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RESOURCE CONSERVATION AND RECOVERY ACT FACILITY INVESTIGATION REPORT FOR SITES 5 AND 16 AND SITE HISTORY AND FILE INFORMATION FOR SITE 12 VOLUME II APPENDICES NSB KINGS BAY GA

6/1/1994

ABB ENVIRONMENTAL

# RESOURCE CONSERVATION AND RECOVERY ACT FACILITY INVESTIGATION REPORT FOR SITES 5 AND 16 AND SITE HISTORY AND FILE INFORMATION FOR SITE 12

## VOLUME II, APPENDICES

## NAVAL SUBMARINE STATION
## KINGS BAY, GEORGIA

## CONTRACT TASK ORDER NO. 041
## CONTRACT NO. N62467-89-D-0317

## JUNE 1994

SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORTH CHARLESTON, SOUTH CAROLINA
29419-9010

RELEASE OF THIS DOCUMENT REQUIRES PRIOR NOTIFICATION OF THE
COMMANDING OFFICER OF NAVAL SUBMARINE BASE, KINGS BAY, GEORGIA

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| NSB Kings Bay, Georgia | 15 |

# RESOURCE CONSERVATION AND RECOVERY ACT FACILITY INVESTIGATION REPORT FOR SITES 5 AND 16 AND SITE HISTORY AND FILE INFORMATION FOR SITE 12

## NAVAL SUBMARINE BASE
## KINGS BAY, GEORGIA

## VOLUME II, APPENDICES

Unit Identification Code No. N42237

Contract Task Order No. 041

Contract No. N62467-89-D-0317

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June 1994

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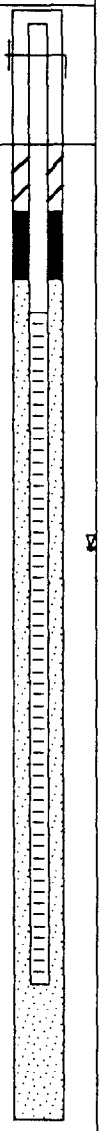
# Appendix A

## Sites 5 and 16 Boring Logs

Site 5

| | | | |
|---|---|---|---|
| **TITLE:** NSB KINGS BAY | | **LOG of WELL:** KBA-5-1 | **BORING NO.** 05SB01 |
| **CLIENT:** U.S. NAVY, SOUTHNAVFACENGCOM | | | **PROJECT NO:** 7553-03 |
| **CONTRACTOR:** Groundwater Protection, Inc. | | **DATE STARTED:** 2/8/92 | **COMPLTD:** 2/8/92 |
| **METHOD:** HSA | **CASE SIZE:** 2" | **BORING DIA.:** 8" | **PROTECTION LEVEL:** D |
| **TOC ELEV.:** 22.07 FT. | **MONITOR INST.:** PID | **TOT DPTH:** 14.5FT. | **DPTH TO ▽** 8 FT. |
| **LOGGED BY:** Laura Harris | **WELL DEVELOPMENT DATE:** | | **SITE:** 5 |

| DEPTH FT. | LABORATORY SAMPLE ID | SAMPLE | RECOVERY | HEADSPACE (ppm) | SOIL/ROCK DESCRIPTION AND COMMENTS | LITHOLOGIC SYMBOL | SOIL CLASS |
|---|---|---|---|---|---|---|---|
| | | | | | topsoil | | SW |
| | | | | | Sand, medium, gray | | |
| | | | | | Silty sand, fine to medium, black | | SM |
| | | | | 0 | | | |
| | | | | 0 | | | |
| 5 | | | 18" | | Silty sand, fine to medium, black, wet on bottom | | |
| | 03 | | | 0 | | | |
| | | | 18" | | Silty sand, fine to medium, black with red medium sand layers | | |
| | 04 | | | 0 | | | |
| | | | | | Sand, medium, dark red-brown with intervals of less sorted darker sand | | SW |
| | | | 16" | | | | |
| 10 | 05 | | | 0 | | | |
| | | | 16" | | Sand, medium, dark red-brown with intervals of less sorted darker sand | | |
| | 06 | | | 0 | | | |
| | | | 20" | | Sand, medium, grading to red-brown, well sorted | | |
| | 07 | | | 0 | | | |
| 15 | | | | | total depth = 14.5 ft. | | |
| 20 | | | | | | | |



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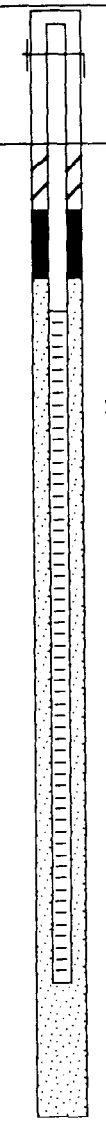
| | | | |
|---|---|---|---|
| **TITLE:** NSB KINGS BAY | | **LOG of WELL:** KBA-5-2 | **BORING NO.** 05SB02 |
| **CLIENT:** U.S. NAVY, SOUTHNAVFACENGCOM | | | **PROJECT NO:** 7553-03 |
| **CONTRACTOR:** Groundwater Protection, Inc. | | **DATE STARTED:** 2/8/92 | **COMPLTD:** 2/8/92 |
| **METHOD:** HSA | **CASE SIZE:** 2" | **BORING DIA.:** 8" | **PROTECTION LEVEL:** D |
| **TOC ELEV.:** 19.83 FT. | **MONITOR INST.:** PID | **TOT DPTH:** 14FT. | **DPTH TO ▽** 4 FT. |
| **LOGGED BY:** Laura Harris | **WELL DEVELOPMENT DATE:** | | **SITE:** 5 |

| DEPTH FT. | LABORATORY SAMPLE ID | SAMPLE | RECOVERY | HEADSPACE (ppm) | SOIL/ROCK DESCRIPTION AND COMMENTS | LITHOLOGIC SYMBOL | SOIL CLASS |
|---|---|---|---|---|---|---|---|
| | | | | | topsoil | | SW |
| | | | | | Sand, medium, gray | | |
| | | | | 0 | | | |
| | | | | | Silty sand, fine to medium, black | | SM |
| | | | | 0 | | | |
| | | | | | Sand, fine to medium, red, brown, and black mottled | | SW |
| 5 | | | 18" | | | | |
| | 03 | | | 0 | | | |
| | | | 18" | | Sand, fine to medium, red, brown, and black mottled | | |
| | 04 | | | 0 | | | |
| | | | 16" | | Sand, fine to medium, red, brown, and black mottled with increasing proportion of dark organic material | | |
| 10 | 05 | | | 0 | | | |
| | | | 16" | | Sand, fine to medium, brown and black | | |
| | 06 | | | 0 | Sand, fine to medium, red, brown, and black mottled | | |
| | | | 20" | | | | |
| | 07 | | | 0 | total depth = 14 ft. | | |
| 15 | | | | | | | |
| 20 | | | | | | | |



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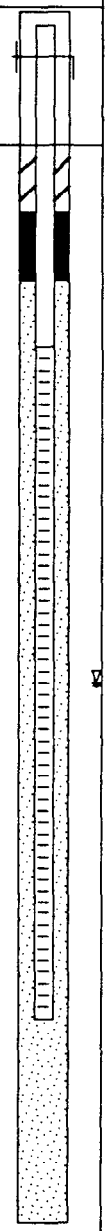
| | | | |
|---|---|---|---|
| **TITLE:** NSB KINGS BAY | | **LOG of WELL:** KBA-5-3 | **BORING NO.** 05SB03 |
| **CLIENT:** U.S. NAVY, SOUTHNAVFACENGCOM | | | **PROJECT NO:** 7553-03 |
| **CONTRACTOR:** Groundwater Protection, Inc. | | **DATE STARTED:** 2/8/92 | **COMPLTD:** 2/8/92 |
| **METHOD:** HSA | **CASE SIZE:** 2" | **BORING DIA.:** 8" | **PROTECTION LEVEL:** D |
| **TOC ELEV.:** 20.89 FT. | **MONITOR INST.:** PID | **TOT DPTH:** 18FT. | **DPTH TO ▽** 8 FT. |
| **LOGGED BY:** Laura Harris | **WELL DEVELOPMENT DATE:** | | **SITE:** 5 |

| DEPTH FT. | LABORATORY SAMPLE ID | SAMPLE | RECOVERY | HEADSPACE (ppm) | SOIL/ROCK DESCRIPTION AND COMMENTS | LITHOLOGIC SYMBOL | SOIL CLASS |
|---|---|---|---|---|---|---|---|
| | | | | | topsoil | | |
| | | | | 0 | Sandy clay silt, red mixed with black and buff sand | | SC |
| 5 | | | 15" | | Sand, medium, red, well sorted, moist | | SW |
| | 03 | | | 0 | | | |
| | | | 18" | | Sand, medium, red-brown, well sorted, wet | | |
| | 04 | | | 0 | | | |
| | | | 24" | | Sand, medium, red-brown, well sorted, wet | | |
| 10 | 05 | | | 0 | | | |
| | | | 22" | | Sand, medium, red-brown, well sorted, wet | | |
| | 08 | | | 0 | | | |
| | | | 24" | | Sand, medium, green-grey, well sorted | | |
| | 07 | | | 0 | | | |
| 15 | | | | | | | |
| | | | | | total depth = 18 ft. | | |
| 20 | | | | | | | |



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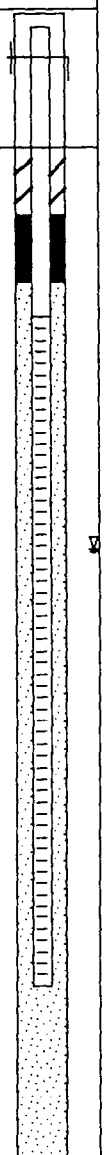
| | | | |
|---|---|---|---|
| **TITLE:** NSB KINGS BAY | | **LOG of WELL:** KBA-5-4 | **BORING NO.** 05SB04 |
| **CLIENT:** U.S. NAVY, SOUTHNAVFACENGCOM | | | **PROJECT NO:** 7553-03 |
| **CONTRACTOR:** Groundwater Protection, Inc. | | **DATE STARTED:** 2/8/92 | **COMPLTD:** 2/8/92 |
| **METHOD:** HSA | **CASE SIZE:** 2" | **BORING DIA.:** 8" | **PROTECTION LEVEL:** D |
| **TOC ELEV.:** 21.72 FT. | **MONITOR INST.:** PID | **TOT DPTH:** 15FT. | **DPTH TO ∇** 6 FT. |
| **LOGGED BY:** Laura Harris | **WELL DEVELOPMENT DATE:** 2/11/92 | | **SITE:** 5 |

| DEPTH FT. | LABORATORY SAMPLE ID | SAMPLE | RECOVERY | HEADSPACE (ppm) | SOIL/ROCK DESCRIPTION AND COMMENTS | LITHOLOGIC SYMBOL | SOIL CLASS |
|---|---|---|---|---|---|---|---|
| | | | | | Silty sand, medium to fine, black | | SM |
| | | | | | Sand, buff fill | | |
| | | | | 0 | | | |
| 5 | | | 18" | | Sand, medium, red, wet | | SW |
| | 03 | | | 0 | Sand, medium, red grading to red-brown | | |
| | | | 20" | | | | |
| | 04 | | | 0 | Sand, medium, red-brown with red layers | | |
| | | | 24" | | | | |
| 10 | 05 | | | 0 | | | |
| | | | 24" | | | | |
| | 08 | | | 0 | Sand, medium, red-brown and green layered | | |
| | | | 24" | | | | |
| | | | | | Sand, medium, green | | |
| | | | | | no change in cuttings | | |
| 15 | | | | | total depth = 15 ft. | | |
| 20 | | | | | | | |



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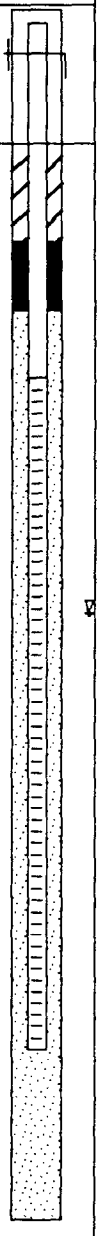
| | | | |
|---|---|---|---|
| **TITLE:** NSB KINGS BAY | | **LOG of WELL:** KBA-5-5 | **BORING NO.** 05SB05 |
| **CLIENT:** U.S. NAVY, SOUTHNAVFACENGCOM | | | **PROJECT NO:** 7553-03 |
| **CONTRACTOR:** Groundwater Protection, Inc. | | **DATE STARTED:** 2/7/92 | **COMPLTD:** 2/7/92 |
| **METHOD:** HSA | **CASE SIZE:** 2" | **BORING DIA.:** 8" | **PROTECTION LEVEL:** D |
| **TOC ELEV.:** 21.02 FT. | **MONITOR INST.:** PID | **TOT DPTH:** 18FT. | **DPTH TO ▽** 7 FT. |
| **LOGGED BY:** Laura Harris | **WELL DEVELOPMENT DATE:** 2/11/92 | | **SITE:** 5 |

| DEPTH FT. | LABORATORY SAMPLE ID | SAMPLE | RECOVERY | HEADSPACE (ppm) | SOIL/ROCK DESCRIPTION AND COMMENTS | LITHOLOGIC SYMBOL | SOIL CLASS |
|---|---|---|---|---|---|---|---|
| | | | | | topsoil | | |
| | | | | 0 | Sand, medium to fine with silt, black, wet but not saturated | | SM |
| 5 | | | 18" | | Sand, medium to fine with silt, black, wet | | |
| | 03 | | | 0 | | | |
| | | | 18" | | Sand, medium to fine with silt, black, wet (saturated) | | |
| | 04 | | | 0 | | | |
| | | | 12" | | Sand, medium to fine, well sorted, red | | SW |
| 10 | 05 | | | 0 | | | |
| | | | 24" | | Sand, medium to fine, well sorted, red and green mottled | | |
| | 06 | | | 0 | | | |
| | | | 24" | | Sand, medium to fine, green, well sorted, micaceous | | |
| | 07 | | | 0 | | | |
| 15 | | | 18" | | Sand, medium to fine with silt, green grading to blue-gray | | SM |
| | 08 | | | 0 | | | |
| | | | | | total depth = 18 ft. | | |
| 20 | | | | | | | |



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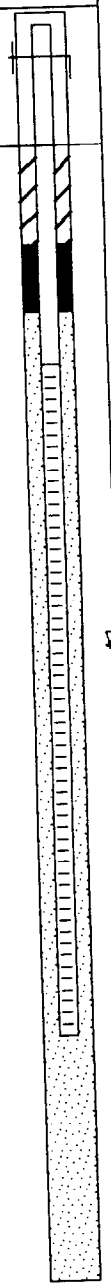
| | | |
|---|---|---|
| **TITLE:** NSB KINGS BAY | **LOG of WELL:** KBA-5-6 | **BORING NO.** 05SB06 |
| | | **PROJECT NO:** 7553-03 |
| **CLIENT:** U.S. NAVY, SOUTHNAVFACENGCOM | | |
| **CONTRACTOR:** Groundwater Protection, Inc. | **DATE STARTED:** 2/7/92 | **COMPLTD:** 2/7/92 |
| **METHOD:** HSA | **CASE SIZE:** 2" / **BORING DIA.:** 8" | **PROTECTION LEVEL:** D |
| **TOC ELEV.:** 22.85 FT. | **MONITOR INST.:** PID / **TOT DPTH:** 17FT. | **DPTH TO ∇** 7.5 FT. |
| **LOGGED BY:** Laura Harris | **WELL DEVELOPMENT DATE:** | **SITE:** 5 |

| DEPTH FT. | LABORATORY SAMPLE ID | SAMPLE | RECOVERY | HEADSPACE (ppm) | SOIL/ROCK DESCRIPTION AND COMMENTS | LITHOLOGIC SYMBOL | SOIL CLASS |
|---|---|---|---|---|---|---|---|
| | | | | | Silty sand, medium to fine, black, wet, not saturated | | SM |
| | | | | 0 | Silty sand, black with red stringers, wooded debris, wet | | |
| 5 | | | 14" | | Silty sand, black with red stringers, wet | | |
| | 03 | | | 0 | | | |
| | | | 16" | | Silty sand, black with red stringers, wet | | |
| | 04 | | | 0 | | | |
| | | | 16" | | Silty sand, medium to fine, fairly well sorted, red, wet | | |
| 10 | 05 | | | 0 | Sand, medium to fine, well sorted, mainly black with red | | SW |
| | | | 16" | | Sand, medium to fine, well sorted, black and red | | |
| | 06 | | | 0 | | | |
| | | | 16" | | Sand, medium to fine, well sorted, black and red | | |
| | 07 | | | 0 | Sand, medium to fine, well sorted, green-brown, saturated | | |
| 15 | | | 18" | | | | |
| | 08 | | | 0 | | | |
| | | | | | total depth = 17 ft. | | |
| 20 | | | | | | | |



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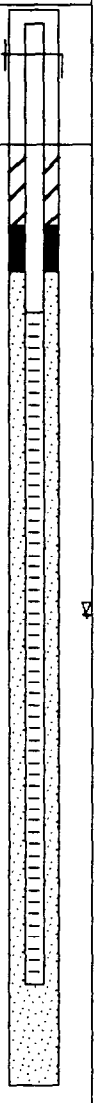
| | | | |
|---|---|---|---|
| **TITLE:** NSB KINGS BAY | | **LOG of WELL:** KBA-5-7 | **BORING NO.** 05SB07 |
| **CLIENT:** U.S. NAVY, SOUTHNAVFACENGCOM | | | **PROJECT NO:** 7553-03 |
| **CONTRACTOR:** Groundwater Protection, Inc. | | **DATE STARTED:** 2/7/92 | **COMPLTD:** 2/7/92 |
| **METHOD:** HSA | **CASE SIZE:** 2" | **BORING DIA.:** 8" | **PROTECTION LEVEL:** D |
| **TOC ELEV.:** 20.5 FT. | **MONITOR INST.:** PID | **TOT DPTH:** 14FT. | **DPTH TO ∇** 7 FT. |
| **LOGGED BY:** Laura Harris | **WELL DEVELOPMENT DATE:** | | **SITE:** 5 |

| DEPTH FT. | LABORATORY SAMPLE ID | SAMPLE | RECOVERY | HEADSPACE (ppm) | SOIL/ROCK DESCRIPTION AND COMMENTS | LITHOLOGIC SYMBOL | SOIL CLASS |
|---|---|---|---|---|---|---|---|
| | | | | | topsoil | | |
| | | | | 0 | limestone fill cobbles, gravel buff colored with sand, black, brown, red layered medium to fine sand, silty (wet) | | GP |
| 5 | | | 18" | | Sand, fine to medium, black, brown | | SM |
| | 03 | | | 0 | Sand, fine to medium, red and brown, well sorted | | SW |
| | | | 18" | | | | |
| | 04 | | | 0 | Sand, fine to medium, brown grading to green, well sorted | | |
| | | | 24" | | | | |
| 10 | 05 | | | 0 | Sand, fine to medium, green and brown, well sorted | | |
| | | | 24" | | | | |
| | 08 | | | 0 | Sand, fine to medium, green and brown, well sorted | | |
| | | | 24" | | | | |
| | 07 | | | 0 | total depth = 14 ft. | | |
| 15 | | | | | | | |
| 20 | | | | | | | |



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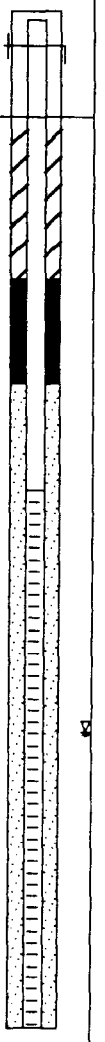
# Site 16

| | | | |
|---|---|---|---|
| **TITLE:** NSB KINGS BAY | | **LOG of WELL:** KBA-16-1 | **BORING NO.** 16SB01 |
| **CLIENT:** U.S. NAVY, SOUTHNAVFACENGCOM | | | **PROJECT NO:** 7553-03 |
| **CONTRACTOR:** Groundwater Protection, Inc. | | **DATE STARTED:** 2/12/92 | **COMPLTD:** 2/12/92 |
| **METHOD:** HSA | **CASE SIZE:** 2" | **BORING DIA.:** 8" | **PROTECTION LEVEL:** D |
| **TOC ELEV.:** 23.43 FT. | **MONITOR INST.:** PID | **TOT DPTH:** 17FT. | **DPTH TO ∇** 11.5 FT. |
| **LOGGED BY:** Mark Steinhauff | **WELL DEVELOPMENT DATE:** 2/14/92 | | **SITE:** 16 |

| DEPTH FT. | LABORATORY SAMPLE ID | SAMPLE | RECOVERY | HEADSPACE (ppm) | SOIL/ROCK DESCRIPTION AND COMMENTS | LITHOLOGIC SYMBOL | SOIL CLASS |
|---|---|---|---|---|---|---|---|
| | | | | 0 | Sand, fill, brown, black, gray | | SW |
| 5 | | | 18" | | Silty sand, fine fill (limestone cobble), brown and black, moist, LEL 2% | | SM |
| | 03 | | | 0 | Silty sand, fine, brown and black with 2" white lens | | |
| | | | 18" | | Silty sand, fine, light brown, massive | | |
| | 04 | | | 0 | Silty sand, fine, light brown | | |
| | | | 20" | | | | |
| 10 | 05 | | | 0 | Silty sand, fine, light to dark brown | | |
| | | | 18" | | Silty sand, fine, dark brown | | |
| | 06 | | | 0 | | | |
| | | | 20" | | Sand, fine, light brown to tan (massive) | | SW |
| | | | | | Sand, fine, white to tan mixed with light to dark brown silty sand | | |
| | 07 | | | 0 | | | |
| 15 | | | | | | | |
| | | | | | total depth = 17 ft. | | |
| 20 | | | | | | | |
| 25 | | | | | | | |



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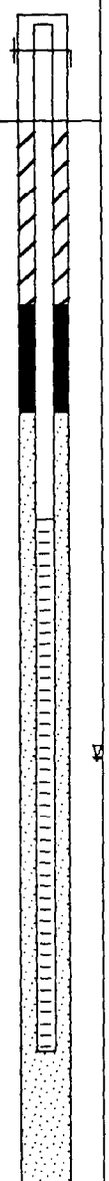
| | | | |
|---|---|---|---|
| **TITLE:** NSB KINGS BAY | | **LOG of WELL:** KBA-16-2 | **BORING NO.** 16SB02 |
| **CLIENT:** U.S. NAVY, SOUTHNAVFACENGCOM | | | **PROJECT NO:** 7553-03 |
| **CONTRACTOR:** Groundwater Protection, Inc. | | **DATE STARTED:** 2/13/92 | **COMPLTD:** 2/13/92 |
| **METHOD:** HSA | **CASE SIZE:** 2" | **BORING DIA.:** 8" | **PROTECTION LEVEL:** D |
| **TOC ELEV.:** 20.76 FT. | **MONITOR INST.:** PID | **TOT DPTH:** 20FT. | **DPTH TO ∇** 12 FT. |
| **LOGGED BY:** Mark Steinhauff | **WELL DEVELOPMENT DATE:** 2/14/92 | | **SITE:** 16 |

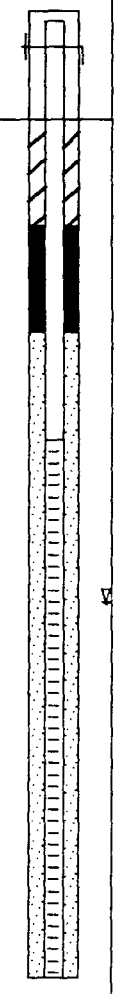
| DEPTH FT. | LABORATORY SAMPLE ID | SAMPLE | RECOVERY | HEADSPACE (ppm) | SOIL/ROCK DESCRIPTION AND COMMENTS | LITHOLOGIC SYMBOL | SOIL CLASS |
|---|---|---|---|---|---|---|---|
| | | | | 0 | Silty sand, fine, brown (fill) | | SM |
| | | | 18" | | Silty sand, fine, dark to medium brown | | |
| 5 | 03 | | 18" | 0 | Silty sand, fine, dark to medium brown | | |
| | 04 | | 20" | 0 | Sand, fine, white to medium brown | | SW |
| 10 | 05 | | 17" | 0 | Sand, fine, light to dark brown laminated<br>Sand, fine, light to dark brown | | |
| | 06 | | 23" | 0 | Silty sand, fine, white to light brown | | SM |
| 15 | 07 | | 23" | 0 | Sand, fine, white | | SW |
| | 08 | | 23" | 0 | | | |
| | 09 | | 6" | 0 | Sand, fine, laminated light to dark brown<br>Silty sand, fine, laminated green to black | | SM |
| 20 | 10 | | | 0 | total depth = 20 ft. | | |
| 25 | | | | | | | |



PAGE 1 of KB16-2 **ABB ENVIRONMENTAL SERVICES, INC.**

| | | | |
|---|---|---|---|
| **TITLE:** NSB KINGS BAY | | **LOG of WELL:** KBA-16-3 | **BORING NO.** 16SB03 |
| **CLIENT:** U.S. NAVY, SOUTHNAVFACENGCOM | | | **PROJECT NO:** 7553-03 |
| **CONTRACTOR:** Groundwater Protection, Inc. | | **DATE STARTED:** 2/12/92 | **COMPLTD:** 2/12/92 |
| **METHOD:** HSA | **CASE SIZE:** 2" | **BORING DIA.:** 8" | **PROTECTION LEVEL:** D |
| **TOC ELEV.:** 21.87 FT. | **MONITOR INST.:** PID | **TOT DPTH:** 18FT. | **DPTH TO ▽** 9 FT. |
| **LOGGED BY:** Mark Steinhauff | **WELL DEVELOPMENT DATE:** 2/14/92 | | **SITE:** 16 |

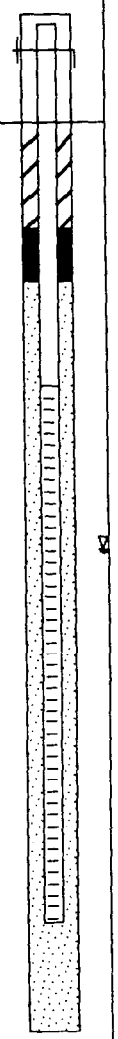
| DEPTH FT. | LABORATORY SAMPLE ID | SAMPLE | RECOVERY | HEADSPACE (ppm) | SOIL/ROCK DESCRIPTION AND COMMENTS | LITHOLOGIC SYMBOL | SOIL CLASS |
|---|---|---|---|---|---|---|---|
| | | | | 0 | Sand, fill with some limestone cobbles, black, brown, and white | | SW |
| 5 | | | 10" | | Silty sand, fine, brown to dark brown | | SM |
| | 03 | | | 0 | Silty sand, fine, black, oxidized sandy lens 2" thick | | |
| | | | 22" | | | | |
| | 04 | | | 0 | Silty sand, fine | | |
| | | | 20" | | Sand, fine, white | | SW |
| 10 | 05 | | | 0 | Silty sand, fine, dark, LEL =1%, massive texture | | SM |
| | 06 | | | 0 | Silty sand, fine, dark, 4" white sand lens, massive | | |
| | 07 | | | 0 | | | |
| 15 | | | | | | | |
| | | | | | total depth = 18 ft. | | |
| 20 | | | | | | | |
| 25 | | | | | | | |



PAGE 1 of KB16-3 **ABB ENVIRONMENTAL SERVICES, INC.**

| | | | |
|---|---|---|---|
| **TITLE:** NSB KINGS BAY | | **LOG of WELL:** KBA-16-4 | **BORING NO.** 16SB04 |
| **CLIENT:** U.S. NAVY, SOUTHNAVFACENGCOM | | | **PROJECT NO:** 7553-03 |
| **CONTRACTOR:** Groundwater Protection, Inc. | | **DATE STARTED:** 2/12/92 | **COMPLTD:** 2/12/92 |
| **METHOD:** HSA | **CASE SIZE:** 2" | **BORING DIA.:** 8" | **PROTECTION LEVEL:** D |
| **TOC ELEV.:** 21.58 FT. | **MONITOR INST.:** PID | **TOT DPTH:** 17FT. | **DPTH TO ∇** 8 FT. |
| **LOGGED BY:** Mark Steinhauff | **WELL DEVELOPMENT DATE:** 2/24/92 | | **SITE:** 16 |

| DEPTH FT. | LABORATORY SAMPLE ID | SAMPLE | RECOVERY | HEADSPACE (ppm) | SOIL/ROCK DESCRIPTION AND COMMENTS | LITHOLOGIC SYMBOL | SOIL CLASS |
|---|---|---|---|---|---|---|---|
| | | | | 0 | Silty sand, loamy soil, homogeneous and probably fill, dark brown | | SM |
| 5 | | | 20" | | Silty sand, loamy soil, brown with 2" layers of lighter sand, moist | | |
| | 03 | | | 0 | Silty sand, dark brown | | |
| | | | 20" | | | | |
| | 04 | | | 0 | Silty sand, dark brown; 2" sandy layers; silty clay with fine sand | | |
| | | | 20" | | | | |
| 10 | 05 | | | 0 | | | |
| | | | 20" | | Silty sand, dark brown with 2" sandy layers | | |
| | 06 | | | 0 | Silty sand, sandy to fine silty clay | | |
| | | | 20" | | | | |
| | 07 | | | 0 | | | |
| 15 | | | | | | | |
| | | | | | total depth = 17 ft. | | |
| 20 | | | | | | | |
| 25 | | | | | | | |



PAGE 1 of KB16-4 **ABB ENVIRONMENTAL SERVICES, INC.**

# Appendix B

## Sites 5 and 16 Groundwater Potentiometric Surface Maps

## Table B-1
## Water Level Measurement Data for Sites 5 and 16

RFI Report for Sites 5 and 16 and
Site History and File Information for Site 12
Naval Installation Restoration Program
Naval Submarine Base, Kings Bay, Georgia

| Well Number | Date | Water Level Measured (ft) | Water Elevation (ft MLW) | Top of Casing (ft MLW) |
|---|---|---|---|---|
| KBA-5-1 | 02/19/92 | 7.76 | 14.31 | 22.07 |
| | 05/06/92 | 7.95 | 14.12 | |
| | 07/10/92 | 8.59 | 13.48 | |
| | 09/12/92 | 8.56 | 13.51 | |
| | 11/12/92 | 6.34 | 15.73 | |
| | 01/13/93 | 6.87 | 15.20 | |
| KBA-5-2 | 02/19/92 | 5.26 | 14.37 | 19.63 |
| | 05/06/92 | 5.70 | 13.93 | |
| | 07/10/92 | 6.22 | 13.41 | |
| | 09/12/92 | 6.05 | 13.58 | |
| | 11/12/92 | 4.70 | 14.93 | |
| | 01/13/93 | 4.18 | 15.45 | |
| KBA-5-3 | 02/19/92 | 6.84 | 14.15 | 20.99 |
| | 05/06/92 | 7.10 | 13.89 | |
| | 07/10/92 | 6.85 | 14.14 | |
| | 09/12/92 | 7.40 | 13.59 | |
| | 11/12/92 | 6.86 | 14.13 | |
| | 01/13/93 | 6.14 | 14.85 | |
| KBA-5-4 | 02/19/92 | 7.59 | 14.13 | 21.72 |
| | 05/06/92 | 7.84 | 13.88 | |
| | 07/10/92 | 7.53 | 14.19 | |
| | 09/12/92 | 8.27 | 13.45 | |
| | 11/12/92 | 7.56 | 14.16 | |
| | 01/13/93 | 7.12 | 14.60 | |
| KBA-5-5 | 02/19/92 | 7.32 | 13.70 | 21.02 |
| | 05/06/92 | 7.52 | 13.50 | |
| | 07/10/92 | 7.53 | 13.49 | |
| | 09/12/92 | 8.06 | 12.96 | |
| | 11/12/92 | 7.30 | 13.72 | |
| | 01/13/93 | 6.92 | 14.10 | |

See notes at end of table.

## Table B-1 (Continued)
## Water Level Measurement Data for Sites 5 and 16

RFI Report for Sites 5 and 16 and
Site History and File Information for Site 12
Naval Installation Restoration Program
Naval Submarine Base, Kings Bay, Georgia

| Well Number | Date | Water Level Measured (ft) | Water Elevation (ft MLW) | Top of Casing (ft MLW) |
|---|---|---|---|---|
| KBA-5-6 | 02/19/92 | 10.51 | 12.34 | 22.85 |
| | 05/06/92 | 9.85 | 13.00 | |
| | 07/10/92 | 9.70 | 13.15 | |
| | 09/12/92 | 10.42 | 12.43 | |
| | 11/12/92 | 9.52 | 13.33 | |
| | 01/13/93 | 9.49 | 13.36 | |
| KBA-5-7 | 02/19/92 | 7.57 | 12.93 | 20.50 |
| | 05/06/92 | 8.04 | 12.46 | |
| | 07/10/92 | 7.88 | 12.62 | |
| | 09/12/92 | 8.06 | 12.44 | |
| | 11/12/92 | 7.68 | 12.82 | |
| | 01/13/93 | 7.08 | 13.42 | |
| KBA-16-1 | 02/22/92 | 13.32 | 10.11 | 23.43 |
| | 05/04/92 | 12.55 | 10.88 | |
| | 07/11/92 | 11.08 | 12.35 | |
| | 09/11/92 | 12.43 | 11.00 | |
| | 11/12/92 | 12.62 | 10.81 | |
| | 01/15/93 | 13.06 | 10.37 | |
| KBA-16-2 | 02/22/92 | 11.65 | 9.11 | 20.76 |
| | 05/04/92 | 10.91 | 9.85 | |
| | 07/11/92 | 10.48 | 10.28 | |
| | 09/11/92 | 10.76 | 10.00 | |
| | 11/12/92 | 10.86 | 9.90 | |
| | 01/15/93 | 11.00 | 9.76 | |
| KBA-16-3 | 02/22/92 | 11.32 | 10.55 | 21.87 |
| | 05/04/92 | 11.75 | 10.12 | |
| | 07/11/92 | 9.94 | 11.93 | |
| | 09/11/92 | 10.26 | 11.61 | |
| | 11/12/92 | 10.90 | 10.97 | |
| | 01/15/93 | 10.90 | 10.97 | |

See notes at end of table.

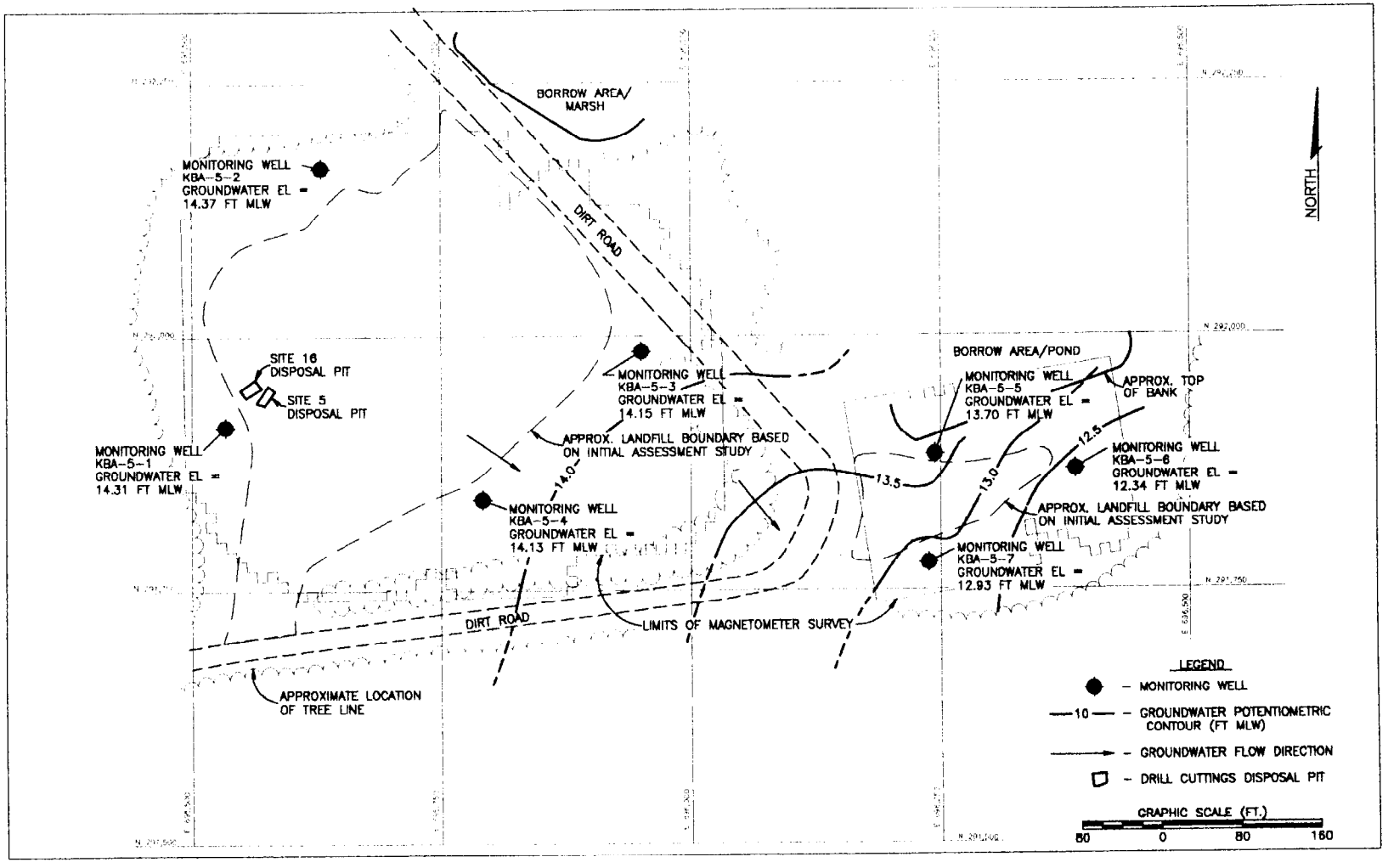
**Table B-1 (Continued)**
**Water Level Measurement Data for Sites 5 and 16**

RFI Report for Sites 5 and 16 and
Site History and File Information for Site 12
Naval Installation Restoration Program
Naval Submarine Base, Kings Bay, Georgia

| Well Number | Date | Water Level Measured (ft) | Water Elevation (ft MLW) | Top of Casing (ft MLW) |
|---|---|---|---|---|
| KBA-16-4 | 02/22/92 | 8.65 | 12.91 | 21.56 |
| | 05/04/92 | 10.30 | 11.26 | |
| | 07/11/92 | 7.32 | 14.24 | |
| | 09/11/92 | 7.98 | 13.58 | |
| | 11/12/92 | 8.33 | 13.23 | |
| | 01/15/93 | 8.22 | 13.34 | |

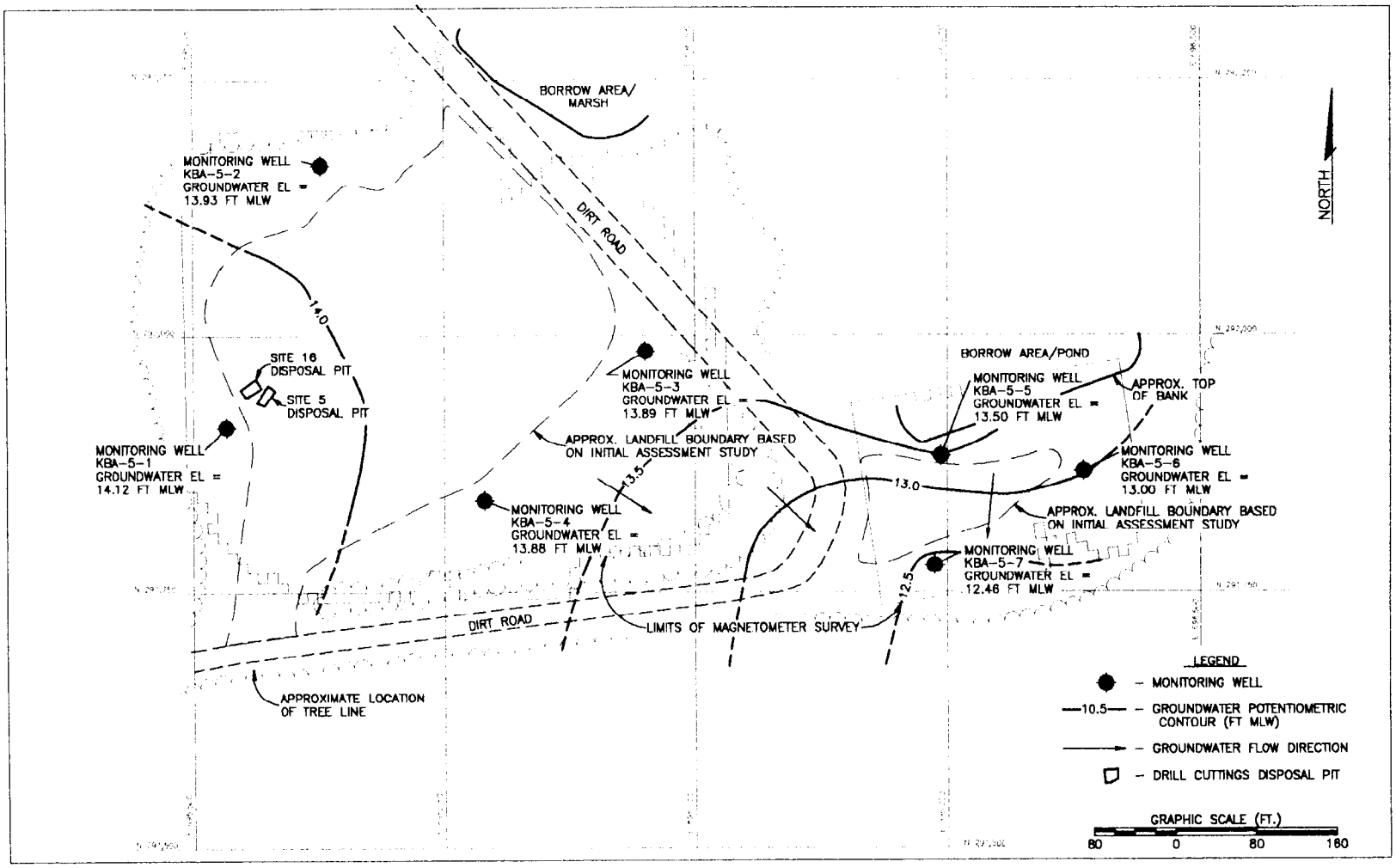
**Notes:** ft = feet.
MLW = mean low water.

Site 5



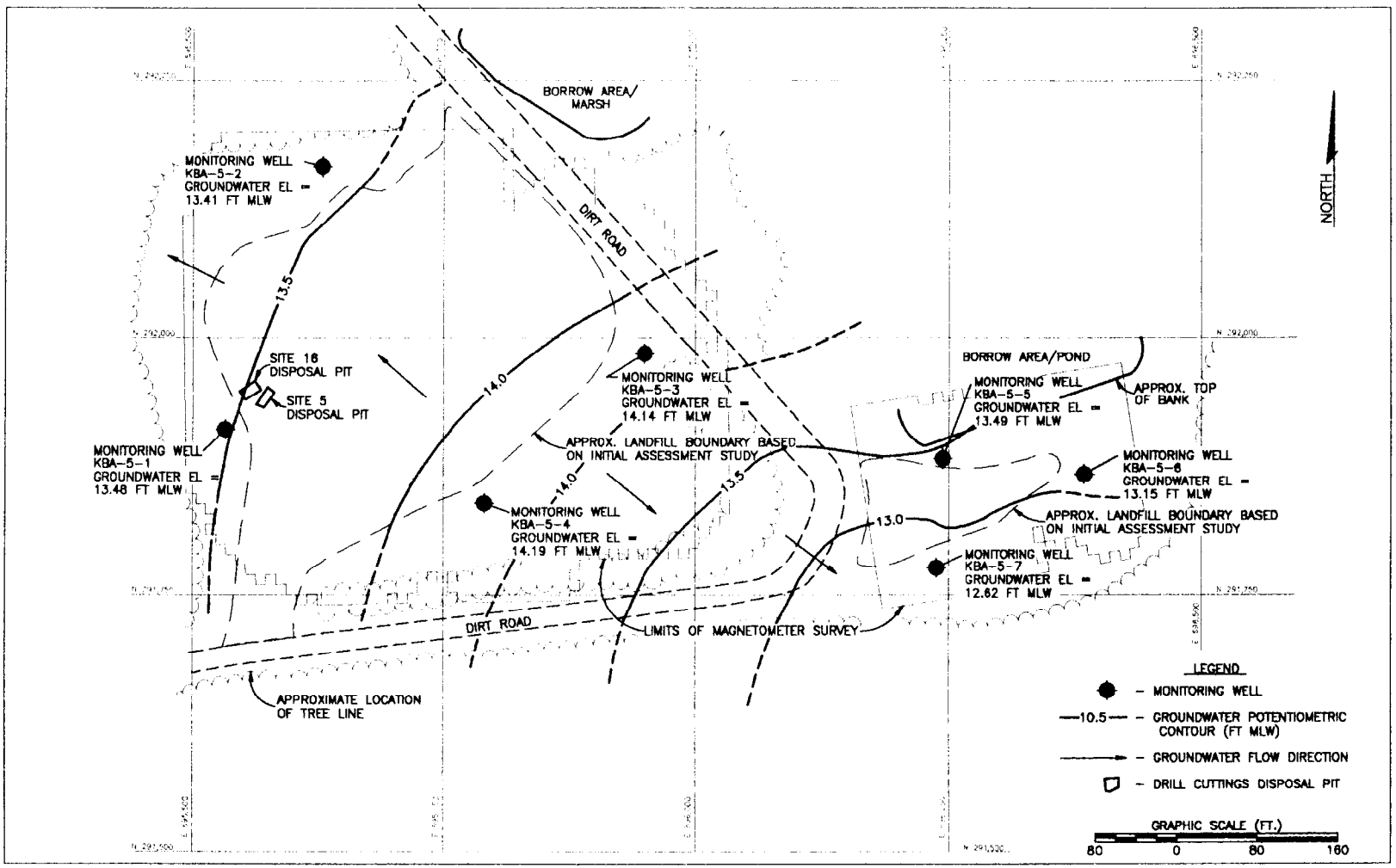

site5-2.dwg

| DWN: DMF | PROJECT NO.: 7553-09 | TITLE: SITE 5 GROUNDWATER POTENTIOMETRIC SURFACE MAP, FEBRUARY 1992 | RFI REPORT FOR SITES 5 & 16 |
|---|---|---|---|
| CHKD: LBH | FIGURE NO.: | | NAVAL SUBMARINE BASE KINGS BAY, GEORGIA |
| DATE: 6-9-94 | | | |



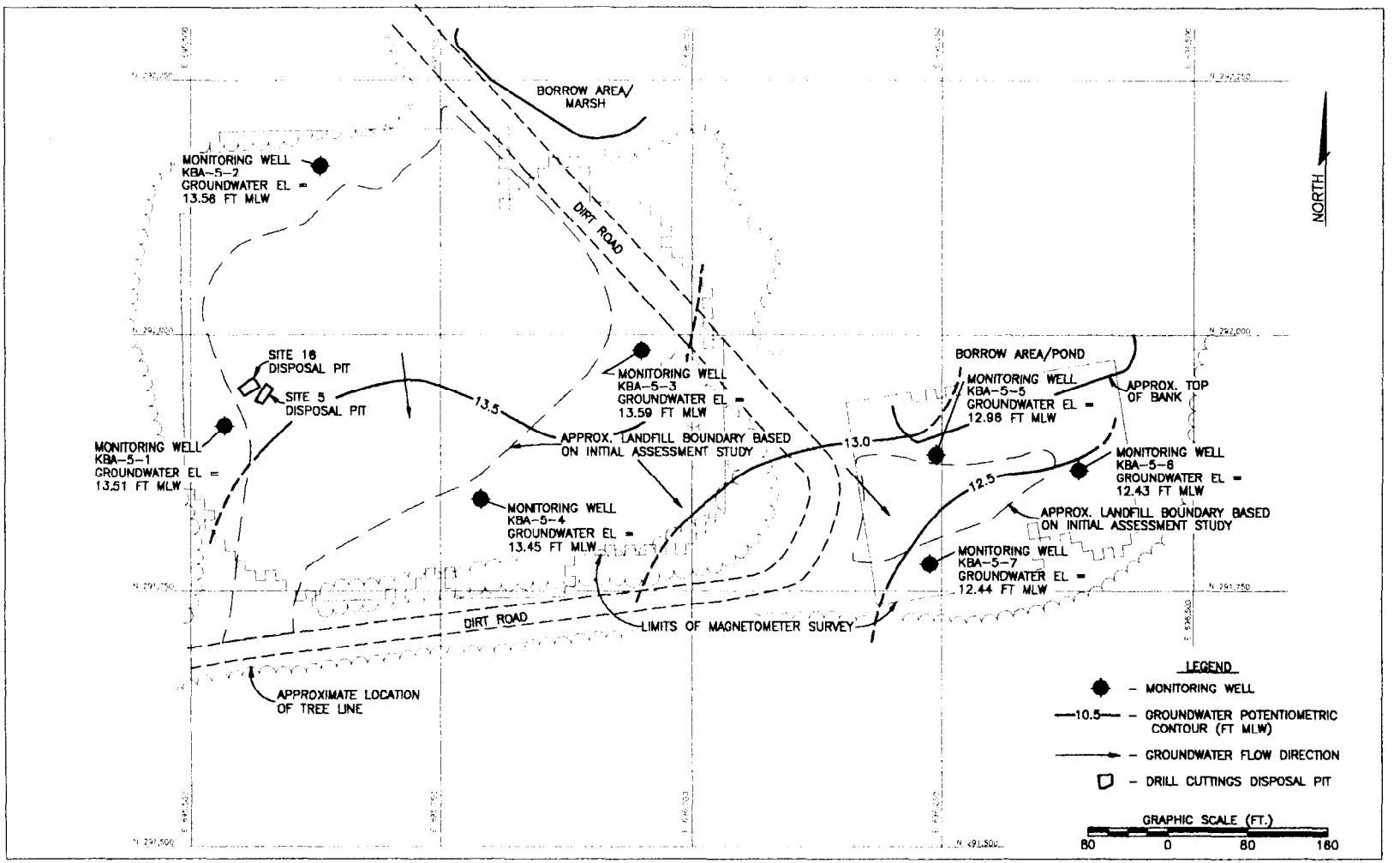

site5-5.dwg

| DWN: DMF | PROJECT NO.: 7553-09 | TITLE: SITE 5 GROUNDWATER POTENTIOMETRIC SURFACE MAP, MAY 1992 | RFI REPORT FOR SITES 5 & 16 |
|---|---|---|---|
| CHKD: LBH | FIGURE NO.: | | NAVAL SUBMARINE BASE KINGS BAY, GEORGIA |
| DATE: 6-9-94 | | | |



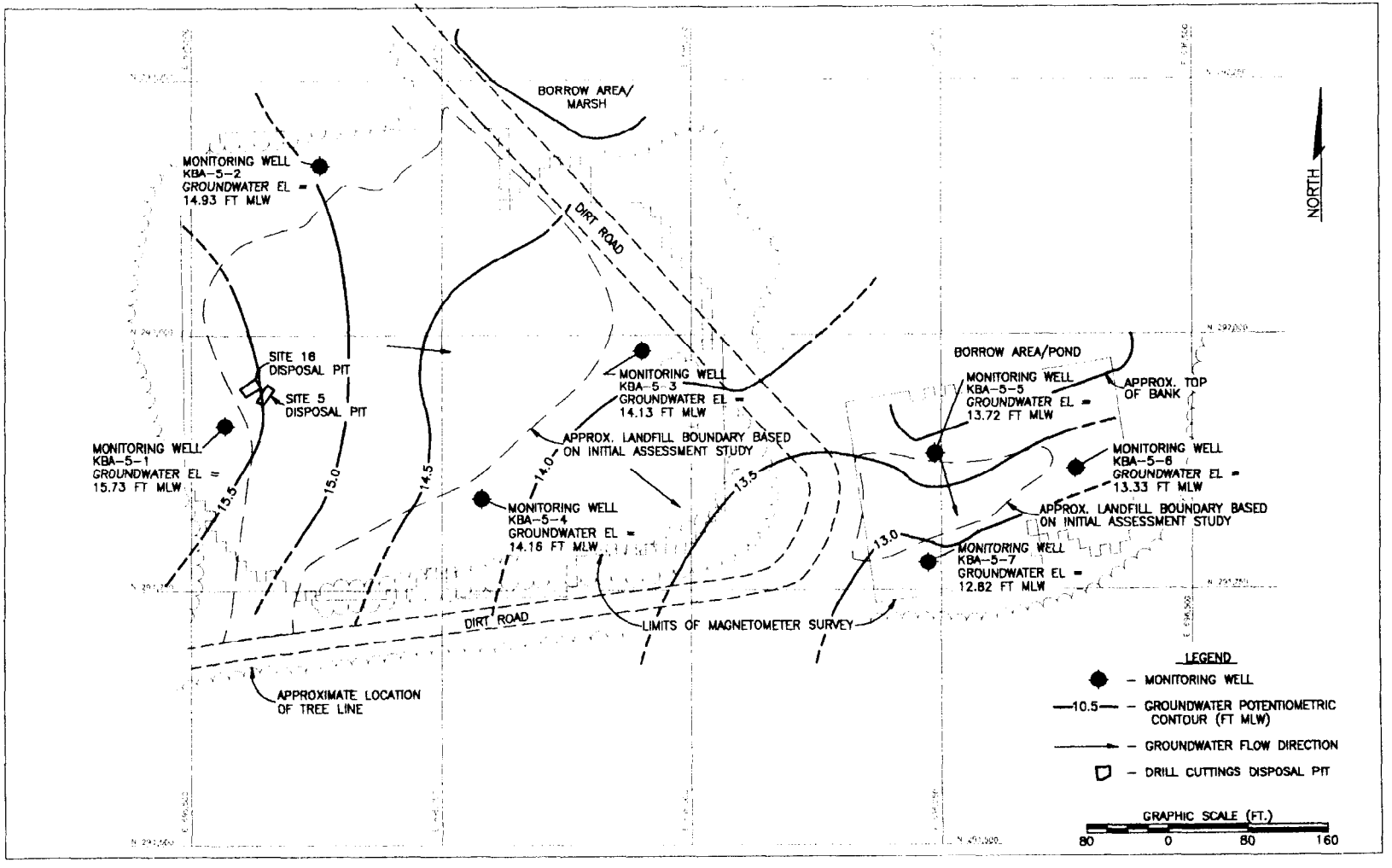

site5-7.dwg

| DWN: DMF | PROJECT NO.: 7553-09 | TITLE: SITE 5 GROUNDWATER POTENTIOMETRIC SURFACE MAP, JULY 1992 | RFI REPORT FOR SITES 5 & 16 |
|---|---|---|---|
| CHKD: LBH | FIGURE NO.: | | NAVAL SUBMARINE BASE KINGS BAY, GEORGIA |
| DATE: 6-9-94 | | | |




site5-9.dwg

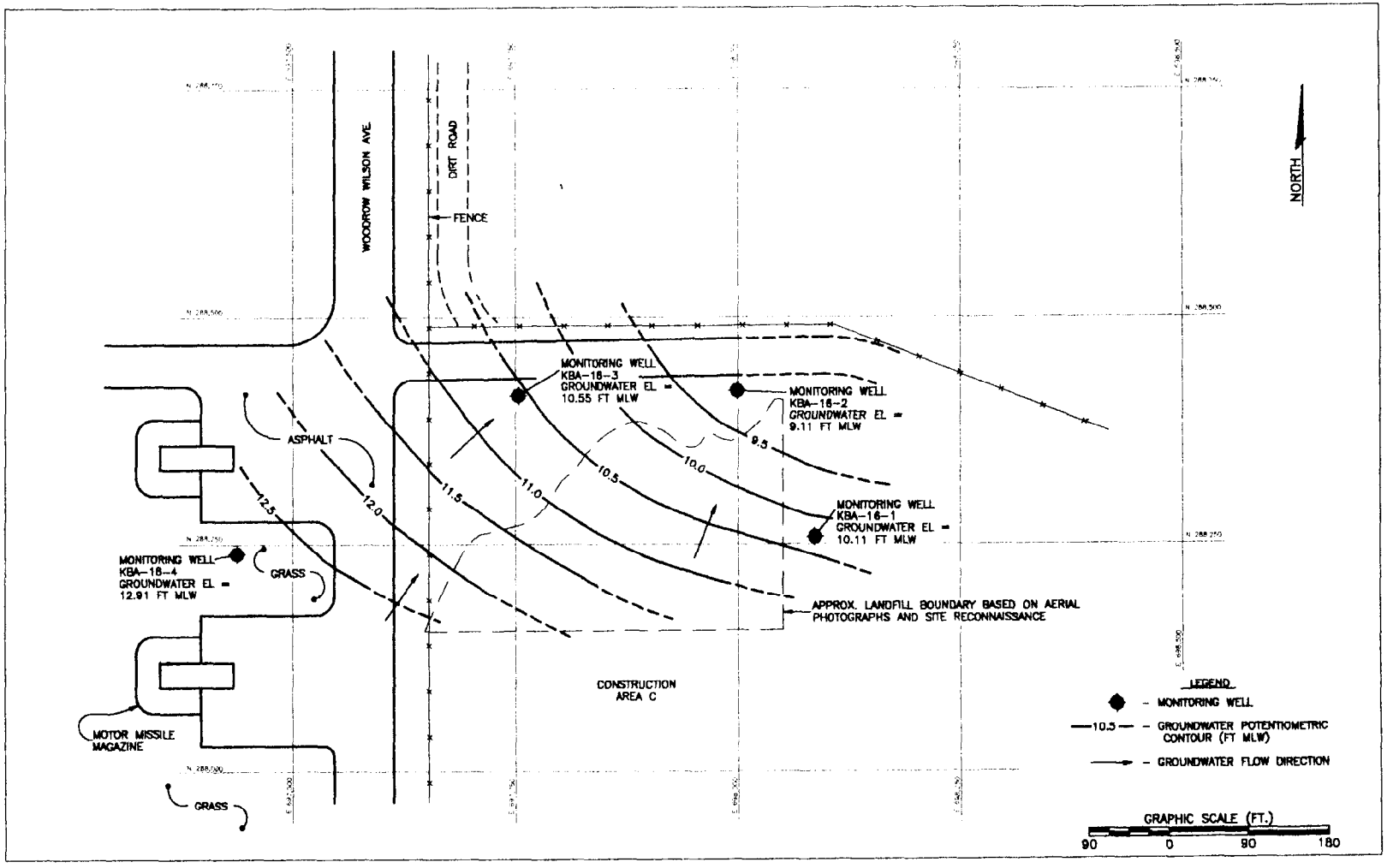
| DWN: DMF | PROJECT NO.: 7553-09 | TITLE: SITE 5 GROUNDWATER POTENTIOMETRIC SURFACE MAP, SEPTEMBER 1992 | RFI REPORT FOR SITES 5 & 16 |
|---|---|---|---|
| CHKD: LBH | FIGURE NO.: | | NAVAL SUBMARINE BASE KINGS BAY, GEORGIA |
| DATE: 6-9-94 | | | |




site5-11.dwg

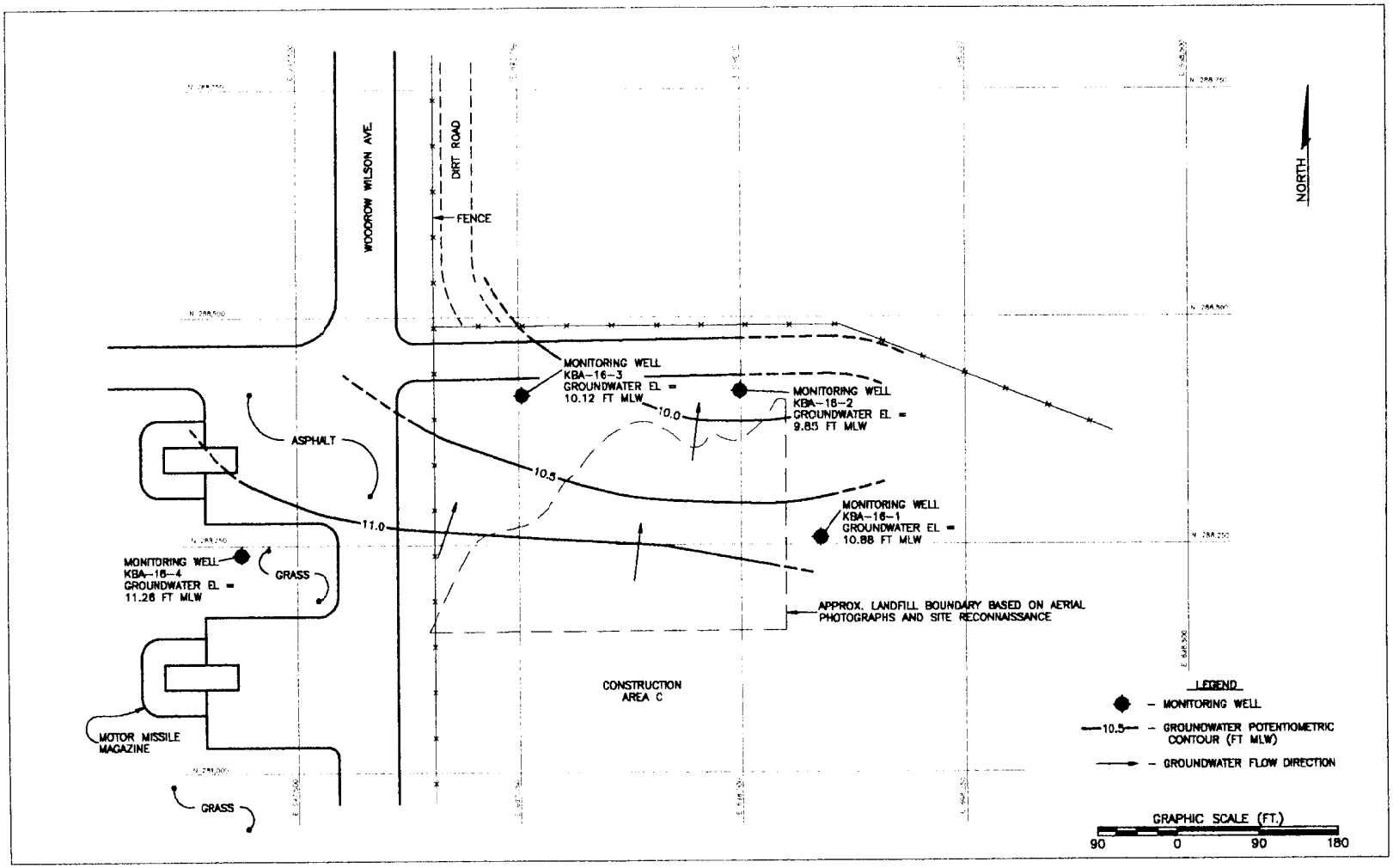
| DWN: DMF | PROJECT NO.: 7553-09 | TITLE: SITE 5 GROUNDWATER POTENTIOMETRIC SURFACE MAP, NOVEMBER 1992 | RFI REPORT FOR SITES 5 & 16 |
|---|---|---|---|
| CHKD: LBH | FIGURE NO.: | | NAVAL SUBMARINE BASE KINGS BAY, GEORGIA |
| DATE: 6-9-94 | | | |

