N42237.AR.000505
NSB KINGS BAY
5090.3a

SEMI-ANNUAL CORRECTIVE ACTION ASSESSMENT REPORT SEPTEMBER 2001 NSB KINGS BAY GA

10/30/2001

J A JONES MANAGEMENT SERVICES

NSB Kings Bay Administrative Record
Document Index Number

31547-000
19.49.00.0025

Semi-Annual Corrective Action Assessment Report

September 2001
FINAL

for
Naval Submarine Base
Kings Bay, Georgia

Prepared for:
Naval Submarine Base
Kings Bay, Georgia
Facilities and Environmental Directorate

Prepared by:
P.O. Box 47248
930 U.S.S. Hunley Avenue
Kings Bay, Georgia 31547

J.A. JONES
MANAGEMENT
SERVICES

NSB Kings Bay Administrative Record
Document Index Number

31547-000
19.49.00.0025

SEMI-ANNUAL CORRECTIVE ACTION ASSESSMENT REPORT
APRIL - SEPTEMBER 2001
FINAL

SITE 11, OLD CAMDEN COUNTY LANDFILL
NAVAL SUBMARINE BASE KINGS BAY, GEORGIA

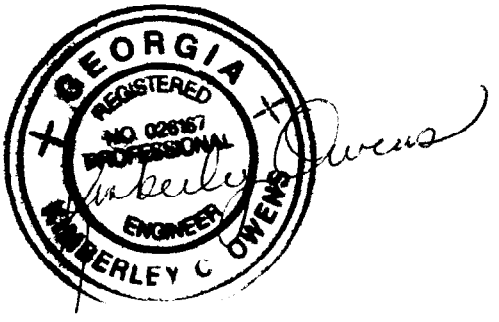
Prepared for:

NAVAL SUBMARINE BASE
KINGS BAY, GEORGIA
FACILITIES AND ENVIRONMENTAL DIRECTORATE

Prepared by:

J.A. Jones Management Services
P.O. Box 47248
930 USS Hunley Avenue
Kings Bay, Georgia 31547

The work described and professional opinions rendered in this document, *Semi-Annual Corrective Action Assessment Report, April – September 2001, Site 11, Old Camden County Landfill, Naval Submarine Base Kings Bay, Georgia* were conducted and developed using commonly accepted procedures consistent with applicable standards of practice. The scope of services and activities described in this document were developed under the supervision of a professional engineer registered in the State of Georgia.



Kimberley C. Owens
Professional Engineer
State of Georgia License No. 026167
Expires December 31, 2002

Table of Contents

Section **Page**

1.0 INTRODUCTION 1

2.0 SUMMARY OF ACTIVITIES 1

2.1 Work Plan Submittal 1

2.2 Quarterly Groundwater Monitoring 1

2.3 Natural Attenuation 1

3.0 DATA PRESENTATION 3

3.1 Headspace Readings 3

3.2 Well Measurements 3

3.3 Well Purging Parameters 3

3.4 Analytical Results 3

3.5 Quantity of Chlorinated Hydrocarbons Removed 5

4.0 DATA ASSESSMENT 5

4.1 Observations 5

4.2 Recommendations 6

5.0 PROJECTED WORK FOR THE NEXT REPORTING PERIOD 7

6.0 REFERENCES 7

APPENDIX

A **WORK PLAN NO.2-GROUNDWATER REMEDIATION AT SITE 11**
B **WELL PURGING AND SAMPLING RECORDS**
C **ANALYTICAL REPORTS**
D **USGS NATURAL ATTENUATION REPORT**

FIGURES

Figure **Page**

1 Source Area Delineation Results 8
2 Site 11 - Site Map - Groundwater Monitoring Program 9
3 Site 11 - Site Map - Groundwater Elevation Map - August 2001 10
4 Chlorinated Hydrocarbons, KBA-11-13A 11
5 Chlorinated Hydrocarbon Trends, KBA-11-13A 12
6 Site 11, Total Chlorinated EtheneConcentrations 13

TABLES

Table **Page**

1 Headspace Readings 14
2 Well Measurements 19
3 Well Purge Parameters 25
4 Analytical Summary, Groundwater Protection Standard 28
5 Appendix IX Analyses Summary 37
6 Analytical Summary for Subdivision Irrigation Wells 39

ACRONYMS

JAJMS	J.A. Jones Management Services
Bechtel	Bechtel Environmental, Inc.
FID	flame ionization detector
NSB	Naval Submarine Base
PID	Photoionization detector

UNITS OF MEASURE

Ft	foot
Gal	gallon
ID	inner diameter
In.	inch
MSL	mean sea level
OD	outer diameter
Ug/L	micrograms per liter
Ppm	parts per million

1.0 INTRODUCTION

J.A. Jones Management Services (JAJMS) has been contracted by the Department of the Navy, Submarine Base Kings Bay to provide ground water monitoring at Site 11, Old Camden County Landfill at the Naval Submarine Base (NSB) Kings Bay.

This Semi-Annual Corrective Action Assessment Report summarizes the quarterly monitoring activities and remediation progress from April 2001 to September 2001. The report presents a summary of 1) the quarterly groundwater monitoring; 2) overall status of remediation and natural attenuation; and 3) projected work for the next six months. This report also serves as the July to September 2001 Quarterly Groundwater Monitoring Report.

2.0 SUMMARY OF ACTIVITIES

During this reporting period, a Work Plan to outline the procedures to be used to continue groundwater remediation at Site 11 was submitted and approved by Georgia Department of Natural Resources (GA DNR). Quarterly groundwater sampling and analysis of monitoring wells was conducted for compliance with Groundwater Protection Standards in accordance with the RCRA permit.

2.1 Work Plan Submittal

A Work Plan was submitted in May 2001 to GA DNR. The project objective stated in the Work Plan is to utilize the analytical data collected during the source area delineation effort to design and implement a Fenton reagent chemical oxidation and vegetable oil injection strategy for remediation of the ground water contamination located in the delineated source area at Site 11 (CCI/JA Jones). The source area delineation sampling had previously occurred during November 6-12, 2000, January 8-12, 2001, and February 7, 2001. Figure 1 is provided to illustrate the groundwater plume isopleths based on the source area delineation efforts. A copy of the Work Plan is included in Appendix A.

2.2 Quarterly Groundwater Monitoring

Quarterly groundwater sampling was conducted by JAJMS on May 1-3, 2001 and August 8-9, 2001. Activities included well inspections, well measurements, and groundwater sampling and analysis. The May sampling and analytical results are detailed in the *Quarterly Groundwater Monitoring Report, April to June 2001, Site 11, Old Camden County Landfill, Naval Submarine Base Kings Bay, Georgia (JAJMS 2000a)*.

Weather conditions during the sampling event August 7-9, 2001 were extremely hot and humid with temperatures from high 70's in the morning to high 90's in the afternoon. There was no significant rainfall in the week preceding the Quarterly August 7-9, 2001 sampling event. From August 1 to 10, 2001, there was 0.2 inches of rain on August 4 and 0.05 inches of rain on August 7. A site map is provided as Figure 2.

Well Inspections – All wells were inspected for aboveground damage or well deterioration. Generally, all wells were structurally sound with no aboveground damage. KBA-11-02 should be redeveloped because the measured depth of the well has been slowly decreasing.

Well Measurements – Well measurements included headspace readings, depth to water, and the total depth measurements. Headspace readings were collected using a Photovac model 2020 PID organic vapor meter.

Water levels and well depth measurements were collected during the sampling event using an electronic water level indicator. Measurements were made from a surveyed reference point located at the top of the well casing. Measurements are to 0.01 feet. Measurement readings were collected two to three times over an eight-hour period on August 7, 2001. Stabilization of static water level was when two consecutive readings were within 0.01 feet of the previous reading. Barometric pressure, relative humidity and ambient air temperatures were collected during each static water level measurement. All water level measurements were obtained prior to sampling the first well thus avoiding interference problems.

Groundwater Sampling and Analysis – Groundwater samples were generally collected from wells in order of least contaminated to most contaminated. Groundwater samples were collected using the low-flow (minimal draw down) method. Prior to purging, the intake of a dedicated piece of Teflon™ tubing (3/16-in. OD by ¼-in. ID) was positioned near the center of the well screen. Groundwater was then purged through the tube using a peristaltic pump, Geotech Model Geopump 2. Water quality parameters measured while purging included temperature, pH, conductivity, oxygen-reduction potential, turbidity, and dissolved oxygen. Once these parameters stabilized within 10 percent, a sample was collected and containerized for chemical analysis. Samples for Groundwater Protection Standard analyses were collected by stopping the pump, removing the tubing from the well, reversing the flow of the pump, and gently filling the container.

2.3 Natural Attenuation

The third year of natural attenuation monitoring occurred between August 2000 and August 2001. In summary, data collected over this year of monitoring shows that the combination of in-situ oxidation and natural attenuation processes continues to lower concentrations of chlorinated ethenes in the contaminant plume. A copy of the Natural Attenuation Report prepared by USGS is attached in Appendix D (USGS, 2001).

3.0 DATA PRESENTATION

This section provides a summation and tabulation of all field measurements and analytical results associated with the groundwater monitoring program. Field measurements include headspace readings, monitoring well measurements, and well purge data. All samples were analyzed by Columbia Analytical Laboratory. There were no sampling and analysis efforts associated with the remediation efforts.

3.1 Headspace Readings

Headspace readings were measured using a photovac model 2020 PID Organic vapor meter. The Photovac is calibrated before use. PID measurements ranged from 0 ppm to 19.1 ppm. The highest reading of 19.1ppm was observed at well KBA-11-2. Table 1 presents a summary of headspace readings.

3.2 Well Measurements

Depth to water ranged from 0.38 feet below the top of the well casing (22.43 feet MSL) to 11.37 feet below the top of the casing (23.4 feet MSL). KBA-11-08B static water level required three measurements to meet stabilization criteria. Barometric pressure ranged from 30.06 inches in the morning to 30.12 inches in the late afternoon. Ambient temperature ranged from 79.7°F. at start of well measurements to 96°F at the conclusion of well measurements. Ground water flow continues to the northwest. Table 2 provides a summary of data collected during the well measurement evolution. Figure 3 shows the general direction of the groundwater flow.

3.3 Well Purging Parameters

Water quality parameters temperature, pH, conductivity, dissolved oxygen and turbidity were measured using Horiba U-10. Oxygen reduction potential was measured using Orion Model 250.A. Each instrument is calibrated daily per manufacturer's instructions. These parameters generally stabilized after 6 to 8 gallons of ground water was purged from the well. Table 3 provides a summary of the stabilized parameters at the time of sample collection.

A summary of the well purging and sampling records for the May 2001 and August 2001 sampling events is included in Appendix B.

3.4 Analytical Results

Eleven (11) wells were sampled and analyzed for Groundwater Protection Standard constituents EPA method 8260B on August 8-9, 2001. Two (2) wells KBA-11-11A and KBA-11-13A were sampled and analyzed for Appendix IX constituents. All samples were submitted to Columbia Analytical Laboratories. Table 4 shows a summary of the results for the Groundwater Protection

standards. Table 5 shows a summary of the results of the Appendix IX analysis for samples collected in August 1999, 2000, and 2001.

Well KBA-11-13A was resampled on August 20, 2001 for the following Appendix IX constituents which were detected in the August 8, 2001 sample: volatile organic compounds, naphthalene, aldrin, heptachlor, cobalt, nickel and zinc.

A tabulation of historical results and the complete analytical report for this quarterly sampling are provided in Appendix C. The complete set of subdivision sampling and analysis data is not included in this report.

Groundwater Protection Standard Analysis - Seven (KBA-11-10B, KBA-11-13A, KBA-11-16, KBA-11-34, KBA-11-37 and PS-2) of the eleven (11) wells sampled and submitted for Groundwater Protection Standard analysis exceeded one or more of the constituent standards. The following exceedances were observed:

- Chlorobenzene (1.2 ug/L) was exceeded in KBA-11-10B.
- Trichloroethene (26 ug/L), Chlorobenzene (2.1 ug/L) were exceeded in KBA-11-13A.
- Cis-1, 2 – Dichlorethane (71 ug/L), Trichloroethene (32 ug/L), Chlorobenzene (3.1 ug/L) were exceeded in KBA-11-13A Duplicate.
- 1,1-Dichloroethane (26 ug/L) was exceeded in KBA-11-16.
- Tetrachloroethene (35 ug/L) was exceeded in KBA-11-34.
- Chlorobenzene (2.8 ug/L) was exceeded in KBA-11-37.
- Vinyl Chloride (2.4ug/L), 1,1-Dichloroethane (4.2 ug/L) and Cis-1, 2 – Dichlorethene (99 ug/L) were exceeded in PS-2.

Chlorinated hydrocarbons Tetrachloroethene and its degradation constituents Trichloroethene, Cis-1, 2 – Dichlorethane and Vinyl Chloride continue to exceed the Groundwater Protection Standard at Site 11.

Tetrachloroethene (35 ug/L) continues to exceed the Groundwater Protection Standard at source area well KBA-11-34 although the concentration decreased from the last quarterly sampling event.

Immediately downgradient to the source area at well KBA-11-13A, Trichloroethene (26 ug/L), Chlorobenzene (2.1 ug/L) remain above the Standards (Figures 4 and 5), although there was a decrease in these concentrations from the previous quarter. The Vinyl Chloride concentration remained below the Standard for the third quarter in a row since the sampling began in 1999.

Piezometer PS-2 continues to show detectable levels of chlorinated and volatile compounds and exceeds the standard for 1,1-Dichloroethane, Vinyl Chloride, Cis-1, 2-Dichloroethene. Results for these constituents indicate minor change from the previous quarter. The Benzene

concentration remained below the standard for the third quarter since sampling began in August 1999.

Offsite well KBA-11-37 continues to show detectable levels of both chlorinated and volatile compounds with only Chlorobenzene exceeding the standard indicating minor change from the previous quarter.

Offsite well KBA-11-16 shows 1,1-Dichloroethane as exceeding the standard and an increase from the previous quarters.

Well KBA-11-10B shows a slight increase in the Chlorobenzene concentration from the previous quarter. The concentration exceeds the standard.

Appendix IX Analyses - Wells requiring Appendix IX analyses were sampled August 2001 in accordance with the Groundwater Protection Plan. Table 5 summarizes the results of Appendix IX analysis from August 1999, August 2000, and August 2001.

Subdivision Irrigation Wells – Three irrigation wells are sampled each month in the Crooked River Plantation subdivision. The irrigation wells sampled are at 102 Plantation Ct, 122 Plantation Ct, and 108 Cottage Ct. The analytical data from January 2000 to August 2001 is summarized in Table 6.

Trichlorethene (9.9 ug/L) was detected in August 2001 at 102 Plantation Ct., but it had not been detected since January 2001. This concentration is above the standard.

Vinyl Chloride (4.7 ug/L August 2001) continues to be detected above the standards at 122 Plantation Ct.

Cis-1, 2-dichloroethene (10 ug/L July 2001) has been detected at 108 Cottage Ct., but at concentrations less than the Standards. This well was not sampled in August 2001 because the occupant was on vacation.

3.5 Quantity of Chlorinated Hydrocarbons Removed

The groundwater recovery and treatment system was not operational during this semi-annual period; therefore the quantity of hydrocarbons removed was not calculated.

4.0 DATA ASSESSMENT

4.1 Observations

(1) With the exception of KBA-11-02, which may require redevelopment. The wells are in good condition and are functioning adequately for evaluating the hydrologic

conditions and groundwater quality at Site 11 and the Crooked River Plantation Subdivision downgradient of the site.

(2) Well measurements were collected over an eight-hour period to minimize effects of barometric pressure changes. Groundwater levels were higher this quarter due to an increase in rains during the summer season.

(3) Source area well KBA-11-34 continues to show high concentrations of Tetrachlorethene which is the only constituent exceeding the Groundwater Protection Standards at this well. Downgradient well KBA-11-13A has two constituents which exceed the standards and downgradient and offsite wells KBA-11-37 and KBA-11-16 have one constituent each which exceeds the Standards.

(4) Piezometer PS-2 has the highest concentration of dissolved VOCs with three constituents exceeding the Standards.

(5) Deep well KBA-11-13B, adjacent to KBA-11-13A, and shallow well KBA-11-01, adjacent to PS-2, continue to show non-detected levels of VOCs.

(6) The irrigation well at 102 Plantation Court had non-detect levels of contaminants for the February to August 2001 samples except for the detection of Trichloroethene above the Standards in August 2001.

(7) The irrigation well at 122 Plantation Court continues to show detectable levels of Cis-1,2-Dichloroethene, 1,4-Dichlorobenzene and Vinyl Chloride but only Vinyl Chloride is at concentrations greater than the Standards.

(8) The irrigation well at 108 Cottage Court continues to show detectable levels of Cis-1,2-Dichloroethene but at levels less than the Standard.

(9) Cobalt, nickel, and zinc were detected in KBA-11-13A at concentrations considerably higher than in background well KBA-11-11A and in the 2000 and 1999 samples of well KBA-11-13A. The nickel concentration (229 ppb) is much higher than the Georgia drinking water MCL of 100 ppb. Well KBA-11-13A was resampled August 20, 2001 and zinc was not detected but the nickel (220 ppb) and cobalt (170 ppb) concentrations were still elevated.

(10) Naphthalene (15 ppb) was detected for the third year in well KBA-11-13A. This well was resampled September 20, 2001 and naphthalene was still detected at 19 ppb.

(11) Three new chemicals were detected in KBA-11-13A (Heptachlor – 0.031 ug/L, Tetrachloroethene – 2.2 ug/L, and Carbon Disulfide – 8.2 ug/L. Well KBA-11-13A was resampled August 20, 2001 and these chemicals were not detected. One new chemical was detected in KBA-11-11A – Aldrin – 0.0072 ug/L. This well was not resampled.

4.2 Recommendations

Continue quarterly groundwater monitoring as scheduled in the Groundwater Monitoring Plan with the exception of KBA-11-02 which is discussed below.

Recommend annual sampling of KBA-11-02. Section 3.0 of the Groundwater Monitoring Plan, dated June 1999, allows this reduction if the Groundwater Protection Standards have been met for one year. This well has met this criterion since quarterly sampling began in August 1999.

Source area well KBA-11-13A was resampled on September 20, 2001 for the following Appendix IX constituents: heptachlor, tetrachloroethene, carbon disulfide, nickel, cobalt, zinc and naphthalene. Results indicate that naphthalene, cobalt and nickel should be added to the quarterly list of Groundwater Protection Standards.

5.0 PROJECTED WORK FOR THE NEXT REPORTING PERIOD

JAJMS will continue quarterly monitoring in accordance with the RCRA Permit. The next quarterly monitoring period is scheduled for November 2001.

CCI with J.A. Jones Environmental Services plans on installing the chemical oxidation injection points at the end of September. The initial chemical oxidation injection will be scheduled for October and November. A polishing chemical oxidation injection, if necessary, will be completed in December. The vegetable oil injection will be completed in January 2002.

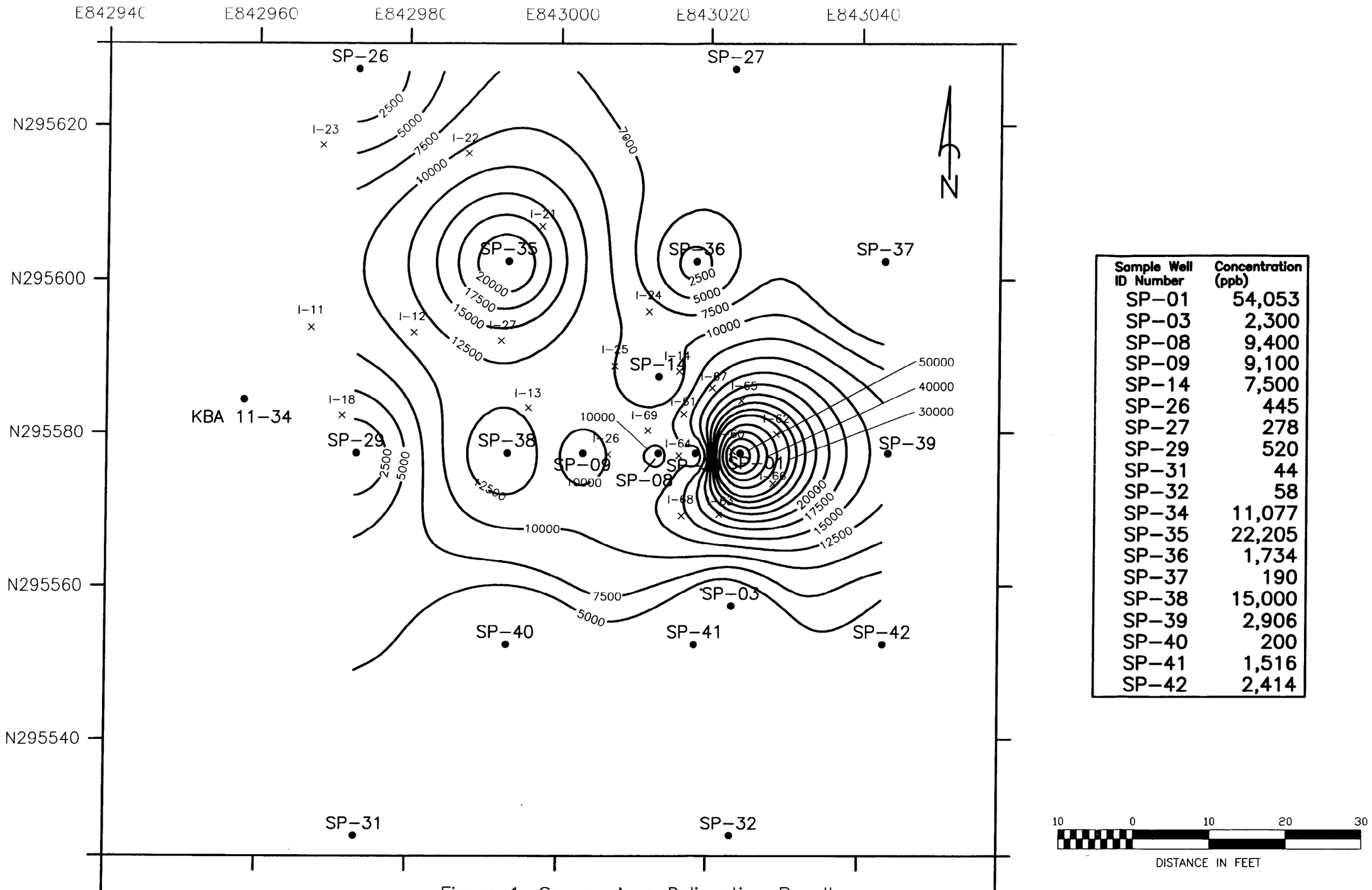
6.0 REFERENCES

The following references were used in this report:

Quarterly Groundwater Monitoring Report April – June, 2001, Site 11 Old Camden County Landfill, Naval Submarine Base Kings Bay, Georgia (JAJMS 2000a)

Work Plan No. 02, Groundwater Remediation at Site 11, Old Camden County Landfill, Naval Submarine Base Kings Bay, Georgia, CCI/JA Jones, May 2001 (CCI/JA Jones, 2001)

Natural Attenuation of Chlorinated Ethene-Contaminated Groundwater, Old Camden County Landfill, Kings Bay Naval Submarine Base, Georgia, August 2000 to August 2001, USGS, September 2001 (USGS, 2001).



Sample Well ID Number	Concentration (ppb)
SP-01	54,053
SP-03	2,300
SP-08	9,400
SP-09	9,100
SP-14	7,500
SP-26	445
SP-27	278
SP-29	520
SP-31	44
SP-32	58
SP-34	11,077
SP-35	22,205
SP-36	1,734
SP-37	190
SP-38	15,000
SP-39	2,906
SP-40	200
SP-41	1,516
SP-42	2,414

Figure 1: Source Area Delineation Results
Total Chlorinated Ethenes (ppb) November 2000 & January 2001 Contour Interval = 2500 ppb

0553 BB12

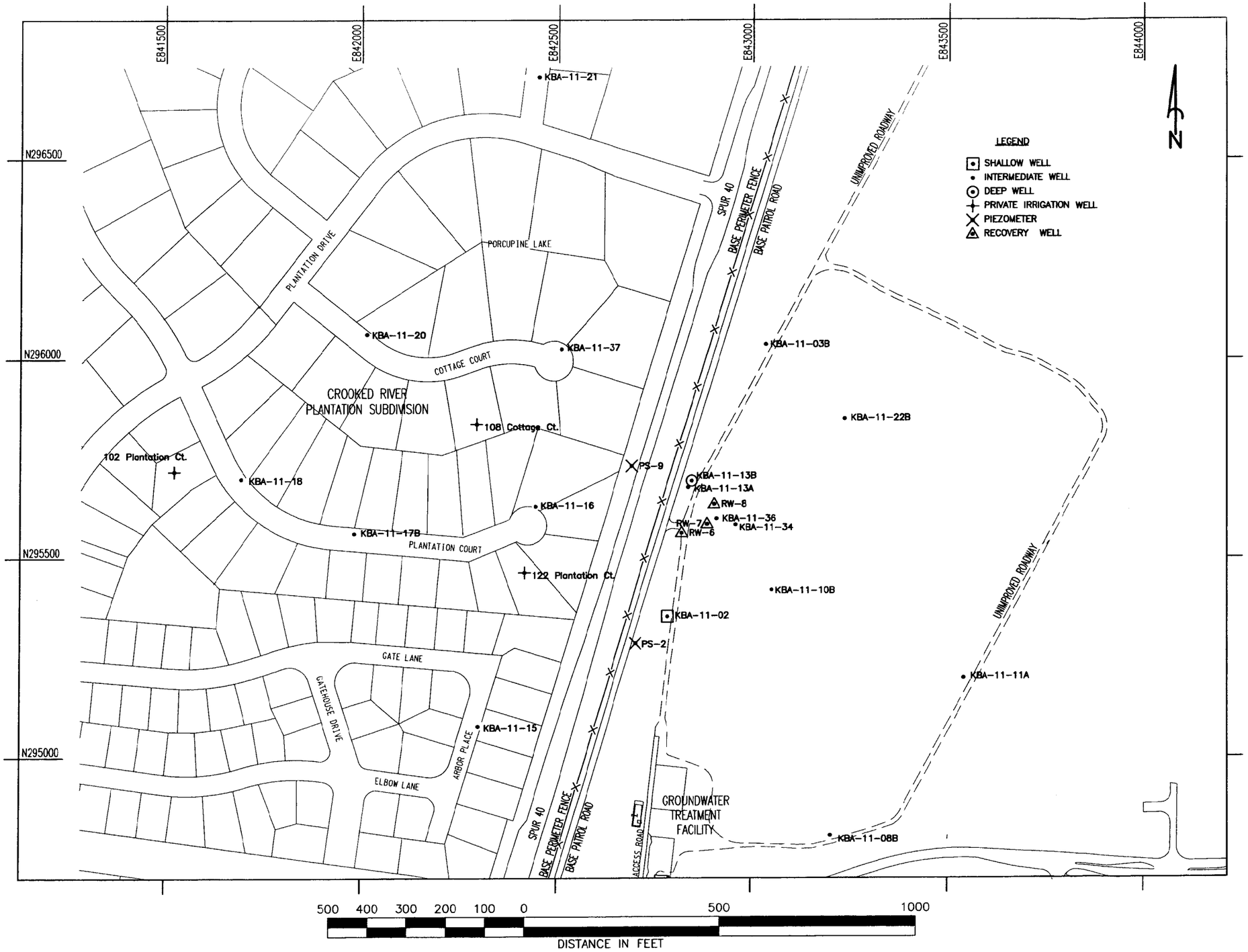


FIGURE 2: Site 11, Site Map

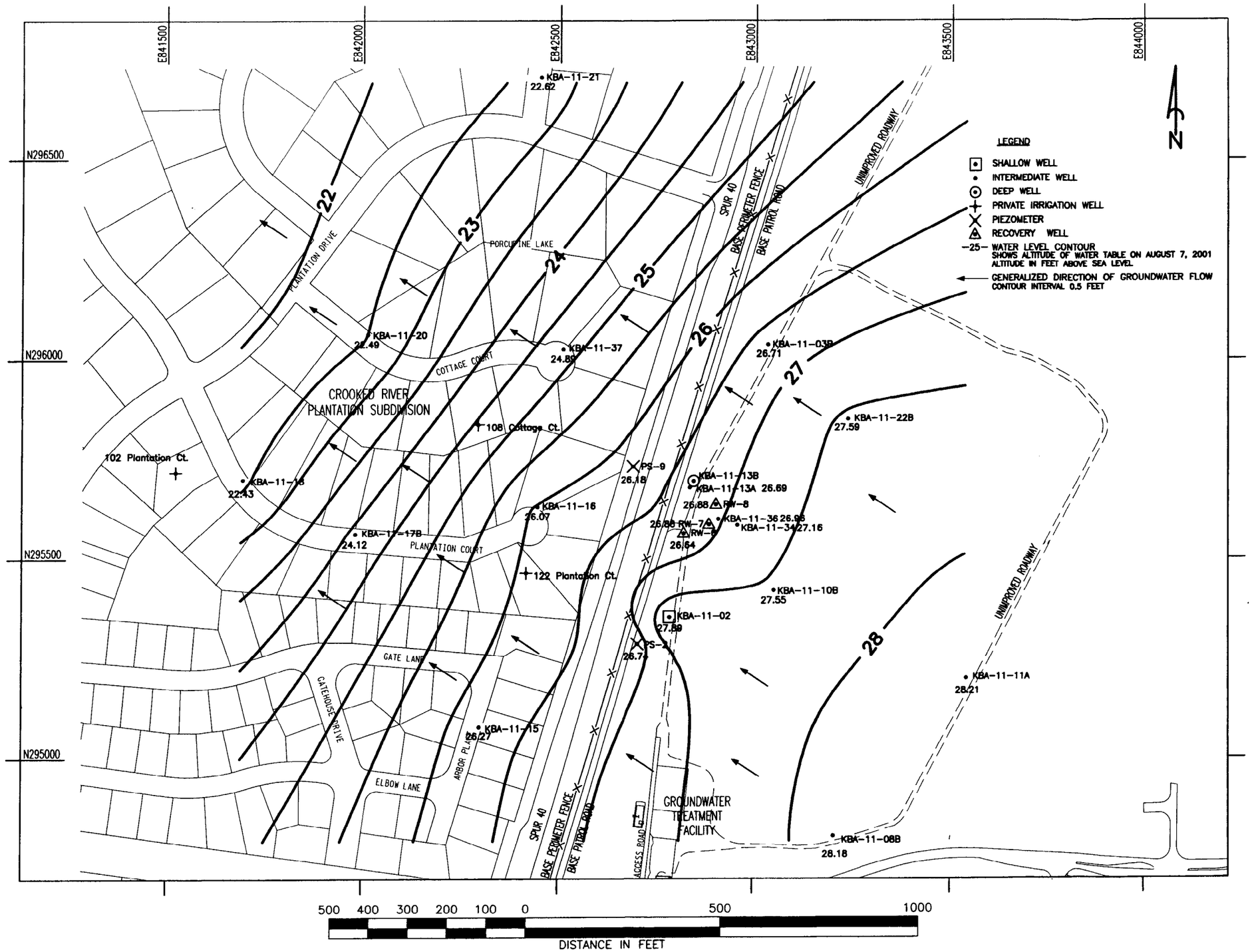


FIGURE 3: Site 11, Groundwater Elevation Map—August 2001

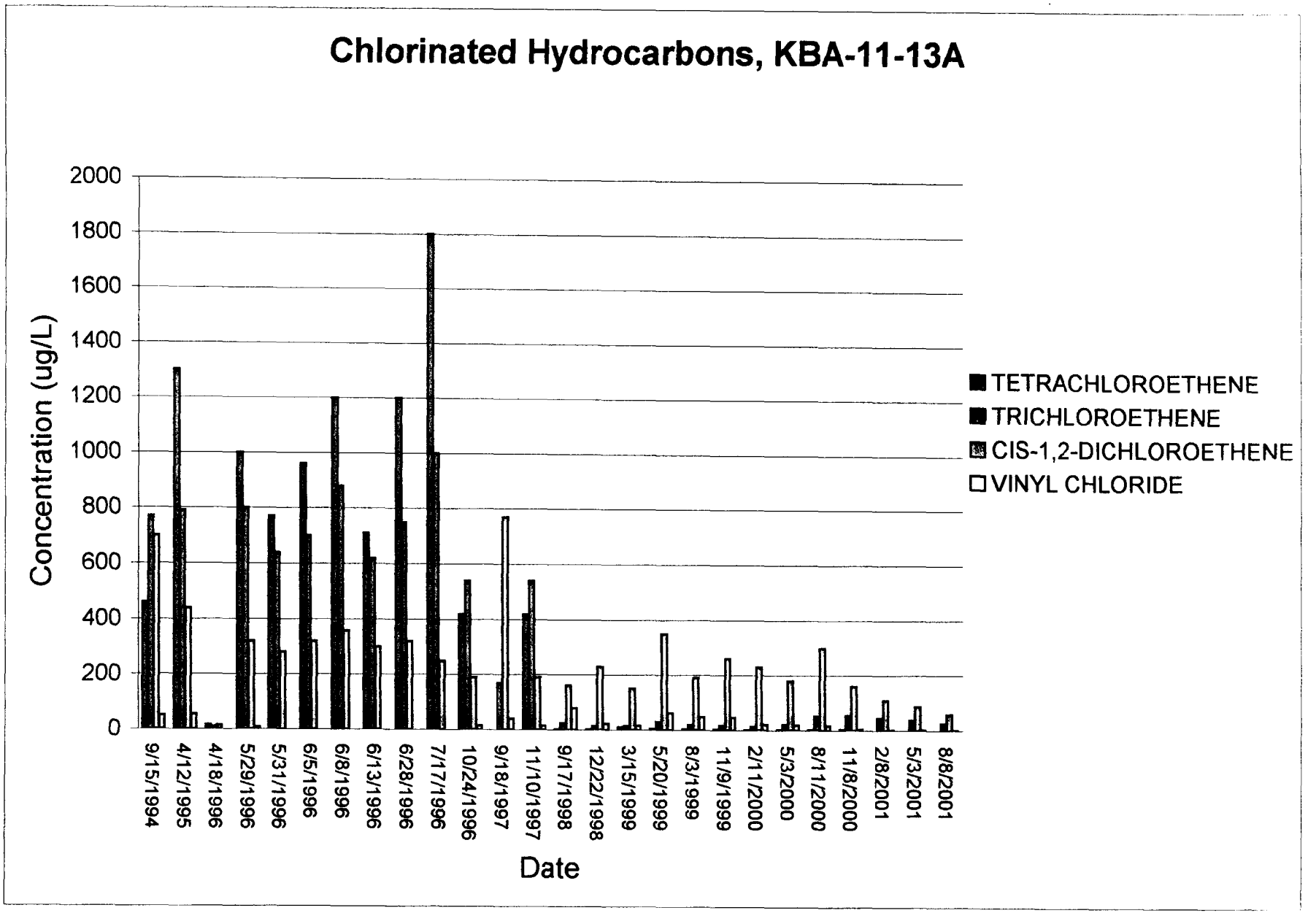
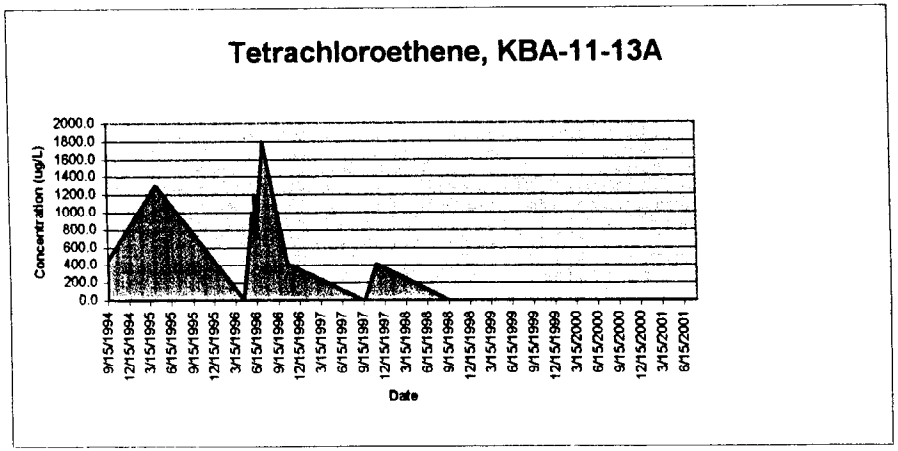
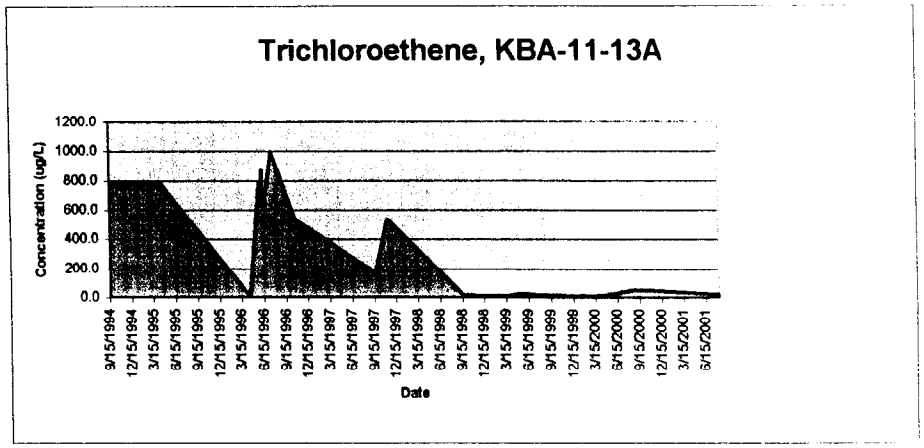
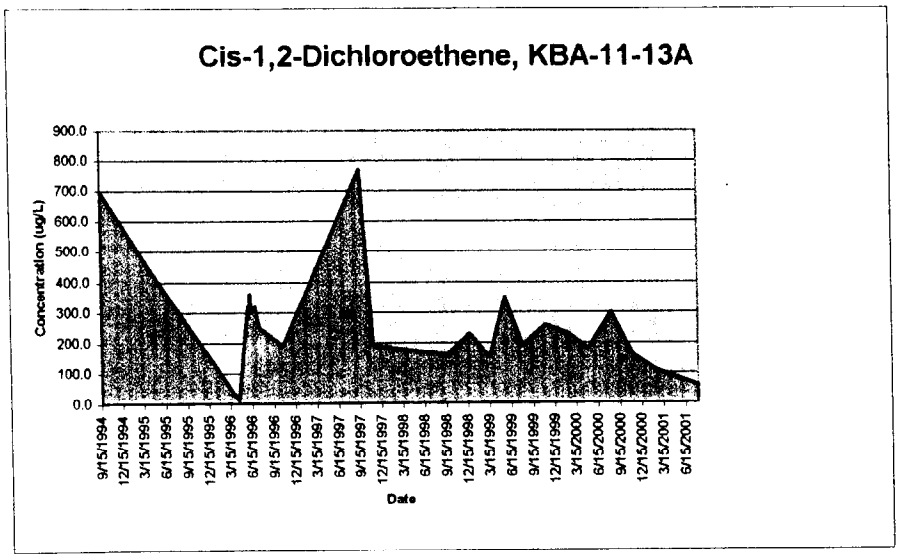


FIGURE 4 - CHLORINATED HYDROCARBONS, KBA-11-13A







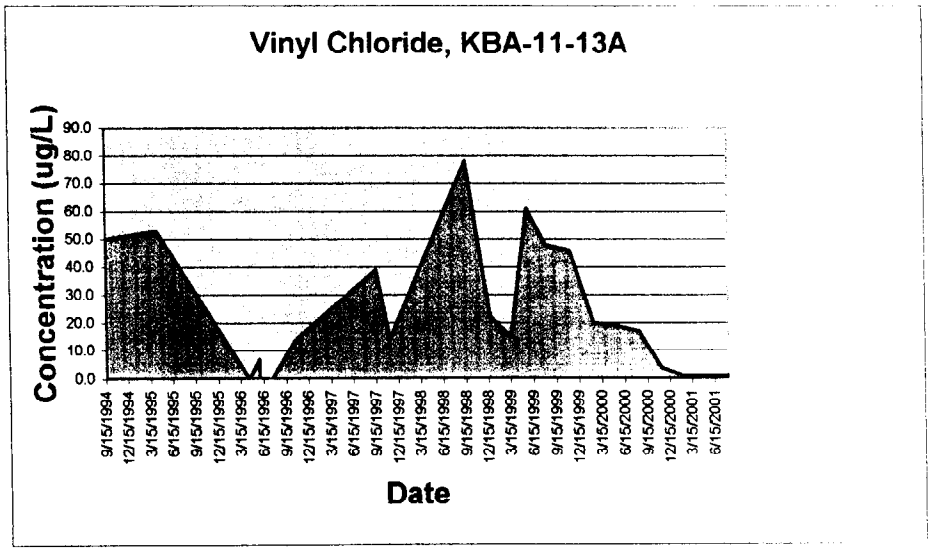


FIGURE 5 - CHLORINATED HYDROCARBON TRENDS, WELL KBA-11-13A

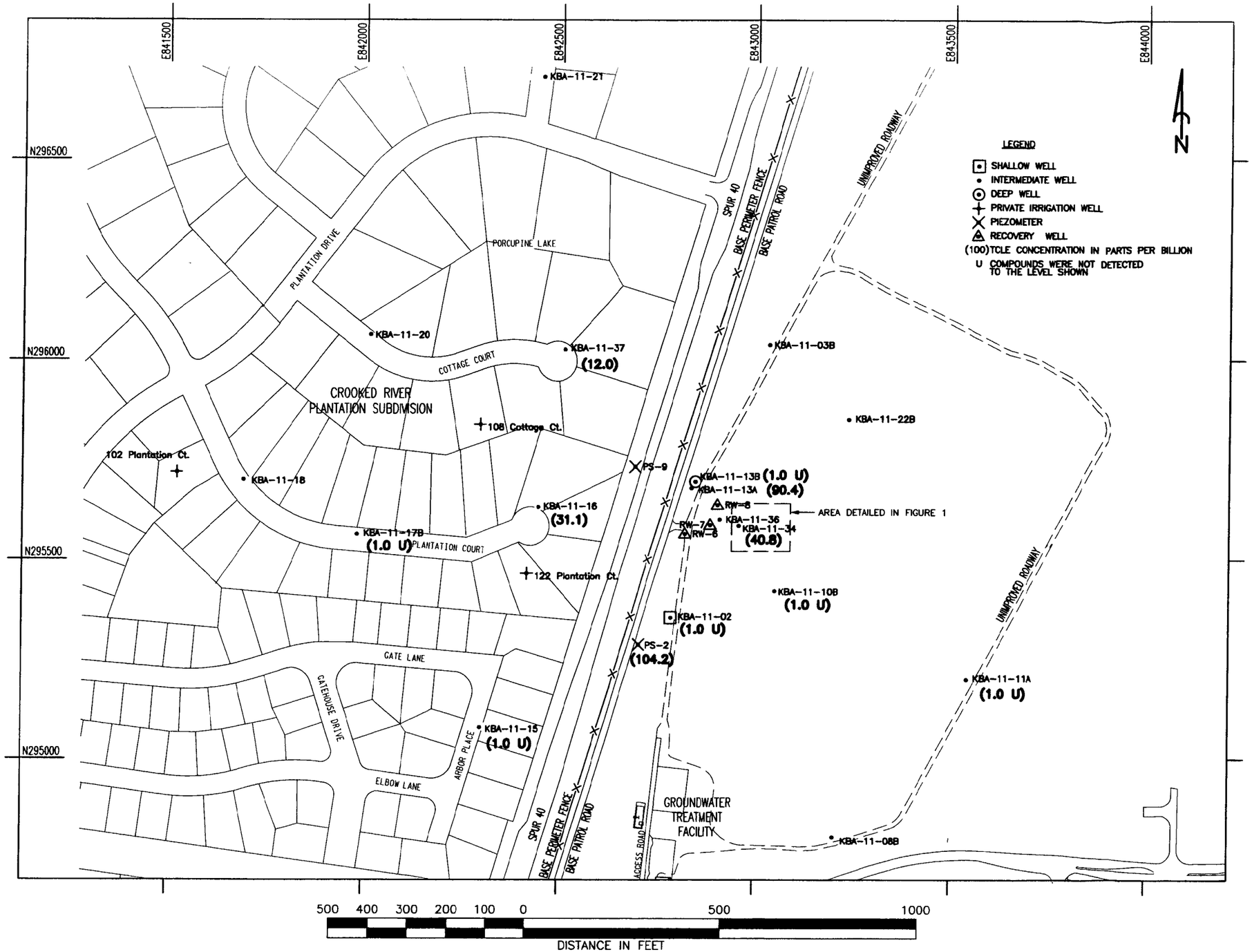


FIGURE 6: Site 11, Groundwater Monitoring Program,
Total Chlorinated Ethenes Concentrations (TCLE) August 8–9, 2001

05538022

Table 1
Headspace Readings

Well Identification (coordinates)	Date	PID Measurement (ppm)	Barometer Pressure (Inches of Hg)	Temperature (F°)
KBA-11-02	8-7-01	19.1	30.12	79.7
(N295339.68)	5-1-01	0		
(E842781.27)	2-6-01	0		
	11-8-00	0		
	8-8-00	0		
	5-2-00	0		
	2-1-00	0.1		
	11-8-99	0.7		
	8-3-99	NM		
KBA-11-03B	8-7-01	2.4	30.12	94.6
(N296023.77)	5-1-01	NM		
(E843026.64)	2-5-01	0		
	11-8-00	0		
	8-1-00	NM		
	5-2-00	0		
	2-1-00	NM		
	11-8-99	2.0		
	8-3-99	0.2		
KBA-11-08B	8-7-01	0.0	30.12	96.4
(N294792.40)	5-1-01	NM		
(E843215.42)	2-5-01	0		
	11-8-00	0		
	8-1-00	NM		
	5-2-00	0		
	2-1-00	NM		
	11-8-99	1.5		
	8-3-99	0.0		
KBA-11-10B	8-7-01	0.0	30.12	94.7
(N295407.32)	5-1-01	NM		
(E843044.79)	2-5-01	0		
	11-8-00	0		
	8-8-00	0		
	2-1-00	NM		
	11-8-99	5		
	8-2-99	1.9		

NM = not measured PID = photo ionization detector

Table 1 continued on following page

Table 1 continued
Headspace Readings

Well Identification (coordinates)	Date	PID Measurement (ppm)	Barometer Pressure (Inches)	Temperature (F°)
KBA-11-11A	8-7-01	0.0	30.12	92.4
(N295185.73)	5-1-01	NM		
(E843535.58)	2-5-01	0		
	11-8-00	0		
	8-10-00	0		
	5-2-00	0		
	2-1-00	NM		
	11-8-99	4.5		
	8-3-99	0.3		
KBA-11-13A	8-7-01	2.8	30.12	88.7
(N295665.45)	5-3-01	0		
(E842831.00)	2-9-01	3.5		
	11-8-00	0		
	8-10-00	0		
	5-2-00	0		
	2-4-00	0		
	11-8-99	2		
	8-3-99	13		
KBA-11-13B	8-7-01	0.0	30.12	92.6
(N295694.10)	5-4-01	0.1		
(E842848.12)	2-9-01	0		
	11-8-00	0		
	8-8-00	0		
	5-2-00	0		
	2-1-00	NM		
	11-8-99	2		
	8-3-99	0		
KBA-11-15	8-7-01	0.0	30.06	91.2
(N295065.19)	5-4-01	6.1		
(E842294.15)	2-13-01	0		
	11-8-00	0		
	8-9-00	0		
	5-2-00	0		
	2-7-00	0		
	11-9-99	2.5		
	8-17-99	2,200		

NM = not measured PID = photo ionization detector

Table 1 continued on following page

Table 1 continued
Headspace Readings

Well Identification (coordinates)	Date	PID Measurement (ppm)	Barometer Pressure (Inches)	Temperature (F°)
KBA-11-16	8-7-01	0.0	30.06	94.2
(N295617.50)	5-2-01	10.5		
(E842440.32)	2-6-01	4.2		
	11-8-00	0		
	8-9-00	0		
	5-2-00	0		
	2-7-00	0		
	11-9-99	1		
	8-17-99	3,500		
KBA-11-17B	8-7-01	0.0	30.06	92.9
(N295549.12)	5-4-01	0		
(E841977.77)	2-13-01	0		
	11-8-00	0		
	8-9-00	0		
	5-3-00	0		
	2-7-00	0		
	11-9-99	5		
	8-17-99	2,700		
KBA-11-18	8-7-01	0.0	30.09	93.2
(N295686.28)	5-4-01	0		
(E8421688.80)	2-16-01	0		
	11-8-00	0		
	8-1-00	NM		
	5-3-00	0		
	2-1-00	NM		
	11-9-99	.11		
	8-17-99	3,600		
KBA-11-20	8-7-01	0.0	30.09	91.3
(N296049.30)	5-4-01	0		
(E842007.67)	2-13-01	0		
	11-8-00	0		
	8-1-00	NM		
	5-2-00	0		
	2-1-00	NM		

NM = not measured PID = photo ionization detector

Table 1 continued on following page

Table 1 continued
Headspace Readings

Well Identification (coordinates)	Date	PID Measurement (ppm)	Barometer Pressure (Inches)	Temperature (F°)
KBA-11-21	8-7-01	0.0	30.06	93.9
(N296691.67)	5-4-01	0		
(E842443.34)	2-13-01	0		
	11-8-00	0		
	8-1-00	NM		
	5-2-00	0		
	2-1-00	NM		
	11-9-99	7.5		
	8-3-99	3		
KBA-11-22B	8-7-01	14.7	30.12	91
(N295837.13)	5-4-01	0		
(E843229.11)	2-12-01	0		
	11-8-00	0		
	8-1-00	NM		
	5-2-00	0		
	2-1-00	NM		
	11-8-99	0.6		
	8-3-99	7		
KBA-11-34	8-7-01	0.0	30.12	92.7
(N295584.23)	5-3-01	28.6		
(E842959.34)	2-8-01	25.6		
	11-8-00	0		
	8-8-00	0		
	5-2-00	0		
	2-7-00	0.4		
	11-8-99	2		
	8-3-99	1,400		
KBA-11-36	8-7-01	0.0	30.12	92.8
(N295599.75)	5-4-01	0		
(E842909.65)	2-12-01	0		
	11-8-00	0		
	8-1-00	NM		
	5-2-00	0		
	2-1-00	NM		
	11-8-99	0.6		
	8-3-99	10		

NM = not measured PID = photo ionization detector

Table 1 continued on following page

Table 1 continued
Headspace Readings

Well Identification (coordinates)	Date	PID Measurement (ppm)	Barometer Pressure (Inches)	Temperature (F°)
KBA-11-37	8-7-01	0.0	30.09	93.1
(N295994.01)	5-2-01	102.5		
(E842501.99)	2-7-01	27		
	11-8-00	0		
	8-9-00	0		
	5-4-00	>2000		
	2-8-00	0		
	11-9-99	3		
	8-16-99	400		
PS-2	8-7-01	0.0	30.12	91.4
(N295286.12)	5-2-01	0.08		
(E842704.24)	2-7-01	0		
	11-8-00	0		
	8-8-00	>2000		
	5-3-00	>2000		
	2-7-00	0		
	11-8-99	0.5		
	8-16-99	NM		
PS-9	8-7-01	0.0	30.06	91.2
(N295732.70)	5-4-01	0		
(E842689.44)	2-13-01	0		
	11-8-00	0		
	8-1-00	NM		
	5-2-00	0		
	2-1-00	NM		
	11-8-99	NM		
	8-16-99	NM		
RW-6 *	8-7-01	NM	30.06	91.3
(N295563.58)				
(E841821.59)				
RW-7 *	8-7-01	NM	30.06	91.1
(N295583.80)				
(E842885.61)				
RW-8 *	8-7-01	NM	30.06	91.3
(N295635.94)				
(E842903.57)				

* Recovery wells are not enclosed, so a headspace reading was not measured.

NM = not measured PID = photo ionization detector

Table 2
Well Measurements

Well Identification	Date	Top of Casing Elevation (ft MSL)	Depth to Water (ft btoc)	Water Elevation (ft MSL)	Constructed Depth (ft btoc)	Measured Depth (ft btoc)
KBA-11-02	8-7-01	36.02	8.13	27.89	15.00	10.87
	5-1-01		9.53	26.49		10.65
	2-6-01		10.18	25.84		10.18
	11-8-00		8.65	27.37		10.60
	8-8-00		No water	no water		10.80
	5-2-00		10.1	25.9		14.00
	2-4-00		11.5	24.52		15.30
	11-8-99		9.61	26.41		15.19
	8-2-99		11.37	24.65		15.42
KBA-11-03B	8-7-01	33.49	6.78	26.71	47.00	47.56
	5-1-01		8.43	25.06		47.50
	2-5-01		8.67	24.82		47.50
	11-6-00		7.78	25.71		47.50
	8-15-00		10.4	23.09		47.50
	5-2-00		8.7	24.79		47.10
	2-24-00		9.5	23.99		49.10
	11-8-99		8.54	24.95		47.77
	8-2-99		10.01	23.48		47.82
KBA-11-08B	8-7-01	38.20	10.02	28.18	43.00	43.49
	5-1-01		11.85	26.35		43.59
	2-5-01		12.04	26.16		43.51
	11-20-00		11.54	26.66		43.46
	8-15-00		14.0	24.20		43.50
	5-2-00		12.1	26.1		43.80
	2-24-00		13.40	24.80		44.90
	11-8-99		12.04	26.16		43.75
	8-2-99		13.74	24.46		43.77
KBA-11-10B	8-7-01	38.03	10.48	27.55	51.50	51.38
	5-1-01		12.06	25.97		51.35
	2-5-01		12.48	25.55		51.35
	11-6-00		14.03	24.00		54.34
	8-8-00		14.9	23.13		52.20
	5-2-00		12.8	25.23		53.40
	2-24-00		13.50	24.53		53.00
	11-8-99		12.31	25.72		51.62
	8-2-99		13.90	24.13		51.67

ft = feet MSL – mean sea level btoc – below top of casing

Table 2 continued on following page

Table 2 - Continued
Well Measurements

Well Identification	Date	Top of Casing Elevation (ft MSL)	Depth to Water (ft btoc)	Water Elevation (ft MSL)	Constructed Depth (ft btoc)	Measured Depth (ft btoc)
KBA-11-11A	8-7-01	35.85	7.64	28.21	37.00	36.86
	5-1-01		9.31	26.54		36.83
	2-5-01		9.60	26.25		36.84
	11-13-00		8.85	27.00		36.86
	8-10-00		11.7	24.15		37.40
	5-2-00		9.4	26.45		37.00
	2-24-00		11.10	24.75		37.20
	11-8-99		9.61	24.42		37.12
	8-2-99		11.40	24.45		37.12
KBA-11-13A	8-7-01	34.20	7.51	26.69	42.50	42.31
	5-3-01		9.21	24.99		42.25
	2-9-01		9.53	24.67		42.26
	11-8-00		6.52	27.68		42.30
	8-10-00		11.2	23.00		42.90
	5-2-00		9.3	24.90		42.00
	2-4-00		10.2	24.00		42.40
	11-8-99		9.25	24.95		42.75
	8-2-99		10.77	23.43		42.52
KBA-11-13B	8-7-01	34.86	11.37	23.49	90.70	91.98
	5-4-01		13.09	21.77		90.49
	2-9-01		13.05	21.81		90.53
	11-6-00		12.50	22.36		91.60
	8-8-00		14.6	20.26		91.80
	5-2-00		12.8	22.06		91.00
	2-24-00		13.60	21.26		91.40
	11-8-99		12.88	21.98		90.72
	8-2-99		14.27	20.59		90.77

ft = feet MSL – mean sea level btoc – below top of casing

Table 2 continued on following page

Table 2 - Continued
Well Measurements

Well Identification	Date	Top of Casing Elevation (ft MSL)	Depth to Water (ft btoc)	Water Elevation (ft MSL)	Constructed Depth (ft btoc)	Measured Depth (ft btoc)
KBA-11-15	8-7-01	28.49	2.22	26.27	39.00	38.94
	5-4-01		4.12	24.37		38.90
	2-13-01		4.45	24.04		38.89
	11-7-00		3.69	24.80		38.70
	8-9-00		5.7	22.29		39.30
	5-2-00		3.9	24.59		38.00
	2-7-00		4.8	23.69		39.00
	11-9-99		4.07	24.42		39.17
	8-2-99		5.60	22.89		39.22
KBA-11-16	8-7-01	28.66	2.59	26.07	44.90	43.48
	5-2-01		4.48	24.18		44.46
	2-6-01		4.98	23.68		44.47
	11-8-00		4.39	24.27		44.45
	8-9-00		6.4	22.26		45.10
	5-3-00		3.9	24.76		44.00
	2-7-00		5.3	23.36		45.30
	11-9-99		4.73	23.93		44.72
	8-2-99		6.17	22.49		44.77
KBA-11-17B	8-7-01	25.41	1.29	24.12	44.80	44.48
	5-4-01		3.33	22.08		44.41
	2-13-01		3.65	21.71		44.41
	11-7-00		3.07	22.34		45.30
	8-9-00		4.6	20.81		45.00
	5-3-00		2.7	22.71		42.30
	2-7-00		3.6	21.81		44.40
	11-9-99		3.03	22.38		44.67
	8-2-99		4.61	20.80		44.72
KBA-11-18	8-7-01	22.81	0.38	22.43	45.80	45.59
	5-4-01		2.57	20.24		45.51
	2-16-01		2.77	20.04		45.50
	11-8-00		2.24	20.57		47.51
	8-15-00		3.7	19.11		45.40
	5-3-00		1.5	21.31		45.50
	2-25-00		2.70	20.11		46.80
	11-9-99		2.05	20.76		45.77
	8-2-99		3.67	19.14		45.82

ft = feet MSL – mean sea level btoc – below top of casing

Table 2 continued on following page

Table 2 - Continued
Well Measurements

Well Identification	Date	Top of Casing Elevation (ft MSL)	Depth to Water (ft btoc)	Water Elevation (ft MSL)	Constructed Depth (ft btoc)	Measured Depth (ft btoc)
KBA-11-20	8-7-01	23.07	0.58	22.49	40.00	39.87
	5-4-01		2.48	20.59		39.86
	2-13-01		2.39	20.68		39.86
	11-8-00		2.18	20.89		39.84
	8-15-00		3.6	19.47		40.20
	5-2-00		1.60	21.47		40.90
	2-25-00		2.60	20.47		40.90
	11-9-99		1.94	21.13		40.12
	8-2-99		3.22	19.85		40.12
KBA-11-21	8-7-01	23.56	0.94	22.62	40.40	40.30
	5-4-01		2.83	20.73		40.30
	2-13-01		2.69	20.87		40.30
	11-6-00		2.40	21.16		40.20
	8-15-00		3.6	19.96		40.20
	5-2-00		2.1	21.46		40.80
	2-25-00		2.90	20.66		41.80
	11-9-99		2.4	21.16		40.57
	8-2-99		3.75	19.81		40.57
KBA-11-22B	8-7-01	36.13	8.54	27.59	52.60	52.38
	5-4-01		10.18	25.95		52.33
	2-5-01		10.48	25.65		52.29
	11-8-00		9.21	26.92		52.30
	8-15-00		11.4	24.73		52.30
	5-2-00		10.8	25.33		52.20
	2-25-00		11.6	24.53		53.60
	11-8-99		10.34	25.79		52.59
	8-2-99		11.92	24.21		52.62
KBA-11-34	8-7-01	37.51	10.35	27.16	40 est	40.78
	5-3-01		12.01	25.50		40.45
	2-8-01		12.40	25.11		40.76
	11-8-00		11.31	26.20		40.76
	8-8-00		14.3	23.21		41.60
	5-2-00		12.3	25.21		41.40
	2-7-00		13.2	24.31		41.04
	11-8-99		12.18	25.33		41.07
	8-2-99		13.75	23.76		41.07

ft = feet MSL -- mean sea level btoc – below top of casing

Table 2 continued on following page

Table 2 - Continued
Well Measurements

Well Identification	Date	Top of Casing Elevation (ft MSL)	Depth to Water (ft btoc)	Water Elevation (ft MSL)	Constructed Depth (ft btoc)	Measured Depth (ft btoc)
KBA-11-36	8-7-01	37.91	10.95	26.96	40 est	41.39
	5-4-01		12.67	25.24		41.39
	2-12-01		13.07	24.84		41.39
	11-8-00		12.02	25.89		41.62
	8-15-00		14.6	23.31		41.40
	5-4-00		12.9	25.01		41.40
	2-24-00		14.02	23.91		42.50
	11-8-99		12.84	25.07		41.65
	8-2-99		14.34	23.57		41.67
KBA-11-37	8-7-01	26.26	1.37	24.89	38.50	38.21
	5-2-01		3.00	23.26		38.20
	2-7-01		2.96	23.30		38.18
	11-8-00		2.76	23.50		30.20
	8-9-00		4.1	22.16		38.60
	5-4-00		2.4	23.86		38.20
	2-8-00		3.2	23.06		38.40
	11-9-99		2.86	23.4		38.46
	8-16-99		4.15	22.11		38.57
PS-2	8-7-01	32.71	5.97	26.74	40.67	37.24
	5-2-01		7.72	24.99		37.19
	2-7-01		8.06	24.65		37.24
	11-8-00		8.85	23.86		36.86
	8-8-00		9.9	22.81		37.50
	5-4-00		7.2	25.51		36.80
	2-7-00		8.8	23.91		36.80
	11-8-99		7.80	24.91		37.47
	8-17-99		9.6	23.11		39.60 est
PS-9	8-7-01	28.72	2.54	26.18	35.45	34.13
	5-4-01		4.29	24.43		34.13
	2-13-01		4.56	24.16		34.15
	11-8-00		3.97	24.81		34.14
	8-15-00		5.8	22.92		34.10
	5-4-00		3.20	25.52		34.10
	2-25-00		6.20	22.52		34.50
	8-20-99		5.89	22.83		34.82
RW-6	8-7-01	33.74	7.10	26.64	75	78.11
	5-4-01		8.83	24.91		77.55
	2-12-01		9.17	24.57		72.43
	11-13-00		10.01	23.73		73.01
	8-15-00		9.80	23.94		78.10
	5-4-00		7.80	25.94		78.00
	2-24-00		9.90	23.84		84.90

ft = feet MSL – mean sea level btoc – below top of casing

Table 2 - Continued
Well Measurements

RW-7	8-7-01	34.99	8.11	26.88	45.59	47.27
	5-4-01		9.79	25.20		44.93
	2-12-01		10.18	24.81		44.95
	11-8-00		9.91	25.08		46.52
	8-15-00		11.70	23.29		47.00
	5-4-00		10.00	24.99		47.00
	2-25-00		11.20	23.79		51.00
RW-8	8-7-01	35.35	8.47	26.88	46.15	36.96
	5-4-01		10.16	25.19		45.00
	2-12-01		10.55	24.80		44.98
	11-13-00		9.62	25.73		36.08
	8-15-00		11.90	23.44		47.10
	5-4-00		10.00	25.35		44.20
	2-24-00		11.40	23.95		51.10

ft = feet MSL – mean sea level btoc – below top of casing

Table 3
Well Purge Parameters

Well Identification	Date	Volume Purged (gal)	Temper-ature (°C)	PH	Oxygen Reduction Potential (mv)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)
KBA-11-02	8-8-01	6	26.9	7.0	-242.2	0.248	10	9.65
	5-1-01	6	22.0	6.1	-84	0.276	6	8.55
	2-6-01	6	18.9	6.3	-255	0.343	11	0.07
	11-8-00	6	23.7	6.6	-189	0.325	7	0.67
	8-8-00	no water – well was not purged						
	5-3-00	6	22.5	6.8	NM	0.440	10	2.30
	2-4-00	3	22.7	5.00	-258	0.604	12	1.70
	11-9-99	6	23.4	5.94	-160	0.527	3	0.51
	8-3-99	7	25.2	5.63	-199	0.713	0	NM
KBA-11-10B	8-9-01	6	24.1	6.16	-222.6	0.317	5	9.99
	8-8-00	6	25.0	6.3	-65	0.295	12	0.04
	8-2-99	6	25.6	5.14	-221	0.304	2	NM
KBA-11-11A	8-8-01	8	22.8	5.64	-216.6	0.079	10	8.60
	8-10-00	6	22.9	6.0	-18	0.071	4	0.01
KBA-11-13A	8-8-01	8	25.2	4.98	-166.8	2.38	9	9.05
	5-3-01	6	22.8	4.75	-76	2.16	1.9	8.50
	2-8-01	6	23.8	4.8	-277	1.80	8	0.31
	11-8-00	6	24.3	5.40	-81	1.30	4	0.40
	8-10-00	6	23.7	6.2	-48	1.35	1	0.11
	5-3-00	6	24.5	6.4	-113	0.561	10	1.10
	2-4-00	8	22.3	6.68	-217	0.503	10	1.17
	11-9-99	8	23	5.54	-142	0.467	2	0.78
	8-3-99	6	24.3	5.50	-210	0.463	17	NM
KBA-11-13B	8-8-01	6	24.5	8.11	-243.3	0.290	0.85	10.21
	8-8-00	6	24.3	7.5	-37	0.241	2	0.07
	8-3-99	8	24.9	7.15	-43	0.267	0	NM
KBA-11-15	8-9-01	6	22.7	5.90	-204.8	0.97	10	8.83
	8-9-00	6	24.2	5.7	-91	0.694	3	0.13
	2-7-00	7	20.8	5.04	-313	0.536	5	1.43
	8-3-99	6	25	4.90	-182	0.677	9	NM

Table 3 continued on following page

°C = degrees centigrade
mv = millivolts
mS/cm = microseimens per centimeter
NTU = nephelometric turbidity units
mg/L = milligrams per liter
NM = not measured

Table 3 Continued
Well Purge Parameters

Well Identification	Date	Volume Purged (gal)	Temper-ature (°C)	PH	Oxygen Reduction Potential (mv)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)
KBA-11-16	8-9-01	8	24.4	5.58	-248.1	0.394	4	8.68
	5-2-01	6	23.1	4.17	-123	0.411	7	7.30
	2-6-01	6	23.4	4.92	-111	0.345	2	0.03
	11-8-00	6	25.02	5.02	-102	0.302	4	0.15
	8-9-00	6	24.6	5.6	-67.7	0.331	1	0.06
	5-4-00	6	23.6	6.1	NM	0.146	10	3.70
	2-7-00	7	22.8	5.40	-275	0.364	8	1.09
	11-9-99	8	24	4.89	-104	0.263	20	0.57
	8-3-99	7	26.8	4.76	-111	0.171	35	NM
KBA-11-17B	8-9-01	6	23.6	5.46	-178.4	0.118	10	8.70
	8-9-00	6	24.3	6.8	-101	0.073	2	0.01
	2-7-00	7	21.9	5.40	-287	0.135	3	1.08
	8-3-99	8	24.7	4.48	-112	0.118	6	NM
KBA-11-34	8-9-01	6	27.5	4.35	-152.5	1.07	12	8.77
	5-3-01	8	25.2	3.88	-113	1.48	3	6.96
	2-8-01	6	26.9	3.8	-249	1.69	4	.06
	11-8-00	6	26.03	3.51	-189	1.73	44	1.73
	8-8-00	6	27.8	3.7	-315	1.78	38	0.02
	5-4-00	6	25.8	3.9	-119	1.36	10	5.85
	2-7-00	8	24.9	2.81	-184	2.19	9	2.43
	11-9-99	8	27.2	3.58	-134	2.26	9	0.44
	8-3-99	6	30.5	3.20	-300	2.36	13	NM
KBA-11-37	8-9-01	6	25.5	6.28	-248.8	0.587	10	9.61
	5-2-01	8	24.2	5.41	-139	0.595	30	8.55
	2-7-01	6	22.5	5.5	-73	0.559	9	0.1
	11-8-00	6	26.2	5.67	-73	0.533	4.3	0.86
	8-9-00	6	24.6	6.2	-119	0.551	3	0.03
	5-4-00	6	24.0	6.3	NM	0.517	10	1.75
	2-8-00	8	21.3	6.1	-323	0.562	6	1.45
	11-9-99	8	24.2	5.37	-200	0.573	12	0.46
	8-16-99	9	25.5	5.52	-227	0.517	15	NM

Table 3 continued on following page

°C = degrees centigrade
mv = millivolts
mS/cm = microseimens per centimeter
NTU = nephelometric turbidity units
mg/L = milligrams per liter
NM = not measured

Table 3 Continued
Well Purge Parameters

Well Identification	Date	Volume Purged (gal)	Temper-ature (°C)	PH	Oxygen Reduction Potential (mv)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)
PS-2	8-9-01	6	23.1	5.80	-223.5	0.318	5	9.84
	5-2-01	8	21.7	5.42	-123	0.327	1	7.80
	2-7-01	6	17.7	5.24	-90	0.290	3	0.03
	11-8-00	6	24.2	5.40	-92	0.298	4	0.48
	8-8-00	6	23.0	5.0	-108	0.300	2	0.04
	5-3-00	6	21.6	5.7	NM	0.317	10	1.30
	2-7-00	8	19.5	4.93	-387	0.355	10	1.43
	11-9-99	8	22	4.87	-144	0.363	2	0.35
	8-18-99	7	23.2	4.95	-213	0.381	10	NM

°C = degrees centigrade
mv = millivolts
mS/cm = microseimens per centimeter
NTU = nephelometric turbidity units
mg/L = milligrams per liter
NM = not measured

Table 4
Analytical Summary, Groundwater Protection Standard

Groundwater Protection Standard	Criteria (µg/L)	KBA-11-02								
Date		8-8-01	5-2-01	2-6-01	11-8-00	8-8-00	5-3-00	2-4-00	11-9-99	8-3-99
Tetrachloroethene	5.0	1.0U	1.0U	1.0U	1.0U	Unable to sample – no water	1.0U	1.0U	3.0U	3.0U
Trichloroethene	5.0	1.0U	1.0U	1.0U	1.0U	NS	1.0U	1.0U	1.0U	1.0U
Cis -1,2-dichloroethene	70	1.0U	1.0U	1.0U	1.0U	NS	1.0U	1.0U	1.0U	1.0U
Trans-1,2 dichloroethene	100	1.0U	1.0U	1.0U	1.0U	NS	1.0U	1.0U	1.0U	1.0U
1,1-dichloroethene	7.0	1.0U	1.0U	1.0U	1.0U	NS	1.0U	1.0U	1.0U	1.0U
1,1-dichloroethane	1.0	1.0U	1.0U	1.0U	1.0U	NS	1.0U	1.0U	1.0U	1.0U
1,2-dichloroethane	5.0	1.0U	1.0U	1.0U	1.0U	NS	1.0U	1.0U	1.0U	1.0U
Vinyl Chloride	2.0	1.0U	1.0U	1.0U	1.0U	NS	1.0U	1.0U	1.0U	1.0U
Chloroethane	1.0	1.0U	1.0U	1.0U	1.0U	NS	1.0U	1.0U	1.0U	1.0U
Benzene	5.0	1.0U	1.0U	1.0U	1.0U	NS	1.0U	1.0U	1.0U	1.0U
Ethylbenzene	700	1.0U	1.0U	1.0U	1.0U	NS	1.0U	1.0U	1.0U	1.0U
Toluene	1,000	1.0U	1.0U	1.0U	1.0U	NS	1.0U	1.0U	1.0U	1.0U
Total xylenes	10,000	3.0U	0.1	3.0U	3.0U	NS	3.0U	3.0U	3.0U	3.0U
Chlorobenzene	1.0	1.0U	1.0U	1.0U	1.0U	NS	1.0U	1.0U	1.0U	1.0U
1,4-dichlorobenzene	75	1.0U	1.0U	1.0U	1.0U	NS	1.0U	1.0U	1.0U	1.0U

Notes: I = interference.
J = estimated value; analyte detected; value is between the method detection level (MDL) and the practical quantitation level (PQL).
U = compound was analyzed for but not detected to the level shown.
BOLD indicates result exceeds the groundwater protection standard.

Table 4 Continued
Analytical Summary, Groundwater Protection Standard

Groundwater Protection Standard	Criteria (µg/L)	KBA-11-10B			KBA-11-11A		
Date		8-9-01	8-8-00	8-2-99	8-8-01	8-10-00	8-2-99
Tetrachloroethene	5.0	1.0U	1.0U	3.0U	1.0U	1.0U	3.0U
Trichloroethene	5.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Cis -1,2-dichloroethene	70	1.0 I	1.0 I	1.6I	1.0U	1.0U	1.0U
Trans-1,2 dichloroethene	100	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
1,1-dichloroethene	7.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
1,1-dichloroethane	1.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
1,2-dichloroethane	5.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Vinyl Chloride	2.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Chloroethane	1.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Benzene	5.0	0.57J	1.0	1.6	1.0U	1.0	1.0U
Ethylbenzene	700	2.50	5.0	10	1.0U	5.0	1.0U
Toluene	1,000	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Total xylenes	10,000	3.0U	3.0U	3.0U	3.0U	1.0U	3.0U
Chlorobenzene	1.0	**1.2**	1.0	**2.5**	1.0U	1.0	1.0U
1,4-dichlorobenzene	75	0.76J	1.0	1.5	1.0U	1.0	1.0U

Notes: I = interference.
J = estimated value; analyte detected; value is between the method detection level (MDL) and the practical quantitation level (PQL).
U = compound was analyzed for but not detected to the level shown.
BOLD indicates result exceeds the groundwater protection standard.

Table 4 Continued
Analytical Summary, Groundwater Protection Standard

Groundwater Protection Standard	Criteria (µg/L)	KBA-11-13A											
Date		8-8-01 Duplicate	8-8-01	5-3-01	2-8-01	11-8-00	8-10-00	8-10-00 (Duplicate)	5-3-00	2-4-00	11-9-99	11-9-99 Duplicate	8-3-99
Tetrachloroethene	5.0	1.6	0.77J	0.59J	0.8	3.0U	1.0U	1.0U	1.0U	1.0U	30U	3.0U	3.0U
Trichloroethene	5.0	**32**	**26**	**37.0**	**45.0**	**54.0**	**51.0**	**40.0**	**20.0**	**14.0**	**15I**	**17**	**19**
Cis -1,2-dichloroethene	70	**71**	59	**88**	**110**	**160**	**300 E**	**190**	**180**	**230**	**260**	**210**	**190**
Trans-1,2 dichloroethene	100	6.4	5.4	6.6	8.0	7.0	9.0	7.0	6.0	6.0	1.0U	6.6	7.4
1,1-dichloroethene	7.0	0.44J	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
1,1-dichloroethane	1.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
1,2-dichloroethane	5.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Vinyl Chloride	2.0	1.0U	1.0U	0.9	0.9	**4.0**	**17.0**	**11.0**	**19.0**	**20.0**	**46**	**42**	**48**
Chloroethane	1.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Benzene	5.0	0.43J	0.31J	0.33J	1.0	1.0	1.0	1.0	2.0	2.0	1.0U	1.3I	1.1I
Ethylbenzene	700	22	14	20	34	57	71	51.0	67	64.0	65	92	66
Toluene	1,000	0.43J	0.30J	0.46J	1.0U	1.0U	0.9	0.7	2.0	2.0	1.0U	4.2	2.7
Total xylenes	10,000	0.56J	0.37J	0.33J	3.0U	2.0U	0.7	3.0	4.0	23.0	24I	49	14.4
Chlorobenzene	1.0	**3.1**	**2.1**	**2.4**	**3.0**	**5.0**	**5.0**	**4.0**	**5.0**	**6.0**	1.0U	**8.2**	**6.2**
1,4-dichlorobenzene	75	1.4	1.4	1.4	1.0U	3.0	3.0	2.0	3.0	4.0	1.0U	5.2	4.0

Notes: I = interference.
J = estimated value; analyte detected; value is between the method detection level (MDL) and the practical quantitation level (PQL).
U = compound was analyzed for but not detected to the level shown.
BOLD indicates result exceeds the groundwater protection standard.

