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RESOURCE CONSERVATION AND RECOVERY ACT FACILITY INVESTIGATION WORK PLAN ADDENDUM ZONE K OFF SITE GROUNDWATER SAMPLING TECHNICAL MEMORANDUM CNC CHARLESTON SC
1/16/2001
ENSAFE

# ZONE K — NAVAL ANNEX RCRA FACILITY INVESTIGATION OFF-SITE GROUNDWATER SAMPLING TECHNICAL MEMORANDUM
# CHARLESTON NAVAL COMPLEX
# CHARLESTON, SC

DRAFT

SOUTHDIV CONTRACT
NUMBER: N62467-89-D-0318

**Prepared for:**

DEPARTMENT OF THE NAVY
SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORTH CHARLESTON, SOUTH CAROLINA

**Prepared by:**

ENSAFE INC.
5724 SUMMER TREES DRIVE
MEMPHIS, TENNESSEE 38134
(901) 372-7962

**January 16, 2001**

# DRAFT

## Air Force Charleston Air Force Base Comments On the Navy's Zone K – Naval Annex RCRA Facility Investigation Off-Site Groundwater Sampling Technical Memorandum

1. **Comment - Last sentence on page one of the introduction.** This sentence states the sampling strategy was to collect groundwater samples up gradient of the Naval Annex. The Charleston Air Force Base (CAFB) believes the statement should be written to reflect that sample strategy was based on the "possibility" that this area would be up gradient. No concrete evidence existed prior to the study indicating the up or down gradient direction.

2. **Comment - Last sentence in section 1.0 on page 3.** Again, the reference is made that CAFB is up gradient to the Navy property. CAFB believes the statement should read that CAFB was "believed" to be up gradient.

3. **Comment - Page 9.** "positive" is spelled incorrectly in the next to last sentence.

4. **Comment – Pages 11 and 12.** Request that any values above the MCLs be highlighted.

5. **Comment – Page 17, section 5.0.** The first sentence concludes that this sampling event proves that the chlorinated compounds in the Naval Annex are from multiple sources on and off-site. This statement seems a bit premature for this type of assumption or needs some more clarity added.

6. **Comment – Page 19, section 5.0.** The last sentence of the first paragraph states that there is a high probability that low levels of TCE at OFFGP009 are migrating to Navy Property. We feel this contradicts Fig 2! Also this sentence should read low levels "of" not "on".

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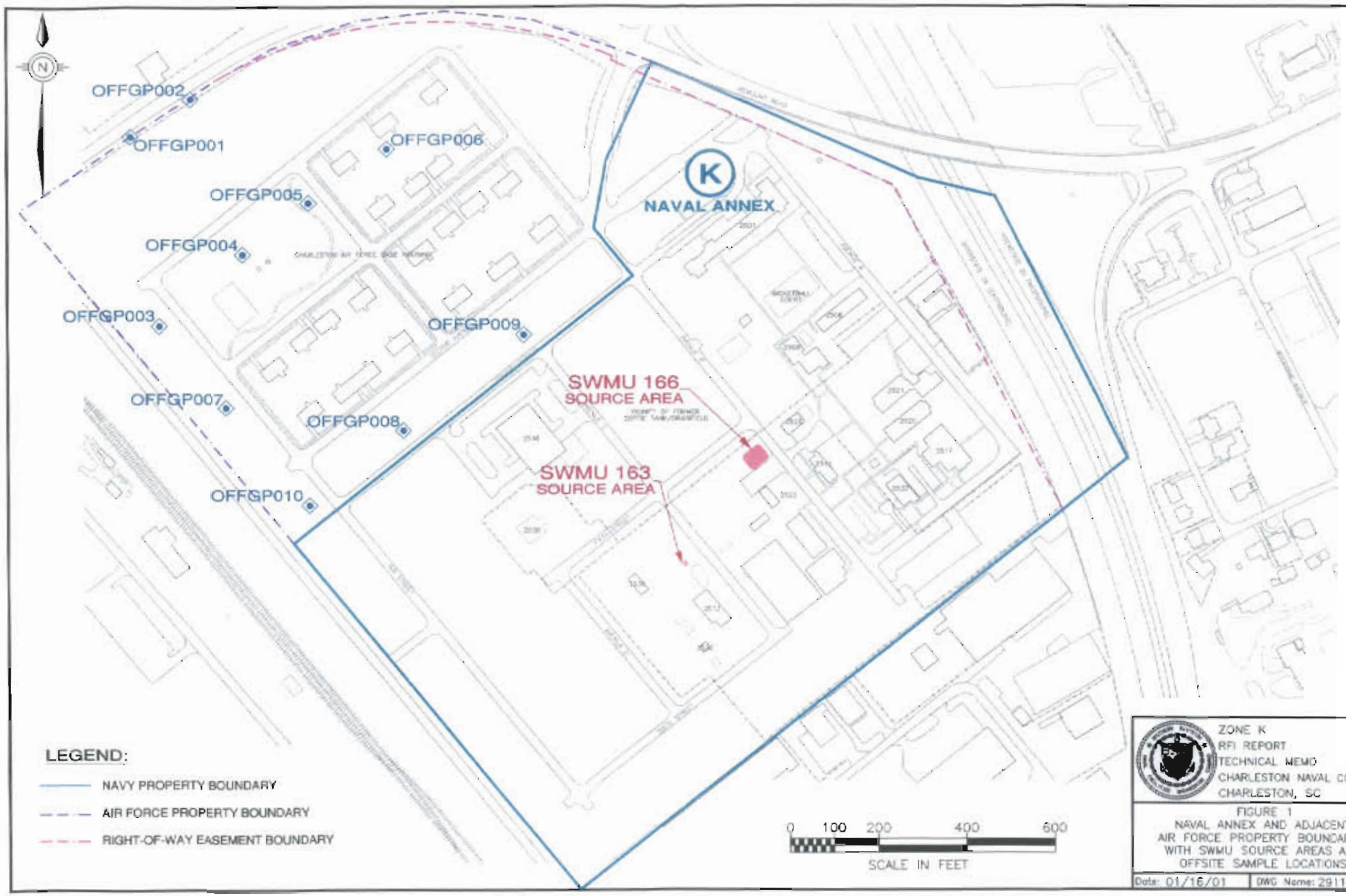
## 1.0 INTRODUCTION

The Naval Annex property located adjacent to Remount Road in North Charleston, South Carolina is the subject of an ongoing RCRA Facility Investigation (RFI) associated with a RCRA Part B Permit held by the Charleston Naval Complex (CNC). The CNC was divided into 12 investigative "zones" for management purposes and the Naval Annex is part of "Zone K" which includes CNC property that is not contiguous with the main portion of the CNC. Two sites on the Naval Annex, Solid Waste Management Units (SWMU) 163 and SWMU 166, have been identified as source areas for chlorinated solvents that have been detected in groundwater. Figure 1 depicts the location of the Naval Annex, adjacent properties, and the locations of the SWMU 163 and 166 source areas. In addition to the groundwater contaminant plumes associated with SWMUs 163 and 166, low levels of solvent contamination were detected in the deeper portion of the surficial aquifer upgradient of both SWMUs which suggests another unidentified source may be present as well. In December 1999, a vertical profiling technique was used to collect groundwater samples on a 200 foot grid in areas considered either upgradient or side gradient of both SWMUs. This phase of the investigation revealed consistent detections of chlorinated compounds (primarily TCE) at 10 of the 12 locations sampled, including upgradient locations GDKGP011, GDKGP012, and GDKGP013 along the northwestern Naval Annex property boundary. The highest concentrations were detected approximately 33 feet below ground surface at location GDKGP011. The December sampling event did not identify the source of the contamination in the deeper portion of the surficial aquifer in the northwestern portion of the Naval Annex. Based on those results however, the Navy hypothesized that contaminants could be migrating on to Navy property from an off-site (for purposes of this memo site is defined as the Naval Annex property) source resulting in co-mingled plumes.

In September 2000, a work plan which outlined a sampling strategy to collect additional groundwater samples upgradient of the Naval Annex was developed. The stated purpose of the


N
OFFGP002
OFFGP001
OFFGP006
OFFGP005
OFFGP004
OFFGP003
OFFGP009
OFFGP007
OFFGP008
OFFGP010
K
NAVAL ANNEX
SWMU 166
SOURCE AREA
SWMU 163
SOURCE AREA
LEGEND:
NAVY PROPERTY BOUNDARY
AIR FORCE PROPERTY BOUNDARY
RIGHT-OF-WAY EASEMENT BOUNDARY
0 100 200 400 600
SCALE IN FEET
ZONE K
RFI REPORT
TECHNICAL MEMO
CHARLESTON NAVAL COMPLE
CHARLESTON, SC
FIGURE 1
NAVAL ANNEX AND ADJACENT
AIR FORCE PROPERTY BOUNDARIES
WITH SWMU SOURCE AREAS AND
OFFSITE SAMPLE LOCATIONS
Date: 01/16/01
DWG Name: 2911C134

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sampling strategy was to collect the data necessary to determine if contamination detected at sample point GDKGP011:

- originated from a source on the Navy property;
- resulted from contamination migrating onto the Navy property from an offsite source;
- or is the result of co-mingled contamination from a source(s) on Navy property as well as an off-site source(s).

The study area encompassed the Charleston Air Force Base (CAFB) housing area which is adjacent to the northwestern boundary of the Naval Annex and a portion Remount Road right-of-way belonging to the South Carolina Department of Transportation (SCDOT). The area can generally be defined as the area between Fourth Street and Remount Road bounded along the NE side by Avenue B and along the SW side by Air Park Road. The vertical extent of the investigation was limited to the top of the Ashley Formation which serves as the bottom of the surficial aquifer. The CAFB property is upgradient of the Navy property and the Remount Road sample locations are upgradient of both the Navy and CAFB property.

## 2.0 FIELD WORK

Two deep rotasonic borings (GDKP13D and GDKP14D) were advanced in November 2000 at the north end of the Air Force housing area to further delineate the top of the Ashley Formation and identify any lithologic variations which could impact the vertical profile groundwater sampling. A deep and shallow piezometer pair was installed at each of the two boring locations to provide additional data points for groundwater elevation control. Additional groundwater sampling to determine the upgradient source of chlorinated solvent detections in deep groundwater was performed in November 2000 subsequent to installation of the piezometers. Ten direct push groundwater vertical profile locations (OFFGP001 through OFFGP010) were sampled at intervals of five feet through the saturated portion of the surficial aquifer. Figure 1 depicts off-site study sample and piezometer locations.

## 3.0 GEOLOGY

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Well construction and lithologic logs from off-site study piezometers GDKP013, GDKP13D, GDKP014, and GDKP14D are presented in Appendix A. Information from the two deep piezometers was used to extend contours for the top of Ashley Formation, and identify the Quaternary age clayey/silty fine sand (Qcs) and fine sand (Qs) members within overlying sediments.

Contours drawn using top of Ashley Formation elevation data are presented in Figure 2. Top of Ashley Formation contours depict a topographic high in the Ashley beneath the eastern portion of the Naval Annex north of Building 2520, and between Avenues A and B. The Air Force housing area is situated over the western flank of this high in the Ashley Formation which slopes very gently to the west.

Quaternary age sediments beneath the CAFB housing area are similar to those encountered on the Naval Annex. Qs in this area is approximately 35 feet in thickness, and is a fine to medium grained orange, grey, or brown sand with occasional fines and very fine mica. Qcs beneath the study area ranged from three to seven feet in thickness, and consisted of grey to dark grey clay, silt, and dark grey clayey fine sand with Phosphate nodules. A three foot thick clay interval which was encountered at a depth of 26.3 feet bgs in boring GDKP14D was observed in boring GDKP13D at a depth of 30.1 feet bgs as an 0.7 feet thick interval of very thin laminations. These laminations appear as reworked clay eroded from the clay interval observed at GDKP14D during sand deposition at GDKP13D. This clay is of limited areal extent and would only locally isolate deeper intervals from vertical communication.

# 4.0 GROUNDWATER

## 4.1 Hydrology

Groundwater flow at the Naval Annex has been documented in detail in previous RFI reports. The most recent RFI groundwater elevation contour maps from January, 2000 are presented in Appendix B. Groundwater measurements were subsequently made in select wells during the November, 2000 study to verify existing flow directions and determine if the offsite area was upgradient of the Naval Annex.

