N61165.AR.003419
CNC CHARLESTON
5090.3a

RESOURCE CONSERVATION AND RECOVERY ACT FACILITY INVESTIGATION ZONE K NAVAL ANNEX OFF-SITE GROUNDWATER SAMPLING TECHNICAL MEMORANDUM CNC CHARLESTON SC

2/23/2001

U S AIR FORCE

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

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.
313 WINGO WAY
MOUNT PLEASANT, SOUTH CAROLINA 29464
(843) 884-0029

**February 21, 2001**

**DEPARTMENT OF THE AIR FORCE**
**HEADQUARTERS 437TH AIRLIFT WING (AMC)**

FEB 2 3 2001

437 CES/CEV
100 W. Stewart Avenue
Charleston AFB SC 29404-4827

Mr. David Scaturo
Bureau of Land and Waste Management
South Carolina Dept. of Health and Environmental Control (SCDHEC)
2600 Bull Street
Columbia SC 29201

Dear Mr. Scaturo

The purpose of this memo is to document Charleston Air Force Base's review of the Zone K - Naval Annex RCRA Facility Investigation Off-Site Groundwater Sampling Technical Memorandum. This memorandum was provided by Southern Division Naval Facilities Engineering Command for Charleston Air Force Base Environmental Management Flight review and comment. We feel that this memorandum indicates that Charleston Air Force Base property on the Naval Annex is not a source of groundwater contamination at the site. As written, we concur with the memorandum.

If you have any questions or comments, please contact Mr. Al Urrutia or myself at (843) 963-4976.

Sincerely,

GLENN W. EASTERBY, REM
Chief, Environmental Flight

cc:
HQ AFCEE/ERD (Attn: Mr. Roger Johnson)
HQ AMC/CEVR (Attn: Mr. Gary DeWerff)
CSO Naval Base Charleston (Attn: Mr. Rob Harrell)

**DEPARTMENT OF THE NAVY**
SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
P.O. BOX 190010
2155 EAGLE DRIVE
NORTH CHARLESTON, S.C. 29419-9010

5090/11
Code 18713
26 Feb 01

Mr. John Litton, P.E.
Director, Division of Hazardous and Infectious Waste Management
Bureau of Land and Waste Management
South Carolina Department of Health and Environmental Control
2600 Bull Street
Columbia, SC 29201

Subj: SUBMITTAL OF THE ZONE K OFFSITE GROUNDWATER SAMPLING TECHNICAL MEMORANDUM

Dear Mr. Litton,

The purpose of this letter is to submit the Zone K Offsite Groundwater Sampling Technical Memorandum located at the Charleston Naval Complex. The work plan is submitted to fulfill the requirements of condition IV.E.2 of the RCRA Part B permit issued to the Navy by the South Carolina Department of Health and Environmental Control and the U.S. Environmental Protection Agency (EPA).

This document details the investigation and provides the rationale for the conclusions. Representatives of Charleston Air Force Base (CAFB), and the Navy in face-to-face and telephonic conferences have reviewed this document. Both CAFB and the Navy concur with the conclusions. We request that the Department and the EPA review this document and provide comments or approval whichever is appropriate.

If you should have any questions, please contact Matthew Humphrey or myself at (843) 743-9985 and (843) 820-5551 respectively.

Sincerely,

Robert A. Harrell Jr., P.E.

ROBERT A. HARRELL, JR., P.E.
Environmental Engineer
BRAC Division

Copy to:
SCDHEC (4)
USEPA (Dann Spariosu)
CSO Naval Base Charleston (Matt Humphrey)
CH2M-Hill (Dean Williamson)
CAFB (Al Urrutia)

**DEPARTMENT OF THE AIR FORCE**
**HEADQUARTERS 437TH AIRLIFT WING (AMC)**

FEB 2 5 2001

437 CES/CEV
100 W. Stewart Avenue
Charleston AFB SC 29404-4827

Mr. David Scaturo
Bureau of Land and Waste Management
South Carolina Dept. of Health and Environmental Control (SCDHEC)
2600 Bull Street
Columbia SC 29201

Dear Mr. Scaturo

The purpose of this memo is to document Charleston Air Force Base's review of the Zone K - Naval Annex RCRA Facility Investigation Off-Site Groundwater Sampling Technical Memorandum. This memorandum was provided by Southern Division Naval Facilities Engineering Command for Charleston Air Force Base Environmental Management Flight review and comment. We feel that this memorandum indicates that Charleston Air Force Base property on the Naval Annex is not a source of groundwater contamination at the site. As written, we concur with the memorandum.

If you have any questions or comments, please contact Mr. Al Urrutia or myself at (843) 963-4976.

Sincerely,

GLENN W. EASTERBY, REM
Chief, Environmental Flight

cc:
HQ AFCEE/ERD (Attn: Mr. Roger Johnson)
HQ AMC/CEVR (Attn: Mr. Gary DeWerff)
CSO Naval Base Charleston (Attn: Mr. Rob Harrell)

ENSAFE

ENSAFE INC. ENVIRONMENTAL AND MANAGEMENT CONSULTANTS

313 Wingo Way • Mt. Pleasant, South Carolina 29464 • Telephone 843-884-0029 • Facsimile 843-856-0107 • www.ensafe.com

February 22, 2001

Mr. Mihir Mehta
SCDHEC Bureau of Land and Waste Management
8901 Farrow Road
Columbia, SC 29223

Re: Zone K Offsite Groundwater Sampling Technical Memorandum
Charleston Naval Complex

Dear Mr. Mehta,

EnSafe, Inc. is pleased to submit 3 copies of the *Zone K Offsite Groundwater Sampling Technical Memorandum* on behalf of the Southern Division Naval Facilities Engineering Command. The document was reviewed by both Navy and Charleston Air Force Base personnel prior to submittal. The official letters from the Navy and Charleston Air Force Base acknowledging the distribution of this document are forthcoming.

If you have any questions please feel free to contact me at (843) 884-0029.

Sincerely,
EnSafe, Inc.

Todd Haverkost, P.G.
Project Manager

enclosures

cc: Mr. Rob Harrell, P.E., SOUTHDIV
Mr. Matthew A. Hunt, P.E., SOUTHDIV
Mr. Al Urrutia, CAFB
Mr. Dann Spariosu, EPA Region IV
Mr. Tom Beisel, P.G., CH2M-Jones
Mr. Casey Hudson, P.E., CH2M-Jones

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ENSAFE INC. ENVIRONMENTAL AND MANAGEMENT CONSULTANTS

313 Wingo Way • Mt. Pleasant, South Carolina 29464 • Telephone 843-884-0029 • Facsimile 843-856-0107 • www.ensafe.com

March 9, 2001

Mr. Mihir Mehta
SCDHEC Bureau of Land and Waste Management
8901 Farrow Road
Columbia, SC 29223

Re: Supplemental Pages for the Zone K Offsite Groundwater Sampling Technical Memorandum dated 21 February 2001, Charleston Naval Complex

Dear Mr. Mehta,

Enclosed you will find 4 copies of the chains of custody for the groundwater samples collected during the recent offsite sampling event at Zone K. The chains of custody were inadvertently omitted from the *Zone K Offsite Groundwater Sampling Technical Memorandum.* These copies should be inserted into Appendix C along with the analytical data reports that were provided in the document.

I apologize for any inconvenience this may cause and if have any questions please feel free to contact me at (843) 884-0029.

Sincerely,
EnSafe, Inc.

Todd Haverkost, P.G.
Project Manager

enclosures

cc: Mr. Rob Harrell, P.E., SOUTHDIV
Mr. Matthew A. Hunt, P.E., SOUTHDIV
Mr. Al Urrutia, CAFB
Mr. Dann Spariosu, EPA Region IV
Mr. Tom Beisel, P.G., CH2M-Jones
Mr. Casey Hudson, P.E., CH2M-Jones

**ENSAFE**

800-588-7962
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# CHAIN OF CUSTODY RECORD

PAGE 1 OF

PROJECT/JOB NO: 2911-ØØ1-Ø8-425-Ø

COC NO:

PO NO:

REL NO:

LAB NAME: Savannah Labs

CLIENT: Charleston Naval Complex

PROJECT MANAGER: ~~Dr.~~ Todd HaverKost

LOCATION: Zone K

TELE/FAX NO. (843) 884-0029/856-0107

SAMPLERS: (SIGNATURE) Andrew Wertz

| FIELD SAMPLE NUMBER | DATE | TIME | SAMPLE TYPE | TYPE/SIZE OF CONTAINER | PRESERVATION TEMP. | PRESERVATION CHEMICAL | NO. OF CONTAINERS | VOCs | | | | | | | | | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OFFGPØØ91Ø | 11/13/ØØ | 11:5Ø | W | 3-4Ø mL vial | 4°C | HCl | 3 | X | | | | | | | | | | |
| OFFEPØØ9ØØ | | 1Ø:1Ø | | | | | 3 | X | | | | | | | | | | |
| OFFDPØØ9ØØ | | 1Ø:15 | | | | | 3 | X | | | | | | | | | | |
| OFFGPØØ915 | | 12:35 | | | | | 3 | X | | | | | | | | | | |
| OFFGPØØ922 | | 14:17 | | | | | 3 | X | | | | | | | | | | |
| OFFGPØØ927 | | 15:Ø5 | | | | | 3 | X | | | | | | | | | | |
| OFFGPØØ932 | | 15:55 | | | | | 3 | X | | | | | | | | | | |
| OFFGPØØ925 | | 16:25 | | | | | 3 | X | | | | | | | | | | |
| OFFTPØØ935 | | — | | | | | 3 | X | | | | | | | | | | |

