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CNC CHARLESTON
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CORRECTIVE ACTION PLAN FOR ZONE B/ SITE 15 QUARTERS O UST FOR QUARTERS O

CNC CHARLESTON SC

8/1/2000

CH2M HILL

CORRECTIVE ACTION PLAN
FOR
ZONE B/ SITE 15 QUARTERS O
UST FOR QUARTERS O

SITE IDENTIFICATION # 01088

Charleston Naval Complex
Charleston, South Carolina

SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND

Contract Number N62467-99-C-0960

August 2000

CORRECTIVE ACTION PLAN
FOR
ZONE B/ SITE 15-QUARTERS O
UST FOR QUARTERS O

SITE IDENTIFICATION # 01088

Charleston Naval Complex
Charleston, South Carolina

Submitted to:
Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
Charleston, South Carolina 29406

Submitted by:
CH2M-JONES, LLC.
115 Perimeter Center Place NE
Suite 700
Atlanta, Georgia 30346-1278

Contract Number: N62467-99-C-0960

August 2000

PREPARED BY:

28 AUG 2000

Brian R. Crawford
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APPROVED BY:

29 Aug 2000

Jed A. Heames
Site Manager
CH2M-JONES, LLC.

CERTIFICATION

I certify that the information contained in this report, is true, and complete to the best of my knowledge, information, and belief.

Approved By: R. Garcia Date: 8/31/00

South Carolina Registration No. 14220

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No 14220 RICHARD R. GARCIA

SOUTH CAROLINA J.A. JONES MANAGEMENT SERVICES, INC. No. C02036 CERTIFICATE OF AUTHORIZATION

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ACRONYMS

bls	below land surface
BTEX	Benzene, Toluene, Ethylbenzene, and Xylene Isomers
CAP	Corrective Action Plan
CNC	Charleston Naval Complex
COC	Chemical of Concern
EISOPQAM	Environmental Investigations Standard Operating Procedures and Quality Assurance Manual
EPA	Environmental Protection Agency
ft	foot
mg/kg	microgram per kilogram
mg/L	microgram per liter
OVA	Organic Vapor Analyzer
QA	Quality Assurance
QC	Quality Control
RBSL	Risk-Based Screening Level
RDA	Redevelopment Authority
SCDHEC	South Carolina Department of Health and Environmental Control
SLA	Standard Limited Assessment
SOUTHDIV	Southern Division Naval Facilities Engineering Command
SSTL	Site-Specific Target Level
TTNUS	Tetra Tech NUS
UST	Underground Storage Tank

1.0 INTRODUCTION

This Corrective Action Plan (CAP) has been prepared by CH2M-JONES, LLC. The plan is designed for Zone B/ Site 15-Quarters O; Underground Storage Tank (UST) O located at the Charleston Naval Complex (CNC), Charleston, South Carolina.

The South Carolina Department of Health and Environmental Control (SCDHEC) has designated this site as Identification Number: 01088. This CAP provides methods to further evaluate the applicability of intrinsic remediation and monitoring well abandonment as a corrective action for UST O in accordance with SCDHEC Corrective Action Guidance, June 1997.

1.1 General Site Description

The CNC is located in the city of North Charleston, on the west bank of the Cooper River in Charleston County, South Carolina as shown in Figure 1. This installation consists of two major areas: an undeveloped dredge materials area on the east bank of the Cooper River on Daniel Island in Berkley County, and a developed area on the west bank of the Cooper River. The developed portion of the base is on the peninsula bounded on the west by the Ashley River and on the east by the Cooper River. The site is located within the developed portion of the base as shown in Figure 1. (Tetra Tech, NUS [TTNUS], 1999).

The area surrounding CNC is "mature urban", having long been developed with commercial, industrial, and residential land use. Commercial areas are primarily west of CNC; industrial areas are primarily to the north of the base along Shipyard Creek. A site vicinity map, which exhibits adjacent properties and structures, vicinity roads, current utilities, and vicinity surface drainage, is included as Figure 2.

Quarters O was built in 1937. It served as base housing until its closure. UST O was in use until March 1998. UST O was reported as in good condition at the time of removal. The steel ventilation pipe contained mild corrosion throughout its length, but no holes were found (Standard Limited Assessment [SLA], Tetra Tech NUS [TTNUS], Inc.; 2000).

1.2 Objective

This CAP presents the groundwater monitoring plan to assess the down gradient plume migration and intrinsic bioremediation/natural attenuation of petroleum hydrocarbons contamination in order to validate the assumptions and calculations used in the in the SLA completed by TTNUS. Details for the abandonment of monitoring wells at UST O are also included in this plan.

2.0 RECEPTOR SURVEY

A receptor survey of the site vicinity was conducted by TTNUS personnel to identify potential receptors for petroleum hydrocarbon contamination. Figures 2 and 3 depict the public utilities located within 250 feet of the former UST S study area. Specific information concerning the depth of utilities bls (below land surface) is currently unavailable, however, utilities at this site generally are between 2 to 6 feet (ft) (bls). Corrective action data summary forms are provided in Appendix A. The following utility receptors were located:

TABLE 1

Utility	On-Site or Distance/ Direction from Site	Depth to Utility
Water	At former UST location	2-6 ft bls
Electric	Northeast corner of Quarters O running to the east. The former UST location is southwest of Quarters O.	2-6 ft bls
Sanitary Sewer	At former UST location	2-6 ft bls
Storm Drain	150 ft snorthwest of former UST O	2-6 ft bls

According to the SLA report completed by TTNUS, a survey of groundwater users within a 7-mile radius of CNC was conducted by the South Carolina Water Resources Commission to ascertain the extent of any shallow groundwater usage. Results of the water use investigation revealed that no drinking water wells, which utilize the shallow aquifer, are located within a 4-mile radius of CNC. Irrigation wells are not identified within 1,000 feet of the site. Numerous monitoring wells are located within 1,000 feet of the site. The nearest surface water body to UST O is Noisette Creek located approximately 1,000 feet to the north.

There are no city, county or state-zoning ordinances, the property (CNC) is currently owned by the federal government. Information concerning zoning ordinances was obtained from the SOUTHDIV Remedial Project Manager located at 2155 Eagle Drive, North Charleston, South Carolina 29406 (TTNUS, 1999).

A receptor survey was completed for the following:

TABLE 2

Receptor	Distance/ Direction from Site
Visitor/Recreator	On-site no complete pathway
On-site Resident	On-site no complete pathway
Off-site Resident	Nearest Building~75 ft west- no complete pathway
Construction Worker	On-site
Commercial Worker	On-site no complete pathway
Surface Water	UST O to Noisette Creek ~ 725 ft- no complete pathway

2.1 Fate and Transport Modeling

The Dominico model was the fate and transport model used to determine groundwater Site Specific Target Levels (SSTL) in the risk analysis. The Dominico dilution/attenuation model is presented in the SCDHEC Guidance Document, *South Carolina Risk-Based Corrective Action foe Petroleum Releases* (SCDHEC 1998). The information used for modeling can be found in the SLA.

2.2 Soil Leaching SSTL

The naphthalene concentration of one monitoring well (MW-01) exceeded the soil leaching RBSLs. The naphthalene concentration at MW-01 was 30 µg/L.

Site Specific Target Levels (SSTL) were not required for soil because soil concentrations did not exceed RBSLs for any COCs.

The Domenico model was used to determine groundwater SSTL for naphthalene. The distance from the former UST locations to Noiseete Creek, which is the nearest point of exposure, was estimated to be 725 feet. Using the values of the RBSL (0.01 mg/L for naphthalene) at the point of exposure, the SSTL at the source was calculated and compared with the calculated source concentrations. The SSTL at the compliance well was also calculated using the values of the RBSL at the point of exposure. The distance of the compliance well to the point of exposure was estimated to be 725 feet (213.4 meters).

Groundwater SSTLs were determined to be:

TABLE 3

Chemical of Concern	Source SSTL (mg/L)	Maximum Source Concentration (mg/L)	Compliance Point SSTL (mg/L)
Naphthalene	1.36	0.030	1.272

The calculated SSTL for surface water exposure was not exceeded by on-site concentration of naphthalene in groundwater. Noisette Creek was not at risk because of the groundwater contamination is at Site 15.

4.0 MONITORING WELL INSTALLATION AND ABANDONMENT

4.1 Monitoring Well Installation

Three monitoring wells are located at the site. Naphthalene (the only COC found on the site) was found in monitoring well MW-01 at a concentration of 30 µg/L. No monitoring wells will be installed at this time.

4.2 Monitoring Well Abandonment

A total of thee monitoring wells will be abandoned at Quarters O following the South Carolina Well Standards and Regulations R.61-71. The well abandonment will include grouting wells, removing stick-ups and removing all guard posts. Any well casing and screen removed will be decontaminated and disposed of as general refuse.

4.3 Surveying

Surveying of any new monitoring wells will be conducted and certified by a South Carolina State Registered Land Surveyor. Datum to be used will be in accordance with USGS NAD' 27. The surveying subcontractor will report all elevations referenced to mean sea level.

After installation, the ground surface, top of the protective casing will be surveyed to within 0.01-foot vertical accuracy by a state-certified land surveyor. In addition the well will be surveyed to a 0.1-foot horizontal accuracy.

4.4 Equipment Decontamination

All drilling equipment, augers, well casing and screens, and soil and groundwater sampling equipment involved in field sampling activities will be decontaminated according to the Environmental Protection Agencies (EPA) " Environmental Investigations Standard Operating Procedures and Quality Assurance Manual (EISOPQAM).

3.0 PROPOSED REMEDIATION TECHNOLOGY

Based on the results of the SLA modeling, an Intrinsic Remediation with a monitoring period of 18 months will be performed for the site. The monitoring program will consist of sampling initially all of the surrounding wells adjacent to the source point, only sampling selected wells thereafter. The proposed monitoring program is described in detail in Sections 4.0 and 5.0 of this plan. The Corrective Action Monitoring plan is provided in Appendix C.

5.0 PROPOSED GROUNDWATER MONITORING PROGRAM

5.1 Monitoring Frequency and Reporting

The groundwater monitoring program proposed at UST O will be performed in accordance with the SCDHEC Corrective Action Guidance dated June, 1997 and consist of the following:

TABLE 4

Sampling date	Monitoring Wells Sampled	Field Measures	Laboratory Analytical
Second half [1] 2000	MW-01, MW-02, MW-03	T°, pH, DO, Conductivity, Depth to water, Total depth, turbidity	Naphthalene 8260 Nitrate, sulfate, total dissolved iron, methane, alkalinity
First half [2] 2001	MW-01, MW-02, MW-03	T°, pH, DO, Conductivity, Depth to water, Total depth, turbidity	Naphthalene 8260 Nitrate, sulfate, total dissolved iron, methane, alkalinity
Second half 2001	MW-01, MW-02, MW-03	T°, pH, DO, Conductivity, Depth to water, Total depth, turbidity	Naphthalene 8260 Nitrate, sulfate, total dissolved iron, methane, alkalinity

1. Second half: Months July through December.
2. First half: Months January through June.

- **Frequency:** Initially all monitoring wells at this site will be sampled. Following analytical results, should no CoCs be identified above the RBSLs, a re-evaluation of no further action will be considered. In the event that the CoCs are above RBSLs, additional groundwater sampling will be collected from wells MW-01, MW-02 and MW03. A schedule of this event would continue on a semi-annual basis as discussed above.

- **Reporting:** Semi-annual groundwater monitoring reports will be submitted to SCDHEC.

Included in the semi-annual reports will be field and analytical information from the certified laboratory indicating well numbers, analytical methods used, date sampled, date analyzed, and method detection limits.

At the end of the 18-month period (or sooner if necessary), a performance evaluation will be submitted to SCDHEC providing the effectiveness of the intrinsic biodegradation/natural attenuation occurring and any recommendations for the site. In addition to the performance evaluation, modeling may be performed after each sampling event

- **Groundwater Sampling**

Prior to any groundwater sampling, each well will be measured for water levels and total depth and each well will be purged in accordance the EPA EISOPQAM.

5.2 Analytical Parameters

The following constituents will be analyzed for each groundwater sample:

- Naphthalene using method 8260.

The following parameters will be analyzed in order to evaluate the effectiveness of intrinsic remediation:

- Nitrate (NO^{-3})
- Sulfate (SO^{-4})
- Total dissolved iron
- Methane (CH_4)
- Alkalinity

5.3 Field Measurements

The following parameters will be sampled in the field:

- Temperature
- pH
- Dissolved Oxygen
- Depth to water table
- Depth of well
- Turbidity
- Specific Conductance

Field measurements will be recorded in the field book and in field forms provided in Appendix D.

5.4 Groundwater Level Measurements

Groundwater measurements will be taken from all monitoring wells at the site during each sampling event. All water level measurements will be taken on the same day as anticipated sampling.

Measurements will be taken with an electrical water level meter or interface probe if floating product is present using the highest part of the top of the casing as a reference point for determining depths to water and total depths. Water level measurements will be recorded to the nearest 0.01 foot in the field book.

5.5 Sample Handling

Sample Handling will be conducted in accordance with the following references:

EPA EISOPQAM (EPA May, 1996)

5.6 Sample Packing and Shipping

The following forms will be completed to complete the packing/shipping process:

- Sample labels
- Chain-of-custody labels
- Appropriate labels applied to shipping coolers
- Chain-of-custody forms
- Federal express air bills

5.7 Quality Control

Quality Control (QC) samples will be collected during sampling events. QC samples may include field blanks, field duplicates, and trip blanks. Definitions of each can be found below as described by the EISOPQAM:

- **Field Blank:** a sample collected using organic-free water, which has been run over/through sample collection equipment. These samples are used to determine if contaminants have been introduced by contact of the sample medium with sampling equipment. Equipment field blanks are often associated with collecting rinse blanks of equipment that has been field cleaned.

- **Field Duplicates:** Two or more samples collected from a common source. The purpose of a duplicate sample is to estimate the variability of a given characteristic or contamination associated with a population.

- **Trip Blank:** A sample, which is prepared prior to the sampling event in the actual container and is stored with the investigative samples throughout the sampling event. They are often packaged for shipment with the other samples and submitted for analysis. At no time after their preparation are trip blanks to be opened before they reach the laboratory. Trip blanks are used to determine if samples were contaminated during storage and/or transportation back to the laboratory (a measure of sample handling variability resulting in positive bias in

contaminant concentration). If samples are to be shipped, trip blanks are to be provided with each shipment but not for each cooler.

5.8 Field QA/QC

More information on field QC can be found in section 5.6.

5.9 Control Limits

TABLE 5

Analysis	Control Parameter	Control Limit	Corrective Action
Air Monitoring	Check Calibration of OVA daily	Calibrate to manufactures specifications	Recalibrate. If unable to calibrate, replace.
pH of water	Continuing calibration check of pH 7.0 buffer	pH= 7.0	Recalibrate. If unable to calibrate, replace electrode.
Specific Conductance of water	Continuing calibration check of standard solution	> 1% of standard	Recalibrate.

5.10 Record keeping

In addition to records kept in logbooks, forms will be kept on log sheets for soil and groundwater. See Appendix D.

5.11 Site Management and Base Support

Throughout the investigation activities, work on the CNC will be coordinated through SOUTHDIV and SCDHEC.

The primary contacts for each are as follows:

1. SOUTHDIV point of contact
   Gabe Magwood
   Southern Division Engineering Command
   2155 Eagle Drive
   North Charleston, SC 29406
   (843) 820-7307

2. SOUTHDIV point of contact
   Tony Hunt
   Southern Division Engineering Command
   2155 Eagle Drive
   North Charleston, SC 29406
   (843) 820-7307

3. SCDHEC point of contact
   Paul Bristol
   South Carolina Department of Health and Environmental Control
   2600 Bull Street
   Columbia, SC 29201
   (843) 898-3559

REFERENCES

South Carolina Department of Health and Environmental Control. 1997. Corrective Action Guidance.

Tetra Tech NUS, Inc.; 2000 Standard Limited Assessment for Site 15 (Quarters O), Charleston, South Carolina.

United States Environmental Protection Agency. 1990. Code of Federal Regulations 136.

United States Environmental Protection Agency. 1988. EPA Users Guide to Contract Laboratory Program.

United States Environmental Protection Agency. 1996. EPA Environmental Investigations Standard Operating Procedures for Quality Assurance Manual.

