QR018381.D	1	08/28/03	BM	n/a	n/a	GQR762
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	2.6	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	1.3	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	2.0	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111501		
Lab Sample ID:	F19133-1	**Date Sampled:**	08/20/03
Matrix:	AQ - Ground Water	**Date Received:**	08/21/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	90%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	94%		74-127%
563-58-6	1,1-Dichloropropene	100%		87-120%
563-58-6	1,1-Dichloropropene	102%		87-120%

(a) All hits confirmed by GC/MS.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-MW111501
Lab Sample ID: F19133-1
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-NW

Date Sampled: 08/20/03
Date Received: 08/21/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ18286.D	1	09/02/03	MRE	08/26/03	OP8355	GIJ875
Run #2							

	Initial Volume	Final Volume
Run #1	950 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.3	2.1	ug/l	
208-96-8	Acenaphthylene	ND	5.3	2.1	ug/l	
120-12-7	Anthracene	ND	5.3	2.1	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.3	2.1	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.3	2.1	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.3	2.1	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.3	2.1	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.3	2.1	ug/l	
218-01-9	Chrysene	ND	5.3	2.1	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.3	2.1	ug/l	
206-44-0	Fluoranthene	ND	5.3	2.1	ug/l	
86-73-7	Fluorene	ND	5.3	2.1	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.3	2.1	ug/l	
91-20-3	Naphthalene	ND	5.3	2.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.3	2.1	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.3	2.1	ug/l	
85-01-8	Phenanthrene	ND	5.3	2.1	ug/l	
129-00-0	Pyrene	ND	5.3	2.1	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	85%		41-139%
84-15-1	o-Terphenyl	83%		46-135%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-GT07
Lab Sample ID: F19133-2
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-NW

Date Sampled: 08/20/03
Date Received: 08/21/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	QR018382.D	1	08/28/03	BM	n/a	n/a	GQR762
Run #2	QR018404.D	5	08/29/03	BM	n/a	n/a	GQR763

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	235 [b]	5.0	2.5	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	5.3	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	1.9	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	1.3	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	0.63	1.0	0.50	ug/l	J
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane [c]	167	1.0	0.20	ug/l	E
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	0.65	1.0	0.50	ug/l	J
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	0.94	1.0	0.50	ug/l	J
79-01-6	Trichloroethene	36.6	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-GT07		
Lab Sample ID:	F19133-2	**Date Sampled:**	08/20/03
Matrix:	AQ - Ground Water	**Date Received:**	08/21/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	92%	88%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	102%	91%	74-127%
563-58-6	1,1-Dichloropropene	94%	97%	87-120%
563-58-6	1,1-Dichloropropene	105%	100%	87-120%

(a) All hits confirmed by GC/MS.
(b) Result is from Run# 2
(c) Results from different vials are not consistent; higher results were reported.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-GT07
Lab Sample ID: F19133-2
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-NW

Date Sampled: 08/20/03
Date Received: 08/21/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ18306.D	1	09/02/03	MRE	08/26/03	OP8355	GIJ875
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	2.0	ug/l	
120-12-7	Anthracene	ND	5.0	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	2.0	ug/l	
218-01-9	Chrysene	ND	5.0	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	2.0	ug/l	
86-73-7	Fluorene	ND	5.0	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	2.0	ug/l	
129-00-0	Pyrene	ND	5.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	61%		41-139%
84-15-1	o-Terphenyl	48%		46-135%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-MW111518
Lab Sample ID: F19133-3
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-NW

Date Sampled: 08/20/03
Date Received: 08/21/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR018393.D	2	08/28/03	BM	n/a	n/a	GQR762
Run #2	QR018405.D	5	08/29/03	BM	n/a	n/a	GQR763

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	215 [a]	5.0	2.5	ug/l	
75-27-4	Bromodichloromethane	ND	2.0	1.0	ug/l	
75-25-2	Bromoform	ND	2.0	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	2.0	1.0	ug/l	
108-90-7	Chlorobenzene	ND	2.0	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	2.0	0.80	ug/l	
75-00-3	Chloroethane	ND	2.0	1.0	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	2.0	1.0	ug/l	
67-66-3	Chloroform	ND	2.0	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	2.0	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	2.0	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	2.0	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	2.0	1.0	ug/l	
107-06-2	1,2-Dichloroethane	225 [a]	5.0	2.5	ug/l	
75-35-4	1,1-Dichloroethene	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	2.0	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	2.0	1.0	ug/l	
78-87-5	1,2-Dichloropropane	7.3	2.0	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.60	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.60	ug/l	
100-41-4	Ethylbenzene	4.1	2.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	10	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	99.8	2.0	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	2.0	1.0	ug/l	
108-88-3	Toluene	1.4	2.0	1.0	ug/l	J
71-55-6	1,1,1-Trichloroethane	ND	2.0	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.0	1.0	ug/l	
79-01-6	Trichloroethene	ND	2.0	1.0	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111518		
Lab Sample ID:	F19133-3	**Date Sampled:**	08/20/03
Matrix:	AQ - Ground Water	**Date Received:**	08/21/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	2.0	1.0	ug/l	
75-01-4	Vinyl chloride	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	4.6	6.0	2.0	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	90%	90%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	99%	99%	74-127%
563-58-6	1,1-Dichloropropene	98%	98%	87-120%
563-58-6	1,1-Dichloropropene	103%	102%	87-120%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111518		
Lab Sample ID:	F19133-3	**Date Sampled:**	08/20/03
Matrix:	AQ - Ground Water	**Date Received:**	08/21/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY011398.D	1	08/22/03	CV	n/a	n/a	GXY304
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	5.53	0.50	0.30	ug/l	
74-84-0	Ethane	ND	1.0	0.60	ug/l	
74-85-1	Ethene	ND	1.0	0.80	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-MW111518
Lab Sample ID: F19133-3
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-NW

Date Sampled: 08/20/03
Date Received: 08/21/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	IJ18288.D	1	09/02/03	MRE	08/26/03	OP8355	GIJ875
Run #2							

	Initial Volume	Final Volume
Run #1	960 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.2	2.1	ug/l	
208-96-8	Acenaphthylene	ND	5.2	2.1	ug/l	
120-12-7	Anthracene	ND	5.2	2.1	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.2	2.1	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.2	2.1	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.2	2.1	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.2	2.1	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.2	2.1	ug/l	
218-01-9	Chrysene	ND	5.2	2.1	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.2	2.1	ug/l	
206-44-0	Fluoranthene	ND	5.2	2.1	ug/l	
86-73-7	Fluorene	ND	5.2	2.1	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.2	2.1	ug/l	
91-20-3	Naphthalene	2.7	5.2	2.1	ug/l	J
90-12-0	1-Methylnaphthalene	ND	5.2	2.1	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.2	2.1	ug/l	
85-01-8	Phenanthrene	ND	5.2	2.1	ug/l	
129-00-0	Pyrene	ND	5.2	2.1	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	80%		41-139%
84-15-1	o-Terphenyl	79%		46-135%

(a) All hits confirmed by dual column analysis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111518		
Lab Sample ID:	F19133-3	**Date Sampled:**	08/20/03
Matrix:	AQ - Ground Water	**Date Received:**	08/21/03
		Percent Solids:	n/a
Project:	Camp Lejeune-NW		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	< 0.10	0.10	mg/l	1	08/21/03 12:12	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	< 0.20	0.20	mg/l	1	08/21/03 12:12	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 0.10	0.10	mg/l	1	08/21/03 12:12	LL	EPA 300/SW846 9056
Sulfate	371	40	mg/l	2	08/21/03 13:40	LL	EPA 300/SW846 9056
Total Organic Carbon	21.8	1.0	mg/l	1	08/21/03	LE	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID: UST1115-GT09
Lab Sample ID: F19133-4
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-NW

Date Sampled: 08/20/03
Date Received: 08/21/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR018383.D	1	08/28/03	BM	n/a	n/a	GQR762
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	2.4	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	1.8	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	1.3	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-GT09		
Lab Sample ID:	F19133-4	**Date Sampled:**	08/20/03
Matrix:	AQ - Ground Water	**Date Received:**	08/21/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	88%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	87%		74-127%
563-58-6	1,1-Dichloropropene	100%		87-120%
563-58-6	1,1-Dichloropropene	98%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-GT09		
Lab Sample ID:	F19133-4	**Date Sampled:**	08/20/03
Matrix:	AQ - Ground Water	**Date Received:**	08/21/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY011399.D	1	08/22/03	CV	n/a	n/a	GXY304
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	31.6	0.50	0.30	ug/l	
74-84-0	Ethane	ND	1.0	0.60	ug/l	
74-85-1	Ethene	ND	1.0	0.80	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-GT09
Lab Sample ID: F19133-4
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-NW

Date Sampled: 08/20/03
Date Received: 08/21/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ18289.D	1	09/02/03	MRE	08/26/03	OP8355	GIJ875
Run #2							

	Initial Volume	Final Volume
Run #1	940 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.3	2.1	ug/l	
208-96-8	Acenaphthylene	ND	5.3	2.1	ug/l	
120-12-7	Anthracene	ND	5.3	2.1	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.3	2.1	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.3	2.1	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.3	2.1	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.3	2.1	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.3	2.1	ug/l	
218-01-9	Chrysene	ND	5.3	2.1	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.3	2.1	ug/l	
206-44-0	Fluoranthene	ND	5.3	2.1	ug/l	
86-73-7	Fluorene	ND	5.3	2.1	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.3	2.1	ug/l	
91-20-3	Naphthalene	ND	5.3	2.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.3	2.1	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.3	2.1	ug/l	
85-01-8	Phenanthrene	ND	5.3	2.1	ug/l	
129-00-0	Pyrene	ND	5.3	2.1	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	78%		41-139%
84-15-1	o-Terphenyl	83%		46-135%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-GT09		
Lab Sample ID:	F19133-4	**Date Sampled:**	08/20/03
Matrix:	AQ - Ground Water	**Date Received:**	08/21/03
		Percent Solids:	n/a
Project:	Camp Lejeune-NW		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	< 0.10	0.10	mg/l	1	08/21/03 12:27	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	< 0.20	0.20	mg/l	1	08/21/03 12:27	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 0.10	0.10	mg/l	1	08/21/03 12:27	LL	EPA 300/SW846 9056
Sulfate	117	20	mg/l	1	08/21/03 12:27	LL	EPA 300/SW846 9056
Total Organic Carbon	2.1	1.0	mg/l	1	08/21/03	LE	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID: UST1115-GT09D
Lab Sample ID: F19133-5
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-NW

Date Sampled: 08/20/03
Date Received: 08/21/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR018384.D	1	08/28/03	BM	n/a	n/a	GQR762
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	1.7	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-GT09D		
Lab Sample ID:	F19133-5	**Date Sampled:**	08/20/03
Matrix:	AQ - Ground Water	**Date Received:**	08/21/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	88%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	90%		74-127%
563-58-6	1,1-Dichloropropene	100%		87-120%
563-58-6	1,1-Dichloropropene	103%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	UST1115-GT09D		
Lab Sample ID:	F19133-5	**Date Sampled:**	08/20/03
Matrix:	AQ - Ground Water	**Date Received:**	08/21/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY011400.D	1	08/22/03	CV	n/a	n/a	GXY304
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	28.9	0.50	0.30	ug/l	
74-84-0	Ethane	ND	1.0	0.60	ug/l	
74-85-1	Ethene	ND	1.0	0.80	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-GT09D
Lab Sample ID: F19133-5
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-NW

Date Sampled: 08/20/03
Date Received: 08/21/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ18290.D	1	09/02/03	MRE	08/26/03	OP8355	GIJ875
Run #2							

	Initial Volume	Final Volume
Run #1	960 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.2	2.1	ug/l	
208-96-8	Acenaphthylene	ND	5.2	2.1	ug/l	
120-12-7	Anthracene	ND	5.2	2.1	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.2	2.1	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.2	2.1	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.2	2.1	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.2	2.1	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.2	2.1	ug/l	
218-01-9	Chrysene	ND	5.2	2.1	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.2	2.1	ug/l	
206-44-0	Fluoranthene	ND	5.2	2.1	ug/l	
86-73-7	Fluorene	ND	5.2	2.1	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.2	2.1	ug/l	
91-20-3	Naphthalene	ND	5.2	2.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.2	2.1	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.2	2.1	ug/l	
85-01-8	Phenanthrene	ND	5.2	2.1	ug/l	
129-00-0	Pyrene	ND	5.2	2.1	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	81%		41-139%
84-15-1	o-Terphenyl	80%		46-135%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-GT09D		
Lab Sample ID:	F19133-5	**Date Sampled:**	08/20/03
Matrix:	AQ - Ground Water	**Date Received:**	08/21/03
		Percent Solids:	n/a
Project:	Camp Lejeune-NW		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	< 0.10	0.10	mg/l	1	08/21/03 12:41	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	< 0.20	0.20	mg/l	1	08/21/03 12:41	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 0.10	0.10	mg/l	1	08/21/03 12:41	LL	EPA 300/SW846 9056
Sulfate	123	20	mg/l	1	08/21/03 12:41	LL	EPA 300/SW846 9056
Total Organic Carbon	2.7	1.0	mg/l	1	08/21/03	LE	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID: UST1115-MW111513
Lab Sample ID: F19133-6
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-NW

Date Sampled: 08/20/03
Date Received: 08/21/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR018394.D	2	08/28/03	BM	n/a	n/a	GQR762
Run #2	QR018406.D	5	08/29/03	BM	n/a	n/a	GQR763

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	340 [a]	5.0	2.5	ug/l	
75-27-4	Bromodichloromethane	ND	2.0	1.0	ug/l	
75-25-2	Bromoform	ND	2.0	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	2.0	1.0	ug/l	
108-90-7	Chlorobenzene	ND	2.0	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	2.0	0.80	ug/l	
75-00-3	Chloroethane	ND	2.0	1.0	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	2.0	1.0	ug/l	
67-66-3	Chloroform	ND	2.0	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	2.0	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	2.0	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	2.0	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	2.0	1.0	ug/l	
107-06-2	1,2-Dichloroethane	118 [a]	5.0	2.5	ug/l	
75-35-4	1,1-Dichloroethene	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	2.0	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	2.0	1.0	ug/l	
78-87-5	1,2-Dichloropropane	4.6	2.0	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.60	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.60	ug/l	
100-41-4	Ethylbenzene	72.4	2.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	10	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	2.0	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	2.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.0	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.0	1.0	ug/l	
79-01-6	Trichloroethene	ND	2.0	1.0	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111513		
Lab Sample ID:	F19133-6	**Date Sampled:**	08/20/03
Matrix:	AQ - Ground Water	**Date Received:**	08/21/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	2.0	1.0	ug/l	
75-01-4	Vinyl chloride	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	16.6	6.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	97%	97%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	107%	105%	74-127%
563-58-6	1,1-Dichloropropene	97%	98%	87-120%
563-58-6	1,1-Dichloropropene	105%	105%	87-120%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111513		
Lab Sample ID:	F19133-6	**Date Sampled:**	08/20/03
Matrix:	AQ - Ground Water	**Date Received:**	08/21/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY011401.D	1	08/22/03	CV	n/a	n/a	GXY304
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	77.9	0.50	0.30	ug/l	
74-84-0	Ethane	2.0	1.0	0.60	ug/l	
74-85-1	Ethene	ND	1.0	0.80	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111513		
Lab Sample ID:	F19133-6	**Date Sampled:**	08/20/03
Matrix:	AQ - Ground Water	**Date Received:**	08/21/03
Method:	EPA 610 EPA 610	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	IJ18291.D	1	09/02/03	MRE	08/26/03	OP8355	GIJ875
Run #2 [a]	IJ18328.D	5	09/03/03	MRE	08/26/03	OP8355	GIJ876

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2	980 ml	1.0 ml

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	15.4	5.1	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.1	2.0	ug/l	
120-12-7	Anthracene	ND	5.1	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.1	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.1	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.1	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.1	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.1	2.0	ug/l	
218-01-9	Chrysene	ND	5.1	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.1	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.1	2.0	ug/l	
86-73-7	Fluorene	3.1	5.1	2.0	ug/l	J
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.1	2.0	ug/l	
91-20-3	Naphthalene	155 [b]	26	10	ug/l	
90-12-0	1-Methylnaphthalene	17.8	5.1	2.0	ug/l	
91-57-6	2-Methylnaphthalene	27.8	5.1	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.1	2.0	ug/l	
129-00-0	Pyrene	ND	5.1	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	69%	57%	41-139%
84-15-1	o-Terphenyl	78%	73%	46-135%

(a) All hits confirmed by dual column analysis.
(b) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-MW111513
Lab Sample ID: F19133-6
Matrix: AQ - Ground Water
Project: Camp Lejeune-NW

Date Sampled: 08/20/03
Date Received: 08/21/03
Percent Solids: n/a

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	< 0.10	0.10	mg/l	1	08/21/03 12:56	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	< 2.6	2.6	mg/l	1	08/21/03 14:53	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 2.5	2.5	mg/l	25	08/21/03 14:53	LL	EPA 300/SW846 9056
Sulfate	4280	500	mg/l	25	08/21/03 14:53	LL	EPA 300/SW846 9056
Total Organic Carbon	18.2	1.0	mg/l	1	08/21/03	LE	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID: UST1115-MW111523
Lab Sample ID: F19133-7
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-NW

Date Sampled: 08/20/03
Date Received: 08/21/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR018385.D	1	08/28/03	BM	n/a	n/a	GQR762
Run #2	QR018435.D	20	09/02/03	RA	n/a	n/a	GQR764

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	260 [a]	20	10	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	463 [a]	20	10	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	4.7	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	5.2	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	2.2	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111523		
Lab Sample ID:	F19133-7	**Date Sampled:**	08/20/03
Matrix:	AQ - Ground Water	**Date Received:**	08/21/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	7.6	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	92%	93%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	103%	97%	74-127%
563-58-6	1,1-Dichloropropene	94%	97%	87-120%
563-58-6	1,1-Dichloropropene	104%	98%	87-120%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-MW111523
Lab Sample ID: F19133-7
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-NW

Date Sampled: 08/20/03
Date Received: 08/21/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ18295.D	1	09/02/03	MRE	08/26/03	OP8355	GIJ875
Run #2							

	Initial Volume	Final Volume
Run #1	930 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.4	2.2	ug/l	
208-96-8	Acenaphthylene	ND	5.4	2.2	ug/l	
120-12-7	Anthracene	ND	5.4	2.2	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.4	2.2	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.4	2.2	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.4	2.2	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.4	2.2	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.4	2.2	ug/l	
218-01-9	Chrysene	ND	5.4	2.2	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.4	2.2	ug/l	
206-44-0	Fluoranthene	ND	5.4	2.2	ug/l	
86-73-7	Fluorene	ND	5.4	2.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.4	2.2	ug/l	
91-20-3	Naphthalene	ND	5.4	2.2	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.4	2.2	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.4	2.2	ug/l	
85-01-8	Phenanthrene	ND	5.4	2.2	ug/l	
129-00-0	Pyrene	ND	5.4	2.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	88%		41-139%
84-15-1	o-Terphenyl	88%		46-135%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-MW78GW2202
Lab Sample ID: F19133-8
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-NW

Date Sampled: 08/20/03
Date Received: 08/21/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR018391.D	1	08/28/03	BM	n/a	n/a	GQR762
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	17.2	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	2.1	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW78GW2202		
Lab Sample ID:	F19133-8	**Date Sampled:**	08/20/03
Matrix:	AQ - Ground Water	**Date Received:**	08/21/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	89%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	92%		74-127%
563-58-6	1,1-Dichloropropene	99%		87-120%
563-58-6	1,1-Dichloropropene	101%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-MW78GW2202
Lab Sample ID: F19133-8
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-NW

Date Sampled: 08/20/03
Date Received: 08/21/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ18296.D	1	09/02/03	MRE	08/26/03	OP8355	GIJ875
Run #2							

	Initial Volume	Final Volume
Run #1	960 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.2	2.1	ug/l	
208-96-8	Acenaphthylene	ND	5.2	2.1	ug/l	
120-12-7	Anthracene	ND	5.2	2.1	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.2	2.1	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.2	2.1	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.2	2.1	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.2	2.1	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.2	2.1	ug/l	
218-01-9	Chrysene	ND	5.2	2.1	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.2	2.1	ug/l	
206-44-0	Fluoranthene	ND	5.2	2.1	ug/l	
86-73-7	Fluorene	ND	5.2	2.1	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.2	2.1	ug/l	
91-20-3	Naphthalene	ND	5.2	2.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.2	2.1	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.2	2.1	ug/l	
85-01-8	Phenanthrene	ND	5.2	2.1	ug/l	
129-00-0	Pyrene	ND	5.2	2.1	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	81%		41-139%
84-15-1	o-Terphenyl	87%		46-135%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-MW78GW2202D
Lab Sample ID: F19133-9
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-NW

Date Sampled: 08/20/03
Date Received: 08/21/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR018403.D	1	08/29/03	BM	n/a	n/a	GQR763
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	15.3	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	2.2	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW78GW2202D		
Lab Sample ID:	F19133-9	**Date Sampled:**	08/20/03
Matrix:	AQ - Ground Water	**Date Received:**	08/21/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	90%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	95%		74-127%
563-58-6	1,1-Dichloropropene	99%		87-120%
563-58-6	1,1-Dichloropropene	103%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-MW78GW2202D
Lab Sample ID: F19133-9
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-NW

Date Sampled: 08/20/03
Date Received: 08/21/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ18297.D	1	09/02/03	MRE	08/26/03	OP8355	GIJ875
Run #2							

	Initial Volume	Final Volume
Run #1	970 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.2	2.1	ug/l	
208-96-8	Acenaphthylene	ND	5.2	2.1	ug/l	
120-12-7	Anthracene	ND	5.2	2.1	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.2	2.1	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.2	2.1	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.2	2.1	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.2	2.1	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.2	2.1	ug/l	
218-01-9	Chrysene	ND	5.2	2.1	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.2	2.1	ug/l	
206-44-0	Fluoranthene	ND	5.2	2.1	ug/l	
86-73-7	Fluorene	ND	5.2	2.1	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.2	2.1	ug/l	
91-20-3	Naphthalene	ND	5.2	2.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.2	2.1	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.2	2.1	ug/l	
85-01-8	Phenanthrene	ND	5.2	2.1	ug/l	
129-00-0	Pyrene	ND	5.2	2.1	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	74%		41-139%
84-15-1	o-Terphenyl	80%		46-135%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: TRIP BLANK-082003
Lab Sample ID: F19133-10
Matrix: AQ - Trip Blank Water
Method: EPA 601/602
Project: Camp Lejeune-NW

Date Sampled: 08/20/03
Date Received: 08/21/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR018395.D	1	08/28/03	BM	n/a	n/a	GQR762
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK-082003		
Lab Sample ID:	F19133-10	**Date Sampled:**	08/20/03
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/21/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	89%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	87%		74-127%
563-58-6	1,1-Dichloropropene	99%		87-120%
563-58-6	1,1-Dichloropropene	99%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Blank Spike Summary

Job Number: F19133
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR762-BS	QR018369.D	1	08/28/03	BM	n/a	n/a	GQR762

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19133-1, F19133-2, F19133-3, F19133-4, F19133-5, F19133-6, F19133-7, F19133-8, F19133-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	20.1	101	88-121
75-27-4	Bromodichloromethane	20	17.7	89	79-121
75-25-2	Bromoform	20	17.5	88	61-135
74-83-9	Bromomethane	20	19.8	99	44-154
56-23-5	Carbon tetrachloride	20	21.6	108	81-127
108-90-7	Chlorobenzene	20	20.8	104	87-120
124-48-1	Dibromochloromethane	20	18.8	94	71-125
75-00-3	Chloroethane	20	20.2	101	68-146
110-75-8	2-Chloroethylvinyl ether	20	18.2	91	39-148
67-66-3	Chloroform	20	18.5	93	87-116
74-87-3	Chloromethane	20	20.7	104	34-188
95-50-1	1,2-Dichlorobenzene	20	21.7	109	81-119
541-73-1	1,3-Dichlorobenzene	20	21.3	107	82-120
106-46-7	1,4-Dichlorobenzene	20	21.5	108	81-120
75-71-8	Dichlorodifluoromethane	20	19.6	98	43-179
75-34-3	1,1-Dichloroethane	20	22.1	111	83-126
107-06-2	1,2-Dichloroethane	20	20.1	101	83-110
75-35-4	1,1-Dichloroethene	20	21.3	107	78-148
156-59-2	cis-1,2-Dichloroethene	20	19.3	97	86-134
156-60-5	trans-1,2-Dichloroethene	20	21.2	106	86-129
78-87-5	1,2-Dichloropropane	20	20.1	101	80-110
10061-01-5	cis-1,3-Dichloropropene	20	21.0	105	68-129
10061-02-6	trans-1,3-Dichloropropene	20	20.5	103	62-132
100-41-4	Ethylbenzene	20	21.5	108	86-125
75-09-2	Methylene chloride	20	24.5	123	74-130
1634-04-4	Methyl Tert Butyl Ether	20	18.9	95	80-117
79-34-5	1,1,2,2-Tetrachloroethane	20	20.4	102	77-108
127-18-4	Tetrachloroethene	20	21.8	109	85-123
108-88-3	Toluene	20	20.4	102	89-123
71-55-6	1,1,1-Trichloroethane	20	20.6	103	86-123
79-00-5	1,1,2-Trichloroethane	20	19.6	98	81-109
79-01-6	Trichloroethene	20	20.9	105	85-117
75-69-4	Trichlorofluoromethane	20	21.7	109	74-149
75-01-4	Vinyl chloride	20	19.2	96	72-138
1330-20-7	Xylenes (total)	60	62.6	104	89-124

Blank Spike Summary

Job Number: F19133
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR762-BS	QR018369.D	1	08/28/03	BM	n/a	n/a	GQR762

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19133-1, F19133-2, F19133-3, F19133-4, F19133-5, F19133-6, F19133-7, F19133-8, F19133-10

CAS No.	Surrogate Recoveries	BSP	Limits
352-33-0	1-Chloro-4-fluorobenzene	106%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	105%	74-127%
563-58-6	1,1-Dichloropropene	100%	87-120%
563-58-6	1,1-Dichloropropene	97%	87-120%

Blank Spike Summary

Job Number: F19133
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR763-BS	QR018399.D	1	08/29/03	BM	n/a	n/a	GQR763

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19133-2, F19133-3, F19133-6, F19133-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	20.0	100	88-121
75-27-4	Bromodichloromethane	20	17.2	86	79-121
75-25-2	Bromoform	20	17.2	86	61-135
74-83-9	Bromomethane	20	20.3	102	44-154
56-23-5	Carbon tetrachloride	20	20.5	103	81-127
108-90-7	Chlorobenzene	20	20.4	102	87-120
124-48-1	Dibromochloromethane	20	18.1	91	71-125
75-00-3	Chloroethane	20	20.1	101	68-146
110-75-8	2-Chloroethylvinyl ether	20	17.6	88	39-148
67-66-3	Chloroform	20	18.6	93	87-116
74-87-3	Chloromethane	20	21.0	105	34-188
95-50-1	1,2-Dichlorobenzene	20	20.5	103	81-119
541-73-1	1,3-Dichlorobenzene	20	20.1	101	82-120
106-46-7	1,4-Dichlorobenzene	20	20.1	101	81-120
75-71-8	Dichlorodifluoromethane	20	18.8	94	43-179
75-34-3	1,1-Dichloroethane	20	21.2	106	83-126
107-06-2	1,2-Dichloroethane	20	19.3	97	83-110
75-35-4	1,1-Dichloroethene	20	22.5	113	78-148
156-59-2	cis-1,2-Dichloroethene	20	17.9	90	86-134
156-60-5	trans-1,2-Dichloroethene	20	21.1	106	86-129
78-87-5	1,2-Dichloropropane	20	20.1	101	80-110
10061-01-5	cis-1,3-Dichloropropene	20	21.0	105	68-129
10061-02-6	trans-1,3-Dichloropropene	20	19.4	97	62-132
100-41-4	Ethylbenzene	20	21.3	107	86-125
75-09-2	Methylene chloride	20	21.0	105	74-130
1634-04-4	Methyl Tert Butyl Ether	20	19.3	97	80-117
79-34-5	1,1,2,2-Tetrachloroethane	20	19.7	99	77-108
127-18-4	Tetrachloroethene	20	20.4	102	85-123
108-88-3	Toluene	20	20.5	103	89-123
71-55-6	1,1,1-Trichloroethane	20	19.0	95	86-123
79-00-5	1,1,2-Trichloroethane	20	19.3	97	81-109
79-01-6	Trichloroethene	20	20.6	103	85-117
75-69-4	Trichlorofluoromethane	20	21.8	109	74-149
75-01-4	Vinyl chloride	20	17.4	87	72-138
1330-20-7	Xylenes (total)	60	62.0	103	89-124

Blank Spike Summary

Job Number: F19133
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR763-BS	QR018399.D	1	08/29/03	BM	n/a	n/a	GQR763

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19133-2, F19133-3, F19133-6, F19133-9

CAS No.	Surrogate Recoveries	BSP	Limits
352-33-0	1-Chloro-4-fluorobenzene	106%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	97%	74-127%
563-58-6	1,1-Dichloropropene	99%	87-120%
563-58-6	1,1-Dichloropropene	94%	87-120%

Blank Spike Summary

Job Number: F19133
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR764-BS	QR018427.D	1	09/02/03	RA	n/a	n/a	GQR764

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19133-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	21.0	105	88-121
107-06-2	1,2-Dichloroethane	20	21.5	108	83-110

CAS No.	Surrogate Recoveries	BSP	Limits
352-33-0	1-Chloro-4-fluorobenzene	110%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	114%	74-127%
563-58-6	1,1-Dichloropropene	96%	87-120%
563-58-6	1,1-Dichloropropene	101%	87-120%

Blank Spike Summary

Job Number: F19133
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GXY304-BS	XY011397.D	1	08/22/03	CV	n/a	n/a	GXY304

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F19133-3, F19133-4, F19133-5, F19133-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
74-82-8	Methane	108	86.8	80	50-126
74-84-0	Ethane	219	189	86	49-135
74-85-1	Ethene	290	249	86	56-130

Blank Spike Summary

Job Number: F19133
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GXY304-BS	XY011420.D	1	08/25/03	CV	n/a	n/a	GXY304

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F19133-3, F19133-4, F19133-5, F19133-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
74-82-8	Methane	108	91.3	85	50-126
74-84-0	Ethane	219	187	85	49-135
74-85-1	Ethene	290	248	86	56-130

Duplicate Summary

Job Number: F19133
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19133-8DUP	QR018392.D	1	08/28/03	BM	n/a	n/a	GQR762
F19133-8	QR018391.D	1	08/28/03	BM	n/a	n/a	GQR762

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19133-1, F19133-2, F19133-3, F19133-4, F19133-5, F19133-6, F19133-7, F19133-8, F19133-10

CAS No.	Compound	F19133-8 ug/l	Q	DUP ug/l	Q	RPD	Limits
71-43-2	Benzene	17.2		17.1		1	
75-27-4	Bromodichloromethane	ND		ND		nc	
75-25-2	Bromoform	ND		ND		nc	
74-83-9	Bromomethane	ND		ND		nc	
56-23-5	Carbon tetrachloride	ND		ND		nc	
108-90-7	Chlorobenzene	ND		ND		nc	
124-48-1	Dibromochloromethane	ND		ND		nc	
75-00-3	Chloroethane	ND		ND		nc	
110-75-8	2-Chloroethylvinyl ether	ND		ND		nc	
67-66-3	Chloroform	ND		ND		nc	
74-87-3	Chloromethane	ND		ND		nc	
95-50-1	1,2-Dichlorobenzene	ND		ND		nc	
541-73-1	1,3-Dichlorobenzene	ND		ND		nc	
106-46-7	1,4-Dichlorobenzene	ND		ND		nc	
75-71-8	Dichlorodifluoromethane	ND		ND		nc	
75-34-3	1,1-Dichloroethane	ND		ND		nc	
107-06-2	1,2-Dichloroethane	ND		ND		nc	
75-35-4	1,1-Dichloroethene	ND		ND		nc	
156-59-2	cis-1,2-Dichloroethene	ND		ND		nc	
156-60-5	trans-1,2-Dichloroethene	ND		ND		nc	
78-87-5	1,2-Dichloropropane	ND		ND		nc	
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	
100-41-4	Ethylbenzene	ND		ND		nc	
75-09-2	Methylene chloride	ND		ND		nc	
1634-04-4	Methyl Tert Butyl Ether	ND		ND		nc	
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	
127-18-4	Tetrachloroethene	ND		ND		nc	
108-88-3	Toluene	ND		ND		nc	
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	
79-01-6	Trichloroethene	2.1		2.1		0	
75-69-4	Trichlorofluoromethane	ND		ND		nc	
75-01-4	Vinyl chloride	ND		ND		nc	
1330-20-7	Xylenes (total)	ND		ND		nc	

Duplicate Summary

Job Number: F19133
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19133-8DUP	QR018392.D	1	08/28/03	BM	n/a	n/a	GQR762
F19133-8	QR018391.D	1	08/28/03	BM	n/a	n/a	GQR762

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19133-1, F19133-2, F19133-3, F19133-4, F19133-5, F19133-6, F19133-7, F19133-8, F19133-10

CAS No.	Surrogate Recoveries	DUP	F19133-8	Limits
352-33-0	1-Chloro-4-fluorobenzene	89%	89%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	90%	92%	74-127%
563-58-6	1,1-Dichloropropene	99%	99%	87-120%
563-58-6	1,1-Dichloropropene	98%	101%	87-120%

Duplicate Summary

Job Number: F19133
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19141-2DUP	XY011405.D	1	08/22/03	CV	n/a	n/a	GXY304
F19141-2	XY011404.D	1	08/22/03	CV	n/a	n/a	GXY304

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F19133-3, F19133-4, F19133-5, F19133-6

CAS No.	Compound	F19141-2 ug/l	Q	DUP ug/l	Q	RPD	Limits
74-82-8	Methane	11.2		11.8		5	29
74-84-0	Ethane	ND		ND		nc	24
74-85-1	Ethene	0.81		0.89		9	23

Duplicate Summary

Job Number: F19133
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19188-2DUP	XY011425.D	1	08/25/03	CV	n/a	n/a	GXY304
F19188-2	XY011424.D	1	08/25/03	CV	n/a	n/a	GXY304

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F19133-3, F19133-4, F19133-5, F19133-6

CAS No.	Compound	F19188-2 ug/l	Q	DUP ug/l	Q	RPD	Limits
74-82-8	Methane	67.8		72.5		7	29
74-84-0	Ethane	ND		ND		nc	24
74-85-1	Ethene	ND		ND		nc	23

Duplicate Summary

Job Number: F19133
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19188-4DUP	QR018415.D	1	08/29/03	BM	n/a	n/a	GQR763
F19188-4	QR018414.D	1	08/29/03	BM	n/a	n/a	GQR763

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19133-2, F19133-3, F19133-6, F19133-9

CAS No.	Compound	F19188-4 ug/l	Q	DUP ug/l	Q	RPD	Limits
71-43-2	Benzene	618	E	613	E	1	
75-27-4	Bromodichloromethane	ND		ND		nc	
75-25-2	Bromoform	ND		ND		nc	
74-83-9	Bromomethane	ND		ND		nc	
56-23-5	Carbon tetrachloride	ND		ND		nc	
108-90-7	Chlorobenzene	ND		ND		nc	
124-48-1	Dibromochloromethane	ND		ND		nc	
75-00-3	Chloroethane	ND		ND		nc	
110-75-8	2-Chloroethylvinyl ether	ND		ND		nc	
67-66-3	Chloroform	ND		ND		nc	
74-87-3	Chloromethane	ND		ND		nc	
95-50-1	1,2-Dichlorobenzene	ND		ND		nc	
541-73-1	1,3-Dichlorobenzene	ND		ND		nc	
106-46-7	1,4-Dichlorobenzene	ND		ND		nc	
75-71-8	Dichlorodifluoromethane	ND		ND		nc	
75-34-3	1,1-Dichloroethane	ND		ND		nc	
107-06-2	1,2-Dichloroethane	113	E	115	E	2	
75-35-4	1,1-Dichloroethene	ND		ND		nc	
156-59-2	cis-1,2-Dichloroethene	ND		ND		nc	
156-60-5	trans-1,2-Dichloroethene	ND		ND		nc	
78-87-5	1,2-Dichloropropane	3.7		3.7		0	
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	
100-41-4	Ethylbenzene	19.5		19.5		0	
75-09-2	Methylene chloride	ND		ND		nc	
1634-04-4	Methyl Tert Butyl Ether	6.3		6.3		0	
79-34-5	1,1,2,2-Tetrachloroethane	1.5		1.5		0	
127-18-4	Tetrachloroethene	ND		ND		nc	
108-88-3	Toluene	271	E	269	E	1	
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	
79-01-6	Trichloroethene	ND		ND		nc	
75-69-4	Trichlorofluoromethane	ND		ND		nc	
75-01-4	Vinyl chloride	ND		ND		nc	
1330-20-7	Xylenes (total)	346	E	345	E	0	

Duplicate Summary

Job Number: F19133
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19188-4DUP	QR018415.D	1	08/29/03	BM	n/a	n/a	GQR763
F19188-4	QR018414.D	1	08/29/03	BM	n/a	n/a	GQR763

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19133-2, F19133-3, F19133-6, F19133-9

CAS No.	Surrogate Recoveries	DUP	F19188-4	Limits
352-33-0	1-Chloro-4-fluorobenzene	99%	100%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	108%	111%	74-127%
563-58-6	1,1-Dichloropropene	88%	88%	87-120%
563-58-6	1,1-Dichloropropene	103%	104%	87-120%

Duplicate Summary

Job Number: F19133
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19188-4DUP	QR018446.D	20	09/02/03	RA	n/a	n/a	GQR764
F19188-4	QR018445.D	20	09/02/03	RA	n/a	n/a	GQR764

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19133-7

CAS No.	Compound	F19188-4 ug/l	Q	DUP ug/l	Q	RPD	Limits
71-43-2	Benzene	957		930		3	
107-06-2	1,2-Dichloroethane	138		135		2	

CAS No.	Surrogate Recoveries	DUP	F19188-4	Limits
352-33-0	1-Chloro-4-fluorobenzene	96%	96%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	101%	102%	74-127%
563-58-6	1,1-Dichloropropene	94%	94%	87-120%
563-58-6	1,1-Dichloropropene	102%	99%	87-120%

Method Blank Summary

Job Number: F19133
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR762-MB	QR018370.D	1	08/28/03	BM	n/a	n/a	GQR762

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19133-1, F19133-2, F19133-3, F19133-4, F19133-5, F19133-6, F19133-7, F19133-8, F19133-10

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

Method Blank Summary

Job Number: F19133
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR762-MB	QR018370.D	1	08/28/03	BM	n/a	n/a	GQR762

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19133-1, F19133-2, F19133-3, F19133-4, F19133-5, F19133-6, F19133-7, F19133-8, F19133-10

CAS No.	Surrogate Recoveries		Limits
352-33-0	1-Chloro-4-fluorobenzene	89%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	91%	74-127%
563-58-6	1,1-Dichloropropene	100%	87-120%
563-58-6	1,1-Dichloropropene	107%	87-120%

Method Blank Summary

Job Number: F19133
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR763-MB	QR018400.D	1	08/29/03	BM	n/a	n/a	GQR763

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19133-2, F19133-3, F19133-6, F19133-9

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

Method Blank Summary

Job Number: F19133
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR763-MB	QR018400.D	1	08/29/03	BM	n/a	n/a	GQR763

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19133-2, F19133-3, F19133-6, F19133-9

CAS No.	Surrogate Recoveries		Limits
352-33-0	1-Chloro-4-fluorobenzene	89%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	91%	74-127%
563-58-6	1,1-Dichloropropene	99%	87-120%
563-58-6	1,1-Dichloropropene	102%	87-120%

Method Blank Summary

Job Number: F19133
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR764-MB	QR018428.D	1	09/02/03	RA	n/a	n/a	GQR764

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19133-7

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	

CAS No.	Surrogate Recoveries		Limits
352-33-0	1-Chloro-4-fluorobenzene	92%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	100%	74-127%
563-58-6	1,1-Dichloropropene	96%	87-120%
563-58-6	1,1-Dichloropropene	101%	87-120%

Method Blank Summary

Job Number: F19133
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GXY304-MB	XY011396.D	1	08/22/03	CV	n/a	n/a	GXY304

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F19133-3, F19133-4, F19133-5, F19133-6

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	0.50	0.30	ug/l	
74-84-0	Ethane	ND	1.0	0.60	ug/l	
74-85-1	Ethene	ND	1.0	0.80	ug/l	

Method Blank Summary

Job Number: F19133
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GXY304-MB	XY011419.D	1	08/25/03	CV	n/a	n/a	GXY304

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F19133-3, F19133-4, F19133-5, F19133-6

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	0.50	0.30	ug/l	
74-84-0	Ethane	ND	1.0	0.60	ug/l	
74-85-1	Ethene	ND	1.0	0.80	ug/l	

Matrix Spike Summary

Job Number: F19133
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19133-6MS	XY011402.D	1	08/22/03	CV	n/a	n/a	GXY304
F19133-6	XY011401.D	1	08/22/03	CV	n/a	n/a	GXY304

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F19133-3, F19133-4, F19133-5, F19133-6

CAS No.	Compound	F19133-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
74-82-8	Methane	77.9		108	188	102	50-150 [a]
74-84-0	Ethane	2.0		219	274	124	50-150 [a]
74-85-1	Ethene	ND		290	353	122	50-150 [a]

(a) Advisory control limits.

Matrix Spike Summary

Job Number: F19133
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19188-1MS	XY011423.D	1	08/25/03	CV	n/a	n/a	GXY304
F19188-1	XY011422.D	1	08/25/03	CV	n/a	n/a	GXY304

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F19133-3, F19133-4, F19133-5, F19133-6

CAS No.	Compound	F19188-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
74-82-8	Methane	5.05		108	107	94	50-150 [a]
74-84-0	Ethane	ND		219	220	100	50-150 [a]
74-85-1	Ethene	ND		290	291	100	50-150 [a]

(a) Advisory control limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F19133
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19161-2MS	QR018438.D	50	09/02/03	RA	n/a	n/a	GQR764
F19161-2MSD	QR018439.D	50	09/02/03	RA	n/a	n/a	GQR764
F19161-2	QR018432.D	50	09/02/03	RA	n/a	n/a	GQR764

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19133-7

CAS No.	Compound	F19161-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	2260		1000	2890	63* [a]	2920	66* [a]	1	77-127/9
107-06-2	1,2-Dichloroethane	ND		1000	1010	101	1080	108	7	74-116/14

CAS No.	Surrogate Recoveries	MS	MSD	F19161-2	Limits
352-33-0	1-Chloro-4-fluorobenzene	108%	107%	96%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	110%	107%	104%	74-127%
563-58-6	1,1-Dichloropropene	95%	95%	94%	87-120%
563-58-6	1,1-Dichloropropene	96%	95%	101%	87-120%

(a) Outside control limits due to high level in sample relative to spike amount.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F19133
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19166-12MS	QR018377.D	250	08/28/03	BM	n/a	n/a	GQR762
F19166-12MSD	QR018378.D	250	08/28/03	BM	n/a	n/a	GQR762
F19166-12	QR018376.D	250	08/28/03	BM	n/a	n/a	GQR762

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19133-1, F19133-2, F19133-3, F19133-4, F19133-5, F19133-6, F19133-7, F19133-8, F19133-10

CAS No.	Compound	F19166-12 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	1190		5000	6180	100	6110	98	1	77-127/9
75-27-4	Bromodichloromethane	ND		5000	4480	90	4670	93	4	78-122/9
75-25-2	Bromoform	ND		5000	4310	86	4400	88	2	57-140/22
74-83-9	Bromomethane	ND		5000	4860	97	5150	103	6	27-159/21
56-23-5	Carbon tetrachloride	ND		5000	5160	103	5410	108	5	79-127/14
108-90-7	Chlorobenzene	ND		5000	5170	103	5330	107	3	82-122/10
124-48-1	Dibromochloromethane	ND		5000	4760	95	5070	101	6	69-127/14
75-00-3	Chloroethane	ND		5000	4900	98	5020	100	2	51-180/17
110-75-8	2-Chloroethylvinyl ether	ND		5000	ND	0*	ND	0*	nc	10-158/13
67-66-3	Chloroform	ND		5000	4650	93	4810	96	3	82-118/9
74-87-3	Chloromethane	ND		5000	5180	104	5220	104	1	11-193/31
95-50-1	1,2-Dichlorobenzene	ND		5000	5440	109	5660	113	4	69-133/13
541-73-1	1,3-Dichlorobenzene	ND		5000	5370	107	5300	106	1	77-123/13
106-46-7	1,4-Dichlorobenzene	ND		5000	5510	110	5530	111	0	73-127/13
75-71-8	Dichlorodifluoromethane	ND		5000	4550	91	4760	95	5	14-176/25
75-34-3	1,1-Dichloroethane	ND		5000	5380	108	5710	114	6	80-127/10
107-06-2	1,2-Dichloroethane	ND		5000	4800	96	5060	101	5	74-116/14
75-35-4	1,1-Dichloroethene	ND		5000	5650	113	5670	113	0	72-163/16
156-59-2	cis-1,2-Dichloroethene	ND		5000	4600	92	4840	97	5	83-139/9
156-60-5	trans-1,2-Dichloroethene	ND		5000	5340	107	5560	111	4	82-131/11
78-87-5	1,2-Dichloropropane	ND		5000	5180	104	5350	107	3	77-112/8
10061-01-5	cis-1,3-Dichloropropene	ND		5000	5230	105	5550	111	6	65-131/17
10061-02-6	trans-1,3-Dichloropropene	ND		5000	5090	102	5290	106	4	53-140/21
100-41-4	Ethylbenzene	1050		5000	6390	107	6330	106	1	68-136/11
75-09-2	Methylene chloride	ND		5000	5400	108	5570	111	3	60-145/12
1634-04-4	Methyl Tert Butyl Ether	14700		5000	18500	76	19100	88	3	71-124/14
79-34-5	1,1,2,2-Tetrachloroethane	ND		5000	4940	99	5490	110	11*	72-114/8
127-18-4	Tetrachloroethene	ND		5000	5310	106	5530	111	4	85-124/13
108-88-3	Toluene	3760		5000	8820	101	8760	100	1	78-128/9
71-55-6	1,1,1-Trichloroethane	ND		5000	4940	99	5290	106	7	83-123/12
79-00-5	1,1,2-Trichloroethane	ND		5000	5040	101	5160	103	2	78-111/7
79-01-6	Trichloroethene	ND		5000	5190	104	5360	107	3	82-119/11
75-69-4	Trichlorofluoromethane	ND		5000	4590	92	5000	100	9	76-147/15
75-01-4	Vinyl chloride	ND		5000	5220	104	5210	104	0	72-139/14
1330-20-7	Xylenes (total)	9540		15000	24900	102	24600	100	1	71-136/11

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F19133
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19166-12MS	QR018377.D	250	08/28/03	BM	n/a	n/a	GQR762
F19166-12MSD	QR018378.D	250	08/28/03	BM	n/a	n/a	GQR762
F19166-12	QR018376.D	250	08/28/03	BM	n/a	n/a	GQR762

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19133-1, F19133-2, F19133-3, F19133-4, F19133-5, F19133-6, F19133-7, F19133-8, F19133-10

CAS No.	Surrogate Recoveries	MS	MSD	F19166-12	Limits
352-33-0	1-Chloro-4-fluorobenzene	105%	105%	95%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	103%	108%	98%	74-127%
563-58-6	1,1-Dichloropropene	100%	100%	99%	87-120%
563-58-6	1,1-Dichloropropene	101%	104%	102%	87-120%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F19133
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19187-2MS	QR018412.D	1	08/29/03	BM	n/a	n/a	GQR763
F19187-2MSD	QR018413.D	1	08/29/03	BM	n/a	n/a	GQR763
F19187-2	QR018411.D	1	08/29/03	BM	n/a	n/a	GQR763

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19133-2, F19133-3, F19133-6, F19133-9

CAS No.	Compound	F19187-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		20	20.1	101	20.4	102	1	77-127/9
75-27-4	Bromodichloromethane	ND		20	17.8	89	18.6	93	4	78-122/9
75-25-2	Bromoform	ND		20	17.5	88	17.8	89	2	57-140/22
74-83-9	Bromomethane	ND		20	19.8	99	20.6	103	4	27-159/21
56-23-5	Carbon tetrachloride	ND		20	20.7	104	21.4	107	3	79-127/14
108-90-7	Chlorobenzene	ND		20	20.6	103	21.0	105	2	82-122/10
124-48-1	Dibromochloromethane	ND		20	19.0	95	19.7	99	4	69-127/14
75-00-3	Chloroethane	ND		20	20.0	100	20.6	103	3	51-180/17
110-75-8	2-Chloroethylvinyl ether	ND		20	ND	0*	ND	0*	nc	10-158/13
67-66-3	Chloroform	ND		20	18.7	94	19.1	96	2	82-118/9
74-87-3	Chloromethane	ND		20	20.0	100	21.4	107	7	11-193/31
95-50-1	1,2-Dichlorobenzene	ND		20	21.6	108	22.2	111	3	69-133/13
541-73-1	1,3-Dichlorobenzene	ND		20	20.4	102	21.2	106	4	77-123/13
106-46-7	1,4-Dichlorobenzene	ND		20	21.4	107	21.4	107	0	73-127/13
75-71-8	Dichlorodifluoromethane	ND		20	17.5	88	18.7	94	7	14-176/25
75-34-3	1,1-Dichloroethane	ND		20	22.0	110	21.9	110	0	80-127/10
107-06-2	1,2-Dichloroethane	ND		20	20.0	100	20.6	103	3	74-116/14
75-35-4	1,1-Dichloroethene	ND		20	22.4	112	22.8	114	2	72-163/16
156-59-2	cis-1,2-Dichloroethene	ND		20	19.4	97	19.1	96	2	83-139/9
156-60-5	trans-1,2-Dichloroethene	ND		20	21.2	106	21.5	108	1	82-131/11
78-87-5	1,2-Dichloropropane	ND		20	20.5	103	20.7	104	1	77-112/8
10061-01-5	cis-1,3-Dichloropropene	ND		20	21.1	106	21.7	109	3	65-131/17
10061-02-6	trans-1,3-Dichloropropene	ND		20	19.7	99	20.2	101	3	53-140/21
100-41-4	Ethylbenzene	ND		20	22.1	111	22.4	112	1	68-136/11
75-09-2	Methylene chloride	ND		20	20.0	100	20.1	101	0	60-145/12
1634-04-4	Methyl Tert Butyl Ether	ND		20	19.8	99	20.0	100	1	71-124/14
79-34-5	1,1,2,2-Tetrachloroethane	0.52	J	20	23.6	115*	23.7	116*	0	72-114/8
127-18-4	Tetrachloroethene	2.3		20	24.1	109	24.2	110	0	85-124/13
108-88-3	Toluene	ND		20	20.4	102	20.7	104	1	78-128/9
71-55-6	1,1,1-Trichloroethane	ND		20	20.2	101	20.7	104	2	83-123/12
79-00-5	1,1,2-Trichloroethane	ND		20	19.4	97	20.5	103	6	78-111/7
79-01-6	Trichloroethene	1.5		20	22.8	107	23.1	108	1	82-119/11
75-69-4	Trichlorofluoromethane	ND		20	18.9	95	20.1	101	6	76-147/15
75-01-4	Vinyl chloride	ND		20	19.5	98	21.0	105	7	72-139/14
1330-20-7	Xylenes (total)	ND		60	62.0	103	62.9	105	1	71-136/11

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F19133
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19187-2MS	QR018412.D	1	08/29/03	BM	n/a	n/a	GQR763
F19187-2MSD	QR018413.D	1	08/29/03	BM	n/a	n/a	GQR763
F19187-2	QR018411.D	1	08/29/03	BM	n/a	n/a	GQR763

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19133-2, F19133-3, F19133-6, F19133-9

CAS No.	Surrogate Recoveries	MS	MSD	F19187-2	Limits
352-33-0	1-Chloro-4-fluorobenzene	111%	111%	97%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	104%	109%	94%	74-127%
563-58-6	1,1-Dichloropropene	101%	100%	100%	87-120%
563-58-6	1,1-Dichloropropene	100%	98%	102%	87-120%

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Blank Spike Summary

Job Number: F19133
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8355-BS	IJ18284.D	1	09/02/03	MRE	08/26/03	OP8355	GIJ875

The QC reported here applies to the following samples: **Method:** EPA 610

F19133-1, F19133-2, F19133-3, F19133-4, F19133-5, F19133-6, F19133-7, F19133-8, F19133-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	25	21.7	87	59-114
208-96-8	Acenaphthylene	25	19.5	78	58-109
120-12-7	Anthracene	25	20.8	83	63-110
56-55-3	Benzo(a)anthracene	25	21.3	85	74-111
50-32-8	Benzo(a)pyrene	25	20.6	82	71-110
205-99-2	Benzo(b)fluoranthene	25	21.3	85	75-112
191-24-2	Benzo(g,h,i)perylene	25	20.8	83	66-114
207-08-9	Benzo(k)fluoranthene	25	20.3	81	73-111
218-01-9	Chrysene	25	20.8	83	73-112
53-70-3	Dibenzo(a,h)anthracene	25	20.4	82	67-111
206-44-0	Fluoranthene	25	21.4	86	74-113
86-73-7	Fluorene	25	21.1	84	67-113
193-39-5	Indeno(1,2,3-cd)pyrene	25	21.5	86	68-115
91-20-3	Naphthalene	25	20.2	81	52-113
90-12-0	1-Methylnaphthalene	25	22.2	89	55-117
91-57-6	2-Methylnaphthalene	25	20.2	81	50-115
85-01-8	Phenanthrene	25	21.5	86	70-111
129-00-0	Pyrene	25	21.1	84	73-115

CAS No.	Surrogate Recoveries	BSP	Limits
321-60-8	2-Fluorobiphenyl	82%	41-139%
84-15-1	o-Terphenyl	82%	46-135%

Duplicate Summary

Job Number: F19133
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8355-DUP	IJ18299.D	1	09/02/03	MRE	08/26/03	OP8355	GIJ875
F19187-1	IJ18298.D	1	09/02/03	MRE	08/26/03	OP8355	GIJ875

The QC reported here applies to the following samples: **Method:** EPA 610

F19133-1, F19133-2, F19133-3, F19133-4, F19133-5, F19133-6, F19133-7, F19133-8, F19133-9

CAS No.	Compound	F19187-1 ug/l	Q	DUP ug/l	Q	RPD	Limits
83-32-9	Acenaphthene	ND		ND		nc	
208-96-8	Acenaphthylene	ND		ND		nc	
120-12-7	Anthracene	ND		ND		nc	
56-55-3	Benzo(a)anthracene	ND		ND		nc	
50-32-8	Benzo(a)pyrene	ND		ND		nc	
205-99-2	Benzo(b)fluoranthene	ND		ND		nc	
191-24-2	Benzo(g,h,i)perylene	ND		ND		nc	
207-08-9	Benzo(k)fluoranthene	ND		ND		nc	
218-01-9	Chrysene	ND		ND		nc	
53-70-3	Dibenzo(a,h)anthracene	ND		ND		nc	
206-44-0	Fluoranthene	ND		ND		nc	
86-73-7	Fluorene	ND		ND		nc	
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ND		nc	
91-20-3	Naphthalene	ND		ND		nc	
90-12-0	1-Methylnaphthalene	ND		ND		nc	
91-57-6	2-Methylnaphthalene	ND		ND		nc	
85-01-8	Phenanthrene	ND		ND		nc	
129-00-0	Pyrene	ND		ND		nc	

CAS No.	Surrogate Recoveries	DUP	F19187-1	Limits
321-60-8	2-Fluorobiphenyl	94%	79%	41-139%
84-15-1	o-Terphenyl	95%	82%	46-135%

Method Blank Summary

Job Number: F19133
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8355-MB	IJ18285.D	1	09/02/03	MRE	08/26/03	OP8355	GIJ875

The QC reported here applies to the following samples: **Method:** EPA 610

F19133-1, F19133-2, F19133-3, F19133-4, F19133-5, F19133-6, F19133-7, F19133-8, F19133-9

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	2.0	ug/l	
120-12-7	Anthracene	ND	5.0	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	2.0	ug/l	
218-01-9	Chrysene	ND	5.0	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	2.0	ug/l	
86-73-7	Fluorene	ND	5.0	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	2.0	ug/l	
129-00-0	Pyrene	ND	5.0	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
321-60-8	2-Fluorobiphenyl	79%	41-139%
84-15-1	o-Terphenyl	83%	46-135%

Method Blank Summary

Job Number: F19133
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8355-MB	IJ18327.D	1	09/03/03	MRE	08/26/03	OP8355	GIJ876

The QC reported here applies to the following samples: **Method:** EPA 610

F19133-1, F19133-2, F19133-3, F19133-4, F19133-5, F19133-6, F19133-7, F19133-8, F19133-9

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	2.0	ug/l	
120-12-7	Anthracene	ND	5.0	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	2.0	ug/l	
218-01-9	Chrysene	ND	5.0	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	2.0	ug/l	
86-73-7	Fluorene	ND	5.0	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	2.0	ug/l	
129-00-0	Pyrene	ND	5.0	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
321-60-8	2-Fluorobiphenyl	78%	41-139%
84-15-1	o-Terphenyl	76%	46-135%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F19133
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8355-MS	IJ18329.D	4	09/03/03	MRE	08/26/03	OP8355	GIJ876
OP8355-MSD	IJ18330.D	4	09/03/03	MRE	08/26/03	OP8355	GIJ876
F19133-6 [a]	IJ18291.D	1	09/02/03	MRE	08/26/03	OP8355	GIJ875
F19133-6 [a]	IJ18328.D	5	09/03/03	MRE	08/26/03	OP8355	GIJ876

The QC reported here applies to the following samples: **Method:** EPA 610

F19133-1, F19133-2, F19133-3, F19133-4, F19133-5, F19133-6, F19133-7, F19133-8, F19133-9

CAS No.	Compound	F19133-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	15.4		52.1	66.5	98	65.4	96	2	36-143/21
208-96-8	Acenaphthylene	ND		52.1	40.0	77	40.4	78	1	59-108/22
120-12-7	Anthracene	ND		52.1	46.3	89	45.5	87	2	61-113/22
56-55-3	Benzo(a)anthracene	ND		52.1	43.7	84	43.5	84	0	69-111/17
50-32-8	Benzo(a)pyrene	ND		52.1	43.4	83	43.4	83	0	71-109/22
205-99-2	Benzo(b)fluoranthene	ND		52.1	41.6	80	40.8	78	2	63-116/19
191-24-2	Benzo(g,h,i)perylene	ND		52.1	44.7	86	45.3	87	1	54-123/19
207-08-9	Benzo(k)fluoranthene	ND		52.1	48.1	92	48.8	94	1	66-114/16
218-01-9	Chrysene	ND		52.1	47.9	92	47.1	90	2	65-116/15
53-70-3	Dibenzo(a,h)anthracene	ND		52.1	47.2	91	48.2	93	2	52-130/24
206-44-0	Fluoranthene	ND		52.1	45.7	88	45.8	88	0	73-113/16
86-73-7	Fluorene	3.1	J	52.1	46.6	84	46.8	84	0	63-114/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		52.1	41.9	80	41.7	80	0	43-133/24
91-20-3	Naphthalene	155 [c]		52.1	252	186* [b]	244	171* [b]	3	40-130/27
90-12-0	1-Methylnaphthalene	17.8		52.1	74.4	109	73.5	107	1	50-128/25
91-57-6	2-Methylnaphthalene	27.8		52.1	77.7	96	76.5	94	2	32-148/26
85-01-8	Phenanthrene	ND		52.1	44.2	85	44.1	85	0	44-136/19
129-00-0	Pyrene	ND		52.1	46.9	90	46.7	90	0	71-116/16

CAS No.	Surrogate Recoveries	MS	MSD	F19133-6	F19133-6	Limits
321-60-8	2-Fluorobiphenyl	78%	78%	69%	57%	41-139%
84-15-1	o-Terphenyl	82%	82%	78%	73%	46-135%

(a) All hits confirmed by dual column analysis.
(b) Outside control limits due to high level in sample relative to spike amount.
(c) Result is from Run #2.

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F19133
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-NW

Analyte	Batch ID	RL	MB Result	Units	BSP %Recov	QC Limits
Nitrogen, Nitrate	GP4400/GN12482	0.10	<0.10	mg/l	105.0	90-110%
Nitrogen, Nitrite	GP4400/GN12482	0.10	<0.10	mg/l	107.0	90-110%
Sulfate	GP4400/GN12482	20	<20	mg/l	102.0	90-110%
Total Organic Carbon	GN12475	1.0	<1.0	mg/l	99.6	86-116%

Associated Samples:
Batch GN12475: F19133-3, F19133-4, F19133-5, F19133-6
Batch GP4400: F19133-3, F19133-4, F19133-5, F19133-6

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F19133
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-NW

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Nitrogen, Nitrate	GP4400/GN12482	F19133-3	mg/l	<0.10	<0.10	0.0	0-20%
Nitrogen, Nitrite	GP4400/GN12482	F19133-3	mg/l	<0.10	<0.10	0.0	0-20%
Sulfate	GP4400/GN12482	F19133-3	mg/l	371	371	0.0	0-20%
Total Organic Carbon	GN12475	F19100-5	mg/l	45.4	46.1	1.6	0-20%

Associated Samples:
Batch GN12475: F19133-3, F19133-4, F19133-5, F19133-6
Batch GP4400: F19133-3, F19133-4, F19133-5, F19133-6

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F19133
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-NW

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Nitrogen, Nitrate	GP4400/GN12482	F19133-3	mg/l	<0.10	1	1.1	110.0	90-110%
Nitrogen, Nitrite	GP4400/GN12482	F19133-3	mg/l	<0.10	1	0.99	99.0	90-110%
Sulfate	GP4400/GN12482	F19133-3	mg/l	371	100	488	117.0N(a)	90-110%
Total Organic Carbon	GN12475	F19100-5	mg/l	45.4	50	90.8	90.9	76-118%

Associated Samples:
Batch GN12475: F19133-3, F19133-4, F19133-5, F19133-6
Batch GP4400: F19133-3, F19133-4, F19133-5, F19133-6
(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F19133
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-NW

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Total Organic Carbon	GN12475	F19100-5	mg/l	45.4	50	87.6	3.6	

Associated Samples:
Batch GN12475: F19133-3, F19133-4, F19133-5, F19133-6

F19133

COC Number:
824603-NW-082003

Shaw
Shaw Environmental & Infrastructure, Inc.

CHAIN-OF-CUSTODY RECORD

Shaw Environmental & Infrastructure, Inc. - Piney Green Rd. Lot 203 Bld 626 - 910-451-2390

Receiving Lab: ACCUTEST

Project Name	Project Location
CAMP LEJEUNE - NW	CAMP LEJEUNE, NC

Project Number	Contact	PO Number
824603	Mark Martin	209378

Client Rep	Project Manager
US NAVY - LANTDIV	Ron Kenyon

Item No.	Sample Number	Date	Time	Comp	Grab	Sample Description	Number of Containers	Analysis Desired: VOA 601/602	PAH 610	Dissolved Gasses RSK-175	NO3,NO2,NO3-NO2 BY 353.2-354.1	SO4 BY 375.4	TOC BY 415.1
1	UST1115-MW111501	8/20/03	0810		X	UST1115-MW111501	6	X	X				
2	UST1115-GT07	8/20/03	0850		X	UST1115-GT07	6	X	X				
3	UST1115-MW111518	8/20/03	1105		X	UST1115-MW111518	10	X	X	X	X	X	X
4	UST1115-GT09	8/20/03	1200		X	UST1115-GT09	10	X	X	X	X	X	X
5	UST1115-GT09D	8/20/03	1210		X	UST1115-GT09D	10	X	X	X	X	X	X
6	UST1115-MW111513	8/20/03	1530		X	UST1115-MW111513	10	X	X	X	X	X	X
7	UST1115-MW111523	8/20/03	1250		X	UST1115-MW111523	6	X	X				
8	UST1115-MW78GW2202	8/20/03	1400		X	UST1115-MW78GW2202	6	X	X				
9	UST1115-MW78GW2202D	8/20/03	1410		X	UST1115-MW78GW2202D	6	X	X				
10	Trip Blank- 082003	8/20/03	-----		X	Trip Blank	2	X					

Transfer Number	Item Number	Transfers Relinquished By	Transfers Accepted By	Date	Time	Remarks
1	1-10	[signature]	Fed Ex 8369 1400 ~~2820~~	8/20/03	18:00	Please E-mail results to mamartin@theitgroup.com
2		FED EX	Muhammad	8/21/03	0915	21 Day TAT

0.6, 1.4

ACCUTEST LABORATORIES SOUTHEAST SAMPLE RECEIPT CONFIRMATION

Accutest's Job Number: F19133

Client: Shaw Project: Camp Lejeune - NW

Date Received: 8/21/03 Time Received: 0915

of Coolers Received: 2 Cooler Temperatures: 0.6, 1.4

Delivery Method: (FedEx) UPS Accutest Courier Greyhound Delivery Other

Air Bill Number: 8369 1400 2820

Cooler Custody Seals Intact ?	(Yes)	No	
Chain of Custody Provided ?	(Yes)	No	
COC Match Bottle Label ID's ?	(Yes)	No	
Sample Labels Present on all bottles ?	(Yes)	No	
All Analyses Marked On COC ?	(Yes)	No	
Are All Bottles Intact ?	(Yes)	No	
Samples Preserved Correctly ?	(Yes)	No	
Correct Number of Containers Used ?	(Yes)	No	
Sufficient Sample Volume ?	(Yes)	No	
Trip Blank Provided ?	(Yes)	No	
Trip Blank on COC ?	(Yes)	No	
Trip Blank Intact ?	(Yes)	No	N/A
Trip Blank Matrix ?	Soil	(Water)	N/A
Number of Encores ?	0		
Number of Soil Field Kits ?	0		

Summary of Comments: _____

Signature: Muna Mohammed Date: 8/21/03

Southeast ACCUTEST Laboratories

08/29/03

Technical Report for

Shaw E & I, Inc.

Camp Lejeune-NW

824603

Accutest Job Number: F19117

Report to:

Shaw E & I, Inc.

natasha.sullivan@shawgrp.com

ATTN: Natasha Sullivan

Total number of pages in report: 60

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Harry Behzadi, Ph.D.
Laboratory Director

Certifications: FL (DOH E83510), NC (573), NJ (FL002), MA (FL946), IA (366), LA (03051), KS (E-10327), SC, AK

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Sample Summary

Shaw E & I, Inc.

Job No: F19117

Camp Lejeune-NW
Project No: 824603

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
F19117-1	08/19/03	09:20	MM	08/20/03	AQ	Ground Water	UST1115-MW111521
F19117-2	08/19/03	10:30	MM	08/20/03	AQ	Ground Water	UST1115-MW111524
F19117-3	08/19/03	11:15	MM	08/20/03	AQ	Ground Water	UST1115-MW111502
F19117-4	08/19/03	13:00	MM	08/20/03	AQ	Ground Water	UST1115-MW111522
F19117-5	08/19/03	13:45	MM	08/20/03	AQ	Ground Water	UST1115-MW111517
F19117-6	08/19/03	14:25	MM	08/20/03	AQ	Ground Water	UST1115-MW111504
F19117-7	08/19/03	00:00	MM	08/20/03	AQ	Trip Blank Water	TRIP BLANK-021903

Report of Analysis

Client Sample ID: UST1115-MW111521
Lab Sample ID: F19117-1
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-NW

Date Sampled: 08/19/03
Date Received: 08/20/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR018224.D	1	08/20/03	BM	n/a	n/a	GQR754
Run #2	QR018236.D	5	08/21/03	BM	n/a	n/a	GQR755

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	485 [a]	5.0	2.5	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	21.5	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	3.6	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane [b]	ND	5.0	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	36.2	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	0.53	1.0	0.50	ug/l	J
108-88-3	Toluene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	20.1	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111521		
Lab Sample ID:	F19117-1	**Date Sampled:**	08/19/03
Matrix:	AQ - Ground Water	**Date Received:**	08/20/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	90%	90%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	101%	96%	74-127%
563-58-6	1,1-Dichloropropene	90%	95%	87-120%
563-58-6	1,1-Dichloropropene	97%	102%	87-120%

(a) Result is from Run# 2
(b) Elevated reporting limits due to matrix interference.

Report of Analysis

Client Sample ID:	UST1115-MW111521		
Lab Sample ID:	F19117-1	**Date Sampled:**	08/19/03
Matrix:	AQ - Ground Water	**Date Received:**	08/20/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY011386.D	1	08/20/03	CV	n/a	n/a	GXY303
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	23.7	0.50	0.30	ug/l	
74-84-0	Ethane	0.73	1.0	0.60	ug/l	J
74-85-1	Ethene	ND	1.0	0.80	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-MW111521
Lab Sample ID: F19117-1
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-NW

Date Sampled: 08/19/03
Date Received: 08/20/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	IJ18238.D	1	08/21/03	NJ	08/20/03	OP8264	GIJ872
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.1	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.1	2.0	ug/l	
120-12-7	Anthracene	ND	5.1	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.1	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.1	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.1	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.1	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.1	2.0	ug/l	
218-01-9	Chrysene	ND	5.1	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.1	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.1	2.0	ug/l	
86-73-7	Fluorene	ND	5.1	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.1	2.0	ug/l	
91-20-3	Naphthalene	7.0	5.1	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.1	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.1	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.1	2.0	ug/l	
129-00-0	Pyrene	ND	5.1	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	82%		41-139%
84-15-1	o-Terphenyl	88%		46-135%

(a) All hits confirmed by dual column analysis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111521		
Lab Sample ID:	F19117-1	**Date Sampled:**	08/19/03
Matrix:	AQ - Ground Water	**Date Received:**	08/20/03
		Percent Solids:	n/a
Project:	Camp Lejeune-NW		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	< 0.10	0.10	mg/l	1	08/20/03 11:40	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	< 0.20	0.20	mg/l	1	08/20/03 11:40	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 0.10	0.10	mg/l	1	08/20/03 11:40	LL	EPA 300/SW846 9056
Sulfate	31.2	20	mg/l	1	08/20/03 11:40	LL	EPA 300/SW846 9056
Total Organic Carbon	< 1.0	1.0	mg/l	1	08/21/03	LE	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID: UST1115-MW111524
Lab Sample ID: F19117-2
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-NW

Date Sampled: 08/19/03
Date Received: 08/20/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR018226.D	50	08/20/03	BM	n/a	n/a	GQR754
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	3990	50	25	ug/l	
75-27-4	Bromodichloromethane	ND	50	25	ug/l	
75-25-2	Bromoform	ND	50	25	ug/l	
74-83-9	Bromomethane	ND	50	25	ug/l	
56-23-5	Carbon tetrachloride	ND	50	25	ug/l	
108-90-7	Chlorobenzene	ND	50	25	ug/l	
124-48-1	Dibromochloromethane	ND	50	20	ug/l	
75-00-3	Chloroethane	ND	50	25	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	50	25	ug/l	
67-66-3	Chloroform	ND	50	25	ug/l	
74-87-3	Chloromethane	ND	50	25	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	50	25	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	50	25	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	50	25	ug/l	
75-71-8	Dichlorodifluoromethane	ND	50	25	ug/l	
75-34-3	1,1-Dichloroethane	ND	50	25	ug/l	
107-06-2	1,2-Dichloroethane	33.9	50	25	ug/l	J
75-35-4	1,1-Dichloroethene	ND	50	25	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	50	25	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	50	25	ug/l	
78-87-5	1,2-Dichloropropane	ND	50	25	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	50	15	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	50	15	ug/l	
100-41-4	Ethylbenzene	ND	50	25	ug/l	
75-09-2	Methylene chloride	ND	250	50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	50	25	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	50	10	ug/l	
127-18-4	Tetrachloroethene	ND	50	25	ug/l	
108-88-3	Toluene	ND	50	25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	50	25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	50	25	ug/l	
79-01-6	Trichloroethene	ND	50	25	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111524		
Lab Sample ID:	F19117-2	**Date Sampled:**	08/19/03
Matrix:	AQ - Ground Water	**Date Received:**	08/20/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	50	25	ug/l	
75-01-4	Vinyl chloride	ND	50	25	ug/l	
1330-20-7	Xylenes (total)	ND	150	50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	87%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	85%		74-127%
563-58-6	1,1-Dichloropropene	96%		87-120%
563-58-6	1,1-Dichloropropene	97%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111524		
Lab Sample ID:	F19117-2	**Date Sampled:**	08/19/03
Matrix:	AQ - Ground Water	**Date Received:**	08/20/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY011387.D	1	08/20/03	CV	n/a	n/a	GXY303
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	183	0.50	0.30	ug/l	
74-84-0	Ethane	7.36	1.0	0.60	ug/l	
74-85-1	Ethene	ND	1.0	0.80	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-MW111524
Lab Sample ID: F19117-2
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-NW

Date Sampled: 08/19/03
Date Received: 08/20/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	IJ18239.D	1	08/21/03	NJ	08/20/03	OP8264	GIJ872
Run #2							

	Initial Volume	Final Volume
Run #1	970 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.2	2.1	ug/l	
208-96-8	Acenaphthylene	ND	5.2	2.1	ug/l	
120-12-7	Anthracene	ND	5.2	2.1	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.2	2.1	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.2	2.1	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.2	2.1	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.2	2.1	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.2	2.1	ug/l	
218-01-9	Chrysene	ND	5.2	2.1	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.2	2.1	ug/l	
206-44-0	Fluoranthene	ND	5.2	2.1	ug/l	
86-73-7	Fluorene	ND	5.2	2.1	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.2	2.1	ug/l	
91-20-3	Naphthalene	6.7	5.2	2.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.2	2.1	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.2	2.1	ug/l	
85-01-8	Phenanthrene	ND	5.2	2.1	ug/l	
129-00-0	Pyrene	ND	5.2	2.1	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	80%		41-139%
84-15-1	o-Terphenyl	84%		46-135%

(a) All hits confirmed by dual column analysis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111524		
Lab Sample ID:	F19117-2	**Date Sampled:**	08/19/03
Matrix:	AQ - Ground Water	**Date Received:**	08/20/03
		Percent Solids:	n/a
Project:	Camp Lejeune-NW		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	< 0.10	0.10	mg/l	1	08/20/03 11:55	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	< 0.20	0.20	mg/l	1	08/20/03 11:55	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 0.10	0.10	mg/l	1	08/20/03 11:55	LL	EPA 300/SW846 9056
Sulfate	< 20	20	mg/l	1	08/20/03 11:55	LL	EPA 300/SW846 9056
Total Organic Carbon	6.3	1.0	mg/l	1	08/21/03	LE	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID: UST1115-MW111502
Lab Sample ID: F19117-3
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-NW

Date Sampled: 08/19/03
Date Received: 08/20/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR018217.D	1	08/20/03	BM	n/a	n/a	GQR754
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	3.1	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	5.4	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	3.9	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111502		
Lab Sample ID:	F19117-3	**Date Sampled:**	08/19/03
Matrix:	AQ - Ground Water	**Date Received:**	08/20/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	89%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	87%		74-127%
563-58-6	1,1-Dichloropropene	99%		87-120%
563-58-6	1,1-Dichloropropene	102%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111502		
Lab Sample ID:	F19117-3	**Date Sampled:**	08/19/03
Matrix:	AQ - Ground Water	**Date Received:**	08/20/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY011389.D	1	08/20/03	CV	n/a	n/a	GXY303
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	0.50	0.30	ug/l	
74-84-0	Ethane	ND	1.0	0.60	ug/l	
74-85-1	Ethene	ND	1.0	0.80	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111502		
Lab Sample ID:	F19117-3	**Date Sampled:**	08/19/03
Matrix:	AQ - Ground Water	**Date Received:**	08/20/03
Method:	EPA 610 EPA 610	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ18240.D	1	08/21/03	NJ	08/20/03	OP8264	GIJ872
Run #2							

	Initial Volume	Final Volume
Run #1	940 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.3	2.1	ug/l	
208-96-8	Acenaphthylene	ND	5.3	2.1	ug/l	
120-12-7	Anthracene	ND	5.3	2.1	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.3	2.1	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.3	2.1	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.3	2.1	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.3	2.1	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.3	2.1	ug/l	
218-01-9	Chrysene	ND	5.3	2.1	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.3	2.1	ug/l	
206-44-0	Fluoranthene	ND	5.3	2.1	ug/l	
86-73-7	Fluorene	ND	5.3	2.1	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.3	2.1	ug/l	
91-20-3	Naphthalene	ND	5.3	2.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.3	2.1	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.3	2.1	ug/l	
85-01-8	Phenanthrene	ND	5.3	2.1	ug/l	
129-00-0	Pyrene	ND	5.3	2.1	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	89%		41-139%
84-15-1	o-Terphenyl	86%		46-135%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111502		
Lab Sample ID:	F19117-3	**Date Sampled:**	08/19/03
Matrix:	AQ - Ground Water	**Date Received:**	08/20/03
		Percent Solids:	n/a
Project:	Camp Lejeune-NW		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	0.53	0.10	mg/l	1	08/20/03 12:10	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	0.53	0.20	mg/l	1	08/20/03 12:10	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 0.10	0.10	mg/l	1	08/20/03 12:10	LL	EPA 300/SW846 9056
Sulfate	37.0	20	mg/l	1	08/20/03 12:10	LL	EPA 300/SW846 9056
Total Organic Carbon	< 1.0	1.0	mg/l	1	08/21/03	LE	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID: UST1115-MW111522
Lab Sample ID: F19117-4
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-NW

Date Sampled: 08/19/03
Date Received: 08/20/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR018218.D	1	08/20/03	BM	n/a	n/a	GQR754
Run #2	QR018244.D	50	08/21/03	BM	n/a	n/a	GQR755

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	1930 [a]	50	25	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane [b]	ND	5.0	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	4.4	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene [b]	ND	10	10	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111522		
Lab Sample ID:	F19117-4	**Date Sampled:**	08/19/03
Matrix:	AQ - Ground Water	**Date Received:**	08/20/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	1.0	3.0	1.5	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	77%	89%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	108%	93%	74-127%
563-58-6	1,1-Dichloropropene	74% [c]	96%	87-120%
563-58-6	1,1-Dichloropropene	102%	102%	87-120%

(a) Result is from Run# 2
(b) Elevated reporting limits due to matrix interference.
(c) Outside control limits due to matrix interference.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111522		
Lab Sample ID:	F19117-4	**Date Sampled:**	08/19/03
Matrix:	AQ - Ground Water	**Date Received:**	08/20/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY011390.D	1	08/20/03	CV	n/a	n/a	GXY303
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	36.7	0.50	0.30	ug/l	
74-84-0	Ethane	9.54	1.0	0.60	ug/l	
74-85-1	Ethene	2.2	1.0	0.80	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-MW111522
Lab Sample ID: F19117-4
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-NW

Date Sampled: 08/19/03
Date Received: 08/20/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	IJ18241.D	1	08/21/03	NJ	08/20/03	OP8264	GIJ872
Run #2							

	Initial Volume	Final Volume
Run #1	970 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.2	2.1	ug/l	
208-96-8	Acenaphthylene	ND	5.2	2.1	ug/l	
120-12-7	Anthracene	ND	5.2	2.1	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.2	2.1	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.2	2.1	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.2	2.1	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.2	2.1	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.2	2.1	ug/l	
218-01-9	Chrysene	ND	5.2	2.1	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.2	2.1	ug/l	
206-44-0	Fluoranthene	ND	5.2	2.1	ug/l	
86-73-7	Fluorene	ND	5.2	2.1	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.2	2.1	ug/l	
91-20-3	Naphthalene	4.8	5.2	2.1	ug/l	J
90-12-0	1-Methylnaphthalene	ND	5.2	2.1	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.2	2.1	ug/l	
85-01-8	Phenanthrene	ND	5.2	2.1	ug/l	
129-00-0	Pyrene	ND	5.2	2.1	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	83%		41-139%
84-15-1	o-Terphenyl	87%		46-135%

(a) All hits confirmed by dual column analysis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111522		
Lab Sample ID:	F19117-4	**Date Sampled:**	08/19/03
Matrix:	AQ - Ground Water	**Date Received:**	08/20/03
		Percent Solids:	n/a
Project:	Camp Lejeune-NW		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	< 0.10	0.10	mg/l	1	08/20/03 12:24	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	< 0.20	0.20	mg/l	1	08/20/03 12:24	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 0.10	0.10	mg/l	1	08/20/03 12:24	LL	EPA 300/SW846 9056
Sulfate	< 20	20	mg/l	1	08/20/03 12:24	LL	EPA 300/SW846 9056
Total Organic Carbon	4.5	1.0	mg/l	1	08/21/03	LE	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID: UST1115-MW111517
Lab Sample ID: F19117-5
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-NW

Date Sampled: 08/19/03
Date Received: 08/20/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	QR018237.D	2	08/21/03	BM	n/a	n/a	GQR755
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	84.3	2.0	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	2.0	1.0	ug/l	
75-25-2	Bromoform	ND	2.0	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	2.0	1.0	ug/l	
108-90-7	Chlorobenzene	ND	2.0	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	2.0	0.80	ug/l	
75-00-3	Chloroethane	ND	2.0	1.0	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	2.0	1.0	ug/l	
67-66-3	Chloroform	ND	2.0	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	2.0	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	2.0	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	2.0	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	2.0	1.0	ug/l	
107-06-2	1,2-Dichloroethane	43.9	2.0	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	4.1	2.0	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	2.0	1.0	ug/l	
78-87-5	1,2-Dichloropropane [b]	ND	5.0	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.60	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.60	ug/l	
100-41-4	Ethylbenzene	63.4	2.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	10	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether [b]	ND	10	10	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	5.2	2.0	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	2.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.0	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.0	1.0	ug/l	
79-01-6	Trichloroethene	3.8	2.0	1.0	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111517		
Lab Sample ID:	F19117-5	**Date Sampled:**	08/19/03
Matrix:	AQ - Ground Water	**Date Received:**	08/20/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	2.0	1.0	ug/l	
75-01-4	Vinyl chloride	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total) [b]	ND	5.0	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	100%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	108%		74-127%
563-58-6	1,1-Dichloropropene	97%		87-120%
563-58-6	1,1-Dichloropropene	102%		87-120%

(a) Confirmed by GC/MS
(b) Elevated reporting limits due to matrix interference.

Report of Analysis

Client Sample ID:	UST1115-MW111517		
Lab Sample ID:	F19117-5	**Date Sampled:**	08/19/03
Matrix:	AQ - Ground Water	**Date Received:**	08/20/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY011391.D	1	08/20/03	CV	n/a	n/a	GXY303
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	120	0.50	0.30	ug/l	
74-84-0	Ethane	3.26	1.0	0.60	ug/l	
74-85-1	Ethene	ND	1.0	0.80	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111517		
Lab Sample ID:	F19117-5	**Date Sampled:**	08/19/03
Matrix:	AQ - Ground Water	**Date Received:**	08/20/03
Method:	EPA 610 EPA 610	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ18243.D	1	08/21/03	NJ	08/20/03	OP8264	GIJ872
Run #2	IJ18246.D	10	08/21/03	NJ	08/20/03	OP8264	GIJ872

	Initial Volume	Final Volume
Run #1	950 ml	1.0 ml
Run #2	950 ml	1.0 ml

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	20.2	5.3	2.1	ug/l	
208-96-8	Acenaphthylene	ND	5.3	2.1	ug/l	
120-12-7	Anthracene	ND	5.3	2.1	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.3	2.1	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.3	2.1	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.3	2.1	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.3	2.1	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.3	2.1	ug/l	
218-01-9	Chrysene	ND	5.3	2.1	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.3	2.1	ug/l	
206-44-0	Fluoranthene	ND	5.3	2.1	ug/l	
86-73-7	Fluorene	10.5	5.3	2.1	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.3	2.1	ug/l	
91-20-3	Naphthalene	332 [a]	53	21	ug/l	
90-12-0	1-Methylnaphthalene	20.7	5.3	2.1	ug/l	
91-57-6	2-Methylnaphthalene	17.1	5.3	2.1	ug/l	
85-01-8	Phenanthrene	ND	5.3	2.1	ug/l	
129-00-0	Pyrene	ND	5.3	2.1	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	94%	80%	41-139%
84-15-1	o-Terphenyl	89%	97%	46-135%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-MW111517
Lab Sample ID: F19117-5
Matrix: AQ - Ground Water
Project: Camp Lejeune-NW

Date Sampled: 08/19/03
Date Received: 08/20/03
Percent Solids: n/a

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	< 0.10	0.10	mg/l	1	08/20/03 12:39	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	< 0.20	0.20	mg/l	1	08/20/03 12:39	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 0.10	0.10	mg/l	1	08/20/03 12:39	LL	EPA 300/SW846 9056
Sulfate	2010	400	mg/l	20	08/20/03 14:35	LL	EPA 300/SW846 9056
Total Organic Carbon	18.7	1.0	mg/l	1	08/21/03	LE	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID: UST1115-MW111504
Lab Sample ID: F19117-6
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-NW

Date Sampled: 08/19/03
Date Received: 08/20/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR018233.D	1	08/21/03	BM	n/a	n/a	GQR755
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111504		
Lab Sample ID:	F19117-6	**Date Sampled:**	08/19/03
Matrix:	AQ - Ground Water	**Date Received:**	08/20/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	90%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	92%		74-127%
563-58-6	1,1-Dichloropropene	98%		87-120%
563-58-6	1,1-Dichloropropene	100%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111504		
Lab Sample ID:	F19117-6	**Date Sampled:**	08/19/03
Matrix:	AQ - Ground Water	**Date Received:**	08/20/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY011392.D	1	08/20/03	CV	n/a	n/a	GXY303
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	27.3	0.50	0.30	ug/l	
74-84-0	Ethane	ND	1.0	0.60	ug/l	
74-85-1	Ethene	ND	1.0	0.80	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-MW111504
Lab Sample ID: F19117-6
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-NW

Date Sampled: 08/19/03
Date Received: 08/20/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ18244.D	1	08/21/03	NJ	08/20/03	OP8264	GIJ872
Run #2							

	Initial Volume	Final Volume
Run #1	910 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.5	2.2	ug/l	
208-96-8	Acenaphthylene	ND	5.5	2.2	ug/l	
120-12-7	Anthracene	ND	5.5	2.2	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.5	2.2	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.5	2.2	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.5	2.2	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.5	2.2	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.5	2.2	ug/l	
218-01-9	Chrysene	ND	5.5	2.2	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.5	2.2	ug/l	
206-44-0	Fluoranthene	ND	5.5	2.2	ug/l	
86-73-7	Fluorene	ND	5.5	2.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.5	2.2	ug/l	
91-20-3	Naphthalene	ND	5.5	2.2	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.5	2.2	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.5	2.2	ug/l	
85-01-8	Phenanthrene	ND	5.5	2.2	ug/l	
129-00-0	Pyrene	ND	5.5	2.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	92%		41-139%
84-15-1	o-Terphenyl	90%		46-135%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111504		
Lab Sample ID:	F19117-6	**Date Sampled:**	08/19/03
Matrix:	AQ - Ground Water	**Date Received:**	08/20/03
		Percent Solids:	n/a
Project:	Camp Lejeune-NW		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	< 0.10	0.10	mg/l	1	08/20/03 12:54	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	< 0.20	0.20	mg/l	1	08/20/03 12:54	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 0.10	0.10	mg/l	1	08/20/03 12:54	LL	EPA 300/SW846 9056
Sulfate	35.0	20	mg/l	1	08/20/03 12:54	LL	EPA 300/SW846 9056
Total Organic Carbon	< 1.0	1.0	mg/l	1	08/21/03	LE	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID: TRIP BLANK-021903
Lab Sample ID: F19117-7
Matrix: AQ - Trip Blank Water
Method: EPA 601/602
Project: Camp Lejeune-NW

Date Sampled: 08/19/03
Date Received: 08/20/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR018234.D	1	08/21/03	BM	n/a	n/a	GQR755
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK-021903		
Lab Sample ID:	F19117-7	**Date Sampled:**	08/19/03
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/20/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	90%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	88%		74-127%
563-58-6	1,1-Dichloropropene	98%		87-120%
563-58-6	1,1-Dichloropropene	101%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Blank Spike Summary

Job Number: F19117
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR754-BS	QR018211.D	1	08/20/03	BM	n/a	n/a	GQR754

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19117-1, F19117-2, F19117-3, F19117-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	19.6	98	88-121
75-27-4	Bromodichloromethane	20	18.6	93	79-121
75-25-2	Bromoform	20	16.4	82	61-135
74-83-9	Bromomethane	20	21.2	106	44-154
56-23-5	Carbon tetrachloride	20	21.4	107	81-127
108-90-7	Chlorobenzene	20	19.9	100	87-120
124-48-1	Dibromochloromethane	20	17.2	86	71-125
75-00-3	Chloroethane	20	22.1	111	68-146
110-75-8	2-Chloroethylvinyl ether	20	12.5	63	39-148
67-66-3	Chloroform	20	17.7	89	87-116
74-87-3	Chloromethane	20	21.7	109	34-188
95-50-1	1,2-Dichlorobenzene	20	19.5	98	81-119
541-73-1	1,3-Dichlorobenzene	20	19.4	97	82-120
106-46-7	1,4-Dichlorobenzene	20	19.1	96	81-120
75-71-8	Dichlorodifluoromethane	20	19.9	100	43-179
75-34-3	1,1-Dichloroethane	20	21.6	108	83-126
107-06-2	1,2-Dichloroethane	20	18.6	93	83-110
75-35-4	1,1-Dichloroethene	20	23.1	116	78-148
156-59-2	cis-1,2-Dichloroethene	20	19.5	98	86-134
156-60-5	trans-1,2-Dichloroethene	20	21.4	107	86-129
78-87-5	1,2-Dichloropropane	20	18.7	94	80-110
10061-01-5	cis-1,3-Dichloropropene	20	21.0	105	68-129
10061-02-6	trans-1,3-Dichloropropene	20	18.2	91	62-132
100-41-4	Ethylbenzene	20	20.6	103	86-125
75-09-2	Methylene chloride	20	21.2	106	74-130
1634-04-4	Methyl Tert Butyl Ether	20	18.0	90	80-117
79-34-5	1,1,2,2-Tetrachloroethane	20	18.5	93	77-108
127-18-4	Tetrachloroethene	20	21.4	107	85-123
108-88-3	Toluene	20	19.7	99	89-123
71-55-6	1,1,1-Trichloroethane	20	20.5	103	86-123
79-00-5	1,1,2-Trichloroethane	20	19.5	98	81-109
79-01-6	Trichloroethene	20	20.3	102	85-117
75-69-4	Trichlorofluoromethane	20	21.9	110	74-149
75-01-4	Vinyl chloride	20	18.6	93	72-138
1330-20-7	Xylenes (total)	60	60.0	100	89-124

Blank Spike Summary

Job Number: F19117
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR754-BS	QR018211.D	1	08/20/03	BM	n/a	n/a	GQR754

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19117-1, F19117-2, F19117-3, F19117-4

CAS No.	Surrogate Recoveries	BSP	Limits
352-33-0	1-Chloro-4-fluorobenzene	105%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	105%	74-127%
563-58-6	1,1-Dichloropropene	100%	87-120%
563-58-6	1,1-Dichloropropene	98%	87-120%

Blank Spike Summary

Job Number: F19117
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR755-BS	QR018231.D	1	08/21/03	BM	n/a	n/a	GQR755

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19117-1, F19117-4, F19117-5, F19117-6, F19117-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	20.0	100	88-121
75-27-4	Bromodichloromethane	20	19.5	98	79-121
75-25-2	Bromoform	20	18.0	90	61-135
74-83-9	Bromomethane	20	21.7	109	44-154
56-23-5	Carbon tetrachloride	20	22.8	114	81-127
108-90-7	Chlorobenzene	20	21.2	106	87-120
124-48-1	Dibromochloromethane	20	18.4	92	71-125
75-00-3	Chloroethane	20	21.8	109	68-146
110-75-8	2-Chloroethylvinyl ether	20	15.6	78	39-148
67-66-3	Chloroform	20	18.5	93	87-116
74-87-3	Chloromethane	20	22.1	111	34-188
95-50-1	1,2-Dichlorobenzene	20	21.0	105	81-119
541-73-1	1,3-Dichlorobenzene	20	20.3	102	82-120
106-46-7	1,4-Dichlorobenzene	20	20.8	104	81-120
75-71-8	Dichlorodifluoromethane	20	19.8	99	43-179
75-34-3	1,1-Dichloroethane	20	22.4	112	83-126
107-06-2	1,2-Dichloroethane	20	20.0	100	83-110
75-35-4	1,1-Dichloroethene	20	23.0	115	78-148
156-59-2	cis-1,2-Dichloroethene	20	20.5	103	86-134
156-60-5	trans-1,2-Dichloroethene	20	21.9	110	86-129
78-87-5	1,2-Dichloropropane	20	20.4	102	80-110
10061-01-5	cis-1,3-Dichloropropene	20	22.2	111	68-129
10061-02-6	trans-1,3-Dichloropropene	20	19.6	98	62-132
100-41-4	Ethylbenzene	20	20.9	105	86-125
75-09-2	Methylene chloride	20	22.9	115	74-130
1634-04-4	Methyl Tert Butyl Ether	20	18.5	93	80-117
79-34-5	1,1,2,2-Tetrachloroethane	20	20.5	103	77-108
127-18-4	Tetrachloroethene	20	22.6	113	85-123
108-88-3	Toluene	20	20.0	100	89-123
71-55-6	1,1,1-Trichloroethane	20	20.6	103	86-123
79-00-5	1,1,2-Trichloroethane	20	20.3	102	81-109
79-01-6	Trichloroethene	20	21.4	107	85-117
75-69-4	Trichlorofluoromethane	20	22.0	110	74-149
75-01-4	Vinyl chloride	20	22.0	110	72-138
1330-20-7	Xylenes (total)	60	61.1	102	89-124

Blank Spike Summary

Job Number: F19117
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR755-BS	QR018231.D	1	08/21/03	BM	n/a	n/a	GQR755

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19117-1, F19117-4, F19117-5, F19117-6, F19117-7

CAS No.	Surrogate Recoveries	BSP	Limits
352-33-0	1-Chloro-4-fluorobenzene	107%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	109%	74-127%
563-58-6	1,1-Dichloropropene	98%	87-120%
563-58-6	1,1-Dichloropropene	98%	87-120%

Blank Spike Summary

Job Number: F19117
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GXY303-BS	XY011382.D	1	08/20/03	CV	n/a	n/a	GXY303

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F19117-1, F19117-2, F19117-3, F19117-4, F19117-5, F19117-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
74-82-8	Methane	108	105	97	50-126
74-84-0	Ethane	219	227	104	49-135
74-85-1	Ethene	290	298	103	56-130

Duplicate Summary

Job Number: F19117
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19117-2DUP	XY011388.D	1	08/20/03	CV	n/a	n/a	GXY303
F19117-2	XY011387.D	1	08/20/03	CV	n/a	n/a	GXY303

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F19117-1, F19117-2, F19117-3, F19117-4, F19117-5, F19117-6

CAS No.	Compound	F19117-2 ug/l	Q	DUP ug/l	Q	RPD	Limits
74-82-8	Methane	183		194		6	29
74-84-0	Ethane	7.36		7.75		5	24
74-85-1	Ethene	0.62		ND		5	23

Method Blank Summary

Job Number: F19117
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR754-MB	QR018212.D	1	08/20/03	BM	n/a	n/a	GQR754

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19117-1, F19117-2, F19117-3, F19117-4

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

Method Blank Summary

Job Number: F19117
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR754-MB	QR018212.D	1	08/20/03	BM	n/a	n/a	GQR754

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19117-1, F19117-2, F19117-3, F19117-4

CAS No.	Surrogate Recoveries		Limits
352-33-0	1-Chloro-4-fluorobenzene	88%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	86%	74-127%
563-58-6	1,1-Dichloropropene	99%	87-120%
563-58-6	1,1-Dichloropropene	104%	87-120%

Method Blank Summary

Job Number: F19117
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR755-MB	QR018232.D	1	08/21/03	BM	n/a	n/a	GQR755

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19117-1, F19117-4, F19117-5, F19117-6, F19117-7

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

Method Blank Summary

Job Number: F19117
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR755-MB	QR018232.D	1	08/21/03	BM	n/a	n/a	GQR755

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19117-1, F19117-4, F19117-5, F19117-6, F19117-7

CAS No.	Surrogate Recoveries		Limits
352-33-0	1-Chloro-4-fluorobenzene	89%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	89%	74-127%
563-58-6	1,1-Dichloropropene	98%	87-120%
563-58-6	1,1-Dichloropropene	101%	87-120%

Method Blank Summary

Job Number: F19117
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GXY303-MB	XY011381.D	1	08/20/03	CV	n/a	n/a	GXY303

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F19117-1, F19117-2, F19117-3, F19117-4, F19117-5, F19117-6

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	0.50	0.30	ug/l	
74-84-0	Ethane	ND	1.0	0.60	ug/l	
74-85-1	Ethene	ND	1.0	0.80	ug/l	

Matrix Spike Summary

Job Number: F19117
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19110-3MS	XY011384.D	1	08/20/03	CV	n/a	n/a	GXY303
F19110-3	XY011383.D	1	08/20/03	CV	n/a	n/a	GXY303

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F19117-1, F19117-2, F19117-3, F19117-4, F19117-5, F19117-6

CAS No.	Compound	F19110-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
74-82-8	Methane	8.75		108	128	110	50-150 [a]
74-84-0	Ethane	ND		219	279	127	50-150 [a]
74-85-1	Ethene	ND		290	366	126	50-150 [a]

(a) Advisory control limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F19117
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19117-3MS	QR018222.D	1	08/20/03	BM	n/a	n/a	GQR754
F19117-3MSD	QR018223.D	1	08/20/03	BM	n/a	n/a	GQR754
F19117-3	QR018217.D	1	08/20/03	BM	n/a	n/a	GQR754

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19117-1, F19117-2, F19117-3, F19117-4

CAS No.	Compound	F19117-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	3.1		20	21.8	94	22.0	95	1	77-127/9
75-27-4	Bromodichloromethane	ND		20	18.2	91	18.3	92	1	78-122/9
75-25-2	Bromoform	ND		20	16.1	81	16.9	85	5	57-140/22
74-83-9	Bromomethane	ND		20	21.5	108	20.9	105	3	27-159/21
56-23-5	Carbon tetrachloride	ND		20	21.6	108	21.0	105	3	79-127/14
108-90-7	Chlorobenzene	ND		20	20.2	101	19.7	99	3	82-122/10
124-48-1	Dibromochloromethane	ND		20	17.1	86	17.2	86	1	69-127/14
75-00-3	Chloroethane	ND		20	21.9	110	21.7	109	1	51-180/17
110-75-8	2-Chloroethylvinyl ether	ND		20	ND	0*	ND	0*	nc	10-158/13
67-66-3	Chloroform	ND		20	18.8	94	17.8	89	5	82-118/9
74-87-3	Chloromethane	ND		20	21.5	108	21.2	106	1	11-193/31
95-50-1	1,2-Dichlorobenzene	ND		20	20.2	101	19.7	99	3	69-133/13
541-73-1	1,3-Dichlorobenzene	ND		20	19.1	96	19.3	97	1	77-123/13
106-46-7	1,4-Dichlorobenzene	ND		20	19.7	99	19.5	98	1	73-127/13
75-71-8	Dichlorodifluoromethane	ND		20	19.5	98	20.5	103	5	14-176/25
75-34-3	1,1-Dichloroethane	ND		20	21.1	106	21.4	107	1	80-127/10
107-06-2	1,2-Dichloroethane	ND		20	19.7	99	19.4	97	2	74-116/14
75-35-4	1,1-Dichloroethene	ND		20	22.7	114	23.5	118	3	72-163/16
156-59-2	cis-1,2-Dichloroethene	ND		20	20.5	103	19.1	96	7	83-139/9
156-60-5	trans-1,2-Dichloroethene	ND		20	21.2	106	21.9	110	3	82-131/11
78-87-5	1,2-Dichloropropane	ND		20	19.1	96	19.0	95	1	77-112/8
10061-01-5	cis-1,3-Dichloropropene	ND		20	20.6	103	20.6	103	0	65-131/17
10061-02-6	trans-1,3-Dichloropropene	ND		20	18.1	91	17.5	88	3	53-140/21
100-41-4	Ethylbenzene	ND		20	20.7	104	20.9	105	1	68-136/11
75-09-2	Methylene chloride	ND		20	21.6	108	18.8	94	14*	60-145/12
1634-04-4	Methyl Tert Butyl Ether	ND		20	18.4	92	19.0	95	3	71-124/14
79-34-5	1,1,2,2-Tetrachloroethane	5.4		20	21.2	79	21.0	78	1	72-114/8
127-18-4	Tetrachloroethene	ND		20	21.1	106	21.5	108	2	85-124/13
108-88-3	Toluene	ND		20	19.9	100	20.0	100	1	78-128/9
71-55-6	1,1,1-Trichloroethane	ND		20	20.2	101	20.3	102	0	83-123/12
79-00-5	1,1,2-Trichloroethane	ND		20	18.7	94	19.6	98	5	78-111/7
79-01-6	Trichloroethene	3.9		20	22.5	93	22.5	93	0	82-119/11
75-69-4	Trichlorofluoromethane	ND		20	20.4	102	20.1	101	1	76-147/15
75-01-4	Vinyl chloride	ND		20	18.7	94	19.4	97	4	72-139/14
1330-20-7	Xylenes (total)	ND		60	60.2	100	61.0	102	1	71-136/11

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F19117
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19117-3MS	QR018222.D	1	08/20/03	BM	n/a	n/a	GQR754
F19117-3MSD	QR018223.D	1	08/20/03	BM	n/a	n/a	GQR754
F19117-3	QR018217.D	1	08/20/03	BM	n/a	n/a	GQR754

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19117-1, F19117-2, F19117-3, F19117-4

CAS No.	Surrogate Recoveries	MS	MSD	F19117-3	Limits
352-33-0	1-Chloro-4-fluorobenzene	106%	105%	89%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	103%	102%	87%	74-127%
563-58-6	1,1-Dichloropropene	99%	100%	99%	87-120%
563-58-6	1,1-Dichloropropene	99%	95%	102%	87-120%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F19117
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19122-2MS	QR018242.D	1	08/21/03	BM	n/a	n/a	GQR755
F19122-2MSD	QR018243.D	1	08/21/03	BM	n/a	n/a	GQR755
F19122-2	QR018239.D	1	08/21/03	BM	n/a	n/a	GQR755

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19117-1, F19117-4, F19117-5, F19117-6, F19117-7

CAS No.	Compound	F19122-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		20	20.2	101	20.1	101	0	77-127/9
75-27-4	Bromodichloromethane	ND		20	19.6	98	18.7	94	5	78-122/9
75-25-2	Bromoform	ND		20	17.8	89	17.5	88	2	57-140/22
74-83-9	Bromomethane	ND		20	21.7	109	20.2	101	7	27-159/21
56-23-5	Carbon tetrachloride	ND		20	22.1	111	20.9	105	6	79-127/14
108-90-7	Chlorobenzene	ND		20	21.0	105	20.2	101	4	82-122/10
124-48-1	Dibromochloromethane	ND		20	17.8	89	17.8	89	0	69-127/14
75-00-3	Chloroethane	ND		20	21.6	108	20.8	104	4	51-180/17
110-75-8	2-Chloroethylvinyl ether	ND		20	ND	0*	ND	0*	nc	10-158/13
67-66-3	Chloroform	ND		20	18.7	94	18.3	92	2	82-118/9
74-87-3	Chloromethane	ND		20	21.5	108	20.4	102	5	11-193/31
95-50-1	1,2-Dichlorobenzene	ND		20	20.4	102	20.2	101	1	69-133/13
541-73-1	1,3-Dichlorobenzene	ND		20	19.9	100	19.9	100	0	77-123/13
106-46-7	1,4-Dichlorobenzene	ND		20	20.0	100	19.6	98	2	73-127/13
75-71-8	Dichlorodifluoromethane	ND		20	17.4	87	16.5	83	5	14-176/25
75-34-3	1,1-Dichloroethane	ND		20	22.3	112	21.7	109	3	80-127/10
107-06-2	1,2-Dichloroethane	ND		20	19.1	96	18.5	93	3	74-116/14
75-35-4	1,1-Dichloroethene	ND		20	23.5	118	23.9	120	2	72-163/16
156-59-2	cis-1,2-Dichloroethene	ND		20	20.8	104	20.0	100	4	83-139/9
156-60-5	trans-1,2-Dichloroethene	ND		20	22.3	112	21.4	107	4	82-131/11
78-87-5	1,2-Dichloropropane	ND		20	19.7	99	18.9	95	4	77-112/8
10061-01-5	cis-1,3-Dichloropropene	ND		20	22.0	110	20.4	102	8	65-131/17
10061-02-6	trans-1,3-Dichloropropene	ND		20	18.6	93	17.8	89	4	53-140/21
100-41-4	Ethylbenzene	ND		20	21.2	106	20.9	105	1	68-136/11
75-09-2	Methylene chloride	ND		20	20.6	103	18.0	90	13*	60-145/12
1634-04-4	Methyl Tert Butyl Ether	ND		20	18.9	95	19.3	97	2	71-124/14
79-34-5	1,1,2,2-Tetrachloroethane	ND		20	19.1	96	18.6	93	3	72-114/8
127-18-4	Tetrachloroethene	ND		20	22.4	112	21.1	106	6	85-124/13
108-88-3	Toluene	0.98	J	20	21.7	104	21.5	103	1	78-128/9
71-55-6	1,1,1-Trichloroethane	ND		20	20.6	103	19.6	98	5	83-123/12
79-00-5	1,1,2-Trichloroethane	ND		20	20.2	101	19.7	99	3	78-111/7
79-01-6	Trichloroethene	ND		20	20.7	104	20.7	104	0	82-119/11
75-69-4	Trichlorofluoromethane	ND		20	20.2	101	19.3	97	5	76-147/15
75-01-4	Vinyl chloride	ND		20	17.7	89	16.0	80	10	72-139/14
1330-20-7	Xylenes (total)	ND		60	61.7	103	61.0	102	1	71-136/11

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F19117
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19122-2MS	QR018242.D	1	08/21/03	BM	n/a	n/a	GQR755
F19122-2MSD	QR018243.D	1	08/21/03	BM	n/a	n/a	GQR755
F19122-2	QR018239.D	1	08/21/03	BM	n/a	n/a	GQR755

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19117-1, F19117-4, F19117-5, F19117-6, F19117-7

CAS No.	Surrogate Recoveries	MS	MSD	F19122-2	Limits
352-33-0	1-Chloro-4-fluorobenzene	107%	105%	90%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	107%	105%	92%	74-127%
563-58-6	1,1-Dichloropropene	98%	98%	98%	87-120%
563-58-6	1,1-Dichloropropene	97%	94%	102%	87-120%

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Blank Spike Summary

Job Number: F19117
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8264-BS	IJ18232.D	1	08/21/03	NJ	08/20/03	OP8264	GIJ872

The QC reported here applies to the following samples: **Method:** EPA 610

F19117-1, F19117-2, F19117-3, F19117-4, F19117-5, F19117-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	25	26.5	106	59-114
208-96-8	Acenaphthylene	25	23.6	94	58-109
120-12-7	Anthracene	25	25.3	101	63-110
56-55-3	Benzo(a)anthracene	25	25.9	104	74-111
50-32-8	Benzo(a)pyrene	25	25.3	101	71-110
205-99-2	Benzo(b)fluoranthene	25	26.4	106	75-112
191-24-2	Benzo(g,h,i)perylene	25	24.8	99	66-114
207-08-9	Benzo(k)fluoranthene	25	25.1	100	73-111
218-01-9	Chrysene	25	25.6	102	73-112
53-70-3	Dibenzo(a,h)anthracene	25	24.5	98	67-111
206-44-0	Fluoranthene	25	25.8	103	74-113
86-73-7	Fluorene	25	25.3	101	67-113
193-39-5	Indeno(1,2,3-cd)pyrene	25	24.9	100	68-115
91-20-3	Naphthalene	25	24.7	99	52-113
90-12-0	1-Methylnaphthalene	25	27.2	109	55-117
91-57-6	2-Methylnaphthalene	25	24.6	98	50-115
85-01-8	Phenanthrene	25	25.9	104	70-111
129-00-0	Pyrene	25	26.2	105	73-115

CAS No.	Surrogate Recoveries	BSP	Limits
321-60-8	2-Fluorobiphenyl	101%	41-139%
84-15-1	o-Terphenyl	101%	46-135%

Method Blank Summary

Job Number: F19117
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8264-MB	IJ18233.D	1	08/21/03	NJ	08/20/03	OP8264	GIJ872

The QC reported here applies to the following samples: **Method:** EPA 610

F19117-1, F19117-2, F19117-3, F19117-4, F19117-5, F19117-6

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	2.0	ug/l	
120-12-7	Anthracene	ND	5.0	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	2.0	ug/l	
218-01-9	Chrysene	ND	5.0	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	2.0	ug/l	
86-73-7	Fluorene	ND	5.0	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	2.0	ug/l	
129-00-0	Pyrene	ND	5.0	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
321-60-8	2-Fluorobiphenyl	82%	41-139%
84-15-1	o-Terphenyl	80%	46-135%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F19117
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8264-MS	IJ18236.D	1	08/21/03	NJ	08/20/03	OP8264	GIJ872
OP8264-MSD	IJ18237.D	1	08/21/03	NJ	08/20/03	OP8264	GIJ872
F19056-2 [a]	IJ18235.D	1	08/21/03	NJ	08/20/03	OP8264	GIJ872
F19056-2	IJ18245.D	1	08/21/03	NJ	08/20/03	OP8264	GIJ872

The QC reported here applies to the following samples: **Method:** EPA 610

F19117-1, F19117-2, F19117-3, F19117-4, F19117-5, F19117-6

CAS No.	Compound	F19056-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		53.2	42.3	80	38.3	72	10	36-143/21
208-96-8	Acenaphthylene	ND		53.2	38.3	72	34.8	65	10	59-108/22
120-12-7	Anthracene	ND		53.2	42.3	80	37.8	71	11	61-113/22
56-55-3	Benzo(a)anthracene	ND		53.2	45.2	85	40.7	77	10	69-111/17
50-32-8	Benzo(a)pyrene	ND		53.2	44.6	84	40.0	75	11	71-109/22
205-99-2	Benzo(b)fluoranthene	ND		53.2	46.0	86	41.4	78	11	63-116/19
191-24-2	Benzo(g,h,i)perylene	ND		53.2	43.4	82	38.7	73	11	54-123/19
207-08-9	Benzo(k)fluoranthene	ND		53.2	44.8	84	40.1	75	11	66-114/16
218-01-9	Chrysene	ND		53.2	45.1	85	40.7	77	10	65-116/15
53-70-3	Dibenzo(a,h)anthracene	ND		53.2	43.8	82	39.0	73	12	52-130/24
206-44-0	Fluoranthene	ND		53.2	44.7	84	40.4	76	10	73-113/16
86-73-7	Fluorene	ND		53.2	41.8	79	37.3	70	11	63-114/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		53.2	43.8	82	38.7	73	12	43-133/24
91-20-3	Naphthalene	ND		53.2	39.4	74	38.4	72	3	40-130/27
90-12-0	1-Methylnaphthalene	ND		53.2	42.5	80	39.8	75	7	50-128/25
91-57-6	2-Methylnaphthalene	ND		53.2	39.0	73	36.6	69	6	32-148/26
85-01-8	Phenanthrene	ND		53.2	43.5	82	38.4	72	12	44-136/19
129-00-0	Pyrene	ND		53.2	45.3	85	41.0	77	10	71-116/16

CAS No.	Surrogate Recoveries	MS	MSD	F19056-2	F19056-2	Limits
321-60-8	2-Fluorobiphenyl	75%	67%	38%* [b]	41%	41-139%
84-15-1	o-Terphenyl	80%	71%	42%* [b]	45%*	46-135%

(a) Insufficient sample for re-extraction.
(b) Confirmed by reanalysis.

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F19117
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-NW

Analyte	Batch ID	RL	MB Result	Units	BSP %Recov	QC Limits
Nitrogen, Nitrate	GP4395/GN12465	0.10	<0.10	mg/l	104.0	90-110%
Nitrogen, Nitrite	GP4395/GN12465	0.10	<0.10	mg/l	109.0	90-110%
Sulfate	GP4395/GN12465	20	<20	mg/l	102.0	90-110%
Total Organic Carbon	GN12475	1.0	<1.0	mg/l	99.6	86-116%

Associated Samples:
Batch GN12475: F19117-1, F19117-2, F19117-3, F19117-4, F19117-5, F19117-6
Batch GP4395: F19117-1, F19117-2, F19117-3, F19117-4, F19117-5, F19117-6

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F19117
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-NW

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Nitrogen, Nitrate	GP4395/GN12465	F19117-1	mg/l	<0.10	<0.10	0.0	0-20%
Nitrogen, Nitrite	GP4395/GN12465	F19117-1	mg/l	<0.10	<0.10	0.0	0-20%
Sulfate	GP4395/GN12465	F19117-1	mg/l	31.2	30.8	1.3	0-20%
Total Organic Carbon	GN12475	F19100-5	mg/l	45.4	46.1	1.6	0-20%

Associated Samples:
Batch GN12475: F19117-1, F19117-2, F19117-3, F19117-4, F19117-5, F19117-6
Batch GP4395: F19117-1, F19117-2, F19117-3, F19117-4, F19117-5, F19117-6

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F19117
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-NW

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Nitrogen, Nitrate	GP4395/GN12465	F19117-1	mg/l	<0.10	1	1.1	110.0	90-110%
Nitrogen, Nitrite	GP4395/GN12465	F19117-1	mg/l	<0.10	1	0.99	99.0	90-110%
Sulfate	GP4395/GN12465	F19117-1	mg/l	31.2	100	131	99.8	90-110%
Total Organic Carbon	GN12475	F19100-5	mg/l	45.4	50	90.8	90.9	76-118%

Associated Samples:
Batch GN12475: F19117-1, F19117-2, F19117-3, F19117-4, F19117-5, F19117-6
Batch GP4395: F19117-1, F19117-2, F19117-3, F19117-4, F19117-5, F19117-6

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F19117
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-NW

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Total Organic Carbon	GN12475	F19100-5	mg/l	45.4	50	87.6	3.6	

Associated Samples:
Batch GN12475: F19117-1, F19117-2, F19117-3, F19117-4, F19117-5, F19117-6

CHAIN-OF-CUSTODY RECORD F19117

COC Number: 824603-NW-081903

Shaw Environmental & Infrastructure, Inc.