Andrew Wertz
11/13/00

| RELINQUISHER | DATE | RECEIVER | DATE | RELINQUISHER | DATE | RECEIVER | DATE |
|---|---|---|---|---|---|---|---|
| Andrew Wertz | 11/13/00 | F. Swafford | 11/14/00 | | | | |
| PRINTED: Andrew Wertz | TIME 18:3Ø | PRINTED: F Swafford | TIME 9:05 | PRINTED: | TIME | PRINTED: | TIME |
| COMPANY: EnSafe | | COMPANY: STL-Sav | | COMPANY: | | COMPANY: | |

METHOD OF SHIPMENT: FedEx

SHIPMENT NO. 815350318431

RESULTS TO: Charlie Vernoy

COMMENTS: DQO II 14-Day TAT

S0 07814

ENSAFE

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MEMPHIS, TENNESSEE
CHARLESTON,SC; CINCINNATI,OH; DALLAS,TX; JACKSON,TN; KNOXVILLE,TN; LANCASTER,PA; NASHVILLE,TN; NORFOLK,VA; PADUCAH,KY; PENSACOLA,FL; RALEIGH,NC; COLOGNE, GERMANY

# CHAIN OF CUSTODY RECORD

PROJECT/JOB NO: 2911-001-08-442-00
COC NO:
PO NO: 4208
REL NO:
LAB NAME: Savannah Labs

CLIENT: Charleston Naval Complex
PROJECT MANAGER: Todd Haverkost
LOCATION: Zone K
TELE/FAX NO. (843) 884-0029 / 856-0107
SAMPLERS: (SIGNATURE) [signature]

| FIELD SAMPLE NUMBER | DATE | TIME | SAMPLE TYPE | TYPE/SIZE OF CONTAINER | PRESERVATION TEMP. | PRESERVATION CHEMICAL | NO. OF CONTAINERS | VOCs | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| OFFGPØØ81Ø | 11/14/00 | 12:05 | W | 3-4Ø ml vial | 4°C | HCl | 3 | X | |
| OFFGPØØ815 | | 12:26 | | | | | 3 | X | |
| OFFGPØØ82Ø | | 13:13 | | | | | 3 | X | |
| OFFGPØØ825 | | 14:Ø8 | | | | | 3 | X | |
| OFFGPØØ83Ø | | 14:41 | | | | | 3 | X | |
| OFFGPØØ835 | | 15:12 | | | | | 3 | X | |
| OFFGPØØ84Ø | | 15:42 | | | | | 3 | X | |
| OFFTPØØ84Ø | | — | | | | | 3 | X | |
| OFFS13DIDW | | 16:45 | S | 3-Encore Sampler 1-8oz glass jar | | — | 4 | X | |
| OFFS14DIDW | | 16:50 | | | | — | 4 | X | |

| RELINQUISHER | DATE | RECEIVER | DATE | RELINQUISHER | DATE | RECEIVER | DATE |
|---|---|---|---|---|---|---|---|
| [signature] | 11/14/00 | C. Vargas | 11/15/00 | | | | |
| PRINTED: Andrew Wertz | TIME 1800 | PRINTED: C. Vargas | TIME 9:00 | PRINTED: | TIME | PRINTED: | TIME |
| COMPANY: EnSafe | | COMPANY: STL-SKY | | COMPANY: | | COMPANY: | |

METHOD OF SHIPMENT: FedEx
SHIPMENT NO. 823928604540
SEND RESULTS TO: Charlie Vernoy

COMMENTS:

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) 50-07856

ENSCOC2 REV. 05/9

ENSAFE

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# CHAIN OF CUSTODY RECORD

PAGE ___ OF ___

PROJECT/JOB NO: 2911-001- 425-00
COC NO:
PO NO: 4208
REL NO:
LAB NAME: Savannah Labs

CLIENT: Charleston Naval Complex
PROJECT MANAGER: Todd Haverkost
LOCATION: Zone K
TELE/FAX NO. (843) 884-0029/856-0107
SAMPLERS: (SIGNATURE) Andrew Wertz

| FIELD SAMPLE NUMBER | DATE | TIME | SAMPLE TYPE | TYPE/SIZE OF CONTAINER | PRESERVATION TEMP. | PRESERVATION CHEMICAL | NO. OF CONTAINERS | VOCs | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| OFFGP01001 | 11/15/00 | 11:47 | W | 3-40 mL vial | 4°C | HCl | 3 | X | |
| OFFGP01015 | | 12:37 | | | | | 3 | X | |
| OFFGP01020 | | 13:15 | | | | | 3 | X | |
| OFFGP01025 | | 13:46 | | | | | 3 | X | |
| OFFGP01030 | | 14:17 | | | | | 3 | X | |
| OFFGP01035 | | 14:55 | | | | | 3 | X | |
| OFFTP01035 | 11/15/00 | — | W | 3-40 mL vial | 4°C | HCl | 3 | X | |

Andrew Wertz
11/15/00

| RELINQUISHER | DATE | RECEIVER | DATE | RELINQUISHER | DATE | RECEIVER | DATE |
|---|---|---|---|---|---|---|---|
| Andrew Wertz | 11/15/00 | C. Vasquez | 11/16/00 | | | | |
| PRINTED: Andrew Wertz | TIME 1745 | PRINTED: C. Vasquez | TIME 9:00 | PRINTED: | TIME | PRINTED: | TIME |
| COMPANY: EnSafe | | COMPANY: STL-SAV | | COMPANY: | | COMPANY: | |

METHOD OF SHIPMENT: FedEx
SHIPMENT NO. 807129985420
SEND RESULTS TO: Charlie Verney

COMMENTS:

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE)

ENSCOC2
REV. 05/98

**ENSAFE**

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# CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

PROJECT/JOB NO: 2911-001 8-425-0C

COC NO:

PO NO: 4208

REL NO:

LAB NAME: Savannah Labs

CLIENT: Charleston Naval Complex

PROJECT MANAGER: Todd Haver Kost

LOCATION: Zone K

TELE/FAX NO. (843) 884-0029 / 856-0107

SAMPLERS: (SIGNATURE) Andrew Wertz

ANALYSIS REQUIRED

| FIELD SAMPLE NUMBER | DATE | TIME | SAMPLE TYPE | TYPE/SIZE OF CONTAINER | PRESERVATION TEMP. | PRESERVATION CHEMICAL | NO. OF CONTAINERS | VOCs | | | | | | | | | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OFFGPØØ71Ø | 11/16/00 | 9:03 | W | 3-40 mL vial | 4°C | HCl | 3 | X | | | | | | | | | | |
| OFFGPØØ715 | | 9:26 | | | | | 3 | X | | | | | | | | | | |
| OFFGPØØ72Ø | | 9:58 | | | | | 3 | X | | | | | | | | | | |
| OFFGPØØ725 | | 10:38 | | | | | 3 | X | | | | | | | | | | |
| OFFGPØØ73Ø | | 11:00 | | | | | 3 | X | | | | | | | | | | |
| OFFGPØØ733 | | 11:22 | | | | | 3 | X | | | | | | | | | | |
| OFFGPØØ736 | | 11:39 | | | | | 3 | X | | | | | | | | | | |
| OFFGPØØ31Ø | | 15:00 | | | | | 3 | X | | | | | | | | | | |
| OFFGPØØ315 | | 15:22 | | | | | 3 | X | | | | | | | | | | |
| OFFGPØØ32Ø | | 15:~~50~~ 44 AM | | | | | 3 | X | | | | | | | | | | |
| OFFGPØØ325 | | 16:06 | | | | | 3 | X | | | | | | | | | | |
| OFFGPØØ33Ø | | 16:30 | | | | | 3 | X | | | | | | | | | | |
| OFFGPØØ333 | | 16:50 | | | | | 3 | X | | | | | | | | | | |
| OFFGPØØ336 | | 17:12 | | | | | 3 | X | | | | | | | | | | |
| OFFGPØØ339 | | 17:30 | | | | | 3 | X | | | | | | | | | | |
| OFFTPØØ339 | | — | | | | | 3 | X | | | | | | | | | | |

| RELINQUISHER | DATE | RECEIVER | DATE | RELINQUISHER | DATE | RECEIVER | DATE |
|---|---|---|---|---|---|---|---|
| Andrew Wertz | 11/16/00 | C. Vasquez | | | | | |
| PRINTED: Andrew Wertz | TIME 19:00 | PRINTED: C. Vasquez | TIME | PRINTED: | TIME | PRINTED: | TIME |
| COMPANY: EnSafe | | COMPANY: STL - SAV. | | COMPANY: | | COMPANY: | |

METHOD OF SHIPMENT: Fed Ex

SHIPMENT NO. 815350318340

SEND RESULTS TO: Charlie Verney

COMMENTS:

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE)