APPENDIX A

D H E C
PROMOTE PROTECT PROSPER

Corrective Action Data Summary
Division of Underground Storage Tank Management

GENERAL

Facility ID #: 01088 County: CHARLESTON

Facility Name: CHARLESTON NAVAL COMPLEX

Facility Address: 1545 HOBSON AVE, N. CHARLESTON, SC 29405

UST Owner/Operator: SOUTHERN DIVISION NAVAL FACILITIES ENG. COM. Phone #: 843-820-7307

Address: 2155 EAGLE DR N. CHARLESTON, SC 29406

Current use of facility/property: NOT IN USE

Current property owner name: SAME

Current property owner address: SAME

# of USTs: ONE Replaced / Tested: _____ (Circle one) (date) Removed: 4-20-98 (date)

Type of product: ☐ Gasoline ☐ Diesel ☐ Kerosene ☐ Waste Oil ☑ Other: HEATING OIL (specify)

Previous Treatment: ☐ Yes ☐ No Effectiveness: _____

The release occurred in: ☐ UST Basin ☐ Dispensers ☐ Line ☐ Other Please specify: MILD CORROSION, BUT NO HOLES FOUND IN UST

EXPOSURE AND POINTS OF COMPLIANCE INFORMATION

Enter the exposure points, points of compliance and the x, y, and z coordinates for each.

EP	PC	x	y	z
N/A	NOISETTE CREEK 725-FT FROM UST			

SOIL SSTL's

Units: N/A

CoC	SSTL
Benzene	
NAPHTHALENE	

A Groundwater SSTL for NAPH = 1.36 mg/L

Corrective Action Data Summary

Facility ID#: 01688 Facility Name: CHARLESTON NAVAL COMPLEX

TLs

se SSTLs are established for each point of compliance. _____ Units: mg/L

Chemical of Concern	MW- 01 GW	MW- GW	MW- GW	MW- GW
~~Benzene~~				
NAPHTHALENE	1.272			

These SSTLs are established for each point of compliance. _____ Units:

Chemical of Concern	MW- GW	MW- GW	MW- GW	MW- GW

These SSTLs are established for each point of compliance. _____ Units:

Chemical of Concern	MW- GW	MW- GW	MW- GW	MW- GW

The technical file is available for review through the Freedom of Information Office.
Please call 803-734-5376 for an appointment.

Selected Remedial Approach

☐ Active ☑ Intrinsic

ceptors

. the receptors and exposure pathways (include distance from source).

1) VISITOR/RECREATOR: ON-SITE - NO COMPLETE PATHWAY
2) ON-SITE RESIDENT: ON-SITE - NO COMPLETE PATHWAY
3) OFF-SITE RESIDENT: NEAREST BUILDING ~75-FT WEST - NO COMPLETE PATHWAY
4) CONSTRUCTION WORKER: ON-SITE
5) COMMERCIAL WORKER: ON-SITE - NO COMPLETE PATHWAY
6) SURFACE WATER: UST O to NOISETTE CREEK ~725 FT - NO COMPLETE PATHWAY.
7) WATER: AT FORMER UST LOCATION
8) ELECTRIC: NE CORNER OF QUARTERS O RUNNING to THE EAST.
9) SANITARY SEWER: AT FORMER UST LOCATION
10) STORM DRAIN: 150-FT SOUTHWEST OF FORMER UST.

* ALL UTILITIES ARE ~ 2-6 FT BELOW LAND SURFACE.

References

Please see the following reports for site specific information.
(List the report title and date)

TETRA TECH NUS, INC. 2000. STANDARD LIMITED ASSESSMENT FOR SITE 15 (QUARTERS O), CHARLESTON, SC

APPENDIX B

SUMMARY OF SLUG TEST

SOUTH CAROLINA
Department of Health and Environmental Control (DHEC)

Site Data

SITE ID #: 01088 **COUNTY:** Charleston

FACILITY NAME: Charleston Naval Complex Site 15, UST O at Qtrs. O

Slug Data

See Appendix: **Table:** **Figure:** X **for a list of all data measurements.**
(water level logs, etc.) (Complete as appropriate.)

Water Level Recovery Data was measured by -
(Hermit Data Logger, Manually with Water Level Indicator, etc.) (List Method).

Complete the following table for each well tested.

COMPLETE A SECOND SHEET IF MORE THAN FOUR WELLS ARE TESTED

Slug Test Conducted in well(s) number	NBCB-GDB-002	NBCB-GDB-002
Initial Rise/Drawdown in well (feet)	1.01	1.03
Radius of Well Casing (feet)	0.083	0.083
Effective Radius of Well (feet)	0.3125	0..125
Static Saturated Aquifer Thickness (feet)	7.73	7.73
Length of Well Screen (feet)	10	10
Static Height of Water Column in Well (ft)	7.73	7.73

Calculations

See Appendix: **Table:** **Figure:** X **for calculations. (Complete as appropriate**

The method for aquifer calculations was: Bouwer-Rice **(i.e. Bouwer-Rice, Cooper, etc.)**

Calculated values by well were as follows:

Slug Test Conducted in well(s) number	NBCB-GDB-002	NBCB-GDB-002	Geo. Mean
Hydraulic Conductivity (ft/day)	0.855	0.734	0.792

Thickness of the aquifer used to calculate hydraulic conductivity was **feet.**
The aquifer is **confined** **semi-confined** X **Water table (Check as appropriate**
The estimated seepage velocity is 1.5 **feet per year based on**
a hydraulic conductivity of 0.792 **, a hydraulic gradient of** 0.0023 **, and**
a porosity of 0.45 **per cent for** Sandy **soil (list type i.e., silty sand, clay, etc).**

APPENDIX C

DHEC

PROMOTE PROTECT PROSPER

Corrective Action Monitoring Plan

ID#: 01088

Proposed Monitoring Program

_____ Active Corrective Action ✓ Intrinsic Corrective Action

List method used to verify intrinsic remediation:

Tracer compounds: N/A

Time vs. concentration:

Other:

Proposed Sampling Parameters and Frequency

Parameter	Frequency	Well #
NAPHTHALENE	SEMI-ANNUAL	MW-01, MW-02, MW-03
- NITRATE, SULFATE,		
TOTAL DISSOLVED IRON,		
METHANE, ALKALINITY		
FIELD MEASURES:		
T°, pH, DO, Cond,		
TURBIDITY.		

References

TTNUS, INC. SLA-2000.

Appendix Check List

- [ ] Soil Quality Data Table
- [ ] Ground-Water Quality Data Table/Graph
- [ ] Potentiometric Data Table/Graph
- [ ] Site Map (topographic or county map)
- [ ] Tax Map
- [ ] Soil Impact Map
- [ ] Ground-Water Impact Map
- [ ] Cross Section
- [ ] Predicted Future Migration Map(s)
- [ ] North Arrow and Bar Scales on all maps

APPENDIX D

Monitor' l Data
Contract . ..k Order No.

Well Identification	Date/Time	Total Depth of Well	Depth to Product	Depth to Water	pH	Temperature (°C)	Conductivity (ms/cm)	Dissolved O_2 (mg/l)	Turbidity (NTU)	Sample ID

APPENDIX E

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: SITE 15
Project No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: 15GLMØ2Ø1
Sample Location: CNC15MW2
Sampled By: PH/JA
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 9/8/99	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA
Time: 1001								
Method: PERISTA	CLEAR	4.77	.291	22.8	3	0.93	N/A	

PURGE DATA:

Date: 9/8/99	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Method:	Initial	5.22	.302	23.0	8	1.39	N/A	
Monitor Reading (ppm):	1	~~6.51~~	~~.550~~	~~23.6~~	~~6~~	~~1.44~~	~~N/A~~	
Well Casing Diameter & Material	1	4.80	.291	22.9	4	0.86	N/A	
Type: 2" PVC	2	5.55	.290	22.9	3	0.81	N/A	
Total Well Depth (TD): 14.ØØ	3	4.77	.291	22.8	3	0.93	N/A	
Static Water Level (WL): 6.97								
One Casing Volume(gal/L): 1.12								
Start Purge (hrs): ØØ9Ø1								
End Purge (hrs): 0946								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected

OBSERVATIONS / NOTES:

14.60
6.97
7.03

7.03
.16
4268
7030
1.12.98

Circle if Applicable:

Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: SITE 15
Project No.: 0141

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: 15GLMØ301
Sample Location: SNC15MW3
Sampled By: PH/JA
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color Visual	pH Standard	S.C. mS/cm	Temp. Degrees C	Turbidity NTU	DO mg/l	Salinity %	Other NA
Date: 9/8/99								
Time: ~~1286~~ 1050								
Method: LOW FLOW	CLEAR	6.34	.548	23.4	4	1.31	N/A	

PURGE DATA:

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Date: 9/8/99								
Method: PERIST.	Initial	6.35	.553	23.8	20	0.54	NA	
Monitor Reading (ppm): 0.0	1	6.51	.550	23.6	6	1.44	N/A	
Well Casing Diameter & Material	2	6.51	.554	23.4	2	0.47	N/A	
Type: 2" PVC	3	6.34	.548	23.4	4	1.31	N/A	
Total Well Depth (TD): 14.27								
Static Water Level (WL): 6.31								
One Casing Volume(gal/L): 1.27								
Start Purge (hrs): Ø9Ø2								
End Purge (hrs): 0945								
Total Purge Time (min): 43								
Total Vol. Purged (gal/L): 5 GAL								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
BTEX + EDB	HCL	3x40mL	YES
PAH	Ø	2x1 LTR.	YES
ANIONS	Ø	1x500 mL	YES
DIS. METHANE	HCL	3x40 mL	YES

OBSERVATIONS / NOTES:

14.27
6.31
7.96

5 3
7.96
1.16
4776
7960
15736

1.27

Circle if Applicable:

Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: SITE 15
Project No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: 15GLMØ2Ø1
Sample Location: CNC15MW2
Sampled By: PB/JA
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9/8/99	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1001	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA
Method: PERUSA	CLEAR	4.77	.291	22.8	3	0.93	N/A	

PURGE DATA:

Date: 9/8/99	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Method:	Initial	5.22	.302	23.0	8	1.39	N/A	
Monitor Reading (ppm):	1	~~6.51~~	~~.550~~	~~23.6~~	~~6~~	~~1.44~~	~~N/A~~	
Well Casing Diameter & Material	1	4.80	.291	22.9	4	0.86	N/A	
Type: 2" PVC	2	5.55	.290	22.9	3	0.81	N/A	
Total Well Depth (TD): 14.00	3	4.77	.291	22.8	3	0.93	N/A	
Static Water Level (WL): 6.97								
One Casing Volume(gal/L): 1.12								
Start Purge (hrs): 0901								
End Purge (hrs): 0946								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected

OBSERVATIONS / NOTES:

14.00
6.97
7.03

7.03
.16
4268
7030
1.1 2.98

Circle if Applicable:
MS/MSD | Duplicate ID No.:

Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: SITE 15
Project No.: 0141

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: 15GLMØ301
Sample Location: SNC15MW3
Sampled By: PA/JA
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color Visual	pH Standard	S.C. mS/cm	Temp. Degrees C	Turbidity NTU	DO mg/l	Salinity %	Other NA
Date: 9/8/99								
Time: ~~1200~~ 1050								
Method: LOW FLOW	CLEAR	6.34	.548	23.4	4	1.31	N/A	

PURGE DATA:

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Date: 9/8/99								
Method: PERIST.	Initial	6.35	.553	23.8	20	0.54	N/A	
Monitor Reading (ppm): 0.0	1	6.51	.550	23.6	6	1.44	N/A	
Well Casing Diameter & Material	2	6.51	.554	23.4	2	0.47	N/A	
Type: 2" PVC	3	6.34	.548	23.4	4	1.31	N/A	
Total Well Depth (TD): 14.27								
Static Water Level (WL): 6.31								
One Casing Volume(gal/L): 1.27								
Start Purge (hrs): Ø9Ø2								
End Purge (hrs): 0945								
Total Purge Time (min): 43								
Total Vol. Purged (gal/L): 5 GAL								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
BTEX + EDB	HCL	3x40mL	YES
PAH	Ø	2x1 LTR.	YES
ANIONS	Ø	1x500 mL	YES
DIS. METHANE	HCL	3x40 mL	YES

OBSERVATIONS / NOTES:

14.27
6.31
7.96

7.96
7.96
1.16
4776
7960
15336

1.27

Circle if Applicable:

Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: SITE 15
Project No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: 15GLMØ2Ø1
Sample Location: CNC15MW2
Sampled By: PB/JA
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9/8/99	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1001	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA
Method: PERISTA	CLEAR	4.77	.291	22.8	3	0.93	N/A	

PURGE DATA:

Date: 9/8/99	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Method:	Initial	5.22	.302	23.0	8	1.39	N/A	
Monitor Reading (ppm):	1	~~6.51~~	~~.550~~	~~23.6~~	~~6~~	~~1.44~~	~~N/A~~	
Well Casing Diameter & Material	1	4.80	.291	22.9	4	0.86	N/A	
Type: 2" PVC	2	5.55	.290	22.9	3	0.81	N/A	
Total Well Depth (TD): 14.ØØ	3	4.77	.291	22.8	3	0.93	N/A	
Static Water Level (WL): 6.97								
One Casing Volume(gal/L): 1.12								
Start Purge (hrs): ØØ9Ø1								
End Purge (hrs): 0946								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected

OBSERVATIONS / NOTES:

14.60
6.97
7.Ø3

7.03
.16
4268
7030
1.12.98

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: SITE 15
Project No.: 0141

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: 15GLMØ3Ø1
Sample Location: SNC15MW3
Sampled By: PA/JA
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 9/8/99	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA
Time: ~~1200~~ 1050								
Method: LOW FLOW	CLEAR	6.34	.548	23.4	4	1.31	N/A	

PURGE DATA:

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Date: 9/8/99								
Method: PERIST.	Initial	6.35	.553	23.8	20	0.54	N/A	
Monitor Reading (ppm): 0.0	1	6.51	.550	23.6	6	1.44	N/A	
Well Casing Diameter & Material	2	6.51	.554	23.4	2	0.47	N/A	
Type: 2" PVC	3	6.34	.548	23.4	4	1.31	N/A	
Total Well Depth (TD): 14.27								
Static Water Level (WL): 6.31								
One Casing Volume(gal/L): 1.27								
Start Purge (hrs): Ø9Ø2								
End Purge (hrs): 0945								
Total Purge Time (min): 43								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
BTEX + EDB	HCL	3x40mL	YES
PAH	Ø	2x1 LTR.	YES
ANIONS	Ø	1x500 mL	YES
DIS. METHANE	HCL	3x40 mL	YES

OBSERVATIONS / NOTES:

14.27
6.31
7.96

5 3
7.96
1.16
4776
7960
12736

1.27

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: SITE 15
Project No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: 15GLMØ2Ø1
Sample Location: CNC15MW2
Sampled By: PB/JA
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9/8/99	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1001	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA
Method: PERISTA	CLEAR	4.77	.291	22.8	3	0.93	N/A	

PURGE DATA:

Date: 9/8/99	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Method:	Initial	5.22	.302	23.0	8	1.39	N/A	
Monitor Reading (ppm):	1	~~6.51~~	~~.550~~	~~23.6~~	~~6~~	~~1.44~~	~~N/A~~	
Well Casing Diameter & Material	1	4.80	.291	22.9	4	0.86	N/A	
Type: 2" PVC	2	5.55	.290	22.9	3	0.81	N/A	
Total Well Depth (TD): 14.00	3	4.77	.291	22.8	3	0.93	N/A	
Static Water Level (WL): 6.97								
One Casing Volume(gal/L): 1.12								
Start Purge (hrs): 0901								
End Purge (hrs): 0946								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected

OBSERVATIONS / NOTES:

14.00
6.97
7.03

7.03
.16
4268
7030
1.12 98

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: SITE 15
Project No.: 0141

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: 15GLMØ3Ø1
Sample Location: SNS15MW3
Sampled By: PB/JA
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 9/8/99	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA
Time: ~~1200~~ 1050								
Method: LOW FLOW	CLEAR	6.34	.548	23.4	4	1.31	N/A	

PURGE DATA:

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Date: 9/8/99								
Method: PERIST.	Initial	6.35	.553	23.8	20	0.54	N/A	
Monitor Reading (ppm): 0.0	1	6.51	.550	23.6	6	1.44	N/A	
Well Casing Diameter & Material	2	6.51	.554	23.4	2	0.47	N/A	
Type: 2" PVC	3	6.34	.548	23.4	4	1.31	N/A	
Total Well Depth (TD): 14.27								
Static Water Level (WL): 6.31								
One Casing Volume(gal/L): 1.27								
Start Purge (hrs): Ø9Ø2								
End Purge (hrs): 0945								
Total Purge Time (min): 43								
Total Vol. Purged (gal/L): 5 GAL								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
BTEX + EDB	HCL	3x40mL	YES
PAH	Ø	2x1 LTR.	YES
ANIONS	Ø	1x500 mL	YES
DIS. METHANE	HCL	3x40 mL	YES