Shaw Environmental & Infrastructure, Inc. - Piney Green Rd. Lot 203 Bld 626 - 910-451-2390

Receiving Lab: ACCUTEST

Project Name	Project Location
CAMP LEJEUNE - NW	CAMP LEJEUNE, NC

Project Number	Contact	PO Number
824603	Mark Martin	209378

Client Rep	Project Manager
US NAVY - LANTDIV	Ron Kenyon

Item No.	Sample Number	Date	Time	Comp	Grab	Sample Description	Number of Containers	VOA 601/602	PAH 610	Dissolved Gasses RSK-175	NO3,NO2,NO3-NO2 BY 353.2-354.1	SO4 BY 375.4	TOC BY 415.1	Analysis Desired
1	UST1115-MW111521	8/19/03	0920		X	UST1115-MW111521	10	X	X	X	X	X	X	
2	UST1115-MW111524	8/19/03	1030		X	UST1115-MW111524	10	X	X	X	X	X	X	
3	UST1115-MW111502	8/19/03	1115		X	UST1115-MW111502	10	X	X	X	X	X	X	
4	UST1115-MW111522	8/19/03	1300		X	UST1115-MW111522	10	X	X	X	X	X	X	
5	UST1115-MW111517	8/19/03	1345		X	UST1115-MW111517	10	X	X	X	X	X	X	
6	UST1115-MW111504	8/19/03	1425		X	UST1115-MW111504	10	X	X	X	X	X	X	
7	TripBlank-021903	8/19/03	----		X	Trip Blank	2	X						
8														
9														
10														
11														
12														

Transfer Number	Item Number	Transfers Relinquished By	Transfers Accepted By	Date	Time	Remarks
1	1 -- 7	[signature]	Fed EX 814815171741	8/19/03	18:00	Please E-mail results to Mark.Martin@Shawgrp.com
2		FEDEX	Muna Mohammed	8/20/03	0930	21 Day TAT

3.8

ACCUTEST LABORATORIES SOUTHEAST SAMPLE RECEIPT CONFIRMATION

Accutest's Job Number: F19117

Client: Shaw **Project:** Camp Lejeune-DW

Date Received: 8/20/03 **Time Received:** 8/20/03 @ 0930

of Coolers Received: 1 **Cooler Temperatures:** 3.8

Delivery Method: (FedEx) UPS Accutest Courier Greyhound Delivery Other

Air Bill Number: 8148 1517 1741

Cooler Custody Seals Intact ?	(Yes)	No	
Chain of Custody Provided ?	(Yes)	No	
COC Match Bottle Label ID's ?	(Yes)	No	
Sample Labels Present on all bottles ?	(Yes)	No	
All Analyses Marked On COC ?	(Yes)	No	
Are All Bottles Intact ?	(Yes)	No	
Samples Preserved Correctly ?	(Yes)	No	
Correct Number of Containers Used ?	(Yes)	No	
Sufficient Sample Volume ?	(Yes)	No	
Trip Blank Provided ?	(Yes)	No	
Trip Blank on COC ?	(Yes)	No	
Trip Blank Intact ?	(Yes)	No	N/A
Trip Blank Matrix ?	Soil	(Water)	N/A
Number of Encores ?	0		
Number of Soil Field Kits ?	0		

Summary of Comments: _____

Signature: Nuna Mohammad **Date:** 8/20/03

Southeast ACCUTEST Laboratories

03/10/03

Technical Report for

Shaw E & I, Inc.

Camp Lejeune-NW

824603

Accutest Job Number: F16645

Report to:

Shaw E & I, Inc.

natasha.sullivan@shawgrp.com

ATTN: Natasha Sullivan

Total number of pages in report: 125

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Harry Behzadi, Ph.D.
Laboratory Director

Certifications: FL (DOH E83510), NC (573), NJ (FL002), MA (FL946), IA (366), LA (03051), KS (E-10327), SC, AK

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Sample Summary

Shaw E & I, Inc.

Job No: F16645

Camp Lejeune-NW
Project No: 824603

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
F16645-1	02/18/03	11:00	MM	02/19/03	AQ	Ground Water	UST1115-GT01
F16645-2	02/17/03	12:00	MM	02/19/03	AQ	Ground Water	UST1115-MW78GW2202
F16645-3	02/17/03	12:05	MM	02/19/03	AQ	Ground Water	UST1115-MW78GW2202D
F16645-4	02/18/03	10:00	MM	02/19/03	AQ	Ground Water	UST1115-MW111523
F16645-5	02/17/03	11:00	MM	02/19/03	AQ	Ground Water	UST1115-MW111501
F16645-6	02/17/03	15:00	MM	02/19/03	AQ	Ground Water	UST1115-GT07
F16645-7	02/18/03	00:00	MM	02/19/03	AQ	Trip Blank Water	TRIP BLANK-021803
F16645-8	02/18/03	14:15	MM	02/19/03	AQ	Ground Water	USTHPFF-MWHPFF04
F16645-9	02/18/03	14:30	MM	02/19/03	AQ	Ground Water	USTHPFF-MW18
F16645-10	02/18/03	11:30	MM	02/19/03	AQ	Ground Water	USTHPFF-MWHPFF19
F16645-11	02/17/03	15:45	MM	02/19/03	AQ	Ground Water	UST1115-MW10R
F16645-12	02/17/03	16:30	MM	02/19/03	AQ	Ground Water	USTHPFF-MW01
F16645-13	02/17/03	16:35	MM	02/19/03	AQ	Ground Water	USTHPFF-MW01D

Sample Summary
(continued)

Shaw E & I, Inc.

Job No: F16645

Camp Lejeune-NW
Project No: 824603

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
F16645-14	02/18/03	10:00	MM	02/19/03	AQ	Ground Water	USTHPFF-MW11
F16645-15	02/18/03	12:00	MM	02/19/03	AQ	Ground Water	USTHPFF-MWHPFF20

Report of Analysis

Client Sample ID: UST1115-GT01
Lab Sample ID: F16645-1
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-NW

Date Sampled: 02/18/03
Date Received: 02/19/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	QR015933.D	1	02/25/03	RA	n/a	n/a	GQR622
Run #2 [a]	QR015972.D	10	02/27/03	RA	n/a	n/a	GQR623

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	80.0	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND [b]	10	5.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.69	1.0	0.50	ug/l	J
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	41.0	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	2.4	1.0	0.50	ug/l	
108-88-3	Toluene	557 [b]	10	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	1.3	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-GT01		
Lab Sample ID:	F16645-1	**Date Sampled:**	02/18/03
Matrix:	AQ - Ground Water	**Date Received:**	02/19/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	201	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	111%	92%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	113%	96%	74-127%
563-58-6	1,1-Dichloropropene	97%	100%	87-120%
563-58-6	1,1-Dichloropropene	107%	102%	87-120%

(a) Confirmed by GC/MS
(b) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-GT01
Lab Sample ID: F16645-1
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-NW

Date Sampled: 02/18/03
Date Received: 02/19/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	IJ17128.D	1	02/25/03	NJ	02/20/03	OP6980	GIJ815
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	2.0	ug/l	
120-12-7	Anthracene	ND	5.0	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	2.0	ug/l	
218-01-9	Chrysene	ND	5.0	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	2.0	ug/l	
86-73-7	Fluorene	ND	5.0	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	2.0	ug/l	
91-20-3	Naphthalene	6.6	5.0	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	2.0	ug/l	
129-00-0	Pyrene	ND	5.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	58%		41-139%
84-15-1	o-Terphenyl	55%		46-135%

(a) All hits confirmed by dual column analysis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-MW78GW2202
Lab Sample ID: F16645-2
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-NW

Date Sampled: 02/17/03
Date Received: 02/19/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	QR015934.D	1	02/25/03	RA	n/a	n/a	GQR622
Run #2	QR015964.D	1	02/27/03	RA	n/a	n/a	GQR623

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	41.1	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND [b]	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	0.54	1.0	0.50	ug/l	J
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	0.65	1.0	0.50	ug/l	J
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	0.81	1.0	0.50	ug/l	J

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW78GW2202		
Lab Sample ID:	F16645-2	**Date Sampled:**	02/17/03
Matrix:	AQ - Ground Water	**Date Received:**	02/19/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	82%	86%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	87%	89%	74-127%
563-58-6	1,1-Dichloropropene	102%	99%	87-120%
563-58-6	1,1-Dichloropropene	104%	101%	87-120%

(a) Confirmed by GC/MS
(b) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-MW78GW2202
Lab Sample ID: F16645-2 **Date Sampled:** 02/17/03
Matrix: AQ - Ground Water **Date Received:** 02/19/03
Method: EPA 610 EPA 610 **Percent Solids:** n/a
Project: Camp Lejeune-NW

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ17107.D	1	02/24/03	NJ	02/20/03	OP6980	GIJ814
Run #2							

	Initial Volume	Final Volume
Run #1	990 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.1	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.1	2.0	ug/l	
120-12-7	Anthracene	ND	5.1	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.1	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.1	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.1	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.1	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.1	2.0	ug/l	
218-01-9	Chrysene	ND	5.1	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.1	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.1	2.0	ug/l	
86-73-7	Fluorene	ND	5.1	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.1	2.0	ug/l	
91-20-3	Naphthalene	ND	5.1	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.1	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.1	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.1	2.0	ug/l	
129-00-0	Pyrene	ND	5.1	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	71%		41-139%
84-15-1	o-Terphenyl	85%		46-135%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-MW78GW2202D
Lab Sample ID: F16645-3
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-NW

Date Sampled: 02/17/03
Date Received: 02/19/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	QR015935.D	1	02/25/03	RA	n/a	n/a	GQR622
Run #2	QR015965.D	1	02/27/03	RA	n/a	n/a	GQR623

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	41.0	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND [b]	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	0.53	1.0	0.50	ug/l	J
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	0.78	1.0	0.50	ug/l	J

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW78GW2202D		
Lab Sample ID:	F16645-3	**Date Sampled:**	02/17/03
Matrix:	AQ - Ground Water	**Date Received:**	02/19/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	84%	84%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	94%	87%	74-127%
563-58-6	1,1-Dichloropropene	99%	98%	87-120%
563-58-6	1,1-Dichloropropene	108%	102%	87-120%

(a) Confirmed by GC/MS
(b) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-MW78GW2202D
Lab Sample ID: F16645-3
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-NW

Date Sampled: 02/17/03
Date Received: 02/19/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ17109.D	1	02/24/03	NJ	02/20/03	OP6980	GIJ814
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	2.0	ug/l	
120-12-7	Anthracene	ND	5.0	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	2.0	ug/l	
218-01-9	Chrysene	ND	5.0	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	2.0	ug/l	
86-73-7	Fluorene	ND	5.0	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	2.0	ug/l	
129-00-0	Pyrene	ND	5.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	72%		41-139%
84-15-1	o-Terphenyl	87%		46-135%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111523		
Lab Sample ID:	F16645-4	**Date Sampled:**	02/18/03
Matrix:	AQ - Ground Water	**Date Received:**	02/19/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	QR015936.D	1	02/25/03	RA	n/a	n/a	GQR622
Run #2	QR015966.D	1	02/27/03	RA	n/a	n/a	GQR623
Run #3 [b]	QR016012.D	5	02/28/03	RA	n/a	n/a	GQR625

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml
Run #3	5.0 ml

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	0.98	1.0	0.50	ug/l	J
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND [c]	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	223 [d]	5.0	2.5	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	2.0	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND [d]	5.0	2.5	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111523		
Lab Sample ID:	F16645-4	**Date Sampled:**	02/18/03
Matrix:	AQ - Ground Water	**Date Received:**	02/19/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND [d]	15	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
352-33-0	1-Chloro-4-fluorobenzene	82%	89%	87%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	81%	93%	87%	74-127%
563-58-6	1,1-Dichloropropene	100%	100%	100%	87-120%
563-58-6	1,1-Dichloropropene	100%	102%	107%	87-120%

(a) Confirmed by GC/MS
(b) Sample vial(s) contained significant headspace; reported results are considered minimum values.
(c) Result is from Run# 2
(d) Result is from Run# 3

Report of Analysis

Client Sample ID: UST1115-MW111523
Lab Sample ID: F16645-4
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-NW

Date Sampled: 02/18/03
Date Received: 02/19/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ17124.D	1	02/24/03	NJ	02/20/03	OP6980	GIJ814
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.1	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.1	2.0	ug/l	
120-12-7	Anthracene	ND	5.1	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.1	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.1	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.1	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.1	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.1	2.0	ug/l	
218-01-9	Chrysene	ND	5.1	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.1	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.1	2.0	ug/l	
86-73-7	Fluorene	ND	5.1	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.1	2.0	ug/l	
91-20-3	Naphthalene	ND	5.1	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.1	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.1	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.1	2.0	ug/l	
129-00-0	Pyrene	ND	5.1	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	70%		41-139%
84-15-1	o-Terphenyl	90%		46-135%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-MW111501
Lab Sample ID: F16645-5
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-NW

Date Sampled: 02/17/03
Date Received: 02/19/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR015937.D	1	02/25/03	RA	n/a	n/a	GQR622
Run #2	QR015969.D	5	02/27/03	RA	n/a	n/a	GQR623

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	187 [a]	5.0	2.5	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND [a]	5.0	2.5	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	12.3	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	1.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111501		
Lab Sample ID:	F16645-5	**Date Sampled:**	02/17/03
Matrix:	AQ - Ground Water	**Date Received:**	02/19/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	1.6	3.0	1.0	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	84%	85%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	100%	85%	74-127%
563-58-6	1,1-Dichloropropene	95%	99%	87-120%
563-58-6	1,1-Dichloropropene	111%	97%	87-120%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-MW111501
Lab Sample ID: F16645-5
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-NW

Date Sampled: 02/17/03
Date Received: 02/19/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ17113.D	1	02/24/03	NJ	02/20/03	OP6980	GIJ814
Run #2							

	Initial Volume	Final Volume
Run #1	990 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.1	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.1	2.0	ug/l	
120-12-7	Anthracene	ND	5.1	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.1	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.1	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.1	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.1	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.1	2.0	ug/l	
218-01-9	Chrysene	ND	5.1	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.1	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.1	2.0	ug/l	
86-73-7	Fluorene	ND	5.1	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.1	2.0	ug/l	
91-20-3	Naphthalene	ND	5.1	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.1	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.1	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.1	2.0	ug/l	
129-00-0	Pyrene	ND	5.1	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	71%		41-139%
84-15-1	o-Terphenyl	88%		46-135%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-GT07
Lab Sample ID: F16645-6
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-NW

Date Sampled: 02/17/03
Date Received: 02/19/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR015939.D	1	02/25/03	RA	n/a	n/a	GQR622
Run #2	QR015970.D	5	02/27/03	RA	n/a	n/a	GQR623

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	205 [a]	5.0	2.5	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND [a]	5.0	2.5	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	1.1	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-GT07		
Lab Sample ID:	F16645-6	**Date Sampled:**	02/17/03
Matrix:	AQ - Ground Water	**Date Received:**	02/19/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	81%	83%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	92%	85%	74-127%
563-58-6	1,1-Dichloropropene	95%	100%	87-120%
563-58-6	1,1-Dichloropropene	109%	102%	87-120%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-GT07
Lab Sample ID: F16645-6
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-NW

Date Sampled: 02/17/03
Date Received: 02/19/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ17115.D	1	02/24/03	NJ	02/20/03	OP6980	GIJ814
Run #2							

	Initial Volume	Final Volume
Run #1	920 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.4	2.2	ug/l	
208-96-8	Acenaphthylene	ND	5.4	2.2	ug/l	
120-12-7	Anthracene	ND	5.4	2.2	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.4	2.2	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.4	2.2	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.4	2.2	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.4	2.2	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.4	2.2	ug/l	
218-01-9	Chrysene	ND	5.4	2.2	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.4	2.2	ug/l	
206-44-0	Fluoranthene	ND	5.4	2.2	ug/l	
86-73-7	Fluorene	ND	5.4	2.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.4	2.2	ug/l	
91-20-3	Naphthalene	ND	5.4	2.2	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.4	2.2	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.4	2.2	ug/l	
85-01-8	Phenanthrene	ND	5.4	2.2	ug/l	
129-00-0	Pyrene	ND	5.4	2.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	85%		41-139%
84-15-1	o-Terphenyl	90%		46-135%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: TRIP BLANK-021803
Lab Sample ID: F16645-7
Matrix: AQ - Trip Blank Water
Method: EPA 601/602
Project: Camp Lejeune-NW

Date Sampled: 02/18/03
Date Received: 02/19/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR015940.D	1	02/25/03	RA	n/a	n/a	GQR622
Run #2	QR015967.D	1	02/27/03	RA	n/a	n/a	GQR623

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND [a]	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK-021803		
Lab Sample ID:	F16645-7	**Date Sampled:**	02/18/03
Matrix:	AQ - Trip Blank Water	**Date Received:**	02/19/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	80%	84%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	88%	86%	74-127%
563-58-6	1,1-Dichloropropene	105%	101%	87-120%
563-58-6	1,1-Dichloropropene	111%	101%	87-120%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: USTHPFF-MWHPFF04
Lab Sample ID: F16645-8
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-NW

Date Sampled: 02/18/03
Date Received: 02/19/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR015941.D	1	02/25/03	RA	n/a	n/a	GQR622
Run #2	QR015968.D	1	02/27/03	RA	n/a	n/a	GQR623

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND [a]	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF04		
Lab Sample ID:	F16645-8	**Date Sampled:**	02/18/03
Matrix:	AQ - Ground Water	**Date Received:**	02/19/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	80%	84%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	89%	86%	74-127%
563-58-6	1,1-Dichloropropene	102%	100%	87-120%
563-58-6	1,1-Dichloropropene	110%	101%	87-120%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: USTHPFF-MWHPFF04
Lab Sample ID: F16645-8
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-NW

Date Sampled: 02/18/03
Date Received: 02/19/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ17116.D	1	02/24/03	NJ	02/20/03	OP6980	GIJ814
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.1	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.1	2.0	ug/l	
120-12-7	Anthracene	ND	5.1	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.1	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.1	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.1	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.1	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.1	2.0	ug/l	
218-01-9	Chrysene	ND	5.1	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.1	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.1	2.0	ug/l	
86-73-7	Fluorene	ND	5.1	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.1	2.0	ug/l	
91-20-3	Naphthalene	ND	5.1	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.1	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.1	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.1	2.0	ug/l	
129-00-0	Pyrene	ND	5.1	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	86%		41-139%
84-15-1	o-Terphenyl	94%		46-135%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MW18		
Lab Sample ID:	F16645-9	**Date Sampled:**	02/18/03
Matrix:	AQ - Ground Water	**Date Received:**	02/19/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR015975.D	500	02/27/03	RA	n/a	n/a	GQR623
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	16900	500	250	ug/l	
75-27-4	Bromodichloromethane	ND	500	250	ug/l	
75-25-2	Bromoform	ND	500	250	ug/l	
74-83-9	Bromomethane	ND	500	250	ug/l	
56-23-5	Carbon tetrachloride	ND	500	250	ug/l	
108-90-7	Chlorobenzene	ND	500	250	ug/l	
124-48-1	Dibromochloromethane	ND	500	200	ug/l	
75-00-3	Chloroethane	ND	500	250	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	500	250	ug/l	
67-66-3	Chloroform	ND	500	250	ug/l	
74-87-3	Chloromethane	ND	500	250	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	500	250	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	500	250	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	500	250	ug/l	
75-71-8	Dichlorodifluoromethane	ND	500	250	ug/l	
75-34-3	1,1-Dichloroethane	ND	500	250	ug/l	
107-06-2	1,2-Dichloroethane	ND	500	250	ug/l	
75-35-4	1,1-Dichloroethene	ND	500	250	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	500	250	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	500	250	ug/l	
78-87-5	1,2-Dichloropropane	ND	500	250	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	500	150	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	500	150	ug/l	
100-41-4	Ethylbenzene	1370	500	250	ug/l	
75-09-2	Methylene chloride	ND	2500	500	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	500	250	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	500	100	ug/l	
127-18-4	Tetrachloroethene	ND	500	250	ug/l	
108-88-3	Toluene	30000	500	250	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	500	250	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	500	250	ug/l	
79-01-6	Trichloroethene	ND	500	250	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MW18		
Lab Sample ID:	F16645-9	**Date Sampled:**	02/18/03
Matrix:	AQ - Ground Water	**Date Received:**	02/19/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	500	250	ug/l	
75-01-4	Vinyl chloride	ND	500	250	ug/l	
1330-20-7	Xylenes (total)	7670	1500	500	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	91%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	96%		74-127%
563-58-6	1,1-Dichloropropene	99%		87-120%
563-58-6	1,1-Dichloropropene	103%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: USTHPFF-MW18
Lab Sample ID: F16645-9
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-NW

Date Sampled: 02/18/03
Date Received: 02/19/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	IJ17129.D	20	02/25/03	NJ	02/20/03	OP6980	GIJ815
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	100	41	ug/l	
208-96-8	Acenaphthylene	ND	100	41	ug/l	
120-12-7	Anthracene	ND	100	41	ug/l	
56-55-3	Benzo(a)anthracene	ND	100	41	ug/l	
50-32-8	Benzo(a)pyrene	ND	100	41	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	100	41	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	100	41	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	100	41	ug/l	
218-01-9	Chrysene	ND	100	41	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	100	41	ug/l	
206-44-0	Fluoranthene	ND	100	41	ug/l	
86-73-7	Fluorene	ND	100	41	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	100	41	ug/l	
91-20-3	Naphthalene	464	100	41	ug/l	
90-12-0	1-Methylnaphthalene	ND	100	41	ug/l	
91-57-6	2-Methylnaphthalene	67.3	100	41	ug/l	J
85-01-8	Phenanthrene	ND	100	41	ug/l	
129-00-0	Pyrene	ND	100	41	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	0% [b]		41-139%
84-15-1	o-Terphenyl	0% [b]		46-135%

(a) All hits confirmed by dual column analysis.
(b) Outside control limits due to dilution.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: USTHPFF-MWHPFF19
Lab Sample ID: F16645-10
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-NW

Date Sampled: 02/18/03
Date Received: 02/19/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR015976.D	250	02/27/03	RA	n/a	n/a	GQR623
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	16300	250	130	ug/l	
75-27-4	Bromodichloromethane	ND	250	130	ug/l	
75-25-2	Bromoform	ND	250	130	ug/l	
74-83-9	Bromomethane	ND	250	130	ug/l	
56-23-5	Carbon tetrachloride	ND	250	130	ug/l	
108-90-7	Chlorobenzene	ND	250	130	ug/l	
124-48-1	Dibromochloromethane	ND	250	100	ug/l	
75-00-3	Chloroethane	ND	250	130	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	250	130	ug/l	
67-66-3	Chloroform	ND	250	130	ug/l	
74-87-3	Chloromethane	ND	250	130	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	250	130	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	250	130	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	250	130	ug/l	
75-71-8	Dichlorodifluoromethane	ND	250	130	ug/l	
75-34-3	1,1-Dichloroethane	ND	250	130	ug/l	
107-06-2	1,2-Dichloroethane	2380	250	130	ug/l	
75-35-4	1,1-Dichloroethene	ND	250	130	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	250	130	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	250	130	ug/l	
78-87-5	1,2-Dichloropropane	ND	250	130	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	250	75	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	250	75	ug/l	
100-41-4	Ethylbenzene	1420	250	130	ug/l	
75-09-2	Methylene chloride	ND	1300	250	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	250	130	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	250	50	ug/l	
127-18-4	Tetrachloroethene	ND	250	130	ug/l	
108-88-3	Toluene	17800	250	130	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	250	130	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	250	130	ug/l	
79-01-6	Trichloroethene	ND	250	130	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF19		
Lab Sample ID:	F16645-10	**Date Sampled:**	02/18/03
Matrix:	AQ - Ground Water	**Date Received:**	02/19/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	250	130	ug/l	
75-01-4	Vinyl chloride	ND	250	130	ug/l	
1330-20-7	Xylenes (total)	6630	750	250	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	92%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	93%		74-127%
563-58-6	1,1-Dichloropropene	99%		87-120%
563-58-6	1,1-Dichloropropene	100%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: USTHPFF-MWHPFF19
Lab Sample ID: F16645-10 **Date Sampled:** 02/18/03
Matrix: AQ - Ground Water **Date Received:** 02/19/03
Method: EPA 610 EPA 610 **Percent Solids:** n/a
Project: Camp Lejeune-NW

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	IJ17130.D	10	02/25/03	NJ	02/20/03	OP6980	GIJ815
Run #2							

	Initial Volume	Final Volume
Run #1	1080 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	46	19	ug/l	
208-96-8	Acenaphthylene	ND	46	19	ug/l	
120-12-7	Anthracene	ND	46	19	ug/l	
56-55-3	Benzo(a)anthracene	ND	46	19	ug/l	
50-32-8	Benzo(a)pyrene	ND	46	19	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	46	19	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	46	19	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	46	19	ug/l	
218-01-9	Chrysene	ND	46	19	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	46	19	ug/l	
206-44-0	Fluoranthene	ND	46	19	ug/l	
86-73-7	Fluorene	ND	46	19	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	46	19	ug/l	
91-20-3	Naphthalene	220	46	19	ug/l	
90-12-0	1-Methylnaphthalene	29.6	46	19	ug/l	J
91-57-6	2-Methylnaphthalene	76.6	46	19	ug/l	
85-01-8	Phenanthrene	ND	46	19	ug/l	
129-00-0	Pyrene	ND	46	19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	115%		41-139%
84-15-1	o-Terphenyl	99%		46-135%

(a) All hits confirmed by dual column analysis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW10R		
Lab Sample ID:	F16645-11	**Date Sampled:**	02/17/03
Matrix:	AQ - Ground Water	**Date Received:**	02/19/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR015974.D	50	02/27/03	RA	n/a	n/a	GQR623
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	2340	50	25	ug/l	
75-27-4	Bromodichloromethane	ND	50	25	ug/l	
75-25-2	Bromoform	ND	50	25	ug/l	
74-83-9	Bromomethane	ND	50	25	ug/l	
56-23-5	Carbon tetrachloride	ND	50	25	ug/l	
108-90-7	Chlorobenzene	ND	50	25	ug/l	
124-48-1	Dibromochloromethane	ND	50	20	ug/l	
75-00-3	Chloroethane	ND	50	25	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	50	25	ug/l	
67-66-3	Chloroform	ND	50	25	ug/l	
74-87-3	Chloromethane	ND	50	25	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	50	25	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	50	25	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	50	25	ug/l	
75-71-8	Dichlorodifluoromethane	ND	50	25	ug/l	
75-34-3	1,1-Dichloroethane	ND	50	25	ug/l	
107-06-2	1,2-Dichloroethane	ND	50	25	ug/l	
75-35-4	1,1-Dichloroethene	ND	50	25	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	50	25	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	50	25	ug/l	
78-87-5	1,2-Dichloropropane	ND	50	25	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	50	15	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	50	15	ug/l	
100-41-4	Ethylbenzene	352	50	25	ug/l	
75-09-2	Methylene chloride	ND	250	50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	50	25	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	50	10	ug/l	
127-18-4	Tetrachloroethene	ND	50	25	ug/l	
108-88-3	Toluene	2380	50	25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	50	25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	50	25	ug/l	
79-01-6	Trichloroethene	ND	50	25	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW10R		
Lab Sample ID:	F16645-11	**Date Sampled:**	02/17/03
Matrix:	AQ - Ground Water	**Date Received:**	02/19/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	50	25	ug/l	
75-01-4	Vinyl chloride	ND	50	25	ug/l	
1330-20-7	Xylenes (total)	2260	150	50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	95%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	100%		74-127%
563-58-6	1,1-Dichloropropene	99%		87-120%
563-58-6	1,1-Dichloropropene	103%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-MW10R
Lab Sample ID: F16645-11
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-NW

Date Sampled: 02/17/03
Date Received: 02/19/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	IJ17131.D	4	02/25/03	NJ	02/20/03	OP6980	GIJ815
Run #2							

	Initial Volume	Final Volume
Run #1	990 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	20	8.1	ug/l	
208-96-8	Acenaphthylene	ND	20	8.1	ug/l	
120-12-7	Anthracene	ND	20	8.1	ug/l	
56-55-3	Benzo(a)anthracene	ND	20	8.1	ug/l	
50-32-8	Benzo(a)pyrene	ND	20	8.1	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	20	8.1	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	20	8.1	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	20	8.1	ug/l	
218-01-9	Chrysene	ND	20	8.1	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	20	8.1	ug/l	
206-44-0	Fluoranthene	ND	20	8.1	ug/l	
86-73-7	Fluorene	ND	20	8.1	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	20	8.1	ug/l	
91-20-3	Naphthalene	55.5	20	8.1	ug/l	
90-12-0	1-Methylnaphthalene	26.7	20	8.1	ug/l	
91-57-6	2-Methylnaphthalene	39.3	20	8.1	ug/l	
85-01-8	Phenanthrene	ND	20	8.1	ug/l	
129-00-0	Pyrene	ND	20	8.1	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	115%		41-139%
84-15-1	o-Terphenyl	109%		46-135%

(a) All hits confirmed by dual column analysis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MW01		
Lab Sample ID:	F16645-12	**Date Sampled:**	02/17/03
Matrix:	AQ - Ground Water	**Date Received:**	02/19/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR015977.D	500	02/27/03	RA	n/a	n/a	GQR623
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	5380	500	250	ug/l	
75-27-4	Bromodichloromethane	ND	500	250	ug/l	
75-25-2	Bromoform	ND	500	250	ug/l	
74-83-9	Bromomethane	ND	500	250	ug/l	
56-23-5	Carbon tetrachloride	ND	500	250	ug/l	
108-90-7	Chlorobenzene	ND	500	250	ug/l	
124-48-1	Dibromochloromethane	ND	500	200	ug/l	
75-00-3	Chloroethane	ND	500	250	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	500	250	ug/l	
67-66-3	Chloroform	ND	500	250	ug/l	
74-87-3	Chloromethane	ND	500	250	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	500	250	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	500	250	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	500	250	ug/l	
75-71-8	Dichlorodifluoromethane	ND	500	250	ug/l	
75-34-3	1,1-Dichloroethane	ND	500	250	ug/l	
107-06-2	1,2-Dichloroethane	ND	500	250	ug/l	
75-35-4	1,1-Dichloroethene	ND	500	250	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	500	250	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	500	250	ug/l	
78-87-5	1,2-Dichloropropane	ND	500	250	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	500	150	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	500	150	ug/l	
100-41-4	Ethylbenzene	2280	500	250	ug/l	
75-09-2	Methylene chloride	ND	2500	500	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	500	250	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	500	100	ug/l	
127-18-4	Tetrachloroethene	ND	500	250	ug/l	
108-88-3	Toluene	22000	500	250	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	500	250	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	500	250	ug/l	
79-01-6	Trichloroethene	ND	500	250	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MW01		
Lab Sample ID:	F16645-12	**Date Sampled:**	02/17/03
Matrix:	AQ - Ground Water	**Date Received:**	02/19/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	500	250	ug/l	
75-01-4	Vinyl chloride	ND	500	250	ug/l	
1330-20-7	Xylenes (total)	11600	1500	500	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	92%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	91%		74-127%
563-58-6	1,1-Dichloropropene	99%		87-120%
563-58-6	1,1-Dichloropropene	98%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: USTHPFF-MW01
Lab Sample ID: F16645-12
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-NW

Date Sampled: 02/17/03
Date Received: 02/19/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	IJ17132.D	10	02/25/03	NJ	02/20/03	OP6980	GIJ815
Run #2							

	Initial Volume	Final Volume
Run #1	990 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	51	20	ug/l	
208-96-8	Acenaphthylene	ND	51	20	ug/l	
120-12-7	Anthracene	ND	51	20	ug/l	
56-55-3	Benzo(a)anthracene	ND	51	20	ug/l	
50-32-8	Benzo(a)pyrene	ND	51	20	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	51	20	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	51	20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	51	20	ug/l	
218-01-9	Chrysene	ND	51	20	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	51	20	ug/l	
206-44-0	Fluoranthene	ND	51	20	ug/l	
86-73-7	Fluorene	ND	51	20	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	51	20	ug/l	
91-20-3	Naphthalene	415	51	20	ug/l	
90-12-0	1-Methylnaphthalene	39.8	51	20	ug/l	J
91-57-6	2-Methylnaphthalene	84.0	51	20	ug/l	
85-01-8	Phenanthrene	ND	51	20	ug/l	
129-00-0	Pyrene	ND	51	20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	108%		41-139%
84-15-1	o-Terphenyl	103%		46-135%

(a) All hits confirmed by dual column analysis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: USTHPFF-MW01D
Lab Sample ID: F16645-13
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-NW

Date Sampled: 02/17/03
Date Received: 02/19/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR015983.D	500	02/28/03	RA	n/a	n/a	GQR623
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	5390	500	250	ug/l	
75-27-4	Bromodichloromethane	ND	500	250	ug/l	
75-25-2	Bromoform	ND	500	250	ug/l	
74-83-9	Bromomethane	ND	500	250	ug/l	
56-23-5	Carbon tetrachloride	ND	500	250	ug/l	
108-90-7	Chlorobenzene	ND	500	250	ug/l	
124-48-1	Dibromochloromethane	ND	500	200	ug/l	
75-00-3	Chloroethane	ND	500	250	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	500	250	ug/l	
67-66-3	Chloroform	ND	500	250	ug/l	
74-87-3	Chloromethane	ND	500	250	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	500	250	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	500	250	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	500	250	ug/l	
75-71-8	Dichlorodifluoromethane	ND	500	250	ug/l	
75-34-3	1,1-Dichloroethane	ND	500	250	ug/l	
107-06-2	1,2-Dichloroethane	ND	500	250	ug/l	
75-35-4	1,1-Dichloroethene	ND	500	250	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	500	250	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	500	250	ug/l	
78-87-5	1,2-Dichloropropane	ND	500	250	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	500	150	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	500	150	ug/l	
100-41-4	Ethylbenzene	2310	500	250	ug/l	
75-09-2	Methylene chloride	612	2500	500	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	ND	500	250	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	500	100	ug/l	
127-18-4	Tetrachloroethene	ND	500	250	ug/l	
108-88-3	Toluene	22100	500	250	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	500	250	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	500	250	ug/l	
79-01-6	Trichloroethene	ND	500	250	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MW01D		
Lab Sample ID:	F16645-13	**Date Sampled:**	02/17/03
Matrix:	AQ - Ground Water	**Date Received:**	02/19/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	500	250	ug/l	
75-01-4	Vinyl chloride	ND	500	250	ug/l	
1330-20-7	Xylenes (total)	11700	1500	500	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	93%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	98%		74-127%
563-58-6	1,1-Dichloropropene	100%		87-120%
563-58-6	1,1-Dichloropropene	102%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MW01D		
Lab Sample ID:	F16645-13	**Date Sampled:**	02/17/03
Matrix:	AQ - Ground Water	**Date Received:**	02/19/03
Method:	EPA 610 EPA 610	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	IJ17133.D	10	02/25/03	NJ	02/20/03	OP6980	GIJ815
Run #2							

	Initial Volume	Final Volume
Run #1	990 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	51	20	ug/l	
208-96-8	Acenaphthylene	ND	51	20	ug/l	
120-12-7	Anthracene	ND	51	20	ug/l	
56-55-3	Benzo(a)anthracene	ND	51	20	ug/l	
50-32-8	Benzo(a)pyrene	ND	51	20	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	51	20	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	51	20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	51	20	ug/l	
218-01-9	Chrysene	ND	51	20	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	51	20	ug/l	
206-44-0	Fluoranthene	ND	51	20	ug/l	
86-73-7	Fluorene	ND	51	20	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	51	20	ug/l	
91-20-3	Naphthalene	435	51	20	ug/l	
90-12-0	1-Methylnaphthalene	41.0	51	20	ug/l	J
91-57-6	2-Methylnaphthalene	86.1	51	20	ug/l	
85-01-8	Phenanthrene	ND	51	20	ug/l	
129-00-0	Pyrene	ND	51	20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	113%		41-139%
84-15-1	o-Terphenyl	105%		46-135%

(a) All hits confirmed by dual column analysis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MW11		
Lab Sample ID:	F16645-14	**Date Sampled:**	02/18/03
Matrix:	AQ - Ground Water	**Date Received:**	02/19/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR015973.D	20	02/27/03	RA	n/a	n/a	GQR623
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	274	20	10	ug/l	
75-27-4	Bromodichloromethane	ND	20	10	ug/l	
75-25-2	Bromoform	ND	20	10	ug/l	
74-83-9	Bromomethane	ND	20	10	ug/l	
56-23-5	Carbon tetrachloride	ND	20	10	ug/l	
108-90-7	Chlorobenzene	ND	20	10	ug/l	
124-48-1	Dibromochloromethane	ND	20	8.0	ug/l	
75-00-3	Chloroethane	ND	20	10	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	20	10	ug/l	
67-66-3	Chloroform	ND	20	10	ug/l	
74-87-3	Chloromethane	ND	20	10	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	20	10	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	20	10	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	20	10	ug/l	
75-71-8	Dichlorodifluoromethane	ND	20	10	ug/l	
75-34-3	1,1-Dichloroethane	ND	20	10	ug/l	
107-06-2	1,2-Dichloroethane	ND	20	10	ug/l	
75-35-4	1,1-Dichloroethene	ND	20	10	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	20	10	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	20	10	ug/l	
78-87-5	1,2-Dichloropropane	ND	20	10	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	20	6.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	20	6.0	ug/l	
100-41-4	Ethylbenzene	98.3	20	10	ug/l	
75-09-2	Methylene chloride	ND	100	20	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	20	10	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	20	4.0	ug/l	
127-18-4	Tetrachloroethene	ND	20	10	ug/l	
108-88-3	Toluene	1160	20	10	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	20	10	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	20	10	ug/l	
79-01-6	Trichloroethene	ND	20	10	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MW11		
Lab Sample ID:	F16645-14	**Date Sampled:**	02/18/03
Matrix:	AQ - Ground Water	**Date Received:**	02/19/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	20	10	ug/l	
75-01-4	Vinyl chloride	ND	20	10	ug/l	
1330-20-7	Xylenes (total)	501	60	20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	92%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	92%		74-127%
563-58-6	1,1-Dichloropropene	100%		87-120%
563-58-6	1,1-Dichloropropene	103%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: USTHPFF-MW11
Lab Sample ID: F16645-14
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-NW

Date Sampled: 02/18/03
Date Received: 02/19/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	IJ17134.D	1	02/25/03	NJ	02/20/03	OP6980	GIJ815
Run #2							

	Initial Volume	Final Volume
Run #1	990 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.1	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.1	2.0	ug/l	
120-12-7	Anthracene	ND	5.1	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.1	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.1	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.1	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.1	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.1	2.0	ug/l	
218-01-9	Chrysene	ND	5.1	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.1	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.1	2.0	ug/l	
86-73-7	Fluorene	ND	5.1	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.1	2.0	ug/l	
91-20-3	Naphthalene	7.5	5.1	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.1	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.1	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.1	2.0	ug/l	
129-00-0	Pyrene	ND	5.1	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	105%		41-139%
84-15-1	o-Terphenyl	72%		46-135%

(a) Confirmed by GC/MS

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: USTHPFF-MWHPFF20
Lab Sample ID: F16645-15
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-NW

Date Sampled: 02/18/03
Date Received: 02/19/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR015979.D	200	02/27/03	RA	n/a	n/a	GQR623
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	3280	200	100	ug/l	
75-27-4	Bromodichloromethane	ND	200	100	ug/l	
75-25-2	Bromoform	ND	200	100	ug/l	
74-83-9	Bromomethane	ND	200	100	ug/l	
56-23-5	Carbon tetrachloride	ND	200	100	ug/l	
108-90-7	Chlorobenzene	ND	200	100	ug/l	
124-48-1	Dibromochloromethane	ND	200	80	ug/l	
75-00-3	Chloroethane	ND	200	100	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	200	100	ug/l	
67-66-3	Chloroform	ND	200	100	ug/l	
74-87-3	Chloromethane	ND	200	100	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	200	100	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	200	100	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	200	100	ug/l	
75-71-8	Dichlorodifluoromethane	ND	200	100	ug/l	
75-34-3	1,1-Dichloroethane	ND	200	100	ug/l	
107-06-2	1,2-Dichloroethane	ND	200	100	ug/l	
75-35-4	1,1-Dichloroethene	ND	200	100	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	200	100	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	200	100	ug/l	
78-87-5	1,2-Dichloropropane	ND	200	100	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	200	60	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	200	60	ug/l	
100-41-4	Ethylbenzene	551	200	100	ug/l	
75-09-2	Methylene chloride	ND	1000	200	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	200	100	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	200	40	ug/l	
127-18-4	Tetrachloroethene	ND	200	100	ug/l	
108-88-3	Toluene	7630	200	100	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	200	100	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	200	100	ug/l	
79-01-6	Trichloroethene	ND	200	100	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF20		
Lab Sample ID:	F16645-15	**Date Sampled:**	02/18/03
Matrix:	AQ - Ground Water	**Date Received:**	02/19/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	200	100	ug/l	
75-01-4	Vinyl chloride	ND	200	100	ug/l	
1330-20-7	Xylenes (total)	2330	600	200	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	90%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	92%		74-127%
563-58-6	1,1-Dichloropropene	100%		87-120%
563-58-6	1,1-Dichloropropene	104%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: USTHPFF-MWHPFF20
Lab Sample ID: F16645-15
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-NW

Date Sampled: 02/18/03
Date Received: 02/19/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	IJ17135.D	1	02/25/03	NJ	02/20/03	OP6980	GIJ815
Run #2 [a]	IJ17136.D	4	02/25/03	NJ	02/20/03	OP6980	GIJ815

	Initial Volume	Final Volume
Run #1	940 ml	1.0 ml
Run #2	940 ml	1.0 ml

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.3	2.1	ug/l	
208-96-8	Acenaphthylene	ND	5.3	2.1	ug/l	
120-12-7	Anthracene	ND	5.3	2.1	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.3	2.1	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.3	2.1	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.3	2.1	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.3	2.1	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.3	2.1	ug/l	
218-01-9	Chrysene	ND	5.3	2.1	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.3	2.1	ug/l	
206-44-0	Fluoranthene	ND	5.3	2.1	ug/l	
86-73-7	Fluorene	ND	5.3	2.1	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.3	2.1	ug/l	
91-20-3	Naphthalene	104 [b]	21	8.5	ug/l	
90-12-0	1-Methylnaphthalene	6.4	5.3	2.1	ug/l	
91-57-6	2-Methylnaphthalene	14.8	5.3	2.1	ug/l	
85-01-8	Phenanthrene	ND	5.3	2.1	ug/l	
129-00-0	Pyrene	ND	5.3	2.1	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	94%	100%	41-139%
84-15-1	o-Terphenyl	96%	101%	46-135%

(a) All hits confirmed by dual column analysis.
(b) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries
- Initial and Continuing Calibration Summaries

Blank Spike Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR622-BS	QR015923.D	1	02/25/03	RA	n/a	n/a	GQR622

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16645-1, F16645-2, F16645-3, F16645-4, F16645-5, F16645-6, F16645-7, F16645-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	18.6	93	88-121
75-27-4	Bromodichloromethane	20	18.6	93	79-121
75-25-2	Bromoform	20	20.1	101	61-135
74-83-9	Bromomethane	20	19.8	99	44-154
108-90-7	Chlorobenzene	20	20.4	102	87-120
124-48-1	Dibromochloromethane	20	18.3	92	71-125
75-00-3	Chloroethane	20	21.4	107	68-146
110-75-8	2-Chloroethylvinyl ether	20	26.4	132	39-148
67-66-3	Chloroform	20	19.0	95	87-116
74-87-3	Chloromethane	20	19.0	95	34-188
95-50-1	1,2-Dichlorobenzene	20	19.8	99	81-119
541-73-1	1,3-Dichlorobenzene	20	19.6	98	82-120
106-46-7	1,4-Dichlorobenzene	20	19.7	99	81-120
75-71-8	Dichlorodifluoromethane	20	20.8	104	43-179
75-34-3	1,1-Dichloroethane	20	20.3	102	83-126
107-06-2	1,2-Dichloroethane	20	20.1	101	83-110
75-35-4	1,1-Dichloroethene	20	21.8	109	78-148
156-59-2	cis-1,2-Dichloroethene	20	19.7	99	86-134
156-60-5	trans-1,2-Dichloroethene	20	21.7	109	86-129
78-87-5	1,2-Dichloropropane	20	20.8	104	80-110
10061-01-5	cis-1,3-Dichloropropene	20	23.1	116	68-129
10061-02-6	trans-1,3-Dichloropropene	20	21.7	109	62-132
100-41-4	Ethylbenzene	20	20.0	100	86-125
75-09-2	Methylene chloride	20	21.1	106	74-130
1634-04-4	Methyl Tert Butyl Ether	20	17.9	90	80-117
79-34-5	1,1,2,2-Tetrachloroethane	20	18.8	94	77-108
127-18-4	Tetrachloroethene	20	22.0	110	85-123
108-88-3	Toluene	20	19.4	97	89-123
71-55-6	1,1,1-Trichloroethane	20	21.9	110	86-123
79-00-5	1,1,2-Trichloroethane	20	20.2	101	81-109
79-01-6	Trichloroethene	20	22.1	111	85-117
75-69-4	Trichlorofluoromethane	20	20.5	103	74-149
75-01-4	Vinyl chloride	20	20.7	104	72-138
1330-20-7	Xylenes (total)	60	59.8	100	89-124

Blank Spike Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR622-BS	QR015923.D	1	02/25/03	RA	n/a	n/a	GQR622

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16645-1, F16645-2, F16645-3, F16645-4, F16645-5, F16645-6, F16645-7, F16645-8

CAS No.	Surrogate Recoveries	BSP	Limits
352-33-0	1-Chloro-4-fluorobenzene	102%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	108%	74-127%
563-58-6	1,1-Dichloropropene	99%	87-120%
563-58-6	1,1-Dichloropropene	105%	87-120%

Blank Spike Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR623-BS	QR015963.D	1	02/27/03	RA	n/a	n/a	GQR623

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16645-1, F16645-2, F16645-3, F16645-4, F16645-5, F16645-6, F16645-7, F16645-8, F16645-9, F16645-10, F16645-11, F16645-12, F16645-13, F16645-14, F16645-15

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	20.6	103	88-121
75-27-4	Bromodichloromethane	20	18.7	94	79-121
75-25-2	Bromoform	20	19.2	96	61-135
74-83-9	Bromomethane	20	18.8	94	44-154
56-23-5	Carbon tetrachloride	20	21.3	107	81-127
108-90-7	Chlorobenzene	20	20.6	103	87-120
124-48-1	Dibromochloromethane	20	18.6	93	71-125
75-00-3	Chloroethane	20	20.3	102	68-146
110-75-8	2-Chloroethylvinyl ether	20	20.4	102	39-148
67-66-3	Chloroform	20	19.2	96	87-116
74-87-3	Chloromethane	20	19.9	100	34-188
95-50-1	1,2-Dichlorobenzene	20	20.1	101	81-119
541-73-1	1,3-Dichlorobenzene	20	20.6	103	82-120
106-46-7	1,4-Dichlorobenzene	20	20.3	102	81-120
75-71-8	Dichlorodifluoromethane	20	18.2	91	43-179
75-34-3	1,1-Dichloroethane	20	20.8	104	83-126
107-06-2	1,2-Dichloroethane	20	20.0	100	83-110
75-35-4	1,1-Dichloroethene	20	22.1	111	78-148
156-59-2	cis-1,2-Dichloroethene	20	19.5	98	86-134
156-60-5	trans-1,2-Dichloroethene	20	20.2	101	86-129
78-87-5	1,2-Dichloropropane	20	20.4	102	80-110
10061-01-5	cis-1,3-Dichloropropene	20	22.2	111	68-129
10061-02-6	trans-1,3-Dichloropropene	20	20.9	105	62-132
100-41-4	Ethylbenzene	20	21.8	109	86-125
75-09-2	Methylene chloride	20	20.3	102	74-130
1634-04-4	Methyl Tert Butyl Ether	20	18.8	94	80-117
79-34-5	1,1,2,2-Tetrachloroethane	20	19.5	98	77-108
127-18-4	Tetrachloroethene	20	22.0	110	85-123
108-88-3	Toluene	20	21.4	107	89-123
71-55-6	1,1,1-Trichloroethane	20	20.7	104	86-123
79-00-5	1,1,2-Trichloroethane	20	20.1	101	81-109
79-01-6	Trichloroethene	20	21.3	107	85-117
75-69-4	Trichlorofluoromethane	20	19.1	96	74-149
75-01-4	Vinyl chloride	20	20.2	101	72-138
1330-20-7	Xylenes (total)	60	65.5	109	89-124

Blank Spike Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR623-BS	QR015963.D	1	02/27/03	RA	n/a	n/a	GQR623

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16645-1, F16645-2, F16645-3, F16645-4, F16645-5, F16645-6, F16645-7, F16645-8, F16645-9, F16645-10, F16645-11, F16645-12, F16645-13, F16645-14, F16645-15

CAS No.	Surrogate Recoveries	BSP	Limits
352-33-0	1-Chloro-4-fluorobenzene	102%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	103%	74-127%
563-58-6	1,1-Dichloropropene	101%	87-120%
563-58-6	1,1-Dichloropropene	101%	87-120%

Blank Spike Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR625-BS	QR016011.D	1	02/28/03	RA	n/a	n/a	GQR625

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16645-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
107-06-2	1,2-Dichloroethane	20	20.9	105	83-110
100-41-4	Ethylbenzene	20	22.0	110	86-125
1330-20-7	Xylenes (total)	60	65.7	110	89-124

CAS No.	Surrogate Recoveries	BSP	Limits
352-33-0	1-Chloro-4-fluorobenzene	102%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	106%	74-127%
563-58-6	1,1-Dichloropropene	100%	87-120%
563-58-6	1,1-Dichloropropene	103%	87-120%

Duplicate Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F16645-12DUP	QR015978.D	500	02/27/03	RA	n/a	n/a	GQR623
F16645-12	QR015977.D	500	02/27/03	RA	n/a	n/a	GQR623

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16645-1, F16645-2, F16645-3, F16645-4, F16645-5, F16645-6, F16645-7, F16645-8, F16645-9, F16645-10, F16645-11, F16645-12, F16645-13, F16645-14, F16645-15

CAS No.	Compound	F16645-12 ug/l	Q	DUP ug/l	Q	RPD	Limits
71-43-2	Benzene	5380		5280		2	
75-27-4	Bromodichloromethane	ND		ND		nc	
75-25-2	Bromoform	ND		ND		nc	
74-83-9	Bromomethane	ND		ND		nc	
56-23-5	Carbon tetrachloride	ND		ND		nc	
108-90-7	Chlorobenzene	ND		ND		nc	
124-48-1	Dibromochloromethane	ND		ND		nc	
75-00-3	Chloroethane	ND		ND		nc	
110-75-8	2-Chloroethylvinyl ether	ND		ND		nc	
67-66-3	Chloroform	ND		ND		nc	
74-87-3	Chloromethane	ND		ND		nc	
95-50-1	1,2-Dichlorobenzene	ND		ND		nc	
541-73-1	1,3-Dichlorobenzene	ND		ND		nc	
106-46-7	1,4-Dichlorobenzene	ND		ND		nc	
75-71-8	Dichlorodifluoromethane	ND		ND		nc	
75-34-3	1,1-Dichloroethane	ND		ND		nc	
107-06-2	1,2-Dichloroethane	ND		ND		nc	
75-35-4	1,1-Dichloroethene	ND		ND		nc	
156-59-2	cis-1,2-Dichloroethene	ND		ND		nc	
156-60-5	trans-1,2-Dichloroethene	ND		ND		nc	
78-87-5	1,2-Dichloropropane	ND		ND		nc	
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	
100-41-4	Ethylbenzene	2280		2240		2	
75-09-2	Methylene chloride	ND		ND		nc	
1634-04-4	Methyl Tert Butyl Ether	ND		ND		nc	
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	
127-18-4	Tetrachloroethene	ND		ND		nc	
108-88-3	Toluene	22000		21600		2	
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	
79-01-6	Trichloroethene	ND		ND		nc	
75-69-4	Trichlorofluoromethane	ND		ND		nc	
75-01-4	Vinyl chloride	ND		ND		nc	
1330-20-7	Xylenes (total)	11600		11400		2	

Duplicate Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F16645-12DUP	QR015978.D	500	02/27/03	RA	n/a	n/a	GQR623
F16645-12	QR015977.D	500	02/27/03	RA	n/a	n/a	GQR623

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16645-1, F16645-2, F16645-3, F16645-4, F16645-5, F16645-6, F16645-7, F16645-8, F16645-9, F16645-10, F16645-11, F16645-12, F16645-13, F16645-14, F16645-15

CAS No.	Surrogate Recoveries	DUP	F16645-12	Limits
352-33-0	1-Chloro-4-fluorobenzene	92%	92%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	96%	91%	74-127%
563-58-6	1,1-Dichloropropene	99%	99%	87-120%
563-58-6	1,1-Dichloropropene	102%	98%	87-120%

Duplicate Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F16645-5DUP	QR015938.D	1	02/25/03	RA	n/a	n/a	GQR622
F16645-5	QR015937.D	1	02/25/03	RA	n/a	n/a	GQR622

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16645-1, F16645-2, F16645-3, F16645-4, F16645-5, F16645-6, F16645-7, F16645-8

CAS No.	Compound	F16645-5 ug/l	Q	DUP ug/l	Q	RPD	Limits
71-43-2	Benzene	169		168		1	
75-27-4	Bromodichloromethane	ND		ND		nc	
75-25-2	Bromoform	ND		ND		nc	
74-83-9	Bromomethane	ND		ND		nc	
108-90-7	Chlorobenzene	ND		ND		nc	
124-48-1	Dibromochloromethane	ND		ND		nc	
75-00-3	Chloroethane	ND		ND		nc	
110-75-8	2-Chloroethylvinyl ether	ND		ND		nc	
67-66-3	Chloroform	ND		ND		nc	
74-87-3	Chloromethane	ND		ND		nc	
95-50-1	1,2-Dichlorobenzene	ND		ND		nc	
541-73-1	1,3-Dichlorobenzene	ND		ND		nc	
106-46-7	1,4-Dichlorobenzene	ND		ND		nc	
75-71-8	Dichlorodifluoromethane	ND		ND		nc	
75-34-3	1,1-Dichloroethane	ND		ND		nc	
107-06-2	1,2-Dichloroethane	12.3		12.4		1	
75-35-4	1,1-Dichloroethene	ND		ND		nc	
156-59-2	cis-1,2-Dichloroethene	ND		ND		nc	
156-60-5	trans-1,2-Dichloroethene	ND		ND		nc	
78-87-5	1,2-Dichloropropane	ND		ND		nc	
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	
100-41-4	Ethylbenzene	ND		ND		nc	
75-09-2	Methylene chloride	ND		ND		nc	
1634-04-4	Methyl Tert Butyl Ether	ND		ND		nc	
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	
127-18-4	Tetrachloroethene	ND		ND		nc	
108-88-3	Toluene	1.0		1.0		0	
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	
79-01-6	Trichloroethene	ND		ND		nc	
75-69-4	Trichlorofluoromethane	ND		ND		nc	
75-01-4	Vinyl chloride	ND		ND		nc	
1330-20-7	Xylenes (total)	1.6	J	1.8	J	12	

Duplicate Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F16645-5DUP	QR015938.D	1	02/25/03	RA	n/a	n/a	GQR622
F16645-5	QR015937.D	1	02/25/03	RA	n/a	n/a	GQR622

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16645-1, F16645-2, F16645-3, F16645-4, F16645-5, F16645-6, F16645-7, F16645-8

CAS No.	Surrogate Recoveries	DUP	F16645-5	Limits
352-33-0	1-Chloro-4-fluorobenzene	82%	84%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	97%	100%	74-127%
563-58-6	1,1-Dichloropropene	97%	95%	87-120%
563-58-6	1,1-Dichloropropene	109%	111%	87-120%

Duplicate Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F16674-2DUP	QR016014.D	1	02/28/03	RA	n/a	n/a	GQR625
F16674-2	QR016013.D	1	02/28/03	RA	n/a	n/a	GQR625

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16645-4

CAS No.	Compound	F16674-2 ug/l	Q	DUP ug/l	Q	RPD	Limits
107-06-2	1,2-Dichloroethane	ND		ND		nc	
100-41-4	Ethylbenzene	ND		ND		nc	
1330-20-7	Xylenes (total)	ND		ND		nc	

CAS No.	Surrogate Recoveries	DUP	F16674-2	Limits
352-33-0	1-Chloro-4-fluorobenzene	84%	83%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	85%	83%	74-127%
563-58-6	1,1-Dichloropropene	100%	100%	87-120%
563-58-6	1,1-Dichloropropene	107%	108%	87-120%

Duplicate Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F16674-8DUP	QR016025.D	500	02/28/03	RA	n/a	n/a	GQR625
F16674-8 [a]	QR016024.D	500	02/28/03	RA	n/a	n/a	GQR625

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16645-4

CAS No.	Compound	F16674-8 ug/l	Q	DUP ug/l	Q	RPD	Limits
107-06-2	1,2-Dichloroethane	267	J	263	J	2	
100-41-4	Ethylbenzene	2650		2590		2	
1330-20-7	Xylenes (total)	16000		15600		3	

CAS No.	Surrogate Recoveries	DUP	F16674-8	Limits
352-33-0	1-Chloro-4-fluorobenzene	94%	93%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	97%	99%	74-127%
563-58-6	1,1-Dichloropropene	99%	98%	87-120%
563-58-6	1,1-Dichloropropene	109%	109%	87-120%

(a) Confirmed by GC/MS

Method Blank Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR622-MB	QR015921.D	1	02/25/03	RA	n/a	n/a	GQR622

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16645-1, F16645-2, F16645-3, F16645-4, F16645-5, F16645-6, F16645-7, F16645-8

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	

Method Blank Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR622-MB	QR015921.D	1	02/25/03	RA	n/a	n/a	GQR622

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16645-1, F16645-2, F16645-3, F16645-4, F16645-5, F16645-6, F16645-7, F16645-8

CAS No.	Surrogate Recoveries		Limits
352-33-0	1-Chloro-4-fluorobenzene	80%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	87%	74-127%
563-58-6	1,1-Dichloropropene	103%	87-120%
563-58-6	1,1-Dichloropropene	110%	87-120%

Method Blank Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR623-MB	QR015962.D	1	02/27/03	RA	n/a	n/a	GQR623

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16645-1, F16645-2, F16645-3, F16645-4, F16645-5, F16645-6, F16645-7, F16645-8, F16645-9, F16645-10, F16645-11, F16645-12, F16645-13, F16645-14, F16645-15

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	

Method Blank Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR623-MB	QR015962.D	1	02/27/03	RA	n/a	n/a	GQR623

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16645-1, F16645-2, F16645-3, F16645-4, F16645-5, F16645-6, F16645-7, F16645-8, F16645-9, F16645-10, F16645-11, F16645-12, F16645-13, F16645-14, F16645-15

CAS No.	Surrogate Recoveries		Limits
352-33-0	1-Chloro-4-fluorobenzene	84%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	86%	74-127%
563-58-6	1,1-Dichloropropene	99%	87-120%
563-58-6	1,1-Dichloropropene	101%	87-120%

Method Blank Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR625-MB	QR016010.D	1	02/28/03	RA	n/a	n/a	GQR625

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16645-4

CAS No.	Compound	Result	RL	Units	Q
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
352-33-0	1-Chloro-4-fluorobenzene	84%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	84%	74-127%
563-58-6	1,1-Dichloropropene	100%	87-120%
563-58-6	1,1-Dichloropropene	108%	87-120%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F16645-15MS	QR015980.D	200	02/27/03	RA	n/a	n/a	GQR623
F16645-15MSD	QR015981.D	200	02/27/03	RA	n/a	n/a	GQR623
F16645-15	QR015979.D	200	02/27/03	RA	n/a	n/a	GQR623

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16645-1, F16645-2, F16645-3, F16645-4, F16645-5, F16645-6, F16645-7, F16645-8, F16645-9, F16645-10, F16645-11, F16645-12, F16645-13, F16645-14, F16645-15

CAS No.	Compound	F16645-15 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	3280		4000	7420	104	7300	101	2	77-127/9
75-27-4	Bromodichloromethane	ND		4000	3830	96	3770	94	2	78-122/9
75-25-2	Bromoform	ND		4000	3960	99	4040	101	2	57-140/22
74-83-9	Bromomethane	ND		4000	3570	89	3590	90	1	27-159/21
56-23-5	Carbon tetrachloride	ND		4000	4320	108	4260	107	1	79-127/14
108-90-7	Chlorobenzene	ND		4000	4140	104	4150	104	0	82-122/10
124-48-1	Dibromochloromethane	ND		4000	3770	94	3800	95	1	69-127/14
75-00-3	Chloroethane	ND		4000	3800	95	4000	100	5	51-180/17
110-75-8	2-Chloroethylvinyl ether	ND		4000	3590	90	3530	88	2	10-158/13
67-66-3	Chloroform	ND		4000	3890	97	3870	97	1	82-118/9
74-87-3	Chloromethane	ND		4000	3460	87	3530	88	2	11-193/31
95-50-1	1,2-Dichlorobenzene	ND		4000	4100	103	4100	103	0	69-133/13
541-73-1	1,3-Dichlorobenzene	ND		4000	4240	106	4210	105	1	77-123/13
106-46-7	1,4-Dichlorobenzene	ND		4000	4230	106	4210	105	0	73-127/13
75-71-8	Dichlorodifluoromethane	ND		4000	3560	89	3540	89	1	14-176/25
75-34-3	1,1-Dichloroethane	ND		4000	4190	105	4120	103	2	80-127/10
107-06-2	1,2-Dichloroethane	ND		4000	4140	104	4080	102	1	74-116/14
75-35-4	1,1-Dichloroethene	ND		4000	4410	110	4430	111	0	72-163/16
156-59-2	cis-1,2-Dichloroethene	ND		4000	3970	99	3950	99	1	83-139/9
156-60-5	trans-1,2-Dichloroethene	ND		4000	3970	99	3880	97	2	82-131/11
78-87-5	1,2-Dichloropropane	ND		4000	4160	104	4110	103	1	77-112/8
10061-01-5	cis-1,3-Dichloropropene	ND		4000	4400	110	4310	108	2	65-131/17
10061-02-6	trans-1,3-Dichloropropene	ND		4000	4130	103	4050	101	2	53-140/21
100-41-4	Ethylbenzene	551		4000	4970	110	4900	109	1	68-136/11
75-09-2	Methylene chloride	ND		4000	4300	108	4280	107	0	60-145/12
1634-04-4	Methyl Tert Butyl Ether	ND		4000	3980	100	3900	98	2	71-124/14
79-34-5	1,1,2,2-Tetrachloroethane	ND		4000	3990	100	4060	102	2	72-114/8
127-18-4	Tetrachloroethene	ND		4000	4320	108	4310	108	0	85-124/13
108-88-3	Toluene	7630		4000	12200	114	11900	107	2	78-128/9
71-55-6	1,1,1-Trichloroethane	ND		4000	4260	107	4160	104	2	83-123/12
79-00-5	1,1,2-Trichloroethane	ND		4000	4080	102	4070	102	0	78-111/7
79-01-6	Trichloroethene	ND		4000	4320	108	4250	106	2	82-119/11
75-69-4	Trichlorofluoromethane	ND		4000	3320	83	3610	90	8	76-147/15
75-01-4	Vinyl chloride	ND		4000	4320	108	4140	104	4	72-139/14
1330-20-7	Xylenes (total)	2330		12000	15500	110	15300	108	1	71-136/11

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F16645-15MS	QR015980.D	200	02/27/03	RA	n/a	n/a	GQR623
F16645-15MSD	QR015981.D	200	02/27/03	RA	n/a	n/a	GQR623
F16645-15	QR015979.D	200	02/27/03	RA	n/a	n/a	GQR623

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16645-1, F16645-2, F16645-3, F16645-4, F16645-5, F16645-6, F16645-7, F16645-8, F16645-9, F16645-10, F16645-11, F16645-12, F16645-13, F16645-14, F16645-15

CAS No.	Surrogate Recoveries	MS	MSD	F16645-15	Limits
352-33-0	1-Chloro-4-fluorobenzene	102%	102%	90%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	101%	103%	92%	74-127%
563-58-6	1,1-Dichloropropene	100%	100%	100%	87-120%
563-58-6	1,1-Dichloropropene	100%	100%	104%	87-120%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F16645-4MS	QR015943.D	1	02/26/03	RA	n/a	n/a	GQR622
F16645-4MSD	QR015944.D	1	02/26/03	RA	n/a	n/a	GQR622
F16645-4 [a]	QR015936.D	1	02/25/03	RA	n/a	n/a	GQR622

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16645-1, F16645-2, F16645-3, F16645-4, F16645-5, F16645-6, F16645-7, F16645-8

CAS No.	Compound	F16645-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	0.98	J	20	20.7	99	20.6	98	0	77-127/9
75-27-4	Bromodichloromethane	ND		20	13.9	70*	13.8	69*	1	78-122/9
75-25-2	Bromoform	ND		20	13.6	68	14.4	72	6	57-140/22
74-83-9	Bromomethane	ND		20	37.7	189*	36.0	180*	5	27-159/21
108-90-7	Chlorobenzene	ND		20	17.2	86	17.3	87	1	82-122/10
124-48-1	Dibromochloromethane	ND		20	12.2	61*	13.4	67*	9	69-127/14
75-00-3	Chloroethane	ND		20	70.2	351*	66.9	335*	5	51-180/17
110-75-8	2-Chloroethylvinyl ether	ND		20	ND	0*	ND	0*	nc	10-158/13
67-66-3	Chloroform	ND		20	22.0	110	21.5	108	2	82-118/9
74-87-3	Chloromethane	ND		20	25.5	128	28.4	142	11	11-193/31
95-50-1	1,2-Dichlorobenzene	ND		20	16.2	81	15.0	75	8	69-133/13
541-73-1	1,3-Dichlorobenzene	ND		20	13.8	69*	13.3	67*	4	77-123/13
106-46-7	1,4-Dichlorobenzene	ND		20	12.2	61*	11.9	60*	2	73-127/13
75-71-8	Dichlorodifluoromethane	ND		20	81.5	408*	77.1	386*	6	14-176/25
75-34-3	1,1-Dichloroethane	ND		20	23.9	120	23.0	115	4	80-127/10
107-06-2	1,2-Dichloroethane	207		20	198	-45* [b]	197	-50* [b]	1	74-116/14
75-35-4	1,1-Dichloroethene	ND		20	53.1	266*	50.9	255*	4	72-163/16
156-59-2	cis-1,2-Dichloroethene	ND		20	21.8	109	21.1	106	3	83-139/9
156-60-5	trans-1,2-Dichloroethene	ND		20	22.0	110	21.9	110	0	82-131/11
78-87-5	1,2-Dichloropropane	2.0		20	24.2	111	24.1	111	0	77-112/8
10061-01-5	cis-1,3-Dichloropropene	ND		20	16.3	82	17.7	89	8	65-131/17
10061-02-6	trans-1,3-Dichloropropene	ND		20	14.3	72	16.4	82	14	53-140/21
100-41-4	Ethylbenzene	2.2		20	19.8	88	19.3	86	3	68-136/11
75-09-2	Methylene chloride	ND		20	33.2	166*	31.8	159*	4	60-145/12
1634-04-4	Methyl Tert Butyl Ether	ND		20	24.5	123	24.4	122	0	71-124/14
79-34-5	1,1,2,2-Tetrachloroethane	ND		20	24.5	123*	23.8	119*	3	72-114/8
127-18-4	Tetrachloroethene	ND		20	21.0	105	21.0	105	0	85-124/13
108-88-3	Toluene	ND		20	18.6	93	18.6	93	0	78-128/9
71-55-6	1,1,1-Trichloroethane	ND		20	23.1	116	21.7	109	6	83-123/12
79-00-5	1,1,2-Trichloroethane	ND		20	22.1	111	22.6	113*	2	78-111/7
79-01-6	Trichloroethene	ND		20	22.4	112	22.9	115	2	82-119/11
75-69-4	Trichlorofluoromethane	ND		20	76.7	384*	73.2	366*	5	76-147/15
75-01-4	Vinyl chloride	ND		20	43.1	216*	39.9	200*	8	72-139/14
1330-20-7	Xylenes (total)	8.5		60	61.8	89	58.0	83	6	71-136/11

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F16645-4MS	QR015943.D	1	02/26/03	RA	n/a	n/a	GQR622
F16645-4MSD	QR015944.D	1	02/26/03	RA	n/a	n/a	GQR622
F16645-4 [a]	QR015936.D	1	02/25/03	RA	n/a	n/a	GQR622

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16645-1, F16645-2, F16645-3, F16645-4, F16645-5, F16645-6, F16645-7, F16645-8

CAS No.	Surrogate Recoveries	MS	MSD	F16645-4	Limits
352-33-0	1-Chloro-4-fluorobenzene	87%	88%	82%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	90%	90%	81%	74-127%
563-58-6	1,1-Dichloropropene	94%	95%	100%	87-120%
563-58-6	1,1-Dichloropropene	98%	100%	100%	87-120%

(a) Confirmed by GC/MS
(b) Outside control limits due to high level in sample relative to spike amount.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F16674-9MS	QR016022.D	250	02/28/03	RA	n/a	n/a	GQR625
F16674-9MSD	QR016023.D	250	02/28/03	RA	n/a	n/a	GQR625
F16674-9 [a]	QR016021.D	250	02/28/03	RA	n/a	n/a	GQR625

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16645-4

CAS No.	Compound	F16674-9 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
107-06-2	1,2-Dichloroethane	ND		5000	5190	104	5050	101	3	74-116/14
100-41-4	Ethylbenzene	2060		5000	7340	106	7260	104	1	68-136/11
1330-20-7	Xylenes (total)	15300		15000	31000	105	30300	100	2	71-136/11

CAS No.	Surrogate Recoveries	MS	MSD	F16674-9	Limits
352-33-0	1-Chloro-4-fluorobenzene	105%	104%	95%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	106%	107%	102%	74-127%
563-58-6	1,1-Dichloropropene	99%	100%	99%	87-120%
563-58-6	1,1-Dichloropropene	103%	102%	108%	87-120%

(a) Confirmed by GC/MS

Volatile Surrogate Recovery Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Method: EPA 601/602 **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]	S2 [a]	S2 [b]
F16645-1	QR015972.D	92.0	96.0	100.0	102.0
F16645-1	QR015933.D	111.0	113.0	97.0	107.0
F16645-2	QR015964.D	86.0	89.0	99.0	101.0
F16645-2	QR015934.D	82.0	87.0	102.0	104.0
F16645-3	QR015965.D	84.0	87.0	98.0	102.0
F16645-3	QR015935.D	84.0	94.0	99.0	108.0
F16645-4	QR015966.D	89.0	93.0	100.0	102.0
F16645-4	QR016012.D	87.0	87.0	100.0	107.0
F16645-4	QR015936.D	82.0	81.0	100.0	100.0
F16645-5	QR015969.D	85.0	85.0	99.0	97.0
F16645-5	QR015937.D	84.0	100.0	95.0	111.0
F16645-6	QR015970.D	83.0	85.0	100.0	102.0
F16645-6	QR015939.D	81.0	92.0	95.0	109.0
F16645-7	QR015967.D	84.0	86.0	101.0	101.0
F16645-7	QR015940.D	80.0	88.0	105.0	111.0
F16645-8	QR015968.D	84.0	86.0	100.0	101.0
F16645-8	QR015941.D	80.0	89.0	102.0	110.0
F16645-9	QR015975.D	91.0	96.0	99.0	103.0
F16645-10	QR015976.D	92.0	93.0	99.0	100.0
F16645-11	QR015974.D	95.0	100.0	99.0	103.0
F16645-12	QR015977.D	92.0	91.0	99.0	98.0
F16645-13	QR015983.D	93.0	98.0	100.0	102.0
F16645-14	QR015973.D	92.0	92.0	100.0	103.0
F16645-15	QR015979.D	90.0	92.0	100.0	104.0
F16645-12DUP	QR015978.D	92.0	96.0	99.0	102.0
F16645-15MS	QR015980.D	102.0	101.0	100.0	100.0
F16645-15MSD	QR015981.D	102.0	103.0	100.0	100.0
F16645-4MS	QR015943.D	87.0	90.0	94.0	98.0
F16645-4MSD	QR015944.D	88.0	90.0	95.0	100.0
F16645-5DUP	QR015938.D	82.0	97.0	97.0	109.0
F16674-2DUP	QR016014.D	84.0	85.0	100.0	107.0
F16674-8DUP	QR016025.D	94.0	97.0	99.0	109.0
F16674-9MS	QR016022.D	105.0	106.0	99.0	103.0
F16674-9MSD	QR016023.D	104.0	107.0	100.0	102.0
GQR622-BS	QR015923.D	102.0	108.0	99.0	105.0
GQR622-MB	QR015921.D	80.0	87.0	103.0	110.0
GQR623-BS	QR015963.D	102.0	103.0	101.0	101.0
GQR623-MB	QR015962.D	84.0	86.0	99.0	101.0
GQR625-BS	QR016011.D	102.0	106.0	100.0	103.0
GQR625-MB	QR016010.D	84.0	84.0	100.0	108.0

Volatile Surrogate Recovery Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Method: EPA 601/602 **Matrix:** AQ

Samples and QC shown here apply to the above method

Surrogate Compounds	Recovery Limits

Surrogate Compounds	Recovery Limits
S1 = 1-Chloro-4-fluorobenzene	74-127%
S2 = 1,1-Dichloropropene	87-120%

(a) Recovery from GC signal #1
(b) Recovery from GC signal #2

GC Surrogate Retention Time Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Check Std:	GQR621-CC621	**Injection Date:**	02/25/03
Lab File ID:	QR015931.D	**Injection Time:**	18:49
Instrument ID:	GCQR	**Method:**	EPA 601/602

	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
Check Std	15.10	15.12	10.31	10.33

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
F16645-1	QR015933.D	02/25/03	19:43	15.10	15.12	10.31	10.33
F16645-2	QR015934.D	02/25/03	20:11	15.11	15.13	10.31	10.33
F16645-3	QR015935.D	02/25/03	20:38	15.11	15.13	10.31	10.33
F16645-4	QR015936.D	02/25/03	21:05	15.11	15.13	10.31	10.33
F16645-5	QR015937.D	02/25/03	21:33	15.10	15.12	10.31	10.33
F16645-5DUP	QR015938.D	02/25/03	22:00	15.10	15.12	10.31	10.33
F16645-6	QR015939.D	02/25/03	22:27	15.10	15.12	10.30	10.32
F16645-7	QR015940.D	02/25/03	22:55	15.11	15.13	10.30	10.32
F16645-8	QR015941.D	02/25/03	23:22	15.11	15.13	10.30	10.32

Surrogate Compounds

S1 = 1-Chloro-4-fluorobenzene
S2 = 1,1-Dichloropropene

(a) Retention time from GC signal #1
(b) Retention time from GC signal #2

GC Surrogate Retention Time Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Check Std:	GQR623-CC623	**Injection Date:**	02/27/03
Lab File ID:	QR015971.D	**Injection Time:**	18:28
Instrument ID:	GCQR	**Method:**	EPA 601/602

	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
Check Std	15.04	15.06	9.99	10.01

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
F16645-1	QR015972.D	02/27/03	18:59	15.04	15.06	9.99	10.01
F16645-14	QR015973.D	02/27/03	19:29	15.04	15.06	10.00	10.02
F16645-11	QR015974.D	02/27/03	19:59	15.05	15.06	10.01	10.03
F16645-9	QR015975.D	02/27/03	20:27	15.03	15.05	10.01	10.03
F16645-10	QR015976.D	02/27/03	20:54	15.03	15.05	10.01	10.03
F16645-12	QR015977.D	02/27/03	21:22	15.04	15.05	10.01	10.03
F16645-12DUP	QR015978.D	02/27/03	21:49	15.04	15.06	10.01	10.03
F16645-15	QR015979.D	02/27/03	22:16	15.03	15.05	10.01	10.03
F16645-15MS	QR015980.D	02/27/03	22:43	15.03	15.05	9.99	10.01
F16645-15MSD	QR015981.D	02/27/03	23:11	15.03	15.05	9.99	10.01

Surrogate Compounds

S1 = 1-Chloro-4-fluorobenzene
S2 = 1,1-Dichloropropene

(a) Retention time from GC signal #1
(b) Retention time from GC signal #2

GC Surrogate Retention Time Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Check Std:	GQR623-CC623	**Injection Date:**	02/27/03
Lab File ID:	QR015982.D	**Injection Time:**	23:38
Instrument ID:	GCQR	**Method:**	EPA 601/602

	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
Check Std	15.03	15.05	9.98	10.00

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
F16645-13	QR015983.D	02/28/03	00:05	15.04	15.06	9.99	10.01
ZZZZZZ	QR015984.D	02/28/03	00:33	15.04	15.06	10.00	10.01
GQR624-BS	QR015985.D	02/28/03	01:00	15.04	15.06	10.00	10.01
GQR624-MB	QR015986.D	02/28/03	01:27	15.05	15.06	10.01	10.03
ZZZZZZ	QR015987.D	02/28/03	01:55	15.04	15.06	10.00	10.02
F16674-1	QR015988.D	02/28/03	02:22	15.04	15.06	10.00	10.02
F16674-2	QR015989.D	02/28/03	02:49	15.03	15.06	10.00	10.02
F16674-2DUP	QR015990.D	02/28/03	03:17	15.04	15.06	10.00	10.02
F16674-1MS	QR015991.D	02/28/03	03:43	15.03	15.05	10.00	10.02
F16674-1MSD	QR015992.D	02/28/03	04:11	15.03	15.05	10.00	10.02

Surrogate Compounds

S1 = 1-Chloro-4-fluorobenzene
S2 = 1,1-Dichloropropene

(a) Retention time from GC signal #1
(b) Retention time from GC signal #2

GC Surrogate Retention Time Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Check Std:	GQR625-CC623	**Injection Date:**	02/28/03
Lab File ID:	QR016009.D	**Injection Time:**	14:35
Instrument ID:	GCQR	**Method:**	EPA 601/602

	S1 [a] **RT**	**S1** [b] **RT**	**S2** [a] **RT**	**S2** [b] **RT**
Check Std	15.05	15.07	10.00	10.02

Lab Sample ID	**Lab File ID**	**Date Analyzed**	**Time Analyzed**	**S1** [a] **RT**	**S1** [b] **RT**	**S2** [a] **RT**	**S2** [b] **RT**
GQR625-MB	QR016010.D	02/28/03	15:22	15.05	15.07	10.01	10.03
GQR625-BS	QR016011.D	02/28/03	16:21	15.04	15.06	10.00	10.02
F16645-4	QR016012.D	02/28/03	16:49	15.03	15.05	10.00	10.02
F16674-2	QR016013.D	02/28/03	17:16	15.03	15.05	10.00	10.02
F16674-2DUP	QR016014.D	02/28/03	17:43	15.02	15.04	10.00	10.02
ZZZZZZ	QR016015.D	02/28/03	18:11	15.02	15.04	9.99	10.01
ZZZZZZ	QR016016.D	02/28/03	18:38	15.02	15.05	9.99	10.01
ZZZZZZ	QR016017.D	02/28/03	19:05	15.03	15.05	9.98	10.00
ZZZZZZ	QR016018.D	02/28/03	19:32	15.03	15.05	9.99	10.01

Surrogate Compounds

S1 = 1-Chloro-4-fluorobenzene
S2 = 1,1-Dichloropropene

(a) Retention time from GC signal #1
(b) Retention time from GC signal #2

GC Surrogate Retention Time Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Check Std:	GQR623-ICC623	**Injection Date:**	02/27/03
Lab File ID:	QR015958.D	**Injection Time:**	11:54
Instrument ID:	GCQR	**Method:**	EPA 601/602

	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
Check Std	15.05	15.07	10.01	10.03

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
GQR623-MB	QR015962.D	02/27/03	13:43	15.07	15.09	10.02	10.03
GQR623-BS	QR015963.D	02/27/03	14:27	15.06	15.08	10.01	10.02
F16645-2	QR015964.D	02/27/03	15:15	15.05	15.07	10.00	10.02
F16645-3	QR015965.D	02/27/03	15:44	15.05	15.07	10.01	10.02
F16645-4	QR015966.D	02/27/03	16:12	15.05	15.07	10.01	10.03
F16645-7	QR015967.D	02/27/03	16:39	15.05	15.07	10.02	10.03
F16645-8	QR015968.D	02/27/03	17:06	15.04	15.06	10.02	10.03
F16645-5	QR015969.D	02/27/03	17:34	15.04	15.06	10.01	10.03
F16645-6	QR015970.D	02/27/03	18:01	15.04	15.06	10.01	10.03

Surrogate Compounds

S1 = 1-Chloro-4-fluorobenzene
S2 = 1,1-Dichloropropene

(a) Retention time from GC signal #1
(b) Retention time from GC signal #2

GC Surrogate Retention Time Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Check Std:	GQR622-CC621	**Injection Date:**	02/25/03
Lab File ID:	QR015942.D	**Injection Time:**	23:49
Instrument ID:	GCQR	**Method:**	EPA 601/602

	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
Check Std	15.10	15.12	10.30	10.32

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
F16645-4MS	QR015943.D	02/26/03	00:16	15.10	15.12	10.30	10.32
F16645-4MSD	QR015944.D	02/26/03	00:43	15.11	15.12	10.30	10.32
GQR622-ECC621	QR015953.D	02/26/03	05:09	15.12	15.13	10.30	10.32

Surrogate Compounds

S1 = 1-Chloro-4-fluorobenzene
S2 = 1,1-Dichloropropene

(a) Retention time from GC signal #1
(b) Retention time from GC signal #2

GC Surrogate Retention Time Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Check Std:	GQR625-CC623	**Injection Date:**	02/28/03
Lab File ID:	QR016020.D	**Injection Time:**	20:27
Instrument ID:	GCQR	**Method:**	EPA 601/602

	S1 [a] **RT**	**S1** [b] **RT**	**S2** [a] **RT**	**S2** [b] **RT**
Check Std	15.03	15.05	10.00	10.01

Lab Sample ID	**Lab File ID**	**Date Analyzed**	**Time Analyzed**	**S1** [a] **RT**	**S1** [b] **RT**	**S2** [a] **RT**	**S2** [b] **RT**
F16674-9	QR016021.D	02/28/03	20:54	15.04	15.06	10.00	10.02
F16674-9MS	QR016022.D	02/28/03	21:22	15.04	15.05	10.01	10.03
F16674-9MSD	QR016023.D	02/28/03	21:49	15.03	15.04	10.01	10.02
F16674-8	QR016024.D	02/28/03	22:16	15.02	15.04	10.01	10.03
F16674-8DUP	QR016025.D	02/28/03	22:43	15.02	15.04	10.00	10.02
ZZZZZZ	QR016027.D	02/28/03	23:38	15.03	15.05	10.00	10.02
ZZZZZZ	QR016030.D	03/01/03	01:05	15.03	15.05	9.99	10.01

Surrogate Compounds

S1 = 1-Chloro-4-fluorobenzene
S2 = 1,1-Dichloropropene

(a) Retention time from GC signal #1
(b) Retention time from GC signal #2

GC Surrogate Retention Time Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Check Std:	GQR621-ICC621	**Injection Date:**	02/25/03
Lab File ID:	QR015918.D	**Injection Time:**	12:08
Instrument ID:	GCQR	**Method:**	EPA 601/602

	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
Check Std	15.13	15.14	10.34	10.36

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
GQR621-MB	QR015921.D	02/25/03	13:57	15.13	15.15	10.35	10.37
GQR622-MB	QR015921.D	02/25/03	13:57	15.13	15.15	10.35	10.37
GQR621-BS	QR015923.D	02/25/03	15:10	15.13	15.14	10.33	10.35
GQR622-BS	QR015923.D	02/25/03	15:10	15.13	15.14	10.33	10.35
ZZZZZZ	QR015924.D	02/25/03	15:37	15.13	15.15	10.34	10.36
F16594-7	QR015925.D	02/25/03	16:05	15.13	15.15	10.32	10.34
F16594-8	QR015926.D	02/25/03	16:32	15.13	15.15	10.34	10.36
F16594-8DUP	QR015927.D	02/25/03	16:59	15.13	15.15	10.33	10.35

Surrogate Compounds

S1 = 1-Chloro-4-fluorobenzene
S2 = 1,1-Dichloropropene

(a) Retention time from GC signal #1
(b) Retention time from GC signal #2

Initial Calibration Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GQR621-ICC621
Lab FileID: QR015918.D

Response Factor Report VOA3

Method : C:\HPCHEM\1\METHODS\QR022103.M (Chemstation Integrator)
Title : EPA 601/602 & SWA 5030B/8021B
Last Update : Tue Feb 25 13:26:50 2003
Response via : Initial Calibration

Calibration Files
1 =QR015915.D 2 =QR015916.D 3 =QR015917.D
4 =QR015918.D 5 =QR015919.D 6 =QR015920.D

		Compound	1	2	3	4	5	6	Avg	%RSD
1)	I	Fluorobenzene	----------ISTD----------							
2)	c	VINYL CHLORIDE	0.305	0.298	0.259	0.245	0.262	0.274		9.54
3)		1,1-Dichloroethene	0.371	0.409	0.397	0.415	0.423	0.403		4.99
4)		Methyl tert Butyl E	0.494	0.440	0.462	0.437	0.427	0.416	0.446	6.32
5)		trans-1,2-Dichloroe	1.278	1.002	1.103	1.066	1.111	1.141	1.117	8.27
6)		Di-Isopropyl ether	0.528	0.421	0.457	0.443	0.446	0.442	0.456	8.13
7)		cis-1,2-Dichloroeth	0.774	0.615	0.696	0.693	0.721	0.744	0.707	7.69
8)	S	1,1-Dichloropropene	0.513	0.520	0.506	0.501	0.483	0.490	0.502	2.78
9)		Benzene	1.656	1.376	1.474	1.404	1.415	1.401	1.454	7.17
10)		Trichloroethene	1.034	0.868	0.927	0.887	0.901	0.884	0.917	6.61
11)		2-Chloroethylvinyl	0.337	0.267	0.248	0.214	0.195	0.130	0.232	30.24
12)		cis-1,3-Dichloropro	0.453	0.430	0.461	0.447	0.451	0.440	0.447	2.40
13)		Toluene	1.624	1.309	1.521	1.519	1.582	1.590	1.524	7.41
14)		trans-1,3-Dichlorop	0.593	0.561	0.614	0.614	0.648	0.631	0.610	4.95
15)		Tetrachloroethene	0.636	0.730	0.721	0.765	0.764	0.723		7.30
16)	S	1-Chloro-4-fluorobe	1.151	1.156	1.286	1.387	1.446	1.517	1.324	11.49
17)		Chlorobenzene	2.188	1.749	2.076	2.144	2.292	2.329	2.130	9.80
18)		Ethylbenzene	2.033	1.585	1.873	1.872	1.935	1.958	1.876	8.24
19)		m,p-Xylene	2.359	1.910	2.215	2.229	2.289	2.335	2.223	7.35
20)		o-Xylene	1.923	2.178	2.162	2.200	2.232	2.139		5.78
21)		1,3-Dichlorobenzene	1.314	1.209	1.594	1.833	2.174	2.329	1.742	26.03
22)		1,4-Dichlorobenzene	0.972	1.015	1.386	1.639	2.032	2.215	1.543	33.41
23)		1,2-Dichlorobenzene	1.385	1.179	1.604	1.641	1.865	1.987	1.610	18.52

Signal #2 Calibration Files
1 =QR015955.D 2 =QR015956.D 3 =QR015957.D
4 =QR015958.D 5 =QR015959.D 6 =QR015960.D

		Compound	1	2	3	4	5	6	Avg	%RSD
25)	I	Bromochloromethane	----------ISTD----------							
26)	c	DICHLORODIFLUOROMET	0.305	0.491	0.532	0.493	0.463	0.475	0.460	17.29
27)	c	CHLOROMETHANE	0.736	0.740	0.761	0.679	0.627	0.602	0.691	9.47
28)	c	VINYL CHLORIDE #2	0.708	0.729	0.764	0.683	0.661	0.680	0.704	5.37
29)	c	BROMOMETHANE	0.218	0.238	0.314	0.342	0.365	0.347	0.304	20.18#
30)	c	CHLOROETHANE	0.798	0.861	0.912	0.759	0.746	0.757	0.806	8.35
31)	c	TRICHLOROFLUOROMETH	0.830	0.916	0.981	0.882	0.793	0.798	0.867	8.51
32)		1,1-Dichloroethene	0.678	0.799	0.897	0.831	0.827	0.771	0.801	9.16
33)		Methylene Chloride	1.728	1.452	1.477	1.291	1.184	1.164	1.383	15.47
34)		trans-1,2-Dichloroe	0.972	1.082	1.160	1.043	1.029	0.954	1.040	7.25
35)		1,1-Dichloroethane	0.927	1.045	1.159	1.075	1.052	0.971	1.038	7.85
36)		cis-1,2-Dichloroeth	1.183	1.281	1.397	1.273	1.227	1.150	1.252	6.96
37)		Chloroform	1.633	1.650	1.705	1.547	1.490	1.387	1.569	7.49
38)		1,1,1-Trichloroetha	1.332	1.260	1.253	1.063	1.014	0.914	1.139	14.52
39)	S	1,1-Dichloropropene	0.988	1.070	0.998	0.942	0.913	0.875	0.965	7.17

Initial Calibration Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GQR621-ICC621
Lab FileID: QR015918.D

40)		Carbon Tetrachlorid	3.131	1.622	1.478	1.201	1.131	0.985	1.591	49.63
41)		1,2-Dichloroethane	1.630	1.612	1.614	1.419	1.338	1.226	1.473	11.60
42)		Trichloroethene #2	1.585	1.739	1.752	1.531	1.440	1.274	1.554	11.75
43)		1,2-Dichloropropane	1.292	1.413	1.426	1.240	1.163	1.043	1.263	11.68
44)		Bromodichloromethan	1.243	1.482	1.516	1.334	1.232	1.135	1.324	11.35
45)		2-Chloroethylvinyl	0.114	0.173	0.182	0.164	0.156	0.099	0.148	22.83
46)		cis-1,3-Dichloropro	1.069	1.405	1.470	1.298	1.221	1.095	1.260	12.91
47)		trans-1,3-Dichlorop	0.884	1.276	1.369	1.255	1.216	1.095	1.183	14.50
48)		1,1,2-Trichloroetha	1.604	1.877	1.926	1.749	1.639	1.459	1.709	10.32
49)		Tetrachloroethene #	1.692	1.743	1.866	1.684	1.640	1.455	1.680	8.03
50)		Dibromochloromethan	0.910	1.274	1.376	1.266	1.193	1.113	1.189	13.68
51)	s	1-Chloro-4-fluorobe	0.794	0.849	0.865	0.895	0.940	0.928	0.878	6.18
52)		Chlorobenzene #2	0.668	0.776	0.909	0.868	0.887	0.810	0.820	10.88
53)		Bromoform	0.511	0.875	1.043	1.050	1.102	1.008	0.932	23.59
54)		1,1,2,2-Tetrachloro	1.817	2.039	2.234	2.111	1.965	1.774	1.990	8.82
55)		1,3-Dichlorobenzene	0.447	0.808	1.100	1.171	1.255	1.207	0.998	31.37
56)		1,4-Dichlorobenzene	0.337	0.695	0.998	1.085	1.217	1.176	0.918	37.00
57)		1,2-Dichlorobenzene	0.614	0.991	1.276	1.306	1.352	1.292	1.138	25.26

Average % RSD = 13.0

(#) = Out of Range

QR022103.M Thu Feb 27 12:03:54 2003 QRXY

Continuing Calibration Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GQR621-CC621
Lab FileID: QR015931.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\022503\QR015931.D\FID1B.CH Vial: 15
Signal #2 : C:\HPCHEM\1\DATA\022503\QR015931.D\AIB2A.CH
Acq On : 25 Feb 2003 6:49 pm Operator: RachidA
Sample : CC621-35 Inst : VOA3
Misc : gc2341,gqr621,,,,, Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: ELCD.E

Method : C:\HPCHEM\1\METHODS\QR0227.M (Chemstation Integrator)
Title : EPA 601/602 & SWA 5030B/8021B
Last Update : Thu Feb 27 13:11:50 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	20.000	20.000	0.0	25	0.25
2	c	VINYL CHLORIDE	35.000	31.867	9.0	87	0.81#
3		1,1-Dichloroethene	35.000	35.589	-1.7	37	0.70#
4		Methyl tert Butyl Ether	70.000	71.372	-2.0	40	0.61#
5		trans-1,2-Dichloroethene	35.000	34.642	1.0	36	0.60#
6		Di-Isopropyl ether	35.000	34.539	1.3	31	0.51#
7		cis-1,2-Dichloroethene	35.000	35.605	-1.7	32	0.40
8	S	1,1-Dichloropropene	20.000	20.188	-0.9	21	0.30
9		Benzene	70.000	70.309	-0.4	31	0.27
10		Trichloroethene	35.000	37.125	-6.1	30	0.21
11		2-Chloroethylvinyl ether	35.000	27.240	22.2#	6	0.13
12		cis-1,3-Dichloropropene	35.000	36.669	-4.8	29	0.12
13		Toluene	70.000	72.600	-3.7	28	0.11
14		trans-1,3-Dichloropropene	35.000	38.097	-8.8	29	0.09
15		Tetrachloroethene	35.000	36.949	-5.6	27	0.08
16	S	1-Chloro-4-fluorobenzene	20.000	21.641	-8.2	27	0.04
17		Chlorobenzene	35.000	37.465	-7.0	27	0.04
18		Ethylbenzene	70.000	71.165	-1.7	29	0.04
19		m,p-Xylene	140.000	142.583	-1.8	30	0.04
20		o-Xylene	70.000	70.990	-1.4	30	0.03
21		1,3-Dichlorobenzene	35.000	34.863	0.4	24	0.00
22		1,4-Dichlorobenzene	35.000	35.039	-0.1	23	0.00
23		1,2-Dichlorobenzene	35.000	34.467	1.5	25	0.00

Signal #2

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
25	I	Bromochloromethane	20.000	20.000	0.0	28	0.36
26	c	DICHLORODIFLUOROMETHANE	35.000	36.745	-5.0	110	0.84#
27	c	CHLOROMETHANE	35.000	34.666	1.0	43	0.92#
28	c	VINYL CHLORIDE #2	35.000	36.075	-3.1	93	0.81#
29	c	BROMOMETHANE	35.000	35.095	-0.3	40	0.86#
30	c	CHLOROETHANE	35.000	37.404	-6.9	62	0.82#
31	c	TRICHLOROFLUOROMETHANE	35.000	36.401	-4.0	129	0.85#
32		1,1-Dichloroethene #2	35.000	37.653	-7.6	43	0.70#
33		Methylene Chloride	35.000	38.049	-8.7	65	0.53#
34		trans-1,2-Dichloroethene #2	35.000	37.643	-7.6	43	0.60#
35		1,1-Dichloroethane	35.000	36.683	-4.8	40	0.51#

Continuing Calibration Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GQR621-CC621
Lab FileID: QR015931.D

36		cis-1,2-Dichloroethene #2	35.000	37.713	-7.8	40	0.40
37		Chloroform	35.000	37.724	-7.8	41	0.38
38		1,1,1-Trichloroethane	35.000	39.811	-13.7	41	0.32
39	S	1,1-Dichloropropene #2	20.000	20.724	-3.6	26	0.30
40		Carbon Tetrachloride	35.000	37.524	-7.2	36	0.29
41		1,2-Dichloroethane	35.000	38.384	-9.7	40	0.27
42		Trichloroethene #2	35.000	41.617	-18.9#	40	0.21
43		1,2-Dichloropropane	35.000	38.291	-9.4	36	0.19
44		Bromodichloromethane	35.000	38.903	-11.2	35	0.17
45		2-Chloroethylvinyl ether #2	35.000	31.997	8.6	8	0.13
46		cis-1,3-Dichloropropene #2	35.000	39.528	-12.9	37	0.12
47		trans-1,3-Dichloropropene #	35.000	39.721	-13.5	37	0.09
48		1,1,2-Trichloroethane	35.000	38.890	-11.1	40	0.09
49		Tetrachloroethene #2	35.000	38.279	-9.4	37	0.08
50		Dibromochloromethane	35.000	38.133	-9.0	35	0.07
51	s	1-Chloro-4-fluorobenzene #2	20.000	22.362	-11.8	31	0.04
52		Chlorobenzene #2	35.000	38.544	-10.1	34	0.04
53		Bromoform	35.000	41.474	-18.5#	33	0.02
54		1,1,2,2-Tetrachloroethane	35.000	36.480	-4.2	41	0.02
55		1,3-Dichlorobenzene #2	35.000	36.963	-5.6	31	0.00
56		1,4-Dichlorobenzene #2	35.000	37.432	-6.9	30	0.00
57		1,2-Dichlorobenzene #2	35.000	37.008	-5.7	33	0.00

Average % D = 6.6

(#) = Out of Range SPCC's out = 0 CCC's out = 0

QR015959.D QR0227.M Thu Feb 27 13:26:45 2003 QRXY

Continuing Calibration Summary

Job Number: F16645 **Sample:** GQR622-CC621
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** QR015942.D
Project: Camp Lejeune-NW

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\022503\QR015942.D\FID1B.CH Vial: 25
Signal #2 : C:\HPCHEM\1\DATA\022503\QR015942.D\AIB2A.CH
Acq On : 25 Feb 2003 11:49 pm Operator: RachidA
Sample : CC621-20 Inst : VOA3
Misc : gc2358,gqr622,,,,, Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: ELCD.E

Method : C:\HPCHEM\1\METHODS\QR022103.M (Chemstation Integrator)
Title : EPA 601/602 & SWA 5030B/8021B
Last Update : Thu Feb 27 12:42:21 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	20.000	20.000	0.0	106	0.23
2	c	VINYL CHLORIDE	20.000	22.212	-11.1	124	0.74#
3		1,1-Dichloroethene	20.000	21.670	-8.4	116	0.67#
4		Methyl tert Butyl Ether	40.000	38.443	3.9	104	0.59#
5		trans-1,2-Dichloroethene	20.000	17.886	10.6	99	0.57#
6		Di-Isopropyl ether	20.000	19.230	3.8	105	0.48
7		cis-1,2-Dichloroethene	20.000	19.933	0.3	108	0.38
8	S	1,1-Dichloropropene	20.000	20.365	-1.8	108	0.28
9		Benzene	40.000	39.377	1.6	108	0.26
10		Trichloroethene	20.000	21.763	-8.8	119	0.19
11		2-Chloroethylvinyl ether	20.000	25.650	-28.2#	134	0.12
12		cis-1,3-Dichloropropene	20.000	17.278	13.6	91	0.11
13		Toluene	40.000	38.945	2.6	103	0.10
14		trans-1,3-Dichloropropene	20.000	17.487	12.6	92	0.09
15		Tetrachloroethene	20.000	20.586	-2.9	109	0.07
16	S	1-Chloro-4-fluorobenzene	20.000	20.469	-2.3	103	0.04
17		Chlorobenzene	20.000	19.888	0.6	104	0.04
18		Ethylbenzene	40.000	38.930	2.7	103	0.04
19		m,p-Xylene	80.000	76.857	3.9	101	0.03
20		o-Xylene	40.000	38.861	2.8	102	0.03
21		1,3-Dichlorobenzene	20.000	19.026	4.9	101	0.00
22		1,4-Dichlorobenzene	20.000	18.913	5.4	101	0.00
23		1,2-Dichlorobenzene	20.000	19.042	4.8	102	0.00

Signal #2

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
25	I	Bromochloromethane	20.000	20.000	0.0	99	0.34
26	c	DICHLORODIFLUOROMETHANE	20.000	22.712	-13.6	110	0.80#
27	c	CHLOROMETHANE	20.000	19.693	1.5	98	0.86#
28	c	VINYL CHLORIDE #2	20.000	21.043	-5.2	104	0.76#
29	c	BROMOMETHANE	20.000	18.541	7.3	93	0.82#
30	c	CHLOROETHANE	20.000	22.019	-10.1	111	0.79#
31	c	TRICHLOROFLUOROMETHANE	20.000	22.746	-13.7	109	0.81#
32		1,1-Dichloroethene #2	20.000	23.224	-16.1#	116	0.66#
33		Methylene Chloride	20.000	22.273	-11.4	109	0.50
34		trans-1,2-Dichloroethene #2	20.000	19.818	0.9	101	0.57#
35		1,1-Dichloroethane	20.000	22.019	-10.1	110	0.48

Continuing Calibration Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GQR622-CC621
Lab FileID: QR015942.D

36		cis-1,2-Dichloroethene #2	20.000	21.935	-9.7	109	0.38
37		Chloroform	20.000	22.741	-13.7	113	0.36
38		1,1,1-Trichloroethane	20.000	21.286	-6.4	109	0.30
39	S	1,1-Dichloropropene #2	20.000	21.688	-8.4	110	0.29
40		Carbon Tetrachloride	20.000	16.286	18.6#	88	0.27
41		1,2-Dichloroethane	20.000	22.057	-10.3	110	0.25
42		Trichloroethene #2	20.000	24.036	-20.2#	119	0.19
43		1,2-Dichloropropane	20.000	22.987	-14.9	115	0.17
44		Bromodichloromethane	20.000	17.428	12.9	88	0.16
45		2-Chloroethylvinyl ether #2	20.000	31.985	-59.9#	143	0.12
46		cis-1,3-Dichloropropene #2	20.000	18.501	7.5	94	0.11
47		trans-1,3-Dichloropropene #	20.000	18.321	8.4	94	0.09
48		1,1,2-Trichloroethane	20.000	21.678	-8.4	108	0.08
49		Tetrachloroethene #2	20.000	21.739	-8.7	110	0.07
50		Dibromochloromethane	20.000	18.187	9.1	91	0.06
51	s	1-Chloro-4-fluorobenzene #2	20.000	21.842	-9.2	106	0.04
52		Chlorobenzene #2	20.000	21.154	-5.8	107	0.04
53		Bromoform	20.000	21.785	-8.9	96	0.02
54		1,1,2,2-Tetrachloroethane	20.000	18.878	5.6	94	0.01
55		1,3-Dichlorobenzene #2	20.000	20.007	-0.0	100	0.00
56		1,4-Dichlorobenzene #2	20.000	19.532	2.3	99	0.00
57		1,2-Dichlorobenzene #2	20.000	20.657	-3.3	103	0.00

Average % D = 8.9

(#) = Out of Range SPCC's out = 0 CCC's out = 0
QR015918.D QR022103.M Thu Feb 27 12:51:06 2003 QRXY

Initial Calibration Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GQR623-ICC623
Lab FileID: QR015958.D

Response Factor Report VOA3

Method : C:\HPCHEM\1\METHODS\QR0227.M (Chemstation Integrator)
Title : EPA 601/602 & SWA 5030B/8021B
Last Update : Fri Feb 28 15:05:24 2003
Response via : Initial Calibration

Calibration Files
1 =QR015955.D 2 =QR015956.D 3 =QR015957.D
4 =QR015958.D 5 =QR015959.D 6 =QR015960.D

		Compound	1	2	3	4	5	6	Avg	%RSD
1)	I	Fluorobenzene	----------ISTD----------							
2)	c	VINYL CHLORIDE	0.119	0.081	0.086	0.070	0.070	0.066	0.082	23.80#
3)		1,1-Dichloroethene	0.266	0.264	0.289	0.244	0.270	0.271	0.267	5.34
4)		Methyl tert Butyl E	0.283	0.321	0.329	0.257	0.283	0.267	0.290	9.96
5)		trans-1,2-Dichloroe	0.707	0.704	0.841	0.701	0.760	0.730	0.741	7.31
6)		Di-Isopropyl ether	0.350	0.374	0.405	0.338	0.360	0.351	0.363	6.56
7)		cis-1,2-Dichloroeth	0.486	0.533	0.597	0.504	0.547	0.537	0.534	7.15
8)	S	1,1-Dichloropropene	0.586	0.585	0.586	0.579	0.583	0.577	0.583	0.62
9)		Benzene	1.120	1.175	1.308	1.097	1.176	1.153	1.172	6.30
10)		Trichloroethene	0.713	0.728	0.851	0.721	0.793	0.776	0.764	7.02
11)		2-Chloroethylvinyl	0.407	0.541	0.652	0.575	0.636	0.643	0.576	16.19
12)		cis-1,3-Dichloropro		0.365	0.429	0.369	0.402	0.401	0.393	6.75
13)		Toluene	1.294	1.360	1.532	1.286	1.387	1.362	1.370	6.48
14)		trans-1,3-Dichlorop		0.472	0.568	0.501	0.556	0.563	0.532	8.06
15)		Tetrachloroethene	0.618	0.640	0.743	0.627	0.687	0.677	0.665	7.06
16)	S	1-Chloro-4-fluorobe	1.125	1.210	1.273	1.293	1.309	1.322	1.255	5.98
17)		Chlorobenzene	1.718	1.862	2.176	1.894	2.042	2.011	1.950	8.21
18)		Ethylbenzene	1.505	1.601	1.807	1.523	1.624	1.599	1.610	6.69
19)		m,p-Xylene	1.674	1.804	2.061	1.729	1.864	1.805	1.823	7.37
20)		o-Xylene	1.623	1.747	1.972	1.650	1.775	1.727	1.749	7.07
21)		1,3-Dichlorobenzene	1.365	1.601	2.059	1.867	2.141	2.177	1.868	17.44
22)		1,4-Dichlorobenzene	1.257	1.491	1.989	1.814	2.119	2.180	1.808	20.27
23)		1,2-Dichlorobenzene	1.248	1.434	1.767	1.577	1.744	1.767	1.589	13.44

Signal #2 Calibration Files
1 =QR015955.D 2 =QR015956.D 3 =QR015957.D
4 =QR015958.D 5 =QR015959.D 6 =QR015960.D

		Compound	1	2	3	4	5	6	Avg	%RSD
25)	I	Bromochloromethane	----------ISTD----------							
26)	c	DICHLORODIFLUOROMET	0.089	0.117	0.140	0.122	0.128	0.122	0.120	14.43
27)	c	CHLOROMETHANE	0.491	0.532	0.541	0.458	0.413	0.373	0.468	14.20
28)	c	VINYL CHLORIDE #2	0.209	0.224	0.257	0.207	0.212	0.198	0.218	9.56
29)	c	BROMOMETHANE	0.204	0.261	0.283	0.247	0.248	0.231	0.246	10.93
30)	c	CHLOROETHANE	0.389	0.429	0.445	0.382	0.370	0.343	0.393	9.63
31)	c	TRICHLOROFLUOROMETH	0.126	0.179	0.222	0.192	0.187	0.178	0.181	17.32
32)		1,1-Dichloroethene	0.629	0.696	0.721	0.576	0.570	0.529	0.620	12.27
33)		Methylene Chloride	0.842	0.821	0.714	0.598	0.569	0.533	0.680	19.51
34)		trans-1,2-Dichloroe	0.796	0.852	0.947	0.719	0.705	0.620	0.773	15.12
35)		1,1-Dichloroethane	0.886	0.996	1.034	0.800	0.762	0.692	0.862	15.63
36)		cis-1,2-Dichloroeth	1.091	1.203	1.234	0.972	0.918	0.831	1.041	15.45
37)		Chloroform	1.465	1.526	1.525	1.175	1.086	0.979	1.292	18.72
38)		1,1,1-Trichloroetha	1.136	1.033	1.072	0.804	0.767	0.687	0.917	20.33
39)	S	1,1-Dichloropropene	1.109	1.094	1.091	1.074	1.070	1.073	1.085	1.41

Initial Calibration Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GQR623-ICC623
Lab FileID: QR015958.D

40)		Carbon Tetrachlorid	2.240	1.375	1.339	0.987	0.931	0.833	1.284	40.35
41)		1,2-Dichloroethane	1.426	1.409	1.418	1.103	1.020	0.939	1.219	18.35
42)		Trichloroethene #2	1.494	1.516	1.585	1.217	1.139	1.045	1.333	17.01
43)		1,2-Dichloropropane	1.333	1.359	1.366	1.053	0.978	0.896	1.164	18.27
44)		Bromodichloromethan	1.233	1.392	1.439	1.140	1.076	0.996	1.213	14.49
45)		2-Chloroethylvinyl	0.304	0.514	0.598	0.500	0.498	0.477	0.482	20.09
46)		cis-1,3-Dichloropro	1.071	1.290	1.381	1.089	1.027	0.949	1.134	14.57
47)		trans-1,3-Dichlorop	0.890	1.161	1.271	1.053	1.009	0.936	1.053	13.51
48)		1,1,2-Trichloroetha	1.507	1.719	1.761	1.349	1.246	1.150	1.456	17.21
49)		Tetrachloroethene #	1.846	1.810	1.851	1.410	1.306	1.194	1.569	19.10
50)		Dibromochloromethan	0.948	1.221	1.268	1.069	1.033	0.980	1.087	11.98
51)	s	1-Chloro-4-fluorobe	0.783	0.827	0.859	0.870	0.882	0.893	0.852	4.81
52)		Chlorobenzene #2	0.884	0.894	1.009	0.810	0.781	0.727	0.851	11.75
53)		Bromoform	0.614	0.946	1.124	0.934	0.952	0.922	0.915	18.08
54)		1,1,2,2-Tetrachloro	1.702	1.954	1.985	1.516	1.387	1.283	1.638	17.87
55)		1,3-Dichlorobenzene	0.956	1.167	1.388	1.177	1.150	1.087	1.154	12.20
56)		1,4-Dichlorobenzene	0.920	1.144	1.374	1.187	1.173	1.104	1.150	12.72
57)		1,2-Dichlorobenzene	1.124	1.331	1.500	1.227	1.178	1.089	1.242	12.26

Average % RSD = 12.9

(#) = Out of Range

QR0227.M Mon Mar 03 10:10:19 2003 QRXY

Continuing Calibration Summary

Job Number: F16645 **Sample:** GQR623-CC623
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** QR015971.D
Project: Camp Lejeune-NW

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\022703\QR015971.D\FID1B.CH Vial: 17
Signal #2 : C:\HPCHEM\1\DATA\022703\QR015971.D\AIB2A.CH
Acq On : 27 Feb 2003 6:28 pm Operator: RachidA
Sample : CC623-20 Inst : VOA3
Misc : GC2358,GQR623,,,,, Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: ELCD.E

Method : C:\HPCHEM\1\METHODS\QR0227.M (Chemstation Integrator)
Title : EPA 601/602 & SWA 5030B/8021B
Last Update : Fri Feb 28 15:05:24 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	20.000	20.000	0.0	99	-0.01
2	c	VINYL CHLORIDE	20.000	21.560	-7.8	112	0.00
3		1,1-Dichloroethene	20.000	20.534	-2.7	111	0.02
4		Methyl tert Butyl Ether	40.000	38.516	3.7	108	0.00
5		trans-1,2-Dichloroethene	20.000	19.895	0.5	104	0.00
6		Di-Isopropyl ether	20.000	20.340	-1.7	108	0.00
7		cis-1,2-Dichloroethene	20.000	20.449	-2.2	107	0.00
8	S	1,1-Dichloropropene	20.000	20.039	-0.2	100	-0.01
9		Benzene	40.000	40.100	-0.3	106	-0.01
10		Trichloroethene	20.000	20.198	-1.0	106	-0.01
11		2-Chloroethylvinyl ether	20.000	19.988	0.1	104	-0.02
12		cis-1,3-Dichloropropene	20.000	20.146	-0.7	106	-0.02
13		Toluene	40.000	40.405	-1.0	107	-0.02
14		trans-1,3-Dichloropropene	20.000	20.105	-0.5	106	-0.02
15		Tetrachloroethene	20.000	20.243	-1.2	106	-0.02
16	S	1-Chloro-4-fluorobenzene	20.000	20.386	-1.9	98	-0.02
17		Chlorobenzene	20.000	20.643	-3.2	105	0.00
18		Ethylbenzene	40.000	40.230	-0.6	105	-0.02
19		m,p-Xylene	80.000	81.066	-1.3	106	-0.01
20		o-Xylene	40.000	40.351	-0.9	106	-0.01
21		1,3-Dichlorobenzene	20.000	20.360	-1.8	107	0.00
22		1,4-Dichlorobenzene	20.000	20.259	-1.3	107	0.00
23		1,2-Dichlorobenzene	20.000	20.320	-1.6	106	-0.01

Signal #2

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
25	I	Bromochloromethane	20.000	20.000	0.0	101	-0.01
26	c	DICHLORODIFLUOROMETHANE	20.000	20.534	-2.7	109	0.00
27	c	CHLOROMETHANE	20.000	21.342	-6.7	109	0.01
28	c	VINYL CHLORIDE #2	20.000	21.815	-9.1	116	0.00
29	c	BROMOMETHANE	20.000	20.764	-3.8	109	0.02
30	c	CHLOROETHANE	20.000	20.936	-4.7	109	0.02
31	c	TRICHLOROFLUOROMETHANE	20.000	19.982	0.1	103	0.03
32		1,1-Dichloroethene #2	20.000	21.012	-5.1	112	0.03
33		Methylene Chloride	20.000	22.450	-12.3	117	0.02
34		trans-1,2-Dichloroethene #2	20.000	19.865	0.7	108	0.00
35		1,1-Dichloroethane	20.000	20.306	-1.5	108	0.00

Continuing Calibration Summary

Job Number: F16645 **Sample:** GQR623-CC623
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** QR015971.D
Project: Camp Lejeune-NW

36		cis-1,2-Dichloroethene #2	20.000	20.289	-1.4	107	0.00
37		Chloroform	20.000	20.375	-1.9	108	0.00
38		1,1,1-Trichloroethane	20.000	19.950	0.3	108	-0.01
39	S	1,1-Dichloropropene #2	20.000	20.002	-0.0	102	-0.01
40		Carbon Tetrachloride	20.000	19.972	0.1	108	-0.01
41		1,2-Dichloroethane	20.000	20.503	-2.5	108	-0.01
42		Trichloroethene #2	20.000	21.628	-8.1	113	-0.01
43		1,2-Dichloropropane	20.000	21.465	-7.3	112	-0.01
44		Bromodichloromethane	20.000	20.451	-2.3	107	-0.02
45		2-Chloroethylvinyl ether #2	20.000	21.491	-7.5	104	-0.02
46		cis-1,3-Dichloropropene #2	20.000	20.328	-1.6	107	-0.02
47		trans-1,3-Dichloropropene #	20.000	20.202	-1.0	105	-0.02
48		1,1,2-Trichloroethane	20.000	20.627	-3.1	108	-0.02
49		Tetrachloroethene #2	20.000	20.295	-1.5	107	-0.02
50		Dibromochloromethane	20.000	20.576	-2.9	107	-0.02
51	s	1-Chloro-4-fluorobenzene #2	20.000	20.234	-1.2	100	-0.02
52		Chlorobenzene #2	20.000	20.208	-1.0	106	-0.02
53		Bromoform	20.000	22.065	-10.3	109	-0.01
54		1,1,2,2-Tetrachloroethane	20.000	20.601	-3.0	108	-0.01
55		1,3-Dichlorobenzene #2	20.000	20.631	-3.2	107	0.00
56		1,4-Dichlorobenzene #2	20.000	20.360	-1.8	106	0.00
57		1,2-Dichlorobenzene #2	20.000	20.390	-2.0	107	-0.01

Average % D = 2.7

(#) = Out of Range SPCC's out = 0 CCC's out = 0
QR015958.D QR0227.M Mon Mar 03 10:13:05 2003 QRXY

Continuing Calibration Summary

Job Number: F16645 **Sample:** GQR623-CC623
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** QR015982.D
Project: Camp Lejeune-NW

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\022703\QR015982.D\FID1B.CH Vial: 26
Signal #2 : C:\HPCHEM\1\DATA\022703\QR015982.D\AIB2A.CH
Acq On : 27 Feb 2003 11:38 pm Operator: RachidA
Sample : CC623-20 Inst : VOA3
Misc : GC2358,GQR623,,,,, Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: ELCD.E

Method : C:\HPCHEM\1\METHODS\QR0227.M (Chemstation Integrator)
Title : EPA 601/602 & SWA 5030B/8021B
Last Update : Fri Feb 28 15:05:24 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	20.000	20.000	0.0	100	-0.03
2	c	VINYL CHLORIDE	20.000	21.524	-7.6	112	-0.02
3		1,1-Dichloroethene	20.000	20.794	-4.0	113	0.00
4		Methyl tert Butyl Ether	40.000	39.162	2.1	110	0.00
5		trans-1,2-Dichloroethene	20.000	19.449	2.8	102	0.00
6		Di-Isopropyl ether	20.000	20.211	-1.1	108	-0.01
7		cis-1,2-Dichloroethene	20.000	20.614	-3.1	109	-0.02
8	S	1,1-Dichloropropene	20.000	20.042	-0.2	100	-0.03
9		Benzene	40.000	40.737	-1.8	108	-0.03
10		Trichloroethene	20.000	23.060	-15.3#	121	-0.03
11		2-Chloroethylvinyl ether	20.000	20.263	-1.3	106	-0.03
12		cis-1,3-Dichloropropene	20.000	19.651	1.7	104	-0.03
13		Toluene	40.000	40.960	-2.4	109	-0.03
14		trans-1,3-Dichloropropene	20.000	19.552	2.2	103	-0.03
15		Tetrachloroethene	20.000	20.802	-4.0	110	-0.03
16	S	1-Chloro-4-fluorobenzene	20.000	20.588	-2.9	99	-0.02
17		Chlorobenzene	20.000	20.877	-4.4	107	0.00
18		Ethylbenzene	40.000	41.080	-2.7	108	-0.02
19		m,p-Xylene	80.000	82.749	-3.4	109	-0.02
20		o-Xylene	40.000	41.246	-3.1	109	-0.02
21		1,3-Dichlorobenzene	20.000	20.367	-1.8	107	-0.02
22		1,4-Dichlorobenzene	20.000	20.425	-2.1	108	-0.02
23		1,2-Dichlorobenzene	20.000	20.427	-2.1	107	-0.02