ENSC002

EN'SAFE

800-588-7962
MEMPHIS, TENNESSEE
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CASTER,PA; NASHVILLE,TN; NORFOLK,VA; PADUCAH,KY; PENSACOLA,FL;
RALEIGH,NC; COLOGNE, GERMANY

# CHAIN OF CUSTO. .' RECORD

PROJECT/JOB NO: 2911-001-08-425-00
COC NO:
PO NO: 4208
REL NO:
LAB NAME: Savannah Labs

CLIENT: Charleston Naval Complex
PROJECT MANAGER: Todd Haverkost
LOCATION: Zone K
TELE/FAX NO. (843) 884-0029/856-0107
SAMPLERS: (SIGNATURE) Andrew Wertz

ANALYSIS REQUIRED

| FIELD SAMPLE NUMBER | DATE | TIME | SAMPLE TYPE | TYPE/SIZE OF CONTAINER | PRESERVATION TEMP. | PRESERVATION CHEMICAL | NO. OF CONTAINERS | VOCs | | | | | | | | | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OFFGPØØ41Ø | 11/17/00 | 11:30 | W | 3-40 mL vial | 4°C | HCl | 3 | X | | | | | | | | | | |
| OFFGPØØ415 | | 12:05 | | | | | 3 | X | | | | | | | | | | |
| OFFGPØØ42Ø | | 12:37 | | | | | 3 | X | | | | | | | | | | |
| OFFGPØØ427 | | 13:27 | | | | | 3 | X | | | | | | | | | | |
| OFFGPØØ43Ø | | 14:55 | | | | | 3 | X | | | | | | | | | | |
| OFFGPØØ433 | | 15:45 | | | | | 1 | X | | | | | | | | | | limited quantity |
| OFFGPØØ439 | | 16:49 | | | | | 3 | X | | | | | | | | | | |
| OFFTPØØ41Ø | ↓ | — | ↓ | ↓ | ↓ | ↓ | 3 | X | | | | | | | | | | |

Andrew Wertz
11/17/00

| RELINQUISHER | DATE | RECEIVER | DATE | RELINQUISHER | DATE | RECEIVER | DATE |
|---|---|---|---|---|---|---|---|
| Andrew Wertz | 11/17/00 | C. Vasquez | 11/18/00 | | | | |
| PRINTED: Andrew Wertz | TIME 17:45 | PRINTED: C. Vasquez | TIME 10:12 | PRINTED: | TIME | PRINTED: | TIME |
| COMPANY: EnSafe | | COMPANY: STL-SAV | | COMPANY: | | COMPANY: | |

METHOD OF SHIPMENT: FedEx
SHIPMENT NO. 825049929456
RESULTS TO: Charlie Vernoy

COMMENTS:

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) SO-07969

ENSCOC2
REV. 05/98

**ENSAFE**

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MEMPHIS, TENNESSEE
CHARLESTON, SC; CINCINNATI, OH; DALLAS, TX; JACKSON, TN; KNOXVILLE, TN; LANCASTER, PA; NASHVILLE, TN; NORFOLK, VA; PADUCAH, KY; PENSACOLA, FL; RALEIGH, NC; COLOGNE, GERMANY

# CHAIN OF CUSTODY RECORD

PAGE 1 OF 2
PROJECT/JOB NO: 2911-001 425-00
COC NO:
PO NO: 4208
REL NO:
LAB NAME: Savannah Labs

CLIENT: Charleston Naval Complex
PROJECT MANAGER: Todd Haverkost
LOCATION: Zone K
TELE/FAX NO. (843) 884-0029 / 856-0107
SAMPLERS: (SIGNATURE) [signature]

ANALYSIS REQUIRED

| FIELD SAMPLE NUMBER | DATE | TIME | SAMPLE TYPE | TYPE/SIZE OF CONTAINER | PRESERVATION TEMP. | PRESERVATION CHEMICAL | NO. OF CONTAINERS | VOCs | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| OFFGP00510 | 11-18-00 | 1008 | W | 40ml vial | 4°C | HCL | 3 | X | |
| OFFGP00515 | | 1045 | | | | | | X | |
| OFFGP00520 | | 1120 | | | | | | X | |
| OFFGP00525 | | 1157 | | | | | | X | |
| OFFGP00530 | | 1225 | | | | | | X | |
| OFFGP00533 | | 1315 | | | | | 1 | X | |
| OFFGP00536 | | 1352 | | | | | 3 | X | |
| OFFGP00539 | | 1422 | | | | | | X | |
| OFFGP00610 | | 1547 | | | | | | X | |
| OFFGP00615 | | 1610 | | | | | | X | |
| OFFGP00620 | | 1645 | | | | | | X | |
| OFFGP00625 | | 1721 | | | | | | X | |
| OFFGP00630 | | 1742 | | | | | | X | |
| OFFGP00633 | | 1802 | | | | | | X | |
| OFFGP00636 | | 1823 | | | | | | X | |
| OFFGP00639 | | 1845 | | | | | | X | |

| RELINQUISHER | DATE | RECEIVER | DATE | RELINQUISHER | DATE | RECEIVER | DATE |
|---|---|---|---|---|---|---|---|
| [signature] | 11/20/00 | K Conner | 11/21/00 | | | | |
| PRINTED: Andrew Wertz | TIME 17:00 | PRINTED: K Conner | TIME 945 | PRINTED: | TIME | PRINTED: | TIME |
| COMPANY: EnSafe | | COMPANY: STL SAV | | COMPANY: | | COMPANY: | |

METHOD OF SHIPMENT: FedEx
SHIPMENT NO. 308 8109 455
SEND RESULTS TO: Charlie Verney

COMMENTS: DQO II 14-Day TAT

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE)

Sa-07907

ENSCOC2

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MEMPHIS, TENNESSEE
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# CHAIN OF CUSTODY RECORD

PAGE 2 OF 2
PROJECT/JOB NO: 2911-001 1-428-00
COC NO:
PO NO: 4208
REL NO:
LAB NAME: Savannah Labs

CLIENT Charleston Naval Complex
PROJECT MANAGER Todd Haver Kost
LOCATION Zone K
TELE/FAX NO. (843) 884-0029/856-0107
SAMPLERS: (SIGNATURE) Andrew Wertz

ANALYSIS REQUIRED

| FIELD SAMPLE NUMBER | DATE | TIME | SAMPLE TYPE | TYPE/SIZE OF CONTAINER | PRESERVATION TEMP. | PRESERVATION CHEMICAL | NO. OF CONTAINERS | VOCs | | | | | | | | | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OFFGPØØ21Ø | 11/19/00 | 9:10 | W | 40 mL vial | 4°C | HCl | 3 | X | | | | | | | | | | |
| OFFGPØØ215 | | 9:40 | | | | | 3 | X | | | | | | | | | | |
| OFFGPØØ22Ø | | 10:07 | | | | | 3 | X | | | | | | | | | | |
| OFFGPØØ225 | | 10:31 | | | | | 3 | X | | | | | | | | | | |
| OFFGPØØ233 | | 11:10 | | | | | 3 | X | | | | | | | | | | |
| OFFGPØØ238 | | 11:50 | | | | | 3 | X | | | | | | | | | | |
| OFFGPØØ11Ø | | 13:23 | | | | | 3 | X | | | | | | | | | | |
| OFFGPØØ115 | | 13:46 | | | | | 3 | X | | | | | | | | | | |
| OFFGPØØ12Ø | | 14:09 | | | | | 3 | X | | | | | | | | | | |
| OFFGPØØ125 | | 14:30 | | | | | 3 | X | | | | | | | | | | |
| OFFGPØØ13Ø | | 14:50 | | | | | 3 | X | | | | | | | | | | |
| OFFGPØØ133 | | 15:20 | | | | | 3 | X | | | | | | | | | | |
| OFFGPØØ136 | | 15:48 | | | | | 3 | X | | | | | | | | | | |
| OFFGPØØ139 | | 16:11 | | | | | 3 | X | | | | | | | | | | |
| | | | | | | Andrew Wertz | | 11/20/00 | | | | | | | | | | |

| RELINQUISHER: | DATE | RECEIVER: | DATE | RELINQUISHER: | DATE | RECEIVER: | DATE |
|---|---|---|---|---|---|---|---|
| Andrew Wertz | 11/20/00 | K Conner | 11/21/00 | | | | |
| PRINTED: Andrew Wertz | TIME | PRINTED: K Conner | TIME | PRINTED: | TIME | PRINTED: | TIME |
| COMPANY: EnSafe | 17:00 | COMPANY: STLSAV | 845 | COMPANY: | | COMPANY: | |

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

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:

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MOUNT PLEASANT, SOUTH CAROLINA 29464

The Contractor, EnSafe Inc., hereby certifies that, to the best of its knowledge and belief, the technical data delivered herewith under Contract No. N62467-89-D-0318 is complete, accurate, and complies with all requirements of the contract.