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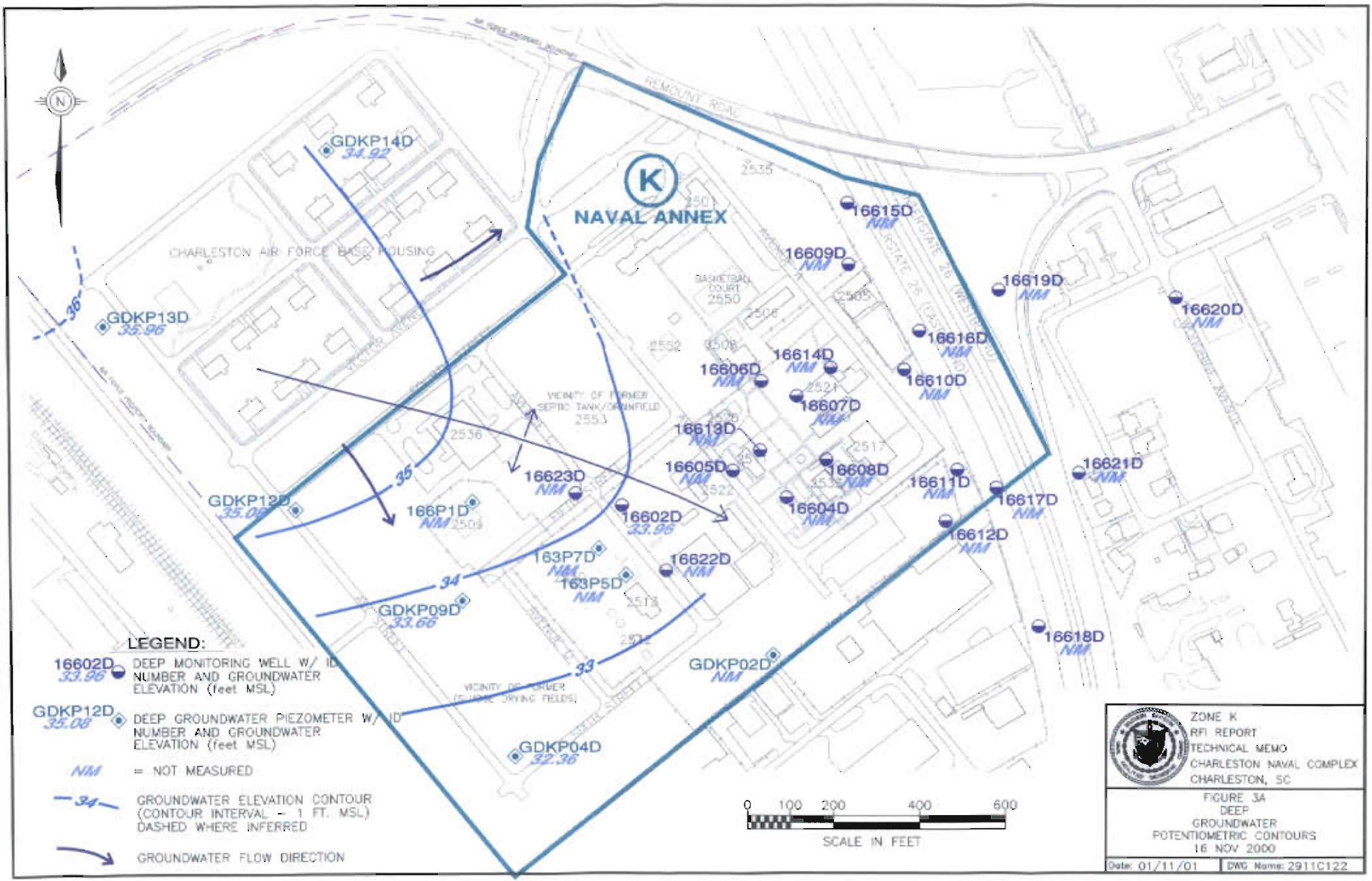
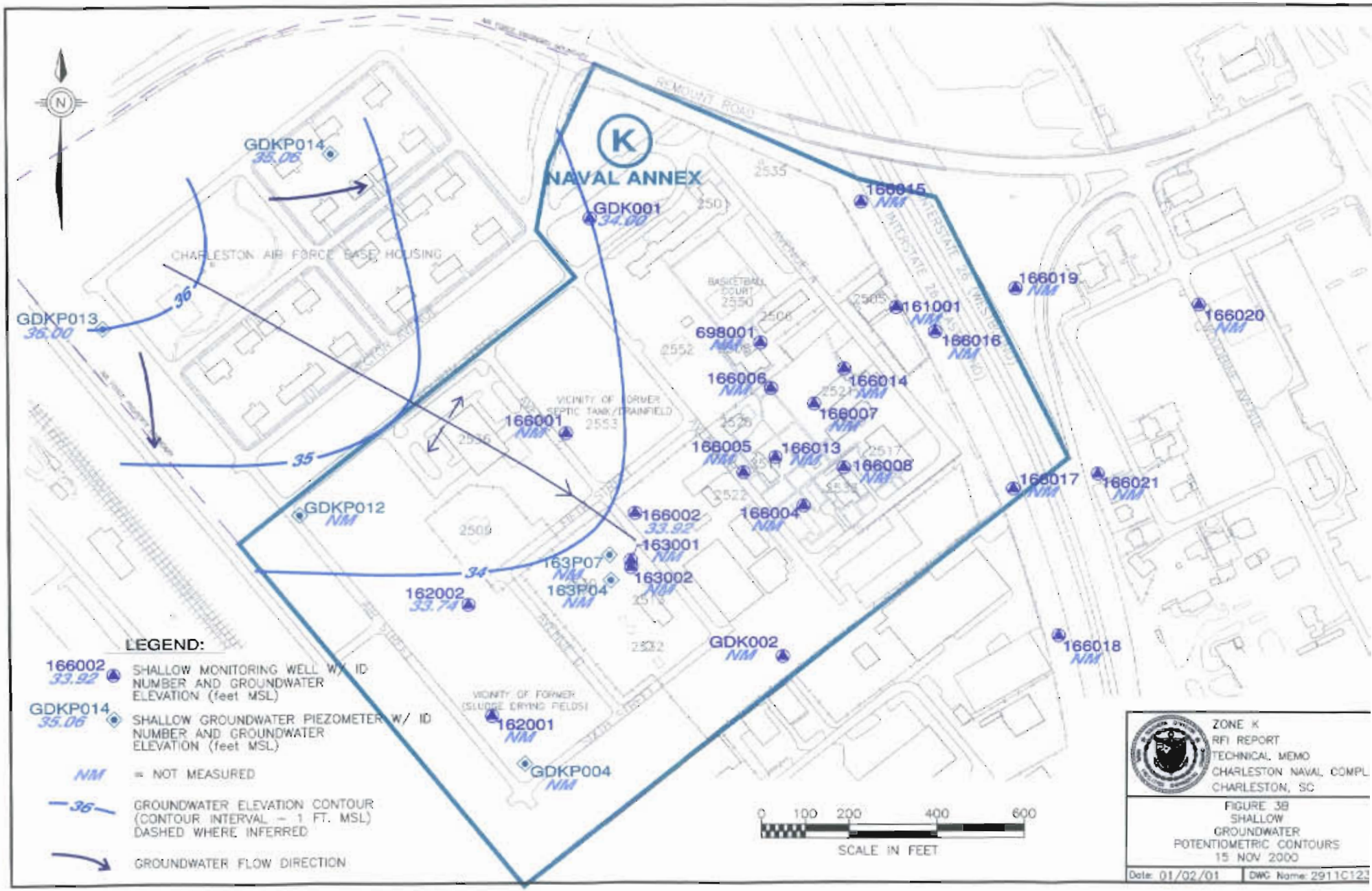
Deep groundwater elevations in November 2000 are lower than elevations in January 2000. Declines in deep groundwater elevations range from 0.48 feet at 16602D to 0.91 feet at GDKP12D, and averaged 0.79 feet for the four wells measured in both January and November, 2000. Elevation contours drawn on the November data from deep wells and piezometers illustrate that groundwater flow directions are essentially unchanged from January. The November contours also indicate that the area northwest of Fourth Street is upgradient of the Naval Annex. A groundwater divide trending east-southeast from the area near GDKP13D to the 16605D/16613D area is present based on the November 2000 data. This divide, as well as general groundwater flow directions are presented on Figure 3A.

Shallow groundwater elevation data from November show a similar but more variable decline in elevations from January, 2000. Declines in shallow groundwater elevation ranged from 0.07 feet at GDK001 to 1.26 feet at 162002, and averaged 0.60 feet for the three wells measured in January and November, 2000. However, the overall shallow groundwater contour pattern remained essentially unchanged from that of January. November groundwater elevation data from shallow wells and piezometers indicate that the area northwest of Fourth Street is upgradient of the Naval Annex. A groundwater divide trending east-southeast from a point just east of GDKP013 towards well 166002 is present based on the November 2000 data. This divide, as well as general groundwater flow directions are presented on Figure 3B.


NAVAL ANNEX
K
CHARLESTON AIR FORCE BASE HOUSING
REMOUNT ROAD
GDKP14D 34.92
GDKP13D 35.96
GDKP12D 35.08
GDKP09D 33.66
GDKP04D 32.36
GDKP02D NM
16615D NM
16609D NM
16619D NM
16620D NM
16616D NM
16614D NM
16606D NM
16610D NM
16607D NM
16613D NM
16605D NM
16608D NM
16611D NM
16604D NM
16621D NM
16617D NM
16612D NM
16618D NM
16623D NM
166P1D NM
16602D 33.96
16622D NM
163P7D NM
163P5D NM
36
35
34
33
LEGEND:
16602D 33.96 DEEP MONITORING WELL W/ ID NUMBER AND GROUNDWATER ELEVATION (feet MSL)
GDKP12D 35.08 DEEP GROUNDWATER PIEZOMETER W/ ID NUMBER AND GROUNDWATER ELEVATION (feet MSL)
NM = NOT MEASURED
34 GROUNDWATER ELEVATION CONTOUR (CONTOUR INTERVAL = 1 FT. MSL) DASHED WHERE INFERRED
GROUNDWATER FLOW DIRECTION
0 100 200 400 600
SCALE IN FEET
ZONE K
RFI REPORT
TECHNICAL MEMO
CHARLESTON NAVAL COMPLEX
CHARLESTON, SC
FIGURE 3A
DEEP
GROUNDWATER
POTENTIOMETRIC CONTOURS
16 NOV 2000
Date: 01/11/01
DWG Name: 2911C122


N
K
NAVAL ANNEX
CHARLESTON AIR FORCE BASE HOUSING
BEMOUNT ROAD
INTERSTATE 26
BASKETBALL COURT
VICINITY OF FORMER SEPTIC TANK/DRAINFIELD
VICINITY OF FORMER (SLUDGE DRYING FIELDS)
GDKP014 35.06
GDK001 34.00
GDKP013 35.00
GDKP012 NM
166002 33.92
163001 NM
163P07 NM
163002 NM
163P04 NM
162002 33.74
162001 NM
GDKP004 NM
GDK002 NM
166001 NM
166005 NM
166013 NM
166008 NM
166004 NM
166006 NM
166014 NM
166007 NM
698001 NM
161001 NM
166016 NM
166015 NM
166019 NM
166020 NM
166017 NM
166021 NM
166018 NM
36
35
34
LEGEND:
166002 33.92 SHALLOW MONITORING WELL W/ ID NUMBER AND GROUNDWATER ELEVATION (feet MSL)
GDKP014 35.06 SHALLOW GROUNDWATER PIEZOMETER W/ ID NUMBER AND GROUNDWATER ELEVATION (feet MSL)
NM = NOT MEASURED
36 GROUNDWATER ELEVATION CONTOUR (CONTOUR INTERVAL = 1 FT. MSL) DASHED WHERE INFERRED
GROUNDWATER FLOW DIRECTION
0 100 200 400 600
SCALE IN FEET
ZONE K
RFI REPORT
TECHNICAL MEMO
CHARLESTON NAVAL COMPL
CHARLESTON, SC
FIGURE 3B
SHALLOW
GROUNDWATER
POTENTIOMETRIC CONTOURS
15 NOV 2000
Date: 01/02/01
DWG Name: 2911C123

Water level data collected in March 1998 were used to determine vertical hydraulic gradients at the Naval Annex. Only four well pairs constructed adjacent to Interstate 26 and well pair 166002/16602D displayed upward vertical gradients ranging from 0.0005 to 0.073. All other wells had very slight downward vertical gradients ranging from 0.0005 at 166003/16603D to 0.148 at 166015/16615D. Vertical gradients at the new locations GDKP013/GDKP13D (0.0007) and GDKP014/GDKP14D (0.0029) are also slightly downward and are comparable in magnitude to what has been observed across the majority of the Naval Annex.

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## 4.2 Groundwater Sampling Methodology

Groundwater samples were collected from 10 off-site locations using direct push technology (DPT) vertical profiling techniques. Vertical profiling of groundwater is the collection of samples from descrete intervals throughout the saturated zone. Samples are collected at increasingly deeper depths without retracting the sampling device from the borehole. Frequency of sample collection is determined by aquifer heterogeneity and desired degree of detail. The groundwater sampler is advanced to the intial sampling depth using DPT equipment. A slightly positive hydraulic pressure is maintained in the sampler using de-ionized water from a graduated cylinder connected to a peristaltic pump. The positive pressure helps to reduce clogging of the sampler by fines and prevents inflow of water from non-sampled intervals. The volume of water lost from a graduated cylinder to the formation during the push is recorded. Twice the volume of de-ionized water lost to the formation is recovered and properly discarded prior to actual sample collection in order to minimize any flushed zone effects around the sampler. Groundwater is sampled from the purged interval and the sampler advanced to the next sampling depth after re-establishing positve hydraulic pressure in the sampler. Discrete groundwater sample intervals less than 0.5 feet in length began just below the water table (8 to 10 feet below ground surface) and every 5 feet thereafter with the target being the clayey sand overlying the Ashley Formation.

## 4.3 Offsite Water Quality

All groundwater samples were submitted to a SCDHEC certified laboratory for VOC analysis. Table 1 provides a summary of the compounds detected and the complete analytical data sets are presented in Appendix C. The initial step in the data evaluation process was a review of the analytical results of field and laboratory method blanks to assess the data for chemical artifacts which may have been introduced either in the field or the laboratory. Methylene chloride was the only analyte detected in blank samples. Detection of methylene chloride occurred only once in the method blanks (0.67 JB $\mu$g/L) and in only one field blank at 0.54 J $\mu$g/L. Consequently, data validation guidelines allow for methylene chloride detections of up to 10 times the blank concentration (in this case 6.7 $\mu$g/L) to be dismissed as an artifact. The maximum detection of methylene chloride in a groundwater sample was 4.4 J $\mu$g/L.

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VOCs were detected at 8 of the 10 locations sampled during this phase of the field investigation. There were no chlorinated solvent detections at locations OFFGP001 and OFFGP002 which were located in the Remount Road right-of-way. Excluding methylene chloride, a total of 12 different compounds were detected with one or more compounds being present at each of the 8 locations where hits occurred. There were no detections shallower than 25 feet bgs (again excluding methylene chloride).

The low level presence of TCE was nearly ubiquitous across the CAFB property with only location OFFGP010 not having any reported detections. Three detections out of the 15 reported exceeded the MCL for TCE which is 5 $\mu$g/L. Two of these detections occurred at OFFGP006 and the remaining exceedance was detected at OFFGP009. Very little breakdown of the TCE appears to be occurring due to the fact only 4 detections of DCE were reported. This is not surprising based on evidence gathered previously during two sampling events for the monitored natural attenuation parameters which indicated the aquifer conditions were not suitable for the natural biological degradation of chlorinated solvent constituents. Figure 4A presents a summary

Table 1

OFFSITE GROUNDWATER SAMPLING

PRIMARY SAMPLE HITS SUMMARY

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| Location | Depth | 1,1-Dichloroethane | 1,1-Dichloroethene | 1,2-Dichloroethene (Total) | 2-Butanone (MEK) | 2-Hexanone | Acetone | Benzene | Bromodichloromethane | Carbon tetrachloride | Chloroform | Methylene chloride | Toluene | Trichloroethene |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OFFGP003 | | | | | | | | | | | | | | |
| | 15 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.76J | ND | ND |
| | 25 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.57J | ND | ND |
| | 30 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.69J | ND | 0.42J |
| | 33 | ND | ND | ND | ND | ND | ND | ND | ND | 0.88J | 1.00J | ND | ND | 1.4J |
| | 39 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 1.1J |
| OFFGP004 | | | | | | | | | | | | | | |
| | 27 | ND | ND | ND | ND | ND | ND | ND | 2.0J | ND | 8.4 | ND | 2.1J | ND |
| | 30 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 1.1J | ND | 2.0J |
| | 33 | ND | ND | 0.92J | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.91J |
| | 39 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.82J | ND | ND |
| OFFGP005 | | | | | | | | | | | | | | |
| | 30 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 3.3J |
| OFFGP006 | | | | | | | | | | | | | | |
| | 30 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 17 |
| | 33 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 36 |
| | 36 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 4.6 |
| OFFGP007 | | | | | | | | | | | | | | |
| | 10 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.53J | ND | ND |
| | 25 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 1.0J | ND | ND |
| | 30 | ND | ND | ND | ND | ND | ND | ND | ND | 0.56J | ND | 4.4J | ND | ND |
| | 33 | 1.5J | 1.2J | ND | ND | ND | ND | ND | ND | 4.9J | ND | ND | ND | 1.2J |

Table 1

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OFFSITE GROUNDWATER SAMPLING

PRIMARY SAMPLE HITS SUMMARY

| Location | Depth | 1,1-Dichloroethane | 1,1-Dichloroethene | 1,2-Dichloroethene (Total) | 2-Butanone (MEK) | 2-Hexanone | Acetone | Benzene | Bromodichloromethane | Carbon tetrachloride | Chloroform | Methylene chloride | Toluene | Trichloroethene |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 36 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 1.1J |
| OFFGP008 | | | | | | | | | | | | | | |
| | 10 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.58JB | ND | ND |
| | 15 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.5JB | ND | ND |
| | 20 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.55JB | ND | ND |
| | 25 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 1.8J |
| | 30 | ND | ND | ND | 12J | ND | ND | ND | 2.3J | ND | 8.1 | 0.54JB | ND | 0.44J |
| | 35 | ND | ND | ND | 22JL | ND | 19J | ND | 0.71J | ND | 8 | 0.89JB | ND | 0.43J |
| | 40 | ND | ND | ND | 26 | 4.7J | 25J | 0.91J | 2.4J | ND | 8.5 | 0.84JB | ND | ND |
| OFFGP009 | | | | | | | | | | | | | | |
| | 27 | ND | ND | 1.2J | ND | ND | ND | 0.76J | ND | ND | ND | ND | ND | 18 |
| | 32 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 1.2J | ND | ND |
| | 35 | ND | ND | ND | ND | ND | ND | ND | ND | ND | 3.1J | ND | ND | ND |
| OFFGP010 | | | | | | | | | | | | | | |
| | 35 | 0.83J | 1.2J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |

***Note:*** Only sample depths with detections are presented.

Concentrations are in $\mu g/L$

ND - Not Detected

of the PCE, TCE, and DCE detections at the 10 off-site sample locations and 3 locations previously sampled on the Naval Annex which prompted this phase of work.