OBSERVATIONS / NOTES:

3
14.27
6.31
7.96

5 3
7.96
1.16
4776
7960
13336

1.27

Circle if Applicable:
MS/MSD | Duplicate ID No.:

Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: SITE 15
Project No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: 15GLMØ2Ø1
Sample Location: CNC15MW2
Sampled By: PB/JA
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9/8/99	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1001	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA
Method: PERISTA	CLEAR	4.77	.291	22.8	3	0.93	N/A	

PURGE DATA:

Date: 9/8/99	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Method:	Initial	5.22	.302	23.0	8	1.39	N/A	
Monitor Reading (ppm):	1	~~6.51~~	~~.550~~	~~23.6~~	~~6~~	~~1.44~~	~~N/A~~	
Well Casing Diameter & Material	1	4.80	.291	22.9	4	0.86	N/A	
Type: 2" PVC	2	5.55	.290	22.9	3	0.81	N/A	
Total Well Depth (TD): 14.00	3	4.77	.291	22.8	3	0.93	N/A	
Static Water Level (WL): 6.97								
One Casing Volume(gal/L): 1.12								
Start Purge (hrs): 0901								
End Purge (hrs): 0946								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected

OBSERVATIONS / NOTES:

14.00
6.97
7.03

7.03
.16
4268
7030
1.12 98

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: SITE 15
Project No.: 0141

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: 15GLMØ3Ø1
Sample Location: SNC15MW3
Sampled By: PH/JA
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 9/8/99	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA
Time: ~~1200~~ 1050								
Method: LOW FLOW	CLEAR	6.34	.548	23.4	4	1.31	N/A	

PURGE DATA:

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Date: 9/8/99								
Method: PERIST.	Initial	6.35	.553	23.8	20	0.54	N/A	
Monitor Reading (ppm): 0.0	1	6.51	.550	23.6	6	1.44	N/A	
Well Casing Diameter & Material	2	6.51	.554	23.4	2	0.47	N/A	
Type: 2" PVC	3	6.34	.548	23.4	4	1.31	N/A	
Total Well Depth (TD): 14.27								
Static Water Level (WL): 6.31								
One Casing Volume(gal/L): 1.27								
Start Purge (hrs): Ø9Ø2								
End Purge (hrs): 0945								
Total Purge Time (min): 43								
Total Vol. Purged (gal/L): 5 GAL								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
BTEX + EDB	HCL	3x40mL	YES
PAH	Ø	2x1 LTR.	YES
ANIONS	Ø	1x500 mL	YES
DIS. METHANE	HCL	3x40 mL	YES

OBSERVATIONS / NOTES:

14.27
6.31
7.96

5 3
7.96
1.16
4776
7960
13736

1.27

Circle if Applicable:

Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: SITE 15
Project No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: 15GLMØ2Ø1
Sample Location: CNC15MW2
Sampled By: PB/JA
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 9/8/99	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA
Time: 1001								
Method: PERISTA	CLEAR	4.77	.291	22.8	3	0.93	N/A	

PURGE DATA:

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Date: 9/8/99								
Method:	Initial	5.22	.302	23.0	8	1.39	N/A	
Monitor Reading (ppm):	1	~~6.51~~	~~.550~~	~~23.6~~	~~6~~	~~1.44~~	~~N/A~~	
Well Casing Diameter & Material	1	4.80	.291	22.9	4	0.86	N/A	
Type: 2" PVC	2	5.55	.290	22.9	3	0.81	N/A	
Total Well Depth (TD): 14.ØØ	3	4.77	.291	22.8	3	0.93	N/A	
Static Water Level (WL): 6.97								
One Casing Volume(gal/L): 1.12								
Start Purge (hrs): ØØ9Ø1								
End Purge (hrs): 0946								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected

OBSERVATIONS / NOTES:

14.60
6.97
7.03

7.03
.16
4268
7030
1.1298

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: SITE 15
Project No.: 0141

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: 15GLMØ3Ø1
Sample Location: SNC15MW3
Sampled By: PH/JA
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 9/8/99								
Time: ~~1300~~ 1050	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA
Method: LOW FLOW	CLEAR	6.34	.548	23.4	4	1.31	N/A	

PURGE DATA:

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Date: 9/8/99								
Method: PERIST.	Initial	6.35	.553	23.8	2Ø	0.54	N/A	
Monitor Reading (ppm): 0.0	1	6.51	.550	23.6	6	1.44	N/A	
Well Casing Diameter & Material	2	6.51	.554	23.4	2	0.47	N/A	
Type: 2" PVC	3	6.34	.548	23.4	4	1.31	N/A	
Total Well Depth (TD): 14.27								
Static Water Level (WL): 6.31								
One Casing Volume(gal/L): 1.27								
Start Purge (hrs): Ø9Ø2								
End Purge (hrs): 0945								
Total Purge Time (min): 43								
Total Vol. Purged (gal/L): 5 GAL								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
BTEX + EDB	HCL	3x40mL	YES
PAH	Ø	2x1 LTR.	YES
ANIONS	Ø	1x500 mL	YES
DIS. METHANE	HCL	3x40 mL	YES

OBSERVATIONS / NOTES:

14.27
6.31
7.96

5 3
7.96
1.16
4776
7960
15736

1.27

Circle if Applicable:

Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: SITE 15
Project No.:

[] Domestic Well Data
[x] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: 15GLMØ2Ø1
Sample Location: CNC15MW2
Sampled By: PH/JA
C.O.C. No.:
Type of Sample:
[x] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9/8/99	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1001	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA
Method: PERISTA	CLEAR	4.77	.291	22.8	3	0.93	N/A	

PURGE DATA:

Date: 9/8/99	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Method:	Initial	5.22	.302	23.0	8	1.39	N/A	
Monitor Reading (ppm):	1	~~6.51~~	~~.550~~	~~23.6~~	~~6~~	~~1.44~~	~~N/A~~	
Well Casing Diameter & Material	1	4.80	.291	22.9	4	0.86	N/A	
Type: 2" PVC	2	5.55	.290	22.9	3	0.81	N/A	
Total Well Depth (TD): 14.00	3	4.77	.291	22.8	3	0.93	N/A	
Static Water Level (WL): 6.97								
One Casing Volume(gal/L): 1.12								
Start Purge (hrs): Ø9Ø1								
End Purge (hrs): 0946								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected

OBSERVATIONS / NOTES:

14.00
6.97
7.03

7.03
.16
4268
7030
1.1298

Circle if Applicable:

Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: SITE 15
Project No.: 0141

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: 15GLMØ3Ø1
Sample Location: SNC15MW3
Sampled By: PH/JA
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 9/8/99	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA
Time: ~~1200~~ 1050								
Method: LOW FLOW	CLEAR	6.34	.548	23.4	4	1.31	N/A	

PURGE DATA:

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Date: 9/8/99								
Method: PERIST.	Initial	6.35	.553	23.8	20	0.54	N/A	
Monitor Reading (ppm): 0.0	1	6.51	.550	23.6	6	1.44	N/A	
Well Casing Diameter & Material	2	6.51	.554	23.4	2	0.47	N/A	
Type: 2" PVC	3	6.34	.548	23.4	4	1.31	N/A	
Total Well Depth (TD): 14.27								
Static Water Level (WL): 6.31								
One Casing Volume(gal/L): 1.27								
Start Purge (hrs): Ø9Ø2								
End Purge (hrs): 0945								
Total Purge Time (min): 43								
Total Vol. Purged (gal/L): 5 GAL								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
BTEX + EDB	HCL	3x40mL	YES
PAH	Ø	2x1 LTR.	YES
ANIONS	Ø	1x500 mL	YES
DIS. METHANE	HCL	3x40 mL	YES

OBSERVATIONS / NOTES:

14.27
6.31
7.96

7.96
1.16
4776
7960
15736

1.27

Circle if Applicable:

Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: SITE 15
Project No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: 15GLMØ2Ø1
Sample Location: CNC15MW2
Sampled By: PH/JA
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 9/8/99								
Time: 1001	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA
Method: PERISTA	CLEAR	4.77	.291	22.8	3	0.93	N/A	

PURGE DATA:

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Date: 9/8/99								
Method:	Initial	5.22	.302	23.0	8	1.39	N/A	
Monitor Reading (ppm):	1	~~6.51~~	~~.550~~	~~23.6~~	~~6~~	~~1.44~~	~~N/A~~	
Well Casing Diameter & Material	1	4.80	.291	22.9	4	0.86	N/A	
Type: 2" PVC	2	5.55	.290	22.9	3	0.81	N/A	
Total Well Depth (TD): 14.ØØ	3	4.77	.291	22.8	3	0.93	N/A	
Static Water Level (WL): 6.97								
One Casing Volume(gal/L): 1.12								
Start Purge (hrs): ØØ9Ø1								
End Purge (hrs): 0946								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected

OBSERVATIONS / NOTES:

14.60
6.97
7.03

7.03
.16
4268
7030
1.12 98

Circle if Applicable:

Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: SITE 15
Project No.: 0141

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: 15GLMØ3Ø1
Sample Location: SNC15MW3
Sampled By: PH/JA
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 9/8/99	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA
Time: ~~1200~~ 1050								
Method: LOW FLOW	CLEAR	6.34	.548	23.4	4	1.31	N/A	

PURGE DATA:

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Date: 9/8/99								
Method: PERIST.	Initial	6.35	.553	23.8	20	0.54	N/A	
Monitor Reading (ppm): 0.0	1	6.51	.550	23.6	6	1.44	N/A	
Well Casing Diameter & Material	2	6.51	.554	23.4	2	0.47	N/A	
Type: 2" PVC	3	6.34	.548	23.4	4	1.31	N/A	
Total Well Depth (TD): 14.27								
Static Water Level (WL): 6.31								
One Casing Volume(gal/L): 1.27								
Start Purge (hrs): Ø9Ø2								
End Purge (hrs): 0945								
Total Purge Time (min): 43								
Total Vol. Purged (gal/L): 5 GAL								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
BTEX + EDB	HCL	3x40mL	YES
PAH	Ø	2x1 LTR.	YES
ANIONS	Ø	1x500 mL	YES
DIS. METHANE	HCL	3x40 mL	YES

OBSERVATIONS / NOTES:

14.27
6.31
7.96

5 3
7.96
1.16
4776
7960
12736

1.27

Circle if Applicable:

Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: SITE 15
Project No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: 15GLMØ2Ø1
Sample Location: CNC15MW2
Sampled By: PH/JA
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 9/8/99	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA
Time: 1001								
Method: PERUSA	CLEAR	4.77	.291	22.8	3	Ø.93	N/A	

PURGE DATA:

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Date: 9/8/99								
Method:	Initial	5.22	.302	23.0	8	1.39	N/A	
Monitor Reading (ppm):	1	~~6.51~~	~~.550~~	~~23.6~~	~~6~~	~~1.44~~	~~N/A~~	
Well Casing Diameter & Material	1	4.80	.291	22.9	4	0.86	N/A	
Type: 2" PVC	2	5.55	.290	22.9	3	0.81	N/A	
Total Well Depth (TD): 14.ØØ	3	4.77	.291	22.8	3	Ø.93	N/A	
Static Water Level (WL): 6.97								
One Casing Volume(gal/L): 1.12								
Start Purge (hrs): ØØØ1								
End Purge (hrs): 0946								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected

OBSERVATIONS / NOTES:

14.00
6.97
7.03

7.03
.16
4268
7030
1.12 98

Circle if Applicable:
MS/MSD | Duplicate ID No.:

Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: SITE 15
Project No.: 0141

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: 15GLMØ301
Sample Location: CNC15MW3
Sampled By: PH/JA
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color Visual	pH Standard	S.C. mS/cm	Temp. Degrees C	Turbidity NTU	DO mg/l	Salinity %	Other NA
Date: 9/8/99								
Time: ~~1230~~ 1050								
Method: LOW FLOW	CLEAR	6.34	.548	23.4	4	1.31	N/A	

PURGE DATA:

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Date: 9/8/99								
Method: PERIST.	Initial	6.35	.553	23.8	20	0.54	N/A	
Monitor Reading (ppm): 0.0	1	6.51	.550	23.6	6	1.44	N/A	
Well Casing Diameter & Material	2	6.51	.554	23.4	2	0.47	N/A	
Type: 2" PVC	3	6.34	.548	23.4	4	1.31	N/A	
Total Well Depth (TD): 14.27								
Static Water Level (WL): 6.31								
One Casing Volume(gal/L): 1.27								
Start Purge (hrs): Ø9Ø2								
End Purge (hrs): 0945								
Total Purge Time (min): 43								
Total Vol. Purged (gal/L): 5 GAL								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
BTEX + EDB	HCL	3x40mL	YES
PAH	Ø	2x1 LTR.	YES
ANIONS	Ø	1x500 mL	YES
DIS. METHANE	HCL	3x40 mL	YES

OBSERVATIONS / NOTES:

14.27
6.31
7.96

5 3
7.96
1.16
4776
7960
15736

1.27

Circle if Applicable:

Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: SITE 15
Project No.:

[] Domestic Well Data
[x] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: 15GLMØ2Ø1
Sample Location: CNC15MW2
Sampled By: PB/JA
C.O.C. No.:
Type of Sample:
[x] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9/8/99	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1001	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA
Method: PERISTA	CLEAR	4.77	.291	22.8	3	Ø.93	N/A	

PURGE DATA:

Date: 9/8/99	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Method:	Initial	5.22	.302	23.0	8	1.39	N/A	
Monitor Reading (ppm):	1	~~6.51~~	~~.550~~	~~23.6~~	~~6~~	~~1.44~~	~~N/A~~	
Well Casing Diameter & Material	1	4.80	.291	22.9	4	0.86	N/A	
Type: 2" PVC	2	5.55	.290	22.9	3	0.81	N/A	
Total Well Depth (TD): 14.ØØ	3	4.77	.291	22.8	3	Ø.93	N/A	
Static Water Level (WL): 6.97								
One Casing Volume(gal/L): 1.12								
Start Purge (hrs): ØØ9Ø1								
End Purge (hrs): 0946								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected

OBSERVATIONS / NOTES:

14.60
6.97
7.Ø3

7.03
.16
4268
7030
1.12.98

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: SITE 15
Project No.: 0141

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: 15GLMØ3Ø1
Sample Location: SNC15MW3
Sampled By: PB/JA
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 9/8/99								
Time: ~~1200~~ 1050	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA
Method: LOW FLOW	CLEAR	6.34	.548	23.4	4	1.31	N/A	

PURGE DATA:

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Date: 9/8/99								
Method: PERIST.	Initial	6.35	.553	23.8	20	0.54	N/A	
Monitor Reading (ppm): 0.0	1	6.51	.550	23.6	6	1.44	N/A	
Well Casing Diameter & Material	2	6.51	.554	23.4	2	0.47	N/A	
Type: 2" PVC	3	6.34	.548	23.4	4	1.31	N/A	
Total Well Depth (TD): 14.27								
Static Water Level (WL): 6.31								
One Casing Volume(gal/L): 1.27								
Start Purge (hrs): Ø9Ø2								
End Purge (hrs): 0945								
Total Purge Time (min): 43								
Total Vol. Purged (gal/L): 5 GAL								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
BTEX + EDB	HCL	3x40mL	YES
PAH	Ø	2x1 LTR.	YES
ANIONS	Ø	1x500 mL	YES
DIS. METHANE	HCL	3x40 mL	YES

OBSERVATIONS / NOTES:

14.27
6.31
7.96

5.3
7.96
1.16
4776
7960
15336

1.27

Circle if Applicable:

Signature(s):

BORING LOG

PROJECT NAME: Site 15
OJECT NUMBER: 0141
RILLING COMPANY: Tidewater
DRILLING RIG: Geoprobe
BORING NUMBER: CNC15B01
DATE: 5/16/99
GEOLOGIST: BDH
DRILLER: DD

Sample No. and Type or RQD	Depth (FL) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS*	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
				1.1'	loose	med bn	Topsoil, silt, roots		sl. moist	0/1			0
			2.4/4	1.5'	loose	lt gray	Sand, f. grnd		sl. moist	0			
					loose		Silt, med bn to		moist				
	4						tan, sandy - v.f-f			0			
									CNC15B010405	0/5			0
			3.7/4'	7'					Wet @ ~ 5.5'-6.0'	0			0
	8				firm	tan to med bn	Silt, clayey becoming						
							clay, silty, sl. sdy		moist				
						gray	mottled, v.dk bn,						
							orange bn						
							TD 8'						