Signal #2

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
25	I	Bromochloromethane	20.000	20.000	0.0	100	-0.03
26	c	DICHLORODIFLUOROMETHANE	20.000	21.536	-7.7	113	0.00
27	c	CHLOROMETHANE	20.000	20.595	-3.0	104	0.00
28	c	VINYL CHLORIDE #2	20.000	22.453	-12.3	118	-0.02
29	c	BROMOMETHANE	20.000	19.847	0.8	103	0.00
30	c	CHLOROETHANE	20.000	20.762	-3.8	107	0.00
31	c	TRICHLOROFLUOROMETHANE	20.000	19.684	1.6	100	0.00
32		1,1-Dichloroethene #2	20.000	22.344	-11.7	117	0.00
33		Methylene Chloride	20.000	21.594	-8.0	111	0.00
34		trans-1,2-Dichloroethene #2	20.000	19.057	4.7	103	-0.01
35		1,1-Dichloroethane	20.000	20.498	-2.5	108	-0.01

Continuing Calibration Summary

Job Number: F16645 **Sample:** GQR623-CC623
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** QR015982.D
Project: Camp Lejeune-NW

36		cis-1,2-Dichloroethene #2	20.000	20.525	-2.6	107	-0.02
37		Chloroform	20.000	20.606	-3.0	108	-0.02
38		1,1,1-Trichloroethane	20.000	20.080	-0.4	107	-0.03
39	S	1,1-Dichloropropene #2	20.000	20.027	-0.1	101	-0.03
40		Carbon Tetrachloride	20.000	20.254	-1.3	108	-0.03
41		1,2-Dichloroethane	20.000	20.438	-2.2	106	-0.03
42		Trichloroethene #2	20.000	23.074	-15.4#	119	-0.03
43		1,2-Dichloropropane	20.000	20.549	-2.7	107	-0.03
44		Bromodichloromethane	20.000	20.607	-3.0	107	-0.03
45		2-Chloroethylvinyl ether #2	20.000	21.903	-9.5	105	-0.03
46		cis-1,3-Dichloropropene #2	20.000	19.956	0.2	104	-0.03
47		trans-1,3-Dichloropropene #	20.000	19.970	0.2	103	-0.03
48		1,1,2-Trichloroethane	20.000	20.784	-3.9	108	-0.03
49		Tetrachloroethene #2	20.000	20.851	-4.3	109	-0.03
50		Dibromochloromethane	20.000	20.882	-4.4	107	-0.03
51	s	1-Chloro-4-fluorobenzene #2	20.000	20.523	-2.6	100	-0.03
52		Chlorobenzene #2	20.000	20.501	-2.5	106	-0.03
53		Bromoform	20.000	22.265	-11.3	109	-0.02
54		1,1,2,2-Tetrachloroethane	20.000	18.259	8.7	96	-0.02
55		1,3-Dichlorobenzene #2	20.000	20.968	-4.8	107	-0.02
56		1,4-Dichlorobenzene #2	20.000	20.963	-4.8	107	-0.02
57		1,2-Dichlorobenzene #2	20.000	20.821	-4.1	107	-0.02

Average % D = 4.1

(#) = Out of Range SPCC's out = 0 CCC's out = 0
QR015958.D QR0227.M Mon Mar 03 10:13:07 2003 QRXY

Continuing Calibration Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GQR624-CC623
Lab FileID: QR015993.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\022703\QR015993.D\FID1B.CH Vial: 35
Signal #2 : C:\HPCHEM\1\DATA\022703\QR015993.D\AIB2A.CH
Acq On : 28 Feb 2003 4:38 am Operator: RachidA
Sample : CC623-20 Inst : VOA3
Misc : GC2364,GQR624,,,,, Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: ELCD.E

Method : C:\HPCHEM\1\METHODS\QR0227.M (Chemstation Integrator)
Title : EPA 601/602 & SWA 5030B/8021B
Last Update : Fri Feb 28 15:05:24 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	20.000	20.000	0.0	100	-0.01
2	c	VINYL CHLORIDE	20.000	22.605	-13.0	118	-0.02
3		1,1-Dichloroethene	20.000	20.603	-3.0	112	0.01
4		Methyl tert Butyl Ether	40.000	39.705	0.7	112	0.00
5		trans-1,2-Dichloroethene	20.000	19.595	2.0	103	0.00
6		Di-Isopropyl ether	20.000	20.386	-1.9	109	0.00
7		cis-1,2-Dichloroethene	20.000	23.896	-19.5#	126	0.00
8	S	1,1-Dichloropropene	20.000	19.954	0.2	100	0.00
9		Benzene	40.000	40.860	-2.1	109	-0.01
10		Trichloroethene	20.000	29.228	-46.1#	154	-0.01
11		2-Chloroethylvinyl ether	20.000	20.371	-1.9	107	-0.02
12		cis-1,3-Dichloropropene	20.000	19.439	2.8	103	-0.02
13		Toluene	40.000	40.943	-2.4	109	-0.02
14		trans-1,3-Dichloropropene	20.000	19.423	2.9	103	-0.02
15		Tetrachloroethene	20.000	35.374	-76.9#	187	-0.02
16	S	1-Chloro-4-fluorobenzene	20.000	20.751	-3.8	100	-0.02
17		Chlorobenzene	20.000	21.137	-5.7	108	0.00
18		Ethylbenzene	40.000	40.963	-2.4	108	-0.02
19		m,p-Xylene	80.000	82.369	-3.0	108	-0.02
20		o-Xylene	40.000	41.190	-3.0	109	-0.02
21		1,3-Dichlorobenzene	20.000	20.418	-2.1	108	-0.03
22		1,4-Dichlorobenzene	20.000	20.376	-1.9	108	-0.03
23		1,2-Dichlorobenzene	20.000	20.598	-3.0	108	-0.03

Signal #2

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
25	I	Bromochloromethane	20.000	20.000	0.0	96	0.00
26	c	DICHLORODIFLUOROMETHANE	20.000	20.780	-3.9	104	0.02
27	c	CHLOROMETHANE	20.000	24.053	-20.3#	114	0.00
28	c	VINYL CHLORIDE #2	20.000	25.620	-28.1#	128	-0.03
29	c	BROMOMETHANE	20.000	19.500	2.5	97	0.02
30	c	CHLOROETHANE	20.000	22.601	-13.0	110	0.01
31	c	TRICHLOROFLUOROMETHANE	20.000	19.276	3.6	94	0.03
32		1,1-Dichloroethene #2	20.000	21.022	-5.1	106	0.01
33		Methylene Chloride	20.000	23.497	-17.5#	115	0.00
34		trans-1,2-Dichloroethene #2	20.000	20.393	-2.0	104	0.00
35		1,1-Dichloroethane	20.000	21.574	-7.9	108	0.00

Continuing Calibration Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GQR624-CC623
Lab FileID: QR015993.D

36		cis-1,2-Dichloroethene #2	20.000	23.707	-18.5#	116	0.00
37		Chloroform	20.000	22.159	-10.8	110	0.00
38		1,1,1-Trichloroethane	20.000	20.424	-2.1	104	0.00
39	S	1,1-Dichloropropene #2	20.000	21.532	-7.7	104	0.00
40		Carbon Tetrachloride	20.000	22.173	-10.9	112	0.00
41		1,2-Dichloroethane	20.000	21.503	-7.5	106	-0.01
42		Trichloroethene #2	20.000	29.005	-45.0#	137	-0.01
43		1,2-Dichloropropane	20.000	21.096	-5.5	105	-0.01
44		Bromodichloromethane	20.000	20.703	-3.5	103	-0.01
45		2-Chloroethylvinyl ether #2	20.000	21.182	-5.9	98	-0.02
46		cis-1,3-Dichloropropene #2	20.000	19.809	1.0	99	-0.02
47		trans-1,3-Dichloropropene #	20.000	19.234	3.8	96	-0.02
48		1,1,2-Trichloroethane	20.000	21.455	-7.3	106	-0.02
49		Tetrachloroethene #2	20.000	36.076	-80.4#	162	-0.02
50		Dibromochloromethane	20.000	20.710	-3.6	102	-0.02
51	s	1-Chloro-4-fluorobenzene #2	20.000	21.280	-6.4	100	-0.02
52		Chlorobenzene #2	20.000	19.252	3.7	96	-0.02
53		Bromoform	20.000	19.512	2.4	91	-0.02
54		1,1,2,2-Tetrachloroethane	20.000	17.180	14.1	87	-0.02
55		1,3-Dichlorobenzene #2	20.000	19.266	3.7	95	-0.02
56		1,4-Dichlorobenzene #2	20.000	20.329	-1.6	100	-0.02
57		1,2-Dichlorobenzene #2	20.000	19.869	0.7	99	-0.02

Average % D = 10.2

(#) = Out of Range SPCC's out = 0 CCC's out = 2

QR015958.D QR0227.M Mon Mar 03 10:13:08 2003 QRXY

Continuing Calibration Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GQR625-CC623
Lab FileID: QR016009.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\022803\QR016009.D\FID1B.CH Vial: 1
Signal #2 : C:\HPCHEM\1\DATA\022803\QR016009.D\AIB2A.CH
Acq On : 28 Feb 2003 2:35 pm Operator: RachidA
Sample : CC623-20 Inst : VOA3
Misc : gc2358,gqr625,,,,,1 Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: ELCD.E

Method : C:\HPCHEM\1\METHODS\QR0227.M (Chemstation Integrator)
Title : EPA 601/602 & SWA 5030B/8021B
Last Update : Wed Mar 05 10:41:57 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	20.000	20.000	0.0	101	-0.01
2	c	VINYL CHLORIDE	20.000	23.178	-15.9	122	-0.05
3		1,1-Dichloroethene	20.000	18.774	6.1	104	0.00
4		Methyl tert Butyl Ether	40.000	34.807	13.0	99	0.00
5		trans-1,2-Dichloroethene	20.000	20.170	-0.9	108	0.00
6		Di-Isopropyl ether	20.000	19.230	3.8	104	0.00
7		cis-1,2-Dichloroethene	20.000	19.942	0.3	107	0.00
8	S	1,1-Dichloropropene	20.000	19.935	0.3	101	-0.01
9		Benzene	40.000	38.923	2.7	105	-0.01
10		Trichloroethene	20.000	19.712	1.4	106	-0.01
11		2-Chloroethylvinyl ether	20.000	18.883	5.6	100	0.00
12		cis-1,3-Dichloropropene	20.000	19.774	1.1	107	0.00
13		Toluene	40.000	39.339	1.7	106	0.00
14		trans-1,3-Dichloropropene	20.000	19.982	0.1	107	0.00
15		Tetrachloroethene	20.000	20.616	-3.1	111	0.00
16	S	1-Chloro-4-fluorobenzene	20.000	20.751	-3.8	102	0.00
17		Chlorobenzene	20.000	19.895	0.5	104	0.01
18		Ethylbenzene	40.000	39.349	1.6	105	0.00
19		m,p-Xylene	80.000	79.523	0.6	106	0.00
20		o-Xylene	40.000	39.555	1.1	106	0.00
21		1,3-Dichlorobenzene	20.000	19.867	0.7	106	0.00
22		1,4-Dichlorobenzene	20.000	19.952	0.2	107	0.00
23		1,2-Dichlorobenzene	20.000	19.768	1.2	105	0.00

Signal #2

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
25	I	Bromochloromethane	20.000	20.000	0.0	91	0.00
26	c	DICHLORODIFLUOROMETHANE	20.000	17.847	10.8	86	0.00
27	c	CHLOROMETHANE	20.000	18.104	9.5	85	0.00
28	c	VINYL CHLORIDE #2	20.000	23.743	-18.7	114	-0.06
29	c	BROMOMETHANE	20.000	18.926	5.4	90	0.00
30	c	CHLOROETHANE	20.000	19.662	1.7	93	0.00
31	c	TRICHLOROFLUOROMETHANE	20.000	19.731	1.3	92	0.00
32		1,1-Dichloroethene #2	20.000	19.403	3.0	94	0.00
33		Methylene Chloride	20.000	19.782	1.1	94	0.00
34		trans-1,2-Dichloroethene #2	20.000	19.975	0.1	98	0.00
35		1,1-Dichloroethane	20.000	19.726	1.4	95	0.00

Continuing Calibration Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GQR625-CC623
Lab FileID: QR016009.D

36		cis-1,2-Dichloroethene #2	20.000	19.869	0.7	95	0.00
37		Chloroform	20.000	20.146	-0.7	96	0.00
38		1,1,1-Trichloroethane	20.000	19.454	2.7	95	0.00
39	S	1,1-Dichloropropene #2	20.000	20.424	-2.1	94	-0.01
40		Carbon Tetrachloride	20.000	19.897	0.5	97	-0.01
41		1,2-Dichloroethane	20.000	20.512	-2.6	97	-0.01
42		Trichloroethene #2	20.000	20.071	-0.4	96	-0.01
43		1,2-Dichloropropane	20.000	19.938	0.3	95	-0.01
44		Bromodichloromethane	20.000	19.816	0.9	94	0.00
45		2-Chloroethylvinyl ether #2	20.000	20.033	-0.2	88	0.00
46		cis-1,3-Dichloropropene #2	20.000	20.302	-1.5	96	0.00
47		trans-1,3-Dichloropropene #	20.000	20.029	-0.1	94	0.00
48		1,1,2-Trichloroethane	20.000	20.498	-2.5	97	0.00
49		Tetrachloroethene #2	20.000	21.073	-5.4	100	0.00
50		Dibromochloromethane	20.000	19.764	1.2	93	0.00
51	s	1-Chloro-4-fluorobenzene #2	20.000	21.245	-6.2	95	0.00
52		Chlorobenzene #2	20.000	19.264	3.7	92	0.00
53		Bromoform	20.000	18.987	5.1	85	0.00
54		1,1,2,2-Tetrachloroethane	20.000	20.231	-1.2	96	0.00
55		1,3-Dichlorobenzene #2	20.000	19.085	4.6	90	0.00
56		1,4-Dichlorobenzene #2	20.000	19.971	0.1	94	0.00
57		1,2-Dichlorobenzene #2	20.000	19.520	2.4	93	0.00

Average % D = 3.0

(#) = Out of Range SPCC's out = 0 CCC's out = 0

QR015958.D QR0227.M Wed Mar 05 14:17:20 2003 QRXY

Continuing Calibration Summary

Job Number: F16645 **Sample:** GQR625-CC623
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** QR016020.D
Project: Camp Lejeune-NW

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\022803\QR016020.D\FID1B.CH Vial: 11
Signal #2 : C:\HPCHEM\1\DATA\022803\QR016020.D\AIB2A.CH
Acq On : 28 Feb 2003 8:27 pm Operator: RachidA
Sample : CC623-20 Inst : VOA3
Misc : gc2364,gqr625,,,,, Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: ELCD.E

Method : C:\HPCHEM\1\METHODS\QR0227.M (Chemstation Integrator)
Title : EPA 601/602 & SWA 5030B/8021B
Last Update : Fri Feb 28 15:05:24 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	20.000	20.000	0.0	100	-0.01
2	c	VINYL CHLORIDE	20.000	21.228	-6.1	112	-0.03
3		1,1-Dichloroethene	20.000	19.601	2.0	108	0.01
4		Methyl tert Butyl Ether	40.000	37.116	7.2	105	0.00
5		trans-1,2-Dichloroethene	20.000	18.397	8.0	98	0.00
6		Di-Isopropyl ether	20.000	19.814	0.9	107	0.00
7		cis-1,2-Dichloroethene	20.000	20.016	-0.1	106	0.00
8	S	1,1-Dichloropropene	20.000	19.805	1.0	100	-0.01
9		Benzene	40.000	39.011	2.5	104	-0.01
10		Trichloroethene	20.000	19.651	1.7	104	-0.02
11		2-Chloroethylvinyl ether	20.000	19.157	4.2	101	-0.02
12		cis-1,3-Dichloropropene	20.000	19.714	1.4	105	-0.02
13		Toluene	40.000	39.347	1.6	105	-0.02
14		trans-1,3-Dichloropropene	20.000	19.719	1.4	105	-0.02
15		Tetrachloroethene	20.000	19.835	0.8	106	-0.02
16	S	1-Chloro-4-fluorobenzene	20.000	20.524	-2.6	100	-0.02
17		Chlorobenzene	20.000	20.287	-1.4	105	0.00
18		Ethylbenzene	40.000	38.969	2.6	103	-0.02
19		m,p-Xylene	80.000	78.548	1.8	104	-0.02
20		o-Xylene	40.000	39.377	1.6	105	-0.02
21		1,3-Dichlorobenzene	20.000	19.929	0.4	106	-0.02
22		1,4-Dichlorobenzene	20.000	20.008	-0.0	107	-0.02
23		1,2-Dichlorobenzene	20.000	20.005	-0.0	105	-0.02

Signal #2

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
25	I	Bromochloromethane	20.000	20.000	0.0	89	-0.01
26	c	DICHLORODIFLUOROMETHANE	20.000	17.880	10.6	83	0.00
27	c	CHLOROMETHANE	20.000	18.111	9.4	83	0.00
28	c	VINYL CHLORIDE #2	20.000	22.302	-11.5	104	-0.03
29	c	BROMOMETHANE	20.000	19.219	3.9	89	0.03
30	c	CHLOROETHANE	20.000	19.925	0.4	91	0.02
31	c	TRICHLOROFLUOROMETHANE	20.000	18.806	6.0	85	0.04
32		1,1-Dichloroethene #2	20.000	20.340	-1.7	95	0.01
33		Methylene Chloride	20.000	21.539	-7.7	98	0.00
34		trans-1,2-Dichloroethene #2	20.000	18.386	8.1	88	0.00
35		1,1-Dichloroethane	20.000	20.110	-0.5	94	0.00

Continuing Calibration Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GQR625-CC623
Lab FileID: QR016020.D

36		cis-1,2-Dichloroethene #2	20.000	20.279	-1.4	94	0.00
37		Chloroform	20.000	20.796	-4.0	96	-0.01
38		1,1,1-Trichloroethane	20.000	19.651	1.7	93	-0.01
39	S	1,1-Dichloropropene #2	20.000	20.471	-2.4	92	-0.01
40		Carbon Tetrachloride	20.000	19.690	1.5	94	-0.01
41		1,2-Dichloroethane	20.000	20.948	-4.7	96	-0.01
42		Trichloroethene #2	20.000	20.332	-1.7	94	-0.02
43		1,2-Dichloropropane	20.000	20.741	-3.7	96	-0.02
44		Bromodichloromethane	20.000	20.497	-2.5	94	-0.02
45		2-Chloroethylvinyl ether #2	20.000	20.688	-3.4	88	-0.02
46		cis-1,3-Dichloropropene #2	20.000	20.614	-3.1	95	-0.02
47		trans-1,3-Dichloropropene #	20.000	20.289	-1.4	93	-0.02
48		1,1,2-Trichloroethane	20.000	21.079	-5.4	97	-0.02
49		Tetrachloroethene #2	20.000	20.518	-2.6	95	-0.02
50		Dibromochloromethane	20.000	20.323	-1.6	93	-0.02
51	s	1-Chloro-4-fluorobenzene #2	20.000	21.151	-5.8	92	-0.02
52		Chlorobenzene #2	20.000	20.014	-0.1	92	-0.02
53		Bromoform	20.000	19.828	0.9	86	-0.02
54		1,1,2,2-Tetrachloroethane	20.000	20.996	-5.0	96	-0.02
55		1,3-Dichlorobenzene #2	20.000	20.427	-2.1	93	-0.02
56		1,4-Dichlorobenzene #2	20.000	21.024	-5.1	96	-0.02
57		1,2-Dichlorobenzene #2	20.000	20.478	-2.4	94	-0.02

Average % D = 3.2

(#) = Out of Range SPCC's out = 0 CCC's out = 0

QR015958.D QR0227.M Mon Mar 03 14:46:50 2003 QRXY

Continuing Calibration Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GQR621-CC621
Lab FileID: QR015928.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\022503\QR015928.D\FID1B.CH Vial: 13
Signal #2 : C:\HPCHEM\1\DATA\022503\QR015928.D\AIB2A.CH
Acq On : 25 Feb 2003 5:26 pm Operator: RachidA
Sample : CC621-20 Inst : VOA3
Misc : gc2341,gqr621,,,,, Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: ELCD.E

Method : C:\HPCHEM\1\METHODS\QR022103.M (Chemstation Integrator)
Title : EPA 601/602 & SWA 5030B/8021B
Last Update : Thu Feb 27 12:42:21 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	20.000	20.000	0.0	103	0.23
2	c	VINYL CHLORIDE	20.000	18.756	6.2	102	0.77#
3		1,1-Dichloroethene	20.000	19.609	2.0	102	0.68#
4		Methyl tert Butyl Ether	40.000	40.132	-0.3	105	0.60#
5		trans-1,2-Dichloroethene	20.000	19.520	2.4	105	0.58#
6		Di-Isopropyl ether	20.000	19.266	3.7	102	0.49
7		cis-1,2-Dichloroethene	20.000	19.515	2.4	102	0.38
8	S	1,1-Dichloropropene	20.000	20.362	-1.8	105	0.29
9		Benzene	40.000	38.718	3.2	103	0.26
10		Trichloroethene	20.000	20.526	-2.6	109	0.20
11		2-Chloroethylvinyl ether	20.000	43.338	-116.7#	167	0.12
12		cis-1,3-Dichloropropene	20.000	21.094	-5.5	108	0.11
13		Toluene	40.000	38.767	3.1	100	0.10
14		trans-1,3-Dichloropropene	20.000	21.225	-6.1	108	0.09
15		Tetrachloroethene	20.000	20.079	-0.4	103	0.07
16	S	1-Chloro-4-fluorobenzene	20.000	20.612	-3.1	101	0.04
17		Chlorobenzene	20.000	19.968	0.2	102	0.04
18		Ethylbenzene	40.000	38.006	5.0	98	0.04
19		m,p-Xylene	80.000	76.259	4.7	98	0.04
20		o-Xylene	40.000	37.953	5.1	96	0.03
21		1,3-Dichlorobenzene	20.000	19.081	4.6	99	0.00
22		1,4-Dichlorobenzene	20.000	19.040	4.8	99	0.00
23		1,2-Dichlorobenzene	20.000	18.949	5.3	98	0.00

Signal #2

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
25	I	Bromochloromethane	20.000	20.000	0.0	101	0.34
26	c	DICHLORODIFLUOROMETHANE	20.000	21.302	-6.5	106	0.83#
27	c	CHLOROMETHANE	20.000	19.554	2.2	99	0.89#
28	c	VINYL CHLORIDE #2	20.000	20.313	-1.6	103	0.78#
29	c	BROMOMETHANE	20.000	20.436	-2.2	105	0.84#
30	c	CHLOROETHANE	20.000	21.159	-5.8	109	0.81#
31	c	TRICHLOROFLUOROMETHANE	20.000	20.975	-4.9	103	0.82#
32		1,1-Dichloroethene #2	20.000	20.310	-1.5	105	0.68#
33		Methylene Chloride	20.000	21.183	-5.9	106	0.51#
34		trans-1,2-Dichloroethene #2	20.000	20.597	-3.0	107	0.58#
35		1,1-Dichloroethane	20.000	20.063	-0.3	103	0.49

Continuing Calibration Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GQR621-CC621
Lab FileID: QR015928.D

36		cis-1,2-Dichloroethene #2	20.000	20.691	-3.5	106	0.38
37		Chloroform	20.000	20.966	-4.8	107	0.36
38		1,1,1-Trichloroethane	20.000	21.542	-7.7	112	0.31
39	S	1,1-Dichloropropene #2	20.000	20.831	-4.2	108	0.29
40		Carbon Tetrachloride	20.000	20.906	-4.5	111	0.28
41		1,2-Dichloroethane	20.000	21.577	-7.9	110	0.26
42		Trichloroethene #2	20.000	21.736	-8.7	112	0.19
43		1,2-Dichloropropane	20.000	21.194	-6.0	109	0.17
44		Bromodichloromethane	20.000	21.335	-6.7	108	0.16
45		2-Chloroethylvinyl ether #2	20.000	38.616	-93.1#	176	0.12
46		cis-1,3-Dichloropropene #2	20.000	21.694	-8.5	111	0.11
47		trans-1,3-Dichloropropene #	20.000	21.356	-6.8	110	0.09
48		1,1,2-Trichloroethane	20.000	20.901	-4.5	107	0.08
49		Tetrachloroethene #2	20.000	20.332	-1.7	106	0.07
50		Dibromochloromethane	20.000	20.593	-3.0	104	0.06
51	s	1-Chloro-4-fluorobenzene #2	20.000	20.984	-4.9	104	0.04
52		Chlorobenzene #2	20.000	20.011	-0.1	104	0.04
53		Bromoform	20.000	23.202	-16.0#	104	0.03
54		1,1,2,2-Tetrachloroethane	20.000	19.309	3.5	98	0.02
55		1,3-Dichlorobenzene #2	20.000	19.506	2.5	100	0.00
56		1,4-Dichlorobenzene #2	20.000	19.385	3.1	100	0.00
57		1,2-Dichlorobenzene #2	20.000	19.230	3.8	98	0.00

Average % D = 7.9

(#) = Out of Range SPCC's out = 0 CCC's out = 0

QR015918.D QR022103.M Thu Feb 27 13:06:56 2003 QRXY

Continuing Calibration Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GQR622-ECC621
Lab FileID: QR015953.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\022503\QR015953.D\FID1B.CH Vial: 35
Signal #2 : C:\HPCHEM\1\DATA\022503\QR015953.D\AIB2A.CH
Acq On : 26 Feb 2003 5:09 am Operator: RachidA
Sample : ECC621-20 Inst : VOA3
Misc : gc2358,gqr622,,,,, Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: ELCD.E

Method : C:\HPCHEM\1\METHODS\QR022103.M (Chemstation Integrator)
Title : EPA 601/602 & SWA 5030B/8021B
Last Update : Thu Feb 27 12:42:21 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	20.000	20.000	0.0	122	0.23
2	c	VINYL CHLORIDE	20.000	18.392	8.0	118	0.74#
3		1,1-Dichloroethene	20.000	19.194	4.0	118	0.66#
4		Methyl tert Butyl Ether	40.000	38.876	2.8	121	0.59#
5		trans-1,2-Dichloroethene	20.000	18.644	6.8	119	0.57#
6		Di-Isopropyl ether	20.000	19.999	0.0	125	0.49
7		cis-1,2-Dichloroethene	20.000	19.030	4.8	118	0.38
8	S	1,1-Dichloropropene	20.000	19.148	4.3	117	0.29
9		Benzene	40.000	40.876	-2.2	129	0.26
10		Trichloroethene	20.000	23.585	-17.9#	148	0.20
11		2-Chloroethylvinyl ether	20.000	13.685	31.6#	97	0.13
12		cis-1,3-Dichloropropene	20.000	13.761	31.2#	84	0.12
13		Toluene	40.000	40.363	-0.9	123	0.12
14		trans-1,3-Dichloropropene	20.000	12.415	37.9#	75	0.10
15		Tetrachloroethene	20.000	21.390	-7.0	131	0.09
16	S	1-Chloro-4-fluorobenzene	20.000	18.114	9.4	105	0.05
17		Chlorobenzene	20.000	18.754	6.2	113	0.05
18		Ethylbenzene	40.000	31.878	20.3#	97	0.05
19		m,p-Xylene	80.000	57.916	27.6#	88	0.04
20		o-Xylene	40.000	29.068	27.3#	88	0.03
21		1,3-Dichlorobenzene	20.000	13.819	30.9#	81	0.01
22		1,4-Dichlorobenzene	20.000	14.043	29.8#	82	0.01
23		1,2-Dichlorobenzene	20.000	13.821	30.9#	82	0.01

Signal #2

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
25	I	Bromochloromethane	20.000	20.000	0.0	110	0.34
26	c	DICHLORODIFLUOROMETHANE	20.000	20.756	-3.8	113	0.80#
27	c	CHLOROMETHANE	20.000	16.846	15.8	94	0.86#
28	c	VINYL CHLORIDE #2	20.000	20.187	-0.9	112	0.76#
29	c	BROMOMETHANE	20.000	19.909	0.5	111	0.82#
30	c	CHLOROETHANE	20.000	21.343	-6.7	121	0.78#
31	c	TRICHLOROFLUOROMETHANE	20.000	21.367	-6.8	115	0.80#
32		1,1-Dichloroethene #2	20.000	21.540	-7.7	121	0.66#
33		Methylene Chloride	20.000	21.348	-6.7	117	0.50
34		trans-1,2-Dichloroethene #2	20.000	21.210	-6.1	120	0.57#
35		1,1-Dichloroethane	20.000	20.956	-4.8	118	0.48

Continuing Calibration Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GQR622-ECC621
Lab FileID: QR015953.D

36		cis-1,2-Dichloroethene #2	20.000	21.478	-7.4	120	0.38
37		Chloroform	20.000	21.877	-9.4	122	0.36
38		1,1,1-Trichloroethane	20.000	22.970	-14.8	130	0.31
39	S	1,1-Dichloropropene #2	20.000	20.920	-4.6	118	0.29
40		Carbon Tetrachloride	20.000	17.560	12.2	105	0.28
41		1,2-Dichloroethane	20.000	21.433	-7.2	120	0.26
42		Trichloroethene #2	20.000	25.805	-29.0#	141	0.20
43		1,2-Dichloropropane	20.000	22.889	-14.4	128	0.18
44		Bromodichloromethane	20.000	19.772	1.1	111	0.17
45		2-Chloroethylvinyl ether #2	20.000	20.014	-0.1	100	0.13
46		cis-1,3-Dichloropropene #2	20.000	14.752	26.2#	86	0.12
47		trans-1,3-Dichloropropene #	20.000	13.141	34.3#	77	0.10
48		1,1,2-Trichloroethane	20.000	21.811	-9.1	121	0.10
49		Tetrachloroethene #2	20.000	22.710	-13.6	128	0.09
50		Dibromochloromethane	20.000	16.432	17.8#	93	0.07
51	s	1-Chloro-4-fluorobenzene #2	20.000	20.051	-0.3	109	0.05
52		Chlorobenzene #2	20.000	20.346	-1.7	116	0.05
53		Bromoform	20.000	16.425	17.9#	80	0.03
54		1,1,2,2-Tetrachloroethane	20.000	15.673	21.6#	89	0.02
55		1,3-Dichlorobenzene #2	20.000	14.611	26.9#	81	0.01
56		1,4-Dichlorobenzene #2	20.000	14.629	26.9#	82	0.01
57		1,2-Dichlorobenzene #2	20.000	15.007	25.0#	84	0.01

Average % D = 13.4

(#) = Out of Range SPCC's out = 0 CCC's out = 0

QR015918.D QR022103.M Thu Feb 27 12:51:08 2003 QRXY

Continuing Calibration Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GQR625-CC623
Lab FileID: QR016031.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\022803\QR016031.D\FID1B.CH Vial: 20
Signal #2 : C:\HPCHEM\1\DATA\022803\QR016031.D\AIB2A.CH
Acq On : 1 Mar 2003 1:33 am Operator: RachidA
Sample : CC623-35 Inst : VOA3
Misc : gc2364,gqr625,,,,,1 Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: ELCD.E

Method : C:\HPCHEM\1\METHODS\QR0227.M (Chemstation Integrator)
Title : EPA 601/602 & SWA 5030B/8021B
Last Update : Fri Feb 28 15:05:24 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	20.000	20.000	0.0	100	-0.02
2	c	VINYL CHLORIDE	35.000	35.998	-2.9	102	-0.02
3		1,1-Dichloroethene	35.000	33.765	3.5	95	0.00
4		Methyl tert Butyl Ether	70.000	63.043	9.9	92	0.00
5		trans-1,2-Dichloroethene	35.000	33.429	4.5	93	-0.01
6		Di-Isopropyl ether	35.000	34.092	2.6	98	-0.01
7		cis-1,2-Dichloroethene	35.000	35.065	-0.2	97	-0.02
8	S	1,1-Dichloropropene	20.000	19.678	1.6	98	-0.02
9		Benzene	70.000	68.272	2.5	97	-0.02
10		Trichloroethene	35.000	34.627	1.1	95	-0.02
11		2-Chloroethylvinyl ether	35.000	33.353	4.7	93	-0.03
12		cis-1,3-Dichloropropene	35.000	33.411	4.5	93	-0.03
13		Toluene	70.000	68.737	1.8	97	-0.03
14		trans-1,3-Dichloropropene	35.000	34.051	2.7	93	-0.03
15		Tetrachloroethene	35.000	34.528	1.3	95	-0.03
16	S	1-Chloro-4-fluorobenzene	20.000	21.192	-6.0	101	-0.03
17		Chlorobenzene	35.000	35.672	-1.9	97	0.00
18		Ethylbenzene	70.000	68.597	2.0	97	-0.03
19		m,p-Xylene	140.000	138.386	1.2	96	-0.03
20		o-Xylene	70.000	69.617	0.5	98	-0.03
21		1,3-Dichlorobenzene	35.000	34.768	0.7	96	-0.02
22		1,4-Dichlorobenzene	35.000	34.845	0.4	96	-0.02
23		1,2-Dichlorobenzene	35.000	34.913	0.2	98	-0.02

Signal #2

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
25	I	Bromochloromethane	20.000	20.000	0.0	86	-0.02
26	c	DICHLORODIFLUOROMETHANE	35.000	33.333	4.8	81	0.00
27	c	CHLOROMETHANE	35.000	33.011	5.7	84	0.00
28	c	VINYL CHLORIDE #2	35.000	37.848	-8.1	91	-0.03
29	c	BROMOMETHANE	35.000	35.811	-2.3	87	0.00
30	c	CHLOROETHANE	35.000	36.288	-3.7	89	0.00
31	c	TRICHLOROFLUOROMETHANE	35.000	35.442	-1.3	88	0.02
32		1,1-Dichloroethene #2	35.000	34.991	0.0	86	0.00
33		Methylene Chloride	35.000	36.013	-2.9	90	-0.01
34		trans-1,2-Dichloroethene #2	35.000	34.246	2.2	84	-0.01
35		1,1-Dichloroethane	35.000	35.651	-1.9	88	-0.01

Continuing Calibration Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GQR625-CC623
Lab FileID: QR016031.D

36		cis-1,2-Dichloroethene #2	35.000	35.746	-2.1	88	-0.01
37		Chloroform	35.000	36.125	-3.2	90	-0.02
38		1,1,1-Trichloroethane	35.000	34.605	1.1	86	-0.02
39	S	1,1-Dichloropropene #2	20.000	20.429	-2.1	90	-0.02
40		Carbon Tetrachloride	35.000	34.475	1.5	87	-0.02
41		1,2-Dichloroethane	35.000	36.704	-4.9	91	-0.02
42		Trichloroethene #2	35.000	35.898	-2.6	90	-0.02
43		1,2-Dichloropropane	35.000	36.114	-3.2	90	-0.02
44		Bromodichloromethane	35.000	35.790	-2.3	89	-0.02
45		2-Chloroethylvinyl ether #2	35.000	35.171	-0.5	84	-0.03
46		cis-1,3-Dichloropropene #2	35.000	34.443	1.6	86	-0.03
47		trans-1,3-Dichloropropene #	35.000	34.359	1.8	85	-0.03
48		1,1,2-Trichloroethane	35.000	36.178	-3.4	91	-0.03
49		Tetrachloroethene #2	35.000	35.351	-1.0	89	-0.03
50		Dibromochloromethane	35.000	35.471	-1.3	88	-0.03
51	s	1-Chloro-4-fluorobenzene #2	20.000	21.406	-7.0	89	-0.03
52		Chlorobenzene #2	35.000	35.083	-0.2	87	-0.03
53		Bromoform	35.000	34.800	0.6	83	-0.03
54		1,1,2,2-Tetrachloroethane	35.000	35.452	-1.3	90	-0.03
55		1,3-Dichlorobenzene #2	35.000	35.703	-2.0	88	-0.02
56		1,4-Dichlorobenzene #2	35.000	36.572	-4.5	89	-0.02
57		1,2-Dichlorobenzene #2	35.000	35.223	-0.6	87	-0.02

Average % D = 2.6

(#) = Out of Range SPCC's out = 0 CCC's out = 0

QR015959.D QR0227.M Mon Mar 03 14:47:13 2003 QRXY

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries
- Initial and Continuing Calibration Summaries

Blank Spike Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP6980-BS	IJ17104.D	1	02/24/03	NJ	02/20/03	OP6980	GIJ814

The QC reported here applies to the following samples: **Method:** EPA 610

F16645-1, F16645-2, F16645-3, F16645-4, F16645-5, F16645-6, F16645-8, F16645-9, F16645-10, F16645-11, F16645-12, F16645-13, F16645-14, F16645-15

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	25	21.4	86	59-114
208-96-8	Acenaphthylene	25	19.2	77	58-109
120-12-7	Anthracene	25	21.9	88	63-110
56-55-3	Benzo(a)anthracene	25	22.9	92	74-111
50-32-8	Benzo(a)pyrene	25	23.1	92	71-110
205-99-2	Benzo(b)fluoranthene	25	23.0	92	75-112
191-24-2	Benzo(g,h,i)perylene	25	22.3	89	66-114
207-08-9	Benzo(k)fluoranthene	25	23.3	93	73-111
218-01-9	Chrysene	25	23.2	93	73-112
53-70-3	Dibenzo(a,h)anthracene	25	23.0	92	67-111
206-44-0	Fluoranthene	25	22.3	89	74-113
86-73-7	Fluorene	25	21.6	86	67-113
193-39-5	Indeno(1,2,3-cd)pyrene	25	22.0	88	68-115
91-20-3	Naphthalene	25	20.2	81	52-113
90-12-0	1-Methylnaphthalene	25	21.2	85	55-117
91-57-6	2-Methylnaphthalene	25	20.1	80	50-115
85-01-8	Phenanthrene	25	21.2	85	70-111
129-00-0	Pyrene	25	22.6	90	73-115

CAS No.	Surrogate Recoveries	BSP	Limits
321-60-8	2-Fluorobiphenyl	83%	41-139%
84-15-1	o-Terphenyl	92%	46-135%

Duplicate Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP6980-DUP	IJ17108.D	1	02/24/03	NJ	02/20/03	OP6980	GIJ814
F16645-2	IJ17107.D	1	02/24/03	NJ	02/20/03	OP6980	GIJ814

The QC reported here applies to the following samples: **Method:** EPA 610

F16645-1, F16645-2, F16645-3, F16645-4, F16645-5, F16645-6, F16645-8, F16645-9, F16645-10, F16645-11, F16645-12, F16645-13, F16645-14, F16645-15

CAS No.	Compound	F16645-2 ug/l	Q	DUP ug/l	Q	RPD	Limits
83-32-9	Acenaphthene	ND		ND		nc	
208-96-8	Acenaphthylene	ND		ND		nc	
120-12-7	Anthracene	ND		ND		nc	
56-55-3	Benzo(a)anthracene	ND		ND		nc	
50-32-8	Benzo(a)pyrene	ND		ND		nc	
205-99-2	Benzo(b)fluoranthene	ND		ND		nc	
191-24-2	Benzo(g,h,i)perylene	ND		ND		nc	
207-08-9	Benzo(k)fluoranthene	ND		ND		nc	
218-01-9	Chrysene	ND		ND		nc	
53-70-3	Dibenzo(a,h)anthracene	ND		ND		nc	
206-44-0	Fluoranthene	ND		ND		nc	
86-73-7	Fluorene	ND		ND		nc	
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ND		nc	
91-20-3	Naphthalene	ND		ND		nc	
90-12-0	1-Methylnaphthalene	ND		ND		nc	
91-57-6	2-Methylnaphthalene	ND		ND		nc	
85-01-8	Phenanthrene	ND		ND		nc	
129-00-0	Pyrene	ND		ND		nc	

CAS No.	Surrogate Recoveries	DUP	F16645-2	Limits
321-60-8	2-Fluorobiphenyl	74%	71%	41-139%
84-15-1	o-Terphenyl	87%	85%	46-135%

Method Blank Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP6980-MB	IJ17105.D	1	02/24/03	NJ	02/20/03	OP6980	GIJ814

The QC reported here applies to the following samples: **Method:** EPA 610

F16645-1, F16645-2, F16645-3, F16645-4, F16645-5, F16645-6, F16645-8, F16645-9, F16645-10, F16645-11, F16645-12, F16645-13, F16645-14, F16645-15

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	5.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	ug/l	
120-12-7	Anthracene	ND	5.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	ug/l	
218-01-9	Chrysene	ND	5.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	ug/l	
86-73-7	Fluorene	ND	5.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	ug/l	
129-00-0	Pyrene	ND	5.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
321-60-8	2-Fluorobiphenyl	78%	41-139%
84-15-1	o-Terphenyl	85%	46-135%

Method Blank Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP6980-MB	IJ17127.D	1	02/25/03	NJ	02/20/03	OP6980	GIJ815

The QC reported here applies to the following samples: **Method:** EPA 610

F16645-1, F16645-2, F16645-3, F16645-4, F16645-5, F16645-6, F16645-8, F16645-9, F16645-10, F16645-11, F16645-12, F16645-13, F16645-14, F16645-15

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	5.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	ug/l	
120-12-7	Anthracene	ND	5.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	ug/l	
218-01-9	Chrysene	ND	5.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	ug/l	
86-73-7	Fluorene	ND	5.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	ug/l	
129-00-0	Pyrene	ND	5.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
321-60-8	2-Fluorobiphenyl	81%	41-139%
84-15-1	o-Terphenyl	87%	46-135%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP6980-MS	IJ17110.D	1	02/24/03	NJ	02/20/03	OP6980	GIJ814
OP6980-MSD	IJ17111.D	1	02/24/03	NJ	02/20/03	OP6980	GIJ814
F16645-3	IJ17109.D	1	02/24/03	NJ	02/20/03	OP6980	GIJ814

The QC reported here applies to the following samples: **Method:** EPA 610

F16645-1, F16645-2, F16645-3, F16645-4, F16645-5, F16645-6, F16645-8, F16645-9, F16645-10, F16645-11, F16645-12, F16645-13, F16645-14, F16645-15

CAS No.	Compound	F16645-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		51	45.4	89	45.9	90	1	36-143/21
208-96-8	Acenaphthylene	ND		51	40.3	79	41.0	80	2	59-108/22
120-12-7	Anthracene	ND		51	45.1	88	45.6	89	1	61-113/22
56-55-3	Benzo(a)anthracene	ND		51	46.3	91	46.7	92	1	69-111/17
50-32-8	Benzo(a)pyrene	ND		51	46.8	92	47.3	93	1	71-109/22
205-99-2	Benzo(b)fluoranthene	ND		51	46.7	92	47.4	93	1	63-116/19
191-24-2	Benzo(g,h,i)perylene	ND		51	45.7	90	46.5	91	2	54-123/19
207-08-9	Benzo(k)fluoranthene	ND		51	47.4	93	47.8	94	1	66-114/16
218-01-9	Chrysene	ND		51	47.1	92	47.6	93	1	65-116/15
53-70-3	Dibenzo(a,h)anthracene	ND		51	47.2	93	47.9	94	1	52-130/24
206-44-0	Fluoranthene	ND		51	45.6	89	45.8	90	0	73-113/16
86-73-7	Fluorene	ND		51	46.4	91	46.9	92	1	63-114/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		51	44.7	88	45.4	89	2	43-133/24
91-20-3	Naphthalene	ND		51	43.1	84	43.7	86	1	40-130/27
90-12-0	1-Methylnaphthalene	ND		51	44.7	88	45.6	89	2	50-128/25
91-57-6	2-Methylnaphthalene	ND		51	42.5	83	43.4	85	2	32-148/26
85-01-8	Phenanthrene	ND		51	43.7	86	44.3	87	1	44-136/19
129-00-0	Pyrene	ND		51	46.1	90	46.6	91	1	71-116/16

CAS No.	Surrogate Recoveries	MS	MSD	F16645-3	Limits
321-60-8	2-Fluorobiphenyl	84%	85%	72%	41-139%
84-15-1	o-Terphenyl	91%	92%	87%	46-135%

Semivolatile Surrogate Recovery Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Method: EPA 610 **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S2 [a]
F16645-1	IJ17128.D	58.0	55.0
F16645-2	IJ17107.D	71.0	85.0
F16645-3	IJ17109.D	72.0	87.0
F16645-4	IJ17124.D	70.0	90.0
F16645-5	IJ17113.D	71.0	88.0
F16645-6	IJ17115.D	85.0	90.0
F16645-8	IJ17116.D	86.0	94.0
F16645-9	IJ17129.D	0.0* [b]	0.0* [b]
F16645-10	IJ17130.D	115.0	99.0
F16645-11	IJ17131.D	115.0	109.0
F16645-12	IJ17132.D	108.0	103.0
F16645-13	IJ17133.D	113.0	105.0
F16645-14	IJ17134.D	105.0	72.0
F16645-15	IJ17136.D	100.0	101.0
F16645-15	IJ17135.D	94.0	96.0
OP6980-BS	IJ17104.D	83.0	92.0
OP6980-DUP	IJ17108.D	74.0	87.0
OP6980-MB	IJ17105.D	78.0	85.0
OP6980-MB	IJ17127.D	81.0	87.0
OP6980-MS	IJ17110.D	84.0	91.0
OP6980-MSD	IJ17111.D	85.0	92.0

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorobiphenyl	41-139%
S2 = o-Terphenyl	46-135%

(a) Recovery from GC signal #1
(b) Outside control limits due to dilution.

GC Surrogate Retention Time Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Check Std:	GIJ814-CC803	**Injection Date:**	02/24/03
Lab File ID:	IJ17103.D	**Injection Time:**	09:45
Instrument ID:	GCIJ	**Method:**	EPA 610

	S1 [a] **RT**	**S2** [a] **RT**
Check Std	5.86	10.41

Lab Sample ID	**Lab File ID**	**Date Analyzed**	**Time Analyzed**	**S1** [a] **RT**	**S2** [a] **RT**
OP6980-BS	IJ17104.D	02/24/03	10:17	5.86	10.42
OP6980-MB	IJ17105.D	02/24/03	10:45	5.87	10.42
F16645-2	IJ17107.D	02/24/03	11:40	5.87	10.42
OP6980-DUP	IJ17108.D	02/24/03	12:07	5.87	10.42
F16645-3	IJ17109.D	02/24/03	12:35	5.87	10.42
OP6980-MS	IJ17110.D	02/24/03	13:02	5.87	10.42
OP6980-MSD	IJ17111.D	02/24/03	13:30	5.87	10.42
F16645-5	IJ17113.D	02/24/03	14:25	5.87	10.42

Surrogate Compounds

S1 = 2-Fluorobiphenyl
S2 = o-Terphenyl

(a) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Check Std:	GIJ814-CC803	**Injection Date:**	02/24/03
Lab File ID:	IJ17114.D	**Injection Time:**	15:00
Instrument ID:	GCIJ	**Method:**	EPA 610

	S1 [a] **RT**	**S1** [b] **RT**	**S2** [a] **RT**	**S2** [b] **RT**
Check Std	5.87	6.75	10.42	11.92

Lab Sample ID	**Lab File ID**	**Date Analyzed**	**Time Analyzed**	**S1** [a] **RT**	**S1** [b] **RT**	**S2** [a] **RT**	**S2** [b] **RT**
F16645-6	IJ17115.D	02/24/03	15:29	5.87		10.42	
F16645-8	IJ17116.D	02/24/03	15:57	5.87		10.42	
F16645-4	IJ17124.D	02/24/03	19:37	5.87		10.42	
GIJ814-ECC803	IJ17125.D	02/24/03	20:05	5.87	6.75	10.42	11.92

Surrogate Compounds

S1 = 2-Fluorobiphenyl
S2 = o-Terphenyl

(a) Retention time from GC signal #1
(b) Retention time from GC signal #2

GC Surrogate Retention Time Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Check Std:	GIJ815-CC803	**Injection Date:**	02/25/03
Lab File ID:	IJ17126.D	**Injection Time:**	10:06
Instrument ID:	GCIJ	**Method:**	EPA 610

	S1 [a] **RT**	**S2** [a] **RT**
Check Std	5.86	10.41

Lab Sample ID	**Lab File ID**	**Date Analyzed**	**Time Analyzed**	**S1** [a] **RT**	**S2** [a] **RT**
OP6980-MB	IJ17127.D	02/25/03	10:36	5.87	10.42
F16645-1	IJ17128.D	02/25/03	11:03	5.87	10.41
F16645-9	IJ17129.D	02/25/03	11:31	0.00	0.00
F16645-10	IJ17130.D	02/25/03	11:59	5.86	10.41
F16645-11	IJ17131.D	02/25/03	12:26	5.87	10.41
F16645-12	IJ17132.D	02/25/03	12:54	5.86	10.41
F16645-13	IJ17133.D	02/25/03	13:21	5.86	10.41
F16645-14	IJ17134.D	02/25/03	13:49	5.87	10.41
F16645-15	IJ17135.D	02/25/03	14:17	5.87	10.42
F16645-15	IJ17136.D	02/25/03	14:44	5.86	10.41

Surrogate Compounds

S1 = 2-Fluorobiphenyl
S2 = o-Terphenyl

(a) Retention time from GC signal #1

Initial Calibration Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GIJ803-ICC803
Lab FileID: IJ16841.D

Response Factor Report FID 1

Method : C:\HPCHEM\1\METHODS\8100_H2.M (Chemstation Integrator)
Title : PAH's BY EPA 610 OR 8100
Last Update : Wed Jan 22 13:03:50 2003
Response via : Initial Calibration

Calibration Files
5 =IJ16839.D 10 =IJ16840.D 20 =IJ16841.D
30 =IJ16842.D 40 =IJ16843.D 50 =IJ16844.D

	Compound	5	10	20	30	40	50	Avg		%RSD
1)	Naphthalene	2.198	2.287	2.215	2.189	2.176	2.213	2.213	E4	1.77
2)	2-Methyl Naphthalen	2.170	2.263	2.194	2.168	2.158	2.198	2.192	E4	1.75
3)	1-Methyl Naphthalen	2.114	2.201	2.132	2.107	2.098	2.137	2.132	E4	1.73
4) S	2-Fluorobiphenyl	1.862	1.945	1.889	1.874	1.866	1.902	1.890	E4	1.63
5)	Acenaphthylene	2.109	2.218	2.158	2.150	2.141	2.187	2.160	E4	1.76
6)	Acenaphthene	2.157	2.262	2.198	2.188	2.180	2.223	2.201	E4	1.67
7)	Fluorene	2.020	2.162	2.125	2.127	2.125	2.171	2.122	E4	2.54
8)	Phenanthrene	2.142	2.266	2.184	2.187	2.177	2.221	2.196	E4	1.94
9)	Anthracene	2.155	2.272	2.177	2.174	2.156	2.192	2.188	E4	1.99
10) S	O-Terphenyl	2.121	2.207	2.109	2.104	2.085	2.122	2.125	E4	1.99
11)	Fluoranthene	2.185	2.278	2.175	2.178	2.154	2.189	2.193	E4	1.98
12)	Pyrene	2.132	2.232	2.151	2.149	2.128	2.160	2.159	E4	1.75
13)	Benzo(a)Anthracene	2.067	2.179	2.116	2.120	2.111	2.142	2.123	E4	1.74
14)	Chrysene	2.146	2.247	2.161	2.158	2.141	2.169	2.170	E4	1.79
15)	Benzo(b)Fluoranthen	2.079	2.195	2.140	2.158	2.113	2.189	2.146	E4	2.07
16)	Benzo(k)Fluoranthen	2.130	2.240	2.156	2.142	2.141	2.138	2.158	E4	1.90
17)	Benzo(a) Pyrene	2.005	2.129	2.063	2.070	2.062	2.093	2.070	E4	1.98
18)	Indeno(1,2,3-cd)pyr	1.923	2.084	2.034	2.043	2.046	2.082	2.035	E4	2.90
19)	Dibenzo(a,h)anthrac	1.999	2.153	2.091	2.101	2.095	2.127	2.094	E4	2.49
20)	Benzo(g,h,i) Peryle	1.977	2.141	2.088	2.102	2.100	2.131	2.090	E4	2.82

Signal #2 Calibration Files
5 =IJ16839.D 10 =IJ16840.D 20 =IJ16841.D
30 =IJ16842.D 40 =IJ16843.D 50 =IJ16844.D

	Compound	5	10	20	30	40	50	Avg		%RSD
1)	Naphthalene	1.905	1.968	1.899	1.875	1.866	1.899	1.902	E4	1.87
2)	2-Methyl Naphthalen	1.820	1.889	1.820	1.800	1.791	1.824	1.824	E4	1.88
3)	1-Methyl Naphthalen	1.758	1.824	1.758	1.739	1.730	1.763	1.762	E4	1.87
4) S	2-Fluorobiphenyl	1.539	1.605	1.554	1.538	1.533	1.564	1.556	E4	1.74
5)	Acenaphthylene	1.714	1.796	1.745	1.734	1.727	1.765	1.747	E4	1.70
6)	Acenaphthene	1.744	1.823	1.768	1.755	1.749	1.783	1.770	E4	1.66
7)	Fluorene	1.624	1.729	1.689	1.687	1.680	1.714	1.687	E4	2.15
8)	Phenanthrene	1.654	1.753	1.691	1.700	1.688	1.717	1.701	E4	1.94
9)	Anthracene	1.687	1.766	1.695	1.688	1.675	1.704	1.703	E4	1.90
10) S	O-Terphenyl	1.634	1.699	1.647	1.666	1.673	1.718	1.673	E4	1.87
11)	Fluoranthene	1.709	1.778	1.700	1.700	1.683	1.710	1.713	E4	1.93
12)	Pyrene	1.697	1.766	1.689	1.688	1.672	1.698	1.702	E4	1.93
13)	Benzo(a)Anthracene	1.660	1.735	1.669	1.665	1.653	1.677	1.676	E4	1.78
14)	Chrysene	1.673	1.752	1.679	1.672	1.661	1.684	1.687	E4	1.95
15)	Benzo(b)Fluoranthen	1.727	1.747	1.627	1.671	1.632	1.727	1.688	E4	3.10
16)	Benzo(k)Fluoranthen	1.647	1.742	1.669	1.665	1.659	1.669	1.675	E4	2.02
17)	Benzo(a) Pyrene	1.593	1.679	1.616	1.615	1.609	1.631	1.624	E4	1.82
18)	Indeno(1,2,3-cd)pyr	1.527	1.645	1.601	1.632	1.666	1.676	1.625	E4	3.36
19)	Dibenzo(a,h)anthrac	1.613	1.706	1.625	1.613	1.579	1.593	1.622	E4	2.75
20)	Benzo(g,h,i) Peryle	1.585	1.697	1.645	1.646	1.642	1.666	1.647	E4	2.24

Initial Calibration Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GIJ803-ICC803
Lab FileID: IJ16841.D

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------------------------------------------------------------------------------

                                                    Average  % RSD =   2.0
------------------------------------------------------------------------------
(#) = Out of Range