# Site 16




site16-2.dwg

| DWN: DMF | PROJECT NO.: 7553-09 | TITLE: SITE 16 GROUNDWATER POTENTIOMETRIC SURFACE MAP, FEBRUARY 1992 | RFI REPORT FOR SITES 5 & 16 |
|---|---|---|---|
| CHKD: LBH | FIGURE NO.: | | NAVAL SUBMARINE BASE KINGS BAY, GEORGIA |
| DATE: 6-9-94 | | | |




site16-5.dwg

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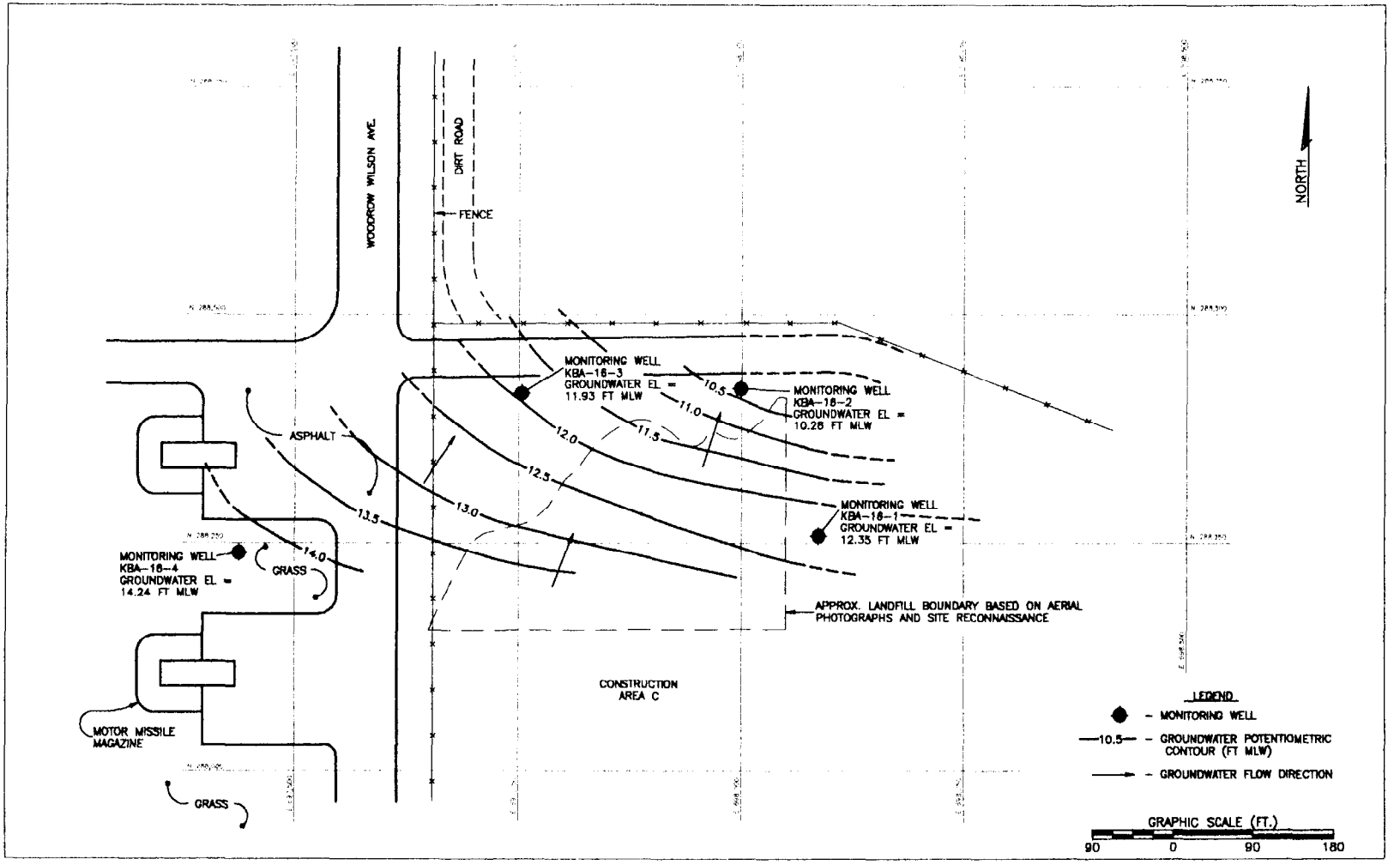
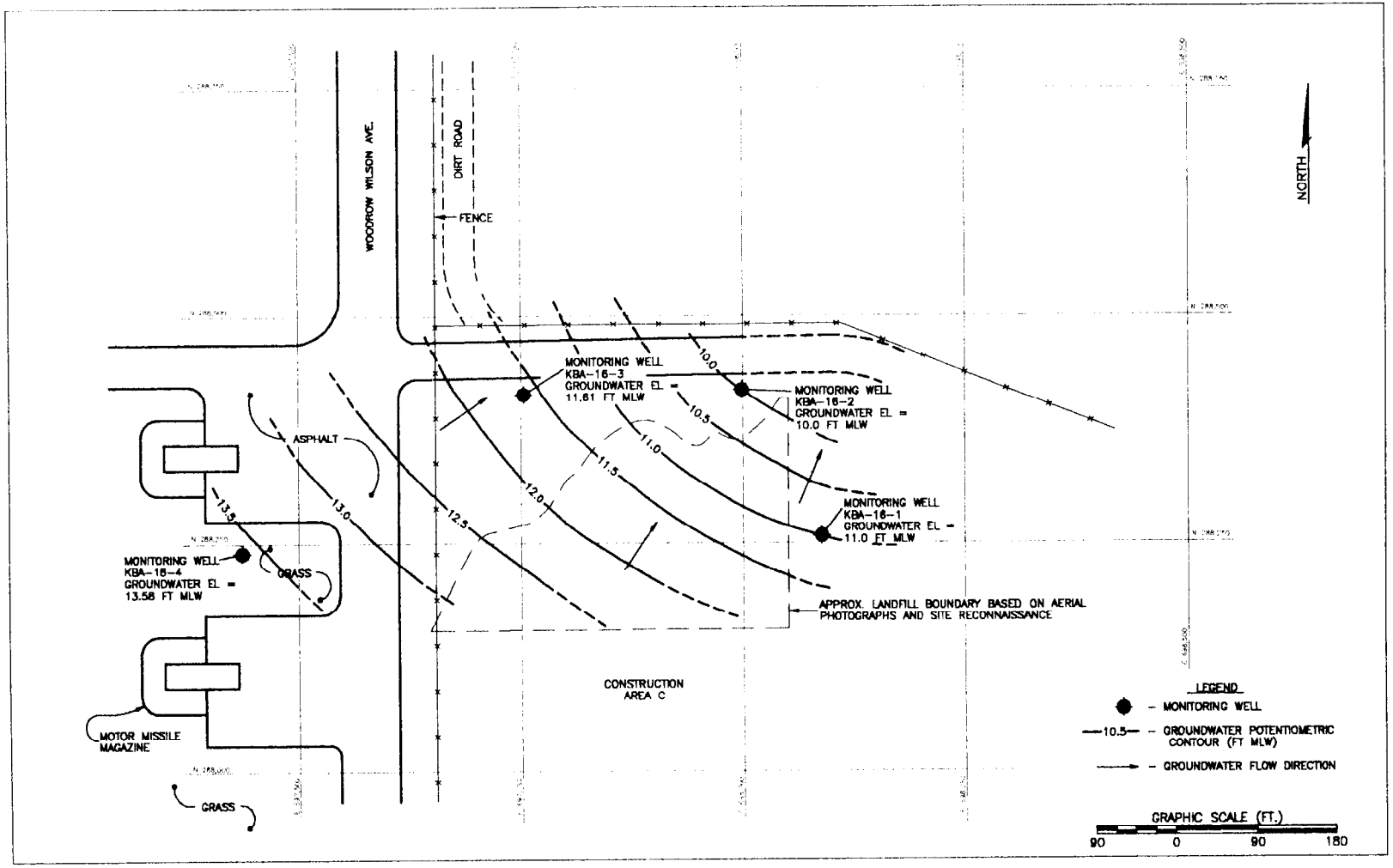
|---|---|---|---|
| CHKD: LBH | FIGURE NO.: | | NAVAL SUBMARINE BASE KINGS BAY, GEORGIA |
| DATE: 6-9-94 | | | |




site16-7.dwg

| DWN: DMF | PROJECT NO.: 7553-09 | TITLE: SITE 16 GROUNDWATER POTENTIOMETRIC SURFACE MAP, JULY 1992 | RFI REPORT FOR SITES 5 & 16 |
|---|---|---|---|
| CHKD: LBH | FIGURE NO.: | | NAVAL SUBMARINE BASE KINGS BAY, GEORGIA |
| DATE: 6-9-94 | | | |



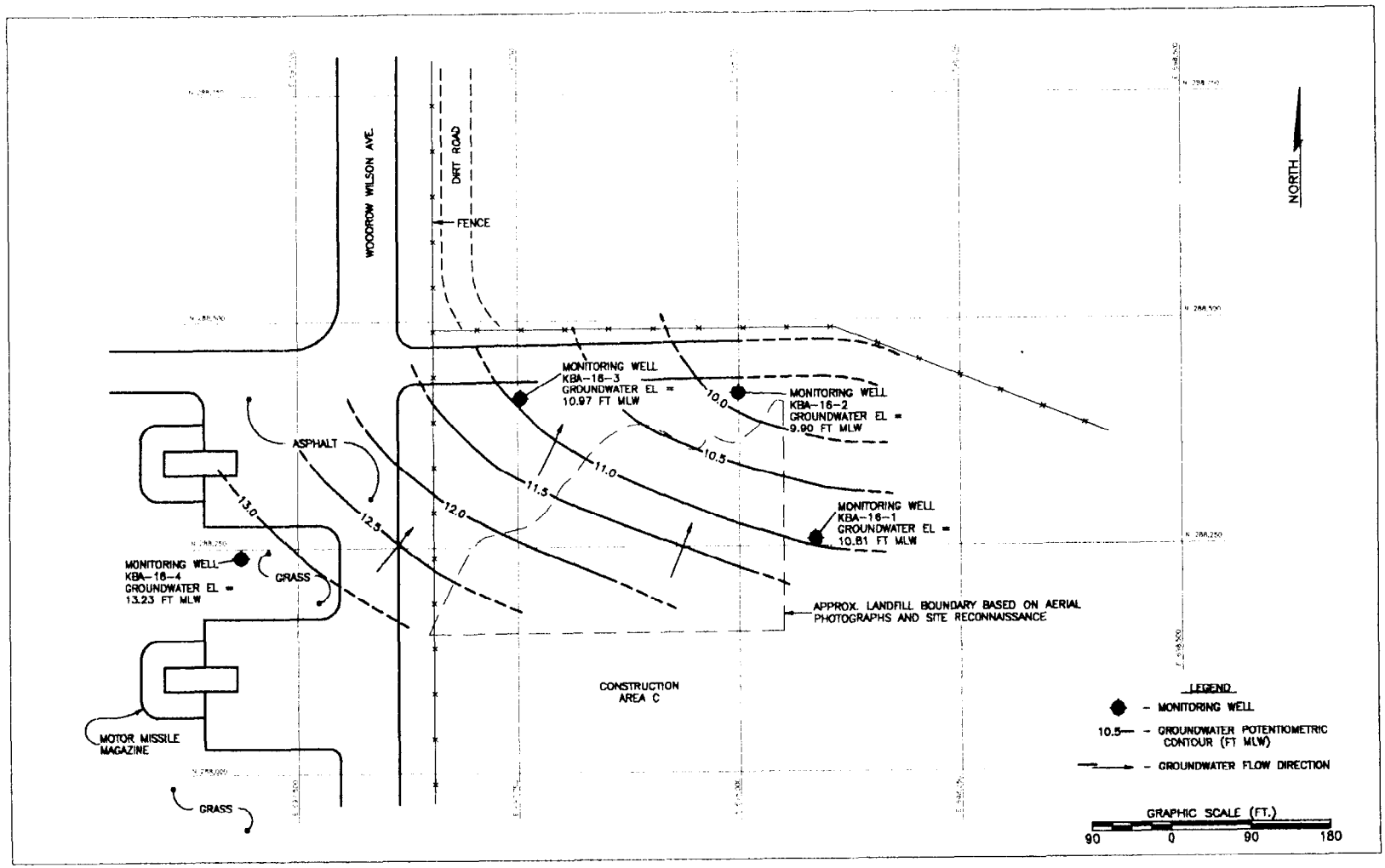

site16-9.dwg

| | | |
|---|---|---|
| DWN: DMF | PROJECT NO.: 7553-09 | TITLE: |
| CHKD: LBH | FIGURE NO.: | |
| DATE: 6-9-94 | | |

SITE 16
GROUNDWATER POTENTIOMETRIC
SURFACE MAP, SEPTEMBER 1992

RFI REPORT FOR
SITES 5 & 16

NAVAL SUBMARINE BASE
KINGS BAY, GEORGIA

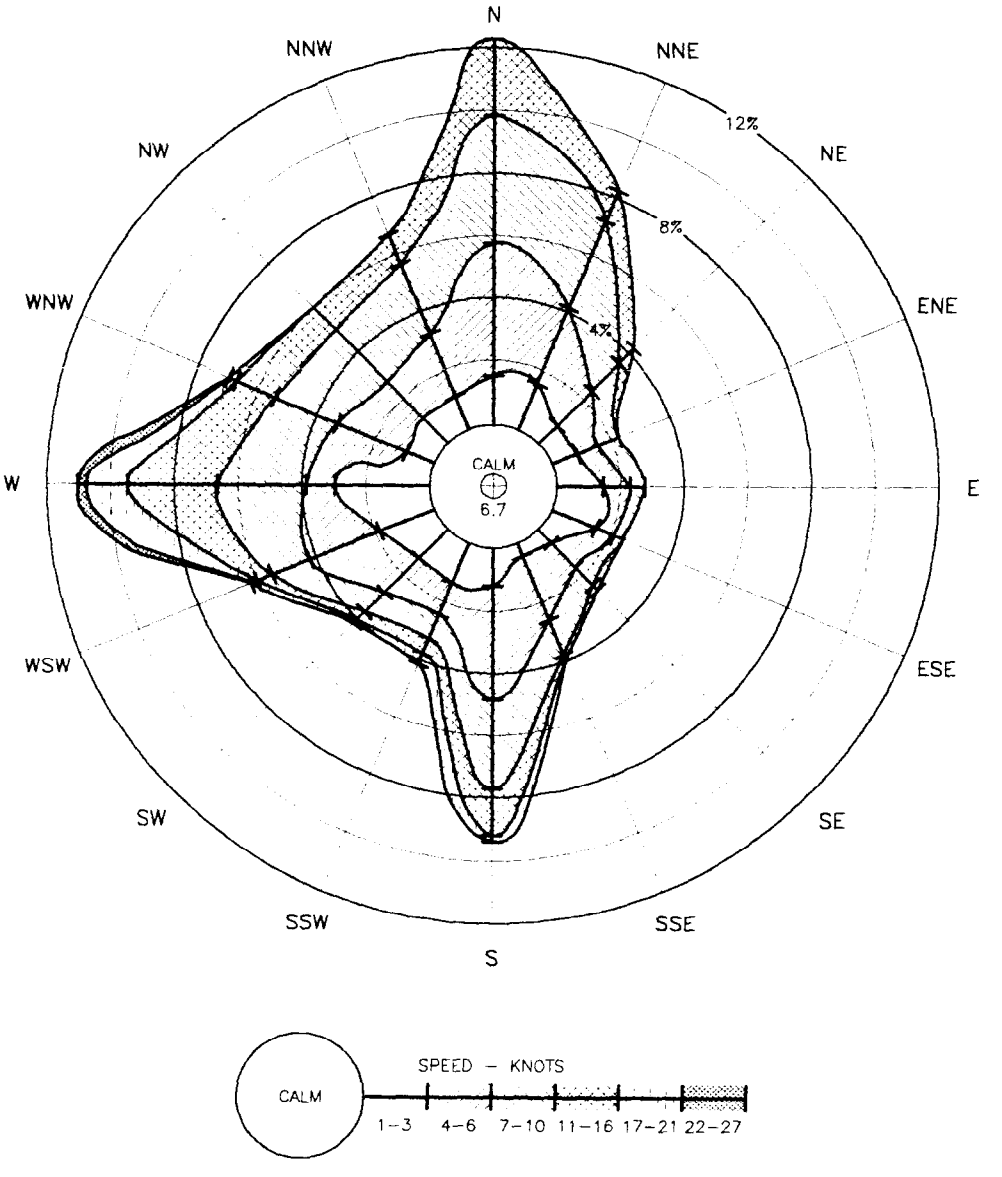



sit16-11.dwg

| DWN: DMF | PROJECT NO.: 7553-09 | TITLE: SITE 16 GROUNDWATER POTENTIOMETRIC SURFACE MAP, NOVEMBER 1992 | RFI REPORT FOR SITES 5 & 16 |
|---|---|---|---|
| CHKD: LBH | FIGURE NO.: | | NAVAL SUBMARINE BASE KINGS BAY, GEORGIA |
| DATE: 6-9-94 | | | |

# Appendix C

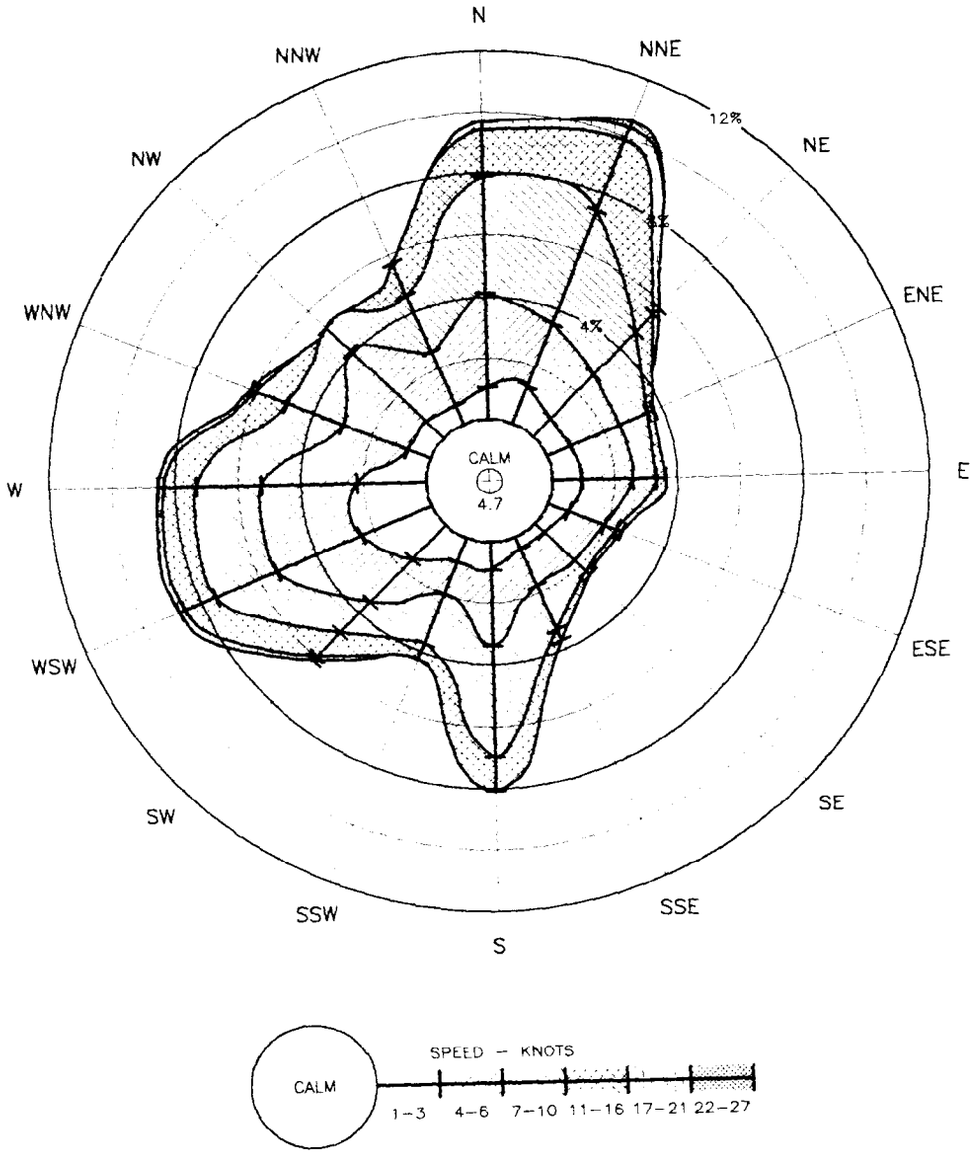
## Wind Rose Diagrams




(SOURCE: NATIONAL CLIMATIC DATA CENTER)

rose_01.dwg

| | | | |
|---|---|---|---|
| DWN: DMF | PROJECT NO.: 7553–09 | TITLE: WIND ROSE FOR JACKSONVILLE, FLORIDA, 1973–1982, JANUARY | RFI REPORT FOR SITES 5 & 16 |
| CHKD: KMH | FIGURE NO.: | | NAVAL SUBMARINE BASE KINGS BAY, GEORGIA |
| DATE: 6–9–94 | | | |




(SOURCE: NATIONAL CLIMATIC DATA CENTER)

rose_02.dwg

| | | | |
|---|---|---|---|
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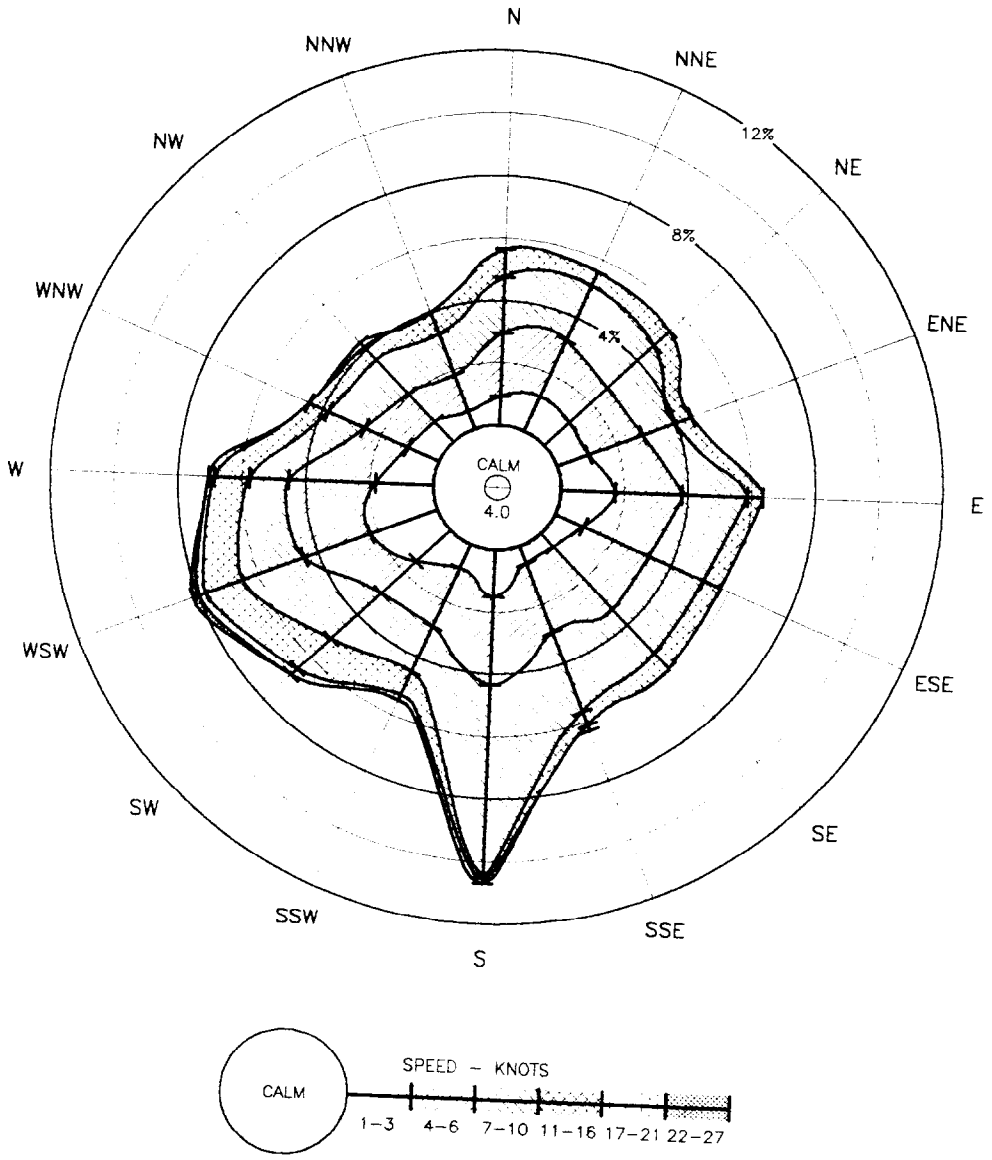
| CHKD: KMH | FIGURE NO.: | | NAVAL SUBMARINE BASE KINGS BAY, GEORGIA |
| DATE: 6–9–94 | | | |




(SOURCE: NATIONAL CLIMATIC DATA CENTER)

rose_03.dwg

| | | | |
|---|---|---|---|
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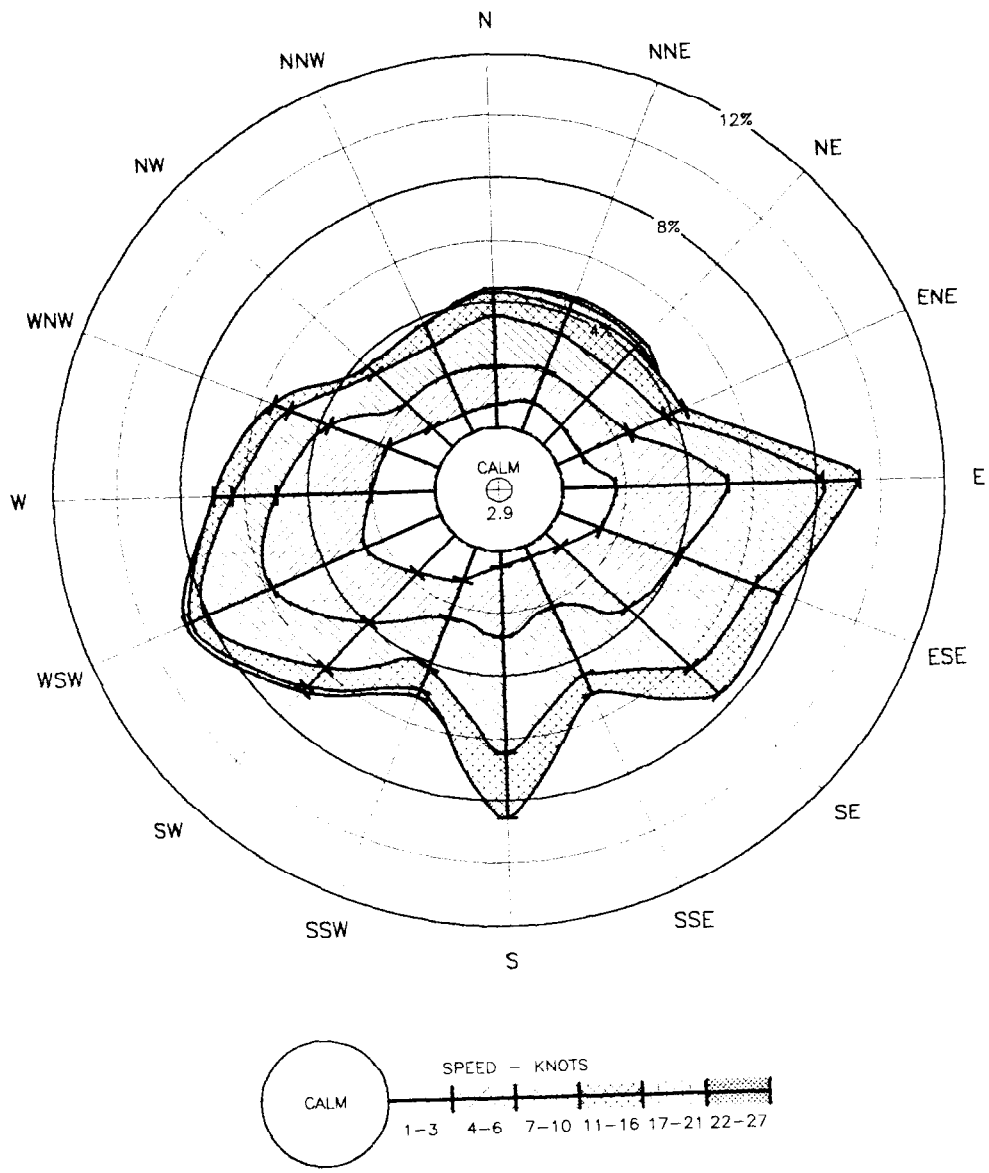
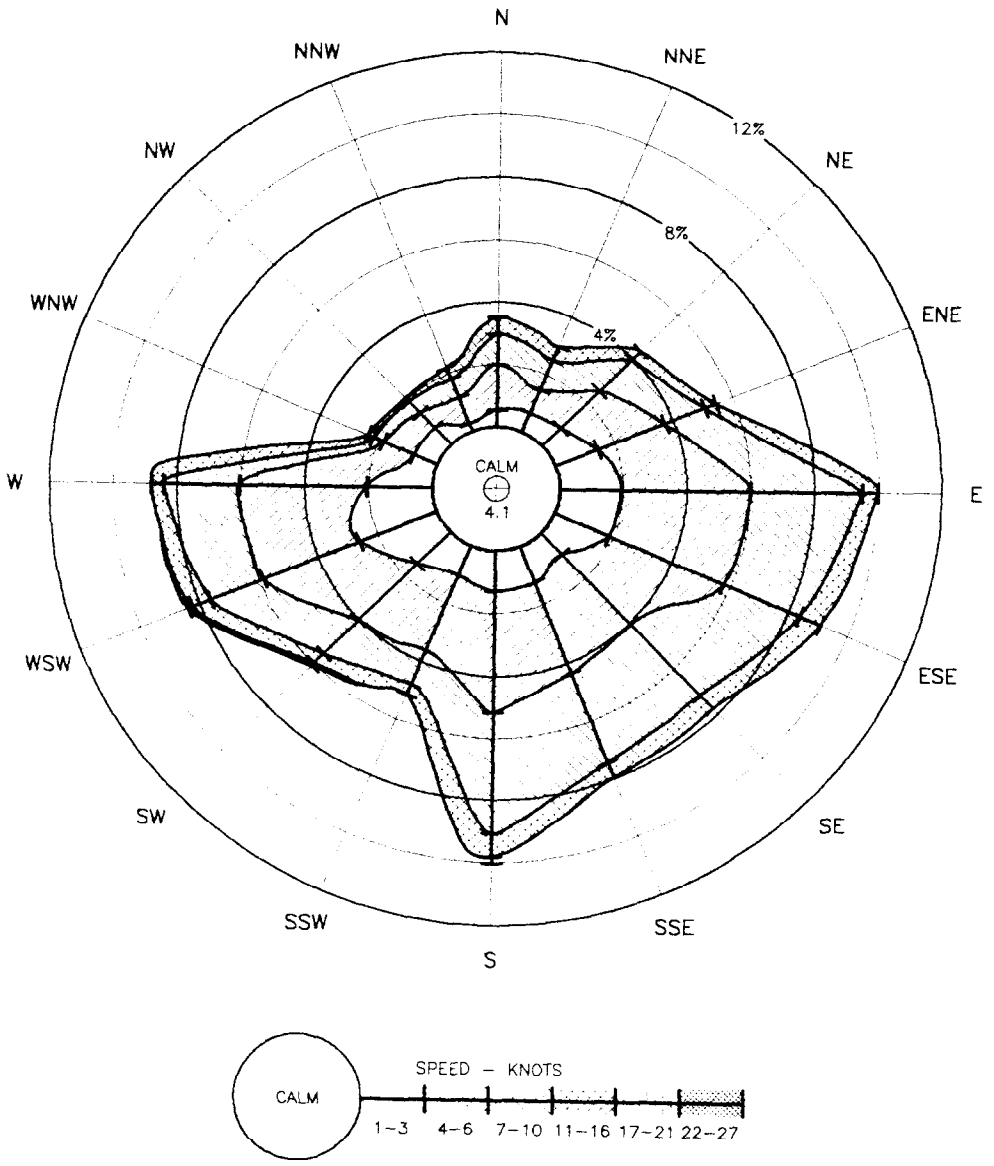
| CHKD: KMH | FIGURE NO.: | | NAVAL SUBMARINE BASE KINGS BAY, GEORGIA |
| DATE: 6–9–94 | | | |




(SOURCE: NATIONAL CLIMATIC DATA CENTER)

rose_04.dwg

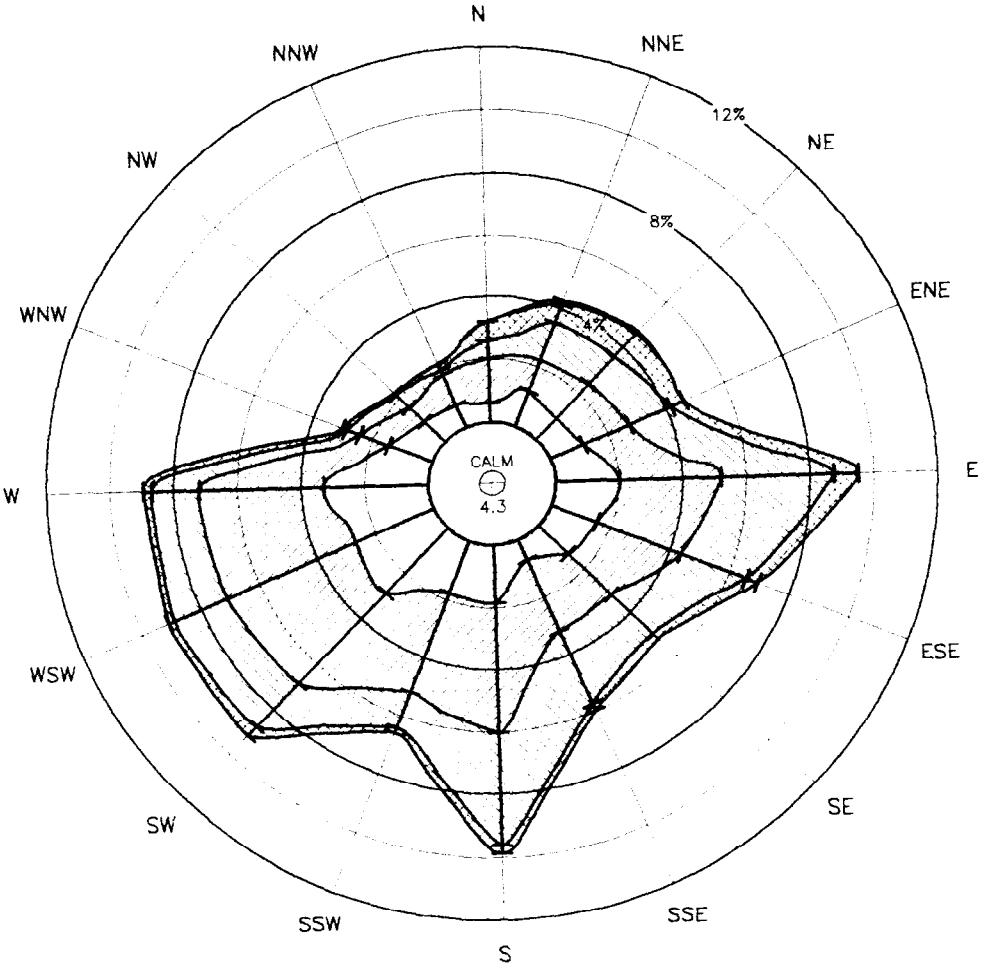
| | | | |
|---|---|---|---|
| DWN: DMF | PROJECT NO.: 7553-09 | TITLE: WIND ROSE FOR JACKSONVILLE, FLORIDA, 1973–1982, APRIL | RFI REPORT FOR SITES 5 & 16 |
| CHKD: KMH | FIGURE NO.: | | NAVAL SUBMARINE BASE KINGS BAY, GEORGIA |
| DATE: 6–9–94 | | | |

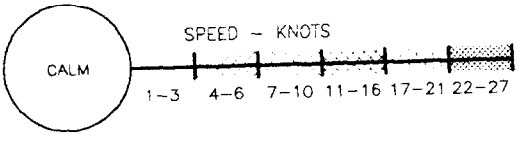



(SOURCE: NATIONAL CLIMATIC DATA CENTER)

rose_05.dwg

| | | | |
|---|---|---|---|
| DWN: DMF | PROJECT NO.: 7553-09 | TITLE: WIND ROSE FOR JACKSONVILLE, FLORIDA, 1973–1982, MAY | RFI REPORT FOR SITES 5 & 16 |
| CHKD: KMH | FIGURE NO.: | | NAVAL SUBMARINE BASE KINGS BAY, GEORGIA |
| DATE: 6–9–94 | | | |




(SOURCE: NATIONAL CLIMATIC DATA CENTER)

rose_06.dwg

| | | | |
|---|---|---|---|
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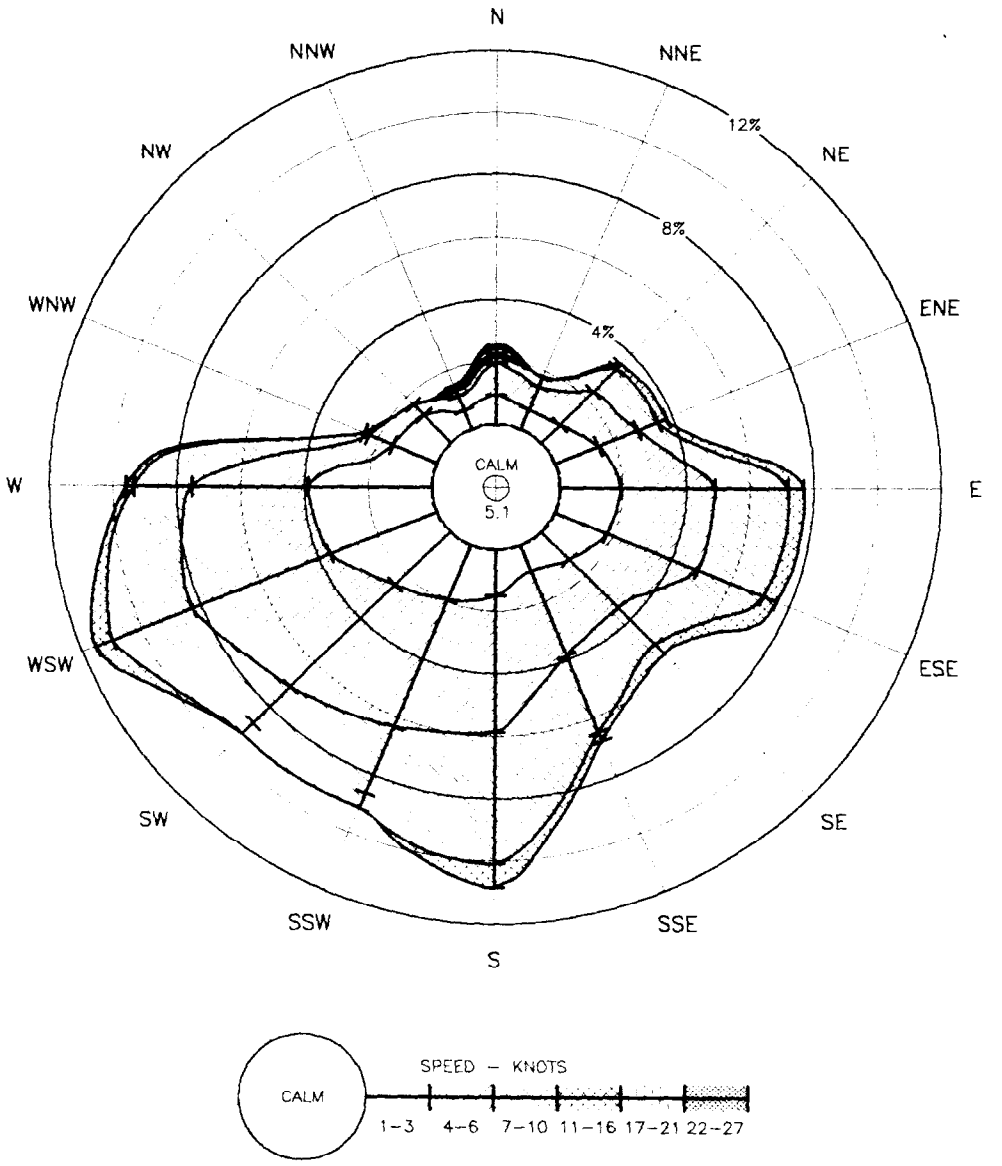
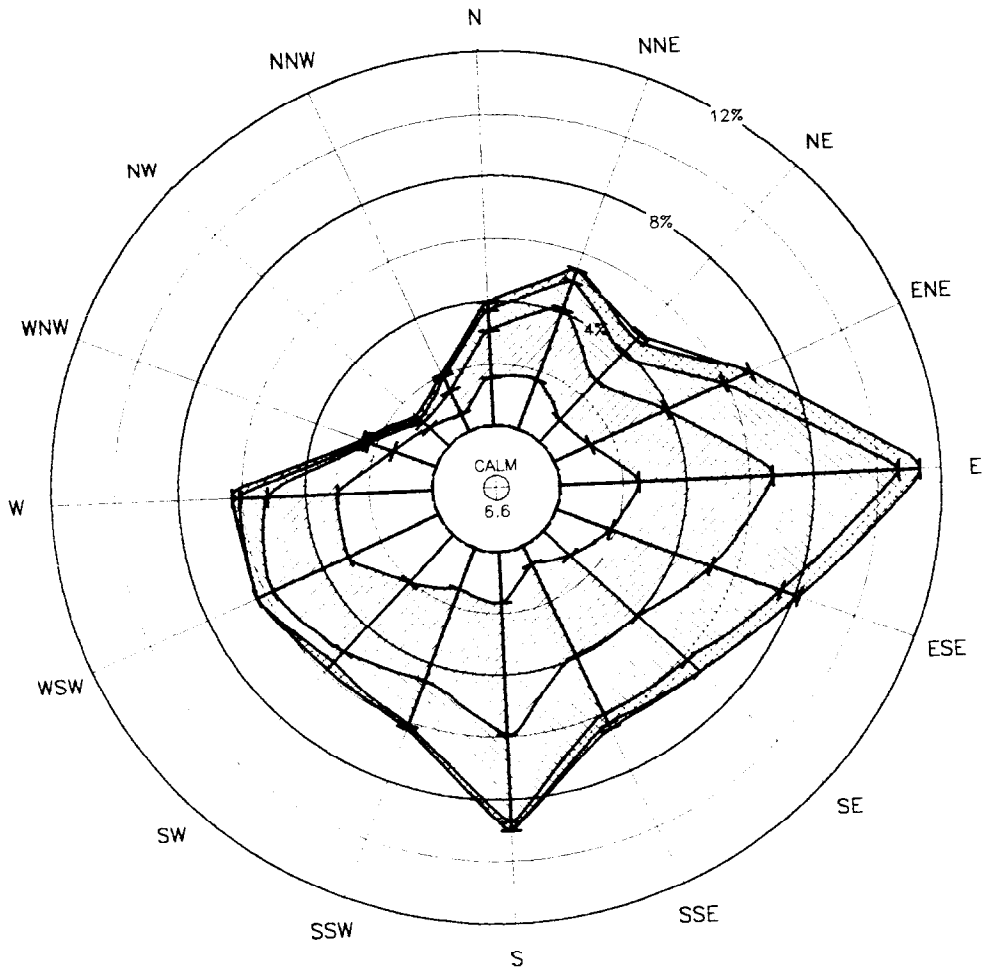
| CHKD: KMH | FIGURE NO.: | | NAVAL SUBMARINE BASE KINGS BAY, GEORGIA |
| DATE: 6-9-94 | | | |

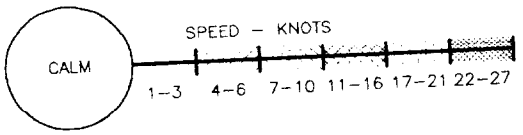



(SOURCE: NATIONAL CLIMATIC DATA CENTER)

rose_07.dwg

| | | | |
|---|---|---|---|
| DWN: DMF | PROJECT NO.: 7553–09 | TITLE: WIND ROSE FOR JACKSONVILLE, FLORIDA, 1973–1982, JULY | RFI REPORT FOR SITES 5 & 16 |
| CHKD: KMH | FIGURE NO.: | | NAVAL SUBMARINE BASE KINGS BAY, GEORGIA |
| DATE: 6–9–94 | | | |




(SOURCE: NATIONAL CLIMATIC DATA CENTER)

rose_08.dwg

| | | | |
|---|---|---|---|
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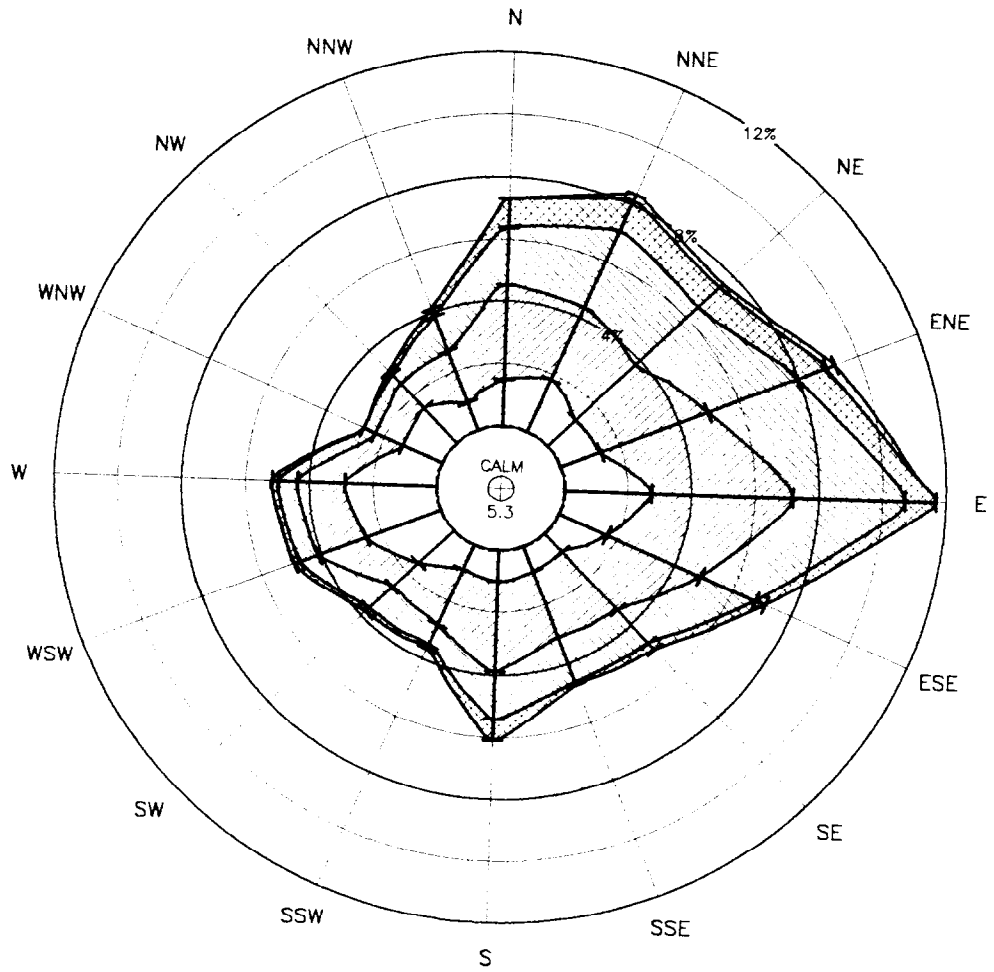
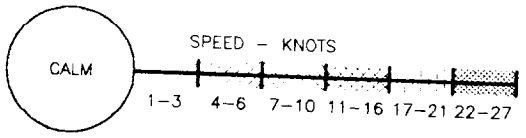
| CHKD: KMH | FIGURE NO.: | | NAVAL SUBMARINE BASE KINGS BAY, GEORGIA |
| DATE: 6–9–94 | | | |

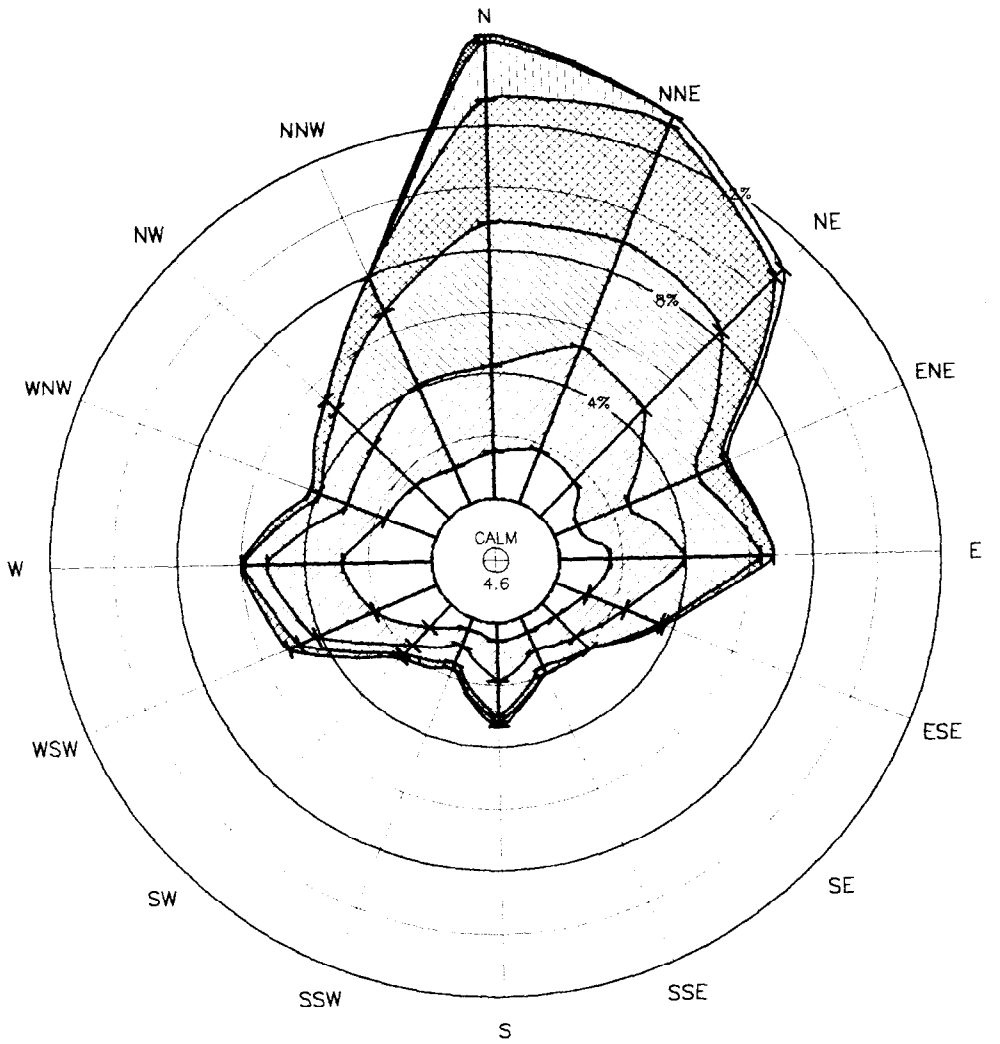


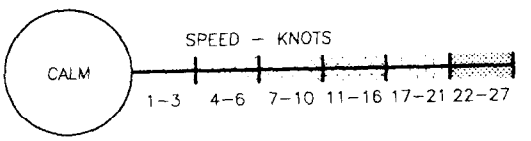




(SOURCE: NATIONAL CLIMATIC DATA CENTER)

rose_09.dwg

| | | | |
|---|---|---|---|
| DWN: DMF | PROJECT NO.: 7553–09 | TITLE: WIND ROSE FOR JACKSONVILLE, FLORIDA, 1973–1982, SEPTEMBER | RFI REPORT FOR SITES 5 & 16 |
| CHKD: KMH | FIGURE NO.: | | NAVAL SUBMARINE BASE KINGS BAY, GEORGIA |
| DATE: 6–9–94 | | | |




(SOURCE: NATIONAL CLIMATIC DATA CENTER)

rose_10.dwg

| | | | |
|---|---|---|---|
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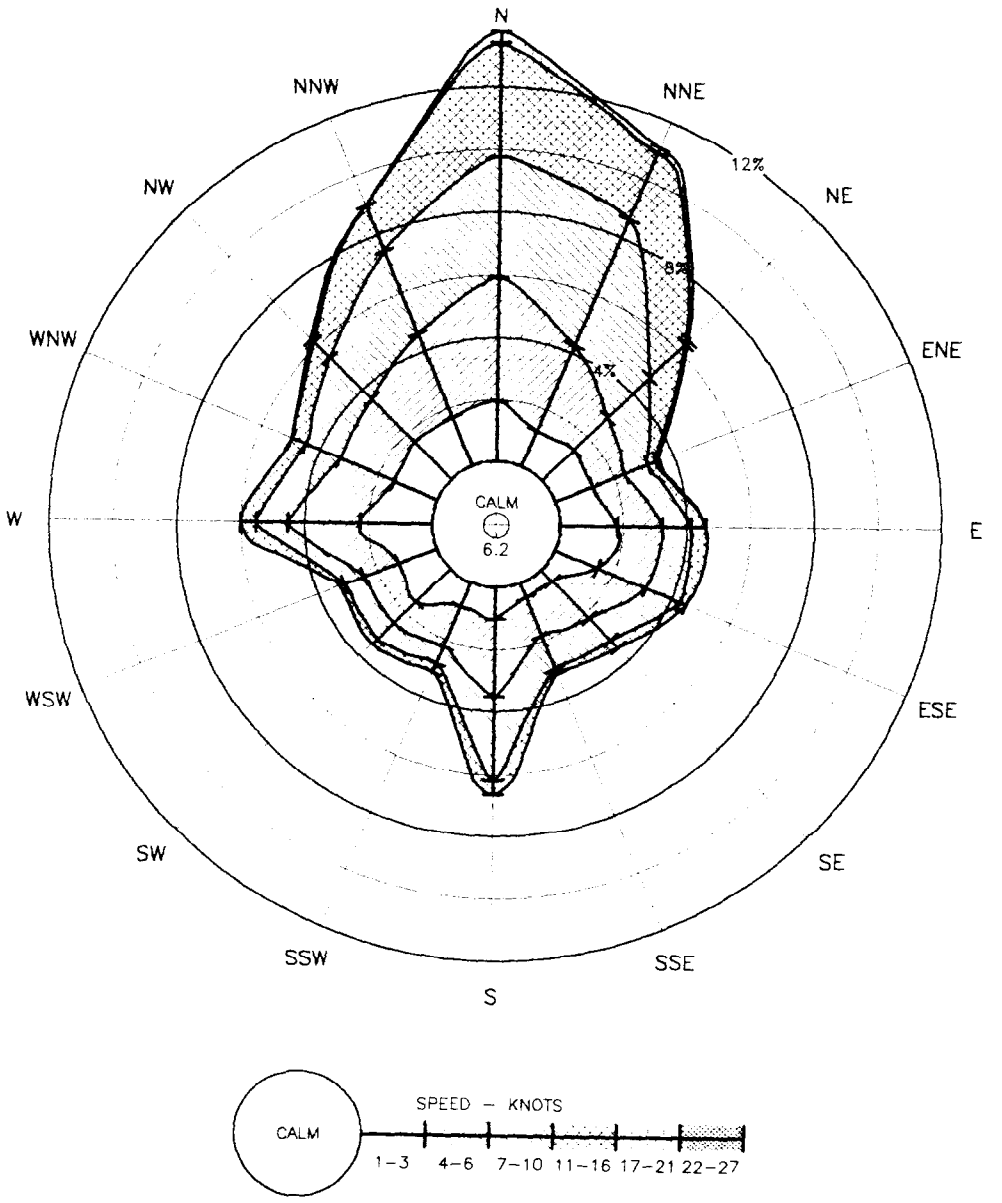
| CHKD: KMH | FIGURE NO.: | | NAVAL SUBMARINE BASE KINGS BAY, GEORGIA |
| DATE: 6-9-94 | | | |




(SOURCE: NATIONAL CLIMATIC DATA CENTER)

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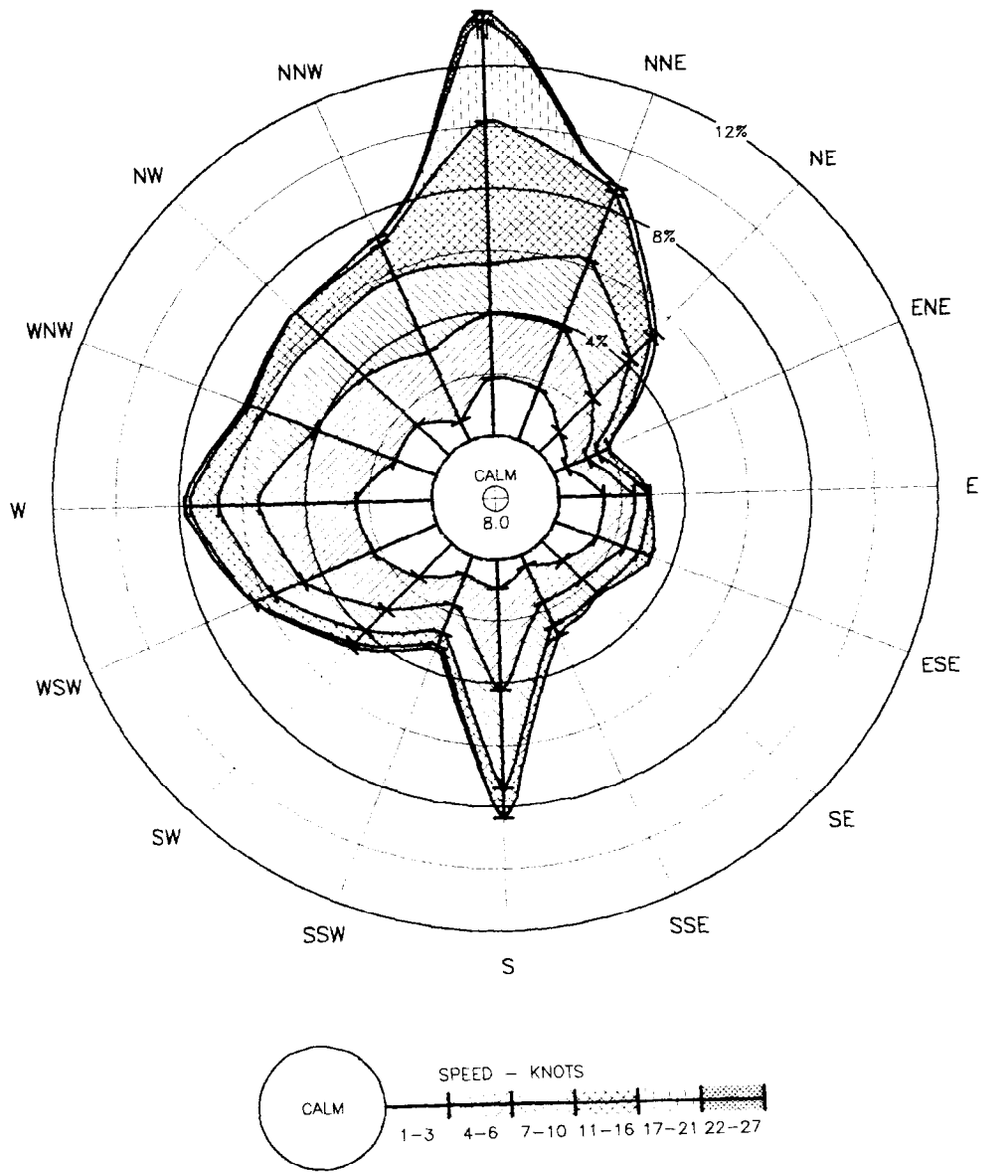
|---|---|---|---|
| CHKD: KMH | FIGURE NO.: | | NAVAL SUBMARINE BASE KINGS BAY, GEORGIA |
| DATE: 6–9–94 | | | |




(SOURCE: NATIONAL CLIMATIC DATA CENTER)

rose_12.dwg

| | | | |
|---|---|---|---|
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| CHKD: KMH | FIGURE NO.: | | NAVAL SUBMARINE BASE KINGS BAY, GEORGIA |
| DATE: 6-9-94 | | | |

# Appendix D

## Quality Assurance Program and Data Quality Assessment for Groundwater Sampling Event No. 6, Sites 5 and 16

## Appendix D

## Quality Assurance Program and Data Quality Assessment for Groundwater Sampling Event No. 6 Sites 5 and 16, NSB Kings Bay, Georgia

This section summarizes the analytical program for groundwater samples collected from monitoring wells at Sites 5 and 16 during groundwater sampling event No. 6 at NSB Kings Bay. In addition, it presents an assessment of data quality and useability.

D.1 CHEMICAL ANALYSES. Sampling activities during the sixth groundwater sampling event at NSB Kings Bay included collection of groundwater samples. All samples were collected in accordance with procedures outlined in the Quality Assurance Project Plan, Appendix A of the NSB Kings Bay Work Plan (ABB-ES, 1991). Samples were submitted to a NEESA certified contract laboratory for chemical analyses. Table D-1 summarizes the sampling and analysis program for samples collected from Sites 5 and 16 during the sixth sampling event. Samples were analyzed in accordance with USEPA SW-846 methods (USEPA, 1986) and NEESA Level C documentation (NEESA, 1988) for a modified list of Appendix IX volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and inorganic analytes (including total cyanide and sulfide). Samples were also analyzed for total dissolved solids (TDS) and total suspended solids (TSS) in accordance with Standard Methods for the Examination of Water and Wastewater (American Public Health Association (APHA) et. al., 1989). Table D-2 is the modified list of Appendix IX compounds and corresponding U.S. Environmental Protection Agency (USEPA) analytical method numbers.

Table D-1 Summary of Sampling and Analysis Program for Sites 5 and 16

| Location and Type of Sampling | Laboratory Analysis | | | | |
|---|---|---|---|---|---|
| | A | B | C | D | E |
| **Site 5** | | | | | |
| Groundwater | 7 | 0 | 7 | 14 | 7 |
| **Site 16** | | | | | |
| Groundwater | 4 | 4 | 0 | 8 | 4 |
| **Field Duplicates** | | | | | |
| Groundwater | 2 | 1 | 1 | 3 | 2 |
| **Quality Control Samples** | | | | | |
| Trip Blanks | 2 | 0 | 0 | 0 | 0 |
| Rinseate Blanks | 2 | 1 | 1 | 2 | 2 |
| Field Blanks | 2 | 2 | 2 | 3 | 2 |

A - Volatile Organic Compounds (VOCs)
B - Semivolatile Organic Compounds (SVOCs)
C - Polychlorinated Biphenyls (PCBs)
D - Inorganic constituents (including cyanide and sulfide)
E - Total Dissolved Solids (TDS) and Total Suspended Solids (TSS)

Table D-2 Compounds and Analytical Methods for Groundwater Sampling Event No. 6 at Sites 5 and 16

**Parameter:** Volatile Organic Compounds
**Method:** SW-846 Method 8240

| | |
|---|---|
| Chloromethane | cis-1,3-Dichloropropene |
| Bromomethane | Trichloroethane |
| Vinyl Chloride | Dibromochloromethane |
| Chloroethane | 1,1,2-Trichloroethane |
| Methylene Chloride | Benzene |
| Acetone | trans-1,3-Dichloropropene |
| Carbon Disulfide | Bromoform |
| Trichlorofluoromethane | 2-Hexanone |
| 1,1-Dichloroethene | 4-Methyl-2-Pentanone |
| 1,1-Dichloroethane | Tetrachloroethane |
| 1,2-Dichloroethene (total) | 1,1,2,2-Tetrachloroethane |
| Chloroform | Toluene |
| 1,2-Dichloroethane | Chlorobenzene |
| 2-Butanone | Ethylbenzene |
| 1,1,1-Trichloroethane | Styrene |
| Carbon Tetrachloride | Xylene (total) |
| Vinyl Acetate | 1,3-Dichlorobenzene |
| Bromodichloromethane | 1,4-Dichlorobenzene |
| 1,2-Dichloropropane | 1,2-Dichlorobenzene |

**Parameter:** Polychlorinated Biphenyls (PCBs)
**Method:** SW-846 Method 8080

| | | |
|---|---|---|
| Aroclor-1016 | Aroclor-1221 | Aroclor-1232 |
| Aroclor-1242 | Aroclor-1248 | Aroclor-1254 |
| | Aroclor-1260 | |

**Parameter:** Appendix IX Inorganic Analytes
**Method:** SW-846 Methods (listed in parentheses)

| | | |
|---|---|---|
| Antimony (6010) | Copper (6010) | Thallium (7841) |
| Arsenic (7060) | Lead (7421) | Vanadium (6010) |
| Barium (6010) | Mercury (7470) | Zinc (6010) |
| Beryllium (6010) | Nickel (6010) | Tin (6010) |
| Cadmium (6010) | Selenium (7740) | Cyanide (9010) |
| Chromium (6010) | Silver (6010) | Sulfide (9030) |
| | Cobalt (6010) | |

Table D-2 (continued) Compounds and Analytical Methods for Groundwater Sampling Event No. 6 at Sites 5 and 16

**Parameter:** Semivolatile Organic Compounds (base/neutral fraction)
**Method:** SW-846 Method 8270

bis(2-Chloroethyl)Ether
1,3-Dichlorobenzene
1,4-Dichlorobenzene
Benzyl Alcohol
1,2-Dichlorobenzene
bis(2-Chloroisopropyl)Ether
N-Nitroso-Di-n-Propylamine
Hexachloroethane
Nitrobenzene
Isophorone
bis(2-Chloroethoxy)Methane
1,2,4-Trichlorobenzene
Naphthalene
4-Chloroaniline
Hexachlorobutadiene
2-Methylnaphthalene
Hexachlorocyclopentadiene
2-Chloronaphthalene
2-Nitroaniline
Dimethylphthalate
Acenaphthylene
2,6-Dinitrotoluene
3-Nitroaniline
Acenaphthene
Dibenzofuran
2,4-Dinitrotoluene
Diethylphthalate
4-Chlorophenyl-phenylether
Fluorene
4-Nitroaniline
N-Nitrosodiphenylamine
4-Bromophenyl-phenylether
Hexachlorobenzene
Phenanthrene
Anthracene
Di-n-Butylphthalate
Fluoranthene
Pyrene
Butylbenzylphthalate
3,3'-Dichlorobenzidine
Benzo(a)Anthracene
Chrysene
bis(2-Ethylhexyl)Phthalate
Di-n-Octyl Phthalate
Benzo(b)Fluoranthene
Benzo(k)Fluoranthene
Benzo(a)Pyrene
Indeno(1,2,3-cd)Pyrene
Dibenz(a,h)Anthracene
Benzo(g,h,i)Perylene

**Parameter:** Total Dissolved Solids (TDS)/ Total Suspended Solids (TSS)
**Method:** Standard Methods-- Methods 2540C and 2540D

D.2 DATA QUALITY ASSESSMENT. All groundwater samples collected during the RFI were properly preserved, placed in coolers, and packed with bagged ice immediately after collection. All samples remained in the custody of the field operations leader until delivery to the courier service providing overnight shipment to the contract laboratory. All samples were shipped, complete with chain-of-custody forms, to the contract laboratory within 24 hours for analysis. Upon arrival at the laboratory, the chain-of-custody and preservation of the samples were checked with the contents of each cooler by laboratory personnel. After verification, the chain-of-custody form was signed by laboratory personnel and the samples accepted for analysis.