Table 4 Continued
Analytical Summary, Groundwater Protection Standard

Groundwater Protection Standard	Criteria (µg/L)	KBA-11-13B			KBA-11-15				
Date		8-8-01	8-8-00	8-3-99	8-9-01	8-9-00	2-7-00	2-7-00 Duplicate	8-3-99
Tetrachloroethene	5.0	1.0U	1.0U	3.0U	1.0U	1.0U	1.0	1.0	3.0U
Trichloroethene	5.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Cis -1,2-dichloroethene	70	1.0U	1.0U	1.0U	1.0U	1.0U	0.9I	1.0	1.0U
Trans-1,2 dichloroethene	100	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
1,1-dichloroethene	7.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
1,1-dichloroethane	1.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
1,2-dichloroethane	5.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Vinyl Chloride	2.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Chloroethane	1.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Benzene	5.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Ethylbenzene	700	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Toluene	1,000	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Total xylenes	10,000	3.0U	3.0U	3.0U	3.0U	3.0U	3.0U	3.0U	3.0U
Chlorobenzene	1.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
1,4-dichlorobenzene	75	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U

Notes: I = interference.
J = estimated value; analyte detected; value is between the method detection level (MDL) and the practical quantitation level (PQL).
U = compound was analyzed for but not detected to the level shown.
BOLD indicates result exceeds the groundwater protection standard.

Table 4 Continued
Analytical Summary, Groundwater Protection Standard

Groundwater Protection Standard	Criteria (µg/L)	KBA-11-16									
Date		8-9-01	5-2-01	2-6-01	11-8-00	8-9-00	5-4-00	5-4-00 Duplicate	2-7-00	11-9-99	8-3-99
Tetrachloroethene	5.0	1.0U	1.0U	1.0U	2.0	1.0U	1.0U	1.0U	1.0U	3.0U	3.0U
Trichloroethene	5.0	0.42J	0.31J	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Cis -1,2-dichloroethene	70	30	32	34.0	8.0	2.0	2.0	2.0	14.0	3.6	1.0U
Trans-1,2 dichloroethene	100	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
1,1-dichloroethene	7.0	1.8	1.3	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
1,1-dichloroethane	1.0	**26**	**15**	**11.0**	**2.0**	**2.0**	1.0U	0.6U	**5.0**	1.6I	1.0U
1,2-dichloroethane	5.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Vinyl Chloride	2.0	1.1	**3.4**	**4.0**	1.0U	1.0U	1.0U	1.0U	1.0	1.4I	1.0U
Chloroethane	1.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Benzene	5.0	1.2	0.96J	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Ethylbenzene	700	1.8	0.99J	1.0U	1.0U	0.8J	1.0U	1.0U	1.0U	1.0U	1.0U
Toluene	1,000	15	5.4	1.0U	3.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Total xylenes	10,000	1.7J	0.86J	3.0U	3.0U	3.0U	3.0U	3.0U	3.0U	3.0U	3.0U
Chlorobenzene	1.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
1,4-dichlorobenzene	75	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U

Notes: I = interference.
J = estimated value; analyte detected; value is between the method detection level (MDL) and the practical quantitation level (PQL).
U = compound was analyzed for but not detected to the level shown.
BOLD indicates result exceeds the groundwater protection standard.

Table 4 Continued
Analytical Summary, Groundwater Protection Standard

Groundwater Protection Standard	Criteria (µg/L)	KBA-11-17B				
Date		8-9-01	8-9-00	2-7-00	8-3-99	8-3-99
Tetrachloroethene	5.0	1.0U	1.0U	1.0U	3.0U	**17**
Trichloroethene	5.0	1.0U	1.0U	1.0U	1.0U	1.0U
Cis -1,2-dichloroethene	70	1.0U	1.0U	1.0U	1.0U	1.0U
Trans-1,2 dichloroethene	100	1.0U	1.0U	1.0U	1.0U	1.0U
1,1-dichloroethene	7.0	1.0U	1.0U	1.0U	1.0U	1.0U
1,1-dichloroethane	1.0	1.0U	1.0U	1.0U	1.0U	1.0U
1,2-dichloroethane	5.0	1.0U	1.0U	1.0U	1.0U	1.0U
Vinyl Chloride	2.0	1.0U	1.0U	1.0U	1.0U	1.0U
Chloroethane	1.0	1.0U	1.0U	1.0U	1.0U	1.0U
Benzene	5.0	1.0U	1.0U	1.0U	1.0U	1.0U
Ethylbenzene	700	1.0U	1.0U	1.0U	1.0U	1.0U
Toluene	1,000	1.0U	1.0U	1.0U	1.0U	1.0U
Total xylenes	10,000	3.0U	3.0U	3.0U	3.0U	3.0U
Chlorobenzene	1.0	1.0U	1.0U	1.0U	1.0U	1.0U
1,4-dichlorobenzene	75	1.0U	1.0U	1.0U	1.0U	1.0U

Notes: I = interference.
J = estimated value; analyte detected; value is between the method detection level (MDL) and the practical quantitation level (PQL).
U = compound was analyzed for but not detected to the level shown.
BOLD indicates result exceeds the groundwater protection standard.

Table 4 Continued
Analytical Summary, Groundwater Protection Standard

Groundwater Protection Standard	Criteria (µg/L)	KBA-11-34								
Date		8-9-01	5-3-01	2-8-01	11-8-00	8-9-00	5-4-00	2-7-00	11-9-99	8-3-99
Tetrachloroethene	5.0	**35**	**62.0**	**73.0**	**79.0**	**63.0**	**89.0**	**83.0**	**22**	**17**
Trichloroethene	5.0	3.0	2.6	2.0	1.0U	0.6J	1.0	2.0	1.0U	1.0U
Cis -1,2-dichloroethene	70	2.8	0.27J	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Trans-1,2 dichloroethene	100	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
1,1-dichloroethene	7.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
1,1-dichloroethane	1.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
1,2-dichloroethane	5.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Vinyl Chloride	2.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Chloroethane	1.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Benzene	5.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Ethylbenzene	700	1.0U	0.13J	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Toluene	1,000	1.0U	0.24J	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Total xylenes	10,000	3.0U	0.17J	3.0U	3.0U	3.0U	3.0U	3.0U	3.0U	3.0U
Chlorobenzene	1.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
1,4-dichlorobenzene	75	0.56J	0.41J	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U

Notes: I = interference.
J = estimated value; analyte detected; value is between the method detection level (MDL) and the practical quantitation level (PQL).
U = compound was analyzed for but not detected to the level shown.
BOLD indicates result exceeds the groundwater protection standard.

Table 4 Continued
Analytical Summary, Groundwater Protection Standard

Groundwater Protection Standard	Criteria (µg/L)	KBA-11-37									
Date		8-8-01	5-2-01	2-7-01	11-8-00	11-8-00 Duplicate	8-9-00	5-4-00	2-8-00	11-9-99	8-16-99
Tetrachloroethene	5.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	3.0U	3.0U
Trichloroethene	5.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Cis -1,2-dichloroethene	70	12.0	13.0	13.0	11.0	11.0	14.0	17.0	16.0	17	24
Trans-1,2 dichloroethene	100	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
1,1-dichloroethene	7.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
1,1-dichloroethane	1.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
1,2-dichloroethane	5.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Vinyl Chloride	2.0	1.0U	0.6J	0.6J	1.0U	1.0U	1.0U	1.0U	1.0U	1.4I	**2.5I**
Chloroethane	1.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Benzene	5.0	1.3	1.3	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
Ethylbenzene	700	13	10.0	13.0	10.0	11.0	7.0	1.0U	9.0	14	15
Toluene	1,000	0.22J	0.41J	1.0U	1.0U	1.0U	1.0U	1.0U	1.0	1.0U	1.0U
Total xylenes	10,000	3.0U	0.18J	3.0U	2.0U	2.0U	3.0	12.0	3.0U	3.0U	3.0U
Chlorobenzene	1.0	**2.8**	**2.1**	**2.0**	**3.0**	**3.0**	**2.0**	**3.0**	**2.0**	**3.1**	**2.9**
1,4-dichlorobenzene	75	3.1	2.6	1.0U	4.0	3.0	3.0	3.0	3.0	4.7	3.6

Notes: I = interference.
J = estimated value; analyte detected; value is between the method detection level (MDL) and the practical quantitation level (PQL).
U = compound was analyzed for but not detected to the level shown.
BOLD indicates result exceeds the groundwater protection standard.

Table 4 Continued
Analytical Summary, Groundwater Protection Standard

Groundwater Protection Standard	Criteria (µg/L)	PS-2								
Date		8-9-01	5-2-01	2-7-01	11-8-00	8-8-00	5-3-00	2-7-00	11-9-99	8-18-99
Tetrachloroethene	5.0	1.0U	0.14J	1.0U	3.0U	1.0U	1.0U	1.0U	3.0U	3.0U
Trichloroethene	5.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	1.4I	1.3I
Cis -1,2-dichloroethene	70	**99**	**79.0**	**71.0**	**61.0**	**58.0**	57.0	52.0	40	41
Trans-1,2 dichloroethene	100	0.80J	0.60J	0.6J	1.0U	1.0U	0.5	1.0U	1.0U	1.0U
1,1-dichloroethene	7.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
1,1-dichloroethane	1.0	**4.2**	**4.1**	**4.0**	**4.0**	**4.0**	**5.0**	**5.0**	**5.1**	**5.6**
1,2-dichloroethane	5.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Vinyl Chloride	2.0	**2.4**	**2.4**	**3.0**	**3.0**	**2.0**	1.0U	**2.0**	**2.9**	3.2I
Chloroethane	1.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Benzene	5.0	3.4	3.7	4.0	**5.0**	**6.0**	**8.0**	**8.0**	**9.4**	**9.1**
Ethylbenzene	700	22.0	22.0	18.0	18.0	14.0	16.0	14.0	16	10
Toluene	1,000	2.7	2.9	3.0	5.0	8.0	19.0	37.0	57	43
Total xylenes	10,000	3.5	3.6	4.0	7.0	19.0	41.0	40.0	47	29
Chlorobenzene	1.0	0.92J	0.59J	0.5J	1.0	0.5	0.7	1.0U	1.0U	1.0U
1,4-dichlorobenzene	75	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U

Notes: I = interference.
J = estimated value; analyte detected; value is between the method detection level (MDL) and the practical quantitation level (PQL).
U = compound was analyzed for but not detected to the level shown.
BOLD indicates result exceeds the groundwater protection standard.

Table 5
Appendix IX Analyses Summary

Appendix IX Constituents (only detectable compounds shown)	**KBA-11-13A Background Well (Resample)**	**KBA-11-11A Background Well**	**KBA-11-13A Downgradient Well**	**KBA-11-11A Background Well**	**KBA-11-13A Downgradient Well**	**KBA-11-11A Background Well Sample ID KB20015 GWT**	**KBA-11-13A Downgradient Well Sample ID KB20010 GWT**
Date Collected	9-20-01	8-8-01	8-8-01	8-10-00	8-16-00	8-19-99	8-3-99
Volatile Organic (µg/L)							
Vinyl Chloride	1.0U	1.0U	1.0U	1.0U	17	1.0U	49.6
Trichlororethene	7	1.0U	35	1.0U	51	1.0U	22.7
Toluene	1.0U	1.0U	1.0U	1.0U	0.95	1.0U	3.5
Chlorobenzene	3	1.0U	3.4	1.0U	5.0	1.0U	5.8
Ethylbenzene	24	1.0U	21	1.0U	71	1.0U	79.6
Xylenes (total)	3.0U	3.0U	3.0U	3.0U	0.71	3.0U	19.5
Trans-1,2-dichloroethene	1	1.0U	6.4	1.0U	9	1.0U	4.7
Cis-1,2-dichloroethene	14	1.0U	71	1.0U	300 E	1.0U	234 E
Benzene	1.0U	1.0U	1.0U	1.0U	1.0		
Carbon disulfide	5.0U	5.0U	8.2	5.0U	5.0U	5.0U	4.6J
Tetrachloroethene	1.0U	1.0U	2.2	1.0U	1.0U	1.0U	1.0U
Semivolatile Organic (µg/L)							
Naphthalene	19	10U	15	5.0U	20	10.4U	18.3
Diethyl Phthalate	5U	10U	10U	5.2	7.2		
Dioxins/furans (NG/L)							
All below detection limit	NA	ND	ND	ND	ND	10.0 U	10.0U

Notes: U = compound was analyzed for but not detected to the level shown.
E or J = estimated value.
NG/L = nanograms per liter;
µg/L = micrograms per liter;
mg/L = milli grams per liter
NA – Not analyzed

Table 5 continued on following page

Table 5 Continued
Appendix IX Analyses Summary

Appendix IX Constituents (only detectable compounds shown)	KBA-11-13A Background Well (Resample)	KBA-11-11A Background Well	KBA-11-13A Downgradient Well	KBA-11-11A Background Well	KBA-11-13A Downgradient Well	KBA-11-11A Background Well Sample ID KB20015 GWT	KBA-11-13A Downgradient Well Sample ID KB20010 GWT
Date Collected	9-20-01	8-8-01	8-8-01	8-10-00	8-16-00	8-19-99	8-3-99
Pesticide/PCBs/Herbicides Organics (µg/L)							
Aldrin	0.02U	0.0072J	0.020U	0.050U	0.020U	0.020U	
Heptachlor	0.02U	0.020U	0.031	0.050U	0.020U	0.020U	
Inorganics (µg/L)							
Antimony	NA	0.140U	0.350U	0.150	0.289	2.9	2.9
Arsenic	NA	0.519B	4.060	0.318	1.41	2.7	2.7
Barium	NA	10.0	74.9	10.4	74.8	8.2	15.8
Beryllium	NA	0.040U	0.923B	0.024	0.022	0.32	0.09
Cadmium	NA	0.080U	0.200U	0.020	0.020	0.36	0.36
Chromium	NA	0.779B	5.400B	0.604	1.94	1.3	2.5
Cobalt	170	0.028B	177	0.015	0.148	0.84	0.84
Copper	NA	0.120U	4.920B	1.550	0.493	1.7	6.2
Lead	NA	0.080B	0.150U	0.058	0.044	1.9	2.8
Mercury	NA	0.100U	0.100U	0.03	0.03	0.04	0.04
Nickel	220	0.400U	229	0.363	3.480	1.0	12.7
Selenium	NA	1.800B	5.710B	0.677	2.110	2.9	2.9
Silver	NA	0.020U	0.050U	0.005	0.036	0.9	3.1
Thallium	NA	0.020U	0.050U	0.010	0.010	4.4	3.9
Tin	NA	3.00U	3.00U	0.170	0.224	2.0	2.0
Vanadium	NA	0.497B	4.420B	0.715	5.070	1.1	5.5
Zinc	20U	1.00U	219	1.16	1.990	4.9	18.3
General Chemistry (mg/L)							
Cyanides	NA	0.0006U	0.0006U	0.006U	0.0008	0.00	0.00
Sulfides	NA	1.00U	1.00U	1.00U	1.00U	0.45	1.1

Notes: U = compound was analyzed for but not detected to the level shown.
E or J = estimated value.
NG/L = nanograms per liter;
µg/L = micrograms per liter;
mg/L = milli grams per liter
NA = Not Analyzed

Table 6
Analytical Summary for Subdivision Irrigation Wells

Groundwater Protection Standard	**Criteria (µg/L)**	**KBA-102-PLANTATION CT. Year 2001**							
Date		8-01	7-01	6-01	5-01	4-01	3-01	2-01	1-01
Tetrachloroethene	5.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Trichloroethene	5.0	**9.9**	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	**86**
Cis -1,2-dichloroethene	70	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Trans-1,2 dichloroethene	100	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
1,1-dichloroethene	7.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
1,1-dichloroethane	1.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
1,2-dichloroethane	5.0	1.0U	1.0U	1.0U	0.10J	0.10J	1.0U	1.0U	1.0U
Vinyl Chloride	2.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Chloroethane	1.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Benzene	5.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Ethylbenzene	700	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Toluene	1,000	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Total xylenes	10,000	3.0	3.0	3.0	3.0	3.0	3.0U	3.0U	3.0U
Chlorobenzene	1.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
1,4-dichlorobenzene	75	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U

Table 6 Continued
Analytical Summary for Subdivision Irrigation Wells

Groundwater Protection Standard	Criteria (µg/L)	KBA-102-PLANTATION CT. Year 2000											
Date		12-00	11-00	10-00	9-00	8-00	7-00	6-00	5-00	4-00	3-00	2-00	1-00
Tetrachloroethene	5.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Trichloroethene	5.0	**17**	**8.0**	**4.0**	**150**	**37**	**8.0**	1.OU	1.0U	1.0U	1.0U	1.0U	**28.0**
Cis -1,2-dichloroethene	70	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Trans-1,2 dichloroethene	100	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
1,1-dichloroethene	7.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
1,1-dichloroethane	1.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
1,2-dichloroethane	5.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Vinyl Chloride	2.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Chloroethane	1.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Benzene	5.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Ethylbenzene	700	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Toluene	1,000	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Total xylenes	10,000	3.0U	1.0U	3.0U	3.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Chlorobenzene	1.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
1,4-dichlorobenzene	75	3.0U	3.0U	3.0U	3.0U	3.0U	3.0U	3.0U	3.0U	3.0U	3.0U	3.0U	3.0U

Table 6 Continued
Analytical Summary for Subdivision Irrigation Wells

Groundwater Protection Standard	Criteria (µg/L)	KBA-122-PLANTATION CT. Year 2001														
Date		8-01 duplicate	8-01	7-01 duplicate	7-01	6--01 duplicate	6-01	5-01 duplicate	5-01	4-01	4-01	3-01 duplicate	3-01	2-01 duplicate	2-01	1-01
Tetrachloroethene	5.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Trichloroethene	5.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Cis -1,2-dichloroethene	70	1.1	1.2	1.0	1.0	1.2	0.95	0.1	0.94J	1.0	1.0	1.0	1.0	1.0	2.0	2.0
Trans-1,2 dichloroethene	100	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
1,1-dichloroethene	7.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
1,1-dichloroethane	1.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
1,2-dichloroethane	5.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Vinyl Chloride	2.0	**4.7**	**4.7**	**4.6**	**4.6**	**4.8**	**4.8**	**4.5**	**3.4**	**5.0**	**5.0**	**4.0E**	**4.0E**	**4.0**	**6.0**	**7.0**
Chloroethane	1.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Benzene	5.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Ethylbenzene	700	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Toluene	1,000	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Total xylenes	10,000	3.0U	3.0U	3.0U	3.0U	3.0U	3.0U	3.0U	3.0U	3.0U	3.0U	3.0U	3.0U	3.0U	3.0U	3.0U
Chlorobenzene	1.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
1,4-dichlorobenzene	75	0.22	0.24	0.26J	0.27J	0.23J	0.21J	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U

Table 6 Continued
Analytical Summary for Subdivision Irrigation Wells

Groundwater Protection Standard	Criteria (µg/L)	KBA-122-PLANTATION CT. Year 2000											
Date		12-00	11-00	10-00	9-00	8-00	7-00	6-00	5-00	4-00	3-00	2-00	1-00
Tetrachloroethene	5.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Trichloroethene	5.0	2.0	0.93	0.9J	1.0U	2.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Cis -1,2-dichloroethene	70	1.0	2.0	2.0	3.0	2.0	1.0U	2.0	3.0	2.0	2.0	2.0	2.0
Trans-1,2 dichloroethene	100	1.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
1,1-dichloroethene	7.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
1,1-dichloroethane	1.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
1,2-dichloroethane	5.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Vinyl Chloride	2.0	**4.0**	**5.0**	**5.0**	**5.0**	**5.0**	1.0U	**7.0**	**8.0**	**6.0**	**8.0**	**8.0**	**5.0**
Chloroethane	1.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Benzene	5.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Ethylbenzene	700	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Toluene	1,000	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Total xylenes	10,000	3.0U	3.0U	3.0U	3.0U	3.0U	3.0U	3.0U	3.0U	3.0U	3.0U	3.0U	3.0U
Chlorobenzene	1.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
1,4-dichlorobenzene	75	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U

Table 6 Continued
Analytical Summary for Subdivision Irrigation Wells

Groundwater Protection Standard	Criteria (µg/L)	KBA-108-COTTAGE CT. Year 2001							
Date		8-01	7-01	6-01	5-01	4-01	3-01	2-01	1-01
Tetrachloroethene	5.0	NM	1.0U	1.0U	1.0U	1.0U	NM	NM	NM
Trichloroethene	5.0	NM	1.0U	1.0U	1.0U	1.0U	NM	NM	NM
Cis -1,2-dichloroethene	70	NM	10	3.8	6.8	3.1	NM	NM	NM
Trans-1,2 dichloroethene	100	NM	1.0U	1.0U	1.0U	1.0U	NM	NM	NM
1,1-dichloroethene	7.0	NM	1.0U	1.0U	1.0U	1.0U	NM	NM	NM
1,1-dichloroethane	1.0	NM	1.0U	1.0U	1.0U	1.0U	NM	NM	NM
1,2-dichloroethane	5.0	NM	0.32J	1.0U	1.0U	1.0U	NM	NM	NM
Vinyl Chloride	2.0	NM	1.0U	1.0U	1.0U	1.0U	NM	NM	NM
Chloroethane	1.0	NM	1.0U	1.0U	1.0U	1.0U	NM	NM	NM
Benzene	5.0	NM	1.0U	1.0U	1.0U	1.0U	NM	NM	NM
Ethylbenzene	700	NM	1.0U	1.0U	1.0U	1.0U	NM	NM	NM
Toluene	1,000	NM	1.0U	1.0U	1.0U	1.0U	NM	NM	NM
Total xylenes	10,000	NM	3.0U	3.0U	3.0U	7.0U	NM	NM	NM
Chlorobenzene	1.0	NM	1.0U	1.0U	1.0U	1.0U	NM	NM	NM
1,4-dichlorobenzene	75	NM	1.0U	1.0U	1.0U	1.0U	NM	NM	NM

NM – Not measured. Irrigation well was closed for the winter or owner was on vacation.

Table 6 Continued
Analytical Summary for Subdivision Irrigation Wells

Groundwater Protection Standard	Criteria (µg/L)	KBA-108-COTTAGE CT. Year 2000											
Date		12-00	11-00	10-00	9-00	8-00	7-00	6-00	5-00	4-00	3-00	2-00	1-00
Tetrachloroethene	5.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	NM	NM
Trichloroethene	5.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	NM	NM
Cis -1,2-dichloroethene	70	0.7J	1.0U	2.0	1.0U	1.0U	4.0	4.0	5.0	5.0	7.0	NM	NM
Trans-1,2 dichloroethene	100	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	NM	NM
1,1-dichloroethene	7.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	NM	NM
1,1-dichloroethane	1.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	NM	NM
1,2-dichloroethane	5.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	NM	NM
Vinyl Chloride	2.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	NM	NM
Chloroethane	1.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	NM	NM
Benzene	5.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	NM	NM
Ethylbenzene	700	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	NM	NM
Toluene	1,000	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	NM	NM
Total xylenes	10,000	3.0U	3.0U	3.0U	3.0U	3.0U	3.0U	3.0U	3.0U	3.0U	3.0U	NM	NM
Chlorobenzene	1.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	NM	NM
1,4-dichlorobenzene	75	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	NM	NM

NM – Not measured. Irrigation well is closed for the winter.

APPENDIX A

WORK PLAN NO. 02
GROUNDWATER REMEDIATION
AT SITE 11
OLD CAMDEN COUNTY LANDFILL

(without Appendices)

CH2M HILL
115 Perimeter Center Place NE
Suite 700
Atlanta, GA
30346-1278
Tel 770.604.9095
Fax 770.604.9282

CH2MHILL
Constructors, Inc

September 6, 2001

Mr. Anthony Robinson
Southern Division, Naval Facilities Engineering Command
P.O. Box 190010
North Charleston, SC 29419-9010

RE: Contract No. N62467-98-D-0995
Contract Task Order No. 0047 – Naval Submarine Base (NSB) Kings Bay, Georgia
Work Plan No. 02, Revision No. 01 for Groundwater Remediation at Site 11, Old Camden County Landfill

Dear Mr. Robinson:

CH2M HILL Constructors, Inc. is pleased to provide two copies of the enclosed Work Plan No. 02, Revision No. 01 with the Response to Georgia Department of Natural Resources, Environmental Protection Division Comments for the Groundwater Remediation at Site 11, Old Camden County Landfill, NSB Kings Bay, Georgia.

If you have any questions or comments regarding the enclosed, please do not hesitate to contact Michael Halil at (904) 777-4812 or at mhalil@vnet.net.

Sincerely,

CH2M HILL Constructors, Inc.

Michael Halil, E.I.T. (mc)
Project Engineer

cc: John Garner, NSB Kings Bay
Larry Blackburn, SOUTHDIV
CCI Project File No. 160027

NAVYRAC\0047\WP02 R01_CVRLTR

Work Plan No. 02
Groundwater Remediation at Site 11
Old Camden County Landfill

Naval Submarine Base Kings Bay
Kings Bay, Georgia

Revision No. 01

Contract No. N62467-98-D-0995
Contract Task Order No. 0047

Submitted to:

U.S. Naval Facilities
Engineering Command
Southern Division

Prepared by:

CH2MHILL
Constructors, Inc.
115 Perimeter Center Place, N.E.
Suite 700
Atlanta, GA 30346

September 2001

Work Plan No. 02
Groundwater Remediation at Site 11
Old Camden County Landfill

Naval Submarine Base Kings Bay
Kings Bay, Georgia

Revision No. 01

Contract No. N62467-98-D-0995
Contract Task Order No. 0047

Submitted to:
U.S. Naval Facilities
Engineering Command
Southern Division

Prepared by:

CH2MHILL
Constructors, Inc.
115 Perimeter Center Place, N.E.
Suite 700
Atlanta, GA 30346

September 2001

Prepared/Approved By:

Sam Ross, Project Manager — Date

Approved By:

R. Scott Newman, Program Manager — Date

Client Acceptance:

U.S. Navy Responsible Authority — Date

Table of Contents

Acronyms vi
1.0 **Introduction** **1-1**
1.1 Site History and Project Objectives 1-2
1.2 Source Area Delineation Effort 1-3
1.2.1 November 6 - 21, 2000 Source Area Delineation Effort 1-3
1.2.2 January 8 - 12, 2001 Source Area Delineation Effort 7
1.3 Project Objectives 10
2.0 **Project Execution Plan** **2-1**
2.1 Scope of Work 2-1
2.1.1 Mobilization and Setup of Temporary Facilities and Site Controls 2-1
2.1.2 Chemical Oxidation Injection 2-1
2.1.3 Vegetable Oil Injection 2-2
2.1.4 Site Restoration 2-4
2.1.5 Decontamination 2-6
2.1.6 Demobilization 2-6
2.2 Project Schedule 2-6
2.3 Communications Plan 2-6
2.4 Traffic Control Plan 2-8
3.0 **Sampling and Analysis Plan** **3-1**
3.1 Data Quality Objectives for Measurement Data 3-1
3.2 Sediment Collection 3-1
3.3 Waste Characterization and Incidental Wastestream Sampling and Analyses 3-4
3.3.1 Soil/Solids Characterization 3-4
3.3.2 Water Characterization 3-4
3.4 Analytical Methods 3-5
4.0 **Waste Management Plan** **4-1**
4.1 Waste Characterization 4-1
4.1.1 Waste Profile 4-1
4.2 Waste Management 4-2
4.2.1 Waste Storage Time Limit 4-2
4.2.2 Labels 4-2
4.2.3 Waste Management Requirements 4-3
4.2.4 Drums/Small Containers 4-3
4.2.5 Portable Tanks 4-3
4.2.6 Roll-off Boxes 4-4
4.2.7 Security and Contingency Planning 4-4
4.2.8 Waste/Fuel Storage Area Inspections 4-4
4.3 Transportation 4-4
4.3.1 Manifests/Shipping Documentation 4-5
4.3.2 Transporter Responsibilities 4-5
4.3.3 Transportation and Disposal Log 4-6
4.4 Disposal of Wastestreams 4-6

4.5 Training 4-6
4.6 Records/Reporting 4-7
5.0 Environmental Protection Plan 5-1
6.0 Quality Control Plan 6-1

Tables

1-1 Post-Phase III Sampling Event Analytical Results 1-3
1-2 November 6 - 21, 2000 Source Area Delineation Results 1-6
1-3 January 8 - 12, 2001 and February 7, 2001 Source Area Delineation Results 1-8
2-1 Communication Matrix 2-7
2-2 Project Personnel Directory 2-7
3-1 Data Quality Objectives 3-1
3-2 Sampling and Analytical Summary 3-2

Figures

1-1 Source Area Delineation Site Plan No. 01 1-4
1-2 Source Area Delineation Site Plan No. 02 1-5
1-3 Groundwater Contaminant Plume Isopleth Map 1-9
2-1 Proposed Chemical Oxidation Treatment Area 2-3
2-2 Proposed Vegetable Oil Injection Locations 2-5
6-1 Project Organizational Chart 6-2

Appendices

A Critical Path Method Project Schedule
B Submittal Register
C Testing Plan and Log
D Site Specific Health and Safety Plan
E Source Area Delineation Analytical/Membrane Interface Probe Results

Acronym List

AFCEE	Air Force Center for Environmental Excellence
ACO	Administrative Contracting Officer
BEI	Bechtel Environmental, Inc.
bls	below land surface
CCI	CH2M HILL Constructors, Inc.
CFR	Code of Federal Regulations
CO	Contracting Officer
CPM	Critical Path Method
CTO	Contract Task Order
DCE	dichloroethene
GC	gas chromatography
J.A. Jones	J.A. Jones Environmental Services Company
MIP	membrane interface probe
MSDS	Material Safety Data Sheets
µg/L	micrograms per liter
NAVFAC	Naval Facilities Engineering Command
NPDES	National Pollutant Discharge Elimination System
NRC	National Response Center
NSB	Naval Submarine Base
NTR	Navy Technical Representative
PCE	tetrachloroethene
POTW	publicly-owned treatment works
ppb	parts per billion
PPE	personal protective equipment
QA	Quality Assurance
QC	Quality Control
ROICC	Resident Officer in Charge of Construction
RPM	Remedial Project Manager
SAP	Sampling and Analysis Plan
SOPs	standard operating procedures
T&D	Transportation and Disposal
TCE	trichloroethene
TCLE	total chlorinated ethenes
TOC	total organic carbon
USACE	United States Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
VC	Vinyl chloride
VOC	volatile organic compound

1.0 Introduction

CH2M HILL Constructors, Inc. (CCI) with J.A. Jones Environmental Services Company (J.A. Jones) have been contracted by the Department of the Navy, Southern Division Naval Facilities Engineering Command (NAVFAC), to prepare this site-specific Work Plan, under Response Action Contract No. N62467-98-D-0995, Contract Task Order (CTO) No. 0047. The purpose of this Work Plan is to outline the procedures to be used to perform groundwater remediation at Site 11, Old Camden County Landfill (Site 11) located at Naval Submarine Base (NSB) Kings Bay, Georgia.

The scope of work under this CTO is to perform groundwater remediation in the delineated source area at Site 11 utilizing Fenton's reagent chemical oxidation injection followed by an injection of vegetable oil into the subsurface.

This Work Plan is organized into six sections of text and five appendices as follows.

Section 1.0 Introduction includes the site history, a summary of the source area delineation effort, and the project objectives.

Section 2.0 Project Execution Plan details the required scope of work, the project schedule, the communications plan, and the traffic control plan. A detailed project schedule is provided in Appendix A.

Section 3.0 Sampling and Analysis Plan (SAP) provides project sample locations, sample collection frequency, and the required laboratory analyses for samples collected during project activities.

Section 4.0 Waste Management Plan discusses the characterization, disposal, onsite management, and transportation of wastes (i.e., decontamination water, etc.) encountered or generated during project activities. Waste management forms are provided in Appendix B of CTO No. 0047 Work Plan No. 01 (CCI, August 2000).

Section 5.0 Environmental Protection Plan of CTO No. 0047 Work Plan No. 01 addresses environmental protection for all work completed at NSB Kings Bay.

Section 6.0 Quality Control (QC) **Plan** of CTO No. 0047 Work Plan No. 01 addresses QC for all work completed at NSB Kings Bay. The site-specific project organization for this CTO is included in Section 6.0 Quality Control Plan of this Work Plan No. 02. The Submittal Register and Testing Plan and Log for this phase of the CTO are provided in Appendices B and C, respectively. Additional project QC documents are provided in Appendix C of the CTO No. 0047 Work Plan No. 01.

The **Site Health and Safety Plan**, provided as a standalone document in Appendix D, addresses project-specific health and safety issues for the remediation activities to be completed at NSB Kings Bay.

Source delineation analytical and membrane interface probe results are provided in Appendix E.

1.1 Site History and Project Objectives

NSB Kings Bay occupies approximately 16,168 acres in Camden County, Georgia. Site 11 is identified as the Old Camden County Landfill, which is now incorporated in NSB Kings Bay. The Old Camden County Landfill was used for municipal solid waste disposal in the 1960s and 1970s. Waste was disposed of by digging trenches, filling the trenches with waste, and then backfilling the trenches with fill. Tetrachloroethene (PCE) was disposed in the landfill at some point during waste disposal activities, which resulted in groundwater contamination at the site. The contaminants of concern at Site 11 include chlorinated volatile organic compounds (VOCs), specifically PCE, and its degradation constituents trichloroethene (TCE), cis-1,2-dichloroethene (DCE), and vinyl chloride (VC).

Bechtel Environmental, Inc. (BEI), with Geo-Cleanse International, Inc., performed three phases of chemical oxidation treatment during August 1998 through April 2000. During the entire treatment program, a total of 54 injectors were installed and an approximate total of 34,850 gallons of 50 percent hydrogen peroxide and an equivalent amount of ferrous iron catalyst were delivered to the subsurface.

Phase I chemical oxidation treatment was performed from August 1998 through February 1999. Because of a concentration increase in three piezometers and Injector I-14 following Phase I treatment, BEI conducted a cone penetration testing program in April 1999 to confirm and delineate the horizontal extent of dissolved groundwater contamination.

Phase II chemical oxidation treatment was performed from May 1999 to July 1999 on areas east and west of the Phase I area of concern. Because of a concentration rebound in Injector I-14 following the Phase II treatment, BEI conducted a Geoprobe investigation in August 1999 to investigate and locate the potential new source of PCE at Injector I-14. Excavation of the suspected source area near Injector I-14 was conducted in September 1999. The excavation yielded several 5-gallon containers, one containing a gray-colored, paint looking waste, and one approximate 20-gallon container containing a black sludge type waste. Analysis of the black waste showed PCE with the highest concentration of all compounds tested.

Phase III chemical oxidation treatment was performed from January 2000 to April 2000 on the delineated source area southeast of Injector I-14. Based on the analytical results from the post-Phase III sampling event conducted on May 30, 2000, a source area of PCE contamination appeared to remain beneath the Phase III injectors.

The post-Phase III sampling event analytical results are summarized in Table 1-1.

TABLE 1-1
Post-Phase III Sampling Event Analytical Results

	Concentration in micrograms per liter (µg/L)				
Injector ID	PCE	TCE	cis-1,2-DCE	VC	Total Chlorinated Ethenes (TCLE)
I-11	170.0	7.0	6.5I	5U	177.0
I-12	47.0	1.8I	1U	1U	47.0
I-13	41.0	5U	5U	5U	41.0
I-14	32.0	2.8	1.6I	1U	34.8
I-18	99.0	1.6I	1U	1U	99.0
I-24	13.0	1.4I	1.3I	1U	13.0
I-25	81.0	1U	2.0	1U	83.0
I-26	49.0	1U	1.5I	1U	49.0
I-60	10,000.0	100U	100U	100U	10,000.0
I-61	820.0	20U	20U	20U	820.0
I-62	120.0	5U	5U	5U	120.0
I-63	130.0	5U	5U	5U	130.0
I-64	92.0	5U	5U	5U	92.0
I-65	210.0	5U	5U	5U	210.0
I-66	260.0	5U	5U	5U	260.0
I-67	72.0	5U	5.2I	5U	72.0
I-68	4.0	1U	1U	1U	4.0
I-69	36.0	1.8I	1U	1U	36.0

U denotes compound was analyzed for but not detected to the level shown.
µg/L – micrograms per liter
I denotes analyte detected; however, the value is between the method detection limit and the practical quantitation limit.

1.2 Source Area Delineation Effort

A source area delineation effort was conducted by CCI/J.A. Jones from November 6, 2000, through January 12, 2001, to delineate the horizontal and vertical extent of the potential source area PCE contamination (and its degradation products) beneath the Phase III chemical oxidation treatment injectors.

1.2.1 November 6 - 21, 2000 Source Area Delineation Effort

From November 6 - 21, 2000, the source area delineation effort was completed utilizing a membrane interface probe (MIP)/Geoprobe rig with an onsite mobile laboratory. The MIP technology was utilized to provide a vertical profile of the subsurface on a horizontal 10-foot grid from Injector I-60. The MIP is pushed into the ground using the Geoprobe rig at a rate of 1 foot per minute. A soil conductivity sensor on the probe continuously logs the changes in the subsurface conductivity. A thermister on the probe heats the surrounding soil and water, which volatilizes the contaminants causing them to migrate across a permeable membrane and into the probe. A carrier gas transports the volatilized gases to a lab-grade gas chromatograph (GC) at the surface. The GC results log continuously into a computer and display real time. The MIP data was used to determine the groundwater sample collection locations and intervals. The groundwater sample collection locations are shown on Figures 1-1 and 1-2 and the MIP data and groundwater sample collection intervals and onsite mobile laboratory analytical results are summarized in Table 1-2. The MIP data and onsite mobile laboratory analytical results are provided in Appendix E.

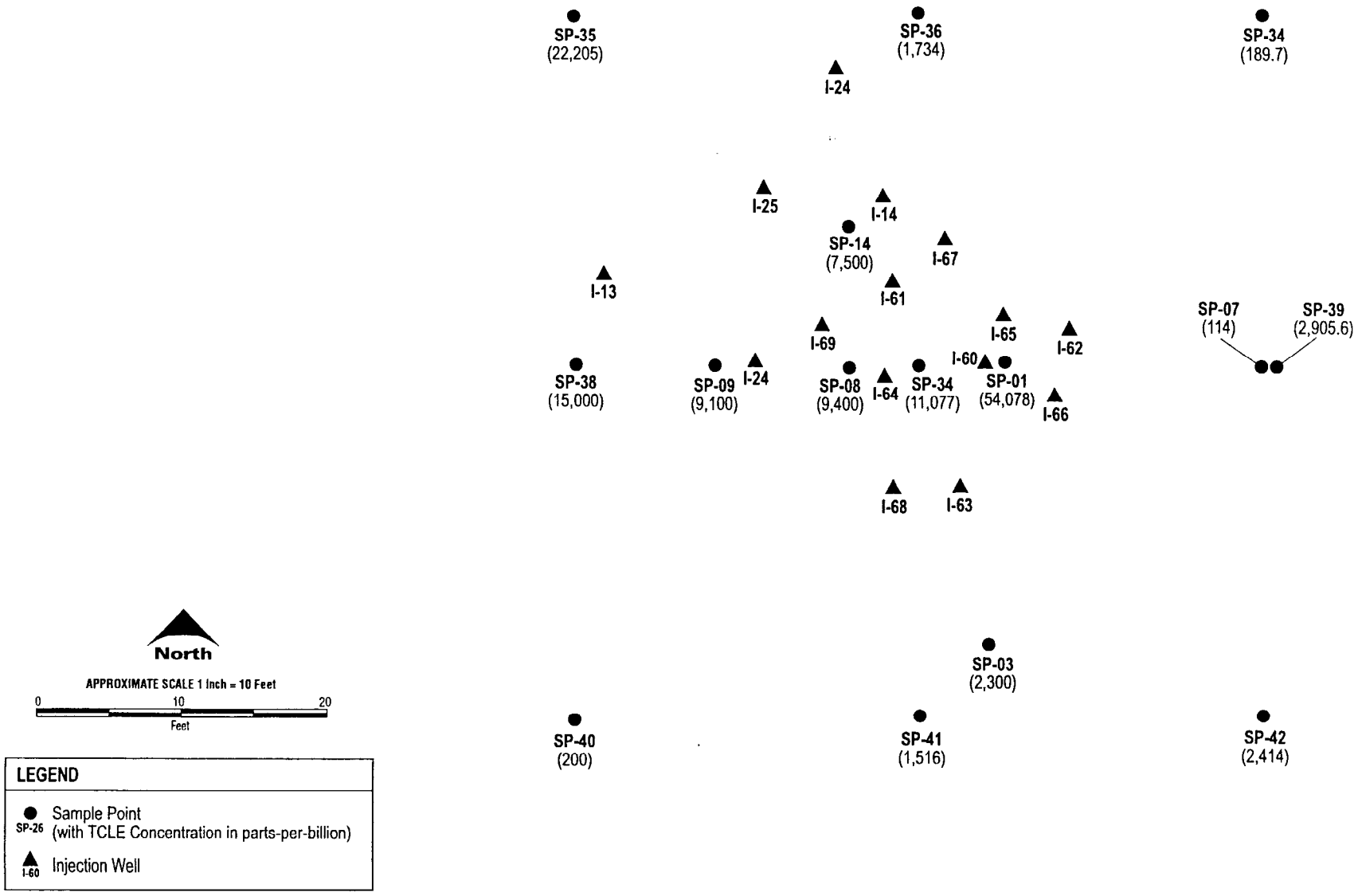


Figure 1-1
Source Area Delineation Site Plan No. 1
NSB Kings Bay, Georgia

CH2MHILL
A052001004ATL - KingsBay100.FH8

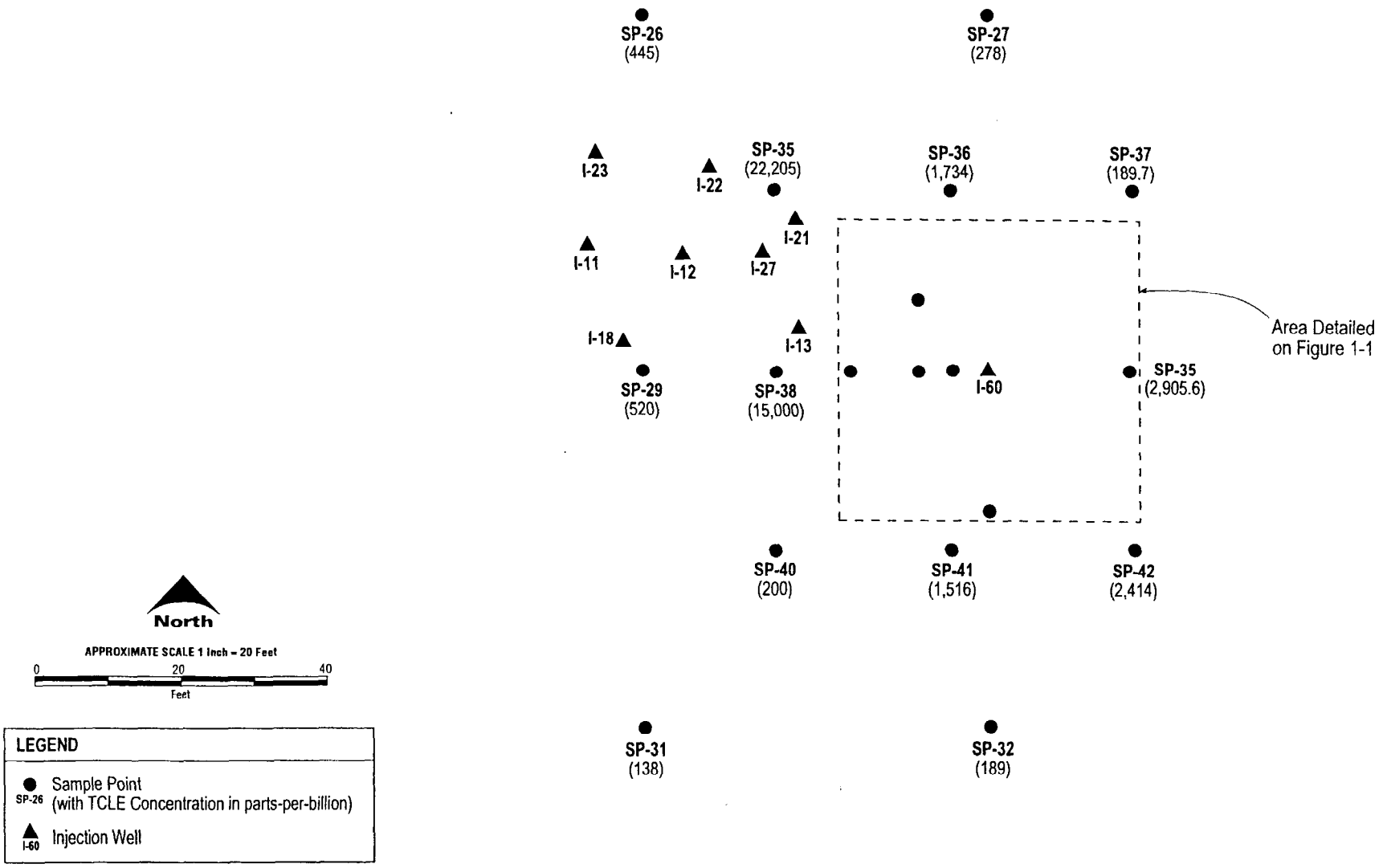


Figure 1-2
Source Area Delineation Site Plan No. 2
NSB Kings Bay, Georgia

CH2MHILL
A052001004ATL - KingsBay101.FH8

TABLE 1-2
November 6 – 12, 2000 Source Area Delineation Results

Sample Location ID	Sample Collection Interval (feet bls)	Summary of Total Chlorinated Ethenes					TCLE	Total VOCs	Maximum MIP Reading (uV)
		VC	Cis-1,2-DCE	trans-1,2-DCE	TCE	PCE			
SP-01	20 to 24	<2	17	<2	24	61	102	102	1.6E+7/3.7E+6
	36 to 40	<2	15	<2	19	180	214	214	1.60E+07
	40 to 44	<2	<2	<2	19	550	569	569	3.80E+06
	44 to 48	<2	7	<2	46	54,000	54,053	54,078	5.80E+06
	48 to 52	<2	45	<2	4	790	839	857	1.50E+06
	52 to 56	<2	40	<2	<2	8	48	90	--
	56 to 60	<2	3	<2	<2	2 J	5	27	--
SP-03	35 to 39	<200	<200	<200	<200	2,300	2,300	2,300	4.30E+06
SP-07	44 to 48	<2	71	<2	<2	2 J	73	114	--
	48 to 52	<2	44	<2	<2	1 J	45	102	--
SP-08	44 to 48	<200	<200	<200	<200	9,400	9,400	9,400	1E+7/3.5E+5
	48 to 52	<20	48	<20	<20	2,900	2,948	3,019	1E+7/2.5E+5
	52 to 56	<2	27	<2	<2	4	31	61	--
	56 to 60	<2	13	<2	<2	1 J	14	37	--
SP-09	44 to 48	<200	<200	<200	<200	9,100	9,100	9,100	2.40E+06
	48 to 52	<200	<200	<200	<200	150 J	150	150	1.50E+06
SP-14	44 to 48	<200	<200	<200	<200	7,500	7,500	7,500	4.80E+06
	48 to 52	<20	22	<20	<20	950	972	972	6.50E+06
	52 to 56	<2	17	<2	<2	1 J	18	47	--
SP-26	44 to 48	<20	15 J	<20	<20	430	445	445	--
SP-27	44 to 48	<20	100	<20	<20	100	200	278	--
	48 to 52	<2	17	<2	<2	<2	17	42	--
SP-29	44 to 48	<200	<200	<200	<200	300	300	300	--
	48 to 52	<200	<200	<200	<200	520	520	520	--
SP-31	44 to 48	<2	25	<2	<2	<2	25	80	--
	48 to 52	<2	43	<2	1 J	<2	44	138	--
SP-32	36 to 40	<2	<2	<2	<2	<2	--	15	--
	41 to 45	<2	3	<2	<2	<2	3	47	--
	46 to 50	<2	58	<2	<2	<2	58	189	--

Notes:
J: J qualifier denotes the concentration is estimated.
bls: below land surface
DCE: Dichloroethene
TCE: Trichloroethene
PCE: Tetrachloroethene
TCLE: Total Chlorinated Ethenes
VOCs: Volatile Organic Compounds
MIP: Membrane Interface Probe
uV: microvolts
All concentrations reported in micrograms per liter (µg/L), unless otherwise noted.
TCLE is defined as the summation of PCE, TCE, DCE, and Vinyl Chloride.
Total VOCs is defined as the sum of all detected constituents by USEPA Method 8021B.

Initially, groundwater samples were collected on a horizontal 10-foot grid from Injector I-60, but based on the initial groundwater sample analytical results, the spacing was increased to a 50-foot grid to locate a "clean" boundary. Groundwater samples were collected from each boring using the Geoprobe rig with peristaltic sampling pump and analyzed by the onsite mobile laboratory for U. S. Environmental Protection Agency (USEPA) SW-846 Method 8021B. Each boring was abandoned immediately following MIP boring or groundwater sample collection by sealing the boring with grout from the bottom of the boring to the ground surface using a tremie pipe.

Based on the groundwater sample analytical results collected during this initial effort, the vertical interval of contamination in the source area was determined to be from 44 to 48 feet below land surface (bls); however, additional groundwater collection sampling and analysis was determined to be necessary to delineate the horizontal extent of contamination.

1.2.2 January 8 - 12, 2001 Source Area Delineation Effort

From January 8 through 12, 2001, the source area delineation effort was completed utilizing a Geoprobe rig with an offsite laboratory. Groundwater samples were collected on a 25-foot grid centered 5 feet to the west of Injector I-60, with samples collected from each of nine borings at depths of 36 to 40 feet bls, 40 to 44 feet bls, 44 to 48 feet bls, and 48 to 52 feet bls and analyzed by an offsite laboratory for USEPA SW-846 Method 8021B.

The groundwater sample collection locations are shown on Figures 1-1 and 1-2 and the groundwater sample collection intervals and offsite laboratory analytical results are summarized in Table 1-3. The offsite laboratory analytical results are provided in Appendix D. Each boring was abandoned immediately following groundwater sample collection by sealing the boring with grout from the bottom of the boring to the ground surface using a tremie pipe.

In addition to the above delineation effort, Injector I-60 was sampled on February 7, 2001, and analyzed by an offsite laboratory for USEPA SW-846 Method 8021B. The offsite laboratory analytical results for this event are provided in Appendix D, and the results are summarized in Table 1-3.

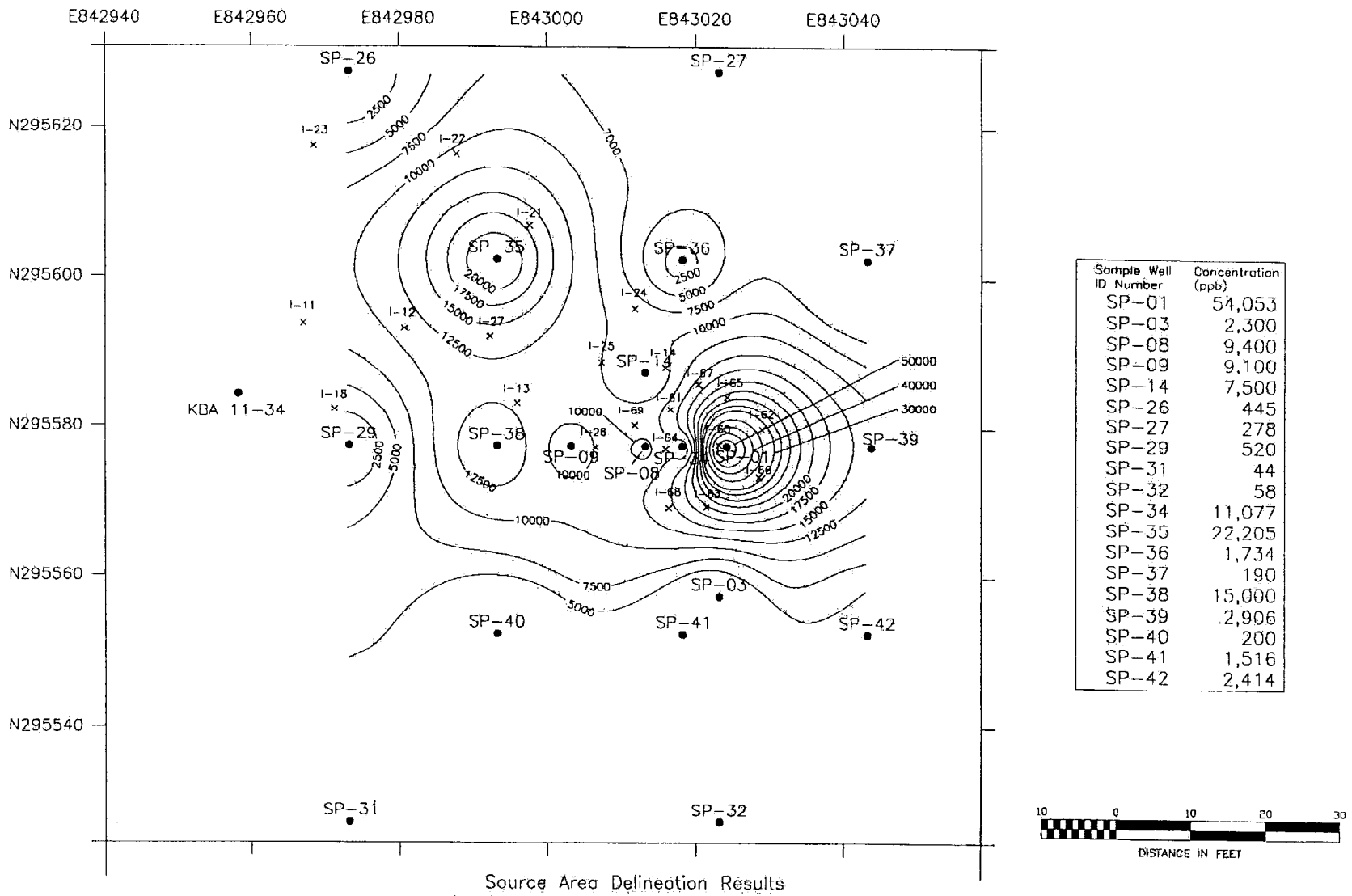
This delineation effort, along with the initial effort, provided sufficient data to determine the horizontal extent of contamination and the area requiring remediation. The data collected during the delineation efforts is consistent with a small amount of contaminate mass remaining in the subsurface. Based on the site studies to date, natural attenuation processes are working faster than the groundwater contaminates are migrating, however, the development of a chemical oxidation/vegetable oil injection strategy through the use of the source area delineation analytical results is an aggressive action to quickly achieve the groundwater remedial goals.

Figure 1-3 is provided to illustrate the groundwater contaminant plume isopleths based on the source area delineation efforts.

TABLE 1-3
January 8-12, 2001 and February 7, 2001 Source Area Delineation Effort Results

Sample Location ID	Sample Collection Interval (feet bls)	Summary of Total Chlorinated Ethenes					TCLE	Total VOCs
		VC	cis-1,2-DCE	trans-1,2-DCE	TCE	PCE		
SP-34	36 to 40	<39	900	<64	430	5,300	6,630.0	6,630.0
	40 to 44	<39	200	<64	<31	5,100	5,300.0	53.1
	44 to 48	<39	77 J	<64	<31	11,000	11,077.0	11,077.0
	48 to 52	3.7	46	<0.64	0.5 J	43	93.2	123.6
SP-35	36 to 40	53	62	8.4	22	56	201.4	201.4
	40 to 44	<3.9	37	<6.4	33	1,300	1,370.0	1,375.9
	44 to 48	<24	150	<12	55	22,000	22,205.0	22,205.0
	48 to 52	<3.9	<0.47	<0.64	25	460	485.0	496.0
SP-36	36 to 40	<0.39	<0.47	<0.63	0.38 J	90	90.4	94.0
	40 to 44	<3.9	24	<6.4	10	1,700	1,734.0	1,742.3
	44 to 48	5.2	340	1.8	1.1	14	362.1	413.5
	48 to 52	2.9	14	<0.23	<0.22	0.42 J	17.3	37.7
SP-37	36 to 40	1.2	0.58 J	<0.23	<0.22	6	7.8	13.4
	40 to 44	5.1	180	0.6 J	0.47 J	3.5	189.7	229.8
	44 to 48	1.3	17	<0.23	<0.22	3.7	22.0	36.2
	48 to 52	3.2	11	<0.23	0.31 J	3.8	18.3	36.7
SP-38	36 to 40	<0.39	6.5	<0.64	7	130	143.5	144.9
	40 to 44	<0.39	2.9	<0.64	1.8	90	94.7	96.5
	44 to 48	<39	<47	<64	<31	15,000	15,000.0	15,000.0
	48 to 52	<39	<47	<64	<31	5,100	5,100.0	5,100.0
SP-39	36 to 40	<3.9	<4.7	<6.4	4.3 J	1,800	1,804.3	1,804.3
	40 to 44	<3.9	<4.7	<6.4	5.6 J	2,900	2,905.6	2,905.6
	44 to 48	0.55 J	8.5	<0.23	<0.22	190	199.1	212.9
	48 to 52	<4.8	<1.4	<2.3	<2.2	680	680.0	686.9
SP-40	36 to 40	<3.9	<4.7	<6.4	<3.1	200	200.0	200.0
	40 to 44	<0.39	<0.47	<0.64	<0.31	11	11.0	13.8
	44 to 48	3.4	71	<0.64	<0.31	2.8	77.2	95.9
	48 to 52	3.6	85	0.73 J	1.3	1.6	92.2	333.0
SP-41	36 to 40	<3.9	<4.7	<6.4	11	1,500	1,511.0	1,511.0
	40 to 44	2.7	26	<0.64	0.76 J	73	102.5	119.2
	44 to 48	<3.9	<4.7	<6.4	16	1,500	1,516.0	1,520.4
	48 to 52	<3.9	<4.7	<6.4	13	1,200	1,213.0	1,213.0
SP-42	36 to 40	<0.48	0.33 J	<0.23	<0.22	0.51 J	0.8	2.6
	40 to 44	<4.8	<1.4	<2.3	14	2,400	2,414.0	2,425.3
	44 to 48	2.8	62	<0.64	0.44 J	3.4	68.6	131.6
	48 to 52	2.5	69	<0.64	0.81 J	<1.2	72.3	342.6
I-60	36 to 39	<0.48	6.0	<0.23	17	130.0	153.0	154.0

Notes:
J: J qualifier denotes the concentration is estimated.
bls: below land surface
DCE: Dichloroethene
TCE: Trichloroethene
PCE: Tetrachloroethene
TCLE: Total Chlorinated Ethenes
VOCs: Volatile Organic Compounds
All concentrations reported in micrograms per liter (µg/L)
TCLE is defined as the summation of PCE, TCE, DCE, and Vinyl Chloride.
Total VOCs is defined as the sum of all detected constituents by USEPA Method 8021B.



Sample Well ID Number	Concentration (ppb)
SP-01	54,053
SP-03	2,300
SP-08	9,400
SP-09	9,100
SP-14	7,500
SP-26	445
SP-27	278
SP-29	520
SP-31	44
SP-32	58
SP-34	11,077
SP-35	22,205
SP-36	1,734
SP-37	190
SP-38	15,000
SP-39	2,906
SP-40	200
SP-41	1,516
SP-42	2,414

Source Area Delineation Results
Total Chlorinated Ethenes (ppb) November 2000 & January 2001 Contour Interval = 2500 ppb

Courtesy of J.A. Jones Management Services

Figure 1-3
Groundwater Containment Plume Isopleth Map
NSB Kings Bay, Georgia

CH2MHILL
A052001004ATL - KingsBay105.FH8

1.3 Project Objectives

The project objective is to utilize the analytical data collected during the source area delineation effort to design and implement a Fenton's reagent chemical oxidation and vegetable oil injection strategy to remediate the groundwater contamination located in the delineated source area at Site 11.

The following documents were utilized by CCI/J.A. Jones in its preparation of this Work Plan:

- Bechtel Environmental, Inc. July 2000. Completion Report for In Situ Chemical Oxidation, July 1998 - July 2000, Site 11, Old Camden County Landfill; NSB Kings Bay, Georgia.
- CCI Constructors, Inc. August 2000. Work Plan for source Delineation at site 11, Old Camden Landfill, Naval Submarine Base Kings Bay, Kings Bay, Georgia.

2.0 Project Execution Plan

The scope of work, project schedule, communications plan and traffic control plan are described in this section.

2.1 Scope of Work

The scope of work for this project includes the following activities:

- Mobilization and Setup of Temporary Facilities and Site Controls
- Fenton's Reagent Chemical Oxidation Injection
- Vegetable Oil Injection
- Site Restoration
- Decontamination
- Demobilization

2.1.1 Mobilization and Setup of Temporary Facilities and Site Controls

This task will consist of the mobilization of personnel and equipment to the work site and the establishment of temporary facilities, consisting of portable sanitary facilities, a decontamination area, site refuge area, and equipment laydown area. Project management and scheduling activities, including contractor coordination, will be achieved from the CCI/J.A. Jones office trailer located at NSB Kings Bay equipped with telephone and facsimile capabilities. CCI/J.A. Jones will utilize the existing office trailer located at Site 11. Office supplies, field equipment, and personal protective equipment (PPE) will be stored in the office.

Prior to the commencement of site activities, site controls including construction barricades will be installed and the decontamination area, site refuge area, and equipment laydown area will be prepared. If necessary, security fencing will also be installed. CCI/J.A. Jones will coordinate with both the NSB Kings Bay Public Works Center and the Resident Officer in Charge of Construction (ROICC) to acquire utility layout plans of the area. Utilities in the area will be marked with paint and stakes, as appropriate. All marked utility lines in construction areas will be uncovered with hand tools. In addition, the progress of subsurface work will be continuously monitored for evidence of subsurface obstructions.

Prior to vegetable oil injection, the Revised Underground Control Permit No. 089, dated June 3, 1999, will be modified to allow the injection of vegetable oil and the additional injection wells.

2.1.2 Chemical Oxidation Injection

The chemical oxidation process to be utilized at the site is an aggressive, pressurized injection of concentrated hydrogen peroxide and ferrous iron catalyst, which together are known as Fenton's reagent and generate a hydroxyl free radical that acts as the active oxidizing agent. The hydroxyl free radical is a powerful, non-selective oxidant. Fenton's reagent oxidizes chlorinated VOCs, such as PCE, to carbon dioxide, water, and chloride.

Residual hydrogen peroxide not consumed by oxidation of the chlorinated VOCs naturally decomposes to oxygen and water. Soluble ferrous iron catalyst amendments will naturally precipitate as ferric iron compounds.

The hydrogen peroxide, in a 25 to 50 percent concentration, will be injected, along with the ferrous iron catalyst, through a series of injectors. A typical injector for a chemical oxidation injection at this site would be constructed of 1.25-inch diameter Schedule 80 black iron riser with a 3-foot long section of 0.01-inch slot, stainless steel well screen. Each injector would be installed with a four-foot thick sand pack consisting of 6/20-grade silica sand, a 1-foot thick bentonite seal, and a grouted annulus. The injectors will be installed by either direct-push or hollow stem auger drilling techniques.

The chemical oxidation injector parameters (actual number, placement, and construction details) and hydrogen peroxide and ferrous iron catalyst injection concentrations and methodology are vendor-specific and will be determined by the selected chemical oxidation injection vendor at a later date. The proposed chemical oxidation treatment area is shown on Figure 2-1 and the proposed chemical oxidation treatment zone at the site is from 40 to 50 feet bls as determined by the source area delineation effort.

Prior to the chemical oxidation process, one sediment sample from each different screened depth interval associated with the chemical oxidation injection will be collected and analyzed for bioavailable iron, soil bulk density, and fraction of organic carbon of the soil in accordance with Section 3.0 Sampling and Analysis Plan of this Work Plan to assist in the development of a fate and transport model.

2.1.3 Vegetable Oil Injection

Chlorinated solvents may undergo biodegradation through three different pathways: as an electron acceptor, as an electron donor, or co-metabolism. Under anaerobic conditions, biodegradation of chlorinated solvents usually proceeds through a process called reductive dehalogenation. In general, reductive dehalogenation occurs by sequential dechlorination. For the chlorinated ethenes, dechlorination progresses from PCE to TCE to DCE to VC and ethene. PCE and TCE are the most susceptible of these compounds to reductive dehalogenation because they are the most oxidized. Because these compounds are used as electron acceptors, there must be an appropriate source of carbon for microbial growth and reductive dehalogenation to occur.

The most common approach utilized to stimulate reductive dehalogenation has been the addition of a carbon source dissolved in groundwater. Food-grade vegetable oil is a potential carbon source for microbial growth and the reductive dehalogenation process. The separate phase nature of vegetable oil allows for slow dissolution into groundwater thus making it a slow release carbon source. Vegetable oil is an inexpensive, innocuous carbon source that is not regulated as a contaminant by the USEPA.

Previous natural attenuation studies at Site 11 have shown reductive dechlorination processes are naturally occurring with the existing anaerobic conditions, therefore the approach to enhance biodegradation of the remaining chlorinated ethenes following chemical oxidation will be to inject vegetable oil as a carbon source for microbial growth and stimulation of the reductive dehalogenation process.

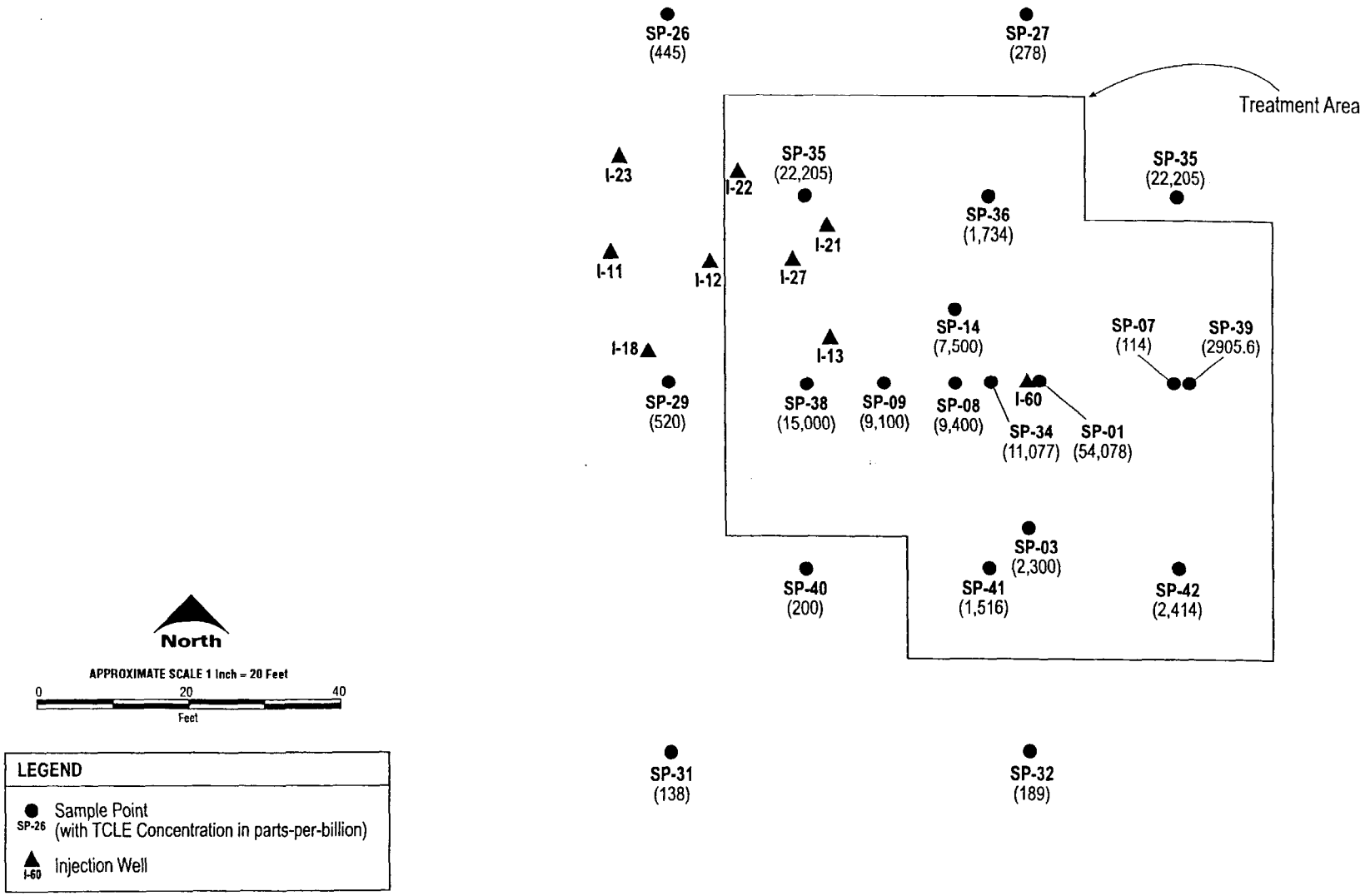


Figure 2-1
Proposed Chemical Oxidation Treatment Area
NSB Kings Bay, Georgia

CH2MHILL
A052001004ATL - KingsBay102.FH8

Following completion of the chemical oxidation injection, the vegetable oil injection will begin immediately. Initially, injection of vegetable oil (specifically food-grade soybean oil) will begin at a location 10 feet upgradient of Injector I-60 to determine the volume and radius of acceptance of the surrounding lithology. Vegetable oil injection will be completed with a Geoprobe rig and the oil will be injected through the 1.25-inch Geoprobe direct-push rods and 4-foot well screen. The vegetable oil will be injected from 32 feet bls through 52 feet bls in 4-foot intervals. The vegetable oil injection will begin with the simplest method of delivering the vegetable oil into the injection location (simple gravity feed). If this method is not successful, then a Geoprobe grout pump will be used to inject the vegetable oil under pressure at no more than 10 pounds per square inch. Based upon observations and experience gained during the initial injection, a modification of the injection method to better accommodate the site-specific conditions may be warranted.

Once the volume and radius of acceptance of the surrounding lithology are determined, the full-scale vegetable oil injection will begin. Approximately 150 to 250 gallons of vegetable oil is anticipated for injection into each of the proposed 39 injection locations. The actual volume of vegetable oil pumped into each injection location will depend on volume of acceptance of the surrounding lithology. It is important that the vegetable oil be incorporated into a very high percentage of the formation pore space. At each injection location, vegetable oil will be injected from 32 feet bls through 52 feet bls in 4-foot intervals. The proposed locations for vegetable oil injection are shown on Figure 2-2. Injection points installed for the chemical oxidation injection may be used for vegetable oil injection based on the actual placement and construction details.

A National Science Foundation-certified potable, water-safe, tracer dye will be mixed with the vegetable oil prior to injection to assist in determining the contaminant degradation, oil travel time, and oil dispersion. It is anticipated that the dye can be measured in the groundwater that has come into contact with the oil. In addition to the dye, micronutrients nitrogen and phosphorus will be added to the vegetable oil if the nitrogen and phosphorus content in the procured vegetable oil is deemed not sufficient. The micronutrients will be added to support the microbial growth necessary to enhance natural attenuation.

Vegetable oil injection will address the anticipated slight contaminant rebound following chemical oxidation injections and will preclude the further necessity of in-depth investigations at the site. Future site monitoring will be performed in accordance with the Site 11 Groundwater Monitoring Plan.

2.1.4 Site Restoration

Areas disturbed during site work will be restored to their previous condition. Restoration of disturbed areas of asphalt or concrete will include subgrade compaction to prevent subsidence, followed by the replacement of asphalt or concrete. Following chemical oxidation injection completion, each injector will be properly abandoned by sealing the injector with grout from the bottom of the well to the ground surface using a tremie pipe. Following vegetable oil injection completion, each boring will be properly abandoned by sealing with grout from the bottom of the boring to the ground surface using a tremie pipe.

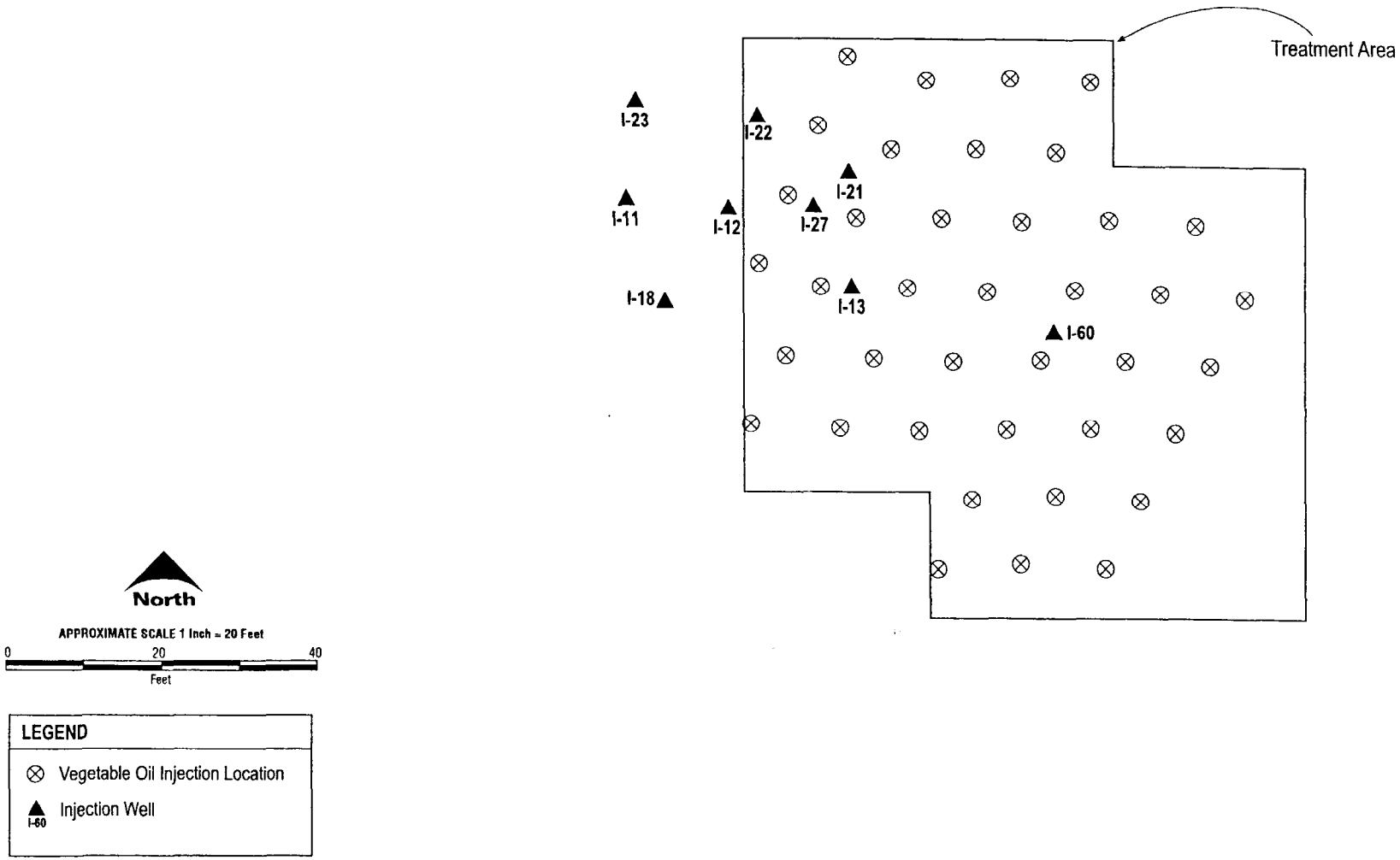


Figure 2-2
Proposed Vegetable Oil Injection Locations
NSB Kings Bay, Georgia

CH2MHILL
A052001004ATL - KingsBay103.FH8

2.1.5 Decontamination

Personnel and equipment will be properly decontaminated to remove all contamination that may be adhering to personnel or equipment as a result of site activities. Any water accumulated during the decontamination process will be containerized in 55-gallon drums, sampled in accordance with Section 3.0 Sampling and Analysis Plan and managed, transported, and disposed in accordance with Section 4.0 Waste Management Plan. All debris generated by remediation activities will be properly contained and disposed of at a facility permitted to accept the waste. Section 4.0 Waste Management Plan describes the requirements for onsite management and offsite disposal of all wastestreams. Decontamination of personnel and equipment will be performed in accordance with the site-specific Health and Safety Plan provided in Appendix D and the applicable provisions of 29 Code of Federal Regulations (CFR) 1910.120.