Date: February 21, 2001

Signature:

Name: Todd Haverkost, P.G.
Title: Task Order Manager

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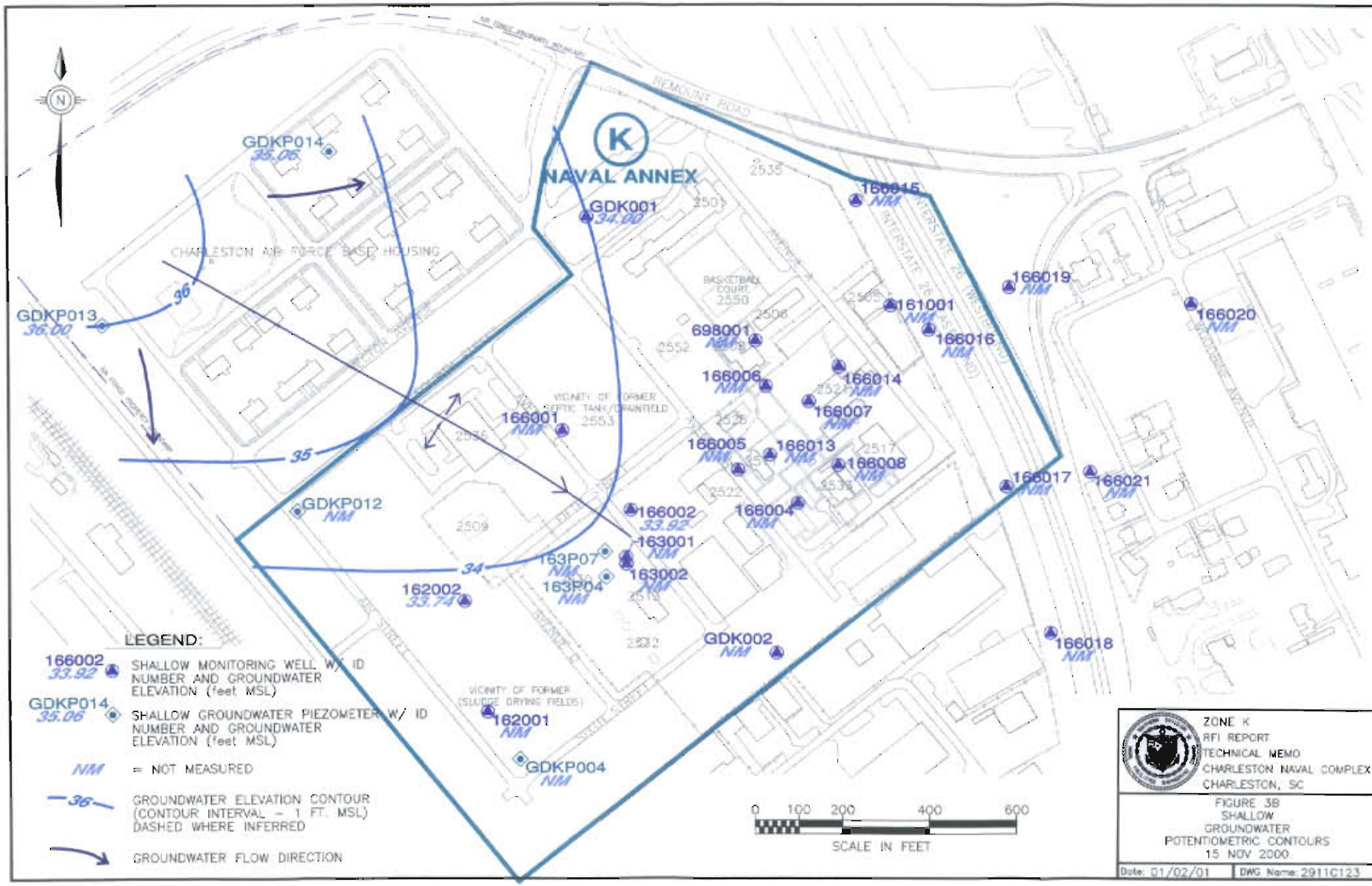
## 1.0 INTRODUCTION

The Naval Annex property 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 to 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 shows where the Naval Annex, adjacent properties, and the SWMU 163 and 166 source areas are located. In addition to the groundwater contaminant plumes associated with SWMUs 163 and 166, low concentrations 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. In December 1999, a vertical profiling technique was used to collect groundwater samples on a 200-foot grid in areas considered either upgradient or sidegradient of both SWMUs. This phase of the investigation identified consistent detections of chlorinated compounds (primarily trichloroethylene) at 10 of the 12 locations sampled, including upgradient locations GDKGP011, GDKGP012, and GDKGP013 along the northwestern Naval Annex property boundary. The highest detections were approximately 33 feet below ground surface (bgs) 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. However, based on the December sampling results, the Navy hypothesized that contaminants could be migrating onto Navy property from an offsite source[1], resulting in comingled plumes.

A September 2000 work plan outlined a sampling strategy to collect additional groundwater samples in areas presumed to be hydraulically upgradient of the Naval Annex. According to the

[1] The site is defined as Naval Annex property.


K
NAVAL ANNEX
CHARLESTON AIR FORCE BASE HOUSING
REMOUNT ROAD
INTERSTATE 26
GDKP014
35.06
GDKP013
36.00
GDK001
34.00
GDKP012
NM
GDK002
NM
GDKP004
NM
162001
NM
162002
33.74
163001
NM
163002
NM
163P07
NM
163P04
NM
166001
NM
166002
33.92
166004
NM
166005
NM
166006
NM
166007
NM
166008
NM
166013
NM
166014
NM
166015
NM
166016
NM
166017
NM
166018
NM
166019
NM
166020
NM
166021
NM
161001
NM
698001
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 COMPLEX
CHARLESTON, SC
FIGURE 3B
SHALLOW
GROUNDWATER
POTENTIOMETRIC CONTOURS
15 NOV 2000
Date: 01/02/01
DWG Name: 2911C123

work plan, the purpose of the sampling strategy was to collect the data necessary to determine the origin of the contamination at sample point GDKGP011.

The potential origins of contamination included:

- A source on the Navy property.
- Contamination migrating onto the Navy property from an offsite source.
- Comingled contamination from a source(s) on Navy property and an offsite 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 of the Remount Road right-of-way belonging to the South Carolina Department of Transportation (SCDOT). The study area is generally between Fourth Street and Remount Road and bounded on its northeast side by Avenue B and on its southwest 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.

## 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 that could impact the vertical profile groundwater sampling. A shallow-deep piezometer pair was installed at each of the two boring locations to provide additional data points for groundwater elevation control. Groundwater was sampled to establish the upgradient presence/absence of chlorinated solvent detections in deep groundwater in November 2000 after the piezometers were installed. Ten direct-push groundwater vertical profile locations (OFFGP001 to OFFGP010) were sampled at 5 foot intervals through the saturated portion of the surficial aquifer. Figure 1 depicts offsite study sample and piezometer locations.

## 3.0 GEOLOGY

Well construction and lithologic logs from offsite 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 elevation data from the top of theAshley Formation are presented in Figure 2. The 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 this highs western flank, which slopes very gently 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 thick and is a fine- to medium-grained orange, gray, or brown sand with occasional fines and very fine mica. Qcs beneath the study area ranged from 3 to 7 feet thick and consisted of gray to dark gray clay, silt, and dark gray clayey fine sand with phosphate nodules. A 3 foot thick clay interval was encountered at 26.3 feet bgs in boring GDKP14D and in boring GDKP13D at a depth of 30.1 feet bgs as a 0.7 foot 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 limited in 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 detailed in detail in previous RFI reports. The most recent RFI groundwater elevation contour maps from January 2000 are presented in Appendix B. Groundwater elevations were subsequently measured in select wells during the

study to verify existing flow directions and determine if the offsite area was upgradient of the Naval Annex.

Deep groundwater elevations in November were lower than in January 2000. Declines in these 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 from the November data from deep wells and piezometers illustrate that groundwater flow directions were essentially the same as in January. The November contours also indicate that the area northwest of Fourth Street is upgradient of the Naval Annex. A groundwater divide trends east-southeast from the area near GDKP13D to the 16605D/16613D area, 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 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 trends east-southeast from a point just east of GDKP013 toward well 166002, based on the November 2000 data. This divide, as well as general groundwater flow directions, are presented on Figure 3B.

Water level data collected in March 1998 were used to determine vertical hydraulic gradients at the Naval Annex. Only five well pairs: four points 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 comparable in magnitude to the gradients observed across the majority of the Naval Annex.

## 4.2 Groundwater Sampling Methodology

Groundwater samples were collected from 10 offsite locations using direct-push technology (DPT) vertical profiling which involves collecting samples from increasingly deeper, discrete intervals throughout the saturated zone 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 initial sampling depth using DPT equipment. A slightly positive hydraulic pressure is maintained in the sampler using deionized water from a graduated cylinder connected to a peristaltic pump. The positive pressure helps to reduce fines clogging the sampler and prevents inflow of water from intervals not sampled. The volume of water lost from a graduated cylinder to the formation during the push is recorded. Twice the volume of deionized water lost to the formation is recovered and properly discarded prior to actual sample collection 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 positive hydraulic pressure in the sampler. Discrete groundwater sample intervals less than 6 inches long began just below the water table (8 to 10 feet bgs) and continued every 5 feet thereafter, with the target being the clayey sand overlying the Ashley Formation.

## 4.3 Offsite Groundwater Sampling Results

All groundwater samples were submitted to an SCDHEC certified laboratory for VOC[2] analysis. Table 1 summarizes the compounds detected, while the complete analytical data sets are in Appendix C.