Review of the field notebook and chain-of-custody forms did not indicate any non-conformance relative to field instrument calibration or sample handling. All required field quality control (QC) samples were collected in conformance with the requirements of the June 1988 NEESA Sampling and Chemical Analysis Quality Assurance Requirements for the Navy Installation Restoration Program (NEESA, 1988) (Document 20.2-047B). These field QC samples included field duplicates, equipment rinseate blanks, source water blanks, and VOC trip blanks for each VOC sample shipment.

The analytical results for environmental samples collected during groundwater sampling event No. 6 were evaluated and validated according to NEESA Level C QC criteria to determine data quality and useability. These criteria are described in Section 7.3.2 of NEESA Document 20.2-047B (NEESA 1988). The following subsections discuss analytical performance and the evaluation of field and laboratory QC samples.

D.2.1 Analytical Performance The data review and NEESA Level C validation were performed under subcontract. Review of analytical data indicated the laboratory generally met applicable analytical QC criteria for all chemical analyses. Extraction and analysis holding times for all sample lots were met.

For PCB analyses, all applicable QC criteria, including criteria for initial and continuing calibration standards, surrogate recoveries, precision, and accuracy, were met. For VOC and SVOC analyses, all tuning and initial calibration standard criteria, internal standard/surrogate recoveries, and matrix spike/matrix spike duplicate (MS/MSD) precision and accuracy criteria were met. However, several VOC and SVOC continuing calibration standards contained compounds with percentage differences exceeding QC limits. No qualification of data was required because these compounds were not detected in associated samples.

For inorganic analyses, all holding times and calibration criteria were met. However, one duplicate analysis for lead and selenium was outside QC limits and one matrix spike result for lead and tin was below QC limits. Associated sample results and quantitation limits have been qualified and estimated and flagged with a "J" and "UJ" qualifier, respectively. One analytical method blank contained mercury and zinc and exhibited negative bias for copper and vanadium. Table D-3 summarizes inorganic preparation blank analytical results. If an inorganic analyte exhibiting negative bias in a method blank is not detected in associated samples, sample quantitation limits for that analyte are qualified as estimated. For sample concentrations less than 10 times that found in a blank that exhibited negative bias for an inorganic analyte, the sample results are qualified as estimated. No qualification is required if the sample value is more than 10 times the blank value if there is negative bias (NEESA, 1988). All sample results qualified as estimated are considered useable data.

Table D-3 Summary of Inorganic Analysis of Preparation Blanks

| Method Blank ID | Blank Analysis Results (μg/l) Compound | Concentration | PQL[1] | Associated Samples |
|---|---|---|---|---|
| 23751 | Copper | -1.28 | 25 | KBA-16-1, KBA-16-1F, |
| | Vanadium | -2.66 | 50 | KBA-16-2, KBA-16-2F, |
| | Mercury | 0.124 | 0.2 | KBA-16-3, KBA-16-3F, |
| | Zinc | 9.57 | 20 | KBA-16-4, KBA-16-4F, |
| | | | | KBA-16-2D, BS-36-ER |

Notes:
[1]Practical quantitation limit
μg/l = micrograms per liter

D.2.2 Evaluation of Field QC Samples Three field blanks, two trip blanks, and two rinseate blanks were collected during the sixth groundwater sampling event at Sites 5 and 16. One field blank, BS-19-FB, represents organic-free, deionized water used as a final rinse during equipment decontamination procedures, and the second field blank, BS-21-FB, represents regular deionized water used as an intermediate rinse during equipment decontamination procedures. The third field blank, BS-20-FB, is a filter blank that represents organic-free, deionized water passed through a 0.45-micron filter. The two equipment rinseate samples, BS-35-ER and BS-36-ER, were collected during decontamination procedures involving Teflon bailers.

No VOCs were detected in trip blanks or rinseate blanks. Two VOCs, acetone and chloroform, were detected in the source water blank representing regular deionized water (Table D-4). Chloroform is a trihalomethane which forms in water chlorinated for drinking water disinfection. None of the environmental samples associated with this source water blank contained chloroform. Acetone was also detected in one groundwater sample (KBA-16-3) collected during sampling event No. 6; however, no qualification of data was performed or required because acetone was not detected in the associated equipment rinseate blank or the source water blank representing water used as a final rinse during equipment decontamination procedures.

Four inorganic analytes, barium, copper, lead, and mercury, were detected in source water blanks and rinseate blanks as shown in Table D-5. Concentrations for all analytes are well below any regulatory limits in water and concentrations for barium and copper are below their respective practical quantitation limit (PQL).

Table D-4 Summary of Organic Analyses of Source Water Blanks

| Compounds Detected | Source Water Blank (μg/l) |
|---|---|
| | BS-21-FB |
| Acetone | 11 |
| Chloroform | 2 J |

Notes:
J = value is considered estimated because the concentration is less than the practical quantitation limit.
μg/l = micrograms per liter

Table D-5 Summary of Inorganic Analyses of Rinseate Blanks and Source Water Blanks

| Compounds Detected | Rinseate Blanks (μg/l) | | Source Water Blanks (μg/l) | | |
|---|---|---|---|---|---|
| | BS-35-ER | BS-36-ER | BS-19-FB | BS-20-FB | BS-21-FB |
| Barium | 1.4 J | 0.92 J | 1.8 J | 1.0 J | 1.6 J |
| Copper | 1.2 U | 1.2 UJ | 1.2 U | 1.2 U | 1.2 J |
| Lead | 4.5 J | 1.7 UJ | 1.7 UJ | 1.7 UJ | 1.7 UJ |
| Mercury | 0.22 | 0.28 U | 0.21 | 0.32 | 0.07 U |

Notes:
J = estimated value
U = not detected at the reported value
μg/l = micrograms per liter

As shown in Table D-5, barium was detected in both source water blanks and both rinseate blanks; however, not qualification of data was performed or required because concentrations of barium in associated groundwater samples were significantly higher than concentrations detected in the field blanks.

Copper was detected in the source water blank representing regular deionized water (BS-21-FB); however, no qualification of data was performed or required because copper was not detected in corresponding rinseate samples or the source water blank representing water used as a final rinse during equipment decontamination procedures.

The rinseate sample associated with all filtered and unfiltered groundwater samples collected from Site 5, BS-35-ER, contained lead at a concentration of 4.5 J $\mu$g/l. All associated sample results for lead are considered bias high and have been qualified as estimated because sample concentrations were on the same order of magnitude as blank concentrations.

Mercury was detected in one rinseate sample and two source water blanks at concentrations ranging from 0.21 to 0.32 $\mu$g/l and was also detected at similar concentrations in certain groundwater samples. Mercury was also detected in an analytical method blank associated with sampling event No. 6. All positive results for mercury in groundwater samples collected from Site 5 have been qualified as undetected because sample concentrations were less than concentrations detected in associated field blanks.

Except for one duplicate result for tin and total suspended solids (TSS), review of the chemical concentrations in groundwater field duplicates exhibited agreement. During field duplicate comparisons, where an analyte was not detected

in one groundwater replicate, it was present at less than three times the quantitation limit in the duplicate. Variation in groundwater replicate results is common when an analyte is present in the replicated samples at or near the detection limit. Groundwater replication for inorganic analytes may also vary by factors of two to five times because of the variation in the amount of suspended solids in each sample and the nature of the inorganic constituents sorbed to those suspended solids.

Tin was detected in one replicate groundwater sample, KBA-5-3, at 702 J $\mu$g/l but was not detected in the duplicate sample (KBA-5-3D). The concentration of TSS in KBA-5-3 was also much higher than the concentration detected the replicate sample. The discrepancy in duplicate results for tin may be due to the increased concentration of TSS in KBA-5-3. It is not uncommon to experience poor duplication in TSS results when sampling turbid groundwater, which is the case at Site 5. However, increased concentrations of other inorganic constituents, such as chromium, copper, and zinc, would also be expected with an increased TSS concentration and concentrations of these analytes in KBA-5-3 were similar to or less than concentrations detected in KBA-5-3D. The concentration of tin in KBA-5-3 is most likely a laboratory artifact because tin was not detected in this monitoring well during previous sampling events.

<u>D.3 DATA QUALITY OBJECTIVES ASSESSMENT</u>. The quality of the field sampling data generated during the field program met the established field QC criteria and were traceable to sample location. The data generated met the Level I field screening and Level C data quality objectives established for the RFI/SI. For data collected at the nine groundwater monitoring wells at Site 11, 100 percent of the data is considered useable, based on NEESA Level C validation criteria (NEESA, 1988), and are acceptable for use in site characterization and evaluation.

# Appendix E

## Precision and Accuracy Results for the Resource Conservation and Recovery Act Facility Investigation Program

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# PRECISION, ACCURACY, REPRESENTATIVENESS

# COMPARABILITY, AND COMPLETENESS

## NSB KINGSBAY

Final
Revision 1.1
March 13, 1993
Prepared by: Heartland ESI

HEARTLAND ENVIRONMENTAL
SERVICES, INC.

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# PRECISION AND ACCUARCY

## FIELD DUPLICATE RESULTS

## AND

## MS/MSD RESULTS

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1.2.3, 1.2.6

## FIELD DUPLICATE PRECISION - TABLE 1.1
## VOLATILES

| SDG | SAMPLE ID | MATRIX | NO. ASSC. SAMPLES | COMPOUND | SAMPLE CONC. | DUP CONC | MAX RPD | RPD |
|---|---|---|---|---|---|---|---|---|
| 20867 | KB05SB0203 | SOIL | 7 | XYLENE (TOTAL) | 3 | 0 | 35% | 200.0% |
| 20873 | KB11SB0303 | SOIL | 6 | ACETONE | 96 | 210 | 35% | 74.5% |
| 20940 | 05SS03 | SOIL | 7 | ACETONE | 12000 | 17000 | 35% | 34.5% |
| 21002 | KBA-11-3 | WATER | 5 | CHLOROBENZENE | 6 | 7 | 20% | 15.4% |
| | | | | 1,4-DICHLOROBENZENE | 13 | 15 | 20% | 14.3% |
| 20985 | KBA-5-4 | WATER | 7 | NO COMPOUNDS DETECTED | NA | NA | 20% | NA |
| 21628 | KBA-5-5 | WATER | 5 | NO COMPOUNDS DETECTED | NA | NA | 20% | NA |
| 21644 | KBA-11-2 | WATER | 5 | VINYL CHLORIDE | 64 | 100 | 20% | 43.9% |
| | | | | 1,2-DICHLOROETHENE(TOTAL | 16 | 22 | 20% | 31.6% |
| | | | | TETRACHLOROETHENE | 1 | 1 | 20% | 0.0% |
| | | | | XYLENE(TOTAL) | 2 | 4 | 20% | 66.7% |
| 22201 | KBA-5-3A | WATER | 8 | NO COMPOUNDS DETECTED | NA | NA | 20% | NA |
| 22191 | KBA-11-2 | WATER | 5 | VINYL CHLORIDE | 63 | 150 | 20% | 81.7% |
| | | | | 1,2-DICHLOROETHENE(TOTAL | 5 | 10 | 20% | 66.7% |
| | | | | TOLUENE | 0 | 2 | 20% | 200.0% |
| | | | | XYLENE(TOTAL) | 0 | 2 | 20% | 200.0% |
| 22711 | KBA-11-2 | WATER | 9 | VINYL CHLORIDE | 48 | 71 | 20% | 38.7% |
| | | | | 1,2-DICHLOROETHENE(TOTAL | 4 | 8 | 20% | 66.7% |
| | | | | TOLUENE | 0 | 1 | 20% | 200.0% |
| 22727 | KBA-5-3 | WATER | 4 | NO COMOUNDS DETECTED | NA | NA | 20% | NA |
| 34467 | KBA-11-2 | WATER | 4 | VINYL CHLORIDE | 140 | 160 | 20% | 13.3% |
| | | | | CHLOROETHANE | 3 | 3 | 20% | 0.0% |
| | | | | 1,2-DICHLOROETHENE(TOTAL | 11 | 13 | 20% | 16.7% |
| | | | | ETHYLBENZENE | 1 | 1 | 20% | 0.0% |
| | | | | XYLENE(TOTAL) | 4 | 2 | 20% | 66.7% |
| | | | | 1,4-DICHLOROBENZENE | 1 | 1 | 20% | 0.0% |
| | | | | TOLUENE | 0 | 3 | 20% | 200.0% |
| 23710 | KBA-11-2 | WATER | 3 | VINYL CHLORIDE | 100 | 85 | 20% | 16.2% |
| | | | | 1,2-DICHLOROETHENE(TOTAL | 12 | 11 | 20% | 8.7% |
| | | | | TOLUENE | 2 | 2 | 20% | 0.0% |
| | | | | XYLENE(TOTAL) | 2 | 2 | 20% | 0.0% |
| 23739 | KBA-5-3 | WATER | 2 | NO COMPOUNDS DETECTED | NA | NA | 20% | NA |
| 23751 | KBA-16-2 | WATER | 4 | NO COMPOUNDS DETECTED | NA | NA | 20% | NA |
| 20865 | | | 3 | | | | | |
| 20900 | | | 3 | | | | | |
| 20917 | | | 1 | | | | | |
| 21652 | | | 4 | | | | | |
| 21616 | | | 4 | | | | | |
| 21599 | | | 2 | | | | | |
| 21012 | | | 1 | | | | | |
| 34464 | | | 5 | | | | | |
| 23740 | | | 5 | | | | | |
| 20997 | | | 7 | | | | | |
| 22205 | | | 4 | | | | | |
| 22203 | | | 4 | | | | | |
| 22723 | | | 4 | | | | | |
| 22725 | | | 3 | | | | | |
| 23726 | | | 6 | | | | | |

| % OF DUPLICATES COLLECTED | RPD IN | RPD OUT | % WITHIN RPD LIMIT |
|---|---|---|---|
| 10.9% | 19 | 14 | 57.6% |

000001

# FIELD DUPLICATE PRECISION - TABLE 1.1.1
# SEMI-VOLATILES

| SDG | SAMPLE ID | MATRIX | NO. ASSC. SAMPLES | COMPOUND | SAMPLE CONC. | DUP CONC | MAX RPD | RPD |
|---|---|---|---|---|---|---|---|---|
| 20867 | KB05SB02030 | SOIL | 7 | BIS(2-ETHYLHEXYL)PHTHALATE | 590 | 360 | 35% | 48.4% |
| 20873 | KB11SB03030 | SOIL | 6 | NO COMPOUNDS DETECTED | NA | NA | 35% | NA |
| 20940 | 05SS03 | SOIL | 7 | BIS(2-ETHYLHEXYL)PHTHALATE | 790 | 710 | 35% | 10.7% |
| 21002 | KBA-11-3 | WATER | 5 | 1,4-DICHLOROBENZENE | 4 | 7 | 20% | 54.5% |
| | | | | BIS(2-ETHYLHEXYL)PHTHALATE | 31 | 0 | 20% | 200.0% |
| 20985 | KBA-5-4 | WATER | 7 | DIETHYLPHTHALATE | 2 | 0 | 20% | 200.0% |
| | | | | DI-N-BUTYLPHTHALATE | 2 | 0 | 20% | 200.0% |
| 21628 | KBA-5-5 | WATER | 5 | BIS(2-ETHYLHEXYL)PHTHALATE | 18 | 0 | 20% | 200.0% |
| 21644 | KBA-11-2 | WATER | 5 | NO COMPOUNDS DETECTED | NA | NA | 20% | NA |
| 22205 | KBA-16-2 | WATER | 4 | BIS(2-ETHYLHEXYL)PHTHALATE | 3 | 6 | 20% | 66.7% |
| 22723 | KBA-16-2 | WATER | 4 | BIS(2-ETHYLHEXYL)PHTHALATE | 0 | 1 | 20% | 200.0% |
| 23751 | KBA-16-2 | WATER | 4 | NO COMPOUNDS DETECTED | NA | NA | 20% | NA |
| 20865 | | | 3 | | | | | |
| 20900 | | | 3 | | | | | |
| 20917 | | | 1 | | | | | |
| 21652 | | | 4 | | | | | |
| 21616 | | | 4 | | | | | |
| 21599 | | | 2 | | | | | |
| 21012 | | | 1 | | | | | |
| 22725 | | | 0 | | | | | |
| 23739 | | | 0 | | | | | |

| % OF DUPLICATES COLLECTED | RPD IN | RPD OUT | % WITHIN RPD LIMIT |
|---|---|---|---|
| 13.9% | 4 | 8 | 33.3% |

000002

# FIELD DUPLICATE PRECISION - TABLE 1.1.2
# PESTICIDES

| SDG | SAMPLE ID | MATRIX | NO. ASSC. SAMPLES | COMPOUND | SAMPLE CONC. | DUP CONC | MAX RPD | RPD |
|---|---|---|---|---|---|---|---|---|
| 20867 | KB05SB02030 | SOIL | 7 | NO COMPOUNDS DETECTED | NA | NA | 35% | NA |
| 20873 | KB11SB03030 | SOIL | 6 | NO COMPOUNDS DETECTED | NA | NA | 35% | NA |
| 20940 | 05SS03 | SOIL | 7 | NO COMPOUNDS DETECTED | NA | NA | 35% | NA |
| 21002 | KBA-11-3 | WATER | 5 | NO COMPOUNDS DETECTED | NA | NA | 35% | NA |
| 20985 | KBA-5-4 | WATER | 7 | NO COMPOUNDS DETECTED | NA | NA | 20% | NA |
| 21628 | KBA-5-5 | WATER | 5 | NO COMPOUNDS DETECTED | NA | NA | 20% | NA |
| 21644 | KBA-11-2 | WATER | 5 | NO COMPOUNDS DETECTED | NA | NA | 20% | NA |
| 22727 | KBA-5-3 | WATER | 4 | NO COMPOUNDS DETECTED | NA | NA | 20% | NA |
| 22201 | KBA-5-3B | WATER | 3 | NO COMPOUNDS DETECTED | NA | NA | 20% | NA |
| 22208 | 05-SS-08 | WATER | 7 | NO COMPOUNDS DETECTED | NA | NA | 20% | NA |
| 23739 | KBA-5-3 | WATER | 2 | NO COMPOUNDS DETECTED | NA | NA | 20% | NA |
| 22203 | | | 4 | | | | | |
| 20865 | | | 3 | | | | | |
| 20900 | | | 3 | | | | | |
| 20917 | | | 1 | | | | | |
| 21652 | | | 4 | | | | | |
| 21616 | | | 4 | | | | | |
| 21599 | | | 2 | | | | | |
| 20997 | | | 7 | | | | | |
| 21012 | | | 1 | | | | | |
| 23740 | | | 5 | | | | | |
| 22725 | | | 3 | | | | | |

| % OF DUPLICATES COLLECTED | RPD IN | RPD OUT | % WITHIN RPD LIMIT |
|---|---|---|---|
| 11.6% | 11 | 0 | 100.0% |

000003

# FIELD DUPLICATE PRECISION - TABLE 1.1.3
# METALS

| SDG | SAMPLE ID | MATRIX | NO. ASSC. SAMPLES | COMPOUND | SAMPLE CONC. | DUP CONC | MAX RPD | RPD |
|---|---|---|---|---|---|---|---|---|
| 20867 | KB05SB02030 | SOIL | 7 | ARSENIC | 0.24 | 0 | 35% | 200.0% |
| | | | | BARIUM | 5 | 5.3 | 35% | 5.8% |
| | | | | BERYLLIUM | 0.05 | 0.07 | 35% | 33.3% |
| | | | | CHROMIUM | 6.5 | 6 | 35% | 8.0% |
| | | | | LEAD | 2.7 | 3.2 | 35% | 16.9% |
| | | | | NICKEL | 0.98 | 0.98 | 35% | 0.0% |
| | | | | SELENIUM | 0.71 | 0.33 | 35% | 73.1% |
| 20873 | KB11SB03030 | SOIL | 6 | BARIUM | 3 | 2.7 | 35% | 10.5% |
| | | | | CADMIUM | 0.81 | 0 | 35% | 200.0% |
| | | | | LEAD | 1.8 | 0.88 | 35% | 68.7% |
| | | | | NICKEL | 2.2 | 0 | 35% | 200.0% |
| | | | | VANADIUM | 1.7 | 1.6 | 35% | 6.1% |
| 20940 | 05SS03 | SOIL | 7 | BARIUM | 3 | 3 | 35% | 0.0% |
| | | | | BERYLLIUM | 0.15 | 0.11 | 35% | 30.8% |
| | | | | CHROMIUM | 6.2 | 6.1 | 35% | 1.6% |
| | | | | LEAD | 5.3 | 5.5 | 35% | 3.7% |
| | | | | VANADIUM | 3.4 | 3.2 | 35% | 6.1% |
| | | | | ZINC | 15.9 | 11.9 | 35% | 28.8% |
| 21002 | KBA-11-3 | WATER | 5 | ANTIMONY | 11.1 | 0 | 20% | 200.0% |
| | | | | BARIUM | 155 | 280 | 20% | 57.5% |
| | | | | BERYLLIUM | 2 | 2.9 | 20% | 36.7% |
| | | | | CHROMIUM | 113 | 177 | 20% | 44.1% |
| | | | | COBALT | 3.9 | 0 | 20% | 200.0% |
| | | | | LEAD | 18.8 | 14.8 | 20% | 23.8% |
| | | | | MERCURY | 0.6 | 0.67 | 20% | 11.0% |
| | | | | NICKEL | 0 | 42.2 | 20% | 200.0% |
| | | | | SELENIUM | 24.5 | 26 | 20% | 5.9% |
| | | | | VANADIUM | 87.4 | 138 | 20% | 44.9% |
| | | | | ZINC | 0 | 102 | 20% | 200.0% |
| | | | | CYANIDE | 3 | 0 | 20% | 200.0% |
| 20985 | KBA-5-4 | WATER | 7 | ANTIMONY | 14 | 0 | 20% | 200.0% |
| | | | | ARSENIC | 15.9 | 18 | 20% | 12.4% |
| | | | | BARIUM | 601 | 588 | 20% | 2.2% |
| | | | | BERYLLIUM | 3.1 | 2.9 | 20% | 6.7% |
| | | | | CHROMIUM | 103 | 3.7 | 20% | 186.1% |
| | | | | COLBALT | 28.5 | 29.1 | 20% | 2.1% |
| | | | | COPPER | 31.7 | 36.9 | 20% | 15.2% |
| | | | | LEAD | 22 | 25.2 | 20% | 13.6% |
| | | | | NICKEL | 40.2 | 42.7 | 20% | 6.0% |
| | | | | SELENIUM | 2 | 1.6 | 20% | 22.2% |
| | | | | THALLIUM | 1.6 | 1.5 | 20% | 6.5% |
| | | | | TIN | 232 | 0 | 20% | 200.0% |
| | | | | VANDIUM | 84.7 | 82.6 | 20% | 2.5% |
| | | | | ZINC | 153 | 177 | 20% | 14.5% |

000004

## FIELD DUPLICATE PRECISION - TABLE 1.1.3
## METALS - PAGE - 2

| SDG | SAMPLE ID | MATRIX | NO. ASSC. SAMPLES | COMPOUND | SAMPLE CONC. | DUP CONC | MAX RPD | RPD |
|---|---|---|---|---|---|---|---|---|
| 21628 | KBA-5-5 | WATER | 5 | ARSENIC | 22.5 | 24 | 20% | 6.5% |
| | | | | BARIUM | 187 | 187 | 20% | 0.0% |
| | | | | BERYLLIUM | 2.6 | 2.3 | 20% | 12.2% |
| | | | | CADMIUM | 1.3 | 3.1 | 20% | 81.8% |
| | | | | CHROMIUM | 30.8 | 30.2 | 20% | 2.0% |
| | | | | COBALT | 14.7 | 13 | 20% | 12.3% |
| | | | | COPPER | 9.6 | 9.8 | 20% | 2.1% |
| | | | | LEAD | 17.8 | 16.9 | 20% | 5.2% |
| | | | | NICKEL | 24.3 | 24.7 | 20% | 1.6% |
| | | | | SELENIUM | 3.3 | 2.5 | 20% | 27.6% |
| | | | | THALLIUM | 1.1 | 1.3 | 20% | 16.7% |
| | | | | VANADIUM | 42.1 | 37.6 | 20% | 11.3% |
| | | | | ZINC | 62.9 | 62.2 | 20% | 1.1% |
| 21644 | KBA-11-2 | WATER | 5 | BARIUM | 26.2 | 25.9 | 20% | 1.2% |
| | | | | BERYLLIUM | 1.7 | 1.7 | 20% | 0.0% |
| | | | | CHROMIUM | 38.1 | 37.2 | 20% | 2.4% |
| | | | | COPPER | 6.4 | 6.2 | 20% | 3.2% |
| | | | | LEAD | 4.5 | 5.6 | 20% | 21.8% |
| | | | | SELENIUM | 2.7 | 2.9 | 20% | 7.1% |
| | | | | VANADIUM | 20.2 | 24.6 | 20% | 19.6% |
| | | | | CYANIDE | 6.1 | 6.1 | 20% | 0.0% |
| 22201 | KBA-11-3 | WATER | 9 | ARSENIC | 2.7 | 2.6 | 20% | 3.8% |
| | | | | BARIUM | 49 | 57.6 | 20% | 16.1% |
| | | | | BERYLLIUM | 0.45 | 0.73 | 20% | 47.5% |
| | | | | CHROMIUM | 34.3 | 38.7 | 20% | 12.1% |
| | | | | COPPER | 27.6 | 72.6 | 20% | 89.8% |
| | | | | LEAD | 12.4 | 87.2 | 20% | 150.2% |
| | | | | SELENIUM | 6.4 | 5.5 | 20% | 15.1% |
| | | | | VANADIUM | 26.2 | 30.2 | 20% | 14.2% |
| | | | | ZINC | 37.3 | 128 | 20% | 109.7% |
| | | | | CYANIDE | 4.4 | 0 | 20% | 200.0% |
| | | | | COBALT | 0 | 1.6 | 20% | 200.0% |
| | | | | NICKEL | 0 | 61.4 | 20% | 200.0% |
| 22201 | KBA-5-3A | WATER | 0 | ARSENIC | 6.7 | 5.8 | 20% | 14.4% |
| | | | | BARIUM | 92.8 | 82.6 | 20% | 11.6% |
| | | | | CHROMIUM | 13.5 | 12.9 | 20% | 4.5% |
| | | | | COBALT | 3.3 | 0 | 20% | 200.0% |
| | | | | COPPER | 61.8 | 89.9 | 20% | 37.0% |
| | | | | LEAD | 6.1 | 14.7 | 20% | 82.7% |
| | | | | NICKEL | 109 | 30.2 | 20% | 113.2% |
| | | | | VANADIUM | 12.7 | 9.2 | 20% | 32.0% |
| | | | | ZINC | 199 | 123 | 20% | 47.2% |
| | | | | BERYLLIUM | 0 | 0.26 | 20% | 200.0% |
| 22191 | KBA-11-2 | WATER | 8 | ARSENIC | 2.4 | 2.4 | 20% | 0.0% |
| | | | | BARIUM | 30.2 | 24 | 20% | 22.9% |
| | | | | BERYLLIUM | 0.49 | 0.26 | 20% | 61.3% |
| | | | | CHROMIUM | 27.2 | 27.9 | 20% | 2.5% |
| | | | | COPPER | 27.8 | 0 | 20% | 200.0% |
| | | | | LEAD | 8.5 | 10.3 | 20% | 19.1% |
| | | | | NICKEL | 23.9 | 23.6 | 20% | 1.3% |
| | | | | SILVER | 1.7 | 0 | 20% | 200.0% |
| | | | | VANADIUM | 13.4 | 11.6 | 20% | 14.4% |

000005

# FIELD DUPLICATE PRECISION - TABLE 1.1.3
# METALS - PAGE - 3

| SDG | SAMPLE ID | MATRIX | NO. ASSC. SAMPLES | COMPOUND | SAMPLE CONC. | DUP CONC | MAX RPD | RPD |
|---|---|---|---|---|---|---|---|---|
| 22203 | KBA-5-5 | WATER | 8 | ARSENIC | 37 | 8.3 | 20% | 126.7% |
| | | | | BARIUM | 207 | 0 | 20% | 200.0% |
| | | | | BERYLLIUM | 1.7 | 0 | 20% | 200.0% |
| | | | | CHROMIUM | 46.4 | 0 | 20% | 200.0% |
| | | | | COBALT | 10.8 | 0 | 20% | 200.0% |
| | | | | COPPER | 38.2 | 13.1 | 20% | 97.9% |
| | | | | LEAD | 36.9 | 0 | 20% | 200.0% |
| | | | | MERCURY | 0.27 | 0 | 20% | 200.0% |
| | | | | NICKEL | 56.9 | | 20% | 200.0% |
| | | | | THALLIUM | 3 | 0 | 20% | 200.0% |
| | | | | VANADIUM | 42.1 | 0 | 20% | 200.0% |
| | | | | ZINC | 135 | 23.9 | 20% | 139.8% |
| 22711 | KBA-11-2 | WATER | 9 | ARSENIC | 3.2 | 2.7 | 20% | 16.9% |
| | | | | BARIUM | 26.4 | 19 | 20% | 32.6% |
| | | | | BERYLLIUM | 0.42 | 0 | 20% | 200.0% |
| | | | | CHROMIUM | 27.6 | 21.9 | 20% | 23.0% |
| | | | | COPPER | 35.2 | 10.2 | 20% | 110.1% |
| | | | | LEAD | 11.9 | 6.7 | 20% | 55.9% |
| | | | | MERCURY | 0.6 | 0.61 | 20% | 1.7% |
| | | | | NICKEL | 34 | 10.7 | 20% | 104.3% |
| | | | | SELENIUM | 2.7 | 0 | 20% | 200.0% |
| | | | | SILVER | 3.4 | 2.8 | 20% | 19.4% |
| | | | | VANADIUM | 15.7 | 10 | 20% | 44.4% |
| | | | | ZINC | 64 | 32.9 | 20% | 64.2% |
| 22711 | KBA-11-9 | WATER | 0 | ARSENIC | 7.5 | 3.5 | 20% | 72.7% |
| | | | | BARIUM | 91.9 | 52.4 | 20% | 54.7% |
| | | | | BERYLLIUM | 2.4 | 1.4 | 20% | 52.6% |
| | | | | CHROMIUM | 100 | 68.1 | 20% | 38.0% |
| | | | | COBALT | 2.6 | 1.8 | 20% | 36.4% |
| | | | | COPPER | 27.4 | 23.5 | 20% | 15.3% |
| | | | | LEAD | 11.6 | 0 | 20% | 200.0% |
| | | | | MERCURY | 0.49 | 0.61 | 20% | 21.8% |
| | | | | NICKEL | 11.3 | 13 | 20% | 14.0% |
| | | | | SELENIUM | 2.7 | 0 | 20% | 200.0% |
| | | | | SILVER | 1.9 | 2.8 | 20% | 38.3% |
| | | | | VANADIUM | 61.3 | 41.3 | 20% | 39.0% |
| | | | | ZINC | 56.5 | 41.4 | 20% | 30.8% |

000003

## FIELD DUPLICATE PRECISION - TABLE 1.1.3
## METALS - PAGE - 4

| SDG | SAMPLE ID | MATRIX | NO. ASSC. SAMPLES | COMPOUND | SAMPLE CONC. | DUP CONC | MAX RPD | RPD |
|---|---|---|---|---|---|---|---|---|
| 22727 | KBA-5-3 | WATER | 8 | ARSENIC | 10.4 | 7.6 | 20% | 31.1% |
| | | | | BARIUM | 124 | 119 | 20% | 4.1% |
| | | | | BERYLLIUM | 1 | 0.66 | 20% | 41.0% |
| | | | | CHROMIUM | 24.6 | 17.2 | 20% | 35.4% |
| | | | | COBALT | 7.2 | 4.8 | 20% | 40.0% |
| | | | | COPPER | 14.9 | 18.7 | 20% | 22.6% |
| | | | | LEAD | 5.2 | 4.7 | 20% | 10.1% |
| | | | | MERCURY | 0.37 | 0.26 | 20% | 34.9% |
| | | | | VANADIUM | 23.1 | 15.7 | 20% | 38.1% |
| | | | | ZINC | 54.5 | 48.4 | 20% | 11.9% |
| 22725 | KBA-5-5 | WATER | 6 | ANTIMONY | 17 | 0 | 20% | 200.0% |
| | | | | ARSENIC | 9.9 | 2.3 | 20% | 124.6% |
| | | | | CHROMIUM | 21.6 | 0 | 20% | 200.0% |
| | | | | LEAD | 9.6 | 0 | 20% | 200.0% |
| | | | | NICKEL | 10.8 | 0 | 20% | 200.0% |
| 34467 | KBA-11-2 | WATER | 8 | BARIUM | 15.5 | 14.8 | 20% | 4.6% |
| | | | | BERYLLIUM | 0.41 | 0.35 | 20% | 15.8% |
| | | | | CHROMIUM | 15.1 | 15.3 | 20% | 1.3% |
| | | | | COPPER | 7.7 | 5.7 | 20% | 29.9% |
| | | | | LEAD | 6.6 | 5 | 20% | 27.6% |
| | | | | NICKEL | 7.4 | 5.7 | 20% | 26.0% |
| | | | | VANADIUM | 8 | 9.5 | 20% | 17.1% |
| | | | | ZINC | 29.6 | 12.8 | 20% | 79.2% |
| | | | | CYANIDE | 3.1 | 3.2 | 20% | 3.2% |
| | | | | SELENIUM | 0 | 2.6 | 20% | 200.0% |
| | | | | SILVER | 0 | 2.4 | 20% | 200.0% |
| 34467 | BKA-11-2F | WATER | 0 | BARIUM | 5.1 | 5.3 | 20% | 3.8% |
| | | | | CHROMIUM | 9 | 4.2 | 20% | 72.7% |
| | | | | COPPER | 145 | 2.9 | 20% | 192.2% |
| | | | | NICKEL | 527 | 0 | 20% | 200.0% |
| | | | | VANADIUM | 4.3 | 5.1 | 20% | 17.0% |
| | | | | ZINC | 138 | 0 | 20% | 200.0% |
| | | | | MERCURY | 0 | 0.31 | 20% | 200.0% |
| | | | | SILVER | 0 | 2 | 20% | 200.0% |
| | | | | CYANIDE | 0 | 2.2 | 20% | 200.0% |
| | | | | TIN | 0 | 15.9 | 20% | 200.0% |
| 23710 | KBA-11-2 | WATER | 6 | ARSENIC | 1.9 | 1.6 | 20% | 17.1% |
| | | | | BARIUM | 11.1 | 14.3 | 20% | 25.2% |
| | | | | CHROMIUM | 8.1 | 10.8 | 20% | 28.6% |
| | | | | LEAD | 5.8 | 6.4 | 20% | 9.8% |
| | | | | SELENIUM | 2 | 0 | 20% | 200.0% |
| | | | | VANADIUM | 5.5 | 5.9 | 20% | 7.0% |
| | | | | ZINC | 42 | 24.4 | 20% | 53.0% |

## FIELD DUPLICATE PRECISION - TABLE 1.1.3
## METALS - PAGE - 5

| SDG | SAMPLE ID | MATRIX | NO. ASSC. SAMPLES | COMPOUND | SAMPLE CONC. | DUP CONC | MAX RPD | RPD |
|---|---|---|---|---|---|---|---|---|
| 23710 | KBA-11-2F | WATER | 0 | ARSENIC | 1.2 | 1 | 20% | 18.2% |
| | | | | BARIUM | 4.5 | 4.4 | 20% | 2.2% |
| | | | | CADMIUM | 3.1 | 3.9 | 20% | 22.9% |
| | | | | VANADIUM | 3.6 | 4.6 | 20% | 24.4% |
| | | | | ZINC | 24 | 36.3 | 20% | 40.8% |
| | | | | LEAD | 0 | 2.8 | 20% | 200.0% |
| 23739 | KBA-5-3 | WATER | 4 | ARSENIC | 6.7 | 6.2 | 20% | 7.8% |
| | | | | BARIUM | 76.3 | 80.8 | 20% | 5.7% |
| | | | | BERYLLIUM | 0.38 | 0.42 | 20% | 10.0% |
| | | | | CHROMIUM | 15.6 | 13.4 | 20% | 15.2% |
| | | | | COBALT | 4.5 | 5.7 | 20% | 23.5% |
| | | | | COPPER | 6.5 | 6.5 | 20% | 0.0% |
| | | | | LEAD | 5.2 | 6.9 | 20% | 28.1% |
| | | | | VANADIUM | 10.5 | 11.8 | 20% | 11.7% |
| | | | | ZINC | 56.3 | 78.5 | 20% | 32.9% |
| | | | | TIN | 702 | 0 | 20% | 200.0% |
| | | | | MERCURY | 0 | 0.07 | 20% | 200.0% |
| 23739 | KBA-5-3F | WATER | 0 | ARSENIC | 2.6 | 2 | 20% | 26.1% |
| | | | | BARIUM | 48.5 | 44.1 | 20% | 9.5% |
| | | | | CADMIUM | 3.4 | 0 | 20% | 200.0% |
| | | | | COBALT | 3.4 | 4.8 | 20% | 34.1% |
| | | | | LEAD | 2.6 | 0 | 20% | 200.0% |
| | | | | MERCURY | 0.08 | 0 | 20% | 200.0% |
| | | | | ZINC | 18.5 | 46.7 | 20% | 86.5% |
| | | | | ANTIMONY | 0 | 17.6 | 20% | 200.0% |
| | | | | TIN | 0 | 15.8 | 20% | 200.0% |
| 23751 | KBA-16-2 | WATER | 8 | ARSENIC | 17.7 | 21.4 | 20% | 18.9% |
| | | | | BARIUM | 68.6 | 75.3 | 20% | 9.3% |
| | | | | BERYLLIUM | 0.85 | 0.99 | 20% | 15.2% |
| | | | | CHROMIUM | 33 | 38.4 | 20% | 15.1% |
| | | | | COBALT | 12.3 | 13.5 | 20% | 9.3% |
| | | | | COPPER | 9.8 | 10.3 | 20% | 5.0% |
| | | | | LEAD | 10.7 | 12.4 | 20% | 14.7% |
| | | | | NICKEL | 24.5 | 23.8 | 20% | 2.9% |
| | | | | SELENIUM | 2.6 | 2.6 | 20% | 0.0% |
| | | | | VANADIUM | 34.2 | 40.6 | 20% | 17.1% |
| | | | | ZINC | 59.5 | 70.2 | 20% | 16.5% |
| | | | | CYANIDE | 4.2 | 0 | 20% | 200.0% |

000003

## FIELD DUPLICATE PRECISION - TABLE 1.1.3
## METALS - PAGE - 6

| SDG | SAMPLE ID | MATRIX | NO. ASSC. SAMPLES | COMPOUND | SAMPLE CONC. | DUP CONC | MAX RPD | RPD |
|---|---|---|---|---|---|---|---|---|
| 20865 | | | 3 | | | | | |
| 20900 | | | 4 | | | | | |
| 20917 | | | 1 | | | | | |
| 21652 | | | 4 | | | | | |
| 21616 | | | 4 | | | | | |
| 21599 | | | 2 | | | | | |
| 20997 | | | 7 | | | | | |
| 21012 | | | 1 | | | | | |
| 22710 | | | 9 | | | | | |
| 34464 | | | 10 | | | | | |
| 23726 | | | 12 | | | | | |
| 23740 | | | 10 | | | | | |
| 22205 | | | 8 | | | | | |
| 22202 | | | 7 | | | | | |
| 22723 | | | 7 | | | | | |

| % OF DUPLICATES COLLECTED | RPD IN | RPD OUT | % WITHIN RPD LIMIT |
|---|---|---|---|
| 18.0% | 104 | 120 | 46.4% |

000009

# FIELD DUPLICATE PRECISION - TABLE 1.1.4
# HERBICIDE

| SDG | SAMPLE ID | MATRIX | NO. ASSC. SAMPLES | COMPOUND | SAMPLE CONC. | DUP CONC | MAX RPD | RPD |
|---|---|---|---|---|---|---|---|---|
| 20867 | KB05SB02030 | SOIL | 7 | NO COMPOUNDS DETECTED | NA | NA | 35% | NA |
| 20873 | KB11SB03030 | SOIL | 6 | NO COMPOUNDS DETECTED | NA | NA | 35% | NA |
| 20940 | 05SS03 | SOIL | 7 | NO COMPOUNDS DETECTED | NA | NA | 35% | NA |
| 21002 | KBA-11-3 | WATER | 5 | NO COMPOUNDS DETECTED | NA | NA | 35% | NA |
| 20985 | KBA-5-4 | WATER | 7 | NO COMPOUNDS DETECTED | NA | NA | 20% | NA |
| 21628 | KBA-5-5 | WATER | 5 | NO COMPOUNDS DETECTED | NA | NA | 20% | NA |
| 21644 | KBA-11-2 | WATER | 5 | NO COMPOUNDS DETECTED | NA | NA | 20% | NA |
| 20900 | | | 3 | | | | | |
| 20917 | | | 1 | | | | | |
| 21652 | | | 4 | | | | | |
| 21616 | | | 4 | | | | | |
| 21599 | | | 2 | | | | | |
| 20997 | | | 7 | | | | | |
| 21012 | | | 1 | | | | | |
| 20865 | | | 3 | | | | | |

| % OF DUPLICATES COLLECTED | RPD IN | RPD OUT | % WITHIN RPD LIMIT |
|---|---|---|---|
| 10.4% | 7 | 0 | 100.0% |

000010

# FIELD DUPLICATE PRECISION - TABLE 1.1.5
# ORGANOPHOSPHATES

| SDG | SAMPLE ID | MATRIX | NO. ASSC. SAMPLES | COMPOUND | SAMPLE CONC. | DUP CONC | MAX RPD | RPD |
|---|---|---|---|---|---|---|---|---|
| 20867 | KB05SB02030 | SOIL | 7 | NO COMPOUNDS DETECTED | NA | NA | 35% | NA |
| 20873 | KB11SB03030 | SOIL | 6 | NO COMPOUNDS DETECTED | NA | NA | 35% | NA |
| 20940 | 05SS03 | SOIL | 7 | NO COMPOUNDS DETECTED | NA | NA | 35% | NA |
| 21002 | KBA-11-3 | WATER | 5 | NO COMPOUNDS DETECTED | NA | NA | 35% | NA |
| 20985 | KBA-5-4 | WATER | 7 | NO COMPOUNDS DETECTED | NA | NA | 20% | NA |
| 21628 | KBA-5-5 | WATER | 5 | NO COMPOUNDS DETECTED | NA | NA | 20% | NA |
| 21644 | KBA-11-2 | WATER | 5 | NO COMPOUNDS DETECTED | NA | NA | 20% | NA |
| 20900 | | | 3 | | | | | |
| 20917 | | | 1 | | | | | |
| 21652 | | | 4 | | | | | |
| 21616 | | | 4 | | | | | |
| 21599 | | | 2 | | | | | |
| 20997 | | | 7 | | | | | |
| 21012 | | | 1 | | | | | |
| 20865 | | | 3 | | | | | |

| % OF DUPLICATES COLLECTED | RPD IN | RPD OUT | % WITHIN RPD LIMIT |
|---|---|---|---|
| 10.4% | 7 | 0 | 100.0% |

000011

# FIELD DUPLICATE PRECISION - TABLE 1.1.6
# DIOXINS/FURANS

| SDG | SAMPLE ID | MATRIX | NO. ASSC. SAMPLES | COMPOUND | SAMPLE CONC. | DUP CONC | MAX RPD | RPD |
|---|---|---|---|---|---|---|---|---|
| 20867 | KB05SB02030 | SOIL | 7 | NO COMPOUNDS DETECTED | NA | NA | 35% | NA |
| 20873 | KB11SB03030 | SOIL | 6 | NO COMPOUNDS DETECTED | NA | NA | 35% | NA |
| 20940 | 05SS03 | SOIL | 7 | NO COMPOUNDS DETECTED | NA | NA | 35% | NA |
| 21002 | KBA-11-3 | WATER | 5 | NO COMPOUNDS DETECTED | NA | NA | 20% | NA |
| 20985 | KBA-5-4 | WATER | 7 | NO COMPOUNDS DETECTED | NA | NA | 20% | NA |
| 21628 | KBA-5-5 | WATER | 5 | NO COMPOUNDS DETECTED | NA | NA | 20% | NA |
| 21644 | KBA-11-2 | WATER | 5 | NO COMPOUNDS DETECTED | NA | NA | 20% | NA |
| 20865 | | | 3 | | | | | |
| 20900 | | | 3 | | | | | |
| 20917 | | | 1 | | | | | |
| 21652 | | | 4 | | | | | |
| 21599 | | | 2 | | | | | |
| 20997 | | | 7 | | | | | |
| 21616 | | | 4 | | | | | |
| 21012 | | | 1 | | | | | |

| % OF DUPLICATES COLLECTED | RPD IN | RPD OUT | % WITHIN RPD LIMIT |
|---|---|---|---|
| 10.4% | 7 | 0 | 100.0% |

000012

## FIELD DUPLICATE PRECISION - TABLE 1.1.7
## GC/VOAS

| SDG | SAMPLE ID | MATRIX | NO. ASSC. SAMPLES | COMPOUND | SAMPLE CONC. | DUP CONC | MAX RPD | RPD |
|---|---|---|---|---|---|---|---|---|
| 22711 | KBA-11-2 | WATER | 4 | VINYL CHLORIDE | 15 | 100 | 20% | 147.8% |
| | | | | CHLOROETHANE | 0 | 3.3 | 20% | 200.0% |
| | | | | CIS-1,2-DICHLOROETHENE | 0 | 4.8 | 20% | 200.0% |
| | | | | TOLUENE | 0 | 1.1 | 20% | 200.0% |

| % OF DUPLICATES COLLECTED | RPD IN | RPD OUT | % WITHIN RPD LIMIT |
|---|---|---|---|
| 25.0% | 0 | 4 | 0.0% |

000013

# FIELD DUPLICATE PRECISION - TABLE 1.1.8
# SULFIDE

| SDG | SAMPLE ID | MATRIX | NO. ASSC. SAMPLES | COMPOUND | SAMPLE CONC. | DUP CONC | MAX RPD | RPD |
|---|---|---|---|---|---|---|---|---|
| 20867 | KB05SB02030 | SOIL | 7 | NO SULFIDE DETECTED | NA | NA | 35% | NA |
| 20873 | KB11SB03030 | SOIL | 6 | NO SULFIDE DETECTED | NA | NA | 35% | NA |
| 20940 | 05SS03 | SOIL | 7 | NO SULFIDE DETECTED | NA | NA | 35% | NA |
| 21002 | KBA-11-3 | WATER | 5 | SULFIDE | 0.6 | 1 | 20% | 50.0% |
| 20985 | KBA-5-4 | WATER | 7 | SULFIDE | 0.3 | 0.4 | 20% | 28.6% |
| 21628 | KBA-5-5 | WATER | 5 | SULFIDE | 1.2 | 3.1 | 20% | 88.4% |
| 21644 | KBA-11-2 | WATER | 5 | SULFIDE | 2.6 | 1 | 20% | 88.9% |
| 22201 | KBA-11-3 | WATER | 8 | SULFIDE | 0.2 | 0.2 | 20% | 0.0% |
| | | | | TDS | 932 | 0 | 20% | 200.0% |
| | | | | TSS | 693 | 0 | 20% | 200.0% |
| 22201 | KBA-5-3A | WATER | 0 | SULFIDE | 0 | 0.2 | 20% | 200.0% |
| | | | | TDS | 177 | 160 | 20% | 10.1% |
| | | | | TSS | 79 | 152 | 20% | 63.2% |
| 22191 | KBA-11-2 | WATER | 8 | SULFIDE | 0.3 | 0.2 | 20% | 40.0% |
| | | | | TDS | 182 | 225 | 20% | 21.1% |
| | | | | TSS | 198 | 338 | 20% | 52.2% |
| 22203 | KBA-5-5 | WATER | 8 | SULFIDE | 0.3 | 0.2 | 20% | 40.0% |
| | | | | TDS | 107 | 0 | 20% | 200.0% |
| | | | | TSS | 1450 | 0 | 20% | 200.0% |
| 22711 | KBA-11-2 | WATER | 9 | SULFIDE | 0.2 | 0 | 20% | 200.0% |
| | | | | TDS | 298 | 282 | 20% | 5.5% |
| | | | | TSS | 420 | 665 | 20% | 45.2% |
| 22711 | KBA-11-9 | WATER | 0 | SULFIDE | 0 | 0.2 | 20% | 200.0% |
| | | | | TDS | 144 | 0 | 20% | 200.0% |
| | | | | TSS | 468 | 0 | 20% | 200.0% |
| 22727 | KBA-5-3 | WATER | 8 | SULFIDE | 0.2 | 0.2 | 20% | 0.0% |
| | | | | TDS | 214 | 254 | 20% | 17.1% |
| | | | | TSS | 303 | 234 | 20% | 25.7% |
| 22725 | KBA-5-5 | WATER | 6 | SULFIDE | 0.2 | 0 | 20% | 200.0% |
| | | | | TDS | 102 | 0 | 20% | 200.0% |
| | | | | TSS | 303 | 0 | 20% | 200.0% |
| 34467 | KBA-11-2 | WATER | 8 | SULFIDE | 0.2 | 0.2 | 20% | 0.0% |
| | | | | TDS | 240 | 130 | 20% | 59.5% |
| | | | | TSS | 169 | 187 | 20% | 10.1% |

000014

## FIELD DUPLICATE PRECISION - TABLE 1.1.8
## SULFIDE - PAGE - 2

| SDG | SAMPLE ID | MATRIX | NO. ASSC. SAMPLES | COMPOUND | SAMPLE CONC. | DUP CONC | MAX RPD | RPD |
|---|---|---|---|---|---|---|---|---|
| 34467 | KBA-11-2F | WATER | 0 | SULFIDE | 0.1 | 0 | 20% | 200.0% |
| 23710 | KBA-11-2 | WATER | 6 | SULFIDE | 0.2 | 0.2 | 20% | 0.0% |
| | | | | TDS | 192 | 166 | 20% | 14.5% |
| | | | | TSS | 129 | 219 | 20% | 51.7% |
| 23710 | KBA-11-2F | WATER | 0 | SULFIDE | 0.2 | 0 | 20% | 200.0% |
| 23739 | KBA-5-3 | WATER | 4 | SULFIDE | 0 | 0.2 | 20% | 200.0% |
| | | | | TDS | 167 | 159 | 20% | 4.9% |
| | | | | TSS | 1020 | 289 | 20% | 111.7% |
| 23739 | KBA-5-3F | WATER | 0 | SULFIDE | 0.2 | 0 | 20% | 200.0% |
| 23751 | KBA-16-2 | WATER | 8 | SULFIDE | 0.3 | 0 | 20% | 200.0% |
| | | | | TDS | 411 | 361 | 20% | 13.0% |
| | | | | TSS | 543 | 530 | 20% | 2.4% |
| 20900 | | | 3 | | | | | |
| 20917 | | | 1 | | | | | |
| 21652 | | | 4 | | | | | |
| 21616 | | | 4 | | | | | |
| 21599 | | | 2 | | | | | |
| 20997 | | | 7 | | | | | |
| 21012 | | | 1 | | | | | |
| 22710 | | | 9 | | | | | |
| 34464 | | | 10 | | | | | |
| 23726 | | | 12 | | | | | |
| 23740 | | | 10 | | | | | |
| 20865 | | | 3 | | | | | |
| 22205 | | | 8 | | | | | |
| 22207 | | | 7 | | | | | |
| 22723 | | | 7 | | | | | |

| % OF DUPLICATES COLLECTED | RPD IN | RPD OUT | % WITHIN RPD LIMIT |
|---|---|---|---|
| 12.3% | 17 | 31 | 35.4% |

000015

# MATRIX SPIKE/MATRIX SPIKE DUPLICATE - TABLE 1.2

## VOLATILE OUTLIER SUMMARY TABLE

| MS = MATRIX SPIKE *SAMPLE 05SB04030ADL* | | SDG 20865 | | |
|---|---|---|---|---|
| MSD = MATRIX SPIKE DUPLICATE | | MS | MSD | |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | %R | %RPD |
| **VOA COMPOUNDS** | UNITS | | | |
| 1,1-DICHLOROETHENE | ug/L | *19 | *18 | |
| TRICHLOROETHENE | ug/L | | | |
| BENZENE | ug/L | | | |
| TOLUENE | ug/L | | | |
| CHLOROBENZENE | ug/L | | | |

*** DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS**

**CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES**

20865: KBBT00101FB, KBBS00101FB, KBBS00101ER, KB05SB060301, KB05SB050301, KB05SB070301

| MS = MATRIX SPIKE *SAMPLE KB05SB010301* | | SDG 20867 | | |
|---|---|---|---|---|
| MSD = MATRIX SPIKE DUPLICATE | | MS | MSD | |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | %R | %RPD |
| **VOA COMPOUNDS** | UNITS | | | |
| 1,1-DICHLOROETHENE | ug/L | | | |
| TRICHLOROETHENE | ug/L | | | |
| BENZENE | ug/L | | | |
| TOLUENE | ug/L | | | |
| CHLOROBENZENE | ug/L | | | |

*** DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS**

**CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES**

20867: KB05SB030301, KB05SB040301, KB05SB010301, KB05SB020301, KBBT00201FB, KBBS00201ER, KB11SB060201, KB11SB010301, KB11SB080301, KBBT00301FB, KBBS00301ER, KB05SB020301D

| | WATER | SOIL | | WATER | SOIL |
|---|---|---|---|---|---|
| 1,1-DICHLOROETHENE | 61%-145% | 59%-172% | | 14 | 22 |
| TRICHLOROETHENE | 71%-120% | 62%-137% | | 14 | 24 |
| BENZENE | 76%-127% | 66%-142% | | 11 | 21 |
| TOLUENE | 76%-125% | 59%-139% | | 13 | 21 |
| CHLOROBENZENE | 75%-130% | 60%-133% | | 13 | 21 |

000013

# MATRIX SPIKE/MATRIX SPIKE DUPLICATE - TABLE 1.2

## VOLATILE OUTLIER SUMMARY TABLE - PAGE - 2

| MS = MATRIX SPIKE *SAMPLE 16SB0305* | | SDG 20900 | | |
|---|---|---|---|---|
| MSD = MATRIX SPIKE DUPLICATE | | MS | MSD | |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | %R | %RPD |
| **VOA COMPOUNDS** | UNITS | | | |
| 1,1-DICHLOROETHENE | ug/L | | | |
| TRICHLOROETHENE | ug/L | | | |
| BENZENE | ug/L | | | |
| TOLUENE | ug/L | | | |
| CHLOROBENZENE | ug/L | | | |

*** DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS**

**CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES**

20900: 16SB0405, 16SB0305, 16SB0105, BT05FB, BS05ER

| MS = MATRIX SPIKE *SAMPLE 05SS04* | | SDGS 20940 | | |
|---|---|---|---|---|
| MSD = MATRIX SPIKE DUPLICATE | | MS | MSD | |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | %R | %RPD |
| **VOA COMPOUNDS** | UNITS | | | |
| 1,1-DICHLOROETHENE | ug/L | | | |
| TRICHLOROETHENE | ug/L | | | |
| BENZENE | ug/L | | | |
| TOLUENE | ug/L | | | |
| CHLOROBENZENE | ug/L | | | |

*** DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS**

**CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES**

20940: 05SS01, 05SS02, 05SS03, 05SS03D, 05SS04, 05SS05, 05SS06, 05SS07, BT07FB, BS07ER

| | WATER | SOIL | | WATER | SOIL |
|---|---|---|---|---|---|
| 1,1-DICHLOROETHENE | 61%-145% | 59%-172% | | 14 | 22 |
| TRICHLOROETHENE | 71%-120% | 62%-137% | | 14 | 24 |
| BENZENE | 76%-127% | 66%-142% | | 11 | 21 |
| TOLUENE | 76%-125% | 59%-139% | | 13 | 21 |
| CHLOROBENZENE | 75%-130% | 60%-133% | | 13 | 21 |

000017

# MATRIX SPIKE/MATRIX SPIKE DUPLICATE - TABLE 1.2

## VOLATILE OUTLIER SUMMARY TABLE - PAGE - 3

| MS = MATRIX SPIKE *SAMPLE KBA-16-2*<br>MSD = MATRIX SPIKE DUPLICATE<br>RPD = RELATIVE PERCENT DIFFERENCE | | SDG 21002 | | |
|---|---|---|---|---|
| | | MS | MSD | |
| | | %R | %R | %RPD |
| **VOA COMPOUNDS** | UNITS | | | |
| 1,1-DICHLOROETHENE | ug/L | | | |
| TRICHLOROETHENE | ug/L | | | |
| BENZENE | ug/L | | | |
| TOLUENE | ug/L | | | |
| CHLOROBENZENE | ug/L | | | |

*** DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS**

**CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES**

21002: KBA-11-2, KBA-11-3, KBA-11-3D, KBA-16-2, BS10ER, KBA-16-3, KBBA-16-1, TRAVEL BLANK

| MS = MATRIX SPIKE *SAMPLE KBA-5-4*<br>MSD = MATRIX SPIKE DUPLICATE<br>RPD = RELATIVE PERCENT DIFFERENCE | | SDG 20985 | | |
|---|---|---|---|---|
| | | MS | MSD | |
| | | %R | %R | %RPD |
| **VOA COMPOUNDS** | UNITS | | | |
| 1,1-DICHLOROETHENE | ug/L | | | |
| TRICHLOROETHENE | ug/L | | | |
| BENZENE | ug/L | | | |
| TOLUENE | ug/L | | | |
| CHLOROBENZENE | ug/L | | | |

*** DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS**

**CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES**

20985: KBA-5-1, KBA-5-2, KBA-5-3, KBA-5-4, KBA-5-4D, KBA-5-5, KBA-5-6 KBA-5-7, BS08ER, BS08FB

| | WATER | SOIL | | WATER | SOIL |
|---|---|---|---|---|---|
| 1,1-DICHLOROETHENE | 61%-145% | 59%-172% | | 14 | 22 |
| TRICHLOROETHENE | 71%-120% | 62%-137% | | 14 | 24 |
| BENZENE | 76%-127% | 66%-142% | | 11 | 21 |
| TOLUENE | 76%-125% | 59%-139% | | 13 | 21 |
| CHLOROBENZENE | 75%-130% | 60%-133% | | 13 | 21 |

000013

# MATRIX SPIKE/MATRIX SPIKE DUPLICATE - TABLE 1.2

## VOLATILE OUTLIER SUMMARY TABLE - PAGE - 4

| MS = MATRIX SPIKE *SAMPLE KBA-11-9* | | SDG 20997 | | |
|---|---|---|---|---|
| MSD = MATRIX SPIKE DUPLICATE | | MS | MSD | |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | %R | %RPD |
| **VOA COMPOUNDS** | UNITS | | | |
| 1,1-DICHLOROETHENE | ug/L | | | |
| TRICHLOROETHENE | ug/L | | | |
| BENZENE | ug/L | | | |
| TOLUENE | ug/L | | | |
| CHLOROBENZENE | ug/L | | | |

*** DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS**

**CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES**

20997: BT09FB, KBA-11-1, KBA-11-7, KBA-11-6, KBA-11-9, KBA-11-8,, BS09ER, KBA-11-4, KBA-11-5

| MS = MATRIX SPIKE *SAMPLE KBA-5-3* | | SDGs 21599, 21616, 21628 | | |
|---|---|---|---|---|
| MSD = MATRIX SPIKE DUPLICATE | | MS | MSD | |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | %R | %RPD |
| **VOA COMPOUNDS** | UNITS | | | |
| 1,1-DICHLOROETHENE | ug/L | | | |
| TRICHLOROETHENE | ug/L | | | |
| BENZENE | ug/L | | | |
| TOLUENE | ug/L | | | |
| CHLOROBENZENE | ug/L | | | |

*** DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS**

**CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES**

21599: BS12ER, BT12FB, KBA-16-3, KBA-16-4
21616: BT13FB, KBA-16-2, KBA-16-1, KBA-5-3, BS13ER, KBA-5-4
21628: BT14FB, KBA-5-1, KBA-5-2, BS14ER, KBA-5-5, KBA-5-5D, KBA-5-7, KBA-5-6

| | WATER | SOIL | | WATER | SOIL |
|---|---|---|---|---|---|
| 1,1-DICHLOROETHENE | 61%-145% | 59%-172% | | 14 | 22 |
| TRICHLOROETHENE | 71%-120% | 62%-137% | | 14 | 24 |
| BENZENE | 76%-127% | 66%-142% | | 11 | 21 |
| TOLUENE | 76%-125% | 59%-139% | | 13 | 21 |
| CHLOROBENZENE | 75%-130% | 60%-133% | | 13 | 21 |

# MATRIX SPIKE/MATRIX SPIKE DUPLICATE - TABLE 1.2

## VOLATILE OUTLIER SUMMARY TABLE - PAGE - 5

| MS = MATRIX SPIKE SAMPLE KBA-11-7 | | SDGS 21652, 21644 | | |
|---|---|---|---|---|
| MSD = MATRIX SPIKE DUPLICATE | | MS | MSD | |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | %R | %RPD |
| VOA COMPOUNDS | UNITS | | | |
| 1,1-DICHLOROETHENE | ug/L | | | |
| TRICHLOROETHENE | ug/L | | | |
| BENZENE | ug/L | | | |
| TOLUENE | ug/L | | | |
| CHLOROBENZENE | ug/L | | | |

* DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS

CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES

21652: BT16FB, BS05FB, BS04FB, BS16ER, KBA-11-3, KBA-11-4, KBA-11-5, KBA-11-6
21644: BT15FB, KBA-11-1, KBA-11-9, BS15ER, KBA-11-8, KBA-11-7, KBA-11-2, KBA-11-2D

| MS = MATRIX SPIKE SAMPLE KBA-5-3A | | SDG 22201 | | |
|---|---|---|---|---|
| MSD = MATRIX SPIKE DUPLICATE | | MS | MSD | |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | %R | %RPD |
| VOA COMPOUNDS | UNITS | | | |
| 1,1-DICHLOROETHENE | ug/L | | | |
| TRICHLOROETHENE | ug/L | | | |
| BENZENE | ug/L | | | |
| TOLUENE | ug/L | | | |
| CHLOROBENZENE | ug/L | | | |

* DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS

CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES

22201: KBA-11-1, BT-18-FB, KBA-11-3, BS-18-ER1, KBA-11-4, KBA-11-5, KBA-11-6
KBA-5-2, KBA-5-3A, KBA-5-3D2

| | WATER | SOIL | | WATER | SOIL |
|---|---|---|---|---|---|
| 1,1-DICHLOROETHENE | 61%-145% | 59%-172% | | 14 | 22 |
| TRICHLOROETHENE | 71%-120% | 62%-137% | | 14 | 24 |
| BENZENE | 76%-127% | 66%-142% | | 11 | 21 |
| TOLUENE | 76%-125% | 59%-139% | | 13 | 21 |
| CHLOROBENZENE | 75%-130% | 60%-133% | | 13 | 21 |

# MATRIX SPIKE/MATRIX SPIKE DUPLICATE - TABLE 1.2

## VOLATILE OUTLIER SUMMARY TABLE - PAGE - 6

| MS = MATRIX SPIKE SAMPLE KBA-11-2 | | SDG 22191 | | |
|---|---|---|---|---|
| MSD = MATRIX SPIKE DUPLICATE | | MS | MSD | |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | %R | %RPD |
| VOA COMPOUNDS | UNITS | | | |
| 1,1-DICHLOROETHENE | ug/L | | | |
| TRICHLOROETHENE | ug/L | | | |
| BENZENE | ug/L | | | |
| TOLUENE | ug/L | | | |
| CHLOROBENZENE | ug/L | | | |

* DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS

CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES

22191: KBA-11-2, KBA-11-2D, KBA-11-7, BT-17-FB, KBA-11-8, BS-17-ER, KBA-11-9

| MS = MATRIX SPIKE SAMPLE KBA-16-4 | | SDGS 22205, 22203 | | |
|---|---|---|---|---|
| MSD = MATRIX SPIKE DUPLICATE | | MS | MSD | |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | %R | %RPD |
| VOA COMPOUNDS | UNITS | | | |
| 1,1-DICHLOROETHENE | ug/L | | | |
| TRICHLOROETHENE | ug/L | | | |
| BENZENE | ug/L | | | |
| TOLUENE | ug/L | | | |
| CHLOROBENZENE | ug/L | | | |

* DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS

CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES

22205: BS-19-ER, BT-19-FB, KBA-16-4, KBA-16-3, KBA-16-2, KBA-16-1,
22203: BT-20-FB, BS-20-ER, KBA-5-7, KBA-5-6, KBA-5-5, KBA-5-4

| | WATER | SOIL | | WATER | SOIL |
|---|---|---|---|---|---|
| 1,1-DICHLOROETHENE | 61%-145% | 59%-172% | | 14 | 22 |
| TRICHLOROETHENE | 71%-120% | 62%-137% | | 14 | 24 |
| BENZENE | 76%-127% | 66%-142% | | 11 | 21 |
| TOLUENE | 76%-125% | 59%-139% | | 13 | 21 |
| CHLOROBENZENE | 75%-130% | 60%-133% | | 13 | 21 |

# MATRIX SPIKE/MATRIX SPIKE DUPLICATE - TABLE 1.2

## VOLATILE OUTLIER SUMMARY TABLE - PAGE - 7

| MS = MATRIX SPIKE SAMPLE KBA-11-2 | | SDGS 22711, 22723, 23710, 2372 | | |
|---|---|---|---|---|
| MSD = MATRIX SPIKE DUPLICATE | | MS | MSD | |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | %R | %RPD |
| VOA COMPOUNDS | UNITS | | | |
| 1,1-DICHLOROETHENE | ug/L | | | |
| TRICHLOROETHENE | ug/L | | | |
| BENZENE | ug/L | | | |
| TOLUENE | ug/L | | | |
| CHLOROBENZENE | ug/L | | | |

* DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS

CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES

22723: KBA-16-1, BT-25-FB, KBA-16-2, KBA-16-3, KBA-16-4, BS-24-ER
22711: KBA-11-8, KBA-11-1, BT-23-FB, BS-22-ER, KBA-11-2, KBA-11-3, KBA-11-4, BS-23-ER, BT-24-FB, KBA-11-5, KBA-11-6, KBA-11-7, KBA-11-9, KBA-11-2D

| MS = MATRIX SPIKE SAMPLE KBA-5-4 | | SDGS 22727, 22725 | | |
|---|---|---|---|---|
| MSD = MATRIX SPIKE DUPLICATE | | MS | MSD | |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | %R | %RPD |
| VOA COMPOUNDS | UNITS | | | |
| 1,1-DICHLOROETHENE | ug/L | | | |
| TRICHLOROETHENE | ug/L | | | |
| BENZENE | ug/L | | | *16 |
| TOLUENE | ug/L | | | |
| CHLOROBENZENE | ug/L | | | |

* DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS

CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES

22725: BT-27-FB, BS-26-ER, KBA-5-5, KBA-5-6, KBA-5-7, BS-10-FB, BS-12-FB
22727: KBA-5-4, BS-25-ER, BS-26-FB, KBA-5-1, KBA-5-2, KBA-5-3, KBA-5-3D

| | WATER | SOIL | | WATER | SOIL |
|---|---|---|---|---|---|
| 1,1-DICHLOROETHENE | 61%-145% | 59%-172% | | 14 | 22 |
| TRICHLOROETHENE | 71%-120% | 62%-137% | | 14 | 24 |
| BENZENE | 76%-127% | 66%-142% | | 11 | 21 |
| TOLUENE | 76%-125% | 59%-139% | | 13 | 21 |
| CHLOROBENZENE | 75%-130% | 60%-133% | | 13 | 21 |

# MATRIX SPIKE/MATRIX SPIKE DUPLICATE - TABLE 1.2

## VOLATILE OUTLIER SUMMARY TABLE - PAGE - 8

| MS = MATRIX SPIKE SAMPLE KBA-11-2 | | SDG 34467 | | |
|---|---|---|---|---|
| MSD = MATRIX SPIKE DUPLICATE | | MS | MSD | |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | %R | %RPD |
| VOA COMPOUNDS | UNITS | | | |
| 1,1-DICHLOROETHENE | ug/L | | | |
| TRICHLOROETHENE | ug/L | | | |
| BENZENE | ug/L | | | |
| TOLUENE | ug/L | | | |
| CHLOROBENZENE | ug/L | | | |

* DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS

CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES

34467: BT-28-FB, KBA-11-9, KBA-11-8, KBA-11-1, KBA-11-2, KBA-11-2D, BS-27-ER
23710: BS-18-FB, BT-33-FB, BS-16-FB, BS-33-ER, KBA-11-2, KBA-11-2D, KBA-11-1, KBA-11-8
23726: KBA-11-9, KBA-11-7, KBA-11-6, KBA-11-5, BS-34-ER, KBA-11-4, KBA-11-3

| MS = MATRIX SPIKE SAMPLE KBA-5-3 | | SDGs 23739, 23740 | | |
|---|---|---|---|---|
| MSD = MATRIX SPIKE DUPLICATE | | MS | MSD | |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | %R | %RPD |
| VOA COMPOUNDS | UNITS | | | |
| 1,1-DICHLOROETHENE | ug/L | | | |
| TRICHLOROETHENE | ug/L | | | |
| BENZENE | ug/L | | | |
| TOLUENE | ug/L | | | |
| CHLOROBENZENE | ug/L | | | |

* DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS

CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES

23739: BT-35-FB, BS-21-FB, BS-19-FB, BS-35-ER, KBA-5-3, KBA-5-3D, KBA-5-5
23740: KBA-5-7, KBA-5-6, KBA-5-4, KBA-5-1, KBA-5-2

| | WATER | SOIL | | WATER | SOIL |
|---|---|---|---|---|---|
| 1,1-DICHLOROETHENE | 61%-145% | 59%-172% | | 14 | 22 |
| TRICHLOROETHENE | 71%-120% | 62%-137% | | 14 | 24 |
| BENZENE | 76%-127% | 66%-142% | | 11 | 21 |
| TOLUENE | 76%-125% | 59%-139% | | 13 | 21 |
| CHLOROBENZENE | 75%-130% | 60%-133% | | 13 | 21 |

# MATRIX SPIKE/MATRIX SPIKE DUPLICATE - TABLE 1.2.1

## SEMI-VOLATILE OUTLIER SUMMARY TABLE

| MS = MATRIX SPIKE *SAMPLE KB05SB010301* | | SDG 20876 | | |
|---|---|---|---|---|
| MSD = MATRIX SPIKE DUPLICATE | | MS | MSD | |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | %R | %RPD |
| **SVOA COMPOUNDS** | UNITS | | | |
| 1,4-DICHLOROBENZENE | ug/L | | | |
| N-NITROSO-DI-N-PROPYLAMINE | ug/L | | | |
| 1,2,4,-TRICHLOROBENZENE | ug/L | | | |
| ACENAPHTHENE | ug/L | | | |
| 2,4-DINITROTOLUENE | ug/L | | | |
| PYRENE | ug/L | | | |
| PHENOL | ug/L | | | |
| 2-CHLOROPHENOL | ug/L | | | |
| 4-CHLORO-3-METHYLPHENOL | ug/L | | | |
| 4-NITROPHENOL | ug/L | | | |
| PENTACHLOROPHENOL | ug/L | | | |

*** DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS**

**CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES**

20867: KB05SB030301, KB05SB040301, KB05SB010301, KB05SB020301, KBBS00201ER, KB11SB060201, KB11SB010301, KB11SB080301, KBBS00301ER, KB05SB020301D

| COMPOUND | ADVISORY LIMITS | | | RPD | |
|---|---|---|---|---|---|
| | WATER | SOIL | | WATER | SOIL |
| 1,4-DICHLOROBENZENE | 36%-97% | 28%-104% | | 28 | 27 |
| N-NITROSO-DI-N-PROPYL | 41%-116% | 41%-116% | | 38 | 38 |
| 1,2,4,-TRICHLOROBENZE | 39%-98% | 38%-107% | | 28 | 23 |
| ACENAPHTHENE | 46%-118% | 31%-137% | | 31 | 19 |
| 2,4-DINITROTOLUENE | 24%-96% | 28%-89% | | 38 | 47 |
| PYRENE | 26%-127% | 35%-142% | | 31 | 36 |
| PHENOL | 12%-89% | 26%-90% | | 42 | 35 |
| 2-CHLOROPHENOL | 27%-123% | 25%-102% | | 40 | 50 |
| 4-CHLORO-3-METHYLPHE | 23%-97% | 26%-103% | | 42 | 33 |
| 4-NITROPHENOL | 10%-80% | 11%-114% | | 50 | 50 |
| PENTACHLOROPHENOL | 9%-103% | 17%-109% | | 50 | 47 |

# MATRIX SPIKE/MATRIX SPIKE DUPLICATE - TABLE 1.2.1

## SEMI-VOLATILE OUTLIER SUMMARY TABLE - PAGE - 2

| MS = MATRIX SPIKE *SAMPLE 05SS04* | | SDG 20940 | | |
|---|---|---|---|---|
| MSD = MATRIX SPIKE DUPLICATE | | MS | MSD | |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | %R | %RPD |
| **SVOA COMPOUNDS** | UNITS | | | |
| 1,4-DICHLOROBENZENE | ug/L | | | |
| N-NITROSO-DI-N-PROPYLAMINE | ug/L | | | |
| 1,2,4,-TRICHLOROBENZENE | ug/L | | | |
| ACENAPHTHENE | ug/L | | | |
| 2,4-DINITROTOLUENE | ug/L | | | |
| PYRENE | ug/L | | | |
| PHENOL | ug/L | | | |
| 2-CHLOROPHENOL | ug/L | | | |
| 4-CHLORO-3-METHYLPHENOL | ug/L | | | |
| 4-NITROPHENOL | ug/L | | | |
| PENTACHLOROPHENOL | ug/L | | | |

*** DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS**

**CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES**

20940: 05SS01, 05SS02, 05SS03, 05SS03D, 05SS04, 05SS05, 05SS06, 05SS07, BS07ER

| COMPOUND | ADVISORY LIMITS | | | RPD | |
|---|---|---|---|---|---|
| | WATER | SOIL | | WATER | SOIL |
| 1,4-DICHLOROBENZENE | 36%-97% | 28%-104% | | 28 | 27 |
| N-NITROSO-DI-N-PROPYL | 41%-116% | 41%-116% | | 38 | 38 |
| 1,2,4,-TRICHLOROBENZE | 39%-98% | 38%-107% | | 28 | 23 |
| ACENAPHTHENE | 46%-118% | 31%-137% | | 31 | 19 |
| 2,4-DINITROTOLUENE | 24%-96% | 28%-89% | | 38 | 47 |
| PYRENE | 26%-127% | 35%-142% | | 31 | 36 |
| PHENOL | 12%-89% | 26%-90% | | 42 | 35 |
| 2-CHLOROPHENOL | 27%-123% | 25%-102% | | 40 | 50 |
| 4-CHLORO-3-METHYLPHE | 23%-97% | 26%-103% | | 42 | 33 |
| 4-NITROPHENOL | 10%-80% | 11%-114% | | 50 | 50 |
| PENTACHLOROPHENOL | 9%-103% | 17%-109% | | 50 | 47 |

000025

# MATRIX SPIKE/MATRIX SPIKE DUPLICATE - TABLE 1.2.1

## SEMI-VOLATILE OUTLIER SUMMARY TABLE - PAGE - 3

| MS = MATRIX SPIKE *SAMPLE KBA-11-9* | | SDG 20997 | | |
|---|---|---|---|---|
| MSD = MATRIX SPIKE DUPLICATE | | MS | MSD | |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | %R | %RPD |
| **SVOA COMPOUNDS** | UNITS | | | |
| 1,4-DICHLOROBENZENE | ug/L | | 8 | 132 |
| N-NITROSO-DI-N-PROPYLAMINE | ug/L | | 10 | 129 |
| 1,2,4,-TRICHLOROBENZENE | ug/L | 38 | 8 | 130 |
| ACENAPHTHENE | ug/L | | 8 | 141 |
| 2,4-DINITROTOLUENE | ug/L | | 8 | 109 |
| PYRENE | ug/L | | 13 | 109 |
| PHENOL | ug/L | | | |
| 2-CHLOROPHENOL | ug/L | | | |
| 4-CHLORO-3-METHYLPHENOL | ug/L | | | |
| 4-NITROPHENOL | ug/L | | | |
| PENTACHLOROPHENOL | ug/L | | | |

*** DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS**

**CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES**

20997: KBA-11-1, KBA-11-7, KBA-11-6, KBA-11-9, KBA-11-8, BS09ER, KBA-11-4, KBA-11-5, BS02FB, BS03FB

| COMPOUND | ADVISORY LIMITS | | | RPD | |
|---|---|---|---|---|---|
| | WATER | SOIL | | WATER | SOIL |
| 1,4-DICHLOROBENZENE | 36%-97% | 28%-104% | | 28 | 27 |
| N-NITROSO-DI-N-PROPYL | 41%-116% | 41%-116% | | 38 | 38 |
| 1,2,4,-TRICHLOROBENZE | 39%-98% | 38%-107% | | 28 | 23 |
| ACENAPHTHENE | 46%-118% | 31%-137% | | 31 | 19 |
| 2,4-DINITROTOLUENE | 24%-96% | 28%-89% | | 38 | 47 |
| PYRENE | 26%-127% | 35%-142% | | 31 | 36 |
| PHENOL | 12%-89% | 26%-90% | | 42 | 35 |
| 2-CHLOROPHENOL | 27%-123% | 25%-102% | | 40 | 50 |
| 4-CHLORO-3-METHYLPHE | 23%-97% | 26%-103% | | 42 | 33 |
| 4-NITROPHENOL | 10%-80% | 11%-114% | | 50 | 50 |
| PENTACHLOROPHENOL | 9%-103% | 17%-109% | | 50 | 47 |

# MATRIX SPIKE/MATRIX SPIKE DUPLICATE - TABLE 1.2.1

## SEMI-VOLATILE OUTLIER SUMMARY TABLE - PAGE - 4

| MS = MATRIX SPIKE *SAMPLE KBA-5-3* | | SDGs 21616, 21599, 21628 | | |
|---|---|---|---|---|
| MSD = MATRIX SPIKE DUPLICATE | | MS | MSD | |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | %R | %RPD |
| **SVOA COMPOUNDS** | UNITS | | | |
| 1,4-DICHLOROBENZENE | ug/L | | | |
| N-NITROSO-DI-N-PROPYLAMINE | ug/L | | | |
| 1,2,4,-TRICHLOROBENZENE | ug/L | | | |
| ACENAPHTHENE | ug/L | | | |
| 2,4-DINITROTOLUENE | ug/L | | | |
| PYRENE | ug/L | | | |
| PHENOL | ug/L | | | |
| 2-CHLOROPHENOL | ug/L | | | |
| 4-CHLORO-3-METHYLPHENOL | ug/L | | | |
| 4-NITROPHENOL | ug/L | | | |
| PENTACHLOROPHENOL | ug/L | | | |

*** DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS**

**CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES**

21616: KBA-16-2, KBA-16-1, KBA-5-3, BS13ER, KBA-5-4,
21599: BS12ER, KBA-16-3, KBA-16-4,
21628: KBA-5-1, KBA-5-2, BS14ER, KBA-5-5, KBA-5-5D, KBA-5-7, KBA-5-6

| COMPOUND | ADVISORY LIMITS | | | RPD | |
|---|---|---|---|---|---|
| | WATER | SOIL | | WATER | SOIL |
| 1,4-DICHLOROBENZENE | 36%-97% | 28%-104% | | 28 | 27 |
| N-NITROSO-DI-N-PROPYL | 41%-116% | 41%-116% | | 38 | 38 |
| 1,2,4,-TRICHLOROBENZE | 39%-98% | 38%-107% | | 28 | 23 |
| ACENAPHTHENE | 46%-118% | 31%-137% | | 31 | 19 |
| 2,4-DINITROTOLUENE | 24%-96% | 28%-89% | | 38 | 47 |
| PYRENE | 26%-127% | 35%-142% | | 31 | 36 |
| PHENOL | 12%-89% | 26%-90% | | 42 | 35 |
| 2-CHLOROPHENOL | 27%-123% | 25%-102% | | 40 | 50 |
| 4-CHLORO-3-METHYLPHE | 23%-97% | 26%-103% | | 42 | 33 |
| 4-NITROPHENOL | 10%-80% | 11%-114% | | 50 | 50 |
| PENTACHLOROPHENOL | 9%-103% | 17%-109% | | 50 | 47 |

000027

# MATRIX SPIKE/MATRIX SPIKE DUPLICATE - TABLE 1.2.1

## SEMI-VOLATILE OUTLIER SUMMARY TABLE - PAGE - 5

| MS = MATRIX SPIKE SAMPLE KBA-16-2D<br>MSD = MATRIX SPIKE DUPLICATE<br>RPD = RELATIVE PERCENT DIFFERENCE | | SDG 22205 | | |
|---|---|---|---|---|
| | | MS | MSD | |
| | | %R | %R | %RPD |
| SVOA COMPOUNDS | UNITS | | | |
| 1,4-DICHLOROBENZENE | ug/L | *33 | | |
| N-NITROSO-DI-N-PROPYLAMINE | ug/L | | | |
| 1,2,4,-TRICHLOROBENZENE | ug/L | *35 | *37 | |
| ACENAPHTHENE | ug/L | | | |
| 2,4-DINITROTOLUENE | ug/L | | | |
| PYRENE | ug/L | | | |
| PHENOL | ug/L | | | |
| 2-CHLOROPHENOL | ug/L | | | |
| 4-CHLORO-3-METHYLPHENOL | ug/L | | | |
| 4-NITROPHENOL | ug/L | | | |
| PENTACHLOROPHENOL | ug/L | | | |

* DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS

CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES

22205: BS-19-ER, KBA-16-4, KBA-16-3, KBA-16-2, KBA-16-1, KBA-16-2D

| COMPOUND | ADVISORY LIMITS | | | RPD | |
|---|---|---|---|---|---|
| | WATER | SOIL | | WATER | SOIL |
| 1,4-DICHLOROBENZENE | 36%-97% | 28%-104% | | 28 | 27 |
| N-NITROSO-DI-N-PROPYL | 41%-116% | 41%-116% | | 38 | 38 |
| 1,2,4,-TRICHLOROBENZE | 39%-98% | 38%-107% | | 28 | 23 |
| ACENAPHTHENE | 46%-118% | 31%-137% | | 31 | 19 |
| 2,4-DINITROTOLUENE | 24%-96% | 28%-89% | | 38 | 47 |
| PYRENE | 26%-127% | 35%-142% | | 31 | 36 |
| PHENOL | 12%-89% | 26%-90% | | 42 | 35 |
| 2-CHLOROPHENOL | 27%-123% | 25%-102% | | 40 | 50 |
| 4-CHLORO-3-METHYLPHE | 23%-97% | 26%-103% | | 42 | 33 |
| 4-NITROPHENOL | 10%-80% | 11%-114% | | 50 | 50 |
| PENTACHLOROPHENOL | 9%-103% | 17%-109% | | 50 | 47 |

000023

# MATRIX SPIKE/MATRIX SPIKE DUPLICATE - TABLE 1.2.1

## SEMI-VOLATILE OUTLIER SUMMARY TABLE - PAGE - 6

| MS = MATRIX SPIKE SAMPLE KBA-16-2 | | SDG 22723 | | |
|---|---|---|---|---|
| MSD = MATRIX SPIKE DUPLICATE | | MS | MSD | |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | %R | %RPD |
| SVOA COMPOUNDS | UNITS | | | |
| 1,4-DICHLOROBENZENE | ug/L | | | |
| N-NITROSO-DI-N-PROPYLAMINE | ug/L | *131 | *126 | |
| 1,2,4,-TRICHLOROBENZENE | ug/L | | | |
| ACENAPHTHENE | ug/L | | | |
| 2,4-DINITROTOLUENE | ug/L | *132 | *130 | |
| PYRENE | ug/L | | | |
| PHENOL | ug/L | | | |
| 2-CHLOROPHENOL | ug/L | | | |
| 4-CHLORO-3-METHYLPHENOL | ug/L | | | |
| 4-NITROPHENOL | ug/L | | | |
| PENTACHLOROPHENOL | ug/L | | | |

* DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS

CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES

22723: KBA-16-1, KBA-16-2, KBA-16-3, KBA-16-4, BS-24-ER, KBA-16-2D

| COMPOUND | ADVISORY LIMITS | | | RPD | |
|---|---|---|---|---|---|
| | WATER | SOIL | | WATER | SOIL |
| 1,4-DICHLOROBENZENE | 36%-97% | 28%-104% | | 28 | 27 |
| N-NITROSO-DI-N-PROPYL | 41%-116% | 41%-116% | | 38 | 38 |
| 1,2,4,-TRICHLOROBENZE | 39%-98% | 38%-107% | | 28 | 23 |
| ACENAPHTHENE | 46%-118% | 31%-137% | | 31 | 19 |
| 2,4-DINITROTOLUENE | 24%-96% | 28%-89% | | 38 | 47 |
| PYRENE | 26%-127% | 35%-142% | | 31 | 36 |
| PHENOL | 12%-89% | 26%-90% | | 42 | 35 |
| 2-CHLOROPHENOL | 27%-123% | 25%-102% | | 40 | 50 |
| 4-CHLORO-3-METHYLPHE | 23%-97% | 26%-103% | | 42 | 33 |
| 4-NITROPHENOL | 10%-80% | 11%-114% | | 50 | 50 |
| PENTACHLOROPHENOL | 9%-103% | 17%-109% | | 50 | 47 |

000023

# MATRIX SPIKE/MATRIX SPIKE DUPLICATE - TABLE 1.2.1

## SEMI-VOLATILE OUTLIER SUMMARY TABLE - PAGE - 7

| MS = MATRIX SPIKE SAMPLE KBA-16-2<br>MSD = MATRIX SPIKE DUPLICATE<br>RPD = RELATIVE PERCENT DIFFERENCE | | SDG 23751 | | |
|---|---|---|---|---|
| | | MS | MSD | |
| | | %R | %R | %RPD |
| SVOA COMPOUNDS | UNITS | | | |
| 1,4-DICHLOROBENZENE | ug/L | | | |
| N-NITROSO-DI-N-PROPYLAMINE | ug/L | *39 | *37 | |
| 1,2,4,-TRICHLOROBENZENE | ug/L | *37 | | |
| ACENAPHTHENE | ug/L | | | |
| 2,4-DINITROTOLUENE | ug/L | | | |
| PYRENE | ug/L | | | |
| PHENOL | ug/L | | | |
| 2-CHLOROPHENOL | ug/L | | | |
| 4-CHLORO-3-METHYLPHENOL | ug/L | | | |
| 4-NITROPHENOL | ug/L | | | |
| PENTACHLOROPHENOL | ug/L | | | |

* DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS

CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES

23751: BS-36-ER, KBA-16-1, KBA-16-2, KBA-16-2D, KBA-16-3, KBA-16-4
23739: BS-21-FB, BS-19-FB

| COMPOUND | ADVISORY LIMITS | | | RPD | |
|---|---|---|---|---|---|
| | WATER | SOIL | | WATER | SOIL |
| 1,4-DICHLOROBENZENE | 36%-97% | 28%-104% | | 28 | 27 |
| N-NITROSO-DI-N-PROPYL | 41%-116% | 41%-116% | | 38 | 38 |
| 1,2,4,-TRICHLOROBENZE | 39%-98% | 38%-107% | | 28 | 23 |
| ACENAPHTHENE | 46%-118% | 31%-137% | | 31 | 19 |
| 2,4-DINITROTOLUENE | 24%-96% | 28%-89% | | 38 | 47 |
| PYRENE | 26%-127% | 35%-142% | | 31 | 36 |
| PHENOL | 12%-89% | 26%-90% | | 42 | 35 |
| 2-CHLOROPHENOL | 27%-123% | 25%-102% | | 40 | 50 |
| 4-CHLORO-3-METHYLPHE | 23%-97% | 26%-103% | | 42 | 33 |
| 4-NITROPHENOL | 10%-80% | 11%-114% | | 50 | 50 |
| PENTACHLOROPHENOL | 9%-103% | 17%-109% | | 50 | 47 |

000030

# MATRIX SPIKE/MATRIX SPIKE DUPLICATE - TABLE 1.2.2
## PESTICIDES OUTLIER SUMMARY TABLE

| MS = MATRIX SPIKE *SAMPLE KBA-5-3B* | | SDG 22201, 22203 | | |
|---|---|---|---|---|
| MSD = MATRIX SPIKE DUPLICATE | | MS | MSD | |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | %R | %RPD |
| **PEST COMPOUNDS** | UNITS | | | |
| LINDANE | ug/L | | | |
| HEPTACHLOR | ug/L | | | |
| ALDRIN | ug/L | | | |
| DIELDRIN | ug/L | | | |
| ENDRIN | ug/L | | | |
| 4,4'-DDT | ug/L | | | |
| AR1260 | ug/L | | | |

*** DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS**

**CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES**

22201: KBA-5-1, KBA-5-2, KBA-5-3D1, KBA-5-3B, BS-18-ER2
22203: BS-20-ER, KBA-5-7, KBA-5-6, KBA-5-5, KBA-5-4

| COMPOUND | ADVISORY LIMITS | | | RPD | |
|---|---|---|---|---|---|
| | WATER | SOIL | | WATER | SOIL |
| LINDANE | 56%-123% | 46%-127% | | 15 | 50 |
| HEPTACHLOR | 40%-131% | 35%-130% | | 20 | 31 |
| ALDRIN | 40%-120% | 34%-132% | | 22 | 43 |
| DIELDRIN | 52%-126% | 31%-134% | | 18 | 38 |
| ENDRIN | 56%-121% | 42%-139% | | 21 | 45 |
| 4,4'-DDT | 38%-127% | 23%-134% | | 27 | 50 |
| AR1260 | | | | | |

000031

# MATRIX SPIKE/MATRIX SPIKE DUPLICATE - TABLE 1.2.2
## PESTICIDES OUTLIER SUMMARY TABLE - PAGE - 2

| MS = MATRIX SPIKE *SAMPLE 05-SS-08* | | SDG 22208 | | |
|---|---|---|---|---|
| MSD = MATRIX SPIKE DUPLICATE | | MS | MSD | |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | %R | %RPD |
| **PEST COMPOUNDS** | UNITS | | | |
| LINDANE | ug/L | | | |
| HEPTACHLOR | ug/L | | | |
| ALDRIN | ug/L | | | |
| DIELDRIN | ug/L | | | |
| ENDRIN | ug/L | | | |
| 4,4'-DDT | ug/L | | | |
| AR1260 | ug/L | | | |

*** DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS**

**CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES**

22208: BS-08-FB, BS-06-FB, BS-21-ER, 05-SS-08, 05-SS-08D, 05-SS-09, 05-SS-10
05-SS-11, 05-SS-12, 05-SS-13, 05-SS-14

| COMPOUND | ADVISORY LIMITS | | | RPD | |
|---|---|---|---|---|---|
| | WATER | SOIL | | WATER | SOIL |
| LINDANE | 56%-123% | 46%-127% | | 15 | 50 |
| HEPTACHLOR | 40%-131% | 35%-130% | | 20 | 31 |
| ALDRIN | 40%-120% | 34%-132% | | 22 | 43 |
| DIELDRIN | 52%-126% | 31%-134% | | 18 | 38 |
| ENDRIN | 56%-121% | 42%-139% | | 21 | 45 |
| 4,4'-DDT | 38%-127% | 23%-134% | | 27 | 50 |
| AR1260 | | | | | |

000032

# MATRIX SPIKE/MATRIX SPIKE DUPLICATE - TABLE 1.2.2
## PESTICIDES OUTLIER SUMMARY TABLE - PAGE - 3

| MS = MATRIX SPIKE *SAMPLE KBA-5-3* | | SDG 22727 | | |
|---|---|---|---|---|
| MSD = MATRIX SPIKE DUPLICATE | | MS | MSD | |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | %R | %RPD |
| **PEST COMPOUNDS** | UNITS | | | |
| LINDANE | ug/L | | | |
| HEPTACHLOR | ug/L | | | |
| ALDRIN | ug/L | | | |
| DIELDRIN | ug/L | | | |
| ENDRIN | ug/L | | | |
| 4,4'-DDT | ug/L | | | |
| AR1260 | ug/L | | | |

*** DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS**

**CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES**

22727: KBA-5-4, KBA-5-1, BA-25-ER, KBA-5-2, KBA-5-3, KBA-5-3D
23739: BS-21-FB, BS-19-FB, BS-35-ER, KBA-5-3D, KBA-5-5

| COMPOUND | ADVISORY LIMITS | | | RPD | |
|---|---|---|---|---|---|
| | WATER | SOIL | | WATER | SOIL |
| LINDANE | 56%-123% | 46%-127% | | 15 | 50 |
| HEPTACHLOR | 40%-131% | 35%-130% | | 20 | 31 |
| ALDRIN | 40%-120% | 34%-132% | | 22 | 43 |
| DIELDRIN | 52%-126% | 31%-134% | | 18 | 38 |
| ENDRIN | 56%-121% | 42%-139% | | 21 | 45 |
| 4,4'-DDT | 38%-127% | 23%-134% | | 27 | 50 |
| AR1260 | | | | | |

000033

# MATRIX SPIKE/MATRIX SPIKE DUPLICATE - TABLE 1.2.2
## PESTICIDES OUTLIER SUMMARY TABLE - PAGE - 4

| MS = MATRIX SPIKE *SAMPLE KB05SB010301* | | SDGs 20867, 20917 | | |
|---|---|---|---|---|
| MSD = MATRIX SPIKE DUPLICATE | | MS | MSD | |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | %R | %RPD |
| **PEST COMPOUNDS** | UNITS | | | |
| LINDANE | ug/L | | | |
| HEPTACHLOR | ug/L | | | |
| ALDRIN | ug/L | | | |
| DIELDRIN | ug/L | | | |
| ENDRIN | ug/L | | | |
| 4,4'-DDT | ug/L | | | |
| AR1260 | ug/L | | | |

*** DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS**

**CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES**

20867: KB05AV030301, KB05AV040301, KB05AV010301, KB05SB020301, KBBS00201ER, KB11SB010301, KB11SB060201, KB11SB080301, KBBS00301ER, KB05SB020301D

20917: 16SB0206, BS06ER

| COMPOUND | ADVISORY LIMITS | | | RPD | |
|---|---|---|---|---|---|
| | WATER | SOIL | | WATER | SOIL |
| LINDANE | 56%-123% | 46%-127% | | 15 | 50 |
| HEPTACHLOR | 40%-131% | 35%-130% | | 20 | 31 |
| ALDRIN | 40%-120% | 34%-132% | | 22 | 43 |
| DIELDRIN | 52%-126% | 31%-134% | | 18 | 38 |
| ENDRIN | 56%-121% | 42%-139% | | 21 | 45 |
| 4,4'-DDT | 38%-127% | 23%-134% | | 27 | 50 |
| AR1260 | | | | | |

# MATRIX SPIKE/MATRIX SPIKE DUPLICATE - TABLE 1.2.2
## PESTICIDES OUTLIER SUMMARY TABLE - PAGE - 5

| MS = MATRIX SPIKE *SAMPLE 05SS04* | | SDG 20940 | | |
|---|---|---|---|---|
| MSD = MATRIX SPIKE DUPLICATE | | MS | MSD | |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | %R | %RPD |
| **PEST COMPOUNDS** | UNITS | | | |
| LINDANE | ug/L | | | |
| HEPTACHLOR | ug/L | | | |
| ALDRIN | ug/L | | | |
| DIELDRIN | ug/L | | | |
| ENDRIN | ug/L | | | |
| 4,4'-DDT | ug/L | | | |
| AR1260 | ug/L | | | |

*** DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS**

**CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES**

20940: 05SS01, 05SS02, 05SS03, 05SS03D, 05SS05, 05SS06, 05SS06, 05SS07, BS07ER KB11SB010301, KB11SB060201, KB11SB080301, KBBS00301ER, KB05SB020301D

| COMPOUND | ADVISORY LIMITS | | | RPD | |
|---|---|---|---|---|---|
| | WATER | SOIL | | WATER | SOIL |
| LINDANE | 56%-123% | 46%-127% | | 15 | 50 |
| HEPTACHLOR | 40%-131% | 35%-130% | | 20 | 31 |
| ALDRIN | 40%-120% | 34%-132% | | 22 | 43 |
| DIELDRIN | 52%-126% | 31%-134% | | 18 | 38 |
| ENDRIN | 56%-121% | 42%-139% | | 21 | 45 |
| 4,4'-DDT | 38%-127% | 23%-134% | | 27 | 50 |
| AR1260 | | | | | |

000035

# MATRIX SPIKE/MATRIX SPIKE DUPLICATE - TABLE 1.2.2
## PESTICIDES OUTLIER SUMMARY TABLE - PAGE - 6

| MS = MATRIX SPIKE *SAMPLE KBA-11-9* | | SDG 20997 | | |
|---|---|---|---|---|
| MSD = MATRIX SPIKE DUPLICATE | | MS | MSD | |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | %R | %RPD |
| **PEST COMPOUNDS** | UNITS | | | |
| LINDANE | ug/L | | | |
| HEPTACHLOR | ug/L | | | |
| ALDRIN | ug/L | | | |
| DIELDRIN | ug/L | | | |
| ENDRIN | ug/L | | | |
| 4,4'-DDT | ug/L | | | |
| AR1260 | ug/L | | | |

*** DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS**

**CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES**

20997: KBA-11-1, KBA-11-7, KBA-11-9, KBA-11-8, BS09ER, KBA-11-4, KBA-11-5, BS02FB, BS03FB

| COMPOUND | ADVISORY LIMITS | | | RPD | |
|---|---|---|---|---|---|
| | WATER | SOIL | | WATER | SOIL |
| LINDANE | 56%-123% | 46%-127% | | 15 | 50 |
| HEPTACHLOR | 40%-131% | 35%-130% | | 20 | 31 |
| ALDRIN | 40%-120% | 34%-132% | | 22 | 43 |
| DIELDRIN | 52%-126% | 31%-134% | | 18 | 38 |
| ENDRIN | 56%-121% | 42%-139% | | 21 | 45 |
| 4,4'-DDT | 38%-127% | 23%-134% | | 27 | 50 |
| AR1260 | | | | | |

000035

# MATRIX SPIKE/MATRIX SPIKE DUPLICATE - TABLE 1.2.2
## PESTICIDES OUTLIER SUMMARY TABLE - PAGE - 7

| MS = MATRIX SPIKE *SAMPLE KBA-5-3* | | SDG 21616 | | |
|---|---|---|---|---|
| MSD = MATRIX SPIKE DUPLICATE | | MS | MSD | |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | %R | %RPD |
| **PEST COMPOUNDS** | UNITS | | | |
| LINDANE | ug/L | | | |
| HEPTACHLOR | ug/L | | | |
| ALDRIN | ug/L | | | |
| DIELDRIN | ug/L | | | |
| ENDRIN | ug/L | | | |
| 4,4'-DDT | ug/L | | | |
| AR1260 | ug/L | | | |

*** DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS**

**CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES**

21616: KBA-16-2, KBA-16-1, KBA-5-3, BS13ER, KBA-5-4

| COMPOUND | ADVISORY LIMITS | | | RPD | |
|---|---|---|---|---|---|
| | WATER | SOIL | | WATER | SOIL |
| LINDANE | 56%-123% | 46%-127% | | 15 | 50 |
| HEPTACHLOR | 40%-131% | 35%-130% | | 20 | 31 |
| ALDRIN | 40%-120% | 34%-132% | | 22 | 43 |
| DIELDRIN | 52%-126% | 31%-134% | | 18 | 38 |
| ENDRIN | 56%-121% | 42%-139% | | 21 | 45 |
| 4,4'-DDT | 38%-127% | 23%-134% | | 27 | 50 |
| AR1260 | | | | | |

000037

# MATRIX SPIKE/MATRIX DUPLICATE - TABLE 1.2.3

## METALS OUTLIER SUMMARY TABLE

| MS = MATRIX SPIKE *SAMPLES KBBS00101,*<br>MD = MATRIX DUPLICATE *KB05SB070301*<br>RPD = RELATIVE PERCENT DIFFERENCE | | SDG 20865 | |
|---|---|---|---|
| | | MS | MD |
| | | %R | RPD |
| **METALS COMPOUNDS** | UNITS | | |
| ALUMINUM | ug/L | | |
| ANTIMONY | ug/L | | |
| ARSENIC | ug/L | | |
| BARIUM | ug/L | | |
| BERYLLIUM | ug/L | | |
| CADMIUM | ug/L | | |
| CHROMIUM | ug/L | | |
| COBALT | ug/L | | |
| COPPER | ug/L | | |
| IRON | ug/L | | |
| LEAD | ug/L | | |
| MANGANESE | ug/L | | |
| MERCURY | ug/L | | |
| NICKEL | ug/L | | |
| SELENIUM | ug/L | | |
| SILVER | ug/L | | |
| THALLIUM | ug/L | | |
| VANADIUM | ug/L | | |
| ZINC | ug/L | | |
| CYANIDE | ug/L | | |

*** DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS**

**CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES**

20865: KBBS00101FB, KBBS00101, KBBS00101ER, KB05SB060301, KB05SB070301, KB05SB070301

| COMPOUND | ADVISORY LIMITS | | | RPD |
|---|---|---|---|---|
| | WATER | SOIL | | WATER/SOIL |
| ALL COMPOUNDS | 75%-125% | 75%-125% | | +/- 20% OR +/-CRDL |

000033

# MATRIX SPIKE/MATRIX DUPLICATE - TABLE 1.2.3

## METALS OUTLIER SUMMARY TABLE - PAGE - 2

| MS = MATRIX SPIKE *SAMPLE KB05SB010301* | | SDGs 20867 | |
|---|---|---|---|
| MD = MATRIX DUPLICATE | | MS | MD |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | RPD |
| **METALS COMPOUNDS** | UNITS | | |
| ALUMINUM | ug/L | | |
| ANTIMONY | ug/L | | |
| ARSENIC | ug/L | | |
| BARIUM | ug/L | | |
| BERYLLIUM | ug/L | | |
| CADMIUM | ug/L | | |
| CHROMIUM | ug/L | | |
| COBALT | ug/L | | |
| COPPER | ug/L | | |
| IRON | ug/L | | |
| LEAD | ug/L | | |
| MANGANESE | ug/L | | |
| MERCURY | ug/L | | |
| NICKEL | ug/L | | |
| SELENIUM | ug/L | | |
| SILVER | ug/L | | |
| THALLIUM | ug/L | | |
| VANADIUM | ug/L | | |
| ZINC | ug/L | | |
| CYANIDE | ug/L | | |

*** DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS**

**CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES**

20867: KB05SB030301, KB05SB040301, KB05SB010301, KB05SB020301, KBBS00201ER, KB11SB060201, KB11SB010301, KB11SB080301, KBBS00301ER, KB05SB020301D

| COMPOUND | ADVISORY LIMITS | | | RPD |
|---|---|---|---|---|
| | WATER | SOIL | | WATER/SOIL |
| ALL COMPOUNDS | 75%-125% | 75%-125% | | +/- 20% OR +/-CRDL |

000033

# MATRIX SPIKE/MATRIX DUPLICATE - TABLE 1.2.3

## METALS OUTLIER SUMMARY TABLE - PAGE - 3

| MS = MATRIX SPIKE *SAMPLE KB11SB020301* | | SDGs 20873 | |
|---|---|---|---|
| MD = MATRIX DUPLICATE | | MS | MD |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | RPD |
| **METALS COMPOUNDS** | UNITS | | |
| ALUMINUM | ug/L | | |
| ANTIMONY | ug/L | | |
| ARSENIC | ug/L | | |
| BARIUM | ug/L | | |
| BERYLLIUM | ug/L | | |
| CADMIUM | ug/L | | |
| CHROMIUM | ug/L | | |
| COBALT | ug/L | | |
| COPPER | ug/L | | |
| IRON | ug/L | | |
| LEAD | ug/L | | |
| MANGANESE | ug/L | | |
| MERCURY | ug/L | | |
| NICKEL | ug/L | | |
| SELENIUM | ug/L | | |
| SILVER | ug/L | | |
| THALLIUM | ug/L | | |
| VANADIUM | ug/L | | |
| ZINC | ug/L | | |
| CYANIDE | ug/L | | |

*** DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS**

**CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES**

20873: KB11SB020301, KB11SB030301, KB11SB030301D, KB11SB040301, KB11SB050301, KB11SB060301, KBBS00401ER

| COMPOUND | ADVISORY LIMITS | | | RPD |
|---|---|---|---|---|
| | WATER | SOIL | | WATER/SOIL |
| ALL COMPOUNDS | 75%-125% | 75%-125% | | +/- 20% OR +/-CRDL |

# MATRIX SPIKE/MATRIX DUPLICATE - TABLE 1.2.3

## METALS OUTLIER SUMMARY TABLE - PAGE - 4

| MS = MATRIX SPIKE *SAMPLES BS05ER, RB-6D,* | | SDG 20900 | |
|---|---|---|---|
| MD = MATRIX DUPLICATE *16SB0405, 16SB0105* | | MS | MD |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | RPD |
| **METALS COMPOUNDS** | UNITS | | |
| ALUMINUM | ug/L | | |
| ANTIMONY | ug/L | | |
| ARSENIC | ug/L | | |
| BARIUM | ug/L | | |
| BERYLLIUM | ug/L | | |
| CADMIUM | ug/L | | |
| CHROMIUM | ug/L | | |
| COBALT | ug/L | | |
| COPPER | ug/L | | |
| IRON | ug/L | | |
| LEAD | ug/L | | |
| MANGANESE | ug/L | | |
| MERCURY | ug/L | | |
| NICKEL | ug/L | | |
| SELENIUM | ug/L | | |
| SILVER | ug/L | | |
| THALLIUM | ug/L | | |
| VANADIUM | ug/L | | |
| ZINC | ug/L | | |
| CYANIDE | ug/L | | |

*** DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS**

**CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES**

20900:BT05FB, BS05ER, RB-6, 16SB0105, 16SB0305, 16SB0405

| COMPOUND | ADVISORY LIMITS | | | RPD |
|---|---|---|---|---|
| | WATER | SOIL | | WATER/SOIL |
| ALL COMPOUNDS | 75%-125% | 75%-125% | | +/- 20% OR +/-CRDL |

000041

# MATRIX SPIKE/MATRIX DUPLICATE - TABLE 1.2.3

## METALS OUTLIER SUMMARY TABLE - PAGE - 5

| MS = MATRIX SPIKE *SAMPLE BS06ER*<br>MD = MATRIX DUPLICATE<br>RPD = RELATIVE PERCENT DIFFERENCE | | SDGs 20917 | |
|---|---|---|---|
| | | MS | MD |
| | | %R | RPD |
| **METALS COMPOUNDS** | UNITS | | |
| ALUMINUM | ug/L | | |
| ANTIMONY | ug/L | | |
| ARSENIC | ug/L | | |
| BARIUM | ug/L | | |
| BERYLLIUM | ug/L | | |
| CADMIUM | ug/L | | |
| CHROMIUM | ug/L | | |
| COBALT | ug/L | | |
| COPPER | ug/L | | |
| IRON | ug/L | | |
| LEAD | ug/L | | |
| MANGANESE | ug/L | | |
| MERCURY | ug/L | | |
| NICKEL | ug/L | | |
| SELENIUM | ug/L | | |
| SILVER | ug/L | | |
| THALLIUM | ug/L | | |
| VANADIUM | ug/L | | |
| ZINC | ug/L | | |
| CYANIDE | ug/L | | |

*** DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS**

**CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES**

20917: 16SB0206, BS06ER, BS06ERD

| COMPOUND | ADVISORY LIMITS | | | RPD |
|---|---|---|---|---|
| | WATER | SOIL | | WATER/SOIL |
| ALL COMPOUNDS | 75%-125% | 75%-125% | | +/- 20% OR +/-CRDL |

# MATRIX SPIKE/MATRIX DUPLICATE - TABLE 1.2.3

## METALS OUTLIER SUMMARY TABLE - PAGE - 6

| MS = MATRIX SPIKE *SAMPLES 05SS01,* | | SDG 20940 | |
|---|---|---|---|
| MD = MATRIX DUPLICATE *05SS04* | | MS | MD |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | RPD |
| **METALS COMPOUNDS** | UNITS | | |
| ALUMINUM | ug/L | | |
| ANTIMONY | ug/L | | |
| ARSENIC | ug/L | | |
| BARIUM | ug/L | | |
| BERYLLIUM | ug/L | | |
| CADMIUM | ug/L | | |
| CHROMIUM | ug/L | | |
| COBALT | ug/L | | |
| COPPER | ug/L | | |
| IRON | ug/L | | |
| LEAD | ug/L | | |
| MANGANESE | ug/L | | |
| MERCURY | ug/L | | |
| NICKEL | ug/L | | |
| SELENIUM | ug/L | | |
| SILVER | ug/L | | |
| THALLIUM | ug/L | | |
| VANADIUM | ug/L | | |
| ZINC | ug/L | | |
| CYANIDE | ug/L | | |

*** DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS**

**CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES**

20940: 05SS01, 05SS02, 05SS03, 05SS04, 05SS05, 05SS06, 05SS07, BS07ER

| COMPOUND | ADVISORY LIMITS | | | RPD |
|---|---|---|---|---|
| | WATER | SOIL | | WATER/SOIL |
| ALL COMPOUNDS | 75%-125% | 75%-125% | | +/- 20% OR +/-CRDL |

000043

# MATRIX SPIKE/MATRIX DUPLICATE - TABLE 1.2.3

## METALS OUTLIER SUMMARY TABLE - PAGE - 7

| MS = MATRIX SPIKE *SAMPLE KBA-16-3* | | SDGs 21002 | |
|---|---|---|---|
| MD = MATRIX DUPLICATE | | MS | MD |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | RPD |
| **METALS COMPOUNDS** | UNITS | | |
| ALUMINUM | ug/L | | |
| ANTIMONY | ug/L | *36 | |
| ARSENIC | ug/L | | |
| BARIUM | ug/L | | |
| BERYLLIUM | ug/L | | |
| CADMIUM | ug/L | | |
| CHROMIUM | ug/L | | |
| COBALT | ug/L | | |
| COPPER | ug/L | | |
| IRON | ug/L | | |
| LEAD | ug/L | *29 | |
| MANGANESE | ug/L | | |
| MERCURY | ug/L | | |
| NICKEL | ug/L | | |
| SELENIUM | ug/L | | |
| SILVER | ug/L | | |
| THALLIUM | ug/L | *48 | |
| VANADIUM | ug/L | | |
| ZINC | ug/L | | |
| CYANIDE | ug/L | | |

*** DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS**

**CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES**

21002: KBA-11-2, KBA-11-3, KBA-11-3D, KBA-16-2, BS10ER, KBA-16-3, KBA-16-1

| COMPOUND | ADVISORY LIMITS | | | RPD |
|---|---|---|---|---|
| | WATER | SOIL | | WATER/SOIL |
| ALL COMPOUNDS | 75%-125% | 75%-125% | | +/- 20% OR +/-CRDL |

000044

# MATRIX SPIKE/MATRIX DUPLICATE - TABLE 1.2.3

## METALS OUTLIER SUMMARY TABLE - PAGE - 8

| MS = MATRIX SPIKE *SAMPLE BS11ER* | | SDGs 21012 | |
|---|---|---|---|
| MD = MATRIX DUPLICATE | | MS | MD |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | RPD |
| **METALS COMPOUNDS** | UNITS | | |
| ALUMINUM | ug/L | | |
| ANTIMONY | ug/L | | |
| ARSENIC | ug/L | | * |
| BARIUM | ug/L | | |
| BERYLLIUM | ug/L | | |
| CADMIUM | ug/L | | |
| CHROMIUM | ug/L | | |
| COBALT | ug/L | | |
| COPPER | ug/L | | |
| IRON | ug/L | | |
| LEAD | ug/L | | * |
| MANGANESE | ug/L | | |
| MERCURY | ug/L | | |
| NICKEL | ug/L | | |
| SELENIUM | ug/L | | |
| SILVER | ug/L | | |
| THALLIUM | ug/L | | |
| VANADIUM | ug/L | | |
| ZINC | ug/L | | |
| CYANIDE | ug/L | | |

*** DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS**

**CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES**

21012: KBA-16-4, BS11ER.

| COMPOUND | ADVISORY LIMITS | | | RPD |
|---|---|---|---|---|
| | WATER | SOIL | | WATER/SOIL |
| ALL COMPOUNDS | 75%-125% | 75%-125% | | +/- 20% OR +/-CRDL |

000045

# MATRIX SPIKE/MATRIX DUPLICATE - TABLE 1.2.3

## METALS OUTLIER SUMMARY TABLE - PAGE - 9

| MS = MATRIX SPIKE *SAMPLES KBA-5-1,*<br>MD = MATRIX DUPLICATE *BS08ER*<br>RPD = RELATIVE PERCENT DIFFERENCE | | SDG 20985 | |
|---|---|---|---|
| | | MS | MD |
| | | %R | RPD |
| **METALS COMPOUNDS** | UNITS | | |
| ALUMINUM | ug/L | | |
| ANTIMONY | ug/L | | |
| ARSENIC | ug/L | | |
| BARIUM | ug/L | | |
| BERYLLIUM | ug/L | | |
| CADMIUM | ug/L | | |
| CHROMIUM | ug/L | | |
| COBALT | ug/L | | |
| COPPER | ug/L | | |
| IRON | ug/L | | |
| LEAD | ug/L | | |
| MANGANESE | ug/L | | |
| MERCURY | ug/L | | |
| NICKEL | ug/L | | |
| SELENIUM | ug/L | | |
| SILVER | ug/L | | |
| THALLIUM | ug/L | | |
| VANADIUM | ug/L | | |
| ZINC | ug/L | | *140.4 |
| CYANIDE | ug/L | | |

*** DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS**

**CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES**

20985: KBA-5-1, KBA-5-2, KBA-5-3, KBA-5-4, KBA-5-5, KBA-5-6, KBA-5-7, BS08ER

| COMPOUND | ADVISORY LIMITS | | | RPD |
|---|---|---|---|---|
| | WATER | SOIL | | WATER/SOIL |
| ALL COMPOUNDS | 75%-125% | 75%-125% | | +/- 20% OR +/-CRDL |

# MATRIX SPIKE/MATRIX DUPLICATE - TABLE 1.2.3

## METALS OUTLIER SUMMARY TABLE - PAGE 10

| MS = MATRIX SPIKE *SAMPLE KBA-11-9*<br>MD = MATRIX DUPLICATE<br>RPD = RELATIVE PERCENT DIFFERENCE | | SDG 20997 | |
|---|---|---|---|
| | | MS | MD |
| | | %R | RPD |
| **METALS COMPOUNDS** | UNITS | | |
| ALUMINUM | ug/L | | |
| ANTIMONY | ug/L | | |
| ARSENIC | ug/L | | |
| BARIUM | ug/L | | |
| BERYLLIUM | ug/L | | |
| CADMIUM | ug/L | | |
| CHROMIUM | ug/L | | *64.4 |
| COBALT | ug/L | | |
| COPPER | ug/L | | |
| IRON | ug/L | | |
| LEAD | ug/L | *45.0 | *45.7 |
| MANGANESE | ug/L | | |
| MERCURY | ug/L | | |
| NICKEL | ug/L | | |
| SELENIUM | ug/L | | |
| SILVER | ug/L | | |
| THALLIUM | ug/L | | |
| VANADIUM | ug/L | | |
| ZINC | ug/L | | |
| TIN | ug/L | *0 | |
| CYANIDE | ug/L | | |

*** DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS**

**CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES**

20997: KBA-11-1 KBA-11-7, KBA-11-9, KBA-11-8, BS09ER, KBA-11-4, KBA-11-5, BS02FB, BS03FB

| COMPOUND | ADVISORY LIMITS | | | RPD |
|---|---|---|---|---|
| | WATER | SOIL | | WATER/SOIL |
| ALL COMPOUNDS | 75%-125% | 75%-125% | | +/- 20% OR +/-CRDL |

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# MATRIX SPIKE/MATRIX DUPLICATE - TABLE 1.2.3

## METALS OUTLIER SUMMARY TABLE - PAGE 11

| MS = MATRIX SPIKE *SAMPLE KBA-5-3*<br>MD = MATRIX DUPLICATE<br>RPD = RELATIVE PERCENT DIFFERENCE | | SDGs 21616 | |
|---|---|---|---|
| | | MS | MD |
| | | %R | RPD |
| **METALS COMPOUNDS** | UNITS | | |
| ALUMINUM | ug/L | | |
| ANTIMONY | ug/L | | |
| ARSENIC | ug/L | | |
| BARIUM | ug/L | | |
| BERYLLIUM | ug/L | | |
| CADMIUM | ug/L | | |
| CHROMIUM | ug/L | | |
| COBALT | ug/L | | |
| COPPER | ug/L | | |
| IRON | ug/L | | |
| LEAD | ug/L | | |
| MANGANESE | ug/L | | |
| MERCURY | ug/L | *129 | |
| NICKEL | ug/L | | |
| SELENIUM | ug/L | | |
| SILVER | ug/L | | |
| THALLIUM | ug/L | | |
| VANADIUM | ug/L | | |
| ZINC | ug/L | | |
| CYANIDE | ug/L | | |

*** DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS**

**CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES**

21616: KBA-16-2, KBA-16-1, KBA-5-3, KBA-5-4, BS13ER

| COMPOUND | ADVISORY LIMITS | | | RPD |
|---|---|---|---|---|
| | WATER | SOIL | | WATER/SOIL |
| ALL COMPOUNDS | 75%-125% | 75%-125% | | +/- 20% OR +/-CRDL |

# MATRIX SPIKE/MATRIX DUPLICATE - TABLE 1.2.3

## METALS OUTLIER SUMMARY TABLE - PAGE -12

| MS = MATRIX SPIKE *SAMPLE KBA-11-1* | | SDG 21599 | |
|---|---|---|---|
| MD = MATRIX DUPLICATE | | MS | MD |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | RPD |
| **METALS COMPOUNDS** | UNITS | | |
| ALUMINUM | ug/L | | |
| ANTIMONY | ug/L | | |
| ARSENIC | ug/L | *66 | |
| BARIUM | ug/L | | |
| BERYLLIUM | ug/L | | |
| CADMIUM | ug/L | | |
| CHROMIUM | ug/L | | |
| COBALT | ug/L | | |
| COPPER | ug/L | | |
| IRON | ug/L | | |
| LEAD | ug/L | | |
| MANGANESE | ug/L | | |
| MERCURY | ug/L | | |
| NICKEL | ug/L | | |
| SELENIUM | ug/L | | |
| SILVER | ug/L | | |
| THALLIUM | ug/L | | |
| VANADIUM | ug/L | | |
| ZINC | ug/L | | |
| CYANIDE | ug/L | | |

*** DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS**

**CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES**

21599: BS12ER, KBA-16-3, KBA-16-4

21628: KBA-5-1, KBA-5-2, BS14ER, KBA-5-5, KBA-5-5D, KBA-5-7, KBA-5-6

| COMPOUND | ADVISORY LIMITS | | | RPD |
|---|---|---|---|---|
| | WATER | SOIL | | WATER/SOIL |
| ALL COMPOUNDS | 75%-125% | 75%-125% | | +/- 20% OR +/-CRDL |

# MATRIX SPIKE/MATRIX DUPLICATE - TABLE 1.2.3

## METALS OUTLIER SUMMARY TABLE - PAGE -13

| MS = MATRIX SPIKE SAMPLE KBA-11-7 | | SDG 21644 | |
|---|---|---|---|
| MD = MATRIX DUPLICATE | | MS | MD |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | RPD |
| METALS COMPOUNDS | UNITS | | |
| ALUMINUM | ug/L | | |
| ANTIMONY | ug/L | | |
| ARSENIC | ug/L | *66 | |
| BARIUM | ug/L | | |
| BERYLLIUM | ug/L | | |
| CADMIUM | ug/L | | |
| CHROMIUM | ug/L | | |
| COBALT | ug/L | | |
| COPPER | ug/L | | |
| IRON | ug/L | | |
| LEAD | ug/L | | |
| MANGANESE | ug/L | | |
| MERCURY | ug/L | | |
| NICKEL | ug/L | | |
| SELENIUM | ug/L | | |
| SILVER | ug/L | | |
| THALLIUM | ug/L | | |
| VANADIUM | ug/L | | |
| ZINC | ug/L | | |
| CYANIDE | ug/L | | |

* DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS

CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES

21644: KBA-11-1, KBA-11-9, BS15ER, KBA-11-8, KBA-11-7, KBA-11-2, KBA-11-2D

| COMPOUND | ADVISORY LIMITS | | | RPD |
|---|---|---|---|---|
| | WATER | SOIL | | WATER/SOIL |
| ALL COMPOUNDS | 75%-125% | 75%-125% | | +/- 20% OR +/-CRDL |

# MATRIX SPIKE/MATRIX DUPLICATE - TABLE 1.2.3

## METALS OUTLIER SUMMARY TABLE - PAGE -14

| MS = MATRIX SPIKE SAMPLE KBA-5-3 | | SDGs 21652 | |
|---|---|---|---|
| MD = MATRIX DUPLICATE | | MS | MD |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | RPD |
| METALS COMPOUNDS | UNITS | | |
| ALUMINUM | ug/L | | |
| ANTIMONY | ug/L | | |
| ARSENIC | ug/L | | |
| BARIUM | ug/L | | |
| BERYLLIUM | ug/L | | |
| CADMIUM | ug/L | | |
| CHROMIUM | ug/L | | |
| COBALT | ug/L | | |
| COPPER | ug/L | | |
| IRON | ug/L | | |
| LEAD | ug/L | | |
| MANGANESE | ug/L | | |
| MERCURY | ug/L | *129 | |
| NICKEL | ug/L | | |
| SELENIUM | ug/L | | |
| SILVER | ug/L | | |
| THALLIUM | ug/L | | |
| VANADIUM | ug/L | | |
| ZINC | ug/L | | |
| CYANIDE | ug/L | *70 | |

* DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS

CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES

21652: BS05FB, BS04FB, BS16ER, KBA-11-3, KBA-11-4, KBA-11-5, KBA-11-6

| COMPOUND | ADVISORY LIMITS | | | RPD |
|---|---|---|---|---|
| | WATER | SOIL | | WATER/SOIL |
| ALL COMPOUNDS | 75%-125% | 75%-125% | | +/- 20% OR +/-CRDL |

# MATRIX SPIKE/MATRIX DUPLICATE - TABLE 1.2.3

## METALS OUTLIER SUMMARY TABLE - PAGE -15

| MS = MATRIX SPIKE SAMPLE KBA-5-3A<br>MD = MATRIX DUPLICATE<br>RPD = RELATIVE PERCENT DIFFERENCE | | SDGs 22201 | |
|---|---|---|---|
| | | MS | MD |
| | | %R | RPD |
| METALS COMPOUNDS | UNITS | | |
| ALUMINUM | ug/L | | |
| ANTIMONY | ug/L | | |
| ARSENIC | ug/L | | |
| BARIUM | ug/L | | |
| BERYLLIUM | ug/L | | |
| CADMIUM | ug/L | | |
| CHROMIUM | ug/L | | |
| COBALT | ug/L | | |
| COPPER | ug/L | *636 | *187.1 |
| IRON | ug/L | | |
| LEAD | ug/L | *126 | |
| MANGANESE | ug/L | | |
| MERCURY | ug/L | | |
| NICKEL | ug/L | | |
| SELENIUM | ug/L | | |
| SILVER | ug/L | | |
| THALLIUM | ug/L | | |
| VANADIUM | ug/L | | |
| ZINC | ug/L | *152 | *76.2 |
| CYANIDE | ug/L | | |

* DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS

CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES

22201: KBA-11-1, KBA-11-1F, KBA-11-3, BS-18-ER1, KBA-11-4, KBA-11-5, KBA-11-6, KBA-5-1, KBA-5-2, KBA-5-3A, KBA-5-3D1

| COMPOUND | ADVISORY LIMITS | | | RPD |
|---|---|---|---|---|
| | WATER | SOIL | | WATER/SOIL |
| ALL COMPOUNDS | 75%-125% | 75%-125% | | +/- 20% OR +/-CRDL |

# MATRIX SPIKE/MATRIX DUPLICATE - TABLE 1.2.3

## METALS OUTLIER SUMMARY TABLE - PAGE -16

| MS = MATRIX SPIKE SAMPLE KBA-11-2<br>MD = MATRIX DUPLICATE<br>RPD = RELATIVE PERCENT DIFFERENCE | | SDGs 22191 | |
|---|---|---|---|
| | | MS | MD |
| | | %R | RPD |
| METALS COMPOUNDS | UNITS | | |
| ALUMINUM | ug/L | | |
| ANTIMONY | ug/L | | |
| ARSENIC | ug/L | *72 | |
| BARIUM | ug/L | | |
| BERYLLIUM | ug/L | | |
| CADMIUM | ug/L | | |
| CHROMIUM | ug/L | | |
| COBALT | ug/L | | |
| COPPER | ug/L | | |
| IRON | ug/L | | |
| LEAD | ug/L | *62 | |
| MANGANESE | ug/L | | |
| MERCURY | ug/L | | |
| NICKEL | ug/L | | |
| SELENIUM | ug/L | | |
| SILVER | ug/L | | |
| THALLIUM | ug/L | *75 | |
| VANADIUM | ug/L | | |
| ZINC | ug/L | | |
| CYANIDE | ug/L | | |

* DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS

CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES

22191: KBA-11-2, KBA-11-2D, KBA-11-2F, KBA-11-7, KBA-11-7F, KBA-11-8, KBA-11-8F, KBA-11-9, KBA-11-9F

| COMPOUND | ADVISORY LIMITS | | | RPD |
|---|---|---|---|---|
| | WATER | SOIL | | WATER/SOIL |
| ALL COMPOUNDS | 75%-125% | 75%-125% | | +/- 20% OR +/-CRDL |

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# MATRIX SPIKE/MATRIX DUPLICATE - TABLE 1.2.3

## METALS OUTLIER SUMMARY TABLE - PAGE -17

| MS = MATRIX SPIKE SAMPLE KBA-16-4<br>MD = MATRIX DUPLICATE<br>RPD = RELATIVE PERCENT DIFFERENCE | | SDGs 22205 | |
|---|---|---|---|
| | | MS | MD |
| | | %R | RPD |
| METALS COMPOUNDS | UNITS | | |
| ALUMINUM | ug/L | | |
| ANTIMONY | ug/L | | |
| ARSENIC | ug/L | *72 | |
| BARIUM | ug/L | | |
| BERYLLIUM | ug/L | | |
| CADMIUM | ug/L | | |
| CHROMIUM | ug/L | | |
| COBALT | ug/L | | |
| COPPER | ug/L | | |
| IRON | ug/L | | |
| LEAD | ug/L | *62 | |
| MANGANESE | ug/L | | |
| MERCURY | ug/L | | |
| NICKEL | ug/L | | |
| SELENIUM | ug/L | | |
| SILVER | ug/L | | |
| THALLIUM | ug/L | *75 | |
| VANADIUM | ug/L | | |
| ZINC | ug/L | | |
| CYANIDE | ug/L | | |

* DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS

CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES

22191: KBA-11-2, KBA-11-2D, KBA-11-2F, KBA-11-7, KBA-11-7F, KBA-11-8, KBA-11-8F, KBA-11-9, KBA-11-9F

| COMPOUND | ADVISORY LIMITS | | | RPD |
|---|---|---|---|---|
| | WATER | SOIL | | WATER/SOIL |
| ALL COMPOUNDS | 75%-125% | 75%-125% | | +/- 20% OR +/-CRDL |

# MATRIX SPIKE/MATRIX DUPLICATE - TABLE 1.2.3

## METALS OUTLIER SUMMARY TABLE - PAGE -18

| MS = MATRIX SPIKE SAMPLE BS-20-ER<br>MD = MATRIX DUPLICATE<br>RPD = RELATIVE PERCENT DIFFERENCE | | SDGs 22203 | |
|---|---|---|---|
| | | MS | MD |
| | | %R | RPD |
| METALS COMPOUNDS | UNITS | | |
| ALUMINUM | ug/L | | |
| ANTIMONY | ug/L | | |
| ARSENIC | ug/L | | |
| BARIUM | ug/L | | |
| BERYLLIUM | ug/L | | |
| CADMIUM | ug/L | | |
| CHROMIUM | ug/L | | |
| COBALT | ug/L | | |
| COPPER | ug/L | | |
| IRON | ug/L | | |
| LEAD | ug/L | | |
| MANGANESE | ug/L | | |
| MERCURY | ug/L | | |
| NICKEL | ug/L | | |
| SELENIUM | ug/L | | |
| SILVER | ug/L | | |
| THALLIUM | ug/L | | |
| VANADIUM | ug/L | | |
| ZINC | ug/L | | |
| CYANIDE | ug/L | | |

* DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS

CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES

22203: BS-20-ER, KBA-5-7, KBA-5-6, KBA-5-5, KBA-5-4, KBA-5-5D, KBA-5-7F, KBA-5-6F, KBA-5-5F, KBA-5-4F

| COMPOUND | ADVISORY LIMITS | | | RPD |
|---|---|---|---|---|
| | WATER | SOIL | | WATER/SOIL |
| ALL COMPOUNDS | 75%-125% | 75%-125% | | +/- 20% OR +/-CRDL |

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# MATRIX SPIKE/MATRIX DUPLICATE - TABLE 1.2.3

## METALS OUTLIER SUMMARY TABLE - PAGE -19

| MS = MATRIX SPIKE SAMPLE BS-07-FB<br>MD = MATRIX DUPLICATE<br>RPD = RELATIVE PERCENT DIFFERENCE | | SDGs 22208 | |
|---|---|---|---|
| | | MS | MD |
| | | %R | RPD |
| METALS COMPOUNDS | UNITS | | |
| ALUMINUM | ug/L | | |
| ANTIMONY | ug/L | | |
| ARSENIC | ug/L | | |
| BARIUM | ug/L | | |
| BERYLLIUM | ug/L | | |
| CADMIUM | ug/L | | |
| CHROMIUM | ug/L | | |
| COBALT | ug/L | | |
| COPPER | ug/L | | |
| IRON | ug/L | | |
| LEAD | ug/L | | |
| MANGANESE | ug/L | | |
| MERCURY | ug/L | | |
| NICKEL | ug/L | | |
| SELENIUM | ug/L | | |
| SILVER | ug/L | | |
| THALLIUM | ug/L | | |
| VANADIUM | ug/L | | |
| ZINC | ug/L | | |
| CYANIDE | ug/L | | |

* DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS

CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES

22208: BS-07-FB, BS-08-FB, BS-06-FB

| COMPOUND | ADVISORY LIMITS | | | RPD |
|---|---|---|---|---|
| | WATER | SOIL | | WATER/SOIL |
| ALL COMPOUNDS | 75%-125% | 75%-125% | | +/- 20% OR +/-CRDL |

# MATRIX SPIKE/MATRIX DUPLICATE - TABLE 1.2.3

## METALS OUTLIER SUMMARY TABLE - PAGE -20

| MS = MATRIX SPIKE SAMPLES KBA-11-8F, | | SDGs 22710 | |
|---|---|---|---|
| MD = MATRIX DUPLICATE | | MS | MD |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | RPD |
| METALS COMPOUNDS | UNITS | | |
| ALUMINUM | ug/L | | |
| ANTIMONY | ug/L | | |
| ARSENIC | ug/L | | |
| BARIUM | ug/L | | |
| BERYLLIUM | ug/L | | |
| CADMIUM | ug/L | | |
| CHROMIUM | ug/L | | |
| COBALT | ug/L | | |
| COPPER | ug/L | | |
| IRON | ug/L | | |
| LEAD | ug/L | | |
| MANGANESE | ug/L | | |
| MERCURY | ug/L | | |
| NICKEL | ug/L | | |
| SELENIUM | ug/L | | |
| SILVER | ug/L | | |
| THALLIUM | ug/L | | |
| VANADIUM | ug/L | | |
| ZINC | ug/L | | *136.8 |
| CYANIDE | ug/L | | |

* DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS

CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES

22710: KBA-11-8F, KBA-11-1F, KBA-11-4F, KBA-11-5F, KBA-11-3F, KBA-11-2F
KBA-11-6F, KBA-11-7F, KBA-11-9F

| COMPOUND | ADVISORY LIMITS | | | RPD |
|---|---|---|---|---|
| | WATER | SOIL | | WATER/SOIL |
| ALL COMPOUNDS | 75%-125% | 75%-125% | | +/- 20% OR +/-CRDL |

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# MATRIX SPIKE/MATRIX DUPLICATE - TABLE 1.2.3

## METALS OUTLIER SUMMARY TABLE - PAGE -21

| MS = MATRIX SPIKE SAMPLE KBA-11-2<br>MD = MATRIX DUPLICATE<br>RPD = RELATIVE PERCENT DIFFERENCE | | SDGs 22711 | |
|---|---|---|---|
| | | MS | MD |
| | | %R | RPD |
| METALS COMPOUNDS | UNITS | | |
| ALUMINUM | ug/L | | |
| ANTIMONY | ug/L | | |
| ARSENIC | ug/L | | |
| BARIUM | ug/L | | |
| BERYLLIUM | ug/L | | |
| CADMIUM | ug/L | | |
| CHROMIUM | ug/L | | |
| COBALT | ug/L | | |
| COPPER | ug/L | | |
| IRON | ug/L | | |
| LEAD | ug/L | *59 | |
| MANGANESE | ug/L | | |
| MERCURY | ug/L | | |
| NICKEL | ug/L | | |
| SELENIUM | ug/L | *36 | |
| SILVER | ug/L | *73 | |
| THALLIUM | ug/L | *67 | |
| VANADIUM | ug/L | | |
| ZINC | ug/L | | *92.4 |
| CYANIDE | ug/L | | |

* DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS

CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES

22711: KBA-11-8, KBA-11-1, BS-22-ER, BS-23-ER, KBA-11-4, KBA-11-5, KBA-11-3, KBA-11-6, KBA-11-7, KBA-11-9, KBA-11-2, KBA-11-9D, KBA-11-2D

| COMPOUND | ADVISORY LIMITS | | | RPD |
|---|---|---|---|---|
| | WATER | SOIL | | WATER/SOIL |
| ALL COMPOUNDS | 75%-125% | 75%-125% | | +/- 20% OR +/-CRDL |

# MATRIX SPIKE/MATRIX DUPLICATE - TABLE 1.2.3

## METALS OUTLIER SUMMARY TABLE - PAGE -22

| MS = MATRIX SPIKE SAMPLE KBA-5-3 | | SDGs 22727 | |
|---|---|---|---|
| MD = MATRIX DUPLICATE | | MS | MD |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | RPD |
| METALS COMPOUNDS | UNITS | | |
| ALUMINUM | ug/L | | |
| ANTIMONY | ug/L | | |
| ARSENIC | ug/L | | |
| BARIUM | ug/L | | |
| BERYLLIUM | ug/L | | |
| CADMIUM | ug/L | | |
| CHROMIUM | ug/L | | |
| COBALT | ug/L | | |
| COPPER | ug/L | | |
| IRON | ug/L | | |
| LEAD | ug/L | *50 | |
| MANGANESE | ug/L | | |
| MERCURY | ug/L | | |
| NICKEL | ug/L | *131 | |
| SELENIUM | ug/L | *69 | |
| SILVER | ug/L | | |
| THALLIUM | ug/L | *35 | |
| VANADIUM | ug/L | | |
| ZINC | ug/L | *130 | |
| CYANIDE | ug/L | | |

* DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS

CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES

22727: KBA-5-4, KBA-5-4F, BS-25-ER, KBA-5-1, KBA-5-2, KBA-5-3, KBA-5-3D, KBA-5-3F, KBA-5-1F, KBA-5-2F

| COMPOUND | ADVISORY LIMITS | | | RPD |
|---|---|---|---|---|
| | WATER | SOIL | | WATER/SOIL |
| ALL COMPOUNDS | 75%-125% | 75%-125% | | +/- 20% OR +/-CRDL |

# MATRIX SPIKE/MATRIX DUPLICATE - TABLE 1.2.3

## METALS OUTLIER SUMMARY TABLE - PAGE -23

| MS = MATRIX SPIKE SAMPLE KBA-16-2F | | SDGs 22723 | |
|---|---|---|---|
| MD = MATRIX DUPLICATE | | MS | MD |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | RPD |
| METALS COMPOUNDS | UNITS | | |
| ALUMINUM | ug/L | | |
| ANTIMONY | ug/L | | |
| ARSENIC | ug/L | | |
| BARIUM | ug/L | | |
| BERYLLIUM | ug/L | | |
| CADMIUM | ug/L | | |
| CHROMIUM | ug/L | | |
| COBALT | ug/L | | |
| COPPER | ug/L | | |
| IRON | ug/L | | |
| LEAD | ug/L | | |
| MANGANESE | ug/L | | |
| MERCURY | ug/L | | |
| NICKEL | ug/L | | |
| SELENIUM | ug/L | | |
| SILVER | ug/L | | |
| THALLIUM | ug/L | | |
| VANADIUM | ug/L | | |
| ZINC | ug/L | | |
| CYANIDE | ug/L | | |

* DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS

CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES

22723: KBA-16-1, KBA-16-1F, KBA-16-2, KBA-16-3, KBA-16-4, BS-24-ER, KBA-16-2F
KBA-KBA-16-3F, KBA-16-4F

| COMPOUND | ADVISORY LIMITS | | | RPD |
|---|---|---|---|---|
| | WATER | SOIL | | WATER/SOIL |
| ALL COMPOUNDS | 75%-125% | 75%-125% | | +/- 20% OR +/-CRDL |

# MATRIX SPIKE/MATRIX DUPLICATE - TABLE 1.2.3

## METALS OUTLIER SUMMARY TABLE - PAGE -24

| MS = MATRIX SPIKE SAMPLE KBA-11-2F<br>MD = MATRIX DUPLICATE<br>RPD = RELATIVE PERCENT DIFFERENCE | | SDGs 34467 | |
|---|---|---|---|
| | | MS | MD |
| | | %R | RPD |
| METALS COMPOUNDS | UNITS | | |
| ALUMINUM | ug/L | | |
| ANTIMONY | ug/L | | |
| ARSENIC | ug/L | | |
| BARIUM | ug/L | | |
| BERYLLIUM | ug/L | | |
| CADMIUM | ug/L | | |
| CHROMIUM | ug/L | | |
| COBALT | ug/L | | |
| COPPER | ug/L | | |
| IRON | ug/L | | |
| LEAD | ug/L | | |
| MANGANESE | ug/L | | |
| MERCURY | ug/L | | |
| NICKEL | ug/L | | |
| SELENIUM | ug/L | | |
| SILVER | ug/L | | |
| THALLIUM | ug/L | | |
| VANADIUM | ug/L | | |
| ZINC | ug/L | | *200 |
| CYANIDE | ug/L | | |

* DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS

CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES

34467: KBA-11-9, KBA-11-8, KBA-11-1, KBA-11-2, KBA-11-2D, BS-27-ER, KBA-11-9F
KBA-11-8F, KBA-11-1F, KBA-11-2F, KBA-11-2DF

| COMPOUND | ADVISORY LIMITS | | | RPD |
|---|---|---|---|---|
| | WATER | SOIL | | WATER/SOIL |
| ALL COMPOUNDS | 75%-125% | 75%-125% | | +/- 20% OR +/-CRDL |

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# MATRIX SPIKE/MATRIX DUPLICATE - TABLE 1.2.3

## METALS OUTLIER SUMMARY TABLE - PAGE -25

| MS = MATRIX SPIKE SAMPLE KBA-11-2<br>MD = MATRIX DUPLICATE<br>RPD = RELATIVE PERCENT DIFFERENCE | | SDGs 23710 | |
|---|---|---|---|
| | | MS | MD |
| | | %R | RPD |
| METALS COMPOUNDS | UNITS | | |
| ALUMINUM | ug/L | | |
| ANTIMONY | ug/L | | |
| ARSENIC | ug/L | | |
| BARIUM | ug/L | | |
| BERYLLIUM | ug/L | | |
| CADMIUM | ug/L | | |
| CHROMIUM | ug/L | | |
| COBALT | ug/L | | |
| COPPER | ug/L | | |
| IRON | ug/L | | |
| LEAD | ug/L | | |
| MANGANESE | ug/L | | |
| MERCURY | ug/L | | |
| NICKEL | ug/L | | |
| SELENIUM | ug/L | | |
| SILVER | ug/L | | |
| THALLIUM | ug/L | | |
| VANADIUM | ug/L | | |
| ZINC | ug/L | | |
| CYANIDE | ug/L | | |

* DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS

CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES

23710: BS-18-FB, BS-16-FB, BS-17-FB, BS-33-ER, KBA-11-2, KBA-11-2F, KBA-11-2DF, KBA-11-1, KBA-11-1F, KBA-11-8F, KBA-11-8

| COMPOUND | ADVISORY LIMITS | | | RPD |
|---|---|---|---|---|
| | WATER | SOIL | | WATER/SOIL |
| ALL COMPOUNDS | 75%-125% | 75%-125% | | +/- 20% OR +/-CRDL |

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# MATRIX SPIKE/MATRIX DUPLICATE - TABLE 1.2.3

## METALS OUTLIER SUMMARY TABLE - PAGE -26

| MS = MATRIX SPIKE SAMPLE KBA-11-9F | | SDGs 23726 | |
|---|---|---|---|
| MD = MATRIX DUPLICATE | | MS | MD |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | RPD |
| METALS COMPOUNDS | UNITS | | |
| ALUMINUM | ug/L | | |
| ANTIMONY | ug/L | | |
| ARSENIC | ug/L | | |
| BARIUM | ug/L | | |
| BERYLLIUM | ug/L | | |
| CADMIUM | ug/L | | |
| CHROMIUM | ug/L | | |
| COBALT | ug/L | | |
| COPPER | ug/L | | |
| IRON | ug/L | | |
| LEAD | ug/L | | |
| MANGANESE | ug/L | | |
| MERCURY | ug/L | | |
| NICKEL | ug/L | | |
| SELENIUM | ug/L | | |
| SILVER | ug/L | | |
| THALLIUM | ug/L | | |
| VANADIUM | ug/L | | |
| ZINC | ug/L | | |
| CYANIDE | ug/L | | |

* DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS

CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES

23726: KBA-11-9, KBA-11-9F, KBA-11-7, KBA-11-7F, KBA-11-6, KBA-11-6F, KBA-11-5, KBA-11-5F, BS-34-ER, KBA-11-4, KBA-11-4F, KBA-11-3, KBA-11-3F

| COMPOUND | ADVISORY LIMITS | | | RPD |
|---|---|---|---|---|
| | WATER | SOIL | | WATER/SOIL |
| ALL COMPOUNDS | 75%-125% | 75%-125% | | +/- 20% OR +/-CRDL |

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# MATRIX SPIKE/MATRIX DUPLICATE - TABLE 1.2.3

## METALS OUTLIER SUMMARY TABLE - PAGE -27

| MS = MATRIX SPIKE SAMPLE KBA-5-3<br>MD = MATRIX DUPLICATE<br>RPD = RELATIVE PERCENT DIFFERENCE | | SDGs 23739 | |
|---|---|---|---|
| | | MS | MD |
| | | %R | RPD |
| METALS COMPOUNDS | UNITS | | |
| ALUMINUM | ug/L | | |
| ANTIMONY | ug/L | | |
| ARSENIC | ug/L | | |
| BARIUM | ug/L | | |
| BERYLLIUM | ug/L | | |
| CADMIUM | ug/L | | |
| CHROMIUM | ug/L | | |
| COBALT | ug/L | | |
| COPPER | ug/L | | |
| IRON | ug/L | | |
| LEAD | ug/L | *63 | |
| MANGANESE | ug/L | | |
| MERCURY | ug/L | | |
| NICKEL | ug/L | | |
| SELENIUM | ug/L | | |
| SILVER | ug/L | | |
| THALLIUM | ug/L | | |
| VANADIUM | ug/L | | |
| ZINC | ug/L | | |
| TIN | ug/L | | *200 |
| CYANIDE | ug/L | | |

* DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS

CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES

23739: BS-21-FB, BS-19-FB, BS-20-FB, BS-35-ER KBA-5-3, KBA-5-3D, KBA-5-3F, KBA-5-3DF, KBA-5-5, KBA-5-5F

| COMPOUND | ADVISORY LIMITS | | | RPD |
|---|---|---|---|---|
| | WATER | SOIL | | WATER/SOIL |
| ALL COMPOUNDS | 75%-125% | 75%-125% | | +/- 20% OR +/-CRDL |

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# MATRIX SPIKE/MATRIX DUPLICATE - TABLE 1.2.3

## METALS OUTLIER SUMMARY TABLE - PAGE -28

| MS = MATRIX SPIKE SAMPLE KBA-16-2<br>MD = MATRIX DUPLICATE<br>RPD = RELATIVE PERCENT DIFFERENCE | | SDGs 23751 | |
|---|---|---|---|
| | | MS | MD |
| | | %R | RPD |
| METALS COMPOUNDS | UNITS | | |
| ALUMINUM | ug/L | | |
| ANTIMONY | ug/L | | |
| ARSENIC | ug/L | | |
| BARIUM | ug/L | | |
| BERYLLIUM | ug/L | | |
| CADMIUM | ug/L | | |
| CHROMIUM | ug/L | | |
| COBALT | ug/L | | |
| COPPER | ug/L | | |
| IRON | ug/L | | |
| LEAD | ug/L | | *33.9 |
| MANGANESE | ug/L | | |
| MERCURY | ug/L | | |
| NICKEL | ug/L | | |
| SELENIUM | ug/L | *68 | |
| SILVER | ug/L | | |
| THALLIUM | ug/L | | |
| VANADIUM | ug/L | | |
| ZINC | ug/L | | |
| CYANIDE | ug/L | | |

* DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS

CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES

23750: BS-36-ER, KBA-16-1, KBA-16-1F, KBA-16-2, KBA-16-2D, KBA-16-2F, KBA-16-3
KBA-KBA-16-3F, KBA-16-4, KBA-16-4F

| COMPOUND | ADVISORY LIMITS | | | RPD |
|---|---|---|---|---|
| | WATER | SOIL | | WATER/SOIL |
| ALL COMPOUNDS | 75%-125% | 75%-125% | | +/- 20% OR +/-CRDL |

000003

# MATRIX SPIKE/MATRIX SPIKE DUPLICATE - TABLE 1.2.6
## DIOXIN FURAN OUTLIER SUMMARY TABLE

| MS = MATRIX SPIKE *SAMPLE KB05SB010301* | | SDG 20867, 20865 | | |
|---|---|---|---|---|
| MSD = MATRIX SPIKE DUPLICATE | | MS | MSD | |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | %R | %RPD |
| **DIOXIN/FURAN COMPOUNDS** | UNITS | | | |
| 2,3,7,8-TCDF | NG | | | |
| 1,2,3,7,8-PeCDF | NG | | | |
| 1,2,3,4,7,8-HxCDF | NG | | | |
| 2,3,7,8-TCDD | NG | | | |
| 1,2,3,7,8-PeCDD | NG | | | |
| 1,2,3,4,7,8-HxCDD | NG | | | |

*** DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS**

**CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES**

20867: KB05SB030301, KB05SB040301, KB05SB010301, KB05SB020301, KBBS00201ER, KB11SB060201, KB11SB010301, KB11SB080301, KBBS00301ER, KB05SB020301D

20865: KBBS00101FB, KBBS00101ER, KB05SB060301, KB05SB050301, KB05SB070301

ADVISORY LIMITS NOT AVAILABLE

| MS = MATRIX SPIKE *SAMPLE 05SS01* | | SDG 20940 | | |
|---|---|---|---|---|
| MSD = MATRIX SPIKE DUPLICATE | | MS | MSD | |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | %R | %RPD |
| **DIOXIN/FURAN COMPOUNDS** | UNITS | | | |
| 2,3,7,8-TCDF | NG | | | |
| 1,2,3,7,8-PeCDF | NG | | | |
| 1,2,3,4,7,8-HxCDF | NG | | | |
| 2,3,7,8-TCDD | NG | | | |
| 1,2,3,7,8-PeCDD | NG | | | |
| 1,2,3,4,7,8-HxCDD | NG | | | |

*** DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS**

**CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES**

20940: 05SS01, 05SS02, 05SS03, 05SS04, 05SS05, 05SS06, 05SS07

ADVISORY LIMITS NOT AVAILABLE

# MATRIX SPIKE/MATRIX SPIKE DUPLICATE - TABLE 1.2.6
## DIOXIN FURAN OUTLIER SUMMARY TABLE - PAGE - 2

| MS = MATRIX SPIKE *SAMPLE KBA-11-9* | | SDG 20997 | | |
|---|---|---|---|---|
| MSD = MATRIX SPIKE DUPLICATE | | MS | MSD | |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | %R | %RPD |
| **DIOXIN/FURAN COMPOUNDS** | UNITS | | | |
| 2,3,7,8-TCDF | NG | | | |
| 1,2,3,7,8-PeCDF | NG | | | |
| 1,2,3,4,7,8-HxCDF | NG | | | |
| 2,3,7,8-TCDD | NG | | | |
| 1,2,3,7,8-PeCDD | NG | | | |
| 1,2,3,4,7,8-HxCDD | NG | | | |

*** DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS**

**CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES**

20997: KBA-11-1, KBA-11-7, KBA-11-6, KBA-11-9, KBA-11-8, BS09ER, KBA-11-4, KBA-11-5, BS02FB, BS03FB

ADVISORY LIMITS NOT AVAILABLE

| MS = MATRIX SPIKE *SAMPLE KBA-5-3* | | SDG 21616 | | |
|---|---|---|---|---|
| MSD = MATRIX SPIKE DUPLICATE | | MS | MSD | |
| RPD = RELATIVE PERCENT DIFFERENCE | | %R | %R | %RPD |
| **DIOXIN/FURAN COMPOUNDS** | UNITS | | | |
| 2,3,7,8-TCDF | NG | | | |
| 1,2,3,7,8-PeCDF | NG | | | |
| 1,2,3,4,7,8-HxCDF | NG | | | |
| 2,3,7,8-TCDD | NG | | | |
| 1,2,3,7,8-PeCDD | NG | | | |
| 1,2,3,4,7,8-HxCDD | NG | | | |

*** DENOTES VALUE NOT WITHIN QA/QC ADVISORY LIMITS**

**CORRESPONDING SDG'S WITH ASSOCIATED SAMPLES**

21616: KBA-16-2, KBA-16-1, KBA-5-3, KBA-5-4, BS13ER

ADVISORY LIMITS NOT AVAILABLE



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# CALIBRATION SUMMARY

## INITIAL CALIBRATION RESULTS

## AND

## CONTINUING CALIBRATION RESULTS

**TABLES:**

1.3, 1.3.1,
1.3.5, 1.3.6, 1.3.7

## VOLATILE ORGANIC COMPOUNDS - TABLE 1.3

### INITIAL AND CONTINUING CALIBRATION - %RSD, %D, AND RRF

| *ICAL = INITIAL CALIBRATION = %RSD* | SDG 20865 | | SDG 20867 | SDG 20873 | | | SDG 20900 |
|---|---|---|---|---|---|---|---|
| *CCAL = CONTINUING CALIBRATION = %D* | ICAL | CCAL1 | CCAL1 | CCAL1 | CCAL2 | CCAL2 | CCAL1 |
| DATE | 021492 | 021792 | 021792 | 021792 | 021892 | 021892 | 022392 |
| INSTRUMENT ID | 5100B | 5100B | 5100B | 5100B | 5100B | 5100B | 5100B |
| CALIBRATION CRITERIA | RRF | %D | %D | %D | %D | %D | %D |
| 1,4-DIOXANE | 0.003 | | | | | | |
| 1,2-DICHLOROBENZENE | | -29.1 | -29.1 | -29.1 | -33.2 | | |
| DIBROMOMETHANE | | -31.0 | -31.0 | -31.0 | -28.3 | | |
| CARBON TETRACHLORIDE | | | | | -26.2 | | |
| trans-1,3-DICHLOROPROPENE | | | | | -26.4 | | |
| CHLOROMETHANE | | | | | 39.9 | | |
| TRICHLOROFLUOROMETHANE | | | | | -27.8 | | |
| ACETONE | | | | | | 30.5 | |
| 2-BUTANONE | | | | | | 31.9 | |
| 2-HEXANONE | | | | | | 37.2 | |
| 4-METHYL-2-PENTANONE | | | | | | 32.9 | |
| ACROLEIN | | | | | | 27.5 | |
| ETHYL METHACRYLATE | | | | | | 25.6 | |
| 1,2,3-TRICHLOROPROPANE | | | | | | 25.6 | |
| trans-1,4-DICHLORO-2-BUTENE | | | | | | 25.6 | |
| BROMOMETHANE | | | | | | | -26.7 |

**SDG 20865**
ICAL022092: KB05SB070301DL, KB05SB070301MS, KB05SB070301MSD
CCAL1: KB05SB060301, KB05SB050301, KB05SB070301
**SDG 20867**
CCAL1: KB05SB020301D
**SDG 20873**
CCAL1: KBBT00401FB
CCAL2: KB11SB020301, KB11SB030301, KB11SB030301D, KB11SB040301, KB11SB050301, KB11SB060301, KB11SB070301, KBSB00401ER, KB11SB020301_DL
CCAL3: KB11SB040301_DL
**SDG 20900**
CCAL1: 16SB0305MS, 16SB0305MSD

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# VOLATILE ORGANIC COMPOUNDS - TABLE 1.3 - PAGE 2

## INITIAL AND CONTINUING CALIBRATION - %RSD, %D, AND RRF

| *ICAL = INITIAL CALIBRATION = %RSD* | SDG 20917 | | SDG 20940 | | | |
|---|---|---|---|---|---|---|
| *CCAL = CONTINUING CALIBRATION = %D* | ICAL | CCAL1 | ICAL | CCAL1 | CCAL2 | CCAL3 |
| DATE | 021492 | 022792 | 022092 | 022692 | 022892 | 030292 |
| INSTRUMENT ID | 5100B | 5100B | 5100B | 5100B | 5100B | 5100B |
| CALIBRATION CRITERIA | RRF | %D/RRF | RRF | %D/RRF | %D | %D |
| 1,4-DIOXANE | 0.001 | 0.002 | 0.003 | 0.003 | | |
| 1,2-DICHLOROETHANE | | -97.0 | | | | |
| 1,1,1-TRICHLOROETHANE | | -66.4 | | | | |
| CARBON TETRACHLORIDE | | -58.8 | | | | |
| BROMODICHLOROMETHANE | | -42.1 | | | | |
| trans-1,3-DICHLOROPROPANE | | -34.8 | | | | |
| BROMOFORM | | -43.6 | | | -40.6 | |
| BROMOFLUOROBENZENE | | -59.2 | | | | |
| ACETONE | | -45.5 | | | | |
| CARBON DISULFIDE | | 32.5 | | | 37.5 | |
| METHYLENE CHLORIDE | | 27.4 | | | | |
| 1,2-DICHLOROETHANE-d4 | | -99.9 | | | | |
| TRICHLOROFLUOROMETHANE | | -47.1 | | | | |
| trans-1,4-DICHLORO-2-BUTENE | | -42.2 | | | | |
| 2-BUTANONE | | | | 26.9 | | |
| CHLOROETHANE | | | | -30.3 | | |
| DIBROMOCHLOROMETHANE | | | | | -27.0 | |
| BROMOMETHANE | | | | | | -29.4 |
| 1,1,2,2-TETRACHLOROETHANE | | | | | | -26.5 |
| CHLOROMETHANE | | | | | | -26.5 |

**SDG 20917**
CCAL1: 16SB0206
**SDG 20940**
CCAL1: 05SS03, 05SS03D
CCAL2: BT07FB, BS07ER, 05SS01, 05SS02, 05SS04, 05SS04MS, 05SS04MSD, 05SS05, 05SS06, 05SS07
CCAL3: 05SS02_R, 05SS05_R, 05SS07_R

## VOLATILE ORGANIC COMPOUNDS - TABLE 1.3 - PAGE 3

### INITIAL AND CONTINUING CALIBRATION - %RSD, %D, AND RRF

| *ICAL = INITIAL CALIBRATION = %RSD* | SDG 21002 | | | SDG 21012 | | |
|---|---|---|---|---|---|---|
| *CCAL = CONTINUING CALIBRATION = %D* | ICAL | CCAL1 | CCAL2 | ICAL | CCAL1 | CCAL2 |
| DATE | 022792 | 030392 | 030492 | 022792 | 030492 | 030592 |
| INSTRUMENT ID | 5100B | 5100B | 5100B | 5100B | 5100B | 5100B |
| CALIBRATION CRITERIA | %RSD/RRF | %D/RRF | %D/RRF | %RSD/R | %D/RRF | %D |
| 1,4-DIOXANE | 0.001 | 0.003 | 0.003 | 0.001 | 0.003 | |
| CHLOROMETHANE | 26.6 | | | 26.6 | | -29.2 |
| 1,2-DICHLOROETHANE | | -25.3 | | | | |
| 1,1,1-TRICHLOROETHANE | | -40.0 | | | | |
| CARBON TETRACHLORIDE | | -32.5 | | | | |
| BROMOFLUOROBENZENE | | -30.0 | -42.2 | | -42.2 | |
| ACETONE | | -29.0 | | | | |
| 1,2-DICHLOROETHANE-d4 | | -33.2 | | | | |
| TRICHLOROFLUOROMETHANE | | -40.3 | -36.5 | | -36.5 | |
| 2-HEXANONE | | | 28.6 | | 28.6 | |
| 4-METHYL-2-PENTANONE | | | 26.1 | | 26.1 | |
| BROMOMETHANE | | | | | | -36.2 |
| trans-1,3-DICHLOROPROPENE | | | | | | -29.2 |
| IODOMETHANE | | | | | | -29.5 |
| DIBROMOMETHANE | | | | | | -40.1 |

**SDG 21002**
CCAL1: KBA-16-2, KBA-2MS, KBA-16-2MSD
CCAL2: BS10ER, TRAVEL BLANK, KBA-16-2, KBA-11-3, KBA-11-3D, KBA-16-3, KBA-16-1
**SDG 21012**
CCAL1: BS11ER, BT11FB
CCAL2: KBA-16-4

# VOLATILE ORGANIC COMPOUNDS - TABLE 1.3 - PAGE 4

## INITIAL AND CONTINUING CALIBRATION - %RSD, %D, AND RRF

| *ICAL = INITIAL CALIBRATION = %RSD* | SDG 20985 | | SDG 20997 | | |
|---|---|---|---|---|---|
| *CCAL = CONTINUING CALIBRATION = %D* | ICAL | CCAL1 | CCAL1 | CCAL2 | CCAL3 |
| DATE | 022992 | 030492 | 030392 | 030492 | 030592 |
| INSTRUMENT ID | 5100B | 5100B | 5100B | 5100B | 5100B |
| CALIBRATION CRITERIA | %RSD | %D | %D | %D | %D |
| CHLOROETHANE | 32.4 | | | | |
| CHLOROMETHANE | | 28.6 | | | -36.2 |
| BROMODICHLOROMETHANE | | | -29.1 | -27.1 | |
| DIBROMOCHLOROMETHANE | | | -25.5 | -31.3 | |
| BROMOFORM | | | -33.5 | -49.9 | -29.2 |
| 1,1,2,2-TETRACHLOROETHANE | | | -32.5 | -30.6 | |
| DIBROMOMETHANE | | | -31.7 | -32.0 | |
| 1,2-DICHLOROBENZENE | | | | -25.6 | |
| BROMOMETHANE | | | | | -37.8 |

**SDG 20985**
CCAL1: BS08ER, KBA-5-4, KBA-5-4D, KBA-5-5, KBA-5-6, KBA-5-7, KBA-5-4MS, KBA-5-4MSD
**SDG 20997**
CCAL1: KBA-11-9, KBA-11-9MS, KBA-11-9MSD
CCAL2: BT09FB, BS09ER, BS02FB, BS03FB, KBA-11-7, KBA-11-6, KBA-11-1, KBA-11-8
CCAL3: KBA-11-4, KBA-11-5

# VOLATILE ORGANIC COMPOUNDS - TABLE 1.3 - PAGE 5

## INITIAL AND CONTINUING CALIBRATION - %RSD, %D, AND RRF

| *ICAL = INITIAL CALIBRATION = %RSD* | SDG 21599 | | SDG 21616 | | SDG 21628 | | |
|---|---|---|---|---|---|---|---|
| *CCAL = CONTINUING CALIBRATION = %D* | ICAL | CCAL1 | ICAL | CCAL1 | ICAL | CCAL1 | CCAL2 |
| DATE | 050492 | 050892 | 050492 | 050892 | 050492 | 051392 | 051592 |
| INSTRUMENT ID | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 |
| CALIBRATION CRITERIA | %RSD/RRF | %D/RRF | RRF | %D/RRF | RRF | %D/RRF | %D/RRF |
| 1,4-DIOXANE | 0.002 | 0.003 | 0.002 | 0.003 | 0.002 | 0.003 | 0.002 |
| DIBROMOCHLOROMETHANE | | -25.9 | | -25.9 | | | |
| BROMOFORM | | -28.6 | | -28.6 | | | -34.3 |
| 2-CHLOROETHYLVINYLETHER | 43.2 | -43.2 | 43.2 | -43.2 | 43.2 | -25.7 | -29.7 |
| DIBROMOMETHANE | | -41.6 | | -41.6 | | | |
| 1,4-DIOXANE | | -50.0 | | -50.0 | | -50.0 | |
| 1,2-DIBROMO-3-CHLOROPROPANE | | -55.4 | | -55.4 | | -67.7 | -46.2 |
| CHLOROMETHANE | | | | | | 30.4 | |
| 3-CHLOROPROPENE | | | | | | 27.3 | |
| 1,2-DIBROMOETHANE | | | | | | -27.8 | |
| 1,1,2,2-TETRACHLOROETHANE | | | | | | | -25.7 |
| TRICHLOROFLUOROMETHANE | | | | | | | -25.4 |
| 1,2-DICHLOROBENZENE | | | | | | | -25.2 |
| 1,4-DICHLOROBENZENE | | | | | | | -31.3 |
| DIBROMOMETHANE | | | | | | | -27.7 |

**SDG 21599**
CCAL1: BS12ER, KBA-16-3, KBA-16-4, BT12FB
**SDG 21616**
CCAL1: BT13FB, KBA16-2, KBA-16-1, KBA-5-3, KBA-5-3MS, KBA-5-3MS, KBA-5-3MSD, BS13ER, KBA-5-4
**SDG 21628**
CCAL1: BT14FB, BS14ER, KBA-5-1, KBA-5-2, KBA-5-5, KBA-5-5D, KBA-5-7, KBA-5-6
CCAL2: BS14ER_DL

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# VOLATILE ORGANIC COMPOUNDS - TABLE 1.3 - PAGE 6

## INITIAL AND CONTINUING CALIBRATION - %RSD, %D, AND RRF

| ICAL = INITIAL CALIBRATION = %RSD | SDG 21644 | | |
|---|---|---|---|
| CCAL = CONTINUING CALIBRATION = %D | ICAL | CCAL1 | CCAL2 |
| DATE | 050492 | 051392 | 051492 |
| INSTRUMENT ID | 4500 | 4500 | 4500 |
| CALIBRATION CRITERIA | %RSD/RRF | %D/RRF | %D/RRF |
| 1,4-DIOXANE | 0.002 | 0.002 | 0.003 |
| 2-CHLOROETHYLETHER | 43.2 | | |
| CHLOROMETHANE | | 30.4 | |
| 3-CHLOROPROPENE | | 27.3 | |
| 1,2-DIBROMOETHANE | | -27.8 | -26.2 |
| 1,2-DIBROMO-3-CHLOROPROPANE | | -67.7 | -60.0 |
| 2-CHLOROETHYLVINYLETHER | | -25.7 | |
| ACETONE | | | -55.7 |

**SDG 21644**
CCAL1: BT15FB, KBA-11-1, KBA-11-9, BS15ER, KBA-11-8
CCAL2: KBA-11-7, KBA-11-2, KBA-11-2D, KBA-11-7MS, KBA-11-7MSD, BS15ER_DL

| ICAL = INITIAL CALIBRATION = %RSD | SDG 21652 | | |
|---|---|---|---|
| CCAL = CONTINUING CALIBRATION = %D | ICAL | CCAL1 | CCAL2 |
| DATE | 050492 | 051492 | 051592 |
| INSTRUMENT ID | 4500 | 4500 | 4500 |
| CALIBRATION CRITERIA | %RSD/RRF | %D/RRF | %D/RRF |
| 1,4-DIOXANE | 0.002 | 0.003 | 0.002 |
| 2-CHLOROETHYLETHER | 43.2 | | |
| 1,2-DIBROMOETHANE | | -26.2 | |
| 1,2-DIBROMO-3-CHLOROPROPANE | | -60.0 | -46.2 |
| 2-CHLOROETHYLVINYLETHER | | | -29.7 |
| ACETONE | | -55.7 | |
| BROMOFORM | | | -34.3 |
| 1,1,2,2-TETRACHLOROETHANE | | | -25.7 |
| TRICHLOROFLUOROMETHANE | | | -25.4 |
| 1,2-DICHLOROBENZENE | | | -31.3 |
| 1,4-DICHLOROBENZENE | | | -25.2 |
| DIBROMOMETHANE | | | -27.7 |
| 1,2,3-TRICHLOROPROPANE | | | -28.6 |

**SDG 21652**
CCAL1: BT16FB, BS05FB, BS04FB, KBA-11-3, KBA-11-4, KBA-11-5, KBA-11-6
CCAL2: BS16ER

# VOLATILE ORGANIC COMPOUNDS - TABLE 1.3 - PAGE 7

**INITIAL AND CONTINUING CALIBRATION - %RSD, %D, AND RRF**

| ICAL = INITIAL CALIBRATION = %RSD | SDG 22203 | | SDG 22208 | | |
|---|---|---|---|---|---|
| CCAL = CONTINUING CALIBRATION = %D | ICAL | CCAL1 | ICAL | CCAL1 | CCAL2 |
| DATE | 060892 | 072092 | 060892 | 072092 | 072192 |
| INSTRUMENT ID | 4500 | 4500 | 4500 | 4500 | 4500 |
| CALIBRATION CRITERIA | %RSD | %D/RRF | %RSD | %D/RRF | RRF |
| 1,2-DICHLOROETHANE | | 26.6 | | 26.6 | 30.5 |
| TRICHLOROETHENE | | -27.7 | | -27.7 | -33.4 |
| BROMOFORM | | -54.4 | | -54.4 | -65.9 |
| TETRACHLOROETHENE | | -48.6 | | -48.6 | -51.7 |
| 1,1,2,2-TETRACHLOROETHANE | 41.9 | -50.0 | 41.9 | -50.0 | -36.5 |
| BROMOFLUOROBENZENE | | -40.6 | | -40.6 | -33.6 |
| 1,3-DICHLOROBENZENE | | -44.2 | | -44.2 | -52.5 |
| 1,2-DICHLOROBENZENE | 53.8 | -100.8 | 34.9 | -100.8 | -106.3 |
| 1,4-DICHLOROBENZENE | 34.9 | -60.2 | 53.8 | -60.2 | -65.3 |
| 4-METHYL-2-PENTANONE | | 0.0 | | 0.0 | 0.017 |
| 1,2-DICHLOROETHANE-D4 | | 35.3 | | 35.3 | 40.5 |

**SDG 22203**
CCAL1: VBLKW, BT-20-FB, BS-20-ER, KBA-5-7, KBA-5-6, KBA-5-5, KBA-5-4
**SDG 22208**
CCAL1: VBLKW, BS08FB, BS06FB
CCAL2: VBLKW-2, BT21FB

| ICAL = INITIAL CALIBRATION = %RSD | SDG 22201 | | | SDG 22191 | | | |
|---|---|---|---|---|---|---|---|
| CCAL = CONTINUING CALIBRATION = %D | ICAL | CCAL1 | CCAL2 | ICAL | CCAL1 | CCAL2 | CCAL3 |
| DATE | 051192 | 071392 | 071792 | 051192 | 071092 | 071392 | 071792 |
| INSTRUMENT ID | 5100B | 5100B | 5100B | 5100B | 5100B | 5100B | 5100B |
| CALIBRATION CRITERIA | %RSD | %D | %D | %RSD | %D | %D | %D |
| CHLOROMETHANE | 34.3 | | | 34.3 | -32.4 | | |
| 1,2-DICHLOROETHANE | | 34.5 | 28.2 | | 27.0 | 34.5 | 28.2 |
| trans-1,3-DICHLOROPROPENE | | 36.8 | 34.5 | | 32.1 | 36.8 | 34.5 |
| 2-HEXANONE | | | 31.2 | | | | 31.2 |
| 1,2-DICHLOROETHANE-D4 | | 35.4 | | | | 35.4 | |
| VINYL ACETATE | | 58.8 | 52.5 | | 50.3 | 58.8 | 52.5 |

**SDG 22201**
CCAL1: KBA-11-1, BT-18-FB, BS-18-ER1, KBA-11-3, KBA-11-4,
KBA-11-5, KBA-5-1, KBA-11-6, KBA-5-2, KBA-5-3A
CCAL1: KBA-5-3D2, KBA-5-3AMS, KBA-5-3AMSD
**SDG 22191**
CCAL1: BT-17-FB, KBA-11-2MS, KBA-11-2MSD, KBA-11-2
CCAL2: KBA-11-2D, KBA-11-8, KBA-11-7, BS-17-ER
CCAL3: KBA-11-9

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# VOLATILE ORGANIC COMPOUNDS - TABLE 1.3 - PAGE 8

## INITIAL AND CONTINUING CALIBRATION - %RSD, %D, AND RRF

| ICAL = INITIAL CALIBRATION = %RSD | SDG 22205 | | SDG 22727 | |
|---|---|---|---|---|
| CCAL = CONTINUING CALIBRATION = %D | ICAL | CCAL1 | CCAL1 | CCAL2 |
| DATE | 060892 | 072092 | 092392 | 092492 |
| INSTRUMENT ID | 4500 | 4500 | 4500 | 4500 |
| CALIBRATION CRITERIA | %RSD | %D/RRF | %D | %D |
| 1,2-DICHLOROETHANE | | 26.6 | | |
| TRICHLOROETHENE | | -27.7 | | |
| BROMOFORM | | -54.4 | | 30.5 |
| TETRACHLOROETHENE | | -48.6 | | |
| 1,1,2,2-TETRACHLOROETHANE | 41.9 | -50.0 | -36.1 | |
| BROMOFLUOROBENZENE | | -40.6 | | |
| 1,3-DICHLOROBENZENE | | -44.2 | | |
| 1,2-DICHLOROBENZENE | 34.9 | -100.8 | | |
| 1,4-DICHLOROBENZENE | 53.8 | -60.2 | | |
| 4-METHYL-2-PENTANONE | | 0.0 | -33.7 | |
| 1,2-DICHLOROETHANE-D4 | | 35.3 | | |
| METHYLENE CHLORIDE | | | -27.1 | |

**SDG 22205**
CCAL1: BS-19-ER, BT-19-FB, KBA-16-4, KBA-16-3, KBA-16-2, KBA-16-1
KBA-16-4MS, KBA-16-4MSD
**SDG 22727**
CCAL1: BS-25-ER, BT-26-FB, KBA-5-4, KBA-5-4MS, KBA-5-4MSD,
KBA-5-2, KBA-5-1
CCAL2: KBA-5-3, KBA-5-3D

| ICAL = INITIAL CALIBRATION = %RSD | SDG 22711 | | | |
|---|---|---|---|---|
| CCAL = CONTINUING CALIBRATION = %D | ICAL | CCAL1 | CCAL2 | CCAL3 |
| DATE | 091092 | 091692 | 091892 | 092392 |
| INSTRUMENT ID | 4500 | 4500 | 4500 | 4500 |
| CALIBRATION CRITERIA | %RSD | %D | %D | %D |
| 1,2-DICHLOROETHANE | | | 28.7 | |
| 1,1,2,2-TETRACHLOROETHANE | | | | -36.1 |
| 2-BUTANONE | 36.2 | 25.9 | 28.7 | |
| CARBON DISULFIDE | | | 34.4 | |
| CHLOROETHANE | | | | -27.1 |
| CHLOROMETHANE | | | 26.1 | |
| 4-METHYL-2-PENTANONE | | | | -33.7 |
| 1,2-DICHLOROETHANE-D4 | | | 25.4 | |

**SDG 22711**
CCAL1: KBA-11-8, KBA-11-7, BS-23-ER, KBA-11-1, KBA-1104, KA-11-5
CCAL2: BT-23-FB, KBA-11-2, KKBA-11-2MS, KBA-11-2MSD, KBA-11-2D
CCAL3: BT-24-FB, KBA-11-3, BS-11-ER, KBA-11-6, KBA-11-9

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# VOLATILE ORGANIC COMPOUNDS - TABLE 1.3 - PAGE 9

## INITIAL AND CONTINUING CALIBRATION - %RSD, %D, AND RRF

| ICAL = INITIAL CALIBRATION = %RSD<br>CCAL = CONTINUING CALIBRATION = %D | SDG 22723 | | | | SDG 227 |
|---|---|---|---|---|---|
| | ICAL | CCAL1 | CCAL2 | CCAL3 | CCAL1 |
| DATE | 091092 | 091892 | 092392 | 092492 | 092492 |
| INSTRUMENT ID | 4500 | 4500 | 4500 | 4500 | 4500 |
| CALIBRATION CRITERIA | %RSD | %D | %D | %D | %D |
| 1,2-DICHLOROETHANE | | 28.7 | | | |
| BROMOFORM | | | | 30.5 | 30.5 |
| 1,1,2,2-TETRACHLOROETHANE | | | -36.1 | | |
| 2-BUTANONE | 36.2 | 28.7 | | | |
| CARBON DISULFIDE | | 34.4 | | | |
| CHLOROETHANE | | | -27.1 | | |
| CHLOROMETHANE | | 26.1 | | | |
| 4-METHYL-2-PENTANONE | | | -33.7 | | |

**SDG 22723**
CCAL1: KBA-16-1, BS-24-ER
CCAL2: KBA-16-2, KBA-16-3
CCAL3: BT-25-FB, KBA-16-4
**SDG 22725**
CCAL1: KBA-5-5, KBA-5-6, KBA-5-7, BS-10-FB, BS-12-FB, BT-27-FB, BS-26-ER

| ICAL = INITIAL CALIBRATION = %RSD<br>CCAL = CONTINUING CALIBRATION = %D | SDG 34464 | | | SDG 34467 | | SDG 23726 | |
|---|---|---|---|---|---|---|---|
| | ICAL | CCAL1 | CCAL2 | ICAL | CCAL1 | CCAL1 | CCAL2 |
| DATE | 112392 | 112492 | 112592 | 112392 | 112492 | 011493 | 011493 |
| INSTRUMENT ID | 5100 | 5100 | 5100 | 5100 | 5100 | 5100 | 5100 |
| CALIBRATION CRITERIA | %RSD | %D | %D | %RSD | %D | %D | %D |
| BROMOFORM | 31.3 | | | 31.3 | | | |
| 1,1,2,2-TETRACHLOROETHANE | | -26.4 | | | -26.4 | | |
| 2-BUTANONE | 36.2 | | | 36.2 | | | 33.2 |
| ACETONE | | | 32.7 | | | 32.3 | 29.4 |
| CHLOROMETHANE | | | | | | 30.8 | 30.5 |
| 2-HEXANONE | | | | | | | 26.0 |
| 4-METHYL-2-PENTANONE | | -37.3 | | | -37.3 | | |

**SDG 34464**
CCAL1: BT-29-F, KBA-11-7, KBA-11-5, KBA-11-4, KBA-11-3
CCAL2: BS-28-ER, KBA-11-6
**SDG 34467**
CCAL1: BT-28-FB, KBA-11-9, KBA-11-1, KBA-11-2, KBA-11-2MS KBA-11-2MSD, KBA-11-2D, BS-27-ER, KBA-11-8
**SDG 23726**
CCAL1: KBA-11-9, KBA-11-7, KBA-11-6, BS-34-FB
CCAL2: KBA-11-5, BS-34-ER, KBA-11-4, KBA-11-3

# VOLATILE ORGANIC COMPOUNDS - TABLE 1.3 - PAGE 10

## INITIAL AND CONTINUING CALIBRATION - %RSD, %D, AND RRF

| ICAL = INITIAL CALIBRATION = %RSD | SDG 23739 | | | SDG 237 | SDG 237 |
|---|---|---|---|---|---|
| CCAL = CONTINUING CALIBRATION = %D | CCAL1 | CCAL2 | CCAL3 | CCAL1 | CCAL1 |
| DATE | 012393 | 012593 | 012593 | 012593 | 012593 |
| INSTRUMENT ID | FINNZ | FINNZ | FINNZ | FINNZ | FINNZ |
| CALIBRATION CRITERIA | %D | %D | %D | %D | %D |
| 2-BUTANONE | -30.2 | -42.0 | | | |
| CHLOROMETHANE | 31.0 | 26.0 | 25.8 | 25.8 | 25.8 |
| 2-HEXANONE | -37.3 | -49.7 | -27.8 | -27.8 | -27.8 |
| 4-METHYL-2-PENTANONE | -27.8 | -28.9 | | | |
| VINYL ACETATE | | -25.4 | | | |

**SDG 23739**
CCAL1: BT-35-FB, BS-21-FB, BS-19-FB
CCAL2: KBA-5-3, KBA-5-3MS, KBA-5-3MSD, BS-35-ER, KBA-5-5
CCAL3: KBA-5-3D
**SDG 23740**
CCAL1: KBA-5-7, KBA-5-6, KBA-5-4, KBA-5-3, KBA-5-1, KBA-5-2
**SDG 23751**
CCAL1: BT-36-FB, BS-36-ER, KBA-16-1, KBA-16-2, KBA-16-2D, KKBA-16-3, KBA-16-4

## SEMIVOLATILE ORGANIC COMPOUNDS - TABLE 1.3.1

### INITIAL AND CONTINUING CALIBRATION - %RSD, %D, AND RRF

| *ICAL = INITIAL CALIBRATION = %RSD* | SDG 20865 | | SDG 20867 | | SDG 20873 | | |
|---|---|---|---|---|---|---|---|
| *CCAL = CONTINUING CALIBRATION = %D* | CCAL1 | CCAL2 | CCAL1 | CCAL2 | ICAL | CCAL1 | CCAL2 |
| DATE | 022392 | 022492 | 022492 | 030292 | 021792 | 022492 | 022592 |
| INSTRUMENT ID | 4000 | 4000 | 4000 | 4000 | 5100D | 5100D | 5100D |
| CALIBRATION CRITERIA | %D | %D | %D | %D | %RSD | %D | %D |
| bis(2-CHLOROETHOXY)METHANE | -25.8 | -28.6 | -28.6 | | | | |
| HEXACHLOROBENZENE | 30.3 | 32.3 | 32.3 | 31.7 | | | |
| BENZO(K)FLUORANTHENE | -46.7 | -32.3 | -32.3 | -45.0 | | | |
| 2-NITROANILINE | 30.5 | 26.7 | 26.7 | 36.5 | | | |
| bis(2-CHLOROISOPROPYL)ETHER | 38.7 | | | 34.3 | | | |
| 2,4-DINITROPHENOL | -27.0 | | | -35.6 | | | 59.4 |
| 4-NITROPHENOL | -25.6 | | | 28.5 | | | 39.6 |
| 3,3'-DICHLOROBENZIDINE | 26.3 | | | 37.3 | | | |
| 3-METHYLCHOLANTHRENE | 28.9 | | | | | | |
| 1-NAPHTHYLAMINE | | 27.0 | 27.0 | 41.8 | 40.1 | 39.5 | |
| 2-NAPHTHYLAMINE | | 34.9 | 34.9 | 61.9 | 41.0 | 51.5 | |
| 4-AMINOBIPHENYL | | 33.2 | 33.2 | 28.3 | | | 35.9 |
| PENTACHLORONITROBENZENE | | 29.6 | 29.6 | | | | |
| ANILINE | | | | 30.8 | | | |
| 2-PICOLINE | | | | 30.5 | | | |
| METHYL METHANESULFONATE | | | | 33.6 | | | |
| N-NITROSOPIPERIDINE | | | | 30.1 | | | |
| BENZIDINE | | | | | 40.4 | | |
| BENZYL ALCOHOL | | | | | | 40.3 | |
| BENZOIC ACID | | | | | | | -48.9 |
| 4,6-DINITRO-2-METHYLPHENOL | | | | | | | 35.2 |

**SDG 20865**

CCAL1: KBBS00101FB, KBBS00101ER

CCAL2: KB05SB060301, KB05SB050301, KB05SB070301

**SDG 20867**

CCAL1: KB05SB030301, KB05SB040301, KB05SB010301, KB11SB010301, KB05SB020301, KB11SB060201, KB11SB080301, KB05SB010301MS, KB05SB010301MSD

CCAL2:KB05SB020301D, KB11SB010301RX, KBBS00201ER, KBBS00301ER

**SDG 20873**

CCAL1: KB11SB020301, KB11SB030301, KB11SB030301D

CCAL2: KB11SB040301, KB11SB050301, KB11SB060301, KB11SB070301, KBBS00401ER

## SEMIVOLATILE ORGANIC COMPOUNDS - TABLE 1.3.1 - PAGE - 2

**INITIAL AND CONTINUING CALIBRATION - %RSD, %D, AND RRF**

| *ICAL = INITIAL CALIBRATION = %RSD* | SDG 20900 | | | SDG 20917 | | |
|---|---|---|---|---|---|---|
| *CCAL = CONTINUING CALIBRATION = %D* | **ICAL** | **CCAL1** | **CCAL2** | **ICAL** | **CCAL1** | **CCAL2** |
| DATE | 021792 | 030292 | 030392 | 021792 | 030292 | 030392 |
| INSTRUMENT ID | 5100D | 5100D | 5100D | 5100D | 5100D | 5100D |
| CALIBRATION CRITERIA | %RSD | %D | %D | %RSD | %D | %D |
| BENZIDINE | 40.4 | -106.1 | -61.3 | 40.4 | -106.1 | -61.3 |
| 1-NAPHTHYLAMINE | 40.1 | | 27.1 | 40.1 | | 27.1 |
| 2-NAPHTHYLAMINE | 41.0 | | 26.0 | 41.0 | | 26.0 |
| BENZOIC ACID | | 30.3 | | | 30.3 | |
| N-NITROSOPIPERIDINE | | 25.3 | 27.8 | | 25.3 | 27.8 |
| 4-AMINOBIPHENYL | 37.7 | -26.4 | | 37.7 | -26.4 | |
| ANTHRACENE | | | 26.2 | | | 26.2 |
| BENZO(K)FLUORANTHENE | | | -50.2 | | | -50.2 |
| 2-NITROANILINE | | | 25.8 | | | 25.8 |
| 4-NITROANILINE | | | | | | |
| p-DIMETHYLAMINOAZOBENZENE | | | 31.5 | | | 31.5 |
| 3-METHYLCHOLANTHRENE | | | -31.8 | | | -31.8 |
| 4-NITROPHENOL | | 43.4 | 40.8 | | 43.4 | 40.8 |
| 4-NITROANILINE | | -41.7 | | | -41.7 | |

**SDG 20900**
CCAL1: 16SB0405, 16SB0305, 16SB0105
CCAL2: BS05ER
**SDG 20917**
CCAL1: 16SB0206
CCAL2: BS06ER

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## SEMIVOLATILE ORGANIC COMPOUNDS - TABLE 1.3.1 - PAGE - 3

**INITIAL AND CONTINUING CALIBRATION - %RSD, %D, AND RRF**

| *ICAL = INITIAL CALIBRATION = %RSD* | SDG 20940 | | | | |
|---|---|---|---|---|---|
| *CCAL = CONTINUING CALIBRATION = %D* | ICAL | CCAL1 | CCAL2 | CCAL3 | CCAL4 |
| DATE | 021792 | 030692 | 031092 | 031192 | 031292 |
| INSTRUMENT ID | 5100D | 4000 | 5100D | 5100D | 5100D |
| CALIBRATION CRITERIA | %RSD | %D | %D | %D | %D |
| BENZIDINE | 40.4 | -68.3 | -93.4 | | |
| 1-NAPHTHYLAMINE | 40.1 | -37.9 | | -29.2 | -31.4 |
| 2-NAPHTHYLAMINE | 41.0 | -59.6 | | | |
| 4-AMINOBIPHENYL | 37.7 | -28.9 | -36.1 | | -26.8 |
| 2-METHYLPHENOL | | -31.1 | -29.6 | -40.9 | |
| 4-METHYLPHENOL | | -38.9 | | -40.4 | |
| 2-METHYLNAPHTHALENE | | -30.9 | | | |
| 2,4-DINITROTOLUENE | | -32.3 | | | |
| HEXACHLOROBENZENE | | 42.7 | | | |
| BENZO(B)FLUORANTHENE | | 41.7 | | | |
| INDENO(1,2,3-c,d)PYRENE | | 35.6 | | | |
| DIBENZO(a,h)ANTHRACENE | | 32.8 | | | |
| BENZO(g,h,i)PERYLENE | | 28.6 | | | |
| 2-NITROANILINE | | -27.7 | | | |
| 4-NITROANILINE | | -37.0 | -41.1 | -99.9 | -82.1 |
| 4,6-DINITRO-2-METHYLPHENOL | | -38.2 | | | |
| BUTYLBENZYLPHTHALATE | | -44.1 | -35.2 | -30.5 | |
| bis(2-ETHYLHEXYL)PHTHALATE | | -39.4 | -45.2 | -31.3 | |
| N-NITROSODIMETHYLAMINE | | -25.9 | -29.2 | | |
| 2-PICOLINE | | 29.4 | | | |
| METHYL METHANESULFONATE | | 31.3 | | | 29.6 |
| PHENACETIN | | -37.9 | | | |
| PENTACHLORONITROBENZENE | | 37.9 | | 28.0 | |
| 3-METHYLCHOLANTHRENE | | 31.7 | | | |
| NITROBENZENE | | -60.3 | | | |
| 2,4-DINTROPHENOL | | -72.2 | | -38.4 | -31.2 |
| 2,3,4,6-TETRACHLOROPHENOL | | -63.9 | -39.1 | -48.8 | -80.7 |
| p-DIMETHYLAMINOAZOBENZENE | | -64.3 | -46.3 | -40.7 | |
| HEXACHLOROETHANE | | -28.1 | | -58.4 | |
| bis(2-CHLOROISOPROPYL)ETHER | | | -26.4 | -98.6 | |
| 1,2-DICHLOROBENZENE | | | -31.0 | -26.4 | |
| 2-CHLORONAPHTHALENE | | | -28.6 | | |
| BENZO(K)FLUORANTHENE | | | -39.6 | | -28.6 |
| TERPHENYL-d14 | | | -29.7 | | |
| bis(2-CHLOROETHYL)ETHER | | | -29.5 | -49.2 | |
| DI-N-BUTYLPHTHALATE | | | -27.6 | | |
| 3,3'-DICHLOROBENZIDINE | | | -34.2 | | |
| 2,4,6-TRIBROMOPHENOL | | | 37.6 | | |
| PRONAMIDE | | | -26.2 | | |

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## SEMIVOLATILE ORGANIC COMPOUNDS - TABLE 1.3.1 - PAGE - 4

**INITIAL AND CONTINUING CALIBRATION - %RSD, %D, AND RRF**

| *ICAL = INITIAL CALIBRATION = %RSD* | SDG 20940 | CONTINUED | | | |
|---|---|---|---|---|---|
| *CCAL = CONTINUING CALIBRATION = %D* | **ICAL** | **CCAL1** | **CCAL2** | **CCAL3** | **CCAL4** |
| DATE | 021792 | 030692 | 031092 | 031192 | 031292 |
| INSTRUMENT ID | 5100D | 4000 | 5100D | 5100D | 5100D |
| CALIBRATION CRITERIA | %RSD | %D | %D | %D | %D |
| 1,3-DICHLOROBENZENE | | | | -27.0 | |
| N-NITROSO-DI-PROPYLAMINE | | | | -52.7 | |
| ISOPHORONE | | | | -29.0 | |
| bis(2-CHLOROETHOXY)ETHER | | | | -32.4 | |
| 2,6-DINITROTOLUENE | | | | -34.8 | -31.1 |
| 2,4-DINITROTOLUENE | | | | -35.6 | -34.7 |
| PEHNOL-d5 | | | | -27.4 | |
| BENZYL ALCOHOL | | | | -30.4 | |
| 3-NITROANILINE | | | | -32.5 | -38.2 |
| ANILINE | | | | -33.7 | |
| ETHYL METHANESULFONATE | | | | -67.8 | |
| 2,4,5-TRICHLOROPHENOL | | | | | -27.8 |
| 2-CHLORONAPHTHALENE | | | | | -36.4 |
| 4-CHLOROPHENYL-PHENYLETHER | | | | | -41.1 |
| FLUORENE | | | | | -31.5 |
| HEXACHLOROCYCLOPENTADIENE | | | | | -57.3 |
| BENZOIC ACID | | | | | -36.2 |

**SDG 20940**

CCAL1: 05SS01, 05SS04, 05SS04MS, 05SS04MSD

CCAL2: 05SS02, 05SS03, 05SS03D, 05SS06

CCAL3: 05SS07, 05SS05

CCAL4: BS07ER

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## SEMIVOLATILE ORGANIC COMPOUNDS - TABLE 1.3.1 - PAGE - 5

**INITIAL AND CONTINUING CALIBRATION - %RSD, %D, AND RRF**

| *ICAL = INITIAL CALIBRATION = %RSD* | SDG 21002 | | | | SDG 21012 | |
|---|---|---|---|---|---|---|
| *CCAL = CONTINUING CALIBRATION = %D* | **ICAL** | **CCAL1** | **CCAL2** | **CCAL3** | **ICAL** | **CCAL1** |
| DATE | 031692 | 031692 | 031792 | 031992 | 031692 | 031792 |
| INSTRUMENT ID | 4000 | 4000 | 4000 | 4000 | 4000 | 4000 |
| CALIBRATION CRITERIA | %RSD | %D | %D | %D | %RSD | %D |
| BENZIDINE | 41.0 | -50.7 | | -34.0 | 41.0 | -34.0 |
| 2-NAPHTHYLAMINE | 45.0 | | | 34.0 | 45.0 | 34.0 |
| BENZOIC ACID | | 33.9 | | | | |
| 2-PICOLINE | | 25.4 | | | | |
| 4-AMINOBIPHENYL | | | 32.2 | 32.2 | | 32.2 |

**SDG 21002**
CCAL1: BS10ER
CCAL2: KBA-16-2, KBA-11-2, KBA-11-3, KBA-11-3D, KBA-16-3, KBA-16-1, KBA-16-2_RX
CCAL3: KBA-11-3_RX
**SDG 21012**
CCAL1: KBA-16-4, BS11ER

| *ICAL = INITIAL CALIBRATION = %RSD* | SDG 20985 | | | | SDG 20997 | |
|---|---|---|---|---|---|---|
| *CCAL = CONTINUING CALIBRATION = %D* | **ICAL** | **CCAL1** | **CCAL2** | **CCAL3** | **ICAL** | **CCAL2** |
| DATE | 031692 | 031292 | 031692 | 031792 | 031692 | 031692 |
| INSTRUMENT ID | 4000 | 4000 | 4000 | 4000 | 4000 | 4000 |
| CALIBRATION CRITERIA | %RSD | %D | %D | %D | %RSD | %D |
| BENZIDINE | 41.0 | -27.6 | -50.7 | | 41.0 | -50.7 |
| 2-NAPHTHYLAMINE | 45.0 | | | | 45.0 | |
| 2,4-DINITROPHENOL | | 27.8 | | | | |
| 4-NITROPHENOL | | -34.1 | | | | |
| bis(2-ETHYLHEXYL)PHTHALATE | | -30.8 | | | | |
| METHYL METHANESULFONATE | | 41.3 | | | | |
| BENZOIC ACID | | | 33.9 | | | 33.9 |
| 2-PICOLINE | | | 25.1 | | | 25.1 |
| 4-AMINOBIPHENYL | | | | 32.2 | | |

**SDG 20985**
CCAL1: KBA-5-1, KBA-5-2, KBA-5-3, KBA-5-4D, KBA-5-5, KBA-5-6 KBA-5-7, BS08ER
CCAL2: KBA-5-4
CCAL3: KBA-5-4_RX
**SDG 20997**
ICAL: KBA-11-1_RX, KBA-11-1, KBA-11-7, KBA-11-6
CCAL1: KBA-11-9, KBA-11-8, BS09ER, KBA-11-4, KBA-11-5, BS03FB, BS02FB, KBA-11-9MS, KBA-11-9MSD