2.1.6 Demobilization

Prior to demobilization, an as-built survey of all new chemical oxidation and vegetable oil injection points will be performed to 1983 State Plane Coordinates of Georgia.

During demobilization, temporary facilities, utilities, and equipment will be removed from the site. In addition, any debris or solid waste material remaining from site activities will be removed and properly disposed of offsite in accordance with Section 4.0 Waste Management Plan.

2.2 Project Schedule

The major project activities and estimated durations for each are outlined below.

- Pre-construction Meeting/Submittal Preparation/Reviews — 45 days
- Mobilization — 2 days
- Pre-Chemical Oxidation Sediment Sampling — 1 day
- Injector Installation — 3 weeks
- Primary Chemical Oxidation Injection — 5 days
- Polish Chemical Oxidation Injection (if necessary) — 5 days
- Vegetable Oil Injection — 10 days
- Construction Completion Report — 30 days

CCI/J.A. Jones anticipates the total project duration (from pre-construction conference through submittal of the Construction Completion Report) will be approximately 120 days. This proposed schedule may vary depending on the actual conditions encountered in the field. Appendix A provides a schedule for the work to be performed.

2.3 Communications Plan

A communication matrix outlining the lines of communications for Southern Division, NAVFAC and CCI/J.A. Jones is presented in Table 2-1. Table 2-2 provides a project personnel directory.

TABLE 2-1
Communications Matrix

CCI/J.A. Jones Position	Navy Direct Report
Ray Tyler, Executive Sponsor	Eva Clement, CO
Scott Newman, Program Manager	Jimmy Jones, COTR David Pilarski, ACO
Flip Altman, Senior Project Manager	Jimmy Jones, COTR David Pilarski, ACO
Sam Ross, CTO Project Manager	Anthony Robinson, RPM Larry Blackburn, NTR/ROICC John Garner, NSB Kings Bay

CO	Contracting Officer
COTR	Contracting Officer's Technical Representative
ACO	Administrative Contracting Officer
RPM	Remedial Project Manager
NTR	Navy Technical Representative
ROICC	Resident Officer in Charge of Construction

TABLE 2-2
Project Personnel Directory

Contact	Company
R. Scott Newman, Program Manager Flip Altman, Senior Project Manager Marsha Robinson, Contracts Administration Manager Angelo Liberatore, Health and Safety Manager Theresa Rojas, QA/QC Manager	CH2M HILL Constructors, Inc 115 Perimeter Center Place, N.E. Suite 700 Atlanta, GA 30346-1278 770/604-9095
Sam Ross, Project Manager	J.A. Jones Environmental Services Company 8936 Western Way, Suite 10 Jacksonville, FL 32256 904/363-0911
Eva Clement, CO	Southern Division Naval Facilities Engineering Command P.O. Box 190010 North Charleston, SC 29419-9010 843/820-5518
David Pilarski, ACO	843/820-5928
Jimmy Jones, COTR	As above 843/820-5544
Anthony Robinson, RPM	As above 843/820-7339
Cliff Casey, Navy Environmental Technical Support	As above 843/820-5561
Larry Blackburn, NTR/ROICC	Southern Division Naval Facilities Engineering Command Resident Officer in Charge of Construction P. O. Box 139, Building 13 NAS Jacksonville, FL 32212-0139 904/542-5571, ext. 117 904/237-1868 (mobile)
John Garner, NSB Kings Bay Environmental Director	Facilities and Environmental 1063 USS Tennessee Street Building 2015 NSB Kings Bay, Georgia 31547-2606 912/673-2001, ext. 4048

2.4 Traffic Control Plan

Traffic control at the site will be the responsibility of the CCI/J.A. Jones Site Superintendent. CCI/J.A. Jones will minimize disturbance to Base operations during project activities. CCI/J.A. Jones will consult with onsite Navy personnel to evaluate site access, placement of equipment, and traffic flow to minimize the impact of this work to Base operations. CCI/J.A. Jones will review all Navy regulations and standard operating procedures regarding vehicle movement and control inside NSB Kings Bay.

3.0 Sampling and Analysis Plan

The SAP provided in this Work Plan outlines the required sampling activities associated with the groundwater remedial activities at Site 11 located at NSB Kings Bay, Georgia. This plan outlines the required locations, frequency, and analyses for sediment samples to be collected. In addition, this SAP provides the recommended analyses for disposal characterization for wastes generated during these remedial activities.

Samples will be collected and analyzed in accordance with USEPA Region IV Environmental Investigations Standard Operating Procedures and Quality Assurance Manual, May 1996 (includes 1997 revisions).

3.1 Data Quality Objectives for Measurement Data

The data quality objectives for each sampling task described above are listed in Table 3-1. The sampling and analytical requirements, along with the required level of QC and data packages are listed in Table 3-2.

A Navy-, United States Army Corps of Engineers- (USACE)-, or Air Force Center for Environmental Excellence (AFCEE)-approved laboratory will be used for all sample.

TABLE 3-1
Data Quality Objectives

Sampling Activity	Data Quality Objective Category
Sediment collection (offsite laboratory)	Definitive
Waste characterization of the soils and aqueous waste (offsite laboratory analyses)	Definitive

3.2 Sediment Collection

One sediment sample will be collected prior to chemical oxidation injection from each different screened depth interval associated with the chemical oxidation injection. These samples will be collected using the DPT/Geoprobe rig and analyzed according to Table 3-2.

The bioavailable iron sample will collected and submitted to Cliff Casey, Navy Environmental Technical Support for analysis. The fraction of organic carbon in soil will be analyzed by USEPA SW-846 Method 9060 (total organic carbon), which gives a result in percent total organic carbon (TOC), and calculated to give gram of TOC per gram of soil.

TABLE 3-2
Sampling and Analytical Summary

Sample Task	Sample Point	Matrix	Sampling Frequency	Approx Sample No	Sampling Method1	Sampling Equipment1	TAT2	DQO Level/Data Package Reqmnt	Required Analysis	Analytical Method	Holding Time	Sample Preservtn	Containers
Sediment Sampling Prior to Chemical Oxidation Injection													
Sediment Sampling	Sampling Depth Intervals to be determined based on Chemical Oxidation Injection Strategy	Sediment	Once (prior to Chemical Oxidation Injection)	As Required	Grab	Geoprobe rig; SS spoon	7 days	DQO Level III, CCI Level B	Bioavailable Iron Bioavailable Iron sample will be turned over to Cliff Casey for analysis	Analyzed by Frank Chappelle, USGS	N/A	N/A	1 Quart Mason Jar
									Soil bulk density	Physical testing lab	N/A	N/A	(2) 8 oz glass
									Fraction of organic carbon of the soil (FOC)	9060 (gives %TOC/soil then calculate to get gm of TOC/gm of soil	ASAP	Cool to 4oC; DARK	(1) 4 oz amber glass
Disposal of Aqueous Waste													
Disposal of Aqueous Waste	Aqueous disposal material	Water	One per 6 drums; one per container; or as required by disposal facility	As Needed	Grab	Drum thief or dip jar	7 days	DQO Level III, CCI Level B	Volatiles	8260B	14 days	HCl pH< 2; Cool to 4oC	(2) 40 ml vial
									Semi-volatiles	8270C	7 days ext; 40 days analysis	Cool to 4oC	(3) 1L amber glass
									Pesticides	8081A	7 days ext; 40 days analysis		
									Herbicides	8151A	7 days ext; 40 days analysis		
									TPH	FL-PRO	7 day extr; 40 day analysis	HCl pH< 2; Cool to 4oC	(1) L amber glass
									TAL Metals	6010B/7470A	6 months/Hg = 28 days	HNO3 pH< 2; Cool to 4oC	(1) 500ml HDPE
									Reactivity	1010/1020A	ASAP	Cool to 4oC	(1) 500ml HDPE
									Ignitability	9040B	ASAP		
									Corrosivity	Chapter 7.3	ASAP		

TABLE 3-2
Sampling and Analytical Summary

Sample Task	Sample Point	Matrix	Sampling Frequency	Approx Sample No	Sampling Method1	Sampling Equipment1	TAT2	DQO Level/Data Package Reqmnt	Required Analysis	Analytical Method	Holding Time	Sample Preservtn	Containers
Disposal of Solid Waste													
Solids Disposal	Solid disposal material	Soil	Once per 6 drums; once per container; or as required by disposal facility	As Needed	Dig to approx 6-12" for sample	SS Auger, SS Spoons, SS Bowl	7 days	DQO Level III, CCI Level B	Volatiles	8260B	14 day analysis	Cool to 4oC	(1) 4 oz amber glass
									Semi-Volatiles	8270C	14 day extr; 40 day analysis	Cool to 4oC	(1) 16 oz amber glass
									Pesticides	8081A	14 day extr; 40 day analysis		
									Herbicides	8151A	14 day extr; 40 day analysis		
									TAL Metals	6010B, 7470A	6 month analysis Hg: 28 day analysis	Cool to 4oC	(1) 16 oz amber glass
									TPH	FL-PRO	14 day extr; 40 day analysis		
									PCBs	8082	14 day extr; 40 day analysis		
									ignitability	1030	ASAP		
									Corrosivity	9045A	ASAP		
									Reactivity	Chapter 7.3	ASAP		

3.3 Waste Characterization and Incidental Wastestream Sampling and Analyses

3.3.1 Soil/Solids Characterization

Waste characterization samples, if necessary, will be collected to evaluate the handling, transportation, and disposal requirements of any contaminated soil accumulated during project activities. It is anticipated that drill cutting soils will be placed in drums or rolloffs depending on the volume generated. Soil samples will be collected as follows, delivered to a Navy-, USACE-, or AFCEE-approved laboratory and analyzed for the parameters listed on Table 3-2.

Soil/solids characterization samples will be collected from the drums and/or rolloffs prior to disposal. One composite sample will be collected one per six drums, one per rolloff container or as required by the disposal facility. The samples will be collected as follows.

When collecting samples from drums, the volatile sample will be collected from the drums containing the drill cuttings from the most contaminated area(s). The top 6 inches will be removed and the Encore samples will be collected. When collecting samples from rolloffs, volatile samples will be collected from most contaminated area within the rolloff (visual staining or odors). Again the top 6 or more inches will be removed and the Encore samples will be collected. Volatile samples will be collected as follows:

1. Open the Encore reusable package and remove the core device and cap.
2. Place into the T-handle and core the sample directly into the exposed soil.
3. Remove from the soil, brush off the sides, and put the cap seal onto the sampler.
4. Label and reseal in the original package.
5. Place into cooler for shipment.

When collecting non-volatile samples from drums, one or more grabs per each of six drums will be collected and placed into a stainless steel bowl. When collecting non-volatile samples from rolloffs, at least four grabs will be collected from four points at varying depths using a stainless steel auger.

1. The soil will be blended, coned and quartered using a stainless steel spoon.
2. Fill the appropriate sample jars approximately three-fourths full with the homogenized sample
3. Close the jar, label, and package the sample for shipment to the lab.

A CCI Level B package will be required along with appropriate QC samples for the required waste characterization and incidental wastestream samples. All analytical data will be submitted by both hard copy and electronic files.

3.3.2 Water Characterization

Waste characterization samples, if necessary, will be collected to evaluate the handling, transportation, and disposal requirements of generated decontamination water and any other miscellaneous collected water. It is anticipated that the aqueous waste will be

containerized in drums. Water samples will be collected as follows and delivered to a Navy-, USACE-, or AFCEE-approved laboratory and analyzed for the parameters listed on Table 3-2.

A sample will be collected from the drums using either a dip jar or bailer. The sample containers for volatile analyses will be filled first. The 40-milliliter vials will be filled so that there is no headspace in each vial. The sample containers for the remaining analyses will then be filled.

A CCI Level B package will be required along with appropriate QC samples for the required waste characterization and incidental wastestream samples. All analytical data will be submitted by both hard copy and electronic files.

3.4 Analytical Methods

Samples will be collected for analytical methods summarized in Table 3-2.

Preliminary analytical results will be faxed to the CCI Laboratory Coordinator/Data Management Manager, at the following facsimile number per the turn-around times listed in Table 3-2 from day of sample receipt. The final hardcopy data and electronic file will be delivered to CCI within 14 days of sample receipt. CCI is responsible for reviewing all laboratory analytical data for QA/QC purposes.

CCI Laboratory Coordinator/Data Management Manager
CCI
115 Perimeter Center Place, Suite 700
Atlanta, GA 30346
(770) 604-9182 x268
(678) 604-9282 (fax)

4.0 Waste Management Plan

The Waste Management Plan describes the waste management requirements and procedures for groundwater remediation activities at Site 11 located at NSB Kings Bay, Georgia. These activities are anticipated to generated the following wastes:

- Aqueous waste (including purge water, and decontamination water)
- Drill cuttings
- Spent or contaminated sampling equipment
- PPE
- Uncontaminated debris (such as caution tapes, barricades, signs, packing materials)

4.1 Waste Characterization

All wastes will be classified (and managed) as required under the Resource Conservation and Recovery Act (RCRA) and Subchapter 391-3-11-07 of the Georgia Department of Natural Resources hazardous waste regulations. Section 3.0 Sampling and Analysis Plan provides detailed information on the sampling and analysis requirements for waste characterization, as required for disposal. In some cases, offsite facilities may require additional analyses to evaluate the wastestream prior to acceptance. Uncontaminated wastes and debris will be characterized using process knowledge and generally will be classified as municipal solid waste. In this task, PCE and TCE are considered listed hazardous wastes. Accordingly, any purge water and soil that contain detectable concentrations of PCE or TCE will be managed and disposed as hazardous waste; specifically, as F001/F002 listed hazardous waste.

4.1.1 Waste Profile

Waste characterization information for non-hazardous wastes will be documented on a waste profile form provided by the offsite treatment or disposal facility as part of the waste acceptance process. (For hazardous wastes, the waste characterization information will be provided to the NSB Kings Bay Base Operations Services contractor for their use in preparing the profile). An approved copy of the waste profile will be received prior to offsite transportation of the material. If required, generator certification and/or signature will be provided by the Navy.

The profile typically requires the following information:

- Generator (Navy) information including
  - Commanding Officer, NSB Kings Bay
  - 1063 USS Tennessee Avenue, Kings Bay, GA 31547
  - Contact: Ken Yargus
  - 912/673-2001, ext. 1217
- USEPA ID Number: GA4170090001
- Activity generating waste (e.g., Site 11 site remediation)
- Source of contamination (e.g., landfill disposal)
- Physical state of waste (e.g., solid, liquid, etc.)

4.2 Waste Management

4.2.1 Waste Storage Time Limit

Hazardous waste must be removed within 90-days from the date of generation and other wastes will be removed from the site as soon as possible. The date of generation is the day that a waste is first placed in a container.

4.2.2 Labels

All containers, tanks, and roll-off containers will be labeled, and labels will be visible. Hazardous waste labels will be used where a site has been pre-characterized, and known to be contaminated with listed or characteristic hazardous wastes.

Pre-printed "Hazardous Waste" labels will include the following information:

- Accumulation start date
- Generator Name and address:
  - Commanding Officer, NSB Kings Bay
  - 1063 USS Tennessee Avenue, Kings Bay, GA 31547
  - Contact: Ken Yargus
  - 912/673-2001, ext. 1217
- USEPA ID number: GA4170090001
- Waste codes: F001, F002

For containers of less than 110 gallons, the manifest number must be on the label before transporting.

Containers of known non-hazardous waste will have pre-printed "Non-Hazardous Waste" labels that include the following information:

- Accumulation start date
- Generator Name and address:
  - Commanding Officer, NSB Kings Bay
  - 1063 USS Tennessee Avenue, Kings Bay, GA 31547
  - Contact: Ken Yargus
  - 912/673-2001, ext. 1217
- USEPA ID Number: GA4170090001
- Waste-specific information (e.g., contaminated groundwater)

When waste characterization is unknown and analytical results are pending, the pre-printed "Analysis Pending" label will be used until analytical results are received and reviewed, and a waste designation determined. These wastes will contain the equivalent information provided on a "Hazardous Waste" label:

- Accumulation start date
- Generator Name and address:
  - Commanding Officer, NSB Kings Bay
  - 1063 USS Tennessee Avenue, Kings Bay, GA 31547
  - Contact: Ken Yargus
  - 912/673-2001, ext. 1217

- USEPA ID Number: GA4170090001
- Waste-specific information (e.g., contaminated groundwater)

4.2.3 Waste Management Requirements

All wastes will be contained so as to prevent the spread of contamination. Waste-specific requirements include:

- Purge water and/or decontamination water will be contained in 55-gallon drums or aggregated in portable tanks.
- Drill cuttings will be contained in drums or roll-off boxes.
- Contaminated sampling equipment, PPE, and other debris will be contained in drums. If decontaminated, these wastes can be disposed as uncontaminated debris/solid waste; if not, these wastes will be managed and disposed at the source concentration.
- Uncontaminated general construction debris will be placed with in containers or neatly placed in storage piles, pending offsite disposal.

4.2.4 Drums/Small Containers

Drums and/or small containers will be managed as follows:

- Drums and/or small containers of hazardous waste will be transported to the temporary accumulation areas on wood pallets and will be secured together with non-metallic bonding.
- Drums will be inspected and inventoried upon arrival onsite for signs of contamination and/or deterioration.
- Adequate aisle space (e.g., 30 inches) will be provided for containers such as 55-gallon drums to allow the unobstructed movement of personnel and equipment. A row of drums should be no more than two drums wide.
- Each drum will be provided with its own label as described in Section 4.2.2.
- Drums will remain covered except when removing or adding waste to the drum. Covers will be properly secured at the end of each workday.
- Drums will be disposed of with the contents. If the contents are removed from the drums for offsite transportation and treatment or disposal, the drums will be decontaminated prior to re-use or before leaving the site.

4.2.5 Portable Tanks

Portable tanks will be managed as follows:

- Tanks will be inspected upon arrival onsite for signs of deterioration and contamination. Any tank arriving onsite with contents will be rejected.
- Tanks will be provided with covers.
- Each tank will be labeled, as described in Section 4.2.2.

- Tanks will be provided with secondary containment.

4.2.6 Roll-off Boxes

Roll-off boxes will be managed as follows:

- Roll-off boxes will be inspected upon arrival onsite. Any roll-off boxes arriving with contents will be rejected.
- Roll-off boxes for hazardous soils will be provided with disposable liners that will be disposed of as contaminated debris.
- When not in use, securely fastened covers will be installed on all roll-off boxes.
- Old labels will be removed, and new labels will be attached as described in Section 4.2.2.
- Roll-off containers will be inspected by the transporter after removal of the liner and decontaminated in the event of evidence of liner failure.

4.2.7 Security and Contingency Planning

In general, all waste storage areas will contain emergency response equipment equivalent to hazard posed by waste. Typical items emergency response will include fire extinguishers, decontamination equipment and an alarm system (if radio equipment is not available to all staff working in storage areas). **Spill control equipment (e.g., sorbent pads) will be available in all waste storage areas, and where liquids are transferred from one vessel to another.**

4.2.8 Waste/Fuel Storage Area Inspections

Areas used for waste/container storage will be inspected for malfunctions, deterioration, discharges, and leaks that could result in a release. The following inspection schedule will be followed:

- Daily inspection of containers, tanks, and secondary containment systems (if applicable) for leaks, signs of corrosion, or signs of general deterioration
- Daily inspection of fuel storage areas (e.g., look for eroding containment systems and rusting tanks/ancillary equipment)

Waste storage areas will be inspected each day of operation during the scheduled shift (i.e., Monday through Friday). **If operations will suspend for more than 7 days, alternate inspection arrangements will be made, such that waste storage areas are inspected at least weekly. Prior to demobilization, all hazardous waste or materials will be removed from the site. Inspections will be recorded in the Contractor Quality Control Report, and copies of the report will be maintained onsite, and available for review.**

4.3 Transportation

Hazardous wastes will be transported and disposed by the NSB Kings Bay Base Operating Services contractor. For non-hazardous waste, each transportation vehicle and load will be inspected before leaving the site. The quantities of waste leaving the site will be recorded. A

contractor licensed for commercial transportation will transport non-hazardous wastes. A copy of the documentation indicating that the selected transporter has appropriate licenses will be received prior to transport of any waste material.

4.3.1 Manifests/Shipping Documentation

Manifests and other shipping documentation for hazardous wastes will be prepared by the NSB Kings Bay Base Operating Services contractor. Each load of non-hazardous waste material will be transported with a manifest or haul ticket (for uncontaminated construction debris) prior to leaving the site. The non-hazardous waste manifest form will include the following information:

- Transporter information including name, address, contact and phone number
- Generator information including name, address, contact, and phone number
- Site name including street/mailing address
- Description of waste
- Type of container
- Quantity of waste (volumetric estimate)

4.3.2 Transporter Responsibilities

In general, the transporter will be responsible for weighing loads of non-hazardous waste at a certified scale. For each load of material, weight measurements will be obtained for each full and empty container or tanker truck (for bulked aqueous wastes). Disposal quantities will be based on the difference of weight measurements between the full and empty container or tanker truck. Weights will be recorded on the shipping documentation. The transporter will provide copies of weight tickets with the final manifest to CCI/J.A. Jones.

The transporter will observe the following practices when hauling and transporting wastes offsite:

- Minimize impacts to general public traffic.
- Repair road damage caused by construction and/or hauling traffic.
- Clean up material spilled in transit.
- Line and cover trucks/trailers used for hauling contaminated materials to prevent releases and contamination.
- Decontaminate vehicles prior to re-use, other than hauling contaminated material.
- Seal trucks transporting liquids.

All personnel involved in offsite disposal activities will follow safety and spill response procedures outlined in the Health and Safety Plan.

No materials from other projects will be combined with materials from NSB Kings Bay.

Spill Reporting

In the event of a spill or release of any waste, the transporter must immediately notify CCI/J.A. Jones. The pertinent facts and information about the spill will be reported to CCI/J.A. Jones, and recorded, including:

- Type of material (e.g., soil, sludge, water) and contaminant
- Location
- Estimated volume
- Media affected (e.g., spilled on concrete pad or soil)
- Time of spill/release
- Final disposal of spilled material

Spill Response

The transporter will clean up any spill or release of waste (including soil or water) that occurs during transportation, or take such action as may be required or approved by Federal, State, or local officials. Spilled waste will be immediately cleaned up, including soils on the outside of the trucks or other container and on the ground or road surface. Where appropriate, the spilled material (e.g., soil), will be returned to the original waste container. In any case the spilled material will be properly contained and disposed.

4.3.3 Transportation and Disposal Log

Transportation of wastes will be inventoried the day of transportation from the site using the Transportation and Disposal Log. A carbon copy of the initial manifest form for each load will be retained onsite and attached to the Daily Production Report. All required transportation manifests will be prepared by CCI/J.A. Jones and signed by NSB Kings Bay representative.

4.4 Disposal of Wastestreams

Offsite treatment or disposal facilities will use the waste profile and supporting documentation (e.g., analytical data) to determine if they will accept a waste.

- Aqueous wastes may be discharged to the local publicly-owned treatment works (POTW) or other permitted waste water treatment plant with written approval from the facility or the Navy. The point of discharge (e.g., sewer manhole) will be designated by the POTW or the Navy. Otherwise, contained aqueous wastes will be disposed offsite at a facility permitted to accept the waste.

- Uncontaminated construction debris may be sent to municipal landfills, or landfills designated for construction/demolition debris. The treatment or disposal facility will be responsible for providing a copy of the final waste manifest and for a certificate of treatment or disposal for each load of waste received.

4.5 Training

Training requirements for onsite personnel, including subcontractors, is provided in the site-specific health and safety plan.

4.6 Records/Reporting

The following records and documents will be maintained:

- Transportation and offsite disposal records, including:
  - Profiles and associated characterization data
  - Manifests, bills of lading, and other shipping records
  - Offsite facility waste receipts, certificates of disposal/destruction
- Training records
- Inspection records

CCI/J.A. Jones will maintain Material Data Safety Sheets (MSDS) for chemicals and/or hazardous materials brought onsite, including the MSDS for chemicals brought onsite by subcontractors.

5.0 Environmental Protection Plan

Section 5.0 Environmental Protection Plan provided in the CTO No. 0047 Work Plan No. 01 addresses the Environmental Protection Plan to be instituted during the performance of this CTO at NSB Kings Bay.

6.0 Quality Control Plan

Section 6.0 Quality Control Plan provided in the CTO No. 0047 Work Plan No. 01 addresses the Quality Control Plan to be instituted during the performance of this CTO at NSB Kings Bay.

The Submittal Register and Testing Plan and Log, included in Appendices B and C, respectively, document submittals for this project phase in accordance with Appendix B of CCI's Contract Management Plan (dated July 1998). CCI, the Navy, or others will approve submittals as identified in the Submittal Register. All approved submittals will be distributed by CCI to the appropriate Navy personnel (CO, ROICC (in duplicate), etc.), to the project site, and to the project file. Additional project QC documents are provided in Appendix C of the CTO No. 0047 Work Plan No. 01.

The site-specific project organization chart (Figure 6-1) depicts the chain-of-command for this CTO and the individuals responsible for executing the work as indicated.

DEPARTMENT OF THE NAVY
NAVAL SUBMARINE BASE
1063 USS TENNESSEE AVENUE
KINGS BAY, GEORGIA 31547-2606

IN REPLY REFER TO:
5090
Ser FE4/2165
14 SEP 2001

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Bruce Khaleghi
Georgia Department of Natural Resources
Environmental Protection Division
205 Butler Street, SE, Suite 1252
Atlanta, GA 30334

Dear Mr. Khaleghi:

This submits change pages to our Work Plan No. 2 for Groundwater Remediation at Site 11, Old Camden County Landfill, per your letter of August 10, 2001:

a. Specific replies to your comments are attached as enclosure (1).

b. Please remove the title page and replace it with enclosure (2).

c. Please remove the table of contents, pages II and III, and replace it with enclosure (3).

d. Please remove section 1, pages 1-1 through 1-10 and replace it with enclosure (4). This includes a revised figure 1-3.

e. Please remove section 2, pages 2-6 and 2-7, and replace them with enclosure (5).

f. Please remove section 3, pages 3-3 through 3-5, and replace them with enclosure (6).

g. Please remove section 6, pages 6-1 and 6-2, and replace it with enclosure (7).

h. Please remove these pages from appendix d, Health and Safety Plan, and replace them with enclosure (8).

i. Please replace the binder labels with enclosure (9).

5090
Ser FE4/2165
14 SEP 2001

I certify under penalty of law that this document and all attachments were prepared under my direct supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

The SUBASE Kings Bay point of contact is Ken Yargus, (912) 673-2001, extension 1217. Please address all correspondence to "Commanding Officer, Naval Submarine Base, Kings Bay, 1063 USS TENNESSEE Avenue, Kings Bay, GA 31547-2606."

Sincerely,

JOHN R. GARNER
Leader, Environmental Division
Facilities & Environmental
By direction of the
Commanding Officer

Enclosures:
1. Specific replies to comments
2. Revised title page
3. Revised table of contents, pages II and III
4. Revised section 1, pages 1-1 through 1-10
5. Revised section 2, pages 2-6 and 2-7
6. Revised section 3, pages 3-3 through 3-5
7. Revised section 6, pages 6-1 and 6-2
8. Revised Appendix D, Health and Safety Plan
9. Revised binder labels

Copy to: (w/o encl)
SOUTHNAVENGCOM (Anthony Robinson)
COMNAVREG SE (Laila Capers)
J.A. Jones Environmental Services (Sam Ross)
J.A. Jones Environmental (SUBASE) (Kim Owens)

Georgia Department [illegible]
205 Butler Street, S. E., Suite 1162, Atlanta, Georgia 30334
Lonice C. Barrett, Commissioner
Environmental Protection Division
Harold F. Reheis, Director
404-656-2833

August 10, 2001

CERTIFIED MAIL: RETURN RECEIPT REQUESTED

COPY

Commanding Officer
Naval Submarine Base
1063 USS Tennessee Avenue
Kings Bay, GA 31547-2606

Re: Work Plan No. 02: Groundwater Remediation at Site 11
5090 Ser FE4/1578

Dear Sir:

We have reviewed the above-referenced Work Plan submitted July 10, 2001. In an effort to aid the current work effort to mitigate historical contamination at the Old Camden County Landfill, we are providing comments based on an expedited, brief review. Our comments follow.

1. **Section 1, Figure 1-3:** This Figure is misleading and possibly erroneous in several aspects, including the following:
   a. The "zero" concentration isopleth has nonzero data outside its bounds.
   b. The isopleth indicated as "32,000" and the unmarked 18,000 isopleth near SP-35 have no data points within to support the conclusion that these are closed contours.
   c. The 10,000, 12,000, and 14,000 isopleths between SP-03 and SP-37 intercept.

This Figure should be reviewed and corrected. Hand-drawn contours of these concentration data would be acceptable.

2. **Section 2.1.2, Appendix A:** The Work Plan proposes locations for the vegetable-oil injectors, but not the chemical oxidation injectors. Section 2.1.2 states, "The chemical oxidation injector parameters (actual number, placement, and construction details)...are vendor-specific and will be determined by the selected chemical oxidation injection vendor at a later date." However, the CPM Project Schedule (Appendix A) does not provide for EPD review of the proposed injector parameters and placement once the vendor determines what they are. We understand that adding an extra review step could delay corrective action activities by several weeks or months, possibly detracting from ultimate system performance. NSB may proceed in the most expedient manner, but EPD will closely monitor system performance with respect to the designated criteria.

3. **Section 2.1.3:** The last paragraph of Section 2.1.3 states, "Vegetable oil injection will address the anticipated slight contaminant rebound following chemical oxidation injections and will preclude the further necessity of in-depth investigations at the site", but the Work Plan does not identify the performance criterion to use in evaluating this claim. In other

words, does NSB expect the vegetable oil injection to completely eliminate the cVOC rebound or are cVOC concentrations expected to rebound, but below a certain threshold level? If the performance criterion is the baseline criterion in the CAP for monitored natural attenuation (maximum source-area cVOC concentration of 100 ppb), then the Work Plan should state that.

4. **Section 3.4.1, Analytical Methods**: Jeff Wilmoth's title and role in this project are unclear. Please include this information in this or other sections of the Work Plan.

5. **Appendix D, Health and Safety Plan:** NSB should address the following deficiencies in the Health and Safety Plan (HASP):

   a. Section 3.3 and 3.4 of the HASP list the following biological hazards: snakes, poison ivy/oak/sumac, blood borne pathogens from waste, bees and other stinging insects and ticks. Section 3.4 is devoted specifically to tick bites and the danger of Rocky Mountain spotted fever and Lyme disease. However, the HASP does not mention the hazard posed by mosquitoes. Diseases including several types of encephalitis, such as that caused by the West Nile virus, are transmittable through mosquitoes and have been reported recently in Georgia. The HASP should therefore address the mosquito hazard.

   b. Section 3.7 of the HASP lists the contaminants of concern as 1,2-DCE, PCE, and TCE. However, vinyl chloride was present in some of the source-area characterization samples (See Table 1-3 of Work Plan). The aggressive nature of the Fenton's reaction is such that volatilization will be likely of any vinyl chloride present, with consequent possible exposure by the site workers. The HASP should therefore address vinyl chloride.

Please provide, at your earliest convenience, change pages to address these comments. If you have questions or comments, please contact Billy Hendricks or Larry Papetti at 404-656-2833.

Sincerely,

Bruce Khaleghi, Unit Coordinator
Hazardous Waste Management Branch

cc: John Garner, Subase FE
Sam Ross, J. A. Jones
Anthony Robinson, SOUTHDIV

S:\RDRIVE\BILLY\FACILITY\SUBASE\NSB-WO-1.WPD

APPENDIX B

WELL PURGING AND SAMPLING RECORDS
SITE 11 GROUNDWATER MONITORING PROGRAM
MAY 2001 AND AUGUST 2001

May 2001
Well Purging and Sampling Records

KBA-02-may-01-01

SAMPLING STATION

Well #	Station Type
KBA-11-2	Monitoring well

SAMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By
KBA02-may-01-01		water	Grab	5-1-01	1325	MS/TB

Weather Conditions: Sunny to Partly Cloudy Breezy 81°F

Instruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
pH/Eh	Horiba U10	610003			
Conductivity/Temp	Horiba U10	610003			
Dissolved Oxygen	Horiba U10	610003			
Turbidity	Horiba U10	610003			
Redox	Orion 250A	011482			

GROUND LEVEL DATA (before pujrging)

Redox = -82.7
Redox = -83.5
Redox = -84.1

Well Variables

[illegible]t water = (TD - H) = h (ft) [H = depth to top of water]

side diam. Of casing = d(in.); 1/2(d) = r(in.)

r(in.) / [illegible]n.) = R (ft); [7.48 gal/ft 3 constant}

WELL PURGE INFORMATION

PURGE EQUIPMENT:	S/N:	Purge method:	Pump Type:
Peristaltic Pump		Draw Down	

Cycle	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate (gpm)
	5-1-01	1345	23.5c	6.22			.270	mS/cm	7	8.29 mg/l		
	5-1-01	1400	22.0c	6.27			.269	mS/cm	5	8.37 mg/l		
	5-1-01	1425	22.0c	6.10			.276	mS/cm	6	8.55 mg/l		

Well purged to dryness: [ ] Yes [ ] No

Recorded by:	Date:	Reviewed by:	Date:
Tommy Bryant	5-1-01		

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VA
KBA-11-2	5-1-01	1325	9.53'	10.65'	0.0 ppm

S .MPLING STATION

Well # KBA 11 3B	Station Type Monitoring Well

SAMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By
				5-1-01	1000	ms/TB

Weather Conditions: Sunny 72°F

Instruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
pH/Eh					
onductivity/Temp					
Dissolved Oxygen					
urbidity					

GROUND LEVEL DATA (before pujrging)

Well Variables

epth of water = (TD - H) = h (ft) [H = depth to top of water]

Inside diam. Of casing = d(in.); 1/2(d) = r(in.)

(in.) / 2(in.) = R (ft); [7.48 gal/ft 3 constant}

WELL PURGE INFORMATION

PURGE EQUIPMENT:	S/N:	Purge method:	Pump Type:

Prog Cycl	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate (gpm)

W urged to dryness: [ ] Yes [ ] No

orded by: Tommy Bryant	Date: 5-1-01	Reviewed by:	Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VAC
KBA-11-3B	5-1-01	1000	8.43'	47.50'	~~NA~~ NM

MPLING STATION

Well # KBA-11-08B	Station Type Monitoring Well

SAMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By
				5-1-01	1031	MS/TB

Weather Conditions: Sunny 73°F

Instruments	Manufacturer/Mode	Serial No.	Func. Ck.	Calib.Due	Reference
/Eh					
Conductivity/Temp					
Dissolved Oxygen					
rbidity					

GROUND LEVEL DATA (before pujrging)

Well Variables

p. of water = (TD - H) = h (ft) [H = depth to top of water]

nside diam. Of casing = d(in.); 1/2(d) = r(in.)

$\frac{\text{n.)}}{\text{(in.)}}$ = R (ft); [7.48 gal/ft 3 constant}

WELL PURGE INFORMATION

URGE EQUIPMENT: S/N: Purge method: Pump Type:

Flow Cycle	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate (gpm)

Wi rged to dryness: [ ] Yes [ ] No

rded by: Tommy Bryant	Date: 5-1-01	Reviewed by:	Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VAC
KBA-11-08B	5-1-01	1031	11.85'	43.49'	~~NA~~ NM

PLING STATION

ell # KBA-11-10B	Station Type Monitoring Well

SAMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By
				5-1-01	1121	MS/TB

eather Conditions: Fair Partly Cloudy 76°F

Instruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
/Eh					
onductivity/Temp					
ssolved Oxygen					
bidity					

GROUND LEVEL DATA (before pujrging)

Well Variables

pt. of water = (TD - H) = h (ft) [H = depth to top of water]

nside diam. Of casing = d(in.); 1/2(d) = r(in.)

$\frac{\text{n.)}}{\text{(in.)}}$ = R (ft); [7.48 gal/ft 3 constant}

WELL PURGE INFORMATION

URGE EQUIPMENT:	S/N:	Purge method:	Pump Type:

eg Cycl	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate .(gpm)

W urged to dryness: [ ] Yes [ ] No

orded by: Tommy Bryant	Date: 5-1-01	Reviewed by:	Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VAC
KBA-11-10B	5-1-01	1121	12.06'	51.35'	~~AA~~ NM

SAMPLING STATION

Well # KBA-16-May-02-01 | Station Type: Monitoring Well

SAMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By
KBA-16-May-2-01		Groundwater	Grab	5-2-01	0910	MS/TB

Weather Conditions: Partly Cloudy 70°F

Instruments	Manufacturer/Mode	Serial No.	Func. Ck.	Calib.Due	Reference
pH/Eh	Horiba U10	610003			
Conductivity/Temp	Horiba U10	610003			
Dissolved Oxygen	Horiba U10	610003			
Turbidity	Horiba U10	610003			
Redox	Orion 250A	011482			

GROUND LEVEL DATA (before pujrging)

Redox = -127.6

Redox = -132.8

Redox = -123.5

Variables

Depth of water = (TD - H) = h (ft) [H = depth to top of water]

Inside diam. Of casing = d(in.); 1/2(d) = r(in.)

r(in.) / 12(in.) = R (ft); {7.48 gal/ft 3 constant}

WELL PURGE INFORMATION

PURGE EQUIPMENT: | S/N: | Purge method: Drawdown | Pump Type:

Prog Cyc	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate (gpm)
	5-2-01	0945	22.8c	4.67			.427	ms/cm	1	6.67 mg/l		
	5-2-01	0955	23.0c	5.10			.412	ms/cm	1	6.90 mg/l		
	5-2-01	1005	23.1c	4.17			.411	ms/cm	1	7.30 mg/l		

Well purged to dryness: [ ] Yes [X] No

Recorded by: Tommy Bryant | Date: 5-2-01 | Reviewed by: | Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VAC
KBA-11-16	5-2-01	0915	4.48'	44.46'	10.5

SAMPLING STATION

Well # KBA-11-17B	Station Type Monitoring well

AMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By
				5-4-01	0851	MS/TB

Weather Conditions: Sunny no wind 71°F

Instruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
pH/Eh					
onductivity/Temp					
Dissolved Oxygen					
urbidity					

GROUND LEVEL DATA (before pujrging)

'ariables

Depth of water = (TD - H) = h (ft) [H = depth to top of water]

side diam. Of casing = d(in.); 1/2(d) = r(in.)

$\frac{r(in.)}{12(in.)}$ = R (ft); [7.48 gal/ft 3 constant}

WELL PURGE INFORMATION

RGE EQUIPMENT:	S/N:	Purge method:	Pump Type:

Prog Cyc	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate (gpm)

Well purged to dryness: [ ] Yes [ ] No

Recorded by: Tommy Bryant	Date: 5-4-01	Reviewed by:	Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VA(
KBA-11-17B	5-4-01	0851	3.33'	44.41'	48.7 ppm

SAMPLING STATION

Well # KBA-11-11A	Station Type Monitoring Well

SAMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By
				5-1-01	1100	MS/TB

Weather Conditions: Sunny fair 75°F

Instruments	Manufacturer/Mode	Serial No.	Func. Ck.	Calib.Due	Reference
pH/Eh					
Conductivity/Temp					
Dissolved Oxygen					
Turbidity					

GROUND LEVEL DATA (before pujrging)

Well variables

Depth of water = (TD - H) = h (ft) [H = depth to top of water]

Inside diam. Of casing = d(in.); 1/2(d) = r(in.)

$\frac{r(in.)}{12(in.)}$ = R (ft); [7.48 gal/ft 3 constant}

WELL PURGE INFORMATION

PURGE EQUIPMENT:	S/N:	Purge method:	Pump Type:

Prog Cycle	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate (gpm)

Well purged to dryness: [ ] Yes [ ] No

Recorded by: Tommy Bryant	Date: 5-1-01	Reviewed by:	Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VAC
KBA-11-11A	5-1-01	1100	9.31'	36.83'	~~NA~~ NM

SAMPLING STATION

Well # KBA-11-13A	Station Type Monitoring Well

SAMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By
KBA-13A-May-03-01		Water	Grab	5-3-01	1000	MS/TB

Weather Conditions: Partly Cloudy Breezy 74°F

Instruments	Manufacturer/Mode	Serial No.	Func. Ck.	Calib.Due	Reference
pH/Eh	ORION 250A	011482			
Conductivity/Temp	Horiba U10	610003			
Dissolved Oxygen	Horiba U10	610003			
Turbidity	Horiba U10	610003			
Redox	ORION 250A	~~ORION~~ 011482			

GROUND LEVEL DATA (before pujrging)

Redox = -109.4
Redox = -86.1
Redox = -76.2

Well Variables

Depth of water = (TD - H) = h (ft) [H = depth to top of water]

Inside diam. Of casing = d(in.); 1/2(d) = r(in.)

$\frac{r^2(in.)}{12(in.)}$ = R (ft); [7.48 gal/ft 3 constant]

WELL PURGE INFORMATION

PURGE EQUIPMENT: Geo Pump	S/N:	Purge method: Draw Down	Pump Type:

Log Cycle	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate (gpm)
	5-3-01	1024	22.8	5.12			2.17	mS/cm	20.1	9.11 mg/l		
	5-3-01	1037	23.1	4.80			2.19	mS/cm	21.1	9.33 mg/l		
	5-3-01	10.48	22.8	4.75			2.16	mS/cm	1.98	8.50 mg/l		

Well purged to dryness: [ ] Yes [ ] No

Purged by: Tommy Bryant	Date: 5-3-01	Reviewed by:	Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VA
KBA-11-13A	5-3-01	1000	9.21'	42.25'	0.0 ppm

SAMPLING STATION

Well # KBA-11-13B	Station Type monitoring well

AMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By
				5-4-01	0940	ms/TB

Weather Conditions: Sunny Breezy 75°F

Instruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
pH/Eh					
onductivity/Temp					
Dissolved Oxygen					
Turbidity					

GROUND LEVEL DATA (before pujrging)

ariables

Depth of water = (TD - H) = h (ft) [H = depth to top of water]

de diam. Of casing = d(in.); 1/2(d) = r(in.)

$\frac{r(in.)}{12(in.)}$ = R (ft); [7.48 gal/ft 3 constant]

WELL PURGE INFORMATION

RGE EQUIPMENT:	S/N:	Purge method:	Pump Type:

g Cyc	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate .(gpm)

Well purged to dryness: [ ] Yes [ ] No

ecorded by: Tommy Bryant	Date: 5-4-01	Reviewed by:	Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VA
KBA-11-13B	5-4-01	0940	13.09'	90.49'	0.1 ppm

AMPLING STATION

Well # KBA-11-15	Station Type Monitoring Well

AMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By
				5-4-01	0907	MS/TB

Weather Conditions: Sunny slight Breeze 73°F

Instruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
/Eh					
Conductivity/Temp					
solved Oxygen					
Turbidity					

GROUND LEVEL DATA (before pujrging)

ll Variables

pth of water = (TD - H) = h (ft) [H = depth to top of water]

nside diam. Of casing = d(in.); 1/2(d) = r(in.)

$\frac{r(in.)}{(in.)}$ = R (ft); [7.48 gal/ft 3 constant}

WELL PURGE INFORMATION

RGE EQUIPMENT:	S/N:	Purge method:	Pump Type:

g Cyc	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate (gpm)

Well purged to dryness: [ ] Yes [ ] No

ecorded by: Tommy Bryant	Date: 5-4-01	Reviewed by:	Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VA
KBA-11-15	5-4-01	0907	4.12'	38.90'	6.1 ppm

SAMPLING STATION

Well # KBA-11-18	Station Type Monitoring Well

AMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By
				5-4-01	0835	ms/TB

Weather Conditions: Sunny no wind 71°F

Instruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
pH/Eh					
Conductivity/Temp					
Dissolved Oxygen					
Turbidity					

GROUND LEVEL DATA (before pujrging)

Variables

Depth of water = (TD - H) = h (ft) [H = depth to top of water]

Inside diam. Of casing = d(in.); 1/2(d) = r(in.)

$\frac{r(in.)}{12(in.)}$ = R (ft); [7.48 gal/ft 3 constant}

WELL PURGE INFORMATION

PURGE EQUIPMENT:	S/N:	Purge method:	Pump Type:

Prog Cycle	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate (gpm)

Well purged to dryness: [ ] Yes [ ] No

Recorded by: Tommy Bryant	Date: 5-4-01	Reviewed by:	Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VAC
KBA-11-18	5-4-01	0835	2.57'	45.51'	~~210~~ ppm

S. .MPLING STATION

Vell # KBA-11-20	Station Type Monitoring well

SAMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By
				5-4-01	0820	MS/TB

eather Conditions: Sunny no wind 70°F

Instruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
pH/Eh					
nductivity/Temp					
Dissolved Oxygen					
bidity					

GROUND LEVEL DATA (before pujrging)

/ell Variables

pth of water = (TD - H) = h (ft) [H = depth to top of water]

ide diam. Of casing = d(in.); 1/2(d) = r(in.)

.)
2(in.) = R (ft); [7.48 gal/ft 3 constant]

VELL PURGE INFORMATION

RGE EQUIPMENT:	S/N:	Purge method:	Pump Type:

o Cycl	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate (gpm)

ell pu.ged to dryness: [ ] Yes [ ] No

d by: Tommy Bryant	Date: 5-4-01	Reviewed by:	Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VA
KBA-11-20	5-4-01	0820	2.48'	39.86'	~~475~~ 0 ppm

S. MPLING STATION

Vell # KBA-11-21	Station Type Monitoring Well

SAMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By
				5-4-01	0755	MS/TB

eather Conditions: Sunny no wind 70°F

Instruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
pH/Eh					
nductivity/Temp					
Dissolved Oxygen					
bidity					

GROUND LEVEL DATA (before pujrging)

Vell Variables

pth of water = (TD - H) = h (ft) [H = depth to top of water]

e diam. Of casing = d(in.); 1/2(d) = r(in.)

.) = R (ft); [7.48 gal/ft 3 constant}
2(in.)

VELL PURGE INFORMATION

RGE EQUIPMENT:	S/N:	Purge method:	Pump Type:

g Cycl	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate (gpm)

ell pu ed to dryness: [ ] Yes [ ] No

ed by: Tommy Bryant	Date: 5-4-01	Reviewed by:	Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VAC
KBA-11-21	5-4-01	0755	2.83'	40.30'	~~480~~ 0 ppm

SAMPLING STATION

Well # KBA-11-22B	Station Type Monitoring Well

AMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By
				5-4-01	0926	ms/TB

ather Conditions: Sunny Breezy 74°F

Instruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
H/Eh					
nductivity/Temp					
issolved Oxygen					
rbidity					

GROUND LEVEL DATA (before pujrging)

l riables

epth of water = (TD - H) = h (ft) [H = depth to top of water]

de diam. Of casing = d(in.); 1/2(d) = r(in.)

r(in.) / 12(in.) = R (ft); [7.48 gal/ft 3 constant}

WELL PURGE INFORMATION

RGE EQUIPMENT:	S/N:	Purge method:	Pump Type:

rge Cycl	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate (gpm)

Vell purged to dryness: [ ] Yes [ ] No

ecorded by: Tommy Bryant	Date: 5-4-01	Reviewed by:	Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VA(
KBA-11-22B	5-4-01	0926	10.18'	52.33'	0.0 ppm

S. .IPLING STATION

ell # KBA-11-34 | Station Type Monitoring Well

SAMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By
KBA-34-May-03-01		Water	Grab	5-3-01	0809	ms/JB

ather Conditions: Sunny 69°F

Instruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
/Eh	ORION 250A	011482			
ductivity/Temp	Horiba U10	610003			
issolved Oxygen	Horiba U10	610003			
idity	Horiba U10	610003			
Redox	ORION 250A	011482			

GROUND LEVEL DATA (before pujrging)

Redox = -1.5
Redox = -6.8
Redox = -24.5
Redox = -11.3

ell Variables

pth of water = (TD - H) = h (ft) [H = depth to top of water]

ide diam. Of casing = d(in.); 1/2(d) = r(in.)

( ) / 2(in.) = R (ft); [7.48 gal/ft 3 constant]

VELL PURGE INFORMATION

RGE EQUIPMENT: Geo Pump | S/N: | Purge method: Draw Down | Pump Type:

g Cycl	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate (gpm)
	5-3-01	0900	24.7c	3.92			.770	ms/cm	12	6.60 mg/l		
	5-3-01	0915	25.0c	3.89			1.40	ms/cm	4	6.54 mg/l		
	5-3-01	0925	25.3c	3.84			1.45	ms/cm	3	6.44 mg/l		
	5-3-01	0938	25.2c	3.88			1.48	ms/cm	3	6.96 mg/l		

ell pu.ged to dryness: [ ] Yes [X] No

d by: Tommy Bryant | Date: 5-3-01 | Reviewed by: | Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VAL
KBA-11-34	5-3-01	0809	12.01'	40.45	28.6 ppm

AMPLING STATION

Well # KBA-11-36	Station Type Monitoring Well

AMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By
				5-4-01	0957	MS/TB

Weather Conditions: Sunny Breezy 76°F

Instruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
H/Eh					
onductivity/Temp					
solved Oxygen					
urbidity					

GROUND LEVEL DATA (before pujrging)

. ariables

epth of water = (TD - H) = h (ft) [H = depth to top of water]

de diam. Of casing = d(in.); 1/2(d) = r(in.)

r(in.) / (in.) = R (ft); [7.48 gal/ft 3 constant}

WELL PURGE INFORMATION

RGE EQUIPMENT:	S/N:	Purge method:	Pump Type:

a Cycl	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate .(gpm)

Vell purged to dryness: [ ] Yes [ ] No

ecorded by: Tommy Bryant	Date: 5-4-01	Reviewed by:	Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VAC
KBA-11-36	5-4-01	0957	12.67'	41.39'	0.0 ppm

SAMPLING STATION

Well # KBA-11-37	Station Type monitoring Well

SAMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By
KBA-37-MAY-02-01		groundwater	Grab	5-2-01	1300	ms/TB

Weather Conditions: Partly Cloudy 79°F

Instruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
pH/Eh	ORION 250A	011482			
Conductivity/Temp	Horiba U10	610003			
Dissolved Oxygen	Horiba U10	610003			
Turbidity	Horiba U10	610003			
Redox	ORION 250A	011482			

GROUND LEVEL DATA (before pujrging)

Redox = -125.0

Redox = -146.6

Redox = -134.6

Redox = -139.7

Variables

Depth of water = (TD - H) = h (ft) [H = depth to top of water]

Inside diam. Of casing = d(in.); 1/2(d) = r(in.)

$\frac{r(in.)}{12(in.)}$ = R (ft); [7.48 gal/ft 3 constant}

WELL PURGE INFORMATION

PURGE EQUIPMENT:	S/N:	Purge method:	Pump Type:

Purge Cycle	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate (gpm)
	5-2-01	1335	23.8c	5.89			.516	mS/cm	16	8.73 mg/l		
	5-2-01	1345	24.0c	5.91			.572	mS/cm	34	8.49 mg/l		
	5-2-01	1355	24.1c	5.85			.586	mS/cm	32	8.40 mg/l		
	5-2-01	1403	24.2c	5.91			.595	mS/cm	30	8.55 mg/l		

Well purged to dryness: [ ] Yes [X] No

Recorded by: Tommy Bryant	Date: 5-2-01	Reviewed by:	Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VAC
KBA-11-37	5-2-01	1300	3.00'	38.20'	102.5 ppm

SAMPLING STATION

Well # KBA-11-PS-2 | Station Type Monitoring Well

SAMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By
KBA-PS-2-May-02-01		water	Grab	5-2-01	1050	ms/TB

Weather Conditions: Partly Cloudy - 74°F

Instruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
pH/Eh	ORION 250A ~~Horiba U10~~	011482 ~~610003~~			
Conductivity/Temp	Horiba U10	610003			
Dissolved Oxygen	Horiba U10	610003			
Turbidity	Horiba U10	610003			
Redox	Orion 250A	011482			

GROUND LEVEL DATA (before pujrging)

Redox = -129.9
Redox = -122.1
Redox = -122.0
Redox = -123.6

Variables

Depth of water = (TD - H) = h (ft) [H = depth to top of water]

Inside diam. Of casing = d(in.); 1/2(d) = r(in.)

r(in.) / 12(in.) = R (ft); [7.48 gal/ft 3 constant}

WELL PURGE INFORMATION

PURGE EQUIPMENT: | S/N: | Purge method: | Pump Type:

Prog Cycl	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )		D.O. ( )	VolPrdg (gal)	Purge rate (gpm)
	5-2-01	1115	22.3c	5.49			.335	ms/cm	4		8.85 mg/l		
	5-2-01	1127	22.0c	5.45			.331	ms/cm	1		8.11 mg/l		
	5-2-01	1139	21.7c	5.41			.323	ms/cm	2		8.26 mg/l		
	5-2-01	1150	21.7c	5.42			.327	ms/cm	1		7.80 mg/l		

Well purged to dryness: [ ] Yes [✓] No

Recorded by: Tommy Bryant | Date: 5-2-01 | Reviewed by: | Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VAC
KBA-11-PS-2	5-2-01	1050	7.72'	37.19'	0.08 ppm

SAMPLING STATION

Well # KBA-11-PS-09	Station Type monitoring well

AMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By
				5-4-01	1022	msTB

Weather Conditions: Sunny Breezy 76°F

Instruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
pH/Eh					
nductivity/Temp					
Dissolved Oxygen					
rbidity					

GROUND LEVEL DATA (before pujrging)

ariables

Depth of water = (TD - H) = h (ft) [H = depth to top of water]

de diam. Of casing = d(in.); 1/2(d) = r(in.)

r(in.) / 12(in.) = R (ft); [7.48 gal/ft 3 constant]

WELL PURGE INFORMATION

RGE EQUIPMENT:	S/N:	Purge method:	Pump Type:

Prog Cycl	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate (gpm)

Well purged to dryness: [ ] Yes [ ] No

ecorded by: Tommy Bryant	Date: 5-4-01	Reviewed by:	Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VAL
KBA-11-PS-09	5-4-01	1022	4.29'	34.13'	0.0 ppm

SAMPLING STATION

ell # KBA- RW6	Station Type Recovery Well Monitoring Well

AMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By
				5-4-01	1100	ms/TB

eather Conditions: Sunny Breezy 78°F

Instruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
H/Eh					
nductivity/Temp					
issolved Oxygen					
rbidity					

GROUND LEVEL DATA (before pujrging)

l riables

epth of water = (TD - H) = h (ft) [H = depth to top of water]

de diam. Of casing = d(in.); 1/2(d) = r(in.)

r(in.) / 12(in.) = R (ft); [7.48 gal/ft 3 constant]

WELL PURGE INFORMATION

RGE EQUIPMENT:	S/N:	Purge method:	Pump Type:

rge Cycl	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate .(gpm)

Vell purged to dryness: [ ] Yes [ ] No

corded by: Tommy Bryant	Date: 5-4-01	Reviewed by:	Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VAC
KBA- RW6	5-4-01	1100	8.83'	72.55'	0.0 ppm

SAMPLING STATION

Well # KBA-RW7	Station Type Recovery Well / Monitoring Well

SAMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By
				5-4-01	1117	ms/TB

Weather Conditions: Sunny Breezy 78°F

Instruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
pH/Eh					
Conductivity/Temp					
Dissolved Oxygen					
Turbidity					

GROUND LEVEL DATA (before pujrging)

Well variables

Depth of water = (TD - H) = h (ft) [H = depth to top of water]

Inside diam. Of casing = d(in.); 1/2(d) = r(in.)

$\frac{r(in.)}{12(in.)}$ = R (ft); [7.48 gal/ft 3 constant}

WELL PURGE INFORMATION

PURGE EQUIPMENT:	S/N:	Purge method:	Pump Type:

Prog Cycle	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate (gpm)

Well purged to dryness: [ ] Yes [ ] No

Recorded by: Tommy Bryant	Date: 5-4-01	Reviewed by:	Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VA
KBA-RW7	5-4-01	1117	9.79'	44.93'	0.0 ppm

AMPLING STATION

Well # KBA-RW8

Station Type Recovery Well
monitoring Well

AMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By
				5-4-01	1134	ms/TB

Weather Conditions: Sunny Breezy 80°F

Instruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
/Eh					
onductivity/Temp					
solved Oxygen					
urbidity					

GROUND LEVEL DATA (before pujrging)

el. ariables

pth of water = (TD - H) = h (ft) [H = depth to top of water]

de diam. Of casing = d(in.); 1/2(d) = r(in.)

r(in.) / (in.) = R (ft); [7.48 gal/ft 3 constant]

WELL PURGE INFORMATION

RGE EQUIPMENT: S/N: Purge method: Pump Type:

g Cycl	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate (gpm)

Well purged to dryness: [ ] Yes [ ] No

ecorded by: Tommy Bryant Date: 5-4-01 Reviewed by: Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VA.
KBA-RW8	5-4-01	1134	10.16'	45.00'	0.0 ppm

8.67' – 47.50'

	To H2O	To BOT
o	13.07	41.39
18	3.65	44.44
	2.39	39.86

PLED IRC WELL @
CT. + DUPLICATE
D IRC WELL @
T.
T. WELL STILL
WINTER

3.65'	TO BOT. 44.41'
4.45'	38.89'
10.55'	44.98'
10.18'	44.95'
4.67'	72.43'
4.56'	34.15'
2.69'	40.30'

ECAME IN-OP
D WITH 012594 ALSO
4/2/9/01

ES ON 4 WELLS
F SITE 11

Alan, 2t. @ 1040
2 ALAN, CT @ 1100
E IN TOUCH WITH
at 108 Lett. 2t.

Mark H Sullivan Jr + Tommy Bryant

4-18-01 (1) 09:25 Sampled IRC well
122 plant CT + Duplicates (9 vials) Duplicate
(2) 010:02 Sampled IRC well. ~~(3 vials) Duplicate~~
102 plant CT. (3 vials) Duplicate
010:13 went by Cottage CT. 108
No answer
4-19-01 15.00 Sampled IRC well 108
Cottage CT (3 vials)
5-1-01 (1) Measuring well KBA-11-3B
at 010:00 water Depth 8.43' well Depth 47.50'
(2) Measuring well KBA-11-08B at 010:31
water Depth 11.85' well Depth 43.45'
(3) measuring well KBA-11-11A water Depth 7.31'
well Depth 36.83' at (011:00)
(4) measuring well KBA-11-10B water Depth 12.06'
well Depth 51.35' at 011:21
(5) Measuring well KBA-11-02 water Depth 9.53'
well Depth 10.65' at 13:25
13.45 purge and sample well KBA-11-02 (3 vials)

PH	Temp	Cond	TURB	DO	Redox
6.22	21.5c	.270	7	8.29	-82.7
6.27	22.0c	.269	5	8.37	-83.5
6.10	22.0c	.276	6	8.55	

5-2-01 Measuring well KBA-11-16 water Depth 4.48'
09.45 well Depth 44.46'. purge and sample well KBA-11-16 (3 vials)

PH	Temp	Cond	TURB	DO	Redox	PHoto-VAC
4.61	22.8c	.427	1	6.67	-127.6	10.5 PPM
5.10	23.0c	.412	1	6.96	-132.8	
4.17	23.1c	.411	1	7.30	-123.5	

Mack H Sullen Sr + Tommy Bryant

5-2-01 Measure well KBA-11-PS-2 water Depth 7.72'

Well Depth 37.19' at 010:50

011.15 purge and sample well KBA-11-PS-2 (3-vials)

PH	Temp	Cond	TURB	D.O	Redox	PHOTO VAC
5.49	22.3 C	.335	4	8.85	-129.9	0.08 ppm
5.45	22.0 C	.331	1	8.11	-122.1	
5.41	21.7 C	.323	2	8.26	-122.0	
5.42	21.7 C	.327	1	7.80	-123.6	

Measure well KBA-11-37. water Depth 3.00'

Well Depth 38.20'. Photo-VAC 102.5 ppm

Temp	PH	COND	TURB	D.O	Redox
23.8 c	5.89	.516	16	8.73	-125.0
24.0 c	5.91	.572	34	8.49	-146.6
24.1 c	5.85	.586	32	8.40	-134.6
24.2 c	5.91	.595	30	8.55	-139.7

purge and sample well KBA-11-37 at 13:35

(3 vials)

5-3-01 Measure well KBA-11-34 water Depth 12.01

08.09 Well Depth 40.45

purge and sample well KBA-11-34

(3 vials) ~~(1 duplicate) 3-rinsate~~

Temp	PH	Cond	TURB	DO	Redox	PHoto VAC
24.7 C	3.92	.770	12	6.60	1.5	
25.0 C	3.39	1.90	4	6.54	-6.8	28.6 ppm
25.3 c	3.84	1.45	3	6.44	24.5	
25.2 C	3.88	1.48	3	6.96	11.3	

010.00 Measure well KBA-11-13A water Depth 9.21'

Well Depth 42.25'

purge and sample well KBA-11-13A

Temp	PH	Cond	TURB	DO	Redox	PHoto VAC
22.8	5.12	2.17	201	9.11	-109.4	0.0 ppm
23.1	4.80	2.19	211	9.33	-86.1	
22.8	4.75	2.16	190	8.50	-76.2	

(12 vials) (2 Duplicates) 3-Rinsate

Mack H Sullen Sr

Mack H Sullen

5-4-01 (1) Measure well KBA

07.55 480 ppm. Water Dept

(2) Measure well KBA-

08:20 475 ppm. Water Depth

(3) Measure well KBA-

08:35 210 ppm. Water Dep

(4) Measure well KBA-

08:51 48.7 ppm Water Dept

(5) Measure well KBA-1

09:07 6.1 ppm. Water Depth

(6) Measure well KBA-

09:26 0.0 ppm Water Depth

(7) Measure well KBA-1

09:40 0.1 ppm. Water Depth 1

(8) Measure well KBA-1

09.57 0.0 ppm Water Depth

(9) Measure well KBA-1

010:22 0.0 ppm. Water Dept

(10) Measure well KBA-1

011.00 open well) water De

(11) Measure well KBA

011.17 None open well) wat

(12) Measure well KBA-Ru

011.34 open well. water De

5-1-4-01 D.con all equipment u

Alconox Detergent. 2. tap n

water. (4) wipe down te

[redacted] Sr + Tommy Bryant

[redacted] KBA-11-PS-2 water Depth 7.72' 5-4-01

7.19' at 010:50

(3-VIALS)

[redacted]mple well KBA-11-PS-2

[redacted]nd	TURB	D.O	Redox	PHOTO VAC
[redacted]	4	8.85	-129.9	0.08 ppm
	1	8.11	-122.1	
	2	8.26	-122.0	
[redacted]	1	7.80	123.6	

[redacted]BA-11-37. water Depth 3.00'

[redacted]. photo-VAC 102.5 ppm

[redacted]	TURB	D.O	Redox
	16	8.73	-125.0
[redacted]	34	8.49	-146.6
	32	8.40	-134.6
	30	8.55	-139.7

[redacted]le well KBA-11-37 at 13:35

[redacted]KBA-11-34 water Depth 12.01

45

[redacted]le well KBA-11-34

~~[redacted] 3-RINSATE~~

[redacted]d	TURB	DO	Redox	PHOTO VAC
10	12	6.60	1.5	28.6 PPM
[redacted]	4	6.54	-6.8	
[redacted]	3	6.44	24.5	
48	3	6.96	11.3	

[redacted]BA-11-13A water Depth 9.21'

.25'

[redacted]ple well KBA-11-13A

[redacted]d	TURB	DO	Redox	PHOTO VAC
[redacted]	201	9.11	-109.4	0.0 PPM
[redacted]	211	9.33	-86.1	
6	190	8.50	-76.2	

[redacted] 3) 3-RINSATE

[redacted] Mack H Sullen Sr

Mack H Sullen Sr Tommy Bryant

(1) Measure well KBA-11-21. photo vac Reading

07.55 480 ppm. water Depth 2.83' well Depth 40.30'

(2) Measure well KBA-11-20. photo vac Reading

08:20 475 ppm. water Depth 2.48' well Depth 39.86'

(3) Measure well KBA-11-18 photo vac Reading

08:35 210 ppm. water Depth 2.57' well Depth 45.51'

(4) Measure well KBA-11-17B. photo vac Reading

08:51 48.7 ppm water Depth 3.33' well Depth 44.41'

(5) Measure well KBA-11-15. photo vac Reading

09:07 6.1 ppm. water Depth 4.12' well Depth 38.90'

(6) Measure well KBA-11-22B. photo vac Reading

09:26 0.0 ppm water Depth 10.18' well Depth 52.33'

(7) Measure well KBA-11-13B. Photo vac Reading

09:40 0.1 ppm. water Depth 13.09' well Depth 90.49'

(8) Measure well KBA-11-36. Photo vac Reading

09.57 0.0 ppm water Depth 12.67' well Depth 41.39'

(9) Measure well KBA-11-PS-09. photo vac Reading

010:22 0.0 ppm. water Depth 4.29' well Depth 34.13'

(10) Measure well KBA-RW6. Photo VAC Reading NONE.

011.00 open well) water Depth 8.83' well Depth 72.55'

(11) Measure well KBA-RW7 - Photo vac Reading

011.17 NONE open well) water Depth 9.79' well Depth 44.93'

(12) Measure well KBA-RW8 photo vac Reading NONE

011.34 open well. water Depth 10.16' well Depth 45.00'

Mack H Sullen Sr

5-1.4-01 D.con all equipment using + wash water with Alconox Detergent. 2 tap rinses water (3) D.ION rinse water. (4) wipe down term wipers. MHS

Mack H Sullivan & Tommy Bryant

6-17-01 13:50 Sampled IRG well 122
plant CT. + Duplicates (9) vials Total
(2) 14.00 Sampled IRC Well 102
Plant. CT (3) vials Total.
(3) 14.30 Sampled IRC well 108
Cottage CT (3) vials Total
7-17-01 13.25 Sampled IRG well 122
plant CT. + Duplicates (9) vials Total
7-17-01 13:48 Sample IRG. well 102
plant. CT. (3) vials Total
7-17-01 15.30 Sampled IRC well 108
Cottage CT. (3) vials Total

WEATHER SUNNY BA

8/7/01	SAMPLERS (BRYANT,
08:05 AM	KBA-11-2
08:43 AM	KBA-11-13(A)
08:53 AM	KBA-11-13(B)
09:13 AM	KBA-11-3(B)
09:31 AM	KBA-11-22(B)
09:50 AM	KBA-11-11(A)
10:05 AM	KBA-11-8(B)
11:10 AM	KBA-11-10(B)
11:24 AM	KBA-11-36
11:38 AM	KBA-11-34
11:49 AM	PS 2
13:25 PM	KBA-11-15
13:41 PM	PS 9
13:55 PM	KBA-11-21
14:09 PM	KBA-11-20
14:27 PM	KBA-11-37
14:42 PM	KBA-11-18
14:56 PM	KBA-11-17(B)
15:08 PM	KBA-11-16
16:17 PM	RW 6
16:25 PM	RW 7
16:33 PM	RW 8

THE ABOVE MONITORING
RE-MEASURED TO WATER
@ THE ABOVE TIMES NO

August 2001
Well Purging and Sampling Records

SAMPLING STATION

Well #	Station Type
PS 2	MONITORING WELL

SAMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By
KBAIL-PS2-AUG-09-01	WATER			8/9/01	11:13 AM	S.J.T.

Weather Conditions: 8/7/01 TEMP. 90.6 HUM. 62° PARTLY CLOUDY BP 30.12 11:49 AM 11:57 AM

Instruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
pH/Eh	HORIBA U-10	610003		CALIB. DAILY	
Conductivity/Temp	HORIBA U-10	610003		CALIB. DAILY	
Dissolved Oxygen	HORIBA U-10	610003		CALIB. DAILY	
Turbidity	HORIBA U-10	610003		CALIB. DAILY	
REDOX	ORION MODEL 250A	010186		CALIB. 8-3-01	

GROUND LEVEL DATA (before pujrging)

REDOX -235.2 (2 GAL)
-222.8 (4 GAL)
-223.5 (6 GAL)

Well Variables

Depth of water = (TD - H) = h (ft) [H = depth to top of water]

Inside diam. Of casing = d(in.); 1/2(d) = r(in.)

$\frac{r(in.)}{12(in.)}$ = R (ft); [7.48 gal/ft 3 constant}

WELL PURGE INFORMATION

PURGE EQUIPMENT: GEOTECH S/N: N-0737 Purge method: Pump Type: GEOPUMP 2

Prog Cyc	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate (gpm)
2 GAL	8/9/01	11:26 AM	23.8	5.99			.319 ms/cm		-6	9.99 mg/L		
4 GAL	8/9/01	11:35 AM	23.1	5.79			.323 ms/cm		-4	10.11 mg/L		
6 GAL	8/9/01	11:42 AM	23.1	5.80			.318 ms/cm		-5	9.84 mg/L		

Well purged to dryness: [ ] Yes [X] No

Recorded by: Steven J. Taylor Date: 8/9/01 Reviewed by: Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VAC
PS 2	8/7/01	11:49AM	5.97	37.24	0.0 ppm
PS 2	8/7/01	12:33AM	5.97		
	HUM 20%				
	PARTLY CLOUDY				
	BP 30.12				
	TEMP 91.4°				

SA...PLING STATION

ell # KBA-11-37	Station Type MONITORING WELL

SAMPLE TEMP 94.4 HUM 18% CLOUDLY BP. 30.09 2:27 PM 2:35 PM

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By
CBA11-37-AUG-09-01	WATER			8/9/01	1:58 PM	SJT

eather Conditions:

Instruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
pH/Eh	HORIBA U-10	610003		CALIB. DAILY	
nductivity/Temp	HORIBA U-10	610003		CALIB. DAILY	
Dissolved Oxygen	HORIBA U-10	610003		CALIB. DAILY	
rbidity	HORIBA U-10	610003		CALIB. DAILY	
REDOX	ORION MODEL 250A	010186		CALIB. 8-3-01	

GROUND LEVEL DATA (before pujrging) REDOX -243.5 (2 GAL)

Well Variables -255.3 (4 GAL)

Depth of water = (TD - H) = h (ft) [H = depth to top of water]

ide diam. Of casing = d(in.); 1/2(d) = r(in.) -248.8 (6 GAL)

in.) / 12(in.) = R (ft); [7.48 gal/ft 3 constant]

WELL PURGE INFORMATION

PURGE EQUIPMENT: GEOTECH	S/N: N-0737	Purge method:	Pump Type: GEOPUMP 2

Prog Cyc	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate (gpm)
2 GAL	8/9/01	2:10 PM	27.1	6.24			.557	ms/cm	-9	9.91	mg/L	
4 GAL	8/9/01	2:18 PM	26.1	6.27			.577	ms/cm	-11	9.87	mg/L	
6 GAL	8/9/01	2:25 PM	25.5	6.28			.587	ms/cm	-10	9.61	mg/L	

Well purged to dryness: [ ] Yes [X] No

Recorded by: Steven J. Taylor	Date: 8/9/01	Reviewed by:	Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VAC
KBA-11-37	8/7/1	2:27 PM	1.38	38.21	0.0 ppm
KBA-11-37	8/7/1	3:37	1.37		
	HUM 20%				
	CLOUDY				
	BP 30.09				
	TEMP 93.8°				

S. PLING STATION

ell # KBA-11-34	Station Type MONITORING WELL

SAMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By
KBA11-34-AUG-09-01	WATER			8/9/01	1:05 PM	SJT

11:38 AM

eather Conditions: 8/7/01 TEMP. 92.4° HUM. 51% PARTLY CLOUDY BP. 30.12

Instruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
pH/Eh	HORIBA U-10	610003		CALIB. DAILY	
nductivity/Temp	HORIBA U-10	610003		CALIB. DAILY	
Dissolved Oxygen	HORIBA U-10	610003		CALIB. DAILY	
rbidity	HORIBA U-10	610003		CALIB. DAILY	
REDOX	ORION MODEL 250 A	010186		CALIB. 8-3-01	

GROUND LEVEL DATA (before pujrging) REDOX

- 165.3 (2 gal)
- 150.9 (4 gal)
- 152.5 (6 gal)

Well Variables

epth of water = (TD - H) = h (ft) [H = depth to top of water]

ide diam. Of casing = d(in.); 1/2(d) = r(in.)

in.) / 12(in.) = R (ft); [7.48 gal/ft 3 constant}

WELL PURGE INFORMATION

URGE EQUIPMENT: GEOTECH	S/N: N-0737	Purge method:	Pump Type: GEOPUMP 2

Prog Cyc	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate (gpm)
2 GAL	8/9/01	1:15 PM	28.1	4.49			1.04	mS/CM	-14	8.65	mg/L	
4 GAL	8/9/01	1:22 PM	27.6	4.35			1.01	mS/CM	-10	8.77	mg/L	
6 GAL	8/9/01	1:28 PM	27.5	4.35			1.07	mS/CM	-12	8.77	mg/L	

W urged to dryness: [ ] Yes [✓] No

orded by: Steven J. Taylor	Date: 8/9/01	Reviewed by:	Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VAC
KBA-11-34	8/7/01	11:38 AM	10.35	40.78	0.0 ppm
KBA-11-34	8/7/01	12:25 PM	10.35		
	HUM 24%				
	PARTLY CLOUDY				
	BP 30.12				
	TEMP 92.7				

S PLING STATION

Well # KBA-11-17 B	Station Type MONITORING WELL

SAMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By
KBA11-17B-AUG-09-01	WATER			8/9/01	8:20 AM	S.J.T.