*When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm):

Remarks:

Converted to Well: Yes ____ No ____ Well I.D. #: ____

BORING LOG

PROJECT NAME: Site 15
PROJECT NUMBER: 0141
DRILLING COMPANY: Tidewater
DRILLING RIG: Geoprobe
BORING NUMBER: CNC15B02
DATE: 5/16/99
GEOLOGIST: BDH
DRILLER: DD

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
				0.4									
			1/4'	1.4'	loose	mod bn	Topsoil ~~to top~~ - silt w/ roots		sl. moist	0			0
			2.1/4'		loose	to	Sand f. to v.f. gnd		sl. moist				
						mod bn	Silt, sandy @ base		sl. moist to moist	0			
	4					to tan							
									BCFB02 0405	0			0
			3.1/4'										
				7'	fin	tan	Silt, clayey becoming		Wet ~ 6.5'				
	8					to	clay, silty, mottled		sl. moist to	0			
						gray	reddish bn, orange bn		moist				
							TD 8'						

* When rock conng, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm):

Remarks:

Converted to Well: Yes ____ No ____ Well I.D. #: ____

BORING LOG

PROJECT NAME: Site 15
OJECT NUMBER: 0141
'RILLING COMPANY: Tidewater
DRILLING RIG: Geoprobe
BORING NUMBER: CNC15B01
DATE: 5/16/99
GEOLOGIST: BDH
DRILLER: DD

Sample No. and Type or RQD	Depth (FL) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS*	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
				1.1'	loose	med bn	Topsoil, silt, rootlets		sl. moist	0/1			0
			2.4/4	1.5'	loose	lt gray	Sand, f. grnd		sl. moist	0			
					loose		Silt, med bn to tan, sandy - v.f.-f.		moist				
	4									0			
									CNC15B010405	0/5			0
			3.7/4'	7'					Wet @ ~ 5.5'-6.0'	0			0
	8				firm	tan to med bn	Silt, clayey becoming						
							clay, silty, sl. sdy		moist				
						gray	mottled, med bn, orange bn						
							TD 8'						

*When rock conng, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm):

Converted to Well: Yes ____ No ____ Well I.D. #:

BORING LOG

PROJECT NAME: Site 15
PROJECT NUMBER: 0141
DRILLING COMPANY: Tidewater
DRILLING RIG: Geoprobe

BORING NUMBER: CNC15B02
DATE: 5/16/99
GEOLOGIST: BDH
DRILLER: DD

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
				0.4									
			1/4'	1.4'	loose	mod bn	Topsoil @ top - silt w/ roots		sl. moist	0			0
			2.1/4'		loose	tan	Sand f. to v.f. gnd		sl. moist				
-1						mod bn	Silt, sandy @ base		sl. moist to moist	0			
	4					to tan							
-12													
									BCFB020405	0/2			0
			3.1/4'										
-2													
				7'	fine	tan	Silt, clayey becoming		Wet ~ 6.5'				
-16	8					to	clay, silty, mottled		sl. moist to	0			
						gray	rdish bn, orange bn		moist				
							TD 8'						

* When rock conng, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm):

Remarks:

Converted to Well: Yes ____ No ____ Well I.D. #:

BORING LOG

PROJECT NAME: Site 15
OJECT NUMBER: 0141
RILLING COMPANY: Tidewater
DRILLING RIG: Geoprobe
BORING NUMBER: CNC15B01
DATE: 5/16/99
GEOLOGIST: BDH
DRILLER: DD

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS*	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
				1.1'	loose	med br	Topsoil, silt, roots		sl. moist	0/1			0
			2.4/4	1.5'	loose	dk gray	Sand, f, gent		sl. moist	0			
					loose		Silt, med br to		moist				
	4						tan, sandy - v.f-f.			0			
									CNC15B010405	0/5			0
			3.7/4'	7'					Water @ ~5.5'-6.0'	0			0
	8				firm	tan to	Silt, clayey becoming						
					med br		clay, silty, sl. sdy		moist				
					gray		mottled, rdish br,						
							orange br						
							TD 8'						

*When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm):

Converted to Well: Yes ____ No ____ Well I.D. #: ____

BORING LOG

PROJECT NAME: Site 15
PROJECT NUMBER: 0141
DRILLING COMPANY: Tidewater
DRILLING RIG: Geoprobe
BORING NUMBER: CNC15B02
DATE: 5/16/99
GEOLOGIST: BDH
DRILLER: DD

Sample No. and Type or RQD	Depth (FL) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS*	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
				0.4									
			1'	1.4'	loose	mod bn	Topsoil to top - silt w/ root		sl. moist	0/1			0
			2 1/4'		loose	tan	Sand f. to v.f. gnd		sl. moist				
-1						mod bn	Silt, sandy @ base		sl. moist to moist	0			
2:12	4					to tan							
									BCFB020405	0/2			0
			3.1/4'										
-2													
2				7'	fin	tan	Silt, clayey becoming		Wet ~ 6.5'				
2:16	8					to	clay, silty, mottled		sl. moist to	0			
						gray	rdsh bn, orange bn		moist				
							TD 8'						

* When rock conng, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm):

Remarks:

Converted to Well: Yes ____ No ____ Well I.D. #: ____

BORING LOG

PROJECT NAME: Site 15
OJECT NUMBER: 0141
RILLING COMPANY: Tidewater
DRILLING RIG: Geoprobe

BORING NUMBER: CNC15B01
DATE: 5/16/99
GEOLOGIST: BDH
DRILLER: DD

Sample No. and Type or RQD	Depth (FL) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/FL) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS*	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
				1.1'	loose	med br	Topsoil, silt, rootlets		sl. moist	0/1			0
			2.4/4	1.5'	loose	lt gray	Sand, f. grnd		sl. moist	0			
					loose		Silt, med br to		moist				
	4						tan, sandy - v.f-f.			0			
									CNC15B01 0405	0/5			0
			3.7/4'	7'					WL @ ~ 5.5'-6.0'	0			0
	8				firm	tan to med br	Silt, clayey becoming						
							clay, silty, sl. sdy		moist				
						gray	mottled, med br,						
							orange br						
							TD 8'						

*When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm):

Remarks:

Converted to Well: Yes ____ No ____ Well I.D. #: ____

BORING LOG

PROJECT NAME: Site 15
PROJECT NUMBER: 0141
DRILLING COMPANY: Tidewater
DRILLING RIG: Geoprobe
BORING NUMBER: CNC15B02
DATE: 5/16/99
GEOLOGIST: BDH
DRILLER: DD

Sample No. and Type or RQD	Depth (FL) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/FL) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
				0.4'									
			1'	1.4'	loose	mod bn	Topsoil w/ root top - silt w/ root		sl. moist	0/1			0
			2.1/4'		loose	tan	Sand f. to v.f. grd		sl. moist				
-1						mod bn	Silt, sandy @ base		sl. moist to moist	0			
:12	4					tt tan							
									BCFB020405	0/2			0
			3.1/4'										
-2 @				7'	fine	tan	Silt, clayey becoming		Wet ~ 6.5'				
:16	8					to	clay, silty, mottled		sl. moist to	0			
						tt gray	rdsh bn, orange bn		moist				
							TD 8'						

* When rock conng, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm):

Remarks:

Converted to Well: Yes ____ No ____ Well I.D. #: ____

BORING LOG

PROJECT NAME: Site 15
OJECT NUMBER: 0141
RILLING COMPANY: Tidewater
JRILLING RIG: Geoprobe
BORING NUMBER: CNC15B01
DATE: 5/16/99
GEOLOGIST: BDH
DRILLER: DD

Sample No. and Type or RQD	Depth (FL) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS*	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
				1.1'	loose	med bn	Topsoil, silt, rootlets		sl. moist	0/1			0
			2.4/4	1.5'	loose	lt gray	Sand, f. grnd		sl. moist	0			
					loose		Silt, med bn to tan, sandy - v.f-f.		moist				
	4									0			
									CNC15B010405	0/5			0
			3.7'/4'	7'					Wet @ ~5.5'-6.0'	0			0
	8				firm	tan to med bn	Silt, clayey becoming						
						gray	Clay, silty, sl. sdy		moist				
							mottled, med bn, orange bn						
							TD 8'						

*When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm):

Converted to Well: Yes ____ No ____ Well I.D. #: ____

BORING LOG

PROJECT NAME: Site 15
PROJECT NUMBER: 0141
DRILLING COMPANY: Tidewater
DRILLING RIG: Geoprobe
BORING NUMBER: CNC15B02
DATE: 5/16/99
GEOLOGIST: BDH
DRILLER: DD

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS*	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
				0.4									
			1'	1.4'	loose	Grnish bn	Topsoil w/ root fibers		sl. moist	0			0
			2 1/4'		loose	tan	Sand f. to v.f. grnd		sl. moist				
-1						grnish bn	Silt, sandy @ base		sl. moist to moist	0			
212	4					tt tan							
									BCFB020405	0			0
			3.1/4'										
-2				7'	fine	tan	Silt, clayey becoming		Wet ~ 6.5'				
216	8					to	clay, silty, mottled		sl. moist to	0			
						tt gray	rdish bn, orange bn		moist				
							TD 8'						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm):

Remarks:

Converted to Well: Yes ____ No ____ Well I.D. #:

BORING LOG

PROJECT NAME: Site 15
OJECT NUMBER: 0141
RILLING COMPANY: Tidewater
DRILLING RIG: Geoprobe
BORING NUMBER: CNC15B01
DATE: 5/16/99
GEOLOGIST: BDH
DRILLER: DD

Sample No. and Type or RQD	Depth (FL) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS*	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
				1.1'	loose	red br	Topsoil, silt, rootlets		sl. moist	0/1			0
1-1 @ 1137			2.4/4	1.5'	loose	br gray	Sand, f, grad		sl. moist	0			
					loose		Silt, med br to tan, sandy - v.f-f.		moist				
	4									0			
									CNC15B010405	0/5			0
1-2 @ 1140			3.7/4'	7'					Wet @ ~ 5.5'-6.0'	0			0
	8				firm	tan to red br	Silt, clayey becoming						
							clay, silty, sl. sdy		moist				
						gray	mottled, rdish br, orange br						
							TD 8'						

*When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm):

Converted to Well: Yes ____ No ____ Well I.D. #: ____

BORING LOG

PROJECT NAME: Site 15
PROJECT NUMBER: 0141
DRILLING COMPANY: Tidewater
DRILLING RIG: Geoprobe
BORING NUMBER: CNC15B02
DATE: 5/16/99
GEOLOGIST: BDH
DRILLER: DD

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS*	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
				0.4									
			1'	1.4'	loose	mod brn	Topsoil ~~o top~~ - silt w/ roots		~~dry~~ sl. moist	0			0
			2 1/4'		loose	~~tan~~	Sand f. to v.f. grd		sl. moist				
-1						mod brn	Silt, sandy @ base		sl. moist ~~to~~ moist	0			
@ 12	4					~~to tan~~							
									BCFB020405	0			0
			3 1/4'										
-2 @ 16				7'	fin	~~tan~~	Silt, clayey becoming		Wet ~ 6.5'				
	8					to	clay, silty, mottled		sl. moist ~~to~~	0			
						~~gray~~	rdsh brn, orange brn		moist				
							TD 8'						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm):

Remarks:

Converted to Well: Yes ____ No ____ Well I.D. #: ____

BORING LOG

PROJECT NAME: Site 15
OJECT NUMBER: 0141
RILLING COMPANY: Tidewater
DRILLING RIG: Geoprobe
BORING NUMBER: CNC15B01
DATE: 5/16/99
GEOLOGIST: BDH
DRILLER: DD

Sample No. and Type or RQD	Depth (FL) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/FL) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS*	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
				1.1'	loose	~~red~~ brn	Topsoil, silt, ~~rootlets~~		sl. moist	0/1			0
			2.4/4	1.5'	loose	lt gray	Sand, f. grnd		sl. moist	0			
					loose		Silt, med brn to		moist				
	4						tan, sandy - v.f-f.			0			
									CNC15B010405	0/5			0
			3.7/4'	7'					W/a @ ~ 5.5'-6.0'	0			0
	8				firm	tan to	Silt, clayey becoming						
						~~red~~ brn	clay, silty, sl. sdy		moist				
						gray	mottled, rdish brn,						
							orange brn						
							TD 8'						

*When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm):

Remarks:

Converted to Well: Yes ____ No ____ Well I.D. #: ____

BORING LOG

PROJECT NAME: Site 15
PROJECT NUMBER: 0141
DRILLING COMPANY: Tidewater
DRILLING RIG: Geoprobe

BORING NUMBER: CNC15B02
DATE: 5/16/99
GEOLOGIST: BDH
DRILLER: DD

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
				0.4									
			1'	1.4'	loose	mod bn	Topsoil w/ root fibers - silt w/		sl. moist	0			0
			2.1/4'		loose	tan	Sand f. to v.f. grd		sl. moist				
-1						mod bn	Silt, sandy @ base		sl. moist to moist	0			
-12	4					to tan							
									BCFB020405	0/2			0
			3.1/4'										
-2				7'	fin	tan	Silt, clayey becoming		Wet ~ 6.5'				
② -16	8					to	clay, silty, moist		sl. moist to	0			
						gray	rdish bn, orange bn		moist				
							TD 8'						

* When rock conng, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm):

Remarks:

Converted to Well: Yes ____ No ____ Well I.D. #: ____

BORING LOG

PROJECT NAME: Site 15
OJECT NUMBER: 0141
RILLING COMPANY: Tidewater
DRILLING RIG: Geoprobe
BORING NUMBER: CNC15B01
DATE: 5/16/99
GEOLOGIST: BDH
DRILLER: DD

Sample No. and Type or RQD	Depth (FL) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS*	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
				1.1'	loose	med bn	Topsoil, silt, rootlets		sl. moist	0/1			0
			2.4/4	1.5'	loose	lt gray	Sand, f. grnd		sl. moist	0			
					loose		Silt, med bn to		moist				
	4						tan, sandy - v.f-f.			0			
									CNC15B010405	0/5			0
			3.7/4'	7'					Wet @ ~5.5'-6.0'	0			0
	8				firm	tan to med bn	Silt, clayey becoming						
							clay, silty, sl. sdy		moist				
						gray	mottled, rddish bn,						
							orange bn						
							TD 8'						

*When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm):

Converted to Well: Yes ____ No ____ Well I.D. #: ____

BORING LOG

PROJECT NAME: Site 15
PROJECT NUMBER: 0141
DRILLING COMPANY: Tidewater
DRILLING RIG: Geoprobe
BORING NUMBER: CNC15B02
DATE: 5/16/99
GEOLOGIST: BDH
DRILLER: DD

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS*	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
				0.4									
			1/4'	1.4'	loose	med brn	Topsoil to top - silt w/ roots		sl. moist	0			0
			2.1/4'		loose	tan	Sand f. to v.f. grd		sl. moist				
						med brn to tan	Silt, sandy @ base		sl. moist to moist	0			
	4												
									CCFB02 0405	0			0
			3.1/4'										
				7'	fin	tan to gray	Silt, clayey becoming clay, silty, mottled		Wet ~ 6.5'				
	8								sl. moist to moist	0			
							rdsh brn, orange brn						
							TD 8'						

* When rock conng. enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm):

Converted to Well: Yes ____ No ____ Well I.D. #: ____

BORING LOG

PROJECT NAME: Site 15
OJECT NUMBER: 0141
RILLING COMPANY: Tidewater
DRILLING RIG: Geoprobe
BORING NUMBER: CNC15B01
DATE: 5/16/99
GEOLOGIST: BDH
DRILLER: DD

Sample No. and Type or RQD	Depth (FL) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS*	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
				1.1'	loose	med bn	Topsoil, silt, rootlets		sl. moist	0/1			0
			2.4/4	1.5'	loose	lt gray	Sand, f. grnd		sl. moist	0			
					loose		Silt, med bn to		moist				
	4						tan, sandy - v.f-f.			0			
									CNC15B010405	0/5			0
			3.7/4'	7'					W/a @ ~5.5'-6.0'	0			0
	8				firm	tan to	Silt, clayey becoming						
						gray	clay, silty, sl. sdy		moist				
							mottled, rddsh bn,						
							orange bn						
							TD 8'						

*When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm):