          8100_H2.M         Thu Jan 23 10:48:44 2003
```

Continuing Calibration Summary

Job Number: F16645 **Sample:** GIJ814-CC803
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** IJ17103.D
Project: Camp Lejeune-NW

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\0224PAH\IJ17103.D\FID1A.CH Vial: 1
Signal #2 : C:\HPCHEM\1\DATA\0224PAH\IJ17103.D\FID2B.CH
Acq On : 24 Feb 2003 9:45 am Operator: nareshj
Sample : CC803-20 Inst : FID 1
Misc : op6980,gij814,1000,,,1,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : C:\HPCHEM\1\METHODS\8100_H2.M (Chemstation Integrator)
Title : PAH's BY EPA 610 OR 8100
Last Update : Thu Feb 20 13:09:19 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1		Naphthalene	20.000	21.266	-6.3	106	0.00
2		2-Methyl Naphthalene	20.000	21.192	-6.0	106	0.00
3		1-Methyl Naphthalene	20.000	21.184	-5.9	106	0.00
4	S	2-Fluorobiphenyl	20.000	21.098	-5.5	106	0.00
5		Acenaphthylene	20.000	20.975	-4.9	105	0.00
6		Acenaphthene	20.000	21.149	-5.7	106	0.00
7		Fluorene	20.000	21.376	-6.9	107	0.00
8		Phenanthrene	20.000	21.235	-6.2	107	0.00
9		Anthracene	20.000	21.329	-6.6	107	0.00
10	S	O-Terphenyl	20.000	21.149	-5.7	107	0.00
11		Fluoranthene	20.000	21.219	-6.1	107	0.00
12		Pyrene	20.000	21.300	-6.5	107	0.00
13		Benzo(a)Anthracene	20.000	21.612	-8.1	108	0.00
14		Chrysene	20.000	21.785	-8.9	109	0.00
15		Benzo(b)Fluoranthene	20.000	21.794	-9.0	109	0.00
16		Benzo(k)Fluoranthene	20.000	21.992	-10.0	110	0.00
17		Benzo(a) Pyrene	20.000	21.873	-9.4	110	0.00
18		Indeno(1,2,3-cd)pyrene	20.000	21.309	-6.5	107	0.00
19		Dibenzo(a,h)anthracene	20.000	21.842	-9.2	109	0.00
20		Benzo(g,h,i) Perylene	20.000	21.069	-5.3	105	0.00

Signal #2

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1		Naphthalene	20.000	22.104	-10.5	111	0.00
2		2-Methyl Naphthalene	20.000	21.836	-9.2	109	0.00
3		1-Methyl Naphthalene	20.000	21.865	-9.3	110	0.00
4	S	2-Fluorobiphenyl	20.000	21.609	-8.0	108	0.00
5		Acenaphthylene	20.000	21.560	-7.8	108	0.00
6		Acenaphthene	20.000	21.475	-7.4	108	0.00
7		Fluorene	20.000	21.544	-7.7	108	0.00
8		Phenanthrene	20.000	20.859	-4.3	105	0.00
9		Anthracene	20.000	21.448	-7.2	108	0.00
10	S	O-Terphenyl	20.000	21.001	-5.0	107	0.00
11		Fluoranthene	20.000	21.126	-5.6	106	0.00
12		Pyrene	20.000	21.294	-6.5	107	0.00
13		Benzo(a)Anthracene	20.000	21.674	-8.4	109	0.00
14		Chrysene	20.000	21.627	-8.1	109	0.00
15		Benzo(b)Fluoranthene	20.000	21.931	-9.7	114	0.00

Continuing Calibration Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GIJ814-CC803
Lab FileID: IJ17103.D

16	Benzo(k)Fluoranthene	20.000	21.872	-9.4	110	0.00
17	Benzo(a) Pyrene	20.000	21.640	-8.2	109	0.00
18	Indeno(1,2,3-cd)pyrene	20.000	21.186	-5.9	107	0.00
19	Dibenzo(a,h)anthracene	20.000	21.522	-7.6	107	0.00
20	Benzo(g,h,i) Perylene	20.000	20.904	-4.5	105	0.00

Average % D = 7.2

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ16841.D 8100_H2.M Tue Feb 25 11:09:11 2003

Continuing Calibration Summary

Job Number: F16645 **Sample:** GIJ814-CC803
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** IJ17114.D
Project: Camp Lejeune-NW

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\0224PAH\IJ17114.D\FID1A.CH Vial: 12
Signal #2 : C:\HPCHEM\1\DATA\0224PAH\IJ17114.D\FID2B.CH
Acq On : 24 Feb 2003 3:00 pm Operator: nareshj
Sample : CC803-30 Inst : FID 1
Misc : op6980,gij814,1000,,,1,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : C:\HPCHEM\1\METHODS\8100_H2.M (Chemstation Integrator)
Title : PAH's BY EPA 610 OR 8100
Last Update : Thu Feb 20 13:09:19 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1		Naphthalene	30.000	30.747	-2.5	104	0.00
2		2-Methyl Naphthalene	30.000	30.492	-1.6	103	0.00
3		1-Methyl Naphthalene	30.000	30.541	-1.8	103	0.00
4	S	2-Fluorobiphenyl	30.000	30.329	-1.1	102	0.00
5		Acenaphthylene	30.000	30.225	-0.8	101	0.00
6		Acenaphthene	30.000	30.611	-2.0	103	0.00
7		Fluorene	30.000	31.194	-4.0	104	0.00
8		Phenanthrene	30.000	30.719	-2.4	103	0.00
9		Anthracene	30.000	31.003	-3.3	104	0.00
10	S	O-Terphenyl	30.000	30.794	-2.6	104	0.00
11		Fluoranthene	30.000	31.102	-3.7	104	0.00
12		Pyrene	30.000	31.189	-4.0	104	0.00
13		Benzo(a)Anthracene	30.000	31.562	-5.2	105	0.00
14		Chrysene	30.000	32.024	-6.7	107	0.00
15		Benzo(b)Fluoranthene	30.000	31.963	-6.5	106	0.00
16		Benzo(k)Fluoranthene	30.000	31.995	-6.7	107	0.00
17		Benzo(a) Pyrene	30.000	31.971	-6.6	107	0.00
18		Indeno(1,2,3-cd)pyrene	30.000	30.874	-2.9	103	0.00
19		Dibenzo(a,h)anthracene	30.000	31.596	-5.3	105	0.00
20		Benzo(g,h,i) Perylene	30.000	30.391	-1.3	101	0.00

Signal #2

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1		Naphthalene	30.000	32.265	-7.6	109	0.00
2		2-Methyl Naphthalene	30.000	31.923	-6.4	108	0.00
3		1-Methyl Naphthalene	30.000	32.015	-6.7	108	0.00
4	S	2-Fluorobiphenyl	30.000	31.600	-5.3	107	0.00
5		Acenaphthylene	30.000	31.968	-6.6	107	0.00
6		Acenaphthene	30.000	31.791	-6.0	107	0.00
7		Fluorene	30.000	31.905	-6.4	106	0.00
8		Phenanthrene	30.000	30.958	-3.2	103	0.00
9		Anthracene	30.000	31.557	-5.2	106	0.00
10	S	O-Terphenyl	30.000	31.355	-4.5	105	0.00
11		Fluoranthene	30.000	31.523	-5.1	106	0.00
12		Pyrene	30.000	31.500	-5.0	106	0.00
13		Benzo(a)Anthracene	30.000	31.856	-6.2	107	0.00
14		Chrysene	30.000	32.030	-6.8	108	0.00
15		Benzo(b)Fluoranthene	30.000	31.901	-6.3	107	0.00

Continuing Calibration Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GIJ814-CC803
Lab FileID: IJ17114.D

16	Benzo(k)Fluoranthene	30.000	32.013	-6.7	107	0.00
17	Benzo(a) Pyrene	30.000	31.921	-6.4	107	0.00
18	Indeno(1,2,3-cd)pyrene	30.000	31.415	-4.7	104	0.00
19	Dibenzo(a,h)anthracene	30.000	31.502	-5.0	106	0.00
20	Benzo(g,h,i) Perylene	30.000	30.742	-2.5	103	0.00

Average % D = 4.6

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ16842.D 8100_H2.M Tue Feb 25 11:09:32 2003

Continuing Calibration Summary

Job Number: F16645 **Sample:** GIJ814-ECC803
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** IJ17125.D
Project: Camp Lejeune-NW

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\0224PAH\IJ17125.D\FID1A.CH Vial: 23
Signal #2 : C:\HPCHEM\1\DATA\0224PAH\IJ17125.D\FID2B.CH
Acq On : 24 Feb 2003 8:05 pm Operator: nareshj
Sample : ECC803-20 Inst : FID 1
Misc : op6980,gij814,1000,,,1,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : C:\HPCHEM\1\METHODS\8100_H2.M (Chemstation Integrator)
Title : PAH's BY EPA 610 OR 8100
Last Update : Thu Feb 20 13:09:19 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1		Naphthalene	20.000	22.558	-12.8	113	0.00
2		2-Methyl Naphthalene	20.000	22.371	-11.9	112	0.00
3		1-Methyl Naphthalene	20.000	22.373	-11.9	112	0.00
4	S	2-Fluorobiphenyl	20.000	22.181	-10.9	111	0.00
5		Acenaphthylene	20.000	21.936	-9.7	110	0.00
6		Acenaphthene	20.000	22.255	-11.3	111	0.00
7		Fluorene	20.000	22.730	-13.7	113	0.00
8		Phenanthrene	20.000	22.265	-11.3	112	0.00
9		Anthracene	20.000	22.629	-13.1	114	0.00
10	S	O-Terphenyl	20.000	22.512	-12.6	113	0.00
11		Fluoranthene	20.000	22.554	-12.8	114	0.00
12		Pyrene	20.000	22.535	-12.7	113	0.00
13		Benzo(a)Anthracene	20.000	22.701	-13.5	114	0.00
14		Chrysene	20.000	23.203	-16.0#	116	0.00
15		Benzo(b)Fluoranthene	20.000	22.989	-14.9	115	0.00
16		Benzo(k)Fluoranthene	20.000	23.217	-16.1#	116	0.00
17		Benzo(a) Pyrene	20.000	23.101	-15.5#	116	0.00
18		Indeno(1,2,3-cd)pyrene	20.000	21.832	-9.2	109	0.00
19		Dibenzo(a,h)anthracene	20.000	22.727	-13.6	114	0.00
20		Benzo(g,h,i) Perylene	20.000	21.588	-7.9	108	0.00

Signal #2

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1		Naphthalene	20.000	23.718	-18.6#	119	0.00
2		2-Methyl Naphthalene	20.000	23.431	-17.2#	117	0.00
3		1-Methyl Naphthalene	20.000	23.400	-17.0#	117	0.00
4	S	2-Fluorobiphenyl	20.000	23.134	-15.7#	116	0.00
5		Acenaphthylene	20.000	23.282	-16.4#	117	0.00
6		Acenaphthene	20.000	23.137	-15.7#	116	0.00
7		Fluorene	20.000	23.301	-16.5#	116	0.00
8		Phenanthrene	20.000	22.351	-11.8	112	0.00
9		Anthracene	20.000	23.166	-15.8#	116	0.00
10	S	O-Terphenyl	20.000	22.689	-13.4	115	0.00
11		Fluoranthene	20.000	22.788	-13.9	115	0.00
12		Pyrene	20.000	22.799	-14.0	115	0.00
13		Benzo(a)Anthracene	20.000	23.015	-15.1#	116	0.00
14		Chrysene	20.000	23.095	-15.5#	116	0.00
15		Benzo(b)Fluoranthene	20.000	22.948	-14.7	119	-0.01

Continuing Calibration Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GIJ814-ECC803
Lab FileID: IJ17125.D

16	Benzo(k)Fluoranthene	20.000	23.347	-16.7#	117	-0.01
17	Benzo(a) Pyrene	20.000	23.007	-15.0#	116	-0.01
18	Indeno(1,2,3-cd)pyrene	20.000	22.189	-10.9	113	-0.02
19	Dibenzo(a,h)anthracene	20.000	22.883	-14.4	114	-0.02
20	Benzo(g,h,i) Perylene	20.000	21.830	-9.1	109	-0.02

Average % D = 13.7

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ16841.D 8100_H2.M Tue Feb 25 11:09:13 2003

Continuing Calibration Summary

Job Number: F16645 **Sample:** GIJ815-CC803
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** IJ17126.D
Project: Camp Lejeune-NW

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\0225PAH\IJ17126.D\FID1A.CH Vial: 1
Signal #2 : C:\HPCHEM\1\DATA\0225PAH\IJ17126.D\FID2B.CH
Acq On : 25 Feb 2003 10:06 am Operator: nareshj
Sample : CC803-20 Inst : FID 1
Misc : op6980,gij815,1000,,,1,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : C:\HPCHEM\1\METHODS\8100_H2.M (Chemstation Integrator)
Title : PAH's BY EPA 610 OR 8100
Last Update : Tue Feb 25 14:02:19 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1		Naphthalene	20.000	20.765	-3.8	104	0.00
2		2-Methyl Naphthalene	20.000	20.595	-3.0	103	0.00
3		1-Methyl Naphthalene	20.000	20.141	-0.7	101	0.00
4	S	2-Fluorobiphenyl	20.000	20.061	-0.3	100	0.00
5		Acenaphthylene	20.000	20.375	-1.9	102	0.00
6		Acenaphthene	20.000	20.477	-2.4	103	0.00
7		Fluorene	20.000	20.918	-4.6	104	0.00
8		Phenanthrene	20.000	20.155	-0.8	101	0.00
9		Anthracene	20.000	20.329	-1.6	102	0.00
10	S	O-Terphenyl	20.000	20.858	-4.3	105	0.00
11		Fluoranthene	20.000	20.554	-2.8	104	0.00
12		Pyrene	20.000	21.080	-5.4	106	0.00
13		Benzo(a)Anthracene	20.000	21.007	-5.0	105	0.00
14		Chrysene	20.000	20.683	-3.4	104	0.00
15		Benzo(b)Fluoranthene	20.000	21.022	-5.1	105	0.00
16		Benzo(k)Fluoranthene	20.000	20.832	-4.2	104	0.00
17		Benzo(a) Pyrene	20.000	21.239	-6.2	107	0.00
18		Indeno(1,2,3-cd)pyrene	20.000	21.172	-5.9	106	0.00
19		Dibenzo(a,h)anthracene	20.000	21.032	-5.2	105	0.00
20		Benzo(g,h,i) Perylene	20.000	21.055	-5.3	105	0.00

Signal #2

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1		Naphthalene	20.000	21.768	-8.8	109	0.00
2		2-Methyl Naphthalene	20.000	21.543	-7.7	108	0.00
3		1-Methyl Naphthalene	20.000	21.079	-5.4	106	0.00
4	S	2-Fluorobiphenyl	20.000	20.718	-3.6	104	0.00
5		Acenaphthylene	20.000	21.077	-5.4	106	0.00
6		Acenaphthene	20.000	21.068	-5.3	105	0.00
7		Fluorene	20.000	21.277	-6.4	106	0.00
8		Phenanthrene	20.000	20.006	-0.0	101	0.00
9		Anthracene	20.000	20.486	-2.4	103	0.00
10	S	O-Terphenyl	20.000	20.794	-4.0	106	0.00
11		Fluoranthene	20.000	20.705	-3.5	104	0.00
12		Pyrene	20.000	21.171	-5.9	107	0.00
13		Benzo(a)Anthracene	20.000	21.037	-5.2	106	0.00
14		Chrysene	20.000	20.991	-5.0	105	0.00
15		Benzo(b)Fluoranthene	20.000	20.872	-4.4	108	0.00

Continuing Calibration Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GIJ815-CC803
Lab FileID: IJ17126.D

16	Benzo(k)Fluoranthene	20.000	21.028	-5.1	106	0.00
17	Benzo(a) Pyrene	20.000	21.092	-5.5	106	0.00
18	Indeno(1,2,3-cd)pyrene	20.000	21.106	-5.5	107	0.00
19	Dibenzo(a,h)anthracene	20.000	20.945	-4.7	105	0.00
20	Benzo(g,h,i) Perylene	20.000	20.842	-4.2	104	0.00

Average % D = 4.2

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ16841.D 8100_H2.M Wed Feb 26 10:59:07 2003

Continuing Calibration Summary

Job Number: F16645 **Sample:** GIJ815-CC803
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** IJ17137.D
Project: Camp Lejeune-NW

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\0225PAH\IJ17137.D\FID1A.CH Vial: 12
Signal #2 : C:\HPCHEM\1\DATA\0225PAH\IJ17137.D\FID2B.CH
Acq On : 25 Feb 2003 3:12 pm Operator: nareshj
Sample : CC803-30 Inst : FID 1
Misc : op6980,gij815,1000,,,1,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : C:\HPCHEM\1\METHODS\8100_H2.M (Chemstation Integrator)
Title : PAH's BY EPA 610 OR 8100
Last Update : Tue Feb 25 14:02:19 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1		Naphthalene	30.000	31.886	-6.3	107	0.00
2		2-Methyl Naphthalene	30.000	32.040	-6.8	108	0.00
3		1-Methyl Naphthalene	30.000	31.208	-4.0	105	0.00
4	S	2-Fluorobiphenyl	30.000	31.301	-4.3	105	0.00
5		Acenaphthylene	30.000	31.982	-6.6	107	0.00
6		Acenaphthene	30.000	31.964	-6.5	107	0.00
7		Fluorene	30.000	32.900	-9.7	109	0.00
8		Phenanthrene	30.000	31.864	-6.2	107	0.00
9		Anthracene	30.000	32.063	-6.9	108	0.00
10	S	O-Terphenyl	30.000	32.560	-8.5	110	0.00
11		Fluoranthene	30.000	31.891	-6.3	107	0.00
12		Pyrene	30.000	32.625	-8.8	109	0.00
13		Benzo(a)Anthracene	30.000	32.614	-8.7	109	0.00
14		Chrysene	30.000	31.927	-6.4	107	0.00
15		Benzo(b)Fluoranthene	30.000	32.823	-9.4	109	0.00
16		Benzo(k)Fluoranthene	30.000	32.361	-7.9	109	0.00
17		Benzo(a) Pyrene	30.000	32.944	-9.8	110	0.00
18		Indeno(1,2,3-cd)pyrene	30.000	33.296	-11.0	111	0.00
19		Dibenzo(a,h)anthracene	30.000	33.025	-10.1	110	0.00
20		Benzo(g,h,i) Perylene	30.000	32.888	-9.6	109	0.01

Signal #2

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1		Naphthalene	30.000	33.655	-12.2	114	0.00
2		2-Methyl Naphthalene	30.000	33.673	-12.2	114	0.00
3		1-Methyl Naphthalene	30.000	32.882	-9.6	111	0.00
4	S	2-Fluorobiphenyl	30.000	32.682	-8.9	110	0.00
5		Acenaphthylene	30.000	33.384	-11.3	112	0.00
6		Acenaphthene	30.000	33.102	-10.3	111	0.00
7		Fluorene	30.000	33.727	-12.4	112	0.00
8		Phenanthrene	30.000	31.883	-6.3	106	0.00
9		Anthracene	30.000	32.322	-7.7	109	0.00
10	S	O-Terphenyl	30.000	32.696	-9.0	109	0.00
11		Fluoranthene	30.000	32.302	-7.7	109	0.00
12		Pyrene	30.000	32.911	-9.7	111	0.00
13		Benzo(a)Anthracene	30.000	32.647	-8.8	110	0.00
14		Chrysene	30.000	32.240	-7.5	108	0.00
15		Benzo(b)Fluoranthene	30.000	32.528	-8.4	110	0.00

Continuing Calibration Summary

Job Number: F16645
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GIJ815-CC803
Lab FileID: IJ17137.D

16	Benzo(k)Fluoranthene	30.000	32.747	-9.2	110	0.00
17	Benzo(a) Pyrene	30.000	32.914	-9.7	110	0.00
18	Indeno(1,2,3-cd)pyrene	30.000	33.461	-11.5	111	0.01
19	Dibenzo(a,h)anthracene	30.000	32.712	-9.0	110	0.01
20	Benzo(g,h,i) Perylene	30.000	32.712	-9.0	109	0.02

Average % D = 8.6

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ16842.D 8100_H2.M Wed Feb 26 10:59:28 2003

APPENDIX D

GROUNDWATER SAMPLE COLLECTION LOGS

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 824603
PROJECT NAME: HPFF
WELL NO. 1115-1
SAMPLE NO.UST

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Mark Martin	DATE 2-17-03
PROJECT CONTACT: Mark Martin	SAMPLER: Mark Martin	TIME 11:00
PHONE: 910-451-2390	WEATHER: 40-50 Rain	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4	Avg.		
PH	7.04	5.79	5.46	4.78			(STD)
Specific Conductivity	0.171	0.169	0.170	0.170			(m S/m)
Turbidity (Turb)	413	302	189.8	153.1			(NTU)
Dissolved Oxygen (DO)	4.36	2.92	2.42	1.96			(g/l)
Temperature (Temp)	12.48	14.55	14.91	16.01			(°C)
ORP	79.8	256	295	307			

Depth to Bottom	174.36	(In) (Minus)	Depth to Water	108.6	(In)	=	65.76	HT (in)
Depth to Bottom	14.53	(Ft) (Minus)	Depth to Water	9.05	(Ft)	=	5.48	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)
r = 1 Multiply Together

d/2 = 1	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			65.76	1	3.14	206	.0043	0.9		2.7	3
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

	WELL OR GROUND WATER DATA SHEET	PROJECT NUMBER: 824603
		PROJECT NAME: HPFF
		WELL NO. 1116-02
		SAMPLE NO.UST

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Mark Martin	DATE 2/19/03
PROJECT CONTACT: Mark Martin	SAMPLER: Mark Martin	TIME 1300
PHONE: 910-451-2390	WEATHER: 40-50 Rain	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4	Avg.		
PH	5.36	4.98	4.95	4.94			(STD)
Specific Conductivity	0.117	0.111	0.113	0.114			(m S/m)
Turbidity (Turb)	218	122	208	215			(NTU)
Dissolved Oxygen (DO)	7.38	3.58	2.96	2.87			(g/l)
Temperature (Temp)	18.08	14.17	18.57	18.49			(°C)
ORP	112.3	185.8	209	215			

Depth to Bottom	166.8	(In) (Minus)	Depth to Water	106.08	(In)	=	60.72	HT (in)
Depth to Bottom	13.9	(Ft) (Minus)	Depth to Water	8.84	(Ft)	=	5.06	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)

r = 1 Multiply Together

d/2 = 1	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			60.72	1	3.14	191	.0043	0.8		2.5	3
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]

OTHER:

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 824603	
PROJECT NAME: HPFF	
WELL NO. 1115-4	
SAMPLE NO.UST	
PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Mark Martin — DATE 2/19/03
PROJECT CONTACT: Mark Martin	SAMPLER: Mark Martin — TIME 1040
PHONE: 910-451-2390	WEATHER: 40-50 Rain
LEL:	Well Locked: [X] Yes
PID:	Sampling Device: Bailer — No

FIELD MEASUREMENTS

	1	2	3	4	Avg.		
PH	6.13	5.12	4.88	4.69			(STD)
Specific Conductivity	0.685	0.150	0.145	0.149			(m S/m)
Turbidity (Turb)	93.3	50.5	8.6	7.1			(NTU)
Dissolved Oxygen (DO)	8.13	5.65	5.96	6.44			(g/l)
Temperature (Temp)	15.33	14.06	13.41	13.65			(°C)
ORP	-24.6	88.6	137.8	168.2			

Depth to Bottom	210.36	(In) (Minus)	Depth to Water	25.2	(In)	=	185.16	HT (in)
Depth to Bottom	17.53	(Ft) (Minus)	Depth to Water	2.10	(Ft)	=	15.43	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)

r = 1 Multiply Together

d/2 = 1	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			185.16	1	3.14	581	.0043	2.5		7.5	10
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS: Standing water in area of the well

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 824603	
PROJECT NAME: HPFF	
WELL NO. GT-1	
SAMPLE NO.UST	

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Mark Martin	DATE 2/18/03
PROJECT CONTACT: Mark Martin	SAMPLER: Mark Martin	TIME 11:00
PHONE: 910-451-2390	WEATHER: 40-50 Rain	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4	Avg.		
PH	7.11	5.03	5.14	5.18			(STD)
Specific Conductivity	0.178	0.156	0.201	0.200			(m S/m)
Turbidity (Turb)	1688	957	383	1698			(NTU)
Dissolved Oxygen (DO)	5.79	0.90	0.71	0.55			(g/l)
Temperature (Temp)	17.07	16.11	16.72	17.25			(°C)
ORP	118.7	118.7	119.8	116.1			

Depth to Bottom	211.2	(In) (Minus)	Depth to Water	67.68	(In)	=	143.52	HT (in)
Depth to Bottom	17.6	(Ft) (Minus)	Depth to Water	5.64	(Ft)	=	11.96	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)

r = 1 Multiply Together

d/2 = 1

	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS	Purge Vol.	Vol. Purged
TOP			143.52	1	3.14	451	.0043	1.9	5.8	6
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

	WELL OR GROUND WATER DATA SHEET	PROJECT NUMBER: 824603
		PROJECT NAME: HPFF
		WELL NO. GT-7
		SAMPLE NO.UST

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Mark Martin	DATE 2-17-03
PROJECT CONTACT: Mark Martin	SAMPLER: Mark Martin	TIME 1500
PHONE: 910-451-2390	WEATHER: 40-50 Rain	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4	Avg.		
PH	6.71	5.42	5.38	5.41			(STD)
Specific Conductivity	0.220	0.189	0.189	0.190			(m S/m)
Turbidity (Turb)	448	444	591	774			(NTU)
Dissolved Oxygen (DO)	7.05	1.04	0.81	0.74			(g/l)
Temperature (Temp)	12.62	13.69	12.87	15.69			(°C)
ORP	397.2	22.8	18.4	23.3			

Depth to Bottom	156.96	(In) (Minus)	Depth to Water	60.36	(In)	=	96.60	HT (in)
Depth to Bottom	13.08	(Ft) (Minus)	Depth to Water	5.03	(Ft)	=	8.05	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)

r = 1 Multiply Together

d/2 = 1

	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			96.6	1	3.14	303	.0043	1.3		3.9	5
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER:	824603
PROJECT NAME:	HPFF
WELL NO.	GT-9
SAMPLE NO.	UST

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Mark Martin	DATE 2/21/03
PROJECT CONTACT: Mark Martin	SAMPLER: Mark Martin	TIME 1430
PHONE: 910-451-2390	WEATHER: 40-50 Rain	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4	Avg.		
PH	6.79	5.79	5.87	5.88			(STD)
Specific Conductivity	0.579	0.486	~~0.545~~	0.571			(m S/m)
Turbidity (Turb)	681	296	0.545 29.5	96.2			(NTU)
Dissolved Oxygen (DO)	5.56	0.35	0.31	0.31			(g/l)
Temperature (Temp)	17.16	16.34	16.64	16.74			(°C)
ORP	5.6	74.1	35.8	22.9			

Depth to Bottom	228.24	(In) (Minus)	Depth to Water	62.64	(In)	=	165.6	HT (in)
Depth to Bottom	19.02	(Ft) (Minus)	Depth to Water	5.22	(Ft)	=	13.8	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)

r = 1 Multiply Together

d/2 = 1	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			165.6	1	3.14	520	.0043	2.2		6.7	10
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS: Duplicate Sample Taken.

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

	WELL OR GROUND WATER DATA SHEET	PROJECT NUMBER: 824603
		PROJECT NAME: HPFF
		WELL NO. 78GW22-2
		SAMPLE NO.UST

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Mark Martin	DATE 2/17/04
PROJECT CONTACT: Mark Martin	SAMPLER: Mark Martin	TIME 1200/1205
PHONE: 910-451-2390	WEATHER: 40-50 Rain	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4	Avg.		
PH	6.11	6.13	6.02	5.99			(STD)
Specific Conductivity	0.428	0.467	0.463	0.456			(m S/m)
Turbidity (Turb)	350	342.0	53.7	27.8			(NTU)
Dissolved Oxygen (DO)	7.95	0.49	0.45	0.43			(g/l)
Temperature (Temp)	12.09	14.01	14.15	14.50			(°C)
ORP	22.1	-30.2	-30.0	-29.2			

Depth to Bottom	948	(In) (Minus)	Depth to Water	~~121.92~~ 117.36	(In)	=	~~830.08~~ 830.64	HT (in)
Depth to Bottom	~~99.79~~	(Ft) (Minus)	Depth to Water	~~10.16~~ 9.78	(Ft)	=	68.22	HT (ft)

d = 4 MEASUREMENTS (IN INCHES)

r = 1 Multiply Together

d/2 = 1

	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			~~830.08~~	1	3.14	~~5208~~ 521.2	.0043	22.31		67.2	70
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS: Duplicate Sample

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 824603	
PROJECT NAME: HPFF	
WELL NO. 1115-13	
SAMPLE NO.UST	
PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Mark Martin
PROJECT CONTACT: Mark Martin	SAMPLER: Mark Martin
PHONE: 910-451-2390	WEATHER: 40-50 Rain
LEL:	Well Locked: [X] Yes
PID:	Sampling Device: Bailer

DATE 2/19/03
TIME 14:45
No

FIELD MEASUREMENTS

	1	2	3	4	Avg.		
PH	4.77	4.13	4.10	4.10			(STD)
Specific Conductivity	4.202	4.497	4.584	4.595			(m S/m)
Turbidity (Turb)	330	~~1954~~ 195	1811	63.8			(NTU)
Dissolved Oxygen (DO)	5.22	0.33	0.30	0.28			(g/l)
Temperature (Temp)	23.68	24.74	24.87	24.91			(°C)
ORP	186.6	194.7	184.9	184.5			

Depth to Bottom	615.6	(In) (Minus)	Depth to Water	119.52	(In)	=	496.08	HT (in)
Depth to Bottom	51.3	(Ft) (Minus)	Depth to Water	9.96	(Ft)	=	41.34	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)
r = 1 Multiply Together

d/2 = 1	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS	Purge Vol.	Vol. Purged
TOP			496.08	1	3.14	1558	.0043	6.7	20.1	21
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS: Well Near Steam Line

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 824603	
PROJECT NAME: HPFF	
WELL NO. 1115-17	
SAMPLE NO.UST	
PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Mark Martin
PROJECT CONTACT: Mark Martin	SAMPLER: Mark Martin
PHONE: 910-451-2390	WEATHER: 40-50 Rain
LEL:	Well Locked: [X] Yes
PID:	Sampling Device: Bailer

DATE 2/19/03
TIME 1000
No

FIELD MEASUREMENTS

	1	2	3	4	Avg.		
PH	6.05	5.84	5.83	5.83			(STD)
Specific Conductivity	1,970	2,030	2,018	2007			(m S/m)
Turbidity (Turb)	18.4	29	12.9	12.0			(NTU)
Dissolved Oxygen (DO)	4.95	0.36	0.32	0.33			(g/l)
Temperature (Temp)	18.18	19.09	19.11	19.12			(°C)
ORP	-35.4	-80.7	-89.5	-91.8			

Depth to Bottom	605.4	(In) (Minus)	Depth to Water	127.08	(In)	=	127.08	HT (in)
Depth to Bottom	50.45	(Ft) (Minus)	Depth to Water	10.59	(Ft)	=	39.86	HT (ft)

d = 2
r = 1
d/2 = 1

MEASUREMENTS (IN INCHES)
Multiply Together

	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			127.08	1	3.14	1502	.0043	6.5		19.4	20
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

	WELL OR GROUND WATER DATA SHEET	PROJECT NUMBER: 824603
		PROJECT NAME: HPFF
		WELL NO. 1115-18
		SAMPLE NO.UST

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Mark Martin	DATE 2/20/03
PROJECT CONTACT: Mark Martin	SAMPLER: Mark Martin	TIME
PHONE: 910-451-2390	WEATHER: 40-50 Rain	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4	Avg.		
PH							(STD)
Specific Conductivity							(m S/m)
Turbidity (Turb)							(NTU)
Dissolved Oxygen (DO)							(g/l)
Temperature (Temp)							(°C)
ORP							

Depth to Bottom		(In) (Minus)	Depth to Water		(In)	=		HT (in)
Depth to Bottom		(Ft) (Minus)	Depth to Water	10.69	(Ft)	=		HT (ft)

d = 2 MEASUREMENTS (IN INCHES)

r = 1 Multiply Together

d/2 = 1	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP				1	3.14		.0043				
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS: WAS not BUBBLING WHEN PURGE STARTED. ~~STARTED~~ STARTED BUBBLING AFTER PURGE STARTED COULD not PURGE WATER FROM WELL DUE to BUBBLING.

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 824603	
PROJECT NAME: HPFF	
WELL NO. 1115-21	
SAMPLE NO.UST	
PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Mark Martin
PROJECT CONTACT: Mark Martin	SAMPLER: Mark Martin
PHONE: 910-451-2390	WEATHER: 40-50 Rain
LEL:	Well Locked: [X] Yes
PID:	Sampling Device: Bailer

DATE 2/19/03
TIME 1220
No

FIELD MEASUREMENTS

	1	2	3	4	Avg.		
PH	7.64	5.28	5.21	5.21			(STD)
Specific Conductivity	0.222	0.122	0.126	0.124			(m S/m)
Turbidity (Turb)	249	90.5	44.5	17.2			(NTU)
Dissolved Oxygen (DO)	7.03	0.34	0.29	0.30			(g/l)
Temperature (Temp)	19.77	21.88	22.08	22.09			(°C)
ORP	-56	45.4	37.3	33.8			

Depth to Bottom	602.4	(In) (Minus)	Depth to Water	105.84	(In)	=	456.56	HT (in)
Depth to Bottom	50.2	(Ft) (Minus)	Depth to Water	8.82	(Ft)	=	41.38	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)
r = 1 Multiply Together

d/2 = 1	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			496.56	1	3.14	1559	.0043	6.7		20.1	21
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 824603	
PROJECT NAME: HPFF	
WELL NO. 1115-22	
SAMPLE NO.UST	
PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Mark Martin
PROJECT CONTACT: Mark Martin	SAMPLER: Mark Martin
PHONE: 910-451-2390	WEATHER: 40-50 Rain
LEL:	
PID:	Sampling Device: Bailer

DATE 2-16-03
TIME 0830
Well Locked: [X] Yes
No

FIELD MEASUREMENTS

	1	2	3	4	Avg.		
PH	7.38	7.21	7.19	7.19			(STD)
Specific Conductivity	0.442	0.439	0.437	0.437			(m S/m)
Turbidity (Turb)	27.6	3.8	2.2	0.8			(NTU)
Dissolved Oxygen (DO)	5.42	0.26	0.22	0.21			(g/l)
Temperature (Temp)	17.43	19.43	19.56	19.60			(°C)
ORP -98.1	~~755~~	-127.4	-136.1	-137.6			

Depth to Bottom	958.44	(In) (Minus)	Depth to Water	148.08	(In)	=	810.36	HT (in)
Depth to Bottom	79.87	(Ft) (Minus)	Depth to Water	12.34	(Ft)	=	67.53	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)
r = 1 Multiply Together

d/2 = 1	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			810.36	1	3.14	2545	.0043	10.9		32.8	35
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]

OTHER:

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 824603	
PROJECT NAME: HPFF	
WELL NO. 1115-23	
SAMPLE NO.UST	

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Mark Martin	DATE 2-16-03
PROJECT CONTACT: Mark Martin	SAMPLER: Mark Martin	TIME 1000
PHONE: 910-451-2390	WEATHER: 40-50 Rain	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4	Avg.		
PH	6.36	6.38	6.38	6.37			(STD)
Specific Conductivity	2.654	2.609	2.609	2.603			(m S/m)
Turbidity (Turb)	905	39.1	91.1	422			(NTU)
Dissolved Oxygen (DO)	0.87	0.65	0.67	0.70			mg(g/l)
Temperature (Temp)	19.94	20.57	20.55	20.60			(°C)
ORP	-87.9	-100	-101.5	-102.3			

Depth to Bottom	981	(In) (Minus)	Depth to Water	134.76	(In)	=	846.24	HT (in)
Depth to Bottom	81.75	(Ft) (Minus)	Depth to Water	11.23	(Ft)	=	70.52	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)

r = 1 Multiply Together

d/2 = 1	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP		846.24 ~~2657~~		1	3.14	~~7114~~	.0043	11.41		34.3	35
Middle					3.14	2657	.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

	WELL OR GROUND WATER DATA SHEET	PROJECT NUMBER: 824603
		PROJECT NAME: HPFF
		WELL NO. 1115-24
		SAMPLE NO.UST

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Mark Martin	DATE 2-16-03
PROJECT CONTACT: Mark Martin	SAMPLER: Mark Martin	TIME 1130
PHONE: 910-451-2390	WEATHER: 40-50 Rain	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4	Avg.		
PH	7.31	6.85	6.85	6.85			(STD)
Specific Conductivity	0.727	0.643	0.644	0.645			(m S/m)
Turbidity (Turb)	26.8	8	-2.2	-2.0			(NTU)
Dissolved Oxygen (DO)	2.31	0.40	0.39	0.39			(g/l)
Temperature (Temp)	20.82	21.94	21.96	22.00			(°C)
ORP	-86.4	-120.4	-122.4	-125.2			

Depth to Bottom	954.24	(In) (Minus)	Depth to Water	133.8	(In)	=	820.44	HT (in)
Depth to Bottom	79.52	(Ft) (Minus)	Depth to Water	11.15	(Ft)	=	68.37	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)

r = 1 Multiply Together

d/2 = 1	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			820.44	1	3.14	2576	.0043	11.1		33.2	35
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]

OTHER:

WELL OR GROUND WATER DATA SHEET

		PROJECT NUMBER: 824603
		PROJECT NAME: HPFF
		WELL NO. 1115-25
		SAMPLE NO.UST
PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Mark Martin	DATE 2/19/03
PROJECT CONTACT: Mark Martin	SAMPLER: Mark Martin	TIME 1400
PHONE: 910-451-2390	WEATHER: 40-50 Rain	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4	Avg.		
PH	6.25	7.09	7.20	7.22			(STD)
Specific Conductivity	0.424	0.477	0.474	0.473			(m S/m)
Turbidity (Turb)	404	25.7	2.9	2.1			(NTU)
Dissolved Oxygen (DO)	5.34	0.30	0.25	0.25			(g/l)
Temperature (Temp)	22.29	23.39	23.40	23.42			(°C)
ORP	18.5	-126.5	-142.8	-144.6			

Depth to Bottom	961.2	(In) (Minus)	Depth to Water	126.6	(In)	=	834.60	HT (in)
Depth to Bottom	80.1	(Ft) (Minus)	Depth to Water	10.55	(Ft)	=	69.55	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)

r = 1 Multiply Together

d/2 = 1	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			834.6	1	3.14	2621	.0043	11.3		33.8	35
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS: Well near Steam Line

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 824603
PROJECT NAME: HPFF
WELL NO. MW 1115-01
SAMPLE NO.UST 1115-MW111501

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Debra Hoyt	DATE 8.20.03
PROJECT CONTACT: Mark Martin	SAMPLER: Debra Hoyt	TIME 0810
PHONE: 910-451-2390	WEATHER: Sunny 75°	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4			
PH	7.01	5.03	4.62	4.51			(STD)
Specific Conductivity	.155	.152	.155	.151			(m S/m)
Turbidity (Turb)	1555.0	831.2	40.9	14.1			(NTU)
Dissolved Oxygen (DO)	11.03	3.74	3.74	3.76			(g/l)
Temperature (Temp)	26.06	26.01	26.93	26.78			(°C)
ORP	327.1	334.5	340.4	349.5			

Depth to Bottom	174.36	(In) (Minus)	Depth to Water	79.92	(In)	= 94.44	HT (in)
Depth to Bottom	14.53	(Ft) (Minus)	Depth to Water	6.66	(Ft)	= ~~94.44~~ 7.87	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)
r = 1 Multiply Together

d/2 = 1	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			94.44	1	3.14	297	.0043	1.3		3.8	5
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]

OTHER:

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 824603	
PROJECT NAME: HPFF	
WELL NO. MW111502	
SAMPLE NO.UST1113-MW111502	
PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Debra Hoyt
PROJECT CONTACT: Mark Martin	SAMPLER: Debra Hoyt
PHONE: 910-451-2390	WEATHER:
LEL:	Well Locked: [X] Yes
PID:	Sampling Device: Bailer

DATE 8.19.03
TIME 1115
No

FIELD MEASUREMENTS

	1	2	3	4			
PH	7.22	6.29	4.99	4.88			(STD)
Specific Conductivity	.115	.109	.096	.096			(m S/m)
Turbidity (Turb)	591.0	101.5	0.0	11.3			(NTU)
Dissolved Oxygen (DO)	7.84	5.93	6.63	5.18			(g/l)
Temperature (Temp)	25.80	25.75	25.99	26.02			(°C)
ORP	108.4	145.6	231.0	238.5			

Depth to Bottom	166.80	(In) (Minus)	Depth to Water	75.00	(In)	=	91.80	HT (in)
Depth to Bottom	13.9	(Ft) (Minus)	Depth to Water	6.25	(Ft)	=	7.65	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)
r = 1 Multiply Together
d/2 = 1

	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			91.80	1	3.14	288	.0043	1.2		3.7	5
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]

OTHER:

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 824603	
PROJECT NAME: HPFF	
WELL NO. MW 1115-4	
SAMPLE NO.UST 1115-MW111504	
PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Debra Hoyt
PROJECT CONTACT: Mark Martin	SAMPLER: Debra Hoyt
PHONE: 910-451-2390	WEATHER: warm sunny 89°
LEL:	
PID:	Sampling Device: Bailer

DATE 3.19.03

TIME 1425

Well Locked: [X] Yes

No

FIELD MEASUREMENTS

	1	2	3	4			
PH	6.54	6.25	4.73	4.91			(STD)
Specific Conductivity	.304	.256	.116	.128			(m S/m)
Turbidity (Turb)	153	12.0	0.0	0.0			(NTU)
Dissolved Oxygen (DO)	9.30	5.17	9.12	8.76			(g/l)
Temperature (Temp)	22.49	21.79	24.38	24.18			(°C)
ORP	34.7	26.6	193.0	184.3			

Depth to Bottom	210.36	(In) (Minus)	Depth to Water	21.84	(In)	=	188.52	HT (in)
Depth to Bottom	17.53	(Ft) (Minus)	Depth to Water	1.82	(Ft)	=	15.71	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)

r = 1 Multiply Together

d/2 = 1

	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			188.52	1	3.14	592	.0043	2.5		7.6	9
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 824603	
PROJECT NAME: HPFF	
WELL NO. GT01	
SAMPLE NO.UST1115 - GT01	
PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Debra Hoyt
PROJECT CONTACT: Mark Martin	SAMPLER: Debra Hoyt
PHONE: 910-451-2390	WEATHER: Sunny 92°
LEL:	
PID:	Sampling Device: Bailer

DATE 8.22.03
TIME 1040
Well Locked: [X] Yes
No

FIELD MEASUREMENTS

	1	2	3	4			
PH	5.61	5.61	5.04	4.78			(STD)
Specific Conductivity	.181	.163	.205	.225			(m S/m)
Turbidity (Turb)	1260.3	33.6	24.1	48.2			(NTU)
Dissolved Oxygen (DO)	4.45	3.21	2.17	1.94			(g/l)
Temperature (Temp)	25.33	28.79	28.66	28.64			(°C)
ORP	168.8	111.1	154.9	169.8			

Depth to Bottom	211.20	(In) (Minus)	Depth to Water	28.32	(In)	=	182.88	HT (in)
Depth to Bottom	17.6	(Ft) (Minus)	Depth to Water	2.36	(Ft)	=	15.24	HT (ft)

d = 2
r = 1
d/2 = 1

MEASUREMENTS (IN INCHES)
Multiply Together

	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			182.88	1	3.14	574	.0043	2.5		7.4	8
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]

OTHER:

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER:	824603
PROJECT NAME:	HPFF
WELL NO.	GT07
SAMPLE NO.UST	1115-GT07

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Debra Hoyt	DATE 8.20.03
PROJECT CONTACT: Mark Martin	SAMPLER: Debra Hoyt	TIME 0850
PHONE: 910-451-2390	WEATHER: Sunny 78°	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4			
PH	5.55	6.20					(STD)
Specific Conductivity	.225	.116					(m S/m)
Turbidity (Turb)	505.1	1552.4					(NTU)
Dissolved Oxygen (DO)	2.87	9.25					(g/l)
Temperature (Temp)	24.57	26.99					(°C)
ORP	40.3	63.7					

Depth to Bottom	156.96	(In) (Minus)	Depth to Water	43.08	(In)	=	113.88	HT (in)
Depth to Bottom	13.08	(Ft) (Minus)	Depth to Water	3.59	(Ft)	=	9.49	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)

r = 1 Multiply Together

d/2 = 1

	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS	Purge Vol.	Vol. Purged
TOP			113.88	1	3.14	358	.0043	1.5	4.6	5
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS: bubbling

purged dry after ~3 gallons

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 824603
PROJECT NAME: HPFF
WELL NO. GT09
SAMPLE NO. UST1115-GT09 + UST1115-GT09D

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Debra Hoyt	DATE 8.20.03
PROJECT CONTACT: Mark Martin	SAMPLER: Debra Hoyt	TIME 1200 + 1210
PHONE: 910-451-2390	WEATHER: Partly Sunny 90°	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4			
PH	6.92	6.06	5.88	5.77			(STD)
Specific Conductivity	.346	.334	.343	.351			(m S/m)
Turbidity (Turb)	1454.8	322.1	95.2	225.3			(NTU)
Dissolved Oxygen (DO)	3.52	5.93	6.41	2.87			(g/l)
Temperature (Temp)	22.60	22.83	23.88	23.02			(°C)
ORP	-33.1	-20.9	31.9	43.9			

Depth to Bottom	228.24	(In) (Minus)	Depth to Water	50.28	(In)	=	177.96	HT (in)
Depth to Bottom	19.02	(Ft) (Minus)	Depth to Water	4.19	(Ft)	=	14.83	HT (ft)

d = 2
r = 1
d/2 = 1

MEASUREMENTS (IN INCHES)
Multiply Together

	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			177.96	1	3.14	559	.0043	2.4		7.2	9
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS: SAMPLE + DUPLICATE

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER:	824603
PROJECT NAME:	HPFF
WELL NO.	MW 78GW2202
SAMPLE NO.	UST 1115 - MW 78GW2202 & UST1115-MW78GW2202

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Debra Hoyt	DATE 8-20-08
PROJECT CONTACT: Mark Martin	SAMPLER: Debra Hoyt	TIME 1400
PHONE: 910-451-2390	WEATHER: Partly Sunny 90°	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4			
PH	6.16	5.65	5.71	5.70			(STD)
Specific Conductivity	.269	.274	.274	.271			(m S/m)
Turbidity (Turb)	34.3	25.4	20.3	8.7			(NTU)
Dissolved Oxygen (DO)	4.46	3.11	3.18	2.99			(g/l)
Temperature (Temp)	22.47	22.98	22.98	22.81			(°C)
ORP	41.4	56.8	57.4	55.8			

Depth to Bottom	276.00	(In) (Minus)	Depth to Water	81.96	(In)	=	194.04	HT (in)
Depth to Bottom	23.00	(Ft) (Minus)	Depth to Water	6.83	(Ft)	=	16.17	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)

r = 1 Multiply Together

d/2 = 1	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			194.04	1	3.14	609	.0043	2.6		7.9	8
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS: SAMPLE AND DUPLICATE

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER:	824603
PROJECT NAME:	HPFF
WELL NO.	MW111513
SAMPLE NO.	UST1115-MW111513

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Debra Hoyt	DATE 8.20.03
PROJECT CONTACT: Mark Martin	SAMPLER: Debra Hoyt	TIME 1530
PHONE: 910-451-2390	WEATHER: Mostly Sunny 78°	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4			
PH	3.99	3.91	3.96				(STD)
Specific Conductivity	3.341	3.507	3.592				(m S/m)
Turbidity (Turb)	52.9	1548.8	35.6				(NTU)
Dissolved Oxygen (DO)	4.25	3.36	3.78				(g/l)
Temperature (Temp)	25.67	25.61	26.01				(°C)
ORP	213.5	207.1	204.8				

Depth to Bottom	615.60	(In) (Minus)	Depth to Water	91.08	(In)	= 524.52	HT (in)
Depth to Bottom	51.3	(Ft) (Minus)	Depth to Water	7.59	(Ft)	= 43.71	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)

r = 1 Multiply Together

d/2 = 1	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			524.52	1	3.14	1647	.0043	7.1		21.2	23
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 824603
PROJECT NAME: HPFF
WELL NO. MW1115-21
SAMPLE NO.UST1115 - MW111521

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Debra Hoyt	DATE 8-19-03
PROJECT CONTACT: Mark Martin	SAMPLER: Debra Hoyt	TIME 0920
PHONE: 910-451-2390	WEATHER: Partly Sunny 75°	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4			
PH	5.91	5.10	5.05	5.13			(STD)
Specific Conductivity	.118	.111	.110	.107			(m S/m)
Turbidity (Turb)	-1.0	-1.0	-1.0	1.6			(NTU)
Dissolved Oxygen (DO)	6.85	2.54	2.32	4.05			(g/l)
Temperature (Temp)	23.12	22.88	22.87	23.06			(°C)
ORP	108.3	104.1	99.9	96.4			

Depth to Bottom	602.40	(In) (Minus)	Depth to Water	89.04	(In)	=	513.36	HT (in)
Depth to Bottom	50.2	(Ft) (Minus)	Depth to Water	7.42	(Ft)	=	42.78	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)
r = 1 Multiply Together

d/2 = 1	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			513.36	1	3.14	1612	.0043	6.9		20.8	22
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 824603
PROJECT NAME: HPFF
WELL NO. MW11S-17
SAMPLE NO.UST115-MW11S17

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Debra Hoyt	DATE 8-19-03
PROJECT CONTACT: Mark Martin	SAMPLER: Debra Hoyt	TIME 1345
PHONE: 910-451-2390	WEATHER:	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4			
PH	6.70	5.79	5.80	5.74			(STD)
Specific Conductivity	2.204	2.427	2.427	2.430			(m S/m)
Turbidity (Turb)	0.0	0.0	20.8	0.0			(NTU)
Dissolved Oxygen (DO)	6.81	3.99	2.94	3.28			(g/l)
Temperature (Temp)	19.94	19.99	19.98	20.06			(°C)
ORP	16.8	9.7	8.4	3.3			

505.68

Depth to Bottom	605.4	(In) (Minus)	Depth to Water	99.72	(In)	=	~~1588~~	HT (in)
Depth to Bottom	50.45	(Ft) (Minus)	Depth to Water	8.31	(Ft)	=	42.14	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)
r = 1 Multiply Together

d/2 = 1	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			~~1588~~	1	3.14	1588	.0043	6.8		20.5	21
Middle			505.68		3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]

OTHER:

WELL OR GROUND WATER DATA SHEET

		PROJECT NUMBER: 824603
		PROJECT NAME: HPFF
		WELL NO. MW1115 - 18
		SAMPLE NO.UST1115 - MW1115 18
PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Debra Hoyt	DATE 8.20.03
PROJECT CONTACT: Mark Martin	SAMPLER: Debra Hoyt	TIME 1105
PHONE: 910-451-2390	WEATHER: Partly sunny 83°	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4			
PH	6.32	6.44	6.44	6.45			(STD)
Specific Conductivity	1.194	1.212	1.216	1.215			(m S/m)
Turbidity (Turb)	50.9	83.6	74.1	70.4			(NTU)
Dissolved Oxygen (DO)	3.66	2.71	2.18	1.87			(g/l)
Temperature (Temp)	20.78	20.91	20.93	20.94			(°C)
ORP	-24.4	-44.7	-46.0	-48.2			

Depth to Bottom	606.60	(In) (Minus)	Depth to Water	105.84	(In)	=	500.76	HT (in)
Depth to Bottom	50.55	(Ft) (Minus)	Depth to Water	8.82	(Ft)	=	41.73	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)

r = 1 Multiply Together

d/2 = 1

	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			500.76	1	3.14	1572	.0043	6.8		20.3	21
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

	WELL OR GROUND WATER DATA SHEET	PROJECT NUMBER: 824603
		PROJECT NAME: HPFF
		WELL NO. MW1115 22
		SAMPLE NO.UST1115-MW111522

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Debra Hoyt	DATE 8-19-03
PROJECT CONTACT: Mark Martin	SAMPLER: Debra Hoyt	TIME 1300
PHONE: 910-451-2390	WEATHER: Cloudy 79°	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4			
PH	6.39	6.67	7.04	7.08			(STD)
Specific Conductivity	.377	.377	.377	.377			(m S/m)
Turbidity (Turb)	0.0	0.0	0.0	0.0			(NTU)
Dissolved Oxygen (DO)	4.45	3.33	3.35	2.92			(g/l)
Temperature (Temp)	20.43	20.61	20.64	20.63			(°C)
ORP	-66.3	-110.3	-125.1	-125.6			

Depth to Bottom	958.44	(In) (Minus)	Depth to Water	119.52	(In)	=	838.92	HT (in)
Depth to Bottom	79.87	(Ft) (Minus)	Depth to Water	9.96	(Ft)	=	69.91	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)

r = 1 Multiply Together

d/2 = 1

	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			838.92	1	3.14	2634	.0043	11.3		34	35
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]

OTHER:

	WELL OR GROUND WATER DATA SHEET	PROJECT NUMBER: 824603
		PROJECT NAME: HPFF
		WELL NO. MW1115-23
		SAMPLE NO.UST1115-MW111523

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Debra Hoyt	DATE 8.20.03
PROJECT CONTACT: Mark Martin	SAMPLER: Debra Hoyt	TIME
PHONE: 910-451-2390	WEATHER: Partly Sunny 90°	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4			
PH	6.23	6.29	6.32	6.33			(STD)
Specific Conductivity	2.103	2.153	2.155	2.151			(m S/m)
Turbidity (Turb)	26.5	127.9	19.7	10.6			(NTU)
Dissolved Oxygen (DO)	5.59	4.73	4.39	3.81			(g/l)
Temperature (Temp)	20.94	21.02	21.06	21.04			(°C)
ORP	-24.4	-42.7	-48.7	-52.6			

Depth to Bottom	981.00	(In) (Minus)	Depth to Water	111.00	(In)	=	870.00	HT (in)
Depth to Bottom	81.75	(Ft) (Minus)	Depth to Water	9.25	(Ft)	=	72.50	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)

r = 1 Multiply Together

d/2 = 1	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			870	1	3.14	2732	.0043	11.7		35.2	40
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

	WELL OR GROUND WATER DATA SHEET	PROJECT NUMBER: 824603
		PROJECT NAME: HPFF
		WELL NO. MW111524
		SAMPLE NO.UST1115-MW111524

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Debra Hoyt	DATE 8-19-03
PROJECT CONTACT: Mark Martin	SAMPLER: Debra Hoyt	TIME 1030
PHONE: 910-451-2390	WEATHER: Partly Sunny 75°	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4			
PH	6.20	6.69	6.78	6.79			(STD)
Specific Conductivity	.536	.531	.533	.534			(m S/m)
Turbidity (Turb)	0.0	4.3	0.0	0.0			(NTU)
Dissolved Oxygen (DO)	4.91	3.85	3.77	3.46			(g/l)
Temperature (Temp)	22.89	22.86	22.75	22.79			(°C)
ORP	-41.7	-67.4	-83.8	-86.1			

Depth to Bottom	954.24	(In) (Minus)	Depth to Water	105.72	(In)	=	848.52	HT (in)
Depth to Bottom	79.52	(Ft) (Minus)	Depth to Water	8.81	(Ft)	=	70.71	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)

r = 1 Multiply Together

d/2 = 1	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			848.52	1	3.14	2664	.0043	11.5		34.4	35
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

	WELL OR GROUND WATER DATA SHEET	PROJECT NUMBER: 824603
		PROJECT NAME: HPFF
		WELL NO. MW1115S25
		SAMPLE NO.UST1115-MW1115S25

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Debra Hoyt	DATE 8.22.13
PROJECT CONTACT: Mark Martin	SAMPLER: Debra Hoyt	TIME 1120
PHONE: 910-451-2390	WEATHER:	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4			
PH	6.09	6.67	6.99	7.09			(STD)
Specific Conductivity	.424	.418	.414	.414			(m S/m)
Turbidity (Turb)	222.6	56.3	4.4	3.2			(NTU)
Dissolved Oxygen (DO)	4.69	5.35	2.01	1.92			(g/l)
Temperature (Temp)	23.96	24.05	23.89	24.00			(°C)
ORP	-48.4	-118.5	-149.6	-150.4			

Depth to Bottom	961.20	(In) (Minus)	Depth to Water	96.84	(In)	=	864.36	HT (in)
Depth to Bottom	80.1	(Ft) (Minus)	Depth to Water	8.07	(Ft)	=	72.03	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)

r = 1 Multiply Together

d/2 = 1	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			864.36	1	3.14	2714	.0043	11.7		35	40
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 824603	
PROJECT NAME: HPFF SE	
WELL NO. MW-1	
SAMPLE NO.UST	
PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Mark Martin
PROJECT CONTACT: Mark Martin	SAMPLER: Mark Martin
PHONE: 910-451-2390	WEATHER: 40-50 Rain
LEL:	
PID:	Sampling Device: Bailer

DATE 2/12/03
TIME 1630
Well Locked: [X] Yes
No

FIELD MEASUREMENTS

	1	2	3	4	Avg.		
PH	6.92	5.70	5.58	5.60			(STD)
Specific Conductivity	0.291	0.100	0.103	0.116			(m S/m)
Turbidity (Turb)	119.9	198.2	176.2	77.8			(NTU)
Dissolved Oxygen (DO)	8.03	0.73	0.55	0.36			(g/l)
Temperature (Temp)	10.47	14.02	14.54	14.94			(°C)
ORP	-30.4	76.6	76.1	56.3			

Depth to Bottom	227.64	(In) (Minus)	Depth to Water	114.24	(In)	=	113.4	HT (in)
Depth to Bottom	18.97	(Ft) (Minus)	Depth to Water	9.52	(Ft)	=	9.45	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)
r = 1 Multiply Together
d/2 = 1

	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			113.4	1	3.14	356	.0043	1.5		4.6	5
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 824603	
PROJECT NAME: HPFF SE	
WELL NO. MW10R	
SAMPLE NO.UST	
PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Mark Martin
PROJECT CONTACT: Mark Martin	SAMPLER: Mark Martin
PHONE: 910-451-2390	WEATHER: 40-50 Rain
LEL:	Well Locked: [X] Yes
PID:	Sampling Device: Bailer

DATE 2/17/03
TIME 1545
No

FIELD MEASUREMENTS

	1	2	3	4	Avg.		
PH	6.18						(STD)
Specific Conductivity	0.885						(m S/m)
Turbidity (Turb)	254.3						(NTU)
Dissolved Oxygen (DO)	5.81						(g/l)
Temperature (Temp)	12.82						(°C)
ORP	-49.4						

Depth to Bottom	206.4	(In) (Minus)	Depth to Water	161.64	(In)	=	44.76	HT (in)
Depth to Bottom	17.2	(Ft) (Minus)	Depth to Water	13.47	(Ft)	=	3.73	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)
r = 1 Multiply Together
d/2 = 1

	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			44.76	1	3.14	141	.0043	0.6		1.8	2
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS: Purged Dry. After 1 Vol.

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER:	824603
PROJECT NAME:	HPFF
WELL NO.	MW-11
SAMPLE NO.UST	

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Mark Martin	DATE 2/18/03
PROJECT CONTACT: Mark Martin	SAMPLER: Mark Martin	TIME 1000
PHONE: 910-451-2390	WEATHER: 40-50 Rain	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4	Avg.		
PH	5,15	5,58					(STD)
Specific Conductivity	0,416	0,545					(m S/m)
Turbidity (Turb)	1332	1180					(NTU)
Dissolved Oxygen (DO)	9.80	1,23					(g/l)
Temperature (Temp)	12,92	14.08					(°C)
ORP	79,5	37,7					

Depth to Bottom	288	(In) (Minus)	Depth to Water	95.28	(In)	=	192.72	HT (in)
Depth to Bottom	24.0	(Ft) (Minus)	Depth to Water	7,94	(Ft)	=	16.06	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)

r = 1 Multiply Together

d/2 = 1	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			192,72	1	3.14	605	.0043	2.6		7.8	8
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS: Purged Dry

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 824603
PROJECT NAME: HPFF
WELL NO. MW 17A
SAMPLE NO.UST

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Mark Martin	DATE 2/21/03
PROJECT CONTACT: Mark Martin	SAMPLER: Mark Martin	TIME 12:30
PHONE: 910-451-2390	WEATHER: 40-50 Rain	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4	Avg.		
PH	6.18	6.34	6.36	6.37			(STD)
Specific Conductivity	0.265	0.254	0.293	6.290			(m S/m)
Turbidity (Turb)	275	418.5	30.7	23.8			(NTU)
Dissolved Oxygen (DO)	8.50	0.41	0.24	6.75			(g/l)
Temperature (Temp)	15.20	18.12	18.04	17.82			(°C)
ORP	-9.4	-77.2	-82.9	-80.7			

Depth to Bottom	419.52	(In) (Minus)	Depth to Water	141.36	(In)	=	278.16	HT (in)
Depth to Bottom	34.96	(Ft) (Minus)	Depth to Water	11.78	(Ft)	=	23.18	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)
r = 1 Multiply Together

d/2 = 1	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			278.16	1	3.14	873	.0043	3.8		11.3	12
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER:	824603
PROJECT NAME:	HPFF
WELL NO.	MW-18
SAMPLE NO.UST	

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Mark Martin	DATE 2/18/03
PROJECT CONTACT: Mark Martin	SAMPLER: Mark Martin	TIME 1430
PHONE: 910-451-2390	WEATHER: 40-50 Rain	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4	Avg.		
PH	5,86	5,44	5,44	5,37			(STD)
Specific Conductivity	0,181	0,161	0,161	0,156			(m S/m)
Turbidity (Turb)	126	~~96.8~~ 2.7	1,5	1,0			(NTU)
Dissolved Oxygen (DO)	7,13	0,70	0,61	0,49			(g/l)
Temperature (Temp)	15,81	19,08	19,04	18,87			(°C)
ORP	60,6	96,8	93,1	98,6			

Depth to Bottom	274,8	(In) (Minus)	Depth to Water	146,16	(In)	=	128,64	HT (in)
Depth to Bottom	22,9	(Ft) (Minus)	Depth to Water	12,18	(Ft)	=	10,72	HT (ft)

d = 4 MEASUREMENTS (IN INCHES)

r = 1 Multiply Together

d/2 = 1

	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS	Purge Vol.	Vol. Purged
TOP			129,6	2	3.14	908	.0043	~~3.5~~	10,5	11
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

	WELL OR GROUND WATER DATA SHEET	PROJECT NUMBER: 824603
		PROJECT NAME: HPFF
		WELL NO. HPFF-1
		SAMPLE NO.UST

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Mark Martin	DATE 2/21/03
PROJECT CONTACT: Mark Martin	SAMPLER: Mark Martin	TIME
PHONE: 910-451-2390	WEATHER: 40-50 Rain	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4	Avg.		
PH	6.69	5.67	5.18	5.04			(STD)
Specific Conductivity	0.184	0.151	0.132	0.137			(m S/m)
Turbidity (Turb)	1659	444	21.9	103.9			(NTU)
Dissolved Oxygen (DO)	4.12	2.21	2.04	1.52			(g/l)
Temperature (Temp)	14.35	14.27	15.65	16.44			(°C)
ORP	-18.4	130.2	197.2	221.9			

Depth to Bottom	179.04	(In) (Minus)	Depth to Water	63.96	(In)	=	115.08	HT (in)
Depth to Bottom	14.92	(Ft) (Minus)	Depth to Water	5.33	(Ft)	=	9.55	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)

r = 1 Multiply Together

d/2 = 1	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			115.08	1	3.14	361	.0043	1.6		4.7	5
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

	WELL OR GROUND WATER DATA SHEET	PROJECT NUMBER: 824603
		PROJECT NAME: HPFF
		WELL NO. HPFF-05
		SAMPLE NO.UST

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Mark Martin	DATE 2/21/03
PROJECT CONTACT: Mark Martin	SAMPLER: Mark Martin	TIME 1130
PHONE: 910-451-2390	WEATHER: 40-50 Rain	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4	Avg.		
PH	7.46	6.27	5.75	5.73			(STD)
Specific Conductivity	0.302	0.244	0.210	0.206			(m S/m)
Turbidity (Turb)	1014	165	894	327			(NTU)
Dissolved Oxygen (DO)	6.10	1.87	1.97	3.98			(g/l)
Temperature (Temp)	16.95	17.30	18.21	18.06			(°C)
ORP	-87.4	-26.5	-2.5	-4.8			

Depth to Bottom	180	(In) (Minus)	Depth to Water	95.88	(In)	=	84.12	HT (in)
Depth to Bottom	15.0	(Ft) (Minus)	Depth to Water	7.99	(Ft)	=	7.01	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)

r = 1 Multiply Together

d/2 = 1	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			84.12	1	3.14	264	.0043	1.1		3.4	5
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER:	824603
PROJECT NAME:	HPFF
WELL NO.	HPFF-19
SAMPLE NO.	UST

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Mark Martin	DATE 2/18/03
PROJECT CONTACT: Mark Martin	SAMPLER: Mark Martin	TIME 1130
PHONE: 910-451-2390	WEATHER: 40-50 Rain	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4	Avg.		
PH	5.61	5.68	5.73	5.78			(STD)
Specific Conductivity	0.306	0.220	0.205	0.216			(m S/m)
Turbidity (Turb)	444	210	196.7	223			(NTU)
Dissolved Oxygen (DO)	9.16	1.65	0.39	0.36			(g/l)
Temperature (Temp)	11.17	13.78	13.85	14.70			(°C)
ORP	-18.5	~~-44.5~~ -48.5	-67.7	-79			

Depth to Bottom	175.2	(In) (Minus)	Depth to Water	67.92	(In)	=	107.28	HT (in)
Depth to Bottom	14.6	(Ft) (Minus)	Depth to Water	5.66	(Ft)	=	8.94	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)

r = 1 Multiply Together

d/2 = 1

	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			107.28	1	3.14	337	.0043	1.4		4.3	5
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 824603	
PROJECT NAME: HPFF	
WELL NO. HPFF-20	
SAMPLE NO.UST	

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Mark Martin	DATE 2/18/03
PROJECT CONTACT: Mark Martin	SAMPLER: Mark Martin	TIME 1200
PHONE: 910-451-2390	WEATHER: 40-50 Rain	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4	Avg.		
PH	6.05	5.50	5.88	5.95			(STD)
Specific Conductivity	0.223	0.230	0.265	0.262			(m S/m)
Turbidity (Turb)	234	210.4	91.5	71.3			(NTU)
Dissolved Oxygen (DO)	10.70	2.06	0.46	0.39			(g/l)
Temperature (Temp)	11.26	13.90	14.90	15.19			(°C)
ORP	31.5	8.7	-63	-78.1			

Depth to Bottom	171.36	(In) (Minus)	Depth to Water	104.04	(In)	=	67.32	HT (in)
Depth to Bottom	14.28	(Ft) (Minus)	Depth to Water	8.67	(Ft)	=	5.61	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)

r = 1 Multiply Together

d/2 = 1

	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			67.32	1	3.14	211	.0043	0.9		2.7	3
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

	WELL OR GROUND WATER DATA SHEET	PROJECT NUMBER: 824603
		PROJECT NAME: HPFF
		WELL NO. HPFF-7
		SAMPLE NO.UST

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Mark Martin	DATE 2/21/03
PROJECT CONTACT: Mark Martin	SAMPLER: Mark Martin	TIME 1000
PHONE: 910-451-2390	WEATHER: 40-50 Rain	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4	Avg.		
PH	5,77	6,62	6,65	6,65			(STD)
Specific Conductivity	0,557	0,785	0,793	0,793			(m S/m)
Turbidity (Turb)	146	17,8	11,8	11,0			(NTU)
Dissolved Oxygen (DO)	10,23	0,30	0,23	0,22			(g/l)
Temperature (Temp)	17,04	18,58	19,21	19,22			(°C)
ORP	18,4	-73,4	-89,5	-93,0			

Depth to Bottom	547,32	(In) (Minus)	Depth to Water	118,20	(In)	=	429,12	HT (in)
Depth to Bottom	45,61	(Ft) (Minus)	Depth to Water	9,85	(Ft)	=	35,76	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)

r = 1 Multiply Together

d/2 = 1

	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			429,12	1	3.14	1347	.0043	5,8		17,4	
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]

OTHER:

	WELL OR GROUND WATER DATA SHEET	PROJECT NUMBER: 824603
		PROJECT NAME: HPFF
		WELL NO. HPFF 8
		SAMPLE NO.UST

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Mark Martin	DATE 2/21/03
PROJECT CONTACT: Mark Martin	SAMPLER: Mark Martin	TIME 1415
PHONE: 910-451-2390	WEATHER: 40-50 Rain	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4	Avg.		
PH	8,11	6e.64	6.64	6.63			(STD)
Specific Conductivity	0.398	0.492	0,492	0,489			(m S/m)
Turbidity (Turb)	112	20.	20	18			(NTU)
Dissolved Oxygen (DO)	5,90	0,14	0,13	0.15			(g/l)
Temperature (Temp)	19.46	20.29	20,16	20.25			(°C)
ORP	-170	-127	-128	-119			

Depth to Bottom	613,32	(In) (Minus)	Depth to Water	193,32	(In)	=	420	HT (in)
Depth to Bottom	51,11	(Ft) (Minus)	Depth to Water	16,11	(Ft)	=	35,0	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)

r = 1 Multiply Together

d/2 = 1	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			420	1	3.14	1319	.0043	5,7		17	20
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]

OTHER:

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER:	824603
PROJECT NAME:	HPFF
WELL NO.	HPFF-9
SAMPLE NO.UST	

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Mark Martin	DATE 2/21/03
PROJECT CONTACT: Mark Martin	SAMPLER: Mark Martin	TIME 1045
PHONE: 910-451-2390	WEATHER: 40-50 Rain	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4	Avg.		
PH	7.24	6.95	6.90	6.90			(STD)
Specific Conductivity	0.741	0.748	0.751	0.747			(m S/m)
Turbidity (Turb)	1160	210	160	100			(NTU)
Dissolved Oxygen (DO)	4.42	1.48	0.20	0.18			(g/l)
Temperature (Temp)	19.23	—	20.43	21.02			(°C)
ORP	-107.9	-123	-144	-151.9			

Depth to Bottom	580.8	(In) (Minus)	Depth to Water	108.84	(In)	=	471.96	HT (in)
Depth to Bottom	48.4	(Ft) (Minus)	Depth to Water	9.07	(Ft)	=	39.33	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)

r = 1 Multiply Together

d/2 = 1

	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS	Purge Vol.	Vol. Purged
TOP			471.96	1	3.14	1482	.0043	6.4	19.1	20
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER:	824603
PROJECT NAME:	HPFF
WELL NO.	HPFF-11
SAMPLE NO.	UST

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Mark Martin	DATE 2/21/03
PROJECT CONTACT: Mark Martin	SAMPLER: Mark Martin	TIME 1330
PHONE: 910-451-2390	WEATHER: 40-50 Rain	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4	Avg.		
PH	6.62	10.15	9.00	8.72			(STD)
Specific Conductivity	0.181	0.254	0.382	0.459			(m S/m)
Turbidity (Turb)	6.01	179	209	173			(NTU)
Dissolved Oxygen (DO)	7.[illegible]	0.19	0.19	0.24			(g/l)
Temperature (Temp)	18.53	20.07	20.44	20.50			(°C)
ORP	-119	-164	-150	-148			

Depth to Bottom	973.2	(In) (Minus)	Depth to Water	173.64	(In)	=	799.56	HT (in)
Depth to Bottom	81.1	(Ft) (Minus)	Depth to Water	14.47	(Ft)	=	66.63	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)

r = 1 Multiply Together

d/2 = 1

	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS	Purge Vol.	Vol. Purged
TOP			799.56	1	3.14	2511	.0043	10.8	32.4	35
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER:	824603
PROJECT NAME:	HPFF
WELL NO.	78GW32-2
SAMPLE NO.	UST

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Mark Martin	DATE 2/21/03
PROJECT CONTACT: Mark Martin	SAMPLER: Mark Martin	TIME
PHONE: 910-451-2390	WEATHER: 40-50 Rain	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4	Avg.		
PH	7.85	7.08	7.02	7.01			(STD)
Specific Conductivity	0.319	0.499	0.601	0.608			(m S/m)
Turbidity (Turb)	87	42	8.6	3.1			(NTU)
Dissolved Oxygen (DO)	10.07	1.60	0.60	0.46			(g/l)
Temperature (Temp)	19.88	22.30	22.36	22.36			(°C)
ORP	-31.3	+76.3	-105.7	-101.8			

Depth to Bottom	948	(In) (Minus)	Depth to Water	117.36	(In)	=	830.64	HT (in)
Depth to Bottom	79	(Ft) (Minus)	Depth to Water	9.78	(Ft)	=	69.22	HT (ft)

d = 4
r = 2
d/2 = 2

MEASUREMENTS (IN INCHES)
Multiply Together

	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			830.64	4	3.14	~~2608~~ 10432	.0043	44.9		135	150
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER:	824603
PROJECT NAME:	HPFF
WELL NO.	786W32-3
SAMPLE NO.	UST

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Mark Martin	DATE 2/21/03
PROJECT CONTACT: Mark Martin	SAMPLER: Mark Martin	TIME 0700
PHONE: 910-451-2390	WEATHER: 40-50 Rain	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4	Avg.		
PH	6.25	7.48	7.50	7.52			(STD)
Specific Conductivity	0.385	0.315	0.314	0.316			(m S/m)
Turbidity (Turb)	69.8	-1.6	-2.0	-2.3			(NTU)
Dissolved Oxygen (DO)	7.41	0.12	0.11	0.11			(g/l)
Temperature (Temp)	20.26	21.39	21.15	21.06			(°C)
ORP	-38.2	-154.6	-156.7	-157.3			

Depth to Bottom	1822.8	(In) (Minus)	Depth to Water	121.92	(In)	=	1700.88	HT (in)
Depth to Bottom	151.9	(Ft) (Minus)	Depth to Water	10.16	(Ft)	=	141.7	HT (ft)

d = 4
r = 2
d/2 = 2

MEASUREMENTS (IN INCHES)
Multiply Together

	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS	Purge Vol.	Vol. Purged
TOP			1700.88	4	3.14	~~[illegible]~~	.0043	~~45.9~~	~~137.7~~	~~450~~
Middle					3.14	~~[illegible]~~ 2136	.0043	91.8	276	300
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 824603	
PROJECT NAME: HPFF	
WELL NO. MWHPFF11	
SAMPLE NO.UST HPFF - MWHPFF11	
PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Debra Hoyt
PROJECT CONTACT: Mark Martin	SAMPLER: Debra Hoyt
PHONE: 910-451-2390	WEATHER: Partly Sunny 82°
LEL:	Well Locked: [X] Yes
PID:	Sampling Device: Bailer

DATE 8-25-03
TIME 1030
No

FIELD MEASUREMENTS

	1	2	3	4			
PH	6.97	7.16	7.10	7.01			(STD)
Specific Conductivity	.265	.445	.506	.612			(m S/m)
Turbidity (Turb)	462.3	9.4	10.1	10.0			(NTU)
Dissolved Oxygen (DO)	5.15	1.49	2.07	1.32			(g/l)
Temperature (Temp)	19.65	20.50	20.90	21.03			(°C)
ORP	-12.3	-1232	-111.2	-109.3			

Depth to Bottom	973.20	(In) (Minus)	Depth to Water	141.72	(In)	=	831.48	HT (in)
Depth to Bottom	81.1	(Ft) (Minus)	Depth to Water	11.81	(Ft)	=	69.29	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)
r = 1 Multiply Together

d/2 = 1	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			831.48	1	3.14	2611	.0043	11.2		33.7	35
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 824603
PROJECT NAME: HPFF
WELL NO. MW78GW32-2
SAMPLE NO. UST1115 - MW78GW3202

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Debra Hoyt	DATE 8-25-03
PROJECT CONTACT: Mark Martin	SAMPLER: Debra Hoyt	TIME 1440
PHONE: 910-451-2390	WEATHER: Partly Sunny 85°	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4			
PH	6.87	6.95	6.81	6.81			(STD)
Specific Conductivity	.667	.678	.693	.657			(m S/m)
Turbidity (Turb)	16.6	14.9	1.3	4.5			(NTU)
Dissolved Oxygen (DO)	1.75	.67	.49	.33			(g/l)
Temperature (Temp)	22.69	23.02	22.96	22.92			(°C)
ORP	-68.7	-106.3	-98.3	-96.4			

Depth to Bottom	948.00	(In) (Minus)	Depth to Water	82.68	(In)	=	865.32	HT (in)
Depth to Bottom	79.00	(Ft) (Minus)	Depth to Water	6.89	(Ft)	=	72.11	HT (ft)

d = 4
r = 2
d/2 = 2

MEASUREMENTS (IN INCHES)
Multiply Together

	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			865.32	1	3.14	10868	.0043	46.7		140.2	150
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 824603	
PROJECT NAME: HPFF	
WELL NO. MW786W3203	
SAMPLE NO.UST1115-MW786W3203	
PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Debra Hoyt — DATE 8-26-03
PROJECT CONTACT: Mark Martin	SAMPLER: Debra Hoyt — TIME 1015
PHONE: 910-451-2390	WEATHER:
LEL:	Well Locked: [X] Yes
PID:	Sampling Device: Bailer — No

FIELD MEASUREMENTS

	1	2	3	4			
PH	7.33	7.50	7.43	7.44			(STD)
Specific Conductivity	.340	.337	.341	.341			(m S/m)
Turbidity (Turb)	4.4	3.0	2.8	2.9			(NTU)
Dissolved Oxygen (DO)	.88	.15	.10	.13			(g/l)
Temperature (Temp)	22.08	21.24	21.20	21.20			(°C)
ORP	-148.0	-192.4	-169.4	-186.1			

Depth to Bottom	182.80	(In) (Minus)	Depth to Water	94.20	(In)	=	1728.6	HT (in)
Depth to Bottom	151.9	(Ft) (Minus)	Depth to Water	7.85	(Ft)	=	144.1	HT (ft)

d = 24 MEASUREMENTS (IN INCHES)
r = 12 Multiply Together
d/2 = 12

	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			1728.6	1	3.14	21711	.0043	93.4		280	300
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 824603
PROJECT NAME: HPFF
WELL NO. MW01
SAMPLE NO. USTHPFF-MW01 & USTHPFF-MW01D

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Debra Hoyt	DATE 8.27.03
PROJECT CONTACT: Mark Martin	SAMPLER: Debra Hoyt	TIME 1330 / 1340
PHONE: 910-451-2390	WEATHER:	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4			
PH	6.10	5.54	5.18	5.15			(STD)
Specific Conductivity	.125	.118	.115	.119			(m S/m)
Turbidity (Turb)	64.2	17.4	19.0	14.2			(NTU)
Dissolved Oxygen (DO)	3.96	2.08	.48	.33			(g/l)
Temperature (Temp)	23.03	23.51	23.37	23.31			(°C)
ORP	62.3	67.8	79.4	75.1			

Depth to Bottom	227.64	(In) (Minus)	Depth to Water	88.68	(In)	=	138.96	HT (in)
Depth to Bottom	18.97	(Ft) (Minus)	Depth to Water	7.39	(Ft)	=	11.58	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)
r = 1 Multiply Together
d/2 = 1

	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			138.96	1	3.14	436	.0043	1.9		5.6	7
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS: SAMPLE AND DUPLICATE

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 824603	
PROJECT NAME: HPFF	
WELL NO. MW10R	
SAMPLE NO.UST 1115 - MW10R	
PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Debra Hoyt
PROJECT CONTACT: Mark Martin	SAMPLER: Debra Hoyt
PHONE: 910-451-2390	WEATHER: sunny 80°
LEL:	Well Locked: [X] Yes
PID:	Sampling Device: Bailer

DATE 8.27.08
TIME 1000
No

FIELD MEASUREMENTS

	1	2	3	4			
PH	5.98	6.23	6.34	6.36			(STD)
Specific Conductivity	1.037	1.043	1.026	1.047			(m S/m)
Turbidity (Turb)	72.8	32.5	16.6	6.3			(NTU)
Dissolved Oxygen (DO)	6.13	4.80	3.72	3.19			(g/l)
Temperature (Temp)	22.54	23.29	23.58	23.57			(°C)
ORP	-62.1	-98.1	-105.9	-111.1			

Depth to Bottom	206.40	(In) (Minus)	Depth to Water	134.88	(In)	=	71.52	HT (in)
Depth to Bottom	17.2	(Ft) (Minus)	Depth to Water	11.24	(Ft)	=	5.96	HT (ft)

d = 2
r = 1
d/2 = 1

MEASUREMENTS (IN INCHES)
Multiply Together

	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			71.52	1	3.14	225	.0043	1.0		2.9	3
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]

OTHER:

	WELL OR GROUND WATER DATA SHEET	PROJECT NUMBER: 824603
		PROJECT NAME: HPFF
		WELL NO. MW11
		SAMPLE NO.UST HPFF-MW11

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Debra Hoyt	DATE 8-22-03
PROJECT CONTACT: Mark Martin	SAMPLER: Debra Hoyt	TIME 1235
PHONE: 910-451-2390	WEATHER:	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4			
PH	4.29	3.04	3.51	3.53			(STD)
Specific Conductivity	.775	.780	.541	.521			(m S/m)
Turbidity (Turb)	1380.1	1062.2	113.4	67.0			(NTU)
Dissolved Oxygen (DO)	14.62	12.62	14.35	13.80			(g/l)
Temperature (Temp)	23.63	25.34	24.23	23.97			(°C)
ORP	280.8	374.1	350.2	369.5			

Depth to Bottom	288.00	(In) (Minus)	Depth to Water	65.52	(In)	=	222.48	HT (in)
Depth to Bottom	24.00	(Ft) (Minus)	Depth to Water	5.46	(Ft)	=	18.54	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)

r = 1 Multiply Together

d/2 = 1	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			222.48	1	3.14	6.99	.0043	3.0		9	10
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS: pumped dry 3 times

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 824603
PROJECT NAME: HPFF
WELL NO. MW17A
SAMPLE NO.UST HPFF-MW17A

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Debra Hoyt	DATE 8.25.03
PROJECT CONTACT: Mark Martin	SAMPLER: Debra Hoyt	TIME 1215
PHONE: 910-451-2390	WEATHER: sunny 85°	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4			
PH	6.27	5.86	5.96	5.99			(STD)
Specific Conductivity	.276	.200	.301	.264			(m S/m)
Turbidity (Turb)	444.1	1489.2	214.9	27.8			(NTU)
Dissolved Oxygen (DO)	2.97	.75	.77	1.93			(g/l)
Temperature (Temp)	20.94	23.48	22.92	22.89			(°C)
ORP	-18.8	-14.5	-45.9	-31.0			

Depth to Bottom	419.52	(In) (Minus)	Depth to Water	115.44	(In)	=	304.08	HT (in)
Depth to Bottom	34.96	(Ft) (Minus)	Depth to Water	9.62	(Ft)	=	25.34	HT (ft)

d = 4
r = 2
d/2 = 2

MEASUREMENTS (IN INCHES)
Multiply Together

	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			304.08	1	3.14	3819	.0043	16.4		49.3	50
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

WELL OR GROUND WATER DATA SHEET

		PROJECT NUMBER: 824603
		PROJECT NAME: HPFF
		WELL NO. MW18
		SAMPLE NO.UST HPFF - MW18
PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Debra Hoyt	DATE 8-27-03
PROJECT CONTACT: Mark Martin	SAMPLER: Debra Hoyt	TIME 1045
PHONE: 910-451-2390	WEATHER: Sunny 82°	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4			
PH	6.20						(STD)
Specific Conductivity	.231						(m S/m)
Turbidity (Turb)	54.8						(NTU)
Dissolved Oxygen (DO)							(g/l)
Temperature (Temp)							(°C)
ORP							

Depth to Bottom	274.80	(In) (Minus)	Depth to Water	117.84	(In)	=	156.96	HT (in)
Depth to Bottom	22.90	(Ft) (Minus)	Depth to Water	9.82	(Ft)	=	13.08	HT (ft)

d = 4 MEASUREMENTS (IN INCHES)

r = 2 Multiply Together

d/2 = 2

	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			156.96	1	3.14	1971	.0043	8.5		25.4	9
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS: TOO MUCH SAND IN WELL TO TAKE YSI READINGS (SAND KEPT FILLING YSI TUBE AND BLOWING HOSES OFF).

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 824603	
PROJECT NAME: HPFF	
WELL NO. MWHPFF01	
SAMPLE NO.UST HPFF - MWHPFF01	
PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Debra Hoyt
PROJECT CONTACT: Mark Martin	SAMPLER: Debra Hoyt
PHONE: 910-451-2390	WEATHER: Sunny 80°
LEL:	Well Locked: [X] Yes
PID:	Sampling Device: Bailer

DATE 8 22 03
TIME 0900
No

FIELD MEASUREMENTS

	1	2	3	4			
PH	4.65	4.56	4.64	4.53			(STD)
Specific Conductivity	.145	.138	.152	.150			(m S/m)
Turbidity (Turb)	90.5	51.8	23.7	11.6			(NTU)
Dissolved Oxygen (DO)	4.18	2.84	5.24	5.34			(g/l)
Temperature (Temp)	23.45	24.47	24.05	23.45			(°C)
ORP	281.4	271.2	214.9	215.2			

Depth to Bottom	179.04	(In) (Minus)	Depth to Water	35.04	(In)	=	144.00	HT (in)
Depth to Bottom	14.92	(Ft) (Minus)	Depth to Water	2.92	(Ft)	=	12.00	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)
r = 1 Multiply Together

d/2 = 1	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			144	1	3.14	452	.0043	1.9		5.8	6
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]

OTHER:

	WELL OR GROUND WATER DATA SHEET	PROJECT NUMBER: 824603
		PROJECT NAME: HPFF
		WELL NO. MW HPFF 05
		SAMPLE NO.UST HPFF - MWHPFF05

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Debra Hoyt	DATE 8.25.03
PROJECT CONTACT: Mark Martin	SAMPLER: Debra Hoyt	TIME 0910
PHONE: 910-451-2390	WEATHER: Partly Sunny 78°	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4			
PH	5.96	5.69	5.72	5.69			(STD)
Specific Conductivity	.285	.260	.287	.291			(m S/m)
Turbidity (Turb)	371.6	135.1	13.4	9.0			(NTU)
Dissolved Oxygen (DO)	5.94	2.41	1.23	1.13			(g/l)
Temperature (Temp)	26.25	27.45	28.75	28.66			(°C)
ORP	63.7	55.6	8.6	11.5			

Depth to Bottom	180.00	(In) (Minus)	Depth to Water	63.24	(In)	=	116.76	HT (in)
Depth to Bottom	15.00	(Ft) (Minus)	Depth to Water	5.27	(Ft)	=	9.73	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)

r = 1 Multiply Together

d/2 = 1	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			116.76	1	3.14	367	.0043	1.6		4.7	5
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 824603
PROJECT NAME: HPFF
WELL NO. MWHPFF19
SAMPLE NO.UST HPFF-MWHPFF19

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Debra Hoyt	DATE 8 27 03
PROJECT CONTACT: Mark Martin	SAMPLER: Debra Hoyt	TIME 0915
PHONE: 910-451-2390	WEATHER: Sunny 80°	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4			
PH	6.22	6.02	5.94	5.91			(STD)
Specific Conductivity	.162	.163	.164	.165			(m S/m)
Turbidity (Turb)	126.2	203.1	234.7	115.6			(NTU)
Dissolved Oxygen (DO)	4.97	3.50	3.63	3.06			(g/l)
Temperature (Temp)	26.77	26.95	27.00	27.18			(°C)
ORP	18.3	11.6	7.0	2.5			

Depth to Bottom	175.20	(In) (Minus)	Depth to Water	94.44	(In)	=	80.76	HT (in)
Depth to Bottom	14.60	(Ft) (Minus)	Depth to Water	7.87	(Ft)	=	6.73	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)
r = 1 Multiply Together

d/2 = 1	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			80.76	1	3.14	254	.0043	1.1		3.3	5
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 824603	
PROJECT NAME: HPFF	
WELL NO. MWHPFF20	
SAMPLE NO.UST HPFF-MWHPFF20	
PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Debra Hoyt — DATE 8.27.03
PROJECT CONTACT: Mark Martin	SAMPLER: Debra Hoyt — TIME 0830
PHONE: 910-451-2390	WEATHER: Sunny 79°
LEL:	Well Locked: [X] Yes
PID:	Sampling Device: Bailer — No

FIELD MEASUREMENTS

	1	2	3	4			
PH	8.00	6.37	6.33	6.32			(STD)
Specific Conductivity	.213	.203	.205	.204			(m S/m)
Turbidity (Turb)	237.1	36.1	65.3	36.6			(NTU)
Dissolved Oxygen (DO)	5.27	.35	.28	.22			(g/l)
Temperature (Temp)	24.05	24.64	24.54	24.52			(°C)
ORP	-125.6	-103.5	-112.7	-118.6			

Depth to Bottom	171.36	(In) (Minus)	Depth to Water	75.48	(In)	=	95.88	HT (in)
Depth to Bottom	14.28	(Ft) (Minus)	Depth to Water	6.29	(Ft)	=	7.99	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)

r = 1 Multiply Together

d/2 = 1	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			95.88	1	3.14	301	.0043	1.3		3.9	5
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]

OTHER:

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER:	824603
PROJECT NAME:	HPFF
WELL NO.	MWHPFF07
SAMPLE NO.UST	HPFF-MWHPFF07

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Debra Hoyt	DATE 8-22-03
PROJECT CONTACT: Mark Martin	SAMPLER: Debra Hoyt	TIME 0940
PHONE: 910-451-2390	WEATHER:	
LEL:		Well Locked: [X] Yes
PID:	Sampling Device: Bailer	No

FIELD MEASUREMENTS

	1	2	3	4			
PH	5.51	6.39	6.47	6.49			(STD)
Specific Conductivity	.607	.716	.713	.712			(m S/m)
Turbidity (Turb)	92.0	9.0	4.5	3.7			(NTU)
Dissolved Oxygen (DO)	12.03	2.41	2.23	2.26			(g/l)
Temperature (Temp)	20.06	19.88	19.90	19.91			(°C)
ORP	67.1	-45.4	-54.0	-56.6			

Depth to Bottom	547.32	(In) (Minus)	Depth to Water	97.44	(In)	=	449.88	HT (in)
Depth to Bottom	45.61	(Ft) (Minus)	Depth to Water	8.12	(Ft)	=	37.49	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)

r = 1 Multiply Together

d/2 = 1	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			449.88	1	3.14	1413	.0043	6.1		18.2	20
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 824603	
PROJECT NAME: HPFF	
WELL NO MW HPFF 08	
SAMPLE NO.UST HPFF-MW HPFF08	
PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Debra Hoyt — DATE 8-25-03
PROJECT CONTACT: Mark Martin	SAMPLER: Debra Hoyt — TIME 1125
PHONE: 910-451-2390	WEATHER: Sunny 87°
LEL:	Well Locked: [X] Yes
PID:	Sampling Device: Bailer — No

FIELD MEASUREMENTS

	1	2	3	4			
PH	6.92	6.68	6.32	6.43			(STD)
Specific Conductivity	.1168	.484	.543	.543			(m S/m)
Turbidity (Turb)	30.1	17.8	2.9	2.5			(NTU)
Dissolved Oxygen (DO)	6.50	3.07	1.01	0.90			(g/l)
Temperature (Temp)	21.57	20.18	20.08	20.13			(°C)
ORP	-114.2	-84.3	-121.0	-130.7			

Depth to Bottom	613.32	(In) (Minus)	Depth to Water	161.52	(In)	=	451.80	HT (in)
Depth to Bottom	51.11	(Ft) (Minus)	Depth to Water	13.46	(Ft)	=	37.65	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)

r = 1 Multiply Together

d/2 = 1	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			451.8	1	3.14	1419	.0043	6.1		18.3	20
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 824603	
PROJECT NAME: HPFF	
WELL NO. MW14PFF09	
SAMPLE NO.UST HPFF-MW14PFF09	
PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Debra Hoyt
PROJECT CONTACT: Mark Martin	SAMPLER: Debra Hoyt
PHONE: 910-451-2390	WEATHER: Partly Sunny 87°
LEL:	Well Locked: [X] Yes
PID:	Sampling Device: Bailer

DATE 8.22.03
TIME 1420
No

FIELD MEASUREMENTS

	1	2	3	4			
PH	5.63	6.57	6.61	6.62			(STD)
Specific Conductivity	.678	.743	.743	.743			(m S/m)
Turbidity (Turb)	419.0	13.6	42.1	35.5			(NTU)
Dissolved Oxygen (DO)	8.15	1.89	1.28	1.32			(g/l)
Temperature (Temp)	24.11	22.74	22.76	22.75			(°C)
ORP	-17.9	-65.7	-72.6	-73.7			

Depth to Bottom	580.80	(In) (Minus)	Depth to Water	90.72	(In)	=	490.08	HT (in)
Depth to Bottom	48.4	(Ft) (Minus)	Depth to Water	7.56	(Ft)	=	40.84	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)
r = 1 Multiply Together
d/2 = 1

	BOTTOM	TOP	Layer Thickness	r^2	Π	Vol. Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			490.08	1	3.14	1539	.0043	6.6		19.9	20
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	See Sample Number Above	3 X 40 ml	HCL
PAH 610	See Sample Number Above	2 X 1 L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

APPENDIX E

LABORATORY GROUNDWATER ANALYTICAL REPORTS, SOUTHEAST COMPOUND

Southeast ACCUTEST Laboratories

09/12/03

Technical Report for

Shaw E & I, Inc.

Camp Lejeune-SE

824603

Accutest Job Number: F19234

Report to:

Shaw E & I, Inc.

natasha.sullivan@shawgrp.com

ATTN: Natasha Sullivan

Total number of pages in report: 33

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Harry Behzadi, Ph.D.
Laboratory Director

Certifications: FL (DOH E83510), NC (573), NJ (FL002), MA (FL946), IA (366), LA (03051), KS (E-10327), SC, AK

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Sample Summary

Shaw E & I, Inc.

Job No: F19234

Camp Lejeune-SE
Project No: 824603

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
F19234-1	08/26/03	10:15	MM	08/27/03	AQ	Ground Water	UST1115-MW78GW3203
F19234-2	08/26/03	00:00	MM	08/27/03	AQ	Trip Blank Water	TRIP BLANK-082603

Report of Analysis

Client Sample ID: UST1115-MW78GW3203
Lab Sample ID: F19234-1
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-SE

Date Sampled: 08/26/03
Date Received: 08/27/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR018480.D	1	09/03/03	RA	n/a	n/a	GQR766
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	0.64	1.0	0.50	ug/l	J
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	1.4	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	2.4	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW78GW3203		
Lab Sample ID:	F19234-1	**Date Sampled:**	08/26/03
Matrix:	AQ - Ground Water	**Date Received:**	08/27/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	10.5	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	97%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	102%		74-127%
563-58-6	1,1-Dichloropropene	95%		87-120%
563-58-6	1,1-Dichloropropene	99%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW78GW3203		
Lab Sample ID:	F19234-1	**Date Sampled:**	08/26/03
Matrix:	AQ - Ground Water	**Date Received:**	08/27/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY011446.D	1	08/29/03	CV	n/a	n/a	GXY306
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	8.94	0.50	0.30	ug/l	
74-84-0	Ethane	ND	1.0	0.60	ug/l	
74-85-1	Ethene	ND	1.0	0.80	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-MW78GW3203
Lab Sample ID: F19234-1
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-SE

Date Sampled: 08/26/03
Date Received: 08/27/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ18317.D	1	09/03/03	MRE	08/29/03	OP8399	GIJ875
Run #2							

	Initial Volume	Final Volume
Run #1	910 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.5	2.2	ug/l	
208-96-8	Acenaphthylene	ND	5.5	2.2	ug/l	
120-12-7	Anthracene	ND	5.5	2.2	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.5	2.2	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.5	2.2	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.5	2.2	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.5	2.2	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.5	2.2	ug/l	
218-01-9	Chrysene	ND	5.5	2.2	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.5	2.2	ug/l	
206-44-0	Fluoranthene	ND	5.5	2.2	ug/l	
86-73-7	Fluorene	ND	5.5	2.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.5	2.2	ug/l	
91-20-3	Naphthalene	ND	5.5	2.2	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.5	2.2	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.5	2.2	ug/l	
85-01-8	Phenanthrene	ND	5.5	2.2	ug/l	
129-00-0	Pyrene	ND	5.5	2.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	87%		41-139%
84-15-1	o-Terphenyl	84%		46-135%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW78GW3203		
Lab Sample ID:	F19234-1	**Date Sampled:**	08/26/03
Matrix:	AQ - Ground Water	**Date Received:**	08/27/03
		Percent Solids:	n/a
Project:	Camp Lejeune-SE		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	< 0.10	0.10	mg/l	1	08/27/03 14:48	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	< 0.20	0.20	mg/l	1	08/27/03 14:48	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 0.10	0.10	mg/l	1	08/27/03 14:48	LL	EPA 300/SW846 9056
Sulfate	< 20	20	mg/l	1	08/27/03 14:48	LL	EPA 300/SW846 9056
Total Organic Carbon	< 1.0	1.0	mg/l	1	09/10/03	SL	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID:	TRIP BLANK-082603		
Lab Sample ID:	F19234-2	**Date Sampled:**	08/26/03
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/27/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR018482.D	1	09/03/03	RA	n/a	n/a	GQR766
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK-082603		
Lab Sample ID:	F19234-2	**Date Sampled:**	08/26/03
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/27/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	91%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	94%		74-127%
563-58-6	1,1-Dichloropropene	95%		87-120%
563-58-6	1,1-Dichloropropene	97%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Blank Spike Summary

Job Number: F19234
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR766-BS	QR018472.D	1	09/03/03	RA	n/a	n/a	GQR766

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19234-1, F19234-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	19.2	96	88-121
75-27-4	Bromodichloromethane	20	20.1	101	79-121
75-25-2	Bromoform	20	20.0	100	61-135
74-83-9	Bromomethane	20	20.6	103	44-154
56-23-5	Carbon tetrachloride	20	21.7	109	81-127
108-90-7	Chlorobenzene	20	21.4	107	87-120
124-48-1	Dibromochloromethane	20	21.4	107	71-125
75-00-3	Chloroethane	20	20.7	104	68-146
110-75-8	2-Chloroethylvinyl ether	20	20.9	105	39-148
67-66-3	Chloroform	20	20.6	103	87-116
74-87-3	Chloromethane	20	21.1	106	34-188
95-50-1	1,2-Dichlorobenzene	20	22.3	112	81-119
541-73-1	1,3-Dichlorobenzene	20	20.6	103	82-120
106-46-7	1,4-Dichlorobenzene	20	22.0	110	81-120
75-71-8	Dichlorodifluoromethane	20	19.7	99	43-179
75-34-3	1,1-Dichloroethane	20	23.1	116	83-126
107-06-2	1,2-Dichloroethane	20	20.2	101	83-110
75-35-4	1,1-Dichloroethene	20	23.3	117	78-148
156-59-2	cis-1,2-Dichloroethene	20	19.8	99	86-134
156-60-5	trans-1,2-Dichloroethene	20	22.4	112	86-129
78-87-5	1,2-Dichloropropane	20	20.9	105	80-110
10061-01-5	cis-1,3-Dichloropropene	20	22.6	113	68-129
10061-02-6	trans-1,3-Dichloropropene	20	20.4	102	62-132
100-41-4	Ethylbenzene	20	20.3	102	86-125
75-09-2	Methylene chloride	20	23.1	116	74-130
1634-04-4	Methyl Tert Butyl Ether	20	19.2	96	80-117
79-34-5	1,1,2,2-Tetrachloroethane	20	22.0	110*	77-108
127-18-4	Tetrachloroethene	20	21.7	109	85-123
108-88-3	Toluene	20	19.4	97	89-123
71-55-6	1,1,1-Trichloroethane	20	21.3	107	86-123
79-00-5	1,1,2-Trichloroethane	20	21.0	105	81-109
79-01-6	Trichloroethene	20	21.8	109	85-117
75-69-4	Trichlorofluoromethane	20	21.1	106	74-149
75-01-4	Vinyl chloride	20	21.0	105	72-138
1330-20-7	Xylenes (total)	60	59.1	99	89-124

Blank Spike Summary

Job Number: F19234
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR766-BS	QR018472.D	1	09/03/03	RA	n/a	n/a	GQR766

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19234-1, F19234-2

CAS No.	Surrogate Recoveries	BSP	Limits
352-33-0	1-Chloro-4-fluorobenzene	109%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	113%	74-127%
563-58-6	1,1-Dichloropropene	96%	87-120%
563-58-6	1,1-Dichloropropene	98%	87-120%

Blank Spike Summary

Job Number: F19234
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GXY306-BS	XY011445.D	1	08/29/03	CV	n/a	n/a	GXY306

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F19234-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
74-82-8	Methane	108	89.9	83	50-126
74-84-0	Ethane	219	184	84	49-135
74-85-1	Ethene	290	244	84	56-130

Duplicate Summary

Job Number: F19234
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19234-1DUP	QR018481.D	1	09/03/03	RA	n/a	n/a	GQR766
F19234-1	QR018480.D	1	09/03/03	RA	n/a	n/a	GQR766

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19234-1, F19234-2

CAS No.	Compound	F19234-1 ug/l	Q	DUP ug/l	Q	RPD	Limits
71-43-2	Benzene	0.64	J	0.61	J	5	
75-27-4	Bromodichloromethane	ND		ND		nc	
75-25-2	Bromoform	ND		ND		nc	
74-83-9	Bromomethane	ND		ND		nc	
56-23-5	Carbon tetrachloride	ND		ND		nc	
108-90-7	Chlorobenzene	ND		ND		nc	
124-48-1	Dibromochloromethane	ND		ND		nc	
75-00-3	Chloroethane	ND		ND		nc	
110-75-8	2-Chloroethylvinyl ether	ND		ND		nc	
67-66-3	Chloroform	ND		ND		nc	
74-87-3	Chloromethane	ND		ND		nc	
95-50-1	1,2-Dichlorobenzene	ND		ND		nc	
541-73-1	1,3-Dichlorobenzene	ND		ND		nc	
106-46-7	1,4-Dichlorobenzene	ND		ND		nc	
75-71-8	Dichlorodifluoromethane	ND		ND		nc	
75-34-3	1,1-Dichloroethane	ND		ND		nc	
107-06-2	1,2-Dichloroethane	ND		ND		nc	
75-35-4	1,1-Dichloroethene	ND		ND		nc	
156-59-2	cis-1,2-Dichloroethene	ND		ND		nc	
156-60-5	trans-1,2-Dichloroethene	ND		ND		nc	
78-87-5	1,2-Dichloropropane	ND		ND		nc	
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	
100-41-4	Ethylbenzene	1.4		1.3		7	
75-09-2	Methylene chloride	ND		ND		nc	
1634-04-4	Methyl Tert Butyl Ether	ND		ND		nc	
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	
127-18-4	Tetrachloroethene	ND		ND		nc	
108-88-3	Toluene	2.4		2.3		4	
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	
79-01-6	Trichloroethene	ND		ND		nc	
75-69-4	Trichlorofluoromethane	ND		ND		nc	
75-01-4	Vinyl chloride	ND		ND		nc	
1330-20-7	Xylenes (total)	10.5		10.1		4	

Duplicate Summary

Job Number: F19234
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19234-1DUP	QR018481.D	1	09/03/03	RA	n/a	n/a	GQR766
F19234-1	QR018480.D	1	09/03/03	RA	n/a	n/a	GQR766

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19234-1, F19234-2

CAS No.	Surrogate Recoveries	DUP	F19234-1	Limits
352-33-0	1-Chloro-4-fluorobenzene	97%	97%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	101%	102%	74-127%
563-58-6	1,1-Dichloropropene	96%	95%	87-120%
563-58-6	1,1-Dichloropropene	98%	99%	87-120%

Duplicate Summary

Job Number: F19234
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19243-4DUP	XY011450.D	1	08/29/03	CV	n/a	n/a	GXY306
F19243-4	XY011449.D	1	08/29/03	CV	n/a	n/a	GXY306

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F19234-1

CAS No.	Compound	F19243-4 ug/l	Q	DUP ug/l	Q	RPD	Limits
74-82-8	Methane	36.6		38.9		6	29
74-84-0	Ethane	ND		ND		nc	24
74-85-1	Ethene	ND		ND		nc	23

Method Blank Summary

Job Number: F19234
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR766-MB	QR018471.D	1	09/03/03	RA	n/a	n/a	GQR766

The QC reported here applies to the following samples: **Method:** SW846 8021B

F19234-1, F19234-2

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

Method Blank Summary

Job Number: F19234
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR766-MB	QR018471.D	1	09/03/03	RA	n/a	n/a	GQR766

The QC reported here applies to the following samples: **Method:** SW846 8021B

F19234-1, F19234-2

CAS No.	Surrogate Recoveries		Limits
352-33-0	1-Chloro-4-fluorobenzene	90%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	91%	74-127%
563-58-6	1,1-Dichloropropene	96%	87-120%
563-58-6	1,1-Dichloropropene	96%	87-120%

Method Blank Summary

Job Number: F19234
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GXY306-MB	XY011444.D	1	08/29/03	CV	n/a	n/a	GXY306

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F19234-1

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	0.50	0.30	ug/l	
74-84-0	Ethane	ND	1.0	0.60	ug/l	
74-85-1	Ethene	ND	1.0	0.80	ug/l	

Matrix Spike Summary

Job Number: F19234
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19234-1MS	XY011447.D	1	08/29/03	CV	n/a	n/a	GXY306
F19234-1	XY011446.D	1	08/29/03	CV	n/a	n/a	GXY306

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F19234-1

CAS No.	Compound	F19234-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
74-82-8	Methane	8.94		108	122	105	50-150 [a]
74-84-0	Ethane	ND		219	250	114	50-150 [a]
74-85-1	Ethene	ND		290	331	114	50-150 [a]

(a) Advisory control limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F19234
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19220-2MS	QR018477.D	1	09/03/03	RA	n/a	n/a	GQR766
F19220-2MSD	QR018478.D	1	09/03/03	RA	n/a	n/a	GQR766
F19220-2	QR018474.D	1	09/03/03	RA	n/a	n/a	GQR766

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19234-1, F19234-2

CAS No.	Compound	F19220-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		20	19.7	99	19.6	98	1	77-127/9
75-27-4	Bromodichloromethane	ND		20	20.2	101	19.9	100	1	78-122/9
75-25-2	Bromoform	ND		20	19.5	98	19.7	99	1	57-140/22
74-83-9	Bromomethane	ND		20	20.3	102	20.7	104	2	27-159/21
56-23-5	Carbon tetrachloride	ND		20	22.5	113	22.2	111	1	79-127/14
108-90-7	Chlorobenzene	ND		20	21.6	108	21.2	106	2	82-122/10
124-48-1	Dibromochloromethane	ND		20	21.2	106	21.1	106	0	69-127/14
75-00-3	Chloroethane	ND		20	20.8	104	20.7	104	0	51-180/17
110-75-8	2-Chloroethylvinyl ether	ND		20	ND	0*	ND	0*	nc	10-158/13
67-66-3	Chloroform	ND		20	21.3	107	20.8	104	2	82-118/9
74-87-3	Chloromethane	ND		20	20.2	101	20.2	101	0	11-193/31
95-50-1	1,2-Dichlorobenzene	ND		20	21.6	108	21.8	109	1	69-133/13
541-73-1	1,3-Dichlorobenzene	ND		20	21.4	107	21.4	107	0	77-123/13
106-46-7	1,4-Dichlorobenzene	ND		20	21.2	106	21.2	106	0	73-127/13
75-71-8	Dichlorodifluoromethane	ND		20	19.7	99	20.2	101	3	14-176/25
75-34-3	1,1-Dichloroethane	ND		20	23.2	116	22.4	112	4	80-127/10
107-06-2	1,2-Dichloroethane	ND		20	21.3	107	21.0	105	1	74-116/14
75-35-4	1,1-Dichloroethene	ND		20	23.5	118	22.8	114	3	72-163/16
156-59-2	cis-1,2-Dichloroethene	ND		20	19.9	100	19.3	97	3	83-139/9
156-60-5	trans-1,2-Dichloroethene	ND		20	21.8	109	22.7	114	4	82-131/11
78-87-5	1,2-Dichloropropane	ND		20	21.2	106	21.5	108	1	77-112/8
10061-01-5	cis-1,3-Dichloropropene	ND		20	22.2	111	21.7	109	2	65-131/17
10061-02-6	trans-1,3-Dichloropropene	ND		20	21.1	106	20.5	103	3	53-140/21
100-41-4	Ethylbenzene	ND		20	20.6	103	20.6	103	0	68-136/11
75-09-2	Methylene chloride	ND		20	22.5	113	23.2	116	3	60-145/12
1634-04-4	Methyl Tert Butyl Ether	ND		20	19.3	97	19.4	97	1	71-124/14
79-34-5	1,1,2,2-Tetrachloroethane	ND		20	22.3	112	20.6	103	8	72-114/8
127-18-4	Tetrachloroethene	ND		20	22.9	115	22.1	111	4	85-124/13
108-88-3	Toluene	ND		20	19.5	98	19.7	99	1	78-128/9
71-55-6	1,1,1-Trichloroethane	ND		20	21.5	108	21.8	109	1	83-123/12
79-00-5	1,1,2-Trichloroethane	ND		20	21.2	106	20.3	102	4	78-111/7
79-01-6	Trichloroethene	ND		20	21.7	109	20.6	103	5	82-119/11
75-69-4	Trichlorofluoromethane	ND		20	20.4	102	20.8	104	2	76-147/15
75-01-4	Vinyl chloride	ND		20	20.1	101	19.5	98	3	72-139/14
1330-20-7	Xylenes (total)	ND		60	59.4	99	59.4	99	0	71-136/11

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F19234
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19220-2MS	QR018477.D	1	09/03/03	RA	n/a	n/a	GQR766
F19220-2MSD	QR018478.D	1	09/03/03	RA	n/a	n/a	GQR766
F19220-2	QR018474.D	1	09/03/03	RA	n/a	n/a	GQR766

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19234-1, F19234-2

CAS No.	Surrogate Recoveries	MS	MSD	F19220-2	Limits
352-33-0	1-Chloro-4-fluorobenzene	108%	109%	91%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	110%	110%	96%	74-127%
563-58-6	1,1-Dichloropropene	96%	96%	96%	87-120%
563-58-6	1,1-Dichloropropene	99%	96%	99%	87-120%

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Blank Spike Summary

Job Number: F19234
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8399-BS	IJ18307.D	1	09/02/03	MRE	08/29/03	OP8399	GIJ875