Weather Conditions: 8/7/01 TEMP. 94.1° HUM 16 % CLOUDY BP 30.09 2:56 PM 3:01 PM

Instruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
pH/Eh	HORIBA U-10	610003		CALIB. DAILY	
Conductivity/Temp	HORIBA U-10	610003		CALIB. DAILY	
Dissolved Oxygen	HORIBA U-10	610003		CALIB. DAILY	
Turbidity	HORIBA U-10	610003		CALIB. DAILY	
REDOX	ORION MODEL 250A	010186		CALIB. 8-3-01	

GROUND LEVEL DATA (before pujrging)

REDOX -197.1 (2 gal)
-191.1 (4 gal)
-178.4 (6 gal)

Well Variables

Depth of water = (TD - H) = h (ft) [H = depth to top of water]

Inside diam. Of casing = d(in.); 1/2(d) = r(in.)

$\frac{r(in.)}{12(in.)}$ = R (ft); [7.48 gal/ft 3 constant}

WELL PURGE INFORMATION

PURGE EQUIPMENT: GEOTECH S/N: N-0737 Purge method: Pump Type: GEDPUMP 2

Prog Cycle	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate (gpm)
2 GAL	8/9/01	8:32 AM	23.6	5.81			.124 mS/cm		-10	8.57 mg/L		
4 GAL	8/9/01	8:38 AM	23.5	5.55			.109 mS/cm		-10	8.68 mg/L		
6 GAL	8/9/01	8:45 AM	23.6	5.46			.118 mS/cm		-10	8.70 mg/L		

Well purged to dryness: [ ] Yes [✓] No

Recorded by: Steven J. Taylor Date: 8/9/01 Reviewed by: Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VAC
KBA-11-17 B	8/7/01	2:56 pm	1.29	44.48	0.0 ppm
KBA-11-17 B	8/7/01	3:49 PM	1.29		
	HUM 20%				
	CLOUDY				
	BP 30.06				
	TEMP. 92.9°				

S. PLING STATION

Well #	Station Type
KBA-11-16	MONITORING WELL

SAMPLE ~~TEMP~~ ~~HUM. 16 %~~ ~~CLOUDY~~ ~~BP 30.06~~

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By
KBA11-16-AUG-09-01	WATER			8/9/01	08:57AM	SJT

Weather Conditions: 8/9/01 TEMP. 93.2° HUM. 16 % CLOUDY BP. 30.06 3:08 P.M. 3:17 P.M.

Instruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
pH/Eh	HORIBA U-10	610003		CALIB. DAILY	
Conductivity/Temp	HORIBA U-10	610003		CALIB. DAILY	
Dissolved Oxygen	HORIBA U-10	610003		CALIB. DAILY	
Turbidity	HORIBA U-10	610003		CALIB. DAILY	
REDOX	ORION MODEL 250A	010186		CALIB. 8-3-01	

GROUND LEVEL DATA (before pujrging)

REDOX -209.4 (2 GAL)
-245.8 (4 GAL)
-241.2 (6 GAL)
-248.1 (8 GAL)

Well Variables

Depth of water = (TD - H) = h (ft) [H = depth to top of water]

Inside diam. Of casing = d(in.); 1/2(d) = r(in.)

$\frac{\text{(in.)}}{12\text{(in.)}}$ = R (ft); [7.48 gal/ft 3 constant]

WELL PURGE INFORMATION

PURGE EQUIPMENT: GEOTECK S/N: N-0737 Purge method: Pump Type: GEOPUMP 2

Prog Cyc	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate (gpm)
2 GAL	8/9/01	09:07 AM	24.4	5.52			.324 mS/cm		-3	8.62 mg/L		
4 GAL	8/9/01	09:14 AM	24.6	5.57			.388 mS/cm		-4	8.63 mg/L		
6 GAL	8/9/01	09:23 AM	24.4	5.55			.390 mS/cm		-4	8.61 mg/L		
8 GAL	8/9/01	09:30 AM	24.4	5.58			.394 mS/cm		-4	8.68 mg/L		

Well purged to dryness: [ ] Yes [✓] No

Recorded by: Steven J. Taylor Date: 8/9/01 Reviewed by: Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VAC
KBA-11-16	8/7/01	3:08 pm	3.00	43.48	0.0 ppm
KBA-11-16	8/7/01	3:53 pm	2.59		
	HUM 17%				
	CLOUDY				
	BP 30.06				
	TEMP 94.2°				

S. IPLING STATION

Well # KBA-11-15	Station Type MONITORING WELL

SAMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By
KBA11-15-AUG-09-01	WATER			8/9/01	7:50 AM	S.J.T.

Weather Conditions: 8/7/01 TEMP. 93° HUM. 37% SUNNY BP 30.12 1:25 PM. 1:33 PM.

Instruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
pH/Eh	HORIBA U-10	610003		CALIB. DAILY	
Conductivity/Temp	HORIBA U-10	610003		CALIB. DAILY	
Dissolved Oxygen	HORIBA U-10	610003		CALIB. DAILY	
Turbidity	HORIBA U-10	610003		CALIB. DAILY	
REDOX	ORION MODEL 250A	010186		CALIB. 8-3-01	

GROUND LEVEL DATA (before pujrging) REDOX -204.5 (2 gal) -212.8 (4 gal) -209.8 (6 gal)

Well Variables

Depth of water = (TD - H) = h (ft) [H = depth to top of water]

Inside diam. Of casing = d(in.); 1/2(d) = r(in.)

$\frac{\text{(in.)}}{12\text{(in.)}}$ = R (ft); [7.48 gal/ft 3 constant]

WELL PURGE INFORMATION

PURGE EQUIPMENT: GEOTECH S/N: N-0737 Purge method: Pump Type: GEOPUMP 2

Prog Cycle	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate (gpm)
2 GAL	8/9/01	7:50 AM	23.0	6.30			1.02	mS/cm	-10	8.71	mg/L	
4 GAL	8/9/01	7:57 AM	22.8	6.06			.97	mS/cm	-10	8.84	mg/L	
6 GAL	8/9/01	8:05 AM	22.7	5.90			.97	mS/cm	-10	8.83	mg/L	

Well purged to dryness: [ ] Yes [X] No

Recorded by: Steven J. Taylor	Date: 8/9/01	Reviewed by:	Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VAC
KBA-11-15	8/7/01	1:25 pm	2.22	38.94	0.0 ppm
KBA-11-15	8/7/01	4:03 pm	2.22		
	HUM 19%				
	CLOUDY				
	BP 3006				
	TEMP 91.2°				

S 1PLING STATION

ell # KBA-11-11A	Station Type MONITORING WELL

SAMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By
KBA11-11A-AUG-8-01	WATER			8-8-01	8:45 AM 9:50 a.m. 9:56 a.m.	

eather Conditions: TEMP. 92.3°F HUM. 52% PARTLY CLOUDY BP 30.09

Instruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
pH/Eh	HORIBA U-10	610003		CALIB. DAILY	
nductivity/Temp	HORIBA U-10	610003		CALIB. DAILY	
Dissolved Oxygen	HORIBA U-10	610003		CALIB. DAILY	
rbidity	HORIBA U-10	610003		CALIB. DAILY	
REDOX	ORION MODEL 250A	010186		CALIB. 8-3-01	

GROUND LEVEL DATA (before pujrging)

REDOX -201.9 (2 GAL)
-202.9 (4 GAL)
-220.5 (6 GAL)
-216.6 (8 GAL)

Well Variables

epth of water = (TD - H) = h (ft) [H = depth to top of water]

ide diam. Of casing = d(in.); 1/2(d) = r(in.)

(in.) / 12(in.) = R (ft); [7.48 gal/ft 3 constant}

WELL PURGE INFORMATION

PURGE EQUIPMENT: GEOTECH GEOPUMP 2	S/N: N-0737	Purge method:	Pump Type: GEOPUMP 2

Prog Cyc	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate .(gpm)
GAL	8/8/01	08:46 AM	23.0	5.96			.101 MS/CM		-10	8.21 mg/L		
GAL	8/8/01	09:05 AM	23.5	5.66			.081 MS/CM		-10	8.26 mg/L		
GAL	8/8/01	09:11 AM	22.9	5.64			.079 MS/CM		-10	8.51 mg/L		
2 GAL	8/8/01	09:17 AM	22.8	5.64			.079 MS/CM		-10	8.60 mg/L		

W urged to dryness: [ ] Yes [✓] No

orded by: BRYANT TAYLOR	Date: 8/8/01	Reviewed by:	Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VAC
KBA-11-11A	8/7/01	9:50 a.m.	7.63	36.86	0.0 ppm
KBA-11-11A	8/7/01	10:54 am	7.64		
		HUM 51%			
		PARTLY CLOUDY			
		BP 30.12			
		TEMP. 92.4			

S. .PLING STATION

ell # KBA-11-13A	Station Type Monitoring well

SAMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By
KBA11-13A-AUG-08-01	WATER	GRAB		8/8/01	10:58AM	S.J.T.

eather Conditions: TEMP 88.7°F HUM. 68% CLOUDY B.P. 30.12 in Hg 8:43 8:51

Instruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
pH/Eh	HORIBA U-10	610003		CALIB. DAILY	
nductivity/Temp	HORIBA U-10	610003		CALIB. DAILY	
Dissolved Oxygen	HORIBA U-10	610003		CALIB. DAILY	
rbidity	HORIBA U-10	610003		CALIB. DAILY	
REDOX	ORION MODEL 250A	010186		CALIB. 8-3-01	

GROUND LEVEL DATA (before pujrging)

REDOX
-210.2 (2 gal)
-176.5 (4 gal)
-157.3 (6 gal)
-166.8 (8 gal)

Well Variables

epth of water = (TD - H) = h (ft) [H = depth to top of water]

ide diam. Of casing = d(in.); 1/2(d) = r(in.)

(in.) / 12(in.) = R (ft); [7.48 gal/ft 3 constant}

WELL PURGE INFORMATION

URGE EQUIPMENT: GEOTECH GEOPUMP 2	S/N: N-0737	Purge method:	Pump Type:

Prog Cyc	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate (gpm)
GAL	8/8/01	10:58AM	24.6	5.05			2.39	mS/cm	-9	8.61	mg/L	
GAL	8/8/01	11:03AM	24.6	4.97			2.40	mS/cm	-9	8.78	mg/L	
6 GAL	8/8/01	11:15AM	24.9	4.99			2.39	mS/cm	-10	8.93	mg/L	
8 GAL	8/8/01	11:21AM	25.2	4.98			2.38	mS/cm	-9	9.05	mg/L	

W urged to dryness: [ ] Yes [✓] No

orded by: Steven J. Taylor	Date: 8/8/01	Reviewed by:	Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VAC
KBA-11-13A	8-7-01	0843	7.51	42.31	2.8 ppm
			7.51		
			HUM 53%		
KBA-11-13A	8/7/01	10:30 am	PARTLY CLOUDY		
			BP 30.12		

S IPLING STATION

ell # KBA-11-13 B	Station Type MONITORING WELL

SAMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By
KBA11-13B-AUG-08-01	WATER			8/8/01		SJT

eather Conditions: 8-7-01 TEMP. 89.6 °F HUM. 67 % CLOUDY BP 30.09 8:53 9:02

Instruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
pH/Eh	HORIBA U-10	610003		CALIB. DAILY	
nductivity/Temp	HORIBA U-10	610003		CALIB. DAILY	
Dissolved Oxygen	HORIBA U-10	610003		CALIB. DAILY	
rbidity	HORIBA U-10	610003		CALIB. DAILY	
REDOX	ORION MODEL 250A	010186		CALIB. 8-3-01	

GROUND LEVEL DATA (before pujrging)

REDOX -236.8 (2 gal)
-239.7 (4 gal)
-243.3 (6 gal)

Well Variables

epth of water = (TD - H) = h (ft) [H = depth to top of water]

ide diam. Of casing = d(in.); 1/2(d) = r(in.)

in.) / 12(in.) = R (ft); [7.48 gal/ft 3 constant}

WELL PURGE INFORMATION

URGE EQUIPMENT: GEOTECH	S/N: N-0737	Purge method:	Pump Type: GEOPUMP 2

Prog Cyc	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate (gpm)
GAL	8/8/01	2:12 PM	26.3	7.99			.291	mS/cm	79	9.52 mg/L		
GAL	8/8/01	2:22 PM	25.0	8.10			.289	mS/cm	82	10.38 mg/L		
6 GAL	8/8/01	2:30 PM	24.5	8.11			.290	mS/cm	85	10.21 mg/L		

W urged to dryness: [ ] Yes [ ] No

orded by: Steven J. Taylor	Date: 8/8/01	Reviewed by:	Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VAC
KBA-11-13 B	8/7/01	8:53 am	11.37	91.98	0.0
KBA-11-13 B	8/7/01	10:33 am	11.37		
			HUM 58%		
			PARTLY CLOUDY		
			B.P. 30.12		
			TEMP. 92.4		

S..MPLING STATION

Well # KBA 11-2 | Station Type Monitoring Well

SAMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By
KBA11-2-AUG-DB-01	WATER			8/8/01	1:14 PM	S.J.T.

Weather Conditions: ~~88~~ 79.7 F, Hum. 85, Cloudy, BP 30.12 Time 8:05 am 8:12 am

Instruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
pH/Eh	HORIBA U-10	610083		CALIB. DAILY	
Conductivity/Temp	HORIBA U-10	610003		CALIB. DAILY	
Dissolved Oxygen	HORIBA U-10	610003		CALIB. DAILY	
Turbidity	HORIBA U-10	610003		CALIB DAILY	
REDOX	ORION MODEL 250A	D10186		CALIB. 8-3-01	

GROUND LEVEL DATA (before pujrging) REDOX

- 226.4 (2 gal)
- 235.2 (4 gal)
- 242.2 (6 gal)

Well Variables

Depth of water = (TD - H) = h (ft) [H = depth to top of water]

Inside diam. Of casing = d(in.); 1/2(d) = r(in.)

$\frac{r(in.)}{12(in.)}$ = R (ft); [7.48 gal/ft 3 constant}

Horiba Calibrated daily using

WELL PURGE INFORMATION

PURGE EQUIPMENT: GEOTECH | S/N: N-0737 | Purge method: | Pump Type: GEOPUMP 2

Prog Cyc	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate (gpm)
2 GAL	8/8/01	1:14 PM	28.1	7.00			.273 mS	/CM	11	9.53 mg	/L	
4 GAL	8/8/01	1:21 PM	27.3	7.08			.248 mS	/CM	10	9.37 mg	/L	
6 GAL	8/8/01	1:28 PM	26.9	7.09			.248 mS	/CM	10	9.65 mg	/L	

Well purged to dryness: [ ] Yes [✓] No

Recorded by: Steven J. Taylor | Date: 8/8/01 | Reviewed by: | Date:

Hum. 59%
Temp. 69°F
Cal. - 8-03-01

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VAC
KBA 11-2	8-7-01	0805	8.14'	10.87'	19.1 ppm
	TE	0830			
KBA-11-2		10:21am	8.13		
			HUM. 45%		
			PARTLY CLOUDY		
			B.P. 30.09		

S, .PLING STATION

ell # KBA-11-10 B	Station Type MONITORING WELL

SAMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By
KBA11-10B-AUG-09-01	WATER			8/9/01	10:22 AM	SJT

eather Conditions: 8/7/01 TEMP 78.8° HUM 35 % PARTLY CLOUDY B.P. 30.12 11:10 AM 11:18 AM

Instruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
pH/Eh	HORIBA U-10	610003		CALIB. DAILY	
nductivity/Temp	HORIBA U-10	610003		CALIB. DAILY	
Dissolved Oxygen	HORIBA U-10	610003		CALIB. DAILY	
rbidity	HORIBA U-10	610003		CALIB. DAILY	
REDOX	DRION MODEL 250A	010186		CALIB. 8-3-01	

GROUND LEVEL DATA (before pujrging) REDOX -222.8 (2 GAL)

-219.5 (4 GAL)

-222.6 (6 GAL)

Well Variables

epth of water = (TD - H) = h (ft) [H = depth to top of water]

ide diam. Of casing = d(in.); 1/2(d) = r(in.)

(in.) / 12(in.) = R (ft); [7.48 gal/ft 3 constant]

WELL PURGE INFORMATION

PURGE EQUIPMENT: GEOTECH	S/N: N-0737	Purge method:	Pump Type: GEOPUMP 2

Prog Cyc	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate (gpm)
2 GAL	8/9/01	10:32 AM	24.7	6.19			.308 mS/cm		-5	9.39 mg/L		
GAL	8/9/01	10:50 AM	24.3	6.25			.315 mS/cm		-4	9.77 mg/L		
6 GAL	8/9/01	11:05 AM	24.1	6.16			.317 mS/cm		-5	9.99 mg/L		

We urged to dryness: [ ] Yes [✓] No

orded by: Steven J. Taylor	Date: 8/9/01	Reviewed by:	Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VAC
KBA-11-10 B	8/7/01	11:10 AM	10.49	51.38	0.0 ppm
KBA-11-10 B	8/7/01	12:13 AM	10.48		
	HUM 33%				
	PARTLY CLOUDY				
	BP 30.12				
	TEMP 94.7°				

SA PLING STATION

Well #	Station Type

SAMPLE KBA-11-3B

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By

Weather Conditions: TEMP 91.4°F HUM. 70% PARTLY CLOUDY BP. 30.12 9:13 a.m. 9:22 a.m.

Instruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
pH/Eh					
Conductivity/Temp					
Dissolved Oxygen					
Turbidity					

GROUND LEVEL DATA (before pujrging)

Well Variables

Depth of water = (TD - H) = h (ft) [H = depth to top of water]

Inside diam. Of casing = d(in.); 1/2(d) = r(in.)

$\frac{r(in.)}{12(in.)}$ = R (ft); [7.48 gal/ft 3 constant}

WELL PURGE INFORMATION

PURGE EQUIPMENT:	S/N:	Purge method:	Pump Type:

Prog Cyc	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate (gpm)

Well purged to dryness: [ ] Yes [ ] No

Recorded by:	Date:	Reviewed by:	Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VAC
KBA-11-3B	8/7/01	9:13am	6.79	47.56	2.4 ppm
KBA-11-3B	8/7/01	10:39am	6.78		
		HUM 55%			
		PARTLY CLOUDY			
		BP. 30.12			
		TEMP 94.6			

SA..PLING STATION

ell # KBA-11-08B	Station Type

SAMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By
					10:05 a.m.	

eather Conditions: HUM 35% PARTLY CLOUDY BP 30.09

Instruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
pH/Eh					
nductivity/Temp					
Dissolved Oxygen					
rbidity					

GROUND LEVEL DATA (before pujrging)

Well Variables

Depth of water = (TD - H) = h (ft) [H = depth to top of water]

de diam. Of casing = d(in.); 1/2(d) = r(in.)

in.)
12(in.) = R (ft); [7.48 gal/ft 3 constant}

WELL PURGE INFORMATION

PURGE EQUIPMENT:	S/N:	Purge method:	Pump Type:

Prog Cyc	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate (gpm)

We.. purged to dryness: [ ] Yes [ ] No

orded by:	Date:	Reviewed by:	Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VAC
KBA-11-08 B	8/7/01	10:05am	9.99	43.49	0.0ppm
KBA-11-08 B	8/7/01	11:00am	10.2		
		HUM 52%			
		PARTLY CLOUDY			
		BP 30.12			
		TEMP 92.7			
KBA-11-08 B	8/7/01	12:03am	10.02		
		HUM 52%			
		PARTLY CLOUDY			
		BP 30.12			
		TEMP 96.4°			

S PLING STATION

Well # KBA-11-18	Station Type

SAMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By
					2:42 PM	
					2:50 PM	

Weather Conditions: TEMP 93.9° HUM 19% CLOUDY BP 30.09

Instruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
pH/Eh					
Conductivity/Temp					
Dissolved Oxygen					
Turbidity					

GROUND LEVEL DATA (before pujrging)

Well Variables

Depth of water = (TD - H) = h (ft) [H = depth to top of water]

Inside diam. Of casing = d(in.); 1/2(d) = r(in.)

$\frac{r(in.)}{12(in.)}$ = R (ft); [7.48 gal/ft 3 constant}

WELL PURGE INFORMATION

PURGE EQUIPMENT:	S/N:	Purge method:	Pump Type:

Prog Cyc	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate (gpm)

Well purged to dryness: [ ] Yes [ ] No

Recorded by:	Date:	Reviewed by:	Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VAC
KBA-11-18	8/7/01	2:42 PM	.38	45.59	0.0 ppm
KBA-11-18	8/7/01	3:45 pm	.38		
	HUM 22%				
	CLOUDY				
	BP 30.09				
	TEMP 93.2°				

S. .PLING STATION

ell # KBA-11-20	Station Type

AMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By

eather Conditions: TEMP 93.6° HUM 24% SUNNY BP. 30.12 2:09 PM 2:18 PM

Instruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
pH/Eh					
nductivity/Temp					
Dissolved Oxygen					
rbidity					

GROUND LEVEL DATA (before pujrging)

ell Variables

epth of water = (TD - H) = h (ft) [H = depth to top of water]

ide diam. Of casing = d(in.); 1/2(d) = r(in.)

$\frac{(in.)}{12(in.)}$ = R (ft); [7.48 gal/ft 3 constant}

WELL PURGE INFORMATION

RGE EQUIPMENT:	S/N:	Purge method:	Pump Type:

Prog Cycl	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate (gpm)

We urged to dryness: [ ] Yes [ ] No

orded by:	Date:	Reviewed by:	Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VAC
KBA-11-20	8/7/01	2:09 PM	.58	39.87	0.0 ppm
KBA-11-20	8/7/01	3:32 PM	.58		
	HUM 22%				
	CLOUDY				
	BP 30.09				
	TEMP 91.3°				

S .PLING STATION

ell # KBA-11-21	Station Type

SAMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By

eather Conditions: TEMP 96.4° HUM 19% SUNNY BP. 30.12 1:55 P.M. 2:00 P.M.

Instruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
pH/Eh					
nductivity/Temp					
Dissolved Oxygen					
rbidity					

GROUND LEVEL DATA (before pujrging)

Well Variables

epth of water = (TD - H) = h (ft) [H = depth to top of water]

ide diam. Of casing = d(in.); 1/2(d) = r(in.)

(in.) / 12(in.) = R (ft); [7.48 gal/ft 3 constant}

WELL PURGE INFORMATION

PURGE EQUIPMENT:	S/N:	Purge method:	Pump Type:

Prog Cyc	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate (gpm)

W purged to dryness: [ ] Yes [ ] No

orded by:	Date:	Reviewed by:	Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VAC
KBA-11-21	8/7/1	1:55 PM	.95	40.30	0.0 ppm
KBA-11-21	8/7/1	3:27 PM	.94		
		HUM. 20%			
		CLOUDY			
		BP. 30.00			
		TEMP 93.9°			

SAMPLING STATION

ell # KB-11-22B	Station Type

AMPLE /

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By

eather Conditions: TEMP. 93.2°F HUM. 62% PARTLY CLOUDY BP 30.12 9:31am 9:39am

Instruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
pH/Eh					
nductivity/Temp					
Dissolved Oxygen					
rbidity					

GROUND LEVEL DATA (before pujrging)

Well variables

Depth of water = (TD - H) = h (ft) [H = depth to top of water]

ide diam. Of casing = d(in.); 1/2(d) = r(in.)

(in.) / 12(in.) = R (ft); [7.48 gal/ft 3 constant}

WELL PURGE INFORMATION

RGE EQUIPMENT:	S/N:	Purge method:	Pump Type:

Prog Cyc	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate (gpm)

Well purged to dryness: [ ] Yes [ ] No

orded by:	Date:	Reviewed by:	Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VAC
KBA-11-22B	8/7/01	9:31am	8.55	52.38	14.7 ppm
KBA-11-22B	8/7/01	10:44am	8.54		
		HUM 44%			
		PARTLY CLOUDY			
		BP. 30.12			
		TEMP 91°			

SA...PLING STATION

Well # KBA - 11 - 36	Station Type

AMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By

Weather Conditions: TEMP. 92.7° HUM 42% PARTLY CLOUDY BP. 30.12 11:24 am 11:31 am

Instruments	Manufacturer/Mode	Serial No.	Func. Ck.	Calib.Due	Reference
pH/Eh					
Conductivity/Temp					
Dissolved Oxygen					
Turbidity					

GROUND LEVEL DATA (before pujrging)

Well Variables

Depth of water = (TD - H) = h (ft) [H = depth to top of water]

Inside diam. Of casing = d(in.); 1/2(d) = r(in.)

$\frac{r(in.)}{12(in.)}$ = R (ft); [7.48 gal/ft 3 constant]

WELL PURGE INFORMATION

PURGE EQUIPMENT:	S/N:	Purge method:	Pump Type:

Prog Cyc	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate (gpm)

Well purged to dryness: [ ] Yes [ ] No

Recorded by:	Date:	Reviewed by:	Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VAC
KBA-11-34	8/7/01	11:24am	10.95	41.39	0.0 ppm
KBA-11-36	8/7/01	12:18 PM	10.95		
		HUM 23%			
		PARTLY CLOUDY			
		BP 30.12			
		TEMP. 92.8°			

S/ `PLING STATION

ell # PS - 9	Station Type

SAMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By
					1:41 PM.	
					1:47 PM.	

eather Conditions: TEMP. 94.6 HUM 23 % SUNNY B.P. 30.12

Instruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
pH/Eh					
nductivity/Temp					
Dissolved Oxygen					
rbidity					

GROUND LEVEL DATA (before pujrging)

Well Variables

epth of water = (TD - H) = h (ft) [H = depth to top of water]

ide diam. Of casing = d(in.); 1/2(d) = r(in.)

in.) / 12(in.) = R (ft); [7.48 gal/ft 3 constant}

WELL PURGE INFORMATION

URGE EQUIPMENT:	S/N:	Purge method:	Pump Type:

rog Cyc	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate (gpm)

We rged to dryness: [ ] Yes [ ] No

orded by:	Date:	Reviewed by:	Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VAC
PS-9	8/7/01	1:41 PM	2.54	34.13	0.0 ppm
PS-9	8/7/01		2.54		
	HUM 17%				
	CLOUDY				
	BP 30.06				
	TEMP 91.2°				

SAMPLING STATION

Well # RW-6	Station Type RECOVERY WELL

AMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By
					4:17 PM 4:20 PM	

Weather Conditions: TEMP. 92.2° HUM 29% CLOUDY BP. 30.06

Instruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
pH/Eh					
Conductivity/Temp					
Dissolved Oxygen					
Turbidity					

GROUND LEVEL DATA (before pujrging)

Well Variables

Depth of water = (TD - H) = h (ft) [H = depth to top of water]

Inside diam. Of casing = d(in.); 1/2(d) = r(in.)

$\frac{r(in.)}{12(in.)}$ = R (ft); [7.48 gal/ft 3 constant}

WELL PURGE INFORMATION

PURGE EQUIPMENT:	S/N:	Purge method:	Pump Type:

Prog Cycle	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate (gpm)

Well purged to dryness: [ ] Yes [ ] No

Recorded by: Steven J. Taylor	Date: 8/7/01	Reviewed by:	Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VAC
RW-6	8/7/01	4:17 pm	7.10	78.11	
RW-6	8/7/01	4:47	7.10		
	HUM 29%				
	CLOUDY				
	BP 30.06				
	TEMP 91.3°				

SAMPLING STATION

Well # RW-7	Station Type

SAMPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By

Weather Conditions: TEMP. 91.1° HUM. 25% CLOUDY BP. 30.06 4:25 P.M. 4:28 P.M.

Instruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
pH/Eh					
Conductivity/Temp					
Dissolved Oxygen					
Turbidity					

GROUND LEVEL DATA (before pujrging)

Well Variables

Depth of water = (TD - H) = h (ft) [H = depth to top of water]

Inside diam. Of casing = d(in.); 1/2(d) = r(in.)

$\frac{r(in.)}{12(in.)}$ = R (ft); [7.48 gal/ft 3 constant}

WELL PURGE INFORMATION

PURGE EQUIPMENT:	S/N:	Purge method:	Pump Type:

Prog Cyc	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate (gpm)

Well purged to dryness: [ ] Yes [ ] No

Recorded by: Steven J. Taylor	Date: 8/7/01	Reviewed by:	Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VAC
RW-7	8/7/01	4:25 PM	8.11	47.27	
RW-7	8/7/01	4:51 PM	8.10		
	HUM 27%				
	CLOUDY				
	BP 30.06				
	TEMP 91.1°				

AMPLING STATION

ell # RW-8	Station Type

MPLE

Sample ID	Sample Matrix	Sample Type	Collection Method	Date	Time	By
					4:33 P.M.	
					4:37 P.M.	

eather Conditions: TEMP. 91.0° HUM 29% CLOUDY BP. 30.06

nstruments	Manufacturer/Mode	Serial No.	Fune. Ck.	Calib.Due	Reference
H/Eh					
ductivity/Temp					
olved Oxygen					
bidity					

GROUND LEVEL DATA (before pujrging)

l iables

epth of water = (TD - H) = h (ft) [H = depth to top of water]

e diam. Of casing = d(in.); 1/2(d) = r(in.)

(in.)
2(in.) = R (ft); [7.48 gal/ft 3 constant}

WELL PURGE INFORMATION

GE EQUIPMENT:	S/N:	Purge method:	Pump Type:

Cyc	Date	Time	Temp (C)	pH	Eh	Units	Cond.	Units	Turg ( )	D.O. ( )	VolPrdg (gal)	Purge rate (gpm)

ell purged to dryness: [ ] Yes [ ] No

corded by: Steven J. Taylor	Date: 8/7/01	Reviewed by:	Date:

WELL NUMBER ID	DATE	TIME	MEASURE TO WATER	MEASURE TO BOTTOM	PHOTO VAC
RW-8	8/7/01	4:33 PM	8.47	36.96	n/a
RW-8	8/7/01	4:55 PM	8.47		
	HUM 25%				
	CLOUDY				
	BP 30.06				
	TEMP 91.3°				

J. A. Jones Management Services
Industrial Waste Treatment Facility Laboratory
Kings Bay Naval Base, Kings Bay, Georgia

DATE: 7-Aug-01

EQUIPMENT: Horiba U-10 Water Quality Checker

TEST: Method 4500-H^+ B, pH Value Electrometric Method, Standard Methods 18th Ed.
Method 4500-O G, Oxygen (Dissolved) Membrane Electrode Method, Standard Methods, 18th Ed.

The Horiba Water Quality Checker was calibrated for pH Value and Dissolved Oxygen.

pH readings.	True Value	Actual Reading
	4.00	4.01
	7.00	6.99

Dissolved Oxygen

Temperature	21.5° C
Dissolved Oxygen	8.61 mg/L

Horiba U-10 Calibrated daily with Cal. Solution per Manufactures requirments Aug. 8 / Aug. 9, 2001
Photo Vac. Calibrated day of Shipment Aug. 3, 2001
Orion 2504 Calibrated day of Shipment Aug. 3, 2001

C. Pazdalski
Analyst, IWTF
014104

APPENDIX C

ANALYTICAL TABULATION AND REPORTS
AUGUST 2001

C-1
Analytical Tabulation

Groundwater Protection Standard Analyses
KBA-11-02, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-02	01/12/1993	1,1-DICHLOROETHANE	5.0	U	1
KBA-11-02	01/12/1993	1,1-DICHLOROETHANE	5.0	U	1
KBA-11-02	01/07/1994	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-02	01/07/1994	1,1-DICHLOROETHANE	2.0	UR	1
KBA-11-02	04/09/1994	1,1-DICHLOROETHANE	2.0	U	1
KBA-11-02	09/15/1994	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-02	04/11/1995	1,1-DICHLOROETHANE	0.2	J	1
KBA-11-02	04/18/1996	1,1-DICHLOROETHANE	0.0	U	1
KBA-11-02	08/03/1999	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-02	11/09/1999	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-02	02/11/2000	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-02	05/04/2000	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-02	08/11/2000	1,1-DICHLOROETHANE	unable to sample		
KBA-11-02	11/08/2000	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-02	01/12/1993	1,1-DICHLOROETHENE	5.0	U	7
KBA-11-02	01/12/1993	1,1-DICHLOROETHENE	5.0	U	7
KBA-11-02	01/07/1994	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-02	01/07/1994	1,1-DICHLOROETHENE	2.0	UR	7
KBA-11-02	04/09/1994	1,1-DICHLOROETHENE	2.0	U	7
KBA-11-02	09/15/1994	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-02	04/11/1995	1,1-DICHLOROETHENE	0.0	U	7
KBA-11-02	04/18/1996	1,1-DICHLOROETHENE	0.0	U	7
KBA-11-02	08/03/1999	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-02	11/09/1999	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-02	02/11/2000	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-02	05/04/2000	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-02	08/11/2000	1,1-DICHLOROETHENE	unable to sample		
KBA-11-02	11/08/2000	1,1-DICHLOROETHENE	1.0	U	
KBA-11-02	02/06/2001	1,1-DICHLOROETHENE	1.0	U	
KBA-11-02	01/12/1993	1,2-DICHLOROETHANE	5.0	U	5
KBA-11-02	01/12/1993	1,2-DICHLOROETHANE	5.0	U	5
KBA-11-02	08/03/1999	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-02	11/09/1999	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-02	02/11/2000	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-02	08/11/2000	1,2-DICHLOROETHANE	unable to sample		
KBA-11-02	11/08/2000	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-02	02/06/2001	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-02	05/04/2000	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-02	01/12/1993	1,4-DICHLOROBENZENE	5.0	U	75
KBA-11-02	01/12/1993	1,4-DICHLOROBENZENE	5.0	U	75
KBA-11-02	01/12/1993	1,4-DICHLOROBENZENE	5.0		75
KBA-11-02	01/12/1993	1,4-DICHLOROBENZENE	5.0		75
KBA-11-02	09/15/1994	1,4-DICHLOROBENZENE	10.0	U	75
KBA-11-02	09/15/1994	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-02	04/11/1995	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-02	04/11/1995	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-02	04/18/1996	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-02	04/18/1996	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-02	08/03/1999	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-02	11/09/1999	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-02	02/11/2000	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-02	05/04/2000	1,4-DICHLOROBENZENE	1.0	U	75

I = interference.
J = estimated value; value is between MDL and PQL.
U = compound analyzed for but not detected to level shown.
R = extract reanalyzed without re-extraction.
BOLD = result exceeds the GPS.

Groundwater Protection Standard Analyses
KBA-11-02, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-02	08/11/2000	1,4-DICHLOROBENZENE	unable to sample		
KBA-11-02	11/08/2000	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-02	02/06/2001	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-02	01/12/1993	BENZENE	5.0	U	5
KBA-11-02	01/12/1993	BENZENE	5.0	U	5
KBA-11-02	01/07/1994	BENZENE	1.0	U	5
KBA-11-02	01/07/1994	BENZENE	2.0	UR	5
KBA-11-02	04/09/1994	BENZENE	2.0	U	5
KBA-11-02	09/15/1994	BENZENE	1.0	U	5
KBA-11-02	04/11/1995	BENZENE	0.2	J	5
KBA-11-02	04/18/1996	BENZENE	0.0	U	5
KBA-11-02	08/03/1999	BENZENE	1.0	U	5
KBA-11-02	11/09/1999	BENZENE	1.0	U	5
KBA-11-02	02/11/2000	BENZENE	1.0	U	5
KBA-11-02	08/11/2000	BENZENE	unable to sample		
KBA-11-02	11/08/2000	BENZENE	1.0	U	5
KBA-11-02	02/06/2001	BENZENE	1.0	U	5
KBA-11-02	05/04/2000	BENZENE	1.0	U	5
KBA-11-02	01/12/1993	CHLOROBENZENE	5.0	U	1
KBA-11-02	01/12/1993	CHLOROBENZENE	5.0	U	1
KBA-11-02	01/07/1994	CHLOROBENZENE	1.0	U	1
KBA-11-02	01/07/1994	CHLOROBENZENE	2.0	UR	1
KBA-11-02	04/09/1994	CHLOROBENZENE	2.0	U	1
KBA-11-02	09/15/1994	CHLOROBENZENE	1.0	U	1
KBA-11-02	04/11/1995	CHLOROBENZENE	0.0	U	1
KBA-11-02	04/18/1996	CHLOROBENZENE	0.0	U	1
KBA-11-02	08/03/1999	CHLOROBENZENE	1.0	U	1
KBA-11-02	11/09/1999	CHLOROBENZENE	1.0	U	1
KBA-11-02	02/11/2000	CHLOROBENZENE	1.0	U	1
KBA-11-02	05/04/2000	CHLOROBENZENE	1.0	U	1
KBA-11-02	08/11/2000	CHLOROBENZENE	unable to sample		
KBA-11-02	11/08/2000	CHLOROBENZENE	1.0	U	1
KBA-11-02	02/06/2001	CHLOROBENZENE	1.0	U	1
KBA-11-02	01/12/1993	CHLOROETHANE	10.0	U	1
KBA-11-02	01/12/1993	CHLOROETHANE	10.0	U	1
KBA-11-02	**01/07/1994**	**CHLOROETHANE**	**3.0**		**1**
KBA-11-02	01/07/1994	CHLOROETHANE	2.0	R	1
KBA-11-02	04/09/1994	CHLOROETHANE	2.0	U	1
KBA-11-02	09/15/1994	CHLOROETHANE	1.0	U	1
KBA-11-02	04/11/1995	CHLOROETHANE	0.0	U	1
KBA-11-02	04/18/1996	CHLOROETHANE	0.0	U	1
KBA-11-02	08/03/1999	CHLOROETHANE	1.0	U	1
KBA-11-02	11/09/1999	CHLOROETHANE	1.0	U	1
KBA-11-02	02/11/2000	CHLOROETHANE	1.0	U	1
KBA-11-02	05/04/2000	CHLOROETHANE	1.0	U	1
KBA-11-02	08/11/2000	CHLOROETHANE	unable to sample		
KBA-11-02	11/08/2000	CHLOROETHANE	1.0	U	1
KBA-11-02	02/06/2001	CHLOROETHANE	1.0	U	1
KBA-11-02	01/07/1994	CIS-1,2-DICHLOROETHENE	5.0		70
KBA-11-02	01/07/1994	CIS-1,2-DICHLOROETHENE	5.0	R	70
KBA-11-02	04/09/1994	CIS-1,2-DICHLOROETHENE	10.0		70
KBA-11-02	09/15/1994	CIS-1,2-DICHLOROETHENE	1.0	U	70

I = interference.
J = estimated value; value is between MDL and PQL.
U = compound analyzed for but not detected to level shown.
R = extract reanalyzed without re-extraction.
BOLD = result exceeds the GPS.

Groundwater Protection Standard Analyses
KBA-11-02, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-02	04/11/1995	CIS-1,2-DICHLOROETHENE	0.2	J	70
KBA-11-02	04/18/1996	CIS-1,2-DICHLOROETHENE	0.0	U	70
KBA-11-02	08/03/1999	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-02	11/09/1999	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-02	02/11/2000	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-02	05/04/2000	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-02	08/11/2000	CIS-1,2-DICHLOROETHENE	unable to sample		
KBA-11-02	11/08/2000	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-02	02/06/2001	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-02	05/01/2001	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-02	08/08/2001	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-02	01/12/1993	ETHYLBENZENE	5.0	U	700
KBA-11-02	01/12/1993	ETHYLBENZENE	5.0	U	700
KBA-11-02	01/07/1994	ETHYLBENZENE	1.0	U	700
KBA-11-02	01/07/1994	ETHYLBENZENE	2.0	UR	700
KBA-11-02	04/09/1994	ETHYLBENZENE	2.0	U	700
KBA-11-02	09/15/1994	ETHYLBENZENE	1.0	U	700
KBA-11-02	04/11/1995	ETHYLBENZENE	0.0	U	700
KBA-11-02	04/18/1996	ETHYLBENZENE	0.0	U	700
KBA-11-02	08/03/1999	ETHYLBENZENE	1.0	U	700
KBA-11-02	11/09/1999	ETHYLBENZENE	1.0	U	700
KBA-11-02	02/11/2000	ETHYLBENZENE	1.0	U	700
KBA-11-02	05/04/2000	ETHYLBENZENE	1.0	U	700
KBA-11-02	08/11/2000	ETHYLBENZENE	unable to sample		
KBA-11-02	11/08/2000	ETHYLBENZENE	1.0	U	700
KBA-11-02	02/06/2001	ETHYLBENZENE	1.0	U	700
KBA-11-02	05/01/2001	ETHYLBENZENE	1.0	U	700
KBA-11-02	08/08/2001	ETHYLBENZENE	1.0	U	700
KBA-11-02	01/12/1993	TETRACHLOROETHENE	5.0	U	5
KBA-11-02	01/12/1993	TETRACHLOROETHENE	5.0	U	5
KBA-11-02	01/07/1994	TETRACHLOROETHENE	1.0	U	5
KBA-11-02	01/07/1994	TETRACHLOROETHENE	2.0	UR	5
KBA-11-02	04/09/1994	TETRACHLOROETHENE	2.0	U	5
KBA-11-02	09/15/1994	TETRACHLOROETHENE	1.0	U	5
KBA-11-02	04/11/1995	TETRACHLOROETHENE	0.0	U	5
KBA-11-02	04/18/1996	TETRACHLOROETHENE	0.0	U	5
KBA-11-02	08/03/1999	TETRACHLOROETHENE	3.0	U	5
KBA-11-02	11/09/1999	TETRACHLOROETHENE	3.0	U	5
KBA-11-02	02/11/2000	TETRACHLOROETHENE	1.0	U	5
KBA-11-02	05/04/2000	TETRACHLOROETHENE	1.0	U	5
KBA-11-02	08/11/2000	TETRACHLOROETHENE	unable to sample		
KBA-11-02	11/08/2000	TETRACHLOROETHENE	1.0	U	5
KBA-11-02	05/01/2001	TETRACHLOROETHENE	1.0	U	5
KBA-11-02	08/08/2001	TETRACHLOROETHENE	1.0	U	5
KBA-11-02	02/06/2001	TETRACHLOROETHENE	1.0	U	5
KBA-11-02	01/12/1993	TOLUENE	2.0	J	1000
KBA-11-02	01/12/1993	TOLUENE	2.0	J	1000
KBA-11-02	01/07/1994	TOLUENE	1.0	U	1000
KBA-11-02	01/07/1994	TOLUENE	2.0	UR	1000
KBA-11-02	04/09/1994	TOLUENE	0.7	J	1000
KBA-11-02	09/15/1994	TOLUENE	1.0	U	1000
KBA-11-02	04/11/1995	TOLUENE	0.0	U	1000

I = interference.
J = estimated value; value is between MDL and PQL.
U = compound analyzed for but not detected to level shown.
R = extract reanalyzed without re-extraction.
BOLD = *result exceeds the GPS.*

Groundwater Protection Standard Analyses
KBA-11-02, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-02	04/18/1996	TOLUENE	0.0	U	1000
KBA-11-02	08/03/1999	TOLUENE	1.0	U	1000
KBA-11-02	11/09/1999	TOLUENE	1.0	U	1000
KBA-11-02	02/11/2000	TOLUENE	1.0	U	1000
KBA-11-02	05/04/2000	TOLUENE	1.0	U	1000
KBA-11-02	08/11/2000	TOLUENE	unable to sample		
KBA-11-02	11/08/2000	TOLUENE	1.0	U	1000
KBA-11-02	02/06/2001	TOLUENE	1.0	U	1000
KBA-11-02	05/01/2001	TOLUENE	1.0	U	1000
KBA-11-02	08/08/2001	TOLUENE	1.0	U	1000
KBA-11-02	01/07/1994	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-02	01/07/1994	TRANS-1,2-DICHLOROETHENE	2.0	UR	100
KBA-11-02	04/09/1994	TRANS-1,2-DICHLOROETHENE	2.0	U	100
KBA-11-02	09/15/1994	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-02	04/11/1995	TRANS-1,2-DICHLOROETHENE	0.0	U	100
KBA-11-02	04/18/1996	TRANS-1,2-DICHLOROETHENE	0.0	U	100
KBA-11-02	08/03/1999	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-02	11/09/1999	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-02	02/11/2000	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-02	05/04/2000	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-02	08/11/2000	TRANS-1,2-DICHLOROETHENE	unable to sample		
KBA-11-02	11/08/2000	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-02	02/06/2001	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-02	01/12/1993	TRICHLOROETHENE	5.0	U	5
KBA-11-02	01/12/1993	TRICHLOROETHENE	5.0	U	5
KBA-11-02	01/07/1994	TRICHLOROETHENE	1.0	U	5
KBA-11-02	01/07/1994	TRICHLOROETHENE	2.0	UR	5
KBA-11-02	04/09/1994	TRICHLOROETHENE	2.0	U	5
KBA-11-02	09/15/1994	TRICHLOROETHENE	1.0	U	5
KBA-11-02	04/11/1995	TRICHLOROETHENE	0.2	J	5
KBA-11-02	04/18/1996	TRICHLOROETHENE	0.0	U	5
KBA-11-02	08/03/1999	TRICHLOROETHENE	1.0	U	5
KBA-11-02	11/09/1999	TRICHLOROETHENE	1.0	U	5
KBA-11-02	02/11/2000	TRICHLOROETHENE	1.0	U	5
KBA-11-02	05/04/2000	TRICHLOROETHENE	1.0	U	5
KBA-11-02	08/11/2000	TRICHLOROETHENE	unable to sample		
KBA-11-02	11/08/2000	TRICHLOROETHENE	1.0	U	5
KBA-11-02	02/06/2001	TRICHLOROETHENE	1.0	U	5
KBA-11-02	05/01/2001	TRICHLOROETHENE	1.0	U	5
KBA-11-02	08/08/2001	TRICHLOROETHENE	1.0	U	5
KBA-11-02	**01/12/1993**	**VINYL CHLORIDE**	**100.0**		**2**
KBA-11-02	**01/12/1993**	**VINYL CHLORIDE**	**85.0**		**2**
KBA-11-02	**01/07/1994**	**VINYL CHLORIDE**	**25.0**		**2**
KBA-11-02	01/07/1994	VINYL CHLORIDE	23.0	R	2
KBA-11-02	**04/09/1994**	**VINYL CHLORIDE**	**33.0**		**2**
KBA-11-02	09/15/1994	VINYL CHLORIDE	1.0	U	2
KBA-11-02	**04/11/1995**	**VINYL CHLORIDE**	**2.0**		**2**
KBA-11-02	04/18/1996	VINYL CHLORIDE	0.0	U	2
KBA-11-02	08/03/1999	VINYL CHLORIDE	1.0	U	2
KBA-11-02	11/09/1999	VINYL CHLORIDE	1.0	U	2
KBA-11-02	02/11/2000	VINYL CHLORIDE	1.0	U	2
KBA-11-02	05/04/2000	VINYL CHLORIDE	1.0	U	2

I = interference.
J = estimated value; value is between MDL and PQL.
U = compound analyzed for but not detected to level shown.
R = extract reanalyzed without re-extraction.
BOLD = result exceeds the GPS.

Groundwater Protection Standard Analyses
KBA-11-02, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-02	08/11/2000	VINYL CHLORIDE	unable to sample		
KBA-11-02	11/08/2000	VINYL CHLORIDE	1.0	U	2
KBA-11-02	02/06/2001	VINYL CHLORIDE	1.0	U	2
KBA-11-02	05/01/2001	VINYL CHLORIDE	1.0	U	2
KBA-11-02	08/08/2001	VINYL CHLORIDE	1.0	U	2
KBA-11-02	01/12/1993	XYLENES, TOTAL	2.0	J	10000
KBA-11-02	01/12/1993	XYLENES, TOTAL	2.0	J	10000
KBA-11-02	01/07/1994	XYLENES, TOTAL	1.0	U	10000
KBA-11-02	01/07/1994	XYLENES, TOTAL	2.0	UR	10000
KBA-11-02	04/09/1994	XYLENES, TOTAL	2.0	U	10000
KBA-11-02	09/15/1994	XYLENES, TOTAL	1.0	U	10000
KBA-11-02	04/11/1995	XYLENES, TOTAL	0.2	J	10000
KBA-11-02	04/18/1996	XYLENES, TOTAL	0.0	U	10000
KBA-11-02	08/03/1999	XYLENES, TOTAL	3.0	U	10000
KBA-11-02	11/09/1999	XYLENES, TOTAL	3.0	U	10000
KBA-11-02	02/11/2000	XYLENES, TOTAL	3.0	U	10000
KBA-11-02	05/04/2000	XYLENES, TOTAL	3.0	U	10000
KBA-11-02	08/11/2000	XYLENES, TOTAL	unable to sample		
KBA-11-02	11/08/2000	XYLENES, TOTAL	3.0	U	10000
KBA-11-02	02/06/2001	XYLENES, TOTAL	3.0	U	10000
KBA-11-02	05/01/2001	XYLENES, TOTAL	3.0	U	10000
KBA-11-02	08/08/2001	XYLENES, TOTAL	3.0	U	10000

I = interference.
J = estimated value; value is between MDL and PQL.
U = compound analyzed for but not detected to level shown.
R = extract reanalyzed without re-extraction.
BOLD = result exceeds the GPS.

Groundwater Protection Standard Analyses
KBA-11-10B, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-10B	01/08/1994	1,1-DICHLOROETHANE	0.8	J	1
KBA-11-10B	04/05/1994	1,1-DICHLOROETHANE	0.6	J	1
KBA-11-10B	09/16/1994	1,1-DICHLOROETHANE	0.9	J	1
KBA-11-10B	04/12/1995	1,1-DICHLOROETHANE	0.7	J	1
KBA-11-10B	04/18/1996	1,1-DICHLOROETHANE	0.0	U	1
KBA-11-10B	05/29/1996	1,1-DICHLOROETHANE	0.0	U	1
KBA-11-10B	06/13/1996	1,1-DICHLOROETHANE	0.0	U	1
KBA-11-10B	07/17/1996	1,1-DICHLOROETHANE	0.0	U	1
KBA-11-10B	10/22/1996	1,1-DICHLOROETHANE	0.5	J	1
KBA-11-10B	08/02/1999	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-10B	08/11/2000	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-10B	01/08/1994	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-10B	04/05/1994	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-10B	09/16/1994	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-10B	04/12/1995	1,1-DICHLOROETHENE	0.0	U	7
KBA-11-10B	04/18/1996	1,1-DICHLOROETHENE	0.0	U	7
KBA-11-10B	05/29/1996	1,1-DICHLOROETHENE	0.0	U	7
KBA-11-10B	06/13/1996	1,1-DICHLOROETHENE	0.0	U	7
KBA-11-10B	07/17/1996	1,1-DICHLOROETHENE	0.0	U	7
KBA-11-10B	10/22/1996	1,1-DICHLOROETHENE	0.0	U	7
KBA-11-10B	08/02/1999	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-10B	08/11/2000	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-10B	08/09/2001	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-10B	08/02/1999	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-10B	08/11/2000	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-10B	09/16/1994	1,4-DICHLOROBENZENE	1.0	J	75
KBA-11-10B	09/16/1994	1,4-DICHLOROBENZENE	2.0		75
KBA-11-10B	04/12/1995	1,4-DICHLOROBENZENE	0.0		75
KBA-11-10B	04/12/1995	1,4-DICHLOROBENZENE	0.0		75
KBA-11-10B	04/18/1996	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-10B	04/18/1996	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-10B	05/29/1996	1,4-DICHLOROBENZENE	1.0		75
KBA-11-10B	05/29/1996	1,4-DICHLOROBENZENE	1.0		75
KBA-11-10B	06/13/1996	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-10B	06/13/1996	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-10B	08/02/1999	1,4-DICHLOROBENZENE	1.5	U	75
KBA-11-10B	08/11/2000	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-10B	08/09/2001	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-10B	01/08/1994	BENZENE	2.0		5
KBA-11-10B	04/05/1994	BENZENE	1.0		5
KBA-11-10B	09/16/1994	BENZENE	2.0		5
KBA-11-10B	04/12/1995	BENZENE	2.0		5
KBA-11-10B	04/18/1996	BENZENE	0.0	U	5
KBA-11-10B	05/29/1996	BENZENE	1.0		5
KBA-11-10B	06/13/1996	BENZENE	1.0		5
KBA-11-10B	07/17/1996	BENZENE	4.0	J	5
KBA-11-10B	10/22/1996	BENZENE	2.1		5
KBA-11-10B	08/02/1999	BENZENE	1.6		5
KBA-11-10B	08/11/2000	BENZENE	1.0		5

I = interference
J = estimated value; value is between MDL and PQL.
U = compound was analyzed for but not detected to level shown.
R = extract was reanalyzed without restraction.
BOLD = result exceeds the GPS.

Groundwater Protection Standard Analyses
KBA-11-10B, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-10B	08/09/2001	BENZENE	0.6	J	5
KBA-11-10B	**01/08/1994**	**CHLOROBENZENE**	**2.0**		1
KBA-11-10B	04/05/1994	CHLOROBENZENE	1.0		1
KBA-11-10B	09/16/1994	CHLOROBENZENE	1.0		1
KBA-11-10B	04/12/1995	CHLOROBENZENE	0.0	U	1

I = interference
J = estimated value; value is between MDL and PQL.
U = compound was analyzed for but not detected to level shown.
R = extract was reanalyzed without restraction.
BOLD = result exceeds the GPS.

Groundwater Protection Standard Analyses
KBA-11-10B, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-10B	04/18/1996	CHLOROBENZENE	0.0	U	1
KBA-11-10B	05/29/1996	CHLOROBENZENE	1.0		1
KBA-11-10B	06/13/1996	CHLOROBENZENE	1.0		1
KBA-11-10B	**07/17/1996**	**CHLOROBENZENE**	**2.0**	**J**	**1**
KBA-11-10B	10/22/1996	CHLOROBENZENE	0.0	U	1
KBA-11-10B	**08/02/1999**	**CHLOROBENZENE**	**2.5**		**1**
KBA-11-10B	08/11/2000	CHLOROBENZENE	1.0		1
KBA-11-10B	08/09/2001	CHLOROBENZENE	1.2		1
KBA-11-10B	01/08/1994	CHLOROETHANE	1.0	U	1
KBA-11-10B	04/05/1994	CHLOROETHANE	1.0	U	1
KBA-11-10B	09/16/1994	CHLOROETHANE	1.0	U	1
KBA-11-10B	04/12/1995	CHLOROETHANE	0.0	U	1
KBA-11-10B	04/18/1996	CHLOROETHANE	0.0	U	1
KBA-11-10B	05/29/1996	CHLOROETHANE	0.0	U	1
KBA-11-10B	06/13/1996	CHLOROETHANE	0.0	U	1
KBA-11-10B	07/17/1996	CHLOROETHANE	0.0	U	1
KBA-11-10B	10/22/1996	CHLOROETHANE	0.0	U	1
KBA-11-10B	08/02/1999	CHLOROETHANE	2.0	U	1
KBA-11-10B	08/11/2000	CHLOROETHANE	1.0	U	1
KBA-11-10B	01/08/1994	CIS-1,2-DICHLOROETHENE	4.0		70
KBA-11-10B	04/05/1994	CIS-1,2-DICHLOROETHENE	2.0		70
KBA-11-10B	09/16/1994	CIS-1,2-DICHLOROETHENE	2.0		70
KBA-11-10B	04/12/1995	CIS-1,2-DICHLOROETHENE	2.0		70
KBA-11-10B	04/18/1996	CIS-1,2-DICHLOROETHENE	0.0	U	70
KBA-11-10B	05/29/1996	CIS-1,2-DICHLOROETHENE	2.0		70
KBA-11-10B	06/13/1996	CIS-1,2-DICHLOROETHENE	1.0		70
KBA-11-10B	07/17/1996	CIS-1,2-DICHLOROETHENE	3.0	J	70
KBA-11-10B	10/22/1996	CIS-1,2-DICHLOROETHENE	2.5		70
KBA-11-10B	08/02/1999	CIS-1,2-DICHLOROETHENE	1.6	I	70
KBA-11-10B	08/11/2000	CIS-1,2-DICHLOROETHENE	1.0	I	70
KBA-11-10B	08/09/2001	CIS-1,2-DICHLOROETHENE	1.0	I	70
KBA-11-10B	01/08/1994	ETHYLBENZENE	19.0		700
KBA-11-10B	04/05/1994	ETHYLBENZENE	12.0		700
KBA-11-10B	09/16/1994	ETHYLBENZENE	12.0		700
KBA-11-10B	04/12/1995	ETHYLBENZENE	12.0		700
KBA-11-10B	04/18/1996	ETHYLBENZENE	0.0	U	700
KBA-11-10B	05/29/1996	ETHYLBENZENE	7.0		700
KBA-11-10B	06/13/1996	ETHYLBENZENE	6.0		700
KBA-11-10B	07/17/1996	ETHYLBENZENE	7.0	J	700
KBA-11-10B	10/22/1996	ETHYLBENZENE	8.1		700
KBA-11-10B	08/02/1999	ETHYLBENZENE	10.0		700
KBA-11-10B	08/11/2000	ETHYLBENZENE	5.0		700
KBA-11-10B	08/09/2001	ETHYLBENZENE	2.5		700
KBA-11-10B	01/08/1994	TETRACHLOROETHENE	1.0	U	5
KBA-11-10B	04/05/1994	TETRACHLOROETHENE	1.0	U	5
KBA-11-10B	09/16/1994	TETRACHLOROETHENE	1.0	U	5
KBA-11-10B	04/12/1995	TETRACHLOROETHENE	0.1	J	5
KBA-11-10B	04/18/1996	TETRACHLOROETHENE	0.0	U	5
KBA-11-10B	05/29/1996	TETRACHLOROETHENE	0.0	U	5

I = interference
J = estimated value; value is between MDL and PQL.
U = compound was analyzed for but not detected to level shown.
R = extract was reanalyzed without restraction.
BOLD = result exceeds the GPS.

Groundwater Protection Standard Analyses
KBA-11-10B, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-10B	06/13/1996	TETRACHLOROETHENE	0.0	U	5
KBA-11-10B	07/17/1996	TETRACHLOROETHENE	0.0	U	5
KBA-11-10B	10/22/1996	TETRACHLOROETHENE	0.0	U	5
KBA-11-10B	08/02/1999	TETRACHLOROETHENE	3.0	U	5
KBA-11-10B	08/11/2000	TETRACHLOROETHENE	1.0	U	5
KBA-11-10B	08/09/2001	TETRACHLOROETHENE	1.0	U	5

I = interference
J = estimated value; value is between MDL and PQL.
U = compound was analyzed for but not detected to level shown.
R = extract was reanalyzed without restraction.
BOLD = result exceeds the GPS.

Groundwater Protection Standard Analyses
KBA-11-10B, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-10B	01/08/1994	TOLUENE	0.5	J	1000
KBA-11-10B	04/05/1994	TOLUENE	0.7	J	1000
KBA-11-10B	09/16/1994	TOLUENE	1.0	U	1000
KBA-11-10B	04/12/1995	TOLUENE	0.0	U	1000
KBA-11-10B	04/18/1996	TOLUENE	0.0	U	1000
KBA-11-10B	05/29/1996	TOLUENE	0.0	U	1000
KBA-11-10B	06/13/1996	TOLUENE	0.0	U	1000
KBA-11-10B	07/17/1996	TOLUENE	0.0	U	1000
KBA-11-10B	10/22/1996	TOLUENE	0.2	J	1000
KBA-11-10B	08/02/1999	TOLUENE	1.0	U	1000
KBA-11-10B	08/11/2000	TOLUENE	1.0	U	1000
KBA-11-10B	08/09/2001	TOLUENE	1.0	U	1000
KBA-11-10B	01/08/1994	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-10B	04/05/1994	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-10B	09/16/1994	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-10B	04/12/1995	TRANS-1,2-DICHLOROETHENE	0.0	U	100
KBA-11-10B	04/18/1996	TRANS-1,2-DICHLOROETHENE	0.0	U	100
KBA-11-10B	05/29/1996	TRANS-1,2-DICHLOROETHENE	0.0	U	100
KBA-11-10B	06/13/1996	TRANS-1,2-DICHLOROETHENE	0.0	U	100
KBA-11-10B	07/17/1996	TRANS-1,2-DICHLOROETHENE	0.0	U	100
KBA-11-10B	10/22/1996	TRANS-1,2-DICHLOROETHENE	0.0	U	100
KBA-11-10B	08/02/1999	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-10B	08/11/2000	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-10B	08/09/2001	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-10B	01/08/1994	TRICHLOROETHENE	1.0	U	5
KBA-11-10B	04/05/1994	TRICHLOROETHENE	1.0	U	5
KBA-11-10B	09/16/1994	TRICHLOROETHENE	1.0	U	5
KBA-11-10B	04/12/1995	TRICHLOROETHENE	0.2	J	5
KBA-11-10B	04/18/1996	TRICHLOROETHENE	0.0	U	5
KBA-11-10B	05/29/1996	TRICHLOROETHENE	0.0	U	5
KBA-11-10B	06/13/1996	TRICHLOROETHENE	0.0	U	5
KBA-11-10B	07/17/1996	TRICHLOROETHENE	2.0	J	5
KBA-11-10B	10/22/1996	TRICHLOROETHENE	0.0	U	5
KBA-11-10B	08/02/1999	TRICHLOROETHENE	1.0	U	5
KBA-11-10B	08/11/2000	TRICHLOROETHENE	1.0	U	5
KBA-11-10B	08/09/2001	TRICHLOROETHENE	1.0	U	5
KBA-11-10B	01/08/1994	VINYL CHLORIDE	1.0	U	2
KBA-11-10B	04/05/1994	VINYL CHLORIDE	1.0	U	2
KBA-11-10B	09/16/1994	VINYL CHLORIDE	1.0	U	2
KBA-11-10B	04/12/1995	VINYL CHLORIDE	0.4	J	2
KBA-11-10B	04/18/1996	VINYL CHLORIDE	0.0	U	2
KBA-11-10B	05/29/1996	VINYL CHLORIDE	0.0	U	2
KBA-11-10B	06/13/1996	VINYL CHLORIDE	0.0	U	2
KBA-11-10B	07/17/1996	VINYL CHLORIDE	0.0	U	2
KBA-11-10B	10/22/1996	VINYL CHLORIDE	0.0	U	2
KBA-11-10B	08/02/1999	VINYL CHLORIDE	1.0	U	2
KBA-11-10B	08/11/2000	VINYL CHLORIDE	1.0	U	2
KBA-11-10B	08/09/2001	VINYL CHLORIDE	1.0	U	2
KBA-11-10B	01/08/1994	XYLENES, TOTAL	0.4	J	10000
KBA-11-10B	04/05/1994	XYLENES, TOTAL	3.0		10000

I = interference
J = estimated value; value is between MDL and PQL.
U = compound was analyzed for but not detected to level shown.
R = extract was reanalyzed without restraction.
BOLD = result exceeds the GPS.

Groundwater Protection Standard Analyses
KBA-11-10B, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-10B	09/16/1994	XYLENES, TOTAL	0.8	J	10000
KBA-11-10B	04/12/1995	XYLENES, TOTAL	2.0		10000
KBA-11-10B	04/18/1996	XYLENES, TOTAL	0.0	U	10000
KBA-11-10B	07/17/1996	XYLENES, TOTAL	0.0	U	10000
KBA-11-10B	10/22/1996	XYLENES, TOTAL	0.0	U	10000
KBA-11-10B	08/02/1999	XYLENES, TOTAL	3.0	U	10000
KBA-11-10B	08/11/2000	XYLENES, TOTAL	3.0	U	10000
KBA-11-10B	08/09/2001	XYLENES, TOTAL	3.0	U	10000

I = interference
J = estimated value; value is between MDL and PQL.
U = compound was analyzed for but not detected to level shown.
R = extract was reanalyzed without restraction.
BOLD = result exceeds the GPS.

KBA-11-11A	01/04/1994	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-11A	04/05/1994	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-11A	04/05/1994	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-11A	09/14/1994	1,1-DICHLOROETHANE	1.0		1
KBA-11-11A	09/14/1994	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-11A	09/14/1994	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-11A	04/16/1996	1,1-DICHLOROETHANE	0.0	U	1
KBA-11-11A	08/02/1999	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-11A	08/10/2000	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-11A	08/08/2001	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-11A	01/04/1994	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-11A	04/05/1994	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-11A	04/05/1994	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-11A	09/14/1994	1,1-DICHLOROETHENE	1.0		7
KBA-11-11A	09/14/1994	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-11A	09/14/1994	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-11A	04/16/1996	1,1-DICHLOROETHENE	0.0	U	7
KBA-11-11A	08/02/1999	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-11A	08/08/2000	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-11A	08/09/2001	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-11A	08/02/1999	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-11A	08/10/2000	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-11A	08/08/2001	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-11A	09/14/1994	1,4-DICHLOROBENZENE	1.0		75
KBA-11-11A	09/14/1994	1,4-DICHLOROBENZENE	10.0	U	75
KBA-11-11A	09/14/1994	1,4-DICHLOROBENZENE	10.0	U	75
KBA-11-11A	09/14/1994	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-11A	09/14/1994	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-11A	04/16/1996	1,4-DICHLOROBENZENE	0.0		75
KBA-11-11A	04/16/1996	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-11A	08/02/1999	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-11A	08/11/2000	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-11A	08/08/2001	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-11A	01/04/1994	BENZENE	1.0	U	5
KBA-11-11A	04/05/1994	BENZENE	1.0	U	5
KBA-11-11A	04/05/1994	BENZENE	1.0	U	5
KBA-11-11A	09/14/1994	BENZENE	1.0	U	5
KBA-11-11A	09/14/1994	BENZENE	1.0	U	5
KBA-11-11A	04/16/1996	BENZENE	0.0	U	5
KBA-11-11A	08/02/1999	BENZENE	1.0	U	5
KBA-11-11A	08/11/2000	BENZENE	1.0	U	5
KBA-11-11A	08/08/2001	BENZENE	1.0	U	5
KBA-11-11A	01/04/1994	CHLOROBENZENE	1.0	U	1
KBA-11-11A	04/05/1994	CHLOROBENZENE	1.0	U	1
KBA-11-11A	04/05/1994	CHLOROBENZENE	1.0	U	1
KBA-11-11A	09/14/1994	CHLOROBENZENE	1.0		1
KBA-11-11A	09/14/1994	CHLOROBENZENE	1.0	U	1
KBA-11-11A	09/14/1994	CHLOROBENZENE	1.0	U	1
KBA-11-11A	04/16/1996	CHLOROBENZENE	0.0	U	1
KBA-11-11A	08/02/1999	CHLOROBENZENE	1.0	U	1
KBA-11-11A	08/11/2000	CHLOROBENZENE	1.0	U	1
KBA-11-11A	08/08/2001	CHLOROBENZENE	1.0	U	1
KBA-11-11A	01/04/1994	CHLOROETHANE	1.0	U	1

I = interference.
J = estimated value; value is between MDL and PQL.
U = compound was analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = result exceeds the GPS.

KBA-11-11A	01/04/1994	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-11A	04/05/1994	CHLOROETHANE	1.0	U	1
KBA-11-11A	04/05/1994	CHLOROETHANE	1.0	U	1
KBA-11-11A	09/14/1994	CHLOROETHANE	1.0		1
KBA-11-11A	09/14/1994	CHLOROETHANE	1.0	U	1
KBA-11-11A	09/14/1994	CHLOROETHANE	1.0	U	1
KBA-11-11A	04/16/1996	CHLOROETHANE	0.0	U	1
KBA-11-11A	08/02/1999	CHLOROETHANE	2.0	U	1
KBA-11-11A	08/11/2000	CHLOROETHANE	2.0	U	1
KBA-11-11A	08/08/2001	CHLOROETHANE	1.0	U	1
KBA-11-11A	01/04/1994	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-11A	04/05/1994	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-11A	04/05/1994	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-11A	09/14/1994	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-11A	09/14/1994	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-11A	04/16/1996	CIS-1,2-DICHLOROETHENE	0.0	U	70
KBA-11-11A	08/02/1999	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-11A	08/11/2000	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-11A	08/08/2001	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-11A	01/04/1994	ETHYLBENZENE	1.0	U	700
KBA-11-11A	04/05/1994	ETHYLBENZENE	1.0	U	700
KBA-11-11A	04/05/1994	ETHYLBENZENE	1.0	U	700
KBA-11-11A	09/14/1994	ETHYLBENZENE	1.0	U	700
KBA-11-11A	09/14/1994	ETHYLBENZENE	1.0	U	700
KBA-11-11A	04/16/1996	ETHYLBENZENE	0.0	U	700
KBA-11-11A	08/02/1999	ETHYLBENZENE	1.0	U	700
KBA-11-11A	08/11/2000	ETHYLBENZENE	1.0	U	700
KBA-11-11A	08/08/2001	ETHYLBENZENE	1.0	U	700
LOCATION	**SAMPLE DATE**	**PARAMETER**	**RESULT (ug/L)**	**Q**	**CRITERIA (ug/L)**
KBA-11-11A	01/04/1994	TETRACHLOROETHENE	1.0	U	5
KBA-11-11A	04/05/1994	TETRACHLOROETHENE	1.0	U	5
KBA-11-11A	04/05/1994	TETRACHLOROETHENE	1.0	U	5
KBA-11-11A	09/14/1994	TETRACHLOROETHENE	1.0	U	5
KBA-11-11A	09/14/1994	TETRACHLOROETHENE	1.0	U	5
KBA-11-11A	04/16/1996	TETRACHLOROETHENE	0.0	U	5
KBA-11-11A	08/02/1999	TETRACHLOROETHENE	3.0	U	5
KBA-11-11A	08/11/2000	TETRACHLOROETHENE	1.0	U	5
KBA-11-11A	08/08/2001	TETRACHLOROETHENE	1.0	U	5
KBA-11-11A	01/04/1994	TOLUENE	1.0	U	1000
KBA-11-11A	04/05/1994	TOLUENE	1.0	U	1000
KBA-11-11A	04/05/1994	TOLUENE	1.0	U	1000
KBA-11-11A	09/14/1994	TOLUENE	1.0	U	1000
KBA-11-11A	09/14/1994	TOLUENE	1.0	U	1000
KBA-11-11A	04/16/1996	TOLUENE	0.0	U	1000
KBA-11-11A	08/02/1999	TOLUENE	1.0	U	1000
KBA-11-11A	08/11/2000	TOLUENE	1.0	U	1000
KBA-11-11A	08/08/2001	TOLUENE	1.0	U	1000
KBA-11-11A	01/04/1994	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-11A	04/05/1994	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-11A	04/05/1994	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-11A	09/14/1994	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-11A	09/14/1994	TRANS-1,2-DICHLOROETHENE	1.0	U	100

I = interference.
J = estimated value; value is between MDL and PQL.
U = compound was analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = result exceeds the GPS.

KBA-11-11A	01/04/1994	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-11A	04/16/1996	TRANS-1,2-DICHLOROETHENE	0.0	U	100
KBA-11-11A	08/02/1999	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-11A	08/11/2000	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-11A	08/08/2001	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-11A	01/04/1994	TRICHLOROETHENE	1.0	U	5
KBA-11-11A	04/05/1994	TRICHLOROETHENE	1.0	U	5
KBA-11-11A	04/05/1994	TRICHLOROETHENE	1.0	U	5
KBA-11-11A	09/14/1994	TRICHLOROETHENE	1.0	U	5
KBA-11-11A	09/14/1994	TRICHLOROETHENE	1.0	U	5
KBA-11-11A	04/16/1996	TRICHLOROETHENE	0.0	U	5
KBA-11-11A	08/02/1999	TRICHLOROETHENE	1.0	U	5
KBA-11-11A	08/11/2000	TRICHLOROETHENE	1.0	U	5
KBA-11-11A	08/08/2001	TRICHLOROETHENE	1.0	U	5
KBA-11-11A	01/04/1994	VINYL CHLORIDE	1.0	U	2
KBA-11-11A	04/05/1994	VINYL CHLORIDE	1.0	U	2
KBA-11-11A	04/05/1994	VINYL CHLORIDE	1.0	U	2
KBA-11-11A	09/14/1994	VINYL CHLORIDE	1.0	U	2
KBA-11-11A	09/14/1994	VINYL CHLORIDE	1.0	U	2
KBA-11-11A	04/16/1996	VINYL CHLORIDE	0.0	U	2
KBA-11-11A	08/02/1999	VINYL CHLORIDE	1.0	U	2
KBA-11-11A	08/11/2000	VINYL CHLORIDE	1.0	U	2
KBA-11-11A	08/08/2001	VINYL CHLORIDE	1.0	U	2
KBA-11-11A	01/04/1994	XYLENES, TOTAL	1.0	U	10000
KBA-11-11A	04/05/1994	XYLENES, TOTAL	1.0	U	10000
KBA-11-11A	04/05/1994	XYLENES, TOTAL	1.0	U	10000
KBA-11-11A	09/14/1994	XYLENES, TOTAL	1.0	U	10000
KBA-11-11A	09/14/1994	XYLENES, TOTAL	1.0	U	10000
KBA-11-11A	04/16/1996	XYLENES, TOTAL	0.0	U	10000
KBA-11-11A	08/02/1999	XYLENES, TOTAL	3.0	U	10000
KBA-11-11A	08/11/2000	XYLENES, TOTAL	3.0	U	10000
KBA-11-11A	08/08/2001	XYLENES, TOTAL	3.0	U	10000

I = interference.
J = estimated value; value is between MDL and PQL.
U = compound was analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = result exceeds the GPS.