The only other detections which exhibited some sort of possible pattern or trend were the detections of carbon tetrachloride and chloroform. Carbon tetrachloride was detected at similar depth intervals (30 to 33 feet bgs) at locations OFFGP003 and OFFGP007 which are both along the southwestern boundary of the CAFB property. The southwestern property boundary is generally considered to be hydraulically upgradient of a portion of the CAFB property and the area of the Naval Annex that prompted this phase of the investigation. Chloroform is a degradation product formed during the breakdown of carbon tetrachloride. In addition to sampling location OFFGP003, chloroform was detected at OFFGP004, OFFGP008, and OFFGP009 which are all downgradient of OFFGP003. Methylene chloride can form as a degradation product of chloroform and was detected at each of the locations listed above. However, as mentioned earlier, there were no detections of methylene chloride in groundwater samples that exceeded 10 times the concentrations detected in QA/QC blanks. The presence of the blank contamination casts considerable doubt on whether or not the methylene chloride is actually present in the groundwater samples.

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Detections of the remaining compounds reported in the off-site groundwater samples can be described as sporadic at best. Since there are no consistent trends or discernable patterns to describe for the remaining compounds, and the presence of these compounds will not have an impact of the achieving the goal of this phase of the investigation, no attempt will be made to explain the detections in this memo.

### 4.4 Comparison of Offsite and Naval Annex Results

Distribution of detections by location, depth, and analyte were presented on Figure 4A. Trichloroethene was the predominant compound detected at concentrations ranging from 0.42j

μg/L at OFFGP003 to 36 μg/L at OFFGP006. Perchloroethene (PCE) was not detected in any of the off-site samples. Dichloroethene (DCE) was detected in only three samples; one each at locations OFFGP003, OFFGP007, and OFFGP010. Chlorinated solvent detections in December, 1999 at GDKGP011, GDKGP012, and GDKGP013 were predominantly TCE and ranged from 1 μg/L to 150 μg/L. PCE and DCE were also detected at these three previously sampled locations.

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Isoconcentration contours of the cumulative/total chlorinated solvent detection values (PCE, TCE, DCE and VC) at off-site and pre-existing vertical profile locations west of Avenue B are presented in Figure 4B. These contours illustrate overall distribution of detected chlorinated solvents in groundwater west of Avenue B. Cumulative/total data for the contours were generated by summing all detections of chlorinated solvents at a sample location. Since there were no off-site detections of chlorinated solvents at depths shallower than 25 feet bgs, only data for detections at depths equal to or greater than 25 feet bgs at each offsite study and at previously sampled locations were summed to determine the cumulative/total detection concentration values at each sampling location. The highest cumulative detections presented on Figure 4A were at 166VP006 (12,853 μg/L) and GDKGP011 (344 μg/L). Cumulative detections of 57.6 μg/L at OFFGP006 and 18 μg/L at OFFGP009 were the highest cumulative detections for offsite study locations, and are located in the eastern half of the housing area. Extremely low cumulative concentrations ranging from 1.2 μg/L to 3.83 μg/L were reported for the western half of the Air Force Housing area. These values are less than the reported laboratory quantitation limits, but above method detection limits and are estimated (j) values from the laboratory.

Cross-sections of chlorinated solvent detections in groundwater were developed for the offsite study area. These cross-sections extend into the previous investigation area south of Fourth Street and are combined with previously collected data for SWMU 166 and 163 studies. Isoconcentration contours were drawn using total analyte chlorinated solvent detections (PCE,

TCE, DCE and VC) from individual sample intervals at each location. Each cross-section also includes geologic units projected from contours developed using lithologic data. A groundwater elevation surface developed from November 2000 data is also indicated on each of the sections. A map depicting cross-section transects and four isoconcentration contour cross-sections (A-A', A-B, A-C, and A'-D) is presented as Figure 5. Three cross-sections (A-A', A-B, A-C) originate at A (OFFGP003) to depict concentrations along respective groundwater flow directions across the offsite area. Section A'-D essentially parallels groundwater elevation contours and is therefore perpendicular to flow.

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The very low concentrations of chlorinated solvents detected in offsite groundwater are from samples collected at depths of 25 feet or greater. GDKGP012 was the only location of the 19 selected for cross-section development that had detections shallower than 20 feet bgs. Detections at location GDKGP012 began with the shallowest interval and occurred in all but two of the 12 sample intervals. The highest detection of chlorinated solvents presented in these cross sections was 178 $\mu$g/L from a depth of 34 feet at location GDKP011.

## 5.0 CONCLUSIONS AND RECOMMENDATIONS

The analytical data from this sampling event indicates that the detections of chlorinated compounds along the NW property boundary of the Naval Annex are most likely the result co-mingled contaminant plumes from multiple sources, both on and off-site. The only area that was eliminated as a possible source area for the contaminants detected on both the Naval Annex and the CAFB properties is the area NW of sample locations OFFGP001 and OFFGP002. These sample points are in the Remount Road right-of-way and are considered to be at least partially hydraulically up gradient of both properties. There were no detections of VOCs at either of those sampling locations.

On the CAFB property, low concentrations of VOCs were detected in groundwater at each of the 8 sampling locations. With the questionable exception of methylene chloride, there were not VOC detections in groundwater shallower than 27 feet below ground surface. In the deep portion of the surficial aquifer, sample location OFFGP003 represents the most up gradient location sampled. A groundwater divide trends NW-SE from location OFFGP003 on the CAFB property and extends across the Naval Annex has a substantial influence on the distribution of the dissolved phase contaminants migrating under the CAFB property toward the Naval Annex. Groundwater flow along the axis is divergent which would tend to direct any dissolved phase contaminants to either the NE or SW depending on which side of the axis the contaminants are located. This is significant because the primary intent of this phase of the investigation was to determine the origin of contaminants at location GDKGP011 where the highest detections of chlorinated compounds occurred along the Navy/CAFB property boundary. GDKGP011 is on the SE side of the groundwater divide whereas the highest detections of TCE detected on the CAFB property were on the NE side at OFFGP006 and OFFGP009. The divide creates a natural physical barrier that precludes any relationship between what was detected at GDKGP011 on the Navy property and what was detected at locations OFFGP004, OFFGP005, OFFGP006, and OFFGP009 on the CAFB property. Based on the prevailing groundwater flow directions, there is a high probability that low levels on TCE observed at OFFGP009 are migrating on to Navy property.

Data from sample locations OFFGP003, OFFGP007, OFFGP008, and OFFGP010 located on the SW side of the groundwater divide provide an indication of groundwater contaminants that are co-mingling with contaminants detected on the Navy property at GDKGP011. Contaminant concentrations show little increase along the groundwater flow path between OFFGP003 and OFFGP008 but increase significantly between OFFGP008 and GDKGP011. As a result, the higher concentrations observed at GDKGP011 are not likely to be from an up gradient (off-site) source. The detection of VOCs at locations OFFGP003, OFFGP007, and OFFGP010 is an indication that contaminants originating from somewhere up gradient of the CAFB property are

migrating under the CAFB and on to the Naval Annex where the contaminants are co-mingling with a plume of higher concentrations. In addition to the prevailing groundwater flow direction and concentration gradients, the up gradient presence of carbon tetrachloride and it's degradation product chloroform provides additional evidence to support the assertion that a contaminant plume emanating from a separate source area exists.

DRAFT

No additional off-site characterization is warranted at this time. Additional groundwater sampling being proposed in the Zone K RFI Work Plan Addendum will address portions of the Naval Annex that are down gradient of sample location OFFGP009 to determine the extent of the plume in that area. The extent of the elevated detections of chlorinated compounds detected at GDKGP011 has been adequately defined for purposes of the RFI and no additional sampling is proposed in this area.

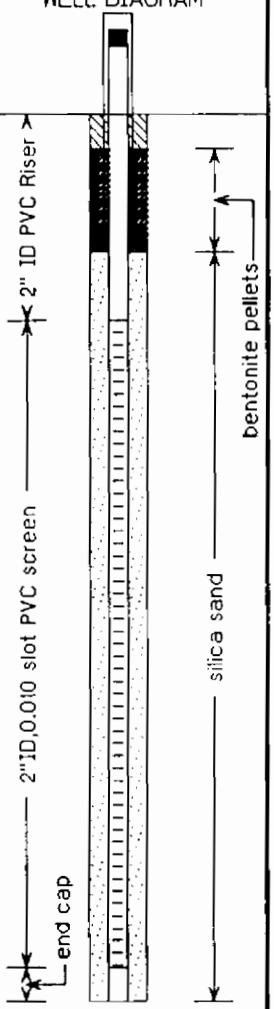
# ENSAFE

# Monitoring Well NBCKGDKP013

| | |
|---|---|
| Project: *ZONE K Charleston Naval Complex* | Coordinates: *2298880.9 E, 388483.5 N* |
| Location: *Charleston, SC* | Surface Elevation: *42.9 feet msl* |
| Started at *0745 on 11/10/00* | TOC Elevation: *45.32 feet msl* |
| Completed at *0930 on 11/10/00* | Depth to Groundwater: *9.32 feet TOC* Measured: *11/15/00* |
| Drilling Method: *Boart-Longyear (Rotasonic 6.5" OD casing)* | Groundwater Elevation: *36.00 feet msl* |
| Drilling Company: *Atlantic Drilling Corp (SC Cert #1210)* | Total Depth: *13.0 feet* |
| Geologist: *P. Bayley* | Well Screen: *3.0 to 12.5 feet* |

| DEPTH IN FEET | LITHOLOGIC SAMPLE | ANALYTICAL SAMPLE | SAMPLE NO. | OVA (ppm) | % RECOVERY | GRAPHIC LOG | SOIL CLASS | GEOLOGIC DESCRIPTION | ELEV. (ft-msl) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | ML | Surface conditions: grass | |
| | | | | | | | SM | Silt: orange brown; sandy-very fine; dry. | 42.2 |
| | | | | | | | SM | Sand: orange-brown; very fine to fine, silty; dry. | 40.2 |
| 5 | | | 1 | | 54 | | SP SM | Sand: lt brown; very fine to fine, some silt to silty; trace very fine mica; wet, loose. @6.6 ft.: grades to lt grey-brown; very fine to fine, some silt. @7.5 ft.: grades to lt brownish-grey; w/thin lt brown laminae. | 37.9 |
| | | | | | | | SP | Sand: dark brown; very fine, trace to some silt; rootlets; wet, loose. | 34 / 33.4 |
| 10 | | | 2 | | 90 | | SP | Sand: lt grey-brown; very fine to fine, some silt, trace very fine mica; wet, loose. @10.5 to 12.0 ft.: trace to some silt. | 32.9 |
| | | | | | | | SP | Sand: brown; very fine to fine, trace silt; trace very fine black grains; wet, loose-soupy. | |
| 15 | | | 3 | | 96 | | SP | @15.0 to 17.7 ft.: color change to lt brown. @17.2 and 17.6 ft.: very thin micaceous laminae. @17.3 to 17.7 ft.: orange-brown. | 28.1 / 27.9 |
| | | | | | | | SP | Sand: lt grey-brown, w/occasional very thin dark grey laminae; very fine to fine, trace silt; wet, loose. from GDKP13D log | |
| 20 | | | | | | | | | |

WELL DIAGRAM



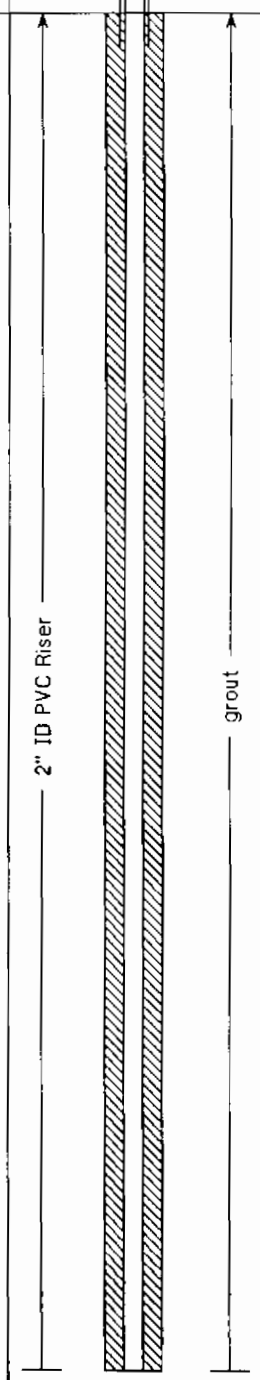
# ENSAFE

# Monitoring Well NBCKGDKP13D

| | |
|---|---|
| Project: *ZONE K Charleston Naval Complex* | Coordinates: *2298883.8 E, 388479.7 N* |
| Location: *Charleston, SC* | Surface Elevation: *42.9 feet msl* |
| Started at *1400 on 11/9/00* | TOC Elevation: *45.33 feet msl* |
| Completed at *1730 on 11/9/00* | Depth to Groundwater: *9.35 feet TOC* Measured: *11/15/00* |
| Drilling Method: *Boart-Longyear (Rotasonic 6.5" OD casing)* | Groundwater Elevation: *35.98 feet msl* |
| Drilling Company: *Atlantic Drilling Corp (SC Cert #1210)* | Total Depth: *42.5 feet* |
| Geologist: *P. Bayley* | Well Screen: *37.5 to 42.0 feet* |

| DEPTH IN FEET | LITHOLOGIC SAMPLE | ANALYTICAL SAMPLE | SAMPLE NO. | OVA (ppm) | % RECOVERY | GRAPHIC LOG | SOIL CLASS | GEOLOGIC DESCRIPTION | ELEV. (ft-msl) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | ML | Surface conditions: grass | |
| | | | | | | | SM | Silt: orange brown; sandy-very fine; dry. | 42.2 |
| | | | | | | | SM | Sand: orange-brown; very fine to fine, silty; dry. | 40.2 |
| 5 | | | 1 | | 54 | | | Sand: lt brown; very fine to fine, some silt to silty; trace very fine mica; wet, loose. | 37.9 |
| | | | | | | | SP SM | @6.6 ft.: grades to lt grey-brown; very fine to fine, some silt. @7.5 ft.: grades to lt brownish-grey; w/thin lt brown laminae. | 34 |
| | | | | | | | SP | Sand: dark brown; very fine, trace to some silt; rootlets; wet, loose. | 33.4 |
| 10 | | | 2 | | 90 | | | Sand: lt grey-brown; very fine to fine, some silt, trace very fine mica; wet, loose. @10.5 to 12.0 ft.: trace to some silt. | 32.9 |
| | | | | | | | SP | Sand: brown; very fine to fine, trace silt; trace very fine black grains; wet, loose-soupy. | |
| 15 | | | 3 | | 96 | | | @15.0 to 17.7 ft.: color change to lt brown. | 28.1 27.9 |
| | | | | | | | SP | @17.2 and 17.6 ft.: very thin micaceous laminae. @17.3 to 17.7 ft.: orange-brown. | |
| | | | | | | | | Sand: lt grey-brown, w/occasional very thin dark grey laminae; very fine to fine, trace silt; wet, loose. | |
| 20 | | | | | | | | | |