Converted to Well: Yes ____ No ____ Well I.D. #: ____

BORING LOG

PROJECT NAME: Site 15
PROJECT NUMBER: 0141
DRILLING COMPANY: Tidewater
DRILLING RIG: Geoprobe
BORING NUMBER: CNC15B02
DATE: 5/16/99
GEOLOGIST: BDH
DRILLER: DD

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
				0.4									
			1'	1.4'	loose	grad bn	Topsoil to top - silt w/		sl. moist	0/1			0
			2.1/4'		loose	to	Sand f. to v.f. grd		sl. moist				
-1						mod bm	Silt, sandy @ base		sl. moist to moist	0			
-12	4					to tan							
									BCFB02 0405	0/2			0
			3.1/4'										
-2													
D				7'	fin	tan	Silt, clayey becoming		Wet ~ 6.5'				
-26	8					to	clay, silty, mottled		sl. moist to	0			
						gray	red bn, orange bn		moist				
							TD 8'						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm):

Remarks:

Converted to Well: Yes ____ No ____ Well I.D. #: ____

BORING LOG

PROJECT NAME: Site 15
OJECT NUMBER: 0141
RILLING COMPANY: Tidewater
DRILLING RIG: Geoprobe

BORING NUMBER: CNC15B01
DATE: 5/16/99
GEOLOGIST: BDH
DRILLER: DD

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS*	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
					loose	dark br	Topsoil, silt, rootlets		sl. moist	0/1			0
			2.4/4	1.1' / 1.5'	loose	lt gray	Sand, f. grnd		sl. moist	0			
					loose		Silt, med br to		moist				
	4						tan, sandy - v.f-f.			0			
									CNC15B010405	0/5			0
			3.7/4'	7'					Water @ ~ 5.5'-6.0'	0			0
	8				firm	tan to	Silt, clayey becoming						
						gray	clay, silty, sl. sdy		moist				
							mottled, rdish br,						
							orange br						
							TD 8'						

*When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm):

Remarks:

Converted to Well: Yes ____ No ____ Well I.D. #: ____

BORING LOG

ROJECT NAME: Site 15
ROJECT NUMBER: 0141
RILLING COMPANY: Tidewater
RILLING RIG: Geoprobe

BORING NUMBER: CNC15B02
DATE: 5/16/99
GEOLOGIST: BDH
DRILLER: DD

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
				0.4									
			1'	1.4'	loose	mod bn	Topsoil w/ root		sl. moist	0			0
			2 1/4'		loose	tan	Sand f. to v.f. grd		sl. moist				
						mod bn	Silt, sandy @ base		sl. moist to moist	0			
	4					tan							
									BCFB020405	0/2			0
			3 1/4'										
				7'	fin	tan	Silt, clayey becoming		Wet ~ 6.5'				
	8					to	clay, silty, mottled		sl. moist to	0			
						gray	rdsh bn, orange bn		moist				
							TD 8'						

* When rock conng, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm):

Remarks:

Converted to Well: Yes ____ No ____ Well I.D. #: ____

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: SITE 15
Project No.: 0141

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: 15GLM0101
Sample Location: CNC15MW1
Sampled By: PH/JA
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9/8/99	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1206	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA
Method: Low Flow	CLOUDY	6.38	.831	23.5	42	2.03	N/A	N/A

PURGE DATA:

Date: 9/8/99	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Method: Low Flow	Initial	5.85	.791	24.0	38	1.38	N/A	
Monitor Reading (ppm): 0.0	1	6.39	.829	23.8	71	2.65	N/A	
Well Casing Diameter & Material	2	6.34	.836	23.5	36	1.66	N/A	
Type: 2" PVC	3	5.75	.827	23.4	41	1.22	N/A	
Total Well Depth (TD): 13.20		6.38	.831	23.5	42	2.03	N/A	
Static Water Level (WL): 7.75								
One Casing Volume(gal/L): .87								
Start Purge (hrs): 0900								
End Purge (hrs): 0950								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): 3.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
ANIONS	Ø	1X 500 mL	YES

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
Ø	Ø

Signature(s):

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Zone B
Project No.:

[] Surface Soil
[✓] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 155LB04465
Sample Location: B04
Sampled By: JA/RF
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 6 2 99 Time: 1245 Method: Monitor Reading (ppm):	4-5'	br.	Sand trace silt

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				2000+ ppm

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
BTEX EDB	4 encores		
PAH	1 4 oz.		

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: SITE 15
Project No.: 0141

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: 15GLM0101
Sample Location: CN15MW1
Sampled By: PH/JA
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9/8/99	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1200	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA
Method: Low Flow	CLOUDY	6.38	.831	23.5	42	2.03	N/A	N/A

PURGE DATA:

Date: 9/8/99	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Method: Low Flow	Initial	5.85	.791	24.0	38	1.38	N/A	
Monitor Reading (ppm): 0.0	1	6.39	.829	23.8	71	2.65	N/A	
Well Casing Diameter & Material	2	6.34	.836	23.5	36	1.66	N/A	
Type: 2" PVC	3	5.75	.827	23.4	41	1.22	N/A	
Total Well Depth (TD): 13.20		6.38	.831	23.5	42	2.03	N/A	
Static Water Level (WL): 7.75								
One Casing Volume(gal/L): .87								
Start Purge (hrs): 0900								
End Purge (hrs): 0950								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): 3.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
ANIONS	Ø	1X 500 ml	YES

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD: Ø
Duplicate ID No.: Ø

Signature(s):

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Zone B
Project No.:

[] Surface Soil
[✓] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 155LB0~~4~~0405
Sample Location: B04
Sampled By: JA/RE
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 6 2 99	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1245	4-5'	br.	Sand trace silt
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				2000+ ppm

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
BTEX EDB	4 encores		
PAH	1 4 oz.		

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: SITE 15
Project No.: 0141

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: 15GLM0101
Sample Location: CNC15MW1
Sampled By: PH/JA
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9/8/99	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1200	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA
Method: Low Flow	CLOUDY	6.38	.831	23.5	42	2.03	N/A	N/A

PURGE DATA:

Date: 9/8/99	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Method: Low Flow	Initial	5.85	.791	24.0	38	1.38	N/A	
Monitor Reading (ppm): 0.0	1	6.39	.829	23.8	71	2.65	N/A	
Well Casing Diameter & Material	2	6.34	.836	23.5	36	1.66	N/A	
Type: 2" PVC	3	5.75	.827	23.4	41	1.22	N/A	
Total Well Depth (TD): 13.20		6.38	.831	23.5	42	2.03	N/A	
Static Water Level (WL): 7.75								
One Casing Volume(gal/L): .87								
Start Purge (hrs): 0900								
End Purge (hrs): 0950								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): 3.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
ANIONS	Ø	1X 500 ml	YES

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
Ø	Ø

Signature(s):

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Zone B
Project No.:

[] Surface Soil
[✓] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 155LB04046S
Sample Location: B04
Sampled By: JA/RF
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 6 2 96 Time: 1245 Method: Monitor Reading (ppm):	4-5'	br.	Sand trace silt

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				2000+ ppm

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
BTEX EDB	4 encores		
PAH	1 4 oz.		

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: SITE 15
Project No.: 0141

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: 15GLM0101
Sample Location: CN015MW1
Sampled By: PH/JA
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9/8/99	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1200	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA
Method: Low Flow	CLOUDY	6.38	.831	23.5	42	2.03	N/A	N/A

PURGE DATA:

Date: 9/8/99	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Method: Low Flow	Initial	5.85	.791	24.0	38	1.38	N/A	
Monitor Reading (ppm): D.O.	1	6.39	.829	23.8	71	2.65	N/A	
Well Casing Diameter & Material	2	6.34	.836	23.5	36	1.66	N/A	
Type: 2" PVC	3	5.75	.827	23.4	41	1.22	N/A	
Total Well Depth (TD): 13.20		6.38	.831	23.5	42	2.03	N/A	
Static Water Level (WL): 7.75								
One Casing Volume(gal/L): .87								
Start Purge (hrs): 0900								
End Purge (hrs): 0950								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): 3.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
ANIONS	Ø	1X 500 mL	YES

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
Ø	Ø

Signature(s):

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Zone B
Project No.:

[] Surface Soil
[✓] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 155LB04046S
Sample Location: B04
Sampled By: JA/RE
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 6 2 96 Time: 1245 Method: Monitor Reading (ppm):	4-5'	br.	Sand trace Silt

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				2000+ ppm

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
BTEX EDB	4 encores		
PAH	1 4 oz.		

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: SITE 15
Project No.: 0141

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: 15GLM0101
Sample Location: CNC15MW1
Sampled By: PH/JA
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9/8/99	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1200	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA
Method: Low Flow	CLOUDY	6.38	.831	23.5	42	2.03	N/A	N/A

PURGE DATA:

Date: 9/8/99	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Method: Low Flow	Initial	5.85	.791	24.0	38	1.38	N/A	
Monitor Reading (ppm): D.D.	1	6.39	.829	23.8	71	2.65	N/A	
Well Casing Diameter & Material	2	6.34	.836	23.5	36	1.66	N/A	
Type: 2" PVC	3	5.75	.827	23.4	41	1.22	N/A	
Total Well Depth (TD): 13.20		6.38	.831	23.5	42	2.03	N/A	
Static Water Level (WL): 7.75								
One Casing Volume(gal/L): .87								
Start Purge (hrs): 0900								
End Purge (hrs): 0950								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): 3.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
ANIONS	Ø	1X 500 mL	YES

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
Ø	Ø

Signature(s): [signature]

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Zone B
Project No.:

[] Surface Soil
[✓] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 155LB04046S
Sample Location: B04
Sampled By: JA/RE
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 6 2 96	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1245	4'-5'	br.	Sand trace silt
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				2000+ ppm

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
BTEX EDB	4 encores		
PAH	1 4 oz.		

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: SITE 15
Project No.: 0141

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: 15GLM0101
Sample Location: CN15MW1
Sampled By: PH/JA
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 9/8/99	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA
Time: 1200								
Method: Low Flow	CLOUDY	6.38	.831	23.5	42	2.03	N/A	N/A

PURGE DATA:

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Date: 9/8/99								
Method: Low Flow	Initial	5.85	.791	24.0	38	1.38	N/A	
Monitor Reading (ppm): 0.0	1	6.39	.829	23.8	71	2.65	N/A	
Well Casing Diameter & Material	2	6.34	.836	23.5	36	1.66	N/A	
Type: 2" PVC	3	5.75	.827	23.4	41	1.22	N/A	
Total Well Depth (TD): 13.20		6.38	.831	23.5	42	2.03	N/A	
Static Water Level (WL): 7.75								
One Casing Volume(gal/L): .87								
Start Purge (hrs): 0900								
End Purge (hrs): 0950								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): 3.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
ANIONS	Ø	1X 500 mL	YES

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
Ø	Ø

Signature(s):

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Zone B
Project No.:

[] Surface Soil
[✓] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 155LB04046S
Sample Location: B04
Sampled By: JA/RF
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 6 2 96			
Time: 1245	4-5'	br.	Sand trace silt
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				2000+ ppm

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
BTEX EDB	4 encores		
PAH	1 4 oz.		

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: SITE 15
Project No.: 0141

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: 15GLM0101
Sample Location: CN015MW1
Sampled By: PH/JA
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9/8/99	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1200	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA
Method: Low Flow	CLOUDY	6.38	.831	23.5	42	2.03	N/A	N/A

PURGE DATA:

Date: 9/8/99	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Method: Low Flow	Initial	5.85	.791	24.0	38	1.38	N/A	
Monitor Reading (ppm): 0.0	1	6.39	.829	23.8	21	2.65	N/A	
Well Casing Diameter & Material	2	6.34	.836	23.5	36	1.66	N/A	
Type: 2" PVC	3	5.75	.827	23.4	41	1.22	N/A	
Total Well Depth (TD): 13.20		6.38	.831	23.5	42	2.03	N/A	
Static Water Level (WL): 7.75								
One Casing Volume(gal/L): .87								
Start Purge (hrs): 0900								
End Purge (hrs): 0950								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): 3.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
ANIONS	Ø	1X 500 ml	YES

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
N	N

Signature(s):

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Zone B
Project No.:

[] Surface Soil
[✓] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 155LB04046S
Sample Location: B04
Sampled By: JA/RF
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 6 2 99	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1245	4-5'	br.	Sand trace silt
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				2000+ ppm

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
BTEX EDB	4 encores		
PAH	1 4 oz.		

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: SITE 15
Project No.: 0141

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: 15GLM0101
Sample Location: CN15MW1
Sampled By: PH/JA
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 9/8/99	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA
Time: 1206								
Method: Low Flow	CLOUDY	6.38	.831	23.5	42	2.03	N/A	N/A

PURGE DATA:

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Date: 9/8/99								
Method: Low Flow	Initial	5.85	.791	24.0	38	1.38	N/A	
Monitor Reading (ppm): 0.0	1	6.39	.829	23.8	71	2.65	N/A	
Well Casing Diameter & Material	2	6.34	.836	23.5	36	1.66	N/A	
Type: 2" PVC	3	5.75	.827	23.4	41	1.22	N/A	
Total Well Depth (TD): 13.20		6.38	.831	23.5	42	2.03	N/A	
Static Water Level (WL): 7.75								
One Casing Volume(gal/L): .87								
Start Purge (hrs): 0900								
End Purge (hrs): 0950								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): 3.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
ANIONS	Ø	1X 500 ml	YES

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
Ø	Ø

Signature(s):

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Zone B
Project No.:

[] Surface Soil
[✓] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 155LB04046
Sample Location: B04
Sampled By: JA/RF
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 6 2 99			
Time: 1245	4-5'	br.	Sand trace silt
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				2000+ ppm

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
BTEX EDB	4 encores		
PAH	1 4 oz.		

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: SITE 15
Project No.: 0141

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: 15GLM0101
Sample Location: CN15MW1
Sampled By: PH/JA
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9/8/99	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1200	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA
Method: Low Flow	CLOUDY	6.38	.831	23.5	42	2.03	N/A	N/A

PURGE DATA:

Date: 9/8/99	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Method: Low Flow	Initial	5.85	.791	24.0	38	1.38	N/A	
Monitor Reading (ppm): 0.0	1	6.39	.829	23.8	71	2.65	N/A	
Well Casing Diameter & Material	2	6.34	.836	23.5	36	1.66	N/A	
Type: 2" PVC	3	5.75	.827	23.4	41	1.22	N/A	
Total Well Depth (TD): 13.20		6.38	.831	23.5	42	2.03	N/A	
Static Water Level (WL): 7.75								
One Casing Volume(gal/L): .87								
Start Purge (hrs): 0900								
End Purge (hrs): 0950								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): 3.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
ANIONS	Ø	1X 500 ml	YES

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
Ø	Ø

Signature(s):

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Zone B
Project No.:

[] Surface Soil
[✓] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 155LB04046S
Sample Location: B04
Sampled By: JA/RE
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 6 2 96			
Time: 1245	4-5'	br.	Sand trace silt
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				2000+ ppm

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
BTEX EDB	4 encores		
PAH	1 4 oz.		

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: SITE 15
Project No.: 0141

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: 15GLM0101
Sample Location: CN15MW1
Sampled By: PH/JA
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color Visual	pH Standard	S.C. mS/cm	Temp. Degrees C	Turbidity NTU	DO mg/l	Salinity %	Other NA
Date: 9/8/99								
Time: 1200								
Method: Low Flow	CLOUDY	6.38	.831	23.5	42	2.03	N/A	N/A

PURGE DATA:

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Date: 9/8/99								
Method: Low Flow	Initial	5.85	.791	24.0	38	1.38	N/A	
Monitor Reading (ppm): 0.0	1	6.39	.829	23.8	71	2.65	N/A	
Well Casing Diameter & Material	2	6.34	.836	23.5	36	1.66	N/A	
Type: 2" PVC	3	5.75	.827	23.4	41	1.22	N/A	
Total Well Depth (TD): 13.20		6.38	.831	23.5	42	2.03	N/A	
Static Water Level (WL): 7.75								
One Casing Volume(gal/L): .87								
Start Purge (hrs): 0900								
End Purge (hrs): 0950								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): 3.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
ANIONS	Ø	1X 500 ML	YES

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
Ø	Ø

Signature(s):

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Zone B
Project No.:

[] Surface Soil
[✓] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 155LB0~~4~~0465
Sample Location: B04
Sampled By: JA/RE
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 6 2 96			
Time: 1245	4-5'	br.	Sand trace silt
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				2000+ ppm

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
BTEX EDB	4 encores		
PAH	1 4 oz.		