Groundwater Protection Standard Analyses
KBA-11-13A, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-13A	**01/07/1994**	**1,1-DICHLOROETHANE**	**100.0**	**U**	**1**
KBA-11-13A	**04/09/1994**	**1,1-DICHLOROETHANE**	**83.0**	**U**	**1**
KBA-11-13A	**09/15/1994**	**1,1-DICHLOROETHANE**	**50.0**	**U**	**1**
KBA-11-13A	**04/12/1995**	**1,1-DICHLOROETHANE**	**3.0**		**1**
KBA-11-13A	**04/18/1996**	**1,1-DICHLOROETHANE**	**2.0**		**1**
KBA-11-13A	**05/29/1996**	**1,1-DICHLOROETHANE**	**1.0**		**1**
KBA-11-13A	05/31/1996	1,1-DICHLOROETHANE	0.0	U	1
KBA-11-13A	06/05/1996	1,1-DICHLOROETHANE	0.0	U	1
KBA-11-13A	06/08/1996	1,1-DICHLOROETHANE	0.0	U	1
KBA-11-13A	06/13/1996	1,1-DICHLOROETHANE	0.0	U	1
KBA-11-13A	06/28/1996	1,1-DICHLOROETHANE	0.0	U	1
KBA-11-13A	07/17/1996	1,1-DICHLOROETHANE	0.0	U	1
KBA-11-13A	10/24/1996	1,1-DICHLOROETHANE	0.0	U	1
KBA-11-13A	09/18/1997	1,1-DICHLOROETHANE	0.0	U	1
KBA-11-13A	09/18/1997	1,1-DICHLOROETHANE	0.0	U	1
KBA-11-13A	08/03/1999	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-13A	11/09/1999	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-13A	02/11/2000	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-13A	05/04/2000	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-13A	08/11/2000	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-13A	11/08/2000	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-13A	02/08/2001	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-13A	05/03/2001	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-13A	08/08/2001	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-13A	**01/07/1994**	**1,1-DICHLOROETHENE**	**100.0**	**U**	**7**
KBA-11-13A	**04/09/1994**	**1,1-DICHLOROETHENE**	**83.0**	**U**	**7**
KBA-11-13A	**09/15/1994**	**1,1-DICHLOROETHENE**	**50.0**	**U**	**7**
KBA-11-13A	04/12/1995	1,1-DICHLOROETHENE	0.4	J	7
KBA-11-13A	04/18/1996	1,1-DICHLOROETHENE	0.0	U	7
KBA-11-13A	05/29/1996	1,1-DICHLOROETHENE	0.0	U	7
KBA-11-13A	05/31/1996	1,1-DICHLOROETHENE	0.0	U	7
KBA-11-13A	06/05/1996	1,1-DICHLOROETHENE	0.0	U	7
KBA-11-13A	06/08/1996	1,1-DICHLOROETHENE	0.0	U	7
KBA-11-13A	06/13/1996	1,1-DICHLOROETHENE	0.0	U	7
KBA-11-13A	06/28/1996	1,1-DICHLOROETHENE	0.0	U	7
KBA-11-13A	07/17/1996	1,1-DICHLOROETHENE	0.0	U	7
KBA-11-13A	10/24/1996	1,1-DICHLOROETHENE	0.0	U	7
KBA-11-13A	09/18/1997	1,1-DICHLOROETHENE	0.0	U	7
KBA-11-13A	08/03/1999	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-13A	11/09/1999	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-13A	02/11/2000	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-13A	08/11/2000	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-13A	02/08/2001	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-13A	08/03/1999	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-13A	11/09/1999	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-13A	02/11/2000	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-13A	05/04/2000	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-13A	08/11/2000	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-13A	11/08/2000	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-13A	05/03/2001	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-13A	08/08/2001	1,2-DICHLOROETHANE	1.0	U	5

I = interference.
J = estimated value; value is between the MDL and PQL.
U = compound analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = exceeds the GPS.

Groundwater Protection Standard Analyses
KBA-11-13A, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-13A	02/08/2001	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-13A	09/15/1994	1,4-DICHLOROBENZENE	10.0	U	75
KBA-11-13A	09/15/1994	1,4-DICHLOROBENZENE	20.0	R	75
KBA-11-13A	09/15/1994	1,4-DICHLOROBENZENE	50.0	U	75
KBA-11-13A	04/12/1995	1,4-DICHLOROBENZENE	1.0	J	75
KBA-11-13A	04/12/1995	1,4-DICHLOROBENZENE	1.0	J	75
KBA-11-13A	04/18/1996	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-13A	04/18/1996	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-13A	05/29/1996	1,4-DICHLOROBENZENE	2.0		75
KBA-11-13A	05/29/1996	1,4-DICHLOROBENZENE	2.0		75
KBA-11-13A	05/31/1996	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-13A	05/31/1996	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-13A	06/05/1996	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-13A	06/05/1996	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-13A	06/08/1996	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-13A	06/08/1996	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-13A	06/13/1996	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-13A	06/13/1996	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-13A	06/28/1996	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-13A	06/28/1996	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-13A	09/18/1997	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-13A	09/18/1997	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-13A	08/03/1999	1,4-DICHLOROBENZENE	4.0		75
KBA-11-13A	11/09/1999	1,4-DICHLOROBENZENE	5.2		75
KBA-11-13A	02/11/2000	1,4-DICHLOROBENZENE	4.0		75
KBA-11-13A	05/04/2000	1,4-DICHLOROBENZENE	3.0		75
KBA-11-13A	08/11/2000	1,4-DICHLOROBENZENE	3.0		75
KBA-11-13A	11/08/2000	1,4-DICHLOROBENZENE	2.0		75
KBA-11-13A	02/08/2001	1,4-DICHLOROBENZENE	1.0U		75
KBA-11-13A	05/03/2001	1,4-DICHLOROBENZENE	1.4		75
KBA-11-13A	08/08/2001	1,4-DICHLOROBENZENE	1.4		75
KBA-11-13A	**01/07/1994**	**BENZENE**	**100.0**	**U**	**5**
KBA-11-13A	**04/09/1994**	**BENZENE**	**83.0**	**U**	**5**
KBA-11-13A	**09/15/1994**	**BENZENE**	**50.0**	**U**	**5**
KBA-11-13A	04/12/1995	BENZENE	4.0		5
KBA-11-13A	04/18/1996	BENZENE	0.0	U	5
KBA-11-13A	05/29/1996	BENZENE	3.0		5
KBA-11-13A	05/31/1996	BENZENE	0.0	U	5
KBA-11-13A	06/05/1996	BENZENE	0.0	U	5
KBA-11-13A	06/08/1996	BENZENE	0.0	U	5
KBA-11-13A	06/13/1996	BENZENE	0.0	U	5
KBA-11-13A	06/28/1996	BENZENE	0.0	U	5
KBA-11-13A	07/17/1996	BENZENE	0.0	U	5
KBA-11-13A	10/24/1996	BENZENE	0.0	U	5
KBA-11-13A	09/18/1997	BENZENE	0.0	U	5
KBA-11-13A	09/18/1997	BENZENE	0.0	U	5
KBA-11-13A	08/03/1999	BENZENE	1.1	I	5
KBA-11-13A	11/09/1999	BENZENE	1.3	I	5
KBA-11-13A	02/11/2000	BENZENE	2.0		5
KBA-11-13A	05/04/2000	BENZENE	2.0		5
KBA-11-13A	08/11/2000	BENZENE	1.0	U	5

I = interference.
J = estimated value; value is between the MDL and PQL.
U = compound analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = exceeds the GPS.

Groundwater Protection Standard Analyses
KBA-11-13A, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-13A	11/08/2000	BENZENE	1.0	U	5
KBA-11-13A	02/08/2001	BENZENE	1.0	U	5
KBA-11-13A	05/03/2001	BENZENE	0.3	U	5
KBA-11-13A	08/08/2001	BENZENE	0.3	U	5
KBA-11-13A	**01/07/1994**	**CHLOROBENZENE**	**100.0**	**U**	**1**
KBA-11-13A	**04/09/1994**	**CHLOROBENZENE**	**83.0**	**U**	**1**
KBA-11-13A	**09/15/1994**	**CHLOROBENZENE**	**50.0**	**U**	**1**
KBA-11-13A	**04/12/1995**	**CHLOROBENZENE**	**2.0**		**1**
KBA-11-13A	04/18/1996	CHLOROBENZENE	0.0	U	1
KBA-11-13A	**05/29/1996**	**CHLOROBENZENE**	**5.0**		**1**
KBA-11-13A	05/31/1996	CHLOROBENZENE	0.0	U	1
KBA-11-13A	06/05/1996	CHLOROBENZENE	0.0	U	1
KBA-11-13A	06/08/1996	CHLOROBENZENE	0.0	U	1
KBA-11-13A	06/13/1996	CHLOROBENZENE	0.0	U	1
KBA-11-13A	06/28/1996	CHLOROBENZENE	0.0	U	1
KBA-11-13A	07/17/1996	CHLOROBENZENE	0.0	U	1
KBA-11-13A	**10/24/1996**	**CHLOROBENZENE**	**5.0**	**J**	**1**
KBA-11-13A	09/18/1997	CHLOROBENZENE	0.0	U	1
KBA-11-13A	**08/03/1999**	**CHLOROBENZENE**	**6.2**		**1**
KBA-11-13A	**11/09/1999**	**CHLOROBENZENE**	**8.2**		**1**
KBA-11-13A	**02/11/2000**	**CHLOROBENZENE**	**6.0**		**1**
KBA-11-13A	**05/04/2000**	**CHLOROBENZENE**	**5.0**		**1**
KBA-11-13A	**08/11/2000**	**CHLOROBENZENE**	**5.0**		**1**
KBA-11-13A	**11/08/2000**	**CHLOROBENZENE**	**5.0**		**1**
KBA-11-13A	**02/08/2001**	**CHLOROBENZENE**	**3.0**		**1**
KBA-11-13A	**05/03/2001**	**CHLOROBENZENE**	**2.4**		**1**
KBA-11-13A	**01/07/1994**	**CHLOROETHANE**	**200.0**	**U**	**1**
KBA-11-13A	**04/09/1994**	**CHLOROETHANE**	**170.0**	**U**	**1**
KBA-11-13A	**09/15/1994**	**CHLOROETHANE**	**50.0**	**U**	**1**
KBA-11-13A	04/12/1995	CHLOROETHANE	0.0	U	1
KBA-11-13A	04/18/1996	CHLOROETHANE	0.0	U	1
KBA-11-13A	05/29/1996	CHLOROETHANE	0.0	U	1
KBA-11-13A	05/31/1996	CHLOROETHANE	0.0	U	1
KBA-11-13A	06/05/1996	CHLOROETHANE	0.0	U	1
KBA-11-13A	06/08/1996	CHLOROETHANE	0.0	U	1
KBA-11-13A	06/13/1996	CHLOROETHANE	0.0	U	1
KBA-11-13A	06/28/1996	CHLOROETHANE	0.0	U	1
KBA-11-13A	07/17/1996	CHLOROETHANE	0.0	U	1
KBA-11-13A	10/24/1996	CHLOROETHANE	0.0	U	1
KBA-11-13A	09/18/1997	CHLOROETHANE	0.0	U	1
KBA-11-13A	08/03/1999	CHLOROETHANE	2.0	U	1
KBA-11-13A	11/09/1999	CHLOROETHANE	**1.0**	**U**	**1**
KBA-11-13A	02/11/2000	CHLOROETHANE	1.0	U	1
KBA-11-13A	05/04/2000	CHLOROETHANE	1.0	U	1
KBA-11-13A	08/11/2000	CHLOROETHANE	1.0	U	1
KBA-11-13A	11/08/2000	CHLOROETHANE	1.0	U	1
KBA-11-13A	02/08/2001	CHLOROETHANE	1.0	U	1
KBA-11-13A	05/03/2001	CHLOROETHANE	1.0	U	1
KBA-11-13A	08/08/2001	CHLOROETHANE	1.0	U	1
KBA-11-13A	**09/15/1994**	**CIS-1,2-DICHLOROETHENE**	**700.0**		**70**
KBA-11-13A	**04/12/1995**	**CIS-1,2-DICHLOROETHENE**	**440.0**		**70**

I = interference.
J = estimated value; value is between the MDL and PQL.
U = compound analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = exceeds the GPS.

Groundwater Protection Standard Analyses
KBA-11-13A, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-13A	04/18/1996	CIS-1,2-DICHLOROETHENE	13.0		70
KBA-11-13A	**05/29/1996**	**CIS-1,2-DICHLOROETHENE**	**320.0**		**70**
KBA-11-13A	**05/31/1996**	**CIS-1,2-DICHLOROETHENE**	**280.0**		**70**
KBA-11-13A	**06/05/1996**	**CIS-1,2-DICHLOROETHENE**	**320.0**		**70**
KBA-11-13A	**06/08/1996**	**CIS-1,2-DICHLOROETHENE**	**360.0**		**70**
KBA-11-13A	**06/13/1996**	**CIS-1,2-DICHLOROETHENE**	**300.0**		**70**
KBA-11-13A	**06/28/1996**	**CIS-1,2-DICHLOROETHENE**	**320.0**		**70**
KBA-11-13A	**07/17/1996**	**CIS-1,2-DICHLOROETHENE**	**250.0**		**70**
KBA-11-13A	**10/24/1996**	**CIS-1,2-DICHLOROETHENE**	**190.0**		**70**
KBA-11-13A	**09/18/1997**	**CIS-1,2-DICHLOROETHENE**	**770.0**		**70**
KBA-11-13A	09/18/1997	CIS-1,2-DICHLOROETHENE	0.0	U	70
KBA-11-13A	**11/10/1997**	**CIS-1,2-DICHLOROETHENE**	**190.0**		**70**
KBA-11-13A	**09/17/1998**	**CIS-1,2-DICHLOROETHENE**	**160.0**		**70**
KBA-11-13A	**10/30/1998**	**CIS-1,2-DICHLOROETHENE**	**130.0**		**70**
KBA-11-13A	11/04/1998	CIS-1,2-DICHLOROETHENE	5.0		70
KBA-11-13A	**11/24/1998**	**CIS-1,2-DICHLOROETHENE**	**100.0**		**70**
KBA-11-13A	**11/25/1998**	**CIS-1,2-DICHLOROETHENE**	**79.0**		**70**
KBA-11-13A	**12/22/1998**	**CIS-1,2-DICHLOROETHENE**	**230.0**		**70**
KBA-11-13A	01/07/1999	CIS-1,2-DICHLOROETHENE	34.0		70
KBA-11-13A	**01/27/1999**	**CIS-1,2-DICHLOROETHENE**	**110.0**		**70**
KBA-11-13A	**02/18/1999**	**CIS-1,2-DICHLOROETHENE**	**150.0**		**70**
KBA-11-13A	**03/15/1999**	**CIS-1,2-DICHLOROETHENE**	**150.0**		**70**
KBA-11-13A	04/07/1999	CIS-1,2-DICHLOROETHENE	49.0		70
KBA-11-13A	**05/20/1999**	**CIS-1,2-DICHLOROETHENE**	**350.0**		**70**
KBA-11-13A	**06/23/1999**	**CIS-1,2-DICHLOROETHENE**	**280.0**		**70**
KBA-11-13A	**07/26/1999**	**CIS-1,2-DICHLOROETHENE**	**240.0**		**70**
KBA-11-13A	**08/03/1999**	**CIS-1,2-DICHLOROETHENE**	**190.0**		**70**
KBA-11-13A	08/17/1999	**CIS-1,2-DICHLOROETHENE**	**240.0**		**70**
KBA-11-13A	**11/09/1999**	**CIS-1,2-DICHLOROETHENE**	**260.0**		**70**
KBA-11-13A	**02/11/2000**	**CIS-1,2-DICHLOROETHENE**	**230.0**		**70**
KBA-11-13A	**05/04/2000**	**CIS-1,2-DICHLOROETHENE**	**180.0**		**70**
KBA-11-13A	**08/11/2000**	**CIS-1,2-DICHLOROETHENE**	**300 E**		**70**
KBA-11-13A	**11/08/2000**	**CIS-1,2-DICHLOROETHENE**	**160.0**		**70**
KBA-11-13A	**02/08/2001**	**CIS-1,2-DICHLOROETHENE**	**110.0**		**70**
KBA-11-13A	**05/03/2001**	**CIS-1,2-DICHLOROETHENE**	**88.0**		**70**
KBA-11-13A	**08/08/2001**	**CIS-1,2-DICHLOROETHENE**	**59.0**		**70**
KBA-11-13A	01/07/1994	ETHYLBENZENE	130.0		700
KBA-11-13A	04/09/1994	ETHYLBENZENE	120.0		700
KBA-11-13A	09/15/1994	ETHYLBENZENE	110.0		700
KBA-11-13A	04/12/1995	ETHYLBENZENE	120.0		700
KBA-11-13A	04/18/1996	ETHYLBENZENE	7.0		700
KBA-11-13A	05/29/1996	ETHYLBENZENE	120.0		700
KBA-11-13A	05/31/1996	ETHYLBENZENE	120.0		700
KBA-11-13A	06/05/1996	ETHYLBENZENE	98.0		700
KBA-11-13A	06/08/1996	ETHYLBENZENE	100.0		700
KBA-11-13A	06/13/1996	ETHYLBENZENE	110.0		700
KBA-11-13A	06/28/1996	ETHYLBENZENE	120.0		700
KBA-11-13A	07/17/1996	ETHYLBENZENE	120.0		700
KBA-11-13A	10/24/1996	ETHYLBENZENE	160.0		700
KBA-11-13A	09/18/1997	ETHYLBENZENE	140.0		700
KBA-11-13A	09/18/1997	ETHYLBENZENE	53.0		700

I = interference.
J = estimated value; value is between the MDL and PQL.
U = compound analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = exceeds the GPS.

Groundwater Protection Standard Analyses
KBA-11-13A, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-13A	08/03/1999	ETHYLBENZENE	66.0		700
KBA-11-13A	11/09/1999	ETHYLBENZENE	92.0		700
KBA-11-13A	02/11/2000	ETHYLBENZENE	64.0		700
KBA-11-13A	05/04/2000	ETHYLBENZENE	67.0		700
KBA-11-13A	08/11/2000	ETHYLBENZENE	71.0		700
KBA-11-13A	11/08/2000	ETHYLBENZENE	57.0		700
KBA-11-13A	02/08/2001	ETHYLBENZENE	34.0		700
KBA-11-13A	05/03/2001	ETHYLBENZENE	20.0		700
KBA-11-13A	08/08/2001	ETHYLBENZENE	14.0		700
KBA-11-13A	**01/07/1994**	**TETRACHLOROETHENE**	**100.0**	**U**	**5**
KBA-11-13A	**04/09/1994**	**TETRACHLOROETHENE**	**580.0**		**5**
KBA-11-13A	**09/15/1994**	**TETRACHLOROETHENE**	**460.0**		**5**
KBA-11-13A	**04/12/1995**	**TETRACHLOROETHENE**	**1300.0**		**5**
KBA-11-13A	**04/18/1996**	**TETRACHLOROETHENE**	**15.0**		**5**
KBA-11-13A	**05/29/1996**	**TETRACHLOROETHENE**	**1000.0**		**5**
KBA-11-13A	**05/31/1996**	**TETRACHLOROETHENE**	**770.0**		**5**
KBA-11-13A	**06/05/1996**	**TETRACHLOROETHENE**	**960.0**		**5**
KBA-11-13A	**06/08/1996**	**TETRACHLOROETHENE**	**1200.0**		**5**
KBA-11-13A	**06/13/1996**	**TETRACHLOROETHENE**	**710.0**		**5**
KBA-11-13A	**06/28/1996**	**TETRACHLOROETHENE**	**1200.0**		**5**
KBA-11-13A	**07/17/1996**	**TETRACHLOROETHENE**	**1800.0**		**5**
KBA-11-13A	**10/24/1996**	**TETRACHLOROETHENE**	**420.0**		**5**
KBA-11-13A	09/18/1997	TETRACHLOROETHENE	0.0	U	5
KBA-11-13A	09/18/1997	TETRACHLOROETHENE	0.0	U	5
KBA-11-13A	**11/10/1997**	**TETRACHLOROETHENE**	**420.0**		**5**
KBA-11-13A	09/17/1998	TETRACHLOROETHENE	1.0	U	5
KBA-11-13A	10/30/1998	TETRACHLOROETHENE	10.0	U	5
KBA-11-13A	11/04/1998	TETRACHLOROETHENE	3.0	U	5
KBA-11-13A	11/24/1998	TETRACHLOROETHENE	1.0	U	5
KBA-11-13A	11/25/1998	TETRACHLOROETHENE	5.0	U	5
KBA-11-13A	12/22/1998	TETRACHLOROETHENE	1.0	U	5
KBA-11-13A	01/07/1999	TETRACHLOROETHENE	5.0	U	5
KBA-11-13A	01/27/1999	TETRACHLOROETHENE	3.0	U	5
KBA-11-13A	02/18/1999	TETRACHLOROETHENE	1.0	U	5
KBA-11-13A	03/15/1999	TETRACHLOROETHENE	10.0	U	5
KBA-11-13A	04/07/1999	TETRACHLOROETHENE	1.0	U	5
KBA-11-13A	05/20/1999	TETRACHLOROETHENE	3.0	U	5
KBA-11-13A	06/23/1999	TETRACHLOROETHENE	3.0	U	5
KBA-11-13A	07/26/1999	TETRACHLOROETHENE	15.0	U	5
KBA-11-13A	08/03/1999	TETRACHLOROETHENE	3.0	U	5
KBA-11-13A	08/17/1999	TETRACHLOROETHENE	1.0	U	5
KBA-11-13A	11/09/1999	TETRACHLOROETHENE	3.0	U	5
KBA-11-13A	02/11/2000	TETRACHLOROETHENE	1.0	U	5
KBA-11-13A	05/04/2000	TETRACHLOROETHENE	1.0	U	5
KBA-11-13A	08/11/2000	TETRACHLOROETHENE	1.0	U	5
KBA-11-13A	11/08/2000	TETRACHLOROETHENE	3.0	U	5
KBA-11-13A	02/08/2001	TETRACHLOROETHENE	0.8	J	5
KBA-11-13A	05/03/2001	TETRACHLOROETHENE	0.6	J	5
KBA-11-13A	08/08/2001	TETRACHLOROETHENE	0.8	J	5
KBA-11-13A	01/07/1994	TOLUENE	170.0		1000

I = interference.
J = estimated value; value is between the MDL and PQL.
U = compound analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = exceeds the GPS.

Groundwater Protection Standard Analyses
KBA-11-13A, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-13A	04/09/1994	TOLUENE	89.0		1000
KBA-11-13A	09/15/1994	TOLUENE	120.0		1000
KBA-11-13A	04/12/1995	TOLUENE	75.0		1000
KBA-11-13A	04/18/1996	TOLUENE	3.0		1000
KBA-11-13A	05/29/1996	TOLUENE	23.0	J	1000
KBA-11-13A	05/31/1996	TOLUENE	0.0	U	1000
KBA-11-13A	06/05/1996	TOLUENE	25.0		1000
KBA-11-13A	06/08/1996	TOLUENE	0.0	U	1000
KBA-11-13A	06/13/1996	TOLUENE	17.0		1000
KBA-11-13A	06/28/1996	TOLUENE	0.0	U	1000
KBA-11-13A	07/17/1996	TOLUENE	20.0	J	1000
KBA-11-13A	10/24/1996	TOLUENE	30.0		1000
KBA-11-13A	09/18/1997	TOLUENE	18.0	J	1000
KBA-11-13A	09/18/1997	TOLUENE	0.0	U	1000
KBA-11-13A	08/03/1999	TOLUENE	2.7		1000
KBA-11-13A	11/09/1999	TOLUENE	4.2		1000
KBA-11-13A	02/11/2000	TOLUENE	2.0		1000
KBA-11-13A	05/04/2000	TOLUENE	2.0		1000
KBA-11-13A	08/11/2000	TOLUENE	0.9	J	1000
KBA-11-13A	11/08/2000	TOLUENE	1.0	U	1000
KBA-11-13A	02/08/2001	TOLUENE	1.0	U	1000
KBA-11-13A	05/03/2001	TOLUENE	0.5	U	1000
KBA-11-13A	08/08/2001	TOLUENE	0.3	U	1000
KBA-11-13A	09/15/1994	TRANS-1,2-DICHLOROETHENE	50.0	U	100
KBA-11-13A	04/12/1995	TRANS-1,2-DICHLOROETHENE	11.0		100
KBA-11-13A	04/18/1996	TRANS-1,2-DICHLOROETHENE	0.0	U	100
KBA-11-13A	05/29/1996	TRANS-1,2-DICHLOROETHENE	9.0		100
KBA-11-13A	05/31/1996	TRANS-1,2-DICHLOROETHENE	0.0	U	100
KBA-11-13A	06/05/1996	TRANS-1,2-DICHLOROETHENE	0.0	U	100
KBA-11-13A	06/08/1996	TRANS-1,2-DICHLOROETHENE	0.0	U	100
KBA-11-13A	06/13/1996	TRANS-1,2-DICHLOROETHENE	0.0	U	100
KBA-11-13A	06/28/1996	TRANS-1,2-DICHLOROETHENE	0.0	U	100
KBA-11-13A	07/17/1996	TRANS-1,2-DICHLOROETHENE	0.0	U	100
KBA-11-13A	10/24/1996	TRANS-1,2-DICHLOROETHENE	5.0	J	100
KBA-11-13A	09/18/1997	TRANS-1,2-DICHLOROETHENE	11.0	J	100
KBA-11-13A	08/03/1999	TRANS-1,2-DICHLOROETHENE	7.4		100
KBA-11-13A	11/09/1999	TRANS-1,2-DICHLOROETHENE	6.6		100
KBA-11-13A	02/11/2000	TRANS-1,2-DICHLOROETHENE	6.0		100
KBA-11-13A	05/04/2000	TRANS-1,2-DICHLOROETHENE	6.0		100
KBA-11-13A	08/11/2000	TRANS-1,2-DICHLOROETHENE	9.0		100
KBA-11-13A	11/08/2000	TRANS-1,2-DICHLOROETHENE	7.0		100
KBA-11-13A	02/08/2001	TRANS-1,2-DICHLOROETHENE	8.0		100
KBA-11-13A	05/03/2001	TRANS-1,2-DICHLOROETHENE	6.6		100
KBA-11-13A	08/08/2001	TRANS-1,2-DICHLOROETHENE	5.4		100
KBA-11-13A	**01/07/1994**	**TRICHLOROETHENE**	**300.0**		**5**
KBA-11-13A	**04/09/1994**	**TRICHLOROETHENE**	**2400.0**		**5**
KBA-11-13A	**09/15/1994**	**TRICHLOROETHENE**	**770.0**		**5**
KBA-11-13A	**04/12/1995**	**TRICHLOROETHENE**	**790.0**		**5**
KBA-11-13A	**04/18/1996**	**TRICHLOROETHENE**	**9.0**		**5**
KBA-11-13A	**05/29/1996**	**TRICHLOROETHENE**	**800.0**		**5**
KBA-11-13A	**05/31/1996**	**TRICHLOROETHENE**	**640.0**		**5**

I = interference.
J = estimated value; value is between the MDL and PQL.
U = compound analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = exceeds the GPS.

Groundwater Protection Standard Analyses
KBA-11-13A, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-13A	**06/05/1996**	**TRICHLOROETHENE**	**700.0**		**5**
KBA-11-13A	**06/08/1996**	**TRICHLOROETHENE**	**880.0**		**5**
KBA-11-13A	**06/13/1996**	**TRICHLOROETHENE**	**620.0**		**5**
KBA-11-13A	**06/28/1996**	**TRICHLOROETHENE**	**750.0**		**5**
KBA-11-13A	**07/17/1996**	**TRICHLOROETHENE**	**1000.0**		**5**
KBA-11-13A	**10/24/1996**	**TRICHLOROETHENE**	**540.0**		**5**
KBA-11-13A	**09/18/1997**	**TRICHLOROETHENE**	**170.0**		**5**
KBA-11-13A	09/18/1997	TRICHLOROETHENE	0.0	U	5
KBA-11-13A	**11/10/1997**	**TRICHLOROETHENE**	**540.0**		**5**
KBA-11-13A	**09/17/1998**	**TRICHLOROETHENE**	**24.0**		**5**
KBA-11-13A	**10/30/1998**	**TRICHLOROETHENE**	**16.0**		**5**
KBA-11-13A	**11/04/1998**	**TRICHLOROETHENE**	**15.0**		**5**
KBA-11-13A	**11/24/1998**	**TRICHLOROETHENE**	**16.0**		**5**
KBA-11-13A	**11/25/1998**	**TRICHLOROETHENE**	**16.0**		**5**
KBA-11-13A	**12/22/1998**	**TRICHLOROETHENE**	**14.0**		**5**
KBA-11-13A	01/07/1999	TRICHLOROETHENE	5.0	U	5
KBA-11-13A	**01/27/1999**	**TRICHLOROETHENE**	**20.0**		**5**
KBA-11-13A	**02/18/1999**	**TRICHLOROETHENE**	**15.0**		**5**
KBA-11-13A	**03/15/1999**	**TRICHLOROETHENE**	**13.0**		**5**
KBA-11-13A	**04/07/1999**	**TRICHLOROETHENE**	**7.0**		**5**
KBA-11-13A	**05/20/1999**	**TRICHLOROETHENE**	**29.0**		**5**
KBA-11-13A	**06/23/1999**	**TRICHLOROETHENE**	**25.0**		**5**
KBA-11-13A	**07/26/1999**	**TRICHLOROETHENE**	**26.0**		**5**
KBA-11-13A	**08/03/1999**	**TRICHLOROETHENE**	**19.0**		**5**
KBA-11-13A	**08/17/1999**	**TRICHLOROETHENE**	**24.0**		**5**
KBA-11-13A	**11/09/1999**	**TRICHLOROETHENE**	**17.0**		**5**
KBA-11-13A	**02/11/2000**	**TRICHLOROETHENE**	**14.0**		**5**
KBA-11-13A	**05/04/2000**	**TRICHLOROETHENE**	**20.0**		**5**
KBA-11-13A	**08/11/2000**	**TRICHLOROETHENE**	**51.0**		**5**
KBA-11-13A	**11/08/2000**	**TRICHLOROETHENE**	**70.0**		**5**
KBA-11-13A	**02/08/2001**	**TRICHLOROETHENE**	**45.0**		**5**
KBA-11-13A	**05/03/2001**	**TRICHLOROETHENE**	**37.0**		**5**
KBA-11-13A	**08/08/2001**	**TRICHLOROETHENE**	**26.0**		**5**
KBA-11-13A	**01/07/1994**	**VINYL CHLORIDE**	**170.0**	**J**	**2**
KBA-11-13A	**04/09/1994**	**VINYL CHLORIDE**	**110.0**	**J**	**2**
KBA-11-13A	**09/15/1994**	**VINYL CHLORIDE**	**50.0**	**U**	**2**
KBA-11-13A	**04/12/1995**	**VINYL CHLORIDE**	**53.0**		**2**
KBA-11-13A	04/18/1996	VINYL CHLORIDE	0.0	U	2
KBA-11-13A	**05/29/1996**	**VINYL CHLORIDE**	**7.0**		**2**
KBA-11-13A	05/31/1996	VINYL CHLORIDE	0.0	U	2
KBA-11-13A	06/05/1996	VINYL CHLORIDE	0.0	U	2
KBA-11-13A	06/08/1996	VINYL CHLORIDE	0.0	U	2
KBA-11-13A	06/13/1996	VINYL CHLORIDE	0.0	U	2
KBA-11-13A	06/28/1996	VINYL CHLORIDE	0.0	U	2
KBA-11-13A	07/17/1996	VINYL CHLORIDE	0.0	U	2
KBA-11-13A	**10/24/1996**	**VINYL CHLORIDE**	**14.0**		**2**
KBA-11-13A	**09/18/1997**	**VINYL CHLORIDE**	**39.0**		**2**
KBA-11-13A	09/18/1997	VINYL CHLORIDE	0.0	U	2
KBA-11-13A	**11/10/1997**	**VINYL CHLORIDE**	**14.0**		**2**
KBA-11-13A	**09/17/1998**	**VINYL CHLORIDE**	**78.0**		**2**
KBA-11-13A	**10/30/1998**	**VINYL CHLORIDE**	**10.0**		**2**

I = interference.
J = estimated value; value is between the MDL and PQL.
U = compound analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = exceeds the GPS.

Groundwater Protection Standard Analyses
KBA-11-13A, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-13A	**11/04/1998**	**VINYL CHLORIDE**	**28.0**		**2**
KBA-11-13A	**11/24/1998**	**VINYL CHLORIDE**	**22.0**		**2**
KBA-11-13A	**11/25/1998**	**VINYL CHLORIDE**	**26.0**		**2**
KBA-11-13A	**12/22/1998**	**VINYL CHLORIDE**	**22.0**		**2**
KBA-11-13A	**01/07/1999**	**VINYL CHLORIDE**	**60.0**		**2**
KBA-11-13A	**01/27/1999**	**VINYL CHLORIDE**	**22.0**		**2**
KBA-11-13A	**02/18/1999**	**VINYL CHLORIDE**	**22.0**		**2**
KBA-11-13A	**03/15/1999**	**VINYL CHLORIDE**	**15.0**		**2**
KBA-11-13A	**04/07/1999**	**VINYL CHLORIDE**	**93.0**		**2**
KBA-11-13A	**05/20/1999**	**VINYL CHLORIDE**	**61.0**		**2**
KBA-11-13A	**06/23/1999**	**VINYL CHLORIDE**	**45.0**		**2**
KBA-11-13A	**07/26/1999**	**VINYL CHLORIDE**	**57.0**		**2**
KBA-11-13A	**08/03/1999**	**VINYL CHLORIDE**	**48.0**		**2**
KBA-11-13A	**08/17/1999**	**VINYL CHLORIDE**	**26.0**		**2**
KBA-11-13A	**11/09/1999**	**VINYL CHLORIDE**	**46.0**		**2**
KBA-11-13A	**02/11/2000**	**VINYL CHLORIDE**	**20.0**		**2**
KBA-11-13A	**05/04/2000**	**VINYL CHLORIDE**	**19.0**		**2**
KBA-11-13A	**08/11/2000**	**VINYL CHLORIDE**	**17.0**		**2**
KBA-11-13A	**11/08/2000**	**VINYL CHLORIDE**	**4.0**		**2**
KBA-11-13A	02/08/2001	VINYL CHLORIDE	0.9	J	2
KBA-11-13A	05/03/2001	VINYL CHLORIDE	1.0	U	2
KBA-11-13A	08/08/2001	VINYL CHLORIDE	1.0	U	2
KBA-11-13A	01/07/1994	XYLENES, TOTAL	240.0		10000
KBA-11-13A	04/09/1994	XYLENES, TOTAL	200.0		10000
KBA-11-13A	09/15/1994	XYLENES, TOTAL	310.0		10000
KBA-11-13A	04/12/1995	XYLENES, TOTAL	260.0		10000
KBA-11-13A	04/18/1996	XYLENES, TOTAL	21.0		10000
KBA-11-13A	07/17/1996	XYLENES, TOTAL	140.0		10000
KBA-11-13A	10/24/1996	XYLENES, TOTAL	300.0		10000
KBA-11-13A	09/18/1997	XYLENES, TOTAL	240.0		10000
KBA-11-13A	08/03/1999	XYLENES, TOTAL	14.4		10000
KBA-11-13A	11/09/1999	XYLENES, TOTAL	49.0		10000
KBA-11-13A	02/11/2000	XYLENES, TOTAL	23.0		10000
KBA-11-13A	05/04/2000	XYLENES, TOTAL	4.0		10000
KBA-11-13A	08/11/2000	XYLENES, TOTAL	0.7		10000
KBA-11-13A	11/08/2000	XYLENES, TOTAL	2.0	U	10000
KBA-11-13A	02/08/2001	XYLENES, TOTAL	3.0	U	10000
KBA-11-13A	05/03/2001	XYLENES, TOTAL	0.3	J	10000
KBA-11-13A	08/08/2001	XYLENES, TOTAL	0.4	J	10000

I = interference.
J = estimated value; value is between the MDL and PQL.
U = compound analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = exceeds the GPS.

Groundwater Protection Standard Analyses
KBA-11-13B, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-13B	01/07/1994	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-13B	04/09/1994	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-13B	09/15/1994	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-13B	04/17/1996	1,1-DICHLOROETHANE	0.0	U	1
KBA-11-13B	10/22/1996	1,1-DICHLOROETHANE	0.0	U	1
KBA-11-13B	09/18/1997	1,1-DICHLOROETHANE	0.0	U	1
KBA-11-13B	08/03/1999	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-13B	08/08/2000	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-13B	08/08/2001	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-13B	01/07/1994	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-13B	04/09/1994	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-13B	09/15/1994	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-13B	04/17/1996	1,1-DICHLOROETHENE	0.0	U	7
KBA-11-13B	10/22/1996	1,1-DICHLOROETHENE	0.0	U	7
KBA-11-13B	09/18/1997	1,1-DICHLOROETHENE	0.0	U	7
KBA-11-13B	08/03/1999	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-13B	08/08/2000	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-13B	08/08/2001	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-13B	08/03/1999	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-13B	08/10/2000	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-13B	08/08/2001	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-13B	09/15/1994	1,4-DICHLOROBENZENE	10.0	U	75
KBA-11-13B	09/15/1994	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-13B	04/17/1996	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-13B	04/17/1996	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-13B	09/18/1997	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-13B	09/18/1997	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-13B	08/03/1999	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-13B	08/11/2000	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-13B	08/08/2001	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-13B	01/07/1994	BENZENE	1.0	U	5
KBA-11-13B	04/09/1994	BENZENE	1.0	U	5
KBA-11-13B	09/15/1994	BENZENE	1.0	U	5
KBA-11-13B	04/17/1996	BENZENE	3.0		5
KBA-11-13B	10/22/1996	BENZENE	0.0	U	5
KBA-11-13B	09/18/1997	BENZENE	0.0	U	5
KBA-11-13B	08/03/1999	BENZENE	1.0	U	5
KBA-11-13B	08/11/2000	BENZENE	1.0	U	5
KBA-11-13B	08/08/2001	BENZENE	1.0	U	5
KBA-11-13B	01/07/1994	CHLOROBENZENE	1.0	U	1
KBA-11-13B	04/09/1994	CHLOROBENZENE	1.0	U	1
KBA-11-13B	09/15/1994	CHLOROBENZENE	1.0	U	1
KBA-11-13B	04/17/1996	CHLOROBENZENE	1.0	J	1
KBA-11-13B	10/22/1996	CHLOROBENZENE	0.0	U	1
KBA-11-13B	09/18/1997	CHLOROBENZENE	0.0	U	1
KBA-11-13B	08/03/1999	CHLOROBENZENE	1.0	U	1
KBA-11-13B	08/11/2000	CHLOROBENZENE	1.0	U	1
KBA-11-13B	08/08/2001	CHLOROBENZENE	1.0	U	1
KBA-11-13B	01/07/1994	CHLOROETHANE	1.0	U	1
KBA-11-13B	04/09/1994	CHLOROETHANE	1.0	U	1
KBA-11-13B	09/15/1994	CHLOROETHANE	1.0	U	1

I = interference.
J = estimated value; value is between MDL and PQL.
U = compound was analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = results exceed the GPS.

Groundwater Protection Standard Analyses
KBA-11-13B, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-13B	04/17/1996	CHLOROETHANE	0.0	U	1
KBA-11-13B	10/22/1996	CHLOROETHANE	0.0	U	1
KBA-11-13B	09/18/1997	CHLOROETHANE	0.0	U	1
KBA-11-13B	08/03/1999	CHLOROETHANE	2.0	U	1
KBA-11-13B	08/11/2000	CHLOROETHANE	2.0	U	1
KBA-11-13B	08/08/2001	CHLOROETHANE	2.0	U	1
KBA-11-13B	01/07/1994	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-13B	04/09/1994	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-13B	09/15/1994	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-13B	04/17/1996	CIS-1,2-DICHLOROETHENE	16.0		70
KBA-11-13B	10/22/1996	CIS-1,2-DICHLOROETHENE	0.0	U	70
KBA-11-13B	09/18/1997	CIS-1,2-DICHLOROETHENE	0.0	U	70
KBA-11-13B	08/03/1999	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-13B	08/11/2000	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-13B	08/08/2001	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-13B	01/07/1994	ETHYLBENZENE	1.0	U	700
KBA-11-13B	04/09/1994	ETHYLBENZENE	1.0	U	700
KBA-11-13B	09/15/1994	ETHYLBENZENE	1.0	U	700
KBA-11-13B	04/17/1996	ETHYLBENZENE	8.0		700
KBA-11-13B	10/22/1996	ETHYLBENZENE	0.2	J	700
KBA-11-13B	09/18/1997	ETHYLBENZENE	0.0	U	700
KBA-11-13B	08/03/1999	ETHYLBENZENE	1.0	U	700
KBA-11-13B	08/11/2000	ETHYLBENZENE	1.0	U	700
KBA-11-13B	08/08/2001	ETHYLBENZENE	1.0	U	700
KBA-11-13B	01/07/1994	TETRACHLOROETHENE	1.0	U	5
KBA-11-13B	04/09/1994	TETRACHLOROETHENE	1.0	U	5
KBA-11-13B	09/15/1994	TETRACHLOROETHENE	1.0	U	5
KBA-11-13B	04/17/1996	TETRACHLOROETHENE	0.0	U	5
KBA-11-13B	10/22/1996	TETRACHLOROETHENE	0.0	U	5
KBA-11-13B	09/18/1997	TETRACHLOROETHENE	0.0	U	5
KBA-11-13B	08/03/1999	TETRACHLOROETHENE	3.0	U	5
KBA-11-13B	08/11/2000	TETRACHLOROETHENE	1.0	U	5
KBA-11-13B	08/08/2001	TETRACHLOROETHENE	1.0	U	5
KBA-11-13B	01/07/1994	TOLUENE	1.0	U	1000
KBA-11-13B	04/09/1994	TOLUENE	1.0	U	1000
KBA-11-13B	09/15/1994	TOLUENE	1.0	U	1000
KBA-11-13B	04/17/1996	TOLUENE	0.5	J	1000
KBA-11-13B	10/22/1996	TOLUENE	0.0	U	1000
KBA-11-13B	09/18/1997	TOLUENE	0.0	U	1000
KBA-11-13B	08/03/1999	TOLUENE	1.0	U	1000
KBA-11-13B	08/11/2000	TOLUENE	1.0	U	1000
KBA-11-13B	08/08/2001	TOLUENE	1.0	U	1000
KBA-11-13B	01/07/1994	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-13B	04/09/1994	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-13B	09/15/1994	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-13B	04/17/1996	TRANS-1,2-DICHLOROETHENE	0.0	U	100
KBA-11-13B	10/22/1996	TRANS-1,2-DICHLOROETHENE	0.0	U	100
KBA-11-13B	09/18/1997	TRANS-1,2-DICHLOROETHENE	0.0	U	100
KBA-11-13B	08/03/1999	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-13B	08/11/2000	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-13B	08/08/2001	TRANS-1,2-DICHLOROETHENE	1.0	U	100

I = interference.
J = estimated value; value is between MDL and PQL.
U = compound was analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = results exceed the GPS.

Groundwater Protection Standard Analyses
KBA-11-13B, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-13B	01/07/1994	TRICHLOROETHENE	1.0	U	5
KBA-11-13B	04/09/1994	TRICHLOROETHENE	1.0	U	5
KBA-11-13B	09/15/1994	TRICHLOROETHENE	1.0	U	5
KBA-11-13B	04/17/1996	TRICHLOROETHENE	0.0	U	5
KBA-11-13B	10/22/1996	TRICHLOROETHENE	0.0	U	5
KBA-11-13B	09/18/1997	TRICHLOROETHENE	0.0	U	5
KBA-11-13B	08/03/1999	TRICHLOROETHENE	1.0	U	5
KBA-11-13B	08/11/2000	TRICHLOROETHENE	1.0	U	5
KBA-11-13B	08/08/2001	TRICHLOROETHENE	1.0	U	5
KBA-11-13B	01/07/1994	VINYL CHLORIDE	1.0	U	2
KBA-11-13B	04/09/1994	VINYL CHLORIDE	1.0	U	2
KBA-11-13B	09/15/1994	VINYL CHLORIDE	1.0	U	2
KBA-11-13B	04/17/1996	VINYL CHLORIDE	0.0	U	2
KBA-11-13B	10/22/1996	VINYL CHLORIDE	0.0	U	2
KBA-11-13B	09/18/1997	VINYL CHLORIDE	0.0	U	2
KBA-11-13B	08/03/1999	VINYL CHLORIDE	1.0	U	2
KBA-11-13B	08/11/2000	VINYL CHLORIDE	1.0	U	2
KBA-11-13B	08/08/2001	VINYL CHLORIDE	1.0	U	2
KBA-11-13B	01/07/1994	XYLENES, TOTAL	1.0	U	10000
KBA-11-13B	04/09/1994	XYLENES, TOTAL	1.0	U	10000
KBA-11-13B	09/15/1994	XYLENES, TOTAL	1.0	U	10000
KBA-11-13B	04/17/1996	XYLENES, TOTAL	0.0	U	10000
KBA-11-13B	10/22/1996	XYLENES, TOTAL	0.0	U	10000
KBA-11-13B	09/18/1997	XYLENES, TOTAL	0.0	U	10000
KBA-11-13B	08/03/1999	XYLENES, TOTAL	3.0	U	10000
KBA-11-13B	08/11/2000	XYLENES, TOTAL	3.0	U	10000
KBA-11-13B	08/08/2001	XYLENES, TOTAL	3.0	U	10000

I = interference.
J = estimated value; value is between MDL and PQL.
U = compound was analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = results exceed the GPS.

Groundwater Protection Standard Analyses
KBA-11-15, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-15	01/05/1994	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-15	04/06/1994	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-15	09/15/1994	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-15	04/16/1996	1,1-DICHLOROETHANE	0.0	U	1
KBA-11-15	04/16/1996	1,1-DICHLOROETHANE	0.0	U	1
KBA-11-15	09/16/1997	1,1-DICHLOROETHANE	0.0	U	1
KBA-11-15	08/03/1999	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-15	02/11/2000	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-15	08/09/2001	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-15	01/05/1994	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-15	04/06/1994	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-15	09/15/1994	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-15	04/16/1996	1,1-DICHLOROETHENE	0.0	U	7
KBA-11-15	04/16/1996	1,1-DICHLOROETHENE	0.0	U	7
KBA-11-15	08/03/1999	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-15	02/11/2000	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-15	08/11/2000	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-15	08/09/2001	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-15	08/03/1999	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-15	02/11/2000	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-15	08/11/2000	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-15	08/09/2001	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-15	09/14/1994	1,4-DICHLOROBENZENE	20.0	R	75
KBA-11-15	09/15/1994	1,4-DICHLOROBENZENE	10.0	U	75
KBA-11-15	09/15/1994	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-15	04/16/1996	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-15	04/16/1996	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-15	04/16/1996	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-15	04/16/1996	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-15	08/03/1999	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-15	02/11/2000	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-15	08/11/2000	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-15	08/09/2001	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-15	01/05/1994	BENZENE	1.0	U	5
KBA-11-15	04/06/1994	BENZENE	1.0	U	5
KBA-11-15	09/15/1994	BENZENE	1.0	U	5
KBA-11-15	04/16/1996	BENZENE	0.0	U	5
KBA-11-15	04/16/1996	BENZENE	0.0	U	5
KBA-11-15	09/16/1997	BENZENE	0.0	U	5
KBA-11-15	08/03/1999	BENZENE	1.0	U	5
KBA-11-15	02/11/2000	BENZENE	1.0	U	5
KBA-11-15	08/11/2000	BENZENE	1.0	U	5
KBA-11-15	08/09/2001	BENZENE	1.0	U	5
KBA-11-15	01/05/1994	CHLOROBENZENE	1.0	U	1
KBA-11-15	04/06/1994	CHLOROBENZENE	1.0	U	1
KBA-11-15	09/15/1994	CHLOROBENZENE	1.0	U	1
KBA-11-15	04/16/1996	CHLOROBENZENE	0.0	U	1
KBA-11-15	04/16/1996	CHLOROBENZENE	0.0	U	1
KBA-11-15	08/03/1999	CHLOROBENZENE	1.0	U	1
KBA-11-15	02/11/2000	CHLOROBENZENE	1.0	U	1
KBA-11-15	08/11/2000	CHLOROBENZENE	1.0	U	1

I = interference
J = estimated value; value is between MDL and PQL.
U = compound was analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = result exceeds the GPS.

Groundwater Protection Standard Analyses
KBA-11-15, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-15	08/09/2001	CHLOROBENZENE	1.0	U	1
KBA-11-15	01/05/1994	CHLOROETHANE	1.0	U	1
KBA-11-15	04/06/1994	CHLOROETHANE	1.0	U	1
KBA-11-15	09/15/1994	CHLOROETHANE	1.0	U	1
KBA-11-15	04/16/1996	CHLOROETHANE	0.0	U	1
KBA-11-15	04/16/1996	CHLOROETHANE	0.0	U	1
KBA-11-15	08/03/1999	CHLOROETHANE	1.0	U	1
KBA-11-15	02/11/2000	CHLOROETHANE	1.0	U	1
KBA-11-15	08/11/2000	CHLOROETHANE	1.0	U	1
KBA-11-15	08/09/2001	CHLOROETHANE	1.0	U	1
KBA-11-15	01/05/1994	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-15	04/06/1994	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-15	09/15/1994	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-15	04/16/1996	CIS-1,2-DICHLOROETHENE	0.0	U	70
KBA-11-15	04/16/1996	CIS-1,2-DICHLOROETHENE	0.0	U	70
KBA-11-15	09/16/1997	CIS-1,2-DICHLOROETHENE	0.0	U	70
KBA-11-15	11/10/1997	CIS-1,2-DICHLOROETHENE	5.0	U	70
KBA-11-15	08/03/1999	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-15	02/11/2000	CIS-1,2-DICHLOROETHENE	0.9	I	70
KBA-11-15	08/11/2000	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-15	08/09/2001	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-15	01/05/1994	ETHYLBENZENE	1.0	U	700
KBA-11-15	04/06/1994	ETHYLBENZENE	1.0	U	700
KBA-11-15	09/15/1994	ETHYLBENZENE	1.0	U	700
KBA-11-15	04/16/1996	ETHYLBENZENE	0.0	U	700
KBA-11-15	04/16/1996	ETHYLBENZENE	0.0	U	700
KBA-11-15	09/16/1997	ETHYLBENZENE	0.0	U	700
KBA-11-15	08/03/1999	ETHYLBENZENE	1.0	U	700
KBA-11-15	02/11/2000	ETHYLBENZENE	1.0	U	700
KBA-11-15	08/11/2000	ETHYLBENZENE	1.0	U	700
KBA-11-15	08/09/2001	ETHYLBENZENE	1.0	U	700
KBA-11-15	01/05/1994	TETRACHLOROETHENE	1.0	U	5
KBA-11-15	04/06/1994	TETRACHLOROETHENE	1.0	U	5
KBA-11-15	09/15/1994	TETRACHLOROETHENE	1.0	U	5
KBA-11-15	04/16/1996	TETRACHLOROETHENE	0.0	U	5
KBA-11-15	04/16/1996	TETRACHLOROETHENE	0.0	U	5
KBA-11-15	09/16/1997	TETRACHLOROETHENE	0.0	U	5
KBA-11-15	11/10/1997	TETRACHLOROETHENE	5.0	U	5
KBA-11-15	08/03/1999	TETRACHLOROETHENE	3.0	U	5
KBA-11-15	02/11/2000	TETRACHLOROETHENE	1.0		5
KBA-11-15	08/11/2000	TETRACHLOROETHENE	1.0	U	5
KBA-11-15	08/09/2001	TETRACHLOROETHENE	1.0	U	5
KBA-11-15	01/05/1994	TOLUENE	1.0	U	1000
KBA-11-15	04/06/1994	TOLUENE	1.0	U	1000
KBA-11-15	09/15/1994	TOLUENE	1.0	U	1000
KBA-11-15	04/16/1996	TOLUENE	0.0	U	1000
KBA-11-15	04/16/1996	TOLUENE	0.0	U	1000
KBA-11-15	09/16/1997	TOLUENE	0.0	U	1000
KBA-11-15	08/03/1999	TOLUENE	1.0	U	1000
KBA-11-15	02/11/2000	TOLUENE	1.0	U	1000
KBA-11-15	08/11/2000	TOLUENE	1.0	U	1000

I = interference
J = estimated value; value is between MDL and PQL.
U = compound was analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = result exceeds the GPS.

Groundwater Protection Standard Analyses
KBA-11-15, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-15	08/09/2001	TOLUENE	1.0	U	1000
KBA-11-15	01/05/1994	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-15	04/06/1994	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-15	09/15/1994	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-15	04/16/1996	TRANS-1,2-DICHLOROETHENE	0.0	U	100
KBA-11-15	04/16/1996	TRANS-1,2-DICHLOROETHENE	0.0	U	100
KBA-11-15	08/03/1999	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-15	02/11/2000	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-15	08/11/2000	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-15	08/09/2001	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-15	01/05/1994	TRICHLOROETHENE	1.0	U	5
KBA-11-15	04/06/1994	TRICHLOROETHENE	1.0	U	5
KBA-11-15	09/15/1994	TRICHLOROETHENE	1.0	U	5
KBA-11-15	04/16/1996	TRICHLOROETHENE	0.0	U	5
KBA-11-15	04/16/1996	TRICHLOROETHENE	0.0	U	5
KBA-11-15	09/16/1997	TRICHLOROETHENE	0.0	U	5
KBA-11-15	11/10/1997	TRICHLOROETHENE	5.0	U	5
KBA-11-15	08/03/1999	TRICHLOROETHENE	1.0	U	5
KBA-11-15	02/11/2000	TRICHLOROETHENE	1.0	U	5
KBA-11-15	08/11/2000	TRICHLOROETHENE	1.0	U	5
KBA-11-15	08/09/2001	TRICHLOROETHENE	1.0	U	5
KBA-11-15	01/05/1994	VINYL CHLORIDE	1.0	U	2
KBA-11-15	04/06/1994	VINYL CHLORIDE	1.0	U	2
KBA-11-15	09/15/1994	VINYL CHLORIDE	1.0	U	2
KBA-11-15	04/16/1996	VINYL CHLORIDE	0.0	U	2
KBA-11-15	04/16/1996	VINYL CHLORIDE	0.0	U	2
KBA-11-15	09/16/1997	VINYL CHLORIDE	0.0	U	2
KBA-11-15	11/10/1997	VINYL CHLORIDE	2.0	U	2
KBA-11-15	08/03/1999	VINYL CHLORIDE	1.0	U	2
KBA-11-15	02/11/2000	VINYL CHLORIDE	1.0	U	2
KBA-11-15	08/11/2000	VINYL CHLORIDE	1.0	U	2
KBA-11-15	08/09/2001	VINYL CHLORIDE	1.0	U	2
KBA-11-15	01/05/1994	XYLENES, TOTAL	1.0	U	10000
KBA-11-15	04/06/1994	XYLENES, TOTAL	1.0	U	10000
KBA-11-15	09/15/1994	XYLENES, TOTAL	1.0	U	10000
KBA-11-15	04/16/1996	XYLENES, TOTAL	0.0	U	10000
KBA-11-15	04/16/1996	XYLENES, TOTAL	0.0	U	10000
KBA-11-15	08/03/1999	XYLENES, TOTAL	3.0	U	10000
KBA-11-15	02/11/2000	XYLENES, TOTAL	3.0	U	10000
KBA-11-15	08/11/2000	XYLENES, TOTAL	3.0	U	10000
KBA-11-15	08/09/2001	XYLENES, TOTAL	3.0	U	10000

I = interference
J = estimated value; value is between MDL and PQL.
U = compound was analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = result exceeds the GPS.

Groundwater Protection Analyses
KBA-11-16, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-16	**01/07/1994**	**1,1-DICHLOROETHANE**	**13.0**		**1**
KBA-11-16	**01/07/1994**	**1,1-DICHLOROETHANE**	**11.0**	**R**	**1**
KBA-11-16	**04/07/1994**	**1,1-DICHLOROETHANE**	**11.0**		**1**
KBA-11-16	**09/15/1994**	**1,1-DICHLOROETHANE**	**2.0**		**1**
KBA-11-16	**09/15/1994**	**1,1-DICHLOROETHANE**	**3.0**		**1**
KBA-11-16	**04/12/1995**	**1,1-DICHLOROETHANE**	**18.0**		**1**
KBA-11-16	**04/17/1996**	**1,1-DICHLOROETHANE**	**32.0**		**1**
KBA-11-16	**05/29/1996**	**1,1-DICHLOROETHANE**	**13.0**		**1**
KBA-11-16	**06/13/1996**	**1,1-DICHLOROETHANE**	**11.0**		**1**
KBA-11-16	**07/17/1996**	**1,1-DICHLOROETHANE**	**24.0**		**1**
KBA-11-16	**10/22/1996**	**1,1-DICHLOROETHANE**	**3.2**		**1**
KBA-11-16	**10/22/1996**	**1,1-DICHLOROETHANE**	**5.3**		**1**
KBA-11-16	03/08/1997	1,1-DICHLOROETHANE	0.0	U	1
KBA-11-16	**09/18/1997**	**1,1-DICHLOROETHANE**	**3.0**		**1**
KBA-11-16	08/03/1999	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-16	**11/09/1999**	**1,1-DICHLOROETHANE**	**1.6**	**I**	**1**
KBA-11-16	**02/11/2000**	**1,1-DICHLOROETHANE**	**5.0**		**1**
KBA-11-16	05/04/2000	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-16	**08/11/2000**	**1,1-DICHLOROETHANE**	**2.0**	**U**	**1**
KBA-11-16	**11/08/2000**	**1,1-DICHLOROETHANE**	**2.0**	**U**	**1**
KBA-11-16	**02/06/2001**	**1,1-DICHLOROETHANE**	**11.0**	**U**	**1**
KBA-11-16	**05/02/2001**	**1,1-DICHLOROETHANE**	**15.0**	**U**	**1**
KBA-11-16	**08/09/2001**	**1,1-DICHLOROETHANE**	**26.0**	**U**	**1**
KBA-11-16	01/07/1994	1,1-DICHLOROETHENE	0.7	J	7
KBA-11-16	01/07/1994	1,1-DICHLOROETHENE	20.0	UR	7
KBA-11-16	04/07/1994	1,1-DICHLOROETHENE	8.4	U	7
KBA-11-16	09/15/1994	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-16	09/15/1994	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-16	04/12/1995	1,1-DICHLOROETHENE	1.0	J	7
KBA-11-16	04/17/1996	1,1-DICHLOROETHENE	2.0		7
KBA-11-16	05/29/1996	1,1-DICHLOROETHENE	0.0	U	7
KBA-11-16	06/13/1996	1,1-DICHLOROETHENE	0.0	U	7
KBA-11-16	07/17/1996	1,1-DICHLOROETHENE	0.0	U	7
KBA-11-16	10/22/1996	1,1-DICHLOROETHENE	0.0	U	7
KBA-11-16	10/22/1996	1,1-DICHLOROETHENE	0.3	J	7
KBA-11-16	09/18/1997	1,1-DICHLOROETHENE	0.0	U	7
KBA-11-16	08/03/1999	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-16	11/09/1999	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-16	02/11/2000	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-16	05/04/2000	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-16	08/11/2000	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-16	11/08/2000	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-16	02/06/2001	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-16	05/02/2001	1,1-DICHLOROETHENE	1.3	U	7
KBA-11-16	08/09/2001	1,1-DICHLOROETHENE	1.8	U	7
KBA-11-16	08/03/1999	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-16	11/09/1999	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-16	02/11/2000	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-16	05/04/2000	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-16	08/11/2000	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-16	11/08/2000	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-16	02/06/2001	1,2-DICHLOROETHANE	1.0	U	5

I = interference.
J = estimated value; value is between MDL and PQL.
U = compound was analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = result exceeds the GPS.

Groundwater Protection Analyses
KBA-11-16, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-16	05/02/2001	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-16	08/09/2001	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-16	09/15/1994	1,4-DICHLOROBENZENE	10.0	U	75

I = interference.
J = estimated value; value is between MDL and PQL.
U = compound was analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = result exceeds the GPS.

Groundwater Protection Analyses
KBA-11-16, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-16	09/15/1994	1,4-DICHLOROBENZENE	10.0	U	75
KBA-11-16	09/15/1994	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-16	09/15/1994	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-16	04/12/1995	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-16	04/12/1995	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-16	04/17/1996	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-16	04/17/1996	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-16	05/29/1996	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-16	05/29/1996	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-16	06/13/1996	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-16	06/13/1996	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-16	09/18/1997	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-16	09/18/1997	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-16	08/03/1999	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-16	11/09/1999	1,4-DICHLOROBENZENE	1.0	U	
KBA-11-16	02/11/2000	1,4-DICHLOROBENZENE	1.0	U	
KBA-11-16	05/04/2000	1,4-DICHLOROBENZENE	1.0	U	
KBA-11-16	08/11/2000	1,4-DICHLOROBENZENE	1.0	U	
KBA-11-16	11/08/2000	1,4-DICHLOROBENZENE	1.0	U	
KBA-11-16	05/02/2001	1,4-DICHLOROBENZENE	1.0	U	
KBA-11-16	08/09/2001	1,4-DICHLOROBENZENE	1.0	U	
KBA-11-16	02/06/2001	1,4-DICHLOROBENZENE	1.0	U	
KBA-11-16	01/07/1994	BENZENE	2.0		5
KBA-11-16	01/07/1994	BENZENE	20.0	UR	5
KBA-11-16	04/07/1994	BENZENE	8.4	U	5
KBA-11-16	09/15/1994	BENZENE	1.0	U	5
KBA-11-16	09/15/1994	BENZENE	1.0	U	5
KBA-11-16	04/12/1995	BENZENE	0.4	J	5
KBA-11-16	04/17/1996	BENZENE	1.0		5
KBA-11-16	05/29/1996	BENZENE	0.0	U	5
KBA-11-16	06/13/1996	BENZENE	0.0	U	5
KBA-11-16	07/17/1996	BENZENE	0.0	U	5
KBA-11-16	10/22/1996	BENZENE	0.0	U	5
KBA-11-16	10/22/1996	BENZENE	0.0	U	5
KBA-11-16	03/08/1997	BENZENE	0.0	U	5
KBA-11-16	09/18/1997	BENZENE	0.0	U	5
KBA-11-16	08/03/1999	BENZENE	1.0	U	5
KBA-11-16	11/09/1999	BENZENE	1.0	U	5
KBA-11-16	02/11/2000	BENZENE	1.0	U	5
KBA-11-16	05/04/2000	BENZENE	1.0	U	5
KBA-11-16	08/11/2000	BENZENE	1.0	U	5
KBA-11-16	11/08/2000	BENZENE	1.0	U	5
KBA-11-16	02/06/2001	BENZENE	1.0	U	5
KBA-11-16	05/02/2001	BENZENE	1.0	U	5
KBA-11-16	08/09/2001	BENZENE	1.2	U	5
KBA-11-16	01/07/1994	CHLOROBENZENE	1.0	U	1
KBA-11-16	01/07/1994	CHLOROBENZENE	20.0	UR	1
KBA-11-16	04/07/1994	CHLOROBENZENE	8.4	U	1
KBA-11-16	09/15/1994	CHLOROBENZENE	1.0	U	1
KBA-11-16	09/15/1994	CHLOROBENZENE	1.0	U	1
KBA-11-16	04/12/1995	CHLOROBENZENE	0.0	U	1
KBA-11-16	04/17/1996	CHLOROBENZENE	0.0	U	1

I = interference.
J = estimated value; value is between MDL and PQL.
U = compound was analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = result exceeds the GPS.

Groundwater Protection Analyses
KBA-11-16, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-16	05/29/1996	CHLOROBENZENE	0.0	U	1
KBA-11-16	06/13/1996	CHLOROBENZENE	0.0	U	1

I = interference.
J = estimated value; value is between MDL and PQL.
U = compound was analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = result exceeds the GPS.

Groundwater Protection Analyses
KBA-11-16, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-16	07/17/1996	CHLOROBENZENE	0.0	U	1
KBA-11-16	10/22/1996	CHLOROBENZENE	0.0	U	1
KBA-11-16	10/22/1996	CHLOROBENZENE	0.0	U	1
KBA-11-16	09/18/1997	CHLOROBENZENE	0.0	U	1
KBA-11-16	08/03/1999	CHLOROBENZENE	1.0	U	1
KBA-11-16	11/09/1999	CHLOROBENZENE	1.0	U	1
KBA-11-16	02/11/2000	CHLOROBENZENE	1.0	U	1
KBA-11-16	05/04/2000	CHLOROBENZENE	1.0	U	1
KBA-11-16	08/11/2000	CHLOROBENZENE	1.0	U	1
KBA-11-16	11/08/2000	CHLOROBENZENE	1.0	U	1
KBA-11-16	02/06/2001	CHLOROBENZENE	1.0	U	1
KBA-11-16	05/02/2001	CHLOROBENZENE	1.0	U	1
KBA-11-16	08/09/2001	CHLOROBENZENE	1.0	U	1
KBA-11-16	01/07/1994	CHLOROETHANE	1.0	U	1
KBA-11-16	01/07/1994	CHLOROETHANE	20.0	UR	1
KBA-11-16	04/07/1994	CHLOROETHANE	17.0	U	1
KBA-11-16	09/15/1994	CHLOROETHANE	1.0	U	1
KBA-11-16	09/15/1994	CHLOROETHANE	1.0	U	1
KBA-11-16	04/12/1995	CHLOROETHANE	0.0	U	1
KBA-11-16	04/17/1996	CHLOROETHANE	0.0	U	1
KBA-11-16	**05/29/1996**	**CHLOROETHANE**	**2.0**		**1**
KBA-11-16	06/13/1996	CHLOROETHANE	0.0	U	1
KBA-11-16	07/17/1996	CHLOROETHANE	0.0	U	1
KBA-11-16	10/22/1996	CHLOROETHANE	0.0	U	1
KBA-11-16	10/22/1996	CHLOROETHANE	0.0	U	1
KBA-11-16	09/18/1997	CHLOROETHANE	0.0	U	1
KBA-11-16	08/03/1999	CHLOROETHANE	1.0	U	1
KBA-11-16	11/09/1999	CHLOROETHANE	1.0	U	1
KBA-11-16	02/11/2000	CHLOROETHANE	1.0	U	1
KBA-11-16	05/04/2000	CHLOROETHANE	1.0	U	1
KBA-11-16	08/11/2000	CHLOROETHANE	1.0	U	1
KBA-11-16	11/08/2000	CHLOROETHANE	1.0	U	1
KBA-11-16	02/06/2001	CHLOROETHANE	1.0	U	1
KBA-11-16	05/02/2001	CHLOROETHANE	1.0	U	1
KBA-11-16	08/09/2001	CHLOROETHANE	1.0	U	1
KBA-11-16	01/07/1994	CIS-1,2-DICHLOROETHENE	7.0		70
KBA-11-16	01/07/1994	CIS-1,2-DICHLOROETHENE	20.0	UR	70
KBA-11-16	09/15/1994	CIS-1,2-DICHLOROETHENE	1.0		70
KBA-11-16	09/15/1994	CIS-1,2-DICHLOROETHENE	0.9	J	70
KBA-11-16	04/12/1995	CIS-1,2-DICHLOROETHENE	3.0		70
KBA-11-16	04/17/1996	CIS-1,2-DICHLOROETHENE	6.0		70
KBA-11-16	05/29/1996	CIS-1,2-DICHLOROETHENE	4.0		70
KBA-11-16	06/13/1996	CIS-1,2-DICHLOROETHENE	3.0		70
KBA-11-16	07/17/1996	CIS-1,2-DICHLOROETHENE	5.0	J	70
KBA-11-16	10/22/1996	CIS-1,2-DICHLOROETHENE	0.7	J	70
KBA-11-16	10/22/1996	CIS-1,2-DICHLOROETHENE	1.2		70
KBA-11-16	03/08/1997	CIS-1,2-DICHLOROETHENE	0.0	U	70
KBA-11-16	09/18/1997	CIS-1,2-DICHLOROETHENE	1.0		70
KBA-11-16	11/10/1997	CIS-1,2-DICHLOROETHENE	5.0	U	70
KBA-11-16	08/03/1999	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-16	11/09/1999	CIS-1,2-DICHLOROETHENE	3.6		70
KBA-11-16	02/11/2000	CIS-1,2-DICHLOROETHENE	14.0		70

I = interference.
J = estimated value; value is between MDL and PQL.
U = compound was analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = result exceeds the GPS.

Groundwater Protection Analyses
KBA-11-16, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-16	05/04/2000	CIS-1,2-DICHLOROETHENE	2.0		70
KBA-11-16	08/11/2000	CIS-1,2-DICHLOROETHENE	2.0		70

I = interference.
J = estimated value; value is between MDL and PQL.
U = compound was analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = result exceeds the GPS.

Groundwater Protection Analyses
KBA-11-16, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-16	11/08/2000	CIS-1,2-DICHLOROETHENE	8.0		70
KBA-11-16	02/06/2001	CIS-1,2-DICHLOROETHENE	11.0		70
KBA-11-16	05/02/2001	CIS-1,2-DICHLOROETHENE	32.0		70
KBA-11-16	08/09/2001	CIS-1,2-DICHLOROETHENE	30.0		70
KBA-11-16	01/07/1994	ETHYLBENZENE	5.0		700
KBA-11-16	01/07/1994	ETHYLBENZENE	20.0	UR	700
KBA-11-16	04/07/1994	ETHYLBENZENE	8.4	U	700
KBA-11-16	09/15/1994	ETHYLBENZENE	1.0	U	700
KBA-11-16	09/15/1994	ETHYLBENZENE	1.0	U	700
KBA-11-16	04/12/1995	ETHYLBENZENE	0.0	U	700
KBA-11-16	04/17/1996	ETHYLBENZENE	3.0		700
KBA-11-16	05/29/1996	ETHYLBENZENE	0.0	U	700
KBA-11-16	06/13/1996	ETHYLBENZENE	0.0	U	700
KBA-11-16	07/17/1996	ETHYLBENZENE	0.0	U	700
KBA-11-16	10/22/1996	ETHYLBENZENE	0.0	U	700
KBA-11-16	10/22/1996	ETHYLBENZENE	0.2	J	700
KBA-11-16	09/18/1997	ETHYLBENZENE	0.0	U	700
KBA-11-16	08/03/1999	ETHYLBENZENE	1.0	U	700
KBA-11-16	11/09/1999	ETHYLBENZENE	1.0	U	700
KBA-11-16	02/11/2000	ETHYLBENZENE	1.0	U	700
KBA-11-16	05/04/2000	ETHYLBENZENE	1.0	U	700
KBA-11-16	08/11/2000	ETHYLBENZENE	0.8	J	700
KBA-11-16	11/08/2000	ETHYLBENZENE	1.0	J	700
KBA-11-16	02/06/2001	ETHYLBENZENE	1.0	J	700
KBA-11-16	05/02/2001	ETHYLBENZENE	1.0	J	700
KBA-11-16	08/09/2001	ETHYLBENZENE	1.8	J	700
KBA-11-16	01/07/1994	TETRACHLOROETHENE	1.0	U	5
KBA-11-16	01/07/1994	TETRACHLOROETHENE	20.0	UR	5
KBA-11-16	04/07/1994	TETRACHLOROETHENE	8.4	U	5
KBA-11-16	09/15/1994	TETRACHLOROETHENE	1.0	U	5
KBA-11-16	09/15/1994	TETRACHLOROETHENE	1.0	U	5
KBA-11-16	04/12/1995	TETRACHLOROETHENE	0.0	U	5
KBA-11-16	04/17/1996	TETRACHLOROETHENE	0.0	U	5
KBA-11-16	05/29/1996	TETRACHLOROETHENE	0.0	U	5
KBA-11-16	06/13/1996	TETRACHLOROETHENE	0.0	U	5
KBA-11-16	07/17/1996	TETRACHLOROETHENE	0.0	U	5
KBA-11-16	10/22/1996	TETRACHLOROETHENE	0.0	U	5
KBA-11-16	10/22/1996	TETRACHLOROETHENE	0.0	U	5
KBA-11-16	03/08/1997	TETRACHLOROETHENE	0.0	U	5
KBA-11-16	09/18/1997	TETRACHLOROETHENE	0.0	U	5
KBA-11-16	11/10/1997	TETRACHLOROETHENE	5.0	U	5
KBA-11-16	08/03/1999	TETRACHLOROETHENE	3.0	U	5
KBA-11-16	11/09/1999	TETRACHLOROETHENE	3.0	U	5
KBA-11-16	02/11/2000	TETRACHLOROETHENE	1.0	U	5
KBA-11-16	05/04/2000	TETRACHLOROETHENE	1.0	U	5
KBA-11-16	08/11/2000	TETRACHLOROETHENE	1.0	U	5
KBA-11-16	11/08/2000	TETRACHLOROETHENE	2.0	U	5
KBA-11-16	02/06/2001	TETRACHLOROETHENE	1.0	U	5
KBA-11-16	05/02/2001	TETRACHLOROETHENE	1.0	U	5
KBA-11-16	08/09/2001	TETRACHLOROETHENE	1.0	U	5
KBA-11-16	01/07/1994	TOLUENE	32.0	R	1000
KBA-11-16	01/07/1994	TOLUENE	23.0		1000

I = interference.
J = estimated value; value is between MDL and PQL.
U = compound was analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = result exceeds the GPS.

Groundwater Protection Analyses
KBA-11-16, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-16	04/07/1994	TOLUENE	24.0		1000
KBA-11-16	09/15/1994	TOLUENE	1.0	U	1000
KBA-11-16	09/15/1994	TOLUENE	1.0	U	1000
KBA-11-16	04/12/1995	TOLUENE	2.0		1000

I = interference.
J = estimated value; value is between MDL and PQL.
U = compound was analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = result exceeds the GPS.

Groundwater Protection Analyses
KBA-11-16, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-16	04/17/1996	TOLUENE	37.0		1000
KBA-11-16	05/29/1996	TOLUENE	3.0		1000
KBA-11-16	06/13/1996	TOLUENE	0.0	U	1000
KBA-11-16	07/17/1996	TOLUENE	3.0	J	1000
KBA-11-16	10/22/1996	TOLUENE	1.2		1000
KBA-11-16	10/22/1996	TOLUENE	1.6		1000
KBA-11-16	09/18/1997	TOLUENE	0.0	U	1000
KBA-11-16	08/03/1999	TOLUENE	1.0	U	1000
KBA-11-16	11/09/1999	TOLUENE	1.0	U	1000
KBA-11-16	02/11/2000	TOLUENE	1.0	U	1000
KBA-11-16	05/04/2000	TOLUENE	1.0	U	1000
KBA-11-16	08/11/2000	TOLUENE	1.0	U	1000
KBA-11-16	11/08/2000	TOLUENE	1.0	U	1000
KBA-11-16	02/06/2001	TOLUENE	3.0	U	1000
KBA-11-16	05/02/2001	TOLUENE	5.4	U	1000
KBA-11-16	08/09/2001	TOLUENE	1.5	U	1000
KBA-11-16	01/07/1994	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-16	01/07/1994	TRANS-1,2-DICHLOROETHENE	20.0	UR	100
KBA-11-16	09/15/1994	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-16	09/15/1994	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-16	04/12/1995	TRANS-1,2-DICHLOROETHENE	0.0	U	100
KBA-11-16	04/17/1996	TRANS-1,2-DICHLOROETHENE	0.0	U	100
KBA-11-16	05/29/1996	TRANS-1,2-DICHLOROETHENE	0.0	U	100
KBA-11-16	06/13/1996	TRANS-1,2-DICHLOROETHENE	0.0	U	100
KBA-11-16	07/17/1996	TRANS-1,2-DICHLOROETHENE	0.0	U	100
KBA-11-16	10/22/1996	TRANS-1,2-DICHLOROETHENE	0.0	U	100
KBA-11-16	10/22/1996	TRANS-1,2-DICHLOROETHENE	0.0	U	100
KBA-11-16	09/18/1997	TRANS-1,2-DICHLOROETHENE	0.0	U	100
KBA-11-16	08/03/1999	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-16	11/09/1999	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-16	02/11/2000	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-16	05/04/2000	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-16	08/11/2000	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-16	11/08/2000	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-16	02/06/2001	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-16	05/02/2001	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-16	08/09/2001	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-16	01/07/1994	TRICHLOROETHENE	0.6	J	5
KBA-11-16	01/07/1994	TRICHLOROETHENE	20.0	UR	5
KBA-11-16	04/07/1994	TRICHLOROETHENE	8.4	U	5
KBA-11-16	09/15/1994	TRICHLOROETHENE	1.0	U	5
KBA-11-16	09/15/1994	TRICHLOROETHENE	1.0	U	5
KBA-11-16	04/12/1995	TRICHLOROETHENE	0.1	J	5
KBA-11-16	04/17/1996	TRICHLOROETHENE	0.0	U	5
KBA-11-16	05/29/1996	TRICHLOROETHENE	0.0	U	5
KBA-11-16	06/13/1996	TRICHLOROETHENE	0.0	U	5
KBA-11-16	07/17/1996	TRICHLOROETHENE	0.0	U	5
KBA-11-16	10/22/1996	TRICHLOROETHENE	0.0	U	5
KBA-11-16	10/22/1996	TRICHLOROETHENE	0.0	U	5
KBA-11-16	03/08/1997	TRICHLOROETHENE	0.0	U	5
KBA-11-16	09/18/1997	TRICHLOROETHENE	0.0	U	5
KBA-11-16	11/10/1997	TRICHLOROETHENE	5.0	U	5

I = interference.
J = estimated value; value is between MDL and PQL.
U = compound was analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = result exceeds the GPS.