WELL DIAGRAM



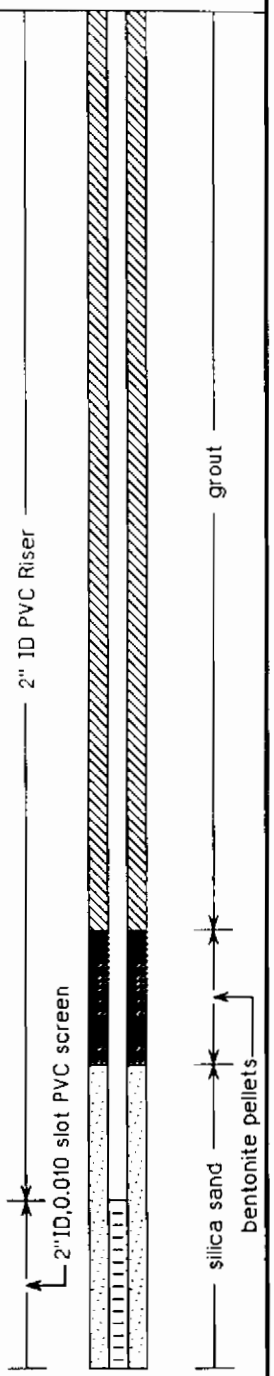
# ENSAFE

# Monitoring Well NBCKGDKP13D

| | |
|---|---|
| Project: *ZONE K Charleston Naval Complex* | Coordinates: *2298883.8 E, 388479.7 N* |
| Location: *Charleston, SC* | Surface Elevation: *42.9 feet msl* |
| Started at *1400 on 11/9/00* | TOC Elevation: *45.33 feet msl* |
| Completed at *1730 on 11/9/00* | Depth to Groundwater: *9.35 feet TOC* Measured: *11/15/00* |
| Drilling Method: *Boart-Longyear (Rotasonic 6.5" OD casing)* | Groundwater Elevation: *35.98 feet msl* |
| Drilling Company: *Atlantic Drilling Corp (SC Cert #1210)* | Total Depth: *42.5 feet* |
| Geologist: *P. Bayley* | Well Screen: *37.5 to 42.0 feet* |

| DEPTH IN FEET | LITHOLOGIC SAMPLE | ANALYTICAL SAMPLE | SAMPLE NO. | OVA (ppm) | % RECOVERY | GRAPHIC LOG | SOIL CLASS | GEOLOGIC DESCRIPTION | ELEV. (ft-msl) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | @20.0, 20.4 and 22.3 ft.: some mica. | |
| | | | | | | | | @24.0 to 25.0 ft.: brown. @24.0 ft.: 0.2 ft thick micaceous lamination. | |
| | | | | | | | | @24.5 to 25.0 ft.: w/occasional thin dark brown laminations w/some disseminated mica. | |
| 25 | | | 4 | | 100 | | | Sand: lt brown; very fine to fine, trace silt; trace very fine mica; wet, loose. | |
| | | | | | | | SP | @25.4 to 26.6 ft.: orange and lt orange. @25.6 & 26.6 ft.: micaceous. @26.2 to 26.6 ft.: coarser to medium sand and slight increase in mica. @26.6 to 27.5 ft.: orange and brown mottled, some mica. | |
| | | | | | | | | @27.5 to 28.1 ft.: orange and lt brown laminated, w/very thin lavender brown clay partings. @28.1 to 28.6 ft.: brown; w/some mica. | |
| 30 | | | | | | | | Sand: red-orange; very fine to fine/medium, trace silt; w/trace clay partings; wet, loose. | |
| | | | | | | | | @30.1 to 31.8 ft.: grades to lt orange-brown w/occasional thin lavender-brown clay laminations. | |
| | | | | | | | | Sand: orange-brown; very fine to fine; trace silt; wet, loose. | |
| | | | | | | | | @33.8 to 35.0 ft.: grades to lt brown. | |
| 35 | | | 5 | | 100 | | | | 7.9 |
| | | | | | | | SC | Sand: dark-grey; very fine to fine, w/orange-grey clayey silt; wet, soft, plastic. @36.2 to 37.3 ft.: pebbly (P04 nodules), and shells in sand matrix. | |
| | | | | | | | | | 5.6 |
| | | | | | | | OH CH | Clay: dark grey-black; silty; wet, firm to stiff, plastic. | |
| | | | | | | | | | 4.1 |
| | | | | | | | OL CL | Clay: dark grey-brown; silty; soft, wet, plastic. @39.5 to 39.7 ft.: pods of dk grey sandy silt w/shell fragments. | |
| 40 | | | | | | | ML | | 2.9 |

WELL DIAGRAM



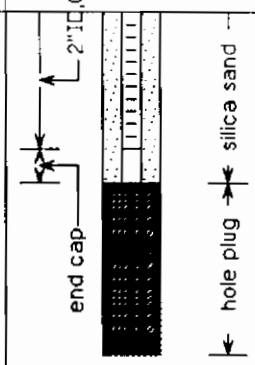
# ENSAFE

## Monitoring Well NBCKGDKP13D

| | |
|---|---|
| Project: *ZONE K Charleston Naval Complex* | Coordinates: *2298883.8 E, 388479.7 N* |
| Location: *Charleston, SC* | Surface Elevation: *42.9 feet msl* |
| Started at *1400 on 11/9/00* | TOC Elevation: *45.33 feet msl* |
| Completed at *1730 on 11/9/00* | Depth to Groundwater: *9.35 feet TOC* Measured: *11/15/00* |
| Drilling Method: *Boart-Longyear (Rotasonic 6.5" OD casing)* | Groundwater Elevation: *35.98 feet msl* |
| Drilling Company: *Atlantic Drilling Corp (SC Cert #1210)* | Total Depth: *42.5 feet* |
| Geologist: *P. Bayley* | Well Screen: *37.5 to 42.0 feet* |

| DEPTH IN FEET | LITHOLOGIC SAMPLE | ANALYTICAL SAMPLE | SAMPLE NO. | OVA (ppm) | % RECOVERY | GRAPHIC LOG | SOIL CLASS | GEOLOGIC DESCRIPTION | ELEV. (ft-msl) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | ML | Silt: lt grey; clayey; wet, soft, plastic. | 2.9 |
| | | | | | | | ML CL | Silt: olive-brown & grey; clayey; wet, firm to stiff, plastic. | .9 |
| 45 | | | 6 | | 100 | | | | 2.1 |
| 50 | | | | | | | | | |
| 55 | | | | | | | | | |
| 60 | | | | | | | | | |

WELL DIAGRAM



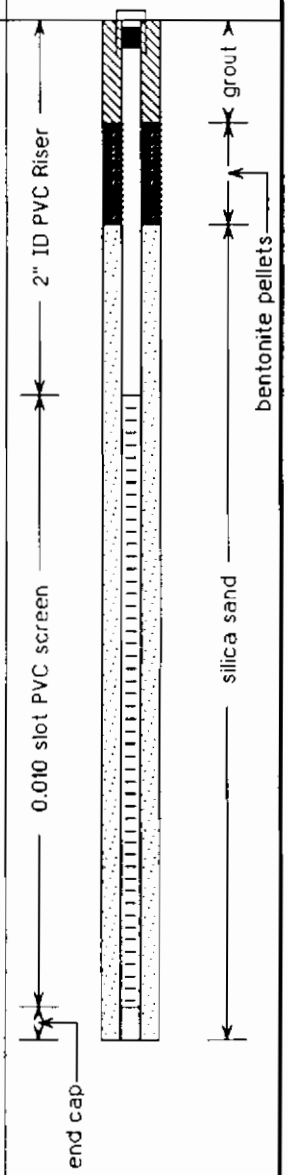
# ENSAFE

# Monitoring Well NBCKGDKP014

| | |
|---|---|
| Project: *ZONE K Charleston Naval Complex* | Coordinates: *2299400.4 E, 388888.4 N* |
| Location: *Charleston, SC* | Surface Elevation: *43.6 feet msl* |
| Started at *1530 on 11/10/00* | TOC Elevation: *43.56 feet msl* |
| Completed at *1630 on 11/10/00* | Depth to Groundwater: *8.50 feet TOC* Measured: *11/15/00* |
| Drilling Method: *Boart-Longyear (Rotasonic 6.5" OD casing)* | Groundwater Elevation: *35.06 feet msl* |
| Drilling Company: *Atlantic Drilling Corp (SC Cert #1210)* | Total Depth: *15.0 feet* |
| Geologist: *P. Bayley* | Well Screen: *5.5 to 14.5 feet* |

| DEPTH IN FEET | LITHOLOGIC SAMPLE | ANALYTICAL SAMPLE | SAMPLE NO. | OVA (ppm) | % RECOVERY | GRAPHIC LOG | SOIL CLASS | GEOLOGIC DESCRIPTION | ELEV. (ft-msl) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | ML | Surface conditions: grass<br>Silt: brown; soft, dry. | 42.5 |
| | | | | | | | CL | Clay: red-orange; some silt, trace sand-very fine; dry. | 41.9 |
| | | | | | | | SP | | 41.4 |
| | | | | | | | CL | Sand: lt brown; very fine to fine, trace silt; dry. | 40.6 |
| | | | | | | | | Clay: orange-brown w/very thin black laminae; silty, trace sand-very fine; moist, firm to stiff, plastic. | |
| 5 | | | 1 | | 60 | | SP | Sand: lt brown; very fine, trace silt; dry, loose. | 38.6 |
| | | | | | | | SM | Sand: orange-brown; very fine, silty, trace clay; wet. | 36.8<br>35.9 |
| 10 | | | | | | | | | |
| | | | | | | | SP | Sand: orange; very fine, trace to some silt, trace very fine black grains and trace very fine mica; wet, loose to soupy. | 30.4 |
| 15 | | | 2 | | 27 | | SP SM | Sand: orange and lt grey banded @ 0.2 ft intervals; very fine to fine, some silt to silty; w/trace very fine mica; wet, loose. @15.2 and 15.7 ft.: micaceous parting. @15.8 to 16.0 ft.: grey w/some mica. @16.4 to 17.9 ft.: grey -brown w/decreasing olive-brown; micaceous laminae, and dissemninated very fine mica throughout. | 28.8<br>25.7 |
| | | | | | | | SP | Sand: lt greenish-grey; very fine to fine, trace to some silt; trace very fine mica; wet, loose. | |
| 20 | | | | | | | | Sand: orange; (from GDKP14D log) | |

WELL DIAGRAM



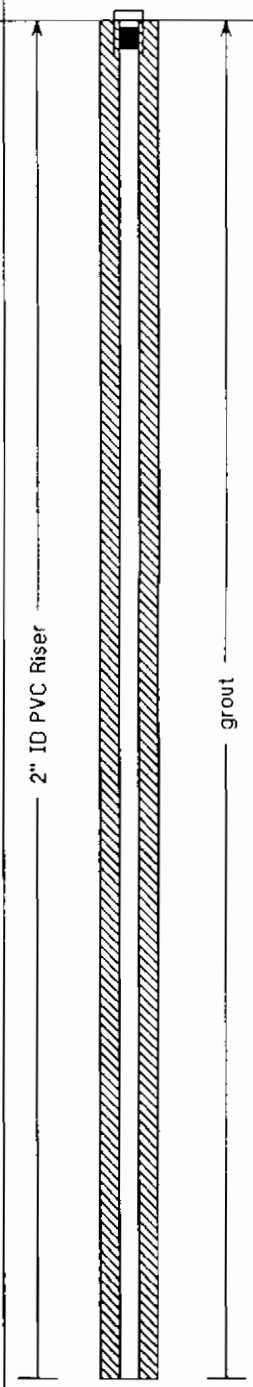
# ENSAFE

# Monitoring Well NBCKGDKP14D

| | |
|---|---|
| Project: *ZONE K Charleston Naval Complex* | Coordinates: *2299404.0 E, 388891.2 N* |
| Location: *Charleston, SC* | Surface Elevation: *43.6 feet msl* |
| Started at *1025 on 11/10/00* | TOC Elevation: *43.47 feet msl* |
| Completed at *1500 on 11/10/00* | Depth to Groundwater: *8.52 feet TOC* Measured: *11/15/00* |
| Drilling Method: *Boart-Longyear (Rotasonic 7.5" OD casing)* | Groundwater Elevation: *34.95 feet msl* |
| Drilling Company: *Atlantic Drilling Corp (SC Cert #1210)* | Total Depth: *39.0 feet* |
| Geologist: *P. Bayley* | Well Screen: *34.3 to 38.8 feet* |

| DEPTH IN FEET | LITHOLOGIC SAMPLE | ANALYTICAL SAMPLE | SAMPLE NO. | OVA (ppm) | % RECOVERY | GRAPHIC LOG | SOIL CLASS | GEOLOGIC DESCRIPTION | ELEV. (ft-msl) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Surface conditions: grass | |
| | | | | | | | ML | Silt: brown; soft, dry. | 42.5 |
| | | | | | | | CL | Clay: red-orange; some silt, trace sand-very fine; dry. | 41.9 |
| | | | | | | | SP | | 41.4 |
| | | | | | | | CL | Sand: lt brown; very fine to fine, trace silt; dry. | 40.6 |
| | | | | | | | | Clay: orange-brown w/very thin black laminae; silty, trace sand-very fine; moist, firm to stiff, plastic. | |
| 5 | | | 1 | | 60 | | SP | Sand: lt brown; very fine, trace silt; dry, loose. | 38.6 |
| | | | | | | | SM | Sand: orange-brown; very fine, silty, trace clay; wet. | 36.8 |
| | | | | | | | | | 35.9 |
| 10 | | | | | | | | | |
| | | | | | | | SP | Sand: orange; very fine, trace to some silt, trace very fine black grains and trace very fine mica; wet, loose to soupy. | 30.4 |
| 15 | | | 2 | | 27 | | SP SM | Sand: orange and lt grey banded @ 0.2 ft intervals; very fine to fine, some silt to silty; w/trace very fine mica; wet, loose. @15.2 and 15.7 ft.: micaceous parting. @15.8 to 16.0 ft.: grey w/some mica. @16.4 to 17.9 ft.: grey -brown w/decreasing olive-brown; micaceous laminae, and dissemninated very fine mica throughout. | 28.8 |
| | | | | | | | SP | Sand: lt greenish-grey; very fine to fine, trace to some silt; trace very fine mica; wet, loose. | 25.7 |
| 20 | | | | | | | | Sand: orange; very fine to fine, trace to some | |