[2] VOC = Volatile Organic Compound

### 4.3.1 Quality Assurance/Quality Control

Quality assurance/quality control (QA/QC) samples analyzed in conjunction with the sampling effort consisted of a field blank, equipment blank, deionzed water blank (deionzed water was used as the injection fluid during the vertical profiling process), trip blanks, and laboratory method blanks. Prior to evaluating the site data, the results of the QA/QC samples were reviewed to assess whether or not chemical artifacts may have been introduced in either the field or the laboratory. Methylene chloride was the only analyte detected in blank samples. It was detected 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. Data validation guidelines allow 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 methylene chloride detection in a groundwater sample was 4.4 J $\mu$g/L.

### 4.3.2 Groundwater Data

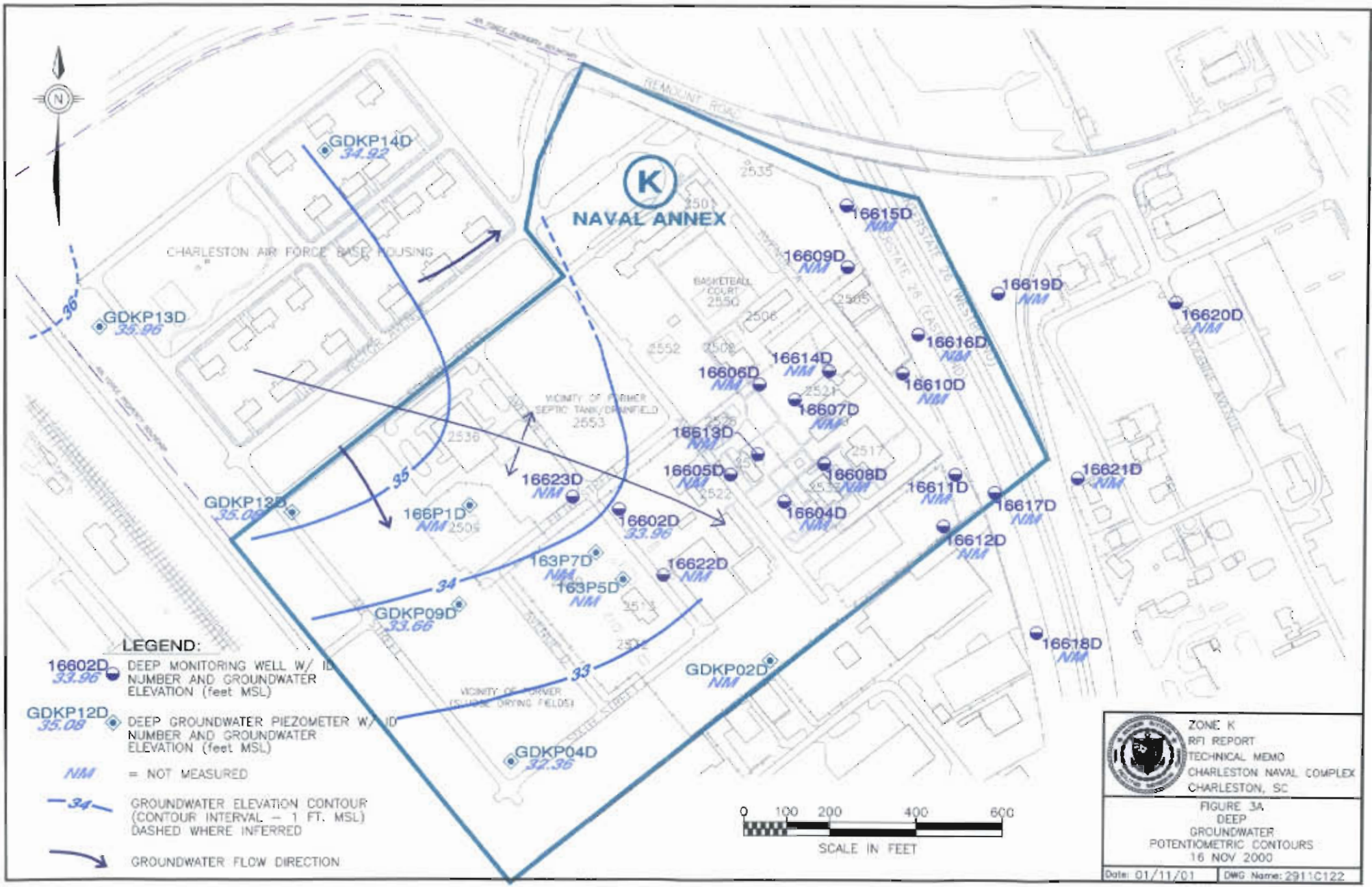
VOCs were detected at 8 of the 10 locations sampled during this phase of the field investigation. No chlorinated solvents were detected at locations OFFGP001 and OFFGP002, which were in the Remount Road right-of-way. Not counting methylene chloride, 12 different compounds were detected, with at least one compound detected at each of the eight locations where hits occurred. Except for methylene chloride, no compounds were detected above 25 feet bgs.

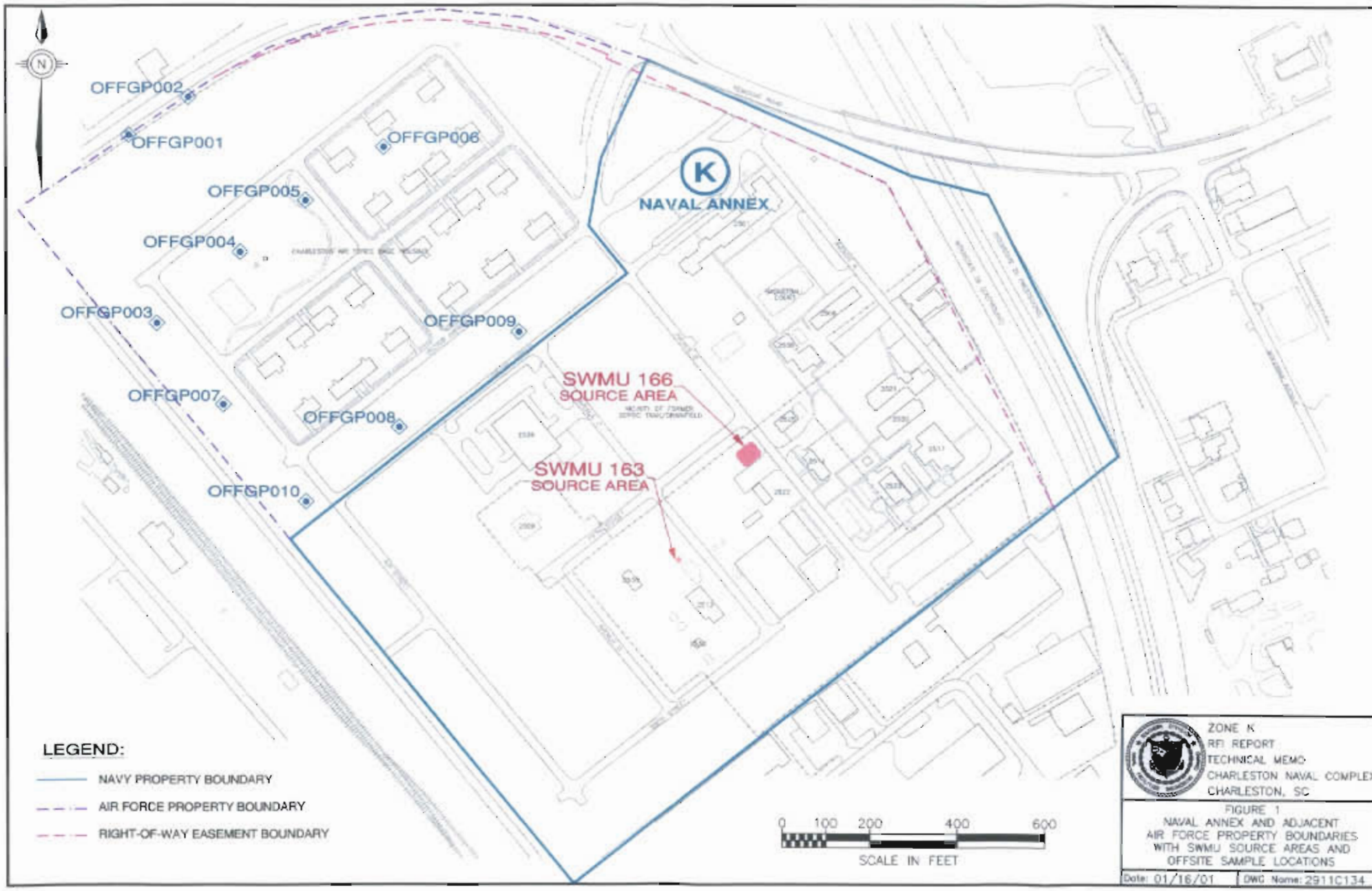
TCE was nearly ubiquitous across the CAFB property, with only location OFFGP010 having no detections. Three of the 15 detections exceeded TCE's maximum contaminant level (MCL) which is 5 $\mu$g/L. Two detections occurred at OFFGP006 and third one was at OFFGP009. Very little TCE degradation based on the fact that dichloroethylene (DCE) was only detected four times. The minimal amount of TCE degradation is not surprising based on evidence gathered during two previous sampling events for monitored natural attenuation parameters. Results indicated that aquifer conditions were not suitable for the natural biological degradation of chlorinated solvent

constituents. Figure 4 shows where perchloroethene (PCE), TCE, and DCE were detected at the 10 offsite sample locations and three previously sampled locations on the Naval Annex, which prompted this phase of work.