Groundwater Protection Analyses
KBA-11-16, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-16	08/03/1999	TRICHLOROETHENE	1.0	U	5
KBA-11-16	11/09/1999	TRICHLOROETHENE	1.0	U	2

I = interference.
J = estimated value; value is between MDL and PQL.
U = compound was analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = result exceeds the GPS.

Groundwater Protection Analyses
KBA-11-16, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-16	02/11/2000	TRICHLOROETHENE	1.0	U	2
KBA-11-16	05/04/2000	TRICHLOROETHENE	1.0	U	2
KBA-11-16	08/11/2000	TRICHLOROETHENE	1.0	U	2
KBA-11-16	11/08/2000	TRICHLOROETHENE	1.0	U	2
KBA-11-16	02/06/2001	TRICHLOROETHENE	1.0	U	2
KBA-11-16	05/02/2001	TRICHLOROETHENE	0.3	U	2
KBA-11-16	08/09/2001	TRICHLOROETHENE	0.4	U	2
KBA-11-16	01/07/1994	VINYL CHLORIDE	1.0	U	2
KBA-11-16	01/07/1994	VINYL CHLORIDE	20.0	UR	2
KBA-11-16	04/07/1994	VINYL CHLORIDE	17.0	U	2
KBA-11-16	09/15/1994	VINYL CHLORIDE	1.0	U	2
KBA-11-16	09/15/1994	VINYL CHLORIDE	1.0	U	2
KBA-11-16	04/12/1995	VINYL CHLORIDE	0.3	J	2
KBA-11-16	04/17/1996	VINYL CHLORIDE	0.0	U	2
KBA-11-16	05/29/1996	VINYL CHLORIDE	0.0	U	2
KBA-11-16	06/13/1996	VINYL CHLORIDE	0.0	U	2
KBA-11-16	07/17/1996	VINYL CHLORIDE	0.0	U	2
KBA-11-16	10/22/1996	VINYL CHLORIDE	0.0	U	2
KBA-11-16	10/22/1996	VINYL CHLORIDE	0.0	U	2
KBA-11-16	03/08/1997	VINYL CHLORIDE	0.0	U	2
KBA-11-16	09/18/1997	VINYL CHLORIDE	0.0	U	2
KBA-11-16	11/10/1997	VINYL CHLORIDE	2.0	U	2
KBA-11-16	08/03/1999	VINYL CHLORIDE	1.0	U	2
KBA-11-16	11/09/1999	VINYL CHLORIDE	1.4	I	2
KBA-11-16	02/11/2000	VINYL CHLORIDE	1.0		2
KBA-11-16	05/04/2000	VINYL CHLORIDE	1.0	U	2
KBA-11-16	08/11/2000	VINYL CHLORIDE	1.0	U	2
KBA-11-16	11/08/2000	VINYL CHLORIDE	1.0	U	2
KBA-11-16	02/06/2001	VINYL CHLORIDE	4.0	U	2
KBA-11-16	05/02/2001	VINYL CHLORIDE	3.4	U	2
KBA-11-16	08/09/2001	VINYL CHLORIDE	1.1	U	2
KBA-11-16	01/07/1994	XYLENES, TOTAL	12.0		10000
KBA-11-16	01/07/1994	XYLENES, TOTAL	6.0	R	10000
KBA-11-16	04/07/1994	XYLENES, TOTAL	5.4	J	10000
KBA-11-16	09/15/1994	XYLENES, TOTAL	1.0	U	10000
KBA-11-16	09/15/1994	XYLENES, TOTAL	1.0	U	10000
KBA-11-16	04/12/1995	XYLENES, TOTAL	0.0	U	10000
KBA-11-16	04/17/1996	XYLENES, TOTAL	4.0		10000
KBA-11-16	07/17/1996	XYLENES, TOTAL	0.0	U	10000
KBA-11-16	10/22/1996	XYLENES, TOTAL	0.0	U	10000
KBA-11-16	10/22/1996	XYLENES, TOTAL	0.0	U	10000
KBA-11-16	09/18/1997	XYLENES, TOTAL	0.0	U	10000
KBA-11-16	08/03/1999	XYLENES, TOTAL	3.0	U	10000
KBA-11-16	11/09/1999	XYLENES, TOTAL	3.0	U	10000
KBA-11-16	02/11/2000	XYLENES, TOTAL	3.0	U	10000
KBA-11-16	05/04/2000	XYLENES, TOTAL	3.0	U	10000
KBA-11-16	08/11/2000	XYLENES, TOTAL	3.0	U	10000
KBA-11-16	11/08/2000	XYLENES, TOTAL	2.0	U	10000
KBA-11-16	02/06/2001	XYLENES, TOTAL	3.0	U	10000
KBA-11-16	05/02/2001	XYLENES, TOTAL	0.9	U	10000
KBA-11-16	08/09/2001	XYLENES, TOTAL	1.1	U	10000

I = interference.
J = estimated value; value is between MDL and PQL.
U = compound was analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = result exceeds the GPS.

Groundwater Protection Standard Analyses
KBA-11-17B, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-17B	01/07/1994	1,1-DICHLOROETHANE	1.0		1
KBA-11-17B	01/07/1994	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-17B	04/07/1994	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-17B	09/15/1994	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-17B	04/12/1995	1,1-DICHLOROETHANE	0.4	J	1
KBA-11-17B	04/17/1996	1,1-DICHLOROETHANE	0.0	U	1
KBA-11-17B	04/17/1996	1,1-DICHLOROETHANE	0.0	U	1
KBA-11-17B	08/03/1999	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-17B	02/11/2000	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-17B	08/11/2000	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-17B	08/09/2001	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-17B	01/07/1994	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-17B	01/07/1994	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-17B	04/07/1994	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-17B	09/15/1994	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-17B	04/12/1995	1,1-DICHLOROETHENE	0.0	U	7
KBA-11-17B	04/17/1996	1,1-DICHLOROETHENE	0.0	U	7
KBA-11-17B	04/17/1996	1,1-DICHLOROETHENE	0.0	U	7
KBA-11-17B	08/03/1999	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-17B	02/11/2000	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-17B	08/11/2000	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-17B	08/09/2001	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-17B	08/03/1999	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-17B	02/11/2000	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-17B	08/11/2000	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-17B	08/09/2001	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-17B	09/15/1994	1,4-DICHLOROBENZENE	10.0	U	75
KBA-11-17B	09/15/1994	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-17B	04/12/1995	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-17B	04/12/1995	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-17B	04/17/1996	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-17B	04/17/1996	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-17B	04/17/1996	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-17B	04/17/1996	1,4-DICHLOROBENZENE	0.0	U	75
KBA-11-17B	08/03/1999	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-17B	02/11/2000	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-17B	08/11/2000	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-17B	08/09/2001	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-17B	01/07/1994	BENZENE	0.5	J	5
KBA-11-17B	01/07/1994	BENZENE	1.0	U	5
KBA-11-17B	04/07/1994	BENZENE	1.0	U	5
KBA-11-17B	09/15/1994	BENZENE	1.0	U	5
KBA-11-17B	04/12/1995	BENZENE	0.6	J	5
KBA-11-17B	04/17/1996	BENZENE	0.0	U	5
KBA-11-17B	04/17/1996	BENZENE	0.0	U	5
KBA-11-17B	08/03/1999	BENZENE	1.0	U	5
KBA-11-17B	02/11/2000	BENZENE	1.0	U	5
KBA-11-17B	08/11/2000	BENZENE	1.0	U	5
KBA-11-17B	08/09/2001	BENZENE	1.0	U	5
KBA-11-17B	01/07/1994	CHLOROBENZENE	1.0	U	1
KBA-11-17B	01/07/1994	CHLOROBENZENE	1.0	U	1
KBA-11-17B	04/07/1994	CHLOROBENZENE	1.0	U	1
KBA-11-17B	09/15/1994	CHLOROBENZENE	1.0	U	1

I = interference.
J = estimated value; value is between MDL and PQL.
U = Compound was analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = result exceeds the GPS.

Groundwater Protection Standard Analyses
KBA-11-17B, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-17B	04/12/1995	CHLOROBENZENE	0.0	U	1
KBA-11-17B	04/17/1996	CHLOROBENZENE	0.0	U	1
KBA-11-17B	04/17/1996	CHLOROBENZENE	0.0	U	1
KBA-11-17B	08/03/1999	CHLOROBENZENE	1.0	U	1
KBA-11-17B	02/11/2000	CHLOROBENZENE	1.0	U	1
KBA-11-17B	08/11/2000	CHLOROBENZENE	1.0	U	1
KBA-11-17B	08/09/2001	CHLOROBENZENE	1.0	U	1
KBA-11-17B	01/07/1994	CHLOROETHANE	1.0	U	1
KBA-11-17B	01/07/1994	CHLOROETHANE	1.0	U	1
KBA-11-17B	04/07/1994	CHLOROETHANE	1.0	U	1
KBA-11-17B	09/15/1994	CHLOROETHANE	1.0	U	1
KBA-11-17B	04/12/1995	CHLOROETHANE	0.0	U	1
KBA-11-17B	04/17/1996	CHLOROETHANE	0.0	U	1
KBA-11-17B	04/17/1996	CHLOROETHANE	0.0	U	1
KBA-11-17B	08/03/1999	CHLOROETHANE	1.0	U	1
KBA-11-17B	02/11/2000	CHLOROETHANE	1.0	U	1
KBA-11-17B	08/11/2000	CHLOROETHANE	1.0	U	1
KBA-11-17B	08/09/2001	CHLOROETHANE	1.0	U	1
KBA-11-17B	01/07/1994	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-17B	01/07/1994	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-17B	04/07/1994	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-17B	09/15/1994	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-17B	04/12/1995	CIS-1,2-DICHLOROETHENE	0.4	J	70
KBA-11-17B	04/17/1996	CIS-1,2-DICHLOROETHENE	0.0	U	70
KBA-11-17B	04/17/1996	CIS-1,2-DICHLOROETHENE	0.0	U	70
KBA-11-17B	11/10/1997	CIS-1,2-DICHLOROETHENE	5.0	U	70
KBA-11-17B	08/03/1999	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-17B	02/11/2000	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-17B	08/11/2000	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-17B	08/09/2001	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-17B	01/07/1994	ETHYLBENZENE	1.0	U	700
KBA-11-17B	01/07/1994	ETHYLBENZENE	1.0	U	700
KBA-11-17B	04/07/1994	ETHYLBENZENE	1.0	U	700
KBA-11-17B	09/15/1994	ETHYLBENZENE	1.0	U	700
KBA-11-17B	04/12/1995	ETHYLBENZENE	0.0	U	700
KBA-11-17B	04/17/1996	ETHYLBENZENE	0.0	U	700
KBA-11-17B	04/17/1996	ETHYLBENZENE	0.0	U	700
KBA-11-17B	08/03/1999	ETHYLBENZENE	1.0	U	700
KBA-11-17B	02/11/2000	ETHYLBENZENE	1.0	U	700
KBA-11-17B	08/11/2000	ETHYLBENZENE	1.0	U	700
KBA-11-17B	08/09/2001	ETHYLBENZENE	1.0	U	700
KBA-11-17B	01/07/1994	TETRACHLOROETHENE	1.0	U	5
KBA-11-17B	01/07/1994	TETRACHLOROETHENE	1.0	U	5
KBA-11-17B	04/07/1994	TETRACHLOROETHENE	1.0	U	5
KBA-11-17B	09/15/1994	TETRACHLOROETHENE	1.0	U	5
KBA-11-17B	04/12/1995	TETRACHLOROETHENE	0.0	U	5
KBA-11-17B	04/17/1996	TETRACHLOROETHENE	0.0	U	5
KBA-11-17B	04/17/1996	TETRACHLOROETHENE	0.0	U	5
KBA-11-17B	11/10/1997	TETRACHLOROETHENE	5.0	U	5
KBA-11-17B	08/03/1999	TETRACHLOROETHENE	3.0	U	5
KBA-11-17B	02/11/2000	TETRACHLOROETHENE	1.0	U	5
KBA-11-17B	08/11/2000	TETRACHLOROETHENE	1.0	U	5
KBA-11-17B	08/09/2001	TETRACHLOROETHENE	1.0	U	5

I = interference.
J = estimated value; value is between MDL and PQL.
U = Compound was analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = result exceeds the GPS.

Groundwater Protection Standard Analyses
KBA-11-17B, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-17B	01/07/1994	TOLUENE	1.0	U	1000
KBA-11-17B	01/07/1994	TOLUENE	1.0	U	1000
KBA-11-17B	04/07/1994	TOLUENE	1.0	U	1000
KBA-11-17B	09/15/1994	TOLUENE	1.0	U	1000
KBA-11-17B	04/12/1995	TOLUENE	0.0	U	1000
KBA-11-17B	04/17/1996	TOLUENE	0.0	U	1000
KBA-11-17B	04/17/1996	TOLUENE	0.0	U	1000
KBA-11-17B	08/03/1999	TOLUENE	1.0	U	1000
KBA-11-17B	02/11/2000	TOLUENE	1.0	U	1000
KBA-11-17B	08/11/2000	TOLUENE	1.0	U	1000
KBA-11-17B	08/09/2001	TOLUENE	1.0	U	1000
KBA-11-17B	01/07/1994	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-17B	01/07/1994	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-17B	04/07/1994	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-17B	09/15/1994	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-17B	04/12/1995	TRANS-1,2-DICHLOROETHENE	0.0	U	100
KBA-11-17B	04/17/1996	TRANS-1,2-DICHLOROETHENE	0.0	U	100
KBA-11-17B	04/17/1996	TRANS-1,2-DICHLOROETHENE	0.0	U	100
KBA-11-17B	08/03/1999	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-17B	02/11/2000	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-17B	08/11/2000	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-17B	08/09/2001	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-17B	01/07/1994	TRICHLOROETHENE	1.0	U	5
KBA-11-17B	01/07/1994	TRICHLOROETHENE	1.0	U	5
KBA-11-17B	04/07/1994	TRICHLOROETHENE	1.0	U	5
KBA-11-17B	09/15/1994	TRICHLOROETHENE	1.0	U	5
KBA-11-17B	04/12/1995	TRICHLOROETHENE	0.0	U	5
KBA-11-17B	04/17/1996	TRICHLOROETHENE	0.0	U	5
KBA-11-17B	04/17/1996	TRICHLOROETHENE	0.0	U	5
KBA-11-17B	11/10/1997	TRICHLOROETHENE	5.0	U	5
KBA-11-17B	08/03/1999	TRICHLOROETHENE	1.0	U	5
KBA-11-17B	02/11/2000	TRICHLOROETHENE	1.0	U	5
KBA-11-17B	08/11/2000	TRICHLOROETHENE	1.0	U	5
KBA-11-17B	08/09/2001	TRICHLOROETHENE	1.0	U	5
KBA-11-17B	01/07/1994	VINYL CHLORIDE	1.0	U	2
KBA-11-17B	01/07/1994	VINYL CHLORIDE	1.0	U	2
KBA-11-17B	04/07/1994	VINYL CHLORIDE	1.0	U	2
KBA-11-17B	09/15/1994	VINYL CHLORIDE	1.0	U	2
KBA-11-17B	04/12/1995	VINYL CHLORIDE	0.0	U	2
KBA-11-17B	04/17/1996	VINYL CHLORIDE	0.0	U	2
KBA-11-17B	04/17/1996	VINYL CHLORIDE	0.0	U	2
KBA-11-17B	11/10/1997	VINYL CHLORIDE	2.0	U	2
KBA-11-17B	08/03/1999	VINYL CHLORIDE	1.0	U	2
KBA-11-17B	02/11/2000	VINYL CHLORIDE	1.0	U	2
KBA-11-17B	08/11/2000	VINYL CHLORIDE	1.0	U	2
KBA-11-17B	08/09/2001	VINYL CHLORIDE	1.0	U	2
KBA-11-17B	01/07/1994	XYLENES, TOTAL	1.0	U	10000
KBA-11-17B	01/07/1994	XYLENES, TOTAL	1.0	U	10000
KBA-11-17B	04/07/1994	XYLENES, TOTAL	1.0	U	10000
KBA-11-17B	09/15/1994	XYLENES, TOTAL	1.0	U	10000
KBA-11-17B	04/12/1995	XYLENES, TOTAL	0.0	U	10000
KBA-11-17B	04/17/1996	XYLENES, TOTAL	0.0	U	10000
KBA-11-17B	04/17/1996	XYLENES, TOTAL	0.0	U	10000

I = interference
J = estimated value; value is between MDL and PQL.
U = Compound was analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = result exceeds the GPS.

Groundwater Protection Standard Analyses
KBA-11-17B, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-17B	08/03/1999	XYLENES, TOTAL	3.0	U	10000
KBA-11-17B	02/11/2000	XYLENES, TOTAL	3.0	U	10000
KBA-11-17B	08/11/2000	XYLENES, TOTAL	3.0	U	10000
KBA-11-17B	08/11/2000	XYLENES, TOTAL	3.0	U	10000

I =interference.
J = estimated value; value is between MDL and PQL.
U = Compound was analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = result exceeds the GPS.

Groundwater Protection Standard Analyses
KBA-11-34, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-34	08/02/1999	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-34	11/09/1999	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-34	02/11/2000	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-34	08/11/2000	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-34	08/09/2001	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-34	08/02/1999	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-34	11/09/1999	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-34	02/11/2000	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-34	05/04/2000	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-34	08/11/2000	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-34	11/08/2000	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-34	02/08/2001	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-34	05/03/2001	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-34	08/09/2001	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-34	08/02/1999	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-34	11/09/1999	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-34	02/11/2000	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-34	05/04/2000	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-34	08/11/2000	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-34	11/08/2000	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-34	02/08/2001	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-34	05/03/2001	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-34	08/09/2001	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-34	08/02/1999	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-34	11/09/1999	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-34	02/11/2000	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-34	05/04/2000	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-34	08/11/2000	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-34	11/08/2000	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-34	02/08/2001	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-34	05/03/2001	1,4-DICHLOROBENZENE	0.4	U	75
KBA-11-34	08/09/2001	1,4-DICHLOROBENZENE	0.6	U	75
KBA-11-34	08/02/1999	BENZENE	1.0	U	5
KBA-11-34	11/09/1999	BENZENE	1.0	U	5
KBA-11-34	02/11/2000	BENZENE	1.0	U	5
KBA-11-34	05/04/2000	BENZENE	1.0	U	5
KBA-11-34	08/11/2000	BENZENE	1.0	U	5
KBA-11-34	11/08/2000	BENZENE	1.0	U	5
KBA-11-34	02/08/2001	BENZENE	1.0	U	5
KBA-11-34	05/03/2001	BENZENE	1.0	U	5
KBA-11-34	08/09/2001	BENZENE	1.0	U	5
KBA-11-34	08/02/1999	CHLOROBENZENE	1.0	U	1
KBA-11-34	11/09/1999	CHLOROBENZENE	1.0	U	1
KBA-11-34	02/11/2000	CHLOROBENZENE	1.0	U	1
KBA-11-34	05/04/2000	CHLOROBENZENE	1.0	U	1
KBA-11-34	08/11/2000	CHLOROBENZENE	1.0	U	1
KBA-11-34	11/08/2000	CHLOROBENZENE	1.0	U	1
KBA-11-34	02/08/2001	CHLOROBENZENE	1.0	U	1
KBA-11-34	05/03/2001	CHLOROBENZENE	1.0	U	1
KBA-11-34	08/09/2001	CHLOROBENZENE	1.0	U	1
KBA-11-34	08/02/1999	CHLOROETHANE	1.0	U	1

I = interference.
J = estimated value; value is between MDL and PQL.
U = compound was analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = result exceeds the GPS.

Groundwater Protection Standard Analyses
KBA-11-34, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-34	11/09/1999	CHLOROETHANE	1.0	U	1
KBA-11-34	02/11/2000	CHLOROETHANE	1.0	U	1
KBA-11-34	05/04/2000	CHLOROETHANE	1.0	U	1
KBA-11-34	08/11/2000	CHLOROETHANE	1.0	U	1
KBA-11-34	11/08/2000	CHLOROETHANE	1.0	U	1
KBA-11-34	02/08/2001	CHLOROETHANE	1.0	U	1
KBA-11-34	05/03/2001	CHLOROETHANE	1.0	U	1
KBA-11-34	08/09/2001	CHLOROETHANE	1.0	U	1
KBA-11-34	09/17/1998	CIS-1,2-DICHLOROETHENE	8.0		70
KBA-11-34	10/30/1998	CIS-1,2-DICHLOROETHENE	24.0		70
KBA-11-34	11/13/1998	CIS-1,2-DICHLOROETHENE	5.0	U	70
KBA-11-34	11/24/1998	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-34	12/22/1998	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-34	01/27/1999	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-34	02/18/1999	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-34	03/15/1999	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-34	05/20/1999	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-34	06/22/1999	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-34	07/26/1999	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-34	08/02/1999	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-34	08/16/1999	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-34	11/09/1999	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-34	02/11/2000	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-34	05/04/2000	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-34	08/11/2000	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-34	11/08/2000	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-34	02/08/2001	CIS-1,2-DICHLOROETHENE	1.0	U	70
KBA-11-34	05/03/2001	CIS-1,2-DICHLOROETHENE	0.3	U	70
KBA-11-34	08/09/2001	CIS-1,2-DICHLOROETHENE	2.8	U	70
KBA-11-34	08/02/1999	ETHYLBENZENE	1.0	U	700
KBA-11-34	11/09/1999	ETHYLBENZENE	1.0	U	700
KBA-11-34	02/11/2000	ETHYLBENZENE	1.0	U	700
KBA-11-34	05/04/2000	ETHYLBENZENE	1.0	U	700
KBA-11-34	08/11/2000	ETHYLBENZENE	1.0	U	700
KBA-11-34	11/08/2000	ETHYLBENZENE	1.0	U	700
KBA-11-34	02/08/2001	ETHYLBENZENE	1.0	U	700
KBA-11-34	05/03/2001	ETHYLBENZENE	1.0	U	700
KBA-11-34	08/09/2001	ETHYLBENZENE	1.0	U	700
KBA-11-34	**09/17/1998**	**TETRACHLOROETHENE**	**3200.0**		**5**
KBA-11-34	**10/30/1998**	**TETRACHLOROETHENE**	**8500.0**		**5**
KBA-11-34	**11/13/1998**	**TETRACHLOROETHENE**	**180.0**		**5**
KBA-11-34	**11/24/1998**	**TETRACHLOROETHENE**	**200.0**		**5**
KBA-11-34	**12/22/1998**	**TETRACHLOROETHENE**	**87.0**		**5**
KBA-11-34	**01/27/1999**	**TETRACHLOROETHENE**	**83.0**		**5**
KBA-11-34	**02/18/1999**	**TETRACHLOROETHENE**	**9.0**		**5**
KBA-11-34	**03/15/1999**	**TETRACHLOROETHENE**	**62.0**		**5**
KBA-11-34	**05/20/1999**	**TETRACHLOROETHENE**	**83.0**		**5**
KBA-11-34	**06/22/1999**	**TETRACHLOROETHENE**	**10.0**		**5**
KBA-11-34	**07/26/1999**	**TETRACHLOROETHENE**	**24.0**		**5**
KBA-11-34	**08/02/1999**	**TETRACHLOROETHENE**	**17.0**		**5**

I = interference.
J = estimated value; value is between MDL and PQL.
U = compound was analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = result exceeds the GPS.

Groundwater Protection Standard Analyses
KBA-11-34, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-34	**08/16/1999**	**TETRACHLOROETHENE**	**16.0**		**5**
KBA-11-34	**11/09/1999**	**TETRACHLOROETHENE**	**22.0**		**5**
KBA-11-34	**02/11/2000**	**TETRACHLOROETHENE**	**83.0**		**5**
KBA-11-34	**05/04/2000**	**TETRACHLOROETHENE**	**89.0**		**5**
KBA-11-34	**08/11/2000**	**TETRACHLOROETHENE**	**63.0**		**5**
KBA-11-34	**11/08/2000**	**TETRACHLOROETHENE**	**79.0**		**5**
KBA-11-34	**02/08/2001**	**TETRACHLOROETHENE**	**73.0**		**5**
KBA-11-34	**05/03/2001**	**TETRACHLOROETHENE**	**62.0**		**5**
KBA-11-34	**08/09/2001**	**TETRACHLOROETHENE**	**35.0**		**5**
KBA-11-34	08/02/1999	TOLUENE	1.0	U	1000
KBA-11-34	11/09/1999	TOLUENE	1.0	U	1000
KBA-11-34	02/11/2000	TOLUENE	1.0	U	1000
KBA-11-34	05/04/2000	TOLUENE	1.0	U	1000
KBA-11-34	08/11/2000	TOLUENE	1.0	U	1000
KBA-11-34	11/08/2000	TOLUENE	1.0	U	1000
KBA-11-34	02/08/2001	TOLUENE	1.0	U	1000
KBA-11-34	05/03/2001	TOLUENE	0.2	U	1000
KBA-11-34	08/09/2001	TOLUENE	1.0	U	1000
KBA-11-34	08/02/1999	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-34	11/09/1999	TRANS-1,2-DICHLOROETHENE	1.0		100
KBA-11-34	02/11/2000	TRANS-1,2-DICHLOROETHENE	1.0		100
KBA-11-34	05/04/2000	TRANS-1,2-DICHLOROETHENE	1.0		100
KBA-11-34	08/11/2000	TRANS-1,2-DICHLOROETHENE	1.0		100
KBA-11-34	11/08/2000	TRANS-1,2-DICHLOROETHENE	1.0		100
KBA-11-34	02/08/2001	TRANS-1,2-DICHLOROETHENE	1.0		100
KBA-11-34	05/03/2001	TRANS-1,2-DICHLOROETHENE	1.0		100
KBA-11-34	08/09/2001	TRANS-1,2-DICHLOROETHENE	1.0		100
KBA-11-34	**09/17/1998**	**TRICHLOROETHENE**	**350.0**		**5**
KBA-11-34	**10/30/1998**	**TRICHLOROETHENE**	**550.0**		**5**
KBA-11-34	**11/13/1998**	**TRICHLOROETHENE**	**30.0**		**5**
KBA-11-34	**11/24/1998**	**TRICHLOROETHENE**	**19.0**		**5**
KBA-11-34	**12/22/1998**	**TRICHLOROETHENE**	**6.0**		**5**
KBA-11-34	**01/27/1999**	**TRICHLOROETHENE**	**7.0**		**5**
KBA-11-34	02/18/1999	TRICHLOROETHENE	1.0	U	5
KBA-11-34	03/15/1999	TRICHLOROETHENE	3.0		5
KBA-11-34	05/20/1999	TRICHLOROETHENE	3.0		5
KBA-11-34	06/22/1999	TRICHLOROETHENE	1.0	U	5
KBA-11-34	07/26/1999	TRICHLOROETHENE	1.0	U	5
KBA-11-34	08/02/1999	TRICHLOROETHENE	1.0	I	5
KBA-11-34	08/16/1999	TRICHLOROETHENE	1.0	U	5
KBA-11-34	11/09/1999	TRICHLOROETHENE	1.0	U	5
KBA-11-34	02/11/2000	TRICHLOROETHENE	2.0		5
KBA-11-34	05/04/2000	TRICHLOROETHENE	1.0		5
KBA-11-34	08/11/2000	TRICHLOROETHENE	0.6	J	5
KBA-11-34	11/08/2000	TRICHLOROETHENE	1.0	J	5
KBA-11-34	02/08/2001	TRICHLOROETHENE	2.0	J	5
KBA-11-34	05/03/2001	TRICHLOROETHENE	2.6	J	5
KBA-11-34	08/09/2001	TRICHLOROETHENE	3.0		5
KBA-11-34	09/17/1998	VINYL CHLORIDE	1.0	U	2
KBA-11-34	10/30/1998	VINYL CHLORIDE	1.0	U	2
KBA-11-34	11/13/1998	VINYL CHLORIDE	5.0	U	2

I = interference.
J = estimated value; value is between MDL and PQL.
U = compound was analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = result exceeds the GPS.

Groundwater Protection Standard Analyses
KBA-11-34, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-34	11/24/1998	VINYL CHLORIDE	1.0	U	2
KBA-11-34	12/22/1998	VINYL CHLORIDE	1.0	U	2
KBA-11-34	01/27/1999	VINYL CHLORIDE	1.0	U	2
KBA-11-34	02/18/1999	VINYL CHLORIDE	1.0	U	2
KBA-11-34	03/15/1999	VINYL CHLORIDE	1.0	U	2
KBA-11-34	05/20/1999	VINYL CHLORIDE	5.0	U	2
KBA-11-34	06/22/1999	VINYL CHLORIDE	1.0	U	2
KBA-11-34	07/26/1999	VINYL CHLORIDE	1.0	U	2
KBA-11-34	08/02/1999	VINYL CHLORIDE	1.0	U	2
KBA-11-34	08/16/1999	VINYL CHLORIDE	1.0	U	2
KBA-11-34	11/09/1999	VINYL CHLORIDE	1.0	U	2
KBA-11-34	02/11/2000	VINYL CHLORIDE	1.0	U	2
KBA-11-34	05/04/2000	VINYL CHLORIDE	1.0	U	2
KBA-11-34	08/11/2000	VINYL CHLORIDE	1.0	U	2
KBA-11-34	11/08/2000	VINYL CHLORIDE	1.0	U	2
KBA-11-34	02/08/2001	VINYL CHLORIDE	1.0	U	2
KBA-11-34	05/03/2001	VINYL CHLORIDE	1.0	U	2
KBA-11-34	08/09/2001	VINYL CHLORIDE	1.0	U	2
KBA-11-34	08/02/1999	XYLENES, TOTAL	3.0	U	10000
KBA-11-34	11/09/1999	XYLENES, TOTAL	3.0	U	10000
KBA-11-34	02/11/2000	XYLENES, TOTAL	3.0	U	10000
KBA-11-34	05/04/2000	XYLENES, TOTAL	3.0	U	10000
KBA-11-34	08/11/2000	XYLENES, TOTAL	3.0	U	10000
KBA-11-34	11/08/2000	XYLENES, TOTAL	2.0	U	10000
KBA-11-34	02/08/2001	XYLENES, TOTAL	3.0	U	10000
KBA-11-34	05/03/2001	XYLENES, TOTAL	3.0	U	10000
KBA-11-34	08/09/2001	XYLENES, TOTAL	3.0	U	10000

I = interference.
J = estimated value; value is between MDL and PQL.
U = compound was analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = result exceeds the GPS.

Groundwater Protection Standard Analyses
KBA-11-37, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-37	08/16/1999	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-37	11/09/1999	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-37	02/11/2000	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-37	05/04/2000	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-37	08/09/2001	1,1-DICHLOROETHANE	1.0	U	1
KBA-11-37	08/16/1999	1,1-DICHLOROETHENE	1.0	U	7
KBA-11-37	11/09/1999	1,1-DICHLOROETHENE	1.0	U	1
KBA-11-37	02/11/2000	1,1-DICHLOROETHENE	1.0	U	1
KBA-11-37	05/04/2000	1,1-DICHLOROETHENE	1.0	U	1
KBA-11-37	08/11/2000	1,1-DICHLOROETHENE	1.0	U	1
KBA-11-37	08/09/2001	1,1-DICHLOROETHENE	1.0	U	1
KBA-11-37	08/16/1999	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-37	11/09/1999	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-37	02/11/2000	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-37	05/04/2000	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-37	08/11/2000	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-37	11/08/2000	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-37	08/09/2001	1,2-DICHLOROETHANE	1.0	U	5
KBA-11-37	08/16/1999	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-37	11/09/1999	1,4-DICHLOROBENZENE	4.7		75
KBA-11-37	02/11/2000	1,4-DICHLOROBENZENE	3.0		75
KBA-11-37	05/04/2000	1,4-DICHLOROBENZENE	3.0		75
KBA-11-37	08/11/2000	1,4-DICHLOROBENZENE	3.0		75
KBA-11-37	11/08/2000	1,4-DICHLOROBENZENE	3.0		75
KBA-11-37	02/07/2001	1,4-DICHLOROBENZENE	1.0	U	75
KBA-11-37	05/02/2001	1,4-DICHLOROBENZENE	2.6	U	75
KBA-11-37	08/09/2001	1,4-DICHLOROBENZENE	3.1	U	75
KBA-11-37	08/16/1999	BENZENE	2.1		5
KBA-11-37	11/09/1999	BENZENE	2.0		5
KBA-11-37	02/11/2000	BENZENE	2.0		5
KBA-11-37	05/04/2000	BENZENE	2.0		5
KBA-11-37	08/11/2000	BENZENE	2.0		5
KBA-11-37	11/08/2000	BENZENE	2.0		5
KBA-11-37	02/07/2001	BENZENE	2.0		5
KBA-11-37	05/02/2001	BENZENE	1.3		5
KBA-11-37	08/09/2001	BENZENE	1.3		5
KBA-11-37	**08/16/1999**	**CHLOROBENZENE**	**2.9**		**1**
KBA-11-37	**11/09/1999**	**CHLOROBENZENE**	**3.1**		**1**
KBA-11-37	**02/11/2000**	**CHLOROBENZENE**	**2.0**		**1**
KBA-11-37	**05/04/2000**	**CHLOROBENZENE**	**3.0**		**1**
KBA-11-37	**08/11/2000**	**CHLOROBENZENE**	**2.0**		**1**
KBA-11-37	**11/08/2000**	**CHLOROBENZENE**	**3.0**		**1**
KBA-11-37	**02/07/2001**	**CHLOROBENZENE**	**2.0**		**1**
KBA-11-37	**05/02/2001**	**CHLOROBENZENE**	**2.1**		**1**
KBA-11-37	**08/09/2001**	**CHLOROBENZENE**	**2.8**		**1**
KBA-11-37	08/16/1999	CHLOROETHANE	1.0	U	1
KBA-11-37	11/09/1999	CHLOROETHANE	1.0	U	1
KBA-11-37	02/11/2000	CHLOROETHANE	1.0	U	1
KBA-11-37	05/04/2000	CHLOROETHANE	1.0	U	1
KBA-11-37	08/11/2000	CHLOROETHANE	1.0	U	1
KBA-11-37	11/08/2000	CHLOROETHANE	1.0	U	1

I = interference.
J = estimated value; value is between MDL and PQL.
U = compound was analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = result exceeds GPS.

Groundwater Protection Standard Analyses
KBA-11-37, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-37	02/07/2001	CHLOROETHANE	1.0	U	1
KBA-11-37	05/02/2001	CHLOROETHANE	1.0	U	1
KBA-11-37	08/09/2001	CHLOROETHANE	1.0	U	1
KBA-11-37	08/16/1999	CIS-1,2-DICHLOROETHENE	24.0		70
KBA-11-37	11/09/1999	CIS-1,2-DICHLOROETHENE	17.0		70
KBA-11-37	02/11/2000	CIS-1,2-DICHLOROETHENE	16.0		70
KBA-11-37	05/04/2000	CIS-1,2-DICHLOROETHENE	17.0		70
KBA-11-37	08/11/2000	CIS-1,2-DICHLOROETHENE	14.0		70
KBA-11-37	11/08/2000	CIS-1,2-DICHLOROETHENE	11.0		70
KBA-11-37	02/07/2001	CIS-1,2-DICHLOROETHENE	13.0		70
KBA-11-37	05/02/2001	CIS-1,2-DICHLOROETHENE	13.0		70
KBA-11-37	08/09/2001	CIS-1,2-DICHLOROETHENE	12.0		70
KBA-11-37	08/16/1999	ETHYLBENZENE	15.0		700
KBA-11-37	11/09/1999	ETHYLBENZENE	14.0	U	700
KBA-11-37	02/11/2000	ETHYLBENZENE	9.0		700
KBA-11-37	05/04/2000	ETHYLBENZENE	1.0U		700
KBA-11-37	08/11/2000	ETHYLBENZENE	7.0		700
KBA-11-37	11/08/2000	ETHYLBENZENE	10.0		700
KBA-11-37	02/07/2001	ETHYLBENZENE	13.0		700
KBA-11-37	05/02/2001	ETHYLBENZENE	10.0		700
KBA-11-37	08/09/2001	ETHYLBENZENE	13.0		700
KBA-11-37	08/16/1999	TETRACHLOROETHENE	3.0	U	5
KBA-11-37	11/09/1999	TETRACHLOROETHENE	3.0	U	5
KBA-11-37	02/11/2000	TETRACHLOROETHENE	1.0	U	5
KBA-11-37	05/04/2000	TETRACHLOROETHENE	1.0	U	5
KBA-11-37	08/11/2000	TETRACHLOROETHENE	1.0	U	5
KBA-11-37	11/08/2000	TETRACHLOROETHENE	1.0	U	5
KBA-11-37	02/07/2001	TETRACHLOROETHENE	1.0	U	5
KBA-11-37	05/02/2001	TETRACHLOROETHENE	1.0	U	5
KBA-11-37	08/09/2001	TETRACHLOROETHENE	1.0	U	5
KBA-11-37	08/16/1999	TOLUENE	1.0	U	1000
KBA-11-37	11/09/1999	TOLUENE	1.0	U	1000
KBA-11-37	02/11/2000	TOLUENE	1.0		1000
KBA-11-37	05/04/2000	TOLUENE	1.0	U	1000
KBA-11-37	08/11/2000	TOLUENE	1.0	U	1000
KBA-11-37	11/08/2000	TOLUENE	1.0	U	1000
KBA-11-37	02/07/2001	TOLUENE	1.0	U	1000
KBA-11-37	05/02/2001	TOLUENE	0.4	U	1000
KBA-11-37	08/09/2001	TOLUENE	0.2	J	1000
KBA-11-37	08/16/1999	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-37	11/09/1999	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-37	02/11/2000	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-37	05/04/2000	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-37	08/11/2000	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-37	11/08/2000	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-37	02/07/2001	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-37	05/02/2001	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-37	08/09/2001	TRANS-1,2-DICHLOROETHENE	1.0	U	100
KBA-11-37	08/16/1999	TRICHLOROETHENE	1.0	U	5
KBA-11-37	11/09/1999	TRICHLOROETHENE	1.0	U	5
KBA-11-37	02/11/2000	TRICHLOROETHENE	1.0	U	5

I = interference.
J = estimated value; value is between MDL and PQL.
U = compound was analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = result exceeds GPS.

Groundwater Protection Standard Analyses
KBA-11-37, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT (ug/L)	Q	CRITERIA (ug/L)
KBA-11-37	05/04/2000	TRICHLOROETHENE	1.0	U	5
KBA-11-37	08/11/2000	TRICHLOROETHENE	1.0	U	5
KBA-11-37	11/08/2000	TRICHLOROETHENE	1.0	U	5
KBA-11-37	02/07/2001	TRICHLOROETHENE	1.0	U	5
KBA-11-37	05/02/2001	TRICHLOROETHENE	1.0	U	5
KBA-11-37	08/09/2002	TRICHLOROETHENE	1.0	U	5
KBA-11-37	**08/16/1999**	**VINYL CHLORIDE**	**2.5**	**I**	**2**
KBA-11-37	11/09/1999	VINYL CHLORIDE	1.4	I	2
KBA-11-37	02/11/2000	VINYL CHLORIDE	1.0	U	2
KBA-11-37	05/04/2000	VINYL CHLORIDE	1.0	U	2
KBA-11-37	08/11/2000	VINYL CHLORIDE	1.0	U	2
KBA-11-37	11/08/2000	VINYL CHLORIDE	1.0	U	2
KBA-11-37	02/07/2001	VINYL CHLORIDE	0.6	J	2
KBA-11-37	05/02/2001	VINYL CHLORIDE	1.0	J	2
KBA-11-37	08/09/2001	VINYL CHLORIDE	1.0	J	2
KBA-11-37	08/16/1999	XYLENES, TOTAL	3.0	U	10000
KBA-11-37	11/09/1999	XYLENES, TOTAL	3.0	U	10000
KBA-11-37	02/11/2000	XYLENES, TOTAL	3.0	U	10000
KBA-11-37	05/04/2000	XYLENES, TOTAL	12.0	U	10000
KBA-11-37	08/11/2000	XYLENES, TOTAL	3.0	U	10000
KBA-11-37	11/08/2000	XYLENES, TOTAL	2.0	U	10000
KBA-11-37	02/07/2001	XYLENES, TOTAL	3.0	U	10000
KBA-11-37	05/02/2001	XYLENES, TOTAL	0.2	J	10000
KBA-11-37	02/07/2001	XYLENES, TOTAL	3.0	J	10000

I = interference.
J = estimated value; value is between MDL and PQL.
U = compound was analyzed for but not detected to level shown.
R = extract was reanalyzed without re-extraction.
BOLD = result exceeds GPS.

Groundwater Protection Standard Analyses
PS-2, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT	Q	CRITERIA (ug/L)
PS-2	**04/18/1996**	**1,1-DICHLOROETHANE**	**16.0**		**1**
PS-2	**05/29/1996**	**1,1-DICHLOROETHANE**	**10.0**		**1**
PS-2	**05/31/1996**	**1,1-DICHLOROETHANE**	**11.0**		**1**
PS-2	**06/05/1996**	**1,1-DICHLOROETHANE**	**11.0**		**1**
PS-2	**06/06/1996**	**1,1-DICHLOROETHANE**	**11.0**		**1**
PS-2	06/08/1996	1,1-DICHLOROETHANE	0.0	U	1
PS-2	06/13/1996	1,1-DICHLOROETHANE	0.0	U	1
PS-2	06/28/1996	1,1-DICHLOROETHANE	0.0	U	1
PS-2	**07/17/1996**	**1,1-DICHLOROETHANE**	**13.0**	**J**	**1**
PS-2	10/24/1996	1,1-DICHLOROETHANE	0.0	U	1
PS-2	**03/08/1997**	**1,1-DICHLOROETHANE**	**10.0**		**1**
PS-2	**09/16/1997**	**1,1-DICHLOROETHANE**	**8.0**	**J**	**1**
PS-2	**08/17/1999**	**1,1-DICHLOROETHANE**	**5.6**		**1**
PS-2	**11/09/1999**	**1,1-DICHLOROETHANE**	**5.1**		**1**
PS-2	**02/11/2000**	**1,1-DICHLOROETHANE**	**5.0**		**1**
PS-2	**05/04/2000**	**1,1-DICHLOROETHANE**	**5.0**		**1**
PS-2	**08/11/2000**	**1,1-DICHLOROETHANE**	**4.0**		**1**
PS-2	**11/08/2000**	**1,1-DICHLOROETHANE**	**4.0**		**1**
PS-2	02/07/2001	1,1-DICHLOROETHANE	1.0	U	1
PS-2	05/02/2001	1,1-DICHLOROETHANE	4.1	U	1
PS-2	08/09/2001	1,1-DICHLOROETHANE	4.2	U	1
PS-2	04/18/1996	1,1-DICHLOROETHENE	0.0	U	7
PS-2	05/29/1996	1,1-DICHLOROETHENE	0.0	U	7
PS-2	05/31/1996	1,1-DICHLOROETHENE	0.0	U	7
PS-2	06/05/1996	1,1-DICHLOROETHENE	0.0	U	7
PS-2	06/06/1996	1,1-DICHLOROETHENE	0.0	U	7
PS-2	06/08/1996	1,1-DICHLOROETHENE	0.0	U	7
PS-2	06/13/1996	1,1-DICHLOROETHENE	0.0	U	7
PS-2	06/28/1996	1,1-DICHLOROETHENE	0.0	U	7
PS-2	07/17/1996	1,1-DICHLOROETHENE	0.0	U	7
PS-2	10/24/1996	1,1-DICHLOROETHENE	0.0	U	7
PS-2	09/16/1997	1,1-DICHLOROETHENE	0.0	U	7
PS-2	08/17/1999	1,1-DICHLOROETHENE	1.0		7
PS-2	11/09/1999	1,1-DICHLOROETHENE	1.0	U	7
PS-2	02/11/2000	1,1-DICHLOROETHENE	1.0	U	7
PS-2	05/04/2000	1,1-DICHLOROETHENE	1.0	U	7
PS-2	08/11/2000	1,1-DICHLOROETHENE	1.0	U	7
PS-2	11/08/2000	1,1-DICHLOROETHENE	1.0	U	7
PS-2	02/07/2001	1,1-DICHLOROETHENE	1.0	U	7
PS-2	05/02/2001	1,1-DICHLOROETHENE	1.0	U	7
PS-2	08/09/2001	1,1-DICHLOROETHENE	1.0	U	7
PS-2	08/17/1999	1,2-DICHLOROETHANE	1.0	U	5
PS-2	11/09/1999	1,2-DICHLOROETHANE	1.0	U	5
PS-2	02/11/2000	1,2-DICHLOROETHANE	1.0	U	5
PS-2	05/04/2000	1,2-DICHLOROETHANE	1.0	U	5
PS-2	08/11/2000	1,2-DICHLOROETHANE	1.0	U	5
PS-2	11/08/2000	1,2-DICHLOROETHANE	1.0	U	5
PS-2	02/07/2001	1,2-DICHLOROETHANE	1.0	U	5
PS-2	05/02/2001	1,2-DICHLOROETHANE	1.0	U	5
PS-2	08/09/2001	1,2-DICHLOROETHANE	1.0	U	5
PS-2	04/18/1996	1,4-DICHLOROBENZENE	0.0		75
PS-2	04/18/1996	1,4-DICHLOROBENZENE	0.0	U	75

I = interference.
J = estimated value; value is between MDL and PQL.
U = compound analyzed for but not detected to level shown.
R = extract reanalyzed w/o re-extraction.
BOLD = exceeds GPS.

Groundwater Protection Standard Analyses
PS-2, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT	Q	CRITERIA (ug/L)
PS-2	05/29/1996	1,4-DICHLOROBENZENE	0.0	U	75
PS-2	05/29/1996	1,4-DICHLOROBENZENE	0.0	U	75
PS-2	05/31/1996	1,4-DICHLOROBENZENE	0.0	U	75
PS-2	05/31/1996	1,4-DICHLOROBENZENE	0.0	U	75
PS-2	06/05/1996	1,4-DICHLOROBENZENE	0.0	U	75
PS-2	06/05/1996	1,4-DICHLOROBENZENE	0.0	U	75
PS-2	06/06/1996	1,4-DICHLOROBENZENE	0.0	U	75
PS-2	06/06/1996	1,4-DICHLOROBENZENE	0.0	U	75
PS-2	06/08/1996	1,4-DICHLOROBENZENE	0.0	U	75
PS-2	06/08/1996	1,4-DICHLOROBENZENE	0.0	U	75
PS-2	06/13/1996	1,4-DICHLOROBENZENE	0.0	U	75
PS-2	06/13/1996	1,4-DICHLOROBENZENE	0.0	U	75
PS-2	06/28/1996	1,4-DICHLOROBENZENE	0.0	U	75
PS-2	06/28/1996	1,4-DICHLOROBENZENE	0.0	U	75
PS-2	08/17/1999	1,4-DICHLOROBENZENE	1.0	U	75
PS-2	11/09/1999	1,4-DICHLOROBENZENE	1.0	U	75
PS-2	02/11/2000	1,4-DICHLOROBENZENE	1.0	U	75
PS-2	05/04/2000	1,4-DICHLOROBENZENE	1.0	U	75
PS-2	08/11/2000	1,4-DICHLOROBENZENE	1.0	U	75
PS-2	11/08/2000	1,4-DICHLOROBENZENE	1.0	U	75
PS-2	02/07/2001	1,4-DICHLOROBENZENE	1.0	U	75
PS-2	05/02/2001	1,4-DICHLOROBENZENE	1.0	U	75
PS-2	08/09/2001	1,4-DICHLOROBENZENE	1.0	U	75
PS-2	04/18/1996	BENZENE	1.0		5
PS-2	05/29/1996	BENZENE	2.0		5
PS-2	05/31/1996	BENZENE	0.0	U	5
PS-2	06/05/1996	BENZENE	0.0	U	5
PS-2	06/06/1996	BENZENE	0.0	U	5
PS-2	06/08/1996	BENZENE	0.0	U	5
PS-2	06/13/1996	BENZENE	0.0	U	5
PS-2	06/28/1996	BENZENE	0.0	U	5
PS-2	07/17/1996	BENZENE	4.0	J	5
PS-2	10/24/1996	BENZENE	0.0	U	5
PS-2	**03/08/1997**	**BENZENE**	**5.9**		**5**
PS-2	**09/16/1997**	**BENZENE**	**10.0**		**5**
PS-2	**08/17/1999**	**BENZENE**	**9.1**		**5**
PS-2	**11/09/1999**	**BENZENE**	**9.4**		**5**
PS-2	**02/11/2000**	**BENZENE**	**8.0**		**5**
PS-2	**05/04/2000**	**BENZENE**	**8.0**		**5**
PS-2	**08/11/2000**	**BENZENE**	**6.0**		**5**
PS-2	**11/08/2000**	**BENZENE**	**5.0**		**5**
PS-2	02/07/2001	BENZENE	2.0		5
PS-2	05/02/2001	BENZENE	3.7		5
PS-2	08/09/2001	BENZENE	5.4		5
PS-2	04/18/1996	CHLOROBENZENE	0.0	U	1
PS-2	05/29/1996	CHLOROBENZENE	0.0	U	1
PS-2	05/31/1996	CHLOROBENZENE	0.0	U	1
PS-2	06/05/1996	CHLOROBENZENE	0.0	U	1
PS-2	06/06/1996	CHLOROBENZENE	0.0	U	1
PS-2	06/08/1996	CHLOROBENZENE	0.0	U	1
PS-2	06/13/1996	CHLOROBENZENE	0.0	U	1
PS-2	06/28/1996	CHLOROBENZENE	0.0	U	1

I = interference.
J = estimated value; value is between MDL and PQL.
U = compound analyzed for but not detected to level shown.
R = extract reanalyzed w/o re-extraction.
BOLD = exceeds GPS.

Groundwater Protection Standard Analyses
PS-2, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT	Q	CRITERIA (ug/L)
PS-2	07/17/1996	CHLOROBENZENE	0.0	U	1
PS-2	10/24/1996	CHLOROBENZENE	0.0	U	1
PS-2	09/16/1997	CHLOROBENZENE	0.0	U	1
PS-2	08/17/1999	CHLOROBENZENE	1.0	U	1
PS-2	11/09/1999	CHLOROBENZENE	1.0	U	1
PS-2	02/11/2000	CHLOROBENZENE	1.0	U	1
PS-2	05/04/2000	CHLOROBENZENE	0.7	U	1
PS-2	08/11/2000	CHLOROBENZENE	0.5	U	1
PS-2	11/08/2000	CHLOROBENZENE	1.0	U	1
PS-2	**02/07/2001**	**CHLOROBENZENE**	**2.0**	**U**	**1**
PS-2	05/02/2001	CHLOROBENZENE	0.6	U	1
PS-2	08/09/2001	CHLOROBENZENE	0.9	J	1
PS-2	04/18/1996	CHLOROETHANE	0.0	U	1
PS-2	05/29/1996	CHLOROETHANE	0.0	U	1
PS-2	05/31/1996	CHLOROETHANE	0.0	U	1
PS-2	06/05/1996	CHLOROETHANE	0.0	U	1
PS-2	06/06/1996	CHLOROETHANE	0.0	U	1
PS-2	06/08/1996	CHLOROETHANE	0.0	U	1
PS-2	06/13/1996	CHLOROETHANE	0.0	U	1
PS-2	06/28/1996	CHLOROETHANE	0.0	U	1
PS-2	07/17/1996	CHLOROETHANE	0.0	U	1
PS-2	10/24/1996	CHLOROETHANE	0.0	U	1
PS-2	09/16/1997	CHLOROETHANE	0.0	U	1
PS-2	08/17/1999	CHLOROETHANE	1.0	U	1
PS-2	11/09/1999	CHLOROETHANE	1.0	U	1
PS-2	02/11/2000	CHLOROETHANE	1.0	U	1
PS-2	05/04/2000	CHLOROETHANE	1.0	U	1
PS-2	08/11/2000	CHLOROETHANE	1.0	U	1
PS-2	11/08/2000	CHLOROETHANE	1.0	U	1
PS-2	02/07/2001	CHLOROETHANE	1.0	U	1
PS-2	05/02/2001	CHLOROETHANE	1.0	U	1
PS-2	08/09/2001	CHLOROETHANE	1.0	U	1
PS-2	**04/18/1996**	**CIS-1,2-DICHLOROETHENE**	**320.0**		**70**
PS-2	**05/29/1996**	**CIS-1,2-DICHLOROETHENE**	**210.0**		**70**
PS-2	**05/31/1996**	**CIS-1,2-DICHLOROETHENE**	**160.0**		**70**
PS-2	**06/05/1996**	**CIS-1,2-DICHLOROETHENE**	**160.0**		**70**
PS-2	**06/06/1996**	**CIS-1,2-DICHLOROETHENE**	**170.0**		**70**
PS-2	**06/08/1996**	**CIS-1,2-DICHLOROETHENE**	**75.0**		**70**
PS-2	**06/13/1996**	**CIS-1,2-DICHLOROETHENE**	**140.0**		**70**
PS-2	**06/28/1996**	**CIS-1,2-DICHLOROETHENE**	**210.0**		**70**
PS-2	**07/17/1996**	**CIS-1,2-DICHLOROETHENE**	**200.0**		**70**
PS-2	10/24/1996	CIS-1,2-DICHLOROETHENE	15.0		70
PS-2	**03/08/1997**	**CIS-1,2-DICHLOROETHENE**	**110.0**		**70**
PS-2	09/16/1997	CIS-1,2-DICHLOROETHENE	41.0		70
PS-2	08/17/1999	CIS-1,2-DICHLOROETHENE	41.0		70
PS-2	11/09/1999	CIS-1,2-DICHLOROETHENE	40.0		70
PS-2	02/11/2000	CIS-1,2-DICHLOROETHENE	52.0		70
PS-2	05/04/2000	CIS-1,2-DICHLOROETHENE	57.0		70
PS-2	**08/11/2000**	**CIS-1,2-DICHLOROETHENE**	**58.0**		**70**
PS-2	**11/08/2000**	**CIS-1,2-DICHLOROETHENE**	**61.0**		**70**
PS-2	**02/07/2001**	**CIS-1,2-DICHLOROETHENE**	**13.0**		**70**

I = interference.
J = estimated value; value is between MDL and PQL.
U = compound analyzed for but not detected to level shown.
R = extract reanalyzed w/o re-extraction.
BOLD = exceeds GPS.

Groundwater Protection Standard Analyses
PS-2, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT	Q	CRITERIA (ug/L)
PS-2	**05/02/2001**	**CIS-1,2-DICHLOROETHENE**	**79.0**		**70**
PS-2	**08/09/2001**	**CIS-1,2-DICHLOROETHENE**	**99.0**		**70**
PS-2	04/18/1996	ETHYLBENZENE	2.0		700
PS-2	05/29/1996	ETHYLBENZENE	3.0		700
PS-2	05/31/1996	ETHYLBENZENE	0.0	U	700
PS-2	06/05/1996	ETHYLBENZENE	0.0	U	700
PS-2	06/06/1996	ETHYLBENZENE	0.0	U	700
PS-2	06/08/1996	ETHYLBENZENE	24.0		700
PS-2	06/13/1996	ETHYLBENZENE	0.0	U	700
PS-2	06/28/1996	ETHYLBENZENE	0.0	U	700
PS-2	07/17/1996	ETHYLBENZENE	3.0	J	700
PS-2	10/24/1996	ETHYLBENZENE	0.0	U	700
PS-2	09/16/1997	ETHYLBENZENE	7.0	J	700
PS-2	08/17/1999	ETHYLBENZENE	10.0		700
PS-2	11/09/1999	ETHYLBENZENE	16.0		700
PS-2	02/11/2000	ETHYLBENZENE	14.0		700
PS-2	05/04/2000	ETHYLBENZENE	16.0		700
PS-2	08/11/2000	ETHYLBENZENE	14.0		700
PS-2	11/08/2000	ETHYLBENZENE	18.0		700
PS-2	02/07/2001	ETHYLBENZENE	13.0		700
PS-2	02/07/2001	ETHYLBENZENE	22.0		700
PS-2	02/07/2001	ETHYLBENZENE	22.0		700
PS-2	04/18/1996	TETRACHLOROETHENE	0.0	U	5
PS-2	05/29/1996	TETRACHLOROETHENE	0.0	U	5
PS-2	05/31/1996	TETRACHLOROETHENE	0.0	U	5
PS-2	06/05/1996	TETRACHLOROETHENE	0.0	U	5
PS-2	06/06/1996	TETRACHLOROETHENE	0.0	U	5
PS-2	**06/08/1996**	**TETRACHLOROETHENE**	**270.0**		**5**
PS-2	06/13/1996	TETRACHLOROETHENE	0.0	U	5
PS-2	06/28/1996	TETRACHLOROETHENE	0.0	U	5
PS-2	07/17/1996	TETRACHLOROETHENE	0.0	U	5
PS-2	10/24/1996	TETRACHLOROETHENE	0.0	U	5
PS-2	03/08/1997	TETRACHLOROETHENE	0.0	U	5
PS-2	09/16/1997	TETRACHLOROETHENE	0.0	U	5
PS-2	08/17/1999	TETRACHLOROETHENE	3.0	U	5
PS-2	11/09/1999	TETRACHLOROETHENE	3.0	U	5
PS-2	02/11/2000	TETRACHLOROETHENE	1.0	U	5
PS-2	05/04/2000	TETRACHLOROETHENE	1.0	U	5
PS-2	08/11/2000	TETRACHLOROETHENE	1.0	U	5
PS-2	11/08/2000	TETRACHLOROETHENE	3.0	U	5
PS-2	02/07/2001	TETRACHLOROETHENE	1.0	U	5
PS-2	05/02/2001	TETRACHLOROETHENE	1.0	U	5
PS-2	08/09/2001	TETRACHLOROETHENE	1.0	U	5
PS-2	04/18/1996	TOLUENE	10.0	J	1000
PS-2	05/29/1996	TOLUENE	66.0		1000
PS-2	05/31/1996	TOLUENE	69.0		1000
PS-2	06/05/1996	TOLUENE	75.0		1000
PS-2	06/06/1996	TOLUENE	71.0		1000
PS-2	06/08/1996	TOLUENE	0.0	U	1000
PS-2	06/13/1996	TOLUENE	74.0		1000
PS-2	06/28/1996	TOLUENE	0.0	U	1000
PS-2	07/17/1996	TOLUENE	110.0		1000

I = interference.
J = estimated value; value is between MDL and PQL.
U = compound analyzed for but not detected to level shown.
R = extract reanalyzed w/o re-extraction.
BOLD = exceeds GPS.

Groundwater Protection Standard Analyses
PS-2, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT	Q	CRITERIA (ug/L)
PS-2	10/24/1996	TOLUENE	0.0	U	1000
PS-2	09/16/1997	TOLUENE	100.0		1000
PS-2	08/17/1999	TOLUENE	43.0		1000
PS-2	11/09/1999	TOLUENE	57.0		1000
PS-2	02/11/2000	TOLUENE	37.0		1000
PS-2	05/04/2000	TOLUENE	19.0		1000
PS-2	08/11/2000	TOLUENE	8.0		1000
PS-2	11/08/2000	TOLUENE	5.0		1000
PS-2	02/07/2001	TOLUENE	1.0	U	1000
PS-2	05/02/2001	TOLUENE	2.9		1000
PS-2	08/09/2001	TOLUENE	2.7		1000
PS-2	04/18/1996	TRANS-1,2-DICHLOROETHENE	5.0		100
PS-2	05/29/1996	TRANS-1,2-DICHLOROETHENE	1.0		100
PS-2	05/31/1996	TRANS-1,2-DICHLOROETHENE	0.0	U	100
PS-2	06/05/1996	TRANS-1,2-DICHLOROETHENE	0.0	U	100
PS-2	06/06/1996	TRANS-1,2-DICHLOROETHENE	0.0	U	100
PS-2	06/08/1996	TRANS-1,2-DICHLOROETHENE	0.0	U	100
PS-2	06/13/1996	TRANS-1,2-DICHLOROETHENE	0.0	U	100
PS-2	06/28/1996	TRANS-1,2-DICHLOROETHENE	0.0	U	100
PS-2	07/17/1996	TRANS-1,2-DICHLOROETHENE	0.0	U	100
PS-2	10/24/1996	TRANS-1,2-DICHLOROETHENE	0.0	U	100
PS-2	09/16/1997	TRANS-1,2-DICHLOROETHENE	0.0	U	100
PS-2	08/17/1999	TRANS-1,2-DICHLOROETHENE	1.0	U	100
PS-2	11/09/1999	TRANS-1,2-DICHLOROETHENE	1.0	U	
PS-2	02/11/2000	TRANS-1,2-DICHLOROETHENE	1.0	U	
PS-2	05/04/2000	TRANS-1,2-DICHLOROETHENE	0.5	U	
PS-2	08/11/2000	TRANS-1,2-DICHLOROETHENE	1.0	U	
PS-2	11/08/2000	TRANS-1,2-DICHLOROETHENE	1.0	U	
PS-2	02/07/2001	TRANS-1,2-DICHLOROETHENE	1.0	U	
PS-2	05/02/2001	TRANS-1,2-DICHLOROETHENE	0.6	J	
PS-2	08/09/2001	TRANS-1,2-DICHLOROETHENE	0.8	J	
PS-2	04/18/1996	TRICHLOROETHENE	3.0		5
PS-2	05/29/1996	TRICHLOROETHENE	2.0		5
PS-2	05/31/1996	TRICHLOROETHENE	0.0	U	5
PS-2	06/05/1996	TRICHLOROETHENE	0.0	U	5
PS-2	06/06/1996	TRICHLOROETHENE	0.0	U	5
PS-2	**06/08/1996**	**TRICHLOROETHENE**	**200.0**		**5**
PS-2	06/13/1996	TRICHLOROETHENE	0.0	U	5
PS-2	06/28/1996	TRICHLOROETHENE	0.0	U	5
PS-2	07/17/1996	TRICHLOROETHENE	4.0	J	5
PS-2	10/24/1996	TRICHLOROETHENE	0.0	U	5
PS-2	03/08/1997	TRICHLOROETHENE	2.8		5
PS-2	09/16/1997	TRICHLOROETHENE	1.0	J	5
PS-2	08/17/1999	TRICHLOROETHENE	1.3	I	5
PS-2	11/09/1999	TRICHLOROETHENE	1.4	I	5
PS-2	02/11/2000	TRICHLOROETHENE	2.0		5
PS-2	05/04/2000	TRICHLOROETHENE	2.0		5
PS-2	08/11/2000	TRICHLOROETHENE	2.0		5
PS-2	11/08/2000	TRICHLOROETHENE	2.0		5
PS-2	02/07/2001	TRICHLOROETHENE	1.0	U	5
PS-2	05/02/2001	TRICHLOROETHENE	1.9	U	5
PS-2	08/09/2001	TRICHLOROETHENE	2.0	U	5

I = interference.
J = estimated value; value is between MDL and PQL.
U = compound analyzed for but not detected to level shown.
R = extract reanalyzed w/o re-extraction.
BOLD = exceeds GPS.

Groundwater Protection Standard Analyses
PS-2, Site 11 NSB Kings Bay

LOCATION	SAMPLE DATE	PARAMETER	RESULT	Q	CRITERIA (ug/L)
PS-2	**04/18/1996**	**VINYL CHLORIDE**	**8.0**		**2**
PS-2	**05/29/1996**	**VINYL CHLORIDE**	**5.0**		**2**
PS-2	05/31/1996	VINYL CHLORIDE	0.0	U	2
PS-2	06/05/1996	VINYL CHLORIDE	0.0	U	2
PS-2	06/06/1996	VINYL CHLORIDE	0.0	U	2
PS-2	06/08/1996	VINYL CHLORIDE	0.0	U	2
PS-2	06/13/1996	VINYL CHLORIDE	0.0	U	2
PS-2	06/28/1996	VINYL CHLORIDE	0.0	U	2
PS-2	07/17/1996	VINYL CHLORIDE	0.0	U	2
PS-2	10/24/1996	VINYL CHLORIDE	0.0	U	2
PS-2	**03/08/1997**	**VINYL CHLORIDE**	**8.8**		**2**
PS-2	09/16/1997	VINYL CHLORIDE	1.0	J	2
PS-2	**08/17/1999**	**VINYL CHLORIDE**	**3.2**	**I**	**2**
PS-2	**11/09/1999**	**VINYL CHLORIDE**	**2.9**		**2**
PS-2	**02/11/2000**	**VINYL CHLORIDE**	**2.0**		**2**
PS-2	05/04/2000	VINYL CHLORIDE	1.0U		2
PS-2	**08/11/2000**	**VINYL CHLORIDE**	**2.0**		**2**
PS-2	**11/08/2000**	**VINYL CHLORIDE**	**3.0**		**2**
PS-2	02/07/2001	VINYL CHLORIDE	0.6	J	2
PS-2	05/02/2001	VINYL CHLORIDE	2.4	J	2
PS-2	08/09/2001	VINYL CHLORIDE	2.4	J	2
PS-2	04/18/1996	XYLENES, TOTAL	4.0		10000
PS-2	07/17/1996	XYLENES, TOTAL	7.0	J	10000
PS-2	10/24/1996	XYLENES, TOTAL	0.0	U	10000
PS-2	09/16/1997	XYLENES, TOTAL	17.0		10000
PS-2	08/17/1999	XYLENES, TOTAL	29.0		10000
PS-2	11/09/1999	XYLENES, TOTAL	47.0		10000
PS-2	02/11/2000	XYLENES, TOTAL	40.0		10000
PS-2	05/04/2000	XYLENES, TOTAL	41.0		10000
PS-2	08/11/2000	XYLENES, TOTAL	19.0		10000
PS-2	11/08/2000	XYLENES, TOTAL	7.0		10000
PS-2	02/07/2001	XYLENES, TOTAL	3.0	U	10000
PS-2	05/02/2001	XYLENES, TOTAL	3.6		10000
PS-2	08/09/2001	XYLENES, TOTAL	3.5		10000

I = interference.
J = estimated value; value is between MDL and PQL.
U = compound analyzed for but not detected to level shown.
R = extract reanalyzed w/o re-extraction.
BOLD = exceeds GPS.