WELL DIAGRAM



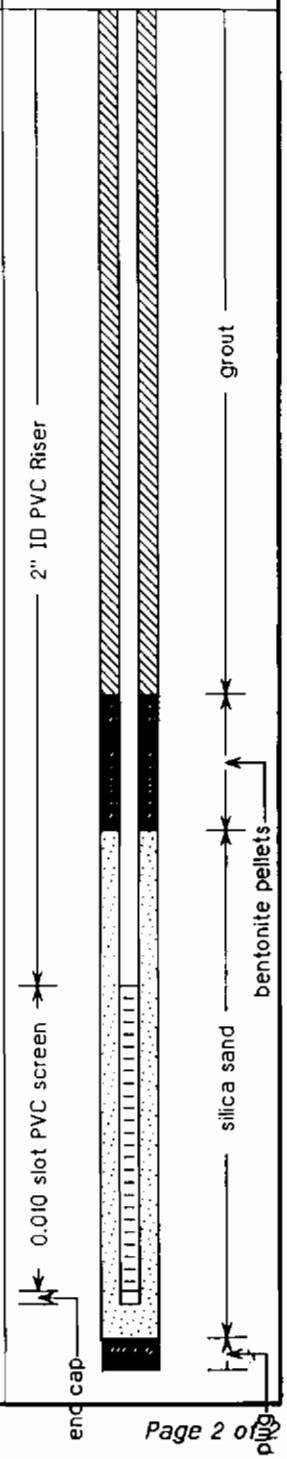
# ENSAFE

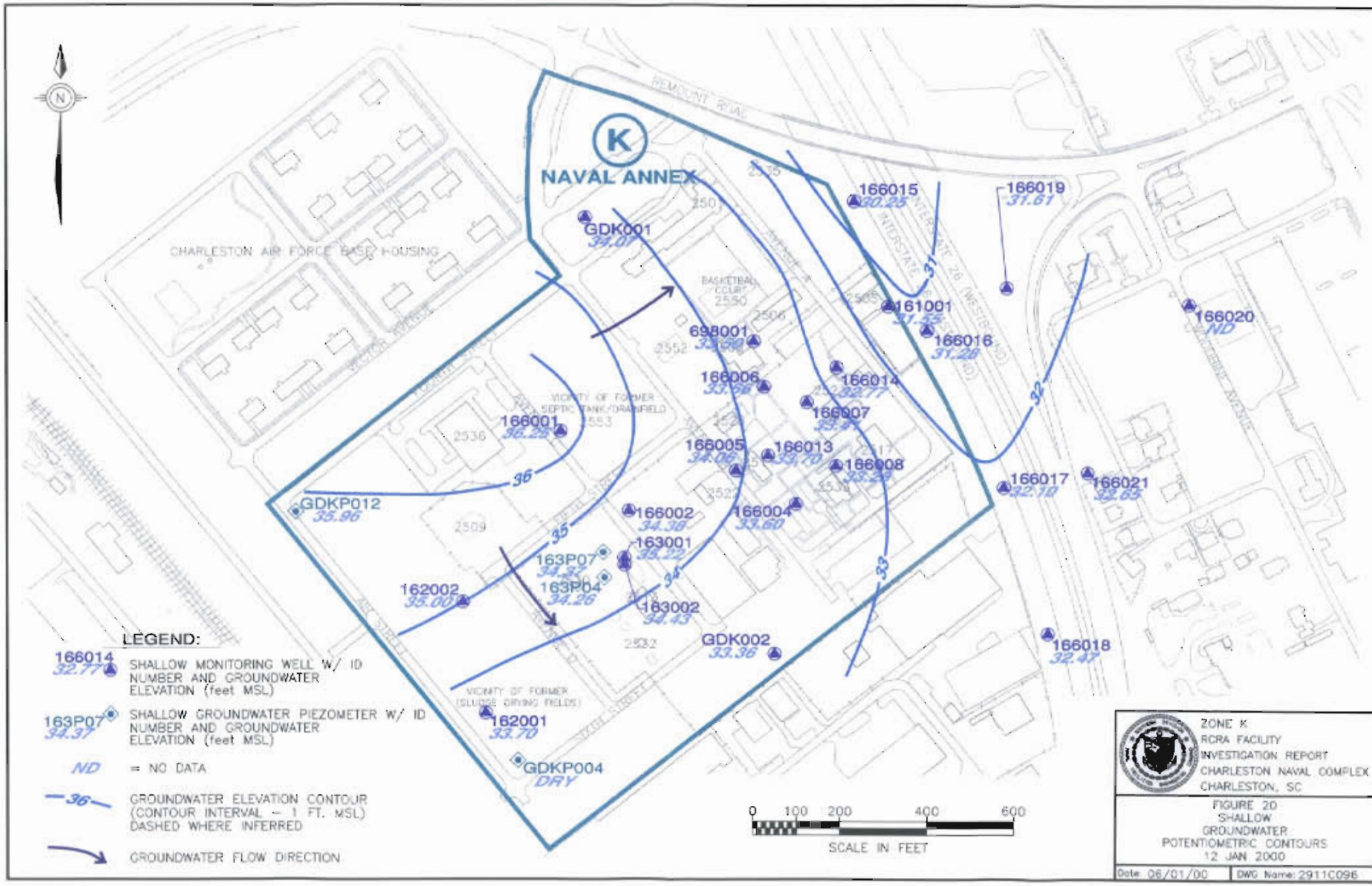
# Monitoring Well NBCKGDKP14D

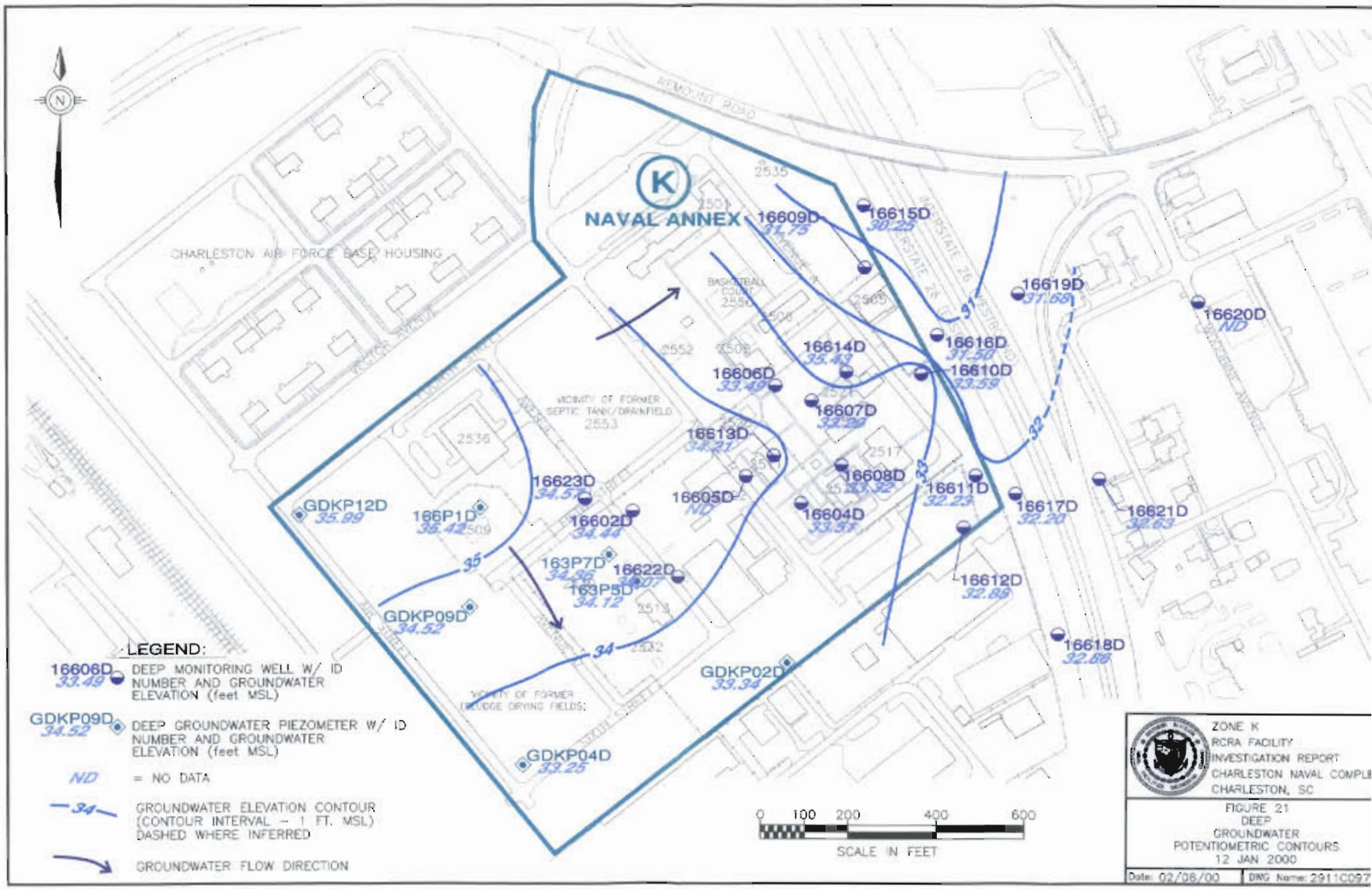
| | |
|---|---|
| Project: *ZONE K Charleston Naval Complex* | Coordinates: *2299404.0 E, 388891.2 N* |
| Location: *Charleston, SC* | Surface Elevation: *43.6 feet msl* |
| Started at *1025 on 11/10/00* | TOC Elevation: *43.47 feet msl* |
| Completed at *1500 on 11/10/00* | Depth to Groundwater: *8.52 feet TOC* Measured: *11/15/00* |
| Drilling Method: *Boart-Longyear (Rotasonic 7.5" OD casing)* | Groundwater Elevation: *34.95 feet msl* |
| Drilling Company: *Atlantic Drilling Corp (SC Cert #1210)* | Total Depth: *39.0 feet* |
| Geologist: *P. Bayley* | Well Screen: *34.3 to 38.8 feet* |

| DEPTH IN FEET | LITHOLOGIC SAMPLE | ANALYTICAL SAMPLE | SAMPLE NO. | OVA (ppm) | % RECOVERY | GRAPHIC LOG | SOIL CLASS | GEOLOGIC DESCRIPTION | ELEV. (ft-msl) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | SP | silt; wet, loose. @20.7, 20.9, 21.2 to 21.4, 21.8, and 22.5 ft.: very thin orange clay partings. | |
| 25 | | | 3 | | 118 | | | Sand: orange; very fine, some silt; trace very fine mica; wet, loose. | 17.3 |
| | | | | | | | CL | Clay: lavender-brown; silty; some sand-very fine; wet, very soft, plastic; w/some very thin silty sand pods/laminae. | 14.3 |
| 30 | | | | | | | SM SC | Sand: lavender-brown; very fine, silty, some clay; w/trace very fine mica. @30.0 to 31.1 ft.: w/some very thin lavender brown clay partings & laminae of very fine sand w/trace silt. | 12.5 |
| | | | | | | | SP | Sand: brown w/some orange mottle, and some very thin dark grey-brown laminae which increase w/depth; very fine to fine, trace to some silt; wet, loose. | |
| 35 | | | 4 | | 100 | | | Sand: grey; very fine to fine, trace to some silt; wet, loose. @33.3 to 33.8 ft.: some very thin dark grey clay laminae decreasing with depth. @ 33.8 to 35.0 ft.: occasional very thin dark grey clay laminae. | 8.6 |
| | | | | | | | ML | Silt: lt grey-brown; some clay to clayey, trace sand-very fine; wet, soft, plastic. @35.0 to 36.6 and 37.5 ft.: dark grey silty sand pods. @36.2 to 36.6 ft.: few P04 nodules in dark grey silty sand pods. | 5.4 |
| 40 | | | | | | | ML CL | Silt: dark olive brown; clayey; moist, stiff, plastic. Boring TD = 45 ft bgs | |

WELL DIAGRAM




K
NAVAL ANNEX
CHARLESTON AIR FORCE BASE HOUSING
REMOUNT ROAD
INTERSTATE 26 (WESTBOUND)
INTERSTATE 26 (EASTBOUND)
BASKETBALL COURT 2550
VICINITY OF FORMER SEPTIC TANK/DRAINFIELD
VICINITY OF FORMER (SLUDGE DRYING FIELDS)
GDK001 34.01
166015 30.25
166019 31.61
161001 31.65
166016 31.28
166020 ND
698001 33.69
166006 33.66
166014 32.77
166007 33.94
166001 36.25
166005 34.06
166013 33.70
166008 33.29
166017 32.10
166021 32.83
GDKP012 35.96
166002 34.38
166004 33.60
163001 33.22
163P07 34.32
163P04 34.26
162002 35.00
163002 32.43
GDK002 33.36
166018 32.47
162001 33.70
GDKP004 DRY
31
32
33
34
35
36
0 100 200 400 600
SCALE IN FEET
LEGEND:
166014 32.77 SHALLOW MONITORING WELL W/ ID NUMBER AND GROUNDWATER ELEVATION (feet MSL)
163P07 34.37 SHALLOW GROUNDWATER PIEZOMETER W/ ID NUMBER AND GROUNDWATER ELEVATION (feet MSL)
ND = NO DATA
36 GROUNDWATER ELEVATION CONTOUR (CONTOUR INTERVAL = 1 FT. MSL) DASHED WHERE INFERRED
GROUNDWATER FLOW DIRECTION
ZONE K
RCRA FACILITY
INVESTIGATION REPORT
CHARLESTON NAVAL COMPLEX
CHARLESTON, SC
FIGURE 20
SHALLOW
GROUNDWATER
POTENTIOMETRIC CONTOURS
12 JAN 2000
Date: 06/01/00
DWG Name: 2911C096


N
K
NAVAL ANNEX
CHARLESTON AIR FORCE BASE HOUSING
REMOUNT ROAD
INTERSTATE 26
BASKETBALL COURT
VICINITY OF FORMER SEPTIC TANK/DRAINFIELD
VICINITY OF FORMER (SLUDGE DRYING FIELDS)
16609D 31.73
16615D 30.25
16619D 31.69
16620D ND
16616D 31.50
16610D 23.59
16614D 35.43
16606D 33.49
16607D 32.29
16613D 34.21
16608D 33.32
16611D 32.23
16617D 32.20
16621D 32.63
16623D 34.57
16605D ND
16604D 33.51
16612D 32.85
16618D 32.86
GDKP12D 35.99
166P1D 35.42
16602D 34.44
163P7D 34.86
16622D 34.07
163P5D 34.12
GDKP09D 34.52
GDKP02D 33.34
GDKP04D 33.25
31
32
33
34
35
0 100 200 400 600
SCALE IN FEET
LEGEND:
16606D 33.49 DEEP MONITORING WELL W/ ID NUMBER AND GROUNDWATER ELEVATION (feet MSL)
GDKP09D 34.52 DEEP GROUNDWATER PIEZOMETER W/ ID NUMBER AND GROUNDWATER ELEVATION (feet MSL)
ND = NO DATA
34 GROUNDWATER ELEVATION CONTOUR (CONTOUR INTERVAL – 1 FT. MSL) DASHED WHERE INFERRED
GROUNDWATER FLOW DIRECTION
ZONE K
RCRA FACILITY
INVESTIGATION REPORT
CHARLESTON NAVAL COMPLE
CHARLESTON, SC
FIGURE 21
DEEP
GROUNDWATER
POTENTIOMETRIC CONTOURS
12 JAN 2000
Date: 02/08/00
DWG Name: 2911C097

# CHARLESTON - ZONE K OFFSITE SAMPLING
## CHARLESTON ZONE K (GROUNDWATER)
## Vertical Profile Primary Sample Results



| 8846-VOA | SAMPLE ID -------> | OFF-G-P001-10 | | OFF-G-P001-15 | | OFF-G-P001-20 | | OFF-G-P001-25 | | OFF-G-P001-30 | | OFF-G-P001-33 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ORIGINAL ID -----> | OFFGP00110 | | OFFGP00115 | | OFFGP00120 | | OFFGP00125 | | OFFGP00130 | | OFFGP00133 | |
| | LAB SAMPLE ID ---> | S007997*23 | | S007997*24 | | S007997*25 | | S007997*26 | | S007997*27 | | S007997*28 | |
| | ID FROM REPORT --> | OFFGP00110 | | OFFGP00115 | | OFFGP00120 | | OFFGP00125 | | OFFGP00130 | | OFFGP00133 | |
| | SAMPLE DATE -----> | 11/19/00 | | 11/19/00 | | 11/19/00 | | 11/19/00 | | 11/19/00 | | 11/19/00 | |
| | DATE ANALYZED ---> | 11/29/00 | | 11/29/00 | | 11/29/00 | | 11/29/00 | | 11/29/00 | | 11/30/00 | |
| | MATRIX ----------> | Water | | Water | | Water | | Water | | Water | | Water | |
| | UNITS ----------> | UG/L | | UG/L | | UG/L | | UG/L | | UG/L | | UG/L | |
| CAS # | Parameter | NBCK18 | | NBCK18 | | NBCK18 | | NBCK18 | | NBCK18 | | NBCK18 | |
| 74-87-3 | Chloromethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 74-83-9 | Bromomethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-01-4 | Vinyl chloride | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-00-3 | Chloroethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-09-2 | Methylene chloride | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 67-64-1 | Acetone | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U |
| 75-15-0 | Carbon disulfide | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-35-4 | 1,1-Dichloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-34-3 | 1,1-Dichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 67-66-3 | Chloroform | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 107-06-2 | 1,2-Dichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 78-93-3 | 2-Butanone (MEK) | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 56-23-5 | Carbon tetrachloride | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-27-4 | Bromodichloromethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 78-87-5 | 1,2-Dichloropropane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-01-6 | Trichloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 124-48-1 | Dibromochloromethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 71-43-2 | Benzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-25-2 | Bromoform | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-10-1 | 4-Methyl-2-Pentanone (MIBK) | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 591-78-6 | 2-Hexanone | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 127-18-4 | Tetrachloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-88-3 | Toluene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-90-7 | Chlorobenzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 100-41-4 | Ethylbenzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 100-42-5 | Styrene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 1330-20-7 | Xylene (Total) | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 108-05-4 | Vinyl acetate | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 110-75-8 | 2-Chloroethyl vinyl ether | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U |