The only other constituents exhibiting a possible pattern or trend were carbon tetrachloride and chloroform. Carbon tetrachloride was detected at similar depth intervals (30 to 33 feet bgs) at locations OFFGP003 and OFFGP007. These locations are along the southwestern boundary of the CAFB property (Figure 5), which is generally considered to be hydraulically upgradient of GDKGP011. Chloroform, which can form during the degradation of carbon tetrachloride, was detected at was detected at OFFGP004, OFFGP008, and OFFGP009 which are all downgradient of OFFGP003 where it was also detected. Methylene chloride which can form as a degradation product of chloroform, was also detected at each of these locations. However, as mentioned earlier, methylene chloride was not detected in groundwater samples at concentrations exceeding 10 times the concentrations detected in QA/QC blanks, suggesting that methylene chloride may not be present in the groundwater samples.

Detections of the remaining compounds in the offsite groundwater samples can be described as sporadic at best. No attempt will be made to explain the detections in this technical memorandum because 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.


NAVAL ANNEX
K
CHARLESTON AIR FORCE BASE HOUSING
GDKP14D 34.92
GDKP13D 35.96
GDKP12D 35.08
GDKP09D 33.66
GDKP04D 32.36
GDKP02D NM
166P1D NM
163P7D NM
163P5D NM
16602D 33.96
16605D NM
16606D NM
16607D NM
16608D NM
16609D NM
16610D NM
16611D NM
16612D NM
16613D NM
16614D NM
16615D NM
16616D NM
16617D NM
16618D NM
16619D NM
16620D NM
16621D NM
16622D NM
16623D 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
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 COMPLEX
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

# Table 1

## Offsite Groundwater Sampling

## Primary Sample Detection Summary

## ($\mu$g/l)

| Location | Depth (ft) | 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 |

# Table 1

## Offsite Groundwater Sampling

## Primary Sample Detection Summary

## ($\mu$g/l)

| Location | Depth (ft) | 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OFFGP007 | 30 | ND | ND | ND | ND | ND | ND | ND | ND | 0.56J | ND | 4.4J | ND | ND |
| *continued* | 33 | 1.5J | 1.2J | ND | ND | ND | ND | ND | ND | 4.9J | ND | ND | ND | 1.2J |
| | 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 | 22J | 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 |

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

Bold values exceed the MCL.

ND - Not Detected

## 4.4 Comparison of Offsite and Naval Annex Results

The distribution of detections by location, depth, and analyte was presented on Figure 4. TCE was detected most frequently; detections ranged from 0.42j $\mu$g/L at OFFGP003 to 36 $\mu$g/L at OFFGP006. PCE was not detected in any offsite samples. DCE was detected in only three samples; one each at locations OFFGP003, OFFGP007, and OFFGP010. Chlorinated solvents (mainly TCE) was detected in December 1999 at GDKGP011, GDKGP012, and GDKGP013; detections ranged from 1 $\mu$g/L to 150 $\mu$g/L. PCE and DCE were also detected at these three previously sampled locations.

Isoconcentration contours of the cumulative/total chlorinated solvent detection values (PCE, TCE, DCE and vinyl chloride) at off-site and pre-existing vertical profile locations west of Avenue B are presented on Figure 6. 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. Chlorinated solvents were not detected offsite above 25 feet bgs; therefore, only data for detections 25 feet bgs or below were summed to determine the cumulative/total detection concentration values at each sampling location for presentation purposes. The highest cumulative detections presented on Figure 4 were at 166VP006 (12,853 $\mu$g/L) and GDKGP011 (344 $\mu$g/L). Cumulative detections of 57.6 $\mu$g/L at OFFGP006 and 18 $\mu$g/L at OFFGP009 were the highest for offsite study locations; they are in the eastern half of the housing area. Extremely low cumulative concentrations ranging from 1.2 $\mu$g/L to 3.83 $\mu$g/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 vinyl chloride) 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 section. 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 7. 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.

The very low concentrations of chlorinated solvents detected in offsite groundwater are from samples collected at depths of at least 25 feet bgs. GDKGP012 was the only one of the 19 locations selected for cross-section development that had detections above 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

Groundwater flow data collected during this phase of field work confirmed that a portion of the CAFB is hydraulically upgradient of sample point GDKGP011 on the Naval Annex property. GDKGP011 served as the focal point during the development of the offsite sampling strategy since it was the location where the highest concentrations of chlorinated compounds were detected along the property boundary shared by the Navy and CAFB. In the deep portion of the surficial aquifer, offsite sample location OFFGP003 represents the most upgradient location sampled during this phase of the field investigation. The distribution of dissolved phase constituents in the general vicinity of the study area appears to be influenced by a groundwater divide trending NW-SE from

location OFFGP003 on the CAFB property and extending across the Naval Annex. Groundwater flow along the axis is predominantly toward the southeast but, because flow diverges away from the axis in the downgradient direction, dissolved phase contaminants will have the tendency to migrate either east-northeast or south-southeast on the side of the axis on which the contaminants are located. The groundwater flow pattern is significant because the primary intent of this phase of the investigation was to determine the general origin of contaminants at location GDKGP011, where the highest detections of chlorinated compounds occurred on Navy property near the Navy/CAFB property boundary. Constituents were detected at four locations on the same side of the divide as GDKGP011 and upgradient of it: OFFGP003, OFFGP007, OFFGP008, and OFFGP010. Any contaminants detected at locations OFFGP001, OFFGP002, OFFGP004, OFFGP005, OFFGP006, or OFFGP009 would not have an impact on GDKGP011 because the locations are on the opposite side of the groundwater divide.

Low concentrations of VOCs were detected in groundwater at each of the eight sampling locations on the CAFB property. No VOCs were detected in groundwater above 27 feet bgs, except for methylene chloride, which was also present in several QA/QC blanks. There were no detections at the either of the two sample locations in the SCDOT right-of-way along Remount Road.

The analytical data for the samples collected upgradient of GDKGP011 indicated the presence of chlorinated compounds similar in type to those detected at GDKGP011, and at the same depth, but they were more than an order of magnitude lower in concentration. Contaminant concentrations are relatively constant along the groundwater flow path between OFFGP003 and OFFGP008, but increase between OFFGP008 and GDKGP011. The concentration gradients indicate a source of groundwater contamination upgradient of OFFGP003 and another likely source on Navy property near GDKGP011. Carbon tetrachloride detections at locations upgradient of GDKGP011 also suggests two separate source areas because carbon tetrachloride was not detected on Navy

property. Chloroform, which can be a degradation product of carbon tetrachloride, is forming along the flow path and has been detected both upgradient and on the Navy property.

No additional offsite characterization is recommended at this time to further evaluate the source of the chlorinated compounds detected at GDKGP011. Additional groundwater sampling has already been proposed in the Zone K RFI work plan addendum to address portions of the Naval Annex that are downgradient of sample locations OFFGP006 and OFFGP009 to determine the extent of the plume in that area.

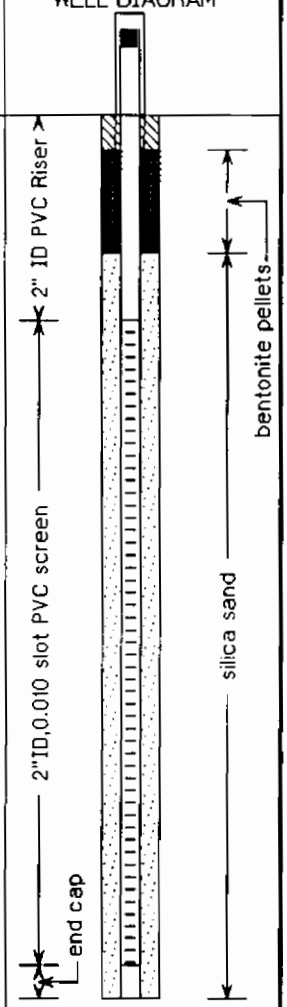
# ENSAFE

# 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 | | | 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 | | | | | | | | from GDKP13D log | |

WELL DIAGRAM



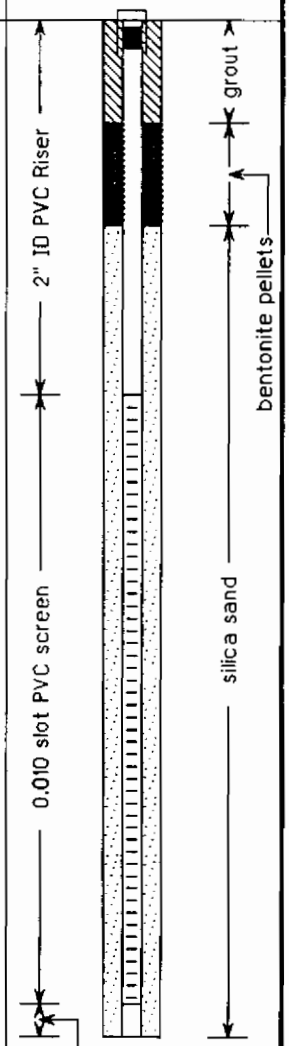
# ENSAFE

# 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. | 38.6 |
| 5 | | | 1 | | 60 | | SP | Sand: lt brown; very fine, trace silt; dry, loose. | 36.8 |
| | | | | | | | SM | Sand: orange-brown; very fine, silty, trace clay; wet. | 35.9 |
| 10 | | | | | | | | | 30.4 |
| | | | | | | | SP | Sand: orange; very fine, trace to some silt, trace very fine black grains and trace very fine mica; wet, loose to soupy. | 28.8 |
| 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. | 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