C-2
Analytical Reports
August 2001, Quarterly Monitoring Data

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

KBA11-11
A-AUG8-01

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102434-001

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-13

Level: (low/med) LOW Date Received: 08/10/01

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane (P)	1.0	U
75-01-4	Vinyl Chloride (C)	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	5.0	U
107-02-8	Acrolein	100	U
75-35-4	1,1-Dichloroethene (C)	1.0	U
67-64-1	Acetone	50	U
75-15-0	Carbon Disulfide	5.0	U
75-09-2	Methylene Chloride	10	U
107-13-1	Acrylonitrile	10	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane (P)	1.0	U
78-93-3	2-Butanone (MEK)	25	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
67-66-3	Chloroform (C)	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon Tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane (C)	1.0	U
75-27-4	Bromodichloromethane	1.0	U
110-75-8	2-Chloroethyl Vinyl Ether	5.0	U
108-10-1	4-Methyl-2-pentanone (MIBK)	25	U
108-88-3	Toluene (C)	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene (P)	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U
100-41-4	Ethylbenzene (C)	1.0	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

KBA11-11
A-AUG8-01

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102434-001

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-13

Level: (low/med) LOW Date Received: 08/10/01

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
136777-61-2	m,p-Xylenes	2.0	U
1330-20-7	Total Xylenes	3.0	U
95-47-6	o-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform (P)	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane (P)	1.0	U
96-18-4	1,2,3-Trichloropropane	5.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

KBA11-13AAUG801

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102434-002

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-14

Level: (low/med) LOW Date Received: 08/10/01

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane (P)	1.0	U
75-01-4	Vinyl Chloride (C)	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	5.0	U
107-02-8	Acrolein	100	U
75-35-4	1,1-Dichloroethene (C)	1.0	U
67-64-1	Acetone	50	U
75-15-0	Carbon Disulfide	5.6	
75-09-2	Methylene Chloride	10	U
107-13-1	Acrylonitrile	10	U
156-60-5	trans-1,2-Dichloroethene	5.4	
75-34-3	1,1-Dichloroethane (P)	1.0	U
78-93-3	2-Butanone (MEK)	25	U
156-59-2	cis-1,2-Dichloroethene	59	
67-66-3	Chloroform (C)	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon Tetrachloride	1.0	U
71-43-2	Benzene	0.31	J
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	26	
78-87-5	1,2-Dichloropropane (C)	1.0	U
75-27-4	Bromodichloromethane	1.0	U
110-75-8	2-Chloroethyl Vinyl Ether	5.0	U
108-10-1	4-Methyl-2-pentanone (MIBK)	25	U
108-88-3	Toluene (C)	0.30	J
127-18-4	Tetrachloroethene	0.77	J
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene (P)	2.1	
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U
100-41-4	Ethylbenzene (C)	14	

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

KBA11-13AAUG801

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102434-002

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-14

Level: (low/med) LOW Date Received: 08/10/01

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
136777-61-2	m,p-Xylenes	0.37	J
1330-20-7	Total Xylenes	0.37	J
95-47-6	o-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform (P)	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane (P)	1.0	U
96-18-4	1,2,3-Trichloropropane	5.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.4	
95-50-1	1,2-Dichlorobenzene	1.0	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

KBA11-13
AAUG801MS

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102434-002MS

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-05

Level: (low/med) LOW Date Received: 08/10/01

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	16	
74-87-3	Chloromethane (P)	13	
75-01-4	Vinyl Chloride (C)	15	
74-83-9	Bromomethane	15	
75-00-3	Chloroethane	16	
75-69-4	Trichlorofluoromethane	14	
107-02-8	Acrolein	100	U
75-35-4	1,1-Dichloroethene (C)	18	
67-64-1	Acetone	82	
75-15-0	Carbon Disulfide	89	
75-09-2	Methylene Chloride	9.2	J
107-13-1	Acrylonitrile	85	
156-60-5	trans-1,2-Dichloroethene	23	
75-34-3	1,1-Dichloroethane (P)	17	
78-93-3	2-Butanone (MEK)	80	
156-59-2	cis-1,2-Dichloroethene	77	
67-66-3	Chloroform (C)	17	
71-55-6	1,1,1-Trichloroethane	18	
56-23-5	Carbon Tetrachloride	17	
71-43-2	Benzene	17	
107-06-2	1,2-Dichloroethane	17	
79-01-6	Trichloroethene	42	
78-87-5	1,2-Dichloropropane (C)	16	
75-27-4	Bromodichloromethane	18	
110-75-8	2-Chloroethyl Vinyl Ether	5.0	U
108-10-1	4-Methyl-2-pentanone (MIBK)	82	
108-88-3	Toluene (C)	17	
127-18-4	Tetrachloroethene	16	
591-78-6	2-Hexanone	78	
124-48-1	Dibromochloromethane	16	
108-90-7	Chlorobenzene (P)	18	
630-20-6	1,1,1,2-Tetrachloroethane	17	
100-41-4	Ethylbenzene (C)	31	

FORM I
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

KBA11-13
AAUG801MS

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102434-002MS

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-05

Level: (low/med) LOW Date Received: 08/10/01

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
136777-61-2	m,p-Xylenes	35	
1330-20-7	Total Xylenes	52	
95-47-6	o-Xylene	18	
100-42-5	Styrene	17	
75-25-2	Bromoform (P)	16	
79-34-5	1,1,2,2-Tetrachloroethane (P)	20	
96-18-4	1,2,3-Trichloropropane	17	
541-73-1	1,3-Dichlorobenzene	16	
106-46-7	1,4-Dichlorobenzene	17	
95-50-1	1,2-Dichlorobenzene	16	

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

KBA11-13A
AUG801MSD

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102434-002MSD

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-06

Level: (low/med) LOW Date Received: 08/10/01

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	16	
74-87-3	Chloromethane (P)	14	
75-01-4	Vinyl Chloride (C)	16	
74-83-9	Bromomethane	16	
75-00-3	Chloroethane	17	
75-69-4	Trichlorofluoromethane	14	
107-02-8	Acrolein	100	U
75-35-4	1,1-Dichloroethene (C)	20	
67-64-1	Acetone	91	
75-15-0	Carbon Disulfide	95	
75-09-2	Methylene Chloride	11	
107-13-1	Acrylonitrile	78	
156-60-5	trans-1,2-Dichloroethene	25	
75-34-3	1,1-Dichloroethane (P)	19	
78-93-3	2-Butanone (MEK)	88	
156-59-2	cis-1,2-Dichloroethene	82	
67-66-3	Chloroform (C)	20	
71-55-6	1,1,1-Trichloroethane	20	
56-23-5	Carbon Tetrachloride	19	
71-43-2	Benzene	20	
107-06-2	1,2-Dichloroethane	19	
79-01-6	Trichloroethene	45	
78-87-5	1,2-Dichloropropane (C)	18	
75-27-4	Bromodichloromethane	20	
110-75-8	2-Chloroethyl Vinyl Ether	5.0	U
108-10-1	4-Methyl-2-pentanone (MIBK)	89	
108-88-3	Toluene (C)	19	
127-18-4	Tetrachloroethene	18	
591-78-6	2-Hexanone	87	
124-48-1	Dibromochloromethane	19	
108-90-7	Chlorobenzene (P)	20	
630-20-6	1,1,1,2-Tetrachloroethane	19	
100-41-4	Ethylbenzene (C)	34	

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

KBA11-13A
AUG801MSD

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102434-002MSD

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-06

Level: (low/med) LOW Date Received: 08/10/01

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
136777-61-2	m,p-Xylenes	39	
1330-20-7	Total Xylenes	59	
95-47-6	o-Xylene	20	
100-42-5	Styrene	19	
75-25-2	Bromoform (P)	18	
79-34-5	1,1,2,2-Tetrachloroethane (P)	23	
96-18-4	1,2,3-Trichloropropane	19	
541-73-1	1,3-Dichlorobenzene	18	
106-46-7	1,4-Dichlorobenzene	19	
95-50-1	1,2-Dichlorobenzene	18	

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

KBA11-13A- DUP

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102434-003

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-15

Level: (low/med) LOW Date Received: 08/10/01

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane (P)	1.0	U
75-01-4	Vinyl Chloride (C)	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	5.0	U
107-02-8	Acrolein	100	U
75-35-4	1,1-Dichloroethene (C)	0.44	J
67-64-1	Acetone	50	U
75-15-0	Carbon Disulfide	7.8	
75-09-2	Methylene Chloride	10	U
107-13-1	Acrylonitrile	10	U
156-60-5	trans-1,2-Dichloroethene	6.4	
75-34-3	1,1-Dichloroethane (P)	1.0	U
78-93-3	2-Butanone (MEK)	25	U
156-59-2	cis-1,2-Dichloroethene	71	
67-66-3	Chloroform (C)	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon Tetrachloride	1.0	U
71-43-2	Benzene	0.43	J
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	32	
78-87-5	1,2-Dichloropropane (C)	1.0	U
75-27-4	Bromodichloromethane	1.0	U
110-75-8	2-Chloroethyl Vinyl Ether	5.0	U
108-10-1	4-Methyl-2-pentanone (MIBK)	25	U
108-88-3	Toluene (C)	0.43	J
127-18-4	Tetrachloroethene	1.6	
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene (P)	3.1	
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U
100-41-4	Ethylbenzene (C)	22	

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

KBA11-13A- DUP

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102434-003

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-15

Level: (low/med) LOW Date Received: 08/10/01

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
136777-61-2	m,p-Xylenes	0.56	J
1330-20-7	Total Xylenes	0.56	J
95-47-6	o-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform (P)	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane (P)	1.0	U
96-18-4	1,2,3-Trichloropropane	5.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	2.1	
95-50-1	1,2-Dichlorobenzene	1.0	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

KBA11-13
B-AUG8-01

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102434-004

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-16

Level: (low/med) LOW Date Received: 08/10/01

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane (P)	1.0	U
75-01-4	Vinyl Chloride (C)	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	5.0	U
107-02-8	Acrolein	100	U
75-35-4	1,1-Dichloroethene (C)	1.0	U
67-64-1	Acetone	50	U
75-15-0	Carbon Disulfide	5.0	U
75-09-2	Methylene Chloride	10	U
107-13-1	Acrylonitrile	10	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane (P)	1.0	U
78-93-3	2-Butanone (MEK)	25	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
67-66-3	Chloroform (C)	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon Tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane (C)	1.0	U
75-27-4	Bromodichloromethane	1.0	U
110-75-8	2-Chloroethyl Vinyl Ether	5.0	U
108-10-1	4-Methyl-2-pentanone (MIBK)	25	U
108-88-3	Toluene (C)	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene (P)	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U
100-41-4	Ethylbenzene (C)	1.0	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

KBA11-13
B-AUG8-01

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102434-004

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-16

Level: (low/med) LOW Date Received: 08/10/01

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
136777-61-2	m,p-Xylenes	2.0	U
1330-20-7	Total Xylenes	3.0	U
95-47-6	o-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform (P)	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane (P)	1.0	U
96-18-4	1,2,3-Trichloropropane	5.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

KHA11-13A
-RINSATE B

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102434-005

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-17

Level: (low/med) LOW Date Received: 08/10/01

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane (P)	1.0	U
75-01-4	Vinyl Chloride (C)	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	5.0	U
107-02-8	Acrolein	100	U
75-35-4	1,1-Dichloroethene (C)	1.0	U
67-64-1	Acetone	50	U
75-15-0	Carbon Disulfide	5.0	U
75-09-2	Methylene Chloride	10	U
107-13-1	Acrylonitrile	10	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane (P)	1.0	U
78-93-3	2-Butanone (MEK)	25	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
67-66-3	Chloroform (C)	8.3	
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon Tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane (C)	1.0	U
75-27-4	Bromodichloromethane	5.9	
110-75-8	2-Chloroethyl Vinyl Ether	5.0	U
108-10-1	4-Methyl-2-pentanone (MIBK)	25	U
108-88-3	Toluene (C)	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	3.4	
108-90-7	Chlorobenzene (P)	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U
100-41-4	Ethylbenzene (C)	1.0	U

FORM I
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

KBA11-13A
-RINSATE B

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102434-005

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-17

Level: (low/med) LOW Date Received: 08/10/01

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
136777-61-2	m,p-Xylenes	2.0	U
1330-20-7	Total Xylenes	3.0	U
95-47-6	o-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform (P)	1.8	
79-34-5	1,1,2,2-Tetrachloroethane (P)	1.0	U
96-18-4	1,2,3-Trichloropropane	5.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

KBA11-02
-AUG8-01

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102434-006

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-18

Level: (low/med) LOW Date Received: 08/10/01

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane (P)	1.0	U
75-01-4	Vinyl Chloride (C)	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	5.0	U
107-02-8	Acrolein	100	U
75-35-4	1,1-Dichloroethene (C)	1.0	U
67-64-1	Acetone	50	U
75-15-0	Carbon Disulfide	5.0	U
75-09-2	Methylene Chloride	10	U
107-13-1	Acrylonitrile	10	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane (P)	1.0	U
78-93-3	2-Butanone (MEK)	25	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
67-66-3	Chloroform (C)	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon Tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane (C)	1.0	U
75-27-4	Bromodichloromethane	1.0	U
110-75-8	2-Chloroethyl Vinyl Ether	5.0	U
108-10-1	4-Methyl-2-pentanone (MIBK)	25	U
108-88-3	Toluene (C)	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene (P)	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U
100-41-4	Ethylbenzene (C)	1.0	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

KBA11-02
-AUG8-01

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102434-006

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-18

Level: (low/med) LOW Date Received: 08/10/01

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
136777-61-2	m,p-Xylenes	2.0	U
1330-20-7	Total Xylenes	3.0	U
95-47-6	o-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform (P)	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane (P)	1.0	U
96-18-4	1,2,3-Trichloropropane	5.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

TRIP BLAN
K(7/18/01)

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102434-007

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-19

Level: (low/med) LOW Date Received: 08/10/01

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane (P)	1.0	U
75-01-4	Vinyl Chloride (C)	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	5.0	U
107-02-8	Acrolein	100	U
75-35-4	1,1-Dichloroethene (C)	1.0	U
67-64-1	Acetone	50	U
75-15-0	Carbon Disulfide	5.0	U
75-09-2	Methylene Chloride	10	U
107-13-1	Acrylonitrile	10	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane (P)	1.0	U
78-93-3	2-Butanone (MEK)	25	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
67-66-3	Chloroform (C)	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon Tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane (C)	1.0	U
75-27-4	Bromodichloromethane	1.0	U
110-75-8	2-Chloroethyl Vinyl Ether	5.0	U
108-10-1	4-Methyl-2-pentanone (MIBK)	25	U
108-88-3	Toluene (C)	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene (P)	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U
100-41-4	Ethylbenzene (C)	1.0	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

TRIP BLAN
K(7/18/01)

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102434-007

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-19

Level: (low/med) LOW Date Received: 08/10/01

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
136777-61-2	m,p-Xylenes	2.0	U
1330-20-7	Total Xylenes	3.0	U
95-47-6	o-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform (P)	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane (P)	1.0	U
96-18-4	1,2,3-Trichloropropane	5.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

KBA11-15-
AUG-09-01

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102434-008

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-20

Level: (low/med) LOW Date Received: 08/10/01

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane (P)	1.0	U
75-01-4	Vinyl Chloride (C)	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	5.0	U
107-02-8	Acrolein	100	U
75-35-4	1,1-Dichloroethene (C)	1.0	U
67-64-1	Acetone	50	U
75-15-0	Carbon Disulfide	5.0	U
75-09-2	Methylene Chloride	10	U
107-13-1	Acrylonitrile	10	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane (P)	1.0	U
78-93-3	2-Butanone (MEK)	25	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
67-66-3	Chloroform (C)	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon Tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane (C)	1.0	U
75-27-4	Bromodichloromethane	1.0	U
110-75-8	2-Chloroethyl Vinyl Ether	5.0	U
108-10-1	4-Methyl-2-pentanone (MIBK)	25	U
108-88-3	Toluene (C)	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene (P)	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U
100-41-4	Ethylbenzene (C)	1.0	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

KBA11-15-AUG-09-01

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102434-008

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-20

Level: (low/med) LOW Date Received: 08/10/01

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
136777-61-2	m,p-Xylenes	2.0	U
1330-20-7	Total Xylenes	3.0	U
95-47-6	o-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform (P)	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane (P)	1.0	U
96-18-4	1,2,3-Trichloropropane	5.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

KBA11-17B
-AUG-09-01

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102434-009

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-21

Level: (low/med) LOW Date Received: 08/10/01

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane (P)	1.0	U
75-01-4	Vinyl Chloride (C)	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	5.0	U
107-02-8	Acrolein	100	U
75-35-4	1,1-Dichloroethene (C)	1.0	U
67-64-1	Acetone	50	U
75-15-0	Carbon Disulfide	5.0	U
75-09-2	Methylene Chloride	10	U
107-13-1	Acrylonitrile	10	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane (P)	1.0	U
78-93-3	2-Butanone (MEK)	25	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
67-66-3	Chloroform (C)	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon Tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane (C)	1.0	U
75-27-4	Bromodichloromethane	1.0	U
110-75-8	2-Chloroethyl Vinyl Ether	5.0	U
108-10-1	4-Methyl-2-pentanone (MIBK)	25	U
108-88-3	Toluene (C)	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene (P)	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U
100-41-4	Ethylbenzene (C)	1.0	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

KBA11-17B
-AUG-09-01

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102434-009

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-21

Level: (low/med) LOW Date Received: 08/10/01

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
136777-61-2	m,p-Xylenes	2.0	U
1330-20-7	Total Xylenes	3.0	U
95-47-6	o-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform (P)	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane (P)	1.0	U
96-18-4	1,2,3-Trichloropropane	5.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

KBA11-16-
AUG-09-01

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102434-010

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-22

Level: (low/med) LOW Date Received: 08/10/01

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane (P)	1.0	U
75-01-4	Vinyl Chloride (C)	1.1	
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	5.0	U
107-02-8	Acrolein	100	U
75-35-4	1,1-Dichloroethene (C)	1.8	
67-64-1	Acetone	22	J
75-15-0	Carbon Disulfide	5.0	U
75-09-2	Methylene Chloride	10	U
107-13-1	Acrylonitrile	10	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane (P)	26	
78-93-3	2-Butanone (MEK)	29	
156-59-2	cis-1,2-Dichloroethene	30	
67-66-3	Chloroform (C)	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon Tetrachloride	1.0	U
71-43-2	Benzene	1.2	
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	0.42	J
78-87-5	1,2-Dichloropropane (C)	0.32	J
75-27-4	Bromodichloromethane	1.0	U
110-75-8	2-Chloroethyl Vinyl Ether	5.0	U
108-10-1	4-Methyl-2-pentanone (MIBK)	29	
108-88-3	Toluene (C)	15	
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene (P)	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U
100-41-4	Ethylbenzene (C)	1.8	

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

KBA11-PS2
-AUG-09-01

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102434-011

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-23

Level: (low/med) LOW Date Received: 08/10/01

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane (P)	1.0	U
75-01-4	Vinyl Chloride (C)	2.4	
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	5.0	U
107-02-8	Acrolein	100	U
75-35-4	1,1-Dichloroethene (C)	1.0	U
67-64-1	Acetone	50	U
75-15-0	Carbon Disulfide	5.0	U
75-09-2	Methylene Chloride	10	U
107-13-1	Acrylonitrile	10	U
156-60-5	trans-1,2-Dichloroethene	0.80	J
75-34-3	1,1-Dichloroethane (P)	4.2	
78-93-3	2-Butanone (MEK)	25	U
156-59-2	cis-1,2-Dichloroethene	99	
67-66-3	Chloroform (C)	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon Tetrachloride	1.0	U
71-43-2	Benzene	3.4	
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	2.0	
78-87-5	1,2-Dichloropropane (C)	0.27	J
75-27-4	Bromodichloromethane	1.0	U
110-75-8	2-Chloroethyl Vinyl Ether	5.0	U
108-10-1	4-Methyl-2-pentanone (MIBK)	1.6	J
108-88-3	Toluene (C)	2.7	
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene (P)	0.92	J
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U
100-41-4	Ethylbenzene (C)	22	

FORM I
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

KBA11-PS2
-AUG-09-01

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102434-011

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-23

Level: (low/med) LOW Date Received: 08/10/01

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
136777-61-2	m,p-Xylenes	1.6	J
1330-20-7	Total Xylenes	3.5	
95-47-6	o-Xylene	2.0	
100-42-5	Styrene	1.0	U
75-25-2	Bromoform (P)	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane (P)	1.0	U
96-18-4	1,2,3-Trichloropropane	5.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

KBA11-10B
-AUG-09-01

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102434-012

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-24

Level: (low/med) LOW Date Received: 08/10/01

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane (P)	1.0	U
75-01-4	Vinyl Chloride (C)	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	5.0	U
107-02-8	Acrolein	100	U
75-35-4	1,1-Dichloroethene (C)	1.0	U
67-64-1	Acetone	50	U
75-15-0	Carbon Disulfide	5.0	U
75-09-2	Methylene Chloride	10	U
107-13-1	Acrylonitrile	10	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane (P)	1.0	U
78-93-3	2-Butanone (MEK)	25	U
156-59-2	cis-1,2-Dichloroethene	1.0	
67-66-3	Chloroform (C)	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon Tetrachloride	1.0	U
71-43-2	Benzene	0.57	J
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane (C)	1.0	U
75-27-4	Bromodichloromethane	1.0	U
110-75-8	2-Chloroethyl Vinyl Ether	5.0	U
108-10-1	4-Methyl-2-pentanone (MIBK)	25	U
108-88-3	Toluene (C)	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene (P)	1.2	
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U
100-41-4	Ethylbenzene (C)	2.5	

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

KBA11-10B
-AUG-09-01

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102434-012

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-24

Level: (low/med) LOW Date Received: 08/10/01

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
136777-61-2	m,p-Xylenes	2.0	U
1330-20-7	Total Xylenes	3.0	U
95-47-6	o-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform (P)	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane (P)	1.0	U
96-18-4	1,2,3-Trichloropropane	5.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	0.76	J
95-50-1	1,2-Dichlorobenzene	1.0	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

KBA11-34-
AUG-09-01

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102434-013

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-25

Level: (low/med) LOW Date Received: 08/10/01

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane (P)	1.0	U
75-01-4	Vinyl Chloride (C)	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	5.0	U
107-02-8	Acrolein	100	U
75-35-4	1,1-Dichloroethene (C)	1.0	U
67-64-1	Acetone	350	
75-15-0	Carbon Disulfide	2.4	J
75-09-2	Methylene Chloride	10	U
107-13-1	Acrylonitrile	10	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane (P)	1.0	U
78-93-3	2-Butanone (MEK)	18	J
156-59-2	cis-1,2-Dichloroethene	2.8	
67-66-3	Chloroform (C)	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon Tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	3.0	
78-87-5	1,2-Dichloropropane (C)	1.0	U
75-27-4	Bromodichloromethane	1.0	U
110-75-8	2-Chloroethyl Vinyl Ether	5.0	U
108-10-1	4-Methyl-2-pentanone (MIBK)	25	U
108-88-3	Toluene (C)	1.0	U
127-18-4	Tetrachloroethene	35	
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene (P)	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U
100-41-4	Ethylbenzene (C)	1.0	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

KBA11-34-
AUG-09-01

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102434-013

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-25

Level: (low/med) LOW Date Received: 08/10/01

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
136777-61-2	m,p-Xylenes	2.0	U
1330-20-7	Total Xylenes	3.0	U
95-47-6	o-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform (P)	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane (P)	1.0	U
96-18-4	1,2,3-Trichloropropane	5.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	0.56	J
95-50-1	1,2-Dichlorobenzene	1.0	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

KBA11-37-
AUG-09-01

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102434-014

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-26

Level: (low/med) LOW Date Received: 08/10/01

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane (P)	1.0	U
75-01-4	Vinyl Chloride (C)	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	5.0	U
107-02-8	Acrolein	100	U
75-35-4	1,1-Dichloroethene (C)	1.0	U
67-64-1	Acetone	50	U
75-15-0	Carbon Disulfide	5.0	U
75-09-2	Methylene Chloride	10	U
107-13-1	Acrylonitrile	10	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane (P)	1.0	U
78-93-3	2-Butanone (MEK)	25	U
156-59-2	cis-1,2-Dichloroethene	12	
67-66-3	Chloroform (C)	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon Tetrachloride	1.0	U
71-43-2	Benzene	1.3	
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane (C)	1.0	U
75-27-4	Bromodichloromethane	1.0	U
110-75-8	2-Chloroethyl Vinyl Ether	5.0	U
108-10-1	4-Methyl-2-pentanone (MIBK)	25	U
108-88-3	Toluene (C)	0.22	J
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene (P)	2.8	
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U
100-41-4	Ethylbenzene (C)	13	

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

KBA11-37-
AUG-09-01

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102434-014

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-26

Level: (low/med) LOW Date Received: 08/10/01

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
136777-61-2	m,p-Xylenes	2.0	U
1330-20-7	Total Xylenes	3.0	U
95-47-6	o-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform (P)	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane (P)	1.0	U
96-18-4	1,2,3-Trichloropropane	5.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	3.1	
95-50-1	1,2-Dichlorobenzene	1.0	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MS521H17-MB

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: MS521H17-MB

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-11

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane (P)	1.0	U
75-01-4	Vinyl Chloride (C)	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	5.0	U
107-02-8	Acrolein	100	U
75-35-4	1,1-Dichloroethene (C)	1.0	U
67-64-1	Acetone	50	U
75-15-0	Carbon Disulfide	5.0	U
75-09-2	Methylene Chloride	10	U
107-13-1	Acrylonitrile	10	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane (P)	1.0	U
78-93-3	2-Butanone (MEK)	25	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
67-66-3	Chloroform (C)	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon Tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane (C)	1.0	U
75-27-4	Bromodichloromethane	1.0	U
110-75-8	2-Chloroethyl Vinyl Ether	5.0	U
108-10-1	4-Methyl-2-pentanone (MIBK)	25	U
108-88-3	Toluene (C)	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene (P)	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U
100-41-4	Ethylbenzene (C)	1.0	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MS521H17-MB

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: MS521H17-MB

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-11

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
136777-61-2	m,p-Xylenes	2.0	U
1330-20-7	Total Xylenes	3.0	U
95-47-6	o-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform (P)	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane (P)	1.0	U
96-18-4	1,2,3-Trichloropropane	5.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MS521H17-MBLCS

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: MS521H17-LCS

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-04

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	22	
74-87-3	Chloromethane (P)	18	
75-01-4	Vinyl Chloride (C)	21	
74-83-9	Bromomethane	21	
75-00-3	Chloroethane	21	
75-69-4	Trichlorofluoromethane	19	
107-02-8	Acrolein	280	
75-35-4	1,1-Dichloroethene (C)	20	
67-64-1	Acetone	98	
75-15-0	Carbon Disulfide	98	
75-09-2	Methylene Chloride	12	
107-13-1	Acrylonitrile	99	
156-60-5	trans-1,2-Dichloroethene	20	
75-34-3	1,1-Dichloroethane (P)	19	
78-93-3	2-Butanone (MEK)	100	
156-59-2	cis-1,2-Dichloroethene	20	
67-66-3	Chloroform (C)	20	
71-55-6	1,1,1-Trichloroethane	20	
56-23-5	Carbon Tetrachloride	19	
71-43-2	Benzene	20	
107-06-2	1,2-Dichloroethane	19	
79-01-6	Trichloroethene	18	
78-87-5	1,2-Dichloropropane (C)	19	
75-27-4	Bromodichloromethane	20	
110-75-8	2-Chloroethyl Vinyl Ether	90	
108-10-1	4-Methyl-2-pentanone (MIBK)	98	
108-88-3	Toluene (C)	19	
127-18-4	Tetrachloroethene	18	
591-78-6	2-Hexanone	96	
124-48-1	Dibromochloromethane	20	
108-90-7	Chlorobenzene (P)	18	
630-20-6	1,1,1,2-Tetrachloroethane	20	
100-41-4	Ethylbenzene (C)	20	

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MS521H17-MBLCS

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: MS521H17-LCS

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-04

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
136777-61-2	m,p-Xylenes	39	
1330-20-7	Total Xylenes	59	
95-47-6	o-Xylene	20	
100-42-5	Styrene	19	
75-25-2	Bromoform (P)	19	
79-34-5	1,1,2,2-Tetrachloroethane (P)	24	
96-18-4	1,2,3-Trichloropropane	20	
541-73-1	1,3-Dichlorobenzene	18	
106-46-7	1,4-Dichlorobenzene	18	
95-50-1	1,2-Dichlorobenzene	19	

C-3
Analytical Reports
August 2001, Appendix IX Monitoring Data

Data File: 0904-28Confirm.d
Report Date: 09-Sep-2001 20:09

Columbia Analytical Services, Inc. (JAX)

TARGET COMPOUNDS

Client Name:
Lab Smp Id: J2102429-001
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: SV
Data Type: GC MULTI COMP
Misc Info: EX210472; J2102429-001R

Client SDG:
Client Smp ID: KBA1111A-Aug0801
Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: LC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
319-84-6	alpha-BHC	0.020	U
58-89-9	gamma-BHC (Lindane)	0.020	U
319-85-7	beta-BHC	0.020	U
319-86-8	delta-BHC	0.020	U
76-44-8	Heptachlor	0.020	U
309-00-2	Aldrin	0.0072	J
1024-57-3	Heptachlor epoxide	0.020	U
5103-74-2	g-Chlordane	0.020	U
5103-71-9	a-Chlordane	0.020	U
72-55-9	4,4'-DDE	0.020	U
959-98-8	Endosulfan I	0.020	U
60-57-1	Dieldrin	0.020	U
72-20-8	Endrin	0.020	U
72-54-8	4,4'-DDD	0.020	U
33213-65-9	Endosulfan II	0.020	U
50-29-3	4,4'-DDT	0.020	U
7421-93-4	Endrin aldehyde	0.020	U
72-43-5	Methoxychlor	0.020	U
1031-07-8	Endosulfan sulfate	0.020	U
53494-70-5	Endrin ketone	0.011	J
	Aroclor 1221	0.50	U
	Aroclor 1232	0.50	U
	Aroclor 1016/1242	0.50	U
	Aroclor 1248	0.50	U
	Aroclor 1254	0.50	U
	Aroclor 1260	0.50	U
	Toxaphene	0.50	U
	TCMX	0.23	
	Decachlorobiphenyl	0.12	

Data File: \\C-JAX1\CSV\CHEM\GC01.I\GC011I04.B\0904-29.D
Report Date: 09-Sep-2001 20:09

Columbia Analytical Services, Inc. (JAX)

TARGET COMPOUNDS

Client Name:
Lab Smp Id: J2102429-002
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: SV
Data Type: GC MULTI COMP
Misc Info: EX210472; J2102429-002R

Client SDG:
Client Smp ID: KBA1113A-Aug0801
Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: LC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
319-84-6	alpha-BHC	0.020	U
58-89-9	gamma-BHC (Lindane)	0.020	U
319-85-7	beta-BHC	0.020	U
319-86-8	delta-BHC	0.020	U
76-44-8	Heptachlor	0.031	
309-00-2	Aldrin	0.020	U
1024-57-3	Heptachlor epoxide	0.020	U
5103-74-2	g-Chlordane	0.020	U
5103-71-9	a-Chlordane	0.020	U
72-55-9	4,4'-DDE	0.020	U
959-98-8	Endosulfan I	0.020	U
60-57-1	Dieldrin	0.020	U
72-20-8	Endrin	0.020	U
72-54-8	4,4'-DDD	0.020	U
33213-65-9	Endosulfan II	0.020	U
50-29-3	4,4'-DDT	0.020	U
7421-93-4	Endrin aldehyde	0.020	U
72-43-5	Methoxychlor	0.020	U
1031-07-8	Endosulfan sulfate	0.020	U
53494-70-5	Endrin ketone	0.019	J
11104-28-2	Aroclor 1221	0.50	U
11141-16-5	Aroclor 1232	0.50	U
12674-11-2/5346	Aroclor 1016/1242	0.50	U
12672-29-6	Aroclor 1248	0.50	U
11097-69-1	Aroclor 1254	0.50	U
11096-82-5	Aroclor 1260	0.50	U
8001-35-2	Toxaphene	0.50	U
	TCMX	0.17	
	Decachlorobiphenyl	0.12	

Data File: \\C-JAX1\CSV\CHEM\MS01.I\MS011H27.b\0827-28.D
Report Date: 29-Aug-2001 08:24

Columbia Analytical Services, Inc. (JAX)

TARGET COMPOUNDS

Client Name:
Lab Smp Id: J2102429-002
Sample Location:
Sample Date: 08-AUG-2001
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: EX210448;

Client SDG: NA
Client Smp ID: KBA11-13A-Aug8-01
Sample Point:
Date Received: 09-AUG-2001
Quant Type: ISTD
Level: LOW
Operator: GKJ

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
110-86-1	Pyridine	10	U
62-75-9	N-Nitrosodimethylamine	10	U
109-06-8	2-Picoline	10	U
66-27-3	Methyl Methanesulfonate	10	U
55-18-5	N-Nitrosodiethylamine	10	U
62-50-0	Ethyl Methanesulfonate	10	U
62-53-3	Aniline	10	U
108-95-2	Phenol (C)	5.0	U
111-44-4	Bis(2-Chloroethyl) Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene (C)	5.0	U
100-51-6	Benzyl Alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
39638-32-9	Bis(2-chloroisopropyl) Ether	10	U
95-48-7	2-Methylphenol (o-Cresol)	10	U
98-86-2	Acetophenone	10	U
621-64-7	N-Nitrosodi-n-propylamine (P	5.0	U
930-55-2	N-Nitrosopyrrolidine	10	U
59-89-2	N-Nitrosomorpholine	10	U
95-53-4	o-Toluidine	10	U
106-44-5	3 and 4-Methylphenol Coeluti	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
100-75-4	n-Nitrosopiperidine	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol (C)	5.0	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol (C)	5.0	U
126-68-1	o,o,o-Triethylphosphorothioa	20	U
----------	a,a-Dimethylphenethylamine	20	U
65-85-0	Benzoic Acid	50	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	15	

Data File: \\C-JAX1\CSV\CHEM\MS01.I\MS011H27.b\0827-27.D
Report Date: 29-Aug-2001 08:24

Columbia Analytical Services, Inc. (JAX)

TARGET COMPOUNDS

Client Name:
Lab Smp Id: J2102429-001
Sample Location:
Sample Date: 08-AUG-2001
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: EX210448;

Client SDG: NA
Client Smp ID: KBA11-11A-Aug8-01
Sample Point:
Date Received: 09-AUG-2001
Quant Type: ISTD
Level: LOW
Operator: GKJ

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
110-86-1	Pyridine	10	U
62-75-9	N-Nitrosodimethylamine	10	U
109-06-8	2-Picoline	10	U
66-27-3	Methyl Methanesulfonate	10	U
55-18-5	N-Nitrosodiethylamine	10	U
62-50-0	Ethyl Methanesulfonate	10	U
62-53-3	Aniline	10	U
108-95-2	Phenol (C)	5.0	U
111-44-4	Bis(2-Chloroethyl) Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene (C)	5.0	U
100-51-6	Benzyl Alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
39638-32-9	Bis(2-chloroisopropyl) Ether	10	U
95-48-7	2-Methylphenol (o-Cresol)	10	U
98-86-2	Acetophenone	10	U
621-64-7	N-Nitrosodi-n-propylamine (P	5.0	U
930-55-2	N-Nitrosopyrrolidine	10	U
59-89-2	N-Nitrosomorpholine	10	U
95-53-4	o-Toluidine	10	U
106-44-5	3 and 4-Methylphenol Coeluti	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
100-75-4	n-Nitrosopiperidine	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol (C)	5.0	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol (C)	5.0	U
126-68-1	o,o,o-Triethylphosphorothioa	20	U
	a,a-Dimethylphenethylamine	20	U
65-85-0	Benzoic Acid	50	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U

Data File: \\C-JAX1\CSV\CHEM\MS01.I\MS011H27.b\0827-27.D
Report Date: 29-Aug-2001 08:24

Columbia Analytical Services, Inc. (JAX)

TARGET COMPOUNDS

Client Name:
Lab Smp Id: J2102429-001
Sample Location:
Sample Date: 08-AUG-2001
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: EX210448;

Client SDG: NA
Client Smp ID: KBA11-11A-Aug8-01
Sample Point:
Date Received: 09-AUG-2001
Quant Type: ISTD
Level: LOW
Operator: GKJ

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
106-47-8	4-Chloroaniline	10	U
87-65-0	2,6-Dichlorophenol	10	U
1888-71-7	Hexachloropropene	10	U
87-68-3	Hexachlorobutadiene (C)	5.0	U
106-50-3	p-Phenylenediamine	20	U
924-16-3	N-Nitrosodi-n-butylamine	10	U
59-50-7	4-Chloro-3-Methylphenol (C)	5.0	U
94-59-7	Safrole	10	U
91-57-6	2-Methylnaphthalene	10	U
95-94-3	1,2,4,5-Tetrachlorobenzene	10	U
77-47-4	Hexachlorocyclopentadiene (P	5.0	U
88-06-2	2,4,6-Trichlorophenol (C)	5.0	U
95-95-4	2,4,5-Trichlorophenol	10	U
120-58-1	Isosafrole	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	20	U
130-15-4	1,4-Naphthoquinone	20	U
131-11-3	Dimethyl Phthalate	10	U
99-65-0	1,3-Dinitrobenzene	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene (C)	5.0	U
51-28-5	2,4-Dinitrophenol (P)	20	U
132-64-9	Dibenzofuran	10	U
100-02-7	4-Nitrophenol (P)	20	U
608-93-5	Pentachlorobenzene	10	U
121-14-2	2,4-Dinitrotoluene	10	U
91-59-8	2-Naphthylamine	10	U
134-32-7	1-Naphthylamine	10	U
99-55-8	2-Methyl-5-nitroaniline	10	U
58-90-2	2,3,4,6-Tetrachlorophenol	10	U
84-66-2	Diethyl Phthalate	10	U
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl Phenyl Ether	10	U

Data File: \\C-JAX1\CSV\CHEM\MS01.I\MS011H27.b\0827-27.D
Report Date: 29-Aug-2001 08:24

Columbia Analytical Services, Inc. (JAX)

TARGET COMPOUNDS

Client Name:
Lab Smp Id: J2102429-001
Sample Location:
Sample Date: 08-AUG-2001
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: EX210448;

Client SDG: NA
Client Smp ID: KBA11-11A-Aug8-01
Sample Point:
Date Received: 09-AUG-2001
Quant Type: ISTD
Level: LOW
Operator: GKJ

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
297-97-2	Thionazin	20	U
100-01-6	4-Nitroaniline	20	U
534-52-1	4,6-Dinitro-2-methylphenol	20	U
122-39-4	Diphenylamine (C)	5.0	U
86-30-6	N-Nitrosodiphenylamine (C)	5.0	U
3689-24-5	Sulfotep	20	U
2303-16-4	Diallate	20	U
298-02-2	Phorate	20	U
101-55-3	4-Bromophenyl Phenyl Ether	10	U
99-35-4	1,3,5-Trinitrobenzene	10	U
62-44-2	Phenacetin	10	U
118-74-1	Hexachlorobenzene	10	U
60-51-5	Dimethoate	20	U
2243-47-2	4-Aminobiphenyl	10	U
82-68-8	Pentachloronitrobenzene	10	U
23950-58-5	Pronamide	20	U
87-86-5	Pentachlorophenol (C)	20	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
298-04-4	Disulfoton	20	U
88-85-7	Dinoseb	10	U
298-00-0	Methyl Parathion	20	U
84-74-2	Di-n-butyl Phthalate	10	U
56-57-4	4-Nitroquinoline-1-oxide	10	U
56-38-2	Parathion	20	U
91-80-5	Methapyrilene	10	U
206-44-0	Fluoranthene (C)	5.0	U
465-73-6	Isodrin	20	U
129-00-0	Pyrene	10	U
140-57-8	Total Aramite	100	U
60-11-7	p-Dimethylaminoazobenzene	10	U
52-85-7	Famphur	20	U
143-50-0	Kepone	20	U
510-15-6	Chlorobenzilate	20	U
119-93-7	3,3'-Dimethylbenzidine	10	U

Data File: \\C-JAX1\CSV\CHEM\MS01.I\MS011H27.b\0827-27.D
Report Date: 29-Aug-2001 08:24

Columbia Analytical Services, Inc. (JAX)

TARGET COMPOUNDS

Client Name:
Lab Smp Id: J2102429-001
Sample Location:
Sample Date: 08-AUG-2001
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: EX210448;

Client SDG: NA
Client Smp ID: KBA11-11A-Aug8-01
Sample Point:
Date Received: 09-AUG-2001
Quant Type: ISTD
Level: LOW
Operator: GKJ

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
85-68-7	Butyl Benzyl Phthalate	10	U
53-96-3	2-Acetylaminofluorene	10	U
56-55-3	Benz(a)anthracene	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-Ethylhexyl) Phthalate	10	U
117-84-0	Di-n-octyl Phthalate (C)	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
57-97-6	7,12-Dimethylbenz(a)anthrace	10	U
70-30-4	Hexachlorophene	200	U
50-32-8	Benzo(a)pyrene (C)	5.0	U
56-49-5	3-Methylcholanthrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U
367-12-4	2-Fluorophenol	8.3	J
4165-62-2	Phenol-d6	13	
4165-60-0	Nitrobenzene-d5	93	
321-60-8	2-Fluorobiphenyl	67	
118-79-6	2,4,6-Tribromophenol	57	
98904-43-9	p-Terphenyl-d14	88	

Data File: \\C-JAX1\CSV\CHEM\MS01.1\MS011H27.b\0827-28.D
Report Date: 29-Aug-2001 08:24

Columbia Analytical Services, Inc. (JAX)

TARGET COMPOUNDS

Client Name:
Lab Smp Id: J2102429-002
Sample Location:
Sample Date: 08-AUG-2001
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: EX210448;

Client SDG: NA
Client Smp ID: KBA11-13A-Aug8-01
Sample Point:
Date Received: 09-AUG-2001
Quant Type: ISTD
Level: LOW
Operator: GKJ

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
106-47-8	4-Chloroaniline	10	U
87-65-0	2,6-Dichlorophenol	10	U
1888-71-7	Hexachloropropene	10	U
87-68-3	Hexachlorobutadiene (C)	5.0	U
106-50-3	p-Phenylenediamine	20	U
924-16-3	N-Nitrosodi-n-butylamine	10	U
59-50-7	4-Chloro-3-Methylphenol (C)	5.0	U
94-59-7	Safrole	10	U
91-57-6	2-Methylnaphthalene	10	U
95-94-3	1,2,4,5-Tetrachlorobenzene	10	U
77-47-4	Hexachlorocyclopentadiene (P	5.0	U
88-06-2	2,4,6-Trichlorophenol (C)	5.0	U
95-95-4	2,4,5-Trichlorophenol	10	U
120-58-1	Isosafrole	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	20	U
130-15-4	1,4-Naphthoquinone	20	U
131-11-3	Dimethyl Phthalate	10	U
99-65-0	1,3-Dinitrobenzene	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene (C)	5.0	U
51-28-5	2,4-Dinitrophenol (P)	20	U
132-64-9	Dibenzofuran	10	U
100-02-7	4-Nitrophenol (P)	20	U
608-93-5	Pentachlorobenzene	10	U
121-14-2	2,4-Dinitrotoluene	10	U
91-59-8	2-Naphthylamine	10	U
134-32-7	1-Naphthylamine	10	U
99-55-8	2-Methyl-5-nitroaniline	10	U
58-90-2	2,3,4,6-Tetrachlorophenol	10	U
84-66-2	Diethyl Phthalate	10	U
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl Phenyl Ether	10	U

Data File: \\C-JAX1\CSV\CHEM\MS01.I\MS011H27.b\0827-28.D
Report Date: 29-Aug-2001 08:24

Columbia Analytical Services, Inc. (JAX)

TARGET COMPOUNDS

Client Name:
Lab Smp Id: J2102429-002
Sample Location:
Sample Date: 08-AUG-2001
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: EX210448;

Client SDG: NA
Client Smp ID: KBA11-13A-Aug8-01
Sample Point:
Date Received: 09-AUG-2001
Quant Type: ISTD
Level: LOW
Operator: GKJ

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
297-97-2	Thionazin	20	U
100-01-6	4-Nitroaniline	20	U
534-52-1	4,6-Dinitro-2-methylphenol	20	U
122-39-4	Diphenylamine (C)	5.0	U
86-30-6	N-Nitrosodiphenylamine (C)	5.0	U
3689-24-5	Sulfotep	20	U
2303-16-4	Diallate	20	U
298-02-2	Phorate	20	U
101-55-3	4-Bromophenyl Phenyl Ether	10	U
99-35-4	1,3,5-Trinitrobenzene	10	U
62-44-2	Phenacetin	10	U
118-74-1	Hexachlorobenzene	10	U
60-51-5	Dimethoate	20	U
2243-47-2	4-Aminobiphenyl	10	U
82-68-8	Pentachloronitrobenzene	10	U
23950-58-5	Pronamide	20	U
87-86-5	Pentachlorophenol (C)	20	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
298-04-4	Disulfoton	20	U
88-85-7	Dinoseb	10	U
298-00-0	Methyl Parathion	20	U
84-74-2	Di-n-butyl Phthalate	10	U
56-57-4	4-Nitroquinoline-1-oxide	10	U
56-38-2	Parathion	20	U
91-80-5	Methapyrilene	10	U
206-44-0	Fluoranthene (C)	5.0	U
465-73-6	Isodrin	20	U
129-00-0	Pyrene	10	U
140-57-8	Total Aramite	100	U
60-11-7	p-Dimethylaminoazobenzene	10	U
52-85-7	Famphur	20	U
143-50-0	Kepone	20	U
510-15-6	Chlorobenzilate	20	U
119-93-7	3,3'-Dimethylbenzidine	10	U

Data File: \\C-JAX1\CSV\CHEM\MS01.I\MS011H27.b\0827-28.D
Report Date: 29-Aug-2001 08:24

Columbia Analytical Services, Inc. (JAX)

TARGET COMPOUNDS

Client Name:
Lab Smp Id: J2102429-002
Sample Location:
Sample Date: 08-AUG-2001
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: EX210448;

Client SDG: NA
Client Smp ID: KBA11-13A-Aug8-01
Sample Point:
Date Received: 09-AUG-2001
Quant Type: ISTD
Level: LOW
Operator: GKJ

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
85-68-7	Butyl Benzyl Phthalate	10	U
53-96-3	2-Acetylaminofluorene	10	U
56-55-3	Benz(a)anthracene	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-Ethylhexyl) Phthalate	10	U
117-84-0	Di-n-octyl Phthalate (C)	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
57-97-6	7,12-Dimethylbenz(a)anthrace	10	U
70-30-4	Hexachlorophene	200	U
50-32-8	Benzo(a)pyrene (C)	5.0	U
56-49-5	3-Methylcholanthrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U
367-12-4	2-Fluorophenol	12	
4165-62-2	Phenol-d6	23	
4165-60-0	Nitrobenzene-d5	120	
321-60-8	2-Fluorobiphenyl	83	
118-79-6	2,4,6-Tribromophenol	88	
98904-43-9	p-Terphenyl-d14	110	

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS
METHOD 8151A
Reported: 09/10/01

Columbia Analytical Services
Project Reference: NSB KINGS BAY GA
Client Sample ID : KBA11-11A-AUG8-01

Date Sampled : 08/08/01 10:35 Order #: 485589 Sample Matrix: WATER
Date Received: 08/11/01 Submission #: R2108142 Analytical Run 68057

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 08/14/01			
DATE ANALYZED : 08/18/01			
ANALYTICAL DILUTION: 1.00			
2,4-D	0.47	0.47 U	UG/L
DINOSEB	1.9	1.9 U	UG/L
2,4,5-T	0.47	0.47 U	UG/L
2,4,5-TP (SILVEX)	0.47	0.47 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
DCAA	(10 - 149 %)	101	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS
METHOD 8151A
Reported: 09/10/01

Columbia Analytical Services
Project Reference: NSB KINGS BAY GA
Client Sample ID : KBA11-13A-AUG8-01

Date Sampled : 08/08/01 12:12 Order #: 485590 Sample Matrix: WATER
Date Received: 08/11/01 Submission #: R2108142 Analytical Run 68057

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 08/14/01			
DATE ANALYZED : 08/18/01			
ANALYTICAL DILUTION: 1.00			
2,4-D	0.47	0.47 U	UG/L
DINOSEB	1.9	1.9 U	UG/L
2,4,5-T	0.47	0.47 U	UG/L
2,4,5-TP (SILVEX)	0.47	0.47 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
DCAA	(10 - 149 %)	108	%

COLUMBIA ANALYTICAL SERVICES

Reported: 09/10/01

Columbia Analytical Services
Project Reference:NSB KINGS BAY GA
Client Sample ID :KBA11-11A-AUG8-01

Date Sampled : 08/08/01
Date Received: 08/11/01
Order #: 485589
Submission #: R2108142
Sample Matrix: WATER

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
WET CHEMISTRY					
TOTAL SULFIDE	1.00	1.00 U	MG/L	08/16/01	1.00

COLUMBIA ANALYTICAL SERVICES

Reported: 09/10/01

Columbia Analytical Services
Project Reference:NSB KINGS BAY GA
Client Sample ID :KBA11-13A-AUG8-01

Date Sampled : 08/08/01 Order #: 485590 Sample Matrix: WATER
Date Received: 08/11/01 Submission #: R2108142

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
WET CHEMISTRY					
TOTAL SULFIDE	1.00	1.50	MG/L	08/16/01	1.00

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

KBA11-11A-Aug8-01

Contract: JA Jones Management Services

Lab Code: JAX Case No.: SAS No.: SDG NO.: J2102429

Matrix (soil/water): WATER Lab Sample ID: J2102429-001

Level (low/med): LOW Date Received: 08/09/01

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.140	U		MS
7440-38-2	Arsenic	0.519	B		MS
7440-39-3	Barium	10.0			MS
7440-41-7	Beryllium	0.040	U		MS
7440-43-9	Cadmium	0.080	U		MS
7440-47-3	Chromium	0.779	B		MS
7440-48-4	Cobalt	0.028	B		MS
7440-50-8	Copper	0.120	U		MS
7439-92-1	Lead	0.080	B		MS
7439-97-6	Mercury	0.100	U		CV
7440-02-0	Nickel	0.400	U		MS
7782-49-2	Selenium	1.800	B		MS
7440-22-4	Silver	0.020	U	N	MS
7440-28-0	Thallium	0.020	U		MS
7440-31-5	Tin	3.00	U	W	F
7440-62-2	Vanadium	0.497	B		MS
7440-66-6	Zinc	1.00	U		MS

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

KBA11-13A-Aug8-01

Contract: JA Jones Management Services

Lab Code: JAX Case No.: SAS No.: SDG NO.: J2102429

Matrix (soil/water): WATER Lab Sample ID: J2102429-002

Level (low/med): LOW Date Received: 08/09/01

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.350	U		MS
7440-38-2	Arsenic	4.060			MS
7440-39-3	Barium	74.9			MS
7440-41-7	Beryllium	0.923	B		MS
7440-43-9	Cadmium	0.200	U		MS
7440-47-3	Chromium	5.440	B		MS
7440-48-4	Cobalt	177			MS
7440-50-8	Copper	4.920	B		MS
7439-92-1	Lead	0.150	U		MS
7439-97-6	Mercury	0.100	U		CV
7440-02-0	Nickel	229			MS
7782-49-2	Selenium	5.710	B		MS
7440-22-4	Silver	0.050	U	N	MS
7440-28-0	Thallium	0.050	U		MS
7440-31-5	Tin	3.00	U		F
7440-62-2	Vanadium	4.420	B		MS
7440-66-6	Zinc	219			MS

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

FORM 1

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

KBA11-11
A-AUG8-01

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: CAS/JAX Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102429-001

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0815-19

Level: (low/med) LOW Date Received: 08/09/01

% Moisture: not dec. _____ Date Analyzed: 08/15/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane (P)	1.0	U
75-01-4	Vinyl Chloride (C)	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	5.0	U
107-02-8	Acrolein	100	U
75-35-4	1,1-Dichloroethene (C)	1.0	U
67-64-1	Acetone	50	U
74-88-4	Iodomethane	5.0	U
75-15-0	Carbon Disulfide	5.0	U
107-05-1	Allyl Chloride	1.0	U
75-05-8	Acetonitrile	100	U
75-09-2	Methylene Chloride	10	U
107-13-1	Acrylonitrile	5.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane (P)	1.0	U
108-05-4	Vinyl Acetate	5.0	U
78-93-3	2-Butanone (MEK)	25	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
107-12-0	Propionitrile	100	U
126-98-7	Methacrylonitrile	10	U
67-66-3	Chloroform (C)	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon Tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane (C)	1.0	U
80-62-6	Methyl Methacrylate	10	U
74-95-3	Dibromomethane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U

FORM I

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

KBA11-11
A-AUG8-01

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: CAS/JAX Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102429-001

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0815-19

Level: (low/med) LOW Date Received: 08/09/01

% Moisture: not dec. _____ Date Analyzed: 08/15/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-10-1	4-Methyl-2-pentanone (MIBK)	25	U
108-88-3	Toluene (C)	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
97-63-2	Ethyl Methacrylate	10	U
79-00-5	1,1,2-Trichloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane (EDB)	1.0	U
108-90-7	Chlorobenzene (P)	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U
100-41-4	Ethylbenzene (C)	1.0	U
136777-61-2	m,p-Xylenes	2.0	U
95-47-6	o-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform (P)	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane (P)	1.0	U
96-18-4	1,2,3-Trichloropropane	10	U
110-57-6	trans-1,4-Dichloro-2-butene	20	U
96-12-8	1,2-Dibromo-3-chloropropane	10	U

FORM I

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

KBA11-13
A-AUG8-01

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: CAS/JAX Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102429-002

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0815-20

Level: (low/med) LOW Date Received: 08/09/01

% Moisture: not dec. _____ Date Analyzed: 08/15/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane (P)	1.0	U
75-01-4	Vinyl Chloride (C)	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	5.0	U
107-02-8	Acrolein	100	U
75-35-4	1,1-Dichloroethene (C)	0.41	J
67-64-1	Acetone	50	U
74-88-4	Iodomethane	5.0	U
75-15-0	Carbon Disulfide	8.2	
107-05-1	Allyl Chloride	1.0	U
75-05-8	Acetonitrile	100	U
75-09-2	Methylene Chloride	10	U
107-13-1	Acrylonitrile	5.0	U
156-60-5	trans-1,2-Dichloroethene	6.4	
75-34-3	1,1-Dichloroethane (P)	1.0	U
108-05-4	Vinyl Acetate	5.0	U
78-93-3	2-Butanone (MEK)	25	U
156-59-2	cis-1,2-Dichloroethene	71	
107-12-0	Propionitrile	100	U
126-98-7	Methacrylonitrile	10	U
67-66-3	Chloroform (C)	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon Tetrachloride	1.0	U
71-43-2	Benzene	0.39	J
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	35	
78-87-5	1,2-Dichloropropane (C)	1.0	U
80-62-6	Methyl Methacrylate	10	U
74-95-3	Dibromomethane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U

FORM I

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

KBA11-13
A-AUG8-01

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: CAS/JAX Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102429-002

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0815-20

Level: (low/med) LOW Date Received: 08/09/01

% Moisture: not dec. _____ Date Analyzed: 08/15/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-10-1	4-Methyl-2-pentanone (MIBK)	25	U
108-88-3	Toluene (C)	0.47	J
10061-02-6	trans-1,3-Dichloropropene	1.0	U
97-63-2	Ethyl Methacrylate	10	U
79-00-5	1,1,2-Trichloroethane	1.0	U
127-18-4	Tetrachloroethene	2.2	
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane (EDB)	1.0	U
108-90-7	Chlorobenzene (P)	3.4	
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U
100-41-4	Ethylbenzene (C)	21	
136777-61-2	m,p-Xylenes	0.62	J
95-47-6	o-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform (P)	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane (P)	1.0	U
96-18-4	1,2,3-Trichloropropane	10	U
110-57-6	trans-1,4-Dichloro-2-butene	20	U
96-12-8	1,2-Dibromo-3-chloropropane	10	U

FORM I
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

KHA11-13A
-RINSATE B

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102434-005

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-17

Level: (low/med) LOW Date Received: 08/10/01

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane (P)	1.0	U
75-01-4	Vinyl Chloride (C)	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	5.0	U
107-02-8	Acrolein	100	U
75-35-4	1,1-Dichloroethene (C)	1.0	U
67-64-1	Acetone	50	U
75-15-0	Carbon Disulfide	5.0	U
75-09-2	Methylene Chloride	10	U
107-13-1	Acrylonitrile	10	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane (P)	1.0	U
78-93-3	2-Butanone (MEK)	25	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
67-66-3	Chloroform (C)	8.3	
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon Tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane (C)	1.0	U
75-27-4	Bromodichloromethane	5.9	
110-75-8	2-Chloroethyl Vinyl Ether	5.0	U
108-10-1	4-Methyl-2-pentanone (MIBK)	25	U
108-88-3	Toluene (C)	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	3.4	
108-90-7	Chlorobenzene (P)	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U
100-41-4	Ethylbenzene (C)	1.0	U

FORM I
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

KBA11-13A
-RINSATE B

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102434-005

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-17

Level: (low/med) LOW Date Received: 08/10/01

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
136777-61-2	m,p-Xylenes	2.0	U
1330-20-7	Total Xylenes	3.0	U
95-47-6	o-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform (P)	1.8	
79-34-5	1,1,2,2-Tetrachloroethane (P)	1.0	U
96-18-4	1,2,3-Trichloropropane	5.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

TRIP BLAN
K(7/18/01)

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102434-007

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-19

Level: (low/med) LOW Date Received: 08/10/01

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane (P)	1.0	U
75-01-4	Vinyl Chloride (C)	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	5.0	U
107-02-8	Acrolein	100	U
75-35-4	1,1-Dichloroethene (C)	1.0	U
67-64-1	Acetone	50	U
75-15-0	Carbon Disulfide	5.0	U
75-09-2	Methylene Chloride	10	U
107-13-1	Acrylonitrile	10	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane (P)	1.0	U
78-93-3	2-Butanone (MEK)	25	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
67-66-3	Chloroform (C)	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon Tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane (C)	1.0	U
75-27-4	Bromodichloromethane	1.0	U
110-75-8	2-Chloroethyl Vinyl Ether	5.0	U
108-10-1	4-Methyl-2-pentanone (MIBK)	25	U
108-88-3	Toluene (C)	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene (P)	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U
100-41-4	Ethylbenzene (C)	1.0	U

FORM I VOA

FORM I
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

TRIP BLAN
K(7/18/01)

Lab Name: COLUMBIA ANALYTICAL SERVI Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: J2102434-007

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0817-19

Level: (low/med) LOW Date Received: 08/10/01

% Moisture: not dec. _____ Date Analyzed: 08/17/01

GC Column: DB-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
136777-61-2	m,p-Xylenes	2.0	U
1330-20-7	Total Xylenes	3.0	U
95-47-6	o-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform (P)	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane (P)	1.0	U
96-18-4	1,2,3-Trichloropropane	5.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U

Columbia Analytical Services, Inc.
8540 Baycenter Road
Jacksonville, FL 32256
(904) 739-2277 Voice
(904) 739-2011 FAX

An Employee-Owned Company

FAX TRANSMITTAL

TO: Fred Coley **FROM:** Tom Kissinger
FAX# **DATE:** 9-14-01

MESSAGE: Fred,
Here's the dioxins and cyanide results for your Appendix Nine samples. Full Package and EDD will follow next week.

Tom

NUMBER OF PAGES 7 **(Including cover sheet)**

Important Note
The documents accompanying this transmission may contain information which is legally privileged and/or confidential. The information is intended only for the use of the individual or entity named above. If you are not the intended recipient, or the person responsible for delivering it to the intended recipient, you are hereby notified that any disclosure, copying, distribution, or use of any of the information contained in this transmission is strictly **PROHIBITED**. If you have received this transmission in error, please immediately notify us by telephone and mail the original transmission to us. Thank you for your cooperation and assistance.

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: JA Jones Management Services
Project: NSB Kings Bay, GA/Date 11
Sample Matrix: Water

Service Request: J2102429
Date Collected: 8/8/01
Date Received: 8/9/01

Inorganic Parameters

Sample Name: KBA11-11A-Aug8-01
Lab Code: J2102429-001
Test Notes:

Basis: NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Cyanide, Total	mg/L (ppm)	335.2	0.005	0.0006	1	NA	8/14/01	U	

U Not detected at or above the MDL.

Approved By. _____ Date: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: JA Jones Management Services
Project: NSB Kings Bay, GA/Date 11
Sample Matrix: Water

Service Request: J2102429
Date Collected: 8/8/01
Date Received: 8/9/01

Inorganic Parameters

Sample Name: KBA11-13A-Aug8-01
Lab Code: J2102429-002
Test Notes:

Basis: NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Cyanide, Total	mg/L (ppm)	335.2	0.005	0.0006	1	NA	8/14/01	U	

U Not detected at or above the MDL.

Approved By: _____ Date: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: JA Jones Management Services
Project: NSB Kings Bay, GA/Date 11
Sample Matrix: Water

Service Request: J2102429
Date Collected: NA
Date Received: NA

Inorganic Parameters

Sample Name: Method Blank
Lab Code: J2100814-MB
Test Notes:

Basis: NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Cyanide, Total	mg/L (ppm)	335.2	0.005	0.0006	1	NA	8/14/01	U	

U Not detected at or above the MDL.

Approved By: _____ Date: _____

Form 1

PCDD/PCDF ANALYSIS DATA SHEET
Use for Sample and Blank Results

CLIENT ID.
METHOD BLANK

Lab Name: Columbia Analytical Services Episode No.:

Lab Code: CAS SDG No.: Method: 8280 Lab Sample ID: EB10035-MB

Client Name: CAS Sample Wt/Vol: 1000 g or mL: mL

Matrix (aqueous/solid/leachate): aqueous Initial Calibration Date: 11/24/00

Sample Receipt Date: Instrument ID: HP5973

Ext. Date: 9/11/01 GC Column:db5

Ext. Vol(ul): 100.0 Inj. Vol(ul): 2.0 Sample Data Filename: H10507

Analysis Date: 12-SEP-01 Time: 11:09:00 Blank Data Filename: H10507

Dilution Factor: 1 Cal. Ver. Data Filename: H10506

Concentration Units (ng/L or ug/Kg dry weight): ng/L % Moisture:

ANALYTE	CONCENTRATION FOUND	DETECTION LIMIT	Qual. (1)	ION ABUND. RATIO (2)	RRT (2)	MEAN RRF
2,3,7,8-TCDD	*	0.193	U	*	*	0.94
1,2,3,7,8-PeCDD	*	1.359	U	*	*	1.32
1,2,3,4,7,8-HxCDD	*	0.730	U	*	*	0.90
1,2,3,6,7,8-HxCDD	*	0.740	U	*	*	0.89
1,2,3,7,8,9-HxCDD	*	0.704	U	*	*	0.93
1,2,3,4,6,7,8-HpCDD	*	0.070	U	*	*	0.90
OCDD	0.657	0.495	JK	1.13	1.165	1.11
2,3,7,8-TCDF	*	0.189	U	*	*	0.85
1,2,3,7,8-PeCDF	*	0.547	U	*	*	1.36
2,3,4,7,8-PeCDF	*	0.587	U	*	*	1.26
1,2,3,4,7,8-HxCDF	*	0.208	U	*	*	0.93
1,2,3,6,7,8-HxCDF	*	0.195	U	*	*	0.99
1,2,3,7,8,9-HxCDF	*	0.232	U	*	*	0.83
2,3,4,6,7,8-HxCDF	*	0.210	U	*	*	0.92
1,2,3,4,6,7,8-HpCDF	*	0.259	U	*	*	0.87
1,2,3,4,7,8,9-HpCDF	*	0.299	U	*	*	0.76
OCDF	*	0.306	U	*	*	1.37
Total Tetra-Dioxins	*	0.193	U			
Total Penta-Dioxins	*	1.359	U			
Total Hexa-Dioxins	*	0.740	U			
Total Hepta-Dioxins	*	0.070	U			
Total Tetra-Furans	*	0.189	U			
Total Penta-Furans	*	0.587	U			
Total Hexa-Furans	*	0.195	U			
Total Hepta-Furans	*	0.259	U			

(1) Qualifiers: See flag definitions.

(2) Ion ratios and RRTS are specified in Tables 9 and 10, Method 8280A.

Form 1

PCDD/PCDF ANALYSIS DATA SHEET
Use for Sample and Blank Results

CLIENT ID.
KBA11-11A-AVG-08-01

Lab Name: Columbia Analytical Services Episode No.:

Lab Code: CAS SDG No.: Method: 8280 Lab Sample ID: E2100255-001

Client Name: JA JONES Sample Wt/Vol: 1070 g or mL: mL

Matrix (aqueous/solid/leachate): aqueous Initial Calibration Date: 11/24/00

Sample Receipt Date: 9/11/01 Instrument ID: HP5973

Ext. Date: 9/11/01 GC Column:db5

Ext. Vol(ul): 100.0 Inj. Vol(ul): 2.0 Sample Data Filename: H10510

Analysis Date: 12-SEP-01 Time: 13:28:00 Blank Data Filename: H10507

Dilution Factor: 1 Cal. Ver. Data Filename: H10506

Concentration Units (ng/L or ug/Kg dry weight): ng/L % Moisture:

ANALYTE	CONCENTRATION FOUND	DETECTION LIMIT	Qual. (1)	ION ABUND. RATIO (2)	RRT (2)	MEAN RRF
2,3,7,8-TCDD	*	0.107	U	*	*	0.94
1,2,3,7,8-PeCDD	*	0.403	U	*	*	1.32
1,2,3,4,7,8-HxCDD	*	0.414	U	*	*	0.90
1,2,3,6,7,8-HxCDD	*	0.419	U	*	*	0.89
1,2,3,7,8,9-HxCDD	*	0.399	U	*	*	0.93
1,2,3,4,6,7,8-HpCDD	*	0.026	U	*	*	0.90
OCDD	*	0.396	U	*	*	1.11
2,3,7,8-TCDF	*	0.086	U	*	*	0.85
1,2,3,7,8-PeCDF	*	0.136	U	*	*	1.36
2,3,4,7,8-PeCDF	*	0.146	U	*	*	1.26
1,2,3,4,7,8-HxCDF	*	0.529	U	*	*	0.93
1,2,3,6,7,8-HxCDF	*	0.496	U	*	*	0.99
1,2,3,7,8,9-HxCDF	*	0.591	U	*	*	0.83
2,3,4,6,7,8-HxCDF	*	0.535	U	*	*	0.92
1,2,3,4,6,7,8-HpCDF	*	0.162	U	*	*	0.87
1,2,3,4,7,8,9-HpCDF	*	0.187	U	*	*	0.76
OCDF	*	0.454	U	*	*	1.37
Total Tetra-Dioxins	*	0.107	U			
Total Penta-Dioxins	*	0.403	U			
Total Hexa-Dioxins	*	0.419	U			
Total Hepta-Dioxins	*	0.026	U			
Total Tetra-Furans	*	0.086	U			
Total Penta-Furans	*	0.146	U			
Total Hexa-Furans	*	0.496	U			
Total Hepta-Furans	*	0.162	U			

(1) Qualifiers: See flag definitions.

(2) Ion ratios and RRTS are specified in Tables 9 and 10, Method 8280A.

Form 1

PCDD/PCDF ANALYSIS DATA SHEET
Use for Sample and Blank Results

CLIENT ID.
KBA11-13A-AVG-08-01

Lab Name: Columbia Analytical Services Episode No.:

Lab Code: CAS SDG No.: Method: 8280 Lab Sample ID: E2100255-002

Client Name: JA JONES Sample Wt/Vol: 1070 g or mL: mL

Matrix (aqueous/solid/leachate): aqueous Initial Calibration Date: 11/24/00

Sample Receipt Date: 9/11/01 Instrument ID: HP5973

Ext. Date: 9/11/01 GC Column:db5

Ext. Vol(ul): 100.0 Inj. Vol(ul): 2.0 Sample Data Filename: H10511

Analysis Date: 12-SEP-01 Time: 14:15:00 Blank Data Filename: H10507

Dilution Factor: 1 Cal. Ver. Data Filename: H10506

Concentration Units (ng/L or ug/Kg dry weight): ng/L % Moisture:

ANALYTE	CONCENTRATION FOUND	DETECTION LIMIT	Qual. (1)	ION ABUND. RATIO (2)	RRT (2)	MEAN RRF
2,3,7,8-TCDD	*	0.107	U	*	*	0.94
1,2,3,7,8-PeCDD	*	0.535	U	*	*	1.32
1,2,3,4,7,8-HxCDD	*	0.386	U	*	*	0.90
1,2,3,6,7,8-HxCDD	*	0.391	U	*	*	0.89
1,2,3,7,8,9-HxCDD	*	0.372	U	*	*	0.93
1,2,3,4,6,7,8-HpCDD	*	0.049	U	*	*	0.90
OCDD	*	0.511	U	*	*	1.11
2,3,7,8-TCDF	*	0.092	U	*	*	0.85
1,2,3,7,8-PeCDF	*	0.171	U	*	*	1.36
2,3,4,7,8-PeCDF	*	0.184	U	*	*	1.26
1,2,3,4,7,8-HxCDF	*	0.622	U	*	*	0.93
1,2,3,6,7,8-HxCDF	*	0.583	U	*	*	0.99
1,2,3,7,8,9-HxCDF	*	0.694	U	*	*	0.83
2,3,4,6,7,8-HxCDF	*	0.629	U	*	*	0.92
1,2,3,4,6,7,8-HpCDF	*	0.146	U	*	*	0.87
1,2,3,4,7,8,9-HpCDF	*	0.169	U	*	*	0.76
OCDF	*	0.589	U	*	*	1.37
Total Tetra-Dioxins	*	0.107	U			
Total Penta-Dioxins	*	0.535	U			
Total Hexa-Dioxins	*	0.391	U			
Total Hepta-Dioxins	*	0.049	U			
Total Tetra-Furans	*	0.092	U			
Total Penta-Furans	*	0.184	U			
Total Hexa-Furans	*	0.583	U			
Total Hepta-Furans	*	0.146	U			

(1) Qualifiers: See flag definitions.

(2) Ion ratios and RRTS are specified in Tables 9 and 10, Method 8280A.

C-4
Analytical Reports
August 2001 RESAMPLE, Appendix IX Monitoring Data

Columbia Analytical Services INC.
An Employee-Owned Company

October 03, 2001

Service Request No. J2102961

Fred Coley
JA Jones Management Services
P.O. Box 47248
Kings Bay, GA 31547

RE: Project No.: Site 11
Project Name: Kings Bay, GA

Dear Fred Coley:

Enclosed are the results of the samples(s) submitted to our laboratory on September 21, 2001. For your reference, these analyses have been assigned our service request number: J2102961.

All analyses were performed according to our laboratory's quality assurance program. All results are intended to be considered in the entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the samples analyzed.

Please call if you have any questions.

Respectfully submitted,

Columbia Analytical Services, Inc.

Tom Kissinger
Project Manager

CAS Jacksonville is NELAC-accredited by the State of Florida (E82502). Other state accreditations include: LA, AI 30759; MA, M-FL937; NH, 2942; NC, 527; SC, 96021; WA, C278.

8540 Baycenter Rd. ▪ Jacksonville, FL 32256 ▪ (904) 739-2277 ▪ 800-695-7222 ▪ Fax (904) 739-2011

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	JA Jones Management Services	**Service Request:**	J2102961
roject:	Kings Bay, GA / Site 11	**Date Collected:**	9/20/01
Sample Matrix:	Water	**Date Received:**	9/21/01
		Date Extracted:	NA

Volatile Organic Compounds
EPA Method 8260B
Units: µg/L (ppb)

	Sample Name:	**KBA11-13A-SEP20-01**	**Method Blank**
	Lab Code:	J2102961-001	MS521J26A-MB
	Date Analyzed:	9/27/01	9/26/01
Analyte	**MRL**		
Acetone	50	U	U
Acrolein	100	U	U
Acrylonitrile	10	U	U
Benzene	1	U	U
Bromodichloromethane	1	U	U
Bromoform	1	U	U
Bromomethane	5	U	U
2-Butanone (MEK)	25	U	U
Carbon Disulfide	5	U	U
Carbon Tetrachloride	1	U	U
Chlorobenzene	1	3	U
Chloroethane	5	U	U
Chloroform	1	U	U
Chloromethane	5	U	U
2-Chloroethyl Vinyl Ether	10	U	U
Dibromochloromethane	1	U	U
1,2-Dichlorobenzene	1	U	U
1,3-Dichlorobenzene	1	U	U
1,4-Dichlorobenzene	1	4	U
1,1-Dichloroethane	1	U	U
1,2-Dichloroethane	1	U	U
1,1-Dichloroethene	1	U	U
cis-1,2-Dichloroethene	1	14	U
trans-1,2-Dichloroethene	1	1	U
Dichlorodifluoromethane	5	U	U
Ethylbenzene	1	24	U
2-Hexanone	25	U	U
Methylene Chloride	5	U	U
4-Methyl-2-pentanone (MIBK)	25	U	U
Styrene	1	U	U
1,1,1,2-Tetrachloroethane	1	U	U
1,1,2,2-Tetrachloroethane	1	U	U
Tetrachloroethene (PCE)	1	U	U
Toluene	1	U	U
1,1,1-Trichloroethane (TCA)	1	U	U
1,1,2-Trichloroethane	1	U	U
Trichloroethene (TCE)	1	7	U
Trichlorofluoromethane (CFC 11)	5	U	U
1,2,3-Trichloropropane	5	U	U
Vinyl Chloride	1	U	U
Total Xylenes	2	U	U

Not detected at or above the MRL.

Approved By: Tam D. Lissinger Date: 10/3/01

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: JA Jones Management Services
Project: Kings Bay, GA / Site 11
Sample Matrix: Water

Service Request: J2102961
Date Collected: 9/20/01
Date Received: 9/21/01
Date Extracted: 9/25/01

Base Neutral/Acid Semivolatile Organic Compounds
EPA Methods 3510/8270
Units: µg/L (ppb)

Sample Name:	KBA11-13A-SEP20-01	Method Blank
Lab Code:	J2102961-001	EX210547-MB
Date Analyzed:	9/29/01	10/2/01

Analyte	MRL		
Acenaphthene	5	U	U
Acenaphthylene	5	U	U
Acetophenone	5	U	U
4-Aminobiphenyl	5	U	U
Aniline	5	U	U
Anthracene	5	U	U
Azobenzene	5	U	U
Benzidine	20	U	U
Benz(a)anthracene	5	U	U
Benzo(a)pyrene	5	U	U
Benzo(b)fluoranthene	5	U	U
Benzo(ghi)perylene	5	U	U
Benzo(k)fluoranthene	5	U	U
Benzyl alcohol	5	U	U
Bis(2-chloroethoxy)methane	5	U	U
Bis(2-chloroethyl) Ether	5	U	U
Bis(2-chloroisopropyl) Ether	5	U	U
Bis(2-ethylhexyl) Phthalate	5	U	U
4-Bromophenyl Phenyl Ether	5	U	U
Butyl Benzyl Phthalate	5	U	U
4-Chloro-3-methylphenol	20	U	U
4-Chloroaniline	5	U	U
1-Chloronaphthalene	5	U	U

U Not detected at or above the MRL.

Approved By: Tom D. Hessinger Date: 10/3/01

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: JA Jones Management Services
Project: Kings Bay, GA / Site 11
Sample Matrix: Water

Service Request: J2102961
Date Collected: 9/20/01
Date Received: 9/21/01
Date Extracted: 9/25/01

Base Neutral/Acid Semivolatile Organic Compounds
EPA Methods 3510/8270
Units: µg/L (ppb)

Sample Name:	**KBA11-13A-SEP20-01**	**Method Blank**
Lab Code:	J2102961-001	EX210547-MB
Date Analyzed:	9/29/01	10/2/01

Analyte	**MRL**		
2-Chloronaphthalene	5	U	U
2-Chlorophenol	5	U	U
4-Chlorophenyl Phenyl Ether	5	U	U
Chrysene	5	U	U
Di-n-butyl Phthalate	5	U	U
Di-n-octyl Phthalate	5	U	U
Dibenz(a,h)anthracene	5	U	U
Dibenzofuran	5	U	U
1,2-Dichlorobenzene	5	U	U
1,3-Dichlorobenzene	5	U	U
1,4-Dichlorobenzene	5	U	U
3,3'-Dichlorobenzidine	20	U	U
2,4-Dichlorophenol	5	U	U
2,6-Dichlorophenol	5	U	U
Diethyl Phthalate	5	U	U
7,12-Dimethybenz(a)anthracene	5	U	U
2,4-Dimethylphenol	5	U	U
Dimethyl Phthalate	5	U	U
2,4-Dinitrophenol	20	U	U
2,4-Dinitrotoluene	5	U	U

U Not detected at or above the MRL.

Approved By: Tom D. Wissinger Date: 10/3/01

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: JA Jones Management Services
Project: Kings Bay, GA / Site 11
Sample Matrix: Water

Service Request: J2102961
Date Collected: 9/20/01
Date Received: 9/21/01
Date Extracted: 9/25/01

Base Neutral/ Acid Semivolatile Organic Compounds
EPA Methods 3510/8270
Units: µg/L (ppb)

		KBA11-13A-	
	Sample Name:	**SEP20-01**	**Method Blank**
	Lab Code:	J2102961-001	EX210547-MB
	Date Analyzed:	9/29/01	10/2/01
Analyte	**MRL**		
2,6-Dinitrotoluene	5	U	U
Diphenylamine	5	U	U
Fluoranthene	5	U	U
Fluorene	5	U	U
Hexachlorobenzene	5	U	U
Hexachlorobutadiene	5	U	U
Hexachlorocyclopentadiene	5	U	U
Hexachloroethane	5	U	U
Indeno(1,2,3-cd)pyrene	5	U	U
Isophorone	5	U	U
2-Methyl-4,6-dinitrophenol	20	U	U
3-Methylcholanthrene	5	U	U
2-Methylnaphthalene	5	U	U
2-Methyphenol	5	U	U
3- & 4-Methyphenol*	5	U	U
N-nitrosodi-n-butylamine	5	U	U
N-Nitrosodi-n-propylamine	5	U	U
N-Nitrosodimethylamine	5	U	U
N-Nitrosodiphenylamine	5	U	U
N-nitrosopiperidine	5	U	U
Naphthalene	5	19	U

U Not detected at or above the MRL.
* Quantified as 4-Methylphenol.

Approved By: Tom D. Chissinger Date: 10/3/01

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: JA Jones Management Services
Project: Kings Bay, GA / Site 11
Sample Matrix: Water

Service Request: J2102961
Date Collected: 9/20/01
Date Received: 9/21/01
Date Extracted: 9/25/01

Base Neutral/ Acid Semivolatile Organic Compounds
EPA Methods 3510/8270
Units: µg/L (ppb)

		KBA11-13A-	
	Sample Name:	**SEP20-01**	**Method Blank**
	Lab Code:	J2102961-001	EX210547-MB
	Date Analyzed:	9/29/01	10/2/01
Analyte	**MRL**		
1-Naphthylamine	5	U	U
2-Naphthylamine	5	U	U
2-Nitroaniline	5	U	U
Nitroaniline	5	U	U
4-Nitroaniline	5	U	U
Nitrobenzene	5	U	U
2-Nitrophenol	5	U	U
4-Nitrophenol	20	U	U
Pentachlorobenzene	5	U	U
Pentachloronitrobenzene	5	U	U
Pentachlorophenol	20	U	U
Phenacetin	5	U	U
Phenanthrene	5	U	U
Phenol	5	U	U
Pronamide	5	U	U
Pyrene	5	U	U
1,2,4,5-Tetrachlorobenzene	5	U	U
2,3,4,6-Tetrachlorophenol	5	U	U
1,2,4-Trichlorobenzene	5	U	U
2,4,5-Trichlorophenol	5	U	U
2,4,6-Trichlorophenol	5	U	U

U Not detected at or above the MRL.

Approved By: Tom D. Wissinger Date: 10/3/01

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	JA Jones Management Services	**Service Request:**	J2102961
Project:	*Kings Bay, GA/Site 11*	**Date Collected:**	9/20/01
Sample Matrix:	Water	**Date Received:**	9/21/01
		Date Extracted:	9/21/01

Organochlorine Pesticides
EPA Method 3510/8081
Units: µg/L (ppb)

		KBA11-13A-	
	Sample Name:	**SEP20-01**	**Method Blank**
	Lab Code:	J2102961-001	EX210543-MB
	Date Analyzed:	9/26/01	9/26/01
Analyte	**MRL**		
Alpha-BHC	0.02	U	U
Beta-BHC	0.02	U	U
Delta-BHC	0.02	U	U
Heptachlor	0.02	U	U
Aldrin	0.02	U	U
Gamma-BHC (Lindane)	0.02	U	U
Heptachlor Epoxide	0.02	U	U
Endosulfan I	0.02	U	U
Endrin	0.02	U	U
Endosulfan II	0.02	U	U
4,4'-DDD	0.02	U	U
Endrin Aldehyde	0.02	U	U
Endosulfan Sulfate	0.02	U	U
4,4'-DDT	0.02	U	U
4,4'-DDE	0.02	U	U
Dieldrin	0.02	U	U
Methoxychlor	0.05	U	U
Chlordane	0.05	U	U
Toxaphene	0.2	U	U

U Not detected at or above the MRL.

Approved By: Tom D. Hissing Date: 10/3/01

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	JA Jones Management Services	**Service Request:**	J2102961
Project:	Kings Bay, GA / Site 11	**Date Collected:**	9/20/01
Sample Matrix:	Water	**Date Received:**	9/21/01
		Date Extracted:	9/27/01

Total Metals
Units: mg/L(ppm)

			KBA11-13A-	
		Sample Name:	**SEP20-01**	**Method Blank**
		Lab Code:	J2102961-001	J210927-MB
		Date Analyzed:	10/1/01	10/1/01
Analyte	**EPA Method**	**MRL**		
Cobalt	200.8	0.002	0.17	U
Nickel	200.8	0.005	0.22	U
Zinc	200.8	0.02	U	U

U Not detected at or above the MRL.