## SEMIVOLATILE ORGANIC COMPOUNDS - TABLE 1.3.1 - PAGE - 6

**INITIAL AND CONTINUING CALIBRATION - %RSD, %D, AND RRF**

| *ICAL = INITIAL CALIBRATION = %RSD* | SDG 21559 | | SDG 21616 | | SDG 21628 | |
|---|---|---|---|---|---|---|
| *CCAL = CONTINUING CALIBRATION = %D* | ICAL | CCAL1 | ICAL | CCAL1 | ICAL | CCAL1 |
| DATE | 043092 | 052092 | 043092 | 052092 | 043092 | 052192 |
| INSTRUMENT ID | 5100 | 5100 | 5100 | 5100 | 5100 | 5100 |
| CALIBRATION CRITERIA | %RSD | %D | %RSD | %D | %RSD | %D |
| 4-CHLOROPHENYL-PHENYLETHER | 33.2 | 28.4 | 33.2 | 28.4 | 33.2 | |
| BENZO(K)FLUORANTHENE | 31.5 | -36.5 | 31.5 | -36.5 | 31.5 | -25.5 |
| PENTACHLOROBENZENE | 33.6 | -29.2 | 33.6 | -29.2 | 33.6 | |
| 1-NAPHTHYLAMINE | 42.6 | -143.7 | 42.6 | -143.7 | 42.6 | -121.1 |
| 2-NAPHTHYLAMINE | 44.4 | -139.7 | 44.4 | -139.7 | 44.4 | -138.0 |
| 4-AMINOBIPHENYL | 50.5 | -35.1 | 50.5 | -35.1 | 50.5 | -27.9 |
| 7,12-DIMETHYLBENZ(A)ANTHRACENE | 31.4 | -25.4 | 31.4 | -25.4 | 31.4 | -27.5 |
| NITROBENZENE | | -36.1 | | -36.1 | | -40.7 |
| bis(2-CHLOROETHYL)ETHER | | -32.8 | | -32.8 | | -44.0 |
| N-NITROSO-DI-N-PROPYLAMINE | | -25.1 | | -25.1 | | -35.1 |
| DIBENZ(a,h)ANTHRACENE | | -29.4 | | -29.4 | | -30.5 |
| 4-CHLOROANILINE | | -32.4 | | -32.4 | | -31.9 |
| DIMETHYLPHTHALATE | | -28.0 | | -28.0 | | -27.3 |
| BENZOIC ACID | | 31.5 | | 31.5 | | |
| BENZIDINE | | 35.3 | | 35.3 | | 49.4 |
| 4-NITROPHENOL | | 28.4 | | 28.4 | | 35.2 |
| 4,6-DINITRO-2-METHYLPHENOL | | 27.0 | | 27.0 | | 26.1 |
| BUTYLBENZYLPHTHALATE | | 28.3 | | 28.3 | | |
| 2,4,6-TRIBROMOPHENOL | | -42.9 | | -42.9 | | -32.1 |
| ANILINE | | -29.2 | | -29.2 | | -37.2 |
| METHYL METHANESULFONATE | | -29.1 | | -29.1 | | |
| N-NITROSOPIPERIDINE | | -29.6 | | -29.6 | | -39.0 |
| p-DIMETHYLAMINOAZOBENZENE | | 26.6 | | 26.6 | | 28.5 |
| 3-METHYLCHOLANTHRENE | | 27.0 | | 27.0 | | -31.8 |
| 1,3,5-TRINITROBENZENE | | 28.7 | | 28.7 | | 32.8 |
| 4-NITROQUINOLINE-1-OXIDE | | 25.7 | | 25.7 | | 33.3 |
| 2-ACETAMIDOFLUORENE | | 32.5 | | 32.5 | | 28.2 |
| bis(2-CHLOROISOPROPYL)ETHER | | -83.0 | | -83.0 | | -98.0 |
| N-NITROMETHYLETHYLAMINE | | 54.8 | | 54.8 | | |
| bis(2-CHLOROETHOXY)METHANE | | -58.2 | | -58.2 | | -58.8 |
| PHENACETIN | | 25.6 | | 25.6 | | 33.8 |
| ARAMITE | | 26.7 | | 26.7 | | |
| 1,2-DICHLOROBENZENE | | | | | | -28.5 |
| 2-METHYLPHENOL | | | | | | 34.5 |
| N-NITROSOMORPHOLINE | | | | | | -30.0 |
| HEXACHLOROPROPENE | | | | | | 29.0 |
| 5-NITRO-O-TOLUIDINE | | | | | | 26.8 |
| METHAPYRILENE | | | | | | 34.9 |

**SDG 21599**
CCAL1: BS12ER, KBA-16-3, KBA-16-4
**SDG 21616**
CCAL1: KBA-16-2, KBA-16-1, KBA-5-3, KBA-5-3MS, KBA-5-3MSD, BS13ER, KBA-5-4
**SDG 21628**
CCAL1: KBA-5-1, KBA-5-2, BS14ER, KBA-5-5, KBA-5-5D, KBA-5-7, KBA-5-6

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## SEMIVOLATILE ORGANIC COMPOUNDS - TABLE 1.3.1 - PAGE - 7

**INITIAL AND CONTINUING CALIBRATION - %RSD, %D, AND RRF**

| ICAL = INITIAL CALIBRATION = %RSD | SDG 21644 | | | SDG 21652 | | | |
|---|---|---|---|---|---|---|---|
| CCAL = CONTINUING CALIBRATION = %D | ICAL | CCAL1 | CCAL2 | ICAL | CCAL1 | CCAL2 | CCAL3 |
| DATE | 043092 | 052192 | 052292 | 043092 | 052092 | 052292 | 052692 |
| INSTRUMENT ID | 5100 | 5100 | 5100 | 5100 | 5100 | 5100 | 5100 |
| CALIBRATION CRITERIA | %RSD | %D | %D | %RSD | %D | %D | %D |
| bis(-2-CHLOROETHYL)ETHER | | -44.0 | -31.0 | | -32.8 | -31.0 | -49.3 |
| 1,2-DICHLOROBENZENE | | -28.5 | | | | | |
| 2-METHYLPHENOL | | 34.5 | | | | | |
| 4-METHYLPHENOL | | | | | | | -44.2 |
| N-NITROSO-DI-PROPYLAMINE | | -35.1 | | | | | -90.0 |
| HEXACHLOROETHANE | | | | | | | -34.8 |
| NITROBENZENE | | -40.7 | | | -36.1 | | -56.2 |
| ISOPHORONE | | | | | | | -29.8 |
| bis(-2-CHLOROETHOXY)METHANE | | -58.8 | -55.8 | | -58.2 | -55.8 | -78.3 |
| 2-CHLORONAPHTHALENE | | | -25.2 | | | -25.2 | |
| ACENAPHTHALENE | | | -30.2 | | | -30.2 | -29.1 |
| 4-CHLOROPHENYL-PHENYLETHER | 33.2 | | | 33.2 | -30.3 | | |
| 4-BROMOPHENYL-PHENYLETHER | | | | | | | 26.5 |
| HEXACHLOROBENZENE | | | | | | | 33.6 |
| BENZO(K)FLUORANTHENE | 31.5 | -25.5 | | 31.5 | -36.5 | | |
| DIBENZO(A,H)ANTHRACENE | | -30.5 | | | -29.4 | | |
| NITROBENZENE-D5 | | | | | | | -31.5 |
| 4-CHLOROANILINE | | | -28.4 | | -32.4 | -28.4 | -35.7 |
| 2-NITROANILINE | | | | | | | -34.4 |
| DIMETHYLPHTHALATE | | -27.3 | | | -28.0 | | |
| bis(2-CHLOROISOPROPYL)ETHER | | -98.0 | -81.8 | | -83.0 | -81.8 | -123.5 |
| BENZOIC ACID | | | 41.6 | | 31.5 | 41.6 | 40.0 |
| BENZIDINE | | 49.4 | 35.3 | | 35.3 | 35.3 | |
| 4-NITROPHENOL | | 35.2 | 36.8 | | 28.4 | 36.8 | 27.2 |
| 4,6-DINITRO-2-METHYLPHENOL | | 26.1 | 27.5 | | 27.0 | 27.5 | 25.6 |
| 3,3'-DICHLOROBENZIDINE | | | -26.3 | | | -26.3 | |
| BUTYLBENZYLPHTHALATE | | | | | 28.3 | | |
| 2,4,6-TRIBROMOPHENOL | 30.1 | -32.1 | | 30.1 | -42.9 | | 25.5 |
| ANILINE | | -37.2 | -29.0 | | -29.2 | -29.0 | -45.9 |
| 2-PICOLINE | | | 33.0 | | | 33.0 | |
| METHYL METHANESULFONATE | | | 34.7 | | | 34.7 | 43.4 |
| ETHYL METHANESULFONATE | | | | | | | -25.5 |
| N-NITROSOPIPERIDINE | | -39.0 | | | -29.6 | | -88.0 |
| N-NITROSO-DI-N-BUTYLAMINE | | | | | | | -33.7 |
| PENTACHLOROBENZENE | 33.6 | | | 33.6 | -29.2 | | 28.6 |
| 1-NAPHTHYLAMINE | 42.6 | -121.0 | -178.0 | 42.6 | -143.7 | 178.0 | -172 |
| 2-NAPHTHYLAMINE | 44.4 | -138.0 | -240.0 | 44.4 | -139.7 | -240.0 | -232.0 |
| PHENACETIN | | -27.9 | 28.1 | | 25.6 | 28.1 | |
| 4-AMINOBIPHENYL | 50.5 | | -71.9 | 50.5 | -35.1 | -71.9 | -111.3 |

## SEMIVOLATILE ORGANIC COMPOUNDS - TABLE 1.3.1 - PAGE - 8

**INITIAL AND CONTINUING CALIBRATION - %RSD, %D, AND RRF**

| ICAL = INITIAL CALIBRATION = %RSD | SDG 21644 CONTINUED | | | SDG 21652 CONTINUED | | | |
|---|---|---|---|---|---|---|---|
| CCAL = CONTINUING CALIBRATION = %D | ICAL | CCAL1 | CCAL2 | ICAL | CCAL1 | CCAL2 | CCAL3 |
| DATE | 043092 | 052192 | 052292 | 043092 | 052092 | 052292 | 052692 |
| INSTRUMENT ID | 5100 | 5100 | 5100 | 5100 | 5100 | 5100 | 5100 |
| CALIBRATION CRITERIA | %RSD | %D | %D | %RSD | %D | %D | %D |
| PENTACHLOROBENZENE | | | | | | | 41.3 |
| 7,12-DIMETHYLBENZ(A)ANTHRACENE | 31.4 | -31.8 | | 31.4 | -25.4 | | |
| 3-METHYLCHOLANTHRENE | | | -28.4 | | -27.0 | -28.4 | |
| N-NITROSOMETHYLETHYLAMINE | | | 30.4 | | 54.8 | 30.4 | 26.2 |
| N-NITROSOMORPHOLINE | | -30.0 | | | | | |
| HEXACHLOROPROPENE | | 29.0 | 26.3 | | 29.0 | 26.3 | |
| ISOSAFROLE | | | 26.0 | | | 26.0 | |
| 1,4-NAPTHOQUINONE | 37.9 | | 49.6 | 37.9 | | 49.6 | 39.4 |
| 1,3-DINITROBENZENE | | | 36.3 | | | 36.3 | |
| 5-NITRO-O-TOLUIDINE | | 26.8 | 28.0 | | | 28.0 | |
| 1,3,5-TRINITROBENZENE | | 32.8 | 37.9 | | 28.7 | 37.9 | |
| 4-NITROQUINOLINE-1-OXIDE | | 33.3 | 40.0 | | 25.7 | 40.0 | |
| METHAPYRILENE | | 34.9 | 37.9 | | | 37.9 | |
| 3,3'-DIMETHYLBENZIDINE | | | -68.7 | | | -68.7 | -32.7 |
| 2-ACETAMIDOFLUORENE | | 28.2 | | | 32.5 | | 27.3 |
| ARAMITE | | | 27.9 | | 26.7 | 27.9 | 44.2 |

**SDG 21644**

CCAL1: KBA-11-1, KBA-11-9, BS15ER, KBA-11-8

CCAL2: KBA-11-7, KBA-11-2D, KBA-11-2

**SDG 21652**

CCAL1: KBA-11-5

CCAL2: BS05FB, BS04FB, BS16ER, KBA-11-3, KBA-11-4

CCAL3: KBA-11-6

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## SEMIVOLATILE ORGANIC COMPOUNDS - TABLE 1.3.1 - PAGE - 9

### INITIAL AND CONTINUING CALIBRATION - %RSD, %D, AND RRF

| ICAL = INITIAL CALIBRATION = %RSD | SDG 22208 | | SDG 22205 | | |
|---|---|---|---|---|---|
| CCAL = CONTINUING CALIBRATION = %D | ICAL | CCAL1 | ICAL | CCAL1 | ICAL |
| DATE | 071592 | 072192 | 071492 | 071792 | 071592 |
| INSTRUMENT ID | 4000 | 4000 | 5100D | 5100D | 5100D |
| CALIBRATION CRITERIA | %RSD | %D | %D | %D | %RSD |
| bis(-2-CHLOROETHYL)ETHER | 33.6 | | | | 33.6 |
| 4-METHYLPHENOL | | | | 26.4 | |
| HEXACHLOROETHANE | | | | 26.3 | |
| 2-METHYLNAPHTHALENE | | -59.0 | | | |
| 2,4,5-TRICHLOROPHENOL | | -32.1 | | | |
| HEXACHLOROCYCLOPENTADIENE | | -33.0 | | | |
| 3-NITROANILINE | | 34.7 | | | |
| 2,4-DINITROPHENOL | | -45.6 | | | |
| 2-FLUOROPHENOL | | | | 30.5 | |
| 4-NITROPHENOL | | -39.5 | | 35.0 | |
| 4-NITROANILINE | | 49.4 | 33.0 | | |
| 2,4,6-TRIBROMOPHENOL | | -48.2 | | | |

**SDG 22208**
CCAL 1: BS08FB, BS06FB
**SDG 22205**
CCAL1: KBA-16-1, KBA-16-2D

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## SEMIVOLATILE ORGANIC COMPOUNDS - TABLE 1.3.1 - PAGE - 10

**INITIAL AND CONTINUING CALIBRATION - %RSD, %D, AND RRF**

| ICAL = INITIAL CALIBRATION = %RSD | SDG 22723 | | | SDG 22725 | |
|---|---|---|---|---|---|
| CCAL = CONTINUING CALIBRATION = %D | CCAL1 | CCAL2 | CCAL3 | CCAL1 | CCAL2 |
| DATE | 101492 | 101592 | 102092 | 101492 | 102092 |
| INSTRUMENT ID | 4000 | 4000 | 4000 | 4000 | 4000 |
| CALIBRATION CRITERIA | %D | %D | %D | %D | %D |
| N-NITROSO-DI-PROPYLAMINE | | | -36.9 | | -36.9 |
| HEXACHLOROETHANE | | | -34.7 | | -34.7 |
| NITROBENZENE | | | -29.7 | | -29.7 |
| ISOPHORONE | | -25.7 | -30.3 | | -30.3 |
| 2,6-DINITROTOLUENE | | -33.3 | | | |
| 2,4-DINITROTOLUENE | | -39.1 | | | |
| BENZO(K)FLUORANTHENE | | 26.0 | | | |
| 2,2'-OXYBIS(1-CHLOROPROPANE) | | | -43.4 | | -43.4 |
| 2,4-DINITROPHENOL | | -31.4 | | | |
| 4-NITROANILINE | | -25.7 | | | |
| 3,3'-DICHLOROBENZIDINE | | -44.5 | -47.7 | | -47.7 |
| BIS(2-ETHYLHEXYL)PHTHALATE | 32.2 | -34.5 | -29.4 | 32.2 | -29.4 |
| 2,4,6-TRIBROMOPHENOL | | | 31.8 | | 31.8 |
| CARBAZOLE | | -29.1 | | | |

**SDG 22723**

CCAL1: BS-24-ER, KBA-16-20, KBA-16-2MS, KBA-16-2MSD

CCAL2: KBA-16-1, KBA-16-2, KBA-16-3, KBA-16-4, SBLKW_2

CCAL3: KBA-16-1RE, KBA-16-2RE, KBA-16-3RE, KBA-16-4RE, BS-24-ERRE, KBA-16-2DRE

**SDG 22725**

CCAL1: BS-10-FB, BS-12-FB

CCAL2: BS-10-FBRE, BS-12-FBRE

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## SEMIVOLATILE ORGANIC COMPOUNDS - TABLE 1.3.1 - PAGE - 11

**INITIAL AND CONTINUING CALIBRATION - %RSD, %D, AND RRF**

| ICAL = INITIAL CALIBRATION = %RSD | SDG 22739 | SDG 23751 | |
|---|---|---|---|
| CCAL = CONTINUING CALIBRATION = %D | CCAL1 | CCAL1 | CCAL2 |
| DATE | 012793 | 012793 | 021593 |
| INSTRUMENT ID | 5100D | 5100D | 5100D |
| CALIBRATION CRITERIA | %D | %D | %D |
| BIS(-2-CHLOROETHYL)ETHER | -26.5 | -26.5 | |
| 2,6-DINITROTOLUENE | -26.1 | -26.1 | |
| 2,4-DINITROTOLUENE | -32.4 | -32.4 | |
| BENZO(K)FLUORANTHENE | | | 42.4 |
| TERPHENYL-D14 | -25.4 | -25.4 | |
| HEXACHLOROCYCLOPENTADIENE | | | -27.9 |
| DIMETHYLPHTHALATE | -27.4 | -27.4 | |
| 2-CHLOROISOPROPYLETHER | -27.4 | -27.4 | |
| BENZOIC ACID | -26.9 | -26.9 | 56.6 |
| 3-NITROANILINE | -25.6 | -25.6 | |
| 4,6-DINITRO-2-METHYLPHENOL | | | 30.5 |
| BUTYLBENZYLPHTHALATE | | | 26.4 |
| 3,3'-DICHLOROBENZIDINE | | | -29.3 |
| BIS(2-ETHYLHEXYL)PHTHALATE | | | 31.5 |

SDG 22739
CCAL1: BS-21-FB, BS-199-FB
SDG 23751
CCAL1: KBA-16-1, BS-36-ER, KBA-16-2, KBA-16-2S, KBA-16-2MD, KBA-16-2D
KBA-16-3, KBA-16-4
CCAL2: KBA-16-3RE

# ORGANOPHOSPHORUS PESTICIDES - TABLE 1.3.5

## INITIAL AND CONTINUING CALIBRATION - %RSD AND %D

| *ICAL = INITIAL CALIBRATION = %RSD* | SDG 20865 | SDG 20873 | SDG 20900 | SDG 20917 |
|---|---|---|---|---|
| *CCAL = CONTINUING CALIBRATION = %D* | **CCAL1** | **CCAL1** | **CCAL1** | **CCAL1** |
| DATE | 022692 | 022692 | 022692 | 022692 |
| INSTRUMENT ID | | | | |
| CALIBRATION CRITERIA | %D | %D | %D | %D |
| SULFOTEPP | -16 | -16 | -16 | -16 |

**SDG 20865**
CCAL1: No effect on sample results
**SDG 20873**
CCAL1: No effect on sample results
**SDG 20900**
CCAL1: No effect on sample results
**SDG 20917**
CCAL1: No effect on sample results

| *ICAL = INITIAL CALIBRATION = %RSD* | SDG 20940 | SDG 21012 | SDG 20985 | SDG 20997 |
|---|---|---|---|---|
| *CCAL = CONTINUING CALIBRATION = %D* | **CCAL1** | **CCAL1** | **CCAL1** | **CCAL1** |
| DATE | 022692 | 031892 | 022692 | 022692 |
| INSTRUMENT ID | | | | |
| CALIBRATION CRITERIA | %D | %D | %D | %D |
| SULFOTEPP | -16 | | -16 | -16 |
| DISULFOTON | | 16 | | |

**SDG 20940**
CCAL1: No effect on sample results
**SDG 21012**
CCAL1: KBA-16-4, BS11ER
**SDG 20985**
CCAL1: No effect on sample results
**SDG 20997**
CCAL1: No effect on sample results

# DIOXIN/FURANS - TABLE 1.3.6

## INITIAL AND CONTINUING CALIBRATION - %RSD AND %D

| ICAL = INITIAL CALIBRATION = %RSD | SDG 20865 | SDG 208 | SDG 20873 |
|---|---|---|---|
| CCAL = CONTINUING CALIBRATION = %D | CCAL1 | CCAL1 | CCAL1 |
| DATE | 021792 | 021792 | 021792 |
| INSTRUMENT ID | | | |
| CALIBRATION CRITERIA | %D | %D | %D |
| OCDF | 32.8 | 32.8 | 32.8 |

20865: NONE ASSOCIATED
20867: KB11SB010301
20873: NONE ASSOCIATED

# GC VOLATILE ORGANIC COMPOUNDS - TABLE 1.3.7
## INITIAL AND CONTINUING CALIBRATION - %RSD AND %D

| *ICAL = INITIAL CALIBRATION = %RSD* | SDG 22711 | |
|---|---|---|
| *CCAL = CONTINUING CALIBRATION = %D* | **ICAL** | **CAL250** |
| DATE | 091492 | 091792 |
| INSTRUMENT ID | | |
| CALIBRATION CRITERIA | %RSD | %D |
| CHLOROMETHANE | | 42 |

SDG 22711: KBA-11-8, KBA-11-1, BS-22-ER, KBA-11-2, KBA-11-3, KBA-11-2D, BT-22-FB, BS-09-FB

# Appendix F

## Validated Analytical Data Tables

## DEFINITION OF DATA QUALIFIERS

### Organic Data Qualifiers

J - Indicates an estimated concentration because results are either below the concentration required detection level (CRQL) or quality control criteria were not met.

U - Indicates that compound was analyzed but not detected.

UJ - Indicates that quantitation level was estimated because QC criteria were not met.

NJ - Presumptive evidence for the presence of a compound at an estimated value.

E - Indicates that the analyte concentration exceeded the calibration range of the GC/MS and re-analysis of diluted sample within calibration range.

D - Indicates that sample concentration was obtained by dilution to bring result within calibration range.

X - Total concentration of two indistinguishable isomers (i.e., 3-Methylphenol and 4-Methylphenol).

UR - Indicates that the reported detection limit is unusable because QA criteria were not met.

### Inorganic Data Qualifiers

J - Indicates an estimated concentration because results are either below the concentration required detection level (CRQL) or quality control criteria were not met.

U - Indicates that compound was analyzed but not detected.

UJ - Indicates that quantitation level was estimated because QC criteria were not met.

E - The reported concentration is estimated because of the presence of an interference.

UR - Indicates that the reported detection limit is unusable because QC criteria were not met.

**Site 5 Soil Sampling Event No. 1**
**February 1992**

PROJECT: NSB KINGS BAY, GEORGIA — VOLATILE SOIL ANALYSES (ug/kg) — Validated Analytical Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SAMPLE LOCATION: | | 5-SB-01 | 5-SB-02 | 5-SB-02D | 5-SB-03 | 5-SB-04 | 5-SB-05 | 5-SB-06 | 5-SB-07 |
| LAB NUMBER: | | S20867003 | S20867004 | S20867012 | S20867001 | S20867002 | S20865005 | S20865004 | S20865006 |
| DATE SAMPLED: | | 02/08/92 | 02/08/92 | 02/08/92 | 02/08/92 | 02/08/92 | 02/07/92 | 02/07/92 | 02/07/92 |
| DATA ANALYZED: | | 02/14/92 | 02/13/92 | 02/17/92 | 02/14/92 | 02/14/92 | 02/17/92 | 02/17/92 | 02/17/92 |
| % SOLIDS: | | 80.0 | 80.0 | 90.0 | 80.0 | 74.0 | 76.0 | 85.0 | 78.0 |
| DILUTION FACTOR: | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 2.0 | 5.0 |
| VOLATILES -- METHOD (8240) | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| Chloromethane | 10 | 12 U | 12 U | 11 U | 12 U | 14 U | 13 U | 24 U | 64 U |
| Bromomethane | 10 | 12 U | 12 U | 11 U | 12 U | 14 U | 13 U | 24 U | 64 U |
| Vinyl Chloride | 10 | 12 U | 12 U | 11 U | 12 U | 14 U | 13 U | 24 U | 64 U |
| Chloroethane | 10 | 12 U | 12 U | 11 U | 12 U | 14 U | 13 U | 24 U | 64 U |
| Methylene Chloride | 5 | 20 U | 43 U | 16 U | 27 U | 37 U | 36 U | 90 | 74 |
| Acetone | 10 | 100 | 95 U | 35 U | 22 U | 180 | 170 | 460 | 7900 |
| Carbon Disulfide | 5 | 6 U | 6 U | 6 U | 6 U | 7 U | 7 U | 7 | 32 U |
| Trichlorofluoromethane | 5 | 6 U | 6 U | 6 U | 6 U | 7 U | 7 U | 12 U | 32 U |
| 1,1-Dichloroethene | 5 | 6 U | 6 U | 6 U | 6 U | 7 U | 7 U | 12 U | 32 U |
| 1,1-Dichloroethane | 5 | 6 U | 6 U | 6 U | 6 U | 7 U | 7 U | 12 U | 32 U |
| 1,2-Dichloroethene (total) | 5 | 6 U | 6 U | 6 U | 6 U | 7 U | 7 U | 12 U | 32 U |
| Chloroform | 5 | 6 U | 6 U | 6 U | 6 U | 7 U | 7 U | 12 U | 32 U |
| 1,2-Dichloroethane | 5 | 6 U | 6 U | 6 U | 6 U | 7 U | 7 U | 12 U | 32 U |
| 2-Butanone | 10 | 12 U | 12 U | 11 U | 12 U | 14 U | 13 U | 24 U | 64 U |
| 1,1,1-Trichloroethane | 5 | 6 U | 6 U | 6 U | 6 U | 7 U | 7 U | 12 U | 32 U |
| Carbon Tetrachloride | 5 | 6 U | 6 U | 6 U | 6 U | 7 U | 7 U | 12 U | 32 U |
| Vinyl Acetate | 10 | 12 U | 12 U | 11 U | 12 U | 14 U | 13 U | 24 U | 64 U |
| Bromodichloromethane | 5 | 6 U | 6 U | 6 U | 6 U | 7 U | 7 U | 12 U | 32 U |
| 1,2-Dichloropropane | 5 | 6 U | 6 U | 6 U | 6 U | 7 U | 7 U | 12 U | 32 U |
| cis-1,3-Dichloropropene | 5 | 6 U | 6 U | 6 U | 6 U | 7 U | 7 U | 12 U | 32 U |
| Trichloroethene | 5 | 6 U | 6 U | 6 U | 6 U | 7 U | 7 U | 12 U | 32 U |
| Dibromochloromethane | 5 | 6 U | 6 U | 6 U | 6 U | 7 U | 7 U | 12 U | 32 U |
| 1,1,2-Trichloroethane | 5 | 6 U | 6 U | 6 U | 6 U | 7 U | 7 U | 12 U | 32 U |
| Benzene | 5 | 6 U | 6 U | 6 U | 6 U | 7 U | 7 U | 12 U | 32 U |
| trans-1,3-Dichloropropene | 5 | 6 U | 6 U | 6 U | 6 U | 7 U | 7 U | 12 U | 32 U |
| 2-Chloroethylvinylether | 10 | 12 U | 12 U | 11 U | 12 U | 14 U | 13 U | 24 U | 64 U |
| Bromoform | 5 | 6 U | 6 U | 6 U | 6 U | 7 U | 7 U | 12 U | 32 U |
| 2-Hexanone | 10 | 12 U | 12 U | 11 U | 12 U | 14 U | 13 U | 24 U | 64 U |
| 4-Methyl-2-Pentanone | 10 | 12 U | 12 U | 11 U | 12 U | 14 U | 13 U | 24 U | 64 U |
| Tetrachloroethene | 5 | 6 U | 6 U | 6 U | 6 U | 7 U | 7 U | 12 U | 32 U |
| 1,1,2,2-Tetrachloroethane | 5 | 6 U | 6 U | 6 U | 6 U | 7 U | 7 U | 12 U | 32 U |
| Toluene | 5 | 6 U | 6 U | 6 U | 6 U | 7 U | 7 U | 4 J | 32 U |
| Chlorobenzene | 5 | 6 U | 6 U | 6 U | 6 U | 7 U | 7 U | 12 U | 32 U |
| Ethylbenzene | 5 | 6 U | 6 U | 6 U | 6 U | 7 U | 7 U | 12 U | 32 U |
| Styrene | 5 | 6 U | 6 U | 6 U | 6 U | 7 U | 7 U | 12 U | 32 U |
| Xylene (total) | 5 | 3 J | 3 J | 6 U | 3 J | 3 J | 9 | 15 | 20 |
| 1,3-Dichlorobenzene | 5 | 6 U | 6 U | 6 U | 6 U | 7 U | 7 U | 12 U | 32 U |
| 1,4-Dichlorobenzene | 5 | 6 U | 6 U | 6 U | 6 U | 7 U | 7 U | 12 U | 32 U |
| 1,2-Dichlorobenzene | 5 | 6 U | 6 U | 6 U | 6 U | 7 U | 7 U | 12 U | 32 U |
| Acrolein | 100 | 120 U | 120 U | 110 U | 120 U | 140 U | 130 U | 240 U | 640 U |
| Iodomethane | 10 | 12 U | 12 U | 11 U | 12 U | 14 U | 13 U | 24 U | 64 U |
| Acrylonitrile | 100 | 120 U | 120 U | 110 U | 120 U | 140 U | 130 U | 240 U | 640 U |
| Dibromomethane | 5 | 6 U | 6 U | 6 U | 6 U | 7 U | 7 U | 12 U | 32 U |
| Ethyl Methacrylate | 5 | 6 U | 6 U | 6 U | 6 U | 7 U | 7 U | 12 U | 32 U |
| 1,2,3-Trichloropropane | 5 | 6 U | 6 U | 6 U | 6 U | 7 U | 7 U | 12 U | 32 U |

PROJECT: NSB KINGS BAY, GEORGIA

VOLATILE SOIL ANALYSES (ug/kg) (continued)

Validated Analytical Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SAMPLE LOCATION: | | 5-SB-01 | 5-SB-02 | 5-SB-02D | 5-SB-03 | 5-SB-04 | 5-SB-05 | 5-SB-06 | 5-SB-07 |
| LAB NUMBER: | | S20867003 | S20867004 | S20867012 | S20867001 | S20867002 | S20865005 | S20865004 | S20865006 |
| DATE SAMPLED: | | 02/08/92 | 02/08/92 | 02/08/92 | 02/08/92 | 02/08/92 | 02/07/92 | 02/07/92 | 02/07/92 |
| DATA ANALYZED: | | 02/14/92 | 02/13/92 | 02/17/92 | 02/14/92 | 02/14/92 | 02/17/92 | 02/17/92 | 02/17/92 |
| % SOLIDS: | | 80.0 | 80.0 | 90.0 | 80.0 | 74.0 | 76.0 | 85.0 | 78.0 |
| DILUTION FACTOR: | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 2.0 | 5.0 |
| VOLATILES -- METHOD (8240) | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| trans-1,4-Dichloro-2-Butene | 5 | 6 U | 6 U | 6 U | 6 U | 7 U | 7 U | 12 U | 32 U |
| Acetonitrile | 100 | 120 UJ | 120 UJ | 110 UJ | 120 UJ | 140 UJ | 130 UJ | 240 UJ | 640UJ |
| 3-Chloropropene | 5 | 6 UJ | 6 UJ | 6 UJ | 6 UJ | 7 UJ | 7 UJ | 12 UJ | 32 UJ |
| Propionitrile | 100 | 120 UJ | 120 UJ | 110 UJ | 120 UJ | 140 UJ | 130 UJ | 240 UJ | 640UJ |
| Methacrylonitrile | 5 | 6 UJ | 6 UJ | 6 UJ | 6 UJ | 7 UJ | 7 UJ | 12 UJ | 32 UJ |
| 1,4-Dioxane | 200 | 250 U | 250 U | 220 U | 250 U | 270 UJ | 260 UJ | 470 U | 1300 U |
| Methyl Methacrylate | 10 | 12 UJ | 12 UJ | 11 UJ | 12 UJ | 14 UJ | 13 UJ | 24 UJ | 64 UJ |
| 1,2-Dibromoethane | 5 | 6 UJ | 6 UJ | 6 UJ | 6 UJ | 7 UJ | 7 UJ | 12 UJ | 32 UJ |
| 1,1,1,2-Tetrachloroethane | 5 | 6 UJ | 6 UJ | 6 UJ | 6 UJ | 7 UJ | 7 UJ | 12 UJ | 32 UJ |
| 1,2-Dibromo-3-Chloropropane | 10 | 12 UJ | 12 UJ | 11 UJ | 12 UJ | 14 UJ | 13 UJ | 24 UJ | 64 UJ |
| Pentachloroethane | 10 | 12 UJ | 12 UJ | 11 UJ | 12 UJ | 14 UJ | 13 UJ | 24 UJ | 64 UJ |
| Isobutyl alcohol | 200 | 250 UJ | 250 UJ | 220 UJ | 250 UJ | 270 UJ | 260 UJ | 470 UJ | 1300 UJ |
| Chloroprene | 200 | 250 UJ | 250 UJ | 220 UJ | 250 UJ | 270 UJ | 260 UJ | 470 UJ | 1300 UJ |

PROJECT: NSB KINGS BAY, GEORGIA

VOLATILE SOIL ANALYSES (ug/kg)

Validated Analytical Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SAMPLE LOCATION: | | 5-SS-01 | 5-SS-02 | 5-SS-03 | 5-SS-03D | 5-SS-04 | 5-SS-05 | 5-SS-06 | 5-SS-07 |
| LAB NUMBER: | | S20940001 | S20940002 | S20940003 | S20940004 | S20940005 | S20940006 | S20940007 | S20940008 |
| DATE SAMPLED: | | 02/17/92 | 02/17/92 | 02/17/92 | 02/17/92 | 02/17/92 | 02/17/92 | 02/17/92 | 02/17/92 |
| DATE ANALYZED: | | 02/28/92 | 02/28/92 | 02/27/92 | 02/27/92 | 02/28/92 | 02/28/92 | 02/28/92 | 02/28/92 |
| % SOLIDS: | | 85.0 | 86.0 | 79.0 | 78.0 | 85.0 | 85.0 | 96.0 | 89.0 |
| DILUTION FACTOR: | | 1.0 | 1.0 | 120 | 120 | 1.0 | 1.0 | 1.0 | 1.0 |
| VOLATILES -- METHOD (8240) | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| Chloromethane | 10 | 12 U | 12 U | 1600 U | 1600 U | 12 U | 12 UJ | 10 U | 11 U |
| Bromomethane | 10 | 12 U | 12 U | 1600 U | 1600 U | 12 U | 12 UJ | 10 U | 11 U |
| Vinyl Chloride | 10 | 12 U | 12 U | 1600 U | 1600 U | 12 U | 12 UJ | 10 U | 11 U |
| Chloroethane | 10 | 12 U | 12 U | 1600 U | 1600 U | 12 U | 12 UJ | 10 U | 11 U |
| Methylene Chloride | 5 | 31 U | 110 J | 1100 U | 1300 U | 35 U | 100 J | 41 U | 72 U |
| Acetone | 10 | 28 U | 41 U | 12000 | 17000 | 71 U | 10 UJ | 10 U | 160 J |
| Carbon Disulfide | 5 | 6 U | 21 J | 790 U | 800 U | 6 U | 24 J | 6 | 14 J |
| Trichlorofluoromethane | 5 | 6 U | 3 J | 790 U | 800 U | 6 U | 6 UJ | 5 U | 6 U |
| 1,1-Dichloroethene | 5 | 6 U | 6 U | 790 U | 800 U | 6 U | 6 UJ | 5 U | 6 U |
| 1,1-Dichloroethane | 5 | 6 U | 6 U | 790 U | 800 U | 6 U | 6 UJ | 5 U | 6 U |
| 1,2-Dichloroethene (total) | 5 | 6 U | 6 U | 790 U | 800 U | 6 U | 6 UJ | 5 U | 6 U |
| Chloroform | 5 | 6 U | 6 U | 790 U | 800 U | 6 U | 6 UJ | 5 U | 6 U |
| 1,2-Dichloroethane | 5 | 6 U | 6 U | 790 U | 800 U | 6 U | 6 UJ | 5 U | 6 U |
| 2-Butanone | 10 | 12 U | 12 U | 1600 U | 1600 U | 12 U | 12 UJ | 10 U | 11 U |
| 1,1,1-Trichloroethane | 5 | 6 U | 6 U | 790 U | 800 U | 6 U | 6 UJ | 5 U | 6 U |
| Carbon Tetrachloride | 5 | 6 U | 6 U | 790 U | 800 U | 6 U | 6 UJ | 5 U | 6 U |
| Vinyl Acetate | 10 | 12 U | 12 U | 1600 U | 1600 U | 12 U | 12 UJ | 10 U | 11 U |
| Bromodichloromethane | 5 | 6 U | 6 U | 790 U | 800 U | 6 U | 6 UJ | 5 U | 6 U |
| 1,2-Dichloropropane | 5 | 6 U | 6 U | 790 U | 800 U | 6 U | 6 UJ | 5 U | 6 U |
| cis-1,3-Dichloropropene | 5 | 6 U | 6 U | 790 U | 800 U | 6 U | 6 UJ | 5 U | 6 U |
| Trichloroethene | 5 | 6 U | 6 U | 790 U | 800 U | 6 U | 6 UJ | 5 U | 6 U |
| Dibromochloromethane | 5 | 6 U | 6 U | 790 U | 800 U | 6 U | 6 UJ | 5 U | 6 U |
| 1,1,2-Trichloroethane | 5 | 6 U | 6 U | 790 U | 800 U | 6 U | 6 UJ | 5 U | 6 U |
| Benzene | 5 | 6 U | 6 U | 790 U | 800 U | 6 U | 6 UJ | 5 U | 6 U |
| trans-1,3-Dichloropropene | 5 | 6 U | 6 U | 790 U | 800 U | 6 U | 6 UJ | 5 U | 6 U |
| 2-Chloroethylvinylether | 10 | 12 U | 12 U | 1600 U | 1600 U | 12 U | 12 UJ | 10 U | 11 U |
| Bromoform | 5 | 6 U | 6 U | 790 U | 800 U | 6 U | 6 UJ | 5 U | 6 U |
| 2-Hexanone | 10 | 12 U | 12 UJ | 1600 U | 1600 U | 12 U | 12 UJ | 10 U | 11 UJ |
| 4-Methyl-2-Pentanone | 10 | 12 U | 12 UJ | 1600 U | 1600 U | 12 U | 12 UJ | 10 U | 11 UJ |
| Tetrachloroethene | 5 | 6 U | 6 UJ | 790 U | 800 U | 6 U | 6 UJ | 5 U | 6 UJ |
| 1,1,2,2-Tetrachloroethane | 5 | 6 U | 6 UJ | 790 U | 800 U | 6 U | 6 UJ | 5 U | 6 UJ |
| Toluene | 5 | 6 U | 5 J | 790 U | 800 U | 6 U | 4 J | 1 J | 6 J |
| Chlorobenzene | 5 | 6 U | 6 UJ | 790 U | 800 U | 6 U | 6 UJ | 5 U | 6 UJ |
| Ethylbenzene | 5 | 6 U | 6 UJ | 790 U | 800 U | 6 U | 6 UJ | 5 U | 6 UJ |
| Styrene | 5 | 6 U | 6 UJ | 790 U | 800 U | 6 U | 6 UJ | 5 U | 6 UJ |
| Xylene (total) | 5 | 6 | 11 J | 790 U | 800 U | 10 | 21 J | 10 | 11 J |
| 1,3-Dichlorobenzene | 5 | 6 U | 6 UJ | 790 U | 800 U | 6 U | 6 UJ | 5 U | 6 UJ |
| 1,4-Dichlorobenzene | 5 | 6 U | 6 UJ | 790 U | 800 U | 6 U | 6 UJ | 5 U | 6 UJ |
| 1,2-Dichlorobenzene | 5 | 6 U | 6 UJ | 790 U | 800 U | 6 U | 6 UJ | 5 U | 6 UJ |
| Acrolein | 100 | 120 U | 120 U | 16000 U | 16000 U | 120 U | 120 UJ | 100 U | 110 U |
| Iodomethane | 10 | 12 U | 12 U | 1600 U | 1600 U | 12 U | 12 UJ | 10 U | 11 U |
| Acrylonitrile | 100 | 120 U | 120 U | 16000 U | 16000 U | 120 U | 120 UJ | 100 U | 110 U |
| Dibromomethane | 5 | 6 U | 6 U | 790 U | 800 U | 6 U | 6 UJ | 5 U | 6 U |
| Ethyl Methacrylate | 5 | 6 U | 6 U | 790 U | 800 U | 6 U | 6 UJ | 5 U | 6 U |
| 1,2,3-Trichloropropane | 5 | 6 U | 6 U | 790 U | 800 U | 6 U | 6 UJ | 5 U | 6 U |

PROJECT: NSB KINGS BAY, GEORGIA

VOLATILE SOIL ANALYSES (ug/kg) (continued)

Validated Analytical Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SAMPLE LOCATION: | | 5-SS-01 | 5-SS-02 | 5-SS-03 | 5-SS-03D | 5-SS-04 | 5-SS-05 | 5-SS-06 | 5-SS-07 |
| LAB NUMBER: | | S20940001 | S20940002 | S20940003 | S20940004 | S20940005 | S20940006 | S20940007 | S20940008 |
| DATE SAMPLED: | | 02/17/92 | 02/17/92 | 02/17/92 | 02/17/92 | 02/17/92 | 02/17/92 | 02/17/92 | 02/17/92 |
| DATE ANALYZED: | | 02/28/92 | 02/28/92 | 02/27/92 | 02/27/92 | 02/28/92 | 02/28/92 | 02/28/92 | 02/28/92 |
| % SOLIDS: | | 85.0 | 86.0 | 79.0 | 78.0 | 85.0 | 85.0 | 96.0 | 89.0 |
| DILUTION FACTOR: | | 1.0 | 1.0 | 120 | 120 | 1.0 | 1.0 | 1.0 | 1.0 |
| VOLATILES -- METHOD (8240) | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| trans-1,4-Dichloro-2-Butene | 5 | 6 U | 6 U | 790 U | 800 U | 6 U | 6 UJ | 5 U | 6 U |
| Acetonitrile | 100 | 120 UJ | 120 UJ | 16000 UJ | 16000 UJ | 120 UJ | 120 UJ | 100 UJ | 110 UJ |
| 3-Chloropropene | 5 | 6 UJ | 6 UJ | 790 UJ | 800 UJ | 6 UJ | 6 UJ | 5 UJ | 6 UJ |
| Propionitrile | 100 | 120 UJ | 120 UJ | 790 UJ | 800 UJ | 120 UJ | 120 UJ | 100 UJ | 110 UJ |
| Methacrylonitrile | 5 | 6 UJ | 6 UJ | 790 UJ | 800 UJ | 6 UJ | 6 UJ | 5 UJ | 6 UJ |
| 1,4-Dioxane | 200 | 240 U | 230 U | 32000 U | 32000 U | 240 UJ | 240 UJ | 210 UJ | 220 UJ |
| Methyl Methacrylate | 10 | 12 UJ | 12 UJ | 1600 UJ | 1600 UJ | 12 UJ | 12 UJ | 10 UJ | 11 UJ |
| 1,2-Dibromoethane | 5 | 6 UJ | 6 UJ | 790 UJ | 800 UJ | 6 UJ | 6 UJ | 5 UJ | 6 UJ |
| 1,1,1,2-Tetrachloroethane | 5 | 6 UJ | 6 UJ | 790 UJ | 800 UJ | 6 UJ | 6 UJ | 5 UJ | 6 UJ |
| 1,2-Dibromo-3-Chloropropane | 10 | 12 UJ | 12 UJ | 1600 UJ | 1600 UJ | 12 UJ | 12 UJ | 10 UJ | 11 UJ |
| Pentachloroethane | 10 | 12 UJ | 12 UJ | 1600 UJ | 1600 UJ | 12 UJ | 12 UJ | 10 UJ | 11 UJ |
| Isobutyl alcohol | 200 | 240 UJ | 230 UJ | 32000 UJ | 32000 UJ | 240 UJ | 240 UJ | 210 UJ | 220 UJ |
| Chloroprene | 200 | 240 UJ | 230 UJ | 32000 UJ | 32000 UJ | 240 UJ | 240 UJ | 210 UJ | 220 UJ |

PROJECT: NSB KINGS BAY, GEORGIA

SEMIVOLATILE SOIL ANALYSES (ug/kg)

Validated Analytical Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | SAMPLE LOCATION: | 05-SB-01 | 05-SB-02 | 05-SB-02D | 05-SB-03 | 05-SB-04 | 05-SB-05 | 05-SB-06 | 05-SB-07 |
| | LAB NUMBER: | S20867003 | S20867004 | S20867012 | S20867001 | S20867002 | S20865005 | S20865004 | S20865006 |
| | DATE SAMPLED: | 02/08/92 | 02/08/92 | 02/08/92 | 02/08/92 | 02/08/92 | 02/07/92 | 02/07/92 | 02/07/92 |
| | DATE ANALYZED: | 02/24/92 | 02/24/92 | 03/02/92 | 02/24/92 | 02/24/92 | 02/24/92 | 02/24/92 | 02/24/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| | % SOLIDS | 80.0 | 81.0 | 81.0 | 80.0 | 77.0 | 75.0 | 84.0 | 74.0 |
| SEMIVOLATILES -- METHOD 8270 | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| N-Nitrosodimethylamine | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| Phenol | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| Aniline | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| bis (2-Chloroethyl) Ether | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| 2- Chlorophenol | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| 1,3- Dichlorobenzene | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| 1,4- Dichlorobenzene | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| Benzyl Alcohol | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| 1,2- Dichlorobenzene | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| 2- Methylphenol | 330 | 410 U | 410 U | 410 U | 410 U | 440 U | 440 U | 390 U | 450 U |
| bis (2- Chloroisopropyl) Ether | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| 4-Methylphenol | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| N-Nitroso-Di-n-Propylamine | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| Hexachloroethane | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| Nitrobenzene | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| Isophorone | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| 2-Nitrophenol | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| 2,4-Dimethylphenol | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| Benzoic Acid | 1600 | 2000 U | 2000 U | 2000 U | 2000 U | 2100 U | 2100 U | 210 J | 2200 U |
| bis (2-Chloroethoxy) Methane | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| 2,4-Dichlorophenol | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| 1,2,4-Trichlorobenzene | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| Naphthalene | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| 4-Chloroaniline | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| Hexachlorobutadiene | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| 4-Chloro-3-Methylphenol | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| 2-Methylnaphthalene | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| Hexachlorocyclopentadiene | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| 2,4,6-Trichlorophenol | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| 2,4,5-Trichlorophenol | 1600 | 2000 U | 2000 U | 2000 U | 2000 U | 2100 U | 2100 U | 1900 U | 2200 U |
| 2-Chloronaphthalene | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| 2-Nitroaniline | 1600 | 2000 U | 2000 U | 2000 U | 2000 U | 2100 U | 2100 U | 1900 U | 2200 U |
| Dimethylphthalate | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| Acenaphthylene | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| 2,6-Dinitrotoluene | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| 3-Nitroaniline | 1600 | 2000 U | 2000 U | 2000 U | 2000 U | 2100 U | 2100 U | 1900 U | 2200 U |
| Acenaphthene | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| 2,4-Dinitrophenol | 1600 | 2000 U | 2000 U | 2000 U | 2000 U | 2100 U | 2100 U | 1900 U | 2200 U |
| 4-Nitrophenol | 1600 | 2000 U | 2000 U | 2000 U | 2000 U | 2100 U | 2100 U | 1900 U | 2200 U |
| Dibenzofuran | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| 2,4-Dinitrotoluene | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| Diethylphthalate | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| 4-Chlorophenyl-phenylether | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| Fluorene | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| 4-Nitroaniline | 1600 | 2000 U | 2000 U | 2000 U | 2000 U | 2100 U | 2100 U | 1900 U | 2200 U |
| 4,6-Dinitro-2-Methylphenol | 1600 | 2000 U | 2000 U | 2000 U | 2000 U | 2100 U | 2100 U | 1900 U | 2200 U |
| N-Nitrosodiphenylamine | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |

PROJECT: NSB KINGS BAY, GEORGIA

SEMIVOLATILE SOIL ANALYSES (ug/kg) (continued)

Validated Analytical Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | SAMPLE LOCATION: | 05-SB-01 | 05-SB-02 | 05-SB-02D | 05-SB-03 | 05-SB-04 | 05-SB-05 | 05-SB-06 | 05-SB-07 |
| | LAB NUMBER: | S20867003 | S20867004 | S20867012 | S20867001 | S20867002 | S20865005 | S20865004 | S20865006 |
| | DATE SAMPLED: | 02/08/92 | 02/08/92 | 02/08/92 | 02/08/92 | 02/08/92 | 02/07/92 | 02/07/92 | 02/07/92 |
| | DATE ANALYZED: | 02/24/92 | 02/24/92 | 03/02/92 | 02/24/92 | 02/24/92 | 02/24/92 | 02/24/92 | 02/24/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| | % SOLIDS | 80.0 | 81.0 | 81.0 | 80.0 | 77.0 | 75.0 | 84.0 | 74.0 |
| SEMIVOLATILES -- METHOD 8270 | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| 1,2-Diphenylhydrazine | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| 4-Bromophenyl-phenylether | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| Hexachlorobenzene | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| Pentachlorophenol | 1600 | 2000 U | 2000 U | 2000 U | 2000 U | 2100 U | 2100 U | 1900 U | 2200 U |
| Phenanthrene | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| Anthracene | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| Di-n-Butylphthalate | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| Fluoranthene | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| Pyrene | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| Butylbenzylphthalate | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| 3,3'-Dichlorobenzidine | 660 | 820 U | 820 U | 820 U | 820 U | 860 U | 880 U | 790 U | 890 U |
| Benzo (a) Anthracene | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| Chrysene | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| bis (2-Ethylhexyl) Phthalate | 330 | 410 | 590 | 360 | 450 | 270 J | 300 J | 360 | 720 |
| Di-n-Octyl Phthalate | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| Benzo (b) Fluoranthene | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| Benzo (k) Fluoranthene | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| Benzo (a) Pyrene | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| Indeno (1,2,3-cd) Pyrene | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| Dibenz (a,h) Anthracene | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| Benzo (g,h,i) Perylene | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| 2-Picoline | 1600 | 2000 U | 2000 U | 2000 U | 2000 U | 2100 U | 2100 U | 1900 U | 2200 U |
| Methyl methanesulfonate | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| Ethyl methanesulfonate | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| Acetophenone | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| N-Nitrosopiperidine | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| Phenyl-tert-butylamine | 1600 | 2000 UR | 2000 UR | 2000 UR | 2000 UR | 2100 UR | 2100 UR | 1900 UR | 2200 UR |
| 2,6-Dichlorophenol | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| N-Nitroso-di-n-butylamine | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| N-Nitrosodiethylamine | 330 | 410 UJ | 410 UJ | 410 UJ | 410 UJ | 430 UJ | 440 UJ | 390 UJ | 450 UJ |
| N-Nitrosopyrrolidine | 330 | 410 UJ | 410 UJ | 410 UJ | 410 UJ | 430 UJ | 440 UJ | 390 UJ | 450 UJ |
| Benzidine | 1600 | 2000 U | 2000 U | 2000 U | 2000 U | 2100 U | 2100 U | 1900 U | 2200 U |
| 1,2,4,5-Tetrachlorobenzene | 1600 | 2000 U | 2000 U | 2000 U | 2000 U | 2100 U | 2100 U | 1900 U | 2200 U |
| Pentachlorobenzene | 1600 | 2000 U | 2000 U | 2000 U | 2000 U | 2100 U | 2100 U | 1900 U | 2200 U |
| 1-Naphthylamine | 1600 | 2000 U | 2000 U | 2000 U | 2000 U | 2100 U | 2100 U | 1900 U | 2200 U |
| 2-Naphthylamine | 1600 | 2000 U | 2000 U | 2000 UJ | 2000 U | 2100 U | 2100 U | 1900 U | 2200 U |
| 2,3,4,6-Tetrachlorophenol | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| Diphenylamine | 330 | 410 UR | 410 UR | 410 UR | 410 UR | 430 UR | 440 UR | 390 UR | 450 UR |
| Phenacetin | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| 4-Aminobiphenyl | 1600 | 2000 U | 2000 U | 2000 U | 2000 U | 2100 U | 2100 U | 1900 U | 2200 U |
| Pentachloronitrobenzene | 1600 | 2000 U | 2000 U | 2000 U | 2000 U | 2100 U | 2100 U | 1900 U | 2200 U |
| Pronamide | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| p-Dimethylaminoazobenzene | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| 7,12-Dimethylbenz (a) Anthracene | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| 3-Methylcholanthrene | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| Pyridine | 1600 | 2000 U | 2000 U | 2000 U | 2000 U | 2100 U | 2100 U | 1900 U | 2200 U |

PROJECT: NSB KINGS BAY, GEORGIA

SEMIVOLATILE SOIL ANALYSES (ug/kg) (continued)

Validated Analytical Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | SAMPLE LOCATION: | 05-SB-01 | 05-SB-02 | 05-SB-02D | 05-SB-03 | 05-SB-04 | 05-SB-05 | 05-SB-06 | 05-SB-07 |
| | LAB NUMBER: | S20867003 | S20867004 | S20867012 | S20867001 | S20867002 | S20865005 | S20865004 | S20865006 |
| | DATE SAMPLED: | 02/08/92 | 02/08/92 | 02/08/92 | 02/08/92 | 02/08/92 | 02/07/92 | 02/07/92 | 02/07/92 |
| | DATE ANALYZED: | 02/24/92 | 02/24/92 | 03/02/92 | 02/24/92 | 02/24/92 | 02/24/92 | 02/24/92 | 02/24/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| | % SOLIDS | 80.0 | 81.0 | 81.0 | 80.0 | 77.0 | 75.0 | 84.0 | 74.0 |
| SEMIVOLATILES -- METHOD 8270 | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| N-Nitrosomethylethylamine | 330 | 410 UJ | 410 UJ | 410 UJ | 410 UJ | 430 UJ | 440 UJ | 390 UJ | 450 UJ |
| N-Nitrosomorpholine | 330 | 410 UJ | 410 UJ | 410 UJ | 410 UJ | 430 UJ | 440 UJ | 390 UJ | 450 UJ |
| o-Toluidine | 330 | 410 UJ | 410 UJ | 410 UJ | 410 UJ | 430 UJ | 440 UJ | 390 UJ | 450 UJ |
| 3- Methylphenol | 330 | 410 U | 410 U | 410 U | 410 U | 430 U | 440 U | 390 U | 450 U |
| Hexachloropropene | 1600 | 2000 UJ | 2000 UJ | 2000 UJ | 2000 UJ | 2100 UJ | 2100 UJ | 1900 UJ | 2200 UJ |
| p-Phenylenediamine | 1600 | 2000 UJ | 2000 UJ | 2000 UJ | 2000 UJ | 2100 UJ | 2100 UJ | 1900 UJ | 2200 UJ |
| Safrole | 1600 | 2000 UJ | 2000 UJ | 2000 UJ | 2000 UJ | 2100 UJ | 2100 UJ | 1900 UJ | 2200 UJ |
| Isosafrole | 1600 | 2000 UJ | 2000 UJ | 2000 UJ | 2000 UJ | 2100 UJ | 2100 UJ | 1900 UJ | 2200 UJ |
| 1,4-Naphthoquinone | 1600 | 2000 UJ | 2000 UJ | 2000 UJ | 2000 UJ | 2100 UJ | 2100 UJ | 1900 UJ | 2200 UJ |
| 1,3-Dinitrobenzene | 330 | 410 UJ | 410 UJ | 410 UJ | 410 UJ | 430 UJ | 440 UJ | 390 UJ | 450 UJ |
| 5-Nitro-o-toluidine | 330 | 410 UJ | 410 UJ | 410 UJ | 410 UJ | 430 UJ | 440 UJ | 390 UJ | 450 UJ |
| 1,3,5-Trinitrobenzene | 330 | 410 UJ | 410 UJ | 410 UJ | 410 UJ | 430 UJ | 440 UJ | 390 UJ | 450 UJ |
| 4-Nitroquinoline-1-oxide | 330 | 410 UJ | 410 UJ | 410 UJ | 410 UJ | 430 UJ | 440 UJ | 390 UJ | 450 UJ |
| Methapyrilene | 1600 | 2000 UJ | 2000 UJ | 2000 UJ | 2000 UJ | 2100 UJ | 2100 UJ | 1900 UJ | 2200 UJ |
| 3,3'-Dimethylbenzidine | 330 | 410 UJ | 410 UJ | 410 UJ | 410 UJ | 430 UJ | 440 UJ | 390 UJ | 450 UJ |
| 2-Acetamidofluorene | 330 | 410 UJ | 410 UJ | 410 UJ | 410 UJ | 430 UJ | 440 UJ | 390 UJ | 450 UJ |
| Hexachlorophene | 1600 | 2000 UJ | 2000 UJ | 2000 UJ | 2000 UJ | 2100 UJ | 2100 UJ | 1900 UJ | 2200 UJ |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| POLYCHLORINATED DIBENZO- FURANS/DIOXINS -- METHOD 8280 (ng/l) | | | | | | | | | |
| | DATE ANALYZED: | 02/13/92 | 02/13/92 | 02/13/92 | 02/13/92 | 02/13/92 | 02/13/92 | 02/13/92 | 02/13/92 |
| ANALYTE | PQL* | | | | | | | | |
| TCDFs (total) | -- | 0.0082 U | 0.0037 U | 0.0068 U | 0.0059 U | 0.0036 U | 0.0062 U | 0.0042 U | 0.0037 U |
| PeCDFs (total) | -- | 0.016 U | 0.0064 U | 0.011 U | 0.011 U | 0.0088 U | 0.014 U | 0.0099 U | 0.0081 U |
| HxCDFs (total) | -- | 0.034 U | 0.013 U | 0.025 U | 0.025 U | 0.020 U | 0.032 U | 0.021 U | 0.020 U |
| TCDDs (total) | -- | 0.010 U | 0.0052 U | 0.0089 U | 0.0067 U | 0.0040 U | 0.0070 U | 0.012 U | 0.017 U |
| 2,3,7,8- TCDD | -- | 0.010 U | 0.0052 U | 0.0089 U | 0.0067 U | 0.0040 U | 0.0070 U | 0.012 U | 0.017 U |
| PeCDDs (total) | -- | 0.065 U | 0.023 U | 0.045 U | 0.039 U | 0.034 U | 0.048 U | 0.038 U | 0.028 U |
| HxCDDs (total) | -- | 0.059 U | 0.030 U | 0.045 U | 0.046 U | 0.038 U | 0.039 U | 0.027 U | 0.029 U |

*PQLs are not listed for dioxins and furans because the data are reported relative to method detection limits (MDLs) based on MDL studies. There are no published PQLs for these analytes in the SW-846 method manual and these analytes are not included in the Contract Laboratory Program.