The QC reported here applies to the following samples: **Method:** EPA 610

F19234-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	25	28.0	112	59-114
208-96-8	Acenaphthylene	25	25.1	100	58-109
120-12-7	Anthracene	25	26.7	107	63-110
56-55-3	Benzo(a)anthracene	25	27.6	110	74-111
50-32-8	Benzo(a)pyrene	25	26.6	106	71-110
205-99-2	Benzo(b)fluoranthene	25	27.8	111	75-112
191-24-2	Benzo(g,h,i)perylene	25	26.9	108	66-114
207-08-9	Benzo(k)fluoranthene	25	25.8	103	73-111
218-01-9	Chrysene	25	26.9	108	73-112
53-70-3	Dibenzo(a,h)anthracene	25	26.3	105	67-111
206-44-0	Fluoranthene	25	27.7	111	74-113
86-73-7	Fluorene	25	27.2	109	67-113
193-39-5	Indeno(1,2,3-cd)pyrene	25	27.5	110	68-115
91-20-3	Naphthalene	25	26.1	104	52-113
90-12-0	1-Methylnaphthalene	25	28.7	115	55-117
91-57-6	2-Methylnaphthalene	25	26.2	105	50-115
85-01-8	Phenanthrene	25	27.8	111	70-111
129-00-0	Pyrene	25	27.3	109	73-115

CAS No.	Surrogate Recoveries	BSP	Limits
321-60-8	2-Fluorobiphenyl	108%	41-139%
84-15-1	o-Terphenyl	106%	46-135%

Duplicate Summary

Job Number: F19234
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8399-DUP	IJ18338.D	40	09/03/03	MRE	08/29/03	OP8399	GIJ876
F19271-4 [a]	IJ18337.D	40	09/03/03	MRE	08/29/03	OP8399	GIJ876

The QC reported here applies to the following samples: **Method:** EPA 610

F19234-1

CAS No.	Compound	F19271-4 ug/l	Q	DUP ug/l	Q	RPD	Limits
83-32-9	Acenaphthene	ND		ND		nc	
208-96-8	Acenaphthylene	ND		ND		nc	
120-12-7	Anthracene	ND		ND		nc	
56-55-3	Benzo(a)anthracene	ND		ND		nc	
50-32-8	Benzo(a)pyrene	ND		ND		nc	
205-99-2	Benzo(b)fluoranthene	ND		ND		nc	
191-24-2	Benzo(g,h,i)perylene	ND		ND		nc	
207-08-9	Benzo(k)fluoranthene	ND		ND		nc	
218-01-9	Chrysene	ND		ND		nc	
53-70-3	Dibenzo(a,h)anthracene	ND		ND		nc	
206-44-0	Fluoranthene	ND		ND		nc	
86-73-7	Fluorene	ND		ND		nc	
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ND		nc	
91-20-3	Naphthalene	768		787		2	
90-12-0	1-Methylnaphthalene	85.3	J	90.6	J	6	
91-57-6	2-Methylnaphthalene	163	J	180	J	10	
85-01-8	Phenanthrene	ND		ND		nc	
129-00-0	Pyrene	ND		ND		nc	

CAS No.	Surrogate Recoveries	DUP	F19271-4	Limits
321-60-8	2-Fluorobiphenyl	0%* [b]	0%* [b]	41-139%
84-15-1	o-Terphenyl	0%* [b]	0%* [b]	46-135%

(a) All hits confirmed by dual column analysis.
(b) Outside control limits due to dilution.

Method Blank Summary

Job Number: F19234
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8399-MB	IJ18308.D	1	09/02/03	MRE	08/29/03	OP8399	GIJ875

The QC reported here applies to the following samples: **Method:** EPA 610

F19234-1

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	2.0	ug/l	
120-12-7	Anthracene	ND	5.0	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	2.0	ug/l	
218-01-9	Chrysene	ND	5.0	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	2.0	ug/l	
86-73-7	Fluorene	ND	5.0	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	2.0	ug/l	
129-00-0	Pyrene	ND	5.0	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
321-60-8	2-Fluorobiphenyl	87%	41-139%
84-15-1	o-Terphenyl	83%	46-135%

Method Blank Summary

Job Number: F19234
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8399-MB	IJ18332.D	1	09/03/03	MRE	08/29/03	OP8399	GIJ876

The QC reported here applies to the following samples: **Method:** EPA 610

F19234-1

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	2.0	ug/l	
120-12-7	Anthracene	ND	5.0	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	2.0	ug/l	
218-01-9	Chrysene	ND	5.0	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	2.0	ug/l	
86-73-7	Fluorene	ND	5.0	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	2.0	ug/l	
129-00-0	Pyrene	ND	5.0	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
321-60-8	2-Fluorobiphenyl	95%	41-139%
84-15-1	o-Terphenyl	91%	46-135%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F19234
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8399-MS	IJ18311.D	1	09/02/03	MRE	08/29/03	OP8399	GIJ875
OP8399-MSD	IJ18312.D	1	09/03/03	MRE	08/29/03	OP8399	GIJ875
F19208-2	IJ18310.D	1	09/02/03	MRE	08/29/03	OP8399	GIJ875

The QC reported here applies to the following samples: **Method:** EPA 610

F19234-1

CAS No.	Compound	F19208-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		53.2	48.4	91	50.2	94	4	36-143/21
208-96-8	Acenaphthylene	ND		53.2	44.0	83	46.0	86	4	59-108/22
120-12-7	Anthracene	ND		53.2	45.7	86	47.9	90	5	61-113/22
56-55-3	Benzo(a)anthracene	ND		53.2	47.0	88	49.7	93	6	69-111/17
50-32-8	Benzo(a)pyrene	ND		53.2	45.8	86	48.3	91	5	71-109/22
205-99-2	Benzo(b)fluoranthene	ND		53.2	47.8	90	50.2	94	5	63-116/19
191-24-2	Benzo(g,h,i)perylene	ND		53.2	46.8	88	48.6	91	4	54-123/19
207-08-9	Benzo(k)fluoranthene	ND		53.2	44.7	84	47.4	89	6	66-114/16
218-01-9	Chrysene	ND		53.2	46.2	87	48.7	92	5	65-116/15
53-70-3	Dibenzo(a,h)anthracene	ND		53.2	45.9	86	48.2	91	5	52-130/24
206-44-0	Fluoranthene	ND		53.2	47.7	90	50.0	94	5	73-113/16
86-73-7	Fluorene	ND		53.2	46.9	88	49.1	92	5	63-114/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		53.2	47.7	90	50.3	95	5	43-133/24
91-20-3	Naphthalene	ND		53.2	45.8	86	48.7	92	6	40-130/27
90-12-0	1-Methylnaphthalene	ND		53.2	50.9	96	54.6	103	7	50-128/25
91-57-6	2-Methylnaphthalene	ND		53.2	45.8	86	49.3	93	7	32-148/26
85-01-8	Phenanthrene	ND		53.2	47.5	89	49.9	94	5	44-136/19
129-00-0	Pyrene	ND		53.2	46.5	87	49.1	92	5	71-116/16

CAS No.	Surrogate Recoveries	MS	MSD	F19208-2	Limits
321-60-8	2-Fluorobiphenyl	87%	93%	84%	41-139%
84-15-1	o-Terphenyl	84%	88%	85%	46-135%

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F19234
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-SE

Analyte	Batch ID	RL	MB Result	Units	BSP %Recov	QC Limits
Chloride	GP4418/GN12524	20	<20	mg/l	107.0	90-110%
Nitrogen, Nitrate	GP4418/GN12524	0.10	<0.10	mg/l	105.0	90-110%
Nitrogen, Nitrite	GP4418/GN12524	0.10	<0.10	mg/l	107.0	90-110%
Sulfate	GP4418/GN12524	20	<20	mg/l	101.0	90-110%
Total Organic Carbon	GN12639	1.0	<1.0	mg/l	103.0	86-116%

Associated Samples:
Batch GN12639: F19234-1
Batch GP4418: F19234-1

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F19234
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-SE

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chloride	GP4418/GN12524	F19234-1	mg/l	<20	<20	0.8	0-20%
Nitrogen, Nitrate	GP4418/GN12524	F19234-1	mg/l	<0.10	<0.10	0.0	0-20%
Nitrogen, Nitrite	GP4418/GN12524	F19234-1	mg/l	<0.10	<0.10	0.0	0-20%
Sulfate	GP4418/GN12524	F19234-1	mg/l	<20	<20	0.0	0-20%
Total Organic Carbon	GN12639	F19234-1	mg/l	<1.0	<1.0	10.2	0-20%

Associated Samples:
Batch GN12639: F19234-1
Batch GP4418: F19234-1

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F19234
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-SE

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chloride	GP4418/GN12524	F19234-1	mg/l	<20	100	114	101.9	90-110%
Nitrogen, Nitrate	GP4418/GN12524	F19234-1	mg/l	<0.10	1	1.1	110.0	90-110%
Nitrogen, Nitrite	GP4418/GN12524	F19234-1	mg/l	<0.10	1	1.1	110.0	90-110%
Sulfate	GP4418/GN12524	F19234-1	mg/l	<20	100	103	103.0	90-110%
Total Organic Carbon	GN12639	F19234-1	mg/l	<1.0	50.0	52.1	104.0	76-118%

Associated Samples:
Batch GN12639: F19234-1
Batch GP4418: F19234-1

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F19234
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-SE

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Total Organic Carbon	GN12639	F19234-1	mg/l	<1.0	50.0	53.3	2.2	

Associated Samples:
Batch GN12639: F19234-1

CHAIN-OF-CUSTODY RECORD

F19234

COC Number:
824603-SE-082603

Shaw
Shaw Environmental & Infrastructure, Inc.

Shaw Environmental & Infrastructure, Inc. - Piney Green Rd. Lot 203 Bld 626 - 910-451-2390

Receiving Lab: ACCUTEST

Project Name	Project Location
CAMP LEJEUNE - SE	CAMP LEJEUNE, NC

Project Number	Contact	PO Number
824603	Mark Martin	209378

Client Rep	Project Manager
US NAVY - LANTDIV	Ron Kenyon

Item No.	Sample Number	Date	Time	Comp	Grab	Sample Description	Number of Containers	VOA 601/602	PAH 610	Dissolved Gasses RSK-175	NO3,NO2,NO3-NO2 BY 353.2-354.1	SO4 BY 375.4	TOC BY 415.1	Analysis Desired
1	UST1115-MW78GW3203	8/26/03	1015		X	UST1115-MW78GW3203	10	X	X	X	X	X	X	
2	Trip Blank-082603	8/26/03	----		X	Trip Blank	2	X						
3														
4														
5														
6														
7														
8														
9														
10														

Transfer Number	Item Number	Transfers Relinquished By	Transfers Accepted By	Date	Time	Remarks
1	1 -- 2	[signature]	Fed Ex 8369 1400 2875	8/26/03	18:00	Please E-mail results to Mark.Martin@Shawgrp.com
2		FEDEX	Muna Mohammed	8/27/03	0930	21 Day TAT

2.2°C.

ACCUTEST LABORATORIES SOUTHEAST SAMPLE RECEIPT CONFIRMATION

Accutest's Job Number: F19234

Client: Shaw Project: Camp Lejeune -SE

Date Received: 8/27/03 Time Received: 0930

of Coolers Received: 1 Cooler Temperatures: 2.2°C

Delivery Method: (FedEx) UPS Accutest Courier Greyhound Delivery Other

Air Bill Number: 8369 1400 2875

Cooler Custody Seals Intact ?	(Yes)	No	
Chain of Custody Provided ?	(Yes)	No	
COC Match Bottle Label ID's ?	(Yes)	No	
Sample Labels Present on all bottles ?	(Yes)	No	
All Analyses Marked On COC ?	(Yes)	No	
Are All Bottles Intact ?	(Yes)	No	
Samples Preserved Correctly ?	(Yes)	No	
Correct Number of Containers Used ?	(Yes)	No	
Sufficient Sample Volume ?	(Yes)	No	
Trip Blank Provided ?	(Yes)	No	
Trip Blank on COC ?	(Yes)	No	
Trip Blank Intact ?	(Yes)	No	N/A
Trip Blank Matrix ?	Soil	(Water)	N/A
Number of Encores ?	0		
Number of Soil Field Kits ?	0		

Summary of Comments: _____

Signature: Muna Mohammed Date: 8/27/03

Southeast ACCUTEST Laboratories

09/10/03

Technical Report for

Shaw E & I, Inc.

Camp Lejeune-SE

824603

Accutest Job Number: F19271

Report to:

Shaw E & I, Inc.

natasha.sullivan@shawgrp.com

ATTN: Natasha Sullivan

Total number of pages in report: 43

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Harry Behzadi, Ph.D.
Laboratory Director

Certifications: FL (DOH E83510), NC (573), NJ (FL002), MA (FL946), IA (366), LA (03051), KS (E-10327), SC, AK

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Sample Summary

Shaw E & I, Inc.

Job No: F19271

Camp Lejeune-SE
Project No: 824603

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
F19271-1	08/27/03	08:30	MM	08/28/03	AQ	Ground Water	USTHPFF-MWHPFF20
F19271-2	08/27/03	09:15	MM	08/28/03	AQ	Ground Water	USTHPFF-MWHPFF19
F19271-3	08/27/03	10:00	MM	08/28/03	AQ	Ground Water	UST1115-MW10R
F19271-4	08/27/03	10:45	MM	08/28/03	AQ	Ground Water	USTHPFF-MW18
F19271-5	08/27/03	13:30	MM	08/28/03	AQ	Ground Water	USTHPFF-MW01
F19271-6	08/27/03	13:40	MM	08/28/03	AQ	Ground Water	USTHPFF-MW01D
F19271-7	08/27/03	00:00	MM	08/28/03	AQ	Trip Blank Water	TRIP BLANK-082703

Report of Analysis

Client Sample ID: USTHPFF-MWHPFF20
Lab Sample ID: F19271-1
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-SE

Date Sampled: 08/27/03
Date Received: 08/28/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	QR018494.D	100	09/03/03	RA	n/a	n/a	GQR766
Run #2	QR018517.D	200	09/04/03	RA	n/a	n/a	GQR767

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	6020	100	50	ug/l	
75-27-4	Bromodichloromethane	ND	100	50	ug/l	
75-25-2	Bromoform	ND	100	50	ug/l	
74-83-9	Bromomethane	ND	100	50	ug/l	
56-23-5	Carbon tetrachloride	ND	100	50	ug/l	
108-90-7	Chlorobenzene	ND	100	50	ug/l	
124-48-1	Dibromochloromethane	ND	100	40	ug/l	
75-00-3	Chloroethane	ND	100	50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	100	50	ug/l	
67-66-3	Chloroform	ND	100	50	ug/l	
74-87-3	Chloromethane	ND	100	50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	100	50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	100	50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	100	50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	100	50	ug/l	
75-34-3	1,1-Dichloroethane	ND	100	50	ug/l	
107-06-2	1,2-Dichloroethane	59.6	100	50	ug/l	J
75-35-4	1,1-Dichloroethene	ND	100	50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	100	50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	100	50	ug/l	
78-87-5	1,2-Dichloropropane	ND	100	50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	100	30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	100	30	ug/l	
100-41-4	Ethylbenzene	112	100	50	ug/l	
75-09-2	Methylene chloride	ND	500	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	100	50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	100	20	ug/l	
127-18-4	Tetrachloroethene	ND	100	50	ug/l	
108-88-3	Toluene	8790 [b]	200	100	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	100	50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	100	50	ug/l	
79-01-6	Trichloroethene	ND	100	50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF20		
Lab Sample ID:	F19271-1	**Date Sampled:**	08/27/03
Matrix:	AQ - Ground Water	**Date Received:**	08/28/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	100	50	ug/l	
75-01-4	Vinyl chloride	ND	100	50	ug/l	
1330-20-7	Xylenes (total)	6770	300	100	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	101%	100%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	109%	106%	74-127%
563-58-6	1,1-Dichloropropene	93%	93%	87-120%
563-58-6	1,1-Dichloropropene	99%	99%	87-120%

(a) All hits confirmed by GC/MS.
(b) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: USTHPFF-MWHPFF20
Lab Sample ID: F19271-1
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-SE

Date Sampled: 08/27/03
Date Received: 08/28/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ18318.D	1	09/03/03	MRE	08/29/03	OP8399	GIJ875
Run #2							

	Initial Volume	Final Volume
Run #1	990 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.1	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.1	2.0	ug/l	
120-12-7	Anthracene	ND	5.1	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.1	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.1	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.1	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.1	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.1	2.0	ug/l	
218-01-9	Chrysene	ND	5.1	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.1	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.1	2.0	ug/l	
86-73-7	Fluorene	ND	5.1	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.1	2.0	ug/l	
91-20-3	Naphthalene	ND	5.1	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.1	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.1	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.1	2.0	ug/l	
129-00-0	Pyrene	ND	5.1	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	88%		41-139%
84-15-1	o-Terphenyl	89%		46-135%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: USTHPFF-MWHPFF19
Lab Sample ID: F19271-2
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-SE

Date Sampled: 08/27/03
Date Received: 08/28/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR018495.D	100	09/03/03	RA	n/a	n/a	GQR766
Run #2	QR018518.D	250	09/04/03	RA	n/a	n/a	GQR767

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	7760	100	50	ug/l	
75-27-4	Bromodichloromethane	ND	100	50	ug/l	
75-25-2	Bromoform	ND	100	50	ug/l	
74-83-9	Bromomethane	ND	100	50	ug/l	
56-23-5	Carbon tetrachloride	ND	100	50	ug/l	
108-90-7	Chlorobenzene	ND	100	50	ug/l	
124-48-1	Dibromochloromethane	ND	100	40	ug/l	
75-00-3	Chloroethane	ND	100	50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	100	50	ug/l	
67-66-3	Chloroform	ND	100	50	ug/l	
74-87-3	Chloromethane	ND	100	50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	100	50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	100	50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	100	50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	100	50	ug/l	
75-34-3	1,1-Dichloroethane	ND	100	50	ug/l	
107-06-2	1,2-Dichloroethane	1090	100	50	ug/l	
75-35-4	1,1-Dichloroethene	ND	100	50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	100	50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	100	50	ug/l	
78-87-5	1,2-Dichloropropane	ND	100	50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	100	30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	100	30	ug/l	
100-41-4	Ethylbenzene	481	100	50	ug/l	
75-09-2	Methylene chloride	ND	500	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	100	50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	100	20	ug/l	
127-18-4	Tetrachloroethene	ND	100	50	ug/l	
108-88-3	Toluene	10600 [a]	250	130	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	100	50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	100	50	ug/l	
79-01-6	Trichloroethene	ND	100	50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF19		
Lab Sample ID:	F19271-2	**Date Sampled:**	08/27/03
Matrix:	AQ - Ground Water	**Date Received:**	08/28/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	100	50	ug/l	
75-01-4	Vinyl chloride	ND	100	50	ug/l	
1330-20-7	Xylenes (total)	12800	300	100	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	103%	100%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	110%	110%	74-127%
563-58-6	1,1-Dichloropropene	94%	93%	87-120%
563-58-6	1,1-Dichloropropene	100%	97%	87-120%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: USTHPFF-MWHPFF19
Lab Sample ID: F19271-2
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-SE

Date Sampled: 08/27/03
Date Received: 08/28/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ18319.D	1	09/03/03	MRE	08/29/03	OP8399	GIJ875
Run #2 [a]	IJ18335.D	8	09/03/03	MRE	08/29/03	OP8399	GIJ876
Run #3 [b]	IJ18355.D	1	09/04/03	SM	09/03/03	OP8399	GIJ877

	Initial Volume	Final Volume
Run #1	940 ml	1.0 ml
Run #2	940 ml	1.0 ml
Run #3	950 ml	1.0 ml

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.3	2.1	ug/l	
208-96-8	Acenaphthylene	ND	5.3	2.1	ug/l	
120-12-7	Anthracene	ND	5.3	2.1	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.3	2.1	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.3	2.1	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.3	2.1	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.3	2.1	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.3	2.1	ug/l	
218-01-9	Chrysene	ND	5.3	2.1	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.3	2.1	ug/l	
206-44-0	Fluoranthene	ND	5.3	2.1	ug/l	
86-73-7	Fluorene	ND	5.3	2.1	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.3	2.1	ug/l	
91-20-3	Naphthalene	266 [c]	43	17	ug/l	
90-12-0	1-Methylnaphthalene	58.6 [c]	43	17	ug/l	
91-57-6	2-Methylnaphthalene	97.1 [c]	43	17	ug/l	
85-01-8	Phenanthrene	ND	5.3	2.1	ug/l	
129-00-0	Pyrene	ND	5.3	2.1	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
321-60-8	2-Fluorobiphenyl	46%	67%	48%	41-139%
84-15-1	o-Terphenyl	30% [d]	38%	30%	46-135%

(a) All hits confirmed by dual column analysis.
(b) Confirmation run.
(c) Result is from Run# 2
(d) Outside control limits due to matrix interference. Confirmed by re-extraction and reanalysis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW10R		
Lab Sample ID:	F19271-3	**Date Sampled:**	08/27/03
Matrix:	AQ - Ground Water	**Date Received:**	08/28/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR018496.D	100	09/03/03	RA	n/a	n/a	GQR766
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	2830	100	50	ug/l	
75-27-4	Bromodichloromethane	ND	100	50	ug/l	
75-25-2	Bromoform	ND	100	50	ug/l	
74-83-9	Bromomethane	ND	100	50	ug/l	
56-23-5	Carbon tetrachloride	ND	100	50	ug/l	
108-90-7	Chlorobenzene	ND	100	50	ug/l	
124-48-1	Dibromochloromethane	ND	100	40	ug/l	
75-00-3	Chloroethane	ND	100	50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	100	50	ug/l	
67-66-3	Chloroform	ND	100	50	ug/l	
74-87-3	Chloromethane	ND	100	50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	100	50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	100	50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	100	50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	100	50	ug/l	
75-34-3	1,1-Dichloroethane	ND	100	50	ug/l	
107-06-2	1,2-Dichloroethane	ND	100	50	ug/l	
75-35-4	1,1-Dichloroethene	ND	100	50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	100	50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	100	50	ug/l	
78-87-5	1,2-Dichloropropane	ND	100	50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	100	30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	100	30	ug/l	
100-41-4	Ethylbenzene	843	100	50	ug/l	
75-09-2	Methylene chloride	ND	500	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	100	50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	100	20	ug/l	
127-18-4	Tetrachloroethene	ND	100	50	ug/l	
108-88-3	Toluene	5070	100	50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	100	50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	100	50	ug/l	
79-01-6	Trichloroethene	ND	100	50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW10R		
Lab Sample ID:	F19271-3	**Date Sampled:**	08/27/03
Matrix:	AQ - Ground Water	**Date Received:**	08/28/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	100	50	ug/l	
75-01-4	Vinyl chloride	ND	100	50	ug/l	
1330-20-7	Xylenes (total)	4830	300	100	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	102%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	108%		74-127%
563-58-6	1,1-Dichloropropene	95%		87-120%
563-58-6	1,1-Dichloropropene	99%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW10R		
Lab Sample ID:	F19271-3	**Date Sampled:**	08/27/03
Matrix:	AQ - Ground Water	**Date Received:**	08/28/03
Method:	EPA 610 EPA 610	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ18320.D	1	09/03/03	MRE	08/29/03	OP8399	GIJ875
Run #2	IJ18336.D	8	09/03/03	MRE	08/29/03	OP8399	GIJ876

	Initial Volume	Final Volume
Run #1	940 ml	1.0 ml
Run #2	940 ml	1.0 ml

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.3	2.1	ug/l	
208-96-8	Acenaphthylene	ND	5.3	2.1	ug/l	
120-12-7	Anthracene	ND	5.3	2.1	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.3	2.1	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.3	2.1	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.3	2.1	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.3	2.1	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.3	2.1	ug/l	
218-01-9	Chrysene	ND	5.3	2.1	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.3	2.1	ug/l	
206-44-0	Fluoranthene	ND	5.3	2.1	ug/l	
86-73-7	Fluorene	3.7	5.3	2.1	ug/l	J
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.3	2.1	ug/l	
91-20-3	Naphthalene	212 [a]	43	17	ug/l	
90-12-0	1-Methylnaphthalene	59.9 [a]	43	17	ug/l	
91-57-6	2-Methylnaphthalene	93.4 [a]	43	17	ug/l	
85-01-8	Phenanthrene	ND	5.3	2.1	ug/l	
129-00-0	Pyrene	ND	5.3	2.1	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	148% [b]	189% [b]	41-139%
84-15-1	o-Terphenyl	83%	100%	46-135%

(a) Result is from Run# 2
(b) Outside control limits due to matrix interference.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: USTHPFF-MW18
Lab Sample ID: F19271-4
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-SE

Date Sampled: 08/27/03
Date Received: 08/28/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR018497.D	100	09/03/03	RA	n/a	n/a	GQR766
Run #2	QR018519.D	250	09/04/03	RA	n/a	n/a	GQR767

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	5440 [a]	250	130	ug/l	
75-27-4	Bromodichloromethane	ND	100	50	ug/l	
75-25-2	Bromoform	ND	100	50	ug/l	
74-83-9	Bromomethane	ND	100	50	ug/l	
56-23-5	Carbon tetrachloride	ND	100	50	ug/l	
108-90-7	Chlorobenzene	ND	100	50	ug/l	
124-48-1	Dibromochloromethane	ND	100	40	ug/l	
75-00-3	Chloroethane	ND	100	50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	100	50	ug/l	
67-66-3	Chloroform	ND	100	50	ug/l	
74-87-3	Chloromethane	ND	100	50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	100	50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	100	50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	100	50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	100	50	ug/l	
75-34-3	1,1-Dichloroethane	ND	100	50	ug/l	
107-06-2	1,2-Dichloroethane	113	100	50	ug/l	
75-35-4	1,1-Dichloroethene	ND	100	50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	100	50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	100	50	ug/l	
78-87-5	1,2-Dichloropropane	ND	100	50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	100	30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	100	30	ug/l	
100-41-4	Ethylbenzene	1930	100	50	ug/l	
75-09-2	Methylene chloride	ND	500	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	100	50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	100	20	ug/l	
127-18-4	Tetrachloroethene	ND	100	50	ug/l	
108-88-3	Toluene	15100 [a]	250	130	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	100	50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	100	50	ug/l	
79-01-6	Trichloroethene	ND	100	50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MW18		
Lab Sample ID:	F19271-4	**Date Sampled:**	08/27/03
Matrix:	AQ - Ground Water	**Date Received:**	08/28/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	100	50	ug/l	
75-01-4	Vinyl chloride	ND	100	50	ug/l	
1330-20-7	Xylenes (total)	11700	300	100	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	105%	101%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	117%	104%	74-127%
563-58-6	1,1-Dichloropropene	93%	93%	87-120%
563-58-6	1,1-Dichloropropene	101%	97%	87-120%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MW18		
Lab Sample ID:	F19271-4	**Date Sampled:**	08/27/03
Matrix:	AQ - Ground Water	**Date Received:**	08/28/03
Method:	EPA 610 EPA 610	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	IJ18337.D	40	09/03/03	MRE	08/29/03	OP8399	GIJ876
Run #2							

	Initial Volume	Final Volume
Run #1	960 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	210	83	ug/l	
208-96-8	Acenaphthylene	ND	210	83	ug/l	
120-12-7	Anthracene	ND	210	83	ug/l	
56-55-3	Benzo(a)anthracene	ND	210	83	ug/l	
50-32-8	Benzo(a)pyrene	ND	210	83	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	210	83	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	210	83	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	210	83	ug/l	
218-01-9	Chrysene	ND	210	83	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	210	83	ug/l	
206-44-0	Fluoranthene	ND	210	83	ug/l	
86-73-7	Fluorene	ND	210	83	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	210	83	ug/l	
91-20-3	Naphthalene	768	210	83	ug/l	
90-12-0	1-Methylnaphthalene	85.3	210	83	ug/l	J
91-57-6	2-Methylnaphthalene	163	210	83	ug/l	J
85-01-8	Phenanthrene	ND	210	83	ug/l	
129-00-0	Pyrene	ND	210	83	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	0% [b]		41-139%
84-15-1	o-Terphenyl	0% [b]		46-135%

(a) All hits confirmed by dual column analysis.
(b) Outside control limits due to dilution.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: USTHPFF-MW01
Lab Sample ID: F19271-5
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-SE

Date Sampled: 08/27/03
Date Received: 08/28/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR018498.D	100	09/04/03	RA	n/a	n/a	GQR766
Run #2	QR018520.D	500	09/04/03	RA	n/a	n/a	GQR767

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	6670	100	50	ug/l	
75-27-4	Bromodichloromethane	ND	100	50	ug/l	
75-25-2	Bromoform	ND	100	50	ug/l	
74-83-9	Bromomethane	ND	100	50	ug/l	
56-23-5	Carbon tetrachloride	ND	100	50	ug/l	
108-90-7	Chlorobenzene	ND	100	50	ug/l	
124-48-1	Dibromochloromethane	ND	100	40	ug/l	
75-00-3	Chloroethane	ND	100	50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	100	50	ug/l	
67-66-3	Chloroform	ND	100	50	ug/l	
74-87-3	Chloromethane	ND	100	50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	100	50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	100	50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	100	50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	100	50	ug/l	
75-34-3	1,1-Dichloroethane	ND	100	50	ug/l	
107-06-2	1,2-Dichloroethane	ND	100	50	ug/l	
75-35-4	1,1-Dichloroethene	ND	100	50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	100	50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	100	50	ug/l	
78-87-5	1,2-Dichloropropane	ND	100	50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	100	30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	100	30	ug/l	
100-41-4	Ethylbenzene	3950	100	50	ug/l	
75-09-2	Methylene chloride	ND	500	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	100	50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	100	20	ug/l	
127-18-4	Tetrachloroethene	ND	100	50	ug/l	
108-88-3	Toluene	26200 [a]	500	250	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	100	50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	100	50	ug/l	
79-01-6	Trichloroethene	ND	100	50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MW01		
Lab Sample ID:	F19271-5	**Date Sampled:**	08/27/03
Matrix:	AQ - Ground Water	**Date Received:**	08/28/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	100	50	ug/l	
75-01-4	Vinyl chloride	ND	100	50	ug/l	
1330-20-7	Xylenes (total)	17200	300	100	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	105%	101%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	115%	101%	74-127%
563-58-6	1,1-Dichloropropene	94%	94%	87-120%
563-58-6	1,1-Dichloropropene	99%	97%	87-120%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: USTHPFF-MW01
Lab Sample ID: F19271-5
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-SE

Date Sampled: 08/27/03
Date Received: 08/28/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ18323.D	1	09/03/03	MRE	08/29/03	OP8399	GIJ875
Run #2 [a]	IJ18339.D	20	09/03/03	MRE	08/29/03	OP8399	GIJ876

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2	980 ml	1.0 ml

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.1	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.1	2.0	ug/l	
120-12-7	Anthracene	ND	5.1	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.1	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.1	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.1	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.1	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.1	2.0	ug/l	
218-01-9	Chrysene	ND	5.1	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.1	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.1	2.0	ug/l	
86-73-7	Fluorene	ND	5.1	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.1	2.0	ug/l	
91-20-3	Naphthalene	417 [b]	100	41	ug/l	
90-12-0	1-Methylnaphthalene	45.4 [b]	100	41	ug/l	J
91-57-6	2-Methylnaphthalene	86.8 [b]	100	41	ug/l	J
85-01-8	Phenanthrene	ND	5.1	2.0	ug/l	
129-00-0	Pyrene	ND	5.1	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	93%	0% [c]	41-139%
84-15-1	o-Terphenyl	78%	0% [c]	46-135%

(a) All hits confirmed by dual column analysis.
(b) Result is from Run# 2
(c) Outside control limits due to dilution.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: USTHPFF-MW01D
Lab Sample ID: F19271-6
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-SE

Date Sampled: 08/27/03
Date Received: 08/28/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR018499.D	100	09/04/03	RA	n/a	n/a	GQR766
Run #2	QR018521.D	500	09/04/03	RA	n/a	n/a	GQR767

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	5130	100	50	ug/l	
75-27-4	Bromodichloromethane	ND	100	50	ug/l	
75-25-2	Bromoform	ND	100	50	ug/l	
74-83-9	Bromomethane	ND	100	50	ug/l	
56-23-5	Carbon tetrachloride	ND	100	50	ug/l	
108-90-7	Chlorobenzene	ND	100	50	ug/l	
124-48-1	Dibromochloromethane	ND	100	40	ug/l	
75-00-3	Chloroethane	ND	100	50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	100	50	ug/l	
67-66-3	Chloroform	ND	100	50	ug/l	
74-87-3	Chloromethane	ND	100	50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	100	50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	100	50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	100	50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	100	50	ug/l	
75-34-3	1,1-Dichloroethane	ND	100	50	ug/l	
107-06-2	1,2-Dichloroethane	ND	100	50	ug/l	
75-35-4	1,1-Dichloroethene	ND	100	50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	100	50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	100	50	ug/l	
78-87-5	1,2-Dichloropropane	ND	100	50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	100	30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	100	30	ug/l	
100-41-4	Ethylbenzene	3890	100	50	ug/l	
75-09-2	Methylene chloride	ND	500	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	100	50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	100	20	ug/l	
127-18-4	Tetrachloroethene	ND	100	50	ug/l	
108-88-3	Toluene	26900 [a]	500	250	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	100	50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	100	50	ug/l	
79-01-6	Trichloroethene	ND	100	50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MW01D		
Lab Sample ID:	F19271-6	**Date Sampled:**	08/27/03
Matrix:	AQ - Ground Water	**Date Received:**	08/28/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	100	50	ug/l	
75-01-4	Vinyl chloride	ND	100	50	ug/l	
1330-20-7	Xylenes (total)	17200	300	100	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	106%	100%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	110%	104%	74-127%
563-58-6	1,1-Dichloropropene	95%	93%	87-120%
563-58-6	1,1-Dichloropropene	102%	99%	87-120%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MW01D		
Lab Sample ID:	F19271-6	**Date Sampled:**	08/27/03
Matrix:	AQ - Ground Water	**Date Received:**	08/28/03
Method:	EPA 610 EPA 610	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ18324.D	1	09/03/03	MRE	08/29/03	OP8399	GIJ875
Run #2 [a]	IJ18340.D	20	09/03/03	MRE	08/29/03	OP8399	GIJ876

	Initial Volume	Final Volume
Run #1	940 ml	1.0 ml
Run #2	940 ml	1.0 ml

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.3	2.1	ug/l	
208-96-8	Acenaphthylene	ND	5.3	2.1	ug/l	
120-12-7	Anthracene	ND	5.3	2.1	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.3	2.1	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.3	2.1	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.3	2.1	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.3	2.1	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.3	2.1	ug/l	
218-01-9	Chrysene	ND	5.3	2.1	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.3	2.1	ug/l	
206-44-0	Fluoranthene	ND	5.3	2.1	ug/l	
86-73-7	Fluorene	ND	5.3	2.1	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.3	2.1	ug/l	
91-20-3	Naphthalene	472 [b]	110	43	ug/l	
90-12-0	1-Methylnaphthalene	50.5 [b]	110	43	ug/l	J
91-57-6	2-Methylnaphthalene	96.2 [b]	110	43	ug/l	J
85-01-8	Phenanthrene	ND	5.3	2.1	ug/l	
129-00-0	Pyrene	ND	5.3	2.1	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	94%	0% [c]	41-139%
84-15-1	o-Terphenyl	80%	0% [c]	46-135%

(a) All hits confirmed by dual column analysis.
(b) Result is from Run# 2
(c) Outside control limits due to dilution.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: TRIP BLANK-082703
Lab Sample ID: F19271-7
Matrix: AQ - Trip Blank Water
Method: EPA 601/602
Project: Camp Lejeune-SE

Date Sampled: 08/27/03
Date Received: 08/28/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR018489.D	1	09/03/03	RA	n/a	n/a	GQR766
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK-082703		
Lab Sample ID:	F19271-7	**Date Sampled:**	08/27/03
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/28/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	90%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	92%		74-127%
563-58-6	1,1-Dichloropropene	95%		87-120%
563-58-6	1,1-Dichloropropene	99%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Blank Spike Summary

Job Number: F19271
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR766-BS	QR018472.D	1	09/03/03	RA	n/a	n/a	GQR766

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19271-1, F19271-2, F19271-3, F19271-4, F19271-5, F19271-6, F19271-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	19.2	96	88-121
75-27-4	Bromodichloromethane	20	20.1	101	79-121
75-25-2	Bromoform	20	20.0	100	61-135
74-83-9	Bromomethane	20	20.6	103	44-154
56-23-5	Carbon tetrachloride	20	21.7	109	81-127
108-90-7	Chlorobenzene	20	21.4	107	87-120
124-48-1	Dibromochloromethane	20	21.4	107	71-125
75-00-3	Chloroethane	20	20.7	104	68-146
110-75-8	2-Chloroethylvinyl ether	20	20.9	105	39-148
67-66-3	Chloroform	20	20.6	103	87-116
74-87-3	Chloromethane	20	21.1	106	34-188
95-50-1	1,2-Dichlorobenzene	20	22.3	112	81-119
541-73-1	1,3-Dichlorobenzene	20	20.6	103	82-120
106-46-7	1,4-Dichlorobenzene	20	22.0	110	81-120
75-71-8	Dichlorodifluoromethane	20	19.7	99	43-179
75-34-3	1,1-Dichloroethane	20	23.1	116	83-126
107-06-2	1,2-Dichloroethane	20	20.2	101	83-110
75-35-4	1,1-Dichloroethene	20	23.3	117	78-148
156-59-2	cis-1,2-Dichloroethene	20	19.8	99	86-134
156-60-5	trans-1,2-Dichloroethene	20	22.4	112	86-129
78-87-5	1,2-Dichloropropane	20	20.9	105	80-110
10061-01-5	cis-1,3-Dichloropropene	20	22.6	113	68-129
10061-02-6	trans-1,3-Dichloropropene	20	20.4	102	62-132
100-41-4	Ethylbenzene	20	20.3	102	86-125
75-09-2	Methylene chloride	20	23.1	116	74-130
1634-04-4	Methyl Tert Butyl Ether	20	19.2	96	80-117
79-34-5	1,1,2,2-Tetrachloroethane	20	22.0	110*	77-108
127-18-4	Tetrachloroethene	20	21.7	109	85-123
108-88-3	Toluene	20	19.4	97	89-123
71-55-6	1,1,1-Trichloroethane	20	21.3	107	86-123
79-00-5	1,1,2-Trichloroethane	20	21.0	105	81-109
79-01-6	Trichloroethene	20	21.8	109	85-117
75-69-4	Trichlorofluoromethane	20	21.1	106	74-149
75-01-4	Vinyl chloride	20	21.0	105	72-138
1330-20-7	Xylenes (total)	60	59.1	99	89-124

Blank Spike Summary

Job Number: F19271
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR766-BS	QR018472.D	1	09/03/03	RA	n/a	n/a	GQR766

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19271-1, F19271-2, F19271-3, F19271-4, F19271-5, F19271-6, F19271-7

CAS No.	Surrogate Recoveries	BSP	Limits
352-33-0	1-Chloro-4-fluorobenzene	109%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	113%	74-127%
563-58-6	1,1-Dichloropropene	96%	87-120%
563-58-6	1,1-Dichloropropene	98%	87-120%

Blank Spike Summary

Job Number: F19271
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR767-BS	QR018506.D	1	09/04/03	RA	n/a	n/a	GQR767

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19271-1, F19271-2, F19271-4, F19271-5, F19271-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	20.5	103	88-121
108-88-3	Toluene	20	20.9	105	89-123

CAS No.	Surrogate Recoveries	BSP	Limits
352-33-0	1-Chloro-4-fluorobenzene	109%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	111%	74-127%
563-58-6	1,1-Dichloropropene	95%	87-120%
563-58-6	1,1-Dichloropropene	95%	87-120%

Duplicate Summary

Job Number: F19271
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19208-4DUP	QR018516.D	500	09/04/03	RA	n/a	n/a	GQR767
F19208-4	QR018515.D	500	09/04/03	RA	n/a	n/a	GQR767

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19271-1, F19271-2, F19271-4, F19271-5, F19271-6

CAS No.	Compound	F19208-4 ug/l	Q	DUP ug/l	Q	RPD	Limits
71-43-2	Benzene	5830		6180		6	
108-88-3	Toluene	27200		28800		6	

CAS No.	Surrogate Recoveries	DUP	F19208-4	Limits
352-33-0	1-Chloro-4-fluorobenzene	101%	101%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	103%	106%	74-127%
563-58-6	1,1-Dichloropropene	94%	94%	87-120%
563-58-6	1,1-Dichloropropene	98%	96%	87-120%

Duplicate Summary

Job Number: F19271
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19234-1DUP	QR018481.D	1	09/03/03	RA	n/a	n/a	GQR766
F19234-1	QR018480.D	1	09/03/03	RA	n/a	n/a	GQR766

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19271-1, F19271-2, F19271-3, F19271-4, F19271-5, F19271-6, F19271-7

CAS No.	Compound	F19234-1 ug/l	Q	DUP ug/l	Q	RPD	Limits
71-43-2	Benzene	0.64	J	0.61	J	5	
75-27-4	Bromodichloromethane	ND		ND		nc	
75-25-2	Bromoform	ND		ND		nc	
74-83-9	Bromomethane	ND		ND		nc	
56-23-5	Carbon tetrachloride	ND		ND		nc	
108-90-7	Chlorobenzene	ND		ND		nc	
124-48-1	Dibromochloromethane	ND		ND		nc	
75-00-3	Chloroethane	ND		ND		nc	
110-75-8	2-Chloroethylvinyl ether	ND		ND		nc	
67-66-3	Chloroform	ND		ND		nc	
74-87-3	Chloromethane	ND		ND		nc	
95-50-1	1,2-Dichlorobenzene	ND		ND		nc	
541-73-1	1,3-Dichlorobenzene	ND		ND		nc	
106-46-7	1,4-Dichlorobenzene	ND		ND		nc	
75-71-8	Dichlorodifluoromethane	ND		ND		nc	
75-34-3	1,1-Dichloroethane	ND		ND		nc	
107-06-2	1,2-Dichloroethane	ND		ND		nc	
75-35-4	1,1-Dichloroethene	ND		ND		nc	
156-59-2	cis-1,2-Dichloroethene	ND		ND		nc	
156-60-5	trans-1,2-Dichloroethene	ND		ND		nc	
78-87-5	1,2-Dichloropropane	ND		ND		nc	
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	
100-41-4	Ethylbenzene	1.4		1.3		7	
75-09-2	Methylene chloride	ND		ND		nc	
1634-04-4	Methyl Tert Butyl Ether	ND		ND		nc	
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	
127-18-4	Tetrachloroethene	ND		ND		nc	
108-88-3	Toluene	2.4		2.3		4	
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	
79-01-6	Trichloroethene	ND		ND		nc	
75-69-4	Trichlorofluoromethane	ND		ND		nc	
75-01-4	Vinyl chloride	ND		ND		nc	
1330-20-7	Xylenes (total)	10.5		10.1		4	

Duplicate Summary

Job Number: F19271
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19234-1DUP	QR018481.D	1	09/03/03	RA	n/a	n/a	GQR766
F19234-1	QR018480.D	1	09/03/03	RA	n/a	n/a	GQR766

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19271-1, F19271-2, F19271-3, F19271-4, F19271-5, F19271-6, F19271-7

CAS No.	Surrogate Recoveries	DUP	F19234-1	Limits
352-33-0	1-Chloro-4-fluorobenzene	97%	97%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	101%	102%	74-127%
563-58-6	1,1-Dichloropropene	96%	95%	87-120%
563-58-6	1,1-Dichloropropene	98%	99%	87-120%

Method Blank Summary

Job Number: F19271
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR766-MB	QR018471.D	1	09/03/03	RA	n/a	n/a	GQR766

The QC reported here applies to the following samples: **Method:** SW846 8021B

F19271-1, F19271-2, F19271-3, F19271-4, F19271-5, F19271-6, F19271-7

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

Method Blank Summary

Job Number: F19271
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR766-MB	QR018471.D	1	09/03/03	RA	n/a	n/a	GQR766

The QC reported here applies to the following samples: **Method:** SW846 8021B

F19271-1, F19271-2, F19271-3, F19271-4, F19271-5, F19271-6, F19271-7

CAS No.	Surrogate Recoveries		Limits
352-33-0	1-Chloro-4-fluorobenzene	90%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	91%	74-127%
563-58-6	1,1-Dichloropropene	96%	87-120%
563-58-6	1,1-Dichloropropene	96%	87-120%

Method Blank Summary

Job Number: F19271
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR767-MB	QR018505.D	1	09/04/03	RA	n/a	n/a	GQR767

The QC reported here applies to the following samples: **Method:** SW846 8021B

F19271-1, F19271-2, F19271-4, F19271-5, F19271-6

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	

CAS No.	Surrogate Recoveries		Limits
352-33-0	1-Chloro-4-fluorobenzene	92%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	93%	74-127%
563-58-6	1,1-Dichloropropene	95%	87-120%
563-58-6	1,1-Dichloropropene	96%	87-120%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F19271
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19208-3MS	QR018512.D	200	09/04/03	RA	n/a	n/a	GQR767
F19208-3MSD	QR018513.D	200	09/04/03	RA	n/a	n/a	GQR767
F19208-3	QR018511.D	200	09/04/03	RA	n/a	n/a	GQR767

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19271-1, F19271-2, F19271-4, F19271-5, F19271-6

CAS No.	Compound	F19208-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	7420		4000	10900	87	10600	80	3	77-127/9
108-88-3	Toluene	1080		4000	4970	97	4860	95	2	78-128/9

CAS No.	Surrogate Recoveries	MS	MSD	F19208-3	Limits
352-33-0	1-Chloro-4-fluorobenzene	110%	110%	95%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	106%	111%	99%	74-127%
563-58-6	1,1-Dichloropropene	94%	94%	94%	87-120%
563-58-6	1,1-Dichloropropene	94%	95%	98%	87-120%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F19271
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19220-2MS	QR018477.D	1	09/03/03	RA	n/a	n/a	GQR766
F19220-2MSD	QR018478.D	1	09/03/03	RA	n/a	n/a	GQR766
F19220-2	QR018474.D	1	09/03/03	RA	n/a	n/a	GQR766

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19271-1, F19271-2, F19271-3, F19271-4, F19271-5, F19271-6, F19271-7

CAS No.	Compound	F19220-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		20	19.7	99	19.6	98	1	77-127/9
75-27-4	Bromodichloromethane	ND		20	20.2	101	19.9	100	1	78-122/9
75-25-2	Bromoform	ND		20	19.5	98	19.7	99	1	57-140/22
74-83-9	Bromomethane	ND		20	20.3	102	20.7	104	2	27-159/21
56-23-5	Carbon tetrachloride	ND		20	22.5	113	22.2	111	1	79-127/14
108-90-7	Chlorobenzene	ND		20	21.6	108	21.2	106	2	82-122/10
124-48-1	Dibromochloromethane	ND		20	21.2	106	21.1	106	0	69-127/14
75-00-3	Chloroethane	ND		20	20.8	104	20.7	104	0	51-180/17
110-75-8	2-Chloroethylvinyl ether	ND		20	ND	0*	ND	0*	nc	10-158/13
67-66-3	Chloroform	ND		20	21.3	107	20.8	104	2	82-118/9
74-87-3	Chloromethane	ND		20	20.2	101	20.2	101	0	11-193/31
95-50-1	1,2-Dichlorobenzene	ND		20	21.6	108	21.8	109	1	69-133/13
541-73-1	1,3-Dichlorobenzene	ND		20	21.4	107	21.4	107	0	77-123/13
106-46-7	1,4-Dichlorobenzene	ND		20	21.2	106	21.2	106	0	73-127/13
75-71-8	Dichlorodifluoromethane	ND		20	19.7	99	20.2	101	3	14-176/25
75-34-3	1,1-Dichloroethane	ND		20	23.2	116	22.4	112	4	80-127/10
107-06-2	1,2-Dichloroethane	ND		20	21.3	107	21.0	105	1	74-116/14
75-35-4	1,1-Dichloroethene	ND		20	23.5	118	22.8	114	3	72-163/16
156-59-2	cis-1,2-Dichloroethene	ND		20	19.9	100	19.3	97	3	83-139/9
156-60-5	trans-1,2-Dichloroethene	ND		20	21.8	109	22.7	114	4	82-131/11
78-87-5	1,2-Dichloropropane	ND		20	21.2	106	21.5	108	1	77-112/8
10061-01-5	cis-1,3-Dichloropropene	ND		20	22.2	111	21.7	109	2	65-131/17
10061-02-6	trans-1,3-Dichloropropene	ND		20	21.1	106	20.5	103	3	53-140/21
100-41-4	Ethylbenzene	ND		20	20.6	103	20.6	103	0	68-136/11
75-09-2	Methylene chloride	ND		20	22.5	113	23.2	116	3	60-145/12
1634-04-4	Methyl Tert Butyl Ether	ND		20	19.3	97	19.4	97	1	71-124/14
79-34-5	1,1,2,2-Tetrachloroethane	ND		20	22.3	112	20.6	103	8	72-114/8
127-18-4	Tetrachloroethene	ND		20	22.9	115	22.1	111	4	85-124/13
108-88-3	Toluene	ND		20	19.5	98	19.7	99	1	78-128/9
71-55-6	1,1,1-Trichloroethane	ND		20	21.5	108	21.8	109	1	83-123/12
79-00-5	1,1,2-Trichloroethane	ND		20	21.2	106	20.3	102	4	78-111/7
79-01-6	Trichloroethene	ND		20	21.7	109	20.6	103	5	82-119/11
75-69-4	Trichlorofluoromethane	ND		20	20.4	102	20.8	104	2	76-147/15
75-01-4	Vinyl chloride	ND		20	20.1	101	19.5	98	3	72-139/14
1330-20-7	Xylenes (total)	ND		60	59.4	99	59.4	99	0	71-136/11

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F19271
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19220-2MS	QR018477.D	1	09/03/03	RA	n/a	n/a	GQR766
F19220-2MSD	QR018478.D	1	09/03/03	RA	n/a	n/a	GQR766
F19220-2	QR018474.D	1	09/03/03	RA	n/a	n/a	GQR766

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19271-1, F19271-2, F19271-3, F19271-4, F19271-5, F19271-6, F19271-7

CAS No.	Surrogate Recoveries	MS	MSD	F19220-2	Limits
352-33-0	1-Chloro-4-fluorobenzene	108%	109%	91%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	110%	110%	96%	74-127%
563-58-6	1,1-Dichloropropene	96%	96%	96%	87-120%
563-58-6	1,1-Dichloropropene	99%	96%	99%	87-120%

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Blank Spike Summary

Job Number: F19271
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8399-BS	IJ18307.D	1	09/02/03	MRE	08/29/03	OP8399	GIJ875

The QC reported here applies to the following samples: **Method:** EPA 610

F19271-1, F19271-2, F19271-3, F19271-4, F19271-5, F19271-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	25	28.0	112	59-114
208-96-8	Acenaphthylene	25	25.1	100	58-109
120-12-7	Anthracene	25	26.7	107	63-110
56-55-3	Benzo(a)anthracene	25	27.6	110	74-111
50-32-8	Benzo(a)pyrene	25	26.6	106	71-110
205-99-2	Benzo(b)fluoranthene	25	27.8	111	75-112
191-24-2	Benzo(g,h,i)perylene	25	26.9	108	66-114
207-08-9	Benzo(k)fluoranthene	25	25.8	103	73-111
218-01-9	Chrysene	25	26.9	108	73-112
53-70-3	Dibenzo(a,h)anthracene	25	26.3	105	67-111
206-44-0	Fluoranthene	25	27.7	111	74-113
86-73-7	Fluorene	25	27.2	109	67-113
193-39-5	Indeno(1,2,3-cd)pyrene	25	27.5	110	68-115
91-20-3	Naphthalene	25	26.1	104	52-113
90-12-0	1-Methylnaphthalene	25	28.7	115	55-117
91-57-6	2-Methylnaphthalene	25	26.2	105	50-115
85-01-8	Phenanthrene	25	27.8	111	70-111
129-00-0	Pyrene	25	27.3	109	73-115

CAS No.	Surrogate Recoveries	BSP	Limits
321-60-8	2-Fluorobiphenyl	108%	41-139%
84-15-1	o-Terphenyl	106%	46-135%

Blank Spike Summary

Job Number: F19271
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8399-BS2	IJ18354.D	1	09/04/03	SM	09/03/03	OP8399	GIJ877

The QC reported here applies to the following samples: **Method:** EPA 610

F19271-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits

CAS No.	Surrogate Recoveries	BSP	Limits
321-60-8	2-Fluorobiphenyl	80%	41-139%
84-15-1	o-Terphenyl	83%	46-135%

Duplicate Summary

Job Number: F19271
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8399-DUP	IJ18338.D	40	09/03/03	MRE	08/29/03	OP8399	GIJ876
F19271-4 [a]	IJ18337.D	40	09/03/03	MRE	08/29/03	OP8399	GIJ876

The QC reported here applies to the following samples: **Method:** EPA 610

F19271-1, F19271-2, F19271-3, F19271-4, F19271-5, F19271-6

CAS No.	Compound	F19271-4 ug/l	Q	DUP ug/l	Q	RPD	Limits
83-32-9	Acenaphthene	ND		ND		nc	
208-96-8	Acenaphthylene	ND		ND		nc	
120-12-7	Anthracene	ND		ND		nc	
56-55-3	Benzo(a)anthracene	ND		ND		nc	
50-32-8	Benzo(a)pyrene	ND		ND		nc	
205-99-2	Benzo(b)fluoranthene	ND		ND		nc	
191-24-2	Benzo(g,h,i)perylene	ND		ND		nc	
207-08-9	Benzo(k)fluoranthene	ND		ND		nc	
218-01-9	Chrysene	ND		ND		nc	
53-70-3	Dibenzo(a,h)anthracene	ND		ND		nc	
206-44-0	Fluoranthene	ND		ND		nc	
86-73-7	Fluorene	ND		ND		nc	
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ND		nc	
91-20-3	Naphthalene	768		787		2	
90-12-0	1-Methylnaphthalene	85.3	J	90.6	J	6	
91-57-6	2-Methylnaphthalene	163	J	180	J	10	
85-01-8	Phenanthrene	ND		ND		nc	
129-00-0	Pyrene	ND		ND		nc	

CAS No.	Surrogate Recoveries	DUP	F19271-4	Limits
321-60-8	2-Fluorobiphenyl	0%* [b]	0%* [b]	41-139%
84-15-1	o-Terphenyl	0%* [b]	0%* [b]	46-135%

(a) All hits confirmed by dual column analysis.
(b) Outside control limits due to dilution.

Method Blank Summary

Job Number: F19271
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8399-MB	IJ18308.D	1	09/02/03	MRE	08/29/03	OP8399	GIJ875

The QC reported here applies to the following samples: **Method:** EPA 610

F19271-1, F19271-2, F19271-3, F19271-4, F19271-5, F19271-6

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	2.0	ug/l	
120-12-7	Anthracene	ND	5.0	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	2.0	ug/l	
218-01-9	Chrysene	ND	5.0	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	2.0	ug/l	
86-73-7	Fluorene	ND	5.0	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	2.0	ug/l	
129-00-0	Pyrene	ND	5.0	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
321-60-8	2-Fluorobiphenyl	87%	41-139%
84-15-1	o-Terphenyl	83%	46-135%

Method Blank Summary

Job Number: F19271
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8399-MB	IJ18332.D	1	09/03/03	MRE	08/29/03	OP8399	GIJ876

The QC reported here applies to the following samples: **Method:** EPA 610

F19271-1, F19271-2, F19271-3, F19271-4, F19271-5, F19271-6

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	2.0	ug/l	
120-12-7	Anthracene	ND	5.0	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	2.0	ug/l	
218-01-9	Chrysene	ND	5.0	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	2.0	ug/l	
86-73-7	Fluorene	ND	5.0	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	2.0	ug/l	
129-00-0	Pyrene	ND	5.0	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
321-60-8	2-Fluorobiphenyl	95%	41-139%
84-15-1	o-Terphenyl	91%	46-135%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F19271
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8399-MS	IJ18311.D	1	09/02/03	MRE	08/29/03	OP8399	GIJ875
OP8399-MSD	IJ18312.D	1	09/03/03	MRE	08/29/03	OP8399	GIJ875
F19208-2	IJ18310.D	1	09/02/03	MRE	08/29/03	OP8399	GIJ875

The QC reported here applies to the following samples: **Method:** EPA 610

F19271-1, F19271-2, F19271-3, F19271-4, F19271-5, F19271-6

CAS No.	Compound	F19208-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		53.2	48.4	91	50.2	94	4	36-143/21
208-96-8	Acenaphthylene	ND		53.2	44.0	83	46.0	86	4	59-108/22
120-12-7	Anthracene	ND		53.2	45.7	86	47.9	90	5	61-113/22
56-55-3	Benzo(a)anthracene	ND		53.2	47.0	88	49.7	93	6	69-111/17
50-32-8	Benzo(a)pyrene	ND		53.2	45.8	86	48.3	91	5	71-109/22
205-99-2	Benzo(b)fluoranthene	ND		53.2	47.8	90	50.2	94	5	63-116/19
191-24-2	Benzo(g,h,i)perylene	ND		53.2	46.8	88	48.6	91	4	54-123/19
207-08-9	Benzo(k)fluoranthene	ND		53.2	44.7	84	47.4	89	6	66-114/16
218-01-9	Chrysene	ND		53.2	46.2	87	48.7	92	5	65-116/15
53-70-3	Dibenzo(a,h)anthracene	ND		53.2	45.9	86	48.2	91	5	52-130/24
206-44-0	Fluoranthene	ND		53.2	47.7	90	50.0	94	5	73-113/16
86-73-7	Fluorene	ND		53.2	46.9	88	49.1	92	5	63-114/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		53.2	47.7	90	50.3	95	5	43-133/24
91-20-3	Naphthalene	ND		53.2	45.8	86	48.7	92	6	40-130/27
90-12-0	1-Methylnaphthalene	ND		53.2	50.9	96	54.6	103	7	50-128/25
91-57-6	2-Methylnaphthalene	ND		53.2	45.8	86	49.3	93	7	32-148/26
85-01-8	Phenanthrene	ND		53.2	47.5	89	49.9	94	5	44-136/19
129-00-0	Pyrene	ND		53.2	46.5	87	49.1	92	5	71-116/16

CAS No.	Surrogate Recoveries	MS	MSD	F19208-2	Limits
321-60-8	2-Fluorobiphenyl	87%	93%	84%	41-139%
84-15-1	o-Terphenyl	84%	88%	85%	46-135%

Method Blank Summary

Job Number: F19271
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8399-MB2	IJ18353.D	1	09/04/03	SM	09/03/03	OP8399	GIJ877

The QC reported here applies to the following samples: **Method:** EPA 610

OP8399-BS2

CAS No.	Compound	Result	RL	MDL	Units	Q

CAS No.	Surrogate Recoveries		Limits
321-60-8	2-Fluorobiphenyl	81%	41-139%
84-15-1	o-Terphenyl	80%	46-135%

CHAIN-OF-CUSTODY RECORD

F19271

COC Number:
824603-SE-082703

Shaw
Shaw Environmental & Infrastructure, Inc.

Shaw Environmental & Infrastructure, Inc. - Piney Green Rd. Lot 203 Bld 626 - 910-451-2390

Receiving Lab: ACCUTEST

Project Name	Project Location
CAMP LEJEUNE - SE	CAMP LEJEUNE, NC

Project Number	Contact	PO Number
824603	Mark Martin	209378

Client Rep	Project Manager
US NAVY - LANTDIV	Ron Kenyon

Item No.	Sample Number	Date	Time	Comp	Grab	Sample Description	Number of Containers	VOA 601/602	PAH 610	Dissolved Gasses RSK-175	NO3,NO2,NO3-NO2 BY 353.2-354.1	SO4 BY 375.4	TOC BY 415.1	Analysis Desired
1	USTHPFF-MWHPFF20	8/27/03	0830		X	USTHPFF-MWHPFF20	5	X	X					
2	USTHPFF-MWHPFF19	8/27/03	0915		X	USTHPFF-MWHPFF19	5	X	X					
3	UST1115-MW10R	8/27/03	1000		X	UST1115-MW10R	5	X	X					
4	USTHPFF-MW18	8/27/03	1045		X	USTHPFF-MW18	5	X	X					
5	USTHPFF-MW01	8/27/03	1330		X	USTHPFF-MW01	5	X	X					
6	USTHPFF-MW01D	8/27/03	1340		X	USTHPFF-MW01D	5	X	X					
7	Trip Blank-082703	8/27/03	-----		X	Trip Blank	2	X						
8														
9														
10														

Transfer Number	Item Number	Transfers Relinquished By	Transfers Accepted By	Date	Time	Remarks
1	1 -- 7		Fed Ex 8369 1400 2886	8/27/03	18:00	Please E-mail results to Mark.Martin@Shawgrp.com
2		Fedex	Fedex	08/28/03	0930	21 Day TAT

3.8°

ACCUTEST LABORATORIES SOUTHEAST SAMPLE RECEIPT CONFIRMATION

Accutest's Job Number: F9271

Client: HCorp Project: Coup Hoover SE

Date Received: 08b863 Time Received: 0930

of Coolers Received: 1 Cooler Temperatures: 3.8°

Delivery Method: (FedEx) UPS Accutest Courier Greyhound Delivery Other

Air Bill Number: 8369 1400 2586

Cooler Custody Seals Intact ?	(Yes)	No	
Chain of Custody Provided ?	(Yes)	No	
COC Match Bottle Label ID's ?	(Yes)	No	
Sample Labels Present on all bottles ?	(Yes)	No	
All Analyses Marked On COC ?	(Yes)	No	
Are All Bottles Intact ?	(Yes)	No	
Samples Preserved Correctly ?	(Yes)	No	
Correct Number of Containers Used ?	(Yes)	No	
Sufficient Sample Volume ?	(Yes)	No	
Trip Blank Provided ?	(Yes)	No	
Trip Blank on COC ?	(Yes)	No	
Trip Blank Intact ?	(Yes)	No	N/A
Trip Blank Matrix ?	Soil	(Water)	N/A
Number of Encores ?			
Number of Soil Field Kits ?			

Summary of Comments:

Signature: Date: 08b803

Southeast ACCUTEST Laboratories

09/08/03

Technical Report for

Shaw E & I, Inc.

Camp Lejeune-SE

824603 PO#209378

Accutest Job Number: F19188

Report to:

Shaw E & I, Inc.

natasha.sullivan@shawgrp.com

ATTN: Natasha Sullivan

Total number of pages in report: 58

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Harry Behzadi, Ph.D.
Laboratory Director

Certifications: FL (DOH E83510), NC (573), NJ (FL002), MA (FL946), IA (366), LA (03051), KS (E-10327), SC, AK

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Sample Summary

Shaw E & I, Inc.

Job No: F19188

Camp Lejeune-SE
Project No: 824603 PO#209378

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
F19188-1	08/22/03	09:00	MM	08/23/03	AQ	Ground Water	USTHPFF-MWHPFF01
F19188-2	08/22/03	09:40	MM	08/23/03	AQ	Ground Water	USTHPFF-MWHPFF07
F19188-3	08/22/03	14:20	MM	08/23/03	AQ	Ground Water	USTHPFF-MWHPFF09
F19188-4	08/22/03	12:35	MM	08/23/03	AQ	Ground Water	USTHPFF-MW11
F19188-5	08/22/03	00:00	MM	08/23/03	AQ	Trip Blank Water	TRIP BLANK-082203

Report of Analysis

Client Sample ID: USTHPFF-MWHPFF01
Lab Sample ID: F19188-1
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-SE

Date Sampled: 08/22/03
Date Received: 08/23/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR018447.D	1	09/02/03	RA	n/a	n/a	GQR764
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	1.5	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	0.90	1.0	0.50	ug/l	J

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF01		
Lab Sample ID:	F19188-1	**Date Sampled:**	08/22/03
Matrix:	AQ - Ground Water	**Date Received:**	08/23/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	91%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	93%		74-127%
563-58-6	1,1-Dichloropropene	96%		87-120%
563-58-6	1,1-Dichloropropene	97%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF01		
Lab Sample ID:	F19188-1	**Date Sampled:**	08/22/03
Matrix:	AQ - Ground Water	**Date Received:**	08/23/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY011422.D	1	08/25/03	CV	n/a	n/a	GXY304
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	5.05	0.50	0.30	ug/l	
74-84-0	Ethane	ND	1.0	0.60	ug/l	
74-85-1	Ethene	ND	1.0	0.80	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: USTHPFF-MWHPFF01
Lab Sample ID: F19188-1
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-SE

Date Sampled: 08/22/03
Date Received: 08/23/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ18301.D	1	09/02/03	MRE	08/26/03	OP8355	GIJ875
Run #2							

	Initial Volume	Final Volume
Run #1	960 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.2	2.1	ug/l	
208-96-8	Acenaphthylene	ND	5.2	2.1	ug/l	
120-12-7	Anthracene	ND	5.2	2.1	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.2	2.1	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.2	2.1	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.2	2.1	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.2	2.1	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.2	2.1	ug/l	
218-01-9	Chrysene	ND	5.2	2.1	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.2	2.1	ug/l	
206-44-0	Fluoranthene	ND	5.2	2.1	ug/l	
86-73-7	Fluorene	ND	5.2	2.1	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.2	2.1	ug/l	
91-20-3	Naphthalene	ND	5.2	2.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.2	2.1	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.2	2.1	ug/l	
85-01-8	Phenanthrene	ND	5.2	2.1	ug/l	
129-00-0	Pyrene	ND	5.2	2.1	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	82%		41-139%
84-15-1	o-Terphenyl	88%		46-135%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF01		
Lab Sample ID:	F19188-1	**Date Sampled:**	08/22/03
Matrix:	AQ - Ground Water	**Date Received:**	08/23/03
		Percent Solids:	n/a
Project:	Camp Lejeune-SE		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	2.0	0.10	mg/l	1	08/25/03 11:35	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	2.0	0.20	mg/l	1	08/25/03 11:35	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 0.10	0.10	mg/l	1	08/25/03 11:35	LL	EPA 300/SW846 9056
Sulfate	55.6	20	mg/l	1	08/25/03 11:35	LL	EPA 300/SW846 9056
Total Organic Carbon	2.9	1.0	mg/l	1	09/05/03	SL	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID: USTHPFF-MWHPFF07
Lab Sample ID: F19188-2
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-SE

Date Sampled: 08/22/03
Date Received: 08/23/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR018418.D	1	08/29/03	BM	n/a	n/a	GQR763
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	0.79	1.0	0.50	ug/l	J
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	1.1	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF07		
Lab Sample ID:	F19188-2	**Date Sampled:**	08/22/03
Matrix:	AQ - Ground Water	**Date Received:**	08/23/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	91%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	94%		74-127%
563-58-6	1,1-Dichloropropene	99%		87-120%
563-58-6	1,1-Dichloropropene	99%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF07		
Lab Sample ID:	F19188-2	**Date Sampled:**	08/22/03
Matrix:	AQ - Ground Water	**Date Received:**	08/23/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY011424.D	1	08/25/03	CV	n/a	n/a	GXY304
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	67.8	0.50	0.30	ug/l	
74-84-0	Ethane	ND	1.0	0.60	ug/l	
74-85-1	Ethene	ND	1.0	0.80	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: USTHPFF-MWHPFF07
Lab Sample ID: F19188-2
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-SE

Date Sampled: 08/22/03
Date Received: 08/23/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ18302.D	1	09/02/03	MRE	08/26/03	OP8355	GIJ875
Run #2							

	Initial Volume	Final Volume
Run #1	860 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.8	2.3	ug/l	
208-96-8	Acenaphthylene	ND	5.8	2.3	ug/l	
120-12-7	Anthracene	ND	5.8	2.3	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.8	2.3	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.8	2.3	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.8	2.3	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.8	2.3	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.8	2.3	ug/l	
218-01-9	Chrysene	ND	5.8	2.3	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.8	2.3	ug/l	
206-44-0	Fluoranthene	ND	5.8	2.3	ug/l	
86-73-7	Fluorene	ND	5.8	2.3	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.8	2.3	ug/l	
91-20-3	Naphthalene	ND	5.8	2.3	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.8	2.3	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.8	2.3	ug/l	
85-01-8	Phenanthrene	ND	5.8	2.3	ug/l	
129-00-0	Pyrene	ND	5.8	2.3	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	85%		41-139%
84-15-1	o-Terphenyl	90%		46-135%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF07		
Lab Sample ID:	F19188-2	**Date Sampled:**	08/22/03
Matrix:	AQ - Ground Water	**Date Received:**	08/23/03
		Percent Solids:	n/a
Project:	Camp Lejeune-SE		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	< 0.10	0.10	mg/l	1	08/25/03 11:50	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	< 0.20	0.20	mg/l	1	08/25/03 11:50	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 0.10	0.10	mg/l	1	08/25/03 11:50	LL	EPA 300/SW846 9056
Sulfate	71.6	20	mg/l	1	08/25/03 11:50	LL	EPA 300/SW846 9056
Total Organic Carbon	1.8	1.0	mg/l	1	09/05/03	SL	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID: USTHPFF-MWHPFF09
Lab Sample ID: F19188-3
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-SE

Date Sampled: 08/22/03
Date Received: 08/23/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR018421.D	5	08/29/03	BM	n/a	n/a	GQR763
Run #2	QR018434.D	50	09/02/03	RA	n/a	n/a	GQR764

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	4090 [a]	50	25	ug/l	
75-27-4	Bromodichloromethane	ND	5.0	2.5	ug/l	
75-25-2	Bromoform	ND	5.0	2.5	ug/l	
74-83-9	Bromomethane	ND	5.0	2.5	ug/l	
56-23-5	Carbon tetrachloride	ND	5.0	2.5	ug/l	
108-90-7	Chlorobenzene	ND	5.0	2.5	ug/l	
124-48-1	Dibromochloromethane	ND	5.0	2.0	ug/l	
75-00-3	Chloroethane	ND	5.0	2.5	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	5.0	2.5	ug/l	
67-66-3	Chloroform	ND	5.0	2.5	ug/l	
74-87-3	Chloromethane	ND	5.0	2.5	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5.0	2.5	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.0	2.5	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.0	2.5	ug/l	
75-71-8	Dichlorodifluoromethane	ND	5.0	2.5	ug/l	
75-34-3	1,1-Dichloroethane	ND	5.0	2.5	ug/l	
107-06-2	1,2-Dichloroethane	70.7	5.0	2.5	ug/l	
75-35-4	1,1-Dichloroethene	ND	5.0	2.5	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	5.0	2.5	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	5.0	2.5	ug/l	
78-87-5	1,2-Dichloropropane	ND	5.0	2.5	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.5	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.5	ug/l	
100-41-4	Ethylbenzene	96.4	5.0	2.5	ug/l	
75-09-2	Methylene chloride	ND	25	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	80.0	5.0	2.5	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	5.0	2.5	ug/l	
108-88-3	Toluene	ND	5.0	2.5	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	5.0	2.5	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	5.0	2.5	ug/l	
79-01-6	Trichloroethene	ND	5.0	2.5	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF09		
Lab Sample ID:	F19188-3	**Date Sampled:**	08/22/03
Matrix:	AQ - Ground Water	**Date Received:**	08/23/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	5.0	2.5	ug/l	
75-01-4	Vinyl chloride	ND	5.0	2.5	ug/l	
1330-20-7	Xylenes (total)	9.2	15	5.0	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	88%	92%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	103%	101%	74-127%
563-58-6	1,1-Dichloropropene	88%	94%	87-120%
563-58-6	1,1-Dichloropropene	102%	100%	87-120%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF09		
Lab Sample ID:	F19188-3	**Date Sampled:**	08/22/03
Matrix:	AQ - Ground Water	**Date Received:**	08/23/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY011426.D	1	08/25/03	CV	n/a	n/a	GXY304
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	187	0.50	0.30	ug/l	
74-84-0	Ethane	6.94	1.0	0.60	ug/l	
74-85-1	Ethene	ND	1.0	0.80	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: USTHPFF-MWHPFF09
Lab Sample ID: F19188-3
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-SE

Date Sampled: 08/22/03
Date Received: 08/23/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	IJ18303.D	1	09/02/03	MRE	08/26/03	OP8355	GIJ875
Run #2							

	Initial Volume	Final Volume
Run #1	940 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.3	2.1	ug/l	
208-96-8	Acenaphthylene	ND	5.3	2.1	ug/l	
120-12-7	Anthracene	ND	5.3	2.1	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.3	2.1	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.3	2.1	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.3	2.1	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.3	2.1	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.3	2.1	ug/l	
218-01-9	Chrysene	ND	5.3	2.1	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.3	2.1	ug/l	
206-44-0	Fluoranthene	ND	5.3	2.1	ug/l	
86-73-7	Fluorene	ND	5.3	2.1	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.3	2.1	ug/l	
91-20-3	Naphthalene	13.6	5.3	2.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.3	2.1	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.3	2.1	ug/l	
85-01-8	Phenanthrene	ND	5.3	2.1	ug/l	
129-00-0	Pyrene	ND	5.3	2.1	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	84%		41-139%
84-15-1	o-Terphenyl	80%		46-135%

(a) All hits confirmed by dual column analysis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF09		
Lab Sample ID:	F19188-3	**Date Sampled:**	08/22/03
Matrix:	AQ - Ground Water	**Date Received:**	08/23/03
		Percent Solids:	n/a
Project:	Camp Lejeune-SE		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	< 0.10	0.10	mg/l	1	08/25/03 12:05	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	< 0.20	0.20	mg/l	1	08/25/03 12:05	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 0.10	0.10	mg/l	1	08/25/03 12:05	LL	EPA 300/SW846 9056
Sulfate	93.3	20	mg/l	1	08/25/03 12:05	LL	EPA 300/SW846 9056
Total Organic Carbon	23.1	1.0	mg/l	1	09/05/03	SL	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID: USTHPFF-MW11
Lab Sample ID: F19188-4
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-SE

Date Sampled: 08/22/03
Date Received: 08/23/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR018414.D	1	08/29/03	BM	n/a	n/a	GQR763
Run #2	QR018445.D	20	09/02/03	RA	n/a	n/a	GQR764

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	957 [a]	20	10	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	138 [a]	20	10	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	3.7	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	19.5	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	6.3	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	1.5	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	319 [a]	20	10	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MW11		
Lab Sample ID:	F19188-4	**Date Sampled:**	08/22/03
Matrix:	AQ - Ground Water	**Date Received:**	08/23/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	378 [a]	60	20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	100%	96%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	111%	102%	74-127%
563-58-6	1,1-Dichloropropene	88%	94%	87-120%
563-58-6	1,1-Dichloropropene	104%	99%	87-120%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: USTHPFF-MW11
Lab Sample ID: F19188-4
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-SE

Date Sampled: 08/22/03
Date Received: 08/23/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ18304.D	1	09/02/03	MRE	08/26/03	OP8355	GIJ875
Run #2							

	Initial Volume	Final Volume
Run #1	930 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.4	2.2	ug/l	
208-96-8	Acenaphthylene	ND	5.4	2.2	ug/l	
120-12-7	Anthracene	ND	5.4	2.2	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.4	2.2	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.4	2.2	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.4	2.2	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.4	2.2	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.4	2.2	ug/l	
218-01-9	Chrysene	ND	5.4	2.2	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.4	2.2	ug/l	
206-44-0	Fluoranthene	ND	5.4	2.2	ug/l	
86-73-7	Fluorene	ND	5.4	2.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.4	2.2	ug/l	
91-20-3	Naphthalene	ND	5.4	2.2	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.4	2.2	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.4	2.2	ug/l	
85-01-8	Phenanthrene	ND	5.4	2.2	ug/l	
129-00-0	Pyrene	ND	5.4	2.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	73%		41-139%
84-15-1	o-Terphenyl	75%		46-135%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: TRIP BLANK-082203
Lab Sample ID: F19188-5
Matrix: AQ - Trip Blank Water
Method: EPA 601/602
Project: Camp Lejeune-SE

Date Sampled: 08/22/03
Date Received: 08/23/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR018419.D	1	08/29/03	BM	n/a	n/a	GQR763
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	5.4	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
75-09-2	Methylene chloride	4.4	5.0	1.0	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	1.6	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK-082203		
Lab Sample ID:	F19188-5	**Date Sampled:**	08/22/03
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/23/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	91%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	91%		74-127%
563-58-6	1,1-Dichloropropene	99%		87-120%
563-58-6	1,1-Dichloropropene	96%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Blank Spike Summary

Job Number: F19188
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR763-BS	QR018399.D	1	08/29/03	BM	n/a	n/a	GQR763

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19188-2, F19188-3, F19188-4, F19188-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	20.0	100	88-121
75-27-4	Bromodichloromethane	20	17.2	86	79-121
75-25-2	Bromoform	20	17.2	86	61-135
74-83-9	Bromomethane	20	20.3	102	44-154
56-23-5	Carbon tetrachloride	20	20.5	103	81-127
108-90-7	Chlorobenzene	20	20.4	102	87-120
124-48-1	Dibromochloromethane	20	18.1	91	71-125
75-00-3	Chloroethane	20	20.1	101	68-146
110-75-8	2-Chloroethylvinyl ether	20	17.6	88	39-148
67-66-3	Chloroform	20	18.6	93	87-116
74-87-3	Chloromethane	20	21.0	105	34-188
95-50-1	1,2-Dichlorobenzene	20	20.5	103	81-119
541-73-1	1,3-Dichlorobenzene	20	20.1	101	82-120
106-46-7	1,4-Dichlorobenzene	20	20.1	101	81-120
75-71-8	Dichlorodifluoromethane	20	18.8	94	43-179
75-34-3	1,1-Dichloroethane	20	21.2	106	83-126
107-06-2	1,2-Dichloroethane	20	19.3	97	83-110
75-35-4	1,1-Dichloroethene	20	22.5	113	78-148
156-59-2	cis-1,2-Dichloroethene	20	17.9	90	86-134
156-60-5	trans-1,2-Dichloroethene	20	21.1	106	86-129
78-87-5	1,2-Dichloropropane	20	20.1	101	80-110
10061-01-5	cis-1,3-Dichloropropene	20	21.0	105	68-129
10061-02-6	trans-1,3-Dichloropropene	20	19.4	97	62-132
100-41-4	Ethylbenzene	20	21.3	107	86-125
75-09-2	Methylene chloride	20	21.0	105	74-130
1634-04-4	Methyl Tert Butyl Ether	20	19.3	97	80-117
79-34-5	1,1,2,2-Tetrachloroethane	20	19.7	99	77-108
127-18-4	Tetrachloroethene	20	20.4	102	85-123
108-88-3	Toluene	20	20.5	103	89-123
71-55-6	1,1,1-Trichloroethane	20	19.0	95	86-123
79-00-5	1,1,2-Trichloroethane	20	19.3	97	81-109
79-01-6	Trichloroethene	20	20.6	103	85-117
75-69-4	Trichlorofluoromethane	20	21.8	109	74-149
75-01-4	Vinyl chloride	20	17.4	87	72-138
1330-20-7	Xylenes (total)	60	62.0	103	89-124

Blank Spike Summary

Job Number: F19188
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR763-BS	QR018399.D	1	08/29/03	BM	n/a	n/a	GQR763

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19188-2, F19188-3, F19188-4, F19188-5

CAS No.	Surrogate Recoveries	BSP	Limits
352-33-0	1-Chloro-4-fluorobenzene	106%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	97%	74-127%
563-58-6	1,1-Dichloropropene	99%	87-120%
563-58-6	1,1-Dichloropropene	94%	87-120%

Blank Spike Summary

Job Number: F19188
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR764-BS	QR018427.D	1	09/02/03	RA	n/a	n/a	GQR764

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19188-1, F19188-3, F19188-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	21.0	105	88-121
75-27-4	Bromodichloromethane	20	19.4	97	79-121
75-25-2	Bromoform	20	17.9	90	61-135
74-83-9	Bromomethane	20	21.6	108	44-154
56-23-5	Carbon tetrachloride	20	22.9	115	81-127
108-90-7	Chlorobenzene	20	21.7	109	87-120
124-48-1	Dibromochloromethane	20	20.7	104	71-125
75-00-3	Chloroethane	20	21.6	108	68-146
110-75-8	2-Chloroethylvinyl ether	20	19.5	98	39-148
67-66-3	Chloroform	20	20.2	101	87-116
74-87-3	Chloromethane	20	20.3	102	34-188
95-50-1	1,2-Dichlorobenzene	20	22.7	114	81-119
541-73-1	1,3-Dichlorobenzene	20	21.7	109	82-120
106-46-7	1,4-Dichlorobenzene	20	23.1	116	81-120
75-71-8	Dichlorodifluoromethane	20	17.3	87	43-179
75-34-3	1,1-Dichloroethane	20	23.5	118	83-126
107-06-2	1,2-Dichloroethane	20	21.5	108	83-110
75-35-4	1,1-Dichloroethene	20	21.7	109	78-148
156-59-2	cis-1,2-Dichloroethene	20	20.3	102	86-134
156-60-5	trans-1,2-Dichloroethene	20	22.9	115	86-129
78-87-5	1,2-Dichloropropane	20	22.0	110	80-110
10061-01-5	cis-1,3-Dichloropropene	20	22.7	114	68-129
10061-02-6	trans-1,3-Dichloropropene	20	21.3	107	62-132
100-41-4	Ethylbenzene	20	22.3	112	86-125
75-09-2	Methylene chloride	20	24.8	124	74-130
1634-04-4	Methyl Tert Butyl Ether	20	20.3	102	80-117
79-34-5	1,1,2,2-Tetrachloroethane	20	21.6	108	77-108
127-18-4	Tetrachloroethene	20	22.8	114	85-123
108-88-3	Toluene	20	21.5	108	89-123
71-55-6	1,1,1-Trichloroethane	20	23.8	119	86-123
79-00-5	1,1,2-Trichloroethane	20	21.5	108	81-109
79-01-6	Trichloroethene	20	21.5	108	85-117
75-69-4	Trichlorofluoromethane	20	23.9	120	74-149
75-01-4	Vinyl chloride	20	18.0	90	72-138
1330-20-7	Xylenes (total)	60	65.2	109	89-124

Blank Spike Summary

Job Number: F19188
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR764-BS	QR018427.D	1	09/02/03	RA	n/a	n/a	GQR764

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19188-1, F19188-3, F19188-4

CAS No.	Surrogate Recoveries	BSP	Limits
352-33-0	1-Chloro-4-fluorobenzene	110%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	114%	74-127%
563-58-6	1,1-Dichloropropene	96%	87-120%
563-58-6	1,1-Dichloropropene	101%	87-120%

Blank Spike Summary

Job Number: F19188
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GXY304-BS	XY011397.D	1	08/22/03	CV	n/a	n/a	GXY304

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F19188-1, F19188-2, F19188-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
74-82-8	Methane	108	86.8	80	50-126
74-84-0	Ethane	219	189	86	49-135
74-85-1	Ethene	290	249	86	56-130

Blank Spike Summary

Job Number: F19188
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GXY304-BS	XY011420.D	1	08/25/03	CV	n/a	n/a	GXY304

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F19188-1, F19188-2, F19188-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
74-82-8	Methane	108	91.3	85	50-126
74-84-0	Ethane	219	187	85	49-135
74-85-1	Ethene	290	248	86	56-130

Duplicate Summary

Job Number: F19188
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19141-2DUP	XY011405.D	1	08/22/03	CV	n/a	n/a	GXY304
F19141-2	XY011404.D	1	08/22/03	CV	n/a	n/a	GXY304

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F19188-1, F19188-2, F19188-3

CAS No.	Compound	F19141-2 ug/l	Q	DUP ug/l	Q	RPD	Limits
74-82-8	Methane	11.2		11.8		5	29
74-84-0	Ethane	ND		ND		nc	24
74-85-1	Ethene	0.81		0.89		9	23

Duplicate Summary

Job Number: F19188
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19188-2DUP	XY011425.D	1	08/25/03	CV	n/a	n/a	GXY304
F19188-2	XY011424.D	1	08/25/03	CV	n/a	n/a	GXY304

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F19188-1, F19188-2, F19188-3

CAS No.	Compound	F19188-2 ug/l	Q	DUP ug/l	Q	RPD	Limits
74-82-8	Methane	67.8		72.5		7	29
74-84-0	Ethane	ND		ND		nc	24
74-85-1	Ethene	ND		ND		nc	23

Duplicate Summary

Job Number: F19188
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19188-4DUP	QR018415.D	1	08/29/03	BM	n/a	n/a	GQR763
F19188-4	QR018414.D	1	08/29/03	BM	n/a	n/a	GQR763

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19188-2, F19188-3, F19188-4, F19188-5

CAS No.	Compound	F19188-4 ug/l	Q	DUP ug/l	Q	RPD	Limits
71-43-2	Benzene	618	E	613	E	1	
75-27-4	Bromodichloromethane	ND		ND		nc	
75-25-2	Bromoform	ND		ND		nc	
74-83-9	Bromomethane	ND		ND		nc	
56-23-5	Carbon tetrachloride	ND		ND		nc	
108-90-7	Chlorobenzene	ND		ND		nc	
124-48-1	Dibromochloromethane	ND		ND		nc	
75-00-3	Chloroethane	ND		ND		nc	
110-75-8	2-Chloroethylvinyl ether	ND		ND		nc	
67-66-3	Chloroform	ND		ND		nc	
74-87-3	Chloromethane	ND		ND		nc	
95-50-1	1,2-Dichlorobenzene	ND		ND		nc	
541-73-1	1,3-Dichlorobenzene	ND		ND		nc	
106-46-7	1,4-Dichlorobenzene	ND		ND		nc	
75-71-8	Dichlorodifluoromethane	ND		ND		nc	
75-34-3	1,1-Dichloroethane	ND		ND		nc	
107-06-2	1,2-Dichloroethane	113	E	115	E	2	
75-35-4	1,1-Dichloroethene	ND		ND		nc	
156-59-2	cis-1,2-Dichloroethene	ND		ND		nc	
156-60-5	trans-1,2-Dichloroethene	ND		ND		nc	
78-87-5	1,2-Dichloropropane	3.7		3.7		0	
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	
100-41-4	Ethylbenzene	19.5		19.5		0	
75-09-2	Methylene chloride	ND		ND		nc	
1634-04-4	Methyl Tert Butyl Ether	6.3		6.3		0	
79-34-5	1,1,2,2-Tetrachloroethane	1.5		1.5		0	
127-18-4	Tetrachloroethene	ND		ND		nc	
108-88-3	Toluene	271	E	269	E	1	
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	
79-01-6	Trichloroethene	ND		ND		nc	
75-69-4	Trichlorofluoromethane	ND		ND		nc	
75-01-4	Vinyl chloride	ND		ND		nc	
1330-20-7	Xylenes (total)	346	E	345	E	0	

Duplicate Summary

Job Number: F19188
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19188-4DUP	QR018415.D	1	08/29/03	BM	n/a	n/a	GQR763
F19188-4	QR018414.D	1	08/29/03	BM	n/a	n/a	GQR763

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19188-2, F19188-3, F19188-4, F19188-5

CAS No.	Surrogate Recoveries	DUP	F19188-4	Limits
352-33-0	1-Chloro-4-fluorobenzene	99%	100%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	108%	111%	74-127%
563-58-6	1,1-Dichloropropene	88%	88%	87-120%
563-58-6	1,1-Dichloropropene	103%	104%	87-120%

Duplicate Summary

Job Number: F19188
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19188-4DUP	QR018446.D	20	09/02/03	RA	n/a	n/a	GQR764
F19188-4	QR018445.D	20	09/02/03	RA	n/a	n/a	GQR764

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19188-1, F19188-3, F19188-4

CAS No.	Compound	F19188-4 ug/l	Q	DUP ug/l	Q	RPD	Limits
71-43-2	Benzene	957		930		3	
75-27-4	Bromodichloromethane	ND		ND		nc	
75-25-2	Bromoform	ND		ND		nc	
74-83-9	Bromomethane	ND		ND		nc	
56-23-5	Carbon tetrachloride	ND		ND		nc	
108-90-7	Chlorobenzene	ND		ND		nc	
124-48-1	Dibromochloromethane	ND		ND		nc	
75-00-3	Chloroethane	ND		ND		nc	
110-75-8	2-Chloroethylvinyl ether	ND		ND		nc	
67-66-3	Chloroform	ND		ND		nc	
74-87-3	Chloromethane	ND		ND		nc	
95-50-1	1,2-Dichlorobenzene	ND		ND		nc	
541-73-1	1,3-Dichlorobenzene	ND		ND		nc	
106-46-7	1,4-Dichlorobenzene	ND		ND		nc	
75-71-8	Dichlorodifluoromethane	ND		ND		nc	
75-34-3	1,1-Dichloroethane	ND		ND		nc	
107-06-2	1,2-Dichloroethane	138		135		2	
75-35-4	1,1-Dichloroethene	ND		ND		nc	
156-59-2	cis-1,2-Dichloroethene	ND		ND		nc	
156-60-5	trans-1,2-Dichloroethene	ND		ND		nc	
78-87-5	1,2-Dichloropropane	ND		ND		nc	
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	
100-41-4	Ethylbenzene	17.9	J	17.4	J	3	
75-09-2	Methylene chloride	ND		ND		nc	
1634-04-4	Methyl Tert Butyl Ether	ND		ND		nc	
79-34-5	1,1,2,2-Tetrachloroethane	6.7	J	6.3	J	6	
127-18-4	Tetrachloroethene	ND		ND		nc	
108-88-3	Toluene	319		310		3	
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	
79-01-6	Trichloroethene	ND		ND		nc	
75-69-4	Trichlorofluoromethane	ND		ND		nc	
75-01-4	Vinyl chloride	ND		ND		nc	
1330-20-7	Xylenes (total)	378		367		3	

Duplicate Summary

Job Number: F19188
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19188-4DUP	QR018446.D	20	09/02/03	RA	n/a	n/a	GQR764
F19188-4	QR018445.D	20	09/02/03	RA	n/a	n/a	GQR764

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19188-1, F19188-3, F19188-4

CAS No.	Surrogate Recoveries	DUP	F19188-4	Limits
352-33-0	1-Chloro-4-fluorobenzene	96%	96%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	101%	102%	74-127%
563-58-6	1,1-Dichloropropene	94%	94%	87-120%
563-58-6	1,1-Dichloropropene	102%	99%	87-120%

Method Blank Summary

Job Number: F19188
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR763-MB	QR018400.D	1	08/29/03	BM	n/a	n/a	GQR763

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19188-2, F19188-3, F19188-4, F19188-5

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

Method Blank Summary

Job Number: F19188
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR763-MB	QR018400.D	1	08/29/03	BM	n/a	n/a	GQR763

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19188-2, F19188-3, F19188-4, F19188-5

CAS No.	Surrogate Recoveries		Limits
352-33-0	1-Chloro-4-fluorobenzene	89%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	91%	74-127%
563-58-6	1,1-Dichloropropene	99%	87-120%
563-58-6	1,1-Dichloropropene	102%	87-120%

Method Blank Summary

Job Number: F19188
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR764-MB	QR018428.D	1	09/02/03	RA	n/a	n/a	GQR764

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19188-1, F19188-3, F19188-4

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

Method Blank Summary

Job Number: F19188
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR764-MB	QR018428.D	1	09/02/03	RA	n/a	n/a	GQR764

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19188-1, F19188-3, F19188-4

CAS No.	Surrogate Recoveries		Limits
352-33-0	1-Chloro-4-fluorobenzene	92%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	100%	74-127%
563-58-6	1,1-Dichloropropene	96%	87-120%
563-58-6	1,1-Dichloropropene	101%	87-120%

Method Blank Summary

Job Number: F19188
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GXY304-MB	XY011396.D	1	08/22/03	CV	n/a	n/a	GXY304

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F19188-1, F19188-2, F19188-3

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	0.50	0.30	ug/l	
74-84-0	Ethane	ND	1.0	0.60	ug/l	
74-85-1	Ethene	ND	1.0	0.80	ug/l	

Method Blank Summary

Job Number: F19188
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GXY304-MB	XY011419.D	1	08/25/03	CV	n/a	n/a	GXY304

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F19188-1, F19188-2, F19188-3

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	0.50	0.30	ug/l	
74-84-0	Ethane	ND	1.0	0.60	ug/l	
74-85-1	Ethene	ND	1.0	0.80	ug/l	

Matrix Spike Summary

Job Number: F19188
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19133-6MS	XY011402.D	1	08/22/03	CV	n/a	n/a	GXY304
F19133-6	XY011401.D	1	08/22/03	CV	n/a	n/a	GXY304

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F19188-1, F19188-2, F19188-3

CAS No.	Compound	F19133-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
74-82-8	Methane	77.9		108	188	102	50-150 [a]
74-84-0	Ethane	2.0		219	274	124	50-150 [a]
74-85-1	Ethene	ND		290	353	122	50-150 [a]

(a) Advisory control limits.

Matrix Spike Summary

Job Number: F19188
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19188-1MS	XY011423.D	1	08/25/03	CV	n/a	n/a	GXY304
F19188-1	XY011422.D	1	08/25/03	CV	n/a	n/a	GXY304

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F19188-1, F19188-2, F19188-3

CAS No.	Compound	F19188-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
74-82-8	Methane	5.05		108	107	94	50-150 [a]
74-84-0	Ethane	ND		219	220	100	50-150 [a]
74-85-1	Ethene	ND		290	291	100	50-150 [a]

(a) Advisory control limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F19188
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19161-2MS	QR018438.D	50	09/02/03	RA	n/a	n/a	GQR764
F19161-2MSD	QR018439.D	50	09/02/03	RA	n/a	n/a	GQR764
F19161-2	QR018432.D	50	09/02/03	RA	n/a	n/a	GQR764

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19188-1, F19188-3, F19188-4

CAS No.	Compound	F19161-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	2260		1000	2890	63* [a]	2920	66* [a]	1	77-127/9
75-27-4	Bromodichloromethane	ND		1000	928	93	978	98	5	78-122/9
75-25-2	Bromoform	ND		1000	926	93	958	96	3	57-140/22
74-83-9	Bromomethane	ND		1000	1040	104	1040	104	0	27-159/21
56-23-5	Carbon tetrachloride	ND		1000	1110	111	1130	113	2	79-127/14
108-90-7	Chlorobenzene	ND		1000	1080	108	1090	109	1	82-122/10
124-48-1	Dibromochloromethane	ND		1000	999	100	1030	103	3	69-127/14
75-00-3	Chloroethane	ND		1000	1060	106	1080	108	2	51-180/17
110-75-8	2-Chloroethylvinyl ether	ND		1000	852	85	881	88	3	10-158/13
67-66-3	Chloroform	ND		1000	960	96	1000	100	4	82-118/9
74-87-3	Chloromethane	ND		1000	1050	105	1050	105	0	11-193/31
95-50-1	1,2-Dichlorobenzene	ND		1000	1170	117	1230	123	5	69-133/13
541-73-1	1,3-Dichlorobenzene	ND		1000	1110	111	1140	114	3	77-123/13
106-46-7	1,4-Dichlorobenzene	ND		1000	1170	117	1170	117	0	73-127/13
75-71-8	Dichlorodifluoromethane	ND		1000	906	91	897	90	1	14-176/25
75-34-3	1,1-Dichloroethane	ND		1000	1160	116	1150	115	1	80-127/10
107-06-2	1,2-Dichloroethane	ND		1000	1010	101	1080	108	7	74-116/14
75-35-4	1,1-Dichloroethene	ND		1000	1080	108	1060	106	2	72-163/16
156-59-2	cis-1,2-Dichloroethene	ND		1000	986	99	1010	101	2	83-139/9
156-60-5	trans-1,2-Dichloroethene	ND		1000	1100	110	1130	113	3	82-131/11
78-87-5	1,2-Dichloropropane	ND		1000	1070	107	1130	113*	5	77-112/8
10061-01-5	cis-1,3-Dichloropropene	ND		1000	1130	113	1180	118	4	65-131/17
10061-02-6	trans-1,3-Dichloropropene	ND		1000	1040	104	1110	111	7	53-140/21
100-41-4	Ethylbenzene	603		1000	1640	104	1650	105	1	68-136/11
75-09-2	Methylene chloride	ND		1000	1230	123	1300	130	6	60-145/12
1634-04-4	Methyl Tert Butyl Ether	720		1000	1670	95	1700	98	2	71-124/14
79-34-5	1,1,2,2-Tetrachloroethane	ND		1000	1110	111	1130	113	2	72-114/8
127-18-4	Tetrachloroethene	ND		1000	1120	112	1180	118	5	85-124/13
108-88-3	Toluene	52.7		1000	1140	109	1160	111	2	78-128/9
71-55-6	1,1,1-Trichloroethane	ND		1000	1130	113	1140	114	1	83-123/12
79-00-5	1,1,2-Trichloroethane	ND		1000	1030	103	1100	110	7	78-111/7
79-01-6	Trichloroethene	ND		1000	1110	111	1110	111	0	82-119/11
75-69-4	Trichlorofluoromethane	ND		1000	1100	110	1120	112	2	76-147/15
75-01-4	Vinyl chloride	ND		1000	1030	103	1100	110	7	72-139/14
1330-20-7	Xylenes (total)	159		3000	3480	111	3520	112	1	71-136/11

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F19188
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19161-2MS	QR018438.D	50	09/02/03	RA	n/a	n/a	GQR764
F19161-2MSD	QR018439.D	50	09/02/03	RA	n/a	n/a	GQR764
F19161-2	QR018432.D	50	09/02/03	RA	n/a	n/a	GQR764

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19188-1, F19188-3, F19188-4

CAS No.	Surrogate Recoveries	MS	MSD	F19161-2	Limits
352-33-0	1-Chloro-4-fluorobenzene	108%	107%	96%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	110%	107%	104%	74-127%
563-58-6	1,1-Dichloropropene	95%	95%	94%	87-120%
563-58-6	1,1-Dichloropropene	96%	95%	101%	87-120%

(a) Outside control limits due to high level in sample relative to spike amount.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F19188
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19187-2MS	QR018412.D	1	08/29/03	BM	n/a	n/a	GQR763
F19187-2MSD	QR018413.D	1	08/29/03	BM	n/a	n/a	GQR763
F19187-2	QR018411.D	1	08/29/03	BM	n/a	n/a	GQR763

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19188-2, F19188-3, F19188-4, F19188-5

CAS No.	Compound	F19187-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		20	20.1	101	20.4	102	1	77-127/9
75-27-4	Bromodichloromethane	ND		20	17.8	89	18.6	93	4	78-122/9
75-25-2	Bromoform	ND		20	17.5	88	17.8	89	2	57-140/22
74-83-9	Bromomethane	ND		20	19.8	99	20.6	103	4	27-159/21
56-23-5	Carbon tetrachloride	ND		20	20.7	104	21.4	107	3	79-127/14
108-90-7	Chlorobenzene	ND		20	20.6	103	21.0	105	2	82-122/10
124-48-1	Dibromochloromethane	ND		20	19.0	95	19.7	99	4	69-127/14
75-00-3	Chloroethane	ND		20	20.0	100	20.6	103	3	51-180/17
110-75-8	2-Chloroethylvinyl ether	ND		20	ND	0*	ND	0*	nc	10-158/13
67-66-3	Chloroform	ND		20	18.7	94	19.1	96	2	82-118/9
74-87-3	Chloromethane	ND		20	20.0	100	21.4	107	7	11-193/31
95-50-1	1,2-Dichlorobenzene	ND		20	21.6	108	22.2	111	3	69-133/13
541-73-1	1,3-Dichlorobenzene	ND		20	20.4	102	21.2	106	4	77-123/13
106-46-7	1,4-Dichlorobenzene	ND		20	21.4	107	21.4	107	0	73-127/13
75-71-8	Dichlorodifluoromethane	ND		20	17.5	88	18.7	94	7	14-176/25
75-34-3	1,1-Dichloroethane	ND		20	22.0	110	21.9	110	0	80-127/10
107-06-2	1,2-Dichloroethane	ND		20	20.0	100	20.6	103	3	74-116/14
75-35-4	1,1-Dichloroethene	ND		20	22.4	112	22.8	114	2	72-163/16
156-59-2	cis-1,2-Dichloroethene	ND		20	19.4	97	19.1	96	2	83-139/9
156-60-5	trans-1,2-Dichloroethene	ND		20	21.2	106	21.5	108	1	82-131/11
78-87-5	1,2-Dichloropropane	ND		20	20.5	103	20.7	104	1	77-112/8