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: SITE 15
Project No.: 0141

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: 15GLM0101
Sample Location: CN15MW1
Sampled By: PH/JA
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9/8/99	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1200	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA
Method: Low Flow	CLOUDY	6.38	.831	23.5	42	2.03	N/A	N/A

PURGE DATA:

Date: 9/8/99	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Method: Low Flow	Initial	5.85	.791	24.0	38	1.38	N/A	
Monitor Reading (ppm): D.O.	1	6.39	.829	23.8	71	2.65	N/A	
Well Casing Diameter & Material	2	6.34	.836	23.5	36	1.66	N/A	
Type: 2" PVC	3	5.75	.827	23.4	41	1.22	N/A	
Total Well Depth (TD): 13.20		6.38	.831	23.5	42	2.03	N/A	
Static Water Level (WL): 7.75								
One Casing Volume(gal/L): .87								
Start Purge (hrs): 0900								
End Purge (hrs): 0950								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): 3.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
ANIONS	Ø	1x500 ml	YES

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
Ø	Ø

Signature(s): [signature]

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Zone B
Project No.:

[] Surface Soil
[✓] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 155LB0~~4~~0465
Sample Location: B04
Sampled By: JA/RF
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 6 2 99	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1245	4-5'	br.	Sand trace silt
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				2000+ ppm

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
BTEX EDB	4 encores		
PAH	1 4 oz.		

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: SITE 15
Project No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: 15GLMØ2Ø1
Sample Location: CNC15MW2
Sampled By: PB/JA
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 9/8/99	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA
Time: 1001								
Method: PERISTA	CLEAR	4.77	.291	22.8	3	0.93	N/A	

PURGE DATA:

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Date: 9/8/99								
Method:	Initial	5.22	.302	23.0	8	1.39	N/A	
Monitor Reading (ppm):	1	~~6.51~~	~~.550~~	~~23.6~~	~~6~~	~~1.44~~	~~N/A~~	
Well Casing Diameter & Material	1	4.80	.291	22.9	4	0.86	N/A	
Type: 2" PVC	2	5.55	.290	22.9	3	0.81	N/A	
Total Well Depth (TD): 14.ØØ	3	4.77	.291	22.8	3	0.93	N/A	
Static Water Level (WL): 6.97								
One Casing Volume(gal/L): 1.12								
Start Purge (hrs): ØØ9Ø1								
End Purge (hrs): 0946								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected

OBSERVATIONS / NOTES:

14.00
6.97
7.03

7.03
.16
4268
7030
1.1298

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: SITE 15
Project No.: 0141

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: 15GLMØ3Ø1
Sample Location: SNC15MW3
Sampled By: PB/JA
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 9/8/99	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA
Time: ~~1200~~ 1050								
Method: LOW FLOW	CLEAR	6.34	.548	23.4	4	1.31	N/A	

PURGE DATA:

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Date: 9/8/99								
Method: PERIST.	Initial	6.35	.553	23.8	20	0.54	N/A	
Monitor Reading (ppm): 0.0	1	6.51	.550	23.6	6	1.44	N/A	
Well Casing Diameter & Material	2	6.51	.554	23.4	2	0.47	N/A	
Type: 2" PVC	3	6.34	.548	23.4	4	1.31	N/A	
Total Well Depth (TD): 14.27								
Static Water Level (WL): 6.31								
One Casing Volume(gal/L): 1.27								
Start Purge (hrs): Ø9Ø2								
End Purge (hrs): 0945								
Total Purge Time (min): 43								
Total Vol. Purged (gal/L): 5 GAL								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
BTEX + EDB	HCL	3x40mL	YES
PAH	Ø	2x1 LTR.	YES
ANIONS	Ø	1x500 mL	YES
DIS. METHANE	HCL	3x40 mL	YES

OBSERVATIONS / NOTES:

14.27
6.31
7.96

5 3
7.96
1.16
4776
7960
15336

1.27

Circle if Applicable:
MS/MSD | Duplicate ID No.:

Signature(s):

BORING LOG

PROJECT NAME: Site 15
OJECT NUMBER: 0141
RILLING COMPANY: Tidewater
RILLING RIG: Geoprobe

BORING NUMBER: CNC15B01
DATE: 5/16/99
GEOLOGIST: BDH
DRILLER: DD

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS*	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
				1.1'	loose	med br	Topsoil, silt, rootlets		sl. moist	0/1			0
1-1 @ 1137			2.4/4	1.5'	loose	lt gray	Sand, f, grad		sl. moist	0			
					loose		Silt, med br to tan, sandy - v.f-f.		moist				
	4									0			
									CNC15B010405	0/5			0
1-2 @ 1140			3.7/4'	7'					Water @ ~5.5'-6.0'	0			0
	8				firm	tan to med br	Silt, clayey becoming						
							clay, silty, sl. sdy		moist				
						gray	mottled, rdish br, orange br						
							TD 8'						

*When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm):

Remarks:

Converted to Well: Yes ____ No ____ Well I.D. #: ____

BORING LOG

PROJECT NAME: Site 15
PROJECT NUMBER: 0141
DRILLING COMPANY: Tidewater
DRILLING RIG: Geoprobe
BORING NUMBER: CNC15B02
DATE: 5/16/99
GEOLOGIST: BDH
DRILLER: DD

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
				0.4									
			1'	1.4'	loose	mod bn	Topsoil w/ roots - silt w/ roots		sl. moist	0/1			0
			2 1/4'		loose	tan	Sand f. to v.f. grd		sl. moist				
-1						mod bn	Silt, sandy @ base		sl. moist to moist	0			
212	4					to tan							
									BCFB020405	0/2			0
			3 1/4'										
-2													
216				7'	fine	tan	Silt, clayey becoming		Wet ~ 6.5'				
	8					to	clay, silty, mottled		sl. moist to	0			
						gray	red bn, orange bn		moist				
							TD 8'						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm):

Remarks:

Converted to Well: Yes ____ No ____ Well I.D. #:

BORING LOG

PROJECT NAME: Rte 15
PROJECT NUMBER: 0141
DRILLING COMPANY: Tidewater
DRILLING RIG: Geoprobe
BORING NUMBER: CNC 15 B03
DATE: 5/16/99
GEOLOGIST: BPH
DRILLER: DD

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS*	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
				0.9'	loose	brnd to dk br	Topsoil, silt, w/ rubble and organic stuff		sl. moist	0/0			0
			2.8'/4'	4.7'	loose	tan	Sand, v.f. grnd		sl. moist	0			
					loose	med brn to tan	Silt, sandy @ base grading to sandy f. grnd (tan)		sl. moist moist	0			
	4								1587 B030506	0/0			0
			0.9'/4'						wet @ ~6.5'				
										0			
	8												

-1 @ 2.47

5.2 @ 2.58

en rock coring, enter rock brokeness.

* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm):

Remarks:

Converted to Well: Yes ____ No ____ Well I.D. #: ____

BORING LOG

PROJECT NAME: Site 35
PROJECT NUMBER: 0141
DRILLING COMPANY: Tidewater
DRILLING RIG: Geoprobe
BORING NUMBER: CNC15B04
DATE: 5/16/99
GEOLOGIST: BDH
DRILLER: DD

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
				0.5'	loose	~~red~~ brn	topsoil, silt w/ ~~roots~~		sl. moist	0/3			0
			4'/4'			~~red~~ brn	Silt, sl. sdy		sl. moist	0			
S1 @ 1342													
	4												
						~~tan~~	Sand, v.f. gnd		155FB040405	0/3			0
			1.9'/4'						moist				
S2 @ 1345									wet @ ~ 6.5'				
	8									0			
							TD 8'						

* When rock conng, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm):

Remarks:

Converted to Well: Yes ____ No ____ Well I.D. #:

BORING LOG

PROJECT NAME: Site 15
PROJECT NUMBER: 0141
DRILLING COMPANY: Tidewater
DRILLING RIG: Geoprobe
BORING NUMBER: CNC 15 B05
DATE: 5/16/99
GEOLOGIST: BDH
DRILLER: DD

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
				0.7'	loose	dk brn	topsoil, sand, w/ roots		sl moist	0/3			0
			4/4'		firm	tan	silt, sl. sdy		sl. moist	0			
S-1 @ 1410							bearing f. sd @						
	4						base w/ roots		sl. moist to moist				
									15SFB050506	0/3			0
			24/4'										
S-2 @ 1415									Wet @ 6.5'-7.0'				
	8									0			
				9.2'									
			4/4'		firm	tan	clay, sdy		moist	0			
S-3				11.1'									
	12				loose	lt gray to tan	Sand, fine grad		wet	0			
			4/4'										
S-4				14.2'									
				15.3'	firm	lt gray	Clay, sandy		moist				
	16									0			
					loose	tan	Sand, fine grad		wet				
S-5			4/4'										
	20												
				20.2'	firm	lt gray	Clay, sdy to sd		moist				
S-6			4/4'	21.6'			clayey			0			
					loose	tan	Sand, f. to v.f.		wet				
	24'						grad						

hen rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm):

Converted to Well: Yes ____ No ____ Well I.D. #:

BORING LOG

PROJECT NAME: Site 15
PROJECT NUMBER: 0141
DRILLING COMPANY: Tidewater
DRILLING RIG: Geoprobe

BORING NUMBER: CNC15B05
DATE: 5/16/99
GEOLOGIST: BDH
DRILLER: DD

Sample No. and Type or RQD	Depth (FL) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
			1/4'		loose ~~to~~	~~to~~ white	Sand		wet	0			
4-7													
	28												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm):

Remarks:

Converted to Well: Yes _____ No _____ Well I.D. #: _____

APPENDIX F

Construction Worker Dermal RBSLs

	Kow	MW	Kp	B	τ_{event}	c	b	t*	t_{event}	DAevent
			cm/hr	unitless	hr/event			hr	hr/event	
Benzene	199.5262315	78.1	0.11551543	0.392637855	2.87E-01	6.32E-01	6.03E-01	6.90E-01	1	eq 3.3
Toluene	537.0317964	92.1	0.259561335	0.958068292	3.44E-01	1.13E+00	1.31E+00	1.33E+00	1	eq 3.2
Ethylbenzene	1412.537545	106.2	0.569219802	2.256154884	4.13E-01	2.36E+00	4.39E+00	1.70E+00	1	eq 3.2
Xylene*	1584.893192	106.2	0.638675123	2.531447415	4.13E-01	2.63E+00	5.31E+00	1.72E+00	1	eq 3.2
Naphthalene	1995.262315	128.2	0.605452393	2.636638957	5.48E-01	2.73E+00	5.69E+00	2.29E+00	1	eq 3.2

	BW	AT	EV	ED	EF	SA	CSF derm	Rfd derm	Target	RBSL	RBSL
	kg	day	events/day	yrs	days/yr	cm^2	$(mg/kg\text{-}day)^{-1}$	mg/kg-day	Risk or HQ	mg/L	mg/L
Benzene	70	25550	1	1	90	4500	2.99E-02	NA	1.00E-06		8.52E-01
Toluene	70	365	1	1	90	4500	NA	1.60E-01	1.0	2.40E+01	
Ethylbenzene	70	365	1	1	90	4500	NA	9.70E-02	1.0	6.05E+00	
Xylene*	70	365	1	1	90	4500	NA	1.84E+00	1.0	1.02E+02	
Naphthalene	70	365	1	1	90	4500	NA	3.20E-02	1.0	1.63E+00	

* Kow and MW values for xylene, m-

Prepared By: _____

Reviewed By: _____

Construction Worker Inhalation RBSLs

Chemical	TR (carc)	HI (nonc)	BWadult	AT	Sfi (carc)	RfD (nonc)	IR air	EF	ED	RBSLair	H	RBSLwater
			kg	yr	$[mg/kg\text{-}day]^{-1}$	[mg/kg-day]	m^3/day	day/yr	yr	mg/m^3	cm^3/cm^3	mg/L
Benzene	1.00E-06	NA	70	70	2.90E-02	NA	20	90	1	3.43E-02	2.26E-01	0.15
T luene	NA	1	70	1	NA	1.14E-01	20	90	1	1.62E+00	3.01E-01	5.38
Ethylbenzene	NA	1	70	1	NA	2.86E-01	20	90	1	4.06E+00	2.80E-01	14.50
Xylenes	NA	1	70	1	NA	NA*	20	90	1	NA*	2.78E-01	NA*
Naphthalene	NA	1	70	1	NA	3.71E-04	20	90	1	5.27E-03	2.00E-03	2.63

*No inhalation reference dose is available for xylenes; therefore, no RBSL can be calculated for xylene.

Prepared By: _____

Reviewed By: _____

Minimum Construction Worker RBSLs

	Dermal RBSL mg/L	Incidental Ingestion RBSL mg/L	Inhalation RBSL mg/L	Minimum RBSL mg/L
Benzene	0.85	68.52	0.15	0.15
Toluene	23.98	5677.78	5.38	5.38
Ethylbenzene	6.05	2838.89	14.50	6.05
Xylene	102.33	56777.78	NA*	102.33
Naphthalene	1.63	1135.56	2.63	1.63

*No inhalation reference dose is available for xylenes; therefore, no inhalation RBSL can be calculated.

Prepared By: _____ Reviewed By: _____

Construction Worker Incidental Ingestion RBSLs

	BW	AT	IR	ED	EF	Target	CSF oral	Rfd oral	RBSL
	kg	day	L/day	yrs	days/yr	Risk or HQ			mg/L
Benzene	70	25550	0.01	1	90	1.00E-06	2.90E-02		6.85E+01
Toluene	70	365	0.01	1	90	1.0	NA	2.00E-01	5677.778
Ethylbenzene	70	365	0.01	1	90	1.0	NA	1.00E-01	2838.889
Xylene	70	365	0.01	1	90	1.0	NA	2.00E+00	56777.78
Naphthalene	70	365	0.01	1	90	1.0	NA	4.00E-02	1135.556

Prepared By: _____ Reviewed By: _____

SITE 15, QUARTERS O, ZONE B, CHARLESTON NAVAL COMPLEX
NORTH CHARLESTON, SOUTH CAROLINA
SCDHEC UST ID No. 01088

DOMENICO'S DILUTION/ATTENUATION EQUATION FOR GROUNDWATER TRANSPORT

Site-Specific Target Level Calculations for Groundwater: Potential Future Off-Site Ingestion

Parameter Descriptions:	Units
POE = Point of Exposure	
SSTL = Site-Specific Target Level	mg/L
$SSTL_{SOURCE}$ = Hydrocarbon Concentration in Plume Source Area protective of RBSLs at POE	mg/L
$SSTL_{COMP}$ = Hydrocarbon Concentration at Compliance Point protective of RBSLs at POE	mg/L
X_{POE} = x = Distance from Plume Source to POE (along Centerline)	m
X_{COMP} = x = Distance from POE to Compliance Point (along Centerline)	m
Y = Source Width (Perpendicular to Flow Direction)	m
Z = Source Depth (Perpendicular to Flow Direction in Vertical Plane)	m
K_s = Saturated Hydraulic Conductivity	m/sec
i = Groundwater Gradient	cm/cm
θ = Porosity in Saturated Zone	cm^3/cm^3

Parameter Descriptions:	Units
ρ_s = Soil Bulk Density	g/cm^3
f_{oc} = Fraction Organic Carbon in Soil	g-C/g-soil
α_x = Longitudinal Dispersivity = 0.1x	m
α_y = Transverse Dispersivity = $\alpha_x/3$	m
α_z = Vertical Dispersivity = $\alpha_y/20$	m
k_{oc} = Organic Carbon Partition Coefficient	cm^3-H_2O/g-C
k_D = Soil-Water Sorption Coefficient	cm^3-H_2O/g-soil
V = Pore Water Velocity	m/sec
R_C = Constituent Retardation Factor	
V/R_C = Maximum Transport Rate of Dissolved Constituent = $(K_s i)/(\theta R_C)$	m/sec
RBSL = Risk-Based Screening Level in Water Provided by SCDHEC (1998)	mg/L

Dilution & Attenuation without Biological Decay

Constituent	X_{POE} ft	X_{POE} m	Y m	Z m	t sec	K_s m/sec	i m/m	θ cm^3/cm^3	ρ_s g/cm^3	α_x m	α_y m	α_z m	f_{oc} g-C/g-soil	k_{oc} cm^3-H_2O/g-C	k_D cm^3-H_2O/g-soil	V m/sec	R_C	C_{POE}/C_{SOURCE}
Naphthalene	725	220.982667	15	2	1.00E+13	1.02E-05	0.0023	0.47	1.45	22.10	7.37	1.10	8.44E-03	1543	13.02292	5.01E-08	41.177	7.542E-03

Constituent	X_{COMP} ft	X_{COMP} m	Y m	Z m	t sec	K_s m/sec	i m/m	θ cm^3/cm^3	ρ_s g/cm^3	α_x m	α_y m	α_z m	f_{oc} g-C/g-soil	k_{oc} cm^3-H_2O/g-C	k_D cm^3-H_2O/g-soil	V m/sec	R_C	C_{POE}/C_{COMP}
Naphthalene	700	213.362594	15	2	1.00E+13	1.02E-05	0.0023	0.47	1.45	21.95	7.32	1.10	8.44E-03	1543	13.02292	5.01E-08	41.177	7.864E-03

Source: South Carolina Department of Health and Environmental Control (SCDHEC) 1998. *Risk-Based Corrective Action for Petroleum Releases*, Bureau of Underground Storage Tank Management.