PROJECT: NSB KINGS BAY, GEORGIA

SEMIVOLATILE SOIL ANALYSES (ug/kg)

Validated Analytical Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | SAMPLE LOCATION: | 05-SS-01 | 05-SS-02 | 05-SS-03 | 05-SS-03D | 05-SS-04 | 05-SS-05 | 05-SS-06 | 05-SS-07 |
| | LAB NUMBER: | S20940001 | S20940002 | S20940003 | S20940004 | S20940005 | S20940006 | S20940007 | S20940008 |
| | DATE SAMPLED: | 02/17/92 | 02/17/92 | 02/17/92 | 02/17/92 | 02/17/92 | 02/17/92 | 02/17/92 | 02/17/92 |
| | DATE ANALYZED: | 03/06/92 | 03/10/92 | 03/10/92 | 03/10/92 | 03/06/92 | 03/11/92 | 03/10/92 | 03/11/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| | % SOLIDS: | 86.0 | 87.0 | 77.0 | 77.0 | 86.0 | 86.0 | 90.0 | 88.0 |
| SEMIVOLATILES -- METHOD 8270 | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| N-Nitrosodimethylamine | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| Phenol | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| Aniline | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| bis (2-Chloroethyl) Ether | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| 2- Chlorophenol | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| 1,3- Dichlorobenzene | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| 1,4- Dichlorobenzene | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| Benzyl Alcohol | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| 1,2- Dichlorobenzene | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| 2- Methylphenol | 330 | 380 U | 380 U | 440 U | 440 U | 380 U | 380 U | 370 U | 370 U |
| bis (2- Chloroisopropyl) Ether | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 UJ | 370 U | 370 UJ |
| 4-Methylphenol | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 82 JX |
| N-Nitroso-Di-n-Propylamine | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 UJ | 370 U | 370 UJ |
| Hexachloroethane | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 UJ | 370 U | 370 UJ |
| Nitrobenzene | 330 | 380 UJ | 380 U | 430 U | 430 U | 380 UJ | 380 U | 370 U | 370 U |
| Isophorone | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| 2-Nitrophenol | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| 2,4-Dimethylphenol | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| Benzoic Acid | 1600 | 1900 U | 1800 U | 2100 U | 2100 U | 1900 U | 660 J | 1800 U | 460 J |
| bis (2-Chloroethoxy) Methane | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| 2,4-Dichlorophenol | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| 1,2,4-Trichlorobenzene | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| Naphthalene | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 44 J |
| 4-Chloroaniline | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| Hexachlorobutadiene | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| 4-Chloro-3-Methylphenol | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| 2-Methylnaphthalene | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| Hexachlorocyclopentadiene | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| 2,4,6-Trichlorophenol | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| 2,4,5-Trichlorophenol | 1600 | 1900 U | 1800 U | 2100 U | 2100 U | 1900 U | 1900 U | 1800 U | 1800 U |
| 2-Chloronaphthalene | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| 2-Nitroaniline | 1600 | 1900 U | 1800 U | 2100 U | 2100 U | 1900 U | 1900 U | 1800 U | 1800 U |
| Dimethylphthalate | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| Acenaphthylene | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| 2,6-Dinitrotoluene | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| 3-Nitroaniline | 1600 | 1900 U | 1800 U | 2100 U | 2100 U | 1900 U | 1900 U | 1800 U | 1800 U |
| Acenaphthene | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| 2,4-Dinitrophenol | 1600 | 1900 UJ | 1800 U | 2100 U | 2100 U | 1900 UJ | 1900 U | 1800 U | 1800 U |
| 4-Nitrophenol | 1600 | 1900 U | 1800 U | 2100 U | 2100 U | 1900 U | 1900 U | 1800 U | 1800 U |
| Dibenzofuran | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| 2,4-Dinitrotoluene | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| Diethylphthalate | 330 | 69 J | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| 4-Chlorophenyl-phenylether | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| Fluorene | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| 4-Nitroaniline | 1600 | 1900 U | 1800 U | 2100 U | 2100 U | 1900 U | 1900 UJ | 1800 U | 1800 UJ |
| 4,6-Dinitro-2-Methylphenol | 1600 | 1900 U | 1800 U | 2100 U | 2100 U | 1900 U | 1900 U | 1800 U | 1800 U |
| N-Nitrosodiphenylamine | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |

PROJECT: NSB KINGS BAY, GEORGIA

SEMIVOLATILE SOIL ANALYSES (ug/kg) (continued)

Validated Analytical Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | SAMPLE LOCATION: | 05-SS-01 | 05-SS-02 | 05-SS-03 | 05-SS-03D | 05-SS-04 | 05-SS-05 | 05-SS-06 | 05-SS-07 |
| | LAB NUMBER: | S20940001 | S20940002 | S20940003 | S20940004 | S20940005 | S20940006 | S20940007 | S20940008 |
| | DATE SAMPLED: | 02/17/92 | 02/17/92 | 02/17/92 | 02/17/92 | 02/17/92 | 02/17/92 | 02/17/92 | 02/17/92 |
| | DATE ANALYZED: | 03/06/92 | 03/10/92 | 03/10/92 | 03/10/92 | 03/06/92 | 03/11/92 | 03/10/92 | 03/11/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| | % SOLIDS: | 86.0 | 87.0 | 77.0 | 77.0 | 86.0 | 86.0 | 90.0 | 88.0 |
| SEMIVOLATILES -- METHOD 8270 | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| 1,2-Diphenylhydrazine | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| 4-Bromophenyl-phenylether | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| Hexachlorobenzene | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| Pentachlorophenol | 1600 | 1900 U | 1800 U | 2100 U | 2100 U | 1900 U | 1900 U | 1800 U | 1800 U |
| Phenanthrene | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| Anthracene | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| Di-n-Butylphthalate | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| Fluoranthene | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| Pyrene | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| Butylbenzylphthalate | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| 3,3'-Dichlorobenzidine | 660 | 770 U | 760 U | 860 U | 860 U | 770 U | 770 U | 730 U | 730 U |
| Benzo (a) Anthracene | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| Chrysene | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| bis (2-Ethylhexyl) Phthalate | 330 | 53 J | 260 J | 790 | 710 J | 280 J | 210 J | 100 J | 160 J |
| Di-n-Octyl Phthalate | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| Benzo (b) Fluoranthene | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| Benzo (k) Fluoranthene | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| Benzo (a) Pyrene | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| Indeno (1,2,3-cd) Pyrene | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| Dibenz (a,h) Anthracene | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| Benzo (g,h,i) Perylene | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| 2-Picoline | 1600 | 1900 U | 1800 U | 2100 U | 2100 U | 1900 U | 1900 U | 1800 U | 1800 U |
| Methyl methanesulfonate | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| Ethyl methanesulfonate | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 UJ | 370 U | 370 UJ |
| Acetophenone | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| N-Nitrosopiperidine | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| Phenyl-tert-butylamine | 1600 | 1900 UR | 1800 UR | 2100 UR | 2100 UR | 1900 UR | 1900 UR | 1800 UR | 1800 UR |
| 2,6-Dichlorophenol | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| N-Nitroso-di-n-butylamine | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| N-Nitrosodiethylamine | 330 | 380 UJ | 380 UJ | 430 UJ | 430 UJ | 380 UJ | 380 UJ | 370 UJ | 370 UJ |
| N-Nitrosopyrrolidine | 330 | 380 UJ | 380 UJ | 430 UJ | 430 UJ | 380 UJ | 380 UJ | 370 UJ | 370 UJ |
| Benzidine | 1600 | 1900 U | 1800 UJ | 2100 UJ | 2100 UJ | 1900 U | 1900 U | 1800 UJ | 1800 U |
| 1,2,4,5-Tetrachlorobenzene | 1600 | 1900 U | 1800 U | 2100 U | 2100 U | 1900 U | 1900 U | 1800 U | 1800 U |
| Pentachlorobenzene | 1600 | 1900 U | 1800 U | 2100 U | 2100 U | 1900 U | 1900 U | 1800 U | 1800 U |
| 1-Naphthylamine | 1600 | 1900 U | 1800 U | 2100 U | 2100 U | 1900 U | 1900 U | 1800 U | 1800 U |
| 2-Naphthylamine | 1600 | 1900 U | 1800 U | 2100 U | 2100 U | 1900 U | 1900 U | 1800 U | 1800 U |
| 2,3,4,6-Tetrachlorophenol | 330 | 380 UJ | 380 U | 430 U | 430 U | 380 UJ | 380 U | 370 U | 370 U |
| Diphenylamine | 330 | 380 UR | 380 UR | 430 UR | 430 UR | 380 UR | 380 UR | 370 UR | 370 UR |
| Phenacetin | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| 4-Aminobiphenyl | 1600 | 1900 U | 1800 U | 2100 U | 2100 U | 1900 U | 1900 U | 1800 U | 1800 U |
| Pentachloronitrobenzene | 1600 | 1900 U | 1800 U | 2100 U | 2100 U | 1900 U | 1900 U | 1800 U | 1800 U |
| Pronamide | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| p-Dimethylaminoazobenzene | 330 | 380 UJ | 380 U | 430 U | 430 U | 380 UJ | 380 U | 370 U | 370 U |
| 7,12-Dimethylbenz (a) Anthracene | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| 3-Methylcholanthrene | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 370 U |
| Pyridine | 1600 | 1900 U | 1800 U | 2100 U | 2100 U | 1900 U | 1900 U | 1800 U | 1800 U |

PROJECT: NSB KINGS BAY, GEORGIA

SEMIVOLATILE SOIL ANALYSES (ug/kg) (continued)

Validated Analytical Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | SAMPLE LOCATION: | 05-SS-01 | 05-SS-02 | 05-SS-03 | 05-SS-03D | 05-SS-04 | 05-SS-05 | 05-SS-06 | 05-SS-07 |
| | LAB NUMBER: | S20940001 | S20940002 | S20940003 | S20940004 | S20940005 | S20940006 | S20940007 | S20940008 |
| | DATE SAMPLED: | 02/17/92 | 02/17/92 | 02/17/92 | 02/17/92 | 02/17/92 | 02/17/92 | 02/17/92 | 02/17/92 |
| | DATE ANALYZED: | 03/06/92 | 03/10/92 | 03/10/92 | 03/10/92 | 03/06/92 | 03/11/92 | 03/10/92 | 03/11/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| | % SOLIDS: | 86.0 | 87.0 | 77.0 | 77.0 | 86.0 | 86.0 | 90.0 | 88.0 |
| SEMIVOLATILES -- METHOD 8270 | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| N-Nitrosomethylethylamine | 330 | 380 UJ | 380 UJ | 430 UJ | 430 UJ | 380 UJ | 380 UJ | 370 UJ | 370 UJ |
| N-Nitrosomorpholine | 330 | 380 UJ | 380 UJ | 430 UJ | 430 UJ | 380 UJ | 380 UJ | 370 UJ | 370 UJ |
| o-Toluidine | 330 | 380 UJ | 380 UJ | 430 UJ | 430 UJ | 380 UJ | 380 UJ | 370 UJ | 370 UJ |
| 3-Methylphenol | 330 | 380 U | 380 U | 430 U | 430 U | 380 U | 380 U | 370 U | 82 JX |
| Hexachloropropene | 1600 | 1900 UJ | 1800 UJ | 2100 UJ | 2100 UJ | 1900 UJ | 1900 UJ | 1800 UJ | 1800 UJ |
| p-Phenylenediamine | 1600 | 1900 UJ | 1800 UJ | 2100 UJ | 2100 UJ | 1900 UJ | 1900 UJ | 1800 UJ | 1800 UJ |
| Safrole | 1600 | 1900 UJ | 1800 UJ | 2100 UJ | 2100 UJ | 1900 UJ | 1900 UJ | 1800 UJ | 1800 UJ |
| Isosafrole | 1600 | 1900 UJ | 1800 UJ | 2100 UJ | 2100 UJ | 1900 UJ | 1900 UJ | 1800 UJ | 1800 UJ |
| 1,4-Naphthoquinone | 1600 | 1900 UJ | 1800 UJ | 2100 UJ | 2100 UJ | 1900 UJ | 1900 UJ | 1800 UJ | 1800 UJ |
| 1,3-Dinitrobenzene | 330 | 380 UJ | 380 UJ | 430 UJ | 430 UJ | 380 UJ | 380 UJ | 370 UJ | 370 UJ |
| 5-Nitro-o-toluidine | 330 | 380 UJ | 380 UJ | 430 UJ | 430 UJ | 380 UJ | 380 UJ | 370 UJ | 370 UJ |
| 1,3,5-Trinitrobenzene | 330 | 380 UJ | 380 UJ | 430 UJ | 430 UJ | 380 UJ | 380 UJ | 370 UJ | 370 UJ |
| 4-Nitroquinoline-1-oxide | 330 | 380 UJ | 380 UJ | 430 UJ | 430 UJ | 380 UJ | 380 UJ | 370 UJ | 370 UJ |
| Methapyrilene | 1600 | 1900 UJ | 1800 UJ | 2100 UJ | 2100 UJ | 1900 UJ | 1900 UJ | 1800 UJ | 1800 UJ |
| 3,3'-Dimethylbenzidine | 330 | 380 UJ | 380 UJ | 430 UJ | 430 UJ | 380 UJ | 380 UJ | 370 UJ | 370 UJ |
| 2-Acetamidofluorene | 330 | 380 UJ | 380 UJ | 430 UJ | 430 UJ | 380 UJ | 380 UJ | 370 UJ | 370 UJ |
| Hexachlorophene | 1600 | 1900 UJ | 1800 UJ | 2100 UJ | 2100 UJ | 1900 UJ | 1900 UJ | 1800 UJ | 1800 UJ |

POLYCHLORINATED DIBENZO- FURANS/DIOXINS -- METHOD 8280 (ng/l)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | DATE ANALYZED: | 02/21/92 | 02/21/92 | 02/21/92 | 02/21/92 | 02/21/92 | 02/21/92 | 02/21/92 | 02/21/92 |
| ANALYTE | PQL* | | | | | | | | |
| TCDFs (total) | -- | 0.0076 U | 0.0031 U | 0.0037 U | 0.0029 U | 0.0021 U | 0.0083 U | 0.0024 U | 0.0034 U |
| PeCDFs (total) | -- | 0.0044 U | 0.0034 U | 0.0073 U | 0.0055 U | 0.0035 U | 0.0064 U | 0.0035 U | 0.0043 U |
| HxCDFs (total) | -- | 0.0075 U | 0.019 U | 0.0070 U | 0.0056 U | 0.0051 U | 0.0069 U | 0.0079 U | 0.0057 U |
| TCDDs (total) | -- | 0.0051 U | 0.0053 U | 0.0059 U | 0.0045 U | 0.0044 U | 0.0057 U | 0.0042 U | 0.0040 U |
| 2,3,7,8- TCDD | -- | 0.0051 U | 0.0053 U | 0.0059 U | 0.0045 U | 0.0044 U | 0.0057 U | 0.0042 U | 0.0040 U |
| PeCDDs (total) | -- | 0.010 U | 0.0093 U | 0.011 U | 0.0089 U | 0.010 U | 0.011 U | 0.0091 U | 0.0096 U |
| HxCDDs (total) | -- | 0.012 U | 0.012 U | 0.0089 U | 0.0088 U | 0.0067 U | 0.010 U | 0.0092 U | 0.010 U |

*PQLs are not listed for dioxins and furans because the data are reported relative to method detection limits (MDLs) based on MDL studies. There are no published PQLs for these analytes in the SW-846 method manual and these analytes are not included in the Contract Laboratory Program.

PROJECT: NSB KINGS BAY, GEORGIA — PESTICIDE/PCB/HERBICIDE SOIL ANALYSES (ug/kg) — Validated Analytical Results

| SAMPLE LOCATION: | | 5-SB-01 | 5-SB-02 | 5-SB-02D | 5-SB-03 | 5-SB-04 | 5-SB-05 | 5-SB-06 | 5-SB-07 |
|---|---|---|---|---|---|---|---|---|---|
| LAB NUMBER: | | S20867003 | S20867004 | S20867012 | S20867001 | S20867002 | S20865005 | S20865004 | S20865006 |
| DATE SAMPLED: | | 02/08/92 | 02/08/92 | 02/08/92 | 02/08/92 | 02/08/92 | 02/07/92 | 02/07/92 | 02/07/92 |
| % SOLIDS | | 80.0 | 81.0 | 81.0 | 80.0 | 77.0 | 75.0 | 84.0 | 74.0 |
| ORGANOCHLORINE PESTICIDES AND PCBs -- METHOD 8080 | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| alpha-BHC | 0.4 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| beta-BHC | 0.8 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.1 U | 1.0 U | 1.1 U |
| delta-BHC | 0.4 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| gamma-BHC (Lindane) | 0.4 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Heptachlor | 0.4 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Aldrin | 0.4 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Heptachlor epoxide | 0.4 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Endosulfan I | 0.8 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.1 U | 1.0 U | 1.1 U |
| Dieldrin | 0.8 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.1 U | 1.0 U | 1.1 U |
| 4,4'- DDE | 0.8 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.1 U | 1.0 U | 1.1 U |
| Endrin | 0.8 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.1 U | 1.0 U | 1.1 U |
| Endosulfan II | 0.8 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.1 U | 1.0 U | 1.1 U |
| 4,4'- DDD | 0.8 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.1 U | 1.0 U | 1.1 U |
| Endrin Aldehyde | 0.8 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.1 U | 1.0 U | 1.1 U |
| Endosulfan Sulfate | 0.8 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.1 U | 1.0 U | 1.1 U |
| 4,4'- DDT | 0.8 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.1 U | 1.0 U | 1.1 U |
| Methoxychlor | 1.6 | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.1 U | 2.1 U | 1.9 U | 2.2 U |
| Endrin Ketone | 0.8 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.1 U | 1.0 U | 1.1 U |
| Chlordane | 4 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Toxaphene | 20 | 25 U | 25 U | 25 U | 25 U | 26 U | 27 U | 24 U | 27 U |
| Aroclor-1016 | 32 | 40 U | 40 U | 40 U | 40 U | 42 U | 43 U | 38 U | 43 U |
| Aroclor-1221 | 80 | 100 U | 99 U | 99 U | 100 U | 100 U | 110 U | 95 U | 110 U |
| Aroclor-1232 | 80 | 100 U | 99 U | 99 U | 100 U | 100 U | 110 U | 95 U | 110 U |
| Aroclor-1242 | 32 | 40 U | 40 U | 40 U | 40 U | 42 U | 43 U | 38 U | 43 U |
| Aroclor-1248 | 16 | 20 U | 20 U | 20 U | 20 U | 21 U | 21 U | 19 U | 22 U |
| Aroclor-1254 | 8 | 10 U | 10 U | 10 U | 10 U | 10 U | 11 U | 10 U | 11 U |
| Aroclor-1260 | 8 | 10 U | 10 U | 10 U | 10 U | 10 U | 11 U | 10 U | 11 U |
| Chlorobenzilate | 20 | 25 U | 25 U | 25 U | 25 U | 26 U | 27 U | 24 U | 27 U |
| Diallate | 40 | 50 U | 49 U | 49 U | 50 U | 52 U | 53 U | 48 U | 54 U |
| Isodrin | 0.8 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.1 U | 1.0 U | 1.1 U |
| Kepone | NR | NR | NR | NR | NR | NR | NR | NR | NR |
| ORGANOPHOSPHOROUS PESTICIDES -- METHOD 8140 | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| Triethylphosphorothioate | 50 | 62 U | 62 U | 62 U | 62 U | 65 U | 67 U | 60 U | 68 U |
| Thionazin | 50 | 62 U | 62 U | 62 U | 62 U | 65 U | 67 U | 60 U | 68 U |
| Phorate | 50 | 62 U | 62 U | 62 U | 62 U | 65 U | 67 U | 60 U | 68 U |
| Sulfotepp | 50 | 62 U | 62 U | 62 U | 62 U | 65 U | 67 U | 60 U | 68 U |
| Dimethoate | NR | NR | NR | NR | NR | NR | NR | NR | NR |
| Disulfoton | 50 | 62 U | 62 U | 62 U | 62 U | 65 U | 67 U | 60 U | 68 U |
| Methyl Parathion | 50 | 62 U | 62 U | 62 U | 62 U | 65 U | 67 U | 60 U | 68 U |
| Ethyl Parathion | 50 | 62 U | 62 U | 62 U | 62 U | 65 U | 67 U | 60 U | 68 U |
| Famphur | 50 | 62 U | 62 U | 62 U | 62 U | 65 U | 67 U | 60 U | 68 U |
| CHLORINATED HERBICIDES -- METHOD 8150 | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| 2,4-D | 100 | 125 U | 123 U | 123 U | 125 U | 130 U | 133 U | 119 U | 135 U |
| Silvex | 20 | 25 U | 25 U | 25 U | 25 U | 26 U | 27 U | 24 U | 27 U |
| 2,4,5-T | 20 | 25 U | 25 U | 25 U | 25 U | 26 U | 27 U | 24 U | 27 U |
| Dinoseb | NR | NR | NR | NR | NR | NR | NR | NR | NR |

PROJECT: NSB KINGS BAY, GEORGIA — PESTICIDE/PCB/HERBICIDE SOIL ANALYSES (ug/kg) — Validated Analytical Results

| SAMPLE LOCATION: | | 05-SS-01 | 05-SS-02 | 05-SS-03 | 05-SS-03D | 05-SS-04 | 05-SS-05 | 05-SS-06 | 05-SS-07 |
|---|---|---|---|---|---|---|---|---|---|
| LAB NUMBER: | | S20940001 | S20940002 | S20940003 | S20940004 | S20940005 | S20940006 | S20940007 | S20940008 |
| DATE SAMPLED: | | 02/17/92 | 02/17/92 | 02/17/92 | 02/17/92 | 02/17/92 | 02/17/92 | 02/17/92 | 02/17/92 |
| % SOLIDS | | 86.0 | 87.0 | 77.0 | 77.0 | 86.0 | 86.0 | 90.0 | 88.0 |
| ORGANOCHLORINE PESTICIDES AND PCBs -- METHOD 8080 | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| alpha-BHC | 0.4 | 0.5 U | 0.4 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.4 U | 0.4 U |
| beta-BHC | 0.8 | 0.9 U | 0.9 U | 1.0 U | 1.0 U | 0.9 U | 0.9 U | 0.9 U | 0.9 U |
| delta-BHC | 0.4 | 0.5 U | 0.4 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.4 U | 0.4 U |
| gamma-BHC (Lindane) | 0.4 | 0.5 U | 0.4 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.4 U | 0.4 U |
| Heptachlor | 0.4 | 0.5 U | 0.4 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.4 U | 0.4 U |
| Aldrin | 0.4 | 0.5 U | 0.4 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.4 U | 0.4 U |
| Heptachlor epoxide | 0.4 | 0.5 U | 0.4 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.4 U | 0.4 U |
| Endosulfan I | 0.8 | 0.9 U | 0.9 U | 1.0 U | 1.0 U | 0.9 U | 0.9 U | 0.9 U | 0.9 U |
| Dieldrin | 0.8 | 0.9 U | 0.9 U | 1.0 U | 1.0 U | 0.9 U | 0.9 U | 0.9 U | 0.9 U |
| 4,4'- DDE | 0.8 | 0.9 U | 0.7 J | 1.0 U | 1.0 U | 0.9 U | 0.9 U | 0.9 U | 0.9 U |
| Endrin | 0.8 | 0.9 U | 0.9 U | 1.0 U | 1.0 U | 0.9 U | 0.9 U | 0.9 U | 0.9 U |
| Endosulfan II | 0.8 | 0.9 U | 0.9 U | 1.0 U | 1.0 U | 0.9 U | 0.9 U | 0.9 U | 0.9 U |
| 4,4'- DDD | 0.8 | 0.9 U | 0.9 U | 1.0 U | 1.0 U | 0.9 U | 0.9 U | 0.9 U | 0.9 U |
| Endrin Aldehyde | 0.8 | 0.9 U | 0.9 U | 1.0 U | 1.0 U | 0.9 U | 0.9 U | 0.9 U | 0.9 U |
| Endosulfan Sulfate | 0.8 | 0.9 U | 0.9 U | 1.0 U | 1.0 U | 0.9 U | 0.9 U | 0.9 U | 0.9 U |
| 4,4'- DDT | 0.8 | 0.9 U | 0.9 U | 1.0 U | 1.0 U | 0.9 U | 0.9 U | 0.9 U | 0.9 U |
| Methoxychlor | 1.6 | 1.9 U | 1.8 U | 2.1 U | 2.1 U | 1.9 U | 1.9 U | 1.8 U | 1.8 U |
| Endrin Ketone | 0.8 | 0.9 U | 0.9 U | 1.0 U | 1.0 U | 0.9 U | 0.9 U | 0.9 U | 0.9 U |
| Chlordane | 4 | 5 U | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 4 U |
| Toxaphene | 20 | 23 U | 23 U | 26 U | 26 U | 23 U | 23 U | 22 U | 23 U |
| Aroclor-1016 | 32 | 37 U | 37 U | 42 U | 42 U | 37 U | 37 U | 36 U | 36 U |
| Aroclor-1221 | 80 | 93 U | 92 U | 100 U | 100 U | 93 U | 93 U | 89 U | 91 U |
| Aroclor-1232 | 80 | 93 U | 92 U | 100 U | 100 U | 93 U | 93 U | 89 U | 91 U |
| Aroclor-1242 | 32 | 37 U | 37 U | 42 U | 42 U | 37 U | 37 U | 36 U | 36 U |
| Aroclor-1248 | 16 | 19 U | 18 U | 21 U | 21 U | 19 U | 19 U | 18 U | 18 U |
| Aroclor-1254 | 8 | 9 U | 9 U | 10 U | 10 U | 9 U | 9 U | 9 U | 9 U |
| Aroclor-1260 | 8 | 9 U | 53 | 10 U | 10 U | 9 U | 9 U | 9 U | 9 U |
| Chlorobenzilate | 20 | 23 U | 23 U | 26 U | 26 U | 23 U | 23 U | 22 U | 23 U |
| Diallate | 40 | 46 U | 46 U | 52 U | 52 U | 46 U | 46 U | 44 U | 45 U |
| Isodrin | 0.8 | 0.9 U | 0.9 U | 1.0 U | 1.0 U | 0.9 U | 0.9 U | 0.9 U | 0.9 U |
| Kepone | NR | NR | NR | NR | NR | NR | NR | NR | NR |
| ORGANOPHOSPHOROUS PESTICIDES -- METHOD 8140 | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| Triethylphosphorothioate | 50 | 58 U | 57 U | 65 U | 65 U | 58 U | 58 U | 56 U | 57 U |
| Thionazin | 50 | 58 U | 57 U | 65 U | 65 U | 58 U | 58 U | 56 U | 57 U |
| Phorate | 50 | 58 U | 57 U | 65 U | 65 U | 58 U | 58 U | 56 U | 57 U |
| Sulfotepp | 50 | 58 U | 57 U | 65 U | 65 U | 58 U | 58 U | 56 U | 57 U |
| Dimethoate | NR | NR | NR | NR | NR | NR | NR | NR | NR |
| Disulfoton | 50 | 58 U | 57 U | 65 U | 65 U | 58 U | 58 U | 56 U | 57 U |
| Methyl Parathion | 50 | 58 U | 57 U | 65 U | 65 U | 58 U | 58 U | 56 U | 57 U |
| Ethyl Parathion | 50 | 58 U | 57 U | 65 U | 65 U | 58 U | 58 U | 56 U | 57 U |
| Famphur | 50 | 58 U | 57 U | 65 U | 65 U | 58 U | 58 U | 56 U | 57 U |
| CHLORINATED HERBICIDES -- METHOD 8150 | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| 2,4-D | 100 | 116 U | 115 U | 130 U | 130 U | 116 U | 116 U | 111 U | 114 U |
| Silvex | 20 | 23 U | 23 U | 26 U | 26 U | 23 U | 23 U | 22 U | 23 U |
| 2,4,5-T | 20 | 23 U | 23 U | 26 U | 26 U | 23 U | 23 U | 22 U | 23 U |
| Dinoseb | NR | NR | NR | NR | NR | NR | NR | NR | NR |

PROJECT: NSB KINGS BAY, GEORGIA — INORGANIC SOIL ANALYSES (mg/kg) — Validated Analytical Results

| | SAMPLE LOCATION: | 5-SB-01 | 5-SB-02 | 5-SB-02D | 5-SB-03 | 5-SB-04 | 5-SB-05 | 5-SB-06 | 5-SB-07 |
|---|---|---|---|---|---|---|---|---|---|
| | SAMPLING DEPTH: | 4-6 FT | 4-6 FT | 4-6 FT | 4-6 FT | 4-6 FT | 4-6 FT | 4-6 FT | 4-6 FT |
| | LAB NUMBER: | S20867003 | S20867004 | S20867012 | S20867001 | S20867002 | S20865005 | S20865004 | S20865006 |
| | DATE SAMPLED: | 02/08/92 | 02/08/92 | 02/08/92 | 02/08/92 | 02/08/92 | 02/07/92 | 02/07/92 | 02/07/92 |
| | % SOLIDS: | 79.9 | 81.2 | 80.1 | 81.0 | 77.6 | 79.1 | 83.6 | 74.5 |
| ANALYTE | CRDL | | | | | | | | |
| Antimony | 12 | 2.7 U | 2.7 U | 2.7 U | 2.7 U | 2.8 U | 2.8 U | 2.6 U | 2.9 U |
| Arsenic | 2 | 1.1 J | 0.24 J | 0.17 U | 0.70 J | 1.0 J | 0.17 U | 0.17 U | 0.19 U |
| Barium | 40 | 2.8 J | 5.0 J | 5.3 J | 3.6 J | 2.8 J | 3.6 J | 3.5 J | 4.9 J |
| Beryllium | 1 | 0.16 J | 0.05 J | 0.07 J | 0.15 J | 0.15 J | 0.15 J | 0.05 U | 0.15 J |
| Cadmium | 1 | 0.73 U | 0.72 U | 0.73 U | 0.72 U | 0.76 U | 0.74 U | 0.70 U | 0.79 U |
| Chromium | 2 | 8.7 | 6.5 | 6.0 | 6.5 | 5.9 | 5.9 | 2.4 U | 6.8 |
| Cobalt | 10 | 0.89 U | 0.88 U | 0.89 U | 0.88 U | 0.92 U | 0.90 U | 0.85 U | 0.96 U |
| Copper | 5 | 2.0 U | 2.3 U | 1.6 U | 1.8 U | 3.4 U | 2.5 U | 1.4 U | 7.8 |
| Lead | 0.6 | 4.4 | 2.7 | 3.2 | 2.7 | 6.0 | 8.5 | 4.5 | 7.6 |
| Mercury | 0.1 | 0.09 U | 0.07 U | 0.08 U | 0.09 U | 0.10 U | 0.08 U | 0.08 U | 0.07 U |
| Nickel | 8 | 1.7 J | 0.98 J | 0.98 J | 1.5 J | 2.8 J | 1.7 J | 0.91 U | 9.2 |
| Selenium | 1 | 0.93 J | 0.71 J | 0.33 J | 1.3 | 0.86 J | 0.40 J | 0.31 U | 1.8 |
| Silver | 2 | 0.43 U | 0.42 U | 0.43 U | 0.43 U | 0.44 U | 0.44 U | 0.41 U | 0.46 U |
| Thallium | 2 | 0.35 U | 0.34 U | 0.35 U | 0.35 U | 0.36 U | 0.36 U | 0.34 U | 0.38 U |
| Tin | 41.6 | 52.1 U | 51.2 U | 51.9 U | 51.4 U | 53.6 U | 52.6 U | 49.8 U | 55.8 U |
| Vanadium | 10 | 8.5 J | 2.2 U | 2.2 U | 3.4 J | 1.6 U | 2.1 U | 2.0 U | 2.8 J |
| Zinc | 4 | 6.7 | 3.3 U | 3.7 U | 2.8 U | 7.4 | 3.1 U | 4.7 U | 10.1 |
| Cyanide | 1 | 0.45 U | 0.44 U | 0.45 U | 0.44 U | 0.46 U | 4.6 | 0.43 U | 5.0 |
| Sulfide | 4000 | 5000 U | 5000 U | 5000 U | 5000 U | 5200 U | 5000 U | 4800 U | 5400 U |

PROJECT: NSB KINGS BAY, GEORGIA — INORGANIC SOIL ANALYSES (mg/kg) — Validated Analytical Results

| | SAMPLE LOCATION: | 05-SS-01 | 05-SS-02 | 05-SS-03 | 05-SS-03D | 05-SS-04 | 05-SS-05 | 05-SS-06 | 05-SS-07 |
|---|---|---|---|---|---|---|---|---|---|
| | SAMPLING DEPTH: | 1.6 FT | 1.5 FT | 2.1 FT | 2.1 FT | 1.8 FT | 0.8 FT | 1.2 FT | 1.4 FT |
| | LAB NUMBER: | S20940001 | S20940002 | S20940003 | S20940004 | S20940005 | S20940006 | S20940007 | S20940008 |
| | DATE SAMPLED: | 02/17/92 | 02/17/92 | 02/17/92 | 02/17/92 | 02/17/92 | 02/17/92 | 02/17/92 | 02/17/92 |
| | % SOLIDS: | 86.6 | 87.0 | 78.0 | 78.0 | 86.7 | 86.6 | 91.0 | 88.6 |
| ANALYTE | CRDL | | | | | | | | |
| Antimony | 12 | 2.5 U | 2.5 U | 2.8 U | 2.8 U | 2.5 U | 2.5 U | 2.4 U | 2.5 U |
| Arsenic | 2 | 0.54 U | 0.48 U | 0.66 U | 0.92 U | 0.22 U | 0.61 U | 0.16 U | 0.31 U |
| Barium | 40 | 2.7 J | 8.0 J | 3.0 J | 3.0 J | 2.5 J | 4.3 J | 3.6 J | 2.8 J |
| Beryllium | 1 | 0.07 J | 0.05 J | 0.15 J | 0.11 J | 0.04 U | 0.05 J | 0.04 J | 0.04 U |
| Cadmium | 1 | 0.68 U | 0.67 U | 0.75 U | 0.75 U | 0.68 U | 0.68 U | 0.64 U | 0.66 U |
| Chromium | 2 | 4.6 | 3.0 | 6.2 | 6.1 | 2.9 | 2.9 | 3.1 | 2.3 |
| Cobalt | 10 | 0.82 U | 0.82 U | 0.91 U | 0.91 U | 0.82 U | 0.82 U | 0.78 U | 0.80 U |
| Copper | 5 | 5.2 U | 3.8 U | 7.5 U | 1.1 U | 2.1 U | 1.4 U | 2.7 U | 1.4 U |
| Lead | 0.6 | 5.4 | 6.4 | 5.3 | 5.5 | 4.1 | 4.7 | 4.0 | 3.3 |
| Mercury | 0.1 | 0.08 U | 0.08 U | 0.09 U | 0.06 U | 0.07 U | 0.09 U | 0.09 U | 0.09 U |
| Nickel | 8 | 0.88 U | 0.87 U | 0.97 U | 0.97 U | 0.87 U | 0.88 U | 0.83 U | 0.86 U |
| Selenium | 1 | 0.30 U | 0.30 U | 0.33 U | 0.33 U | 0.31 U | 0.30 U | 0.28 U | 0.29 U |
| Silver | 2 | 0.40 U | 0.40 U | 0.44 U | 0.44 U | 0.40 U | 0.40 U | 0.38 U | 0.39 U |
| Thallium | 2 | 0.32 U | 0.32 U | 0.36 U | 0.36 U | 0.32 U | 0.32 U | 0.31 U | 0.32 U |
| Tin | 41.6 | 48.0 U | 47.8 U | 53.3 U | 53.3 U | 48.0 U | 48.0 U | 45.7 U | 47.0 U |
| Vanadium | 10 | 2.9 J | 2.6 J | 3.4 J | 3.2 J | 1.2 J | 2.7 J | 3.5 J | 2.1 J |
| Zinc | 4 | 15.8 | 31.0 | 15.9 | 11.9 | 5.0 | 4.8 | 8.8 | 4.1 J |
| Cyanide | 1 | 0.42 U | 0.41 U | 0.46 U | 0.46 U | 0.42 U | 0.42 U | 0.40 U | 0.41 U |
| Sulfide | 4000 | 4600 U | 4700 U | 5200 U | 5100 | 4600 | 4600 U | 4400 U | 4600 U |

**Site 16 Soil Sampling Event No. 1**
**February 1992**

PROJECT: NSB KINGS BAY, GEORGIA

VOLATILE SOIL ANALYSES (ug/kg)

Validated Analytical Results

| | | | | | |
|---|---|---|---|---|---|
| SAMPLE LOCATION: | | 16-SB-01 | 16-SB-02 | 16-SB-03 | 16-SB-04 |
| LAB NUMBER: | | S20900003 | S20917001 | S20900002 | S20900001 |
| DATE SAMPLED: | | 02/12/92 | 02/13/92 | 02/12/92 | 02/12/92 |
| DATE ANALYZED: | | 02/22/92 | 02/27/92 | 02/22/92 | 02/22/92 |
| % SOLIDS: | | 90.0 | 87.0 | 84.0 | 87.0 |
| DILUTION FACTOR: | | 1.0 | 1.0 | 1.0 | 1.0 |
| VOLATILES -- METHOD (8240) | | | | | |
| ANALYTE | PQL | | | | |
| Chloromethane | 10 | 11 U | 11 U | 12 U | 11 U |
| Bromomethane | 10 | 11 U | 11 U | 12 U | 11 U |
| Vinyl Chloride | 10 | 11 U | 11 U | 12 U | 11 U |
| Chloroethane | 10 | 11 U | 11 U | 12 U | 11 U |
| Methylene Chloride | 5 | 32 U | 37 U | 33 U | 46 U |
| Acetone | 10 | 63 U | 51 | 87 U | 110 |
| Carbon Disulfide | 5 | 6 U | 2 J | 6 U | 6 U |
| Trichlorofluoromethane | 5 | 6 U | 6 U | 6 U | 6 U |
| 1,1-Dichloroethene | 5 | 6 U | 6 U | 6 U | 6 U |
| 1,1-Dichloroethane | 5 | 6 U | 6 U | 6 U | 6 U |
| 1,2-Dichloroethene (total) | 5 | 6 U | 6 U | 6 U | 6 U |
| Chloroform | 5 | 6 U | 6 U | 6 U | 6 U |
| 1,2-Dichloroethane | 5 | 6 U | 6 UJ | 6 U | 6 U |
| 2-Butanone | 10 | 11 U | 11 U | 12 U | 10 |
| 1,1,1-Trichloroethane | 5 | 6 U | 6 UJ | 6 U | 6 U |
| Carbon Tetrachloride | 5 | 6 U | 6 UJ | 6 U | 6 U |
| Vinyl Acetate | 10 | 11 U | 11 U | 12 U | 11 U |
| Bromodichloromethane | 5 | 6 U | 6 U | 6 U | 6 U |
| 1,2-Dichloropropane | 5 | 6 U | 6 U | 6 U | 6 U |
| cis-1,3-Dichloropropene | 5 | 6 U | 6 U | 6 U | 6 U |
| Trichloroethene | 5 | 6 U | 6 U | 6 U | 6 U |
| Dibromochloromethane | 5 | 6 U | 6 U | 6 U | 6 U |
| 1,1,2-Trichloroethane | 5 | 6 U | 6 U | 6 U | 6 U |
| Benzene | 5 | 6 U | 6 U | 6 U | 6 U |
| trans-1,3-Dichloropropene | 5 | 6 U | 6 U | 6 U | 6 U |
| 2-Chloroethylvinylether | 10 | 11 U | 11 U | 12 U | 11 U |
| Bromoform | 5 | 6 U | 6 U | 6 U | 6 U |
| 2-Hexanone | 10 | 11 U | 11 U | 12 U | 11 U |
| 4-Methyl-2-Pentanone | 10 | 11 U | 11 U | 12 U | 11 U |
| Tetrachloroethene | 5 | 6 U | 6 U | 6 U | 6 U |
| 1,1,2,2-Tetrachloroethane | 5 | 6 U | 6 U | 6 U | 6 U |
| Toluene | 5 | 6 U | 6 U | 6 U | 1 J |
| Chlorobenzene | 5 | 6 U | 6 U | 6 U | 6 U |
| Ethylbenzene | 5 | 6 U | 6 U | 6 U | 6 U |
| Styrene | 5 | 6 U | 6 U | 6 U | 6 U |
| Xylene (total) | 5 | 3 J | 2 J | 4 J | 9 |
| 1,3-Dichlorobenzene | 5 | 6 U | 6 U | 6 U | 6 U |
| 1,4-Dichlorobenzene | 5 | 6 U | 6 U | 6 U | 6 U |
| 1,2-Dichlorobenzene | 5 | 6 U | 6 U | 6 U | 6 U |
| Acrolein | 100 | 110 U | 110 U | 120 U | 110 U |
| Iodomethane | 10 | 11 U | 11 U | 12 U | 11 U |
| Acrylonitrile | 100 | 110 U | 110 U | 120 U | 110 U |
| Dibromomethane | 5 | 6 U | 6 U | 6 U | 6 U |
| Ethyl Methacrylate | 5 | 6 U | 6 U | 6 U | 6 U |
| 1,2,3-Trichloropropane | 5 | 6 U | 6 U | 6 U | 6 U |

PROJECT: NSB KINGS BAY, GEORGIA

VOLATILE SOIL ANALYSES (ug/kg) (continued)

Validated Analytical Results

| | | | | | |
|---|---|---|---|---|---|
| SAMPLE LOCATION: | | 16-SB-01 | 16-SB-02 | 16-SB-03 | 16-SB-04 |
| LAB NUMBER: | | S20900003 | S20917001 | S20900002 | S20900001 |
| DATE SAMPLED: | | 02/12/92 | 02/13/92 | 02/12/92 | 02/12/92 |
| DATE ANALYZED: | | 02/22/92 | 02/27/92 | 02/22/92 | 02/22/92 |
| % SOLIDS: | | 90.0 | 87.0 | 84.0 | 87.0 |
| DILUTION FACTOR: | | 1.0 | 1.0 | 1.0 | 1.0 |
| VOLATILES -- METHOD (8240) | | | | | |
| ANALYTE | PQL | | | | |
| trans-1,4-Dichloro-2-Butene | 5 | 6 U | 6 U | 6 U | 6 U |
| Acetonitrile | 100 | 110 UJ | 110 UJ | 120 UJ | 110 UJ |
| 3-Chloropropene | 5 | 6 UJ | 6 UJ | 6 UJ | 6 UJ |
| Propionitrile | 100 | 110 UJ | 110 UJ | 120 UJ | 110 UJ |
| Methacrylonitrile | 5 | 6 UJ | 6 UJ | 6 UJ | 6 UJ |
| 1,4-Dioxane | 200 | 220 U | 230 U | 240 U | 230 U |
| Methyl Methacrylate | 10 | 11 UJ | 11 UJ | 12 UJ | 11 UJ |
| 1,2-Dibromoethane | 5 | 6 UJ | 6 UJ | 6 UJ | 6 UJ |
| 1,1,1,2-Tetrachloroethane | 5 | 6 UJ | 6 UJ | 6 UJ | 6 UJ |
| 1,2-Dibromo-3-Chloropropane | 10 | 11 UJ | 11 UJ | 12 UJ | 11 UJ |
| Pentachloroethane | 10 | 11 UJ | 11 UJ | 12 UJ | 11 UJ |
| Isobutyl alcohol | 200 | 220 UJ | 230 UJ | 240 UJ | 230 UJ |
| Chloroprene | 200 | 220 UJ | 230 UJ | 240 UJ | 230 UJ |

PROJECT: NSB KINGS BAY, GEORGIA

SEMIVOLATILE SOIL ANALYSES (ug/kg)

Validated Analytical Results

| | | | | | |
|---|---|---|---|---|---|
| | SAMPLE LOCATION: | 16-SB-01 | 16-SB-02 | 16-SB-03 | 16-SB-04 |
| | LAB NUMBER: | S20900003 | S20917001 | S20900002 | S20900001 |
| | DATE SAMPLED: | 02/12/92 | 02/13/92 | 02/12/92 | 02/12/92 |
| | DATE ANALYZED: | 03/02/92 | 03/02/92 | 03/02/92 | 03/02/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 |
| | SOLIDS: | 92.0 | 90.0 | 90.0 | 93.0 |
| SEMIVOLATILES -- METHOD 8270 | | | | | |
| ANALYTE | PQL | | | | |
| N-Nitrosodimethylamine | 330 | 360 U | 370 U | 370 U | 350 U |
| Phenol | 330 | 360 U | 370 U | 370 U | 350 U |
| Aniline | 330 | 360 U | 370 U | 370 U | 350 U |
| bis (2-Chloroethyl) Ether | 330 | 360 U | 370 U | 370 U | 350 U |
| 2- Chlorophenol | 330 | 360 U | 370 U | 370 U | 350 U |
| 1,3- Dichlorobenzene | 330 | 360 U | 370 U | 370 U | 350 U |
| 1,4- Dichlorobenzene | 330 | 360 U | 370 U | 370 U | 350 U |
| Benzyl Alcohol | 330 | 360 U | 370 U | 370 U | 350 U |
| 1,2- Dichlorobenzene | 330 | 360 U | 370 U | 370 U | 350 U |
| 2- Methylphenol | 330 | 360 U | 370 U | 370 U | 350 U |
| bis (2- Chloroisopropyl) Ether | 330 | 360 U | 370 U | 370 U | 350 U |
| 4-Methylphenol | 330 | 360 U | 370 U | 370 U | 350 U |
| N-Nitroso-Di-n-Propylamine | 330 | 360 U | 370 U | 370 U | 350 U |
| Hexachloroethane | 330 | 360 U | 370 U | 370 U | 350 U |
| Nitrobenzene | 330 | 360 U | 370 U | 370 U | 350 U |
| Isophorone | 330 | 360 U | 370 U | 370 U | 350 U |
| 2-Nitrophenol | 330 | 360 U | 370 U | 370 U | 350 U |
| 2,4-Dimethylphenol | 330 | 360 U | 370 U | 370 U | 350 U |
| Benzoic Acid | 1600 | 1700 U | 1800 U | 1800 U | 1700 U |
| bis (2-Chloroethoxy) Methane | 330 | 360 U | 370 U | 370 U | 350 U |
| 2,4-Dichlorophenol | 330 | 360 U | 370 U | 370 U | 350 U |
| 1,2,4-Trichlorobenzene | 330 | 360 U | 370 U | 370 U | 350 U |
| Naphthalene | 330 | 360 U | 370 U | 370 U | 350 U |
| 4-Chloroaniline | 330 | 360 U | 370 U | 370 U | 350 U |
| Hexachlorobutadiene | 330 | 360 U | 370 U | 370 U | 350 U |
| 4-Chloro-3-Methylphenol | 330 | 360 U | 370 U | 370 U | 350 U |
| 2-Methylnaphthalene | 330 | 360 U | 370 U | 370 U | 350 U |
| Hexachlorocyclopentadiene | 330 | 360 U | 370 U | 370 U | 350 U |
| 2,4,6-Trichlorophenol | 330 | 360 U | 370 U | 370 U | 350 U |
| 2,4,5-Trichlorophenol | 1600 | 1700 U | 1800 U | 1800 U | 1700 U |
| 2-Chloronaphthalene | 330 | 360 U | 370 U | 370 U | 350 U |
| 2-Nitroaniline | 1600 | 1700 U | 1800 U | 1800 U | 1700 U |
| Dimethylphthalate | 330 | 360 U | 370 U | 370 U | 350 U |
| Acenaphthylene | 330 | 360 U | 370 U | 370 U | 350 U |
| 2,6-Dinitrotoluene | 330 | 360 U | 370 U | 370 U | 350 U |
| 3-Nitroaniline | 1600 | 1700 U | 1800 U | 1800 U | 1700 U |
| Acenaphthene | 330 | 360 U | 99 J | 370 U | 350 U |
| 2,4-Dinitrophenol | 1600 | 1700 U | 1800 U | 1800 U | 1700 U |
| 4-Nitrophenol | 1600 | 1700 U | 1800 U | 1800 U | 1700 U |
| Dibenzofuran | 330 | 360 U | 370 U | 370 U | 350 U |
| 2,4-Dinitrotoluene | 330 | 360 U | 370 U | 370 U | 350 U |
| Diethylphthalate | 330 | 360 U | 370 U | 370 U | 350 U |
| 4-Chlorophenyl-phenylether | 330 | 360 U | 370 U | 370 U | 350 U |
| Fluorene | 330 | 360 U | 61 J | 370 U | 350 U |
| 4-Nitroaniline | 1600 | 1700 U | 1800 U | 1800 U | 1700 U |
| 4,6-Dinitro-2-Methylphenol | 1600 | 1700 U | 1800 U | 1800 U | 1700 U |
| N-Nitrosodiphenylamine | 330 | 360 U | 370 U | 370 U | 350 U |

PROJECT: NSB KINGS BAY, GEORGIA

SEMIVOLATILE SOIL ANALYSES (ug/kg) (continued)

Validated Analytical Results

| | | | | | |
|---|---|---|---|---|---|
| | SAMPLE LOCATION: | 16-SB-01 | 16-SB-02 | 16-SB-03 | 16-SB-04 |
| | LAB NUMBER: | S20900003 | S20917001 | S20900002 | S20900001 |
| | DATE SAMPLED: | 02/12/92 | 02/13/92 | 02/12/92 | 02/12/92 |
| | DATE ANALYZED: | 03/02/92 | 03/02/92 | 03/02/92 | 03/02/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 |
| | SOLIDS: | 92.0 | 90.0 | 90.0 | 93.0 |
| SEMIVOLATILES -- METHOD 8270 | | | | | |
| ANALYTE | PQL | | | | |
| 1,2-Diphenylhydrazine | 330 | 360 U | 370 U | 370 U | 350 U |
| 4-Bromophenyl-phenylether | 330 | 360 U | 370 U | 370 U | 350 U |
| Hexachlorobenzene | 330 | 360 U | 370 U | 370 U | 350 U |
| Pentachlorophenol | 1600 | 1700 U | 1800 U | 1800 U | 1700 U |
| Phenanthrene | 330 | 360 U | 130 J | 370 U | 350 U |
| Anthracene | 330 | 360 U | 370 U | 370 U | 350 U |
| Di-n-Butylphthalate | 330 | 360 U | 370 U | 370 U | 350 U |
| Fluoranthene | 330 | 360 U | 1000 | 370 U | 350 U |
| Pyrene | 330 | 360 U | 1700 | 370 U | 350 U |
| Butylbenzylphthalate | 330 | 360 U | 370 U | 370 U | 350 U |
| 3,3'-Dichlorobenzidine | 660 | 720 U | 730 U | 730 U | 710 U |
| Benzo (a) Anthracene | 330 | 360 U | 390 | 370 U | 350 U |
| Chrysene | 330 | 360 U | 600 | 370 U | 350 U |
| bis (2-Ethylhexyl) Phthalate | 330 | 390 | 520 | 630 | 1100 |
| Di-n-Octyl Phthalate | 330 | 360 U | 370 U | 370 U | 350 U |
| Benzo (b) Fluoranthene | 330 | 360 U | 310 J | 370 U | 350 U |
| Benzo (k) Fluoranthene | 330 | 360 U | 280 J | 370 U | 350 U |
| Benzo (a) Pyrene | 330 | 360 U | 170 J | 370 U | 350 U |
| Indeno (1,2,3-cd) Pyrene | 330 | 360 U | 370 U | 370 U | 350 U |
| Dibenz (a,h) Anthracene | 330 | 360 U | 370 U | 370 U | 350 U |
| Benzo (g,h,i) Perylene | 330 | 360 U | 370 U | 370 U | 350 U |
| 2-Picoline | 1600 | 1700 U | 1800 U | 1800 U | 1700 U |
| Methyl methanesulfonate | 330 | 360 U | 370 U | 370 U | 350 U |
| Ethyl methanesulfonate | 330 | 360 U | 370 U | 370 U | 350 U |
| Acetophenone | 330 | 360 U | 370 U | 370 U | 350 U |
| N-Nitrosopiperidine | 330 | 360 U | 370 U | 370 U | 350 U |
| Phenyl-tert-butylamine | 1600 | 1700 UR | 1800 UR | 1800 UR | 1700 UR |
| 2,6-Dichlorophenol | 330 | 360 U | 370 U | 370 U | 350 U |
| N-Nitroso-di-n-butylamine | 330 | 360 U | 370 U | 370 U | 350 U |
| N-Nitrosodiethylamine | 330 | 360 UJ | 370 UJ | 370 UJ | 350 UJ |
| N-Nitrosopyrrolidine | 330 | 360 UJ | 370 UJ | 370 UJ | 350 UJ |
| Benzidine | 1600 | 1700 UJ | 1800 UJ | 1800 UJ | 1700 UJ |
| 1,2,4,5-Tetrachlorobenzene | 1600 | 1700 U | 1800 U | 1800 U | 1700 U |
| Pentachlorobenzene | 1600 | 1700 U | 1800 U | 1800 U | 1700 U |
| 1-Naphthylamine | 1600 | 1700 U | 1800 U | 1800 U | 1700 U |
| 2-Naphthylamine | 1600 | 1700 U | 1800 U | 1800 U | 1700 U |
| 2,3,4,6-Tetrachlorophenol | 330 | 360 U | 370 U | 370 U | 350 U |
| Diphenylamine | 330 | 360 UR | 370 UR | 370 UR | 350 UR |
| Phenacetin | 330 | 360 U | 370 U | 370 U | 350 U |
| 4-Aminobiphenyl | 1600 | 1700 U | 1800 U | 1800 U | 1700 U |
| Pentachloronitrobenzene | 1600 | 1700 U | 1800 U | 1800 U | 1700 U |
| Pronamide | 330 | 360 U | 370 U | 370 U | 350 U |
| p-Dimethylaminoazobenzene | 330 | 360 U | 370 U | 370 U | 350 U |
| 7,12-Dimethylbenz (a) Anthracene | 330 | 360 U | 370 U | 370 U | 350 U |
| 3-Methylcholanthrene | 330 | 360 U | 370 U | 370 U | 350 U |
| Pyridine | 1600 | 1700 U | 1800 U | 1800 U | 1700 U |

PROJECT: NSB KINGS BAY, GEORGIA — SEMIVOLATILE SOIL ANALYSES (ug/kg) (continued) — Validated Analytical Results

| | | | | | |
|---|---|---|---|---|---|
| | SAMPLE LOCATION: | 16-SB-01 | 16-SB-02 | 16-SB-03 | 16-SB-04 |
| | LAB NUMBER: | S20900003 | S20917001 | S20900002 | S20900001 |
| | DATE SAMPLED: | 02/12/92 | 02/13/92 | 02/12/92 | 02/12/92 |
| | DATE ANALYZED: | 03/02/92 | 03/02/92 | 03/02/92 | 03/02/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 |
| | SOLIDS: | 92.0 | 90.0 | 90.0 | 93.0 |
| SEMIVOLATILES -- METHOD 8270 | | | | | |
| ANALYTE | PQL | | | | |
| N-Nitrosomethylethylamine | 330 | 360 UJ | 370 UJ | 370 UJ | 350 UJ |
| N-Nitrosomorpholine | 330 | 360 UJ | 370 UJ | 370 UJ | 350 UJ |
| o-Toluidine | 330 | 360 UJ | 370 UJ | 370 UJ | 350 UJ |
| 3- Methylphenol | 330 | 360 U | 370 U | 370 U | 350 U |
| Hexachloropropene | 1600 | 1700 UJ | 1800 UJ | 1800 UJ | 1700 UJ |
| p-Phenylenediamine | 1600 | 1700 UJ | 1800 UJ | 1800 UJ | 1700 UJ |
| Safrole | 1600 | 1700 UJ | 1800 UJ | 1800 UJ | 1700 UJ |
| Isosafrole | 1600 | 1700 UJ | 1800 UJ | 1800 UJ | 1700 UJ |
| 1,4-Naphthoquinone | 1600 | 1700 UJ | 1800 UJ | 1800 UJ | 1700 UJ |
| 1,3-Dinitrobenzene | 330 | 360 UJ | 370 UJ | 370 UJ | 350 UJ |
| 5-Nitro-o-toluidine | 330 | 360 UJ | 370 UJ | 370 UJ | 350 UJ |
| 1,3,5-Trinitrobenzene | 330 | 360 UJ | 370 UJ | 370 UJ | 350 UJ |
| 4-Nitroquinoline-1-oxide | 330 | 360 UJ | 370 UJ | 370 UJ | 350 UJ |
| Methapyrilene | 1600 | 1700 UJ | 1800 UJ | 1800 UJ | 1700 UJ |
| 3,3'-Dimethylbenzidine | 330 | 360 UJ | 370 UJ | 370 UJ | 350 UJ |
| 2-Acetamidofluorene | 330 | 360 UJ | 370 UJ | 370 UJ | 350 UJ |
| Hexachlorophene | 1600 | 1700 UJ | 1800 UJ | 1800 UJ | 1700 UJ |

POLYCHLORINATED DIBENZO- FURANS/DIOXINS -- METHOD 8280 (ug/kg)

| | | | | | |
|---|---|---|---|---|---|
| | DATE ANALYZED: | 02/21/92 | 02/21/92 | 02/21/92 | 02/20/92 |
| ANALYTE | PQL* | | | | |
| TCDFs (total) | -- | 0.0024 U | 0.0034 U | 0.0018 U | 0.0039 U |
| PeCDFs (total) | -- | 0.0035 U | 0.0043 U | 0.0024 U | 0.0057 U |
| HxCDFs (total) | -- | 0.0079 U | 0.0057 U | 0.0036 U | 0.012 U |
| TCDDs (total) | -- | 0.0042 U | 0.0040 U | 0.0038 U | 0.0050 U |
| 2,3,7,8- TCDD | -- | 0.0042 U | 0.0040 U | 0.0038 U | 0.0050 U |
| PeCDDs (total) | -- | 0.0091 U | 0.0096 U | 0.0075 U | 0.017 U |
| HxCDDs (total) | -- | 0.0092 U | 0.010 U | 0.0069 U | 0.020 U |

*PQLs are not listed for dioxins and furans because the data are reported relative to method detection limits (MDLs) based on MDL studies. There are no published PQLs for these analytes in the SW-846 method manual and these analytes are not included in the Contract Laboratory Program.

PROJECT: NSB KINGS BAY, GEORGIA — PESTICIDE/PCB/HERBICIDE SOIL ANALYSES (ug/kg) — Validated Analytical Results

| | | | | | |
|---|---|---|---|---|---|
| | SAMPLE LOCATION: | 16-SB-01 | 16-SB-02 | 16-SB-03 | 16-SB-04 |
| | LAB NUMBER: | S20900003 | S20917001 | S20900002 | S20900001 |
| | DATE SAMPLED: | 02/12/92 | 02/13/92 | 02/12/92 | 02/12/92 |
| | % SOLIDS: | 87.0 | 87.0 | 85.0 | 88.0 |
| ORGANOCHLORINE PESTICIDES AND PCBs -- METHOD 8080 | | | | | |
| ANALYTE | PQL | | | | |
| alpha-BHC | 0.4 | 0.4 U | 0.4 U | 0.5 U | 0.4 U |
| beta-BHC | 0.8 | 0.9 U | 0.9 U | 0.9 U | 0.9 U |
| delta-BHC | 0.4 | 0.4 U | 0.4 U | 0.5 U | 0.4 U |
| gamma-BHC (Lindane) | 0.4 | 0.4 U | 0.4 U | 0.5 U | 0.4 U |
| Heptachlor | 0.4 | 0.4 U | 0.4 U | 0.5 U | 0.4 U |
| Aldrin | 0.4 | 0.4 U | 0.4 U | 0.5 U | 0.4 U |
| Heptachlor epoxide | 0.4 | 0.4 U | 0.4 U | 0.5 U | 0.4 U |
| Endosulfan I | 0.8 | 0.9 U | 0.9 U | 0.9 U | 0.9 U |
| Dieldrin | 0.8 | 0.9 U | 0.9 U | 0.9 U | 0.9 U |
| 4,4'- DDE | 0.8 | 0.9 U | 0.9 U | 0.9 U | 0.9 U |
| Endrin | 0.8 | 0.9 U | 0.9 U | 0.9 U | 0.9 U |
| Endosulfan II | 0.8 | 0.9 U | 0.9 U | 0.9 U | 0.9 U |
| 4,4'- DDD | 0.8 | 0.9 U | 0.9 U | 1 | 0.9 U |
| Endrin Aldehyde | 0.8 | 0.9 U | 0.9 U | 0.9 U | 0.9 U |
| Endosulfan Sulfate | 0.8 | 0.9 U | 0.9 U | 0.9 U | 0.9 U |
| 4,4'- DDT | 0.8 | 0.9 U | 0.9 U | 0.9 U | 0.9 U |
| Methoxychlor | 1.6 | 1.8 U | 1.8 U | 1.9 U | 1.8 U |
| Endrin Ketone | 0.8 | 0.9 U | 0.9 U | 0.9 U | 0.9 U |
| Chlordane | 4 | 4 U | 4 U | 5 U | 4 U |
| Toxaphene | 20 | 23 U | 23 U | 24 U | 23 U |
| Aroclor-1016 | 32 | 37 U | 37 U | 38 U | 36 U |
| Aroclor-1221 | 80 | 92 U | 92 U | 94 U | 91 U |
| Aroclor-1232 | 80 | 92 U | 92 U | 94 U | 91 U |
| Aroclor-1242 | 32 | 37 U | 37 U | 38 U | 36 U |
| Aroclor-1248 | 16 | 18 U | 18 U | 19 U | 18 U |
| Aroclor-1254 | 8 | 9 U | 9 U | 9 U | 9 U |
| Aroclor-1260 | 8 | 9 U | 9 U | 9 U | 9 U |
| Chlorobenzilate | 20 | 23 U | 23 U | 24 U | 23 U |
| Diallate | 40 | 46 U | 46 U | 47 U | 45 U |
| Isodrin | 0.8 | 0.9 U | 0.9 U | 0.9 U | 0.9 U |
| Kepone | NR | NR | NR | NR | NR |
| ORGANOPHOSPHOROUS PESTICIDES -- METHOD 8140 | | | | | |
| ANALYTE | PQL | | | | |
| Triethylphosphorothioate | 50 | 57 U | 57 U | 59 U | 57 U |
| Thionazin | 50 | 57 U | 57 U | 59 U | 57 U |
| Phorate | 50 | 57 U | 57 U | 59 U | 57 U |
| Sulfotepp | 50 | 57 U | 57 U | 59 U | 57 U |
| Dimethoate | NR | NR | NR | NR | NR |
| Disulfoton | 50 | 57 U | 57 U | 59 U | 57 U |
| Methyl Parathion | 50 | 57 U | 57 U | 59 U | 57 U |
| Ethyl Parathion | 50 | 57 U | 57 U | 59 U | 57 U |
| Famphur | 50 | 57 U | 57 U | 59 U | 57 U |
| CHLORINATED HERBICIDES -- METHOD 8150 | | | | | |
| ANALYTE | PQL | | | | |
| 2,4-D | 100 | 110 U | 110 U | 120 U | 110 U |
| Silvex | 20 | 23 U | 23 U | 24 U | 23 U |
| 2,4,5-T | 20 | 23 U | 23 U | 24 U | 23 U |
| Dinoseb | NR | NR | NR | NR | NR |

PROJECT: NSB KINGS BAY, GEORGIA

INORGANIC SOIL ANALYSES (mg/kg)

Validated Analytical Results

| | SAMPLE LOCATION: | 16-SB-01 | 16-SB-02 | 16-SB-03 | 16-SB-04 |
|---|---|---|---|---|---|
| | SAMPLING DEPTH: | 8-10 FT | 10-12 FT | 8-10 FT | 8-10 FT |
| | LAB NUMBER: | 32241003 | S20917001 | 32241002 | 32241001 |
| | DATE SAMPLED: | 02/12/92 | 02/13/92 | 02/12/92 | 02/12/92 |
| | % SOLIDS: | 87.5 | 87.8 | 87.5 | 87.6 |
| ANALYTE | CRDL | | | | |
| Antimony | 12 | 2.3 U | 2.5 U | 2.4 U | 2.3 U |
| Arsenic | 2 | 0.34 J | 0.28 J | 0.26 J | 0.16 J |
| Barium | 40 | 3.9 J | 6.4 J | 5.1 J | 2.1 J |
| Beryllium | 1 | 0.07 U | 0.07 U | 0.07 UJ | 0.07 UJ |
| Cadmium | 1 | 0.23 U | 0.67 U | 0.24 U | 0.23 U |
| Chromium | 2 | 4.6 J | 12.2 | 1540 | 4.9 |
| Cobalt | 10 | 0.71 U | 0.81 U | 0.73 U | 0.71 U |
| Copper | 5 | 2.4 J | 2.3 J | 2.4 J | 1.8 J |
| Lead | 0.6 | 3.9 | 3.4 | 2.5 | 1.5 |
| Mercury | 0.1 | 0.03 U | 0.08 U | 0.03 U | 0.03 U |
| Nickel | 8 | 1.5 U | 3.0 J | 1.5 U | 1.5 U |
| Selenium | 1 | 0.14 U | 0.29 U | 0.14 U | 0.14 U |
| Silver | 2 | 0.29 U | 0.39 U | 0.28 U | 0.35 U |
| Thallium | 2 | 0.21 U | 0.38 U | 0.21 U | 0.21 U |
| Tin | 41.6 | 3.3 U | 47.4 U | 3.4 U | 3.3 U |
| Vanadium | 10 | 2.3 J | 1.8 J | 2.4 J | 1.5 J |
| Zinc | 4 | 1.8 J | 3.9 U | 3.4 J | 0.68 J |
| Cyanide | 1 | 0.17 U | 0.42 U | 0.18 U | 0.17 U |
| Sulfide | 4000 | 4600 U | 18300 | 4700 U | 9200 |

**Site 5 Groundwater Sampling Event No. 1**
**February 1992**

PROJECT: NSB KINGS BAY, GEORGIA

VOLATILE AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SAMPLE LOCATION: | | KBA-5-1 | KBA-5-2 | KBA-5-3 | KBA-5-4 | KBA-5-4D | KBA-5-5 | KBA-5-6 | KBA-5-7 |
| LAB NUMBER: | | W20985001 | W20985002 | W20985003 | W20985004 | W20985005 | W20985006 | W20985007 | W20985008 |
| DATE SAMPLED: | | 02/20/92 | 02/20/92 | 02/20/92 | 02/20/92 | 02/20/92 | 02/20/92 | 02/20/92 | 02/20/92 |
| DATA ANALYZED: | | 03/03/92 | 03/03/92 | 03/03/92 | 03/04/92 | 03/04/92 | 03/04/92 | 03/04/92 | 03/04/92 |
| DILUTION FACTOR: | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| VOLATILES -- METHOD 8240 | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| Chloromethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromomethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Vinyl Chloride | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Chloroethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Methylene Chloride | 5 | 9 U | 9 U | 9 U | 5 U | 5 U | 7 U | 6 U | 7 U |
| Acetone | 10 | 72 | 12 U | 10 U | 10 U | 12 U | 12 U | 14 U | 10 U |
| Carbon Disulfide | 5 | 2 J | 1 J | 2 J | 5 U | 5 U | 1 J | 5 U | 5 U |
| Trichlorofluoromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 7 | 5 U |
| 1,1-Dichloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloroethene (total) | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chloroform | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 2-Butanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,1,1-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Vinyl Acetate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromodichloromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloropropane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| cis-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Trichloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Dibromochloromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1,2-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Benzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| trans-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 2-Chloroethylvinylether | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromoform | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 2-Hexanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Methyl-2-Pentanone | 10 | 10 U | 3 J | 10 U | 10 U | 10 U | 3 J | 10 U | 10 U |
| Tetrachloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1,2,2-Tetrachloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Toluene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Ethylbenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 1 J | 5 U | 5 U |
| Styrene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Xylene (total) | 5 | 5 U | 4 J | 5 U | 5 U | 5 U | 6 | 5 U | 5 U |
| 1,3-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,4-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Acrolein | 100 | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U |
| Iodomethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Acrylonitrile | 100 | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U |
| Dibromomethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Ethyl Methacrylate | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2,3-Trichloropropane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| trans-1,4-Dichloro-2-Butene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Acetonitrile | 100 | 100 UJ | 100 UJ | 100 UJ | 100 UJ | 100 UJ | 100 UJ | 100 UJ | 100 UJ |
| 3-Chloropropene | 5 | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ |
| Propionitrile | 100 | 100 UJ | 100 UJ | 100 UJ | 100 UJ | 100 UJ | 100 UJ | 100 UJ | 100 UJ |
| Methacrylonitrile | 5 | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ |
| 1,4-Dioxane | 200 | 200 U | 200 U | 200 U | 200 U | 200 U | 200 U | 200 U | 200 U |

PROJECT: NSB KINGS BAY, GEORGIA

VOLATILE AQUEOUS ANALYSES (ug/l) (continued)

Validated Analytical Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SAMPLE LOCATION: | | KBA-5-1 | KBA-5-2 | KBA-5-3 | KBA-5-4 | KBA-5-4D | KBA-5-5 | KBA-5-6 | KBA-5-7 |
| LAB NUMBER: | | W20985001 | W20985002 | W20985003 | W20985004 | W20985005 | W20985006 | W20985007 | W20985008 |
| DATE SAMPLED: | | 02/20/92 | 02/20/92 | 02/20/92 | 02/20/92 | 02/20/92 | 02/20/92 | 02/20/92 | 02/20/92 |
| DATA ANALYZED: | | 03/03/92 | 03/03/92 | 03/03/92 | 03/04/92 | 03/04/92 | 03/04/92 | 03/04/92 | 03/04/92 |
| DILUTION FACTOR: | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| VOLATILES -- METHOD 8240 | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| Methyl Methacrylate | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| 1,2-Dibromoethane | 5 | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ |
| 1,1,1,2-Tetrachloroethane | 5 | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ |
| 1,2-Dibromo-3-Chloropropane | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| Pentachloroethane | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| Isobutyl alcohol | 200 | 200 UJ | 200 UJ | 200 UJ | 200 UJ | 200 UJ | 200 UJ | 200 UJ | 200 UJ |
| Chloroprene | 200 | 200 UJ | 200 UJ | 200 UJ | 200 UJ | 200 UJ | 200 UJ | 200 UJ | 200 UJ |

PROJECT: NSB KINGS BAY, GEORGIA

SEMIVOLATILE AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | SAMPLE LOCATION: | KBA-5-1 | KBA-5-2 | KBA-5-3 | KBA-5-4 | KBA-5-4D | KBA-5-5 | KBA-5-6 | KBA-5-7 |
| | LAB NUMBER: | W20985001 | W20985002 | W20985003 | W20985004 | W20985005 | W20985006 | W20985007 | W20985008 |
| | DATE SAMPLED: | 02/20/92 | 02/20/92 | 02/20/92 | 02/20/92 | 02/20/92 | 02/20/92 | 02/20/92 | 02/20/92 |
| | DATE ANALYZED: | 03/12/92 | 03/12/92 | 03/12/92 | 03/17/92 | 03/13/92 | 03/13/92 | 03/13/92 | 03/13/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| SEMIVOLATILES -- METHOD 8270 | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| N-Nitrosodimethylamine | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Phenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Aniline | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| bis (2-Chloroethyl) Ether | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2- Chlorophenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,3- Dichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,4- Dichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzyl Alcohol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,2- Dichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2- Methylphenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| bis (2- Chloroisopropyl) Ether | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| N-Nitroso-Di-n-Propylamine | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Hexachloroethane | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| Nitrobenzene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| Isophorone | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| 2-Nitrophenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2,4-Dimethylphenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzoic Acid | 50 | 50 U | 50 U | 50 U | 50 UJ | 50 U | 50 U | 50 U | 50 U |
| bis (2-Chloroethoxy) Methane | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| 2,4-Dichlorophenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,2,4-Trichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| Naphthalene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| 4-Chloroaniline | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| Hexachlorobutadiene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| 4-Chloro-3-Methylphenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Methylnaphthalene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| Hexachlorocyclopentadiene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| 2,4,6-Trichlorophenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2,4,5-Trichlorophenol | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| 2-Chloronaphthalene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| 2-Nitroaniline | 50 | 50 U | 50 U | 50 U | 50 UJ | 50 U | 50 U | 50 U | 50 U |
| Dimethylphthalate | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| Acenaphthylene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| 2,6-Dinitrotoluene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| 3-Nitroaniline | 50 | 50 U | 50 U | 50 U | 50 UJ | 50 U | 50 U | 50 U | 50 U |
| Acenaphthene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| 2,4-Dinitrophenol | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| 4-Nitrophenol | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| Dibenzofuran | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| 2,4-Dinitrotoluene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| Diethylphthalate | 10 | 10 U | 10 U | 10 U | 2 J | 10 U | 10 U | 10 U | 10 U |
| 4-Chlorophenyl-phenylether | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Fluorene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| 4-Nitroaniline | 50 | 50 U | 50 U | 50 U | 50 UJ | 50 U | 50 U | 50 U | 50 U |
| 4,6-Dinitro-2-Methylphenol | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| N-Nitrosodiphenylamine | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,2-Diphenylhydrazine | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| 4-Bromophenyl-phenylether | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Hexachlorobenzene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U |

PROJECT: NSB KINGS BAY, GEORGIA

SEMIVOLATILE AQUEOUS ANALYSES (ug/l) (continued) — Validated Analytical Results

| | SAMPLE LOCATION: | KBA-5-1 | KBA-5-2 | KBA-5-3 | KBA-5-4 | KBA-5-4D | KBA-5-5 | KBA-5-6 | KBA-5-7 |
|---|---|---|---|---|---|---|---|---|---|
| | LAB NUMBER: | W20985001 | W20985002 | W20985003 | W20985004 | W20985005 | W20985006 | W20985007 | W20985008 |
| | DATE SAMPLED: | 02/20/92 | 02/20/92 | 02/20/92 | 02/20/92 | 02/20/92 | 02/20/92 | 02/20/92 | 02/20/92 |
| | DATE ANALYZED: | 03/12/92 | 03/12/92 | 03/12/92 | 03/17/92 | 03/13/92 | 03/13/92 | 03/13/92 | 03/13/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| SEMIVOLATILES -- METHOD 8270 | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| Pentachlorophenol | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| Phenanthrene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| Anthracene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| Di-n-Butylphthalate | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| Fluoranthene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| Pyrene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| Butylbenzylphthalate | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| 3,3'-Dichlorobenzidine | 20 | 20 U | 20 U | 20 U | 20 UJ | 20 U | 20 U | 20 U | 20 U |
| Benzo (a) Anthracene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| Chrysene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| bis (2-Ethylhexyl) Phthalate | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| Di-n-Octyl Phthalate | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| Benzo (b) Fluoranthene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| Benzo (k) Fluoranthene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzo (a) Pyrene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| Indeno (1,2,3-cd) Pyrene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| Dibenz (a,h) Anthracene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| Benzo (g,h,i) Perylene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| 2-Picoline | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| Methyl methanesulfonate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Ethyl methanesulfonate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Acetophenone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| N-Nitrosopiperidine | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Phenyl-tert-butylamine | 50 | 50 UR | 50 UR | 50 UR | 50 UR | 50 UR | 50 UR | 50 UR | 50 UR |
| 2,6-Dichlorophenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| N-Nitroso-di-n-butylamine | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| N-Nitrosodiethylamine | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| N-Nitrosopyrrolidine | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| Benzidine | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| 1,2,4,5-Tetrachlorobenzene | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| Pentachlorobenzene | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| 1-Naphthylamine | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| 2-Naphthylamine | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| 2,3,4,6-Tetrachlorophenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Diphenylamine | 10 | 10 UR | 10 UR | 10 UR | 10 UR | 10 UR | 10 UR | 10 UR | 10 UR |
| Phenacetin | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Aminobiphenyl | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| Pentachloronitrobenzene | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| Pronamide | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| p-Dimethylaminoazobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 7,12-Dimethylbenz (a) Anthracene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 3-Methylcholanthrene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Pyridine | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| N-Nitrosomethylethylamine | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| N-Nitrosomorpholine | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| o-Toluidine | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| 3- & 4-Methylphenol | 20 | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U |
| Hexachloropropene | 50 | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ |
| p-Phenylenediamine | 50 | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ |

PROJECT: NSB KINGS BAY, GEORGIA

SEMIVOLATILE AQUEOUS ANALYSES (ug/l) (continued)

Validated Analytical Results

| | SAMPLE LOCATION: | KBA-5-1 | KBA-5-2 | KBA-5-3 | KBA-5-4 | KBA-5-4D | KBA-5-5 | KBA-5-6 | KBA-5-7 |
|---|---|---|---|---|---|---|---|---|---|
| | LAB NUMBER: | W20985001 | W20985002 | W20985003 | W20985004 | W20985005 | W20985006 | W20985007 | W20985008 |
| | DATE SAMPLED: | 02/20/92 | 02/20/92 | 02/20/92 | 02/20/92 | 02/20/92 | 02/20/92 | 02/20/92 | 02/20/92 |
| | DATE ANALYZED: | 03/12/92 | 03/12/92 | 03/12/92 | 03/17/92 | 03/13/92 | 03/13/92 | 03/13/92 | 03/13/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| SEMIVOLATILES -- METHOD 8270 | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| Safrole | 50 | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ |
| Isosafrole | 50 | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ |
| 1,4-Naphthoquinone | 50 | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ |
| 1,3-Dinitrobenzene | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| 5-Nitro-o-toluidine | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| 1,3,5-Trinitrobenzene | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| 4-Nitroquinoline-1-oxide | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| Methapyrilene | 50 | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ |
| 3,3'-Dimethylbenzidine | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| 2-Acetamidofluorene | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| Hexachlorophene | 50 | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ |

POLYCHLORINATED DIBENZO- FURANS/DIOXINS -- METHOD 8280 (ng/l)

| | DATE ANALYZED: | 03/03/92 | 03/03/92 | 03/03/92 | 03/03/92 | 03/03/92 | 03/03/92 | 03/03/92 | 03/03/92 |
|---|---|---|---|---|---|---|---|---|---|
| ANALYTE | PQL* | | | | | | | | |
| TCDFs (total) | -- | 0.027 U | 0.020 U | 0.021 U | 0.025 U | 0.020 U | 0.033 U | 0.018 U | 0.025 U |
| PeCDFs (total) | -- | 0.041 U | 0.039 U | 0.034 U | 0.038 U | 0.029 U | 0.052 U | 0.030 U | 0.033 U |
| HxCDFs (total) | -- | 0.012 U | 0.092 U | 0.010 U | 0.057 U | 0.068 U | 0.11 U | 0.073 U | 0.083 U |
| TCDDs (total) | -- | 0.029 U | 0.036 U | 0.024 U | 0.025 U | 0.020 U | 0.031 U | 0.028 U | 0.035 U |
| 2,3,7,8- TCDD | -- | 0.029 U | 0.036 U | 0.024 U | 0.025 U | 0.020 U | 0.031 U | 0.028 U | 0.035 U |
| PeCDDs (total) | -- | 0.13 U | 0.13 U | 0.12 U | 0.13 U | 0.10 U | 0.15 U | 0.098 U | 0.11 U |
| HxCDDs (total) | -- | 0.17 U | 0.15 U | 0.12 U | 0.12 U | 0.11 U | 0.27 U | 0.11 U | 0.10 U |

*PQLs are not listed for dioxins and furans because the data are reported relative to method detection limits (MDLs) based on MDL studies. There are no published PQLs for these analytes in the SW-846 method manual and these analytes are not included in the Contract Laboratory Program.