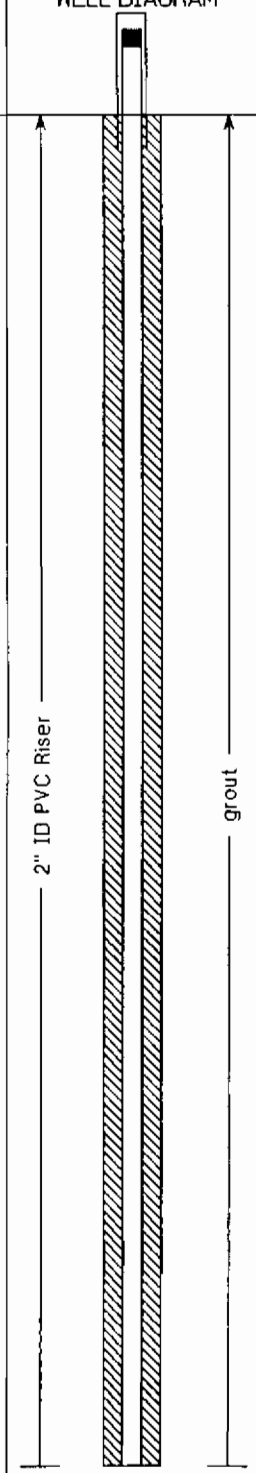
# ENSAFE

# Monitoring Well 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, SM | Surface conditions: grass | |
| | | | | | | | | 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 | | | | 32.9 |
| | | | | | | | | 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. | |
| | | | | | | | 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



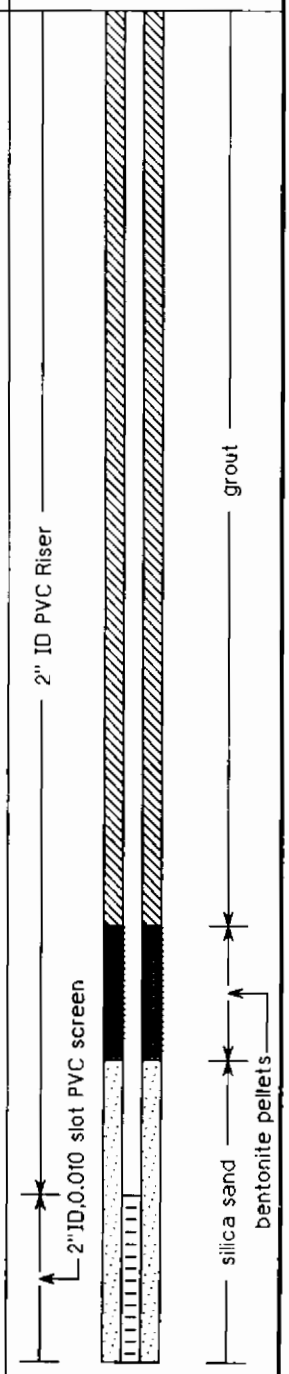
# ENSAFE

# 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 (PO4 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



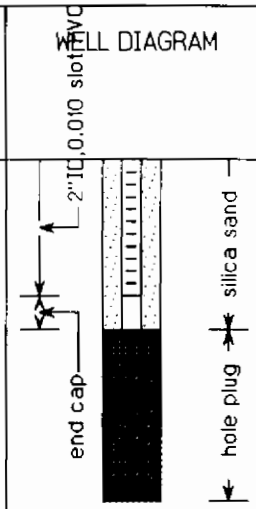
# ENSAFE

## 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 | | | | 21 |
| 50 | | | | | | | | | |
| 55 | | | | | | | | | |
| 60 | | | | | | | | | |

WELL DIAGRAM



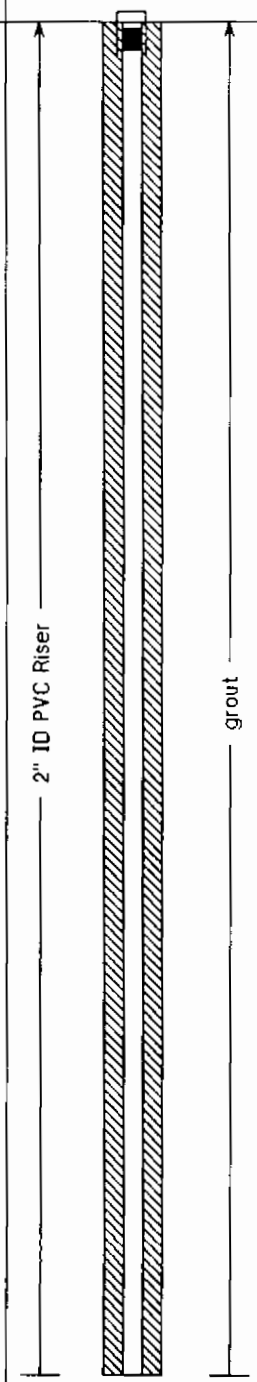
# ENSAFE

# Monitoring Well NBCKGDKP14D

| | |
|---|---|
| Project: *ZONE K Charleston Naval Complex* | Coordinates: *2299404.0 E, 3888912 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) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 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. | 38.6 |
| 5 | | | 1 | | 60 | | SP | Sand: lt brown; very fine, trace silt; dry, loose. | 36.8 |
| | | | | | | | SM | Sand: orange-brown; very fine, silty, trace clay; wet. | 35.9 |
| 10 | | | | | | | | | 30.4 |
| | | | | | | | SP | Sand: orange; very fine, trace to some silt, trace very fine black grains and trace very fine mica; wet, loose to soupy. | 28.8 |
| 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. | 25.7 |
| | | | | | | | SP | Sand: lt greenish-grey; very fine to fine, trace to some silt; trace very fine mica; wet, loose. | |
| 20 | | | | | | | | Sand: orange; very fine to fine, trace to some | |