DOMENICO DILUTION/ATTENUATION MODEL WITHOUT BIOLOGICAL DECAY

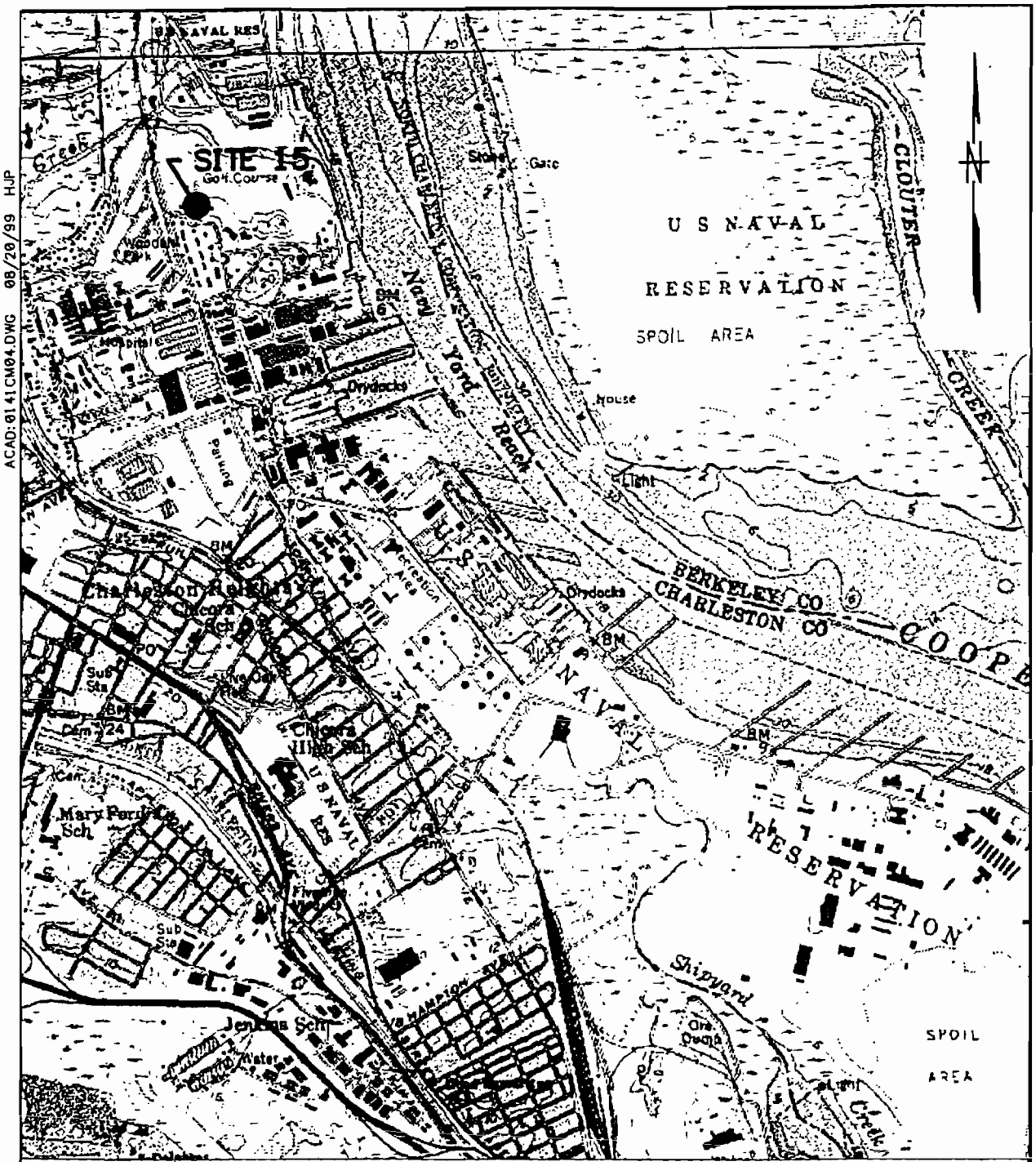
$$\frac{C_X}{C_{SOURCE}} = \frac{1}{2} erfc\left[\frac{\left(x - \frac{vt}{R_c}\right)}{2\sqrt{\alpha_X \frac{vt}{R_c}}}\right] \times erf\left[\frac{Y}{4\sqrt{\alpha_Y x}}\right] \times erf\left[\frac{Z}{2\sqrt{\alpha_Z x}}\right]$$

Constituent	POE RBSL mg/L	$SSTL_{SOURCE}$ mg/L	$SSTL_{COMP}$ mg/L
Naphthalene	0.010	1.326	1.272

Prepa

Reviewed By: _____

ACAD:0141CM04.DWG 08/20/99 HJP



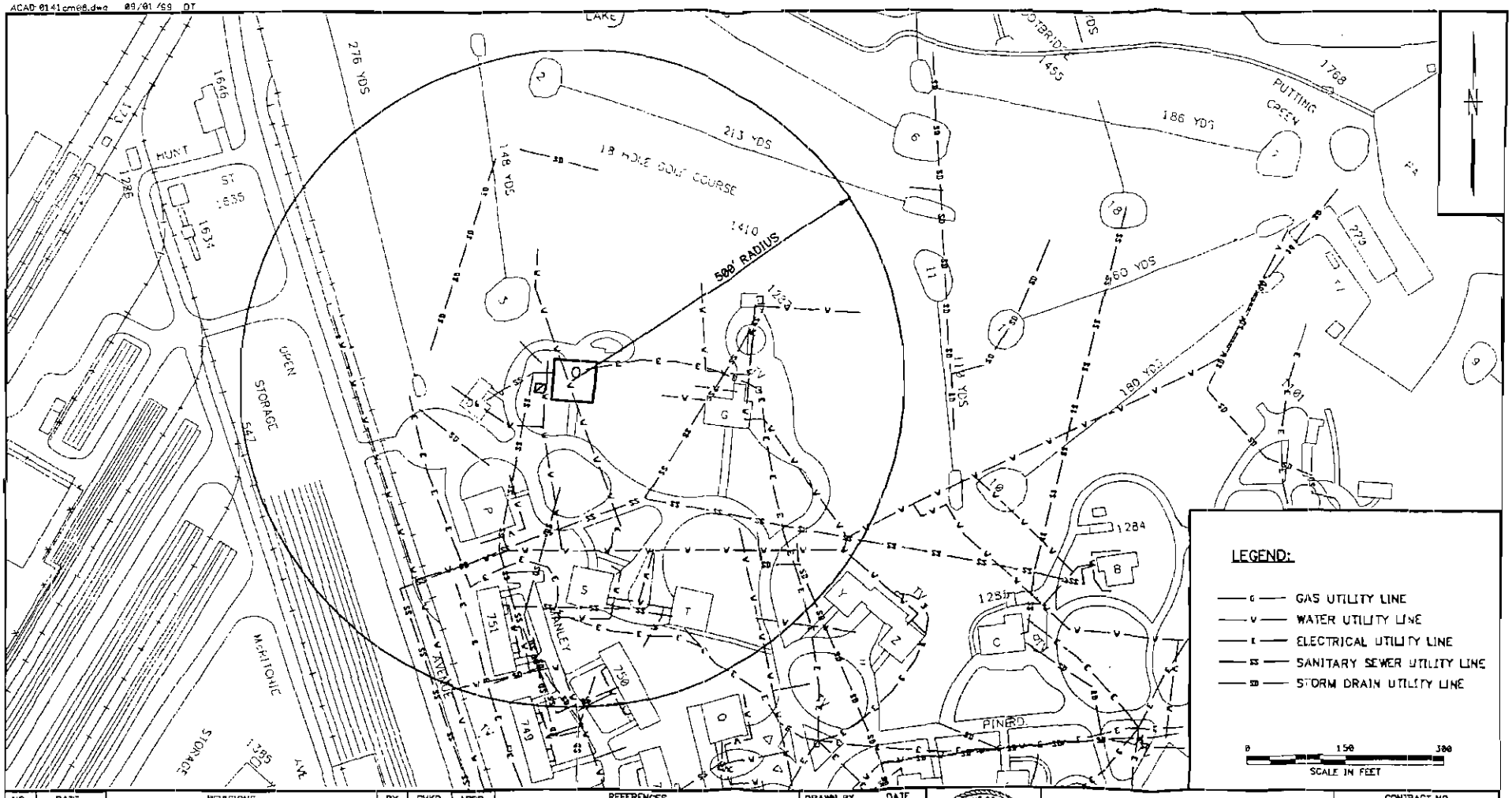
SOURCE: QUADRANGLE MAP SOUTH CAROLINA, REVISED 1979
QUADRANGLE MAP NORTH CHARLESTON REVISED, 1979

0 2000 4000
SCALE IN FEET

DRAWN BY HJP DATE 8/20/99	DEPARTMENT OF THE NAVY	SITE LOCATION MAP SITE 15, BUILDING 0, ZONE B CHARLESTON NAVAL COMPLEX NORTH CHARLESTON, SC	CONTRACT NO. N0141
CHECKED BY DATE			APPROVED BY DATE
COST/SCHED-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 1 / REV. 0

FORM CADD NO. SDIV_AV.DWG - REV 0 - 1/20/98

ACAD 0141 cm08.dwg 09/01/99 DT



NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

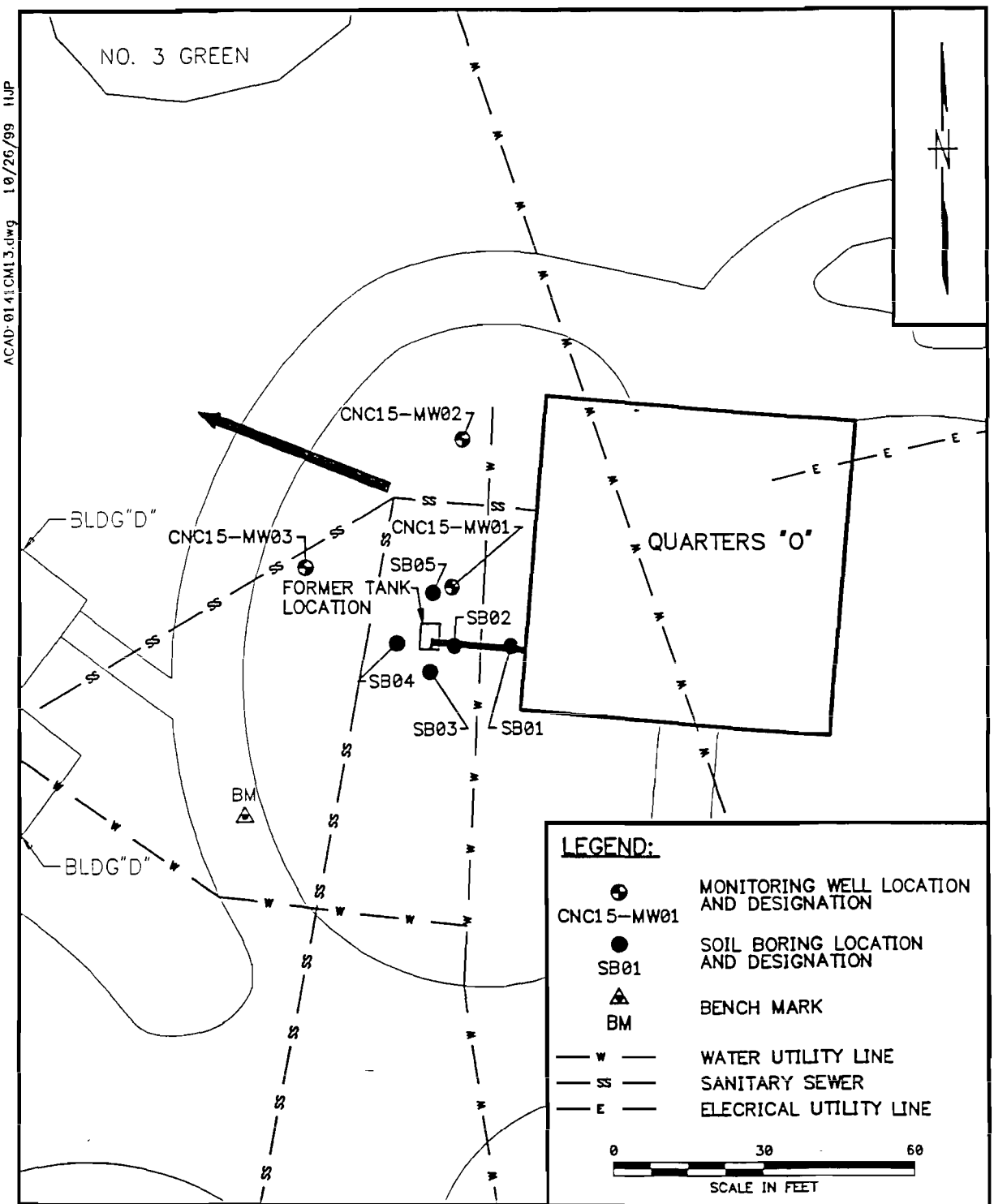
DRAWN BY DLT DATE 9/1/99
CHECKED BY DATE
COST/SCHED-AREA
SCALE AS NOTED

SITE VICINITY MAP
SITE 15, QUARTERS O
ZONE B, CHARLESTON NAVAL COMPLEX
NORTH CHARLESTON, SOUTH CAROLINA

CONTRACT NO. 0141
APPROVED BY DATE
APPROVED BY DATE
DRAWING NO. FIGURE 2
REV. 0

FORM CADD NO SDIV_8x8.DWG - REV 0 - 1/20/98

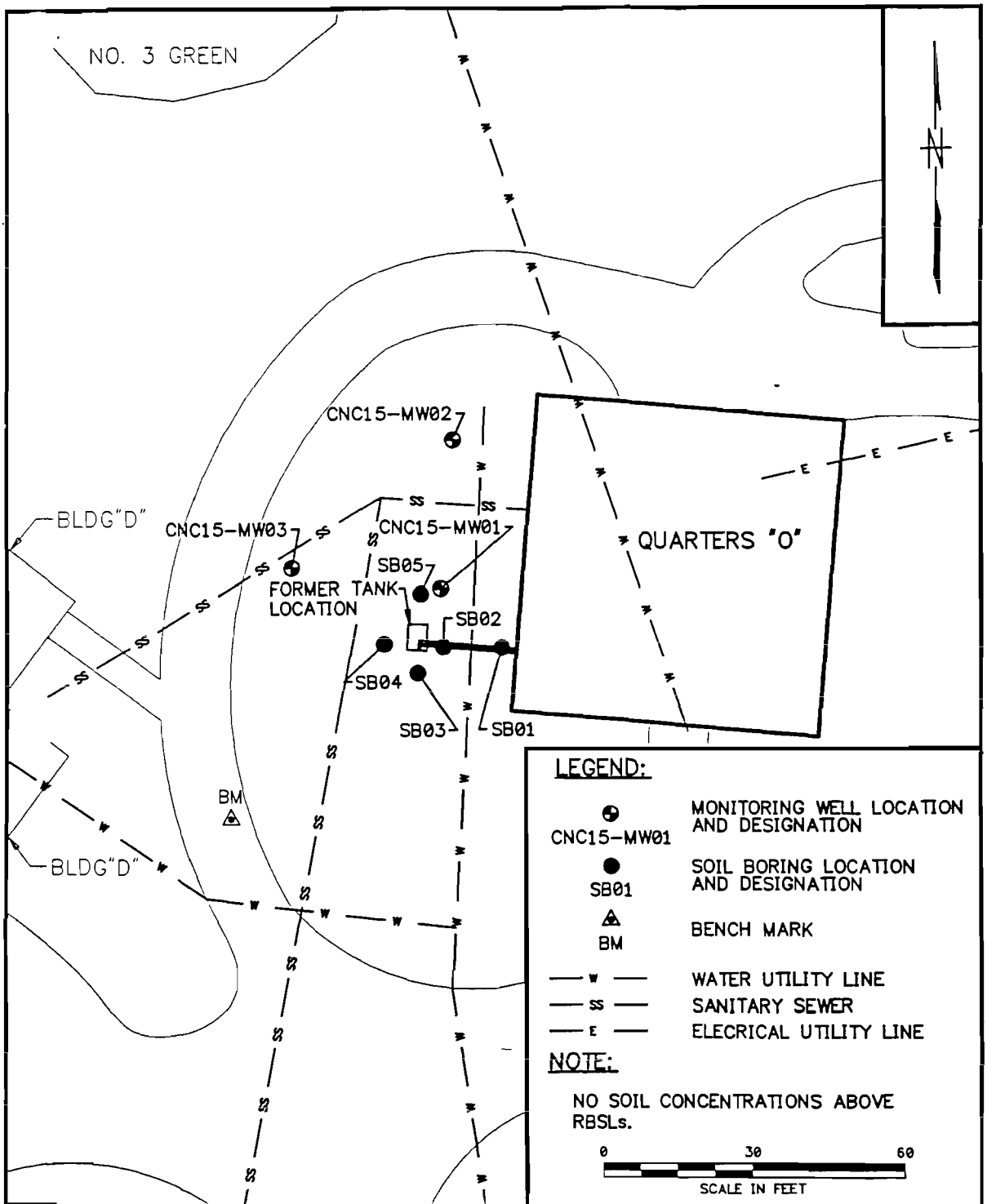
ACAD-0141CM13.dwg 10/26/99 HJP



DRAWN BY HJP 10/25/99 DATE			CONTRACT NO. 0141
CHECKED BY DATE			APPROVED BY DATE
COST/SCHED-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 3 / REV. 0