# CHARLESTON - ZONE K OFFSITE SAMPLING
## CHARLESTON ZONE K (GROUNDWATER)
## Vertical Profile Primary Sample Results



| 846-VOA | SAMPLE ID -------> | OFF-G-P001-36 | | OFF-G-P001-39 | | OFF-G-P002-10 | | OFF-G-P002-15 | | OFF-G-P002-20 | | OFF-G-P002-25 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ORIGINAL ID -----> | OFFGP00136 | | OFFGP00139 | | OFFGP00210 | | OFFGP00215 | | OFFGP00220 | | OFFGP00225 | |
| | LAB SAMPLE ID ---> | S007997*29 | | S007997*30 | | S007997*17 | | S007997*18 | | S007997*19 | | S007997*20 | |
| | ID FROM REPORT --> | OFFGP00136 | | OFFGP00139 | | OFFGP00210 | | OFFGP00215 | | OFFGP00220 | | OFFGP00225 | |
| | SAMPLE DATE -----> | 11/19/00 | | 11/19/00 | | 11/19/00 | | 11/19/00 | | 11/19/00 | | 11/19/00 | |
| | DATE ANALYZED ---> | 11/30/00 | | 11/30/00 | | 11/29/00 | | 11/29/00 | | 11/29/00 | | 11/29/00 | |
| | MATRIX ----------> | Water | | Water | | Water | | Water | | Water | | Water | |
| | UNITS ----------> | UG/L | | UG/L | | UG/L | | UG/L | | UG/L | | UG/L | |
| CAS # | Parameter | NBCK18 | | NBCK18 | | NBCK18 | | NBCK18 | | NBCK18 | | NBCK18 | |
| 74-87-3 | Chloromethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 74-83-9 | Bromomethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-01-4 | Vinyl chloride | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-00-3 | Chloroethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-09-2 | Methylene chloride | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 67-64-1 | Acetone | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U |
| 75-15-0 | Carbon disulfide | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-35-4 | 1,1-Dichloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-34-3 | 1,1-Dichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 67-66-3 | Chloroform | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 107-06-2 | 1,2-Dichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 78-93-3 | 2-Butanone (MEK) | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 56-23-5 | Carbon tetrachloride | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-27-4 | Bromodichloromethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 78-87-5 | 1,2-Dichloropropane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-01-6 | Trichloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 124-48-1 | Dibromochloromethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 71-43-2 | Benzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-25-2 | Bromoform | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-10-1 | 4-Methyl-2-Pentanone (MIBK) | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 591-78-6 | 2-Hexanone | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 127-18-4 | Tetrachloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-88-3 | Toluene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-90-7 | Chlorobenzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 100-41-4 | Ethylbenzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 100-42-5 | Styrene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 1330-20-7 | Xylene (Total) | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 108-05-4 | Vinyl acetate | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 110-75-8 | 2-Chloroethyl vinyl ether | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U |

# CHARLESTON - ZONE K OFFSITE SAMPLING
## CHARLESTON ZONE K (GROUNDWATER)
## Vertical Profile Primary Sample Results



| W846-VOA | SAMPLE ID -------> | OFF-G-P002-33 | | OFF-G-P002-38 | | OFF-G-P003-10 | | OFF-G-P003-15 | | OFF-G-P003-20 | | OFF-G-P003-25 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ORIGINAL ID -----> | OFFGP00233 | | OFFGP00238 | | OFFGP00310 | | OFFGP00315 | | OFFGP00320 | | OFFGP00325 | |
| | LAB SAMPLE ID ---> | S007997*21 | | S007997*22 | | S007931*8 | | S007931*9 | | S007931*10 | | S007931*11 | |
| | ID FROM REPORT --> | OFFGP00233 | | OFFGP00238 | | OFFGP00310 | | OFFGP00315 | | OFFGP00320 | | OFFGP00325 | |
| | SAMPLE DATE -----> | 11/19/00 | | 11/19/00 | | 11/16/00 | | 11/16/00 | | 11/16/00 | | 11/16/00 | |
| | DATE ANALYZED ---> | 11/29/00 | | 11/29/00 | | 11/30/00 | | 11/30/00 | | 11/30/00 | | 11/30/00 | |
| | MATRIX ----------> | Water | | Water | | Water | | Water | | Water | | Water | |
| | UNITS ----------> | UG/L | | UG/L | | UG/L | | UG/L | | UG/L | | UG/L | |
| CAS # | Parameter | NBCK18 | | NBCK18 | | NBCK16 | | NBCK16 | | NBCK16 | | NBCK16 | |
| 74-87-3 | Chloromethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 74-83-9 | Bromomethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-01-4 | Vinyl chloride | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-00-3 | Chloroethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-09-2 | Methylene chloride | 5. | U | 5. | U | 5. | U | 0.76 | J | 5. | U | 0.57 | J |
| 67-64-1 | Acetone | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U |
| 75-15-0 | Carbon disulfide | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-35-4 | 1,1-Dichloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-34-3 | 1,1-Dichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 67-66-3 | Chloroform | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 107-06-2 | 1,2-Dichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 78-93-3 | 2-Butanone (MEK) | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 56-23-5 | Carbon tetrachloride | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-27-4 | Bromodichloromethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 78-87-5 | 1,2-Dichloropropane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-01-6 | Trichloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 124-48-1 | Dibromochloromethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 71-43-2 | Benzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-25-2 | Bromoform | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-10-1 | 4-Methyl-2-Pentanone (MIBK) | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 591-78-6 | 2-Hexanone | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 127-18-4 | Tetrachloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-88-3 | Toluene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-90-7 | Chlorobenzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 100-41-4 | Ethylbenzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 100-42-5 | Styrene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 1330-20-7 | Xylene (Total) | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 108-05-4 | Vinyl acetate | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 110-75-8 | 2-Chloroethyl vinyl ether | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U |

# CHARLESTON - ZONE K OFFSITE SAMPLING
## CHARLESTON ZONE K (GROUNDWATER)
## Vertical Profile Primary Sample Results



| 846-VOA | SAMPLE ID -------> | OFF-G-P003-30 | | OFF-G-P003-33 | | OFF-G-P003-36 | | OFF-G-P003-39 | | OFF-G-P004-10 | | OFF-G-P004-15 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ORIGINAL ID -----> | OFFGP00330 | | OFFGP00333 | | OFFGP00336 | | OFFGP00339 | | OFFGP00410 | | OFFGP00415 | |
| | LAB SAMPLE ID ---> | S007931*12 | | S007931*13 | | S007931*14 | | S007931*15 | | S007969*1 | | S007969*2 | |
| | ID FROM REPORT --> | OFFGP00330 | | OFFGP00333 | | OFFGP00336 | | OFFGP00339 | | OFFGP00410 | | OFFGP00415 | |
| | SAMPLE DATE -----> | 11/16/00 | | 11/16/00 | | 11/16/00 | | 11/16/00 | | 11/17/00 | | 11/17/00 | |
| | DATE ANALYZED ---> | 11/30/00 | | 11/30/00 | | 11/28/00 | | 11/28/00 | | 11/27/00 | | 11/27/00 | |
| | MATRIX ----------> | Water | | Water | | Water | | Water | | Water | | Water | |
| | UNITS ----------> | UG/L | | UG/L | | UG/L | | UG/L | | UG/L | | UG/L | |
| CAS # | Parameter | NBCK16 | | NBCK16 | | NBCK16 | | NBCK16 | | NBCK17 | | NBCK17 | |
| 74-87-3 | Chloromethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 74-83-9 | Bromomethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-01-4 | Vinyl chloride | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-00-3 | Chloroethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-09-2 | Methylene chloride | 0.69 | J | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 67-64-1 | Acetone | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U |
| 75-15-0 | Carbon disulfide | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-35-4 | 1,1-Dichloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-34-3 | 1,1-Dichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 67-66-3 | Chloroform | 5. | U | 1. | J | 5. | U | 5. | U | 5. | U | 5. | U |
| 107-06-2 | 1,2-Dichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 78-93-3 | 2-Butanone (MEK) | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 56-23-5 | Carbon tetrachloride | 5. | U | 0.88 | J | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-27-4 | Bromodichloromethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 78-87-5 | 1,2-Dichloropropane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-01-6 | Trichloroethene | 0.42 | J | 1.4 | J | 5. | U | 1.1 | J | 5. | U | 5. | U |
| 124-48-1 | Dibromochloromethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 71-43-2 | Benzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-25-2 | Bromoform | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-10-1 | 4-Methyl-2-Pentanone (MIBK) | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 591-78-6 | 2-Hexanone | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 127-18-4 | Tetrachloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-88-3 | Toluene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-90-7 | Chlorobenzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 100-41-4 | Ethylbenzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 100-42-5 | Styrene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 1330-20-7 | Xylene (Total) | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 108-05-4 | Vinyl acetate | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 110-75-8 | 2-Chloroethyl vinyl ether | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U |

# CHARLESTON - ZONE K OFFSITE SAMPLING
## CHARLESTON ZONE K (GROUNDWATER)
## Vertical Profile Primary Sample Results



| W846-VOA | SAMPLE ID -------> | OFF-G-P004-20 | | OFF-G-P004-27 | | OFF-G-P004-30 | | OFF-G-P004-33 | | OFF-G-P004-39 | | OFF-G-P005-10 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ORIGINAL ID -----> | OFFGP00420 | | OFFGP00427 | | OFFGP00430 | | OFFGP00433 | | OFFGP00439 | | OFFGP00510 | |
| | LAB SAMPLE ID ---> | S007969*3 | | S007969*4 | | S007969*5 | | S007969*6 | | S007969*7 | | S007997*1 | |
| | ID FROM REPORT --> | OFFGP00420 | | OFFGP00427 | | OFFGP00430 | | OFFGP00433 | | OFFGP00439 | | OFFGP00510 | |
| | SAMPLE DATE -----> | 11/17/00 | | 11/17/00 | | 11/17/00 | | 11/17/00 | | 11/17/00 | | 11/18/00 | |
| | DATE ANALYZED ---> | 11/27/00 | | 11/27/00 | | 11/27/00 | | 11/27/00 | | 11/27/00 | | 11/28/00 | |
| | MATRIX ----------> | Water | | Water | | Water | | Water | | Water | | Water | |
| | UNITS ----------> | UG/L | | UG/L | | UG/L | | UG/L | | UG/L | | UG/L | |
| CAS # | Parameter | NBCK17 | | NBCK17 | | NBCK17 | | NBCK17 | | NBCK17 | | NBCK18 | |
| 74-87-3 | Chloromethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 74-83-9 | Bromomethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-01-4 | Vinyl chloride | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-00-3 | Chloroethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-09-2 | Methylene chloride | 5. | U | 5. | U | 1.1 | J | 5. | U | 0.82 | J | 5. | U |
| 67-64-1 | Acetone | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U |
| 75-15-0 | Carbon disulfide | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-35-4 | 1,1-Dichloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-34-3 | 1,1-Dichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 5. | U | 5. | U | 5. | U | 0.92 | J | 5. | U | 5. | U |
| 67-66-3 | Chloroform | 5. | U | 8.4 | | 5. | U | 5. | U | 5. | U | 5. | U |
| 107-06-2 | 1,2-Dichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 78-93-3 | 2-Butanone (MEK) | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 56-23-5 | Carbon tetrachloride | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-27-4 | Bromodichloromethane | 5. | U | 2. | J | 5. | U | 5. | U | 5. | U | 5. | U |
| 78-87-5 | 1,2-Dichloropropane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-01-6 | Trichloroethene | 5. | U | 5. | U | 2. | J | 0.91 | J | 5. | U | 5. | U |
| 124-48-1 | Dibromochloromethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 71-43-2 | Benzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-25-2 | Bromoform | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-10-1 | 4-Methyl-2-Pentanone (MIBK) | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 591-78-6 | 2-Hexanone | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 127-18-4 | Tetrachloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-88-3 | Toluene | 5. | U | 2.1 | J | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-90-7 | Chlorobenzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 100-41-4 | Ethylbenzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 100-42-5 | Styrene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 1330-20-7 | Xylene (Total) | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 108-05-4 | Vinyl acetate | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 110-75-8 | 2-Chloroethyl vinyl ether | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U |

# CHARLESTON - ZONE K OFFSITE SAMPLING
## CHARLESTON ZONE K (GROUNDWATER)
## Vertical Profile Primary Sample Results



| 8846-VOA | SAMPLE ID -------> | OFF-G-P005-15 | | OFF-G-P005-20 | | OFF-G-P005-25 | | OFF-G-P005-30 | | OFF-G-P005-33 | | OFF-G-P005-36 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ORIGINAL ID -----> | OFFGP00515 | | OFFGP00520 | | OFFGP00525 | | OFFGP00530 | | OFFGP00533 | | OFFGP00536 | |
| | LAB SAMPLE ID ---> | S007997*2 | | S007997*3 | | S007997*4 | | S007997*5 | | S007997*6 | | S007997*7 | |
| | ID FROM REPORT --> | OFFGP00515 | | OFFGP00520 | | OFFGP00525 | | OFFGP00530 | | OFFGP00533 | | OFFGP00536 | |
| | SAMPLE DATE -----> | 11/18/00 | | 11/18/00 | | 11/18/00 | | 11/18/00 | | 11/18/00 | | 11/18/00 | |
| | DATE ANALYZED ---> | 11/30/00 | | 11/28/00 | | 11/28/00 | | 11/28/00 | | 11/28/00 | | 11/30/00 | |
| | MATRIX ----------> | Water | | Water | | Water | | Water | | Water | | Water | |
| | UNITS ----------> | UG/L | | UG/L | | UG/L | | UG/L | | UG/L | | UG/L | |
| CAS # | Parameter | NBCK18 | | NBCK18 | | NBCK18 | | NBCK18 | | NBCK18 | | NBCK18 | |
| 74-87-3 | Chloromethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 74-83-9 | Bromomethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-01-4 | Vinyl chloride | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-00-3 | Chloroethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-09-2 | Methylene chloride | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 67-64-1 | Acetone | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U |
| 75-15-0 | Carbon disulfide | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-35-4 | 1,1-Dichloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-34-3 | 1,1-Dichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 67-66-3 | Chloroform | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 107-06-2 | 1,2-Dichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 78-93-3 | 2-Butanone (MEK) | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 56-23-5 | Carbon tetrachloride | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-27-4 | Bromodichloromethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 78-87-5 | 1,2-Dichloropropane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-01-6 | Trichloroethene | 5. | U | 5. | U | 5. | U | 3.3 | J | 5. | U | 5. | U |
| 124-48-1 | Dibromochloromethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 71-43-2 | Benzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-25-2 | Bromoform | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-10-1 | 4-Methyl-2-Pentanone (MIBK) | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 591-78-6 | 2-Hexanone | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 127-18-4 | Tetrachloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-88-3 | Toluene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-90-7 | Chlorobenzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 100-41-4 | Ethylbenzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 100-42-5 | Styrene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 1330-20-7 | Xylene (Total) | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 108-05-4 | Vinyl acetate | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 110-75-8 | 2-Chloroethyl vinyl ether | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U |

# CHARLESTON - ZONE K OFFSITE SAMPLING
## CHARLESTON ZONE K (GROUNDWATER)
## Vertical Profile Primary Sample Results



| 8846-VOA | SAMPLE ID -------> | OFF-G-P005-39 | | OFF-G-P006-10 | | OFF-G-P006-15 | | OFF-G-P006-20 | | OFF-G-P006-25 | | OFF-G-P006-30 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ORIGINAL ID -----> | OFFGP00539 | | OFFGP00610 | | OFFGP00615 | | OFFGP00620 | | OFFGP00625 | | OFFGP00630 | |
| | LAB SAMPLE ID ---> | S007997*8 | | S007997*9 | | S007997*10 | | S007997*11 | | S007997*12 | | S007997*13 | |
| | ID FROM REPORT --> | OFFGP00539 | | OFFGP00610 | | OFFGP00615 | | OFFGP00620 | | OFFGP00625 | | OFFGP00630 | |
| | SAMPLE DATE -----> | 11/18/00 | | 11/18/00 | | 11/18/00 | | 11/18/00 | | 11/18/00 | | 11/18/00 | |
| | DATE ANALYZED ---> | 11/28/00 | | 11/29/00 | | 11/29/00 | | 11/29/00 | | 11/29/00 | | 11/29/00 | |
| | MATRIX ----------> | Water | | Water | | Water | | Water | | Water | | Water | |
| | UNITS ----------> | UG/L | | UG/L | | UG/L | | UG/L | | UG/L | | UG/L | |
| CAS # | Parameter | NBCK18 | | NBCK18 | | NBCK18 | | NBCK18 | | NBCK18 | | NBCK18 | |
| 74-87-3 | Chloromethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 74-83-9 | Bromomethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-01-4 | Vinyl chloride | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-00-3 | Chloroethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-09-2 | Methylene chloride | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 67-64-1 | Acetone | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U |
| 75-15-0 | Carbon disulfide | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-35-4 | 1,1-Dichloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-34-3 | 1,1-Dichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 67-66-3 | Chloroform | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 107-06-2 | 1,2-Dichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 78-93-3 | 2-Butanone (MEK) | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 56-23-5 | Carbon tetrachloride | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-27-4 | Bromodichloromethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 78-87-5 | 1,2-Dichloropropane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-01-6 | Trichloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 17. | |
| 124-48-1 | Dibromochloromethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 71-43-2 | Benzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-25-2 | Bromoform | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-10-1 | 4-Methyl-2-Pentanone (MIBK) | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 591-78-6 | 2-Hexanone | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 127-18-4 | Tetrachloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-88-3 | Toluene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-90-7 | Chlorobenzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 100-41-4 | Ethylbenzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 100-42-5 | Styrene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 1330-20-7 | Xylene (Total) | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 108-05-4 | Vinyl acetate | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 110-75-8 | 2-Chloroethyl vinyl ether | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U |