10061-01-5	cis-1,3-Dichloropropene	ND		20	21.1	106	21.7	109	3	65-131/17
10061-02-6	trans-1,3-Dichloropropene	ND		20	19.7	99	20.2	101	3	53-140/21
100-41-4	Ethylbenzene	ND		20	22.1	111	22.4	112	1	68-136/11
75-09-2	Methylene chloride	ND		20	20.0	100	20.1	101	0	60-145/12
1634-04-4	Methyl Tert Butyl Ether	ND		20	19.8	99	20.0	100	1	71-124/14
79-34-5	1,1,2,2-Tetrachloroethane	0.52	J	20	23.6	115*	23.7	116*	0	72-114/8
127-18-4	Tetrachloroethene	2.3		20	24.1	109	24.2	110	0	85-124/13
108-88-3	Toluene	ND		20	20.4	102	20.7	104	1	78-128/9
71-55-6	1,1,1-Trichloroethane	ND		20	20.2	101	20.7	104	2	83-123/12
79-00-5	1,1,2-Trichloroethane	ND		20	19.4	97	20.5	103	6	78-111/7
79-01-6	Trichloroethene	1.5		20	22.8	107	23.1	108	1	82-119/11
75-69-4	Trichlorofluoromethane	ND		20	18.9	95	20.1	101	6	76-147/15
75-01-4	Vinyl chloride	ND		20	19.5	98	21.0	105	7	72-139/14
1330-20-7	Xylenes (total)	ND		60	62.0	103	62.9	105	1	71-136/11

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F19188
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F19187-2MS	QR018412.D	1	08/29/03	BM	n/a	n/a	GQR763
F19187-2MSD	QR018413.D	1	08/29/03	BM	n/a	n/a	GQR763
F19187-2	QR018411.D	1	08/29/03	BM	n/a	n/a	GQR763

The QC reported here applies to the following samples: **Method:** EPA 601/602

F19188-2, F19188-3, F19188-4, F19188-5

CAS No.	Surrogate Recoveries	MS	MSD	F19187-2	Limits
352-33-0	1-Chloro-4-fluorobenzene	111%	111%	97%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	104%	109%	94%	74-127%
563-58-6	1,1-Dichloropropene	101%	100%	100%	87-120%
563-58-6	1,1-Dichloropropene	100%	98%	102%	87-120%

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Blank Spike Summary

Job Number: F19188
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8355-BS	IJ18284.D	1	09/02/03	MRE	08/26/03	OP8355	GIJ875

The QC reported here applies to the following samples: **Method:** EPA 610

F19188-1, F19188-2, F19188-3, F19188-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	25	21.7	87	59-114
208-96-8	Acenaphthylene	25	19.5	78	58-109
120-12-7	Anthracene	25	20.8	83	63-110
56-55-3	Benzo(a)anthracene	25	21.3	85	74-111
50-32-8	Benzo(a)pyrene	25	20.6	82	71-110
205-99-2	Benzo(b)fluoranthene	25	21.3	85	75-112
191-24-2	Benzo(g,h,i)perylene	25	20.8	83	66-114
207-08-9	Benzo(k)fluoranthene	25	20.3	81	73-111
218-01-9	Chrysene	25	20.8	83	73-112
53-70-3	Dibenzo(a,h)anthracene	25	20.4	82	67-111
206-44-0	Fluoranthene	25	21.4	86	74-113
86-73-7	Fluorene	25	21.1	84	67-113
193-39-5	Indeno(1,2,3-cd)pyrene	25	21.5	86	68-115
91-20-3	Naphthalene	25	20.2	81	52-113
90-12-0	1-Methylnaphthalene	25	22.2	89	55-117
91-57-6	2-Methylnaphthalene	25	20.2	81	50-115
85-01-8	Phenanthrene	25	21.5	86	70-111
129-00-0	Pyrene	25	21.1	84	73-115

CAS No.	Surrogate Recoveries	BSP	Limits
321-60-8	2-Fluorobiphenyl	82%	41-139%
84-15-1	o-Terphenyl	82%	46-135%

Duplicate Summary

Job Number: F19188
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8355-DUP	IJ18299.D	1	09/02/03	MRE	08/26/03	OP8355	GIJ875
F19187-1	IJ18298.D	1	09/02/03	MRE	08/26/03	OP8355	GIJ875

The QC reported here applies to the following samples: **Method:** EPA 610

F19188-1, F19188-2, F19188-3, F19188-4

CAS No.	Compound	F19187-1 ug/l	Q	DUP ug/l	Q	RPD	Limits
83-32-9	Acenaphthene	ND		ND		nc	
208-96-8	Acenaphthylene	ND		ND		nc	
120-12-7	Anthracene	ND		ND		nc	
56-55-3	Benzo(a)anthracene	ND		ND		nc	
50-32-8	Benzo(a)pyrene	ND		ND		nc	
205-99-2	Benzo(b)fluoranthene	ND		ND		nc	
191-24-2	Benzo(g,h,i)perylene	ND		ND		nc	
207-08-9	Benzo(k)fluoranthene	ND		ND		nc	
218-01-9	Chrysene	ND		ND		nc	
53-70-3	Dibenzo(a,h)anthracene	ND		ND		nc	
206-44-0	Fluoranthene	ND		ND		nc	
86-73-7	Fluorene	ND		ND		nc	
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ND		nc	
91-20-3	Naphthalene	ND		ND		nc	
90-12-0	1-Methylnaphthalene	ND		ND		nc	
91-57-6	2-Methylnaphthalene	ND		ND		nc	
85-01-8	Phenanthrene	ND		ND		nc	
129-00-0	Pyrene	ND		ND		nc	

CAS No.	Surrogate Recoveries	DUP	F19187-1	Limits
321-60-8	2-Fluorobiphenyl	94%	79%	41-139%
84-15-1	o-Terphenyl	95%	82%	46-135%

Method Blank Summary

Job Number: F19188
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8355-MB	IJ18285.D	1	09/02/03	MRE	08/26/03	OP8355	GIJ875

The QC reported here applies to the following samples: **Method:** EPA 610

F19188-1, F19188-2, F19188-3, F19188-4

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	2.0	ug/l	
120-12-7	Anthracene	ND	5.0	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	2.0	ug/l	
218-01-9	Chrysene	ND	5.0	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	2.0	ug/l	
86-73-7	Fluorene	ND	5.0	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	2.0	ug/l	
129-00-0	Pyrene	ND	5.0	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
321-60-8	2-Fluorobiphenyl	79%	41-139%
84-15-1	o-Terphenyl	83%	46-135%

Method Blank Summary

Job Number: F19188
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8355-MB	IJ18327.D	1	09/03/03	MRE	08/26/03	OP8355	GIJ876

The QC reported here applies to the following samples: **Method:** EPA 610

F19188-1, F19188-2, F19188-3, F19188-4

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	2.0	ug/l	
120-12-7	Anthracene	ND	5.0	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	2.0	ug/l	
218-01-9	Chrysene	ND	5.0	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	2.0	ug/l	
86-73-7	Fluorene	ND	5.0	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	2.0	ug/l	
129-00-0	Pyrene	ND	5.0	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
321-60-8	2-Fluorobiphenyl	78%	41-139%
84-15-1	o-Terphenyl	76%	46-135%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F19188
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8355-MS	IJ18329.D	4	09/03/03	MRE	08/26/03	OP8355	GIJ876
OP8355-MSD	IJ18330.D	4	09/03/03	MRE	08/26/03	OP8355	GIJ876
F19133-6 [a]	IJ18291.D	1	09/02/03	MRE	08/26/03	OP8355	GIJ875
F19133-6 [a]	IJ18328.D	5	09/03/03	MRE	08/26/03	OP8355	GIJ876

The QC reported here applies to the following samples: **Method:** EPA 610

F19188-1, F19188-2, F19188-3, F19188-4

CAS No.	Compound	F19133-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	15.4		52.1	66.5	98	65.4	96	2	36-143/21
208-96-8	Acenaphthylene	ND		52.1	40.0	77	40.4	78	1	59-108/22
120-12-7	Anthracene	ND		52.1	46.3	89	45.5	87	2	61-113/22
56-55-3	Benzo(a)anthracene	ND		52.1	43.7	84	43.5	84	0	69-111/17
50-32-8	Benzo(a)pyrene	ND		52.1	43.4	83	43.4	83	0	71-109/22
205-99-2	Benzo(b)fluoranthene	ND		52.1	41.6	80	40.8	78	2	63-116/19
191-24-2	Benzo(g,h,i)perylene	ND		52.1	44.7	86	45.3	87	1	54-123/19
207-08-9	Benzo(k)fluoranthene	ND		52.1	48.1	92	48.8	94	1	66-114/16
218-01-9	Chrysene	ND		52.1	47.9	92	47.1	90	2	65-116/15
53-70-3	Dibenzo(a,h)anthracene	ND		52.1	47.2	91	48.2	93	2	52-130/24
206-44-0	Fluoranthene	ND		52.1	45.7	88	45.8	88	0	73-113/16
86-73-7	Fluorene	3.1	J	52.1	46.6	84	46.8	84	0	63-114/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		52.1	41.9	80	41.7	80	0	43-133/24
91-20-3	Naphthalene	155 [c]		52.1	252	186* [b]	244	171* [b]	3	40-130/27
90-12-0	1-Methylnaphthalene	17.8		52.1	74.4	109	73.5	107	1	50-128/25
91-57-6	2-Methylnaphthalene	27.8		52.1	77.7	96	76.5	94	2	32-148/26
85-01-8	Phenanthrene	ND		52.1	44.2	85	44.1	85	0	44-136/19
129-00-0	Pyrene	ND		52.1	46.9	90	46.7	90	0	71-116/16

CAS No.	Surrogate Recoveries	MS	MSD	F19133-6	F19133-6	Limits
321-60-8	2-Fluorobiphenyl	78%	78%	69%	57%	41-139%
84-15-1	o-Terphenyl	82%	82%	78%	73%	46-135%

(a) All hits confirmed by dual column analysis.
(b) Outside control limits due to high level in sample relative to spike amount.
(c) Result is from Run #2.

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F19188
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-SE

Analyte	Batch ID	RL	MB Result	Units	BSP %Recov	QC Limits
Nitrogen, Nitrate	GP4409/GN12496	0.10	<0.10	mg/l	104.0	90-110%
Nitrogen, Nitrite	GP4409/GN12496	0.10	<0.10	mg/l	103.0	90-110%
Sulfate	GP4409/GN12496	20	<20	mg/l	102.0	90-110%
Total Organic Carbon	GN12599	1.0	<1.0	mg/l	108.0	86-116%

Associated Samples:
Batch GN12599: F19188-1, F19188-2, F19188-3
Batch GP4409: F19188-1, F19188-2, F19188-3

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F19188
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-SE

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Nitrogen, Nitrate	GP4409/GN12496	F19187-1	mg/l	<0.10	<0.10	0.0	0-20%
Nitrogen, Nitrite	GP4409/GN12496	F19187-1	mg/l	<0.10	<0.10	0.0	0-20%
Sulfate	GP4409/GN12496	F19187-1	mg/l	<20	<20	0.0	0-20%
Total Organic Carbon	GN12599	F19177-1	mg/l	65.1	66.2	1.6	0-20%

Associated Samples:
Batch GN12599: F19188-1, F19188-2, F19188-3
Batch GP4409: F19188-1, F19188-2, F19188-3

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F19188
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-SE

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Nitrogen, Nitrate	GP4409/GN12496	F19187-1	mg/l	<0.10	1	1.0	100.0	90-110%
Nitrogen, Nitrite	GP4409/GN12496	F19187-1	mg/l	<0.10	1	0.98	98.0	90-110%
Sulfate	GP4409/GN12496	F19187-1	mg/l	<20	100	100	100.0	90-110%
Total Organic Carbon	GN12599	F19177-1	mg/l	65.1	50.0	117	104.0	76-118%

Associated Samples:
Batch GN12599: F19188-1, F19188-2, F19188-3
Batch GP4409: F19188-1, F19188-2, F19188-3

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F19188
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-SE

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Total Organic Carbon	GN12599	F19177-1	mg/l	65.1	50.0	116	0.4	

Associated Samples:
Batch GN12599: F19188-1, F19188-2, F19188-3

CHAIN-OF-CUSTODY RECORD F19188

COC Number: 824603-SE-082203

Shaw Environmental & Infrastructure, Inc.

Shaw Environmental & Infrastructure, Inc. - Piney Green Rd. Lot 203 Bld 626 - 910-451-2390

Receiving Lab: ACCUTEST

Project Name	Project Location
CAMP LEJEUNE - SE	CAMP LEJEUNE, NC

Project Number	Contact	PO Number
824603	Mark Martin	209378

Client Rep	Project Manager
US NAVY - LANTDIV	Ron Kenyon

Item No.	Sample Number	Date	Time	Comp	Grab	Sample Description	Number of Containers	Analysis Desired: VOA 601/602	PAH 610	Dissolved Gasses RSK-175	NO3,NO2,NO3-NO2 BY 353.2-354.1	SO4 BY 375.4	TOC BY 415.1								
1	USTHPFF-MWHPFF01	8/22/03	0940		X	USTHPFF-MWHPFF01	10	X	X	X	X	X	X								
2	USTHPFF-MWHPFF07	8/22/03	0940		X	USTHPFF-MWHPFF07	10	X	X	X	X	X	X								
3	USTHPFF-MWHPFF09	8/22/03	1420		X	USTHPFF-MWHPFF09	10	X	X	X	X	X	X								
4	USTHPFF-MW11	8/22/03	1235		X	USTHPFF-MW11	5	X	X												
5	Trip Blank-082203	8/22/03	------		X	Trip Blank	2	X													
6																					
7																					
8																					
9																					
10																					

Transfer Number	Item Number	Transfers Relinquished By	Transfers Accepted By	Date	Time	Remarks
1	1 -- 5	[signature]	Fed Ex 8369 1400 2831	8/22/03	18:00	Please E-mail results to Mark.Martin@Shawgrp.com
2		FedEx	Munam Shammee	8/23/03	1000	21 Day TAT

3.0, 2.4

ACCUTEST LABORATORIES SOUTHEAST SAMPLE RECEIPT CONFIRMATION

Accutest's Job Number: F19188

Client: Shaw **Project:** Camp Lejeune - SE

Date Received: 8/23/03 **Time Received:** 1000

of Coolers Received: 2 **Cooler Temperatures:** 3.0, 2.4

Delivery Method: (FedEx) UPS Accutest Courier Greyhound Delivery Other

Air Bill Number:

Cooler Custody Seals Intact ?	(Yes)	No	
Chain of Custody Provided ?	(Yes)	No	
COC Match Bottle Label ID's ?	(Yes)	No	
Sample Labels Present on all bottles ?	(Yes)	No	
All Analyses Marked On COC ?	(Yes)	No	
Are All Bottles Intact ?	(Yes)	No	
Samples Preserved Correctly ?	(Yes)	No	
Correct Number of Containers Used ?	(Yes)	No	
Sufficient Sample Volume ?	(Yes)	No	
Trip Blank Provided ?	(Yes)	No	
Trip Blank on COC ?	(Yes)	No	
Trip Blank Intact ?	(Yes)	No	N/A
Trip Blank Matrix ?	Soil	(Water)	N/A
Number of Encores ?	0		
Number of Soil Field Kits ?	0		

Summary of Comments:

Signature: Mina Mohammed **Date:** 8/23/03

Southeast ACCUTEST Laboratories

03/12/03

Technical Report for

Shaw E & I, Inc.

Camp Lejeune-SE

824603

Accutest Job Number: F16692

Report to:

Shaw E & I, Inc.

natasha.sullivan@shawgrp.com

ATTN: Natasha Sullivan

Total number of pages in report: 138

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Harry Behzadi, Ph.D.
Laboratory Director

Certifications: FL (DOH E83510), NC (573), NJ (FL002), MA (FL946), IA (366), LA (03051), KS (E-10327), SC, AK

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Sample Summary

Shaw E & I, Inc.

Job No: F16692

Camp Lejeune-SE
Project No: 824603

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
F16692-1	02/21/03	09:15	MM	02/22/03	AQ	Ground Water	USTHPFF-MWHPFF01
F16692-2	02/21/03	14:15	MM	02/22/03	AQ	Ground Water	USTHPFF-MWHPFF08
F16692-3	02/21/03	13:30	MM	02/22/03	AQ	Ground Water	USTHPFF-MWHPFF11
F16692-4	02/21/03	12:30	MM	02/22/03	AQ	Ground Water	USTHPFF-MW17A
F16692-5	02/21/03	11:30	MM	02/22/03	AQ	Ground Water	USTHPFF-MWHPFF05
F16692-6	02/21/03	10:45	MM	02/22/03	AQ	Ground Water	USTHPFF-MWHPFF09
F16692-7	02/21/03	07:00	MM	02/22/03	AQ	Ground Water	UST1115-MW78GW3203
F16692-8	02/21/03	08:30	MM	02/22/03	AQ	Ground Water	UST1115-MW78GW3202
F16692-9	02/21/03	10:00	MM	02/22/03	AQ	Ground Water	USTHPFF-MWHPFF07
F16692-10	02/21/03	14:30	MM	02/22/03	AQ	Ground Water	UST1115-GT09
F16692-11	02/21/03	14:35	MM	02/22/03	AQ	Ground Water	UST1115-GT09D
F16692-12	02/21/03	00:00	MM	02/22/03	AQ	Trip Blank Water	TRIP BLANK-022103

Report of Analysis

Client Sample ID: USTHPFF-MWHPFF01
Lab Sample ID: F16692-1
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-SE

Date Sampled: 02/21/03
Date Received: 02/22/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR016100.D	1	03/04/03	RA	n/a	n/a	GQR628
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	32.3	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	1.7	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	2.4	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	4.5	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF01		
Lab Sample ID:	F16692-1	**Date Sampled:**	02/21/03
Matrix:	AQ - Ground Water	**Date Received:**	02/22/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	2.4	3.0	1.0	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	90%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	97%		74-127%
563-58-6	1,1-Dichloropropene	96%		87-120%
563-58-6	1,1-Dichloropropene	104%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF01		
Lab Sample ID:	F16692-1	**Date Sampled:**	02/21/03
Matrix:	AQ - Ground Water	**Date Received:**	02/22/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY010210.D	1	02/27/03	CV	n/a	n/a	GXY235
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	0.35	0.50	0.30	ug/l	J
74-84-0	Ethane	ND	1.0	0.60	ug/l	
74-85-1	Ethene	ND	1.0	0.80	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: USTHPFF-MWHPFF01
Lab Sample ID: F16692-1
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-SE

Date Sampled: 02/21/03
Date Received: 02/22/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	IJ17164.D	1	02/26/03	NJ	02/26/03	OP7011	GIJ816
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	2.0	ug/l	
120-12-7	Anthracene	ND	5.0	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	2.0	ug/l	
218-01-9	Chrysene	ND	5.0	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	2.0	ug/l	
86-73-7	Fluorene	ND	5.0	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	2.0	ug/l	
91-20-3	Naphthalene	6.1	5.0	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	2.0	ug/l	
129-00-0	Pyrene	ND	5.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	88%		41-139%
84-15-1	o-Terphenyl	97%		46-135%

(a) All hits confirmed by dual column analysis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF01		
Lab Sample ID:	F16692-1	**Date Sampled:**	02/21/03
Matrix:	AQ - Ground Water	**Date Received:**	02/22/03
		Percent Solids:	n/a
Project:	Camp Lejeune-SE		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	0.75	0.10	mg/l	1	02/22/03 17:47	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	0.75	0.20	mg/l	1	02/22/03 17:47	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 0.10	0.10	mg/l	1	02/22/03 17:47	LL	EPA 300/SW846 9056
Sulfate	44.0	20	mg/l	1	02/22/03 17:47	LL	EPA 300/SW846 9056
Total Organic Carbon	4.7	1.0	mg/l	1	02/24/03	SL	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID: USTHPFF-MWHPFF08
Lab Sample ID: F16692-2
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-SE

Date Sampled: 02/21/03
Date Received: 02/22/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR016114.D	50	03/05/03	RA	n/a	n/a	GQR628
Run #2	QR016126.D	250	03/05/03	RA	n/a	n/a	GQR629

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	10900 [a]	250	130	ug/l	
75-27-4	Bromodichloromethane	ND	50	25	ug/l	
75-25-2	Bromoform	ND	50	25	ug/l	
74-83-9	Bromomethane	ND	50	25	ug/l	
56-23-5	Carbon tetrachloride	ND	50	25	ug/l	
108-90-7	Chlorobenzene	ND	50	25	ug/l	
124-48-1	Dibromochloromethane	ND	50	20	ug/l	
75-00-3	Chloroethane	ND	50	25	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	50	25	ug/l	
67-66-3	Chloroform	ND	50	25	ug/l	
74-87-3	Chloromethane	ND	50	25	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	50	25	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	50	25	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	50	25	ug/l	
75-71-8	Dichlorodifluoromethane	ND	50	25	ug/l	
75-34-3	1,1-Dichloroethane	ND	50	25	ug/l	
107-06-2	1,2-Dichloroethane	368	50	25	ug/l	
75-35-4	1,1-Dichloroethene	ND	50	25	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	50	25	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	50	25	ug/l	
78-87-5	1,2-Dichloropropane	ND	50	25	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	50	15	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	50	15	ug/l	
100-41-4	Ethylbenzene	878	50	25	ug/l	
75-09-2	Methylene chloride	ND	250	50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	50	25	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	50	10	ug/l	
127-18-4	Tetrachloroethene	ND	50	25	ug/l	
108-88-3	Toluene	2150	50	25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	50	25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	50	25	ug/l	
79-01-6	Trichloroethene	ND	50	25	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF08		
Lab Sample ID:	F16692-2	**Date Sampled:**	02/21/03
Matrix:	AQ - Ground Water	**Date Received:**	02/22/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	50	25	ug/l	
75-01-4	Vinyl chloride	ND	50	25	ug/l	
1330-20-7	Xylenes (total)	2610	150	50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	95%	91%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	106%	97%	74-127%
563-58-6	1,1-Dichloropropene	93%	96%	87-120%
563-58-6	1,1-Dichloropropene	106%	104%	87-120%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF08		
Lab Sample ID:	F16692-2	**Date Sampled:**	02/21/03
Matrix:	AQ - Ground Water	**Date Received:**	02/22/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY010211.D	1	02/27/03	CV	n/a	n/a	GXY235
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	38.4	0.50	0.30	ug/l	
74-84-0	Ethane	10.7	1.0	0.60	ug/l	
74-85-1	Ethene	12.2	1.0	0.80	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: USTHPFF-MWHPFF08
Lab Sample ID: F16692-2
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-SE

Date Sampled: 02/21/03
Date Received: 02/22/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	IJ17179.D	1	02/26/03	NJ	02/26/03	OP7011	GIJ816
Run #2 [a]	IJ17165.D	5	02/26/03	NJ	02/26/03	OP7011	GIJ816

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2	1000 ml	1.0 ml

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	2.0	ug/l	
120-12-7	Anthracene	ND	5.0	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	2.0	ug/l	
218-01-9	Chrysene	ND	5.0	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	2.0	ug/l	
86-73-7	Fluorene	ND	5.0	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	2.0	ug/l	
91-20-3	Naphthalene	173 [b]	25	10	ug/l	
90-12-0	1-Methylnaphthalene	10.1	5.0	2.0	ug/l	
91-57-6	2-Methylnaphthalene	24.5	5.0	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	2.0	ug/l	
129-00-0	Pyrene	ND	5.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	113%	121%	41-139%
84-15-1	o-Terphenyl	106%	113%	46-135%

(a) All hits confirmed by dual column analysis.
(b) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF08		
Lab Sample ID:	F16692-2	**Date Sampled:**	02/21/03
Matrix:	AQ - Ground Water	**Date Received:**	02/22/03
		Percent Solids:	n/a
Project:	Camp Lejeune-SE		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	< 0.10	0.10	mg/l	1	02/22/03 18:04	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	< 0.20	0.20	mg/l	1	02/22/03 18:04	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 0.10	0.10	mg/l	1	02/22/03 18:04	LL	EPA 300/SW846 9056
Sulfate	< 20	20	mg/l	1	02/22/03 18:04	LL	EPA 300/SW846 9056
Total Organic Carbon	37.4	1.0	mg/l	1	02/24/03	SL	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID: USTHPFF-MWHPFF11
Lab Sample ID: F16692-3
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-SE

Date Sampled: 02/21/03
Date Received: 02/22/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR016102.D	1	03/05/03	RA	n/a	n/a	GQR628
Run #2 [a]	QR016157.D	10	03/06/03	RA	n/a	n/a	GQR629

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	489 [b]	10	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	14.8	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.51	1.0	0.50	ug/l	J
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	63.6	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	580 [b]	10	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF11		
Lab Sample ID:	F16692-3	**Date Sampled:**	02/21/03
Matrix:	AQ - Ground Water	**Date Received:**	02/22/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	187	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	100%	95%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	112%	103%	74-127%
563-58-6	1,1-Dichloropropene	91%	94%	87-120%
563-58-6	1,1-Dichloropropene	105%	103%	87-120%

(a) Confirmed by GC/MS
(b) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF11		
Lab Sample ID:	F16692-3	**Date Sampled:**	02/21/03
Matrix:	AQ - Ground Water	**Date Received:**	02/22/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY010212.D	1	02/27/03	CV	n/a	n/a	GXY235
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	13.5	0.50	0.30	ug/l	
74-84-0	Ethane	1.1	1.0	0.60	ug/l	
74-85-1	Ethene	0.82	1.0	0.80	ug/l	J

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: USTHPFF-MWHPFF11
Lab Sample ID: F16692-3
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-SE

Date Sampled: 02/21/03
Date Received: 02/22/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ17166.D	1	02/26/03	NJ	02/26/03	OP7011	GIJ816
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	2.0	ug/l	
120-12-7	Anthracene	ND	5.0	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	2.0	ug/l	
218-01-9	Chrysene	ND	5.0	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	2.0	ug/l	
86-73-7	Fluorene	ND	5.0	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	2.0	ug/l	
91-20-3	Naphthalene	8.0	5.0	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	2.0	ug/l	
129-00-0	Pyrene	ND	5.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	88%		41-139%
84-15-1	o-Terphenyl	89%		46-135%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF11		
Lab Sample ID:	F16692-3	**Date Sampled:**	02/21/03
Matrix:	AQ - Ground Water	**Date Received:**	02/22/03
		Percent Solids:	n/a
Project:	Camp Lejeune-SE		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	< 0.10	0.10	mg/l	1	02/22/03 18:55	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	< 0.20	0.20	mg/l	1	02/22/03 18:55	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 0.10	0.10	mg/l	1	02/22/03 18:55	LL	EPA 300/SW846 9056
Sulfate	32.4	20	mg/l	1	02/22/03 18:55	LL	EPA 300/SW846 9056
Total Organic Carbon	3.4	1.0	mg/l	1	02/24/03	SL	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID: USTHPFF-MW17A
Lab Sample ID: F16692-4
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-SE

Date Sampled: 02/21/03
Date Received: 02/22/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR016115.D	50	03/05/03	RA	n/a	n/a	GQR628
Run #2	QR016127.D	500	03/05/03	RA	n/a	n/a	GQR629

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	5720 [a]	500	250	ug/l	
75-27-4	Bromodichloromethane	ND	50	25	ug/l	
75-25-2	Bromoform	ND	50	25	ug/l	
74-83-9	Bromomethane	ND	50	25	ug/l	
56-23-5	Carbon tetrachloride	ND	50	25	ug/l	
108-90-7	Chlorobenzene	ND	50	25	ug/l	
124-48-1	Dibromochloromethane	ND	50	20	ug/l	
75-00-3	Chloroethane	ND	50	25	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	50	25	ug/l	
67-66-3	Chloroform	ND	50	25	ug/l	
74-87-3	Chloromethane	ND	50	25	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	50	25	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	50	25	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	50	25	ug/l	
75-71-8	Dichlorodifluoromethane	ND	50	25	ug/l	
75-34-3	1,1-Dichloroethane	ND	50	25	ug/l	
107-06-2	1,2-Dichloroethane	158	50	25	ug/l	
75-35-4	1,1-Dichloroethene	ND	50	25	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	50	25	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	50	25	ug/l	
78-87-5	1,2-Dichloropropane	ND	50	25	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	50	15	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	50	15	ug/l	
100-41-4	Ethylbenzene	3260	50	25	ug/l	
75-09-2	Methylene chloride	ND	250	50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	50	25	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	50	10	ug/l	
127-18-4	Tetrachloroethene	ND	50	25	ug/l	
108-88-3	Toluene	22800 [a]	500	250	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	50	25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	50	25	ug/l	
79-01-6	Trichloroethene	ND	50	25	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MW17A		
Lab Sample ID:	F16692-4	**Date Sampled:**	02/21/03
Matrix:	AQ - Ground Water	**Date Received:**	02/22/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	50	25	ug/l	
75-01-4	Vinyl chloride	ND	50	25	ug/l	
1330-20-7	Xylenes (total)	11300	150	50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	105%	95%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	112%	101%	74-127%
563-58-6	1,1-Dichloropropene	95%	96%	87-120%
563-58-6	1,1-Dichloropropene	106%	103%	87-120%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MW17A		
Lab Sample ID:	F16692-4	**Date Sampled:**	02/21/03
Matrix:	AQ - Ground Water	**Date Received:**	02/22/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY010213.D	1	02/27/03	CV	n/a	n/a	GXY235
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	326	0.50	0.30	ug/l	
74-84-0	Ethane	13.4	1.0	0.60	ug/l	
74-85-1	Ethene	6.05	1.0	0.80	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MW17A		
Lab Sample ID:	F16692-4	**Date Sampled:**	02/21/03
Matrix:	AQ - Ground Water	**Date Received:**	02/22/03
Method:	EPA 610 EPA 610	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	IJ17167.D	10	02/26/03	NJ	02/26/03	OP7011	GIJ816
Run #2 [a]	IJ17190.D	20	02/27/03	NJ	02/26/03	OP7011	GIJ817

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2	1000 ml	1.0 ml

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	50	20	ug/l	
208-96-8	Acenaphthylene	ND	50	20	ug/l	
120-12-7	Anthracene	ND	50	20	ug/l	
56-55-3	Benzo(a)anthracene	ND	50	20	ug/l	
50-32-8	Benzo(a)pyrene	ND	50	20	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	50	20	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	50	20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	50	20	ug/l	
218-01-9	Chrysene	ND	50	20	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	50	20	ug/l	
206-44-0	Fluoranthene	ND	50	20	ug/l	
86-73-7	Fluorene	ND	50	20	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	50	20	ug/l	
91-20-3	Naphthalene	415 [b]	100	40	ug/l	
90-12-0	1-Methylnaphthalene	79.9	50	20	ug/l	
91-57-6	2-Methylnaphthalene	195	50	20	ug/l	
85-01-8	Phenanthrene	ND	50	20	ug/l	
129-00-0	Pyrene	ND	50	20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	198% [c]	0% [c]	41-139%
84-15-1	o-Terphenyl	123%	0% [c]	46-135%

(a) All hits confirmed by dual column analysis.
(b) Result is from Run# 2
(c) Outside control limits due to dilution.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MW17A		
Lab Sample ID:	F16692-4	**Date Sampled:**	02/21/03
Matrix:	AQ - Ground Water	**Date Received:**	02/22/03
		Percent Solids:	n/a
Project:	Camp Lejeune-SE		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	< 0.10	0.10	mg/l	1	02/22/03 19:12	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	< 0.20	0.20	mg/l	1	02/22/03 19:12	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 0.10	0.10	mg/l	1	02/22/03 19:12	LL	EPA 300/SW846 9056
Sulfate	< 20	20	mg/l	1	02/22/03 19:12	LL	EPA 300/SW846 9056
Total Organic Carbon	59.4	1.0	mg/l	1	02/24/03	SL	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID: USTHPFF-MWHPFF05
Lab Sample ID: F16692-5
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-SE

Date Sampled: 02/21/03
Date Received: 02/22/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR016106.D	1	03/05/03	RA	n/a	n/a	GQR628
Run #2	QR016124.D	10	03/05/03	RA	n/a	n/a	GQR629

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	674 [a]	10	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	1.7	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	33.6	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	2.9	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	4.6	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF05		
Lab Sample ID:	F16692-5	**Date Sampled:**	02/21/03
Matrix:	AQ - Ground Water	**Date Received:**	02/22/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	9.9	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	92%	89%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	105%	96%	74-127%
563-58-6	1,1-Dichloropropene	88%	95%	87-120%
563-58-6	1,1-Dichloropropene	104%	104%	87-120%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF05		
Lab Sample ID:	F16692-5	**Date Sampled:**	02/21/03
Matrix:	AQ - Ground Water	**Date Received:**	02/22/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY010214.D	1	02/27/03	CV	n/a	n/a	GXY235
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	42.3	0.50	0.30	ug/l	
74-84-0	Ethane	0.66	1.0	0.60	ug/l	J
74-85-1	Ethene	ND	1.0	0.80	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: USTHPFF-MWHPFF05
Lab Sample ID: F16692-5
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-SE

Date Sampled: 02/21/03
Date Received: 02/22/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	IJ17168.D	1	02/26/03	NJ	02/26/03	OP7011	GIJ816
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	2.0	ug/l	
120-12-7	Anthracene	ND	5.0	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	2.0	ug/l	
218-01-9	Chrysene	ND	5.0	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	2.0	ug/l	
86-73-7	Fluorene	ND	5.0	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	2.0	ug/l	
91-20-3	Naphthalene	6.4	5.0	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	2.0	ug/l	
129-00-0	Pyrene	ND	5.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	88%		41-139%
84-15-1	o-Terphenyl	91%		46-135%

(a) All hits confirmed by dual column analysis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF05		
Lab Sample ID:	F16692-5	**Date Sampled:**	02/21/03
Matrix:	AQ - Ground Water	**Date Received:**	02/22/03
		Percent Solids:	n/a
Project:	Camp Lejeune-SE		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	< 0.10	0.10	mg/l	1	02/22/03 19:28	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	< 0.20	0.20	mg/l	1	02/22/03 19:28	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 0.10	0.10	mg/l	1	02/22/03 19:28	LL	EPA 300/SW846 9056
Sulfate	41.4	20	mg/l	1	02/22/03 19:28	LL	EPA 300/SW846 9056
Total Organic Carbon	16.2	1.0	mg/l	1	02/24/03	SL	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID: USTHPFF-MWHPFF09
Lab Sample ID: F16692-6
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-SE

Date Sampled: 02/21/03
Date Received: 02/22/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR016116.D	50	03/05/03	RA	n/a	n/a	GQR628
Run #2	QR016128.D	500	03/05/03	RA	n/a	n/a	GQR629

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	22600 [a]	500	250	ug/l	
75-27-4	Bromodichloromethane	ND	50	25	ug/l	
75-25-2	Bromoform	ND	50	25	ug/l	
74-83-9	Bromomethane	ND	50	25	ug/l	
56-23-5	Carbon tetrachloride	ND	50	25	ug/l	
108-90-7	Chlorobenzene	ND	50	25	ug/l	
124-48-1	Dibromochloromethane	ND	50	20	ug/l	
75-00-3	Chloroethane	ND	50	25	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	50	25	ug/l	
67-66-3	Chloroform	ND	50	25	ug/l	
74-87-3	Chloromethane	ND	50	25	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	50	25	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	50	25	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	50	25	ug/l	
75-71-8	Dichlorodifluoromethane	ND	50	25	ug/l	
75-34-3	1,1-Dichloroethane	ND	50	25	ug/l	
107-06-2	1,2-Dichloroethane	32.2	50	25	ug/l	J
75-35-4	1,1-Dichloroethene	ND	50	25	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	50	25	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	50	25	ug/l	
78-87-5	1,2-Dichloropropane	ND	50	25	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	50	15	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	50	15	ug/l	
100-41-4	Ethylbenzene	363	50	25	ug/l	
75-09-2	Methylene chloride	ND	250	50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	70.7	50	25	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	50	10	ug/l	
127-18-4	Tetrachloroethene	ND	50	25	ug/l	
108-88-3	Toluene	62.4	50	25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	50	25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	50	25	ug/l	
79-01-6	Trichloroethene	ND	50	25	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF09		
Lab Sample ID:	F16692-6	**Date Sampled:**	02/21/03
Matrix:	AQ - Ground Water	**Date Received:**	02/22/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	50	25	ug/l	
75-01-4	Vinyl chloride	ND	50	25	ug/l	
1330-20-7	Xylenes (total)	137	150	50	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	90%	88%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	101%	93%	74-127%
563-58-6	1,1-Dichloropropene	92%	95%	87-120%
563-58-6	1,1-Dichloropropene	105%	103%	87-120%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF09		
Lab Sample ID:	F16692-6	**Date Sampled:**	02/21/03
Matrix:	AQ - Ground Water	**Date Received:**	02/22/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY010215.D	1	02/27/03	CV	n/a	n/a	GXY235
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	190	0.50	0.30	ug/l	
74-84-0	Ethane	6.06	1.0	0.60	ug/l	
74-85-1	Ethene	0.84	1.0	0.80	ug/l	J

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF09		
Lab Sample ID:	F16692-6	**Date Sampled:**	02/21/03
Matrix:	AQ - Ground Water	**Date Received:**	02/22/03
Method:	EPA 610 EPA 610	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ17181.D	1	02/26/03	NJ	02/26/03	OP7011	GIJ816
Run #2 [a]	IJ17187.D	2	02/27/03	NJ	02/26/03	OP7011	GIJ817

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2	1000 ml	1.0 ml

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	2.0	ug/l	
120-12-7	Anthracene	ND	5.0	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	2.0	ug/l	
218-01-9	Chrysene	ND	5.0	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	2.0	ug/l	
86-73-7	Fluorene	ND	5.0	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	2.0	ug/l	
91-20-3	Naphthalene	70.1 [b]	10	4.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	2.0	ug/l	
129-00-0	Pyrene	ND	5.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	122%	114%	41-139%
84-15-1	o-Terphenyl	103%	104%	46-135%

(a) All hits confirmed by dual column analysis.
(b) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF09		
Lab Sample ID:	F16692-6	**Date Sampled:**	02/21/03
Matrix:	AQ - Ground Water	**Date Received:**	02/22/03
		Percent Solids:	n/a
Project:	Camp Lejeune-SE		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	0.10	0.10	mg/l	1	02/22/03 19:45	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	< 0.20	0.20	mg/l	1	02/22/03 19:45	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 0.10	0.10	mg/l	1	02/22/03 19:45	LL	EPA 300/SW846 9056
Sulfate	27.2	20	mg/l	1	02/22/03 19:45	LL	EPA 300/SW846 9056
Total Organic Carbon	18.7	1.0	mg/l	1	02/24/03	SL	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID: UST1115-MW78GW3203
Lab Sample ID: F16692-7
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-SE

Date Sampled: 02/21/03
Date Received: 02/22/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR016123.D	1	03/05/03	RA	n/a	n/a	GQR629
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	7.1	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	1.3	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	1.2	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW78GW3203		
Lab Sample ID:	F16692-7	**Date Sampled:**	02/21/03
Matrix:	AQ - Ground Water	**Date Received:**	02/22/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	89%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	96%		74-127%
563-58-6	1,1-Dichloropropene	96%		87-120%
563-58-6	1,1-Dichloropropene	104%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW78GW3203		
Lab Sample ID:	F16692-7	**Date Sampled:**	02/21/03
Matrix:	AQ - Ground Water	**Date Received:**	02/22/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY010216.D	1	02/27/03	CV	n/a	n/a	GXY235
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	5.63	0.50	0.30	ug/l	
74-84-0	Ethane	ND	1.0	0.60	ug/l	
74-85-1	Ethene	ND	1.0	0.80	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-MW78GW3203
Lab Sample ID: F16692-7
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-SE

Date Sampled: 02/21/03
Date Received: 02/22/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	IJ17173.D	1	02/26/03	NJ	02/26/03	OP7011	GIJ816
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	2.0	ug/l	
120-12-7	Anthracene	ND	5.0	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	2.0	ug/l	
218-01-9	Chrysene	ND	5.0	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	2.0	ug/l	
86-73-7	Fluorene	ND	5.0	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	2.0	ug/l	
91-20-3	Naphthalene	2.7	5.0	2.0	ug/l	J
90-12-0	1-Methylnaphthalene	ND	5.0	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	2.0	ug/l	
129-00-0	Pyrene	ND	5.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	92%		41-139%
84-15-1	o-Terphenyl	101%		46-135%

(a) All hits confirmed by dual column analysis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW78GW3203		
Lab Sample ID:	F16692-7	**Date Sampled:**	02/21/03
Matrix:	AQ - Ground Water	**Date Received:**	02/22/03
		Percent Solids:	n/a
Project:	Camp Lejeune-SE		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	< 0.10	0.10	mg/l	1	02/22/03 20:02	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	< 0.20	0.20	mg/l	1	02/22/03 20:02	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 0.10	0.10	mg/l	1	02/22/03 20:02	LL	EPA 300/SW846 9056
Sulfate	< 20	20	mg/l	1	02/22/03 20:02	LL	EPA 300/SW846 9056
Total Organic Carbon	1.3	1.0	mg/l	1	02/24/03	SL	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID: UST1115-MW78GW3202
Lab Sample ID: F16692-8
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-SE

Date Sampled: 02/21/03
Date Received: 02/22/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR016108.D	1	03/05/03	RA	n/a	n/a	GQR628
Run #2	QR016125.D	2	03/05/03	RA	n/a	n/a	GQR629

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	109 [a]	2.0	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	60.9	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	1.9	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	1.7	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW78GW3202		
Lab Sample ID:	F16692-8	**Date Sampled:**	02/21/03
Matrix:	AQ - Ground Water	**Date Received:**	02/22/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	1.7	3.0	1.0	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	92%	90%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	100%	98%	74-127%
563-58-6	1,1-Dichloropropene	95%	97%	87-120%
563-58-6	1,1-Dichloropropene	104%	105%	87-120%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW78GW3202		
Lab Sample ID:	F16692-8	**Date Sampled:**	02/21/03
Matrix:	AQ - Ground Water	**Date Received:**	02/22/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY010218.D	1	02/27/03	CV	n/a	n/a	GXY235
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	16.9	0.50	0.30	ug/l	
74-84-0	Ethane	2.1	1.0	0.60	ug/l	
74-85-1	Ethene	ND	1.0	0.80	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-MW78GW3202
Lab Sample ID: F16692-8
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-SE

Date Sampled: 02/21/03
Date Received: 02/22/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ17175.D	1	02/26/03	NJ	02/26/03	OP7011	GIJ816
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.1	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.1	2.0	ug/l	
120-12-7	Anthracene	ND	5.1	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.1	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.1	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.1	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.1	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.1	2.0	ug/l	
218-01-9	Chrysene	ND	5.1	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.1	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.1	2.0	ug/l	
86-73-7	Fluorene	ND	5.1	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.1	2.0	ug/l	
91-20-3	Naphthalene	ND	5.1	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.1	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.1	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.1	2.0	ug/l	
129-00-0	Pyrene	ND	5.1	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	94%		41-139%
84-15-1	o-Terphenyl	103%		46-135%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW78GW3202		
Lab Sample ID:	F16692-8	**Date Sampled:**	02/21/03
Matrix:	AQ - Ground Water	**Date Received:**	02/22/03
		Percent Solids:	n/a
Project:	Camp Lejeune-SE		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	< 0.10	0.10	mg/l	1	02/22/03 20:19	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	< 0.20	0.20	mg/l	1	02/22/03 20:19	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 0.10	0.10	mg/l	1	02/22/03 20:19	LL	EPA 300/SW846 9056
Sulfate	< 20	20	mg/l	1	02/22/03 20:19	LL	EPA 300/SW846 9056
Total Organic Carbon	6.7	1.0	mg/l	1	02/24/03	SL	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID: USTHPFF-MWHPFF07
Lab Sample ID: F16692-9
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-SE

Date Sampled: 02/21/03
Date Received: 02/22/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR016109.D	1	03/05/03	RA	n/a	n/a	GQR628
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	9.5	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	5.4	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.95	1.0	0.50	ug/l	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	1.8	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF07		
Lab Sample ID:	F16692-9	**Date Sampled:**	02/21/03
Matrix:	AQ - Ground Water	**Date Received:**	02/22/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	1.2	3.0	1.0	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	92%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	97%		74-127%
563-58-6	1,1-Dichloropropene	97%		87-120%
563-58-6	1,1-Dichloropropene	104%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF07		
Lab Sample ID:	F16692-9	**Date Sampled:**	02/21/03
Matrix:	AQ - Ground Water	**Date Received:**	02/22/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY010220.D	1	02/27/03	CV	n/a	n/a	GXY235
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	65.5	0.50	0.30	ug/l	
74-84-0	Ethane	ND	1.0	0.60	ug/l	
74-85-1	Ethene	ND	1.0	0.80	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: USTHPFF-MWHPFF07
Lab Sample ID: F16692-9
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-SE

Date Sampled: 02/21/03
Date Received: 02/22/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	IJ17176.D	1	02/26/03	NJ	02/26/03	OP7011	GIJ816
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	2.0	ug/l	
120-12-7	Anthracene	ND	5.0	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	2.0	ug/l	
218-01-9	Chrysene	ND	5.0	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	2.0	ug/l	
86-73-7	Fluorene	ND	5.0	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	2.0	ug/l	
91-20-3	Naphthalene	3.2	5.0	2.0	ug/l	J
90-12-0	1-Methylnaphthalene	ND	5.0	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	2.0	ug/l	
129-00-0	Pyrene	ND	5.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	62%		41-139%
84-15-1	o-Terphenyl	77%		46-135%

(a) All hits confirmed by dual column analysis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	USTHPFF-MWHPFF07		
Lab Sample ID:	F16692-9	**Date Sampled:**	02/21/03
Matrix:	AQ - Ground Water	**Date Received:**	02/22/03
		Percent Solids:	n/a
Project:	Camp Lejeune-SE		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	< 0.10	0.10	mg/l	1	02/22/03 20:36	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	< 0.20	0.20	mg/l	1	02/22/03 20:36	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 0.10	0.10	mg/l	1	02/22/03 20:36	LL	EPA 300/SW846 9056
Sulfate	50.8	20	mg/l	1	02/22/03 20:36	LL	EPA 300/SW846 9056
Total Organic Carbon	2.6	1.0	mg/l	1	02/24/03	SL	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID: UST1115-GT09
Lab Sample ID: F16692-10
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-SE

Date Sampled: 02/21/03
Date Received: 02/22/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR016110.D	1	03/05/03	RA	n/a	n/a	GQR628
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	21.1	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	3.5	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	2.0	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	2.5	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-GT09		
Lab Sample ID:	F16692-10	**Date Sampled:**	02/21/03
Matrix:	AQ - Ground Water	**Date Received:**	02/22/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	1.3	3.0	1.0	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	90%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	96%		74-127%
563-58-6	1,1-Dichloropropene	96%		87-120%
563-58-6	1,1-Dichloropropene	104%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-GT09		
Lab Sample ID:	F16692-10	**Date Sampled:**	02/21/03
Matrix:	AQ - Ground Water	**Date Received:**	02/22/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY010221.D	1	02/27/03	CV	n/a	n/a	GXY235
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	4.17	0.50	0.30	ug/l	
74-84-0	Ethane	ND	1.0	0.60	ug/l	
74-85-1	Ethene	ND	1.0	0.80	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-GT09
Lab Sample ID: F16692-10
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-SE

Date Sampled: 02/21/03
Date Received: 02/22/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	IJ17177.D	1	02/26/03	NJ	02/26/03	OP7011	GIJ816
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	2.0	ug/l	
120-12-7	Anthracene	ND	5.0	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	2.0	ug/l	
218-01-9	Chrysene	ND	5.0	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	2.0	ug/l	
86-73-7	Fluorene	ND	5.0	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	2.0	ug/l	
91-20-3	Naphthalene	4.5	5.0	2.0	ug/l	J
90-12-0	1-Methylnaphthalene	ND	5.0	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	2.0	ug/l	
129-00-0	Pyrene	ND	5.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	91%		41-139%
84-15-1	o-Terphenyl	98%		46-135%

(a) All hits confirmed by dual column analysis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-GT09		
Lab Sample ID:	F16692-10	**Date Sampled:**	02/21/03
Matrix:	AQ - Ground Water	**Date Received:**	02/22/03
		Percent Solids:	n/a
Project:	Camp Lejeune-SE		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	< 0.10	0.10	mg/l	1	02/22/03 20:53	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	< 0.20	0.20	mg/l	1	02/22/03 20:53	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 0.10	0.10	mg/l	1	02/22/03 20:53	LL	EPA 300/SW846 9056
Sulfate	164	20	mg/l	1	02/22/03 20:53	LL	EPA 300/SW846 9056
Total Organic Carbon	4.2	1.0	mg/l	1	02/24/03	SL	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID: UST1115-GT09D
Lab Sample ID: F16692-11
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-SE

Date Sampled: 02/21/03
Date Received: 02/22/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR016111.D	1	03/05/03	RA	n/a	n/a	GQR628
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	20.3	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	3.5	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	2.0	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	2.3	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-GT09D		
Lab Sample ID:	F16692-11	**Date Sampled:**	02/21/03
Matrix:	AQ - Ground Water	**Date Received:**	02/22/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	91%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	95%		74-127%
563-58-6	1,1-Dichloropropene	96%		87-120%
563-58-6	1,1-Dichloropropene	103%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-GT09D		
Lab Sample ID:	F16692-11	**Date Sampled:**	02/21/03
Matrix:	AQ - Ground Water	**Date Received:**	02/22/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY010222.D	1	02/27/03	CV	n/a	n/a	GXY235
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	4.29	0.50	0.30	ug/l	
74-84-0	Ethane	ND	1.0	0.60	ug/l	
74-85-1	Ethene	ND	1.0	0.80	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-GT09D
Lab Sample ID: F16692-11
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-SE

Date Sampled: 02/21/03
Date Received: 02/22/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	IJ17178.D	1	02/26/03	NJ	02/26/03	OP7011	GIJ816
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	2.0	ug/l	
120-12-7	Anthracene	ND	5.0	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	2.0	ug/l	
218-01-9	Chrysene	ND	5.0	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	2.0	ug/l	
86-73-7	Fluorene	ND	5.0	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	2.0	ug/l	
91-20-3	Naphthalene	4.6	5.0	2.0	ug/l	J
90-12-0	1-Methylnaphthalene	ND	5.0	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	2.0	ug/l	
129-00-0	Pyrene	ND	5.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	92%		41-139%
84-15-1	o-Terphenyl	102%		46-135%

(a) All hits confirmed by dual column analysis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-GT09D		
Lab Sample ID:	F16692-11	**Date Sampled:**	02/21/03
Matrix:	AQ - Ground Water	**Date Received:**	02/22/03
		Percent Solids:	n/a
Project:	Camp Lejeune-SE		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	< 0.10	0.10	mg/l	1	02/22/03 21:10	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	< 0.20	0.20	mg/l	1	02/22/03 21:10	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 0.10	0.10	mg/l	1	02/22/03 21:10	LL	EPA 300/SW846 9056
Sulfate	162	20	mg/l	1	02/22/03 21:10	LL	EPA 300/SW846 9056
Total Organic Carbon	3.7	1.0	mg/l	1	03/07/03	SL	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID: TRIP BLANK-022103
Lab Sample ID: F16692-12
Matrix: AQ - Trip Blank Water
Method: EPA 601/602
Project: Camp Lejeune-SE

Date Sampled: 02/21/03
Date Received: 02/22/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR016112.D	1	03/05/03	RA	n/a	n/a	GQR628
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK-022103		
Lab Sample ID:	F16692-12	**Date Sampled:**	02/21/03
Matrix:	AQ - Trip Blank Water	**Date Received:**	02/22/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-SE		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	87%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	91%		74-127%
563-58-6	1,1-Dichloropropene	97%		87-120%
563-58-6	1,1-Dichloropropene	103%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries
- Initial and Continuing Calibration Summaries

Blank Spike Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR628-BS	QR016098.D	1	03/04/03	RA	n/a	n/a	GQR628

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16692-1, F16692-2, F16692-3, F16692-4, F16692-5, F16692-6, F16692-8, F16692-9, F16692-10, F16692-11, F16692-12

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	21.2	106	88-121
75-27-4	Bromodichloromethane	20	19.2	96	79-121
75-25-2	Bromoform	20	19.2	96	61-135
74-83-9	Bromomethane	20	18.0	90	44-154
56-23-5	Carbon tetrachloride	20	22.8	114	81-127
108-90-7	Chlorobenzene	20	21.4	107	87-120
124-48-1	Dibromochloromethane	20	19.0	95	71-125
75-00-3	Chloroethane	20	20.1	101	68-146
110-75-8	2-Chloroethylvinyl ether	20	21.4	107	39-148
67-66-3	Chloroform	20	20.3	102	87-116
74-87-3	Chloromethane	20	18.5	93	34-188
95-50-1	1,2-Dichlorobenzene	20	20.4	102	81-119
541-73-1	1,3-Dichlorobenzene	20	20.5	103	82-120
106-46-7	1,4-Dichlorobenzene	20	20.9	105	81-120
75-71-8	Dichlorodifluoromethane	20	17.2	86	43-179
75-34-3	1,1-Dichloroethane	20	22.1	111	83-126
107-06-2	1,2-Dichloroethane	20	21.3	107	83-110
75-35-4	1,1-Dichloroethene	20	22.8	114	78-148
156-59-2	cis-1,2-Dichloroethene	20	20.6	103	86-134
156-60-5	trans-1,2-Dichloroethene	20	21.6	108	86-129
78-87-5	1,2-Dichloropropane	20	21.3	107	80-110
10061-01-5	cis-1,3-Dichloropropene	20	22.2	111	68-129
10061-02-6	trans-1,3-Dichloropropene	20	20.8	104	62-132
100-41-4	Ethylbenzene	20	22.1	111	86-125
75-09-2	Methylene chloride	20	21.7	109	74-130
1634-04-4	Methyl Tert Butyl Ether	20	19.0	95	80-117
79-34-5	1,1,2,2-Tetrachloroethane	20	20.7	104	77-108
127-18-4	Tetrachloroethene	20	22.3	112	85-123
108-88-3	Toluene	20	21.6	108	89-123
71-55-6	1,1,1-Trichloroethane	20	22.5	113	86-123
79-00-5	1,1,2-Trichloroethane	20	21.0	105	81-109
79-01-6	Trichloroethene	20	22.3	112	85-117
75-69-4	Trichlorofluoromethane	20	21.8	109	74-149
75-01-4	Vinyl chloride	20	25.4	127	72-138
1330-20-7	Xylenes (total)	60	66.2	110	89-124

Blank Spike Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR628-BS	QR016098.D	1	03/04/03	RA	n/a	n/a	GQR628

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16692-1, F16692-2, F16692-3, F16692-4, F16692-5, F16692-6, F16692-8, F16692-9, F16692-10, F16692-11, F16692-12

CAS No.	Surrogate Recoveries	BSP	Limits
352-33-0	1-Chloro-4-fluorobenzene	105%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	108%	74-127%
563-58-6	1,1-Dichloropropene	98%	87-120%
563-58-6	1,1-Dichloropropene	101%	87-120%

Blank Spike Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR629-BS	QR016121.D	1	03/05/03	RA	n/a	n/a	GQR629

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16692-2, F16692-3, F16692-4, F16692-5, F16692-6, F16692-7, F16692-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	21.8	109	88-121
75-27-4	Bromodichloromethane	20	19.8	99	79-121
75-25-2	Bromoform	20	19.6	98	61-135
74-83-9	Bromomethane	20	17.1	86	44-154
56-23-5	Carbon tetrachloride	20	22.8	114	81-127
108-90-7	Chlorobenzene	20	22.2	111	87-120
124-48-1	Dibromochloromethane	20	19.5	98	71-125
75-00-3	Chloroethane	20	18.8	94	68-146
110-75-8	2-Chloroethylvinyl ether	20	21.4	107	39-148
67-66-3	Chloroform	20	20.9	105	87-116
74-87-3	Chloromethane	20	17.9	90	34-188
95-50-1	1,2-Dichlorobenzene	20	21.9	110	81-119
541-73-1	1,3-Dichlorobenzene	20	22.3	112	82-120
106-46-7	1,4-Dichlorobenzene	20	22.7	114	81-120
75-71-8	Dichlorodifluoromethane	20	15.4	77	43-179
75-34-3	1,1-Dichloroethane	20	22.4	112	83-126
107-06-2	1,2-Dichloroethane	20	22.0	110	83-110
75-35-4	1,1-Dichloroethene	20	22.5	113	78-148
156-59-2	cis-1,2-Dichloroethene	20	21.1	106	86-134
156-60-5	trans-1,2-Dichloroethene	20	22.7	114	86-129
78-87-5	1,2-Dichloropropane	20	22.0	110	80-110
10061-01-5	cis-1,3-Dichloropropene	20	23.8	119	68-129
10061-02-6	trans-1,3-Dichloropropene	20	22.4	112	62-132
100-41-4	Ethylbenzene	20	23.1	116	86-125
75-09-2	Methylene chloride	20	21.3	107	74-130
1634-04-4	Methyl Tert Butyl Ether	20	18.5	93	80-117
79-34-5	1,1,2,2-Tetrachloroethane	20	21.1	106	77-108
127-18-4	Tetrachloroethene	20	23.8	119	85-123
108-88-3	Toluene	20	22.6	113	89-123
71-55-6	1,1,1-Trichloroethane	20	22.2	111	86-123
79-00-5	1,1,2-Trichloroethane	20	21.6	108	81-109
79-01-6	Trichloroethene	20	23.0	115	85-117
75-69-4	Trichlorofluoromethane	20	20.8	104	74-149
75-01-4	Vinyl chloride	20	24.2	121	72-138
1330-20-7	Xylenes (total)	60	68.9	115	89-124

Blank Spike Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR629-BS	QR016121.D	1	03/05/03	RA	n/a	n/a	GQR629

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16692-2, F16692-3, F16692-4, F16692-5, F16692-6, F16692-7, F16692-8

CAS No.	Surrogate Recoveries	BSP	Limits
352-33-0	1-Chloro-4-fluorobenzene	107%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	110%	74-127%
563-58-6	1,1-Dichloropropene	97%	87-120%
563-58-6	1,1-Dichloropropene	101%	87-120%

Blank Spike Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GXY235-BS	XY010208.D	1	02/27/03	CV	n/a	n/a	GXY235

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F16692-1, F16692-2, F16692-3, F16692-4, F16692-5, F16692-6, F16692-7, F16692-8, F16692-9, F16692-10, F16692-11

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
74-82-8	Methane	108	112	104	50-126
74-84-0	Ethane	219	228	104	49-135
74-85-1	Ethene	290	301	104	56-130

Duplicate Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F16692-11DUP	XY010223.D	1	02/27/03	CV	n/a	n/a	GXY235
F16692-11	XY010222.D	1	02/27/03	CV	n/a	n/a	GXY235

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F16692-1, F16692-2, F16692-3, F16692-4, F16692-5, F16692-6, F16692-7, F16692-8, F16692-9, F16692-10, F16692-11

CAS No.	Compound	F16692-11 ug/l	Q	DUP ug/l	Q	RPD	Limits
74-82-8	Methane	4.29		3.89		10	29
74-84-0	Ethane	ND		ND		nc	24
74-85-1	Ethene	ND		ND		nc	23

Duplicate Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F16692-1DUP	QR016101.D	1	03/05/03	RA	n/a	n/a	GQR628
F16692-1	QR016100.D	1	03/04/03	RA	n/a	n/a	GQR628

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16692-1, F16692-2, F16692-3, F16692-4, F16692-5, F16692-6, F16692-8, F16692-9, F16692-10, F16692-11, F16692-12

CAS No.	Compound	F16692-1 ug/l	Q	DUP ug/l	Q	RPD	Limits
71-43-2	Benzene	32.3		31.3		3	
75-27-4	Bromodichloromethane	ND		ND		nc	
75-25-2	Bromoform	ND		ND		nc	
74-83-9	Bromomethane	ND		ND		nc	
56-23-5	Carbon tetrachloride	ND		ND		nc	
108-90-7	Chlorobenzene	ND		ND		nc	
124-48-1	Dibromochloromethane	ND		ND		nc	
75-00-3	Chloroethane	ND		ND		nc	
110-75-8	2-Chloroethylvinyl ether	ND		ND		nc	
67-66-3	Chloroform	ND		ND		nc	
74-87-3	Chloromethane	ND		ND		nc	
95-50-1	1,2-Dichlorobenzene	ND		ND		nc	
541-73-1	1,3-Dichlorobenzene	ND		ND		nc	
106-46-7	1,4-Dichlorobenzene	ND		ND		nc	
75-71-8	Dichlorodifluoromethane	ND		ND		nc	
75-34-3	1,1-Dichloroethane	ND		ND		nc	
107-06-2	1,2-Dichloroethane	1.7		1.6		6	
75-35-4	1,1-Dichloroethene	ND		ND		nc	
156-59-2	cis-1,2-Dichloroethene	ND		ND		nc	
156-60-5	trans-1,2-Dichloroethene	ND		ND		nc	
78-87-5	1,2-Dichloropropane	ND		ND		nc	
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	
100-41-4	Ethylbenzene	2.4		2.4		0	
75-09-2	Methylene chloride	ND		ND		nc	
1634-04-4	Methyl Tert Butyl Ether	ND		ND		nc	
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	
127-18-4	Tetrachloroethene	ND		ND		nc	
108-88-3	Toluene	4.5		4.4		2	
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	
79-01-6	Trichloroethene	ND		ND		nc	
75-69-4	Trichlorofluoromethane	ND		ND		nc	
75-01-4	Vinyl chloride	ND		ND		nc	
1330-20-7	Xylenes (total)	2.4	J	2.3	J	4	

Duplicate Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F16692-1DUP	QR016101.D	1	03/05/03	RA	n/a	n/a	GQR628
F16692-1	QR016100.D	1	03/04/03	RA	n/a	n/a	GQR628

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16692-1, F16692-2, F16692-3, F16692-4, F16692-5, F16692-6, F16692-8, F16692-9, F16692-10, F16692-11, F16692-12

CAS No.	Surrogate Recoveries	DUP	F16692-1	Limits
352-33-0	1-Chloro-4-fluorobenzene	90%	90%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	97%	97%	74-127%
563-58-6	1,1-Dichloropropene	96%	96%	87-120%
563-58-6	1,1-Dichloropropene	105%	104%	87-120%

Method Blank Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR628-MB	QR016099.D	1	03/04/03	RA	n/a	n/a	GQR628

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16692-1, F16692-2, F16692-3, F16692-4, F16692-5, F16692-6, F16692-8, F16692-9, F16692-10, F16692-11, F16692-12

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	

Method Blank Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR628-MB	QR016099.D	1	03/04/03	RA	n/a	n/a	GQR628

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16692-1, F16692-2, F16692-3, F16692-4, F16692-5, F16692-6, F16692-8, F16692-9, F16692-10, F16692-11, F16692-12

CAS No.	Surrogate Recoveries		Limits
352-33-0	1-Chloro-4-fluorobenzene	86%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	89%	74-127%
563-58-6	1,1-Dichloropropene	97%	87-120%
563-58-6	1,1-Dichloropropene	104%	87-120%

Method Blank Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR629-MB	QR016122.D	1	03/05/03	RA	n/a	n/a	GQR629

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16692-2, F16692-3, F16692-4, F16692-5, F16692-6, F16692-7, F16692-8

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
75-09-2	Methylene chloride	1.6	5.0	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	

Method Blank Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR629-MB	QR016122.D	1	03/05/03	RA	n/a	n/a	GQR629

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16692-2, F16692-3, F16692-4, F16692-5, F16692-6, F16692-7, F16692-8

CAS No.	Surrogate Recoveries		Limits
352-33-0	1-Chloro-4-fluorobenzene	86%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	90%	74-127%
563-58-6	1,1-Dichloropropene	97%	87-120%
563-58-6	1,1-Dichloropropene	103%	87-120%

Method Blank Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GXY235-MB	XY010207.D	1	02/27/03	CV	n/a	n/a	GXY235

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F16692-1, F16692-2, F16692-3, F16692-4, F16692-5, F16692-6, F16692-7, F16692-8, F16692-9, F16692-10, F16692-11

CAS No.	Compound	Result	RL	Units	Q
74-82-8	Methane	ND	0.50	ug/l	
74-84-0	Ethane	ND	1.0	ug/l	
74-85-1	Ethene	ND	1.0	ug/l	

Matrix Spike Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F16692-7MS	XY010219.D	1	02/27/03	CV	n/a	n/a	GXY235
F16692-7	XY010216.D	1	02/27/03	CV	n/a	n/a	GXY235

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F16692-1, F16692-2, F16692-3, F16692-4, F16692-5, F16692-6, F16692-7, F16692-8, F16692-9, F16692-10, F16692-11

CAS No.	Compound	F16692-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
74-82-8	Methane	5.63		108	141	125	50-150 [a]
74-84-0	Ethane	ND		219	277	126	50-150 [a]
74-85-1	Ethene	ND		290	361	124	50-150 [a]

(a) Advisory control limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F16692-3MS	QR016104.D	1	03/05/03	RA	n/a	n/a	GQR628
F16692-3MSD	QR016105.D	1	03/05/03	RA	n/a	n/a	GQR628
F16692-3	QR016102.D	1	03/05/03	RA	n/a	n/a	GQR628

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16692-1, F16692-2, F16692-3, F16692-4, F16692-5, F16692-6, F16692-8, F16692-9, F16692-10, F16692-11, F16692-12

CAS No.	Compound	F16692-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	515		20	536	105	534	95	0	77-127/9
75-27-4	Bromodichloromethane	ND		20	19.6	98	19.6	98	0	78-122/9
75-25-2	Bromoform	ND		20	20.8	104	20.7	104	0	57-140/22
74-83-9	Bromomethane	ND		20	17.7	89	17.3	87	2	27-159/21
56-23-5	Carbon tetrachloride	ND		20	22.3	112	22.2	111	0	79-127/14
108-90-7	Chlorobenzene	ND		20	22.1	111	22.1	111	0	82-122/10
124-48-1	Dibromochloromethane	ND		20	19.8	99	19.8	99	0	69-127/14
75-00-3	Chloroethane	ND		20	19.9	100	19.4	97	3	51-180/17
110-75-8	2-Chloroethylvinyl ether	ND		20	ND	0*	ND	0*	nc	10-158/13
67-66-3	Chloroform	ND		20	20.4	102	20.3	102	0	82-118/9
74-87-3	Chloromethane	ND		20	17.9	90	16.5	83	8	11-193/31
95-50-1	1,2-Dichlorobenzene	ND		20	22.1	111	22.2	111	0	69-133/13
541-73-1	1,3-Dichlorobenzene	ND		20	22.8	114	22.8	114	0	77-123/13
106-46-7	1,4-Dichlorobenzene	ND		20	23.8	119	23.7	119	0	73-127/13
75-71-8	Dichlorodifluoromethane	ND		20	16.3	82	15.9	80	2	14-176/25
75-34-3	1,1-Dichloroethane	ND		20	22.0	110	22.0	110	0	80-127/10
107-06-2	1,2-Dichloroethane	14.8		20	35.1	102	35.1	102	0	74-116/14
75-35-4	1,1-Dichloroethene	ND		20	22.8	114	22.6	113	1	72-163/16
156-59-2	cis-1,2-Dichloroethene	0.51	J	20	21.6	105	21.5	105	0	83-139/9
156-60-5	trans-1,2-Dichloroethene	ND		20	22.0	110	22.0	110	0	82-131/11
78-87-5	1,2-Dichloropropane	ND		20	21.9	110	21.9	110	0	77-112/8
10061-01-5	cis-1,3-Dichloropropene	ND		20	22.3	112	22.4	112	0	65-131/17
10061-02-6	trans-1,3-Dichloropropene	ND		20	21.7	109	21.7	109	0	53-140/21
100-41-4	Ethylbenzene	63.6		20	84.6	105	84.5	105	0	68-136/11
75-09-2	Methylene chloride	ND		20	21.1	106	21.0	105	0	60-145/12
1634-04-4	Methyl Tert Butyl Ether	ND		20	19.6	98	19.5	98	1	71-124/14
79-34-5	1,1,2,2-Tetrachloroethane	ND		20	21.4	107	21.4	107	0	72-114/8
127-18-4	Tetrachloroethene	ND		20	22.4	112	22.3	112	0	85-124/13
108-88-3	Toluene	614		20	633	95	633	95	0	78-128/9
71-55-6	1,1,1-Trichloroethane	ND		20	22.0	110	22.1	111	0	83-123/12
79-00-5	1,1,2-Trichloroethane	ND		20	21.7	109	21.7	109	0	78-111/7
79-01-6	Trichloroethene	ND		20	22.3	112	22.2	111	0	82-119/11
75-69-4	Trichlorofluoromethane	ND		20	21.0	105	20.9	105	0	76-147/15
75-01-4	Vinyl chloride	ND		20	20.3	102	21.0	105	3	72-139/14
1330-20-7	Xylenes (total)	187		60	248	102	246	98	1	71-136/11

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F16692-3MS	QR016104.D	1	03/05/03	RA	n/a	n/a	GQR628
F16692-3MSD	QR016105.D	1	03/05/03	RA	n/a	n/a	GQR628
F16692-3	QR016102.D	1	03/05/03	RA	n/a	n/a	GQR628

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16692-1, F16692-2, F16692-3, F16692-4, F16692-5, F16692-6, F16692-8, F16692-9, F16692-10, F16692-11, F16692-12

CAS No.	Surrogate Recoveries	MS	MSD	F16692-3	Limits
352-33-0	1-Chloro-4-fluorobenzene	103%	103%	100%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	112%	112%	112%	74-127%
563-58-6	1,1-Dichloropropene	92%	92%	91%	87-120%
563-58-6	1,1-Dichloropropene	100%	100%	105%	87-120%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F16724-2MS	QR016132.D	1	03/05/03	RA	n/a	n/a	GQR629
F16724-2MSD	QR016133.D	1	03/05/03	RA	n/a	n/a	GQR629
F16724-2	QR016130.D	1	03/05/03	RA	n/a	n/a	GQR629

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16692-2, F16692-3, F16692-4, F16692-5, F16692-6, F16692-7, F16692-8

CAS No.	Compound	F16724-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	0.90	J	20	22.1	106	21.5	103	3	77-127/9
75-27-4	Bromodichloromethane	ND		20	19.5	98	19.1	96	2	78-122/9
75-25-2	Bromoform	ND		20	20.4	102	19.9	100	2	57-140/22
74-83-9	Bromomethane	ND		20	18.2	91	17.6	88	3	27-159/21
56-23-5	Carbon tetrachloride	ND		20	22.9	115	22.4	112	2	79-127/14
108-90-7	Chlorobenzene	ND		20	22.1	111	21.5	108	3	82-122/10
124-48-1	Dibromochloromethane	ND		20	19.4	97	19.1	96	2	69-127/14
75-00-3	Chloroethane	ND		20	19.4	97	19.2	96	1	51-180/17
110-75-8	2-Chloroethylvinyl ether	ND		20	ND	0*	ND	0*	nc	10-158/13
67-66-3	Chloroform	ND		20	20.5	103	20.2	101	1	82-118/9
74-87-3	Chloromethane	ND		20	17.2	86	16.1	81	7	11-193/31
95-50-1	1,2-Dichlorobenzene	ND		20	21.5	108	21.1	106	2	69-133/13
541-73-1	1,3-Dichlorobenzene	ND		20	21.8	109	21.2	106	3	77-123/13
106-46-7	1,4-Dichlorobenzene	ND		20	22.4	112	21.6	108	4	73-127/13
75-71-8	Dichlorodifluoromethane	ND		20	15.7	79	15.2	76	3	14-176/25
75-34-3	1,1-Dichloroethane	ND		20	22.1	111	21.5	108	3	80-127/10
107-06-2	1,2-Dichloroethane	ND		20	21.7	109	21.5	108	1	74-116/14
75-35-4	1,1-Dichloroethene	ND		20	22.3	112	21.7	109	3	72-163/16
156-59-2	cis-1,2-Dichloroethene	0.66	J	20	21.7	105	21.1	102	3	83-139/9
156-60-5	trans-1,2-Dichloroethene	ND		20	22.5	113	21.8	109	3	82-131/11
78-87-5	1,2-Dichloropropane	ND		20	21.6	108	21.1	106	2	77-112/8
10061-01-5	cis-1,3-Dichloropropene	ND		20	23.2	116	22.8	114	2	65-131/17
10061-02-6	trans-1,3-Dichloropropene	ND		20	21.9	110	21.7	109	1	53-140/21
100-41-4	Ethylbenzene	ND		20	23.0	115	22.0	110	4	68-136/11
75-09-2	Methylene chloride	ND		20	20.2	101	20.2	101	0	60-145/12
1634-04-4	Methyl Tert Butyl Ether	ND		20	19.4	97	19.2	96	1	71-124/14
79-34-5	1,1,2,2-Tetrachloroethane	ND		20	22.2	111	21.9	110	1	72-114/8
127-18-4	Tetrachloroethene	ND		20	22.7	114	22.2	111	2	85-124/13
108-88-3	Toluene	ND		20	22.0	110	21.7	109	1	78-128/9
71-55-6	1,1,1-Trichloroethane	ND		20	22.4	112	21.9	110	2	83-123/12
79-00-5	1,1,2-Trichloroethane	ND		20	21.6	108	21.4	107	1	78-111/7
79-01-6	Trichloroethene	ND		20	22.3	112	21.7	109	3	82-119/11
75-69-4	Trichlorofluoromethane	ND		20	22.2	111	21.7	109	2	76-147/15
75-01-4	Vinyl chloride	ND		20	23.3	117	22.0	110	6	72-139/14
1330-20-7	Xylenes (total)	ND		60	68.4	114	65.7	110	4	71-136/11

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F16724-2MS	QR016132.D	1	03/05/03	RA	n/a	n/a	GQR629
F16724-2MSD	QR016133.D	1	03/05/03	RA	n/a	n/a	GQR629
F16724-2	QR016130.D	1	03/05/03	RA	n/a	n/a	GQR629

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16692-2, F16692-3, F16692-4, F16692-5, F16692-6, F16692-7, F16692-8

CAS No.	Surrogate Recoveries	MS	MSD	F16724-2	Limits
352-33-0	1-Chloro-4-fluorobenzene	108%	107%	88%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	109%	109%	91%	74-127%
563-58-6	1,1-Dichloropropene	96%	97%	96%	87-120%
563-58-6	1,1-Dichloropropene	100%	100%	102%	87-120%

Volatile Surrogate Recovery Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Method: EPA 601/602 **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]	S2 [a]	S2 [b]
F16692-1	QR016100.D	90.0	97.0	96.0	104.0
F16692-2	QR016126.D	91.0	97.0	96.0	104.0
F16692-2	QR016114.D	95.0	106.0	93.0	106.0
F16692-3	QR016157.D	95.0	103.0	94.0	103.0
F16692-3	QR016102.D	100.0	112.0	91.0	105.0
F16692-4	QR016127.D	95.0	101.0	96.0	103.0
F16692-4	QR016115.D	105.0	112.0	95.0	106.0
F16692-5	QR016124.D	89.0	96.0	95.0	104.0
F16692-5	QR016106.D	92.0	105.0	88.0	104.0
F16692-6	QR016128.D	88.0	93.0	95.0	103.0
F16692-6	QR016116.D	90.0	101.0	92.0	105.0
F16692-7	QR016123.D	89.0	96.0	96.0	104.0
F16692-8	QR016125.D	90.0	98.0	97.0	105.0
F16692-8	QR016108.D	92.0	100.0	95.0	104.0
F16692-9	QR016109.D	92.0	97.0	97.0	104.0
F16692-10	QR016110.D	90.0	96.0	96.0	104.0
F16692-11	QR016111.D	91.0	95.0	96.0	103.0
F16692-12	QR016112.D	87.0	91.0	97.0	103.0
F16692-1DUP	QR016101.D	90.0	97.0	96.0	105.0
F16692-3MS	QR016104.D	103.0	112.0	92.0	100.0
F16692-3MSD	QR016105.D	103.0	112.0	92.0	100.0
F16724-2MS	QR016132.D	108.0	109.0	96.0	100.0
F16724-2MSD	QR016133.D	107.0	109.0	97.0	100.0
GQR628-BS	QR016098.D	105.0	108.0	98.0	101.0
GQR628-MB	QR016099.D	86.0	89.0	97.0	104.0
GQR629-BS	QR016121.D	107.0	110.0	97.0	101.0
GQR629-MB	QR016122.D	86.0	90.0	97.0	103.0

Surrogate Compounds	Recovery Limits
S1 = 1-Chloro-4-fluorobenzene	74-127%
S2 = 1,1-Dichloropropene	87-120%

(a) Recovery from GC signal #1
(b) Recovery from GC signal #2

GC Surrogate Retention Time Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Check Std:	GQR627-CC623	**Injection Date:**	03/04/03
Lab File ID:	QR016093.D	**Injection Time:**	20:37
Instrument ID:	GCQR	**Method:**	EPA 601/602

	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
Check Std	15.04	15.06	10.01	10.03

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
ZZZZZZ	QR016094.D	03/04/03	21:04	15.04	15.06	10.02	10.04
ZZZZZZ	QR016095.D	03/04/03	21:34	15.04	15.06	10.02	10.03
ZZZZZZ	QR016096.D	03/04/03	22:05	15.04	15.06	10.01	10.03
ZZZZZZ	QR016097.D	03/04/03	22:31	15.04	15.06	10.01	10.03
GQR628-BS	QR016098.D	03/04/03	22:59	15.03	15.05	10.01	10.03
GQR628-MB	QR016099.D	03/04/03	23:26	15.04	15.06	10.01	10.03
F16692-1	QR016100.D	03/04/03	23:54	15.03	15.06	10.01	10.03
F16692-1DUP	QR016101.D	03/05/03	00:21	15.03	15.05	10.01	10.03
F16692-3	QR016102.D	03/05/03	00:48	15.03	15.05	10.01	10.03

Surrogate Compounds

S1 = 1-Chloro-4-fluorobenzene
S2 = 1,1-Dichloropropene

(a) Retention time from GC signal #1
(b) Retention time from GC signal #2

GC Surrogate Retention Time Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Check Std:	GQR628-CC623	**Injection Date:**	03/05/03
Lab File ID:	QR016103.D	**Injection Time:**	01:16
Instrument ID:	GCQR	**Method:**	EPA 601/602

	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
Check Std	15.03	15.05	10.01	10.03

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
F16692-3MS	QR016104.D	03/05/03	01:43	15.04	15.05	10.01	10.03
F16692-3MSD	QR016105.D	03/05/03	02:10	15.04	15.06	10.01	10.03
F16692-5	QR016106.D	03/05/03	02:38	15.04	15.06	10.01	10.03
F16692-8	QR016108.D	03/05/03	03:32	15.04	15.06	10.02	10.04
F16692-9	QR016109.D	03/05/03	03:59	15.04	15.06	10.02	10.04
F16692-10	QR016110.D	03/05/03	04:27	15.04	15.06	10.02	10.04
F16692-11	QR016111.D	03/05/03	04:54	15.04	15.06	10.02	10.04
F16692-12	QR016112.D	03/05/03	05:21	15.04	15.07	10.02	10.04

Surrogate Compounds

S1 = 1-Chloro-4-fluorobenzene
S2 = 1,1-Dichloropropene

(a) Retention time from GC signal #1
(b) Retention time from GC signal #2

GC Surrogate Retention Time Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Check Std:	GQR628-CC623	**Injection Date:**	03/05/03
Lab File ID:	QR016113.D	**Injection Time:**	05:49
Instrument ID:	GCQR	**Method:**	EPA 601/602

	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
Check Std	15.04	15.06	10.02	10.04

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
F16692-2	QR016114.D	03/05/03	06:19	15.04	15.06	10.02	10.04
F16692-4	QR016115.D	03/05/03	06:49	15.04	15.06	10.02	10.04
F16692-6	QR016116.D	03/05/03	08:05	15.04	15.06	10.02	10.04
GQR628-ECC623	QR016118.D	03/05/03	08:59	15.04	15.05	10.01	10.03

Surrogate Compounds

S1 = 1-Chloro-4-fluorobenzene
S2 = 1,1-Dichloropropene

(a) Retention time from GC signal #1
(b) Retention time from GC signal #2

GC Surrogate Retention Time Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Check Std:	GQR629-CC623	**Injection Date:**	03/05/03
Lab File ID:	QR016120.D	**Injection Time:**	08:59
Instrument ID:	GCQR	**Method:**	EPA 601/602

	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
Check Std	15.04	15.05	10.01	10.03

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
F16692-7	QR016123.D	03/05/03	12:19	15.06	15.08	10.03	10.05
F16692-5	QR016124.D	03/05/03	12:49	15.04	15.06	10.03	10.05
F16692-2	QR016126.D	03/05/03	13:59	15.02	15.04	10.00	10.02
F16692-4	QR016127.D	03/05/03	14:26	15.02	15.04	10.00	10.02
F16692-6	QR016128.D	03/05/03	14:53	15.03	15.05	10.01	10.03
ZZZZZZ	QR016129.D	03/05/03	15:20	15.02	15.04	10.00	10.02
F16724-2	QR016130.D	03/05/03	15:48	15.02	15.04	10.00	10.02

Surrogate Compounds

S1 = 1-Chloro-4-fluorobenzene
S2 = 1,1-Dichloropropene

(a) Retention time from GC signal #1
(b) Retention time from GC signal #2

GC Surrogate Retention Time Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Check Std:	GQR630-CC623	**Injection Date:**	03/06/03
Lab File ID:	QR016153.D	**Injection Time:**	10:03
Instrument ID:	GCQR	**Method:**	EPA 601/602

	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
Check Std	15.02	15.04	9.99	10.01

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
F16778-4MS	QR016154.D	03/06/03	10:42	15.04	15.06	10.00	10.02
F16778-4MSD	QR016155.D	03/06/03	11:09	15.04	15.06	10.00	10.02
ZZZZZZ	QR016156.D	03/06/03	11:37		15.06		10.03
F16692-3	QR016157.D	03/06/03	12:04	15.03	15.05	10.01	10.03
GQR630-BS	QR016158.D	03/06/03	12:39	15.03	15.05	9.99	10.01
GQR630-ECC623	QR016159.D	03/06/03	13:06	15.03	15.05	10.00	10.02

Surrogate Compounds

S1 = 1-Chloro-4-fluorobenzene
S2 = 1,1-Dichloropropene

(a) Retention time from GC signal #1
(b) Retention time from GC signal #2

GC Surrogate Retention Time Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Check Std:	GQR629-CC623	**Injection Date:**	03/05/03
Lab File ID:	QR016131.D	**Injection Time:**	16:16
Instrument ID:	GCQR	**Method:**	EPA 601/602

	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
Check Std	15.02	15.03	9.99	10.00

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
F16724-2MS	QR016132.D	03/05/03	16:45	15.03	15.05	9.99	10.01
F16724-2MSD	QR016133.D	03/05/03	17:13	15.03	15.05	9.99	10.01
ZZZZZZ	QR016137.D	03/05/03	19:08	15.02	15.04	9.99	10.01
ZZZZZZ	QR016138.D	03/05/03	19:35	15.02	15.04	9.98	10.00
ZZZZZZ	QR016139.D	03/05/03	20:03	15.02	15.04	10.00	10.02
ZZZZZZ	QR016140.D	03/05/03	20:30	15.02	15.04	10.00	10.02
ZZZZZZ	QR016141.D	03/05/03	20:58	15.02	15.04	10.00	10.02

Surrogate Compounds

S1 = 1-Chloro-4-fluorobenzene
S2 = 1,1-Dichloropropene

(a) Retention time from GC signal #1
(b) Retention time from GC signal #2

Initial Calibration Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample: GXY233-ICC233
Lab FileID: XY010152.D

Response Factor Report VOA5

Method : C:\HPCHEM\2\METHODS\DGMEE.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Wed Feb 26 13:08:09 2003
Response via : Initial Calibration

Calibration Files
1 =XY010150.D 2 =XY010151.D 3 =XY010152.D
4 =XY010153.D 5 =XY010154.D 6 =XY010155.D 7 =XY010156.D

	Compound	1	2	3	4	5	6	7	Avg	%RSD
1)	Methane	1.546	1.597	1.626	1.827	1.798	1.700	1.691	1.684 E4	6.11
2)	Ethylene		2.991	3.099	3.473	3.360	3.225	3.169	3.219 E4	5.44
3)	Ethane		3.009	3.087	3.498	3.381	3.278	3.233	3.248 E4	5.58

(#) = Out of Range

DGMEE.M Wed Feb 26 13:33:19 2003 EF

Continuing Calibration Summary

Job Number: F16692 **Sample:** GXY235-CC233
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** XY010205.D
Project: Camp Lejeune-SE

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\2\DATA\022703\XY010205.D Vial: 100
Acq On : 27 Feb 2003 8:30 am Operator: ClaireV
Sample : CC233-500ppmv Inst : VOA5
Misc : gc2359,gxy235,,,,,1 Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\HPCHEM\2\METHODS\DGMEE.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Wed Feb 26 13:08:09 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	Methane	500.000	514.207	-2.8	95	0.05
2	Ethylene	500.000	514.304	-2.9	95	0.07
3	Ethane	500.000	513.282	-2.7	95	0.07

Average % D = 2.8

(#) = Out of Range SPCC's out = 0 CCC's out = 0
XY010153.D DGMEE.M Thu Feb 27 13:18:38 2003 EF

Continuing Calibration Summary

Job Number: F16692 **Sample:** GXY235-CC233
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** XY010217.D
Project: Camp Lejeune-SE

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\2\DATA\022703\XY010217.D Vial: 100
Acq On : 27 Feb 2003 11:31 am Operator: ClaireV
Sample : cc233-1000 Inst : VOA5
Misc : gc2360,gxy235,,,,,1 Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\HPCHEM\2\METHODS\DGMEE.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Wed Feb 26 13:08:09 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	Methane	1000.000	1038.936	-3.9	97	-0.06
2	Ethylene	1000.000	1044.148	-4.4	100	-0.06
3	Ethane	1000.000	1045.350	-4.5	100	-0.08

Average % D = 4.3

(#) = Out of Range SPCC's out = 0 CCC's out = 0
XY010154.D DGMEE.M Thu Feb 27 13:19:02 2003 EF

Continuing Calibration Summary

Job Number: F16692 **Sample:** GXY235-ECC233
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** XY010224.D
Project: Camp Lejeune-SE

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\2\DATA\022703\XY010224.D Vial: 100
Acq On : 27 Feb 2003 12:56 pm Operator: ClaireV
Sample : ecc233-500 Inst : VOA5
Misc : gc2360,gxy235,,,,,1 Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\HPCHEM\2\METHODS\DGMEE.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Wed Feb 26 13:08:09 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	Methane	500.000	567.528	-13.5	105	0.00
2	Ethylene	500.000	552.752	-10.6	102	-0.02
3	Ethane	500.000	546.464	-9.3	101	-0.03

Average % D = 11.1

(#) = Out of Range SPCC's out = 0 CCC's out = 0
XY010153.D DGMEE.M Thu Feb 27 13:18:38 2003 EF

Initial Calibration Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample: GQR623-ICC623
Lab FileID: QR015958.D

Response Factor Report VOA3

Method : C:\HPCHEM\1\METHODS\QR0227.M (Chemstation Integrator)
Title : EPA 601/602 & SWA 5030B/8021B
Last Update : Fri Feb 28 15:05:24 2003
Response via : Initial Calibration

Calibration Files
1 =QR015955.D 2 =QR015956.D 3 =QR015957.D
4 =QR015958.D 5 =QR015959.D 6 =QR015960.D

		Compound	1	2	3	4	5	6	Avg	%RSD
1)	I	Fluorobenzene	----------ISTD----------							
2)	c	VINYL CHLORIDE	0.119	0.081	0.086	0.070	0.070	0.066	0.082	23.80#
3)		1,1-Dichloroethene	0.266	0.264	0.289	0.244	0.270	0.271	0.267	5.34
4)		Methyl tert Butyl E	0.283	0.321	0.329	0.257	0.283	0.267	0.290	9.96
5)		trans-1,2-Dichloroe	0.707	0.704	0.841	0.701	0.760	0.730	0.741	7.31
6)		Di-Isopropyl ether	0.350	0.374	0.405	0.338	0.360	0.351	0.363	6.56
7)		cis-1,2-Dichloroeth	0.486	0.533	0.597	0.504	0.547	0.537	0.534	7.15
8)	S	1,1-Dichloropropene	0.586	0.585	0.586	0.579	0.583	0.577	0.583	0.62
9)		Benzene	1.120	1.175	1.308	1.097	1.176	1.153	1.172	6.30
10)		Trichloroethene	0.713	0.728	0.851	0.721	0.793	0.776	0.764	7.02
11)		2-Chloroethylvinyl	0.407	0.541	0.652	0.575	0.636	0.643	0.576	16.19
12)		cis-1,3-Dichloropro		0.365	0.429	0.369	0.402	0.401	0.393	6.75
13)		Toluene	1.294	1.360	1.532	1.286	1.387	1.362	1.370	6.48
14)		trans-1,3-Dichlorop		0.472	0.568	0.501	0.556	0.563	0.532	8.06
15)		Tetrachloroethene	0.618	0.640	0.743	0.627	0.687	0.677	0.665	7.06
16)	S	1-Chloro-4-fluorobe	1.125	1.210	1.273	1.293	1.309	1.322	1.255	5.98
17)		Chlorobenzene	1.718	1.862	2.176	1.894	2.042	2.011	1.950	8.21
18)		Ethylbenzene	1.505	1.601	1.807	1.523	1.624	1.599	1.610	6.69
19)		m,p-Xylene	1.674	1.804	2.061	1.729	1.864	1.805	1.823	7.37
20)		o-Xylene	1.623	1.747	1.972	1.650	1.775	1.727	1.749	7.07
21)		1,3-Dichlorobenzene	1.365	1.601	2.059	1.867	2.141	2.177	1.868	17.44
22)		1,4-Dichlorobenzene	1.257	1.491	1.989	1.814	2.119	2.180	1.808	20.27
23)		1,2-Dichlorobenzene	1.248	1.434	1.767	1.577	1.744	1.767	1.589	13.44

Signal #2 Calibration Files
1 =QR015955.D 2 =QR015956.D 3 =QR015957.D
4 =QR015958.D 5 =QR015959.D 6 =QR015960.D

		Compound	1	2	3	4	5	6	Avg	%RSD
25)	I	Bromochloromethane	----------ISTD----------							
26)	c	DICHLORODIFLUOROMET	0.089	0.117	0.140	0.122	0.128	0.122	0.120	14.43
27)	c	CHLOROMETHANE	0.491	0.532	0.541	0.458	0.413	0.373	0.468	14.20
28)	c	VINYL CHLORIDE #2	0.209	0.224	0.257	0.207	0.212	0.198	0.218	9.56
29)	c	BROMOMETHANE	0.204	0.261	0.283	0.247	0.248	0.231	0.246	10.93
30)	c	CHLOROETHANE	0.389	0.429	0.445	0.382	0.370	0.343	0.393	9.63
31)	c	TRICHLOROFLUOROMETH	0.126	0.179	0.222	0.192	0.187	0.178	0.181	17.32
32)		1,1-Dichloroethene	0.629	0.696	0.721	0.576	0.570	0.529	0.620	12.27
33)		Methylene Chloride	0.842	0.821	0.714	0.598	0.569	0.533	0.680	19.51
34)		trans-1,2-Dichloroe	0.796	0.852	0.947	0.719	0.705	0.620	0.773	15.12
35)		1,1-Dichloroethane	0.886	0.996	1.034	0.800	0.762	0.692	0.862	15.63
36)		cis-1,2-Dichloroeth	1.091	1.203	1.234	0.972	0.918	0.831	1.041	15.45
37)		Chloroform	1.465	1.526	1.525	1.175	1.086	0.979	1.292	18.72
38)		1,1,1-Trichloroetha	1.136	1.033	1.072	0.804	0.767	0.687	0.917	20.33
39)	S	1,1-Dichloropropene	1.109	1.094	1.091	1.074	1.070	1.073	1.085	1.41

Initial Calibration Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample: GQR623-ICC623
Lab FileID: QR015958.D

40)		Carbon Tetrachlorid	2.240	1.375	1.339	0.987	0.931	0.833	1.284	40.35
41)		1,2-Dichloroethane	1.426	1.409	1.418	1.103	1.020	0.939	1.219	18.35
42)		Trichloroethene #2	1.494	1.516	1.585	1.217	1.139	1.045	1.333	17.01
43)		1,2-Dichloropropane	1.333	1.359	1.366	1.053	0.978	0.896	1.164	18.27
44)		Bromodichloromethan	1.233	1.392	1.439	1.140	1.076	0.996	1.213	14.49
45)		2-Chloroethylvinyl	0.304	0.514	0.598	0.500	0.498	0.477	0.482	20.09
46)		cis-1,3-Dichloropro	1.071	1.290	1.381	1.089	1.027	0.949	1.134	14.57
47)		trans-1,3-Dichlorop	0.890	1.161	1.271	1.053	1.009	0.936	1.053	13.51
48)		1,1,2-Trichloroetha	1.507	1.719	1.761	1.349	1.246	1.150	1.456	17.21
49)		Tetrachloroethene #	1.846	1.810	1.851	1.410	1.306	1.194	1.569	19.10
50)		Dibromochloromethan	0.948	1.221	1.268	1.069	1.033	0.980	1.087	11.98
51)	s	1-Chloro-4-fluorobe	0.783	0.827	0.859	0.870	0.882	0.893	0.852	4.81
52)		Chlorobenzene #2	0.884	0.894	1.009	0.810	0.781	0.727	0.851	11.75
53)		Bromoform	0.614	0.946	1.124	0.934	0.952	0.922	0.915	18.08
54)		1,1,2,2-Tetrachloro	1.702	1.954	1.985	1.516	1.387	1.283	1.638	17.87
55)		1,3-Dichlorobenzene	0.956	1.167	1.388	1.177	1.150	1.087	1.154	12.20
56)		1,4-Dichlorobenzene	0.920	1.144	1.374	1.187	1.173	1.104	1.150	12.72
57)		1,2-Dichlorobenzene	1.124	1.331	1.500	1.227	1.178	1.089	1.242	12.26

Average % RSD = 12.9

(#) = Out of Range

QR0227.M Mon Mar 03 10:10:19 2003 QRXY

Continuing Calibration Summary

Job Number: F16692 **Sample:** GQR627-CC623
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** QR016093.D
Project: Camp Lejeune-SE

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\030403\QR016093.D\FID1B.CH Vial: 21
Signal #2 : C:\HPCHEM\1\DATA\030403\QR016093.D\AIB2A.CH
Acq On : 4 Mar 2003 8:37 pm Operator: BarbaraM
Sample : CC623-20 Inst : VOA3
Misc : gc2368,gqr627,,,,, Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: ELCD.E

Method : C:\HPCHEM\1\METHODS\QR0227.M (Chemstation Integrator)
Title : EPA 601/602 & SWA 5030B/8021B
Last Update : Fri Feb 28 10:40:54 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	20.000	20.000	0.0	118	0.00
2	c	VINYL CHLORIDE	20.000	23.521	-17.6	144	-0.04
3		1,1-Dichloroethene	20.000	19.106	4.5	123	0.04
4		Methyl tert Butyl Ether	40.000	35.939	10.2	120	0.02
5		trans-1,2-Dichloroethene	20.000	18.228	8.9	114	0.02
6		Di-Isopropyl ether	20.000	18.957	5.2	120	0.02
7		cis-1,2-Dichloroethene	20.000	19.353	3.2	121	0.01
8	S	1,1-Dichloropropene	20.000	19.300	3.5	115	0.00
9		Benzene	40.000	38.461	3.8	121	0.00
10		Trichloroethene	20.000	19.215	3.9	120	0.00
11		2-Chloroethylvinyl ether	20.000	18.340	8.3	114	0.00
12		cis-1,3-Dichloropropene	20.000	18.472	7.6	116	0.00
13		Toluene	40.000	38.376	4.1	121	0.00
14		trans-1,3-Dichloropropene	20.000	18.427	7.9	115	-0.01
15		Tetrachloroethene	20.000	19.415	2.9	122	-0.01
16	S	1-Chloro-4-fluorobenzene	20.000	21.250	-6.3	122	-0.02
17		Chlorobenzene	20.000	19.463	2.7	118	0.00
18		Ethylbenzene	40.000	38.444	3.9	120	-0.02
19		m,p-Xylene	80.000	77.420	3.2	121	-0.02
20		o-Xylene	40.000	38.769	3.1	121	-0.02
21		1,3-Dichlorobenzene	20.000	18.905	5.5	118	-0.02
22		1,4-Dichlorobenzene	20.000	18.860	5.7	118	-0.02
23		1,2-Dichlorobenzene	20.000	19.085	4.6	118	-0.02

Signal #2

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
25	I	Bromochloromethane	20.000	20.000	0.0	100	0.00
26	c	DICHLORODIFLUOROMETHANE	20.000	18.805	6.0	99	0.02
27	c	CHLOROMETHANE	20.000	20.057	-0.3	102	0.02
28	c	VINYL CHLORIDE #2	20.000	25.945	-29.7#	135	-0.05
29	c	BROMOMETHANE	20.000	20.259	-1.3	106	0.03
30	c	CHLOROETHANE	20.000	20.932	-4.7	108	0.04
31	c	TRICHLOROFLUOROMETHANE	20.000	22.657	-13.3	115	0.05
32		1,1-Dichloroethene #2	20.000	20.349	-1.7	108	0.04
33		Methylene Chloride	20.000	20.091	-0.5	105	0.03
34		trans-1,2-Dichloroethene #2	20.000	18.683	6.6	101	0.02
35		1,1-Dichloroethane	20.000	19.955	0.2	106	0.02

Continuing Calibration Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample: GQR627-CC623
Lab FileID: QR016093.D

36		cis-1,2-Dichloroethene #2	20.000	19.775	1.1	104	0.01
37		Chloroform	20.000	20.062	-0.3	105	0.01
38		1,1,1-Trichloroethane	20.000	19.698	1.5	106	0.00
39	S	1,1-Dichloropropene #2	20.000	20.115	-0.6	102	0.00
40		Carbon Tetrachloride	20.000	19.682	1.6	106	0.00
41		1,2-Dichloroethane	20.000	20.381	-1.9	106	0.00
42		Trichloroethene #2	20.000	19.911	0.4	105	0.00
43		1,2-Dichloropropane	20.000	20.082	-0.4	105	0.00
44		Bromodichloromethane	20.000	19.693	1.5	103	0.00
45		2-Chloroethylvinyl ether #2	20.000	20.322	-1.6	98	0.00
46		cis-1,3-Dichloropropene #2	20.000	19.381	3.1	102	0.00
47		trans-1,3-Dichloropropene #	20.000	19.217	3.9	100	-0.01
48		1,1,2-Trichloroethane	20.000	20.419	-2.1	107	-0.01
49		Tetrachloroethene #2	20.000	20.165	-0.8	106	-0.01
50		Dibromochloromethane	20.000	19.851	0.7	103	-0.01
51	s	1-Chloro-4-fluorobenzene #2	20.000	21.675	-8.4	106	-0.02
52		Chlorobenzene #2	20.000	19.783	1.1	103	-0.02
53		Bromoform	20.000	20.417	-2.1	100	-0.02
54		1,1,2,2-Tetrachloroethane	20.000	20.691	-3.5	107	-0.02
55		1,3-Dichlorobenzene #2	20.000	19.775	1.1	102	-0.02
56		1,4-Dichlorobenzene #2	20.000	19.969	0.2	103	-0.02
57		1,2-Dichlorobenzene #2	20.000	19.831	0.8	103	-0.02

Average % D = 4.3

(#) = Out of Range SPCC's out = 0 CCC's out = 1

QR015958.D QR0227.M Wed Mar 05 14:13:38 2003 QRXY

Continuing Calibration Summary

Job Number: F16692 **Sample:** GQR628-CC623
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** QR016103.D
Project: Camp Lejeune-SE

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\030403\QR016103.D\FID1B.CH Vial: 30
Signal #2 : C:\HPCHEM\1\DATA\030403\QR016103.D\AIB2A.CH
Acq On : 5 Mar 2003 1:16 am Operator: BarbaraM
Sample : CC623-20 Inst : VOA3
Misc : gc2370,gqr628,,,,, Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: ELCD.E

Method : C:\HPCHEM\1\METHODS\QR0227.M (Chemstation Integrator)
Title : EPA 601/602 & SWA 5030B/8021B
Last Update : Fri Feb 28 10:40:54 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	20.000	20.000	0.0	119	0.00
2	c	VINYL CHLORIDE	20.000	23.054	-15.3	143	-0.04
3		1,1-Dichloroethene	20.000	19.268	3.7	125	0.04
4		Methyl tert Butyl Ether	40.000	37.840	5.4	127	0.03
5		trans-1,2-Dichloroethene	20.000	19.459	2.7	122	0.02
6		Di-Isopropyl ether	20.000	20.204	-1.0	129	0.02
7		cis-1,2-Dichloroethene	20.000	20.472	-2.4	129	0.01
8	S	1,1-Dichloropropene	20.000	19.409	3.0	116	0.00
9		Benzene	40.000	40.389	-1.0	128	0.00
10		Trichloroethene	20.000	19.904	0.5	125	0.00
11		2-Chloroethylvinyl ether	20.000	19.037	4.8	119	-0.01
12		cis-1,3-Dichloropropene	20.000	19.357	3.2	123	-0.01
13		Toluene	40.000	40.391	-1.0	128	-0.01
14		trans-1,3-Dichloropropene	20.000	19.181	4.1	121	-0.01
15		Tetrachloroethene	20.000	19.553	2.2	123	-0.02
16	S	1-Chloro-4-fluorobenzene	20.000	21.302	-6.5	123	-0.02
17		Chlorobenzene	20.000	20.618	-3.1	126	0.00
18		Ethylbenzene	40.000	40.090	-0.2	126	-0.02
19		m,p-Xylene	80.000	80.567	-0.7	126	-0.02
20		o-Xylene	40.000	40.579	-1.4	128	-0.02
21		1,3-Dichlorobenzene	20.000	20.125	-0.6	127	-0.03
22		1,4-Dichlorobenzene	20.000	20.187	-0.9	128	-0.03
23		1,2-Dichlorobenzene	20.000	20.277	-1.4	127	-0.03

Signal #2

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
25	I	Bromochloromethane	20.000	20.000	0.0	99	0.00
26	c	DICHLORODIFLUOROMETHANE	20.000	18.293	8.5	96	0.01
27	c	CHLOROMETHANE	20.000	17.842	10.8	92	0.02
28	c	VINYL CHLORIDE #2	20.000	25.315	-26.6#	131	-0.04
29	c	BROMOMETHANE	20.000	19.785	1.1	103	0.04
30	c	CHLOROETHANE	20.000	20.313	-1.6	104	0.04
31	c	TRICHLOROFLUOROMETHANE	20.000	22.173	-10.9	112	0.06
32		1,1-Dichloroethene #2	20.000	20.394	-2.0	107	0.04
33		Methylene Chloride	20.000	22.237	-11.2	114	0.03
34		trans-1,2-Dichloroethene #2	20.000	20.021	-0.1	107	0.02
35		1,1-Dichloroethane	20.000	20.854	-4.3	109	0.02

Continuing Calibration Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample: GQR628-CC623
Lab FileID: QR016103.D

36		cis-1,2-Dichloroethene #2	20.000	20.937	-4.7	109	0.01