SITE MAP
SITE 15, QUARTERS "O"
ZONE B, CHARLESTON NAVAL COMPLEX
NORTH CHARLESTON, SOUTH CAROLINA

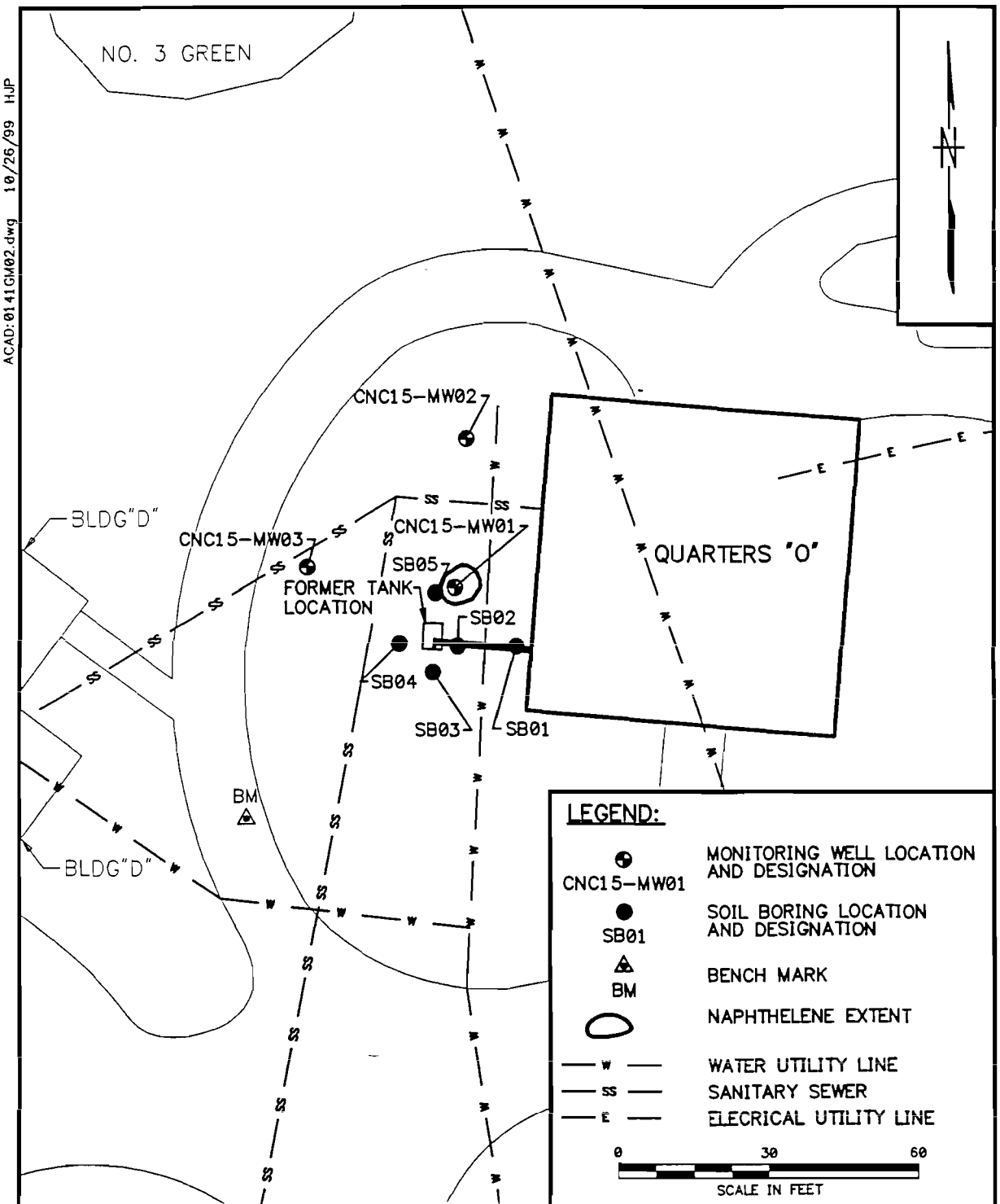
FORM CADD NO. SDIV_AV.DWG – REV 0 – 1/20/98



DRAWN BY HJP DATE 10/25/99		SOIL COC MAP SITE 15, QUARTERS "O" ZONE B, CHARLESTON NAVAL COMPLEX NORTH CHARLESTON, SOUTH CAROLINA	CONTRACT NO. 0141
CHECKED BY DATE			APPROVED BY DATE
COST/SCHED-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 4 / REV. 0

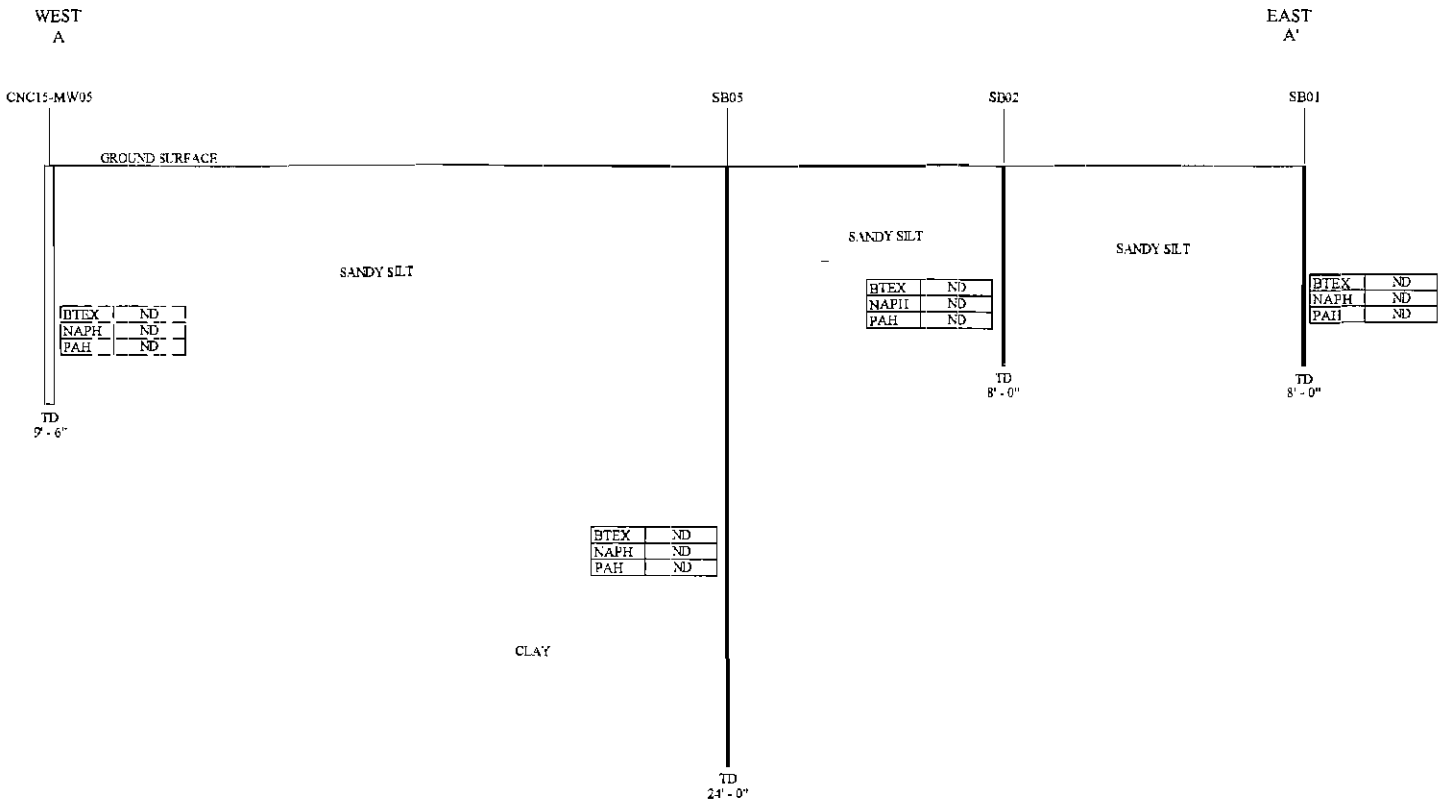
CADD NO. SDIV_AV.DWG – REV 0 – 1/20/98

ACAD: 0141GM02.dwg 10/26/99 HJP



DRAWN BY HJP 10/25/99 DATE			CONTRACT NO. 0141
CHECKED BY DATE		GROUNDWATER COC MAP SITE 15, QUARTERS "O" ZONE B, CHARLESTON NAVAL COMPLEX NORTH CHARLESTON, SOUTH CAROLINA	APPROVED BY DATE
COST/SCHED-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 5 / REV. 0

FORM CADD NO. SDIV_AV.DWG – REV 0 – 1/20/98



LEGEND

MONITORING WELL OR BORING NUMBER — SB05

GROUND SURFACE

WELL OR BORING

TOTAL DEPTH OF BORING OR WELL (BGS) — TD 8' - 0"

BTEX	ND
NAPH	ND
PAH	ND

SOIL PARAMETER CONCENTRATIONS (mg/kg)

BTEX	ND
NAPH	ND
PAH	ND

GROUNDWATER PARAMETER CONCENTRATIONS (µg/L)

BTEX - BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES

NAPH - NAPHTHALENE

PAH - POLYNUCLEAR AROMATIC HYDROCARBONS

ND - NOT DETECTED (BELOW LABORTORY DETECTION LIMITS)

0 5 10
HORIZONTAL SCALE IN FEET

0 5 10
VERTICAL SCALE IN FEET

S MAP WAS CREATED BY:
INTEGRATED SCIENCE & TECHNOLOGY, INC
CHARLESTON, SOUTH CAROLINA

THIS MAP WAS COMPILED FROM BASE DRAWINGS AND/OR SKETCHES SUPPLIED BY OTHERS. IT IS TO BE USED ONLY AS AN APPROXIMATE SOURCE OF REFERENCE. WE ASSUME NO RESPONSIBILITY FOR THE ACCURACY OF BASE MAP RELATED INFORMATION CONTAINED HEREIN

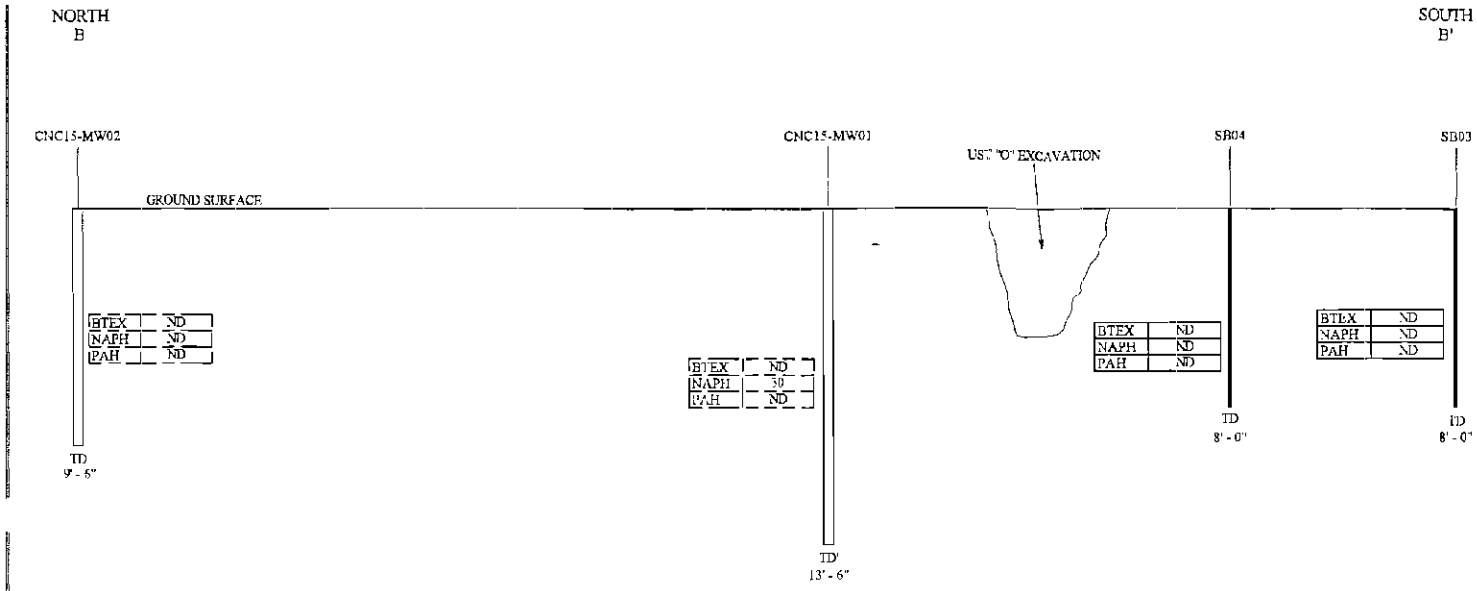
J.A. JONES ENVIRONMENTAL SERVICES

DRAWN BY: C. Broach	DATE: 08/29/2000
REVIEWED BY: B. Crawford	PROJECT NO
APPROVED BY: B. Crawford	DRAWING NO.: JA-02-01

GEOLOGIC CROSS SECTION A-A'

SITE 15, QUARTERS "O"
ZONE B, CHARLESTON NAVAL COMPLEX
NORTH CHARLESTON, SOUTH CAROLINA

FIGURE



LEGEND

MONITORING WELL OR BORING NUMBER — SB06

GROUND SURFACE

WELL OR BORING

TOTAL DEPTH OF BORING OR WELL (DGS) — TD 8' - 0"

BTEX	ND
NAPH	ND
PAH	ND

SOIL PARAMETER CONCENTRATIONS (mg/kg)

BTEX	ND
NAPH	ND
PAH	ND

GROUNDWATER PARAMETER CONCENTRATIONS (µg/L)

BTEX - BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES

NAPH - NAPHTHALENE

PAH - POLYNUCLEAR AROMATIC HYDROCARBONS

ND - NOT DETECTED (BELOW LABORTORY DETECTION LIMITS)

0 5 10
HORIZONTAL SCALE IN FEET

0 5 10
VERTICAL SCALE IN FEET

S MAP WAS CREATED BY:
EGRATED SCIENCE & TECHNOLOGY, INC.
CHARLESTON, SOUTH CAROLINA

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APPROVED BY: B. Crawford	DRAWING NO.: JA-02-02

GEOLOGIC CROSS SECTION B-B'

SITE 15, QUARTERS "O"
ZONE B, CHARLESTON NAVAL COMPLEX
NORTH CHARLESTON, SOUTH CAROLINA

FIGURE