WELL DIAGRAM



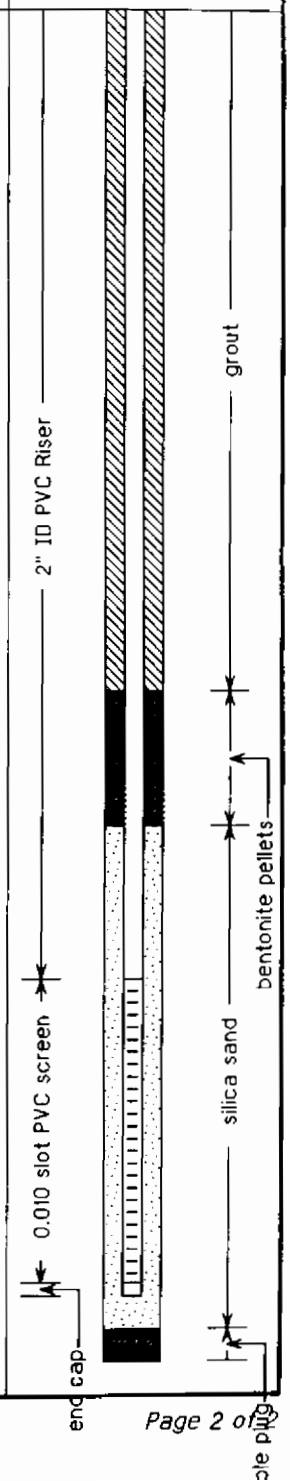
# ENSAFE

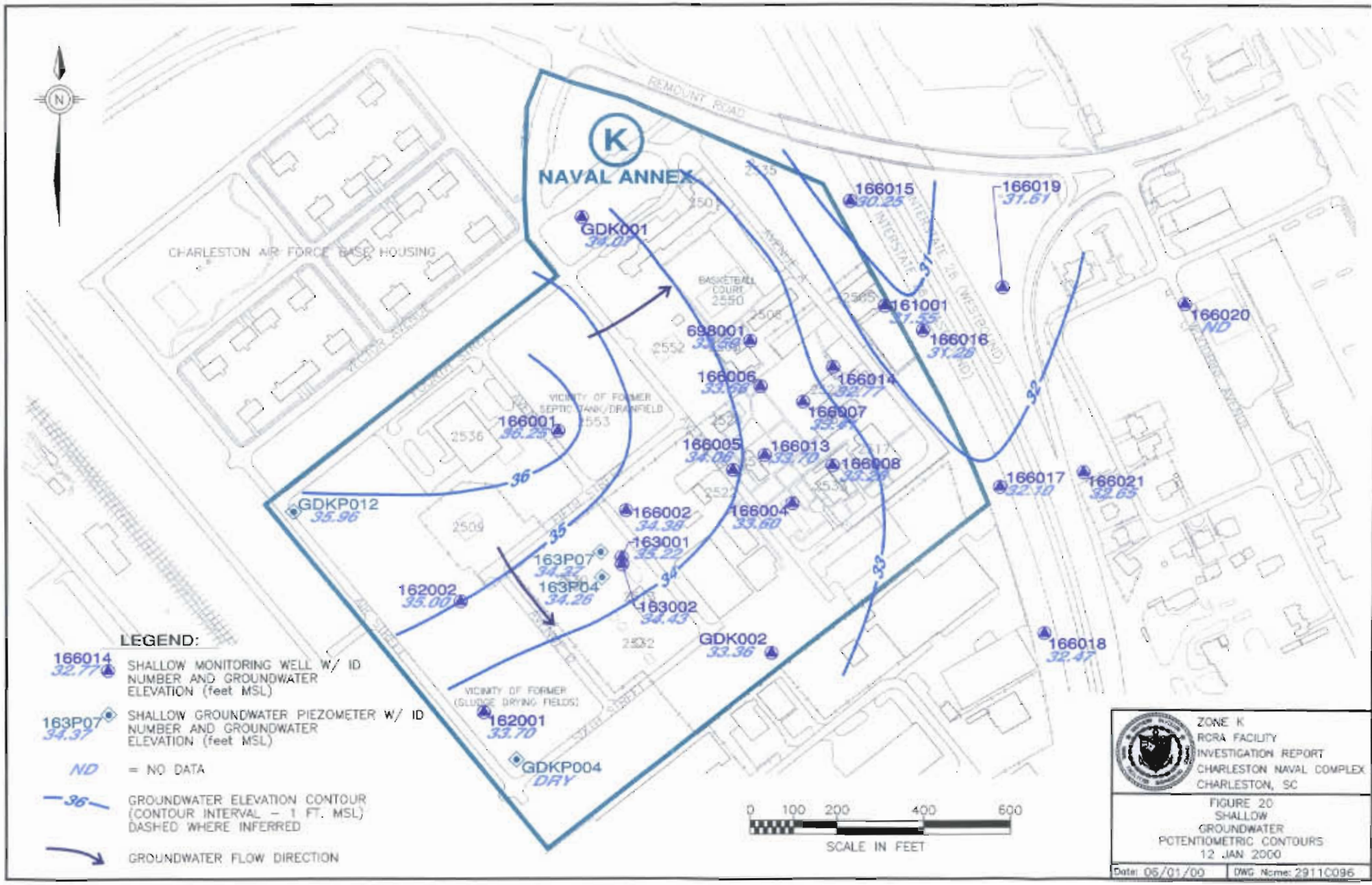
# Monitoring Well NBCKGDKP14D

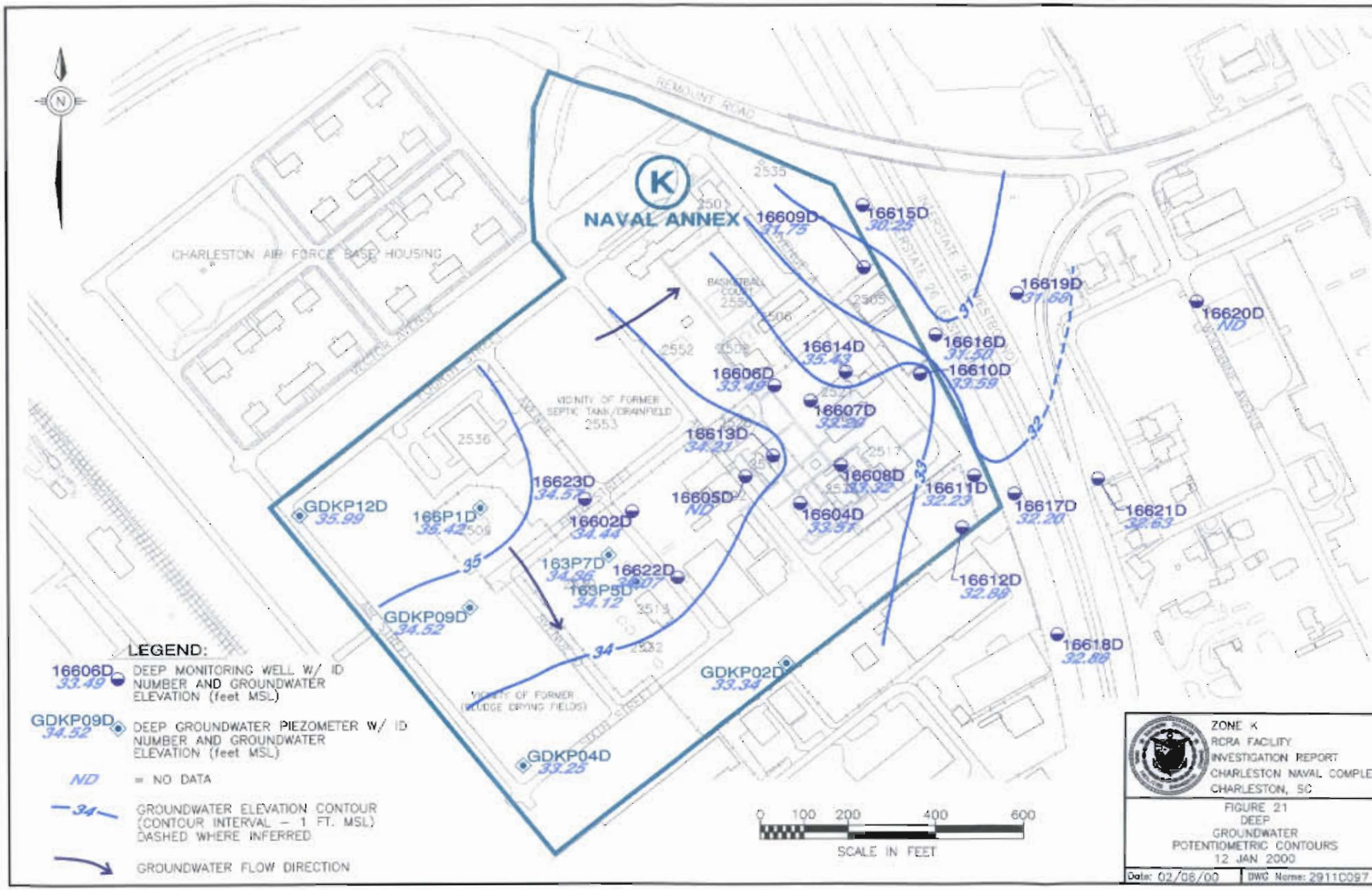
| | |
|---|---|
| Project: *ZONE K Charleston Naval Complex* | Coordinates: *2299404.0 E, 388891.2 N* |
| Location: *Charleston, SC* | Surface Elevation: *43.6 feet msl* |
| Started at *1025 on 11/10/00* | TOC Elevation: *43.47 feet msl* |
| Completed at *1500 on 11/10/00* | Depth to Groundwater: *8.52 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)
BASKETBALL COURT 2550
VICINITY OF FORMER SEPTIC TANK/DRAINFIELD
VICINITY OF FORMER (SLUDGE DRYING FIELDS)
GDK001
34.07
166015
30.25
166019
31.61
161001
31.55
166016
31.28
166020
ND
698001
166006
166014
32.77
166007
166013
33.70
166008
166005
34.06
166017
32.10
166021
32.65
166001
36.25
GDKP012
35.96
166002
34.38
166004
33.60
163001
163P07
34.32
163P04
34.26
162002
35.00
163002
34.43
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: 05/01/00
DWG Name: 2911C096


N
K
NAVAL ANNEX
CHARLESTON AIR FORCE BASE HOUSING
REMOUNT ROAD
INTERSTATE 26 (WESTBOUND)
VICINITY OF FORMER SEPTIC TANK/DRAINFIELD
VICINITY OF FORMER (SLUDGE DRYING FIELDS)
16609D 31.75
16615D 30.25
16619D 31.69
16620D ND
16616D 31.50
16610D 33.59
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
16602D 34.44
GDKP12D 35.99
16P1D 35.42
163P7D 34.86
16622D
163P5D 34.12
GDKP09D 34.52
16612D 32.88
16618D 32.88
GDKP02D 33.34
GDKP04D 33.25
31
32
33
34
35
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
0 100 200 400 600
SCALE IN FEET
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)
## PRIMARY SAMPLES



| SW846-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)
## PRIMARY SAMPLES



| SW846-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)
## PRIMARY SAMPLES



SW846-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)
## PRIMARY SAMPLES



SW846-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)
## PRIMARY SAMPLES



| SW846-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)
## PRIMARY SAMPLES



| SW846-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)
## PRIMARY SAMPLES



SW846-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)
### PRIMARY SAMPLES



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)
## PRIMARY SAMPLES



SW846-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)
## PRIMARY SAMPLES



SW846-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)
## PRIMARY SAMPLES



SW846-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)
## PRIMARY SAMPLES



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 |

# CHARLESTON - ZONE K OFFSITE SAMPLING
## CHARLESTON ZONE K (GROUNDWATER)
## FIELD AND LAB METHOD BLANKS



SW846-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



W846-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 |
| 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 |