# CHARLESTON - ZONE K OFFSITE SAMPLING
## CHARLESTON ZONE K (GROUNDWATER)
## Vertical Profile Primary Sample Results



SW846-VOA

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | SAMPLE ID -------> | OFF-G-P006-33 | | OFF-G-P006-36 | | OFF-G-P006-39 | | OFF-G-P007-10 | | OFF-G-P007-15 | | OFF-G-P007-20 | |
| | ORIGINAL ID -----> | OFFGP00633 | | OFFGP00636 | | OFFGP00639 | | OFFGP00710 | | OFFGP00715 | | OFFGP00720 | |
| | LAB SAMPLE ID ---> | S007997*14 | | S007997*15 | | S007997*16 | | S007931*1 | | S007931*2 | | S007931*3 | |
| | ID FROM REPORT --> | OFFGP00633 | | OFFGP00636 | | OFFGP00639 | | OFFGP00710 | | OFFGP00715 | | OFFGP00720 | |
| | SAMPLE DATE -----> | 11/18/00 | | 11/18/00 | | 11/18/00 | | 11/16/00 | | 11/16/00 | | 11/16/00 | |
| | DATE ANALYZED ---> | 11/29/00 | | 11/29/00 | | 11/29/00 | | 11/30/00 | | 11/28/00 | | 11/28/00 | |
| | MATRIX ----------> | Water | | Water | | Water | | Water | | Water | | Water | |
| | UNITS ----------> | UG/L | | UG/L | | UG/L | | UG/L | | UG/L | | UG/L | |
| CAS # | Parameter | NBCK18 | | NBCK18 | | NBCK18 | | NBCK16 | | NBCK16 | | NBCK16 | |
| 74-87-3 | Chloromethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 74-83-9 | Bromomethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-01-4 | Vinyl chloride | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-00-3 | Chloroethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-09-2 | Methylene chloride | 5. | U | 5. | U | 5. | U | 0.53 | J | 5. | U | 5. | U |
| 67-64-1 | Acetone | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U |
| 75-15-0 | Carbon disulfide | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-35-4 | 1,1-Dichloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-34-3 | 1,1-Dichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 67-66-3 | Chloroform | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 107-06-2 | 1,2-Dichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 78-93-3 | 2-Butanone (MEK) | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 56-23-5 | Carbon tetrachloride | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-27-4 | Bromodichloromethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 78-87-5 | 1,2-Dichloropropane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-01-6 | Trichloroethene | 36. | | 4.6 | J | 5. | U | 5. | U | 5. | U | 5. | U |
| 124-48-1 | Dibromochloromethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 71-43-2 | Benzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-25-2 | Bromoform | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-10-1 | 4-Methyl-2-Pentanone (MIBK) | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 591-78-6 | 2-Hexanone | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 127-18-4 | Tetrachloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-88-3 | Toluene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-90-7 | Chlorobenzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 100-41-4 | Ethylbenzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 100-42-5 | Styrene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 1330-20-7 | Xylene (Total) | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 108-05-4 | Vinyl acetate | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 110-75-8 | 2-Chloroethyl vinyl ether | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U |

# CHARLESTON - ZONE K OFFSITE SAMPLING
## CHARLESTON ZONE K (GROUNDWATER)
## Vertical Profile Primary Sample Results



| 8846-VOA | SAMPLE ID -------> | OFF-G-P007-25 | | OFF-G-P007-30 | | OFF-G-P007-33 | | OFF-G-P007-36 | | OFF-G-P008-10 | | OFF-G-P008-15 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ORIGINAL ID -----> | OFFGP00725 | | OFFGP00730 | | OFFGP00733 | | OFFGP00736 | | OFFGP00810 | | OFFGP00815 | |
| | LAB SAMPLE ID ---> | S007931*4 | | S007931*5 | | S007931*6 | | S007931*7 | | S007836*1 | | S007836*2 | |
| | ID FROM REPORT --> | OFFGP00725 | | OFFGP00730 | | OFFGP00733 | | OFFGP00736 | | OFFGP00810 | | OFFGP00815 | |
| | SAMPLE DATE -----> | 11/16/00 | | 11/16/00 | | 11/16/00 | | 11/16/00 | | 11/14/00 | | 11/14/00 | |
| | DATE ANALYZED ---> | 11/30/00 | | 11/28/00 | | 11/30/00 | | 11/30/00 | | 11/21/00 | | 11/21/00 | |
| | MATRIX ----------> | Water | | Water | | Water | | Water | | Water | | Water | |
| | UNITS ----------> | UG/L | | UG/L | | UG/L | | UG/L | | UG/L | | UG/L | |
| CAS # | Parameter | NBCK16 | | NBCK16 | | NBCK16 | | NBCK16 | | NBCK14 | | NBCK14 | |
| 74-87-3 | Chloromethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 74-83-9 | Bromomethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-01-4 | Vinyl chloride | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-00-3 | Chloroethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-09-2 | Methylene chloride | 1. | J | 4.4 | J | 5. | U | 5. | U | 0.58 | JB | 0.5 | JB |
| 67-64-1 | Acetone | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U |
| 75-15-0 | Carbon disulfide | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-35-4 | 1,1-Dichloroethene | 5. | U | 5. | U | 1.2 | J | 5. | U | 5. | U | 5. | U |
| 75-34-3 | 1,1-Dichloroethane | 5. | U | 5. | U | 1.5 | J | 5. | U | 5. | U | 5. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 67-66-3 | Chloroform | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 107-06-2 | 1,2-Dichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 78-93-3 | 2-Butanone (MEK) | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 56-23-5 | Carbon tetrachloride | 5. | U | 0.56 | J | 4.9 | J | 5. | U | 5. | U | 5. | U |
| 75-27-4 | Bromodichloromethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 78-87-5 | 1,2-Dichloropropane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-01-6 | Trichloroethene | 5. | U | 5. | U | 1.2 | J | 1.1 | J | 5. | U | 5. | U |
| 124-48-1 | Dibromochloromethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 71-43-2 | Benzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-25-2 | Bromoform | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-10-1 | 4-Methyl-2-Pentanone (MIBK) | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 591-78-6 | 2-Hexanone | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 127-18-4 | Tetrachloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-88-3 | Toluene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-90-7 | Chlorobenzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 100-41-4 | Ethylbenzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 100-42-5 | Styrene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 1330-20-7 | Xylene (Total) | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 108-05-4 | Vinyl acetate | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 110-75-8 | 2-Chloroethyl vinyl ether | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U |

# CHARLESTON - ZONE K OFFSITE SAMPLING
## CHARLESTON ZONE K (GROUNDWATER)
## Vertical Profile Primary Sample Results



| 846-VOA | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | SAMPLE ID -------> | OFF-G-P008-20 | | OFF-G-P008-25 | | OFF-G-P008-30 | | OFF-G-P008-35 | | OFF-G-P008-40 | | OFF-G-P009-10 | |
| | ORIGINAL ID -----> | OFFGP00820 | | OFFGP00825 | | OFFGP00830 | | OFFGP00835 | | OFFGP00840 | | OFFGP00910 | |
| | LAB SAMPLE ID ---> | S007836*3 | | S007836*4 | | S007836*5 | | S007836*6 | | S007836*7 | | S007814*1 | |
| | ID FROM REPORT --> | OFFGP00820 | | OFFGP00825 | | OFFGP00830 | | OFFGP00835 | | OFFGP00840 | | OFFGP00910 | |
| | SAMPLE DATE -----> | 11/14/00 | | 11/14/00 | | 11/14/00 | | 11/14/00 | | 11/14/00 | | 11/13/00 | |
| | DATE ANALYZED ---> | 11/20/00 | | 11/20/00 | | 11/20/00 | | 11/20/00 | | 11/20/00 | | 11/22/00 | |
| | MATRIX ----------> | Water | | Water | | Water | | Water | | Water | | Water | |
| | UNITS ----------> | UG/L | | UG/L | | UG/L | | UG/L | | UG/L | | UG/L | |
| CAS # | Parameter | NBCK14 | | NBCK14 | | NBCK14 | | NBCK14 | | NBCK14 | | NBCK14 | |
| 74-87-3 | Chloromethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 74-83-9 | Bromomethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-01-4 | Vinyl chloride | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-00-3 | Chloroethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-09-2 | Methylene chloride | 0.55 | JB | 5. | U | 0.54 | JB | 0.89 | JB | 0.84 | JB | 5. | U |
| 67-64-1 | Acetone | 50. | U | 50. | U | 50. | U | 19. | J | 25. | J | 50. | U |
| 75-15-0 | Carbon disulfide | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-35-4 | 1,1-Dichloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-34-3 | 1,1-Dichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 67-66-3 | Chloroform | 5. | U | 5. | U | 8.1 | | 8. | | 8.5 | | 5. | U |
| 107-06-2 | 1,2-Dichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 78-93-3 | 2-Butanone (MEK) | 25. | U | 25. | U | 12. | J | 22. | J | 26. | | 25. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 56-23-5 | Carbon tetrachloride | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-27-4 | Bromodichloromethane | 5. | U | 5. | U | 2.3 | J | 0.71 | J | 2.4 | J | 5. | U |
| 78-87-5 | 1,2-Dichloropropane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-01-6 | Trichloroethene | 5. | U | 1.8 | J | 0.44 | J | 0.43 | J | 5. | U | 5. | U |
| 124-48-1 | Dibromochloromethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 71-43-2 | Benzene | 5. | U | 5. | U | 5. | U | 5. | U | 0.91 | J | 5. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-25-2 | Bromoform | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-10-1 | 4-Methyl-2-Pentanone (MIBK) | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 591-78-6 | 2-Hexanone | 25. | U | 25. | U | 25. | U | 25. | U | 4.7 | J | 25. | U |
| 127-18-4 | Tetrachloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-88-3 | Toluene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-90-7 | Chlorobenzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 100-41-4 | Ethylbenzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 100-42-5 | Styrene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 1330-20-7 | Xylene (Total) | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 108-05-4 | Vinyl acetate | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 110-75-8 | 2-Chloroethyl vinyl ether | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U |

# CHARLESTON - ZONE K OFFSITE SAMPLING
## CHARLESTON ZONE K (GROUNDWATER)
## Vertical Profile Primary Sample Results



#846-VOA

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | SAMPLE ID -------> | OFF-G-P009-15 | | OFF-G-P009-22 | | OFF-G-P009-27 | | OFF-G-P009-32 | | OFF-G-P009-35 | | OFF-G-P010-10 | |
| | ORIGINAL ID -----> | OFFGP00915 | | OFFGP00922 | | OFFGP00927 | | OFFGP00932 | | OFFGP00935 | | OFFGP01010 | |
| | LAB SAMPLE ID ---> | S007814*4 | | S007814*5 | | S007814*6 | | S007814*7 | | S007814*8 | | S007875*1 | |
| | ID FROM REPORT --> | OFFGP00915 | | OFFGP00922 | | OFFGP00927 | | OFFGP00932 | | OFFGP00935 | | OFFGP01010 | |
| | SAMPLE DATE -----> | 11/13/00 | | 11/13/00 | | 11/13/00 | | 11/13/00 | | 11/13/00 | | 11/15/00 | |
| | DATE ANALYZED ---> | 11/22/00 | | 11/22/00 | | 11/22/00 | | 11/22/00 | | 11/22/00 | | 11/21/00 | |
| | MATRIX ----------> | Water | | Water | | Water | | Water | | Water | | Water | |
| | UNITS ----------> | UG/L | | UG/L | | UG/L | | UG/L | | UG/L | | UG/L | |
| CAS # | Parameter | NBCK14 | | NBCK14 | | NBCK14 | | NBCK14 | | NBCK14 | | NBCK15 | |
| 74-87-3 | Chloromethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 74-83-9 | Bromomethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-01-4 | Vinyl chloride | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-00-3 | Chloroethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-09-2 | Methylene chloride | 5. | U | 5. | U | 5. | U | 1.2 | J | 5. | U | 5. | U |
| 67-64-1 | Acetone | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U |
| 75-15-0 | Carbon disulfide | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-35-4 | 1,1-Dichloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-34-3 | 1,1-Dichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 5. | U | 5. | U | 1.2 | J | 5. | U | 5. | U | 1. | U |
| 67-66-3 | Chloroform | 5. | U | 5. | U | 5. | U | 5. | U | 3.1 | J | 5. | U |
| 107-06-2 | 1,2-Dichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 78-93-3 | 2-Butanone (MEK) | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 56-23-5 | Carbon tetrachloride | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-27-4 | Bromodichloromethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 78-87-5 | 1,2-Dichloropropane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-01-6 | Trichloroethene | 5. | U | 5. | U | 18. | | 5. | U | 5. | U | 5. | U |
| 124-48-1 | Dibromochloromethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 71-43-2 | Benzene | 5. | U | 5. | U | 0.76 | J | 5. | U | 5. | U | 5. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-25-2 | Bromoform | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-10-1 | 4-Methyl-2-Pentanone (MIBK) | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 591-78-6 | 2-Hexanone | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 127-18-4 | Tetrachloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-88-3 | Toluene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-90-7 | Chlorobenzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 100-41-4 | Ethylbenzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 100-42-5 | Styrene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 1330-20-7 | Xylene (Total) | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 108-05-4 | Vinyl acetate | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 110-75-8 | 2-Chloroethyl vinyl ether | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U |