37		Chloroform	20.000	21.099	-5.5	109	0.01
38		1,1,1-Trichloroethane	20.000	20.107	-0.5	107	0.00
39	S	1,1-Dichloropropene #2	20.000	20.000	0.0	100	0.00
40		Carbon Tetrachloride	20.000	19.819	0.9	106	0.00
41		1,2-Dichloroethane	20.000	21.376	-6.9	110	0.00
42		Trichloroethene #2	20.000	20.513	-2.6	107	0.00
43		1,2-Dichloropropane	20.000	21.024	-5.1	109	0.00
44		Bromodichloromethane	20.000	20.700	-3.5	107	0.00
45		2-Chloroethylvinyl ether #2	20.000	21.118	-5.6	101	0.00
46		cis-1,3-Dichloropropene #2	20.000	20.118	-0.6	104	-0.01
47		trans-1,3-Dichloropropene #	20.000	19.981	0.1	103	-0.01
48		1,1,2-Trichloroethane	20.000	21.310	-6.5	110	-0.02
49		Tetrachloroethene #2	20.000	20.131	-0.7	105	-0.02
50		Dibromochloromethane	20.000	20.885	-4.4	107	-0.02
51	s	1-Chloro-4-fluorobenzene #2	20.000	21.810	-9.0	106	-0.02
52		Chlorobenzene #2	20.000	20.622	-3.1	107	-0.02
53		Bromoform	20.000	21.386	-6.9	104	-0.02
54		1,1,2,2-Tetrachloroethane	20.000	21.193	-6.0	109	-0.02
55		1,3-Dichlorobenzene #2	20.000	20.606	-3.0	105	-0.02
56		1,4-Dichlorobenzene #2	20.000	20.941	-4.7	107	-0.03
57		1,2-Dichlorobenzene #2	20.000	20.939	-4.7	108	-0.03

Average % D = 4.2

(#) = Out of Range SPCC's out = 0 CCC's out = 1

QR015958.D QR0227.M Wed Mar 05 14:13:40 2003 QRXY

Continuing Calibration Summary

Job Number: F16692 **Sample:** GQR628-CC623
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** QR016113.D
Project: Camp Lejeune-SE

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\030403\QR016113.D\FID1B.CH Vial: 39
Signal #2 : C:\HPCHEM\1\DATA\030403\QR016113.D\AIB2A.CH
Acq On : 5 Mar 2003 5:49 am Operator: BarbaraM
Sample : CC623-35 Inst : VOA3
Misc : gc2370,gqr628,,,,, Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: ELCD.E

Method : C:\HPCHEM\1\METHODS\QR0227.M (Chemstation Integrator)
Title : EPA 601/602 & SWA 5030B/8021B
Last Update : Wed Mar 05 10:41:57 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	20.000	20.000	0.0	118	0.00
2	c	VINYL CHLORIDE	35.000	31.875	8.9	109	-0.03
3		1,1-Dichloroethene	35.000	31.135	11.0	104	0.04
4		Methyl tert Butyl Ether	70.000	69.571	0.6	121	0.03
5		trans-1,2-Dichloroethene	35.000	30.873	11.8	102	0.02
6		Di-Isopropyl ether	35.000	34.885	0.3	119	0.02
7		cis-1,2-Dichloroethene	35.000	34.827	0.5	115	0.02
8	S	1,1-Dichloropropene	20.000	19.289	3.6	114	0.01
9		Benzene	70.000	67.134	4.1	113	0.00
10		Trichloroethene	35.000	33.435	4.5	109	0.00
11		2-Chloroethylvinyl ether	35.000	31.528	9.9	104	0.00
12		cis-1,3-Dichloropropene	35.000	32.736	6.5	108	0.00
13		Toluene	70.000	67.034	4.2	112	0.00
14		trans-1,3-Dichloropropene	35.000	33.175	5.2	107	0.00
15		Tetrachloroethene	35.000	32.223	7.9	106	0.00
16	S	1-Chloro-4-fluorobenzene	20.000	21.437	-7.2	122	-0.01
17		Chlorobenzene	35.000	35.876	-2.5	116	0.00
18		Ethylbenzene	70.000	66.181	5.5	111	-0.01
19		m,p-Xylene	140.000	132.704	5.2	110	-0.01
20		o-Xylene	70.000	67.422	3.7	112	-0.01
21		1,3-Dichlorobenzene	35.000	34.169	2.4	112	-0.02
22		1,4-Dichlorobenzene	35.000	34.407	1.7	113	-0.02
23		1,2-Dichlorobenzene	35.000	34.794	0.6	116	-0.02

Signal #2

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
25	I	Bromochloromethane	20.000	20.000	0.0	98	0.01
26	c	DICHLORODIFLUOROMETHANE	35.000	29.751	15.0	82	0.02
27	c	CHLOROMETHANE	35.000	36.319	-3.8	102	0.02
28	c	VINYL CHLORIDE #2	35.000	39.031	-11.5	106	-0.04
29	c	BROMOMETHANE	35.000	34.615	1.1	95	0.03
30	c	CHLOROETHANE	35.000	34.549	1.3	96	0.04
31	c	TRICHLOROFLUOROMETHANE	35.000	35.525	-1.5	99	0.06
32		1,1-Dichloroethene #2	35.000	32.556	7.0	92	0.04
33		Methylene Chloride	35.000	35.673	-1.9	100	0.04
34		trans-1,2-Dichloroethene #2	35.000	31.864	9.0	89	0.02
35		1,1-Dichloroethane	35.000	34.900	0.3	98	0.02

Continuing Calibration Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample: GQR628-CC623
Lab FileID: QR016113.D

36		cis-1,2-Dichloroethene #2	35.000	35.281	-0.8	99	0.02
37		Chloroform	35.000	35.229	-0.7	100	0.02
38		1,1,1-Trichloroethane	35.000	32.230	7.9	92	0.01
39	S	1,1-Dichloropropene #2	20.000	20.147	-0.7	100	0.00
40		Carbon Tetrachloride	35.000	31.510	10.0	92	0.00
41		1,2-Dichloroethane	35.000	35.982	-2.8	102	0.00
42		Trichloroethene #2	35.000	33.626	3.9	96	0.00
43		1,2-Dichloropropane	35.000	35.199	-0.6	100	0.00
44		Bromodichloromethane	35.000	34.726	0.8	98	0.00
45		2-Chloroethylvinyl ether #2	35.000	33.863	3.2	91	0.00
46		cis-1,3-Dichloropropene #2	35.000	33.190	5.2	95	0.00
47		trans-1,3-Dichloropropene #	35.000	33.106	5.4	93	0.00
48		1,1,2-Trichloroethane	35.000	34.909	0.3	100	0.00
49		Tetrachloroethene #2	35.000	31.824	9.1	93	0.00
50		Dibromochloromethane	35.000	34.300	2.0	97	-0.01
51	s	1-Chloro-4-fluorobenzene #2	20.000	22.283	-11.4	105	-0.01
52		Chlorobenzene #2	35.000	34.915	0.2	98	-0.01
53		Bromoform	35.000	34.053	2.7	91	-0.02
54		1,1,2,2-Tetrachloroethane	35.000	32.975	5.8	96	-0.02
55		1,3-Dichlorobenzene #2	35.000	34.908	0.3	97	-0.02
56		1,4-Dichlorobenzene #2	35.000	35.449	-1.3	98	-0.02
57		1,2-Dichlorobenzene #2	35.000	35.419	-1.2	99	-0.02

Average % D = 4.4

(#) = Out of Range SPCC's out = 0 CCC's out = 0

QR015959.D QR0227.M Wed Mar 05 14:23:49 2003 QRXY

Continuing Calibration Summary

Job Number: F16692 **Sample:** GQR628-ECC623
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** QR016118.D
Project: Camp Lejeune-SE

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\030403\QR016118.D\FID1B.CH Vial: 44
Signal #2 : C:\HPCHEM\1\DATA\030403\QR016118.D\AIB2A.CH
Acq On : 5 Mar 2003 8:59 am Operator: BarbaraM
Sample : ECC623-35 Inst : VOA3
Misc : gc2370,gqr628,,,,, Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: ELCD.E

Method : C:\HPCHEM\1\METHODS\QR0227.M (Chemstation Integrator)
Title : EPA 601/602 & SWA 5030B/8021B
Last Update : Wed Mar 05 10:41:57 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	20.000	20.000	0.0	119	0.00
2	c	VINYL CHLORIDE	35.000	34.108	2.5	116	0.00
3		1,1-Dichloroethene	35.000	32.786	6.3	111	0.03
4		Methyl tert Butyl Ether	70.000	64.933	7.2	113	0.02
5		trans-1,2-Dichloroethene	35.000	32.744	6.4	109	0.02
6		Di-Isopropyl ether	35.000	34.402	1.7	118	0.02
7		cis-1,2-Dichloroethene	35.000	35.292	-0.8	117	0.01
8	S	1,1-Dichloropropene	20.000	19.234	3.8	114	0.00
9		Benzene	70.000	68.305	2.4	116	0.00
10		Trichloroethene	35.000	34.103	2.6	112	0.00
11		2-Chloroethylvinyl ether	35.000	32.770	6.4	109	0.00
12		cis-1,3-Dichloropropene	35.000	32.372	7.5	108	0.00
13		Toluene	70.000	69.044	1.4	116	0.00
14		trans-1,3-Dichloropropene	35.000	33.052	5.6	108	0.00
15		Tetrachloroethene	35.000	33.344	4.7	110	-0.01
16	S	1-Chloro-4-fluorobenzene	20.000	21.559	-7.8	123	-0.02
17		Chlorobenzene	35.000	35.541	-1.5	116	0.00
18		Ethylbenzene	70.000	67.534	3.5	114	-0.02
19		m,p-Xylene	140.000	136.995	2.1	114	-0.02
20		o-Xylene	70.000	68.474	2.2	115	-0.02
21		1,3-Dichlorobenzene	35.000	34.395	1.7	114	-0.02
22		1,4-Dichlorobenzene	35.000	34.533	1.3	114	-0.02
23		1,2-Dichlorobenzene	35.000	34.600	1.1	116	-0.02

Signal #2

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
25	I	Bromochloromethane	20.000	20.000	0.0	97	0.00
26	c	DICHLORODIFLUOROMETHANE	35.000	31.725	9.4	87	0.01
27	c	CHLOROMETHANE	35.000	36.111	-3.2	101	0.02
28	c	VINYL CHLORIDE #2	35.000	36.375	-3.9	100	-0.02
29	c	BROMOMETHANE	35.000	35.007	-0.0	96	0.03
30	c	CHLOROETHANE	35.000	35.599	-1.7	99	0.03
31	c	TRICHLOROFLUOROMETHANE	35.000	38.473	-9.9	106	0.05
32		1,1-Dichloroethene #2	35.000	34.014	2.8	95	0.03
33		Methylene Chloride	35.000	36.011	-2.9	101	0.03
34		trans-1,2-Dichloroethene #2	35.000	33.657	3.8	93	0.02
35		1,1-Dichloroethane	35.000	35.477	-1.4	99	0.02

Continuing Calibration Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample: GQR628-ECC623
Lab FileID: QR016118.D

36		cis-1,2-Dichloroethene #2	35.000	35.334	-1.0	99	0.01
37		Chloroform	35.000	35.363	-1.0	100	0.00
38		1,1,1-Trichloroethane	35.000	34.192	2.3	96	0.00
39	S	1,1-Dichloropropene #2	20.000	20.062	-0.3	99	0.00
40		Carbon Tetrachloride	35.000	33.302	4.9	95	0.00
41		1,2-Dichloroethane	35.000	35.938	-2.7	101	0.00
42		Trichloroethene #2	35.000	33.903	3.1	97	0.00
43		1,2-Dichloropropane	35.000	35.057	-0.2	99	0.00
44		Bromodichloromethane	35.000	34.409	1.7	97	0.00
45		2-Chloroethylvinyl ether #2	35.000	35.041	-0.1	94	0.00
46		cis-1,3-Dichloropropene #2	35.000	32.511	7.1	93	0.00
47		trans-1,3-Dichloropropene #	35.000	32.744	6.4	93	0.00
48		1,1,2-Trichloroethane	35.000	35.605	-1.7	101	0.00
49		Tetrachloroethene #2	35.000	32.885	6.0	95	-0.01
50		Dibromochloromethane	35.000	34.824	0.5	98	-0.02
51	s	1-Chloro-4-fluorobenzene #2	20.000	22.115	-10.6	104	-0.02
52		Chlorobenzene #2	35.000	35.020	-0.1	98	-0.02
53		Bromoform	35.000	34.805	0.6	93	-0.02
54		1,1,2,2-Tetrachloroethane	35.000	34.684	0.9	99	-0.02
55		1,3-Dichlorobenzene #2	35.000	34.620	1.1	96	-0.02
56		1,4-Dichlorobenzene #2	35.000	35.266	-0.8	97	-0.02
57		1,2-Dichlorobenzene #2	35.000	34.636	1.0	97	-0.02

Average % D = 3.2

(#) = Out of Range SPCC's out = 0 CCC's out = 0

QR015959.D QR0227.M Wed Mar 05 14:23:51 2003 QRXY

Continuing Calibration Summary

Job Number: F16692 **Sample:** GQR630-CC623
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** QR016153.D
Project: Camp Lejeune-SE

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\030503\QR016153.D\FID1B.CH Vial: 33
Signal #2 : C:\HPCHEM\1\DATA\030503\QR016153.D\AIB2A.CH
Acq On : 6 Mar 2003 10:03 am Operator: RachidA
Sample : CC623-35 Inst : VOA3
Misc : GC2375,GQR630,,,,, Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: ELCD.E

Method : C:\HPCHEM\1\METHODS\QR0227.M (Chemstation Integrator)
Title : EPA 601/602 & SWA 5030B/8021B
Last Update : Fri Feb 28 10:40:54 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	20.000	20.000	0.0	117	-0.02
2	c	VINYL CHLORIDE	35.000	32.595	6.9	110	-0.03
3		1,1-Dichloroethene	35.000	34.856	0.4	116	0.02
4		Methyl tert Butyl Ether	70.000	66.676	4.7	114	0.01
5		trans-1,2-Dichloroethene	35.000	35.790	-2.3	117	0.01
6		Di-Isopropyl ether	35.000	35.335	-1.0	119	0.00
7		cis-1,2-Dichloroethene	35.000	36.920	-5.5	120	0.00
8	S	1,1-Dichloropropene	20.000	19.069	4.7	112	-0.02
9		Benzene	70.000	71.514	-2.2	119	-0.02
10		Trichloroethene	35.000	36.154	-3.3	116	-0.02
11		2-Chloroethylvinyl ether	35.000	34.042	2.7	112	-0.03
12		cis-1,3-Dichloropropene	35.000	32.064	8.4	105	-0.03
13		Toluene	70.000	72.039	-2.9	119	-0.03
14		trans-1,3-Dichloropropene	35.000	33.218	5.1	106	-0.03
15		Tetrachloroethene	35.000	35.676	-1.9	116	-0.04
16	S	1-Chloro-4-fluorobenzene	20.000	21.610	-8.0	121	-0.04
17		Chlorobenzene	35.000	36.293	-3.7	116	-0.02
18		Ethylbenzene	70.000	70.993	-1.4	118	-0.04
19		m,p-Xylene	140.000	142.666	-1.9	117	-0.03
20		o-Xylene	70.000	71.344	-1.9	118	-0.03
21		1,3-Dichlorobenzene	35.000	35.273	-0.8	115	-0.03
22		1,4-Dichlorobenzene	35.000	35.373	-1.1	115	-0.03
23		1,2-Dichlorobenzene	35.000	36.037	-3.0	119	-0.03

Signal #2

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
25	I	Bromochloromethane	20.000	20.000	0.0	103	-0.01
26	c	DICHLORODIFLUOROMETHANE	35.000	28.109	19.7	81	0.00
27	c	CHLOROMETHANE	35.000	30.017	14.2	92	0.01
28	c	VINYL CHLORIDE #2	35.000	34.575	1.2	100	-0.04
29	c	BROMOMETHANE	35.000	33.471	4.4	97	0.02
30	c	CHLOROETHANE	35.000	33.623	3.9	99	0.03
31	c	TRICHLOROFLUOROMETHANE	35.000	39.158	-11.9	113	0.04
32		1,1-Dichloroethene #2	35.000	36.035	-3.0	105	0.02
33		Methylene Chloride	35.000	37.099	-6.0	109	0.02
34		trans-1,2-Dichloroethene #2	35.000	37.493	-7.1	106	0.01
35		1,1-Dichloroethane	35.000	37.739	-7.8	109	0.00

Continuing Calibration Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample: GQR630-CC623
Lab FileID: QR016153.D

36		cis-1,2-Dichloroethene #2	35.000	37.628	-7.5	109	0.00
37		Chloroform	35.000	37.759	-7.9	110	0.00
38		1,1,1-Trichloroethane	35.000	37.411	-6.9	108	-0.01
39	S	1,1-Dichloropropene #2	20.000	19.899	0.5	103	-0.02
40		Carbon Tetrachloride	35.000	37.182	-6.2	108	-0.02
41		1,2-Dichloroethane	35.000	37.929	-8.4	111	-0.02
42		Trichloroethene #2	35.000	37.055	-5.9	109	-0.02
43		1,2-Dichloropropane	35.000	36.945	-5.6	109	-0.02
44		Bromodichloromethane	35.000	36.613	-4.6	108	-0.02
45		2-Chloroethylvinyl ether #2	35.000	36.050	-3.0	102	-0.03
46		cis-1,3-Dichloropropene #2	35.000	33.056	5.6	99	-0.03
47		trans-1,3-Dichloropropene #	35.000	33.493	4.3	99	-0.03
48		1,1,2-Trichloroethane	35.000	37.978	-8.5	111	-0.03
49		Tetrachloroethene #2	35.000	36.187	-3.4	107	-0.04
50		Dibromochloromethane	35.000	36.938	-5.5	108	-0.04
51	s	1-Chloro-4-fluorobenzene #2	20.000	22.347	-11.7	111	-0.04
52		Chlorobenzene #2	35.000	36.730	-4.9	107	-0.04
53		Bromoform	35.000	37.544	-7.3	106	-0.03
54		1,1,2,2-Tetrachloroethane	35.000	38.371	-9.6	113	-0.03
55		1,3-Dichlorobenzene #2	35.000	36.432	-4.1	106	-0.03
56		1,4-Dichlorobenzene #2	35.000	37.201	-6.3	107	-0.03
57		1,2-Dichlorobenzene #2	35.000	37.285	-6.5	108	-0.03

Average % D = 5.3

(#) = Out of Range SPCC's out = 0 CCC's out = 0

QR015959.D QR0227.M Thu Mar 06 15:59:25 2003 QRXY

Continuing Calibration Summary

Job Number: F16692 **Sample:** GQR630-ECC623
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** QR016159.D
Project: Camp Lejeune-SE

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\030503\QR016159.D\FID1B.CH Vial: 38
Signal #2 : C:\HPCHEM\1\DATA\030503\QR016159.D\AIB2A.CH
Acq On : 6 Mar 2003 1:06 pm Operator: RachidA
Sample : ECC623-35 Inst : VOA3
Misc : GC2375,GQR630,,,,, Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: ELCD.E

Method : C:\HPCHEM\1\METHODS\QR0227.M (Chemstation Integrator)
Title : EPA 601/602 & SWA 5030B/8021B
Last Update : Fri Feb 28 15:05:24 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	20.000	20.000	0.0	117	-0.01
2	c	VINYL CHLORIDE	35.000	31.215	10.8	105	-0.03
3		1,1-Dichloroethene	35.000	33.633	3.9	111	0.01
4		Methyl tert Butyl Ether	70.000	70.653	-0.9	121	0.00
5		trans-1,2-Dichloroethene	35.000	37.115	-6.0	121	0.00
6		Di-Isopropyl ether	35.000	35.679	-1.9	120	0.00
7		cis-1,2-Dichloroethene	35.000	36.717	-4.9	120	0.00
8	S	1,1-Dichloropropene	20.000	19.000	5.0	111	0.00
9		Benzene	70.000	71.292	-1.8	119	-0.01
10		Trichloroethene	35.000	36.074	-3.1	116	-0.01
11		2-Chloroethylvinyl ether	35.000	32.936	5.9	108	-0.02
12		cis-1,3-Dichloropropene	35.000	31.794	9.2	104	-0.02
13		Toluene	70.000	71.546	-2.2	118	-0.02
14		trans-1,3-Dichloropropene	35.000	32.719	6.5	105	-0.02
15		Tetrachloroethene	35.000	35.688	-2.0	115	-0.02
16	S	1-Chloro-4-fluorobenzene	20.000	21.785	-8.9	122	-0.02
17		Chlorobenzene	35.000	36.998	-5.7	118	0.00
18		Ethylbenzene	70.000	70.668	-1.0	117	-0.02
19		m,p-Xylene	140.000	142.645	-1.9	116	-0.02
20		o-Xylene	70.000	70.712	-1.0	116	-0.02
21		1,3-Dichlorobenzene	35.000	35.834	-2.4	117	-0.02
22		1,4-Dichlorobenzene	35.000	35.924	-2.6	117	-0.02
23		1,2-Dichlorobenzene	35.000	35.909	-2.6	118	-0.02

Signal #2

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
25	I	Bromochloromethane	20.000	20.000	0.0	102	0.00
26	c	DICHLORODIFLUOROMETHANE	35.000	28.366	19.0	82	-0.01
27	c	CHLOROMETHANE	35.000	29.796	14.9	92	0.00
28	c	VINYL CHLORIDE #2	35.000	35.558	-1.6	103	-0.05
29	c	BROMOMETHANE	35.000	34.575	1.2	100	0.00
30	c	CHLOROETHANE	35.000	34.391	1.7	101	0.01
31	c	TRICHLOROFLUOROMETHANE	35.000	40.302	-15.1	116	0.02
32		1,1-Dichloroethene #2	35.000	35.183	-0.5	103	0.01
33		Methylene Chloride	35.000	35.457	-1.3	105	0.01
34		trans-1,2-Dichloroethene #2	35.000	39.059	-11.6	109	0.00
35		1,1-Dichloroethane	35.000	37.477	-7.1	109	0.00

Continuing Calibration Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample: GQR630-ECC623
Lab FileID: QR016159.D

36		cis-1,2-Dichloroethene #2	35.000	37.505	-7.2	108	0.00
37		Chloroform	35.000	37.465	-7.0	109	0.00
38		1,1,1-Trichloroethane	35.000	37.093	-6.0	107	0.00
39	S	1,1-Dichloropropene #2	20.000	19.931	0.3	103	-0.01
40		Carbon Tetrachloride	35.000	37.198	-6.3	108	-0.01
41		1,2-Dichloroethane	35.000	37.777	-7.9	111	-0.01
42		Trichloroethene #2	35.000	36.869	-5.3	108	-0.01
43		1,2-Dichloropropane	35.000	36.761	-5.0	108	-0.01
44		Bromodichloromethane	35.000	36.626	-4.6	107	-0.01
45		2-Chloroethylvinyl ether #2	35.000	34.989	0.0	99	-0.02
46		cis-1,3-Dichloropropene #2	35.000	32.608	6.8	98	-0.02
47		trans-1,3-Dichloropropene #	35.000	32.956	5.8	98	-0.02
48		1,1,2-Trichloroethane	35.000	37.521	-7.2	110	-0.02
49		Tetrachloroethene #2	35.000	36.131	-3.2	107	-0.02
50		Dibromochloromethane	35.000	36.576	-4.5	107	-0.02
51	s	1-Chloro-4-fluorobenzene #2	20.000	22.316	-11.6	110	-0.02
52		Chlorobenzene #2	35.000	36.891	-5.4	107	-0.02
53		Bromoform	35.000	37.225	-6.4	105	-0.03
54		1,1,2,2-Tetrachloroethane	35.000	37.402	-6.9	110	-0.02
55		1,3-Dichlorobenzene #2	35.000	36.880	-5.4	107	-0.02
56		1,4-Dichlorobenzene #2	35.000	37.610	-7.5	108	-0.02
57		1,2-Dichlorobenzene #2	35.000	37.251	-6.4	108	-0.02

Average % D = 5.4

(#) = Out of Range SPCC's out = 0 CCC's out = 0

QR015959.D QR0227.M Thu Mar 06 13:53:45 2003 QRXY

Continuing Calibration Summary

Job Number: F16692 **Sample:** GQR629-CC623
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** QR016120.D
Project: Camp Lejeune-SE

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\030503\QR016120.D\FID1B.CH Vial: 44
Signal #2 : C:\HPCHEM\1\DATA\030503\QR016120.D\AIB2A.CH
Acq On : 5 Mar 2003 8:59 am Operator: RachidA
Sample : CC623-35 Inst : VOA3
Misc : gc2370,gqr629,,,,, Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: ELCD.E

Method : C:\HPCHEM\1\METHODS\QR0227.M (Chemstation Integrator)
Title : EPA 601/602 & SWA 5030B/8021B
Last Update : Fri Feb 28 15:05:24 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	20.000	20.000	0.0	119	0.00
2	c	VINYL CHLORIDE	35.000	34.108	2.5	116	0.00
3		1,1-Dichloroethene	35.000	32.786	6.3	111	0.03
4		Methyl tert Butyl Ether	70.000	64.933	7.2	113	0.02
5		trans-1,2-Dichloroethene	35.000	32.744	6.4	109	0.02
6		Di-Isopropyl ether	35.000	34.402	1.7	118	0.02
7		cis-1,2-Dichloroethene	35.000	35.292	-0.8	117	0.01
8	S	1,1-Dichloropropene	20.000	19.234	3.8	114	0.00
9		Benzene	70.000	68.305	2.4	116	0.00
10		Trichloroethene	35.000	34.103	2.6	112	0.00
11		2-Chloroethylvinyl ether	35.000	32.770	6.4	109	0.00
12		cis-1,3-Dichloropropene	35.000	32.372	7.5	108	0.00
13		Toluene	70.000	69.044	1.4	116	0.00
14		trans-1,3-Dichloropropene	35.000	33.052	5.6	108	0.00
15		Tetrachloroethene	35.000	33.344	4.7	110	-0.01
16	S	1-Chloro-4-fluorobenzene	20.000	21.559	-7.8	123	-0.02
17		Chlorobenzene	35.000	35.541	-1.5	116	0.00
18		Ethylbenzene	70.000	67.534	3.5	114	-0.02
19		m,p-Xylene	140.000	136.995	2.1	114	-0.02
20		o-Xylene	70.000	68.474	2.2	115	-0.02
21		1,3-Dichlorobenzene	35.000	34.395	1.7	114	-0.02
22		1,4-Dichlorobenzene	35.000	34.533	1.3	114	-0.02
23		1,2-Dichlorobenzene	35.000	34.600	1.1	116	-0.02

Signal #2

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
25	I	Bromochloromethane	20.000	20.000	0.0	97	0.00
26	c	DICHLORODIFLUOROMETHANE	35.000	31.725	9.4	87	0.01
27	c	CHLOROMETHANE	35.000	36.111	-3.2	101	0.02
28	c	VINYL CHLORIDE #2	35.000	36.375	-3.9	100	-0.02
29	c	BROMOMETHANE	35.000	35.007	-0.0	96	0.03
30	c	CHLOROETHANE	35.000	35.599	-1.7	99	0.03
31	c	TRICHLOROFLUOROMETHANE	35.000	38.473	-9.9	106	0.05
32		1,1-Dichloroethene #2	35.000	34.014	2.8	95	0.03
33		Methylene Chloride	35.000	36.011	-2.9	101	0.03
34		trans-1,2-Dichloroethene #2	35.000	33.657	3.8	93	0.02
35		1,1-Dichloroethane	35.000	35.477	-1.4	99	0.02

Continuing Calibration Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample: GQR629-CC623
Lab FileID: QR016120.D

36		cis-1,2-Dichloroethene #2	35.000	35.334	-1.0	99	0.01
37		Chloroform	35.000	35.363	-1.0	100	0.00
38		1,1,1-Trichloroethane	35.000	34.192	2.3	96	0.00
39	S	1,1-Dichloropropene #2	20.000	20.062	-0.3	99	0.00
40		Carbon Tetrachloride	35.000	33.302	4.9	95	0.00
41		1,2-Dichloroethane	35.000	35.938	-2.7	101	0.00
42		Trichloroethene #2	35.000	33.903	3.1	97	0.00
43		1,2-Dichloropropane	35.000	35.057	-0.2	99	0.00
44		Bromodichloromethane	35.000	34.409	1.7	97	0.00
45		2-Chloroethylvinyl ether #2	35.000	35.041	-0.1	94	0.00
46		cis-1,3-Dichloropropene #2	35.000	32.511	7.1	93	0.00
47		trans-1,3-Dichloropropene #	35.000	32.744	6.4	93	0.00
48		1,1,2-Trichloroethane	35.000	35.605	-1.7	101	0.00
49		Tetrachloroethene #2	35.000	32.885	6.0	95	-0.01
50		Dibromochloromethane	35.000	34.824	0.5	98	-0.02
51	s	1-Chloro-4-fluorobenzene #2	20.000	22.115	-10.6	104	-0.02
52		Chlorobenzene #2	35.000	35.020	-0.1	98	-0.02
53		Bromoform	35.000	34.805	0.6	93	-0.02
54		1,1,2,2-Tetrachloroethane	35.000	34.684	0.9	99	-0.02
55		1,3-Dichlorobenzene #2	35.000	34.620	1.1	96	-0.02
56		1,4-Dichlorobenzene #2	35.000	35.266	-0.8	97	-0.02
57		1,2-Dichlorobenzene #2	35.000	34.636	1.0	97	-0.02

Average % D = 3.2

(#) = Out of Range SPCC's out = 0 CCC's out = 0

QR015959.D QR0227.M Thu Mar 06 14:06:39 2003 QRXY

Continuing Calibration Summary

Job Number: F16692 **Sample:** GQR629-CC623
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** QR016131.D
Project: Camp Lejeune-SE

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\030503\QR016131.D\FID1B.CH Vial: 12
Signal #2 : C:\HPCHEM\1\DATA\030503\QR016131.D\AIB2A.CH
Acq On : 5 Mar 2003 4:16 pm Operator: RachidA
Sample : CC623-20 Inst : VOA3
Misc : GC2368,GQR629,,,,, Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: ELCD.E

Method : C:\HPCHEM\1\METHODS\QR0227.M (Chemstation Integrator)
Title : EPA 601/602 & SWA 5030B/8021B
Last Update : Fri Feb 28 15:05:24 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	20.000	20.000	0.0	118	-0.03
2	c	VINYL CHLORIDE	20.000	25.453	-27.3#	154	-0.05
3		1,1-Dichloroethene	20.000	20.129	-0.6	129	0.02
4		Methyl tert Butyl Ether	40.000	37.877	5.3	126	0.00
5		trans-1,2-Dichloroethene	20.000	21.231	-6.2	132	0.00
6		Di-Isopropyl ether	20.000	20.587	-2.9	130	0.00
7		cis-1,2-Dichloroethene	20.000	21.301	-6.5	133	0.00
8	S	1,1-Dichloropropene	20.000	19.296	3.5	114	-0.02
9		Benzene	40.000	41.981	-5.0	132	-0.02
10		Trichloroethene	20.000	21.110	-5.5	131	-0.03
11		2-Chloroethylvinyl ether	20.000	19.287	3.6	119	-0.03
12		cis-1,3-Dichloropropene	20.000	20.253	-1.3	127	-0.03
13		Toluene	40.000	41.912	-4.8	131	-0.03
14		trans-1,3-Dichloropropene	20.000	20.476	-2.4	128	-0.03
15		Tetrachloroethene	20.000	21.325	-6.6	133	-0.04
16	S	1-Chloro-4-fluorobenzene	20.000	21.287	-6.4	121	-0.04
17		Chlorobenzene	20.000	21.175	-5.9	128	-0.02
18		Ethylbenzene	40.000	41.954	-4.9	130	-0.04
19		m,p-Xylene	80.000	84.422	-5.5	131	-0.04
20		o-Xylene	40.000	41.884	-4.7	130	-0.04
21		1,3-Dichlorobenzene	20.000	20.728	-3.6	129	-0.03
22		1,4-Dichlorobenzene	20.000	20.842	-4.2	131	-0.03
23		1,2-Dichlorobenzene	20.000	20.708	-3.5	128	-0.03

Signal #2

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
25	I	Bromochloromethane	20.000	20.000	0.0	103	-0.02
26	c	DICHLORODIFLUOROMETHANE	20.000	17.596	12.0	96	0.00
27	c	CHLOROMETHANE	20.000	18.294	8.5	97	0.02
28	c	VINYL CHLORIDE #2	20.000	26.848	-34.2#	144	-0.06
29	c	BROMOMETHANE	20.000	19.449	2.8	105	0.02
30	c	CHLOROETHANE	20.000	19.700	1.5	105	0.03
31	c	TRICHLOROFLUOROMETHANE	20.000	22.829	-14.1	119	0.03
32		1,1-Dichloroethene #2	20.000	20.894	-4.5	114	0.02
33		Methylene Chloride	20.000	21.220	-6.1	114	0.02
34		trans-1,2-Dichloroethene #2	20.000	21.710	-8.6	119	0.00
35		1,1-Dichloroethane	20.000	21.618	-8.1	117	0.00

Continuing Calibration Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample: GQR629-CC623
Lab FileID: QR016131.D

36		cis-1,2-Dichloroethene #2	20.000	21.538	-7.7	116	0.00
37		Chloroform	20.000	21.735	-8.7	117	-0.01
38		1,1,1-Trichloroethane	20.000	21.660	-8.3	118	-0.02
39	S	1,1-Dichloropropene #2	20.000	19.926	0.4	104	-0.02
40		Carbon Tetrachloride	20.000	21.793	-9.0	119	-0.02
41		1,2-Dichloroethane	20.000	21.751	-8.8	116	-0.03
42		Trichloroethene #2	20.000	21.606	-8.0	116	-0.03
43		1,2-Dichloropropane	20.000	21.309	-6.5	114	-0.03
44		Bromodichloromethane	20.000	21.023	-5.1	113	-0.03
45		2-Chloroethylvinyl ether #2	20.000	21.032	-5.2	105	-0.03
46		cis-1,3-Dichloropropene #2	20.000	21.121	-5.6	113	-0.03
47		trans-1,3-Dichloropropene #	20.000	21.025	-5.1	112	-0.03
48		1,1,2-Trichloroethane	20.000	21.805	-9.0	116	-0.04
49		Tetrachloroethene #2	20.000	21.761	-8.8	117	-0.04
50		Dibromochloromethane	20.000	21.315	-6.6	113	-0.04
51	s	1-Chloro-4-fluorobenzene #2	20.000	21.498	-7.5	109	-0.04
52		Chlorobenzene #2	20.000	21.188	-5.9	114	-0.04
53		Bromoform	20.000	22.010	-10.1	111	-0.04
54		1,1,2,2-Tetrachloroethane	20.000	22.152	-10.8	118	-0.04
55		1,3-Dichlorobenzene #2	20.000	21.399	-7.0	113	-0.03
56		1,4-Dichlorobenzene #2	20.000	21.713	-8.6	115	-0.03
57		1,2-Dichlorobenzene #2	20.000	21.150	-5.7	113	-0.03

Average % D = 7.0

(#) = Out of Range SPCC's out = 0 CCC's out = 2

QR015958.D QR0227.M Thu Mar 06 13:53:19 2003 QRXY

Continuing Calibration Summary

Job Number: F16692 **Sample:** GQR629-CC623
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** QR016142.D
Project: Camp Lejeune-SE

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\030503\QR016142.D\FID1B.CH Vial: 22
Signal #2 : C:\HPCHEM\1\DATA\030503\QR016142.D\AIB2A.CH
Acq On : 5 Mar 2003 9:25 pm Operator: RachidA
Sample : CC623-20 Inst : VOA3
Misc : GC2370,GQR629,,,,, Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: ELCD.E

Method : C:\HPCHEM\1\METHODS\QR0227.M (Chemstation Integrator)
Title : EPA 601/602 & SWA 5030B/8021B
Last Update : Fri Feb 28 15:05:24 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	20.000	20.000	0.0	117	-0.02
2	c	VINYL CHLORIDE	20.000	24.165	-20.8#	147	-0.05
3		1,1-Dichloroethene	20.000	20.327	-1.6	131	0.02
4		Methyl tert Butyl Ether	40.000	38.332	4.2	127	0.00
5		trans-1,2-Dichloroethene	20.000	21.027	-5.1	130	0.00
6		Di-Isopropyl ether	20.000	20.548	-2.7	130	0.00
7		cis-1,2-Dichloroethene	20.000	21.317	-6.6	133	0.00
8	S	1,1-Dichloropropene	20.000	19.238	3.8	114	-0.01
9		Benzene	40.000	41.963	-4.9	132	-0.02
10		Trichloroethene	20.000	21.220	-6.1	132	-0.02
11		2-Chloroethylvinyl ether	20.000	19.512	2.4	121	-0.03
12		cis-1,3-Dichloropropene	20.000	19.787	1.1	124	-0.03
13		Toluene	40.000	42.032	-5.1	131	-0.03
14		trans-1,3-Dichloropropene	20.000	19.894	0.5	124	-0.03
15		Tetrachloroethene	20.000	21.157	-5.8	132	-0.03
16	S	1-Chloro-4-fluorobenzene	20.000	21.429	-7.1	122	-0.03
17		Chlorobenzene	20.000	21.216	-6.1	128	-0.01
18		Ethylbenzene	40.000	42.061	-5.2	131	-0.03
19		m,p-Xylene	80.000	84.605	-5.8	131	-0.03
20		o-Xylene	40.000	41.943	-4.9	131	-0.03
21		1,3-Dichlorobenzene	20.000	20.666	-3.3	129	-0.03
22		1,4-Dichlorobenzene	20.000	20.666	-3.3	129	-0.03
23		1,2-Dichlorobenzene	20.000	20.706	-3.5	128	-0.04

Signal #2

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
25	I	Bromochloromethane	20.000	20.000	0.0	102	0.00
26	c	DICHLORODIFLUOROMETHANE	20.000	16.824	15.9	90	0.00
27	c	CHLOROMETHANE	20.000	18.303	8.5	96	0.01
28	c	VINYL CHLORIDE #2	20.000	25.738	-28.7#	137	-0.06
29	c	BROMOMETHANE	20.000	19.432	2.8	103	0.02
30	c	CHLOROETHANE	20.000	19.832	0.8	104	0.03
31	c	TRICHLOROFLUOROMETHANE	20.000	22.420	-12.1	115	0.04
32		1,1-Dichloroethene #2	20.000	21.284	-6.4	114	0.02
33		Methylene Chloride	20.000	21.763	-8.8	114	0.02
34		trans-1,2-Dichloroethene #2	20.000	21.719	-8.6	117	0.00
35		1,1-Dichloroethane	20.000	21.852	-9.3	116	0.00

Continuing Calibration Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample: GQR629-CC623
Lab FileID: QR016142.D

36		cis-1,2-Dichloroethene #2	20.000	21.449	-7.2	113	0.00
37		Chloroform	20.000	21.805	-9.0	115	0.00
38		1,1,1-Trichloroethane	20.000	21.595	-8.0	116	-0.01
39	S	1,1-Dichloropropene #2	20.000	19.918	0.4	102	-0.02
40		Carbon Tetrachloride	20.000	21.976	-9.9	118	-0.02
41		1,2-Dichloroethane	20.000	21.991	-10.0	115	-0.02
42		Trichloroethene #2	20.000	21.715	-8.6	115	-0.02
43		1,2-Dichloropropane	20.000	21.497	-7.5	113	-0.02
44		Bromodichloromethane	20.000	21.228	-6.1	112	-0.03
45		2-Chloroethylvinyl ether #2	20.000	21.151	-5.8	104	-0.03
46		cis-1,3-Dichloropropene #2	20.000	20.670	-3.4	109	-0.03
47		trans-1,3-Dichloropropene #	20.000	20.708	-3.5	109	-0.03
48		1,1,2-Trichloroethane	20.000	22.118	-10.6	116	-0.03
49		Tetrachloroethene #2	20.000	21.757	-8.8	115	-0.03
50		Dibromochloromethane	20.000	21.479	-7.4	112	-0.04
51	s	1-Chloro-4-fluorobenzene #2	20.000	21.827	-9.1	109	-0.03
52		Chlorobenzene #2	20.000	21.510	-7.6	113	-0.03
53		Bromoform	20.000	22.334	-11.7	111	-0.03
54		1,1,2,2-Tetrachloroethane	20.000	22.428	-12.1	117	-0.03
55		1,3-Dichlorobenzene #2	20.000	21.400	-7.0	112	-0.03
56		1,4-Dichlorobenzene #2	20.000	21.858	-9.3	114	-0.03
57		1,2-Dichlorobenzene #2	20.000	21.416	-7.1	112	-0.04

Average % D = 7.1

(#) = Out of Range SPCC's out = 0 CCC's out = 2

QR015958.D QR0227.M Thu Mar 06 13:53:21 2003 QRXY

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries
- Initial and Continuing Calibration Summaries

Blank Spike Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7011-BS	IJ17162.D	1	02/26/03	NJ	02/26/03	OP7011	GIJ816

The QC reported here applies to the following samples: **Method:** EPA 610

F16692-1, F16692-2, F16692-3, F16692-4, F16692-5, F16692-6, F16692-7, F16692-8, F16692-9, F16692-10, F16692-11

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	25	24.1	96	59-114
208-96-8	Acenaphthylene	25	21.7	87	58-109
120-12-7	Anthracene	25	23.7	95	63-110
56-55-3	Benzo(a)anthracene	25	24.2	97	74-111
50-32-8	Benzo(a)pyrene	25	23.6	94	71-110
205-99-2	Benzo(b)fluoranthene	25	24.0	96	75-112
191-24-2	Benzo(g,h,i)perylene	25	22.4	90	66-114
207-08-9	Benzo(k)fluoranthene	25	23.3	93	73-111
218-01-9	Chrysene	25	24.1	96	73-112
53-70-3	Dibenzo(a,h)anthracene	25	22.4	90	67-111
206-44-0	Fluoranthene	25	23.9	96	74-113
86-73-7	Fluorene	25	24.2	97	67-113
193-39-5	Indeno(1,2,3-cd)pyrene	25	22.2	89	68-115
91-20-3	Naphthalene	25	22.6	90	52-113
90-12-0	1-Methylnaphthalene	25	23.6	94	55-117
91-57-6	2-Methylnaphthalene	25	22.5	90	50-115
85-01-8	Phenanthrene	25	23.5	94	70-111
129-00-0	Pyrene	25	24.3	97	73-115

CAS No.	Surrogate Recoveries	BSP	Limits
321-60-8	2-Fluorobiphenyl	94%	41-139%
84-15-1	o-Terphenyl	100%	46-135%

Duplicate Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7011-DUP	IJ17174.D	1	02/26/03	NJ	02/26/03	OP7011	GIJ816
F16692-7 [a]	IJ17173.D	1	02/26/03	NJ	02/26/03	OP7011	GIJ816

The QC reported here applies to the following samples: **Method:** EPA 610

F16692-1, F16692-2, F16692-3, F16692-4, F16692-5, F16692-6, F16692-7, F16692-8, F16692-9, F16692-10, F16692-11

CAS No.	Compound	F16692-7 ug/l	Q	DUP ug/l	Q	RPD	Limits
83-32-9	Acenaphthene	ND		ND		nc	
208-96-8	Acenaphthylene	ND		ND		nc	
120-12-7	Anthracene	ND		ND		nc	
56-55-3	Benzo(a)anthracene	ND		ND		nc	
50-32-8	Benzo(a)pyrene	ND		ND		nc	
205-99-2	Benzo(b)fluoranthene	ND		ND		nc	
191-24-2	Benzo(g,h,i)perylene	ND		ND		nc	
207-08-9	Benzo(k)fluoranthene	ND		ND		nc	
218-01-9	Chrysene	ND		ND		nc	
53-70-3	Dibenzo(a,h)anthracene	ND		ND		nc	
206-44-0	Fluoranthene	ND		ND		nc	
86-73-7	Fluorene	ND		ND		nc	
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ND		nc	
91-20-3	Naphthalene	2.7	J	2.8	J	4	
90-12-0	1-Methylnaphthalene	ND		ND		nc	
91-57-6	2-Methylnaphthalene	ND		ND		nc	
85-01-8	Phenanthrene	ND		ND		nc	
129-00-0	Pyrene	ND		ND		nc	

CAS No.	Surrogate Recoveries	DUP	F16692-7	Limits
321-60-8	2-Fluorobiphenyl	91%	92%	41-139%
84-15-1	o-Terphenyl	99%	101%	46-135%

(a) All hits confirmed by dual column analysis.

Method Blank Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7011-MB	IJ17163.D	1	02/26/03	NJ	02/26/03	OP7011	GIJ816

The QC reported here applies to the following samples: **Method:** EPA 610

F16692-1, F16692-2, F16692-3, F16692-4, F16692-5, F16692-6, F16692-7, F16692-8, F16692-9, F16692-10, F16692-11

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	5.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	ug/l	
120-12-7	Anthracene	ND	5.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	ug/l	
218-01-9	Chrysene	ND	5.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	ug/l	
86-73-7	Fluorene	ND	5.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	ug/l	
129-00-0	Pyrene	ND	5.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
321-60-8	2-Fluorobiphenyl	89%	41-139%
84-15-1	o-Terphenyl	96%	46-135%

Method Blank Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7011-MB	IJ17186.D	1	02/27/03	NJ	02/26/03	OP7011	GIJ817

The QC reported here applies to the following samples: **Method:** EPA 610

F16692-1, F16692-2, F16692-3, F16692-4, F16692-5, F16692-6, F16692-7, F16692-8, F16692-9, F16692-10, F16692-11

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	5.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	ug/l	
120-12-7	Anthracene	ND	5.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	ug/l	
218-01-9	Chrysene	ND	5.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	ug/l	
86-73-7	Fluorene	ND	5.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	ug/l	
129-00-0	Pyrene	ND	5.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
321-60-8	2-Fluorobiphenyl	87%	41-139%
84-15-1	o-Terphenyl	94%	46-135%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7011-MS	IJ17188.D	2	02/27/03	NJ	02/26/03	OP7011	GIJ817
OP7011-MSD	IJ17189.D	2	02/27/03	NJ	02/26/03	OP7011	GIJ817
F16692-6	IJ17181.D	1	02/26/03	NJ	02/26/03	OP7011	GIJ816
F16692-6 [a]	IJ17187.D	2	02/27/03	NJ	02/26/03	OP7011	GIJ817

The QC reported here applies to the following samples: **Method:** EPA 610

F16692-1, F16692-2, F16692-3, F16692-4, F16692-5, F16692-6, F16692-7, F16692-8, F16692-9, F16692-10, F16692-11

CAS No.	Compound	F16692-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		50	49.9	100	45.0	90	10	36-143/21
208-96-8	Acenaphthylene	ND		50	44.5	89	42.6	85	4	59-108/22
120-12-7	Anthracene	ND		50	48.3	97	43.9	88	10	61-113/22
56-55-3	Benzo(a)anthracene	ND		50	49.7	99	47.6	95	4	69-111/17
50-32-8	Benzo(a)pyrene	ND		50	49.9	100	47.6	95	5	71-109/22
205-99-2	Benzo(b)fluoranthene	ND		50	49.2	98	47.1	94	4	63-116/19
191-24-2	Benzo(g,h,i)perylene	ND		50	47.5	95	45.5	91	4	54-123/19
207-08-9	Benzo(k)fluoranthene	ND		50	50.6	101	48.5	97	4	66-114/16
218-01-9	Chrysene	ND		50	50.2	100	48.2	96	4	65-116/15
53-70-3	Dibenzo(a,h)anthracene	ND		50	46.8	94	44.9	90	4	52-130/24
206-44-0	Fluoranthene	ND		50	48.9	98	45.7	91	7	73-113/16
86-73-7	Fluorene	ND		50	47.5	95	45.8	92	4	63-114/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		50	47.4	95	45.3	91	5	43-133/24
91-20-3	Naphthalene	70.1 [b]		50	110	80	99.2	58	10	40-130/27
90-12-0	1-Methylnaphthalene	ND		50	46.2	92	42.3	85	9	50-128/25
91-57-6	2-Methylnaphthalene	ND		50	54.0	108	49.4	99	9	32-148/26
85-01-8	Phenanthrene	ND		50	47.6	95	43.3	87	9	44-136/19
129-00-0	Pyrene	ND		50	49.6	99	46.5	93	6	71-116/16

CAS No.	Surrogate Recoveries	MS	MSD	F16692-6	F16692-6	Limits
321-60-8	2-Fluorobiphenyl	105%	96%	122%	114%	41-139%
84-15-1	o-Terphenyl	99%	91%	103%	104%	46-135%

(a) All hits confirmed by dual column analysis.
(b) Result is from Run #2.

Semivolatile Surrogate Recovery Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Method: EPA 610 **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S2 [a]
F16692-1	IJ17164.D	88.0	97.0
F16692-2	IJ17179.D	113.0	106.0
F16692-2	IJ17165.D	121.0	113.0
F16692-3	IJ17166.D	88.0	89.0
F16692-4	IJ17190.D	0.0* [b]	0.0* [b]
F16692-4	IJ17167.D	198.0* [b]	123.0
F16692-5	IJ17168.D	88.0	91.0
F16692-6	IJ17187.D	114.0	104.0
F16692-6	IJ17181.D	122.0	103.0
F16692-7	IJ17173.D	92.0	101.0
F16692-8	IJ17175.D	94.0	103.0
F16692-9	IJ17176.D	62.0	77.0
F16692-10	IJ17177.D	91.0	98.0
F16692-11	IJ17178.D	92.0	102.0
OP7011-BS	IJ17162.D	94.0	100.0
OP7011-DUP	IJ17174.D	91.0	99.0
OP7011-MB	IJ17163.D	89.0	96.0
OP7011-MB	IJ17186.D	87.0	94.0
OP7011-MS	IJ17188.D	105.0	99.0
OP7011-MSD	IJ17189.D	96.0	91.0

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorobiphenyl	41-139%
S2 = o-Terphenyl	46-135%

(a) Recovery from GC signal #1
(b) Outside control limits due to dilution.

GC Surrogate Retention Time Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Check Std:	GIJ816-CC803	**Injection Date:**	02/26/03
Lab File ID:	IJ17161.D	**Injection Time:**	13:45
Instrument ID:	GCIJ	**Method:**	EPA 610

	S1 [a] **RT**	**S2** [a] **RT**
Check Std	5.87	10.42

Lab Sample ID	**Lab File ID**	**Date Analyzed**	**Time Analyzed**	**S1** [a] **RT**	**S2** [a] **RT**
OP7011-BS	IJ17162.D	02/26/03	14:16	5.87	10.42
OP7011-MB	IJ17163.D	02/26/03	14:44	5.87	10.42
F16692-1	IJ17164.D	02/26/03	15:11	5.87	10.42
F16692-2	IJ17165.D	02/26/03	15:39	5.87	10.41
F16692-3	IJ17166.D	02/26/03	16:06	5.87	10.42
F16692-4	IJ17167.D	02/26/03	16:34	5.86	10.41
F16692-5	IJ17168.D	02/26/03	17:02	5.87	10.42

Surrogate Compounds

S1 = 2-Fluorobiphenyl
S2 = o-Terphenyl

(a) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Check Std:	GIJ816-CC803	**Injection Date:**	02/26/03
Lab File ID:	IJ17172.D	**Injection Time:**	18:52
Instrument ID:	GCIJ	**Method:**	EPA 610

	S1 [a] **RT**	**S1** [b] **RT**	**S2** [a] **RT**	**S2** [b] **RT**
Check Std	5.87	6.75	10.42	11.92

Lab Sample ID	**Lab File ID**	**Date Analyzed**	**Time Analyzed**	**S1** [a] **RT**	**S1** [b] **RT**	**S2** [a] **RT**	**S2** [b] **RT**
F16692-7	IJ17173.D	02/26/03	19:20	5.87		10.42	
OP7011-DUP	IJ17174.D	02/26/03	19:48	5.87		10.42	
F16692-8	IJ17175.D	02/26/03	20:15	5.87		10.42	
F16692-9	IJ17176.D	02/26/03	20:43	5.87		10.42	
F16692-10	IJ17177.D	02/26/03	21:10	5.87		10.42	
F16692-11	IJ17178.D	02/26/03	21:38	5.87		10.42	
F16692-2	IJ17179.D	02/26/03	22:06	5.87		10.42	
F16692-6	IJ17181.D	02/26/03	23:01	5.87		10.42	
GIJ816-ECC803	IJ17182.D	02/26/03	23:28	5.87	6.75	10.42	11.92

Surrogate Compounds

S1 = 2-Fluorobiphenyl
S2 = o-Terphenyl

(a) Retention time from GC signal #1
(b) Retention time from GC signal #2

GC Surrogate Retention Time Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Check Std:	GIJ817-CC803	**Injection Date:**	02/27/03
Lab File ID:	IJ17185.D	**Injection Time:**	09:12
Instrument ID:	GCIJ	**Method:**	EPA 610

	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
Check Std	5.86	6.76	10.41	11.93

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
OP7011-MB	IJ17186.D	02/27/03	09:51	5.86		10.42	
F16692-6	IJ17187.D	02/27/03	10:18	5.87		10.41	
OP7011-MS	IJ17188.D	02/27/03	10:46	5.87		10.41	
OP7011-MSD	IJ17189.D	02/27/03	11:13	5.86		10.41	
F16692-4	IJ17190.D	02/27/03	11:41	0.00		0.00	
GIJ817-ECC803	IJ17191.D	02/27/03	12:33	5.87	6.75	10.42	11.92

Surrogate Compounds

S1 = 2-Fluorobiphenyl
S2 = o-Terphenyl

(a) Retention time from GC signal #1
(b) Retention time from GC signal #2

Initial Calibration Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample: GIJ803-ICC803
Lab FileID: IJ16841.D

Response Factor Report FID 1

Method : C:\HPCHEM\1\METHODS\8100_H2.M (Chemstation Integrator)
Title : PAH's BY EPA 610 OR 8100
Last Update : Wed Jan 22 13:03:50 2003
Response via : Initial Calibration

Calibration Files
5 =IJ16839.D 10 =IJ16840.D 20 =IJ16841.D
30 =IJ16842.D 40 =IJ16843.D 50 =IJ16844.D

	Compound	5	10	20	30	40	50	Avg		%RSD
1)	Naphthalene	2.198	2.287	2.215	2.189	2.176	2.213	2.213	E4	1.77
2)	2-Methyl Naphthalen	2.170	2.263	2.194	2.168	2.158	2.198	2.192	E4	1.75
3)	1-Methyl Naphthalen	2.114	2.201	2.132	2.107	2.098	2.137	2.132	E4	1.73
4) S	2-Fluorobiphenyl	1.862	1.945	1.889	1.874	1.866	1.902	1.890	E4	1.63
5)	Acenaphthylene	2.109	2.218	2.158	2.150	2.141	2.187	2.160	E4	1.76
6)	Acenaphthene	2.157	2.262	2.198	2.188	2.180	2.223	2.201	E4	1.67
7)	Fluorene	2.020	2.162	2.125	2.127	2.125	2.171	2.122	E4	2.54
8)	Phenanthrene	2.142	2.266	2.184	2.187	2.177	2.221	2.196	E4	1.94
9)	Anthracene	2.155	2.272	2.177	2.174	2.156	2.192	2.188	E4	1.99
10) S	O-Terphenyl	2.121	2.207	2.109	2.104	2.085	2.122	2.125	E4	1.99
11)	Fluoranthene	2.185	2.278	2.175	2.178	2.154	2.189	2.193	E4	1.98
12)	Pyrene	2.132	2.232	2.151	2.149	2.128	2.160	2.159	E4	1.75
13)	Benzo(a)Anthracene	2.067	2.179	2.116	2.120	2.111	2.142	2.123	E4	1.74
14)	Chrysene	2.146	2.247	2.161	2.158	2.141	2.169	2.170	E4	1.79
15)	Benzo(b)Fluoranthen	2.079	2.195	2.140	2.158	2.113	2.189	2.146	E4	2.07
16)	Benzo(k)Fluoranthen	2.130	2.240	2.156	2.142	2.141	2.138	2.158	E4	1.90
17)	Benzo(a) Pyrene	2.005	2.129	2.063	2.070	2.062	2.093	2.070	E4	1.98
18)	Indeno(1,2,3-cd)pyr	1.923	2.084	2.034	2.043	2.046	2.082	2.035	E4	2.90
19)	Dibenzo(a,h)anthrac	1.999	2.153	2.091	2.101	2.095	2.127	2.094	E4	2.49
20)	Benzo(g,h,i) Peryle	1.977	2.141	2.088	2.102	2.100	2.131	2.090	E4	2.82

Signal #2 Calibration Files
5 =IJ16839.D 10 =IJ16840.D 20 =IJ16841.D
30 =IJ16842.D 40 =IJ16843.D 50 =IJ16844.D

	Compound	5	10	20	30	40	50	Avg		%RSD
1)	Naphthalene	1.905	1.968	1.899	1.875	1.866	1.899	1.902	E4	1.87
2)	2-Methyl Naphthalen	1.820	1.889	1.820	1.800	1.791	1.824	1.824	E4	1.88
3)	1-Methyl Naphthalen	1.758	1.824	1.758	1.739	1.730	1.763	1.762	E4	1.87
4) S	2-Fluorobiphenyl	1.539	1.605	1.554	1.538	1.533	1.564	1.556	E4	1.74
5)	Acenaphthylene	1.714	1.796	1.745	1.734	1.727	1.765	1.747	E4	1.70
6)	Acenaphthene	1.744	1.823	1.768	1.755	1.749	1.783	1.770	E4	1.66
7)	Fluorene	1.624	1.729	1.689	1.687	1.680	1.714	1.687	E4	2.15
8)	Phenanthrene	1.654	1.753	1.691	1.700	1.688	1.717	1.701	E4	1.94
9)	Anthracene	1.687	1.766	1.695	1.688	1.675	1.704	1.703	E4	1.90
10) S	O-Terphenyl	1.634	1.699	1.647	1.666	1.673	1.718	1.673	E4	1.87
11)	Fluoranthene	1.709	1.778	1.700	1.700	1.683	1.710	1.713	E4	1.93
12)	Pyrene	1.697	1.766	1.689	1.688	1.672	1.698	1.702	E4	1.93
13)	Benzo(a)Anthracene	1.660	1.735	1.669	1.665	1.653	1.677	1.676	E4	1.78
14)	Chrysene	1.673	1.752	1.679	1.672	1.661	1.684	1.687	E4	1.95
15)	Benzo(b)Fluoranthen	1.727	1.747	1.627	1.671	1.632	1.727	1.688	E4	3.10
16)	Benzo(k)Fluoranthen	1.647	1.742	1.669	1.665	1.659	1.669	1.675	E4	2.02
17)	Benzo(a) Pyrene	1.593	1.679	1.616	1.615	1.609	1.631	1.624	E4	1.82
18)	Indeno(1,2,3-cd)pyr	1.527	1.645	1.601	1.632	1.666	1.676	1.625	E4	3.36
19)	Dibenzo(a,h)anthrac	1.613	1.706	1.625	1.613	1.579	1.593	1.622	E4	2.75
20)	Benzo(g,h,i) Peryle	1.585	1.697	1.645	1.646	1.642	1.666	1.647	E4	2.24

Initial Calibration Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample: GIJ803-ICC803
Lab FileID: IJ16841.D

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                                                    Average  % RSD =   2.0
------------------------------------------------------------------------------
(#) = Out of Range

          8100_H2.M         Thu Jan 23 10:48:44 2003
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Continuing Calibration Summary

Job Number: F16692 **Sample:** GIJ816-CC803
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** IJ17161.D
Project: Camp Lejeune-SE

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\0226PAH\IJ17161.D\FID1A.CH Vial: 10
Signal #2 : C:\HPCHEM\1\DATA\0226PAH\IJ17161.D\FID2B.CH
Acq On : 26 Feb 2003 1:45 pm Operator: nareshj
Sample : CC803-30 Inst : FID 1
Misc : op6989,gij816,1000,,,1,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : C:\HPCHEM\1\METHODS\8100_H2.M (Chemstation Integrator)
Title : PAH's BY EPA 610 OR 8100
Last Update : Tue Feb 25 14:02:19 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1		Naphthalene	30.000	31.852	-6.2	107	0.00
2		2-Methyl Naphthalene	30.000	31.939	-6.5	108	0.00
3		1-Methyl Naphthalene	30.000	31.133	-3.8	105	0.00
4	S	2-Fluorobiphenyl	30.000	31.156	-3.9	105	0.00
5		Acenaphthylene	30.000	31.815	-6.1	107	0.00
6		Acenaphthene	30.000	31.453	-4.8	105	0.00
7		Fluorene	30.000	32.811	-9.4	109	0.00
8		Phenanthrene	30.000	31.596	-5.3	106	0.00
9		Anthracene	30.000	31.828	-6.1	107	0.00
10	S	O-Terphenyl	30.000	32.372	-7.9	109	0.00
11		Fluoranthene	30.000	31.586	-5.3	106	0.00
12		Pyrene	30.000	32.311	-7.7	108	0.00
13		Benzo(a)Anthracene	30.000	32.236	-7.5	108	0.00
14		Chrysene	30.000	31.638	-5.5	106	0.00
15		Benzo(b)Fluoranthene	30.000	32.397	-8.0	107	0.00
16		Benzo(k)Fluoranthene	30.000	32.017	-6.7	108	0.00
17		Benzo(a) Pyrene	30.000	32.510	-8.4	108	0.00
18		Indeno(1,2,3-cd)pyrene	30.000	32.651	-8.8	108	0.00
19		Dibenzo(a,h)anthracene	30.000	32.653	-8.8	108	0.00
20		Benzo(g,h,i) Perylene	30.000	32.293	-7.6	107	0.00

Signal #2

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1		Naphthalene	30.000	33.635	-12.1	114	0.00
2		2-Methyl Naphthalene	30.000	33.675	-12.2	114	0.00
3		1-Methyl Naphthalene	30.000	32.861	-9.5	111	0.00
4	S	2-Fluorobiphenyl	30.000	32.536	-8.5	110	0.00
5		Acenaphthylene	30.000	33.323	-11.1	112	0.00
6		Acenaphthene	30.000	33.097	-10.3	111	0.00
7		Fluorene	30.000	33.645	-12.2	112	0.00
8		Phenanthrene	30.000	31.701	-5.7	106	0.00
9		Anthracene	30.000	32.122	-7.1	108	0.00
10	S	O-Terphenyl	30.000	32.548	-8.5	109	0.00
11		Fluoranthene	30.000	32.061	-6.9	108	0.00
12		Pyrene	30.000	32.635	-8.8	110	0.00
13		Benzo(a)Anthracene	30.000	32.198	-7.3	108	0.00
14		Chrysene	30.000	31.830	-6.1	107	0.00
15		Benzo(b)Fluoranthene	30.000	32.149	-7.2	108	0.00

Continuing Calibration Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample: GIJ816-CC803
Lab FileID: IJ17161.D

16	Benzo(k)Fluoranthene	30.000	32.275	-7.6	108	0.01
17	Benzo(a) Pyrene	30.000	32.454	-8.2	109	0.00
18	Indeno(1,2,3-cd)pyrene	30.000	33.311	-11.0	111	0.01
19	Dibenzo(a,h)anthracene	30.000	32.135	-7.1	108	0.01
20	Benzo(g,h,i) Perylene	30.000	32.075	-6.9	107	0.02

Average % D = 7.7

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ16842.D 8100_H2.M Thu Feb 27 10:15:47 2003

Continuing Calibration Summary

Job Number: F16692 **Sample:** GIJ816-CC803
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** IJ17172.D
Project: Camp Lejeune-SE

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\0226PAH\IJ17172.D\FID1A.CH Vial: 21
Signal #2 : C:\HPCHEM\1\DATA\0226PAH\IJ17172.D\FID2B.CH
Acq On : 26 Feb 2003 6:52 pm Operator: nareshj
Sample : CC803-20 Inst : FID 1
Misc : op7011,gij816,1000,,,1,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : C:\HPCHEM\1\METHODS\8100_H2.M (Chemstation Integrator)
Title : PAH's BY EPA 610 OR 8100
Last Update : Tue Feb 25 14:02:19 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1		Naphthalene	20.000	21.071	-5.4	105	0.00
2		2-Methyl Naphthalene	20.000	21.034	-5.2	105	0.00
3		1-Methyl Naphthalene	20.000	20.487	-2.4	102	0.00
4	S	2-Fluorobiphenyl	20.000	20.440	-2.2	102	0.00
5		Acenaphthylene	20.000	20.607	-3.0	103	0.00
6		Acenaphthene	20.000	20.487	-2.4	103	0.00
7		Fluorene	20.000	21.328	-6.6	106	0.00
8		Phenanthrene	20.000	20.456	-2.3	103	0.00
9		Anthracene	20.000	20.760	-3.8	104	0.00
10	S	O-Terphenyl	20.000	21.137	-5.7	106	0.00
11		Fluoranthene	20.000	20.760	-3.8	105	0.00
12		Pyrene	20.000	21.241	-6.2	107	0.00
13		Benzo(a)Anthracene	20.000	21.277	-6.4	107	0.00
14		Chrysene	20.000	21.008	-5.0	105	0.00
15		Benzo(b)Fluoranthene	20.000	21.382	-6.9	107	0.00
16		Benzo(k)Fluoranthene	20.000	21.294	-6.5	107	0.00
17		Benzo(a) Pyrene	20.000	21.535	-7.7	108	0.00
18		Indeno(1,2,3-cd)pyrene	20.000	21.388	-6.9	107	0.00
19		Dibenzo(a,h)anthracene	20.000	21.502	-7.5	108	0.00
20		Benzo(g,h,i) Perylene	20.000	21.369	-6.8	107	0.00

Signal #2

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1		Naphthalene	20.000	22.329	-11.6	112	0.00
2		2-Methyl Naphthalene	20.000	22.265	-11.3	112	0.00
3		1-Methyl Naphthalene	20.000	21.733	-8.7	109	0.00
4	S	2-Fluorobiphenyl	20.000	21.363	-6.8	107	0.00
5		Acenaphthylene	20.000	21.825	-9.1	109	0.00
6		Acenaphthene	20.000	21.734	-8.7	109	0.00
7		Fluorene	20.000	21.994	-10.0	110	0.00
8		Phenanthrene	20.000	20.403	-2.0	103	0.00
9		Anthracene	20.000	21.230	-6.2	107	0.00
10	S	O-Terphenyl	20.000	21.351	-6.8	108	0.00
11		Fluoranthene	20.000	21.011	-5.1	106	0.00
12		Pyrene	20.000	21.530	-7.7	108	0.00
13		Benzo(a)Anthracene	20.000	21.414	-7.1	108	0.00
14		Chrysene	20.000	21.280	-6.4	107	0.00
15		Benzo(b)Fluoranthene	20.000	21.234	-6.2	110	0.00

Continuing Calibration Summary

Job Number: F16692
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-SE

Sample: GIJ816-CC803
Lab FileID: IJ17172.D

16	Benzo(k)Fluoranthene	20.000	21.615	-8.1	108	0.00
17	Benzo(a) Pyrene	20.000	21.514	-7.6	108	0.00
18	Indeno(1,2,3-cd)pyrene	20.000	21.467	-7.3	109	0.00
19	Dibenzo(a,h)anthracene	20.000	21.529	-7.6	107	0.01
20	Benzo(g,h,i) Perylene	20.000	21.141	-5.7	106	0.00

Average % D = 6.3

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ16841.D 8100_H2.M Thu Feb 27 10:15:24 2003

Continuing Calibration Summary

Job Number: F16692 **Sample:** GIJ816-ECC803
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** IJ17182.D
Project: Camp Lejeune-SE

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\0226PAH\IJ17182.D\FID1A.CH Vial: 31
Signal #2 : C:\HPCHEM\1\DATA\0226PAH\IJ17182.D\FID2B.CH
Acq On : 26 Feb 2003 11:28 pm Operator: nareshj
Sample : ECC803-30 Inst : FID 1
Misc : op7011,gij816,1000,,,1,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : C:\HPCHEM\1\METHODS\8100_H2.M (Chemstation Integrator)
Title : PAH's BY EPA 610 OR 8100
Last Update : Tue Feb 25 14:02:19 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1		Naphthalene	30.000	30.847	-2.8	104	0.00
2		2-Methyl Naphthalene	30.000	30.860	-2.9	104	0.00
3		1-Methyl Naphthalene	30.000	30.071	-0.2	101	0.00
4	S	2-Fluorobiphenyl	30.000	30.128	-0.4	101	0.00
5		Acenaphthylene	30.000	30.700	-2.3	103	0.00
6		Acenaphthene	30.000	30.401	-1.3	102	0.00
7		Fluorene	30.000	31.722	-5.7	105	0.00
8		Phenanthrene	30.000	30.321	-1.1	102	0.00
9		Anthracene	30.000	30.626	-2.1	103	0.00
10	S	O-Terphenyl	30.000	31.186	-4.0	105	0.00
11		Fluoranthene	30.000	30.493	-1.6	102	0.00
12		Pyrene	30.000	31.181	-3.9	104	0.00
13		Benzo(a)Anthracene	30.000	31.186	-4.0	104	0.00
14		Chrysene	30.000	30.668	-2.2	103	0.00
15		Benzo(b)Fluoranthene	30.000	31.336	-4.5	104	0.00
16		Benzo(k)Fluoranthene	30.000	31.152	-3.8	105	0.00
17		Benzo(a) Pyrene	30.000	31.567	-5.2	105	0.00
18		Indeno(1,2,3-cd)pyrene	30.000	31.520	-5.1	105	0.00
19		Dibenzo(a,h)anthracene	30.000	31.556	-5.2	105	0.00
20		Benzo(g,h,i) Perylene	30.000	31.226	-4.1	103	0.01

Signal #2

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1		Naphthalene	30.000	32.661	-8.9	110	0.00
2		2-Methyl Naphthalene	30.000	32.686	-9.0	110	0.00
3		1-Methyl Naphthalene	30.000	31.858	-6.2	108	0.00
4	S	2-Fluorobiphenyl	30.000	31.488	-5.0	106	0.00
5		Acenaphthylene	30.000	32.221	-7.4	108	0.00
6		Acenaphthene	30.000	31.927	-6.4	107	0.00
7		Fluorene	30.000	32.448	-8.2	108	0.00
8		Phenanthrene	30.000	30.354	-1.2	101	0.00
9		Anthracene	30.000	30.987	-3.3	104	0.00
10	S	O-Terphenyl	30.000	31.346	-4.5	105	0.00
11		Fluoranthene	30.000	30.813	-2.7	104	0.00
12		Pyrene	30.000	31.537	-5.1	106	0.00
13		Benzo(a)Anthracene	30.000	31.295	-4.3	105	0.00
14		Chrysene	30.000	31.004	-3.3	104	0.00
15		Benzo(b)Fluoranthene	30.000	31.172	-3.9	105	0.00

Continuing Calibration Summary

Job Number: F16692 **Sample:** GIJ816-ECC803
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** IJ17182.D
Project: Camp Lejeune-SE

16	Benzo(k)Fluoranthene	30.000	31.411	-4.7	105	0.01
17	Benzo(a) Pyrene	30.000	31.495	-5.0	106	0.01
18	Indeno(1,2,3-cd)pyrene	30.000	31.668	-5.6	105	0.02
19	Dibenzo(a,h)anthracene	30.000	31.320	-4.4	105	0.02
20	Benzo(g,h,i) Perylene	30.000	30.992	-3.3	103	0.02

Average % D = 4.1

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ16842.D 8100_H2.M Thu Feb 27 10:15:49 2003

Continuing Calibration Summary

Job Number: F16692 **Sample:** GIJ817-CC803
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** IJ17185.D
Project: Camp Lejeune-SE

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\0227PAH\IJ17185.D\FID1A.CH Vial: 1
Signal #2 : C:\HPCHEM\1\DATA\0227PAH\IJ17185.D\FID2B.CH
Acq On : 27 Feb 2003 9:12 am Operator: nareshj
Sample : CC803-20 Inst : FID 1
Misc : op7011,gij817,1000,,,1,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : C:\HPCHEM\1\METHODS\8100_H2.M (Chemstation Integrator)
Title : PAH's BY EPA 610 OR 8100
Last Update : Thu Feb 27 12:58:28 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1		Naphthalene	20.000	21.067	-5.3	105	0.00
2		2-Methyl Naphthalene	20.000	21.010	-5.1	105	0.00
3		1-Methyl Naphthalene	20.000	20.490	-2.4	102	0.00
4	S	2-Fluorobiphenyl	20.000	20.486	-2.4	102	0.00
5		Acenaphthylene	20.000	20.725	-3.6	104	0.00
6		Acenaphthene	20.000	20.590	-2.9	103	0.00
7		Fluorene	20.000	21.660	-8.3	108	0.00
8		Phenanthrene	20.000	20.836	-4.2	105	0.00
9		Anthracene	20.000	21.181	-5.9	106	0.00
10	S	O-Terphenyl	20.000	21.507	-7.5	108	0.00
11		Fluoranthene	20.000	21.111	-5.6	106	0.00
12		Pyrene	20.000	21.565	-7.8	108	0.00
13		Benzo(a)Anthracene	20.000	21.549	-7.7	108	0.00
14		Chrysene	20.000	21.330	-6.6	107	0.00
15		Benzo(b)Fluoranthene	20.000	21.589	-7.9	108	0.00
16		Benzo(k)Fluoranthene	20.000	21.660	-8.3	108	0.00
17		Benzo(a) Pyrene	20.000	21.834	-9.2	110	0.00
18		Indeno(1,2,3-cd)pyrene	20.000	21.569	-7.8	108	0.00
19		Dibenzo(a,h)anthracene	20.000	21.873	-9.4	110	0.00
20		Benzo(g,h,i) Perylene	20.000	21.709	-8.5	109	0.00

Signal #2

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1		Naphthalene	20.000	22.053	-10.3	110	0.00
2		2-Methyl Naphthalene	20.000	22.002	-10.0	110	0.00
3		1-Methyl Naphthalene	20.000	21.464	-7.3	108	0.00
4	S	2-Fluorobiphenyl	20.000	21.087	-5.4	106	0.00
5		Acenaphthylene	20.000	21.629	-8.1	108	0.00
6		Acenaphthene	20.000	21.546	-7.7	108	0.00
7		Fluorene	20.000	21.956	-9.8	110	0.00
8		Phenanthrene	20.000	20.540	-2.7	103	0.00
9		Anthracene	20.000	21.411	-7.1	108	0.00
10	S	O-Terphenyl	20.000	21.454	-7.3	109	0.00
11		Fluoranthene	20.000	21.127	-5.6	106	0.00
12		Pyrene	20.000	21.635	-8.2	109	0.00
13		Benzo(a)Anthracene	20.000	21.513	-7.6	108	0.00
14		Chrysene	20.000	21.276	-6.4	107	0.00
15		Benzo(b)Fluoranthene	20.000	21.432	-7.2	111	0.00

Continuing Calibration Summary

Job Number: F16692 **Sample:** GIJ817-CC803
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** IJ17185.D
Project: Camp Lejeune-SE

16	Benzo(k)Fluoranthene	20.000	21.712	-8.6	109	0.00
17	Benzo(a) Pyrene	20.000	21.619	-8.1	109	0.00
18	Indeno(1,2,3-cd)pyrene	20.000	21.520	-7.6	109	0.00
19	Dibenzo(a,h)anthracene	20.000	21.588	-7.9	108	0.00
20	Benzo(g,h,i) Perylene	20.000	21.213	-6.1	106	0.00

Average % D = 6.9

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ16841.D 8100_H2.M Thu Feb 27 13:14:07 2003

Continuing Calibration Summary

Job Number: F16692 **Sample:** GIJ817-ECC803
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** IJ17191.D
Project: Camp Lejeune-SE

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\0227PAH\IJ17191.D\FID1A.CH Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\0227PAH\IJ17191.D\FID2B.CH
Acq On : 27 Feb 2003 12:33 pm Operator: nareshj
Sample : ECC803-30 Inst : FID 1
Misc : op7011,gij817,1000,,,1,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : C:\HPCHEM\1\METHODS\8100_H2.M (Chemstation Integrator)
Title : PAH's BY EPA 610 OR 8100
Last Update : Thu Feb 27 12:58:28 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1		Naphthalene	30.000	29.494	1.7	99	0.00
2		2-Methyl Naphthalene	30.000	29.527	1.6	100	0.00
3		1-Methyl Naphthalene	30.000	28.743	4.2	97	0.00
4	S	2-Fluorobiphenyl	30.000	28.769	4.1	97	0.00
5		Acenaphthylene	30.000	29.235	2.6	98	0.00
6		Acenaphthene	30.000	28.986	3.4	97	0.00
7		Fluorene	30.000	30.198	-0.7	100	0.00
8		Phenanthrene	30.000	28.989	3.4	97	0.00
9		Anthracene	30.000	29.332	2.2	98	0.00
10	S	O-Terphenyl	30.000	29.827	0.6	100	0.00
11		Fluoranthene	30.000	29.246	2.5	98	0.00
12		Pyrene	30.000	29.924	0.3	100	0.00
13		Benzo(a)Anthracene	30.000	30.007	-0.0	100	0.00
14		Chrysene	30.000	29.554	1.5	99	0.00
15		Benzo(b)Fluoranthene	30.000	30.238	-0.8	100	0.00
16		Benzo(k)Fluoranthene	30.000	30.001	-0.0	101	0.00
17		Benzo(a) Pyrene	30.000	30.415	-1.4	101	0.00
18		Indeno(1,2,3-cd)pyrene	30.000	30.248	-0.8	100	0.00
19		Dibenzo(a,h)anthracene	30.000	30.228	-0.8	100	0.00
20		Benzo(g,h,i) Perylene	30.000	30.165	-0.5	100	0.00

Signal #2

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1		Naphthalene	30.000	31.065	-3.6	105	0.00
2		2-Methyl Naphthalene	30.000	31.106	-3.7	105	0.00
3		1-Methyl Naphthalene	30.000	30.322	-1.1	102	0.00
4	S	2-Fluorobiphenyl	30.000	29.940	0.2	101	0.00
5		Acenaphthylene	30.000	30.693	-2.3	103	0.00
6		Acenaphthene	30.000	30.496	-1.7	103	0.00
7		Fluorene	30.000	30.947	-3.2	103	0.00
8		Phenanthrene	30.000	28.843	3.9	96	0.00
9		Anthracene	30.000	29.807	0.6	100	0.00
10	S	O-Terphenyl	30.000	29.973	0.1	100	0.00
11		Fluoranthene	30.000	29.592	1.4	99	0.00
12		Pyrene	30.000	30.205	-0.7	101	0.00
13		Benzo(a)Anthracene	30.000	30.037	-0.1	101	0.00
14		Chrysene	30.000	29.715	1.0	100	0.00
15		Benzo(b)Fluoranthene	30.000	30.031	-0.1	101	0.00

Continuing Calibration Summary

Job Number: F16692 **Sample:** GIJ817-ECC803
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** IJ17191.D
Project: Camp Lejeune-SE

16	Benzo(k)Fluoranthene	30.000	30.228	-0.8	101	0.00
17	Benzo(a) Pyrene	30.000	30.271	-0.9	101	0.00
18	Indeno(1,2,3-cd)pyrene	30.000	30.447	-1.5	101	0.00
19	Dibenzo(a,h)anthracene	30.000	29.840	0.5	100	0.00
20	Benzo(g,h,i) Perylene	30.000	29.690	1.0	99	0.00

Average % D = 1.5

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ16842.D 8100_H2.M Thu Feb 27 13:13:39 2003

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- Instrument Runlogs

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F16692
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-SE

Analyte	Batch ID	RL	MB Result	Units	BSP %Recov	QC Limits
Chloride	GP3897/GN11251	20	<20	mg/l	98.1	90-110%
Nitrogen, Nitrate	GP3897/GN11251	0.10	<0.10	mg/l	94.0	90-110%
Nitrogen, Nitrite	GP3897/GN11251	0.10	<0.10	mg/l	94.0	90-110%
Sulfate	GP3897/GN11251	20	<20	mg/l	95.8	90-110%
Total Organic Carbon	GN11258	1.0	<1.0	mg/l	99.8	86-116%
Total Organic Carbon	GN11334	1.0	<1.0	mg/l	99.3	86-116%

Associated Samples:
Batch GN11258: F16692-1, F16692-10, F16692-2, F16692-3, F16692-4, F16692-5, F16692-6, F16692-7, F16692-8, F16692-9
Batch GN11334: F16692-11
Batch GP3897: F16692-1, F16692-10, F16692-11, F16692-2, F16692-3, F16692-4, F16692-5, F16692-6, F16692-7, F16692-8, F16692-9

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F16692
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-SE

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chloride	GP3897/GN11251	F16694-1	mg/l	11.4 B	11.4	0.0	0-20%
Nitrogen, Nitrate	GP3897/GN11251	F16694-1	mg/l	0.050 U	<0.050	0.0	0-20%
Nitrogen, Nitrite	GP3897/GN11251	F16694-1	mg/l	0.050 U	<0.050	0.0	0-20%
Sulfate	GP3897/GN11251	F16694-1	mg/l	10 U	<10	0.0	0-20%
Total Organic Carbon	GN11258	F16633-1	mg/l	18.1	17.7	2.3	0-20%
Total Organic Carbon	GN11334	F16692-11	mg/l	3.7	3.8	3.0	0-20%

Associated Samples:
Batch GN11258: F16692-1, F16692-10, F16692-2, F16692-3, F16692-4, F16692-5, F16692-6, F16692-7, F16692-8, F16692-9
Batch GN11334: F16692-11
Batch GP3897: F16692-1, F16692-10, F16692-11, F16692-2, F16692-3, F16692-4, F16692-5, F16692-6, F16692-7, F16692-8, F16692-9

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F16692
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-SE

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chloride	GP3897/GN11251	F16694-1	mg/l	11.4 B	100	102	90.6	80-120%
Nitrogen, Nitrate	GP3897/GN11251	F16694-1	mg/l	0.050 U	1	0.94	94.0	80-120%
Nitrogen, Nitrite	GP3897/GN11251	F16694-1	mg/l	0.050 U	1	0.97	97.0	80-120%
Sulfate	GP3897/GN11251	F16694-1	mg/l	10 U	100	91.3	91.3	80-120%
Total Organic Carbon	GN11258	F16633-1	mg/l	18.1	50.000	67.8	99.3	76-118%
Total Organic Carbon	GN11334	F16692-11	mg/l	3.7	50.000	56.4	105.4	76-118%

Associated Samples:
Batch GN11258: F16692-1, F16692-10, F16692-2, F16692-3, F16692-4, F16692-5, F16692-6, F16692-7, F16692-8, F16692-9
Batch GN11334: F16692-11
Batch GP3897: F16692-1, F16692-10, F16692-11, F16692-2, F16692-3, F16692-4, F16692-5, F16692-6, F16692-7, F16692-8, F16692-9

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F16692
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-SE

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Chloride	GP3897/GN11251	F16694-1	mg/l	11.4 B	100	102	0.0	
Nitrogen, Nitrate	GP3897/GN11251	F16694-1	mg/l	0.050 U	1	0.93	1.1	
Nitrogen, Nitrite	GP3897/GN11251	F16694-1	mg/l	0.050 U	1	0.94	3.1	
Sulfate	GP3897/GN11251	F16694-1	mg/l	10 U	100	90.8	0.5	
Total Organic Carbon	GN11258	F16633-1	mg/l	18.1	50.000	68.6	1.3	
Total Organic Carbon	GN11334	F16692-11	mg/l	3.7	50.000	56.5	0.3	

Associated Samples:
Batch GN11258: F16692-1, F16692-10, F16692-2, F16692-3, F16692-4, F16692-5, F16692-6, F16692-7, F16692-8, F16692-9
Batch GN11334: F16692-11
Batch GP3897: F16692-1, F16692-10, F16692-11, F16692-2, F16692-3, F16692-4, F16692-5, F16692-6, F16692-7, F16692-8, F16692-9

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F16692
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-SE

File ID: 03022201.IC Date Analyzed: 02/22/03 Methods: EPA 300/SW846 9056
Analyst: LL Run ID: GN11251
Parameters: Nitrogen, Nitrate,Nitrogen, Nitrite,Sulfate

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	14:25	GN11251-ICV1	1		
	14:42	GN11251-ICB1	1		
	14:59	GN11251-CCV1	1		
	15:15	GN11251-CCB1	1		
	15:32	GP3897-MB1	1		
	15:49	GP3897-B1	1		
	16:06	GP3897-S1	1		
	16:23	GP3897-S2	1		
	16:40	GP3897-D1	1		
	16:57	F16694-1	1		(sample used for QC only; not part of login F16692)
	17:13	ZZZZZZ	1		
	17:30	ZZZZZZ	1		
	17:47	F16692-1	1		
	18:04	F16692-2	1		
	18:21	GN11251-CCV2	1		
	18:38	GN11251-CCB2	1		
	18:55	F16692-3	1		
	19:12	F16692-4	1		
	19:28	F16692-5	1		
	19:45	F16692-6	1		
	20:02	F16692-7	1		
	20:19	F16692-8	1		
	20:36	F16692-9	1		
	20:53	F16692-10	1		
	21:10	F16692-11	1		
---------->		Last reportable sample/prep for job F16692			
	21:27	GN11251-CCV3	1		
	21:44	GN11251-CCB3	1		
---------->		Last reportable CCB for job F16692			
	22:01	ZZZZZZ	1		
	22:17	ZZZZZZ	1		
	22:34	ZZZZZZ	1		
	22:51	ZZZZZZ	1		
	23:08	ZZZZZZ	1		
	23:25	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F16692
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-SE

File ID: 03022201.IC Date Analyzed: 02/22/03 Methods: EPA 300/SW846 9056
Analyst: LL Run ID: GN11251
Parameters: Nitrogen, Nitrate,Nitrogen, Nitrite,Sulfate

Time	Sample Description	Dilution Factor	PS Recov	Comments
23:42	GN11251-CCV4	1		
23:59	GN11251-CCB4	1		

Refer to raw data for calibration curve and standards.

F16692

CHAIN-OF-CUSTODY RECORD

COC Number: 824603-SE-022103

Shaw™
Shaw Environmental & Infrastructure, Inc.

Shaw Environmental & Infrastructure, Inc. - Piney Green Rd. Lot 203 Bld 626 - 910-451-2390 | Receiving Lab: ACCUTEST

Project Name	Project Location
CAMP LEJEUNE - SE	CAMP LEJEUNE, NC

Project Number	Contact	PO Number
824603	Mark Martin	209378

Client Rep	Project Manager
US NAVY - LANTDIV	Ron Kenyon

Item No.	Sample Number	Date	Time	Comp	Grab	Sample Description	Number of Containers	Analysis Desired: VOA 601/602	PAH 610	Dissolved Gasses RSK-175	NO3,NO2,NO3-NO2 BY 353.2-354.1	SO4 BY 375.4	TOC BY 415.1								
1	X1	USTHPFF-MWHPFF01	2/21/03	9:15		X	USTHPFF-MWHPFF01	10	X	X	X	X	X	X							
2	X2	USTHPFF-MWHPFF08	2/21/03	14:15		X	USTHPFF-MWHPFF08	10	X	X	X	X	X	X							
3	X3	USTHPFF-MWHPFF11	2/21/03	13:30		X	USTHPFF-MWHPFF11	10	X	X	X	X	X	X							
4	X4	USTHPFF-MW17A	2/21/03	12:30		X	USTHPFF-MW17A	10	X	X	X	X	X	X							
5	X5	USTHPFF-MWHPFF05	2/21/03	11:30		X	USTHPFF-MWHPFF05	10	X	X	X	X	X	X							
6	X6	USTHPFF-MWHPFF09	2/21/03	10:45		X	USTHPFF-MWHPFF09	10	X	X	X	X	X	X							
7	X7	UST1115-MW78GW3203	2/21/03	7:00		X	UST1115-MW78GW3203	10	X	X	X	X	X	X							
8	✓ 8	UST1115-MW78GW3202	2/21/03	8:30		X	UST1115-MW78GW3202	10	X	X	X	X	X	X							
9	X9	USTHPFF-MWHPFF07	2/21/03	10:00		X	USTHPFF-MWHPFF07	10	X	X	X	X	X	X							
(2)	10	Trip Blank-022103	2/21/03	----		X	Trip Blank	2	X												

Transfer Number	Item Number	Transfers Relinquished By	Transfers Accepted By	Date	Time	Remarks
1	1 -- 10		Fed Ex 8369 1400 2165	2/21/03	18:00	Please E-mail results to Mark.Martin@Shawgrp.com
2		FedEx		2/22/03	0930	21 Day TAT

20,24,20,26

AG 16692

COC Number:
824603-NW-022103

Shaw
Shaw Environmental & Infrastructure, Inc.

CHAIN-OF-CUSTODY RECORD

Shaw Environmental & Infrastructure, Inc. - Piney Green Rd. Lot 203 Bld 626 - 910-451-2390

Receiving Lab: ACCUTEST

Project Name	Project Location
CAMP LEJEUNE - NW	CAMP LEJEUNE, NC

Project Number	Contact	PO Number
824603	Mark Martin	209378

Client Rep	Project Manager
US NAVY - LANTDIV	Ron Kenyon

Item No.	Sample Number	Date	Time	Comp	Grab	Sample Description	Number of Containers	VOA 601/602	PAH 610	Dissolved Gasses RSK-175	NO3,NO2,NO3-NO2 BY 353.2-354.1	SO4 BY 375.4	TOC BY 415.1	Analysis Desired
10 1	UST1115-GT09	2/21/03	14:30		X	UST1115-GT09	10	X	X	X	X	X	X	
11 ✓2	UST1115-GT09D	2/21/03	14:35		X	UST1115-GT09D	10	X	X	X	X	X	X	
3														
4														
5														
6														
7														
8														
9														
10														

Transfer Number	Item Number	Transfers Relinquished By	Transfers Accepted By	Date	Time	Remarks
1	1 -- 2		Fed Ex 8369 1400 2165	2/21/03	18:00	Please E-mail results to Mark.Martin@Shawgrp.com
2				2/22/03	0930	21 Day TAT

Southeast ACCUTEST Laboratories

03/10/03

Technical Report for

Shaw E & I, Inc.

Camp Lejeune-NW

824603

Accutest Job Number: F16662

Report to:

Shaw E & I, Inc.

natasha.sullivan@shawgrp.com

ATTN: Natasha Sullivan

Total number of pages in report: 103

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Harry Behzadi, Ph.D.
Laboratory Director

Certifications: FL (DOH E83510), NC (573), NJ (FL002), MA (FL946), IA (366), LA (03051), KS (E-10327), SC, AK

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Sample Summary

Shaw E & I, Inc.

Job No: F16662

Camp Lejeune-NW
Project No: 824603

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
F16662-1	02/19/03	12:20	MM	02/20/03	AQ	Ground Water	UST1115-MW111521
F16662-2	02/19/03	11:30	MM	02/20/03	AQ	Ground Water	UST1115-MW111524
F16662-3	02/19/03	13:00	MM	02/20/03	AQ	Ground Water	UST1115-MW111502
F16662-4	02/19/03	09:00	MM	02/20/03	AQ	Ground Water	UST1115-MW111522
F16662-5	02/19/03	10:00	MM	02/20/03	AQ	Ground Water	UST1115-MW111517
F16662-6	02/19/03	10:40	MM	02/20/03	AQ	Ground Water	UST1115-MW111504
F16662-7	02/19/03	14:00	MM	02/20/03	AQ	Ground Water	UST1115-MW111525
F16662-8	02/19/03	14:45	MM	02/20/03	AQ	Ground Water	UST1115-MW111513
F16662-9	02/19/03	00:00	MM	02/20/03	AQ	Trip Blank Water	TRIP BLANK-021903

Report of Analysis

Client Sample ID: UST1115-MW111521
Lab Sample ID: F16662-1
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-NW

Date Sampled: 02/19/03
Date Received: 02/20/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR016076.D	10	03/04/03	BM	n/a	n/a	GQR627
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	727	10	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	10	5.0	ug/l	
75-25-2	Bromoform	ND	10	5.0	ug/l	
74-83-9	Bromomethane	ND	10	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	10	5.0	ug/l	
108-90-7	Chlorobenzene	ND	10	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	10	4.0	ug/l	
75-00-3	Chloroethane	ND	10	5.0	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	10	5.0	ug/l	
67-66-3	Chloroform	ND	10	5.0	ug/l	
74-87-3	Chloromethane	ND	10	5.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	10	5.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	10	5.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	10	5.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	10	5.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	10	5.0	ug/l	
107-06-2	1,2-Dichloroethane	29.2	10	5.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	10	5.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	10	5.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	10	5.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	10	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	10	3.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	10	3.0	ug/l	
100-41-4	Ethylbenzene	11.7	10	5.0	ug/l	
75-09-2	Methylene chloride	ND	50	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	10	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	10	2.0	ug/l	
127-18-4	Tetrachloroethene	ND	10	5.0	ug/l	
108-88-3	Toluene	7.8	10	5.0	ug/l	J
71-55-6	1,1,1-Trichloroethane	ND	10	5.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	10	5.0	ug/l	
79-01-6	Trichloroethene	ND	10	5.0	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111521		
Lab Sample ID:	F16662-1	**Date Sampled:**	02/19/03
Matrix:	AQ - Ground Water	**Date Received:**	02/20/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	10	5.0	ug/l	
75-01-4	Vinyl chloride	ND	10	5.0	ug/l	
1330-20-7	Xylenes (total)	ND	30	10	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	89%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	95%		74-127%
563-58-6	1,1-Dichloropropene	96%		87-120%
563-58-6	1,1-Dichloropropene	104%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111521		
Lab Sample ID:	F16662-1	**Date Sampled:**	02/19/03
Matrix:	AQ - Ground Water	**Date Received:**	02/20/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY010170.D	1	02/25/03	CV	n/a	n/a	GXY233
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	15.8	0.50	0.30	ug/l	
74-84-0	Ethane	3.40	1.0	0.60	ug/l	
74-85-1	Ethene	3.40	1.0	0.80	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-MW111521
Lab Sample ID: F16662-1
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-NW

Date Sampled: 02/19/03
Date Received: 02/20/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	IJ17140.D	1	02/25/03	NJ	02/21/03	OP6989	GIJ815
Run #2							

	Initial Volume	Final Volume
Run #1	990 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.1	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.1	2.0	ug/l	
120-12-7	Anthracene	ND	5.1	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.1	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.1	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.1	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.1	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.1	2.0	ug/l	
218-01-9	Chrysene	ND	5.1	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.1	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.1	2.0	ug/l	
86-73-7	Fluorene	ND	5.1	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.1	2.0	ug/l	
91-20-3	Naphthalene	19.9	5.1	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.1	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.1	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.1	2.0	ug/l	
129-00-0	Pyrene	ND	5.1	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	87%		41-139%
84-15-1	o-Terphenyl	98%		46-135%

(a) All hits confirmed by dual column analysis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111521		
Lab Sample ID:	F16662-1	**Date Sampled:**	02/19/03
Matrix:	AQ - Ground Water	**Date Received:**	02/20/03
		Percent Solids:	n/a
Project:	Camp Lejeune-NW		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	< 0.10	0.10	mg/l	1	02/20/03 11:48	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	< 0.20	0.20	mg/l	1	02/20/03 11:48	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 0.10	0.10	mg/l	1	02/20/03 11:48	LL	EPA 300/SW846 9056
Sulfate	28.2	20	mg/l	1	02/20/03 11:48	LL	EPA 300/SW846 9056
Total Organic Carbon	2.1	1.0	mg/l	1	02/24/03	SL	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID: UST1115-MW111524
Lab Sample ID: F16662-2
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-NW

Date Sampled: 02/19/03
Date Received: 02/20/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	QR016088.D	50	03/04/03	BM	n/a	n/a	GQR627
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	4120	50	25	ug/l	
75-27-4	Bromodichloromethane	ND	50	25	ug/l	
75-25-2	Bromoform	ND	50	25	ug/l	
74-83-9	Bromomethane	ND	50	25	ug/l	
56-23-5	Carbon tetrachloride	ND	50	25	ug/l	
108-90-7	Chlorobenzene	ND	50	25	ug/l	
124-48-1	Dibromochloromethane	ND	50	20	ug/l	
75-00-3	Chloroethane	ND	50	25	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	50	25	ug/l	
67-66-3	Chloroform	ND	50	25	ug/l	
74-87-3	Chloromethane	ND	50	25	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	50	25	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	50	25	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	50	25	ug/l	
75-71-8	Dichlorodifluoromethane	ND	50	25	ug/l	
75-34-3	1,1-Dichloroethane	ND	50	25	ug/l	
107-06-2	1,2-Dichloroethane	39.4	50	25	ug/l	J
75-35-4	1,1-Dichloroethene	ND	50	25	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	50	25	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	50	25	ug/l	
78-87-5	1,2-Dichloropropane	ND	50	25	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	50	15	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	50	15	ug/l	
100-41-4	Ethylbenzene	ND	50	25	ug/l	
75-09-2	Methylene chloride	ND	250	50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	50	25	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	50	10	ug/l	
127-18-4	Tetrachloroethene	ND	50	25	ug/l	
108-88-3	Toluene	ND	50	25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	50	25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	50	25	ug/l	
79-01-6	Trichloroethene	ND	50	25	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111524		
Lab Sample ID:	F16662-2	**Date Sampled:**	02/19/03
Matrix:	AQ - Ground Water	**Date Received:**	02/20/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	50	25	ug/l	
75-01-4	Vinyl chloride	ND	50	25	ug/l	
1330-20-7	Xylenes (total)	ND	150	50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	87%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	93%		74-127%
563-58-6	1,1-Dichloropropene	95%		87-120%
563-58-6	1,1-Dichloropropene	104%		87-120%

(a) Confirmed by GC/MS

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111524		
Lab Sample ID:	F16662-2	**Date Sampled:**	02/19/03
Matrix:	AQ - Ground Water	**Date Received:**	02/20/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY010171.D	1	02/25/03	CV	n/a	n/a	GXY233
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	156	0.50	0.30	ug/l	
74-84-0	Ethane	7.25	1.0	0.60	ug/l	
74-85-1	Ethene	1.08	1.0	0.80	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-MW111524
Lab Sample ID: F16662-2
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-NW

Date Sampled: 02/19/03
Date Received: 02/20/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	IJ17141.D	1	02/25/03	NJ	02/21/03	OP6989	GIJ815
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.1	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.1	2.0	ug/l	
120-12-7	Anthracene	ND	5.1	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.1	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.1	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.1	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.1	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.1	2.0	ug/l	
218-01-9	Chrysene	ND	5.1	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.1	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.1	2.0	ug/l	
86-73-7	Fluorene	ND	5.1	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.1	2.0	ug/l	
91-20-3	Naphthalene	23.6	5.1	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.1	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.1	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.1	2.0	ug/l	
129-00-0	Pyrene	ND	5.1	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	74%		41-139%
84-15-1	o-Terphenyl	91%		46-135%

(a) All hits confirmed by dual column analysis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111524		
Lab Sample ID:	F16662-2	**Date Sampled:**	02/19/03
Matrix:	AQ - Ground Water	**Date Received:**	02/20/03
		Percent Solids:	n/a
Project:	Camp Lejeune-NW		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	< 0.10	0.10	mg/l	1	02/20/03 12:05	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	< 0.20	0.20	mg/l	1	02/20/03 12:05	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 0.10	0.10	mg/l	1	02/20/03 12:05	LL	EPA 300/SW846 9056
Sulfate	< 20	20	mg/l	1	02/20/03 12:05	LL	EPA 300/SW846 9056
Total Organic Carbon	7.0	1.0	mg/l	1	02/24/03	SL	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID: UST1115-MW111502
Lab Sample ID: F16662-3
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-NW

Date Sampled: 02/19/03
Date Received: 02/20/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR016091.D	2	03/04/03	BM	n/a	n/a	GQR627
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	125	2.0	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	2.0	1.0	ug/l	
75-25-2	Bromoform	ND	2.0	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	2.0	1.0	ug/l	
108-90-7	Chlorobenzene	ND	2.0	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	2.0	0.80	ug/l	
75-00-3	Chloroethane	ND	2.0	1.0	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	2.0	1.0	ug/l	
67-66-3	Chloroform	ND	2.0	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	2.0	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	2.0	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	2.0	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	2.0	1.0	ug/l	
107-06-2	1,2-Dichloroethane	1.1	2.0	1.0	ug/l	J
75-35-4	1,1-Dichloroethene	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	2.0	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	2.0	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.60	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.60	ug/l	
100-41-4	Ethylbenzene	6.6	2.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	10	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	2.0	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	2.0	1.0	ug/l	
108-88-3	Toluene	6.4	2.0	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.0	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.0	1.0	ug/l	
79-01-6	Trichloroethene	ND	2.0	1.0	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111502		
Lab Sample ID:	F16662-3	**Date Sampled:**	02/19/03
Matrix:	AQ - Ground Water	**Date Received:**	02/20/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	2.0	1.0	ug/l	
75-01-4	Vinyl chloride	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	3.7	6.0	2.0	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	89%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	96%		74-127%
563-58-6	1,1-Dichloropropene	95%		87-120%
563-58-6	1,1-Dichloropropene	104%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111502		
Lab Sample ID:	F16662-3	**Date Sampled:**	02/19/03
Matrix:	AQ - Ground Water	**Date Received:**	02/20/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY010172.D	1	02/25/03	CV	n/a	n/a	GXY233
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	2.91	0.50	0.30	ug/l	
74-84-0	Ethane	ND	1.0	0.60	ug/l	
74-85-1	Ethene	ND	1.0	0.80	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-MW111502
Lab Sample ID: F16662-3
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-NW

Date Sampled: 02/19/03
Date Received: 02/20/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	IJ17142.D	1	02/25/03	NJ	02/21/03	OP6989	GIJ815
Run #2							

	Initial Volume	Final Volume
Run #1	990 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.1	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.1	2.0	ug/l	
120-12-7	Anthracene	ND	5.1	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.1	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.1	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.1	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.1	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.1	2.0	ug/l	
218-01-9	Chrysene	ND	5.1	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.1	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.1	2.0	ug/l	
86-73-7	Fluorene	ND	5.1	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.1	2.0	ug/l	
91-20-3	Naphthalene	11.2	5.1	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.1	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.1	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.1	2.0	ug/l	
129-00-0	Pyrene	ND	5.1	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	94%		41-139%
84-15-1	o-Terphenyl	102%		46-135%

(a) All hits confirmed by dual column analysis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111502		
Lab Sample ID:	F16662-3	**Date Sampled:**	02/19/03
Matrix:	AQ - Ground Water	**Date Received:**	02/20/03
		Percent Solids:	n/a
Project:	Camp Lejeune-NW		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	1.0	0.10	mg/l	1	02/20/03 12:22	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	1.0	0.20	mg/l	1	02/20/03 12:22	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 0.10	0.10	mg/l	1	02/20/03 12:22	LL	EPA 300/SW846 9056
Sulfate	33.6	20	mg/l	1	02/20/03 12:22	LL	EPA 300/SW846 9056
Total Organic Carbon	1.6	1.0	mg/l	1	02/24/03	SL	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID:	UST1115-MW111522		
Lab Sample ID:	F16662-4	**Date Sampled:**	02/19/03
Matrix:	AQ - Ground Water	**Date Received:**	02/20/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR016095.D	20	03/04/03	BM	n/a	n/a	GQR627
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	1320	20	10	ug/l	
75-27-4	Bromodichloromethane	ND	20	10	ug/l	
75-25-2	Bromoform	ND	20	10	ug/l	
74-83-9	Bromomethane	ND	20	10	ug/l	
56-23-5	Carbon tetrachloride	ND	20	10	ug/l	
108-90-7	Chlorobenzene	ND	20	10	ug/l	
124-48-1	Dibromochloromethane	ND	20	8.0	ug/l	
75-00-3	Chloroethane	ND	20	10	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	20	10	ug/l	
67-66-3	Chloroform	ND	20	10	ug/l	
74-87-3	Chloromethane	ND	20	10	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	20	10	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	20	10	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	20	10	ug/l	
75-71-8	Dichlorodifluoromethane	ND	20	10	ug/l	
75-34-3	1,1-Dichloroethane	ND	20	10	ug/l	
107-06-2	1,2-Dichloroethane	ND	20	10	ug/l	
75-35-4	1,1-Dichloroethene	ND	20	10	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	20	10	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	20	10	ug/l	
78-87-5	1,2-Dichloropropane	ND	20	10	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	20	6.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	20	6.0	ug/l	
100-41-4	Ethylbenzene	ND	20	10	ug/l	
75-09-2	Methylene chloride	ND	100	20	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	20	10	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	20	4.0	ug/l	
127-18-4	Tetrachloroethene	ND	20	10	ug/l	
108-88-3	Toluene	21.0	20	10	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	20	10	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	20	10	ug/l	
79-01-6	Trichloroethene	ND	20	10	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111522		
Lab Sample ID:	F16662-4	**Date Sampled:**	02/19/03
Matrix:	AQ - Ground Water	**Date Received:**	02/20/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	20	10	ug/l	
75-01-4	Vinyl chloride	ND	20	10	ug/l	
1330-20-7	Xylenes (total)	ND	60	20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	87%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	94%		74-127%
563-58-6	1,1-Dichloropropene	95%		87-120%
563-58-6	1,1-Dichloropropene	105%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111522		
Lab Sample ID:	F16662-4	**Date Sampled:**	02/19/03
Matrix:	AQ - Ground Water	**Date Received:**	02/20/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY010173.D	1	02/25/03	CV	n/a	n/a	GXY233
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	32.0	0.50	0.30	ug/l	
74-84-0	Ethane	11.2	1.0	0.60	ug/l	
74-85-1	Ethene	1.18	1.0	0.80	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-MW111522
Lab Sample ID: F16662-4
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-NW

Date Sampled: 02/19/03
Date Received: 02/20/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ17143.D	1	02/25/03	NJ	02/21/03	OP6989	GIJ815
Run #2							

	Initial Volume	Final Volume
Run #1	990 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.1	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.1	2.0	ug/l	
120-12-7	Anthracene	ND	5.1	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.1	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.1	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.1	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.1	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.1	2.0	ug/l	
218-01-9	Chrysene	ND	5.1	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.1	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.1	2.0	ug/l	
86-73-7	Fluorene	ND	5.1	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.1	2.0	ug/l	
91-20-3	Naphthalene	ND	5.1	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.1	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.1	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.1	2.0	ug/l	
129-00-0	Pyrene	ND	5.1	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	69%		41-139%
84-15-1	o-Terphenyl	89%		46-135%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111522		
Lab Sample ID:	F16662-4	**Date Sampled:**	02/19/03
Matrix:	AQ - Ground Water	**Date Received:**	02/20/03
		Percent Solids:	n/a
Project:	Camp Lejeune-NW		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	< 0.10	0.10	mg/l	1	02/20/03 12:39	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	< 0.20	0.20	mg/l	1	02/20/03 12:39	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 0.10	0.10	mg/l	1	02/20/03 12:39	LL	EPA 300/SW846 9056
Sulfate	< 20	20	mg/l	1	02/20/03 12:39	LL	EPA 300/SW846 9056
Total Organic Carbon	5.5	1.0	mg/l	1	02/24/03	SL	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID: UST1115-MW111517
Lab Sample ID: F16662-5
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-NW

Date Sampled: 02/19/03
Date Received: 02/20/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR016089.D	50	03/04/03	BM	n/a	n/a	GQR627
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	3490	50	25	ug/l	
75-27-4	Bromodichloromethane	ND	50	25	ug/l	
75-25-2	Bromoform	ND	50	25	ug/l	
74-83-9	Bromomethane	ND	50	25	ug/l	
56-23-5	Carbon tetrachloride	ND	50	25	ug/l	
108-90-7	Chlorobenzene	ND	50	25	ug/l	
124-48-1	Dibromochloromethane	ND	50	20	ug/l	
75-00-3	Chloroethane	ND	50	25	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	50	25	ug/l	
67-66-3	Chloroform	ND	50	25	ug/l	
74-87-3	Chloromethane	ND	50	25	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	50	25	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	50	25	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	50	25	ug/l	
75-71-8	Dichlorodifluoromethane	ND	50	25	ug/l	
75-34-3	1,1-Dichloroethane	ND	50	25	ug/l	
107-06-2	1,2-Dichloroethane	52.0	50	25	ug/l	
75-35-4	1,1-Dichloroethene	ND	50	25	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	50	25	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	50	25	ug/l	
78-87-5	1,2-Dichloropropane	ND	50	25	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	50	15	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	50	15	ug/l	
100-41-4	Ethylbenzene	196	50	25	ug/l	
75-09-2	Methylene chloride	ND	250	50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	50	25	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	50	10	ug/l	
127-18-4	Tetrachloroethene	ND	50	25	ug/l	
108-88-3	Toluene	ND	50	25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	50	25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	50	25	ug/l	
79-01-6	Trichloroethene	ND	50	25	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111517		
Lab Sample ID:	F16662-5	**Date Sampled:**	02/19/03
Matrix:	AQ - Ground Water	**Date Received:**	02/20/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	50	25	ug/l	
75-01-4	Vinyl chloride	ND	50	25	ug/l	
1330-20-7	Xylenes (total)	ND	150	50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	89%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	95%		74-127%
563-58-6	1,1-Dichloropropene	95%		87-120%
563-58-6	1,1-Dichloropropene	104%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111517		
Lab Sample ID:	F16662-5	**Date Sampled:**	02/19/03
Matrix:	AQ - Ground Water	**Date Received:**	02/20/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY010174.D	1	02/25/03	CV	n/a	n/a	GXY233
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	43.4	0.50	0.30	ug/l	
74-84-0	Ethane	2.22	1.0	0.60	ug/l	
74-85-1	Ethene	ND	1.0	0.80	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-MW111517
Lab Sample ID: F16662-5
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-NW

Date Sampled: 02/19/03
Date Received: 02/20/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	IJ17144.D	1	02/25/03	NJ	02/21/03	OP6989	GIJ815
Run #2 [a]	IJ17154.D	10	02/26/03	NJ	02/21/03	OP6989	GIJ816

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2	1000 ml	1.0 ml

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	12.3	5.0	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	2.0	ug/l	
120-12-7	Anthracene	ND	5.0	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	2.0	ug/l	
218-01-9	Chrysene	ND	5.0	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	2.0	ug/l	
86-73-7	Fluorene	7.0	5.0	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	2.0	ug/l	
91-20-3	Naphthalene	270 [b]	50	20	ug/l	
90-12-0	1-Methylnaphthalene	11.2	5.0	2.0	ug/l	
91-57-6	2-Methylnaphthalene	15.3	5.0	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	2.0	ug/l	
129-00-0	Pyrene	ND	5.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	94%	102%	41-139%
84-15-1	o-Terphenyl	105%	115%	46-135%

(a) All hits confirmed by dual column analysis.
(b) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111517		
Lab Sample ID:	F16662-5	**Date Sampled:**	02/19/03
Matrix:	AQ - Ground Water	**Date Received:**	02/20/03
		Percent Solids:	n/a
Project:	Camp Lejeune-NW		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	< 0.10	0.10	mg/l	1	02/20/03 12:56	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	< 0.20	0.20	mg/l	1	02/20/03 12:56	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 0.10	0.10	mg/l	1	02/20/03 12:56	LL	EPA 300/SW846 9056
Sulfate	1200	200	mg/l	10	02/20/03 17:06	LL	EPA 300/SW846 9056
Total Organic Carbon	13.8	1.0	mg/l	1	02/24/03	SL	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID: UST1115-MW111504
Lab Sample ID: F16662-6
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-NW

Date Sampled: 02/19/03
Date Received: 02/20/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR016092.D	2	03/04/03	BM	n/a	n/a	GQR627
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	128	2.0	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	2.0	1.0	ug/l	
75-25-2	Bromoform	ND	2.0	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	2.0	1.0	ug/l	
108-90-7	Chlorobenzene	ND	2.0	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	2.0	0.80	ug/l	
75-00-3	Chloroethane	ND	2.0	1.0	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	2.0	1.0	ug/l	
67-66-3	Chloroform	ND	2.0	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	2.0	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	2.0	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	2.0	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	2.0	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	2.0	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	2.0	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	2.0	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.60	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.60	ug/l	