Approved By: Tom D. Klissinger Date: 10/3/01

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: JA Jones Management Services
Project: Kings Bay, GA / Site 11
Sample Matrix: Water

Service Request: J2102961
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 9/26-27/01

Surrogate Recovery Summary
Volatile Organic Compounds
EPA Method 8260B

		Percent Recovery		
Sample Name	**Lab Code**	Dibromofluoromethane	Toluene-d_8	4-Bromofluorobenzene
KBA11-13A-SEP20-01	J2102961-001	92	104	110
Method Blank	MS521J26A-MB	92	104	108
Laboratory Control Sample	MS521J26A-LCS	92	104	104
Batch QC	J2102962-001MS	92	104	106
Batch QC	J2102962-001MSD	92	104	106
CAS Acceptance Limits:		82-119	80-120	74-130

Approved By: Tom D. Illsinger Date: 10/3/01

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	JA Jones Management Services	**Service Request:**	J2102961
Project:	Kings Bay, GA / Site 11	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	9/26/01

Matrix Spike/Duplicate Matrix Spike Summary
Volatile Organic Compounds
EPA Method 8260B
Units: µg/L (ppb)

Sample Name: Batch QC
Lab Code: Batch QC

Analyte	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Percent Recovery MS	Percent Recovery DMS	CAS Acceptance Limits	Relative Percent Difference	CAS Acceptance Limits
1,1-Dichloroethene	20	20	U	18	17	90	85	59-127	6	30
Benzene	20	20	U	18	18	90	90	62-127	<1	30
Trichloroethene	20	20	U	17	18	85	90	60-135	6	30
Toluene	20	20	U	19	19	95	95	64-138	<1	30
hlorobenzene	20	20	U	18	18	90	90	61-135	<1	30

U Not detected at or above the MRL.

Approved By: Tom D. Lissinger Date: 10/3/01

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: JA Jones Management Services
Project: Kings Bay, GA / Site 11
LCS Matrix: Water

Service Request: J2102961
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 9/26/01

Laboratory Control Sample Summary
Volatile Organic Compounds
EPA Method 8260B
Units: µg/L (ppb)

Analyte	True Value	Result	Percent Recovery	EPA Percent Recovery Acceptance Limits
1,1-Dichloroethene	20	21	105	61-129
Benzene	20	20	100	63-130
Trichloroethene	20	19	95	72-127
Toluene	20	21	105	70-133
Chlorobenzene	20	20	100	66-132

Approved By: Tom D. Lissinger Date: 10/3/01

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: JA Jones Management Services
Project: Kings Bay, GA / Site 11
Sample Matrix: Water

Service Request: J2102961
Date Collected: 9/20/01
Date Received: 9/21/01
Date Extracted: 9/25/01
Date Analyzed: 9/29-10/2/01

Surrogate Recovery Summary
Base Neutral/ Acid Semivolatile Organic Compounds
EPA Methods 3510/8270

		Percent Recovery					
Sample Name	**Lab Code**	NBZ	FBP	TPH	PHL	2FP	TBP
KBA11-13A-SEP20-01	J2102961-001	78	77	49	28	46	78
Method Blank	EX210547-MB	100	90	84	37	58	91
Laboratory Control Sample	EX210547-LCS	99	92	93	40	64	92
Batch QC	J2102958-002MS	110	100	98	42	66	100
Batch QC	J2102958-002DMS	99	94	91	41	62	93
CAS Acceptance Limits:		35-114	43-116	33-141	10-94	21-100	10-123

NBZ	Nitrobenzene-d5
FBP	2-Fluorobiphenyl
TPH	Terphenyl-d14
PHL	Phenol-d6
2FP	2-Fluorophenol
TBP	2,4,6-Tribromophenol

Approved By: Tom D. Hissinger Date: 10/3/01

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: JA Jones Management Services
Project: Kings Bay, GA / Site 11
Sample Matrix: Water

Service Request: J2102961
Date Collected: NA
Date Received: NA
Date Extracted: 9/25/01
Date Analyzed: 10/2/01

Matrix Spike/Duplicate Matrix Spike Summary
Base Neutral/ Acid Semivolatile Organic Compounds
EPA Methods 3510/8270
Units: µg/L (ppb)

Sample Name: Batch QC
Lab Code: Batch QC

Analyte	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Percent Recovery MS	Percent Recovery DMS	CAS Acceptance Limits	Relative Percent Difference
Phenol	100	100	U	40	42	40	42	25-135	5
2-Chlorophenol	100	100	U	100	96	100	96	31-135	4
N-Nitrosodi-n-propylamine	100	100	U	110	110	110	110	41-126	<1
4-Chloro-3-methylphenol	100	100	U	100	100	100	100	34-135	<1
Acenaphthene	100	100	U	100	98	100	98	39-135	2
4-Nitrophenol	100	100	U	50	56	50	56	25-141	11
2,4-Dinitrotoluene	100	100	U	110	110	110	110	29-149	<1
Pentachlorophenol	100	100	U	95	95	95	95	38-146	<1
Pyrene	100	100	U	110	110	110	110	37-146	<1

U Not detected at or above the MRL.

Approved By: Tom D. Hissinger Date: 10/3/01

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	JA Jones Management Services	**Service Request:**	J2102961
Project:	Kings Bay, GA / Site 11	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	9/25/01
		Date Analyzed:	10/2/01

Laboratory Control Sample Summary
Base Neutral/ Acid Semivolatile Organic Compounds
EPA Methods 3510/8270
Units: µg/L (ppb)

Analyte	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits
Phenol	100	41	41	25-135
2-Chlorophenol	100	99	99	31-135
N-Nitrosodi-n-propylamine	100	100	100	41-126
4-Chloro-3-methylphenol	100	99	99	34-135
Acenaphthene	100	97	97	39-135
' Nitrophenol	100	50	50	25-141
.-Dinitrotoluene	100	110	110	29-149
Pentachlorophenol	100	90	90	38-146
Pyrene	100	100	100	37-146

Approved By: Tom D. Kissinger Date: 10/3/01

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: JA Jones Management Services
Project: Kings Bay, GA/Site 11
Sample Matrix: Water

Service Request: J2102961
Date Collected: 9/20/01
Date Received: 9/21/01
Date Extracted: 9/21/01
Date Analyzed: 9/26/01

Surrogate Recovery Summary
Organochlorine Pesticides/Polychlorinated Biphenyls (PCB's)
EPA Method 3510/8081

Sample Name	Lab Code	Percent Recovery Tetrachloro-*m* -xylene	Percent Recovery Dibutylchlorendate
KBA11-13A-SEP20-01	J2102961-001	55	25 (a)
Method Blank	EX210543-MB	60	58
Laboratory Control Sample	EX210543-LCS	60	58
Batch QC	J2102926-001MS	52	38
Batch QC	J2102926-001DMS	50	40
CAS Acceptance Limits:		26-124	26-124

(a) Outside of acceptance limits because of matrix effects. The sample produced an emulsion during the preparation steps.

Approved By: Tom D. Hissing Date: 10/3/01

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	JA Jones Management Services	**Service Request:**	J2102961
Project:	Kings Bay, GA/Site 11	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	9/21/01
		Date Analyzed:	9/26/01

Matrix Spike/Duplicate Matrix Spike Summary
Organochlorine Pesticides
EPA Method 3510/8081
Units: µg/L (ppb)

Sample Name: Batch QC
Lab Code: Batch QC

	Spike Level		Sample	Spike Result		Percent Recovery		CAS Acceptance	Relative Percent
Analyte	**MS**	**DMS**	**Result**	**MS**	**DMS**	**MS**	**DMS**	**Limits**	**Difference**
Heptachlor	4.0	4.0	U	2.8	2.9	70	73	27-130	4
Aldrin	4.0	4.0	U	2.4	2.4	60	60	28-127	<1
Gamma-BHC (Lindane)	4.0	4.0	U	2.6	2.7	65	68	28-127	4
Endrin	4.0	4.0	U	3.1	3.3	78	83	27-153	6
4'-DDT	4.0	4.0	U	2.9	2.9	73	73	27-151	<1
Dieldrin	4.0	4.0	U	2.6	2.7	65	68	29-142	4

U Not detected at or above the MRL.

Approved By: Tom D. Lessinger Date: 10/3/01

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: JA Jones Management Services
Project: Kings Bay, GA/Site 11
LCS Matrix: Water

Service Request: J2102961
Date Collected: NA
Date Received: NA
Date Extracted: 9/21/01
Date Analyzed: 9/26/01

Laboratory Control Sample Summary
Organochlorine Pesticides
EPA Method 3510/8081
Units: µg/L (ppb)

Analyte	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits
Heptachlor	0.40	0.32	80	27-130
Aldrin	0.40	0.30	75	28-127
Gamma-BHC (Lindane)	0.40	0.33	83	28-127
Endrin	0.40	0.36	90	27-153
4,4'-DDT	0.40	0.31	78	27-151
Dieldrin	0.40	0.27	68	29-142

Approved By: Tom D. Kissinger Date: 10/3/01

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: JA Jones Management Services
Project: Kings Bay, GA / Site 11
Sample Matrix: Water

Service Request: J2102961
Date Collected: NA
Date Received: NA
Date Extracted: 9/27/01
Date Analyzed: 10/1/01

Duplicate Matrix Spike Summary
Total Metals
Units: mg/L(ppm)

Sample Name: Batch QC
Lab Code: Batch QC

Analyte	EPA Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Note
Cobalt	200.8	0.002	0.0456	0.0462	0.0459	1	
Nickel	200.8	0.005	0.0476	0.0475	0.0476	<1	
Zinc	200.8	0.02	0.0439	0.0465	0.0452	6	

Approved By: Tam D. Hissinger Date: 10/3/01

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: JA Jones Management Services
Project: Kings Bay, GA / Site 11
Sample Matrix: Water

Service Request: J2102961
Date Collected: NA
Date Received: NA
Date Extracted: 9/27/01
Date Analyzed: 10/1/01

Matrix Spike Summary
Total Metals
Units: mg/L(ppm)

Sample Name: Batch QC
Lab Code: Batch QC

Analyte	EPA Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptanc Limits	Result Note
Cobalt	200.8	0.002	0.0500	U	0.0456	91	70-130	
Nickel	200.8	0.005	0.0500	U	0.0476	95	70-130	
Zinc	200.8	0.02	0.0500	U	0.0439	88	70-130	

U Not detected at or above the MRL.

Approved By: Tom D. Hessinger Date: 10/3/01

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	JA Jones Management Services	**Service Request:**	J2102961
Project:	Kings Bay, GA / Site 11	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	10/1/01

Laboratory Control Sample Summary
Total Metals
Units: mg/L(ppm)

Analyte	EPA Method	TRUE VALUE	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits
Cobalt	200.8	0.0500	0.0479	96	85-115
Nickel	200.8	0.0500	0.0481	96	85-115
Zinc	200.8	0.0500	0.0459	92	85-115

Approved By: Tom P. Hissinger Date: 10/3/01

Cooler Receipt and Preservation Form

Project/Client: Kings Bay, GA/JA Jones Management Services **SR Number:** J2102961

Cooler received on 9/21/01 by: SS

Courier: CAS ☐ UPS ☐ FEDEX ☐

CLIENT ☒ CD&L ☐ OTHER ☐

	Yes	No	N/A
1. Were custody seals on the outside of the cooler?	☐	☒	☐
2. Were custody seals intact?	☐	☐	☒
3. Were custody papers properly filled out(ink, singed, ect.)?	☒	☐	☐
4. Did all bottles arrive in good condition(unbroken)?	☒	☐	☐
5. Did any VOA vials contain significant air bubbles?	☐	☒	☐
6. Were ice or ice packs present?	☒	☐	☐
7. Did all samples arrive within appropriate holding times?	☒	☐	☐
8. Where did the bottles originate? CAS/JAX	☐	CLIENT	☒

9. Temperature of cooler(s) upon receipt/within 0-6C?:

	Temp.	Yes	No	N/A		Temp.	Yes	No	N/A
Cooler 1:	4.2°C	☒	☐	☐	Cooler 3:		☐	☐	☐
Cooler 2:		☐	☐	☐	Cooler 4:		☐	☐	☐

Date/Time Temperature Taken: 9/21/01 09:42 **If No/NA, Explain**

Thermometer ID: 2618380101-0015 ☒ Temp Blank: ☐ Cooler Temp.: ☒

15-078-J-4 ☐ Sample Bottle: ☐ IR. Gun: ☒

If out of temperature, client approval to run samples

Cooler Breakdown: Date: 9/21/01 By: SS

	Yes	No	N/A
1. Were all the bottle labels complete(i.e. analysis, preservation, ect.)	☒	☐	☐
2. Did all bottle labels and tags agree with custody papers?	☒	☐	☐
3. Were correct containers used for the test indicated?	☒	☐	☐

4. Air samples: Cassettes/Tubes Intact: ☐ Tedlar Bags Inflated: ☐

Canisters Pressurized: ☐ NA: ☒

Explain any discrepancies

		Yes	No	Sample ID	Reagent	Volume Added
pH	Reagent					
>12	NaOH					
>9	NaOH+ZnAc					
<2	HNO3					
<2	H2SO4					
<2	HCl					
5-9*	P/PCB (608 Only)					

* If pH adjustment is required, use NaOH/or H2SO4 PM OK to adjust pH_____

YES= All samples OK NO=Samples were preserved at lab as listed

VOC Vial pH Verification(Tested after Analysis) Following Samples Exhibited pH >2				

Other Comments:

Columbia Analytical Services INC.
An Employee-Owned Company
www.caslab.com

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

8540 Baycenter Rd. • Jacksonville, FL 32256 • (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011

PAGE 1 OF 1

SR # 2961
CAS Contact

Project Name: Kings Bay, Ga
Project Number: Site 11
Project Manager: Cofer
Report CC:
Company/Address: J.A Jones
P.O Box 47428
Kings Bay, GA 31547
Phone #:
FAX#:
Sampler's Signature: Thomas Bryant
Sampler's Printed Name: ~~FRANK~~ THOMAS BRYANT

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	Tetrachloroethene carbon Disulfide	Heptachlor	Naphthalene	Cobalt	Zinc	REMARKS/ ALTERNATE DESCRIPTION
KBA11-13A-SEP20-01		9-20-01	1157	WATER	2		●	✓			
KBA11-13A-SEP-20-01		9-20-01	1201	WATER	2		✓	●			
KBA11-13A-SEP-20-01		9-20-01	1209	WATER	1				✓	✓	
KBA11-13A-SEP20-01		9-20-01	1218	WATER	3	✓					

SPECIAL INSTRUCTIONS/COMMENTS

PLEASE RETURN COOLERS

See QAPP ☐

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
✓ STANDARD
REQUESTED FAX DATE 14 day
REQUESTED REPORT DATE

REPORT REQUIREMENTS
✓ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
____ V. Specialized Forms / Custom Report
Edata ____ Yes ____ No

INVOICE INFORMATION
PO# 65227
BILL TO: J.A Jones
Kings Bay, Ga

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Thomas Bryant	Signature: [signature]	Signature: [signature]	Signature: [signature]	Signature	Signature
Printed Name: Thomas Bryant	Printed Name: FRANK SHEFFIELD	Printed Name: FRANK SHEFFIELD	Printed Name: S Sarich	Printed Name	Printed Name
Firm: J.A Jones	Firm: J.A. JONES, INC.	Firm: J.A. JONES, INC	Firm: CAS	Firm	Firm
Date/Time: 9-21-01 / 0827	Date/Time: 9/21/01 0827	Date/Time: 9/21/01 0942	Date/Time: 9/21/01 942	Date/Time	Date/Time

[redacted]ution: [redacted]eturn [redacted]ator; Y[redacted]ab Co[redacted] Retai[redacted]lient [redacted] COC-[redacted]

APPENDIX D

USGS NATURAL ATTENUATION REPORT

Natural Attenuation of Chlorinated Ethene-Contaminated Ground Water, Old Camden County Landfill, Kings Bay Naval Submarine Base, Georgia
August 2001 to August, 2001

Francis H. Chapelle
and
Paul M. Bradley

U.S. Geological Survey Open-File Report
Water Resources Division
Columbia, SC

Prepared for:

Commanding Officer
Southern Division Naval Facilities Engineering Command
P.O. Box 190010
North Charleston, South Carolina 29419-9010

September, 2001

Summary

A combination of source-area removal by in-situ oxidation and natural attenuation has been selected by Southern Division NAVFACENGCOM and by Georgia Department of Environmental Protection as a corrective action for chlorinated ethene-contaminated ground water at the Old Camden County Landfill, Naval Submarine Base, Kings Bay, Georgia. A comprehensive sampling and analysis program is being carried out by the U.S. Geological Survey to assess the effectiveness of this remedial strategy. This report summarizes the results of the third year (August, 2000 to August 2001) of monitoring at this site.

Monitoring data show that the redox conditions in the plume downgradient of the source area have not been affected by in-situ oxidation, and that redox conditions continue to be favorable (that is, anoxic) for biodegradation of chlorinated ethenes. Laboratory studies conducted on aquifer sediments show that the abundance and activity of microorganisms were greatly affected by in situ oxidation. Prior to in situ oxidation, a bacterial population of approximately 10^6 cells/gm sediment were present in aquifer sediments, and these microorganisms rapidly converted ^{14}C-acetate to ^{14}C carbon dioxide. Sediment samples taken in the same location two days after in situ oxidation, showed less than 10^4 cells/gram and virtually no ^{14}C-acetate conversion to ^{14}C carbon dioxide. Sediment samples taken six months later in this same location, however, showed that both microbial abundance (10^7 cells/gm) and ^{14}C-acetate to ^{14}C carbon dioxide activity had rebounded to levels greater than observed prior to in situ oxidation. Thus, while in situ oxidation initially depresses microbial populations and activity, this activity is observed to rebound quickly.

Average concentrations of chlorinated ethenes have decreased between August, 2000 and

August, 2001 throughout the plume. Since 1998, when the monitoring wells were installed, concentrations of vinyl chloride in the downgradient part of the plume have decreased from greater than 500 μg/L to less than 50 μg/L. Because much of the plume has not yet been affected by in-situ oxidation, these contaminant concentration decreases can be attributed to ongoing natural attenuation processes. However, ground water that has been treated by in situ oxidation is moving through observation wells located near to the landfill, and is also decreasing contaminant concentrations. In summary, data collected over this year of monitoring shows that the combination of in-situ oxidiation and natural attenuation processes continues to lower concentrations of chlorinated ethenes in the contaminant plume.

Results and Discussion

Monitoring Well Results

The location of monitoring wells used in this assessment are shown in Figure 1. Ground-water chemistry data documenting ambient redox conditions in the plume are shown in Tables 1-4, and data documenting concentrations of chlorinated ethenes are shown in Tables 5-8. The following discussion highlights observed trends in redox conditions and concentrations of contaminants as they relate to the ongoing efficiency of natural attenuation processes.

Concentrations of dissolved oxygen, iron, and sulfide in well USGS-3 from 1998 to 2001 are shown in Figure 2. USGS-3 is in the line of observation wells nearest to the landfill and received Fenton's reagent treatment. Before initiation of in situ oxidation, the ground water was uniformly anoxic. Approximately one month after in situ oxidation, dissolved oxygen concentrations were measurable (0.4 mg/L) in well USGS-3 and other upgradient observation

wells. However, conditions reverted to anoxic conditions by three months after in situ oxidation. These results demonstrate that, while oxic conditions were briefly induced by in situ oxidation, anoxic conditions were reestablished relatively quickly. Conditions remain anoxic in the first line of USGS observation wells (Figure 1, Tables 1-4). These anoxic conditions are favorable for the continued biodegradation of chlorinated ethenes.

The data also indicate that the oxic conditions induced by in situ oxidation were not propagated downgradient. Figure 3 shows that well KBA-11-13A, the observation well nearest to the injection zone, had a significant increase in dissolved iron concentrations in August, 2000, indicating the arrival of water impacted by Fenton's reagent. However, concentrations of dissolved oxygen remain below detectable levels. This indicates that the dcwngradient part of the plume has remained anoxic, and thus conditions remain favorable for the reductive biodegradation of chlorinated ethenes.

The redox chemistry data indicates that conditions in the plume remain favorable for the biodegradation of chlorinated ethenes. This is consistent with the general decline of chlorinated ethene concentrations in the plume. In the first line of USGS observation wells, there has been no observed rebound in chlorinated ethene concentrations since the initiation of in-situ oxidation. The pattern of contaminant concentrations in KBA-11-13A is more complex (Fig. 4), and shows a spike in contaminant concentrations immediately after injection. It is possible that this spike was caused by the pressure of injection moving contaminants downgradient during in-situ oxidation. Contaminant concentrations have decreased since the spike, in part reflecting the arrival of ground water impacted by Fenton's reagent (Fig. 4, Fig. 3). The arrival of Fenton's-impacted ground water is indicated by the arrival of water containing relatively high

concentrations of dissolved iron, and by contaminant concentrations declines in ground water produced from well KBA-11-13A.

Concentrations of chlorinated ethenes in the plume are not observed to decline uniformly. For example, in well USGS-4 (the intermediate line of observation wells) concentrations of chlorinated ethenes have increased over the two years. This probably reflects a northward shift of the plume in response to the cessation of the pump-and-treat system, or from other climatic factors (i.e. water levels changing because of drought). Such concentration increases are only observed in well USGS-4. All of the other intermediate line of monitoring wells show declining concentrations of contaminants over time. In well USGS-7, for example, concentrations of chlorinated ethenes continues to decline, a pattern observed in USGS-6, and USGS-5 (Tables 5-8).

In the most downgradient line of observation wells, concentrations of chlorinated ethenes have declined throughout the year (Tables 5-8). In particular, concentrations of vinyl chloride in the most downgradient line of wells range from below detection levels to 40 μg/L. These concentrations are a factor of 10 lower than were observed in August of 1998 when these wells were first installed (Figures 5 and 6). This, in turn, shows the overall effectiveness of natural attenuation processes to remove chlorinated ethenes from this system.

In summary, the overall behavior of the plume demonstrates two important conclusions:

1. In situ oxidation has not diminished the effectiveness of natural attenuation processes in the plume.

2. Natural attenuation processes continue to decrease contaminant concentrations in the plume, roughly at the rate that was expected in this system.

Effects of In Situ Oxidation on Microbial Activity

Fenton's Reagent, which is used to destroy organic contaminants during in-situ oxidation, consists of a mixture of hydrogen peroxide (H_2O_2) and a ferrous iron catalyst that is injected into the aquifer under pressure. Hydrogen peroxide is a powerful oxidizing agent that is toxic to microorganisms. In fact, hydrogen peroxide is widely used as a sterilizing agent to kill microorganisms.

The injection of hydrogen peroxide into the aquifer underlying Site 11 raises the possibility that the aquifer may be sterilized, thereby inactivating the microbial processes that convert chlorinated ethenes to non-toxic carbon dioxide and chloride. This possibility was addressed at Site 11 by sampling aquifer sediments prior to, immediately after, and six months after in-situ oxidation. Sediment samples were taken near the location of well KBA-11-34 (Fig. 1). These sediment samples were then analyzed for numbers of bacteria using acridine orange direct counts (AODC), and microbial activity by following ^{14}C-acetate conversion to ^{14}C carbon dioxide.

Prior to in situ oxidation, bacterial counts in aquifer sediments were approximately 10^6 cells/gm sediment. Sediment samples taken in the same location two days after in situ oxidation showed less than 10^4 cells/gram. However, sediment samples taken six months after in-situ oxidation showed that bacterial numbers had rebounded, and were about an order of magnitude higher than they were prior to treatment.

Analysis of overall microbial activity are consistent with the results of the bacterial counts. Prior to in-situ oxidation, aquifer microorganisms rapidly converted ^{14}C-acetate to ^{14}C carbon dioxide (Fig. 7) whereas sterilized controls showed no ^{14}C carbon dioxide production. In

contrast, sediment samples taken two days after in-situ oxidation showed virtually no ^{14}C-acetate conversion to ^{14}C carbon dioxide. Sediment samples taken six months later in this same location, however, showed that rates of ^{14}C-acetate conversion to ^{14}C carbon dioxide activity had rebounded to levels greater than observed prior to in situ oxidation. These data indicate that the injection of hydrogen peroxide drastically decreased the numbers and activity of microorganisms present in the aquifer (Fig. 7). However, these data also indicate that the numbers and activity of microorganisms rebounds within a matter of months.

The results of the monitoring data and the laboratory studies suggest that, while in-situ oxidation briefly decreases microbial activity in the affected sediments, this effect is transient and microbial populations quickly rebound. In addition, there is no evidence that the water impacted by in-situ oxidation affects microbial degradation processes in the downgradient part of the aquifer.

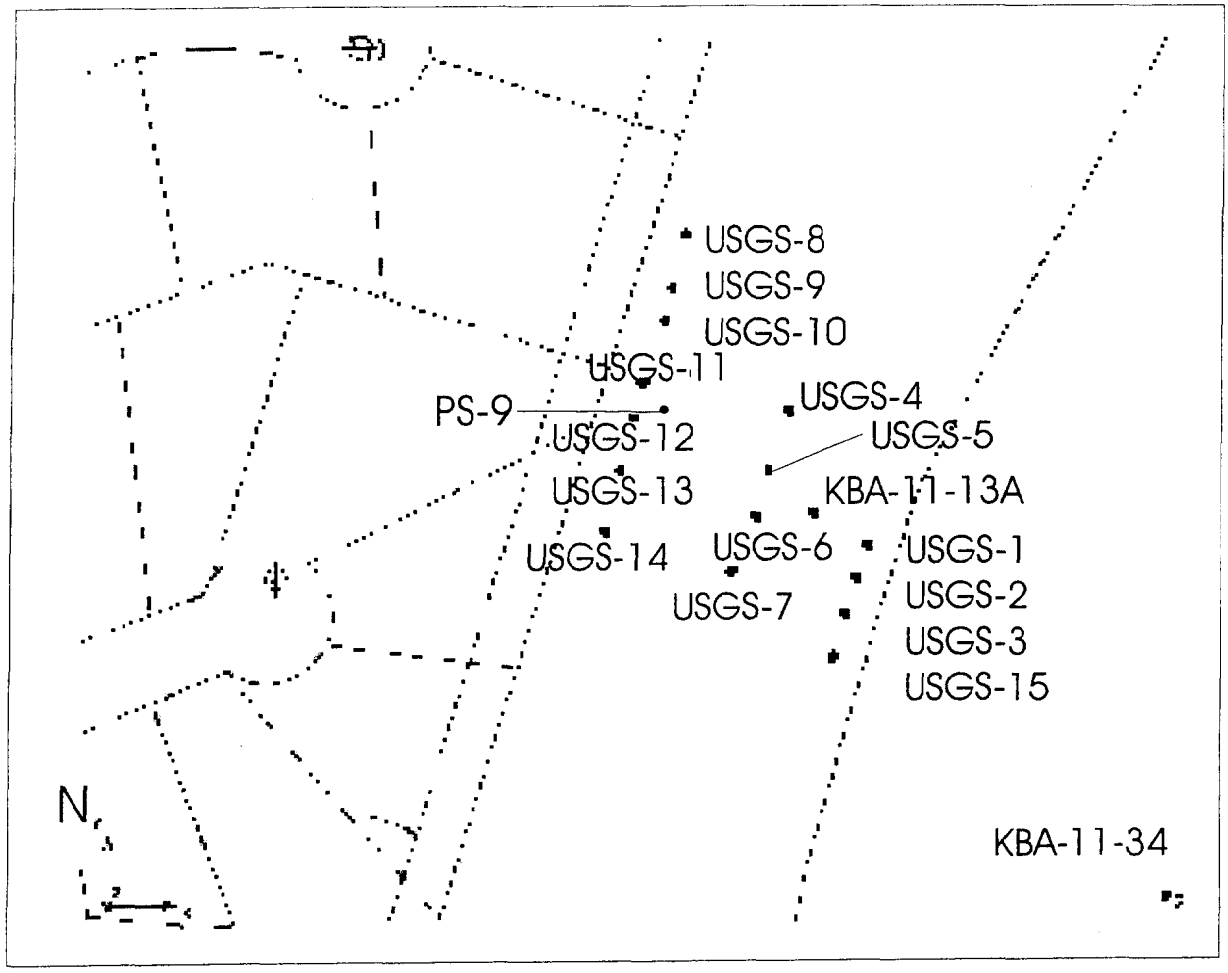


Figure 1.–Locations of monitoring wells used for water-chemistry control.

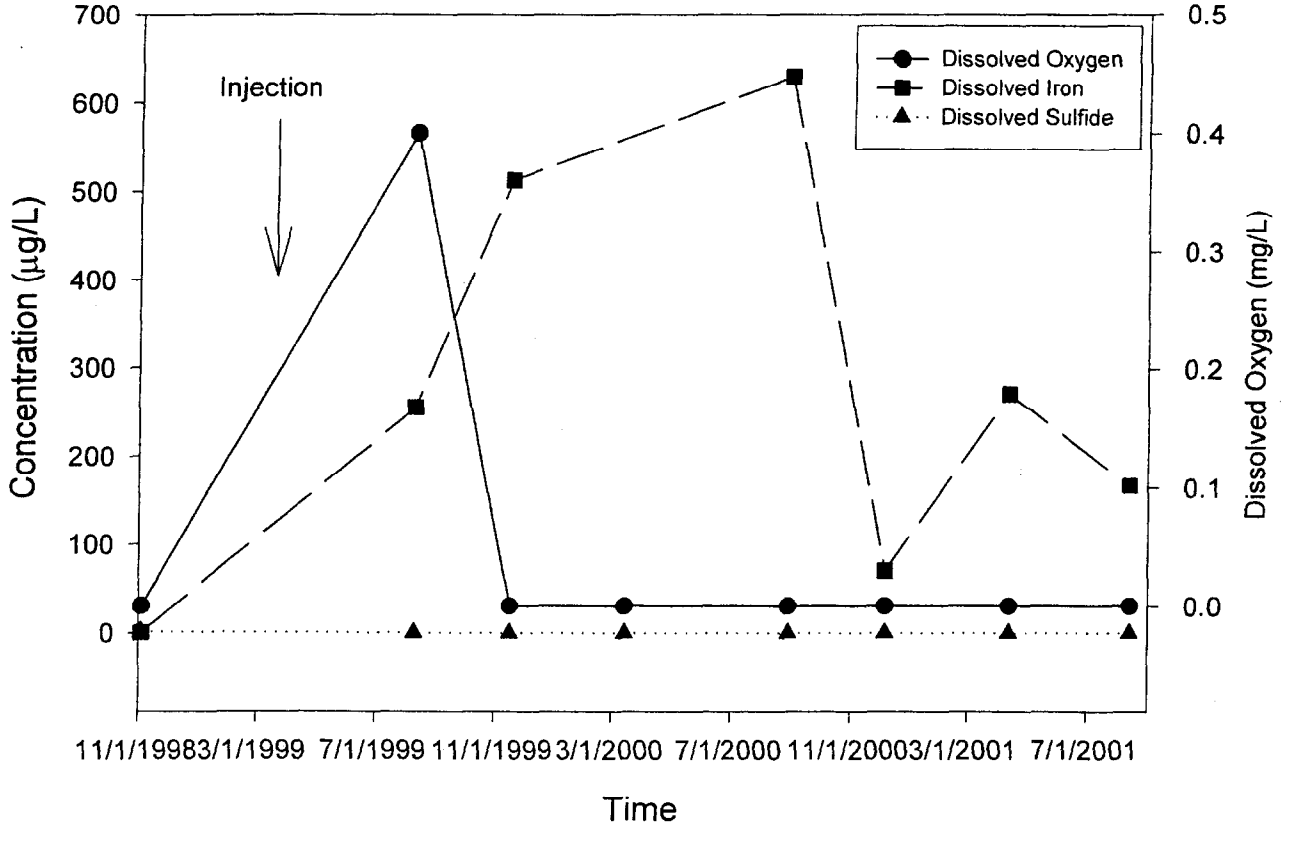


Figure 2.--Redox chemistry of USGS-3 Redox (upgradient line of wells)

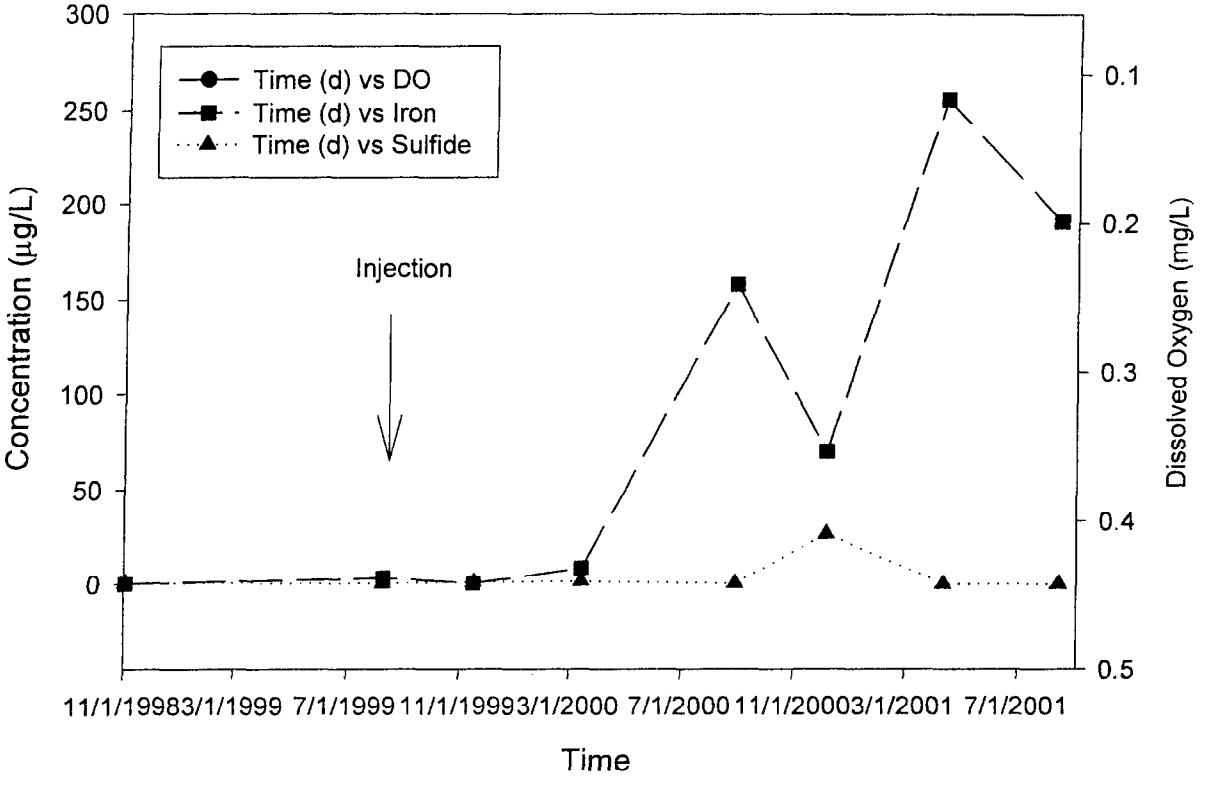


Figure 3.--Redox chemistry of well KBA-11-13A.

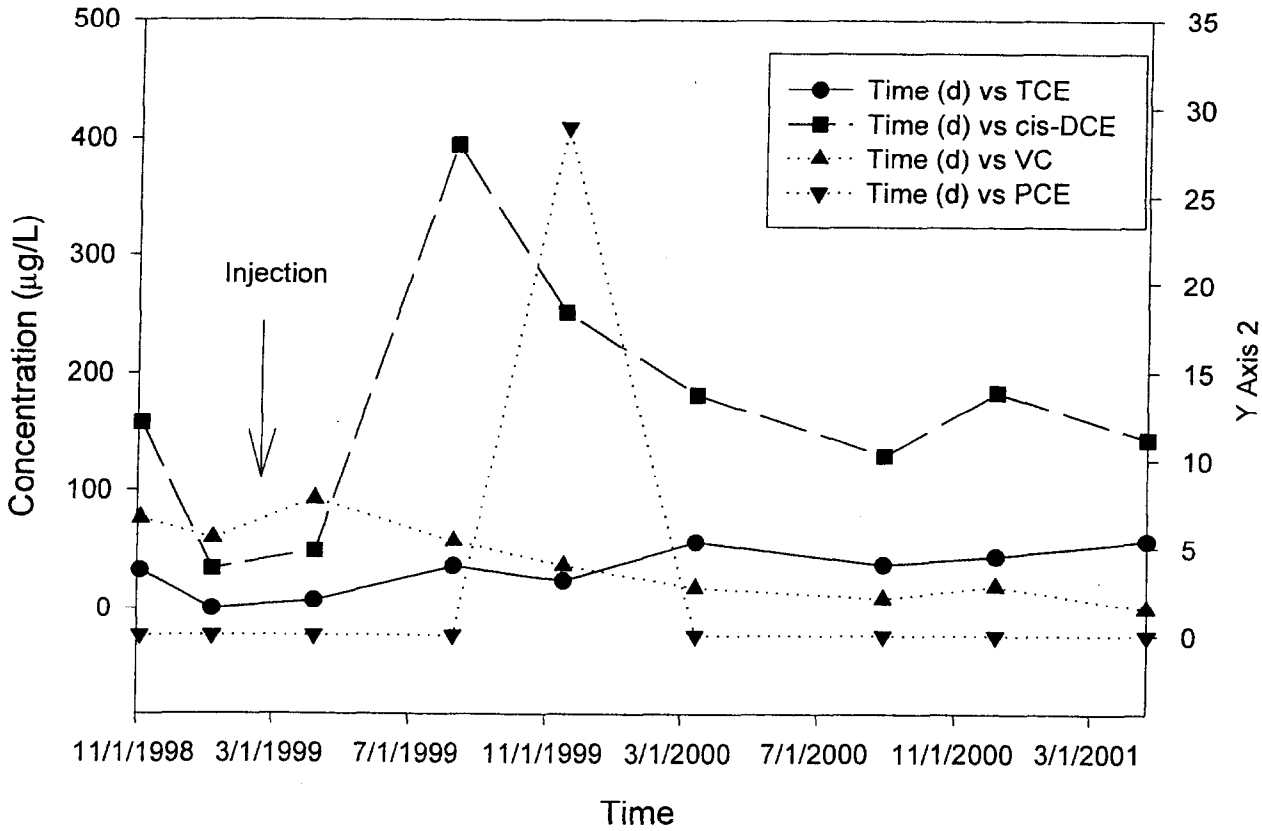


Figure 4.--KBA-11-13A Chlorinated Ethenes vs Time.

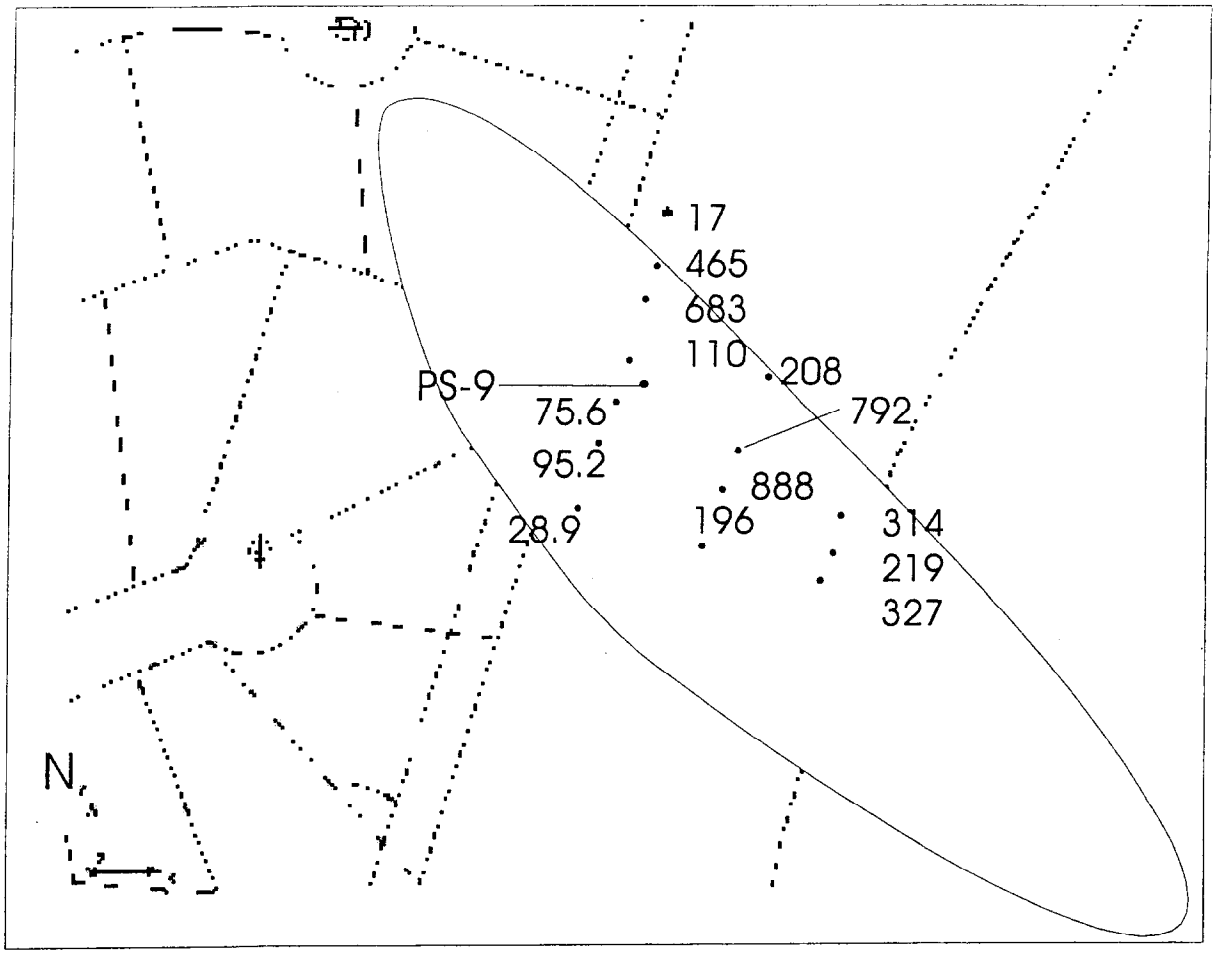


Figure.5–Concentrations of vinyl chloride (μg/L) at Kings Bay, August, 1998.

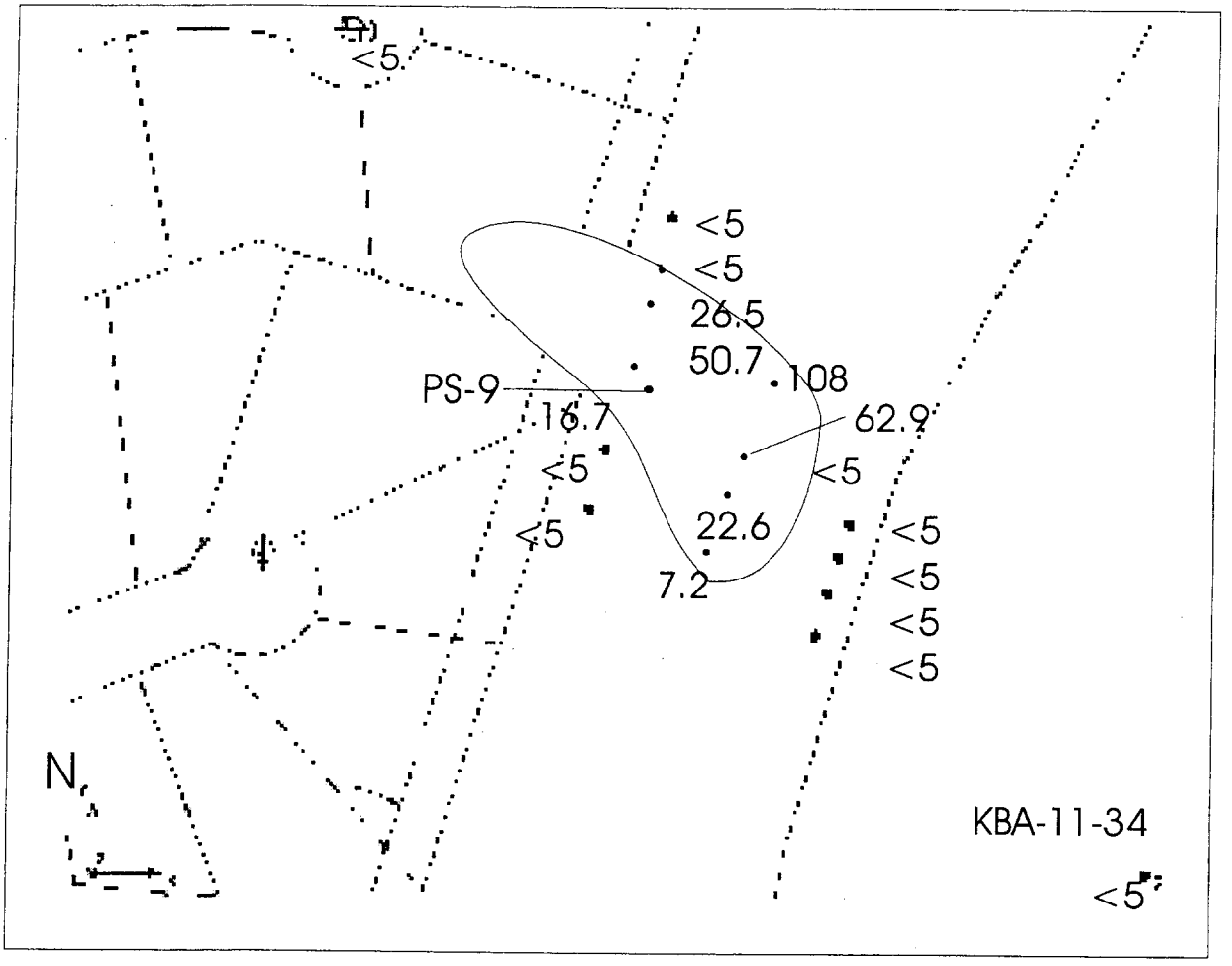
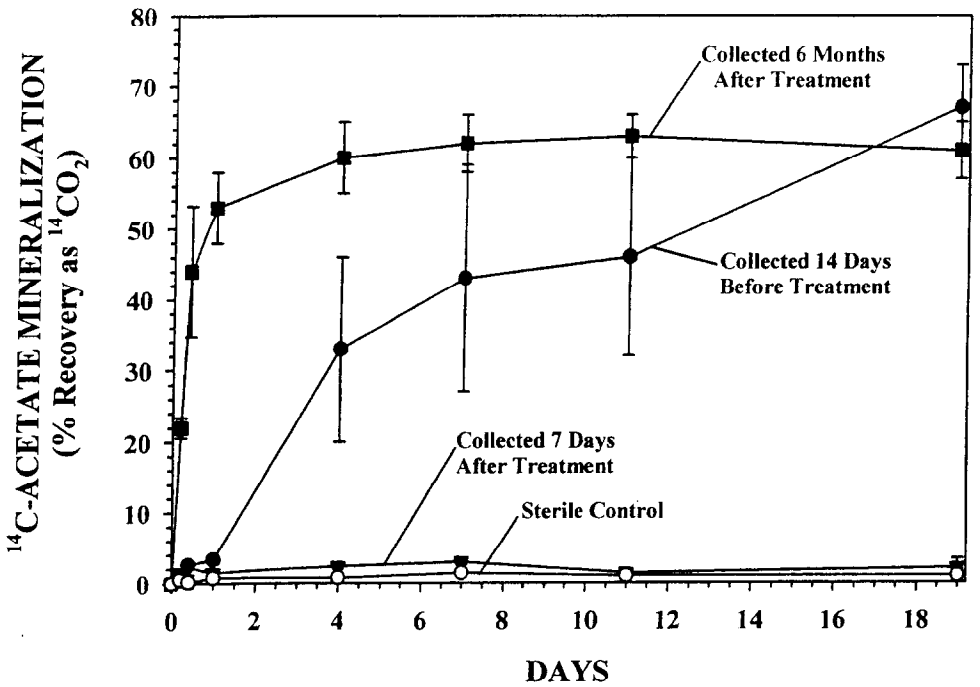
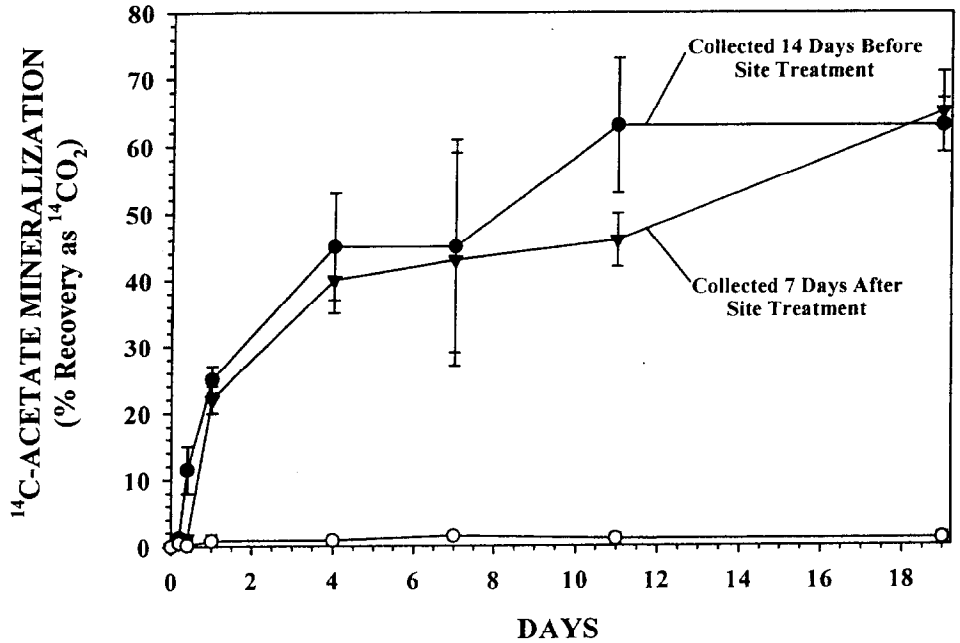


Figure.6–Concentrations of vinyl chloride (µg/L) at Kings Bay, August, 2001.



Inside Treatment Zone



Outside Treatment Zone

Figure 7.–Effects of Chemox Treatment on Microbial Activity, Kings Bay, GA.

Sample	DO (mg/L)	Fe(II) (mg/L)	HS (mg/L)	pH (units)	H_2 (nM)	CO (mg/L)	DIC (mg/L)	CH4 (mg/L)	Cl^- (mg/L)	NO_3^- (mg/L)	$SO_4^=$ (mg/L)	Temp (°C)
KBA-11-34	0.0	505	0.013	3.72	0.30	5.99	511	bd	12.8	bd	1273	25.8
USGS-1	0.0	175	0.000	3.94	na	na	926	bd	11.8	bd	909	25.3
USGS-2	0.0	700	0.003	3.87	0.25	4.18	579	0.5	9.1	bd	2598	25.3
USGS-3	0.0	630	0.004	3.96	0.41	6.99	665	2.5	14.5	bd	3833	25.0
USGS-15	0.0	950	0.004	3.92	Na	na	694	1.7	8.7	bd	2063	24.7
KBA-11-13A	0.0	158	0.313	4.80	0.14	3.33	952	5.4	11.0	bd	676	26.7
USGS-4	0.0	.25	1.400	5.59	na	na	992	9.6	10.1	bd	16.3	24.8
USGS-5	0.0	0.04	0.651	5.53	0.93	3.76	889	6.0	9.3	bd	bd	26.4
USGS-6	0.0	0.04	0.414	5.66	4.11	2.58	986	8.3	8.1	bd	bd	25.5
USGS-7	0.0	11.5	1.1	5.49	0.75	2.71	889	6.2	7.9	bd	bd	24.6
USGS-8	0.0	0.03	0.975	5.46	Na	na	771	3.7	12.8	bd	2.2	24.4
USGS-9	0.0	0.02	0.657	5.19	na	na	773	2.7	11.6	bd	4.4	23.9
USGS-10	0.0	0.02	0.875	5.41	0.34	2.33	759	3.5	13.9	bd	8.5	24.1
USGS-11	0.0	0.03	1.400	5.33	0.59	1.68	951	8.5	30.4	bd	9.1	24.4
USGS-12	0.6	0.04	0.575	5.36	na	na	851	5.4	18.7	bd	10.4	25.5
USGS-13	0.1	0.17	0.531	4.83	na	na	268	bd	7.9	bd	19.3	24.1
USGS-14	0.0	0.13	0.613	4.87	Na	na	897	8.3	11.4	bd	19.2	24.2
USGS-14R	0.0	0.27	0.577	4.85	na	na	921	8.1	11.1	bd	12.4	24.2
KBA-11-37	0.0	0.84	1.25	5.68	0.42	1.94	964	11.7	16.4	bd	125	26.3
KBA-11-37R	0.0	0.83	1.25	5.68	na	na	929	10.2	19.9	bd	108	26.2

Table 1.--Redox parameters for NAS Kings Bay 8/29/00.

Sample	DO (mg/L)	Fe(II) (mg/L)	HS (mg/L)	pH (units)	H_2 (nM)	CO (mg/L)	DIC (mg/L)	CH4 (mg/L)	Cl^- (mg/L)	NO_3^- (mg/L)	$SO_4^=$ (mg/L)	Temp (°C)
KBA-11-34	0.0	66	0.011	3.43	.50	1.64	429	0.6	9.1	bd	1061	25.4
USGS-1	0.0	2.02	0.32	3.79	--	--	523	0.7	9.7	bd	427	23.4
USGS-2	0.0	80	0.008	3.71	1.6	2.30	475	1.0	10.6	bd	2633	23.6
USGS-3	0.0	70	0.012	4.14	1.9	0.41	556	1.1	14.3	bd	2648	23.3
USGS-15	0.0	164	0.008	3.90	--	---	447	0.6	10.3	bd	2549	23.4
KBA-11-13A	0.0	70	26.5	5.64	0.67	1.29	581	4.9	10.4	bd	103	22.5
USGS-4	0.0	0.08	0.925	5.75	---	---	565	5.0	9.8	bd	6.4	21.5
USGS-5	0.0	0.81	0.370	5.39	--	0.64	555	4.9	9.5	bd	0.31	22.3
USGS-6	0.0	0.58	0.349	5.50	2.46	0.46	550	3.8	7.9	bd	0.81	22.0
USGS-7	0.0	0.01	0.598	5.51	0.61	0.38	543	4.4	8.0	bd	2.0	21.8
USGS-8	0.0	0.02	0.725	5.91	---	---	522	2.2	10.5	bd	3.1	21.0
USGS-9	0.0	----	----	6.03	----	---	471	1.8	9.2	bd	2.6	20.0
USGS-10	0.0	0.01	0.587	6.20	----	----	526	3.3	14.4	bd	8.8	20.5
USGS-11	0.0	0.02	1.025	5.87	0.23	0.39	553	4.7	20.5	bd	3.8	22.1
USGS-12	0.0	0.01	0.443	5.89	0.12	0.43	505	3.1	10.2	bd	14.0	20.5
USGS-13	0.0	0.01	0.203	6.34	---	---	163	0.7	9.4	bd	34.4	18.9
USGS-14	0.0	0.48	0.358	6.23	---	---	535	4.5	10.2	bd	13.4	21.2
USGS-14R	0.0	0.49	0.348	6.19	---	----	541	4.4	10.2	bd	17.0	21.5
KBA-11-37	0.0	0.33	1.100	5.69	0.16	0.64	575	6.7	13.1	bd	86.39	22.0
KBA-11-37R	0.0	0.36	1.15	5.71	--	--	547	5.4	12.9	bd	83.2	22.3

Table 2.--Redox parameters for NAS Kings Bay 12/7/00.

Sample	DO (mg/L)	Fe(II) (mg/L)	HS (mg/L)	pH (units)	H_2 (nM)	CO (nM)	DIC (mg/L)	CH4 (mg/L)	Cl^- (mg/L)	NO_3^- (mg/L)	$SO_4^=$ (mg/L)	Temp (°C)
KBA-11-34	0.0	20	0.176	3.99	0.54	2.06	568	0.7	8.4	bd	184	25.3
USGS-1	0.0	3.06	0.018	4.24	---	----	549	0.5	10.2	bd	371	23.3
USGS-2	0.0	319	0.006	4.04	0.40	1.34	529	0.6	9.7	bd	2071	23.2
USGS-3	0.0	270	0.004	4.55	0.31	2.19	587	5.6	12.2	bd	1180	25.0
USGS-15	0.0	294	0.008	4.13	---	----	524	0.7	9.9	bd	2274	25.0
KBA-11-13A	0.0	256	0.060	5.61	0.44	1.63	669	1.4	9.6	bd	1159	23.3
USGS-4	0.0	0.42	0.475	5.87	---	---	587	4.9	9.7	bd	8.7	25.7
USGS-5	0.0	0.53	0.255	5.88	0.91	0.88	602	5.9	10.5	bd	0.7	24.0
USGS-6	0.0	0.42	0.307	5.86	1.5	1.20	578	4.2	7.9	bd	0.8	24.3
USGS-7	0.0	0.32	0.643	5.95	---	---	590	5.5	8.2	bd	1.1	24.8
USGS-8	0.0	0.10	0.579	5.71	---	---	540	2.4	11.2	bd	7.5	23.2
USGS-9	0.0	0.05	0.360	5.69	---	---	514	1.6	9.1	bd	4.8	23.5
USGS-10	0.0	0.00	0.540	5.70	---	---	568	4.6	17.3	bd	8.6	23.2
USGS-11	0.0	0.20	0.454	5.91	0.56	2.33	594	5.5	21.2	bd	6.3	23.6
USGS-12	0.0	0.02	0.329	5.61	0.40	2.52	516	2.9	10.5	bd	13.0	23.2
USGS-13	0.0	0.02	0.095	5.31	---	----	159	0.4	3.7	bd	20.2	23.4
USGS-14	0.0	0.74	0.205	5.43	---	---	561	5.4	12.9	bd	14.3	23.5
KBA-11-37	0.0	0.22	0.700	5.83	0.43	2.44	566	5.4	14.5	bd	55.3	24.0
KBA-11-37R	0.0	0.17	0.625	5.85	--	---	566	5.5	14.5	bd	53.2	24.0

Table 3.--Redox parameters for NAS Kings Bay 4/12/01.

Sample	DO (mg/L)	Fe(II) (mg/L)	HS (mg/L)	pH (units)	H_2 (nM)	CO (nM)	DIC (mg/L)	CH4 (mg/L)	Cl^- (mg/L)	NO_3^- (mg/L)	$SO_4^=$ (mg/L)	Temp (°C)
KBA-11-34	0.0	2.13	0.182	3.82	5.0	0.56	605	1.1	8.3	bd	508	25.7
USGS-1	0.0	43	0.005	4.12	--	---	514	0.4	9.3	bd	296	24.0
USGS-2	0.0	165	0.013	3.88	0.25	4.23	549	1.0	9.5	bd	2105	23.7
USGS-3	0.0	167	0.007	4.17	1.13	2.92	524	0.7	8.9	bd	1731	24.5
USGS-15	0.0	156	0.011	3.86	--	--	521	0.7	8.8	bd	1610	24.3
KBA-11-13A	0.0	191	0.060	4.74	0.56	5.33	554	1.5	9.5	bd	1465	24.1
USGS-4	0.0	0.74	0.485	5.92	---	---	584	5.4	9.8	bd	11.8	24.3
USGS-5	0.0	0.10	0.582	5.83	1.77	3.09	599	6.1	9.8	bd	0.6	24.7
USGS-6	0.0	0.16	0.657	5.79	1.26	3.69	564	4.1	7.8	bd	3.3	25.6
USGS-7	0.0	0.05	0.579	5.90	---	----	570	5.0	8.7	bd	1.6	24.9
USGS-8	0.0	0.04	5.025	5.76	---	----	532	2.5	10.7	bd	6.5	24.2
USGS-9	0.0	0.01	0.261	5.62	---	---	478	1.4	9.2	bd	5.8	24.5
USGS-10	0.0	0.04	0.640	5.66	0.50	4.28	550	4.7	18.1	bd	7.2	25.0
USGS-11	0.0	0.08	0.566	5.58	0.51	2.56	590	4.8	16.9	bd	6.0	24.5
USGS-12	0.0	0.02	0.328	5.52	0.24	3.31	523	3.3	10.5	bd	11.2	25.0
USGS-13	0.1	0.22	0.107	5.18	---	--	169	0.6	3.2	bd	20.7	24.6
USGS-13R	0.1	0.23	0.101	---	----	---	157	0.6	3.1	bd	21.1	---
USGS-14	0.0	0.38	0.214	5.90	---	---	155	0.9	5.5	bd	9.4	25.6
KBA-11-37	0.0	0.32	0.400	5.88	---	----	547	3.6	12.7	bd	95.1	25.4

Table 4.--Redox parameters for NAS Kings Bay 8/14/01.

well no	PCE	TCE	cis-DCE	VC
KBA-11-34	74.3	<5	<5	<5
USGS-1	<5	15.4	13.4	<5
USGS-2	<5	13.8	24.9	<5
USGS-3	15.9	6.5	18.8	<5
USGS-15	43.5	8.8	<5	<5
KBA-11-13A	<5	37.4	130	8.8
USGS-4	<5	<5	97.2	74.6
USGS-5	<5	<5	9.6	66.9
USGS-6	<5	<5	10.2	38.1
USGS-7	<5	<5	5.5	6.1
USGS-8	<5	<5	<5	<5
USGS-9	<5	<5	<5	5.3
USGS-10	<5	<5	11.6	16.8
USGS-11	<5	<5	101	40.8
USGS-12	<5	<5	63.6	22.3
USGS-13	<5	<5	35.8	<5
USGS-14	<5	<5	<5	<5
USGS-14R	<5	<5	<5	<5
KBA-11-37	<5	<5	10.9	<5
KBA-11-37R	<5	<5	9.9	<5

Table 5.–Chlorinated Ethenes Kings Bay August 29, 2000

well no	PCE	TCE	cis-DCE	VC
KBA-11-34	99.0	<5	<5	<5
USGS-1	<5	5.5	<5	<5
USGS-2	<5	8.4	11.3	<5
USGS-3	11.1	5.5	21.6	<5
USGS-15	<5	<5	<5	<5
KBA-11-13A	<5	44.6	184	19.1
USGS-4	<5	8.5	207	63.1
USGS-5	<5	<5	12.3	45.9
USGS-6	<5	<5	10.3	20.9
USGS-7	<5	<5	6.0	5.5
USGS-8	<5	<5	<5	<5
USGS-9	<5	<5	<5	<5
USGS-10	<5	<5	16.7	14.9
USGS-11	<5	<5	149	48.3
USGS-12	<5	<5	62.4	12.9
USGS-13	<5	<5	19.0	<5
USGS-14	<5	<5	<5	<5
USGS-14R	<5	<5	<5	<5
KBA-11-37	<5	<5	11.8	<5
KBA-11-37R	<5	<5	12.8	<5

Table 6.---Chlorinated Ethenes, Kings Bay December 7, 2000.

well no	PCE	TCE	cis-DCE	VC
KBA-11-34	37.1	<5	<5	<5
USGS-1	<5	<5	<5	<5
USGS-2	<5	5.7	8.1	<5
USGS-3	13.7	5.5	111	<5
USGS-15	21.1	<5	<5	<5
KBA-11-13A	<5	57.7	144	19.1
USGS-4	<5	9.4	198	96.5
USGS-5	<5	<5	13.4	62.8
USGS-6	<5	<5	8.5	21.8
USGS-7	<5	<5	6.2	7.9
USGS-8	<5	<5	5.1	5.8
USGS-9	<5	<5	<5	<5
USGS-10	<5	<5	23.5	25.6
USGS-11	<5	<5	168	68.0
USGS-12	<5	<5	47.4	13.3
USGS-13	<5	<5	10.0	<5
USGS-14	<5	<5	<5	<5
USGS-14R	<5	<5	<5	<5
KBA-11-37	<5	<5	16.0	<5
KBA-11-37R	<5	<5	14.3	<5

Table 7.---Chlorinated Ethenes, Kings Bay, March 13, 2001.

well no	PCE	TCE	cis-DCE	VC
KBA-11-34	43.1	<5	<5	<5
USGS-1	<5	<5	<5	<5
USGS-2	8.6	6.4	7.1	<5
USGS-3	4.6	<5	16	<5
USGS-15	26.3	<5	<5	<5
KBA-11-13A	<5	35.7	68.1	<5
USGS-4	<5	8.5	276	108
USGS-5	<5	<5	22.5	62.9
USGS-6	<5	<5	13.0	22.6
USGS-7	<5	<5	6.5	7.2
USGS-8	<5	<5	<5	<5
USGS-9	<5	<5	<5	<5
USGS-10	<5	<5	27.3	26.5
USGS-11	<5	<5	144	50.7
USGS-12	<5	<5	66.6	16.7
USGS-13	<5	<5	7.6	<5
USGS-14	<5	<5	<5	<5
KBA-11-37	<5	<5	15.6	<5

Table 8.–Chlorinated ethenes, Kings Bay August 14, 2001.

well no	PCE	TCE	cis-DCE	VC
KBA-11-34	43.1	<5	<5	<5
USGS-1	<5	<5	<5	<5
USGS-2	8.6	6.4	7.1	<5
USGS-3	4.6	<5	16	<5
USGS-15	26.3	<5	<5	<5
KBA-11-13A	<5	35.7	68.1	<5
USGS-4	<5	8.5	276	108
USGS-5	<5	<5	22.5	62.9
USGS-6	<5	<5	13.0	22.6
USGS-7	<5	<5	6.5	7.2
USGS-8	<5	<5	<5	<5
USGS-9	<5	<5	<5	<5
USGS-10	<5	<5	27.3	26.5
USGS-11	<5	<5	144	50.7
USGS-12	<5	<5	66.6	16.7
USGS-13	<5	<5	7.6	<5
USGS-14	<5	<5	<5	<5
KBA-11-37	<5	<5	15.6	<5

Table 8.–Chlorinated ethenes, Kings Bay August 14, 2001.

J.A. JONES
MANAGEMENT
SERVICES

DATE: October 9, 2001

TO: Ken Yargus, FE4

FROM: Kim Owens, J.A. Jones Environmental Manager KO

SUBJECT: Final Semi-Annual Corrective Action Assessment Report (April to September 2001)

We are submitting the Final Semi-Annual Corrective Action Assessment Report (April to September 2001) for Site 11, Old Camden County Landfill. This report summarizes the groundwater monitoring and remediation activities conducted from April to September 2001.

We have made all the appropriate corrections from the July 27, 2001 Notice of Deficiency received from Georgia DNR and from Ken Yargus' comments on the Draft.

If you have any questions, please contact Fred Coley or me.

CC: (1 copy and Disk)
Commanding Officer
SOUTHNAVFACENGCOM
ATTN: Anthony Robinson
2155 Eagle Drive
North Charleston, SC 29406
(843) 820-7339

conditions and groundwater quality at Site 11 and the Crooked River Plantation Subdivision downgradient of the site.

(2) Well measurements were collected over an eight-hour period to minimize effects of barometric pressure changes. Groundwater levels were higher this quarter due to an increase in rains during the summer season.

(3) Source area well KBA-11-34 continues to show high concentrations of Tetrachlorethene which is the only constituent exceeding the Groundwater Protection Standards at this well. Downgradient well KBA-11-13A has two constituents which exceed the standards and downgradient and offsite wells KBA-11-37 and KBA-11-16 have one constituent each which exceeds the Standards.

(4) Piezometer PS-2 has the highest concentration of dissolved VOCs with three constituents exceeding the Standards.

(5) Deep well KBA-11-13B, adjacent to KBA-11-13A, and shallow well KBA-11-01, adjacent to PS-2, continue to show non-detected levels of VOCs.

(6) The irrigation well at 102 Plantation Court had non-detect levels of contaminants for the February to August 2001 samples except for the detection of Trichloroethene above the Standards in August 2001.

(7) The irrigation well at 122 Plantation Court continues to show detectable levels of Cis-1,2-Dichloroethene, 1,4-Dichlorobenzene and Vinyl Chloride but only Vinyl Chloride is at concentrations greater than the Standards.

(8) The irrigation well at 108 Cottage Court continues to show detectable levels of Cis-1,2-Dichloroethene but at levels less than the Standard.

(9) Cobalt, nickel, and zinc were detected in KBA-11-13A at concentrations considerably higher than in background well KBA-11-11A and in the 2000 and 1999 samples of well KBA-11-13A. The nickel concentration (229 ppb) is much higher than the Georgia drinking water MCL of 100 ppb. Well KBA-11-13A was resampled August 20, 2001 and zinc was not detected but the nickel (220 ppb) and cobalt (170 ppb) concentrations were still elevated.

(10) Naphthalene (15 ppb) was detected for the third year in well KBA-11-13A. This well was resampled September 20, 2001 and naphthalene was still detected at 19 ppb.

(11) Three new chemicals were detected in KBA-11-13A (Heptachlor – 0.031 ug/L, Tetrachloroethene – 2.2 ug/L, and Carbon Disulfide – 8.2 ug/L. Well KBA-11-13A was resampled August 20, 2001 and these chemicals were not detected. One new chemical was detected in KBA-11-11A – Aldrin – 0.0072 ug/L. This well was not resampled.

4.2 Recommendations

Continue quarterly groundwater monitoring as scheduled in the Groundwater Monitoring Plan with the exception of KBA-11-02 which is discussed below.

Recommend annual sampling of KBA-11-02. Section 3.0 of the Groundwater Monitoring Plan, dated June 1999, allows this reduction if the Groundwater Protection Standards have been met for one year. This well has met this criterion since quarterly sampling began in August 1999.

Source area well KBA-11-13A was resampled on September 20, 2001 for the following Appendix IX constituents: heptachlor, tetrachloroethene, carbon disulfide, nickel, cobalt, zinc and naphthalene. Results indicate that naphthalene, cobalt and nickel should be added to the quarterly list of Groundwater Protection Standards.

5.0 PROJECTED WORK FOR THE NEXT REPORTING PERIOD

JAJMS will continue quarterly monitoring in accordance with the RCRA Permit. The next quarterly monitoring period is scheduled for November 2001.

CCI with J.A. Jones Environmental Services plans on installing the chemical oxidation injection points at the end of September. The initial chemical oxidation injection will be scheduled for October and November. A polishing chemical oxidation injection, if necessary, will be completed in December. The vegetable oil injection will be completed in January 2002.

6.0 REFERENCES

The following references were used in this report:

Quarterly Groundwater Monitoring Report April – June, 2001, Site 11 Old Camden County Landfill, Naval Submarine Base Kings Bay, Georgia (JAJMS 2000a)

Work Plan No. 02, Groundwater Remediation at Site 11, Old Camden County Landfill, Naval Submarine Base Kings Bay, Georgia, CCI/JA Jones, May 2001 (CCI/JA Jones, 2001)

Natural Attenuation of Chlorinated Ethene-Contaminated Groundwater, Old Camden County Landfill, Kings Bay Naval Submarine Base, Georgia, August 2000 to August 2001, USGS, September 2001 (USGS, 2001).

Table 5 Continued
Appendix IX Analyses Summary

Appendix IX Constituents (only detectable compounds shown)	**KBA-11-13A Background Well (Resample)**	**KBA-11-11A Background Well**	**KBA-11-13A Downgradient Well**	**KBA-11-11A Background Well**	**KBA-11-13A Downgradient Well**	**KBA-11-11A Background Well Sample ID KB20015 GWT**	**KBA-11-13A Downgradient Well Sample ID KB20010 GWT**
Date Collected	9-20-01	8-8-01	8-8-01	8-10-00	8-16-00	8-19-99	8-3-99
Pesticide/PCBs/Herbicides Organics (µg/L)							
Aldrin	0.02U	0.0072J	0.020U	0.050U	0.020U	0.020U	
Heptachlor	0.02U	0.020U	0.031	0.050U	0.020U	0.020U	
Inorganics (µg/L)							
Antimony	NA	0.140U	0.350U	0.150	0.289	2.9	2.9
Arsenic	NA	0.519B	4.060	0.318	1.41	2.7	2.7
Barium	NA	10.0	74.9	10.4	74.8	8.2	15.8
Beryllium	NA	0.040U	0.923B	0.024	0.022	0.32	0.09
Cadmium	NA	0.080U	0.200U	0.020	0.020	0.36	0.36
Chromium	NA	0.779B	5.400B	0.604	1.94	1.3	2.5
Cobalt	170	0.028B	177	0.015	0.148	0.84	0.84
Copper	NA	0.120U	4.920B	1.550	0.493	1.7	6.2
Lead	NA	0.080B	0.150U	0.058	0.044	1.9	2.8
Mercury	NA	0.100U	0.100U	0.03	0.03	0.04	0.04
Nickel	220	0.400U	229	0.363	3.480	1.0	12.7
Selenium	NA	1.800B	5.710B	0.677	2.110	2.9	2.9
Silver	NA	0.020U	0.050U	0.005	0.036	0.9	3.1
Thallium	NA	0.020U	0.050U	0.010	0.010	4.4	3.9
Tin	NA	3.00U	3.00U	0.170	0.224	2.0	2.0
Vanadium	NA	0.497B	4.420B	0.715	5.070	1.1	5.5
Zinc	20U	1.00U	219	1.16	1.990	4.9	18.3
General Chemistry (mg/L)							
Cyanides	NA	0.0006U	0.0006U	0.006U	0.0008	0.00	0.00
Sulfides	NA	1.00U	1.00U	1.00U	1.00U	0.45	1.1

Notes: U = compound was analyzed for but not detected to the level shown.
E or J = estimated value.
NG/L = nanograms per liter;
µg/L = micrograms per liter;
mg/L = milli grams per liter
NA = Not Analyzed

Table 5
Appendix IX Analyses Summary

Appendix IX Constituents (only detectable compounds shown)	**KBA-11-13A Background Well (Resample)**	**KBA-11-11A Background Well**	**KBA-11-13A Downgradient Well**	**KBA-11-11A Background Well**	**KBA-11-13A Downgradient Well**	**KBA-11-11A Background Well Sample ID KB20015 GWT**	**KBA-11-13A Downgradient Well Sample ID KB20010 GWT**
Date Collected	9-20-01	8-8-01	8-8-01	8-10-00	8-16-00	8-19-99	8-3-99
Volatile Organic (µg/L)							
Vinyl Chloride	1.0U	1.0U	1.0U	1.0U	17	1.0U	49.6
Trichlororethene	7	1.0U	35	1.0U	51	1.0U	22.7
Toluene	1.0U	1.0U	1.0U	1.0U	0.95	1.0U	3.5
Chlorobenzene	3	1.0U	3.4	1.0U	5.0	1.0U	5.8
Ethylbenzene	24	1.0U	21	1.0U	71	1.0U	79.6
Xylenes (total)	3.0U	3.0U	3.0U	3.0U	0.71	3.0U	19.5
Trans-1,2-dichloroethene	1	1.0U	6.4	1.0U	9	1.0U	4.7
Cis-1,2-dichloroethene	14	1.0U	71	1.0U	300 E	1.0U	234 E
Benzene	1.0U	1.0U	1.0U	1.0U	1.0		
Carbon disulfide	5.0U	5.0U	8.2	5.0U	5.0U	5.0U	4.6J
Tetrachloroethene	1.0U	1.0U	2.2	1.0U	1.0U	1.0U	1.0U
Semivolatile Organic (µg/L)							
Naphthalene	19	10U	15	5.0U	20	10.4U	18.3
Diethyl Phthalate	5U	10U	10U	5.2	7.2		
Dioxins/furans (NG/L)							
All below detection limit	NA	ND	ND	ND	ND	10.0 U	10.0U

Notes: U = compound was analyzed for but not detected to the level shown.
E or J = estimated value.
NG/L = nanograms per liter;
µg/L = micrograms per liter;
mg/L = milli grams per liter
NA – Not analyzed

Table 5 continued on following page