# CHARLESTON - ZONE K OFFSITE SAMPLING
## CHARLESTON ZONE K (GROUNDWATER)
## Vertical Profile Primary Sample Results



| W846-VOA | SAMPLE ID -------> | OFF-G-P010-15 | | OFF-G-P010-20 | | OFF-G-P010-25 | | OFF-G-P010-30 | | OFF-G-P010-35 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ORIGINAL ID -----> | OFFGP01015 | | OFFGP01020 | | OFFGP01025 | | OFFGP01030 | | OFFGP01035 | |
| | LAB SAMPLE ID ---> | S007875*2 | | S007875*3 | | S007875*4 | | S007875*5 | | S007875*6 | |
| | ID FROM REPORT --> | OFFGP01015 | | OFFGP01020 | | OFFGP01025 | | OFFGP01030 | | OFFGP01035 | |
| | SAMPLE DATE -----> | 11/15/00 | | 11/15/00 | | 11/15/00 | | 11/15/00 | | 11/15/00 | |
| | DATE ANALYZED ---> | 11/21/00 | | 11/21/00 | | 11/21/00 | | 11/21/00 | | 11/21/00 | |
| | MATRIX ----------> | Water | | Water | | Water | | Water | | Water | |
| | UNITS ----------> | UG/L | | UG/L | | UG/L | | UG/L | | UG/L | |
| CAS # | Parameter | NBCK15 | | NBCK15 | | NBCK15 | | NBCK15 | | NBCK15 | |
| 74-87-3 | Chloromethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 74-83-9 | Bromomethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-01-4 | Vinyl chloride | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-00-3 | Chloroethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-09-2 | Methylene chloride | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 67-64-1 | Acetone | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U |
| 75-15-0 | Carbon disulfide | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-35-4 | 1,1-Dichloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 1.2 | J |
| 75-34-3 | 1,1-Dichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 0.83 | J |
| 540-59-0 | 1,2-Dichloroethene (total) | 1. | U | 1. | U | 1. | U | 1. | U | 1. | U |
| 67-66-3 | Chloroform | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 107-06-2 | 1,2-Dichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 78-93-3 | 2-Butanone (MEK) | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 56-23-5 | Carbon tetrachloride | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-27-4 | Bromodichloromethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 78-87-5 | 1,2-Dichloropropane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-01-6 | Trichloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 124-48-1 | Dibromochloromethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 71-43-2 | Benzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-25-2 | Bromoform | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-10-1 | 4-Methyl-2-Pentanone (MIBK) | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 591-78-6 | 2-Hexanone | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 127-18-4 | Tetrachloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-88-3 | Toluene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-90-7 | Chlorobenzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 100-41-4 | Ethylbenzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 100-42-5 | Styrene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 1330-20-7 | Xylene (Total) | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 108-05-4 | Vinyl acetate | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 110-75-8 | 2-Chloroethyl vinyl ether | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U |

"
@PJL SET JOBATTR="DocOwnerID=2835611858"
@PJL SET JOBATTR="SrcQ=CN=QUE_HP4000_CHAR.OU=Char.O=ENSAFE_TREE"
@PJL SET JOBATTR="DocSize=4595"

# CHARLESTON - ZONE K OFFSITE SAMPLING
## CHARLESTON ZONE K (GROUNDWATER)
## Vertical Profile QA/QC Blanks



| 846-VOA | SAMPLE ID -------> | OFF-T-P003-39 | | OFF-T-P004-10 | | OFF-T-P008-40 | | OFF-E-P009-00 | | OFF-D-P009-00 | | OFF-T-P009-35 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ORIGINAL ID -----> | OFFTP00339 | | OFFTP00410 | | OFFTP00840 | | OFFEP00900 | | OFFDP00900 | | OFFTP00935 | |
| | LAB SAMPLE ID ---> | S007931*16 | | S007969*8 | | S007836*8 | | S007814*2 | | S007814*3 | | S007814*9 | |
| | ID FROM REPORT --> | OFFTP00339 | | OFFTP00410 | | OFFTP00840 | | OFFEP00900 | | OFFDP00900 | | OFFTP00935 | |
| | SAMPLE DATE -----> | 11/16/00 | | 11/17/00 | | 11/14/00 | | 11/13/00 | | 11/13/00 | | 11/13/00 | |
| | DATE ANALYZED ---> | 11/30/00 | | 11/27/00 | | 11/20/00 | | 11/22/00 | | 11/22/00 | | 11/22/00 | |
| | MATRIX ----------> | Water | | Water | | Water | | Water | | Water | | Water | |
| | UNITS ----------> | UG/L | | UG/L | | UG/L | | UG/L | | UG/L | | UG/L | |
| CAS # | Parameter | NBCK16 | | NBCK17 | | NBCK14 | | NBCK14 | | NBCK14 | | NBCK14 | |
| 74-87-3 | Chloromethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 74-83-9 | Bromomethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-01-4 | Vinyl chloride | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-00-3 | Chloroethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-09-2 | Methylene chloride | 5. | U | 5. | U | 0.67 | JB | 5. | U | 5. | U | 5. | U |
| 67-64-1 | Acetone | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U |
| 75-15-0 | Carbon disulfide | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-35-4 | 1,1-Dichloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-34-3 | 1,1-Dichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 67-66-3 | Chloroform | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 107-06-2 | 1,2-Dichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 78-93-3 | 2-Butanone (MEK) | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 56-23-5 | Carbon tetrachloride | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-27-4 | Bromodichloromethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 78-87-5 | 1,2-Dichloropropane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-01-6 | Trichloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 124-48-1 | Dibromochloromethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 71-43-2 | Benzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-25-2 | Bromoform | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-10-1 | 4-Methyl-2-Pentanone (MIBK) | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 591-78-6 | 2-Hexanone | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 127-18-4 | Tetrachloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-88-3 | Toluene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-90-7 | Chlorobenzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 100-41-4 | Ethylbenzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 100-42-5 | Styrene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 1330-20-7 | Xylene (Total) | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 108-05-4 | Vinyl acetate | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 110-75-8 | 2-Chloroethyl vinyl ether | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U |

# CHARLESTON - ZONE K OFFSITE SAMPLING
## CHARLESTON ZONE K (GROUNDWATER)
## Vertical Profile QA/QC Blanks



#846-VOA

| | |
|---|---|
| SAMPLE ID -------> | OFF-T-P010-35 |
| ORIGINAL ID -----> | OFFTP01035 |
| LAB SAMPLE ID ---> | S007875*7 |
| ID FROM REPORT --> | OFFTP01035 |
| SAMPLE DATE -----> | 11/15/00 |
| DATE ANALYZED ---> | 11/21/00 |
| MATRIX ----------> | Water |
| UNITS ----------> | UG/L |

| CAS # | Parameter | NBCK15 | |
|---|---|---|---|
| 74-87-3 | Chloromethane | 10. | U |
| 74-83-9 | Bromomethane | 10. | U |
| 75-01-4 | Vinyl chloride | 10. | U |
| 75-00-3 | Chloroethane | 10. | U |
| 75-09-2 | Methylene chloride | 5. | U |
| 67-64-1 | Acetone | 50. | U |
| 75-15-0 | Carbon disulfide | 5. | U |
| 75-35-4 | 1,1-Dichloroethene | 5. | U |
| 75-34-3 | 1,1-Dichloroethane | 5. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 1. | U |
| 67-66-3 | Chloroform | 5. | U |
| 107-06-2 | 1,2-Dichloroethane | 5. | U |
| 78-93-3 | 2-Butanone (MEK) | 25. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5. | U |
| 56-23-5 | Carbon tetrachloride | 5. | U |
| 75-27-4 | Bromodichloromethane | 5. | U |
| 78-87-5 | 1,2-Dichloropropane | 5. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 5. | U |
| 79-01-6 | Trichloroethene | 5. | U |
| 124-48-1 | Dibromochloromethane | 5. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5. | U |
| 71-43-2 | Benzene | 5. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 5. | U |
| 75-25-2 | Bromoform | 5. | U |
| 108-10-1 | 4-Methyl-2-Pentanone (MIBK) | 25. | U |
| 591-78-6 | 2-Hexanone | 25. | U |
| 127-18-4 | Tetrachloroethene | 5. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5. | U |
| 108-88-3 | Toluene | 5. | U |
| 108-90-7 | Chlorobenzene | 5. | U |
| 100-41-4 | Ethylbenzene | 5. | U |
| 100-42-5 | Styrene | 5. | U |
| 1330-20-7 | Xylene (Total) | 10. | U |
| 108-05-4 | Vinyl acetate | 10. | U |
| 110-75-8 | 2-Chloroethyl vinyl ether | 50. | U |

# CHARLESTON - ZONE K OFFSITE SAMPLING
## CHARLESTON ZONE K (GROUNDWATER)
## Field and Lab Method Blanks



| 8846-VOA | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | SAMPLE ID -------> | BLK-0-CK14-01 | | BLK-0-CK14-03 | | BLK-0-CK15-01 | | BLK-0-CK16-01 | | BLK-0-CK16-02 | | BLK-0-CK17-01 | |
| | ORIGINAL ID -----> | MBLANK1 | | MBLANK3 | | MBLANK1 | | MBLANK1 | | MBLANK2 | | MBLANK1 | |
| | LAB SAMPLE ID ---> | SONBCK14*2 | | SONBCK14*7 | | SONBCK15*2 | | SONBCK16*2 | | SONBCK16*4 | | S007969*10 | |
| | ID FROM REPORT --> | MBLANK1 | | MBLANK3 | | MBLANK1 | | MBLANK1 | | MBLANK2 | | MBLANK1 | |
| | SAMPLE DATE -----> | | | | | | | | | | | | |
| | DATE ANALYZED ---> | 11/20/00 | | 11/22/00 | | 11/21/00 | | 11/28/00 | | 11/30/00 | | 11/27/00 | |
| | MATRIX ----------> | Water | | Water | | Water | | Water | | Water | | Water | |
| | UNITS ----------> | UG/L | | UG/L | | UG/L | | UG/L | | UG/L | | UG/L | |
| CAS # | Parameter | NBCK14 | | NBCK14 | | NBCK15 | | NBCK16 | | NBCK16 | | NBCK17 | |
| 74-87-3 | Chloromethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 74-83-9 | Bromomethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-01-4 | Vinyl chloride | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-00-3 | Chloroethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-09-2 | Methylene chloride | 0.54 | J | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 67-64-1 | Acetone | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U |
| 75-15-0 | Carbon disulfide | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-35-4 | 1,1-Dichloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-34-3 | 1,1-Dichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 5. | U | 5. | U | 1. | U | 5. | U | 5. | U | 5. | U |
| 67-66-3 | Chloroform | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 107-06-2 | 1,2-Dichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 78-93-3 | 2-Butanone (MEK) | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 56-23-5 | Carbon tetrachloride | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-27-4 | Bromodichloromethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 78-87-5 | 1,2-Dichloropropane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-01-6 | Trichloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 124-48-1 | Dibromochloromethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 71-43-2 | Benzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-25-2 | Bromoform | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-10-1 | 4-Methyl-2-Pentanone (MIBK) | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 591-78-6 | 2-Hexanone | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 127-18-4 | Tetrachloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-88-3 | Toluene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-90-7 | Chlorobenzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 100-41-4 | Ethylbenzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 100-42-5 | Styrene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 1330-20-7 | Xylene (Total) | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 108-05-4 | Vinyl acetate | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 110-75-8 | 2-Chloroethyl vinyl ether | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U |

# CHARLESTON - ZONE K OFFSITE SAMPLING
## CHARLESTON ZONE K (GROUNDWATER)
## Field and Lab Method Blanks



| SW846-VOA | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | SAMPLE ID -------> | BLK-0-CK18-01 | | BLK-0-CK18-02 | | BLK-0-CK18-03 | | BLK-0-CK18-04 | | OFF-T-P003-39 | | OFF-T-P004-10 | |
| | ORIGINAL ID -----> | MBLANK1 | | MBLANK2 | | MBLANK3 | | MBLANK4 | | OFFTP00339 | | OFFTP00410 | |
| | LAB SAMPLE ID ---> | S007997*32 | | S007997*34 | | S007997*36 | | S007997*38 | | S007931*16 | | S007969*8 | |
| | ID FROM REPORT --> | MBLANK1 | | MBLANK2 | | MBLANK3 | | MBLANK4 | | OFFTP00339 | | OFFTP00410 | |
| | SAMPLE DATE -----> | | | | | | | | | 11/16/00 | | 11/17/00 | |
| | DATE ANALYZED ---> | 11/28/00 | | 11/30/00 | | 11/29/00 | | 11/30/00 | | 11/30/00 | | 11/27/00 | |
| | MATRIX ----------> | Water | | Water | | Water | | Water | | Water | | Water | |
| | UNITS ----------> | UG/L | | UG/L | | UG/L | | UG/L | | UG/L | | UG/L | |
| CAS # | Parameter | NBCK18 | | NBCK18 | | NBCK18 | | NBCK18 | | NBCK16 | | NBCK17 | |
| 74-87-3 | Chloromethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 74-83-9 | Bromomethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-01-4 | Vinyl chloride | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-00-3 | Chloroethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-09-2 | Methylene chloride | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 67-64-1 | Acetone | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U |
| 75-15-0 | Carbon disulfide | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-35-4 | 1,1-Dichloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-34-3 | 1,1-Dichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 67-66-3 | Chloroform | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 107-06-2 | 1,2-Dichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 78-93-3 | 2-Butanone (MEK) | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 56-23-5 | Carbon tetrachloride | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-27-4 | Bromodichloromethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 78-87-5 | 1,2-Dichloropropane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-01-6 | Trichloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 124-48-1 | Dibromochloromethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 71-43-2 | Benzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-25-2 | Bromoform | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-10-1 | 4-Methyl-2-Pentanone (MIBK) | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 591-78-6 | 2-Hexanone | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 127-18-4 | Tetrachloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-88-3 | Toluene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-90-7 | Chlorobenzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 100-41-4 | Ethylbenzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 100-42-5 | Styrene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 1330-20-7 | Xylene (Total) | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 108-05-4 | Vinyl acetate | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 110-75-8 | 2-Chloroethyl vinyl ether | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U |

# CHARLESTON - ZONE K OFFSITE SAMPLING
## CHARLESTON ZONE K (GROUNDWATER)
## Field and Lab Method Blanks



846-VOA

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | SAMPLE ID -------> | OFF-T-P008-40 | | OFF-E-P009-00 | | OFF-D-P009-00 | | OFF-T-P009-35 | | OFF-T-P010-35 | |
| | ORIGINAL ID -----> | OFFTP00840 | | OFFEP00900 | | OFFDP00900 | | OFFTP00935 | | OFFTP01035 | |
| | LAB SAMPLE ID ---> | S007836*8 | | S007814*2 | | S007814*3 | | S007814*9 | | S007875*7 | |
| | ID FROM REPORT --> | OFFTP00840 | | OFFEP00900 | | OFFDP00900 | | OFFTP00935 | | OFFTP01035 | |
| | SAMPLE DATE -----> | 11/14/00 | | 11/13/00 | | 11/13/00 | | 11/13/00 | | 11/15/00 | |
| | DATE ANALYZED ---> | 11/20/00 | | 11/22/00 | | 11/22/00 | | 11/22/00 | | 11/21/00 | |
| | MATRIX ----------> | Water | | Water | | Water | | Water | | Water | |
| | UNITS ----------> | UG/L | | UG/L | | UG/L | | UG/L | | UG/L | |
| CAS # | Parameter | NBCK14 | | NBCK14 | | NBCK14 | | NBCK14 | | NBCK15 | |
| 74-87-3 | Chloromethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 74-83-9 | Bromomethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-01-4 | Vinyl chloride | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-00-3 | Chloroethane | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 75-09-2 | Methylene chloride | 0.67 | JB | 5. | U | 5. | U | 5. | U | 5. | U |
| 67-64-1 | Acetone | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U |
| 75-15-0 | Carbon disulfide | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-35-4 | 1,1-Dichloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-34-3 | 1,1-Dichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 5. | U | 5. | U | 5. | U | 5. | U | 1. | U |
| 67-66-3 | Chloroform | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 107-06-2 | 1,2-Dichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 78-93-3 | 2-Butanone (MEK) | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 56-23-5 | Carbon tetrachloride | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-27-4 | Bromodichloromethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 78-87-5 | 1,2-Dichloropropane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 0061-01-5 | cis-1,3-Dichloropropene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-01-6 | Trichloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 124-48-1 | Dibromochloromethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 71-43-2 | Benzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 0061-02-6 | trans-1,3-Dichloropropene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 75-25-2 | Bromoform | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-10-1 | 4-Methyl-2-Pentanone (MIBK) | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 591-78-6 | 2-Hexanone | 25. | U | 25. | U | 25. | U | 25. | U | 25. | U |
| 127-18-4 | Tetrachloroethene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-88-3 | Toluene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 108-90-7 | Chlorobenzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 100-41-4 | Ethylbenzene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 100-42-5 | Styrene | 5. | U | 5. | U | 5. | U | 5. | U | 5. | U |
| 1330-20-7 | Xylene (Total) | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 108-05-4 | Vinyl acetate | 10. | U | 10. | U | 10. | U | 10. | U | 10. | U |
| 110-75-8 | 2-Chloroethyl vinyl ether | 50. | U | 50. | U | 50. | U | 50. | U | 50. | U |