100-41-4	Ethylbenzene	13.7	2.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	10	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	2.0	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	2.0	1.0	ug/l	
108-88-3	Toluene	3.8	2.0	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.0	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.0	1.0	ug/l	
79-01-6	Trichloroethene	ND	2.0	1.0	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111504		
Lab Sample ID:	F16662-6	**Date Sampled:**	02/19/03
Matrix:	AQ - Ground Water	**Date Received:**	02/20/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	2.0	1.0	ug/l	
75-01-4	Vinyl chloride	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	6.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	91%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	98%		74-127%
563-58-6	1,1-Dichloropropene	95%		87-120%
563-58-6	1,1-Dichloropropene	104%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111504		
Lab Sample ID:	F16662-6	**Date Sampled:**	02/19/03
Matrix:	AQ - Ground Water	**Date Received:**	02/20/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY010175.D	1	02/25/03	CV	n/a	n/a	GXY233
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	1.00	0.50	0.30	ug/l	
74-84-0	Ethane	ND	1.0	0.60	ug/l	
74-85-1	Ethene	ND	1.0	0.80	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-MW111504
Lab Sample ID: F16662-6
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-NW

Date Sampled: 02/19/03
Date Received: 02/20/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	IJ17147.D	1	02/25/03	NJ	02/21/03	OP6989	GIJ815
Run #2							

	Initial Volume	Final Volume
Run #1	990 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.1	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.1	2.0	ug/l	
120-12-7	Anthracene	ND	5.1	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.1	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.1	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.1	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.1	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.1	2.0	ug/l	
218-01-9	Chrysene	ND	5.1	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.1	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.1	2.0	ug/l	
86-73-7	Fluorene	ND	5.1	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.1	2.0	ug/l	
91-20-3	Naphthalene	21.2	5.1	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.1	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.1	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.1	2.0	ug/l	
129-00-0	Pyrene	ND	5.1	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	95%		41-139%
84-15-1	o-Terphenyl	103%		46-135%

(a) All hits confirmed by dual column analysis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111504		
Lab Sample ID:	F16662-6	**Date Sampled:**	02/19/03
Matrix:	AQ - Ground Water	**Date Received:**	02/20/03
		Percent Solids:	n/a
Project:	Camp Lejeune-NW		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	0.11	0.10	mg/l	1	02/20/03 13:12	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	< 0.20	0.20	mg/l	1	02/20/03 13:12	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 0.10	0.10	mg/l	1	02/20/03 13:12	LL	EPA 300/SW846 9056
Sulfate	28.1	20	mg/l	1	02/20/03 13:12	LL	EPA 300/SW846 9056
Total Organic Carbon	2.0	1.0	mg/l	1	02/24/03	SL	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID: UST1115-MW111525
Lab Sample ID: F16662-7
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-NW

Date Sampled: 02/19/03
Date Received: 02/20/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR016090.D	50	03/04/03	BM	n/a	n/a	GQR627
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	2840	50	25	ug/l	
75-27-4	Bromodichloromethane	ND	50	25	ug/l	
75-25-2	Bromoform	ND	50	25	ug/l	
74-83-9	Bromomethane	ND	50	25	ug/l	
56-23-5	Carbon tetrachloride	ND	50	25	ug/l	
108-90-7	Chlorobenzene	ND	50	25	ug/l	
124-48-1	Dibromochloromethane	ND	50	20	ug/l	
75-00-3	Chloroethane	ND	50	25	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	50	25	ug/l	
67-66-3	Chloroform	ND	50	25	ug/l	
74-87-3	Chloromethane	ND	50	25	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	50	25	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	50	25	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	50	25	ug/l	
75-71-8	Dichlorodifluoromethane	ND	50	25	ug/l	
75-34-3	1,1-Dichloroethane	ND	50	25	ug/l	
107-06-2	1,2-Dichloroethane	148	50	25	ug/l	
75-35-4	1,1-Dichloroethene	ND	50	25	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	50	25	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	50	25	ug/l	
78-87-5	1,2-Dichloropropane	ND	50	25	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	50	15	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	50	15	ug/l	
100-41-4	Ethylbenzene	ND	50	25	ug/l	
75-09-2	Methylene chloride	ND	250	50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	50	25	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	50	10	ug/l	
127-18-4	Tetrachloroethene	ND	50	25	ug/l	
108-88-3	Toluene	150	50	25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	50	25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	50	25	ug/l	
79-01-6	Trichloroethene	ND	50	25	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111525		
Lab Sample ID:	F16662-7	**Date Sampled:**	02/19/03
Matrix:	AQ - Ground Water	**Date Received:**	02/20/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	50	25	ug/l	
75-01-4	Vinyl chloride	ND	50	25	ug/l	
1330-20-7	Xylenes (total)	ND	150	50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	89%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	93%		74-127%
563-58-6	1,1-Dichloropropene	96%		87-120%
563-58-6	1,1-Dichloropropene	103%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111525		
Lab Sample ID:	F16662-7	**Date Sampled:**	02/19/03
Matrix:	AQ - Ground Water	**Date Received:**	02/20/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY010176.D	1	02/25/03	CV	n/a	n/a	GXY233
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	30.5	0.50	0.30	ug/l	
74-84-0	Ethane	6.70	1.0	0.60	ug/l	
74-85-1	Ethene	8.28	1.0	0.80	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-MW111525
Lab Sample ID: F16662-7
Matrix: AQ - Ground Water
Method: EPA 610 EPA 610
Project: Camp Lejeune-NW

Date Sampled: 02/19/03
Date Received: 02/20/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	IJ17149.D	1	02/25/03	NJ	02/21/03	OP6989	GIJ815
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.1	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.1	2.0	ug/l	
120-12-7	Anthracene	ND	5.1	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.1	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.1	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.1	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.1	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.1	2.0	ug/l	
218-01-9	Chrysene	ND	5.1	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.1	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.1	2.0	ug/l	
86-73-7	Fluorene	ND	5.1	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.1	2.0	ug/l	
91-20-3	Naphthalene	10	5.1	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.1	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.1	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.1	2.0	ug/l	
129-00-0	Pyrene	ND	5.1	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	78%		41-139%
84-15-1	o-Terphenyl	95%		46-135%

(a) All hits confirmed by dual column analysis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111525		
Lab Sample ID:	F16662-7	**Date Sampled:**	02/19/03
Matrix:	AQ - Ground Water	**Date Received:**	02/20/03
		Percent Solids:	n/a
Project:	Camp Lejeune-NW		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	< 0.10	0.10	mg/l	1	02/20/03 14:03	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	< 0.20	0.20	mg/l	1	02/20/03 14:03	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 0.10	0.10	mg/l	1	02/20/03 14:03	LL	EPA 300/SW846 9056
Sulfate	< 20	20	mg/l	1	02/20/03 14:03	LL	EPA 300/SW846 9056
Total Organic Carbon	5.4	1.0	mg/l	1	02/24/03	SL	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID: UST1115-MW111513
Lab Sample ID: F16662-8
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-NW

Date Sampled: 02/19/03
Date Received: 02/20/03
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR016096.D	20	03/04/03	BM	n/a	n/a	GQR627
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	872	20	10	ug/l	
75-27-4	Bromodichloromethane	ND	20	10	ug/l	
75-25-2	Bromoform	ND	20	10	ug/l	
74-83-9	Bromomethane	ND	20	10	ug/l	
56-23-5	Carbon tetrachloride	ND	20	10	ug/l	
108-90-7	Chlorobenzene	ND	20	10	ug/l	
124-48-1	Dibromochloromethane	ND	20	8.0	ug/l	
75-00-3	Chloroethane	ND	20	10	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	20	10	ug/l	
67-66-3	Chloroform	ND	20	10	ug/l	
74-87-3	Chloromethane	ND	20	10	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	20	10	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	20	10	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	20	10	ug/l	
75-71-8	Dichlorodifluoromethane	ND	20	10	ug/l	
75-34-3	1,1-Dichloroethane	ND	20	10	ug/l	
107-06-2	1,2-Dichloroethane	272	20	10	ug/l	
75-35-4	1,1-Dichloroethene	ND	20	10	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	20	10	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	20	10	ug/l	
78-87-5	1,2-Dichloropropane	ND	20	10	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	20	6.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	20	6.0	ug/l	
100-41-4	Ethylbenzene	62.2	20	10	ug/l	
75-09-2	Methylene chloride	ND	100	20	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	20	10	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	20	4.0	ug/l	
127-18-4	Tetrachloroethene	ND	20	10	ug/l	
108-88-3	Toluene	28.3	20	10	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	20	10	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	20	10	ug/l	
79-01-6	Trichloroethene	ND	20	10	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111513		
Lab Sample ID:	F16662-8	**Date Sampled:**	02/19/03
Matrix:	AQ - Ground Water	**Date Received:**	02/20/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	20	10	ug/l	
75-01-4	Vinyl chloride	ND	20	10	ug/l	
1330-20-7	Xylenes (total)	21.5	60	20	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	90%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	99%		74-127%
563-58-6	1,1-Dichloropropene	95%		87-120%
563-58-6	1,1-Dichloropropene	105%		87-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111513		
Lab Sample ID:	F16662-8	**Date Sampled:**	02/19/03
Matrix:	AQ - Ground Water	**Date Received:**	02/20/03
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XY010177.D	1	02/25/03	CV	n/a	n/a	GXY233
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	65.1	0.50	0.30	ug/l	
74-84-0	Ethane	1.54	1.0	0.60	ug/l	
74-85-1	Ethene	ND	1.0	0.80	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST1115-MW111513		
Lab Sample ID:	F16662-8	**Date Sampled:**	02/19/03
Matrix:	AQ - Ground Water	**Date Received:**	02/20/03
Method:	EPA 610 EPA 610	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	IJ17150.D	1	02/25/03	NJ	02/21/03	OP6989	GIJ815
Run #2 [a]	IJ17157.D	4	02/26/03	NJ	02/21/03	OP6989	GIJ816

	Initial Volume	Final Volume
Run #1	990 ml	1.0 ml
Run #2	990 ml	1.0 ml

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	12.1	5.1	2.0	ug/l	
208-96-8	Acenaphthylene	ND	5.1	2.0	ug/l	
120-12-7	Anthracene	ND	5.1	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.1	2.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.1	2.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.1	2.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.1	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.1	2.0	ug/l	
218-01-9	Chrysene	ND	5.1	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.1	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.1	2.0	ug/l	
86-73-7	Fluorene	2.6	5.1	2.0	ug/l	J
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.1	2.0	ug/l	
91-20-3	Naphthalene	152 [b]	20	8.1	ug/l	
90-12-0	1-Methylnaphthalene	13.2	5.1	2.0	ug/l	
91-57-6	2-Methylnaphthalene	21.9	5.1	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.1	2.0	ug/l	
129-00-0	Pyrene	ND	5.1	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	98%	107%	41-139%
84-15-1	o-Terphenyl	105%	113%	46-135%

(a) All hits confirmed by dual column analysis.
(b) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST1115-MW111513
Lab Sample ID: F16662-8
Matrix: AQ - Ground Water
Project: Camp Lejeune-NW

Date Sampled: 02/19/03
Date Received: 02/20/03
Percent Solids: n/a

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate	< 0.10	0.10	mg/l	1	02/20/03 14:19	LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	< 0.30	0.30	mg/l	1	02/20/03 17:23	LL	SM18 4500NO3E
Nitrogen, Nitrite	< 0.20	0.20	mg/l	2	02/20/03 17:23	LL	EPA 300/SW846 9056
Sulfate	4340	500	mg/l	25	02/20/03 17:40	LL	EPA 300/SW846 9056
Total Organic Carbon	18.0	1.0	mg/l	1	02/24/03	SL	EPA 415.1

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID:	TRIP BLANK-021903		
Lab Sample ID:	F16662-9	**Date Sampled:**	02/19/03
Matrix:	AQ - Trip Blank Water	**Date Received:**	02/20/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	QR016094.D	1	03/04/03	BM	n/a	n/a	GQR627
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
74-83-9	Bromomethane	ND	1.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-00-3	Chloroethane	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK-021903		
Lab Sample ID:	F16662-9	**Date Sampled:**	02/19/03
Matrix:	AQ - Trip Blank Water	**Date Received:**	02/20/03
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	Camp Lejeune-NW		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	85%		74-127%
352-33-0	1-Chloro-4-fluorobenzene	90%		74-127%
563-58-6	1,1-Dichloropropene	97%		87-120%
563-58-6	1,1-Dichloropropene	103%		87-120%

(a) Sample vial(s) contained significant headspace; reported results are considered minimum values.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries
- Initial and Continuing Calibration Summaries

Blank Spike Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR627-BS	QR016072.D	1	03/04/03	BM	n/a	n/a	GQR627

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16662-1, F16662-2, F16662-3, F16662-4, F16662-5, F16662-6, F16662-7, F16662-8, F16662-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	22.2	111	88-121
75-27-4	Bromodichloromethane	20	19.4	97	79-121
75-25-2	Bromoform	20	18.9	95	61-135
74-83-9	Bromomethane	20	18.0	90	44-154
56-23-5	Carbon tetrachloride	20	22.5	113	81-127
108-90-7	Chlorobenzene	20	21.6	108	87-120
124-48-1	Dibromochloromethane	20	19.0	95	71-125
75-00-3	Chloroethane	20	20.0	100	68-146
110-75-8	2-Chloroethylvinyl ether	20	20.7	104	39-148
67-66-3	Chloroform	20	20.5	103	87-116
74-87-3	Chloromethane	20	18.0	90	34-188
95-50-1	1,2-Dichlorobenzene	20	21.1	106	81-119
541-73-1	1,3-Dichlorobenzene	20	21.3	107	82-120
106-46-7	1,4-Dichlorobenzene	20	21.7	109	81-120
75-71-8	Dichlorodifluoromethane	20	16.8	84	43-179
75-34-3	1,1-Dichloroethane	20	21.7	109	83-126
107-06-2	1,2-Dichloroethane	20	21.4	107	83-110
75-35-4	1,1-Dichloroethene	20	23.0	115	78-148
156-59-2	cis-1,2-Dichloroethene	20	20.6	103	86-134
156-60-5	trans-1,2-Dichloroethene	20	20.8	104	86-129
78-87-5	1,2-Dichloropropane	20	21.4	107	80-110
10061-01-5	cis-1,3-Dichloropropene	20	23.4	117	68-129
10061-02-6	trans-1,3-Dichloropropene	20	21.8	109	62-132
100-41-4	Ethylbenzene	20	22.6	113	86-125
75-09-2	Methylene chloride	20	21.8	109	74-130
1634-04-4	Methyl Tert Butyl Ether	20	18.8	94	80-117
79-34-5	1,1,2,2-Tetrachloroethane	20	20.6	103	77-108
127-18-4	Tetrachloroethene	20	23.0	115	85-123
108-88-3	Toluene	20	22.1	111	89-123
71-55-6	1,1,1-Trichloroethane	20	21.8	109	86-123
79-00-5	1,1,2-Trichloroethane	20	21.1	106	81-109
79-01-6	Trichloroethene	20	22.2	111	85-117
75-69-4	Trichlorofluoromethane	20	22.0	110	74-149
75-01-4	Vinyl chloride	20	19.4	97	72-138
1330-20-7	Xylenes (total)	60	67.9	113	89-124

Blank Spike Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR627-BS	QR016072.D	1	03/04/03	BM	n/a	n/a	GQR627

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16662-1, F16662-2, F16662-3, F16662-4, F16662-5, F16662-6, F16662-7, F16662-8, F16662-9

CAS No.	Surrogate Recoveries	BSP	Limits
352-33-0	1-Chloro-4-fluorobenzene	106%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	108%	74-127%
563-58-6	1,1-Dichloropropene	99%	87-120%
563-58-6	1,1-Dichloropropene	102%	87-120%

Blank Spike Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GXY233-BS	XY010160.D	1	02/25/03	CV	n/a	n/a	GXY233

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F16662-1, F16662-2, F16662-3, F16662-4, F16662-5, F16662-6, F16662-7, F16662-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
74-82-8	Methane	108	105	97	50-126
74-84-0	Ethane	219	214	98	49-135
74-85-1	Ethene	290	284	98	56-130

Duplicate Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F16662-1DUP	QR016077.D	10	03/04/03	BM	n/a	n/a	GQR627
F16662-1	QR016076.D	10	03/04/03	BM	n/a	n/a	GQR627

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16662-1, F16662-2, F16662-3, F16662-4, F16662-5, F16662-6, F16662-7, F16662-8, F16662-9

CAS No.	Compound	F16662-1 ug/l	Q	DUP ug/l	Q	RPD	Limits
71-43-2	Benzene	727		716		2	
75-27-4	Bromodichloromethane	ND		ND		nc	
75-25-2	Bromoform	ND		ND		nc	
74-83-9	Bromomethane	ND		ND		nc	
56-23-5	Carbon tetrachloride	ND		ND		nc	
108-90-7	Chlorobenzene	ND		ND		nc	
124-48-1	Dibromochloromethane	ND		ND		nc	
75-00-3	Chloroethane	ND		ND		nc	
110-75-8	2-Chloroethylvinyl ether	ND		ND		nc	
67-66-3	Chloroform	ND		ND		nc	
74-87-3	Chloromethane	ND		ND		nc	
95-50-1	1,2-Dichlorobenzene	ND		ND		nc	
541-73-1	1,3-Dichlorobenzene	ND		ND		nc	
106-46-7	1,4-Dichlorobenzene	ND		ND		nc	
75-71-8	Dichlorodifluoromethane	ND		ND		nc	
75-34-3	1,1-Dichloroethane	ND		ND		nc	
107-06-2	1,2-Dichloroethane	29.2		29.1		0	
75-35-4	1,1-Dichloroethene	ND		ND		nc	
156-59-2	cis-1,2-Dichloroethene	ND		ND		nc	
156-60-5	trans-1,2-Dichloroethene	ND		ND		nc	
78-87-5	1,2-Dichloropropane	ND		ND		nc	
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	
100-41-4	Ethylbenzene	11.7		11.5		2	
75-09-2	Methylene chloride	ND		ND		nc	
1634-04-4	Methyl Tert Butyl Ether	ND		ND		nc	
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	
127-18-4	Tetrachloroethene	ND		ND		nc	
108-88-3	Toluene	7.8	J	7.7	J	1	
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	
79-01-6	Trichloroethene	ND		ND		nc	
75-69-4	Trichlorofluoromethane	ND		ND		nc	
75-01-4	Vinyl chloride	ND		ND		nc	
1330-20-7	Xylenes (total)	ND		ND		nc	

Duplicate Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F16662-1DUP	QR016077.D	10	03/04/03	BM	n/a	n/a	GQR627
F16662-1	QR016076.D	10	03/04/03	BM	n/a	n/a	GQR627

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16662-1, F16662-2, F16662-3, F16662-4, F16662-5, F16662-6, F16662-7, F16662-8, F16662-9

CAS No.	Surrogate Recoveries	DUP	F16662-1	Limits
352-33-0	1-Chloro-4-fluorobenzene	89%	89%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	94%	95%	74-127%
563-58-6	1,1-Dichloropropene	96%	96%	87-120%
563-58-6	1,1-Dichloropropene	104%	104%	87-120%

Duplicate Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F16694-3DUP	XY010183.D	1	02/25/03	CV	n/a	n/a	GXY233
F16694-3	XY010182.D	1	02/25/03	CV	n/a	n/a	GXY233

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F16662-1, F16662-2, F16662-3, F16662-4, F16662-5, F16662-6, F16662-7, F16662-8

CAS No.	Compound	F16694-3 ug/l	Q	DUP ug/l	Q	RPD	Limits
74-82-8	Methane	ND		ND		nc	29
74-84-0	Ethane	ND		ND		nc	24
74-85-1	Ethene	ND		ND		nc	23

Method Blank Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR627-MB	QR016081.D	1	03/04/03	BM	n/a	n/a	GQR627

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16662-1, F16662-2, F16662-3, F16662-4, F16662-5, F16662-6, F16662-7, F16662-8, F16662-9

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	

Method Blank Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR627-MB	QR016081.D	1	03/04/03	BM	n/a	n/a	GQR627

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16662-1, F16662-2, F16662-3, F16662-4, F16662-5, F16662-6, F16662-7, F16662-8, F16662-9

CAS No.	Surrogate Recoveries		Limits
352-33-0	1-Chloro-4-fluorobenzene	86%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	89%	74-127%
563-58-6	1,1-Dichloropropene	98%	87-120%
563-58-6	1,1-Dichloropropene	103%	87-120%

Method Blank Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GXY233-MB	XY010159.D	1	02/25/03	CV	n/a	n/a	GXY233

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F16662-1, F16662-2, F16662-3, F16662-4, F16662-5, F16662-6, F16662-7, F16662-8

CAS No.	Compound	Result	RL	Units	Q
74-82-8	Methane	ND	0.50	ug/l	
74-84-0	Ethane	ND	1.0	ug/l	
74-85-1	Ethene	ND	1.0	ug/l	

Matrix Spike Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F16662-8MS	XY010178.D	1	02/25/03	CV	n/a	n/a	GXY233
F16662-8	XY010177.D	1	02/25/03	CV	n/a	n/a	GXY233

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

F16662-1, F16662-2, F16662-3, F16662-4, F16662-5, F16662-6, F16662-7, F16662-8

CAS No.	Compound	F16662-8 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
74-82-8	Methane	65.1		108	181	107	50-150 [a]
74-84-0	Ethane	1.54		219	247	112	50-150 [a]
74-85-1	Ethene	ND		290	323	111	50-150 [a]

(a) Advisory control limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F16695-3MS	QR016083.D	1	03/04/03	BM	n/a	n/a	GQR627
F16695-3MSD	QR016084.D	1	03/04/03	BM	n/a	n/a	GQR627
F16695-3	QR016080.D	1	03/04/03	BM	n/a	n/a	GQR627

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16662-1, F16662-2, F16662-3, F16662-4, F16662-5, F16662-6, F16662-7, F16662-8, F16662-9

CAS No.	Compound	F16695-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	0.54	J	20	23.1	113	22.9	112	1	77-127/9
75-27-4	Bromodichloromethane	ND		20	19.3	97	19.6	98	2	78-122/9
75-25-2	Bromoform	ND		20	19.5	98	19.6	98	1	57-140/22
74-83-9	Bromomethane	ND		20	17.5	88	17.6	88	1	27-159/21
56-23-5	Carbon tetrachloride	ND		20	22.4	112	22.5	113	0	79-127/14
108-90-7	Chlorobenzene	ND		20	21.3	107	21.5	108	1	82-122/10
124-48-1	Dibromochloromethane	ND		20	19.3	97	19.5	98	1	69-127/14
75-00-3	Chloroethane	ND		20	18.9	95	18.9	95	0	51-180/17
110-75-8	2-Chloroethylvinyl ether	ND		20	ND	0*	ND	0*	nc	10-158/13
67-66-3	Chloroform	ND		20	20.3	102	20.4	102	0	82-118/9
74-87-3	Chloromethane	ND		20	7.3	37	7.4	37	1	11-193/31
95-50-1	1,2-Dichlorobenzene	ND		20	20.6	103	20.9	105	1	69-133/13
541-73-1	1,3-Dichlorobenzene	ND		20	21.2	106	21.4	107	1	77-123/13
106-46-7	1,4-Dichlorobenzene	ND		20	21.4	107	21.8	109	2	73-127/13
75-71-8	Dichlorodifluoromethane	ND		20	11.6	58	11.1	56	4	14-176/25
75-34-3	1,1-Dichloroethane	ND		20	21.9	110	21.6	108	1	80-127/10
107-06-2	1,2-Dichloroethane	ND		20	21.2	106	21.2	106	0	74-116/14
75-35-4	1,1-Dichloroethene	ND		20	22.6	113	22.3	112	1	72-163/16
156-59-2	cis-1,2-Dichloroethene	ND		20	20.6	103	20.6	103	0	83-139/9
156-60-5	trans-1,2-Dichloroethene	ND		20	21.4	107	20.7	104	3	82-131/11
78-87-5	1,2-Dichloropropane	ND		20	21.3	107	21.5	108	1	77-112/8
10061-01-5	cis-1,3-Dichloropropene	ND		20	22.5	113	22.7	114	1	65-131/17
10061-02-6	trans-1,3-Dichloropropene	ND		20	21.3	107	21.5	108	1	53-140/21
100-41-4	Ethylbenzene	ND		20	24.2	121	23.9	120	1	68-136/11
75-09-2	Methylene chloride	ND		20	21.0	105	20.6	103	2	60-145/12
1634-04-4	Methyl Tert Butyl Ether	ND		20	20.5	103	20.5	103	0	71-124/14
79-34-5	1,1,2,2-Tetrachloroethane	ND		20	21.6	108	21.3	107	1	72-114/8
127-18-4	Tetrachloroethene	ND		20	22.4	112	22.6	113	1	85-124/13
108-88-3	Toluene	ND		20	23.5	118	23.3	117	1	78-128/9
71-55-6	1,1,1-Trichloroethane	ND		20	22.2	111	22.3	112	0	83-123/12
79-00-5	1,1,2-Trichloroethane	ND		20	21.1	106	21.4	107	1	78-111/7
79-01-6	Trichloroethene	ND		20	21.9	110	22.2	111	1	82-119/11
75-69-4	Trichlorofluoromethane	ND		20	21.7	109	20.0	100	8	76-147/15
75-01-4	Vinyl chloride	ND		20	18.2	91	18.3	92	1	72-139/14
1330-20-7	Xylenes (total)	ND		60	71.3	119	71.0	118	0	71-136/11

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F16695-3MS	QR016083.D	1	03/04/03	BM	n/a	n/a	GQR627
F16695-3MSD	QR016084.D	1	03/04/03	BM	n/a	n/a	GQR627
F16695-3	QR016080.D	1	03/04/03	BM	n/a	n/a	GQR627

The QC reported here applies to the following samples: **Method:** EPA 601/602

F16662-1, F16662-2, F16662-3, F16662-4, F16662-5, F16662-6, F16662-7, F16662-8, F16662-9

CAS No.	Surrogate Recoveries	MS	MSD	F16695-3	Limits
352-33-0	1-Chloro-4-fluorobenzene	105%	105%	86%	74-127%
352-33-0	1-Chloro-4-fluorobenzene	108%	109%	91%	74-127%
563-58-6	1,1-Dichloropropene	97%	97%	97%	87-120%
563-58-6	1,1-Dichloropropene	100%	101%	104%	87-120%

Volatile Surrogate Recovery Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Method: EPA 601/602 **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]	S2 [a]	S2 [b]
F16662-1	QR016076.D	89.0	95.0	96.0	104.0
F16662-2	QR016088.D	87.0	93.0	95.0	104.0
F16662-3	QR016091.D	89.0	96.0	95.0	104.0
F16662-4	QR016095.D	87.0	94.0	95.0	105.0
F16662-5	QR016089.D	89.0	95.0	95.0	104.0
F16662-6	QR016092.D	91.0	98.0	95.0	104.0
F16662-7	QR016090.D	89.0	93.0	96.0	103.0
F16662-8	QR016096.D	90.0	99.0	95.0	105.0
F16662-9	QR016094.D	85.0	90.0	97.0	103.0
F16662-1DUP	QR016077.D	89.0	94.0	96.0	104.0
F16695-3MS	QR016083.D	105.0	108.0	97.0	100.0
F16695-3MSD	QR016084.D	105.0	109.0	97.0	101.0
GQR627-BS	QR016072.D	106.0	108.0	99.0	102.0
GQR627-MB	QR016081.D	86.0	89.0	98.0	103.0

Surrogate Compounds	Recovery Limits
S1 = 1-Chloro-4-fluorobenzene	74-127%
S2 = 1,1-Dichloropropene	87-120%

(a) Recovery from GC signal #1
(b) Recovery from GC signal #2

GC Surrogate Retention Time Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Check Std:	GQR627-CC623	**Injection Date:**	03/04/03
Lab File ID:	QR016071.D	**Injection Time:**	08:47
Instrument ID:	GCQR	**Method:**	EPA 601/602

	S1 [a] **RT**	**S1** [b] **RT**	**S2** [a] **RT**	**S2** [b] **RT**
Check Std	15.05	15.07	10.02	10.04

Lab Sample ID	**Lab File ID**	**Date Analyzed**	**Time Analyzed**	**S1** [a] **RT**	**S1** [b] **RT**	**S2** [a] **RT**	**S2** [b] **RT**
GQR627-BS	QR016072.D	03/04/03	09:32	15.05	15.07	10.02	10.04
ZZZZZZ	QR016074.D	03/04/03	11:41	15.04	15.06	10.02	10.04
ZZZZZZ	QR016075.D	03/04/03	12:11	15.03	15.05	10.00	10.02
F16662-1	QR016076.D	03/04/03	12:41	15.04	15.06	10.00	10.02
F16662-1DUP	QR016077.D	03/04/03	13:10	15.05	15.07	10.01	10.03
ZZZZZZ	QR016078.D	03/04/03	13:38	15.05	15.07	10.02	10.04
ZZZZZZ	QR016079.D	03/04/03	14:05	15.05	15.07	10.03	10.05
F16695-3	QR016080.D	03/04/03	14:32	15.05	15.07	10.03	10.05
GQR627-MB	QR016081.D	03/04/03	15:00	15.04	15.06	10.02	10.04

Surrogate Compounds

S1 = 1-Chloro-4-fluorobenzene
S2 = 1,1-Dichloropropene

(a) Retention time from GC signal #1
(b) Retention time from GC signal #2

GC Surrogate Retention Time Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Check Std:	GQR627-CC623	**Injection Date:**	03/04/03
Lab File ID:	QR016082.D	**Injection Time:**	15:27
Instrument ID:	GCQR	**Method:**	EPA 601/602

	S1 [a] **RT**	**S1** [b] **RT**	**S2** [a] **RT**	**S2** [b] **RT**
Check Std	15.04	15.06	10.01	10.03

Lab Sample ID	**Lab File ID**	**Date Analyzed**	**Time Analyzed**	**S1** [a] **RT**	**S1** [b] **RT**	**S2** [a] **RT**	**S2** [b] **RT**
F16695-3MS	QR016083.D	03/04/03	15:55	15.04	15.06	10.00	10.02
F16695-3MSD	QR016084.D	03/04/03	16:22	15.04	15.06	10.01	10.03
ZZZZZZ	QR016085.D	03/04/03	16:50	15.04	15.07	10.01	10.03
ZZZZZZ	QR016086.D	03/04/03	17:17	15.05	15.07	10.02	10.04
ZZZZZZ	QR016087.D	03/04/03	17:44	15.05	15.07	10.03	10.04
F16662-2	QR016088.D	03/04/03	18:15	15.04	15.06	10.02	10.04
F16662-5	QR016089.D	03/04/03	18:45	15.04	15.06	10.01	10.03
F16662-7	QR016090.D	03/04/03	19:15	15.04	15.06	10.01	10.03
F16662-3	QR016091.D	03/04/03	19:42	15.04	15.06	10.01	10.03
F16662-6	QR016092.D	03/04/03	20:10	15.05	15.07	10.02	10.04

Surrogate Compounds

S1 = 1-Chloro-4-fluorobenzene
S2 = 1,1-Dichloropropene

(a) Retention time from GC signal #1
(b) Retention time from GC signal #2

GC Surrogate Retention Time Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Check Std:	GQR627-CC623	**Injection Date:**	03/04/03
Lab File ID:	QR016093.D	**Injection Time:**	20:37
Instrument ID:	GCQR	**Method:**	EPA 601/602

	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
Check Std	15.04	15.06	10.01	10.03

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
F16662-9	QR016094.D	03/04/03	21:04	15.04	15.06	10.02	10.04
F16662-4	QR016095.D	03/04/03	21:34	15.04	15.06	10.02	10.03
F16662-8	QR016096.D	03/04/03	22:05	15.04	15.06	10.01	10.03
ZZZZZZ	QR016097.D	03/04/03	22:31	15.04	15.06	10.01	10.03
GQR628-BS	QR016098.D	03/04/03	22:59	15.03	15.05	10.01	10.03
GQR628-MB	QR016099.D	03/04/03	23:26	15.04	15.06	10.01	10.03
F16692-1	QR016100.D	03/04/03	23:54	15.03	15.06	10.01	10.03
F16692-1DUP	QR016101.D	03/05/03	00:21	15.03	15.05	10.01	10.03
F16692-3	QR016102.D	03/05/03	00:48	15.03	15.05	10.01	10.03

Surrogate Compounds

S1 = 1-Chloro-4-fluorobenzene
S2 = 1,1-Dichloropropene

(a) Retention time from GC signal #1
(b) Retention time from GC signal #2

Initial Calibration Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GXY233-ICC233
Lab FileID: XY010152.D

Response Factor Report VOA5

Method : C:\HPCHEM\2\METHODS\DGMEE.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Wed Feb 26 13:08:09 2003
Response via : Initial Calibration

Calibration Files
1 =XY010150.D 2 =XY010151.D 3 =XY010152.D
4 =XY010153.D 5 =XY010154.D 6 =XY010155.D 7 =XY010156.D

	Compound	1	2	3	4	5	6	7	Avg	%RSD
1)	Methane	1.546	1.597	1.626	1.827	1.798	1.700	1.691	1.684 E4	6.11
2)	Ethylene		2.991	3.099	3.473	3.360	3.225	3.169	3.219 E4	5.44
3)	Ethane		3.009	3.087	3.498	3.381	3.278	3.233	3.248 E4	5.58

(#) = Out of Range

DGMEE.M Wed Feb 26 13:33:19 2003 EF

Continuing Calibration Summary

Job Number: F16662 **Sample:** GXY233-CC233
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** XY010169.D
Project: Camp Lejeune-NW

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\2\DATA\022503\XY010169.D Vial: 100
Acq On : 25 Feb 2003 2:45 pm Operator: ClaireV
Sample : cc233-1000 Inst : VOA5
Misc : gc2354,gxy233,,,,,1 Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\HPCHEM\2\METHODS\DGMEE.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Wed Feb 26 13:08:09 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	Methane	1000.000	1173.161	-17.3	110	-0.09
2	Ethylene	1000.000	1167.090	-16.7	112	-0.05
3	Ethane	1000.000	1170.206	-17.0	112	-0.05

Average % D = 17.0

(#) = Out of Range SPCC's out = 0 CCC's out = 0
XY010154.D DGMEE.M Wed Feb 26 13:32:21 2003 EF

Continuing Calibration Summary

Job Number: F16662 **Sample:** GXY233-CC233
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** XY010180.D
Project: Camp Lejeune-NW

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\2\DATA\022503\XY010180.D Vial: 100
Acq On : 25 Feb 2003 5:00 pm Operator: ClaireV
Sample : cc233-5000 Inst : VOA5
Misc : gc2354,gxy233,,,,,1 Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\HPCHEM\2\METHODS\DGMEE.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Wed Feb 26 13:08:09 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	Methane	5000.000	4929.497	1.4	98	0.00
2	Ethylene	5000.000	4938.821	1.2	99	-0.07
3	Ethane	5000.000	5004.943	-0.1	99	-0.08

Average % D = 0.9

(#) = Out of Range SPCC's out = 0 CCC's out = 0
XY010155.D DGMEE.M Wed Feb 26 13:32:42 2003 EF

Initial Calibration Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GQR623-ICC623
Lab FileID: QR015958.D

Response Factor Report VOA3

Method : C:\HPCHEM\1\METHODS\QR0227.M (Chemstation Integrator)
Title : EPA 601/602 & SWA 5030B/8021B
Last Update : Fri Feb 28 15:05:24 2003
Response via : Initial Calibration

Calibration Files
1 =QR015955.D 2 =QR015956.D 3 =QR015957.D
4 =QR015958.D 5 =QR015959.D 6 =QR015960.D

		Compound	1	2	3	4	5	6	Avg	%RSD
1)	I	Fluorobenzene	----------ISTD----------							
2)	c	VINYL CHLORIDE	0.119	0.081	0.086	0.070	0.070	0.066	0.082	23.80#
3)		1,1-Dichloroethene	0.266	0.264	0.289	0.244	0.270	0.271	0.267	5.34
4)		Methyl tert Butyl E	0.283	0.321	0.329	0.257	0.283	0.267	0.290	9.96
5)		trans-1,2-Dichloroe	0.707	0.704	0.841	0.701	0.760	0.730	0.741	7.31
6)		Di-Isopropyl ether	0.350	0.374	0.405	0.338	0.360	0.351	0.363	6.56
7)		cis-1,2-Dichloroeth	0.486	0.533	0.597	0.504	0.547	0.537	0.534	7.15
8)	S	1,1-Dichloropropene	0.586	0.585	0.586	0.579	0.583	0.577	0.583	0.62
9)		Benzene	1.120	1.175	1.308	1.097	1.176	1.153	1.172	6.30
10)		Trichloroethene	0.713	0.728	0.851	0.721	0.793	0.776	0.764	7.02
11)		2-Chloroethylvinyl	0.407	0.541	0.652	0.575	0.636	0.643	0.576	16.19
12)		cis-1,3-Dichloropro		0.365	0.429	0.369	0.402	0.401	0.393	6.75
13)		Toluene	1.294	1.360	1.532	1.286	1.387	1.362	1.370	6.48
14)		trans-1,3-Dichlorop		0.472	0.568	0.501	0.556	0.563	0.532	8.06
15)		Tetrachloroethene	0.618	0.640	0.743	0.627	0.687	0.677	0.665	7.06
16)	S	1-Chloro-4-fluorobe	1.125	1.210	1.273	1.293	1.309	1.322	1.255	5.98
17)		Chlorobenzene	1.718	1.862	2.176	1.894	2.042	2.011	1.950	8.21
18)		Ethylbenzene	1.505	1.601	1.807	1.523	1.624	1.599	1.610	6.69
19)		m,p-Xylene	1.674	1.804	2.061	1.729	1.864	1.805	1.823	7.37
20)		o-Xylene	1.623	1.747	1.972	1.650	1.775	1.727	1.749	7.07
21)		1,3-Dichlorobenzene	1.365	1.601	2.059	1.867	2.141	2.177	1.868	17.44
22)		1,4-Dichlorobenzene	1.257	1.491	1.989	1.814	2.119	2.180	1.808	20.27
23)		1,2-Dichlorobenzene	1.248	1.434	1.767	1.577	1.744	1.767	1.589	13.44

Signal #2 Calibration Files
1 =QR015955.D 2 =QR015956.D 3 =QR015957.D
4 =QR015958.D 5 =QR015959.D 6 =QR015960.D

		Compound	1	2	3	4	5	6	Avg	%RSD
25)	I	Bromochloromethane	----------ISTD----------							
26)	c	DICHLORODIFLUOROMET	0.089	0.117	0.140	0.122	0.128	0.122	0.120	14.43
27)	c	CHLOROMETHANE	0.491	0.532	0.541	0.458	0.413	0.373	0.468	14.20
28)	c	VINYL CHLORIDE #2	0.209	0.224	0.257	0.207	0.212	0.198	0.218	9.56
29)	c	BROMOMETHANE	0.204	0.261	0.283	0.247	0.248	0.231	0.246	10.93
30)	c	CHLOROETHANE	0.389	0.429	0.445	0.382	0.370	0.343	0.393	9.63
31)	c	TRICHLOROFLUOROMETH	0.126	0.179	0.222	0.192	0.187	0.178	0.181	17.32
32)		1,1-Dichloroethene	0.629	0.696	0.721	0.576	0.570	0.529	0.620	12.27
33)		Methylene Chloride	0.842	0.821	0.714	0.598	0.569	0.533	0.680	19.51
34)		trans-1,2-Dichloroe	0.796	0.852	0.947	0.719	0.705	0.620	0.773	15.12
35)		1,1-Dichloroethane	0.886	0.996	1.034	0.800	0.762	0.692	0.862	15.63
36)		cis-1,2-Dichloroeth	1.091	1.203	1.234	0.972	0.918	0.831	1.041	15.45
37)		Chloroform	1.465	1.526	1.525	1.175	1.086	0.979	1.292	18.72
38)		1,1,1-Trichloroetha	1.136	1.033	1.072	0.804	0.767	0.687	0.917	20.33
39)	S	1,1-Dichloropropene	1.109	1.094	1.091	1.074	1.070	1.073	1.085	1.41

Initial Calibration Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GQR623-ICC623
Lab FileID: QR015958.D

40)		Carbon Tetrachlorid	2.240	1.375	1.339	0.987	0.931	0.833	1.284	40.35
41)		1,2-Dichloroethane	1.426	1.409	1.418	1.103	1.020	0.939	1.219	18.35
42)		Trichloroethene #2	1.494	1.516	1.585	1.217	1.139	1.045	1.333	17.01
43)		1,2-Dichloropropane	1.333	1.359	1.366	1.053	0.978	0.896	1.164	18.27
44)		Bromodichloromethan	1.233	1.392	1.439	1.140	1.076	0.996	1.213	14.49
45)		2-Chloroethylvinyl	0.304	0.514	0.598	0.500	0.498	0.477	0.482	20.09
46)		cis-1,3-Dichloropro	1.071	1.290	1.381	1.089	1.027	0.949	1.134	14.57
47)		trans-1,3-Dichlorop	0.890	1.161	1.271	1.053	1.009	0.936	1.053	13.51
48)		1,1,2-Trichloroetha	1.507	1.719	1.761	1.349	1.246	1.150	1.456	17.21
49)		Tetrachloroethene #	1.846	1.810	1.851	1.410	1.306	1.194	1.569	19.10
50)		Dibromochloromethan	0.948	1.221	1.268	1.069	1.033	0.980	1.087	11.98
51)	s	1-Chloro-4-fluorobe	0.783	0.827	0.859	0.870	0.882	0.893	0.852	4.81
52)		Chlorobenzene #2	0.884	0.894	1.009	0.810	0.781	0.727	0.851	11.75
53)		Bromoform	0.614	0.946	1.124	0.934	0.952	0.922	0.915	18.08
54)		1,1,2,2-Tetrachloro	1.702	1.954	1.985	1.516	1.387	1.283	1.638	17.87
55)		1,3-Dichlorobenzene	0.956	1.167	1.388	1.177	1.150	1.087	1.154	12.20
56)		1,4-Dichlorobenzene	0.920	1.144	1.374	1.187	1.173	1.104	1.150	12.72
57)		1,2-Dichlorobenzene	1.124	1.331	1.500	1.227	1.178	1.089	1.242	12.26

Average % RSD = 12.9

(#) = Out of Range

QR0227.M Mon Mar 03 10:10:19 2003 QRXY

Continuing Calibration Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GQR627-CC623
Lab FileID: QR016071.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\030403\QR016071.D\FID1B.CH Vial: 1
Signal #2 : C:\HPCHEM\1\DATA\030403\QR016071.D\AIB2A.CH
Acq On : 4 Mar 2003 8:47 am Operator: BarbaraM
Sample : CC623-20 Inst : VOA3
Misc : gc2368,gqr627,,,,,1 Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: ELCD.E

Method : C:\HPCHEM\1\METHODS\QR0227.M (Chemstation Integrator)
Title : EPA 601/602 & SWA 5030B/8021B
Last Update : Fri Feb 28 10:40:54 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	20.000	20.000	0.0	114	0.00
2	c	VINYL CHLORIDE	20.000	20.327	-1.6	122	0.00
3		1,1-Dichloroethene	20.000	19.937	0.3	125	0.05
4		Methyl tert Butyl Ether	40.000	36.387	9.0	117	0.03
5		trans-1,2-Dichloroethene	20.000	19.634	1.8	119	0.03
6		Di-Isopropyl ether	20.000	19.896	0.5	122	0.03
7		cis-1,2-Dichloroethene	20.000	20.281	-1.4	123	0.02
8	S	1,1-Dichloropropene	20.000	19.437	2.8	112	0.01
9		Benzene	40.000	43.117	-7.8	132	0.00
10		Trichloroethene	20.000	20.071	-0.4	121	0.00
11		2-Chloroethylvinyl ether	20.000	18.153	9.2	109	0.00
12		cis-1,3-Dichloropropene	20.000	20.157	-0.8	123	0.00
13		Toluene	40.000	39.979	0.1	122	0.00
14		trans-1,3-Dichloropropene	20.000	20.059	-0.3	122	0.00
15		Tetrachloroethene	20.000	20.351	-1.8	123	0.00
16	S	1-Chloro-4-fluorobenzene	20.000	21.160	-5.8	117	0.00
17		Chlorobenzene	20.000	20.899	-4.5	123	0.01
18		Ethylbenzene	40.000	40.569	-1.4	123	0.00
19		m,p-Xylene	80.000	81.438	-1.8	123	0.00
20		o-Xylene	40.000	40.525	-1.3	123	0.00
21		1,3-Dichlorobenzene	20.000	20.341	-1.7	123	-0.01
22		1,4-Dichlorobenzene	20.000	20.371	-1.9	124	-0.01
23		1,2-Dichlorobenzene	20.000	20.076	-0.4	120	-0.01

Signal #2

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
25	I	Bromochloromethane	20.000	20.000	0.0	97	0.02
26	c	DICHLORODIFLUOROMETHANE	20.000	18.165	9.2	93	0.02
27	c	CHLOROMETHANE	20.000	19.337	3.3	96	0.03
28	c	VINYL CHLORIDE #2	20.000	21.112	-5.6	109	0.00
29	c	BROMOMETHANE	20.000	20.937	-4.7	106	0.04
30	c	CHLOROETHANE	20.000	21.138	-5.7	106	0.04
31	c	TRICHLOROFLUOROMETHANE	20.000	22.538	-12.7	111	0.07
32		1,1-Dichloroethene #2	20.000	21.051	-5.3	108	0.05
33		Methylene Chloride	20.000	20.544	-2.7	104	0.04
34		trans-1,2-Dichloroethene #2	20.000	20.112	-0.6	105	0.03
35		1,1-Dichloroethane	20.000	21.091	-5.5	108	0.03

Continuing Calibration Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GQR627-CC623
Lab FileID: QR016071.D

36		cis-1,2-Dichloroethene #2	20.000	20.920	-4.6	106	0.02
37		Chloroform	20.000	21.178	-5.9	107	0.02
38		1,1,1-Trichloroethane	20.000	20.182	-0.9	105	0.01
39	S	1,1-Dichloropropene #2	20.000	20.431	-2.2	101	0.01
40		Carbon Tetrachloride	20.000	20.427	-2.1	107	0.01
41		1,2-Dichloroethane	20.000	21.319	-6.6	107	0.00
42		Trichloroethene #2	20.000	20.947	-4.7	107	0.00
43		1,2-Dichloropropane	20.000	20.995	-5.0	107	0.00
44		Bromodichloromethane	20.000	20.726	-3.6	105	0.00
45		2-Chloroethylvinyl ether #2	20.000	20.363	-1.8	96	0.00
46		cis-1,3-Dichloropropene #2	20.000	21.257	-6.3	107	0.00
47		trans-1,3-Dichloropropene #	20.000	20.840	-4.2	105	0.00
48		1,1,2-Trichloroethane	20.000	21.024	-5.1	106	0.00
49		Tetrachloroethene #2	20.000	21.271	-6.4	108	0.00
50		Dibromochloromethane	20.000	20.469	-2.3	103	0.00
51	s	1-Chloro-4-fluorobenzene #2	20.000	21.858	-9.3	104	0.00
52		Chlorobenzene #2	20.000	20.870	-4.4	106	0.00
53		Bromoform	20.000	20.333	-1.7	97	-0.01
54		1,1,2,2-Tetrachloroethane	20.000	20.395	-2.0	103	-0.01
55		1,3-Dichlorobenzene #2	20.000	21.528	-7.6	107	0.08
56		1,4-Dichlorobenzene #2	20.000	21.318	-6.6	107	-0.01
57		1,2-Dichlorobenzene #2	20.000	20.201	-1.0	102	-0.01

Average % D = 3.8

(#) = Out of Range SPCC's out = 0 CCC's out = 0

QR015958.D QR0227.M Wed Mar 05 14:13:34 2003 QRXY

Continuing Calibration Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GQR627-CC623
Lab FileID: QR016082.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\030403\QR016082.D\FID1B.CH Vial: 11
Signal #2 : C:\HPCHEM\1\DATA\030403\QR016082.D\AIB2A.CH
Acq On : 4 Mar 2003 3:27 pm Operator: BarbaraM
Sample : CC623-20 Inst : VOA3
Misc : gc2368,gqr627,,,,, Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: ELCD.E

Method : C:\HPCHEM\1\METHODS\QR0227.M (Chemstation Integrator)
Title : EPA 601/602 & SWA 5030B/8021B
Last Update : Fri Feb 28 10:40:54 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	20.000	20.000	0.0	118	0.00
2	c	VINYL CHLORIDE	20.000	21.696	-8.5	134	-0.01
3		1,1-Dichloroethene	20.000	20.175	-0.9	130	0.04
4		Methyl tert Butyl Ether	40.000	38.313	4.2	127	0.02
5		trans-1,2-Dichloroethene	20.000	19.621	1.9	122	0.02
6		Di-Isopropyl ether	20.000	20.253	-1.3	128	0.02
7		cis-1,2-Dichloroethene	20.000	20.682	-3.4	129	0.00
8	S	1,1-Dichloropropene	20.000	19.448	2.8	115	0.00
9		Benzene	40.000	40.931	-2.3	129	0.00
10		Trichloroethene	20.000	20.333	-1.7	127	0.00
11		2-Chloroethylvinyl ether	20.000	19.398	3.0	120	-0.01
12		cis-1,3-Dichloropropene	20.000	20.178	-0.9	127	-0.01
13		Toluene	40.000	40.536	-1.3	127	-0.01
14		trans-1,3-Dichloropropene	20.000	20.119	-0.6	126	-0.01
15		Tetrachloroethene	20.000	20.500	-2.5	128	-0.01
16	S	1-Chloro-4-fluorobenzene	20.000	20.863	-4.3	119	-0.01
17		Chlorobenzene	20.000	20.751	-3.8	126	0.00
18		Ethylbenzene	40.000	40.679	-1.7	127	-0.01
19		m,p-Xylene	80.000	82.322	-2.9	128	-0.01
20		o-Xylene	40.000	40.700	-1.8	127	-0.01
21		1,3-Dichlorobenzene	20.000	20.326	-1.6	127	-0.01
22		1,4-Dichlorobenzene	20.000	20.353	-1.8	128	-0.01
23		1,2-Dichlorobenzene	20.000	20.365	-1.8	126	-0.01

Signal #2

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
25	I	Bromochloromethane	20.000	20.000	0.0	103	0.00
26	c	DICHLORODIFLUOROMETHANE	20.000	19.081	4.6	104	0.02
27	c	CHLOROMETHANE	20.000	19.387	3.1	102	0.03
28	c	VINYL CHLORIDE #2	20.000	22.545	-12.7	123	-0.02
29	c	BROMOMETHANE	20.000	19.741	1.3	106	0.04
30	c	CHLOROETHANE	20.000	20.416	-2.1	109	0.04
31	c	TRICHLOROFLUOROMETHANE	20.000	22.105	-10.5	116	0.06
32		1,1-Dichloroethene #2	20.000	21.257	-6.3	116	0.04
33		Methylene Chloride	20.000	21.695	-8.5	116	0.02
34		trans-1,2-Dichloroethene #2	20.000	19.999	0.0	111	0.02
35		1,1-Dichloroethane	20.000	21.101	-5.5	114	0.02

Continuing Calibration Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GQR627-CC623
Lab FileID: QR016082.D

36		cis-1,2-Dichloroethene #2	20.000	21.172	-5.9	114	0.01
37		Chloroform	20.000	21.287	-6.4	114	0.00
38		1,1,1-Trichloroethane	20.000	20.806	-4.0	114	0.00
39	S	1,1-Dichloropropene #2	20.000	20.161	-0.8	105	0.00
40		Carbon Tetrachloride	20.000	20.860	-4.3	115	0.00
41		1,2-Dichloroethane	20.000	21.701	-8.5	116	0.00
42		Trichloroethene #2	20.000	21.097	-5.5	114	0.00
43		1,2-Dichloropropane	20.000	21.356	-6.8	115	0.00
44		Bromodichloromethane	20.000	20.985	-4.9	113	0.00
45		2-Chloroethylvinyl ether #2	20.000	21.533	-7.7	107	-0.01
46		cis-1,3-Dichloropropene #2	20.000	21.379	-6.9	114	-0.01
47		trans-1,3-Dichloropropene #	20.000	21.146	-5.7	112	-0.01
48		1,1,2-Trichloroethane	20.000	21.463	-7.3	115	-0.01
49		Tetrachloroethene #2	20.000	21.279	-6.4	114	-0.01
50		Dibromochloromethane	20.000	21.111	-5.6	112	-0.01
51	s	1-Chloro-4-fluorobenzene #2	20.000	21.753	-8.8	110	-0.01
52		Chlorobenzene #2	20.000	21.004	-5.0	113	-0.01
53		Bromoform	20.000	21.336	-6.7	108	-0.01
54		1,1,2,2-Tetrachloroethane	20.000	21.431	-7.2	114	-0.01
55		1,3-Dichlorobenzene #2	20.000	21.050	-5.3	112	-0.01
56		1,4-Dichlorobenzene #2	20.000	21.490	-7.4	114	-0.01
57		1,2-Dichlorobenzene #2	20.000	21.087	-5.4	113	-0.01

Average % D = 4.5

(#) = Out of Range SPCC's out = 0 CCC's out = 0

QR015958.D QR0227.M Wed Mar 05 14:13:36 2003 QRXY

Continuing Calibration Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GQR627-CC623
Lab FileID: QR016093.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\030403\QR016093.D\FID1B.CH Vial: 21
Signal #2 : C:\HPCHEM\1\DATA\030403\QR016093.D\AIB2A.CH
Acq On : 4 Mar 2003 8:37 pm Operator: BarbaraM
Sample : CC623-20 Inst : VOA3
Misc : gc2368,gqr627,,,,, Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: ELCD.E

Method : C:\HPCHEM\1\METHODS\QR0227.M (Chemstation Integrator)
Title : EPA 601/602 & SWA 5030B/8021B
Last Update : Fri Feb 28 10:40:54 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	20.000	20.000	0.0	118	0.00
2	c	VINYL CHLORIDE	20.000	23.521	-17.6	144	-0.04
3		1,1-Dichloroethene	20.000	19.106	4.5	123	0.04
4		Methyl tert Butyl Ether	40.000	35.939	10.2	120	0.02
5		trans-1,2-Dichloroethene	20.000	18.228	8.9	114	0.02
6		Di-Isopropyl ether	20.000	18.957	5.2	120	0.02
7		cis-1,2-Dichloroethene	20.000	19.353	3.2	121	0.01
8	S	1,1-Dichloropropene	20.000	19.300	3.5	115	0.00
9		Benzene	40.000	38.461	3.8	121	0.00
10		Trichloroethene	20.000	19.215	3.9	120	0.00
11		2-Chloroethylvinyl ether	20.000	18.340	8.3	114	0.00
12		cis-1,3-Dichloropropene	20.000	18.472	7.6	116	0.00
13		Toluene	40.000	38.376	4.1	121	0.00
14		trans-1,3-Dichloropropene	20.000	18.427	7.9	115	-0.01
15		Tetrachloroethene	20.000	19.415	2.9	122	-0.01
16	S	1-Chloro-4-fluorobenzene	20.000	21.250	-6.3	122	-0.02
17		Chlorobenzene	20.000	19.463	2.7	118	0.00
18		Ethylbenzene	40.000	38.444	3.9	120	-0.02
19		m,p-Xylene	80.000	77.420	3.2	121	-0.02
20		o-Xylene	40.000	38.769	3.1	121	-0.02
21		1,3-Dichlorobenzene	20.000	18.905	5.5	118	-0.02
22		1,4-Dichlorobenzene	20.000	18.860	5.7	118	-0.02
23		1,2-Dichlorobenzene	20.000	19.085	4.6	118	-0.02

Signal #2

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
25	I	Bromochloromethane	20.000	20.000	0.0	100	0.00
26	c	DICHLORODIFLUOROMETHANE	20.000	18.805	6.0	99	0.02
27	c	CHLOROMETHANE	20.000	20.057	-0.3	102	0.02
28	c	VINYL CHLORIDE #2	20.000	25.945	-29.7#	135	-0.05
29	c	BROMOMETHANE	20.000	20.259	-1.3	106	0.03
30	c	CHLOROETHANE	20.000	20.932	-4.7	108	0.04
31	c	TRICHLOROFLUOROMETHANE	20.000	22.657	-13.3	115	0.05
32		1,1-Dichloroethene #2	20.000	20.349	-1.7	108	0.04
33		Methylene Chloride	20.000	20.091	-0.5	105	0.03
34		trans-1,2-Dichloroethene #2	20.000	18.683	6.6	101	0.02
35		1,1-Dichloroethane	20.000	19.955	0.2	106	0.02

Continuing Calibration Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GQR627-CC623
Lab FileID: QR016093.D

36		cis-1,2-Dichloroethene #2	20.000	19.775	1.1	104	0.01
37		Chloroform	20.000	20.062	-0.3	105	0.01
38		1,1,1-Trichloroethane	20.000	19.698	1.5	106	0.00
39	S	1,1-Dichloropropene #2	20.000	20.115	-0.6	102	0.00
40		Carbon Tetrachloride	20.000	19.682	1.6	106	0.00
41		1,2-Dichloroethane	20.000	20.381	-1.9	106	0.00
42		Trichloroethene #2	20.000	19.911	0.4	105	0.00
43		1,2-Dichloropropane	20.000	20.082	-0.4	105	0.00
44		Bromodichloromethane	20.000	19.693	1.5	103	0.00
45		2-Chloroethylvinyl ether #2	20.000	20.322	-1.6	98	0.00
46		cis-1,3-Dichloropropene #2	20.000	19.381	3.1	102	0.00
47		trans-1,3-Dichloropropene #	20.000	19.217	3.9	100	-0.01
48		1,1,2-Trichloroethane	20.000	20.419	-2.1	107	-0.01
49		Tetrachloroethene #2	20.000	20.165	-0.8	106	-0.01
50		Dibromochloromethane	20.000	19.851	0.7	103	-0.01
51	s	1-Chloro-4-fluorobenzene #2	20.000	21.675	-8.4	106	-0.02
52		Chlorobenzene #2	20.000	19.783	1.1	103	-0.02
53		Bromoform	20.000	20.417	-2.1	100	-0.02
54		1,1,2,2-Tetrachloroethane	20.000	20.691	-3.5	107	-0.02
55		1,3-Dichlorobenzene #2	20.000	19.775	1.1	102	-0.02
56		1,4-Dichlorobenzene #2	20.000	19.969	0.2	103	-0.02
57		1,2-Dichlorobenzene #2	20.000	19.831	0.8	103	-0.02

Average % D = 4.3

(#) = Out of Range SPCC's out = 0 CCC's out = 1

QR015958.D QR0227.M Wed Mar 05 14:13:38 2003 QRXY

Continuing Calibration Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GQR628-CC623
Lab FileID: QR016103.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\030403\QR016103.D\FID1B.CH Vial: 30
Signal #2 : C:\HPCHEM\1\DATA\030403\QR016103.D\AIB2A.CH
Acq On : 5 Mar 2003 1:16 am Operator: BarbaraM
Sample : CC623-20 Inst : VOA3
Misc : gc2370,gqr628,,,,, Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: ELCD.E

Method : C:\HPCHEM\1\METHODS\QR0227.M (Chemstation Integrator)
Title : EPA 601/602 & SWA 5030B/8021B
Last Update : Fri Feb 28 10:40:54 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	20.000	20.000	0.0	119	0.00
2	c	VINYL CHLORIDE	20.000	23.054	-15.3	143	-0.04
3		1,1-Dichloroethene	20.000	19.268	3.7	125	0.04
4		Methyl tert Butyl Ether	40.000	37.840	5.4	127	0.03
5		trans-1,2-Dichloroethene	20.000	19.459	2.7	122	0.02
6		Di-Isopropyl ether	20.000	20.204	-1.0	129	0.02
7		cis-1,2-Dichloroethene	20.000	20.472	-2.4	129	0.01
8	S	1,1-Dichloropropene	20.000	19.409	3.0	116	0.00
9		Benzene	40.000	40.389	-1.0	128	0.00
10		Trichloroethene	20.000	19.904	0.5	125	0.00
11		2-Chloroethylvinyl ether	20.000	19.037	4.8	119	-0.01
12		cis-1,3-Dichloropropene	20.000	19.357	3.2	123	-0.01
13		Toluene	40.000	40.391	-1.0	128	-0.01
14		trans-1,3-Dichloropropene	20.000	19.181	4.1	121	-0.01
15		Tetrachloroethene	20.000	19.553	2.2	123	-0.02
16	S	1-Chloro-4-fluorobenzene	20.000	21.302	-6.5	123	-0.02
17		Chlorobenzene	20.000	20.618	-3.1	126	0.00
18		Ethylbenzene	40.000	40.090	-0.2	126	-0.02
19		m,p-Xylene	80.000	80.567	-0.7	126	-0.02
20		o-Xylene	40.000	40.579	-1.4	128	-0.02
21		1,3-Dichlorobenzene	20.000	20.125	-0.6	127	-0.03
22		1,4-Dichlorobenzene	20.000	20.187	-0.9	128	-0.03
23		1,2-Dichlorobenzene	20.000	20.277	-1.4	127	-0.03

Signal #2

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
25	I	Bromochloromethane	20.000	20.000	0.0	99	0.00
26	c	DICHLORODIFLUOROMETHANE	20.000	18.293	8.5	96	0.01
27	c	CHLOROMETHANE	20.000	17.842	10.8	92	0.02
28	c	VINYL CHLORIDE #2	20.000	25.315	-26.6#	131	-0.04
29	c	BROMOMETHANE	20.000	19.785	1.1	103	0.04
30	c	CHLOROETHANE	20.000	20.313	-1.6	104	0.04
31	c	TRICHLOROFLUOROMETHANE	20.000	22.173	-10.9	112	0.06
32		1,1-Dichloroethene #2	20.000	20.394	-2.0	107	0.04
33		Methylene Chloride	20.000	22.237	-11.2	114	0.03
34		trans-1,2-Dichloroethene #2	20.000	20.021	-0.1	107	0.02
35		1,1-Dichloroethane	20.000	20.854	-4.3	109	0.02

Continuing Calibration Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GQR628-CC623
Lab FileID: QR016103.D

36		cis-1,2-Dichloroethene #2	20.000	20.937	-4.7	109	0.01
37		Chloroform	20.000	21.099	-5.5	109	0.01
38		1,1,1-Trichloroethane	20.000	20.107	-0.5	107	0.00
39	S	1,1-Dichloropropene #2	20.000	20.000	0.0	100	0.00
40		Carbon Tetrachloride	20.000	19.819	0.9	106	0.00
41		1,2-Dichloroethane	20.000	21.376	-6.9	110	0.00
42		Trichloroethene #2	20.000	20.513	-2.6	107	0.00
43		1,2-Dichloropropane	20.000	21.024	-5.1	109	0.00
44		Bromodichloromethane	20.000	20.700	-3.5	107	0.00
45		2-Chloroethylvinyl ether #2	20.000	21.118	-5.6	101	0.00
46		cis-1,3-Dichloropropene #2	20.000	20.118	-0.6	104	-0.01
47		trans-1,3-Dichloropropene #	20.000	19.981	0.1	103	-0.01
48		1,1,2-Trichloroethane	20.000	21.310	-6.5	110	-0.02
49		Tetrachloroethene #2	20.000	20.131	-0.7	105	-0.02
50		Dibromochloromethane	20.000	20.885	-4.4	107	-0.02
51	s	1-Chloro-4-fluorobenzene #2	20.000	21.810	-9.0	106	-0.02
52		Chlorobenzene #2	20.000	20.622	-3.1	107	-0.02
53		Bromoform	20.000	21.386	-6.9	104	-0.02
54		1,1,2,2-Tetrachloroethane	20.000	21.193	-6.0	109	-0.02
55		1,3-Dichlorobenzene #2	20.000	20.606	-3.0	105	-0.02
56		1,4-Dichlorobenzene #2	20.000	20.941	-4.7	107	-0.03
57		1,2-Dichlorobenzene #2	20.000	20.939	-4.7	108	-0.03

Average % D = 4.2

(#) = Out of Range SPCC's out = 0 CCC's out = 1

QR015958.D QR0227.M Wed Mar 05 14:13:40 2003 QRXY

Continuing Calibration Summary

Job Number: F16662 **Sample:** GXY233-ECC233
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** XY010184.D
Project: Camp Lejeune-NW

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\2\DATA\022503\XY010184.D Vial: 100
Acq On : 25 Feb 2003 5:47 pm Operator: ClaireV
Sample : ecc233-500 Inst : VOA5
Misc : gc2354,gxy233,,,,,1 Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\HPCHEM\2\METHODS\DGMEE.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Wed Feb 26 13:08:09 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	Methane	500.000	554.708	-10.9	102	0.01
2	Ethylene	500.000	556.660	-11.3	103	0.00
3	Ethane	500.000	555.193	-11.0	103	0.00

Average % D = 11.1

(#) = Out of Range SPCC's out = 0 CCC's out = 0
XY010153.D DGMEE.M Wed Feb 26 13:32:00 2003 EF

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries
- Initial and Continuing Calibration Summaries

Blank Spike Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP6989-BS	IJ17138.D	1	02/25/03	NJ	02/21/03	OP6989	GIJ815

The QC reported here applies to the following samples: **Method:** EPA 610

F16662-1, F16662-2, F16662-3, F16662-4, F16662-5, F16662-6, F16662-7, F16662-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	25	25.7	103	59-114
208-96-8	Acenaphthylene	25	22.9	92	58-109
120-12-7	Anthracene	25	24.9	100	63-110
56-55-3	Benzo(a)anthracene	25	25.8	103	74-111
50-32-8	Benzo(a)pyrene	25	25.7	103	71-110
205-99-2	Benzo(b)fluoranthene	25	26.0	104	75-112
191-24-2	Benzo(g,h,i)perylene	25	25.8	103	66-114
207-08-9	Benzo(k)fluoranthene	25	25.7	103	73-111
218-01-9	Chrysene	25	25.7	103	73-112
53-70-3	Dibenzo(a,h)anthracene	25	25.7	103	67-111
206-44-0	Fluoranthene	25	25.2	101	74-113
86-73-7	Fluorene	25	25.6	102	67-113
193-39-5	Indeno(1,2,3-cd)pyrene	25	25.5	102	68-115
91-20-3	Naphthalene	25	23.9	96	52-113
90-12-0	1-Methylnaphthalene	25	25.1	100	55-117
91-57-6	2-Methylnaphthalene	25	23.9	96	50-115
85-01-8	Phenanthrene	25	24.8	99	70-111
129-00-0	Pyrene	25	25.6	102	73-115

CAS No.	Surrogate Recoveries	BSP	Limits
321-60-8	2-Fluorobiphenyl	100%	41-139%
84-15-1	o-Terphenyl	106%	46-135%

Method Blank Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP6989-MB	IJ17139.D	1	02/25/03	NJ	02/21/03	OP6989	GIJ815

The QC reported here applies to the following samples: **Method:** EPA 610

F16662-1, F16662-2, F16662-3, F16662-4, F16662-5, F16662-6, F16662-7, F16662-8

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	5.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	ug/l	
120-12-7	Anthracene	ND	5.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	ug/l	
218-01-9	Chrysene	ND	5.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	ug/l	
86-73-7	Fluorene	ND	5.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	ug/l	
129-00-0	Pyrene	ND	5.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
321-60-8	2-Fluorobiphenyl	91%	41-139%
84-15-1	o-Terphenyl	99%	46-135%

Method Blank Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP6989-MB	IJ17153.D	1	02/26/03	NJ	02/21/03	OP6989	GIJ816

The QC reported here applies to the following samples: **Method:** EPA 610

F16662-1, F16662-2, F16662-3, F16662-4, F16662-5, F16662-6, F16662-7, F16662-8

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	5.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	ug/l	
120-12-7	Anthracene	ND	5.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	ug/l	
218-01-9	Chrysene	ND	5.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	ug/l	
86-73-7	Fluorene	ND	5.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	ug/l	
129-00-0	Pyrene	ND	5.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
321-60-8	2-Fluorobiphenyl	90%	41-139%
84-15-1	o-Terphenyl	98%	46-135%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP6989-MS	IJ17155.D	4	02/26/03	NJ	02/21/03	OP6989	GIJ816
OP6989-MSD	IJ17156.D	4	02/26/03	NJ	02/21/03	OP6989	GIJ816
F16662-5 [a]	IJ17144.D	1	02/25/03	NJ	02/21/03	OP6989	GIJ815
F16662-5 [a]	IJ17154.D	10	02/26/03	NJ	02/21/03	OP6989	GIJ816

The QC reported here applies to the following samples: **Method:** EPA 610

F16662-1, F16662-2, F16662-3, F16662-4, F16662-5, F16662-6, F16662-7, F16662-8

CAS No.	Compound	F16662-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	12.3		51	68.1	109	70.0	113	3	36-143/21
208-96-8	Acenaphthylene	ND		51	46.3	91	47.4	93	2	59-108/22
120-12-7	Anthracene	ND		51	52.4	103	54.1	106	3	61-113/22
56-55-3	Benzo(a)anthracene	ND		51	53.1	104	54.7	107	3	69-111/17
50-32-8	Benzo(a)pyrene	ND		51	54.1	106	55.1	108	2	71-109/22
205-99-2	Benzo(b)fluoranthene	ND		51	53.6	105	54.6	107	2	63-116/19
191-24-2	Benzo(g,h,i)perylene	ND		51	55.2	108	56.7	111	3	54-123/19
207-08-9	Benzo(k)fluoranthene	ND		51	55.0	108	56.4	111	3	66-114/16
218-01-9	Chrysene	ND		51	53.7	105	55.4	109	3	65-116/15
53-70-3	Dibenzo(a,h)anthracene	ND		51	65.7	129	57.2	112	14	52-130/24
206-44-0	Fluoranthene	ND		51	52.8	103	54.3	106	3	73-113/16
86-73-7	Fluorene	7.0		51	61.9	108	63.3	110	2	63-114/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		51	52.6	103	53.3	104	1	43-133/24
91-20-3	Naphthalene	270 [c]		51	348	153* [b]	354	165* [b]	2	40-130/27
90-12-0	1-Methylnaphthalene	11.2		51	66.4	108	67.9	111	2	50-128/25
91-57-6	2-Methylnaphthalene	15.3		51	69.6	106	71.4	110	3	32-148/26
85-01-8	Phenanthrene	ND		51	51.9	102	53.7	105	3	44-136/19
129-00-0	Pyrene	ND		51	52.4	103	53.7	105	2	71-116/16

CAS No.	Surrogate Recoveries	MS	MSD	F16662-5	F16662-5	Limits
321-60-8	2-Fluorobiphenyl	100%	103%	94%	102%	41-139%
84-15-1	o-Terphenyl	106%	109%	105%	115%	46-135%

(a) All hits confirmed by dual column analysis.
(b) Outside control limits due to high level in sample relative to spike amount.
(c) Result is from Run #2.

Semivolatile Surrogate Recovery Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Method: EPA 610 **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S2 [a]
F16662-1	IJ17140.D	87.0	98.0
F16662-2	IJ17141.D	74.0	91.0
F16662-3	IJ17142.D	94.0	102.0
F16662-4	IJ17143.D	69.0	89.0
F16662-5	IJ17154.D	102.0	115.0
F16662-5	IJ17144.D	94.0	105.0
F16662-6	IJ17147.D	95.0	103.0
F16662-7	IJ17149.D	78.0	95.0
F16662-8	IJ17157.D	107.0	113.0
F16662-8	IJ17150.D	98.0	105.0
OP6989-BS	IJ17138.D	100.0	106.0
OP6989-MB	IJ17139.D	91.0	99.0
OP6989-MB	IJ17153.D	90.0	98.0
OP6989-MS	IJ17155.D	100.0	106.0
OP6989-MSD	IJ17156.D	103.0	109.0

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorobiphenyl	41-139%
S2 = o-Terphenyl	46-135%

(a) Recovery from GC signal #1

GC Surrogate Retention Time Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Check Std:	GIJ815-CC803	**Injection Date:**	02/25/03
Lab File ID:	IJ17137.D	**Injection Time:**	15:12
Instrument ID:	GCIJ	**Method:**	EPA 610

	S1 [a] **RT**	**S2** [a] **RT**
Check Std	5.87	10.42

Lab Sample ID	**Lab File ID**	**Date Analyzed**	**Time Analyzed**	**S1** [a] **RT**	**S2** [a] **RT**
OP6989-BS	IJ17138.D	02/25/03	15:50	5.87	10.42
OP6989-MB	IJ17139.D	02/25/03	16:18	5.87	10.42
F16662-1	IJ17140.D	02/25/03	16:45	5.87	10.42
F16662-2	IJ17141.D	02/25/03	17:13	5.87	10.42
F16662-3	IJ17142.D	02/25/03	17:40	5.87	10.42
F16662-4	IJ17143.D	02/25/03	18:08	5.87	10.42
F16662-5	IJ17144.D	02/25/03	18:35	5.87	10.42
F16662-6	IJ17147.D	02/25/03	19:58	5.87	10.42

Surrogate Compounds

S1 = 2-Fluorobiphenyl
S2 = o-Terphenyl

(a) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Check Std:	GIJ815-CC803	**Injection Date:**	02/25/03
Lab File ID:	IJ17148.D	**Injection Time:**	20:26
Instrument ID:	GCIJ	**Method:**	EPA 610

	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
Check Std	5.87	6.75	10.42	11.92

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
F16662-7	IJ17149.D	02/25/03	20:53	5.87		10.42	
F16662-8	IJ17150.D	02/25/03	21:21	5.87		10.42	
GIJ815-ECC803	IJ17151.D	02/25/03	21:48	5.87	6.75	10.42	11.92

Surrogate Compounds

S1 = 2-Fluorobiphenyl
S2 = o-Terphenyl

(a) Retention time from GC signal #1
(b) Retention time from GC signal #2

GC Surrogate Retention Time Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Check Std:	GIJ816-CC803	**Injection Date:**	02/26/03
Lab File ID:	IJ17152.D	**Injection Time:**	09:32
Instrument ID:	GCIJ	**Method:**	EPA 610

	S1 [a] **RT**	**S2** [a] **RT**
Check Std	5.86	10.41

Lab Sample ID	**Lab File ID**	**Date Analyzed**	**Time Analyzed**	**S1** [a] **RT**	**S2** [a] **RT**
OP6989-MB	IJ17153.D	02/26/03	10:04	5.86	10.41
F16662-5	IJ17154.D	02/26/03	10:32	5.86	10.41
OP6989-MS	IJ17155.D	02/26/03	10:59	5.86	10.41
OP6989-MSD	IJ17156.D	02/26/03	11:27	5.86	10.41
F16662-8	IJ17157.D	02/26/03	11:54	5.86	10.41

Surrogate Compounds

S1 = 2-Fluorobiphenyl
S2 = o-Terphenyl

(a) Retention time from GC signal #1

Initial Calibration Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GIJ803-ICC803
Lab FileID: IJ16841.D

Response Factor Report FID 1

Method : C:\HPCHEM\1\METHODS\8100_H2.M (Chemstation Integrator)
Title : PAH's BY EPA 610 OR 8100
Last Update : Wed Jan 22 13:03:50 2003
Response via : Initial Calibration

Calibration Files
5 =IJ16839.D 10 =IJ16840.D 20 =IJ16841.D
30 =IJ16842.D 40 =IJ16843.D 50 =IJ16844.D

	Compound	5	10	20	30	40	50	Avg	%RSD
1)	Naphthalene	2.198	2.287	2.215	2.189	2.176	2.213	2.213 E4	1.77
2)	2-Methyl Naphthalen	2.170	2.263	2.194	2.168	2.158	2.198	2.192 E4	1.75
3)	1-Methyl Naphthalen	2.114	2.201	2.132	2.107	2.098	2.137	2.132 E4	1.73
4) S	2-Fluorobiphenyl	1.862	1.945	1.889	1.874	1.866	1.902	1.890 E4	1.63
5)	Acenaphthylene	2.109	2.218	2.158	2.150	2.141	2.187	2.160 E4	1.76
6)	Acenaphthene	2.157	2.262	2.198	2.188	2.180	2.223	2.201 E4	1.67
7)	Fluorene	2.020	2.162	2.125	2.127	2.125	2.171	2.122 E4	2.54
8)	Phenanthrene	2.142	2.266	2.184	2.187	2.177	2.221	2.196 E4	1.94
9)	Anthracene	2.155	2.272	2.177	2.174	2.156	2.192	2.188 E4	1.99
10) S	O-Terphenyl	2.121	2.207	2.109	2.104	2.085	2.122	2.125 E4	1.99
11)	Fluoranthene	2.185	2.278	2.175	2.178	2.154	2.189	2.193 E4	1.98
12)	Pyrene	2.132	2.232	2.151	2.149	2.128	2.160	2.159 E4	1.75
13)	Benzo(a)Anthracene	2.067	2.179	2.116	2.120	2.111	2.142	2.123 E4	1.74
14)	Chrysene	2.146	2.247	2.161	2.158	2.141	2.169	2.170 E4	1.79
15)	Benzo(b)Fluoranthen	2.079	2.195	2.140	2.158	2.113	2.189	2.146 E4	2.07
16)	Benzo(k)Fluoranthen	2.130	2.240	2.156	2.142	2.141	2.138	2.158 E4	1.90
17)	Benzo(a) Pyrene	2.005	2.129	2.063	2.070	2.062	2.093	2.070 E4	1.98
18)	Indeno(1,2,3-cd)pyr	1.923	2.084	2.034	2.043	2.046	2.082	2.035 E4	2.90
19)	Dibenzo(a,h)anthrac	1.999	2.153	2.091	2.101	2.095	2.127	2.094 E4	2.49
20)	Benzo(g,h,i) Peryle	1.977	2.141	2.088	2.102	2.100	2.131	2.090 E4	2.82

Signal #2 Calibration Files
5 =IJ16839.D 10 =IJ16840.D 20 =IJ16841.D
30 =IJ16842.D 40 =IJ16843.D 50 =IJ16844.D

	Compound	5	10	20	30	40	50	Avg	%RSD
1)	Naphthalene	1.905	1.968	1.899	1.875	1.866	1.899	1.902 E4	1.87
2)	2-Methyl Naphthalen	1.820	1.889	1.820	1.800	1.791	1.824	1.824 E4	1.88
3)	1-Methyl Naphthalen	1.758	1.824	1.758	1.739	1.730	1.763	1.762 E4	1.87
4) S	2-Fluorobiphenyl	1.539	1.605	1.554	1.538	1.533	1.564	1.556 E4	1.74
5)	Acenaphthylene	1.714	1.796	1.745	1.734	1.727	1.765	1.747 E4	1.70
6)	Acenaphthene	1.744	1.823	1.768	1.755	1.749	1.783	1.770 E4	1.66
7)	Fluorene	1.624	1.729	1.689	1.687	1.680	1.714	1.687 E4	2.15
8)	Phenanthrene	1.654	1.753	1.691	1.700	1.688	1.717	1.701 E4	1.94
9)	Anthracene	1.687	1.766	1.695	1.688	1.675	1.704	1.703 E4	1.90
10) S	O-Terphenyl	1.634	1.699	1.647	1.666	1.673	1.718	1.673 E4	1.87
11)	Fluoranthene	1.709	1.778	1.700	1.700	1.683	1.710	1.713 E4	1.93
12)	Pyrene	1.697	1.766	1.689	1.688	1.672	1.698	1.702 E4	1.93
13)	Benzo(a)Anthracene	1.660	1.735	1.669	1.665	1.653	1.677	1.676 E4	1.78
14)	Chrysene	1.673	1.752	1.679	1.672	1.661	1.684	1.687 E4	1.95
15)	Benzo(b)Fluoranthen	1.727	1.747	1.627	1.671	1.632	1.727	1.688 E4	3.10
16)	Benzo(k)Fluoranthen	1.647	1.742	1.669	1.665	1.659	1.669	1.675 E4	2.02
17)	Benzo(a) Pyrene	1.593	1.679	1.616	1.615	1.609	1.631	1.624 E4	1.82
18)	Indeno(1,2,3-cd)pyr	1.527	1.645	1.601	1.632	1.666	1.676	1.625 E4	3.36
19)	Dibenzo(a,h)anthrac	1.613	1.706	1.625	1.613	1.579	1.593	1.622 E4	2.75
20)	Benzo(g,h,i) Peryle	1.585	1.697	1.645	1.646	1.642	1.666	1.647 E4	2.24

Initial Calibration Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GIJ803-ICC803
Lab FileID: IJ16841.D

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                                                    Average  % RSD =   2.0
--------------------------------------------------------------------------------
(#) = Out of Range

          8100_H2.M         Thu Jan 23 10:48:44 2003
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Continuing Calibration Summary

Job Number: F16662 **Sample:** GIJ815-CC803
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** IJ17137.D
Project: Camp Lejeune-NW

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\0225PAH\IJ17137.D\FID1A.CH Vial: 12
Signal #2 : C:\HPCHEM\1\DATA\0225PAH\IJ17137.D\FID2B.CH
Acq On : 25 Feb 2003 3:12 pm Operator: nareshj
Sample : CC803-30 Inst : FID 1
Misc : op6980,gij815,1000,,,1,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : C:\HPCHEM\1\METHODS\8100_H2.M (Chemstation Integrator)
Title : PAH's BY EPA 610 OR 8100
Last Update : Tue Feb 25 14:02:19 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1		Naphthalene	30.000	31.886	-6.3	107	0.00
2		2-Methyl Naphthalene	30.000	32.040	-6.8	108	0.00
3		1-Methyl Naphthalene	30.000	31.208	-4.0	105	0.00
4	S	2-Fluorobiphenyl	30.000	31.301	-4.3	105	0.00
5		Acenaphthylene	30.000	31.982	-6.6	107	0.00
6		Acenaphthene	30.000	31.964	-6.5	107	0.00
7		Fluorene	30.000	32.900	-9.7	109	0.00
8		Phenanthrene	30.000	31.864	-6.2	107	0.00
9		Anthracene	30.000	32.063	-6.9	108	0.00
10	S	O-Terphenyl	30.000	32.560	-8.5	110	0.00
11		Fluoranthene	30.000	31.891	-6.3	107	0.00
12		Pyrene	30.000	32.625	-8.8	109	0.00
13		Benzo(a)Anthracene	30.000	32.614	-8.7	109	0.00
14		Chrysene	30.000	31.927	-6.4	107	0.00
15		Benzo(b)Fluoranthene	30.000	32.823	-9.4	109	0.00
16		Benzo(k)Fluoranthene	30.000	32.361	-7.9	109	0.00
17		Benzo(a) Pyrene	30.000	32.944	-9.8	110	0.00
18		Indeno(1,2,3-cd)pyrene	30.000	33.296	-11.0	111	0.00
19		Dibenzo(a,h)anthracene	30.000	33.025	-10.1	110	0.00
20		Benzo(g,h,i) Perylene	30.000	32.888	-9.6	109	0.01

Signal #2

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1		Naphthalene	30.000	33.655	-12.2	114	0.00
2		2-Methyl Naphthalene	30.000	33.673	-12.2	114	0.00
3		1-Methyl Naphthalene	30.000	32.882	-9.6	111	0.00
4	S	2-Fluorobiphenyl	30.000	32.682	-8.9	110	0.00
5		Acenaphthylene	30.000	33.384	-11.3	112	0.00
6		Acenaphthene	30.000	33.102	-10.3	111	0.00
7		Fluorene	30.000	33.727	-12.4	112	0.00
8		Phenanthrene	30.000	31.883	-6.3	106	0.00
9		Anthracene	30.000	32.322	-7.7	109	0.00
10	S	O-Terphenyl	30.000	32.696	-9.0	109	0.00
11		Fluoranthene	30.000	32.302	-7.7	109	0.00
12		Pyrene	30.000	32.911	-9.7	111	0.00
13		Benzo(a)Anthracene	30.000	32.647	-8.8	110	0.00
14		Chrysene	30.000	32.240	-7.5	108	0.00
15		Benzo(b)Fluoranthene	30.000	32.528	-8.4	110	0.00

Continuing Calibration Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GIJ815-CC803
Lab FileID: IJ17137.D

16	Benzo(k)Fluoranthene	30.000	32.747	-9.2	110	0.00
17	Benzo(a) Pyrene	30.000	32.914	-9.7	110	0.00
18	Indeno(1,2,3-cd)pyrene	30.000	33.461	-11.5	111	0.01
19	Dibenzo(a,h)anthracene	30.000	32.712	-9.0	110	0.01
20	Benzo(g,h,i) Perylene	30.000	32.712	-9.0	109	0.02

Average % D = 8.6

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ16842.D 8100_H2.M Wed Feb 26 10:59:28 2003

Continuing Calibration Summary

Job Number: F16662 **Sample:** GIJ815-CC803
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** IJ17148.D
Project: Camp Lejeune-NW

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\0225PAH\IJ17148.D\FID1A.CH Vial: 23
Signal #2 : C:\HPCHEM\1\DATA\0225PAH\IJ17148.D\FID2B.CH
Acq On : 25 Feb 2003 8:26 pm Operator: nareshj
Sample : CC803-20 Inst : FID 1
Misc : op6989,gij815,1000,,,1,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : C:\HPCHEM\1\METHODS\8100_H2.M (Chemstation Integrator)
Title : PAH's BY EPA 610 OR 8100
Last Update : Tue Feb 25 14:02:19 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1		Naphthalene	20.000	21.685	-8.4	108	0.00
2		2-Methyl Naphthalene	20.000	21.686	-8.4	108	0.00
3		1-Methyl Naphthalene	20.000	21.108	-5.5	105	0.00
4	S	2-Fluorobiphenyl	20.000	21.140	-5.7	106	0.00
5		Acenaphthylene	20.000	21.457	-7.3	107	0.00
6		Acenaphthene	20.000	21.289	-6.4	107	0.00
7		Fluorene	20.000	22.166	-10.8	111	0.00
8		Phenanthrene	20.000	21.242	-6.2	107	0.00
9		Anthracene	20.000	21.477	-7.4	108	0.00
10	S	O-Terphenyl	20.000	21.865	-9.3	110	0.00
11		Fluoranthene	20.000	21.311	-6.6	107	0.00
12		Pyrene	20.000	21.803	-9.0	109	0.00
13		Benzo(a)Anthracene	20.000	21.767	-8.8	109	0.00
14		Chrysene	20.000	21.434	-7.2	108	0.00
15		Benzo(b)Fluoranthene	20.000	21.857	-9.3	110	0.00
16		Benzo(k)Fluoranthene	20.000	21.801	-9.0	109	0.00
17		Benzo(a) Pyrene	20.000	22.027	-10.1	111	0.00
18		Indeno(1,2,3-cd)pyrene	20.000	22.095	-10.5	111	0.00
19		Dibenzo(a,h)anthracene	20.000	22.086	-10.4	111	0.00
20		Benzo(g,h,i) Perylene	20.000	21.973	-9.9	110	0.00

Signal #2

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1		Naphthalene	20.000	22.871	-14.4	115	0.00
2		2-Methyl Naphthalene	20.000	22.866	-14.3	115	0.00
3		1-Methyl Naphthalene	20.000	22.337	-11.7	112	0.00
4	S	2-Fluorobiphenyl	20.000	22.023	-10.1	110	0.00
5		Acenaphthylene	20.000	22.526	-12.6	113	0.00
6		Acenaphthene	20.000	22.353	-11.8	112	0.00
7		Fluorene	20.000	22.701	-13.5	113	0.00
8		Phenanthrene	20.000	21.147	-5.7	106	0.00
9		Anthracene	20.000	21.724	-8.6	109	0.00
10	S	O-Terphenyl	20.000	21.952	-9.8	111	0.00
11		Fluoranthene	20.000	21.523	-7.6	108	0.00
12		Pyrene	20.000	21.990	-9.9	111	0.00
13		Benzo(a)Anthracene	20.000	21.812	-9.1	110	0.00
14		Chrysene	20.000	21.619	-8.1	109	0.00
15		Benzo(b)Fluoranthene	20.000	21.659	-8.3	112	0.00

Continuing Calibration Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GIJ815-CC803
Lab FileID: IJ17148.D

16	Benzo(k)Fluoranthene	20.000	21.979	-9.9	110	0.00
17	Benzo(a) Pyrene	20.000	21.954	-9.8	110	0.00
18	Indeno(1,2,3-cd)pyrene	20.000	22.042	-10.2	112	0.00
19	Dibenzo(a,h)anthracene	20.000	21.974	-9.9	110	0.00
20	Benzo(g,h,i) Perylene	20.000	21.824	-9.1	109	0.00

Average % D = 9.3

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ16841.D 8100_H2.M Wed Feb 26 10:59:09 2003

Continuing Calibration Summary

Job Number: F16662 **Sample:** GIJ815-ECC803
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** IJ17151.D
Project: Camp Lejeune-NW

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\0225PAH\IJ17151.D\FID1A.CH Vial: 26
Signal #2 : C:\HPCHEM\1\DATA\0225PAH\IJ17151.D\FID2B.CH
Acq On : 25 Feb 2003 9:48 pm Operator: nareshj
Sample : ECC803-30 Inst : FID 1
Misc : op6989,gij815,1000,,,1,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : C:\HPCHEM\1\METHODS\8100_H2.M (Chemstation Integrator)
Title : PAH's BY EPA 610 OR 8100
Last Update : Tue Feb 25 14:02:19 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1		Naphthalene	30.000	32.187	-7.3	108	0.00
2		2-Methyl Naphthalene	30.000	32.290	-7.6	109	0.00
3		1-Methyl Naphthalene	30.000	31.443	-4.8	106	0.00
4	S	2-Fluorobiphenyl	30.000	31.549	-5.2	106	0.00
5		Acenaphthylene	30.000	32.211	-7.4	108	0.00
6		Acenaphthene	30.000	32.185	-7.3	108	0.00
7		Fluorene	30.000	33.189	-10.6	110	0.00
8		Phenanthrene	30.000	31.880	-6.3	107	0.00
9		Anthracene	30.000	32.113	-7.0	108	0.00
10	S	O-Terphenyl	30.000	32.656	-8.9	110	0.00
11		Fluoranthene	30.000	32.114	-7.0	108	0.00
12		Pyrene	30.000	32.822	-9.4	110	0.00
13		Benzo(a)Anthracene	30.000	33.016	-10.1	110	0.00
14		Chrysene	30.000	32.384	-7.9	109	0.00
15		Benzo(b)Fluoranthene	30.000	33.292	-11.0	110	0.00
16		Benzo(k)Fluoranthene	30.000	32.928	-9.8	111	0.00
17		Benzo(a) Pyrene	30.000	33.463	-11.5	112	0.00
18		Indeno(1,2,3-cd)pyrene	30.000	33.790	-12.6	112	0.00
19		Dibenzo(a,h)anthracene	30.000	33.640	-12.1	112	0.00
20		Benzo(g,h,i) Perylene	30.000	33.442	-11.5	111	0.01

Signal #2

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1		Naphthalene	30.000	33.917	-13.1	115	0.00
2		2-Methyl Naphthalene	30.000	33.967	-13.2	115	0.00
3		1-Methyl Naphthalene	30.000	33.119	-10.4	112	0.00
4	S	2-Fluorobiphenyl	30.000	32.806	-9.4	111	0.00
5		Acenaphthylene	30.000	33.534	-11.8	113	0.00
6		Acenaphthene	30.000	33.309	-11.0	112	0.00
7		Fluorene	30.000	33.841	-12.8	113	0.00
8		Phenanthrene	30.000	31.860	-6.2	106	0.00
9		Anthracene	30.000	32.326	-7.8	109	0.00
10	S	O-Terphenyl	30.000	32.688	-9.0	109	0.00
11		Fluoranthene	30.000	32.325	-7.8	109	0.00
12		Pyrene	30.000	32.994	-10.0	111	0.00
13		Benzo(a)Anthracene	30.000	32.910	-9.7	110	0.00
14		Chrysene	30.000	32.556	-8.5	109	0.00
15		Benzo(b)Fluoranthene	30.000	32.934	-9.8	111	0.00

Continuing Calibration Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GIJ815-ECC803
Lab FileID: IJ17151.D

16	Benzo(k)Fluoranthene	30.000	33.077	-10.3	111	0.00
17	Benzo(a) Pyrene	30.000	33.286	-11.0	112	0.00
18	Indeno(1,2,3-cd)pyrene	30.000	33.830	-12.8	112	0.01
19	Dibenzo(a,h)anthracene	30.000	33.124	-10.4	111	0.01
20	Benzo(g,h,i) Perylene	30.000	33.054	-10.2	110	0.02

Average % D = 9.5

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ16842.D 8100_H2.M Wed Feb 26 10:59:30 2003

Continuing Calibration Summary

Job Number: F16662 **Sample:** GIJ816-CC803
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** IJ17152.D
Project: Camp Lejeune-NW

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\0226PAH\IJ17152.D\FID1A.CH Vial: 1
Signal #2 : C:\HPCHEM\1\DATA\0226PAH\IJ17152.D\FID2B.CH
Acq On : 26 Feb 2003 9:32 am Operator: nareshj
Sample : CC803-20 Inst : FID 1
Misc : op6989,gij816,1000,,,1,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : C:\HPCHEM\1\METHODS\8100_H2.M (Chemstation Integrator)
Title : PAH's BY EPA 610 OR 8100
Last Update : Tue Feb 25 14:02:19 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1		Naphthalene	20.000	21.431	-7.2	107	0.00
2		2-Methyl Naphthalene	20.000	21.414	-7.1	107	0.00
3		1-Methyl Naphthalene	20.000	20.894	-4.5	104	0.00
4	S	2-Fluorobiphenyl	20.000	20.924	-4.6	105	0.00
5		Acenaphthylene	20.000	21.221	-6.1	106	0.00
6		Acenaphthene	20.000	21.279	-6.4	107	0.00
7		Fluorene	20.000	22.002	-10.0	110	0.00
8		Phenanthrene	20.000	21.329	-6.6	107	0.00
9		Anthracene	20.000	21.585	-7.9	108	0.00
10	S	O-Terphenyl	20.000	21.929	-9.6	110	0.00
11		Fluoranthene	20.000	21.588	-7.9	109	0.00
12		Pyrene	20.000	22.085	-10.4	111	0.00
13		Benzo(a)Anthracene	20.000	22.120	-10.6	111	0.00
14		Chrysene	20.000	21.822	-9.1	110	0.00
15		Benzo(b)Fluoranthene	20.000	22.130	-10.7	111	0.00
16		Benzo(k)Fluoranthene	20.000	22.237	-11.2	111	0.00
17		Benzo(a) Pyrene	20.000	22.383	-11.9	112	0.00
18		Indeno(1,2,3-cd)pyrene	20.000	22.485	-12.4	112	0.00
19		Dibenzo(a,h)anthracene	20.000	22.713	-13.6	114	0.00
20		Benzo(g,h,i) Perylene	20.000	22.381	-11.9	112	0.00

Signal #2

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1		Naphthalene	20.000	22.540	-12.7	113	0.00
2		2-Methyl Naphthalene	20.000	22.441	-12.2	112	0.00
3		1-Methyl Naphthalene	20.000	21.906	-9.5	110	0.00
4	S	2-Fluorobiphenyl	20.000	21.587	-7.9	108	0.00
5		Acenaphthylene	20.000	22.022	-10.1	110	0.00
6		Acenaphthene	20.000	21.989	-9.9	110	0.00
7		Fluorene	20.000	22.380	-11.9	112	0.00
8		Phenanthrene	20.000	21.113	-5.6	106	0.00
9		Anthracene	20.000	21.718	-8.6	109	0.00
10	S	O-Terphenyl	20.000	21.808	-9.0	111	0.00
11		Fluoranthene	20.000	21.706	-8.5	109	0.00
12		Pyrene	20.000	22.107	-10.5	111	0.01
13		Benzo(a)Anthracene	20.000	22.014	-10.1	111	0.01
14		Chrysene	20.000	21.739	-8.7	109	0.00
15		Benzo(b)Fluoranthene	20.000	21.995	-10.0	114	0.00

Continuing Calibration Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GIJ816-CC803
Lab FileID: IJ17152.D

16	Benzo(k)Fluoranthene	20.000	22.115	-10.6	111	0.01
17	Benzo(a) Pyrene	20.000	22.249	-11.2	112	0.01
18	Indeno(1,2,3-cd)pyrene	20.000	22.505	-12.5	114	0.02
19	Dibenzo(a,h)anthracene	20.000	22.423	-12.1	112	0.02
20	Benzo(g,h,i) Perylene	20.000	22.131	-10.7	111	0.02

Average % D = 9.6

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ16841.D 8100_H2.M Thu Feb 27 10:15:22 2003

Continuing Calibration Summary

Job Number: F16662 **Sample:** GIJ816-CC803
Account: ITVAVAB Shaw E & I, Inc. **Lab FileID:** IJ17161.D
Project: Camp Lejeune-NW

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\0226PAH\IJ17161.D\FID1A.CH Vial: 10
Signal #2 : C:\HPCHEM\1\DATA\0226PAH\IJ17161.D\FID2B.CH
Acq On : 26 Feb 2003 1:45 pm Operator: nareshj
Sample : CC803-30 Inst : FID 1
Misc : op6989,gij816,1000,,,1,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : C:\HPCHEM\1\METHODS\8100_H2.M (Chemstation Integrator)
Title : PAH's BY EPA 610 OR 8100
Last Update : Tue Feb 25 14:02:19 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1		Naphthalene	30.000	31.852	-6.2	107	0.00
2		2-Methyl Naphthalene	30.000	31.939	-6.5	108	0.00
3		1-Methyl Naphthalene	30.000	31.133	-3.8	105	0.00
4	S	2-Fluorobiphenyl	30.000	31.156	-3.9	105	0.00
5		Acenaphthylene	30.000	31.815	-6.1	107	0.00
6		Acenaphthene	30.000	31.453	-4.8	105	0.00
7		Fluorene	30.000	32.811	-9.4	109	0.00
8		Phenanthrene	30.000	31.596	-5.3	106	0.00
9		Anthracene	30.000	31.828	-6.1	107	0.00
10	S	O-Terphenyl	30.000	32.372	-7.9	109	0.00
11		Fluoranthene	30.000	31.586	-5.3	106	0.00
12		Pyrene	30.000	32.311	-7.7	108	0.00
13		Benzo(a)Anthracene	30.000	32.236	-7.5	108	0.00
14		Chrysene	30.000	31.638	-5.5	106	0.00
15		Benzo(b)Fluoranthene	30.000	32.397	-8.0	107	0.00
16		Benzo(k)Fluoranthene	30.000	32.017	-6.7	108	0.00
17		Benzo(a) Pyrene	30.000	32.510	-8.4	108	0.00
18		Indeno(1,2,3-cd)pyrene	30.000	32.651	-8.8	108	0.00
19		Dibenzo(a,h)anthracene	30.000	32.653	-8.8	108	0.00
20		Benzo(g,h,i) Perylene	30.000	32.293	-7.6	107	0.00

Signal #2

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1		Naphthalene	30.000	33.635	-12.1	114	0.00
2		2-Methyl Naphthalene	30.000	33.675	-12.2	114	0.00
3		1-Methyl Naphthalene	30.000	32.861	-9.5	111	0.00
4	S	2-Fluorobiphenyl	30.000	32.536	-8.5	110	0.00
5		Acenaphthylene	30.000	33.323	-11.1	112	0.00
6		Acenaphthene	30.000	33.097	-10.3	111	0.00
7		Fluorene	30.000	33.645	-12.2	112	0.00
8		Phenanthrene	30.000	31.701	-5.7	106	0.00
9		Anthracene	30.000	32.122	-7.1	108	0.00
10	S	O-Terphenyl	30.000	32.548	-8.5	109	0.00
11		Fluoranthene	30.000	32.061	-6.9	108	0.00
12		Pyrene	30.000	32.635	-8.8	110	0.00
13		Benzo(a)Anthracene	30.000	32.198	-7.3	108	0.00
14		Chrysene	30.000	31.830	-6.1	107	0.00
15		Benzo(b)Fluoranthene	30.000	32.149	-7.2	108	0.00

Continuing Calibration Summary

Job Number: F16662
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-NW

Sample: GIJ816-CC803
Lab FileID: IJ17161.D

16	Benzo(k)Fluoranthene	30.000	32.275	-7.6	108	0.01
17	Benzo(a) Pyrene	30.000	32.454	-8.2	109	0.00
18	Indeno(1,2,3-cd)pyrene	30.000	33.311	-11.0	111	0.01
19	Dibenzo(a,h)anthracene	30.000	32.135	-7.1	108	0.01
20	Benzo(g,h,i) Perylene	30.000	32.075	-6.9	107	0.02

Average % D = 7.7

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ16842.D 8100_H2.M Thu Feb 27 10:15:47 2003

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- Instrument Runlogs

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F16662
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-NW

Analyte	Batch ID	RL	MB Result	Units	BSP %Recov	QC Limits
Chloride	GP3892/GN11237	20	<20	mg/l	99.2	90-110%
Nitrogen, Nitrate	GP3892/GN11237	0.10	<0.10	mg/l	94.0	90-110%
Nitrogen, Nitrite	GP3892/GN11237	0.10	<0.10	mg/l	95.0	90-110%
Sulfate	GP3892/GN11237	20	<20	mg/l	92.1	90-110%
Total Organic Carbon	GN11258	1.0	<1.0	mg/l	99.8	86-116%

Associated Samples:
Batch GN11258: F16662-1, F16662-2, F16662-3, F16662-4, F16662-5, F16662-6, F16662-7, F16662-8
Batch GP3892: F16662-1, F16662-2, F16662-3, F16662-4, F16662-5, F16662-6, F16662-7, F16662-8

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F16662
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-NW

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chloride	GP3892/GN11237	F16662-1	mg/l	13.1	13.1	0.0	0-20%
Nitrogen, Nitrate	GP3892/GN11237	F16662-1	mg/l	<0.050	<0.050	0.0	0-20%
Nitrogen, Nitrite	GP3892/GN11237	F16662-1	mg/l	<0.050	<0.050	0.0	0-20%
Sulfate	GP3892/GN11237	F16662-1	mg/l	28.2	27.1	4.0	0-20%
Total Organic Carbon	GN11258	F16633-1	mg/l	18.1	17.7	2.3	0-20%

Associated Samples:
Batch GN11258: F16662-1, F16662-2, F16662-3, F16662-4, F16662-5, F16662-6, F16662-7, F16662-8
Batch GP3892: F16662-1, F16662-2, F16662-3, F16662-4, F16662-5, F16662-6, F16662-7, F16662-8

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F16662
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-NW

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chloride	GP3892/GN11237	F16662-1	mg/l	13.1	100	104	90.9	80-120%
Nitrogen, Nitrate	GP3892/GN11237	F16662-1	mg/l	<0.050	1	0.92	92.0	80-120%
Nitrogen, Nitrite	GP3892/GN11237	F16662-1	mg/l	<0.050	1	0.93	93.0	80-120%
Sulfate	GP3892/GN11237	F16662-1	mg/l	28.2	100	114	85.8	80-120%
Total Organic Carbon	GN11258	F16633-1	mg/l	18.1	50.000	67.8	99.3	76-118%

Associated Samples:
Batch GN11258: F16662-1, F16662-2, F16662-3, F16662-4, F16662-5, F16662-6, F16662-7, F16662-8
Batch GP3892: F16662-1, F16662-2, F16662-3, F16662-4, F16662-5, F16662-6, F16662-7, F16662-8

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F16662
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-NW

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Chloride	GP3892/GN11237	F16662-1	mg/l	13.1	100	104	0.0	
Nitrogen, Nitrate	GP3892/GN11237	F16662-1	mg/l	<0.050	1	0.92	0.0	
Nitrogen, Nitrite	GP3892/GN11237	F16662-1	mg/l	<0.050	1	0.93	0.0	
Sulfate	GP3892/GN11237	F16662-1	mg/l	28.2	100	114	0.0	
Total Organic Carbon	GN11258	F16633-1	mg/l	18.1	50.000	68.6	1.3	

Associated Samples:
Batch GN11258: F16662-1, F16662-2, F16662-3, F16662-4, F16662-5, F16662-6, F16662-7, F16662-8
Batch GP3892: F16662-1, F16662-2, F16662-3, F16662-4, F16662-5, F16662-6, F16662-7, F16662-8

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F16662
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-NW

File ID: 03022001.IC Date Analyzed: 02/20/03 Methods: EPA 300/SW846 9056
Analyst: LL Run ID: GN11237
Parameters: Nitrogen, Nitrate,Nitrogen, Nitrite,Sulfate

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:08	GN11237-ICV1	1		
10:25	GN11237-ICB1	1		
10:41	GN11237-CCV1	1		
10:58	GN11237-CCB1	1		
11:15	GP3892-MB1	1		
11:31	GP3892-B1	1		
11:48	F16662-1	1		
12:05	F16662-2	1		
12:22	F16662-3	1		
12:39	F16662-4	1		
12:56	F16662-5	1		
13:12	F16662-6	1		
13:29	GN11237-CCV2	1		
13:46	GN11237-CCB2	1		
14:03	F16662-7	1		
14:19	F16662-8	1		
14:36	ZZZZZZ	1		
14:53	ZZZZZZ	1		
15:09	ZZZZZZ	1		
15:26	ZZZZZZ	1		
15:43	GP3892-D1	1		
15:59	GP3892-S1	1		
16:16	GP3892-S2	1		
16:32	GN11237-CCV3	1		
16:49	GN11237-CCB3	1		
17:06	F16662-5	10		
17:23	F16662-8	2		
17:40	F16662-8	25		
---------->	Last reportable sample/prep for job F16662			
17:57	ZZZZZZ	1		
18:14	ZZZZZZ	1		
18:30	ZZZZZZ	1		
18:47	ZZZZZZ	1		
19:04	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F16662
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-NW

File ID: 03022001.IC Date Analyzed: 02/20/03 Methods: EPA 300/SW846 9056
Analyst: LL Run ID: GN11237
Parameters: Nitrogen, Nitrate,Nitrogen, Nitrite,Sulfate

Time	Sample Description	Dilution Factor	PS Recov	Comments
19:21	ZZZZZZ	1		
19:38	ZZZZZZ	1		
19:55	GN11237-CCV4	1		
20:12	GN11237-CCB4	1		

----------> Last reportable CCB for job F16662
Refer to raw data for calibration curve and standards.

F1663

COC Number:
824603-NW-021903

Shaw
Shaw Environmental & Infrastructure, Inc.

CHAIN-OF-CUSTODY RECORD

Shaw Environmental & Infrastructure, Inc. - Piney Green Rd. Lot 203 Bld 626 - 910-451-2390

Receiving Lab: ACCUTEST

Project Name	Project Location
CAMP LEJEUNE - NW	CAMP LEJEUNE, NC

Project Number	Contact	PO Number
824603	Mark Martin	197694

Client Rep	Project Manager
US NAVY - LANTDIV	Ron Kenyon

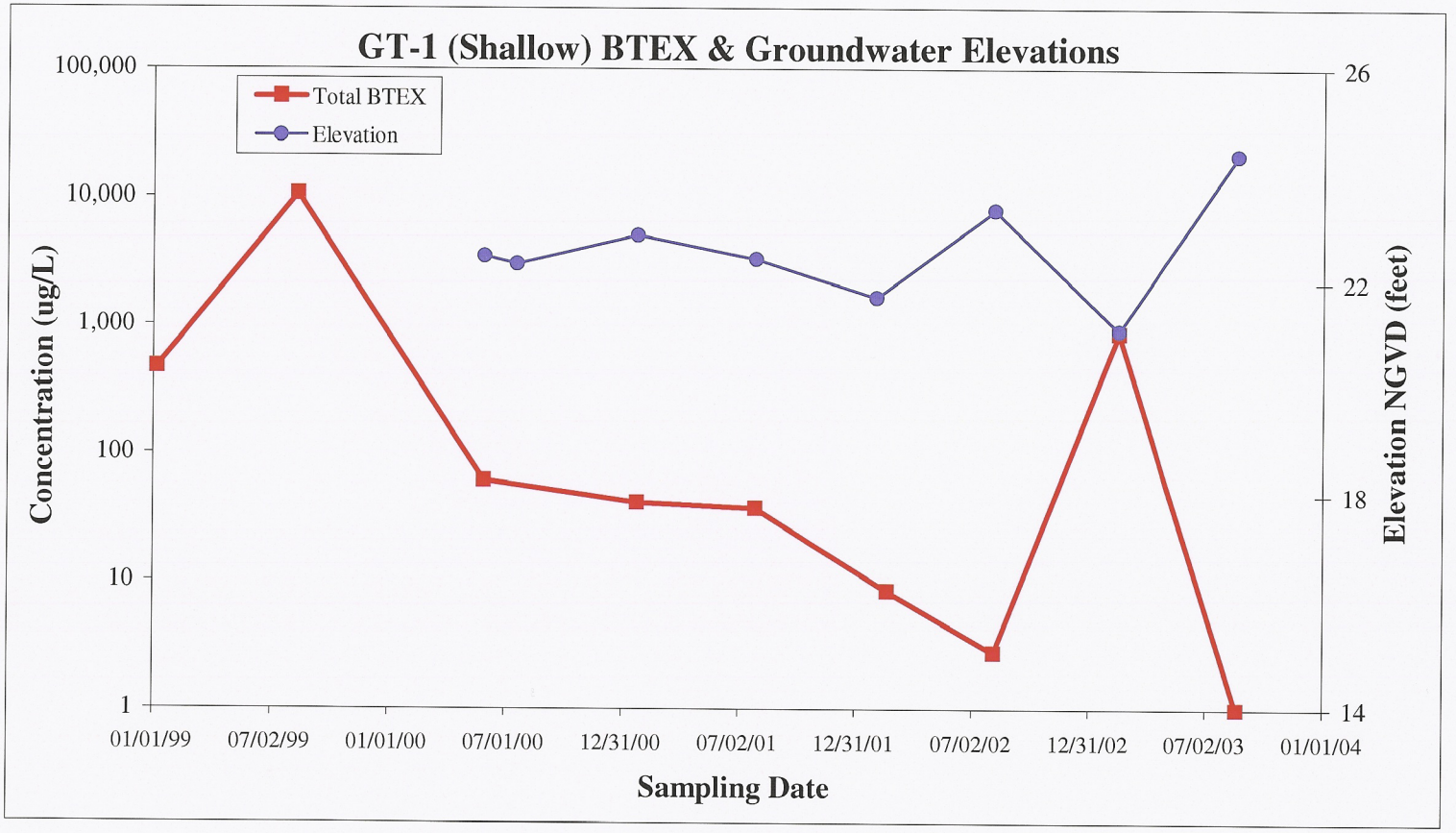
Item No.	Sample Number	Date	Time	Comp	Grab	Sample Description	Number of Containers	VOA 601/602	PAH 610	Dissolved Gasses RSK-175	NO3,NO2,NO3-NO2 BY 353.2-354.1	SO4 BY 375.4	TOC BY 415.1	Analysis Desired
1	UST1115-MW111521	2/19/03	12:20		X	UST1115-MW111521	10	X	X	X	X	X	X	
2	UST1115-MW111524	2/19/03	11:30		X	UST1115-MW111524	10	X	X	X	X	X	X	
3	UST1115-MW111502	2/19/03	13:00		X	UST1115-MW111502	10	X	X	X	X	X	X	
4	UST1115-MW111522	2/19/03	9:00		X	UST1115-MW111522	10	X	X	X	X	X	X	
5	UST1115-MW111517	2/19/03	10:00		X	UST1115-MW111517	10	X	X	X	X	X	X	
6	UST1115-MW111504	2/19/03	10:40		X	UST1115-MW111504	10	X	X	X	X	X	X	
7	UST1115-MW111525	2/19/03	14:00		X	UST1115-MW111525	10	X	X	X	X	X	X	
8	UST1115-MW111513	2/19/03	14:45		X	UST1115-MW111513	10	X	X	X	X	X	X	
9	TripBlank-021903	2/19/03	----		X	Trip Blank	2	X						
10														
11														
12														

Transfer Number	Item Number	Transfers Relinquished By	Transfers Accepted By	Date	Time	Remarks
1	1 -- 9		Fed Ex 8369 1400 2154	2/19/03	18:00	Please E-mail results to Mark.Martin@Shawgrp.com
2		2/20/03 9:00		2/20/03	9:00	21 Day TAT

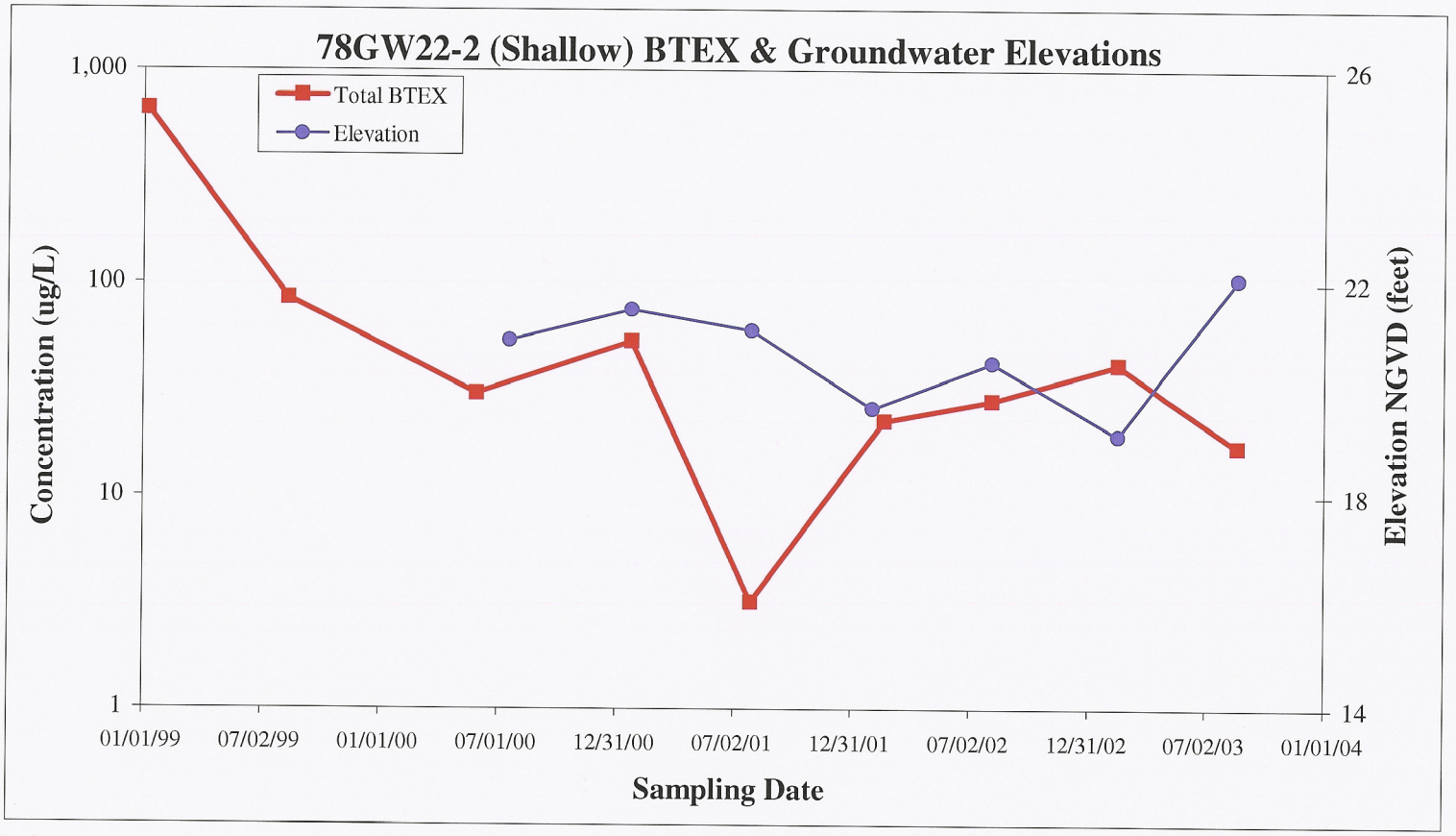
2.4/2.4, 3.0

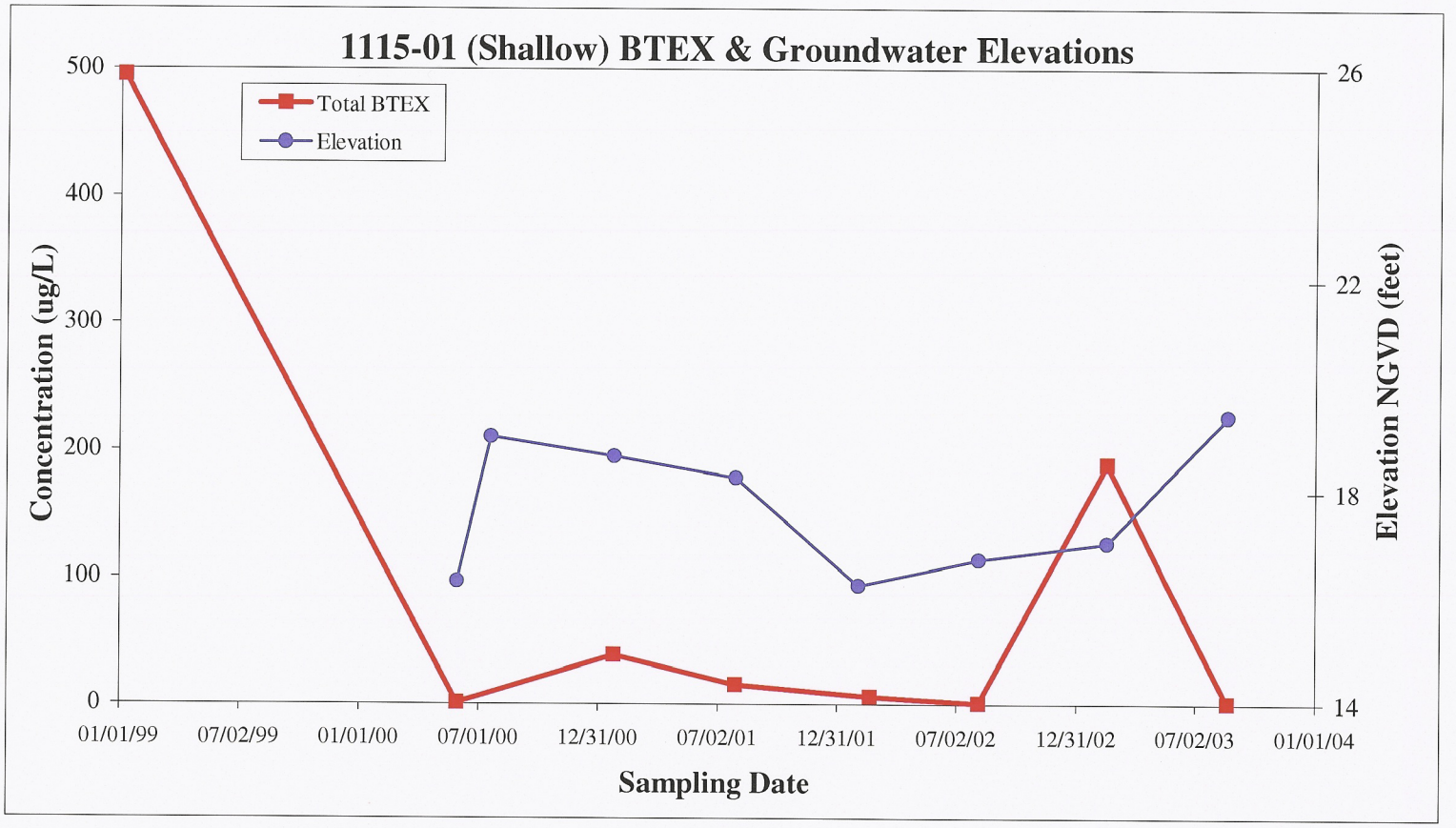
APPENDIX F

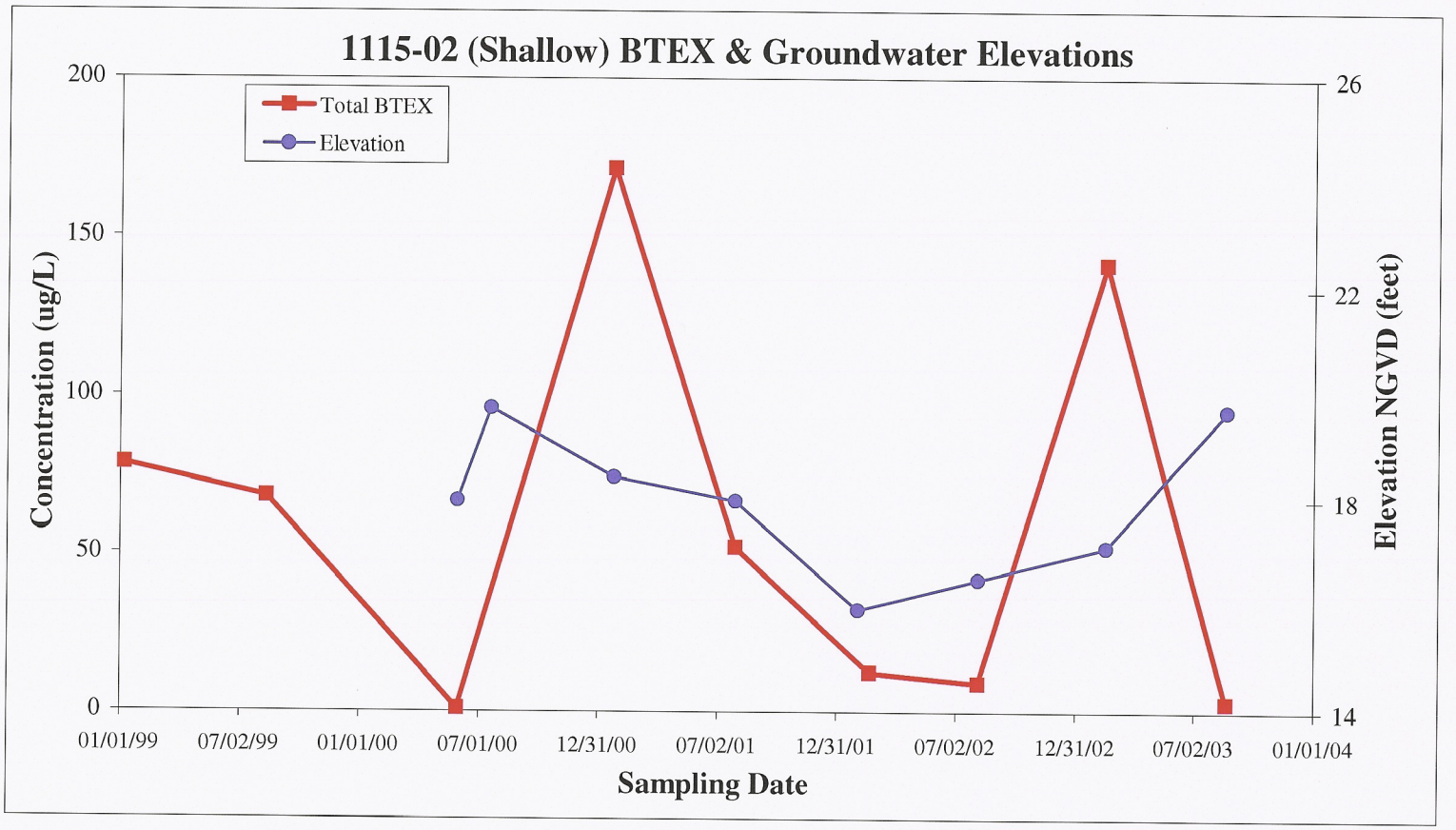
HYDROGRAPHS WITH GROUNDWATER ANALYTICAL RESULTS

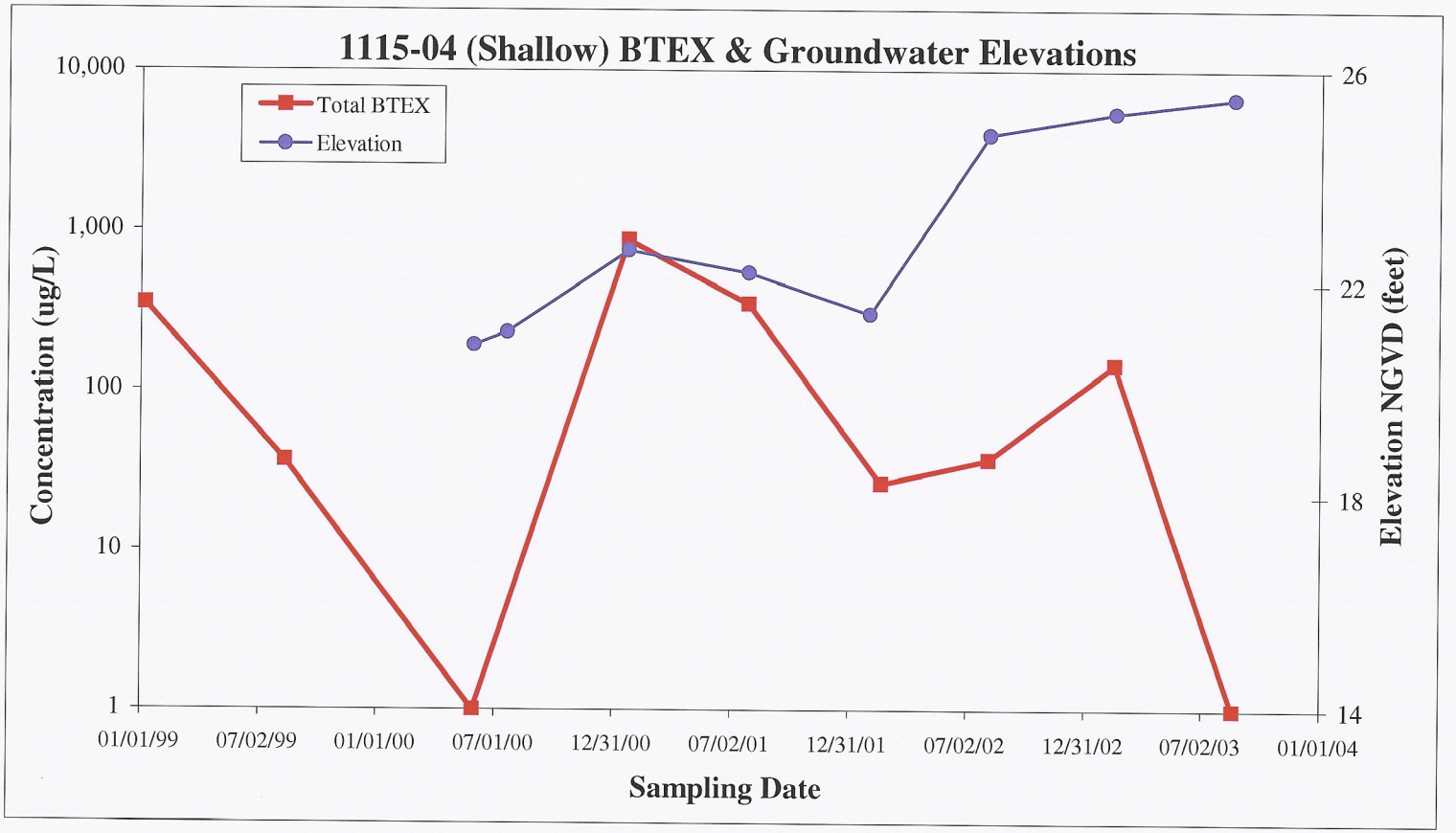


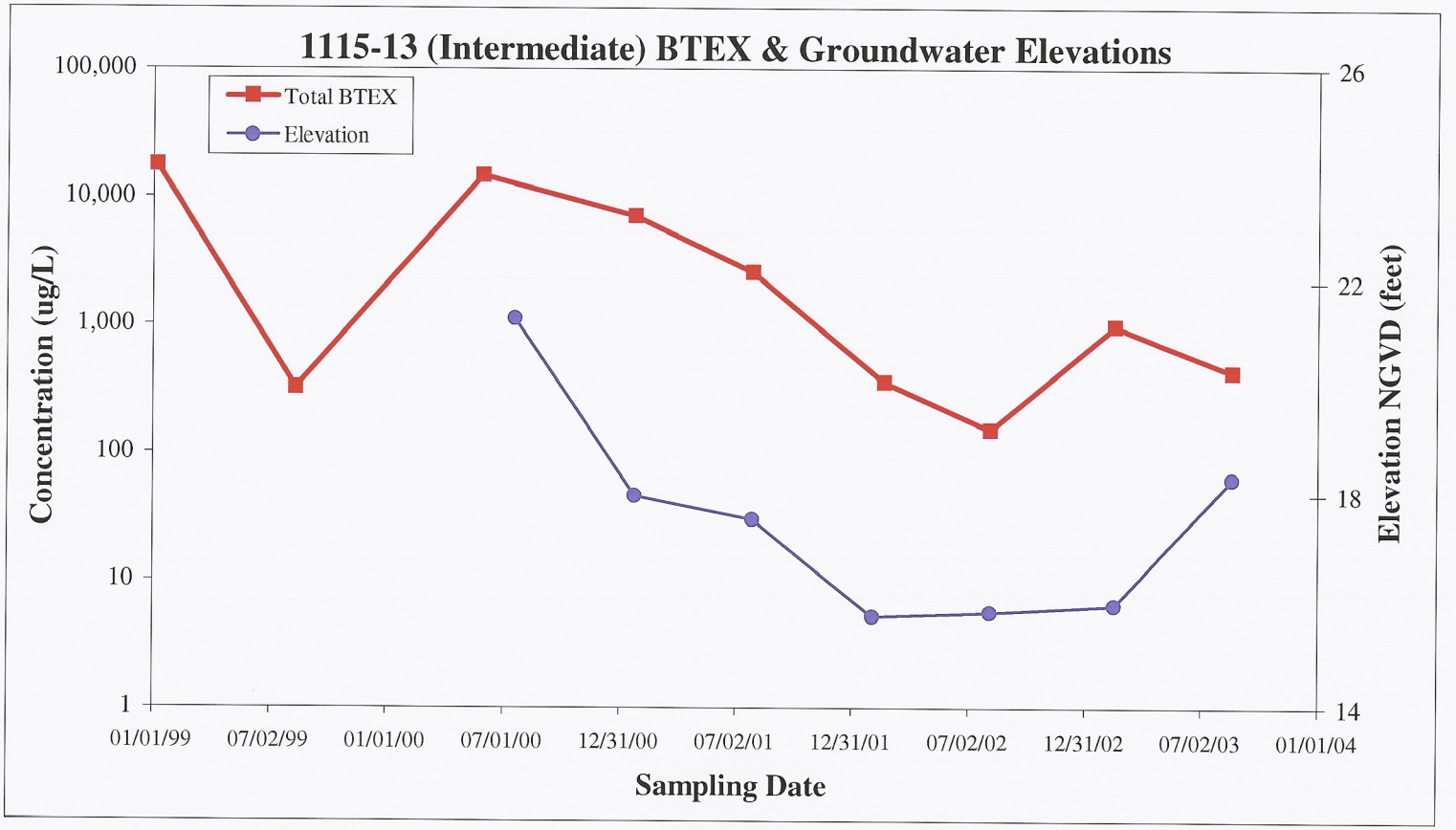
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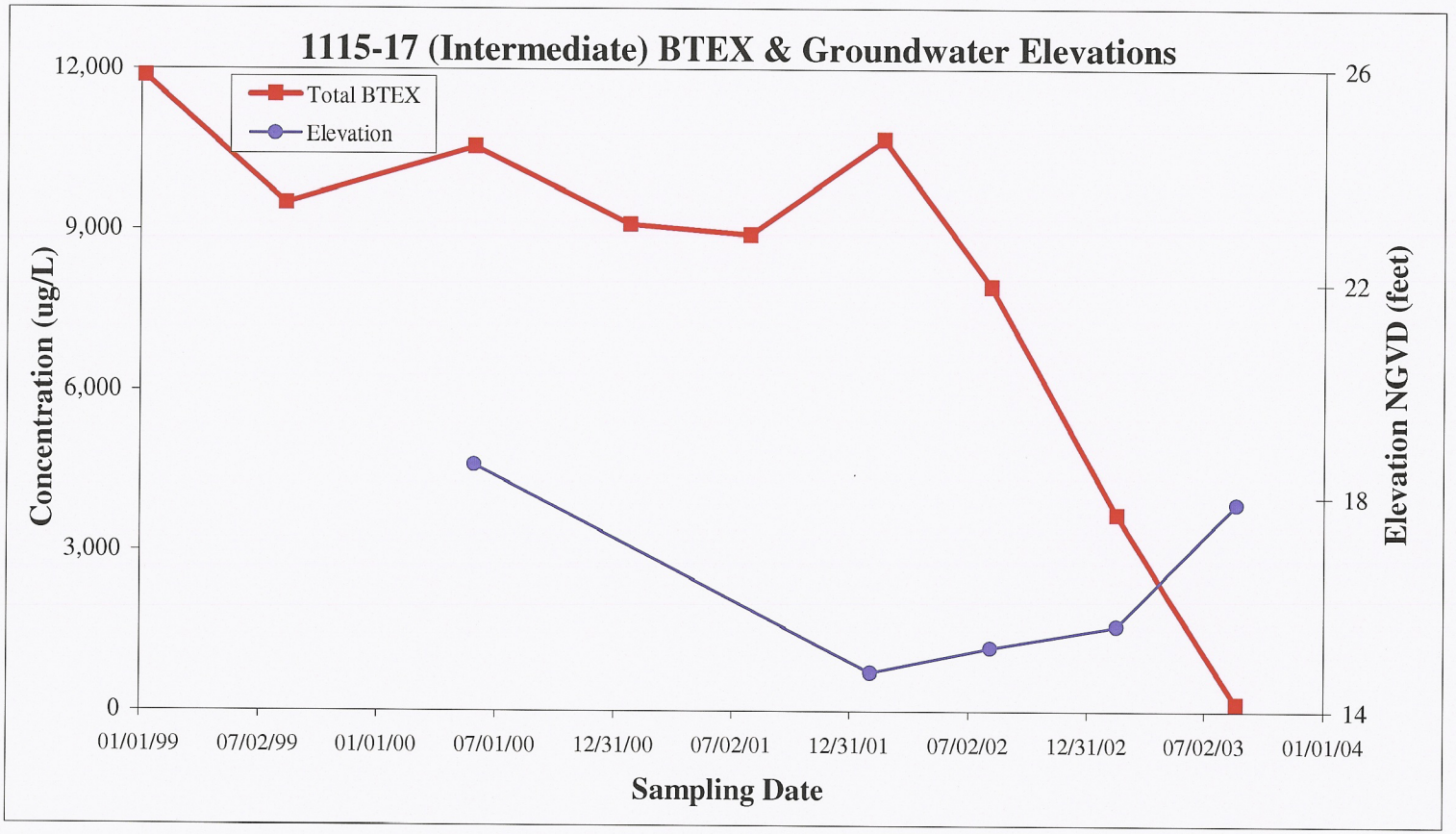

78GW22-2 (Shallow) BTEX & Groundwater Elevations
Total BTEX
Elevation
Concentration (ug/L)
1,000
100
10
1
Elevation NGVD (feet)
26
22
18
14
01/01/99
07/02/99
01/01/00
07/01/00
12/31/00
07/02/01
12/31/01
07/02/02
12/31/02
07/02/03
01/01/04
Sampling Date

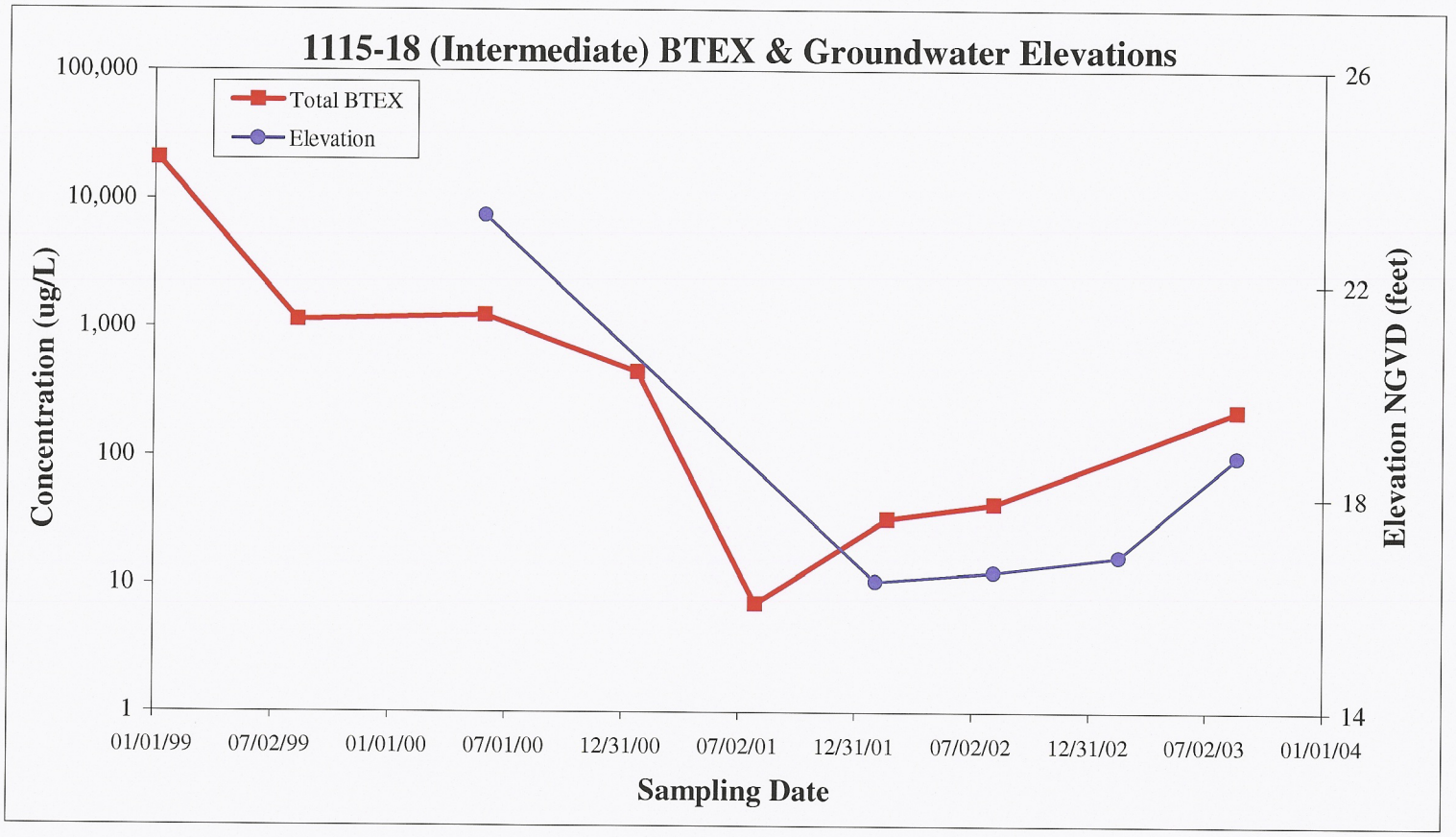

1115-01 (Shallow) BTEX & Groundwater Elevations
Total BTEX
Elevation
Concentration (ug/L)
Elevation NGVD (feet)
500
400
300
200
100
0
26
22
18
14
01/01/99
07/02/99
01/01/00
07/01/00
12/31/00
07/02/01
12/31/01
07/02/02
12/31/02
07/02/03
01/01/04
Sampling Date

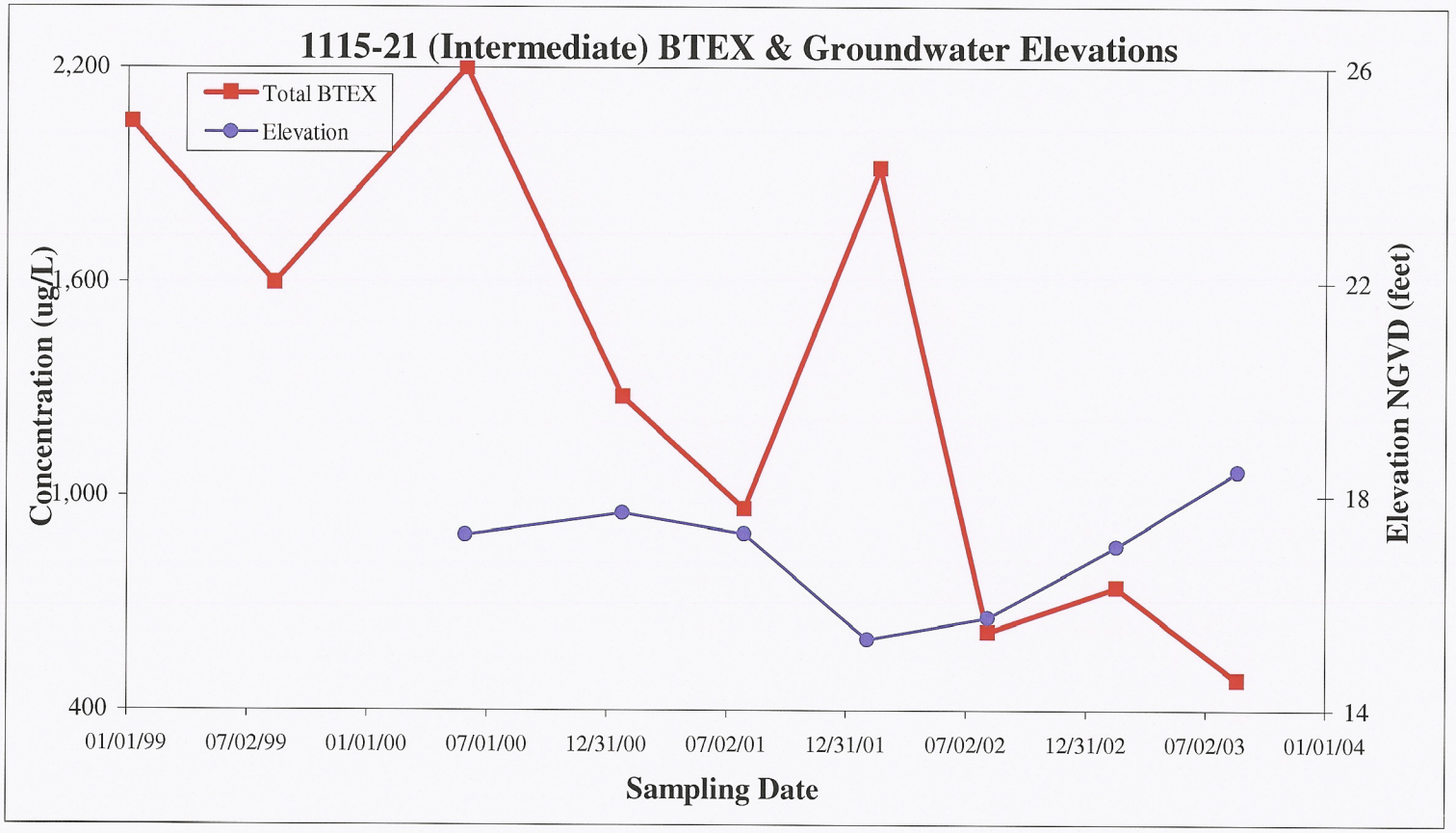

1115-02 (Shallow) BTEX & Groundwater Elevations
Total BTEX
Elevation
Concentration (ug/L)
Elevation NGVD (feet)
Sampling Date
200
150
100
50
0
26
22
18
14
01/01/99
07/02/99
01/01/00
07/01/00
12/31/00
07/02/01
12/31/01
07/02/02
12/31/02
07/02/03
01/01/04


1115-04 (Shallow) BTEX & Groundwater Elevations
Total BTEX
Elevation
Concentration (ug/L)
10,000
1,000
100
10
1
Elevation NGVD (feet)
26
22
18
14
01/01/99
07/02/99
01/01/00
07/01/00
12/31/00
07/02/01
12/31/01
07/02/02
12/31/02
07/02/03
01/01/04
Sampling Date

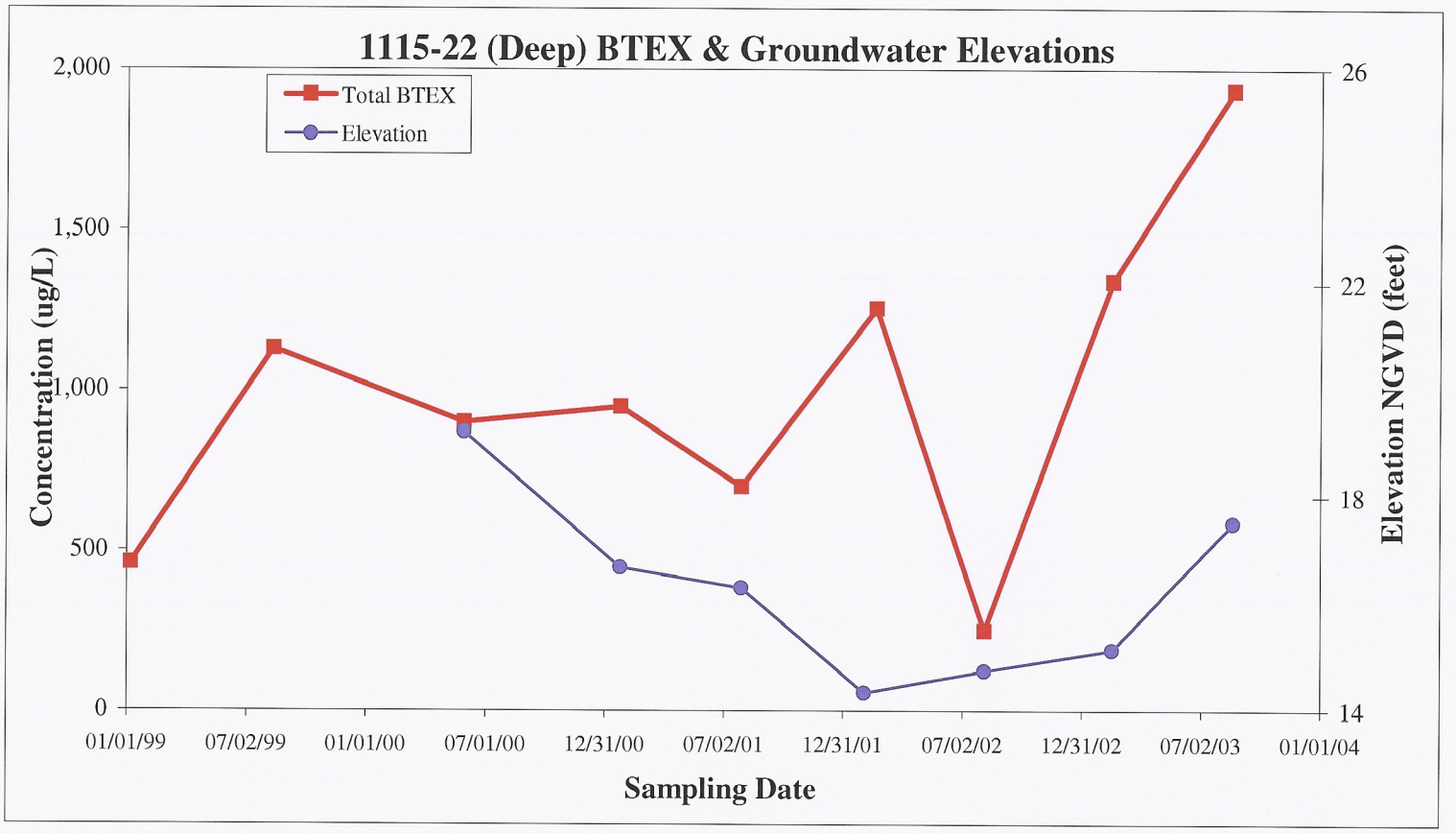

1115-13 (Intermediate) BTEX & Groundwater Elevations
Total BTEX
Elevation
Concentration (ug/L)
100,000
10,000
1,000
100
10
1
Elevation NGVD (feet)
26
22
18
14
01/01/99
07/02/99
01/01/00
07/01/00
12/31/00
07/02/01
12/31/01
07/02/02
12/31/02
07/02/03
01/01/04
Sampling Date

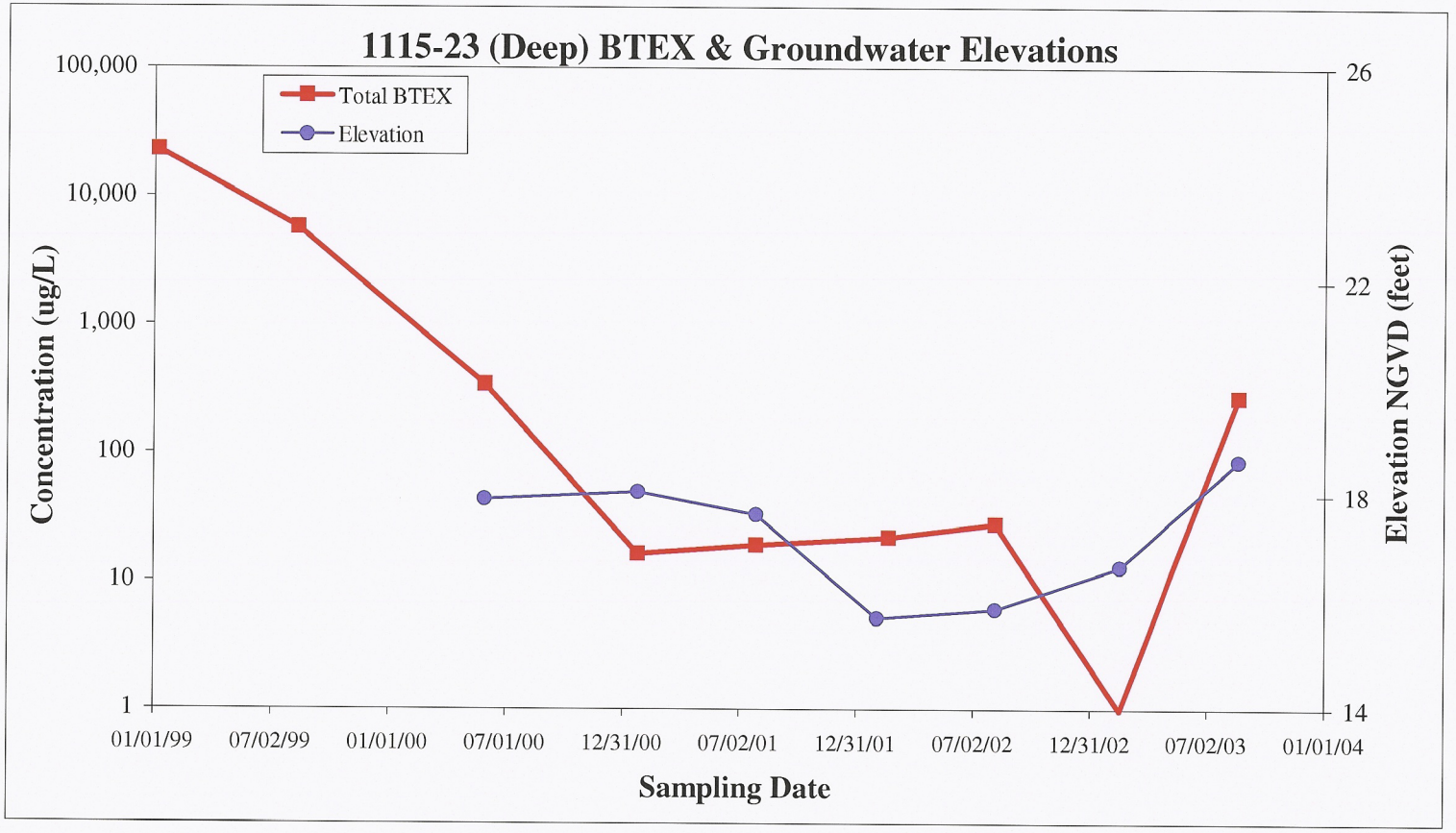

1115-17 (Intermediate) BTEX & Groundwater Elevations
Total BTEX
Elevation
Concentration (ug/L)
12,000
9,000
6,000
3,000
0
Elevation NGVD (feet)
26
22
18
14
01/01/99
07/02/99
01/01/00
07/01/00
12/31/00
07/02/01
12/31/01
07/02/02
12/31/02
07/02/03
01/01/04
Sampling Date

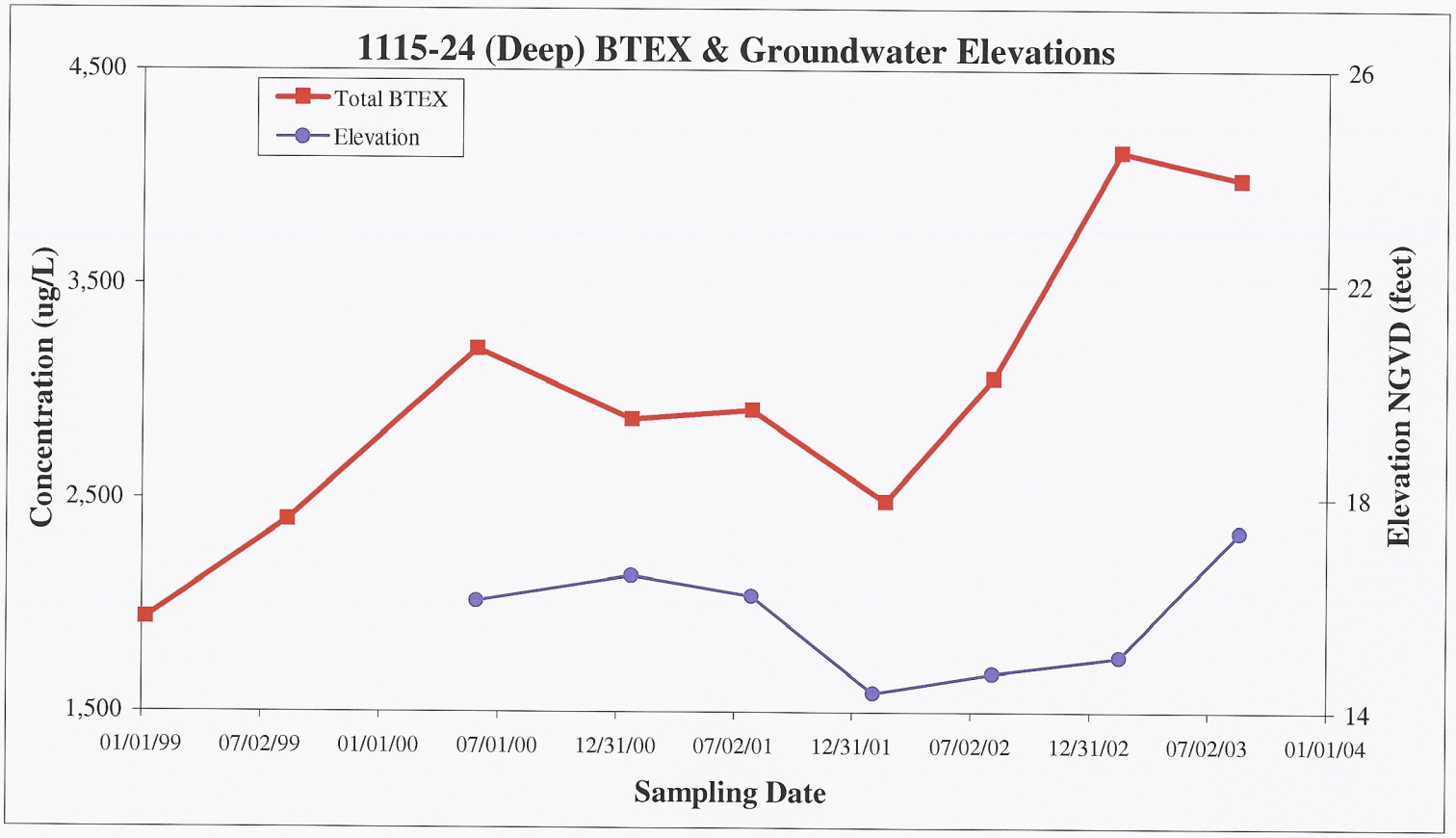

1115-18 (Intermediate) BTEX & Groundwater Elevations
Total BTEX
Elevation
Concentration (ug/L)
100,000
10,000
1,000
100
10
1
Elevation NGVD (feet)
26
22
18
14
01/01/99
07/02/99
01/01/00
07/01/00
12/31/00
07/02/01
12/31/01
07/02/02
12/31/02
07/02/03
01/01/04
Sampling Date

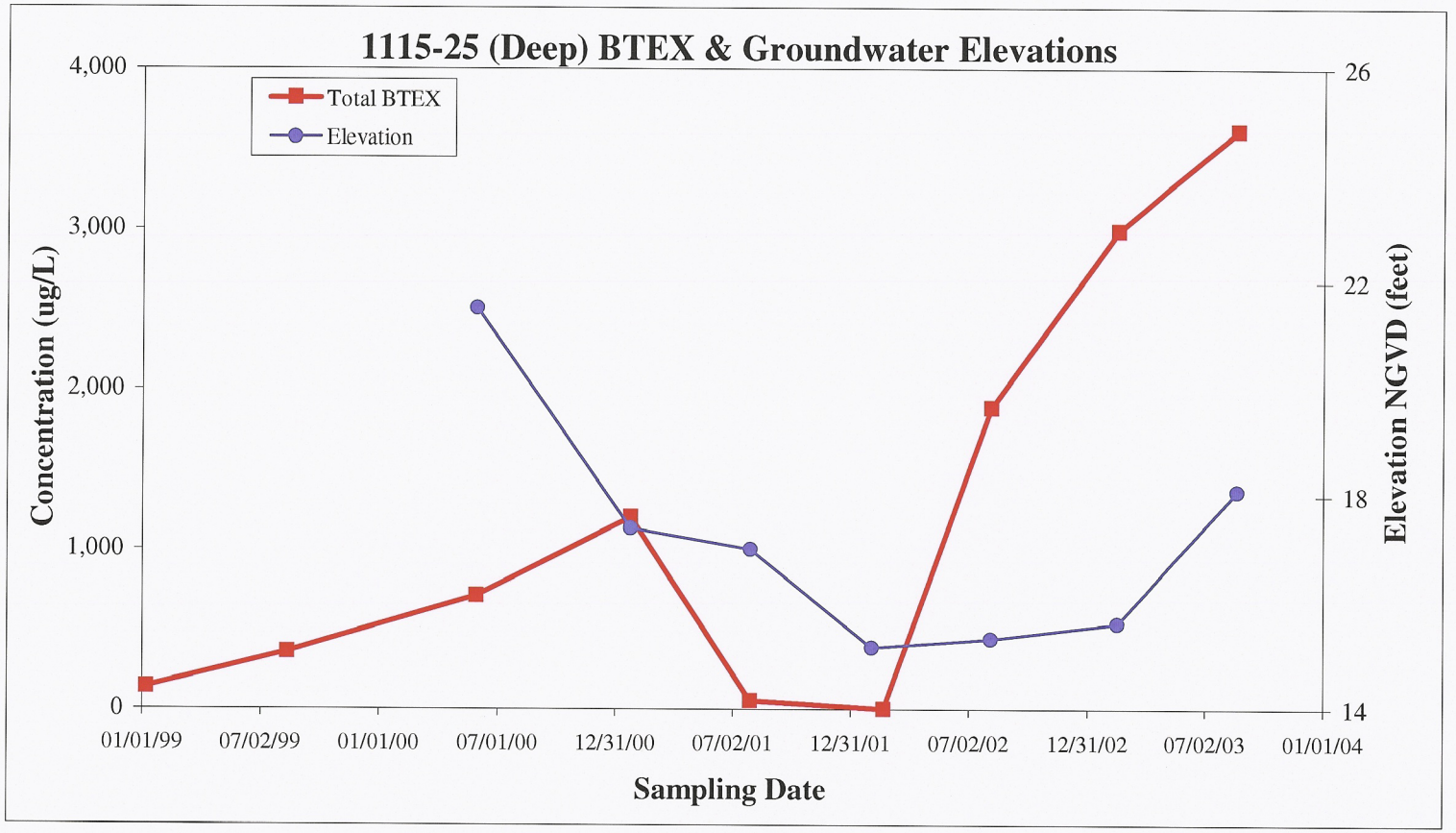


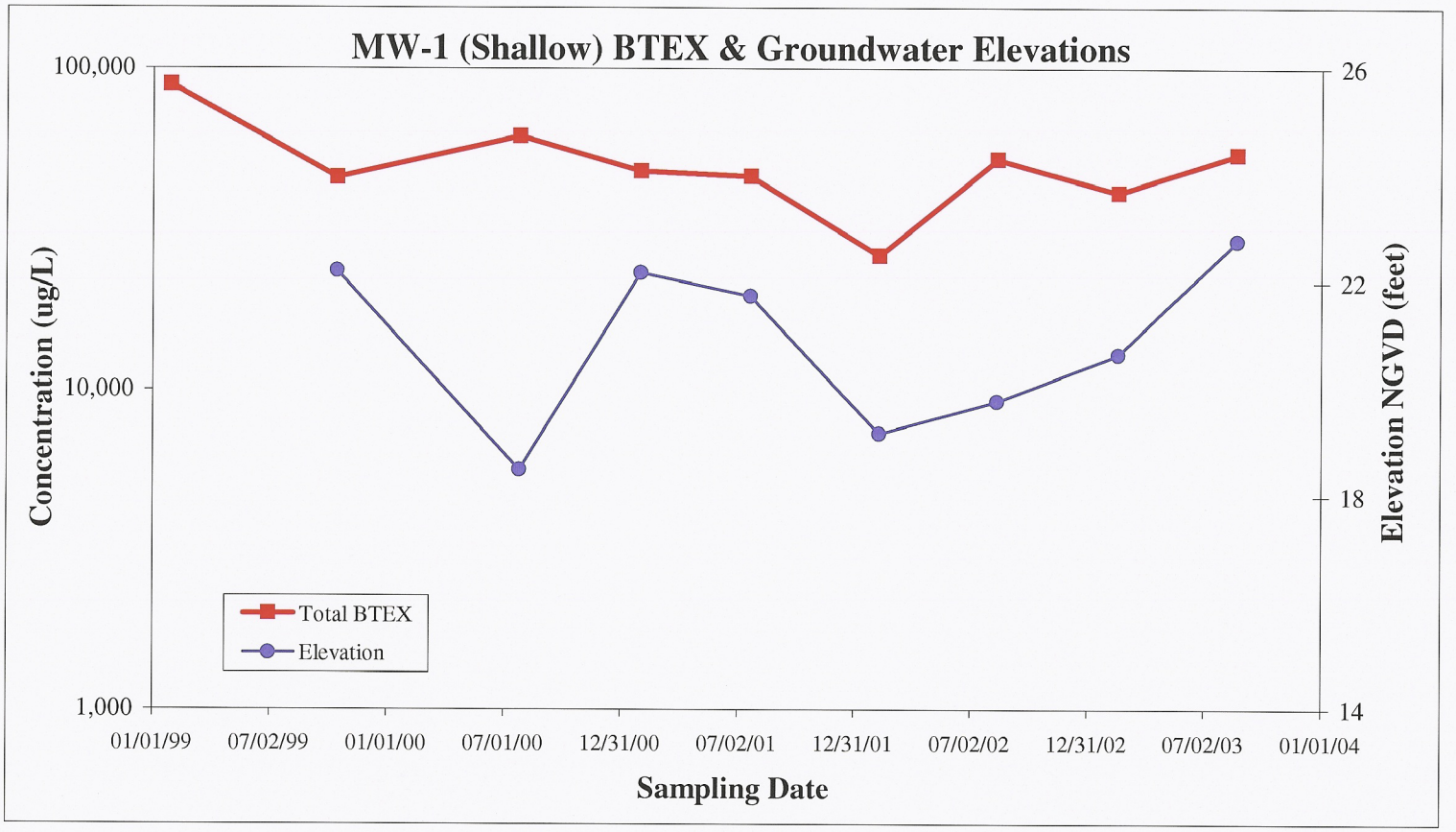
ALPHFP1:\Delta Air Lines\GSE Midfield\Site Data\NW Graph; 1115-21 Plot


1115-22 (Deep) BTEX & Groundwater Elevations
Total BTEX
Elevation
Concentration (ug/L)
2,000
1,500
1,000
500
0
Elevation NGVD (feet)
26
22
18
14
01/01/99
07/02/99
01/01/00
07/01/00
12/31/00
07/02/01
12/31/01
07/02/02
12/31/02
07/02/03
01/01/04
Sampling Date

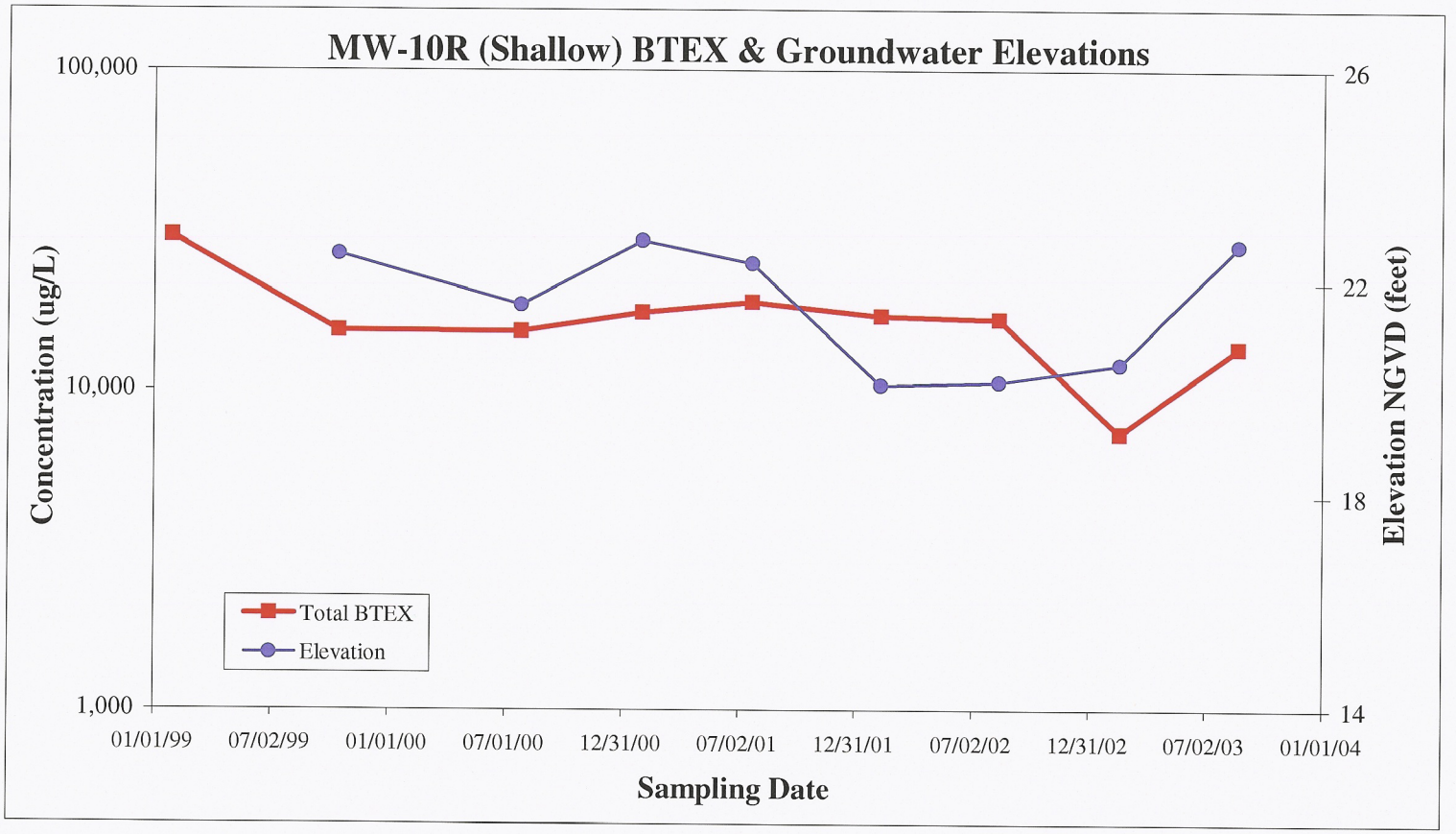

1115-23 (Deep) BTEX & Groundwater Elevations
Total BTEX
Elevation
Concentration (ug/L)
100,000
10,000
1,000
100
10
1
Elevation NGVD (feet)
26
22
18
14
01/01/99
07/02/99
01/01/00
07/01/00
12/31/00
07/02/01
12/31/01
07/02/02
12/31/02
07/02/03
01/01/04
Sampling Date

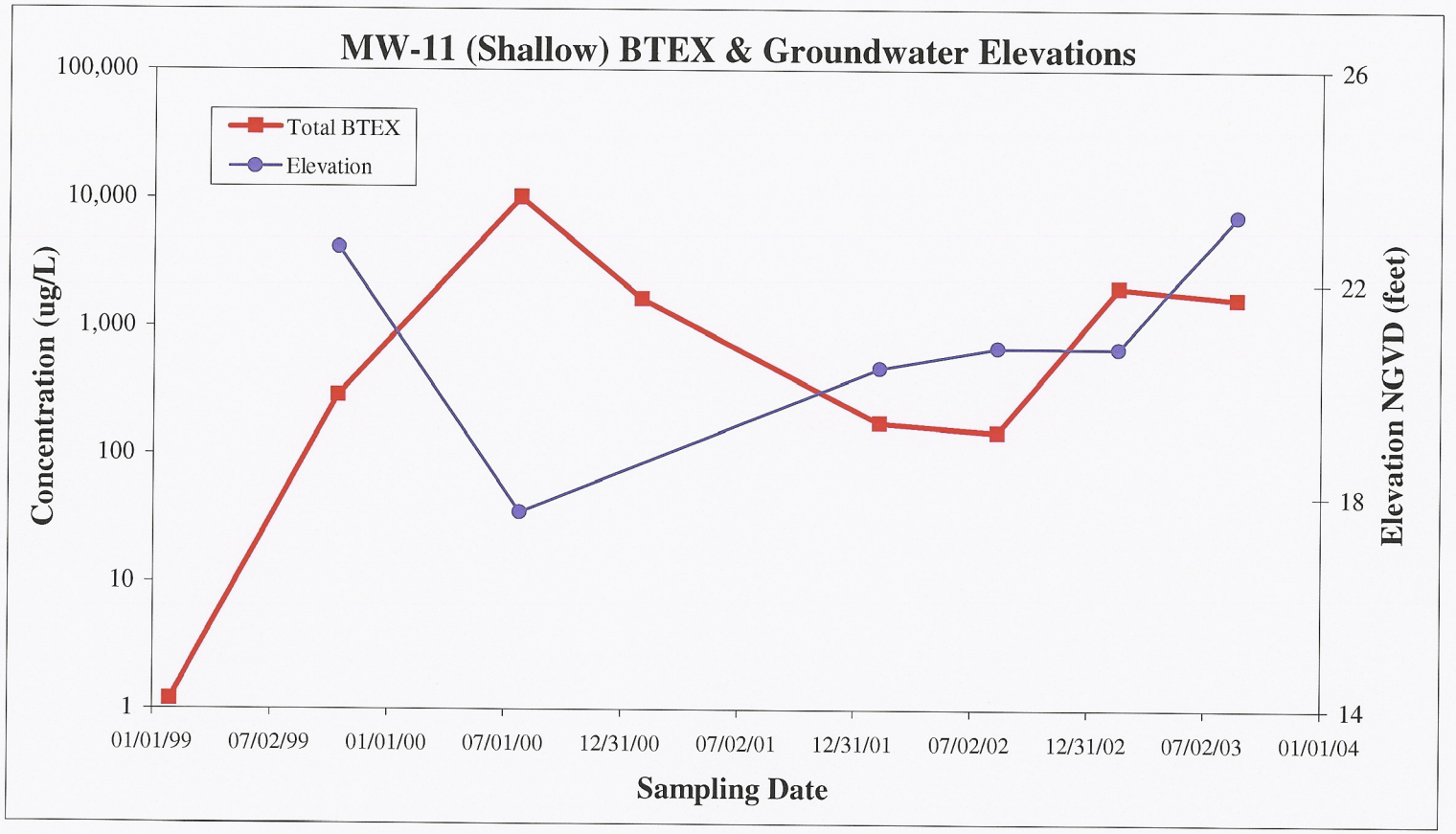

1115-24 (Deep) BTEX & Groundwater Elevations
Total BTEX
Elevation
Concentration (ug/L)
4,500
3,500
2,500
1,500
Elevation NGVD (feet)
26
22
18
14
01/01/99
07/02/99
01/01/00
07/01/00
12/31/00
07/02/01
12/31/01
07/02/02
12/31/02
07/02/03
01/01/04
Sampling Date

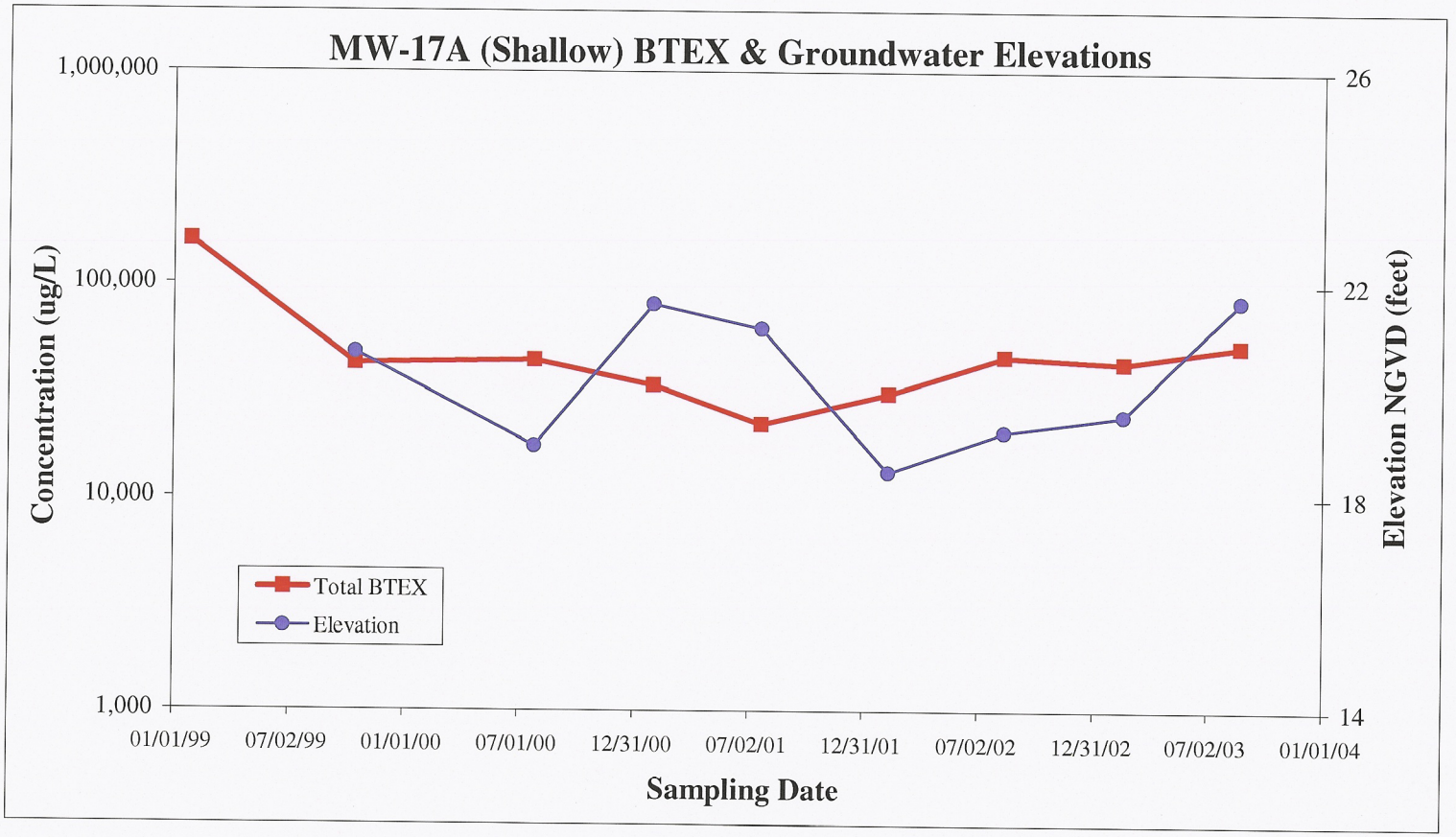

1115-25 (Deep) BTEX & Groundwater Elevations
Total BTEX
Elevation
Concentration (ug/L)
Elevation NGVD (feet)
4,000
3,000
2,000
1,000
0
26
22
18
14
01/01/99
07/02/99
01/01/00
07/01/00
12/31/00
07/02/01
12/31/01
07/02/02
12/31/02
07/02/03
01/01/04
Sampling Date

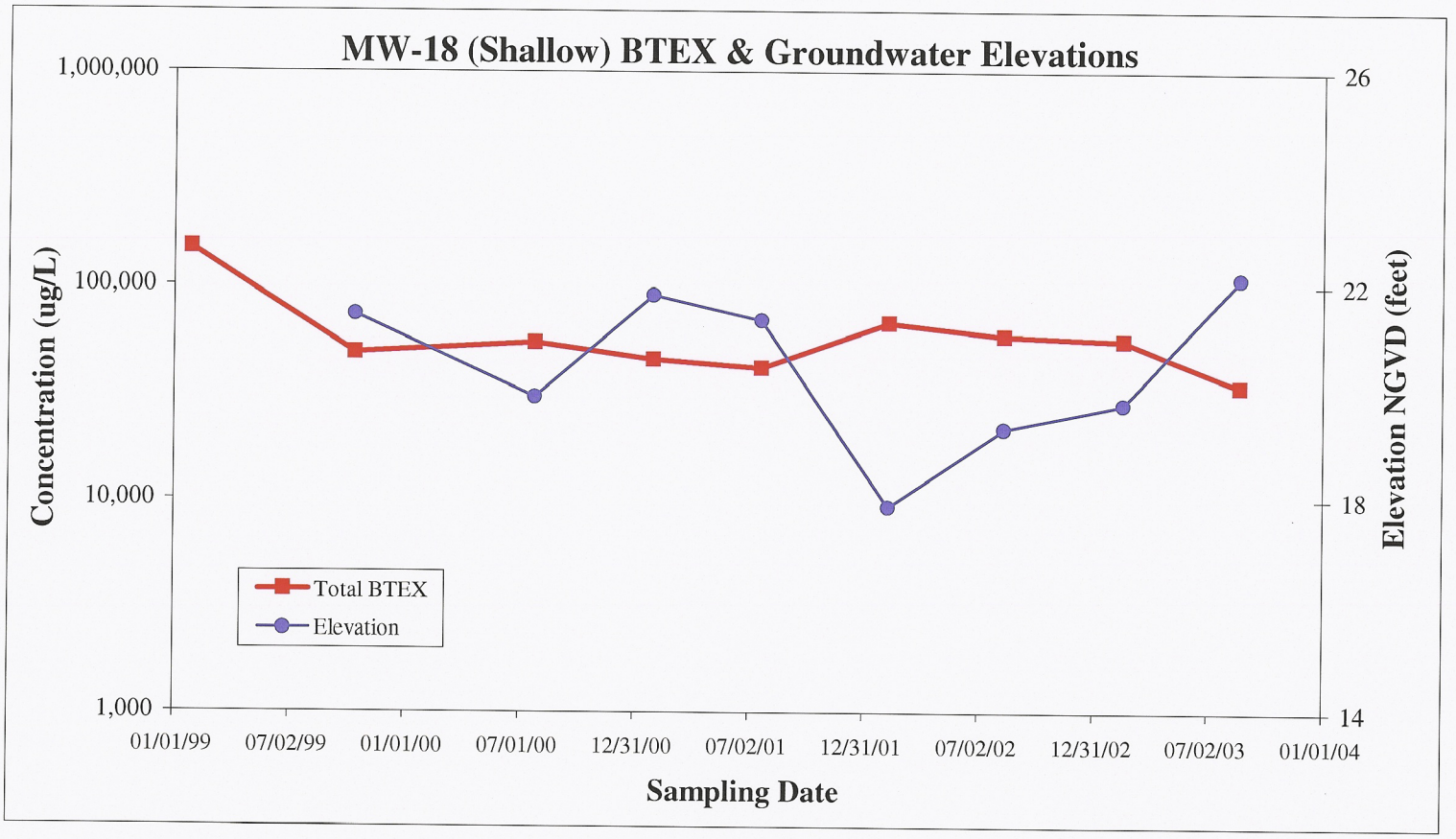


ALPHFP1:\Delta Air Lines\GSE Midfield\Site Data\SE Graph; MW-1 Plot

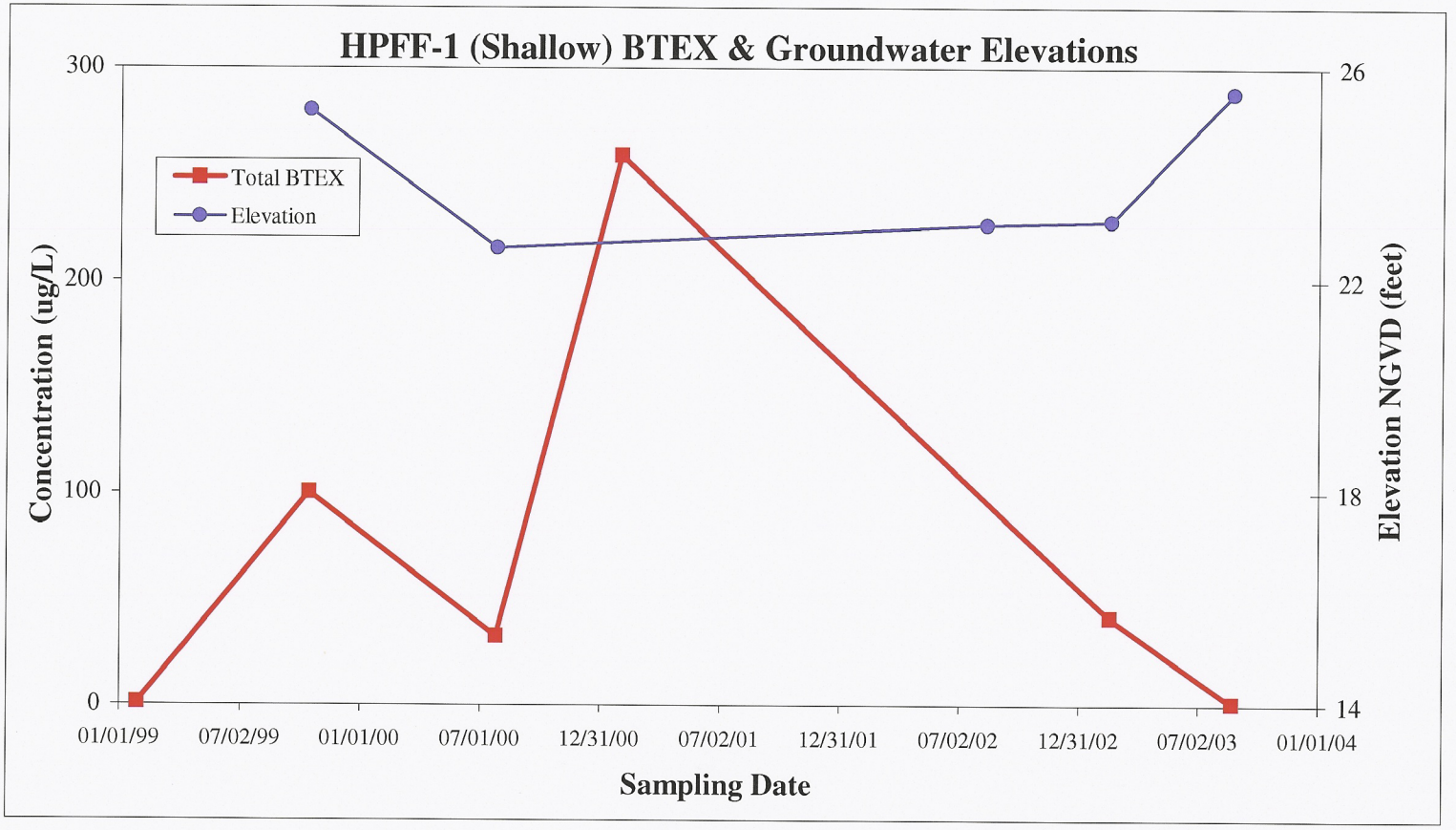

MW-10R (Shallow) BTEX & Groundwater Elevations
100,000
10,000
1,000
Concentration (ug/L)
26
22
18
14
Elevation NGVD (feet)
Total BTEX
Elevation
01/01/99
07/02/99
01/01/00
07/01/00
12/31/00
07/02/01
12/31/01
07/02/02
12/31/02
07/02/03
01/01/04
Sampling Date

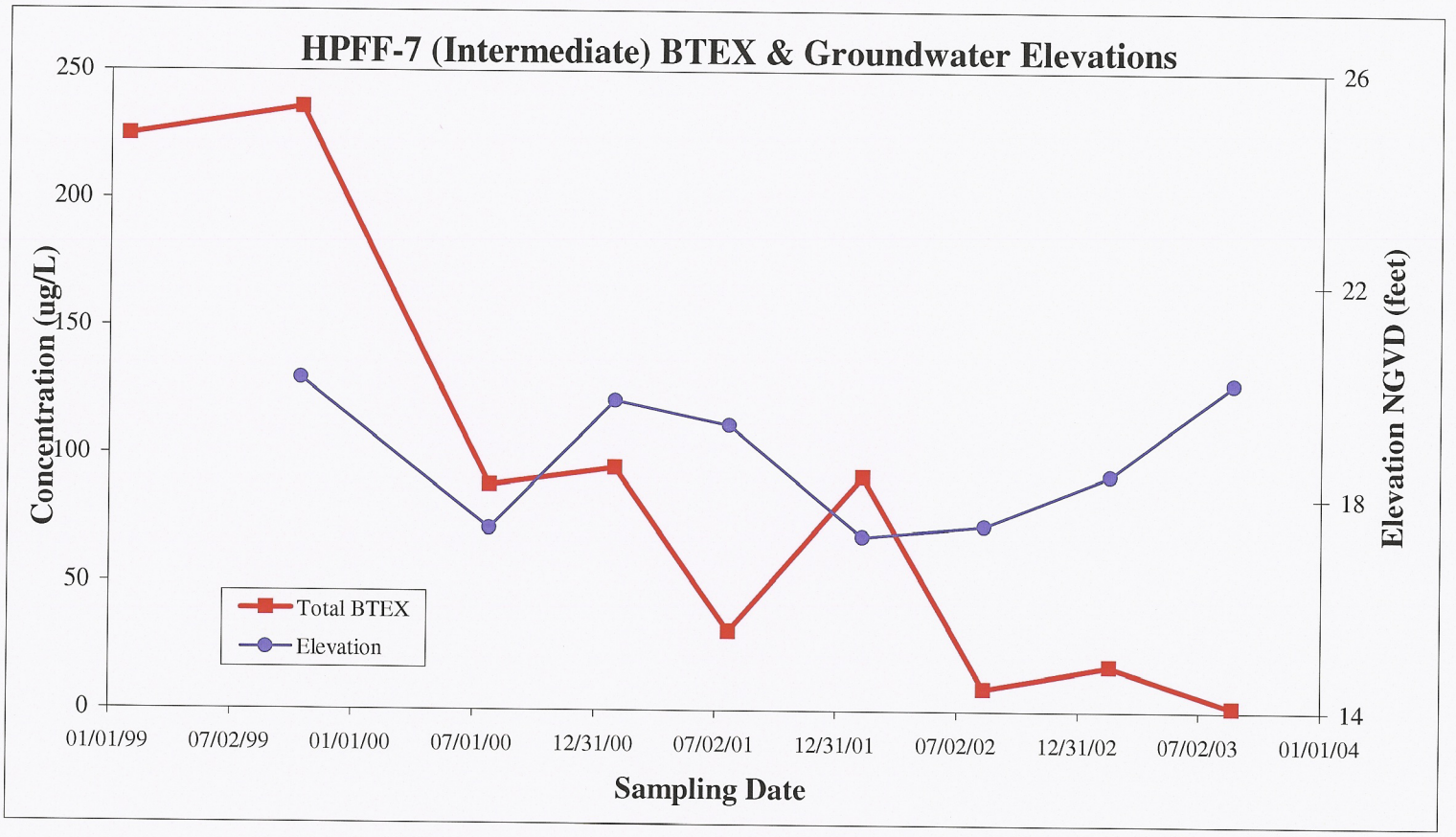

MW-11 (Shallow) BTEX & Groundwater Elevations
Total BTEX
Elevation
Concentration (ug/L)
100,000
10,000
1,000
100
10
1
Elevation NGVD (feet)
26
22
18
14
01/01/99
07/02/99
01/01/00
07/01/00
12/31/00
07/02/01
12/31/01
07/02/02
12/31/02
07/02/03
01/01/04
Sampling Date


MW-17A (Shallow) BTEX & Groundwater Elevations
Concentration (ug/L)
1,000,000
100,000
10,000
1,000
Elevation NGVD (feet)
26
22
18
14
Total BTEX
Elevation
01/01/99
07/02/99
01/01/00
07/01/00
12/31/00
07/02/01
12/31/01
07/02/02
12/31/02
07/02/03
01/01/04
Sampling Date

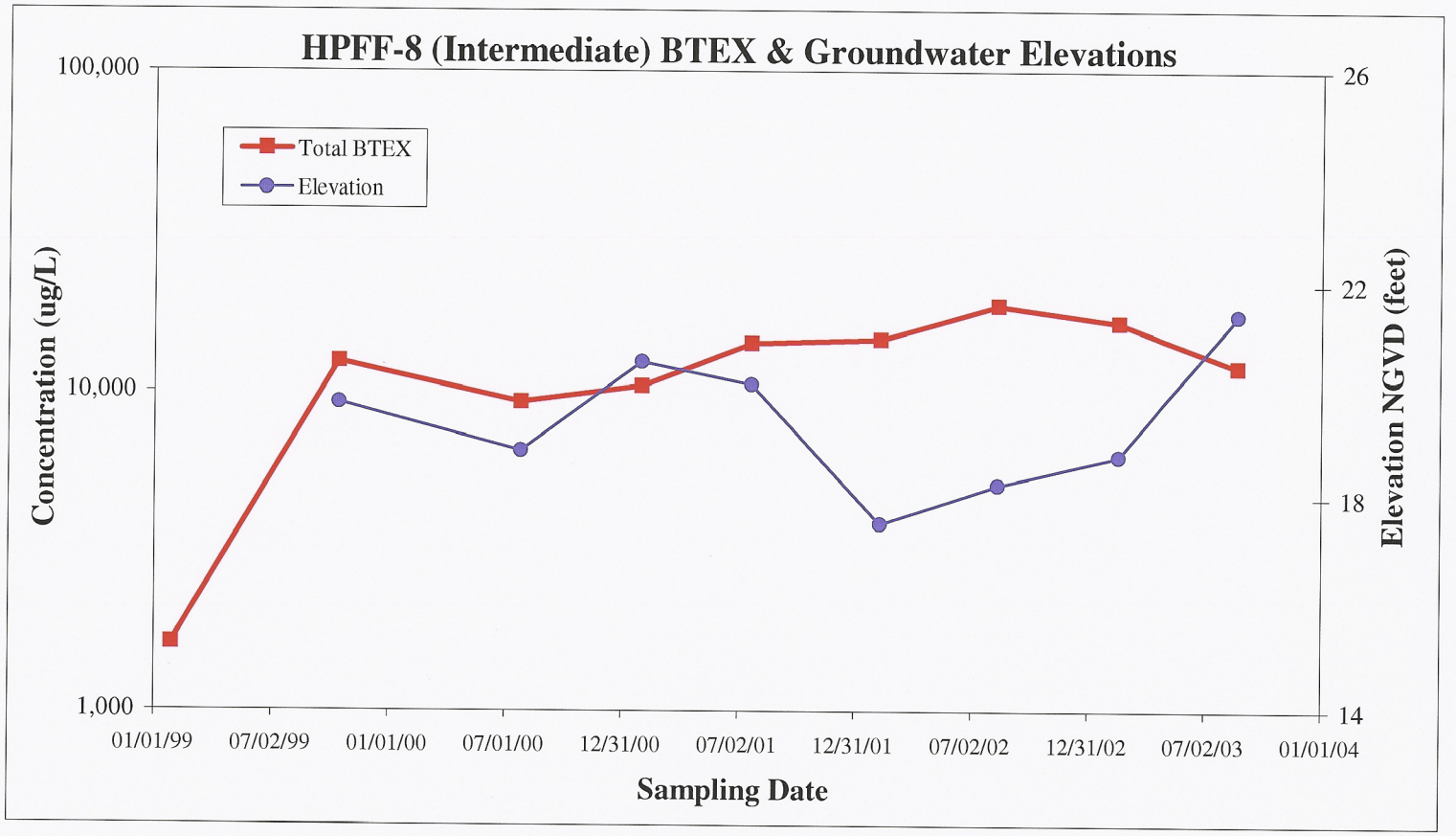


ALPHFP1:\Delta Air Lines\GSE Midfield\Site Data\SE Graph; MW-18 Plot

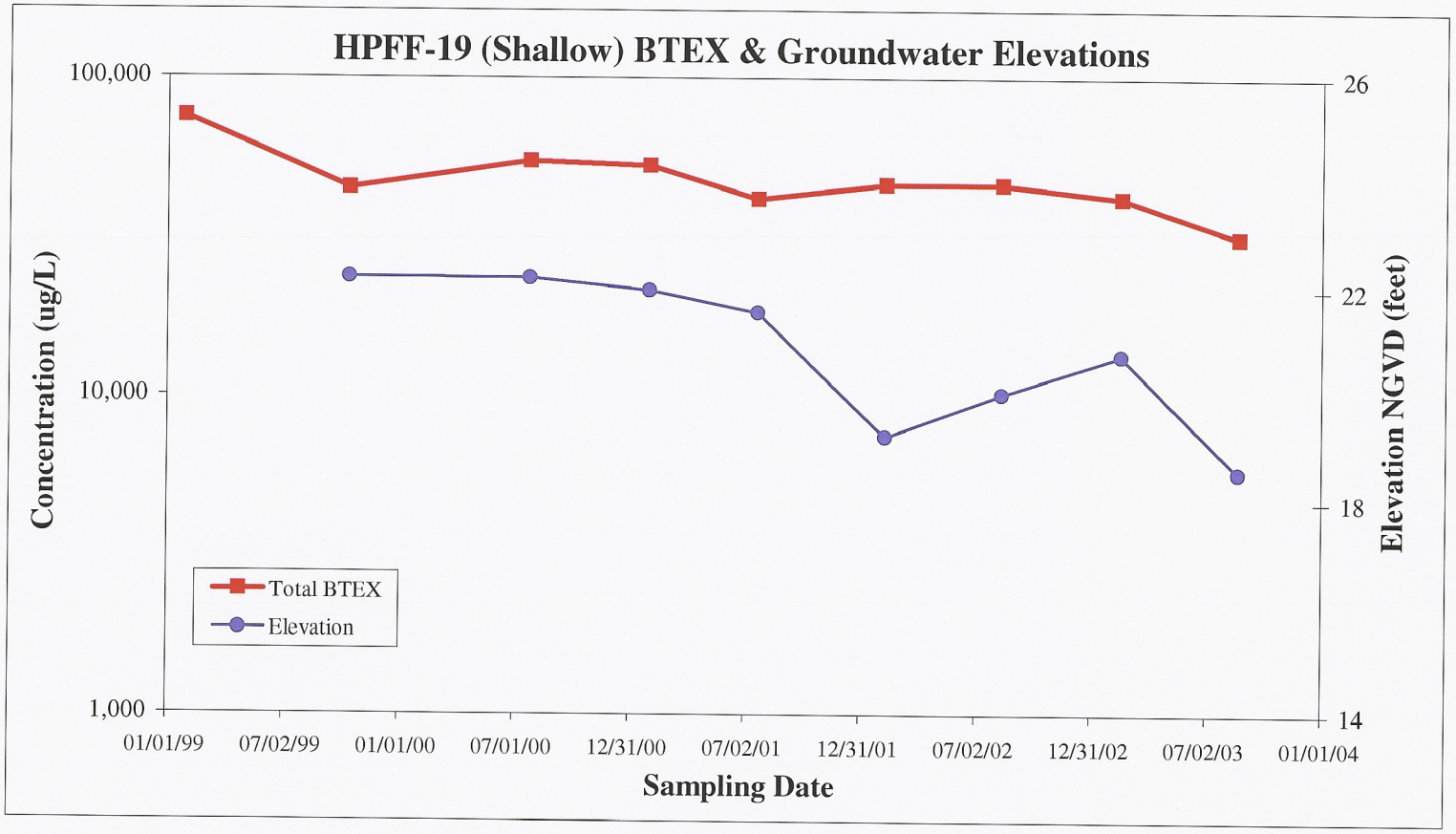

HPFF-1 (Shallow) BTEX & Groundwater Elevations
Concentration (ug/L)
300
200
100
0
Total BTEX
Elevation
26
22
18
14
Elevation NGVD (feet)
01/01/99
07/02/99
01/01/00
07/01/00
12/31/00
07/02/01
12/31/01
07/02/02
12/31/02
07/02/03
01/01/04
Sampling Date

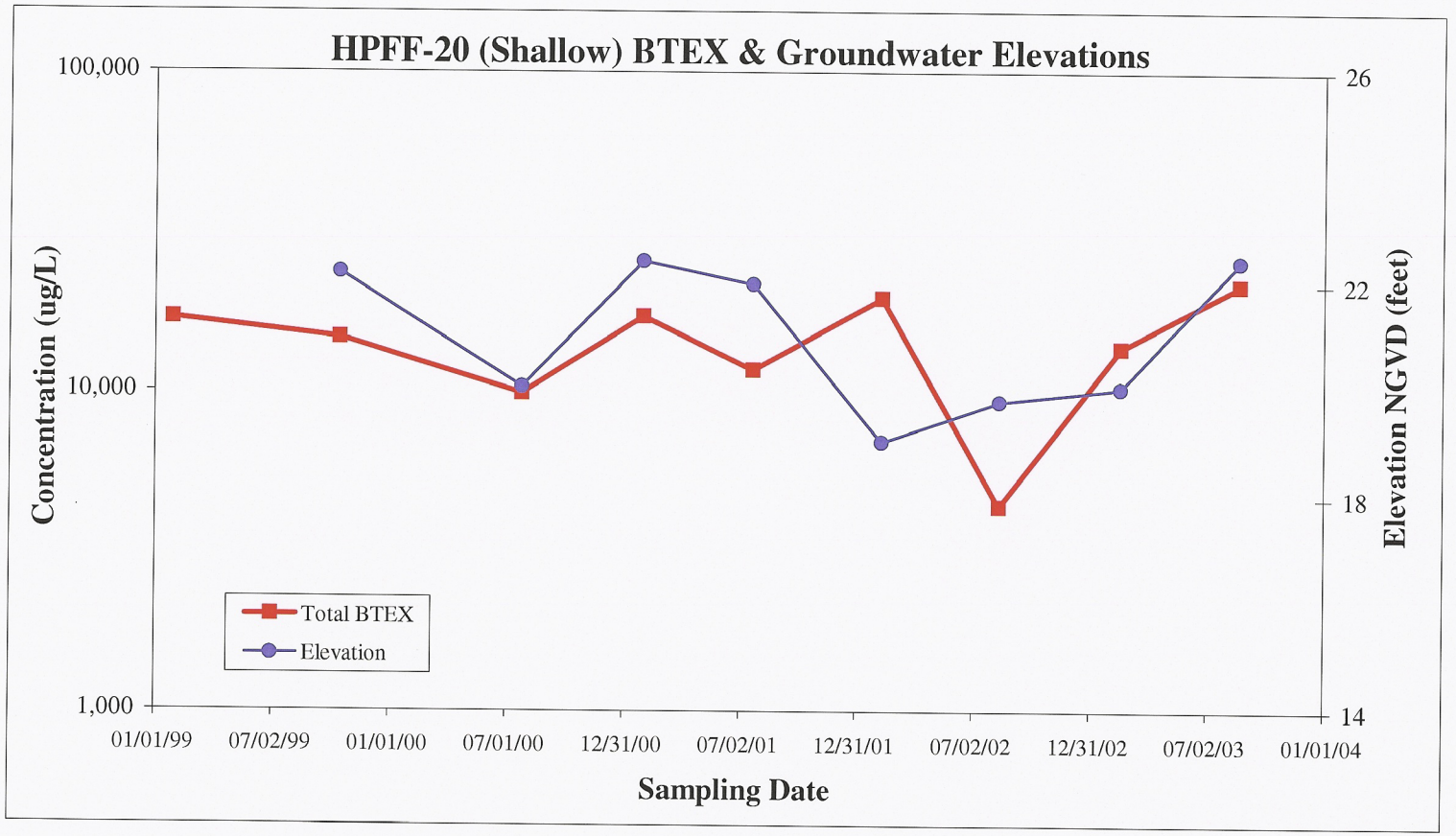


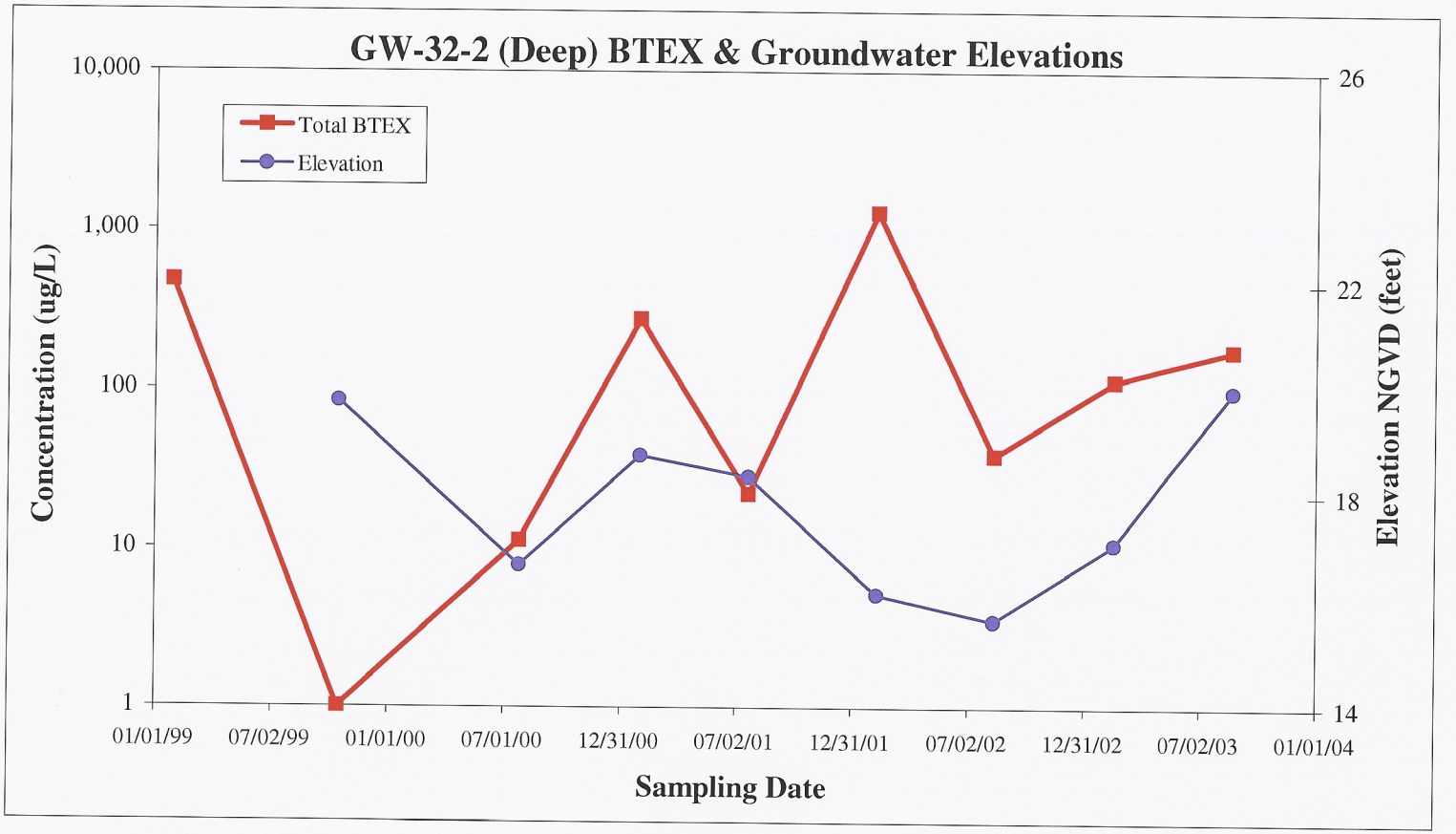
ALPHFP1:\Delta Air Lines\GSE Midfield\Site Data\SE Graph; HPFF-7 Plot

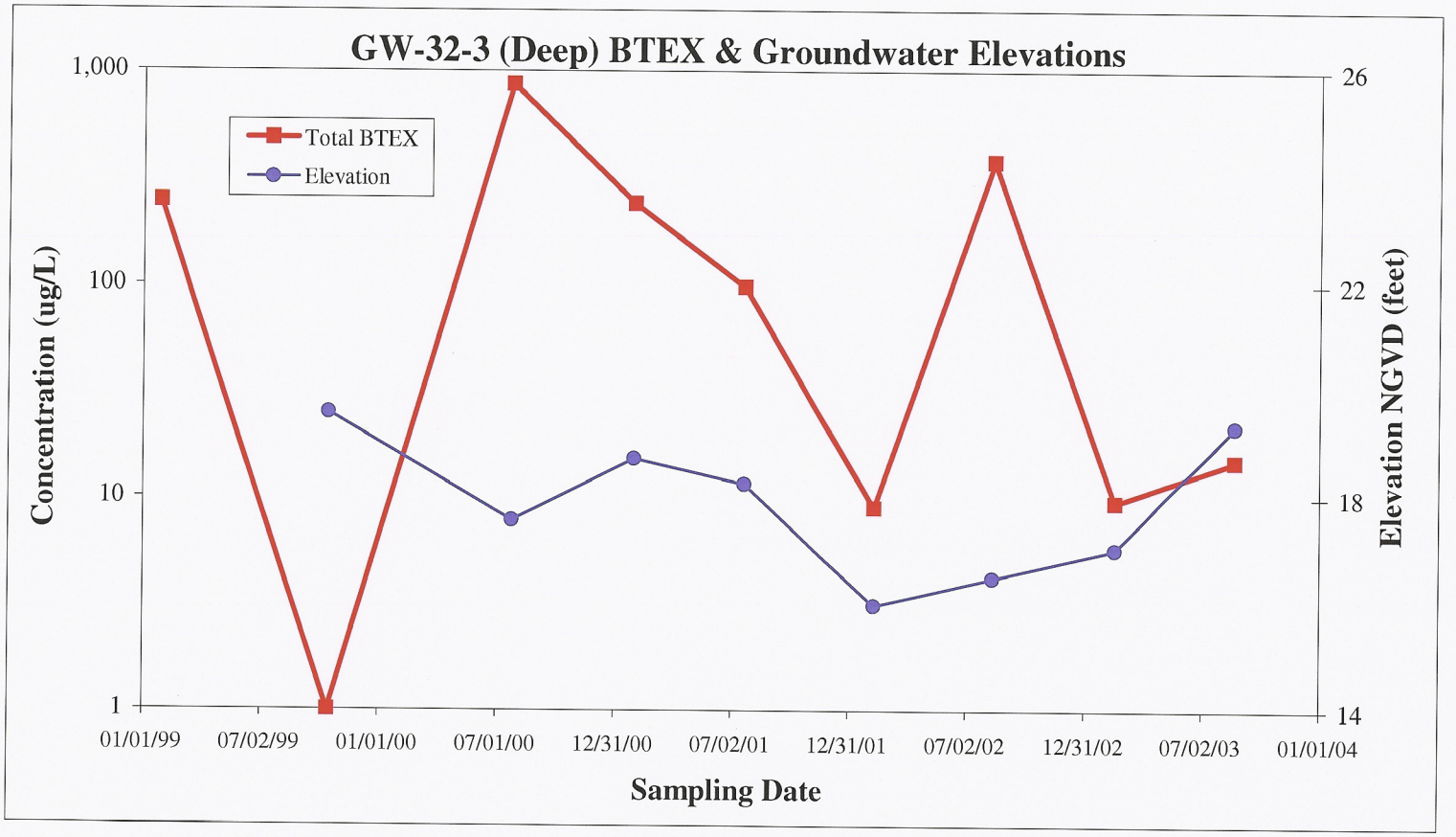


ALPHFP1:\Delta Air Lines\GSE Midfield\Site Data\SE Graph; HPFF-8 Plot

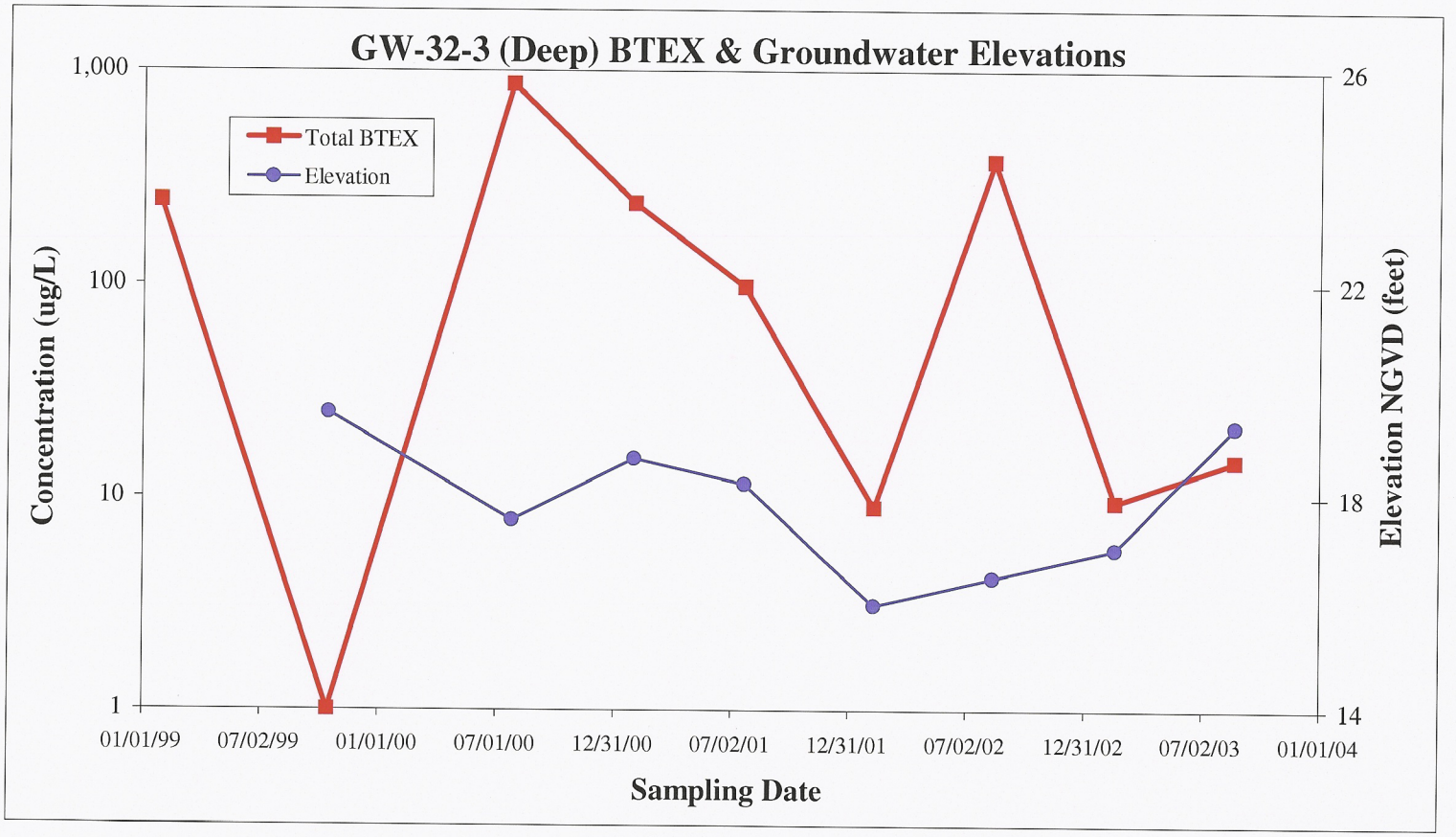

HPFF-19 (Shallow) BTEX & Groundwater Elevations
100,000
10,000
1,000
Concentration (ug/L)
26
22
18
14
Elevation NGVD (feet)
Total BTEX
Elevation
01/01/99
07/02/99
01/01/00
07/01/00
12/31/00
07/02/01
12/31/01
07/02/02
12/31/02
07/02/03
01/01/04
Sampling Date


HPFF-20 (Shallow) BTEX & Groundwater Elevations
100,000
10,000
1,000
Concentration (ug/L)
26
22
18
14
Elevation NGVD (feet)
Total BTEX
Elevation
01/01/99
07/02/99
01/01/00
07/01/00
12/31/00
07/02/01
12/31/01
07/02/02
12/31/02
07/02/03
01/01/04
Sampling Date


GW-32-2 (Deep) BTEX & Groundwater Elevations
Total BTEX
Elevation
Concentration (ug/L)
10,000
1,000
100
10
1
Elevation NGVD (feet)
26
22
18
14
01/01/99
07/02/99
01/01/00
07/01/00
12/31/00
07/02/01
12/31/01
07/02/02
12/31/02
07/02/03
01/01/04
Sampling Date



ALPHFP1:\Delta Air Lines\GSE Midfield\Site Data\SE Graph; GW-32-3 Plot



ALPHFP1:\Delta Air Lines\GSE Midfield\Site Data\SE Graph; GW-32-3 Plot