PROJECT: NSB KINGS BAY, GEORGIA — PESTICIDE/PCB/HERBICIDE AQUEOUS ANALYSES (ug/l) — Validated Analytical Results

| SAMPLE LOCATION: | | KBA-5-1 | KBA-5-2 | KBA-5-3 | KBA-5-4 | KBA-5-4D | KBA-5-5 | KBA-5-6 | KBA-5-7 |
|---|---|---|---|---|---|---|---|---|---|
| LAB NUMBER: | | W20985001 | W20985002 | W20985003 | W20985004 | W20985005 | W20985006 | W20985007 | W20985008 |
| DATE SAMPLED: | | 02/20/92 | 02/20/92 | 02/20/92 | 02/20/92 | 02/20/92 | 02/20/92 | 02/20/92 | 02/20/92 |
| ORGANOCHLORINE PESTICIDES AND PCBs -- METHOD 8080 | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| alpha-BHC | 0.01 | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U |
| beta-BHC | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| delta-BHC | 0.01 | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U |
| gamma-BHC (Lindane) | 0.01 | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U |
| Heptachlor | 0.01 | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U |
| Aldrin | 0.01 | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U |
| Heptachlor epoxide | 0.01 | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U |
| Endosulfan I | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Dieldrin | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| 4,4'- DDE | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Endrin | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Endosulfan II | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| 4,4'- DDD | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Endrin Aldehyde | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Endosulfan Sulfate | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| 4,4'- DDT | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Methoxychlor | 0.04 | 0.04 U | 0.04 U | 0.04 U | 0.04 U | 0.04 U | 0.04 U | 0.04 U | 0.04 U |
| Endrin Ketone | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Chlordane | 0.1 | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Toxaphene | 0.5 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Aroclor-1016 | 0.8 | 0.8 U | 0.8 U | 0.8 U | 0.8 U | 0.8 U | 0.8 U | 0.8 U | 0.8 U |
| Aroclor-1221 | 2 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Aroclor-1232 | 2 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Aroclor-1242 | 0.8 | 0.8 U | 0.8 U | 0.8 U | 0.8 U | 0.8 U | 0.8 U | 0.8 U | 0.8 U |
| Aroclor-1248 | 0.4 | 0.4 U | 0.4 U | 0.4 U | 0.4 U | 0.4 U | 0.4 U | 0.4 U | 0.4 U |
| Aroclor-1254 | 0.2 | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Aroclor-1260 | 0.2 | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Chlorobenzilate | 0.5 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Diallate | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Isodrin | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Kepone | NR | NR | NR | NR | NR | NR | NR | NR | NR |
| ORGANOPHOSPHOROUS PESTICIDES -- METHOD 8140 | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| Triethylphosphorothioate | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Thionazin | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Phorate | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Sulfotepp | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Dimethoate | NR | NR | NR | NR | NR | NR | NR | NR | NR |
| Disulfoton | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Methyl Parathion | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Ethyl Parathion | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Famphur | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| CHLORINATED HERBICIDES -- METHOD 8150 | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| 2,4-D | 2.5 | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U |
| Silvex | 0.5 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 2,4,5-T | 0.5 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Dinoseb | NR | NR | NR | NR | NR | NR | NR | NR | NR |

PROJECT: NSB KINGS BAY, GEORGIA — INORGANIC AQUEOUS ANALYSES (ug/l) — Validated Analytical Results

| | SAMPLE LOCATION: | KBA-5-1 | KBA-5-2 | KBA-5-3 | KBA-5-4 | KBA-5-4D | KBA-5-5 | KBA-5-6 |
|---|---|---|---|---|---|---|---|---|
| | LAB NUMBER: | W20985001 | W20985002 | W20985003 | W20985004 | W20985005 | W20985006 | W20985007 |
| | DATE SAMPLED: | 02/20/92 | 02/20/92 | 02/20/92 | 02/20/92 | 02/20/92 | 02/20/92 | 02/20/92 |
| ANALYTE | CRDL | | | | | | | |
| Antimony | 60 | 10.9 U | 10.9 U | 10.9 U | 14.0 J | 10.9 U | 10.9 U | 11.3 J |
| Arsenic | 10 | 36.5 | 27.9 | 22.5 | 15.9 | 18.0 | 33.2 | 14.9 |
| Barium | 200 | 742 | 459 | 161 J | 601 | 588 | 332 | 640 |
| Beryllium | 5 | 4.2 J | 2.7 J | 0.92 J | 3.1 J | 2.9 J | 3.0 J | 5.1 |
| Cadmium | 5 | 2.9 U | 2.9 U | 2.9 U | 2.9 U | 3.7 J | 2.9 U | 25.4 |
| Chromium | 10 | 134 | 95.7 | 29.5 | 103 | 101 | 102 | 152 |
| Cobalt | 50 | 36.4 J | 21.3 J | 11.8 J | 28.5 J | 29.1 J | 29.2 J | 30.4 J |
| Copper | 25 | 37.8 | 51.5 | 77.6 | 31.7 | 36.9 | 77.4 | 63.3 |
| Lead | 5 | 30.2 | 23.2 | 7.2 | 22.0 | 25.2 | 23.0 | 32.0 |
| Mercury | 0.2 | 0.16 U | 0.16 U | 0.16 U | 0.16 U | 0.16 U | 0.16 U | 0.40 |
| Nickel | 40 | 49.0 | 50.3 | 79.8 | 40.2 J | 42.7 J | 77.2 | 59.8 |
| Selenium | 5 | 1.3 U | 1.4 J | 1.3 U | 2.0 J | 1.6 J | 2.2 J | 1.3 U |
| Silver | 10 | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U |
| Thallium | 10 | 1.4 U | 1.4 U | 1.4 U | 1.6 J | 1.5 J | 1.6 J | 1.6 J |
| Tin | 208 | 208 U | 208 U | 208 U | 232 | 208 U | 208 U | 208 U |
| Vanadium | 50 | 117 | 80.6 | 24.4 J | 84.7 | 82.6 | 81.8 | 138 |
| Zinc | 20 | 168 J | 322 J | 100 J | 153 J | 177 J | 200 J | 235 J |
| Cyanide | 10 | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.9 J |
| Sulfide | 100 | 300 | 300 | 200 | 300 | 400 | 200 | 2100 |

PROJECT: NSB KINGS BAY, GEORGIA — INORGANIC AQUEOUS ANALYSES (ug/l) — Validated Analytical Results

| | SAMPLE LOCATION: | KBA-5-7 |
|---|---|---|
| | LAB NUMBER: | W20985008 |
| | DATE SAMPLED: | 02/20/92 |
| ANALYTE | CRDL | |
| Antimony | 60 | 16.8 J |
| Arsenic | 10 | 76.9 |
| Barium | 200 | 748 |
| Beryllium | 5 | 6.1 |
| Cadmium | 5 | 25.9 |
| Chromium | 10 | 228 |
| Cobalt | 50 | 48.4 J |
| Copper | 25 | 73.4 |
| Lead | 5 | 43.0 |
| Mercury | 0.2 | 0.16 U |
| Nickel | 40 | 84.4 |
| Selenium | 5 | 1.7 J |
| Silver | 10 | 1.7 U |
| Thallium | 10 | 2.2 J |
| Tin | 208 | 208 U |
| Vanadium | 50 | 183 |
| Zinc | 20 | 260 J |
| Cyanide | 10 | 5.6 J |
| Sulfide | 100 | 300 |

# Site 16 Groundwater Sampling Event No. 1
February 1992

PROJECT: NSB KINGS BAY, GEORGIA

VOLATILE AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| | | | | | |
|---|---|---|---|---|---|
| | SAMPLE LOCATION: | KBA-16-1 | KBA-16-2 | KBA-16-3 | KBA-16-4 |
| | LAB NUMBER: | W21002007 | W21002004 | W21002006 | W21012001 |
| | DATE SAMPLED: | 02/22/92 | 02/22/92 | 02/22/92 | 02/24/92 |
| | DATE ANALYZED: | 03/05/92 | 03/03/92 | 03/05/92 | 03/05/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 |
| VOLATILES -- METHOD 8240 | | | | | |
| ANALYTE | PQL | | | | |
| Chloromethane | 10 | 10 U | 10 U | 10 U | 10 U |
| Bromomethane | 10 | 10 U | 10 U | 10 U | 10 U |
| Vinyl Chloride | 10 | 10 U | 10 U | 10 U | 10 U |
| Chloroethane | 10 | 10 U | 10 U | 10 U | 10 U |
| Methylene Chloride | 5 | 5 U | 5 U | 5 U | 9 U |
| Acetone | 10 | 10 U | 29 U | 19 U | 28 U |
| Carbon Disulfide | 5 | 5 U | 5 U | 5 U | 5 U |
| Trichlorofluoromethane | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethene | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloroethene (total) | 5 | 5 U | 5 U | 5 U | 5 U |
| Chloroform | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U |
| 2-Butanone | 10 | 10 U | 10 U | 10 U | 10 U |
| 1,1,1-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | 5 | 5 U | 5 U | 5 U | 5 U |
| Vinyl Acetate | 10 | 10 U | 10 U | 10 U | 10 U |
| Bromodichloromethane | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloropropane | 5 | 5 U | 5 U | 5 U | 5 U |
| cis-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U |
| Trichloroethene | 5 | 5 U | 5 U | 5 U | 5 U |
| Dibromochloromethane | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,1,2-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U |
| Benzene | 5 | 5 U | 5 U | 5 U | 5 U |
| trans-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U |
| 2-Chloroethylvinylether | 10 | 10 U | 10 U | 10 U | 10 U |
| Bromoform | 5 | 5 U | 5 U | 5 U | 5 U |
| 2-Hexanone | 10 | 10 U | 10 U | 10 U | 10 U |
| 4-Methyl-2-Pentanone | 10 | 10 U | 3 J | 10 U | 10 U |
| Tetrachloroethene | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,1,2,2-Tetrachloroethane | 5 | 5 U | 5 U | 5 U | 5 U |
| Toluene | 5 | 5 U | 5 U | 5 U | 5 U |
| Chlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U |
| Ethylbenzene | 5 | 5 U | 2 J | 5 U | 5 U |
| Styrene | 5 | 5 U | 5 U | 5 U | 5 U |
| Xylene (total) | 5 | 5 U | 3 J | 5 U | 5 U |
| 1,3-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,4-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U |
| Acrolein | 100 | 100 U | 100 U | 100 U | 100 U |
| Iodomethane | 10 | 10 U | 10 U | 10 U | 10 U |
| Acrylonitrile | 100 | 100 U | 100 U | 100 U | 100 U |
| Dibromomethane | 5 | 5 U | 5 U | 5 U | 5 U |
| Ethyl Methacrylate | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,2,3-Trichloropropane | 5 | 5 U | 5 U | 5 U | 5 U |
| trans-1,4-Dichloro-2-Butene | 5 | 5 U | 5 U | 5 U | 5 U |
| Acetonitrile | 100 | 100 UJ | 100 UJ | 100 UJ | 100 UJ |
| 3-Chloropropene | 5 | 5 UJ | 5 UJ | 5 UJ | 5 UJ |
| Propionitrile | 100 | 100 UJ | 100 UJ | 100 UJ | 100 UJ |
| Methacrylonitrile | 5 | 5 UJ | 5 UJ | 5 UJ | 5 UJ |
| 1,4-Dioxane | 200 | 200 U | 200 U | 200 U | 200 U |

PROJECT: NSB KINGS BAY, GEORGIA

VOLATILE AQUEOUS ANALYSES (ug/l) (continued)

Validated Analytical Results

| | | | | | |
|---|---|---|---|---|---|
| | SAMPLE LOCATION: | KBA-16-1 | KBA-16-2 | KBA-16-3 | KBA-16-4 |
| | LAB NUMBER: | W21002007 | W21002004 | W21002006 | W21012001 |
| | DATE SAMPLED: | 02/22/92 | 02/22/92 | 02/22/92 | 02/24/92 |
| | DATE ANALYZED: | 03/05/92 | 03/03/92 | 03/05/92 | 03/05/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 |
| VOLATILES -- METHOD 8240 | | | | | |
| ANALYTE | PQL | | | | |
| Methyl Methacrylate | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| 1,2-Dibromoethane | 5 | 5 UJ | 5 UJ | 5 UJ | 5 UJ |
| 1,1,1,2-Tetrachloroethane | 5 | 5 UJ | 5 UJ | 5 UJ | 5 UJ |
| 1,2-Dibromo-3-Chloropropane | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| Pentachloroethane | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| Isobutyl alcohol | 200 | 200 UJ | 200 UJ | 200 UJ | 200 UJ |
| Chloroprene | 200 | 200 UJ | 200 UJ | 200 UJ | 200 UJ |

PROJECT: NSB KINGS BAY, GEORGIA

SEMIVOLATILE AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| | SAMPLE LOCATION: | KBA-16-1 | KBA-16-2 | KBA-16-3 | KBA-16-4 |
|---|---|---|---|---|---|
| | LAB NUMBER: | W21002007 | W21002004 | W21002006 | W21012001 |
| | DATE SAMPLED: | 02/20/92 | 02/20/92 | 02/20/92 | 02/20/92 |
| | DATE ANALYZED: | 03/17/92 | 03/18/92 | 03/17/92 | 03/17/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 |
| SEMIVOLATILES -- METHOD 8270 | | | | | |
| ANALYTE | PQL | | | | |
| N-Nitrosodimethylamine | 10 | 10 U | 10 U | 10 U | 10 U |
| Phenol | 10 | 10 U | 10 U | 10 U | 10 U |
| Aniline | 10 | 10 U | 10 U | 10 U | 10 UJ |
| bis (2-Chloroethyl) Ether | 10 | 10 U | 10 U | 10 U | 10 UJ |
| 2- Chlorophenol | 10 | 10 U | 10 U | 10 U | 10 U |
| 1,3- Dichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 UJ |
| 1,4- Dichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 UJ |
| Benzyl Alcohol | 10 | 10 U | 10 U | 10 U | 10 UJ |
| 1,2- Dichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 UJ |
| 2- Methylphenol | 10 | 10 U | 10 U | 10 U | 10 U |
| bis (2- Chloroisopropyl) Ether | 10 | 10 U | 10 U | 10 U | 10 UJ |
| N-Nitroso-Di-n-Propylamine | 10 | 10 U | 10 U | 10 U | 10 U |
| Hexachloroethane | 10 | 10 U | 10 U | 10 U | 10 UJ |
| Nitrobenzene | 10 | 10 U | 10 U | 10 U | 10 UJ |
| Isophorone | 10 | 10 U | 10 U | 10 U | 10 UJ |
| 2-Nitrophenol | 10 | 10 U | 10 U | 10 U | 10 U |
| 2,4-Dimethylphenol | 10 | 10 U | 10 U | 10 U | 10 U |
| Benzoic Acid | 50 | 50 U | 50 U | 50 U | 50 UJ |
| bis (2-Chloroethoxy) Methane | 10 | 10 U | 10 U | 10 U | 10 UJ |
| 2,4-Dichlorophenol | 10 | 10 U | 10 U | 10 U | 10 U |
| 1,2,4-Trichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 UJ |
| Naphthalene | 10 | 10 U | 10 U | 10 U | 10 UJ |
| 4-Chloroaniline | 10 | 10 U | 10 U | 10 U | 10 UJ |
| Hexachlorobutadiene | 10 | 10 U | 10 U | 10 U | 10 UJ |
| 4-Chloro-3-Methylphenol | 10 | 10 U | 10 U | 10 U | 10 U |
| 2-Methylnaphthalene | 10 | 10 U | 10 U | 10 U | 10 UJ |
| Hexachlorocyclopentadiene | 10 | 10 U | 10 U | 10 U | 10 UJ |
| 2,4,6-Trichlorophenol | 10 | 10 U | 10 U | 10 U | 10 U |
| 2,4,5-Trichlorophenol | 50 | 50 U | 50 U | 50 U | 50 U |
| 2-Chloronaphthalene | 10 | 10 U | 10 U | 10 U | 10 UJ |
| 2-Nitroaniline | 50 | 50 U | 50 U | 50 U | 50 UJ |
| Dimethylphthalate | 10 | 10 U | 10 U | 10 U | 10 UJ |
| Acenaphthylene | 10 | 10 U | 10 U | 10 U | 10 UJ |
| 2,6-Dinitrotoluene | 10 | 10 U | 10 U | 10 U | 10 UJ |
| 3-Nitroaniline | 50 | 50 U | 50 U | 50 U | 50 UJ |
| Acenaphthene | 10 | 10 U | 10 U | 10 U | 10 UJ |
| 2,4-Dinitrophenol | 50 | 50 U | 50 U | 50 U | 50 U |
| 4-Nitrophenol | 50 | 50 U | 50 U | 50 U | 50 U |
| Dibenzofuran | 10 | 10 U | 10 U | 10 U | 10 UJ |
| 2,4-Dinitrotoluene | 10 | 10 U | 10 U | 10 U | 10 UJ |
| Diethylphthalate | 10 | 10 U | 10 U | 10 U | 10 UJ |
| 4-Chlorophenyl-phenylether | 10 | 10 U | 10 U | 10 U | 10 U |
| Fluorene | 10 | 10 U | 10 U | 10 U | 10 UJ |
| 4-Nitroaniline | 50 | 50 U | 50 U | 50 U | 50 UJ |
| 4,6-Dinitro-2-Methylphenol | 50 | 50 U | 50 U | 50 U | 50 U |
| N-Nitrosodiphenylamine | 10 | 10 U | 10 U | 10 U | 10 U |
| 1,2-Diphenylhydrazine | 10 | 10 U | 10 U | 10 U | 10 UJ |
| 4-Bromophenyl-phenylether | 10 | 10 U | 10 U | 10 U | 10 U |
| Hexachlorobenzene | 10 | 10 U | 10 U | 10 U | 10 UJ |

PROJECT: NSB KINGS BAY, GEORGIA

SEMIVOLATILE AQUEOUS ANALYSES (ug/l) (continued)

Validated Analytical Results

| | | | | | |
|---|---|---|---|---|---|
| | SAMPLE LOCATION: | KBA-16-1 | KBA-16-2 | KBA-16-3 | KBA-16-4 |
| | LAB NUMBER: | W21002007 | W21002004 | W21002006 | W21012001 |
| | DATE SAMPLED: | 02/20/92 | 02/20/92 | 02/20/92 | 02/20/92 |
| | DATE ANALYZED: | 03/17/92 | 03/18/92 | 03/17/92 | 03/17/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 |
| SEMIVOLATILES -- METHOD 8270 | | | | | |
| ANALYTE | PQL | | | | |
| Pentachlorophenol | 50 | 50 U | 50 U | 50 U | 50 U |
| Phenanthrene | 10 | 10 U | 10 U | 10 U | 10 UJ |
| Anthracene | 10 | 10 U | 10 U | 10 U | 10 UJ |
| Di-n-Butylphthalate | 10 | 10 U | 10 U | 10 U | 10 UJ |
| Fluoranthene | 10 | 10 U | 10 U | 10 U | 10 UJ |
| Pyrene | 10 | 10 U | 10 U | 10 U | 10 UJ |
| Butylbenzylphthalate | 10 | 10 U | 10 U | 10 U | 10 UJ |
| 3,3'-Dichlorobenzidine | 20 | 20 U | 20 U | 20 U | 20 UJ |
| Benzo (a) Anthracene | 10 | 10 U | 10 U | 10 U | 10 UJ |
| Chrysene | 10 | 10 U | 10 U | 10 U | 10 UJ |
| bis (2-Ethylhexyl) Phthalate | 10 | 10 U | 10 U | 10 U | 10 UJ |
| Di-n-Octyl Phthalate | 10 | 10 U | 10 U | 10 U | 10 UJ |
| Benzo (b) Fluoranthene | 10 | 10 U | 10 U | 10 U | 10 UJ |
| Benzo (k) Fluoranthene | 10 | 10 U | 10 U | 10 U | 10 UJ |
| Benzo (a) Pyrene | 10 | 10 U | 10 U | 10 U | 10 UJ |
| Indeno (1,2,3-cd) Pyrene | 10 | 10 U | 10 U | 10 U | 10 UJ |
| Dibenz (a,h) Anthracene | 10 | 10 U | 10 U | 10 U | 10 UJ |
| Benzo (g,h,i) Perylene | 10 | 10 U | 10 U | 10 U | 10 UJ |
| 2-Picoline | 50 | 50 U | 50 U | 50 U | 50 U |
| Methyl methanesulfonate | 10 | 10 U | 10 U | 10 U | 10 U |
| Ethyl methanesulfonate | 10 | 10 U | 10 U | 10 U | 10 U |
| Acetophenone | 10 | 10 U | 10 U | 10 U | 10 U |
| N-Nitrosopiperidine | 10 | 10 U | 10 U | 10 U | 10 U |
| Phenyl-tert-butylamine | 50 | 50 UR | 50 UR | 50 UR | 50 UR |
| 2,6-Dichlorophenol | 10 | 10 U | 10 U | 10 U | 10 U |
| N-Nitroso-di-n-butylamine | 10 | 10 U | 10 U | 10 U | 10 U |
| N-Nitrosodiethylamine | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| N-Nitrosopyrrolidine | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| Benzidine | 50 | 50 U | 50 U | 50 U | 50 U |
| 1,2,4,5-Tetrachlorobenzene | 50 | 50 U | 50 U | 50 U | 50 U |
| Pentachlorobenzene | 50 | 50 U | 50 U | 50 U | 50 U |
| 1-Naphthylamine | 50 | 50 U | 50 U | 50 U | 50 U |
| 2-Naphthylamine | 50 | 50 U | 50 U | 50 U | 50 U |
| 2,3,4,6-Tetrachlorophenol | 10 | 10 U | 10 U | 10 U | 10 U |
| Diphenylamine | 10 | 10 UR | 10 UR | 10 UR | 10 UR |
| Phenacetin | 10 | 10 U | 10 U | 10 U | 10 U |
| 4-Aminobiphenyl | 50 | 50 U | 50 U | 50 U | 50 U |
| Pentachloronitrobenzene | 50 | 50 U | 50 U | 50 U | 50 U |
| Pronamide | 10 | 10 U | 10 U | 10 U | 10 U |
| p-Dimethylaminoazobenzene | 10 | 10 U | 10 U | 10 U | 10 U |
| 7,12-Dimethylbenz (a) Anthracene | 10 | 10 U | 10 U | 10 U | 10 U |
| 3-Methylcholanthrene | 10 | 10 U | 10 U | 10 U | 10 U |
| Pyridine | 50 | 50 U | 50 U | 50 U | 50 U |
| N-Nitrosomethylethylamine | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| N-Nitrosomorpholine | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| o-Toluidine | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| 3- & 4-Methylphenol | 20 | 20 U | 20 U | 20 U | 20 U |
| Hexachloropropene | 50 | 50 UJ | 50 UJ | 50 UJ | 50 UJ |
| p-Phenylenediamine | 50 | 50 UJ | 50 UJ | 50 UJ | 50 UJ |

PROJECT: NSB KINGS BAY, GEORGIA

SEMIVOLATILE AQUEOUS ANALYSES (ug/l) (continued)

Validated Analytical Results

| | | | | | |
|---|---|---|---|---|---|
| | SAMPLE LOCATION: | KBA-16-1 | KBA-16-2 | KBA-16-3 | KBA-16-4 |
| | LAB NUMBER: | W21002007 | W21002004 | W21002006 | W21012001 |
| | DATE SAMPLED: | 02/20/92 | 02/20/92 | 02/20/92 | 02/20/92 |
| | DATE ANALYZED: | 03/17/92 | 03/18/92 | 03/17/92 | 03/17/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 |
| SEMIVOLATILES -- METHOD 8270 | | | | | |
| ANALYTE | PQL | | | | |
| Safrole | 50 | 50 UJ | 50 UJ | 50 UJ | 50 UJ |
| Isosafrole | 50 | 50 UJ | 50 UJ | 50 UJ | 50 UJ |
| 1,4-Naphthoquinone | 50 | 50 UJ | 50 UJ | 50 UJ | 50 UJ |
| 1,3-Dinitrobenzene | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| 5-Nitro-o-toluidine | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| 1,3,5-Trinitrobenzene | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| 4-Nitroquinoline-1-oxide | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| Methapyrilene | 50 | 50 UJ | 50 UJ | 50 UJ | 50 UJ |
| 3,3'-Dimethylbenzidine | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| 2-Acetamidofluorene | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| Hexachlorophene | 50 | 50 UJ | 50 UJ | 50 UJ | 50 UJ |

POLYCHLORINATED DIBENZO- FURANS/DIOXINS -- METHOD 8280 (ng/l)

| | | | | | |
|---|---|---|---|---|---|
| | DATE ANALYZED: | 03/04/92 | 03/04/92 | 03/04/92 | 03/04/92 |
| ANALYTE | PQL* | | | | |
| TCDFs (total) | -- | 0.066 U | 0.028 U | 0.059 U | 0.036 U |
| PeCDFs (total) | -- | 0.086 U | 0.040 U | 0.14 U | 0.048 U |
| HxCDFs (total) | -- | 0.15 U | 0.058 U | 0.14 U | 0.13 U |
| TCDDs (total) | -- | 0.060 U | 0.040 U | 0.057 U | 0.049 U |
| 2,3,7,8- TCDD | -- | 0.060 U | 0.040 U | 0.057 U | 0.049 U |
| PeCDDs (total) | -- | 0.40 U | 0.18 U | 0.34 U | 0.11 U |
| HxCDDs (total) | -- | 0.23 U | 0.079 U | 0.20 U | 0.25 U |

*PQLs are not listed for dioxins and furans because the data are reported relative to method detection limits (MDLs) based on MDL studies. There are no published PQLs for these analytes in the SW-846 method manual and these analytes are not included in the Contract Laboratory Program.

PROJECT: NSB KINGS BAY, GEORGIA — PESTICIDE/PCB/HERBICIDE AQUEOUS ANALYSES (ug/l) — Validated Analytical Results

| SAMPLE LOCATION: | | KBA-16-1 | KBA-16-2 | KBA-16-3 | KBA-16-4 |
|---|---|---|---|---|---|
| LAB NUMBER: | | W21002007 | W21002004 | W21002006 | W21012001 |
| DATE SAMPLED: | | 02/22/92 | 02/22/92 | 02/22/92 | 02/24/92 |
| ORGANOCHLORINE PESTICIDES AND PCBs -- METHOD 8080 | | | | | |
| ANALYTE | PQL | | | | |
| alpha-BHC | 0.01 | 0.01 U | 0.01 U | 0.01 U | 0.01 U |
| beta-BHC | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| delta-BHC | 0.01 | 0.01 U | 0.01 U | 0.01 U | 0.01 U |
| gamma-BHC (Lindane) | 0.01 | 0.01 U | 0.01 U | 0.01 U | 0.01 U |
| Heptachlor | 0.01 | 0.01 U | 0.01 U | 0.01 U | 0.01 U |
| Aldrin | 0.01 | 0.01 U | 0.01 U | 0.01 U | 0.01 U |
| Heptachlor epoxide | 0.01 | 0.01 U | 0.01 U | 0.01 U | 0.01 U |
| Endosulfan I | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Dieldrin | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| 4,4'- DDE | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Endrin | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Endosulfan II | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| 4,4'- DDD | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Endrin Aldehyde | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Endosulfan Sulfate | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| 4,4'- DDT | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Methoxychlor | 0.04 | 0.04 U | 0.04 U | 0.04 U | 0.04 U |
| Endrin Ketone | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Chlordane | 0.1 | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Toxaphene | 0.5 | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Aroclor-1016 | 0.8 | 0.8 U | 0.8 U | 0.8 U | 0.8 U |
| Aroclor-1221 | 2 | 2 U | 2 U | 2 U | 2 U |
| Aroclor-1232 | 2 | 2 U | 2 U | 2 U | 2 U |
| Aroclor-1242 | 0.8 | 0.8 U | 0.8 U | 0.8 U | 0.8 U |
| Aroclor-1248 | 0.4 | 0.4 U | 0.4 U | 0.4 U | 0.4 U |
| Aroclor-1254 | 0.2 | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Aroclor-1260 | 0.2 | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Chlorobenzilate | 0.5 | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Diallate | 1 | 1 U | 1 U | 1 U | 1 U |
| Isodrin | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Kepone | NR | NR | NR | NR | NR |
| ORGANOPHOSPHOROUS PESTICIDES -- METHOD 8140 | | | | | |
| ANALYTE | PQL | | | | |
| Triethylphosphorothioate | 1 | 1 U | 1 U | 1 U | 1 U |
| Thionazin | 1 | 1 U | 1 U | 1 U | 1 U |
| Phorate | 1 | 1 U | 1 U | 1 U | 1 U |
| Sulfotepp | 1 | 1 U | 1 U | 1 U | 1 U |
| Dimethoate | NR | NR | NR | NR | NR |
| Disulfoton | 1 | 1 U | 1 U | 1 U | 1 UJ |
| Methyl Parathion | 1 | 1 U | 1 U | 1 U | 1 U |
| Ethyl Parathion | 1 | 1 U | 1 U | 1 U | 1 U |
| Famphur | 1 | 1 U | 1 U | 1 U | 1 U |
| CHLORINATED HERBICIDES -- METHOD 8150 | | | | | |
| ANALYTE | PQL | | | | |
| 2,4-D | 2.5 | 2.5 U | 2.5 U | 2.5 U | 2.5 U |
| Silvex | 0.5 | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 2,4,5-T | 0.5 | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Dinoseb | NR | NR | NR | NR | NR |

PROJECT: NSB KINGS BAY, GEORGIA

INORGANIC AQUEOUS ANALYSES (ug/l)

Validated Analytical Result

| ANALYTE | CRDL | KBA-16-1 | KBA-16-2 | KBA-16-3 | KBA-16-4 |
|---|---|---|---|---|---|
| SAMPLE LOCATION: | | KBA-16-1 | KBA-16-2 | KBA-16-3 | KBA-16-4 |
| LAB NUMBER: | | W21002007 | W21002004 | W21002006 | W21012001 |
| DATE SAMPLED: | | 02/22/92 | 02/22/92 | 02/22/92 | 02/24/92 |
| Antimony | 60 | 18.5 J | 13.3 J | 11.4 J | 10.9 U |
| Arsenic | 10 | 29.9 | 19.3 | 25.8 | 4.9 J |
| Barium | 200 | 171 J | 478 | 519 | 386 |
| Beryllium | 5 | 2.5 J | 6.2 | 13.1 | 2.4 J |
| Cadmium | 5 | 2.9 U | 2.9 U | 2.9 U | 2.9 U |
| Chromium | 10 | 84.6 | 256 | 194 | 34.0 |
| Cobalt | 50 | 11.6 J | 74.4 | 29.1 J | 3.6 U |
| Copper | 25 | 25.0 U | 67.0 U | 33.6 U | 38.1 U |
| Lead | 5 | 14.8 J | 36.3 J | 19.9 J | 12.0 J |
| Mercury | 0.2 | 0.16 U | 0.60 | 0.82 | 0.16 U |
| Nickel | 40 | 27.0 J | 132 | 54.7 | 10.5 U |
| Selenium | 5 | 3.2 J | 8.0 | 1.3 U | 2.3 J |
| Silver | 10 | 1.7 U | 1.7 U | 1.7 U | 1.7 U |
| Thallium | 10 | 17.3 J | 1.9 J | 1.7 UJ | 1.7 U |
| Tin | 208 | 208 U | 208 U | 208 U | 208 U |
| Vanadium | 50 | 119 | 257 | 175 | 29.8 J |
| Zinc | 20 | 50.0 U | 297 | 182 | 43.6 U |
| Cyanide | 10 | 3.4 J | 2.6 J | 1.9 J | 1.8 U |
| Sulfide | 100 | 400 | 1800 | 200 | 300 |

**Trip Blanks**
**Source Water Blanks**
**Sampling Event No. 1**
**February 1992**

PROJECT: NSB KINGS BAY, GEORGIA — VOLATILE AQUEOUS ANALYSES (ug/l) — Validated Analytical Results

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | SAMPLE LOCATION: | BT-1-FB | BT-2-FB | BT-5-FB | BT-6-FB | BT-7-FB | BT-8-FB | BT-10-FB |
| | LAB NUMBER: | 20865001 | 20867005 | 20900004 | 20917002 | 20940009 | 20985010 | 21002008 |
| | DATE SAMPLED: | 02/07/92 | 02/08/92 | 02/12/92 | 02/13/92 | 02/17/92 | 02/20/92 | 02/22/92 |
| | DATA ANALYZED: | 02/14/92 | 02/13/92 | 02/22/92 | 02/26/92 | 02/28/92 | 03/03/92 | 03/04/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| VOLATILES -- METHOD 8240 | | | | | | | | |
| ANALYTE | PQL | | | | | | | |
| Chloromethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromomethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Vinyl Chloride | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Chloroethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Methylene Chloride | 5 | 3 J | 16 U | 14 U | 5 U | 10 U | 9 U | 3 J |
| Acetone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 6 J |
| Carbon Disulfide | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Trichlorofluoromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloroethene (total) | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chloroform | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 2-Butanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,1,1-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Vinyl Acetate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromodichloromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloropropane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| cis-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Trichloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Dibromochloromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1,2-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Benzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| trans-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 2-Chloroethylvinylether | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromoform | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 2-Hexanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Methyl-2-Pentanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Tetrachloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1,2,2-Tetrachloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Toluene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Ethylbenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Styrene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Xylene (total) | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,3-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,4-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Acrolein | 100 | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U |
| Iodomethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Acrylonitrile | 100 | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U |
| Dibromomethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Ethyl Methacrylate | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2,3-Trichloropropane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |

PROJECT: NSB KINGS BAY, GEORGIA

VOLATILE AQUEOUS ANALYSES (ug/l) (continued)

Validated Analytical Results

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | SAMPLE LOCATION: | BT-1-FB | BT-2-FB | BT-5-FB | BT-6-FB | BT-7-FB | BT-8-FB | BT-10-FB |
| | LAB NUMBER: | 20865001 | 20867005 | 20900004 | 20917002 | 20940009 | 20985010 | 21002008 |
| | DATE SAMPLED: | 02/07/92 | 02/08/92 | 02/12/92 | 02/13/92 | 02/17/92 | 02/20/92 | 02/22/92 |
| | DATA ANALYZED: | 02/14/92 | 02/13/92 | 02/22/92 | 02/26/92 | 02/28/92 | 03/03/92 | 03/04/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| VOLATILES -- METHOD 8240 | | | | | | | | |
| ANALYTE | PQL | | | | | | | |
| trans-1,4-Dichloro-2-Butene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Acetonitrile | 100 | 100 UJ | 100 UJ | 100 UJ | 100 UJ | 100 UJ | 100 UJ | 100 UJ |
| 3-Chloropropene | 5 | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ |
| Propionitrile | 100 | 100 UJ | 100 UJ | 100 UJ | 100 UJ | 100 UJ | 100 UJ | 100 UJ |
| Methacrylonitrile | 5 | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ |
| 1,4-Dioxane | 200 | 200 U | 200 UJ | 200 U | 200 U | 200 UJ | 200 U | 200 U |
| Methyl Methacrylate | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| 1,2-Dibromoethane | 5 | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ |
| 1,1,1,2-Tetrachloroethane | 5 | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ |
| 1,2-Dibromo-3-Chloropropane | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| Pentachloroethane | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| Isobutyl alcohol | 200 | 200 UJ | 200 UJ | 200 UJ | 200 UJ | 200 UJ | 200 UJ | 200 UJ |
| Chloroprene | 200 | 200 UJ | 200 UJ | 200 UJ | 200 UJ | 200 UJ | 200 UJ | 200 UJ |

PROJECT: NSB KINGS BAY, GEORGIA

VOLATILE AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | SAMPLE LOCATION: | BT-11-FB | BS-1-ER | BS-2-ER | BS-5-ER | BS-6-ER | BS-7-ER | BS-8-ER |
| | LAB NUMBER: | 21012003 | 20865003 | 20867006 | 20900005 | 20917003 | 20940010 | 20895009 |
| | DATE SAMPLED: | 02/24/92 | 02/07/92 | 02/08/92 | 02/12/92 | 02/13/92 | 02/17/92 | 02/20/92 |
| | DATA ANALYZED: | 03/04/92 | 02/14/92 | 02/13/92 | 02/22/92 | 02/26/92 | 02/28/92 | 03/04/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| VOLATILES -- METHOD 8240 | | | | | | | | |
| ANALYTE | PQL | | | | | | | |
| Chloromethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromomethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Vinyl Chloride | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Chloroethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Methylene Chloride | 5 | 3 J | 4 J | 19 U | 6 U | 9 U | 8 U | 7 U |
| Acetone | 10 | 5 J | 10 U | 12 U | 10 U | 10 U | 10 U | 10 U |
| Carbon Disulfide | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 1 J | 5 U |
| Trichlorofluoromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloroethene (total) | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chloroform | 5 | 5 U | 10 | 10 | 33 | 17 | 22 | 5 U |
| 1,2-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 2-Butanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,1,1-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Vinyl Acetate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromodichloromethane | 5 | 5 U | 7 | 8 | 14 | 9 | 9 | 5 U |
| 1,2-Dichloropropane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| cis-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Trichloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Dibromochloromethane | 5 | 5 U | 3 J | 3 J | 4 J | 4 J | 3 J | 5 U |
| 1,1,2-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Benzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| trans-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 2-Chloroethylvinylether | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromoform | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 2-Hexanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Methyl-2-Pentanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 5 U |
| Tetrachloroethene | 5 | 5 U | 1 J | 2 J | 5 U | 5 U | 5 U | 5 U |
| 1,1,2,2-Tetrachloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Toluene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chlorobenzene | 5 | 5 U | 2 J | 2 J | 1 J | 5 U | 5 U | 5 U |
| Ethylbenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Styrene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Xylene (total) | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,3-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,4-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Acrolein | 100 | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U |
| Iodomethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Acrylonitrile | 100 | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U |
| Dibromomethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Ethyl Methacrylate | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2,3-Trichloropropane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |

PROJECT: NSB KINGS BAY, GEORGIA

VOLATILE AQUEOUS ANALYSES (ug/l) (continued)

Validated Analytical Results

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | SAMPLE LOCATION: | BT-11-FB | BS-1-ER | BS-2-ER | BS-5-ER | BS-6-ER | BS-7-ER | BS-8-ER |
| | LAB NUMBER: | 21012003 | 20865003 | 20867006 | 20900005 | 20917003 | 20940010 | 20895009 |
| | DATE SAMPLED: | 02/24/92 | 02/07/92 | 02/08/92 | 02/12/92 | 02/13/92 | 02/17/92 | 02/20/92 |
| | DATA ANALYZED: | 03/04/92 | 02/14/92 | 02/13/92 | 02/22/92 | 02/26/92 | 02/28/92 | 03/04/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| VOLATILES -- METHOD 8240 | | | | | | | | |
| ANALYTE | PQL | | | | | | | |
| trans-1,4-Dichloro-2-Butene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Acetonitrile | 100 | 100 UJ | 100 UJ | 100 UJ | 100 UJ | 100 UJ | 100 UJ | 100 UJ |
| 3-Chloropropene | 5 | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ |
| Propionitrile | 100 | 100 UJ | 100 UJ | 100 UJ | 100 UJ | 100 UJ | 100 UJ | 100 UJ |
| Methacrylonitrile | 5 | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ |
| 1,4-Dioxane | 200 | 200 U | 200 U | 200 U | 200 U | 200 U | 200 UJ | 200 U |
| Methyl Methacrylate | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| 1,2-Dibromoethane | 5 | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ |
| 1,1,1,2-Tetrachloroethane | 5 | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ |
| 1,2-Dibromo-3-Chloropropane | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| Pentachloroethane | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| Isobutyl alcohol | 200 | 200 UJ | 200 UJ | 200 UJ | 200 UJ | 200 UJ | 200 UJ | 200 UJ |
| Chloroprene | 200 | 200 UJ | 200 UJ | 200 UJ | 200 UJ | 200 UJ | 200 UJ | 200 UJ |

PROJECT: NSB KINGS BAY, GEORGIA

VOLATILE AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| | | | | | | |
|---|---|---|---|---|---|---|
| | SAMPLE LOCATION: | BS-10-ER | BS-11-ER | BS-1-FB | BS-2-FB | BS-3-FB |
| | LAB NUMBER: | 21002005 | 21012002 | 20865002 | 20997010 | 20997011 |
| | DATE SAMPLED: | 02/22/92 | 02/24/92 | 02/07/92 | 02/21/92 | 02/21/92 |
| | DATE ANALYZED: | 03/04/92 | 03/04/92 | 02/14/92 | 03/04/92 | 03/04/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| VOLATILES -- METHOD 8240 | | | | | | |
| ANALYTE | PQL | | | | | |
| Chloromethane | 10 | 10 U | 10 U | 1 J | 10 U | 10 U |
| Bromomethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Vinyl Chloride | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Chloroethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Methylene Chloride | 5 | 5 U | 5 U | 2 J | 8 U | 15 U |
| Acetone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Carbon Disulfide | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| Trichlorofluoromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloroethene (total) | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chloroform | 5 | 12 | 8 | 9 | 5 U | 5 U |
| 1,2-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| 2-Butanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,1,1-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| Vinyl Acetate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromodichloromethane | 5 | 7 | 3 J | 6 | 5 U | 5 U |
| 1,2-Dichloropropane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| cis-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| Trichloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| Dibromochloromethane | 5 | 3 J | 5 U | 3 J | 5 U | 5 U |
| 1,1,2-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| Benzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| trans-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| 2-Chloroethylvinylether | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromoform | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| 2-Hexanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Methyl-2-Pentanone | 10 | 5 U | 5 U | 5 U | 5 U | 5 U |
| Tetrachloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1,2,2-Tetrachloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| Toluene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chlorobenzene | 5 | 5 U | 2 J | 2 J | 2 J | 5 U |
| Ethylbenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| Styrene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| Xylene (total) | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,3-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,4-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| Acrolein | 100 | 100 U | 100 U | 100 U | 100 U | 100 U |
| Iodomethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Acrylonitrile | 100 | 100 U | 100 U | 100 U | 100 U | 100 U |
| Dibromomethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| Ethyl Methacrylate | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2,3-Trichloropropane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |

PROJECT: NSB KINGS BAY, GEORGIA

VOLATILE AQUEOUS ANALYSES (ug/l) (continued)

Validated Analytical Results

| | | | | | | |
|---|---|---|---|---|---|---|
| | SAMPLE LOCATION: | BS-10-ER | BS-11-ER | BS-1-FB | BS-2-FB | BS-3-FB |
| | LAB NUMBER: | 21002005 | 21012002 | 20865002 | 20997010 | 20997011 |
| | DATE SAMPLED: | 02/22/92 | 02/24/92 | 02/07/92 | 02/21/92 | 02/21/92 |
| | DATE ANALYZED: | 03/04/92 | 03/04/92 | 02/14/92 | 03/04/92 | 03/04/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| VOLATILES -- METHOD 8240 | | | | | | |
| ANALYTE | PQL | | | | | |
| trans-1,4-Dichloro-2-Butene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| Acetonitrile | 100 | 100 UJ | 100 UJ | 100 UJ | 100 UJ | 100 UJ |
| 3-Chloropropene | 5 | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ |
| Propionitrile | 100 | 100 UJ | 100 UJ | 100 UJ | 100 UJ | 100 UJ |
| Methacrylonitrile | 5 | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ |
| 1,4-Dioxane | 200 | 200 U | 200 U | 200 U | 200 U | 200 U |
| Methyl Methacrylate | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| 1,2-Dibromoethane | 5 | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ |
| 1,1,1,2-Tetrachloroethane | 5 | 5 UJ | 5 UJ | 5 UJ | 5 UJ | 5 UJ |
| 1,2-Dibromo-3-Chloropropane | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| Pentachloroethane | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| Isobutyl alcohol | 200 | 200 UJ | 200 UJ | 200 UJ | 200 UJ | 200 UJ |
| Chloroprene | 200 | 200 UJ | 200 UJ | 200 UJ | 200 UJ | 200 UJ |

PROJECT: NSB KINGS BAY, GEORGIA

SEMIVOLATILE AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | SAMPLE LOCATION: | BS-1-ER | BS-2-ER | BS-5-ER | BS-6-ER | BS-7-ER | BS-8-ER | BS-10-ER |
| | LAB NUMBER: | 20865003 | 20867006 | 20900005 | 20917003 | 20940010 | 20985009 | 21002005 |
| | DATE SAMPLED: | 02/07/92 | 02/08/92 | 02/12/92 | 02/13/92 | 02/17/92 | 02/20/92 | 02/22/92 |
| | DATE ANALYZED: | 02/24/92 | 03/02/92 | 03/04/92 | 03/03/92 | 03/12/92 | 03/13/92 | 03/17/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| SEMIVOLATILES -- METHOD 8270 | | | | | | | | |
| ANALYTE | PQL | | | | | | | |
| N-Nitrosodimethylamine | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Phenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Aniline | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| bis (2-Chloroethyl) Ether | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2- Chlorophenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,3- Dichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,4- Dichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzyl Alcohol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,2- Dichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2- Methylphenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| bis (2- Chloroisopropyl) Ether | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| N-Nitroso-Di-n-Propylamine | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Hexachloroethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Nitrobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Isophorone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Nitrophenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2,4-Dimethylphenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzoic Acid | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| bis (2-Chloroethoxy) Methane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2,4-Dichlorophenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,2,4-Trichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Naphthalene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Chloroaniline | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Hexachlorobutadiene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Chloro-3-Methylphenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Methylnaphthalene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Hexachlorocyclopentadiene | 10 | 10 U | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U |
| 2,4,6-Trichlorophenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2,4,5-Trichlorophenol | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| 2-Chloronaphthalene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Nitroaniline | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| Dimethylphthalate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Acenaphthylene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2,6-Dinitrotoluene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 3-Nitroaniline | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| Acenaphthene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2,4-Dinitrophenol | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| 4-Nitrophenol | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| Dibenzofuran | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2,4-Dinitrotoluene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Diethylphthalate | 10 | 10 U | 10 U | 10 U | 10U | 10 U | 10 U | 10 U |
| 4-Chlorophenyl-phenylether | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Fluorene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Nitroaniline | 50 | 50 U | 50 U | 50 U | 50 U | 50 UJ | 50 U | 50 U |
| 4,6-Dinitro-2-Methylphenol | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| N-Nitrosodiphenylamine | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |

PROJECT: NSB KINGS BAY, GEORGIA

SEMIVOLATILE AQUEOUS ANALYSES (ug/l) (continued)

Validated Analytical Results

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | SAMPLE LOCATION: | BS-1-ER | BS-2-ER | BS-5-ER | BS-6-ER | BS-7-ER | BS-8-ER | BS-10-ER |
| | LAB NUMBER: | 20865003 | 20867006 | 20900005 | 20917003 | 20940010 | 20985009 | 21002005 |
| | DATE SAMPLED: | 02/07/92 | 02/08/92 | 02/12/92 | 02/13/92 | 02/17/92 | 02/20/92 | 02/22/92 |
| | DATE ANALYZED: | 02/24/92 | 03/02/92 | 03/04/92 | 03/03/92 | 03/12/92 | 03/13/92 | 03/17/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| SEMIVOLATILES -- METHOD 8270 | | | | | | | | |
| ANALYTE | PQL | | | | | | | |
| 1,2-Diphenylhydrazine | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Bromophenyl-phenylether | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Hexachlorobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Pentachlorophenol | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| Phenanthrene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Anthracene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Di-n-Butylphthalate | 10 | 10 U | 14 U | 10 U | 10 U | 10 U | 10 U | 2 J |
| Fluoranthene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Pyrene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Butylbenzylphthalate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 3,3'-Dichlorobenzidine | 20 | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U |
| Benzo (a) Anthracene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Chrysene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| bis (2-Ethylhexyl) Phthalate | 10 | 12 | 10 U | 10 U | 10 U | 10 U | 10 U | 2 J |
| Di-n-Octyl Phthalate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzo (b) Fluoranthene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzo (k) Fluoranthene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzo (a) Pyrene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Indeno (1,2,3-cd) Pyrene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Dibenz (a,h) Anthracene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzo (g,h,i) Perylene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Picoline | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| Methyl methanesulfonate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Ethyl methanesulfonate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Acetophenone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| N-Nitrosopiperidine | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Phenyl-tert-butylamine | 50 | 50 UR | 50 UR | 50 UR | 50 UR | 50 UR | 50 UR | 50 UR |
| 2,6-Dichlorophenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| N-Nitroso-di-n-butylamine | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| N-Nitrosodiethylamine | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| N-Nitrosopyrrolidine | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| Benzidine | 50 | 50 U | 50 U | 50 UJ | 50 UJ | 50 U | 50 U | 50 UJ |
| 1,2,4,5-Tetrachlorobenzene | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| Pentachlorobenzene | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| 1-Naphthylamine | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| 2-Naphthylamine | 50 | 50 U | 50 UJ | 50 U | 50 U | 50 U | 50 U | 50 U |
| 2,3,4,6-Tetrachlorophenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U |
| Diphenylamine | 10 | 10 UR | 10 UR | 10 UR | 10 UR | 10 UR | 10 UR | 10 UR |
| Phenacetin | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Aminobiphenyl | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| Pentachloronitrobenzene | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| Pronamide | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| p-Dimethylaminoazobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 7,12-Dimethylbenz (a) Anthracene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 3-Methylcholanthrene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |

PROJECT: NSB KINGS BAY, GEORGIA

SEMIVOLATILE AQUEOUS ANALYSES (ug/l) (continued)

Validated Analytical Results

| | SAMPLE LOCATION: | BS-1-ER | BS-2-ER | BS-5-ER | BS-6-ER | BS-7-ER | BS-8-ER | BS-10-ER |
|---|---|---|---|---|---|---|---|---|
| | LAB NUMBER: | 20865003 | 20867006 | 20900005 | 20917003 | 20940010 | 20985009 | 21002005 |
| | DATE SAMPLED: | 02/07/92 | 02/08/92 | 02/12/92 | 02/13/92 | 02/17/92 | 02/20/92 | 02/22/92 |
| | DATE ANALYZED: | 02/24/92 | 03/02/92 | 03/04/92 | 03/03/92 | 03/12/92 | 03/13/92 | 03/17/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| SEMIVOLATILES -- METHOD 8270 | | | | | | | | |
| ANALYTE | PQL | | | | | | | |
| Pyridine | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| N-Nitrosomethylethylamine | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| N-Nitrosomorpholine | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| o-Toluidine | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| 3- & 4- Methylphenol | 20 | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U |
| Hexachloropropene | 50 | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ |
| p-Phenylenediamine | 50 | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ |
| Safrole | 50 | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ |
| Isosafrole | 50 | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ |
| 1,4-Naphthoquinone | 50 | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ |
| 1,3-Dinitrobenzene | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| 5-Nitro-o-toluidine | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| 1,3,5-Trinitrobenzene | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| 4-Nitroquinoline-1-oxide | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| Methapyrilene | 50 | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ |
| 3,3'-Dimethylbenzidine | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| 2-Acetamidofluorene | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| Hexachlorophene | 50 | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ |

POLYCHLORINATED DIBENZO- FURANS/DIOXINS -- METHOD 8280 (ng/l)

| | DATE ANALYZED: | 02/12/92 | 02/12/92 | 02/21/92 | 02/20/92 | Not Analyzed | 03/03/92 | 03/04/92 |
|---|---|---|---|---|---|---|---|---|
| ANALYTE | PQL* | | | | | | | |
| TCDFs (total) | -- | 0.049 U | 0.095 U | 0.014 U | 0.074 U | Not Analyzed | 0.017 U | 0.082 U |
| PeCDFs (total) | -- | 0.064 U | 0.18 U | 0.021 U | 0.094 U | Not Analyzed | 0.034 U | 0.12 U |
| HxCDFs (total) | -- | 0.13 U | 0.30 U | 0.037 U | 0.26 UJ | Not Analyzed | 0.097 U | 0.15 U |
| TCDDs (total) | -- | 0.074 U | 0.14 U | 0.024 U | 0.064 U | Not Analyzed | 0.031 U | 0.056 U |
| 2,3,7,8- TCDD | -- | 0.074 U | 0.14 U | 0.024 U | 0.064 U | Not Analyzed | 0.031 U | 0.056 U |
| PeCDDs (total) | -- | 0.25 U | 0.40 U | 0.068 U | 0.23 U | Not Analyzed | 0.12 U | 0.43 U |
| HxCDDs (total) | -- | 0.21 U | 0.44 U | 0.055 U | 0.28 UJ | Not Analyzed | 0.11 U | 0.26 U |

*PQLs are not listed for dioxins and furans because the data are reported relative to method detection limits (MDLs) based on MDL studies. There are no published PQLs for these analytes in the SW-846 method manual and these analytes are not included in the Contract Laboratory Program.

PROJECT: NSB KINGS BAY, GEORGIA

SEMIVOLATILE AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| | | | | | |
|---|---|---|---|---|---|
| | SAMPLE LOCATION: | BS-11-ER | BS-1-FB | BS-2-FB | BS-3-FB |
| | LAB NUMBER: | 21012002 | 20865002 | 20997010 | 20997011 |
| | DATE SAMPLED: | 02/24/92 | 02/07/92 | 02/21/92 | 02/21/92 |
| | DATE ANALYZED: | 03/17/92 | 02/24/92 | 03/17/92 | 03/17/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 |
| SEMIVOLATILES -- METHOD 8270 | | | | | |
| ANALYTE | PQL | | | | |
| N-Nitrosodimethylamine | 10 | 10 U | 10 U | 10 U | 10 U |
| Phenol | 10 | 10 U | 10 U | 10 U | 10 U |
| Aniline | 10 | 10 U | 10 U | 10 U | 10 U |
| bis (2-Chloroethyl) Ether | 10 | 10 U | 10 U | 10 U | 10 U |
| 2- Chlorophenol | 10 | 10 U | 10 U | 10 U | 10 U |
| 1,3- Dichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 U |
| 1,4- Dichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 U |
| Benzyl Alcohol | 10 | 10 U | 10 U | 10 U | 10 U |
| 1,2- Dichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 U |
| 2- Methylphenol | 10 | 10 U | 10 U | 10 U | 10 U |
| bis (2- Chloroisopropyl) Ether | 10 | 10 U | 10 U | 10 U | 10 U |
| N-Nitroso-Di-n-Propylamine | 10 | 10 U | 10 U | 10 U | 10 U |
| Hexachloroethane | 10 | 10 U | 10 U | 10 U | 10 U |
| Nitrobenzene | 10 | 10 U | 10 U | 10 U | 10 U |
| Isophorone | 10 | 10 U | 10 U | 10 U | 10 U |
| 2-Nitrophenol | 10 | 10 U | 10 U | 10 U | 10 U |
| 2,4-Dimethylphenol | 10 | 10 U | 10 U | 10 U | 10 U |
| Benzoic Acid | 50 | 50 U | 50 U | 50 U | 50 U |
| bis (2-Chloroethoxy) Methane | 10 | 10 U | 10 U | 10 U | 10 U |
| 2,4-Dichlorophenol | 10 | 10 U | 10 U | 10 U | 10 U |
| 1,2,4-Trichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 U |
| Naphthalene | 10 | 10 U | 10 U | 10 U | 10 U |
| 4-Chloroaniline | 10 | 10 U | 10 U | 10 U | 10 U |
| Hexachlorobutadiene | 10 | 10 U | 10 U | 10 U | 10 U |
| 4-Chloro-3-Methylphenol | 10 | 10 U | 10 U | 10 U | 10 U |
| 2-Methylnaphthalene | 10 | 10 U | 10 U | 10 U | 10 U |
| Hexachlorocyclopentadiene | 10 | 10 U | 10 U | 10 U | 10 U |
| 2,4,6-Trichlorophenol | 10 | 10 U | 10 U | 10 U | 10 U |
| 2,4,5-Trichlorophenol | 50 | 50 U | 50 U | 50 U | 50 U |
| 2-Chloronaphthalene | 10 | 10 U | 10 U | 10 U | 10 U |
| 2-Nitroaniline | 50 | 50 U | 50 U | 50 U | 50 U |
| Dimethylphthalate | 10 | 10 U | 10 U | 10 U | 10 U |
| Acenaphthylene | 10 | 10 U | 10 U | 10 U | 10 U |
| 2,6-Dinitrotoluene | 10 | 10 U | 10 U | 10 U | 10 U |
| 3-Nitroaniline | 50 | 50 U | 50 U | 50 U | 50 U |
| Acenaphthene | 10 | 10 U | 10 U | 10 U | 10 U |
| 2,4-Dinitrophenol | 50 | 50 U | 50 U | 50 U | 50 U |
| 4-Nitrophenol | 50 | 50 U | 50 U | 50 U | 50 U |
| Dibenzofuran | 10 | 10 U | 10 U | 10 U | 10 U |
| 2,4-Dinitrotoluene | 10 | 10 U | 10 U | 10 U | 10 U |
| Diethylphthalate | 10 | 10 U | 10 U | 10 U | 10 U |
| 4-Chlorophenyl-phenylether | 10 | 10 U | 10 U | 10 U | 10 U |
| Fluorene | 10 | 10 U | 10 U | 10 U | 10 U |
| 4-Nitroaniline | 50 | 50 U | 50 U | 50 U | 50 U |
| 4,6-Dinitro-2-Methylphenol | 50 | 50 U | 50 U | 50 U | 50 U |
| N-Nitrosodiphenylamine | 10 | 10 U | 10 U | 10 U | 10 U |

PROJECT: NSB KINGS BAY, GEORGIA

SEMIVOLATILE AQUEOUS ANALYSES (ug/l) (continued)

Validated Analytical Results

| | | | | | |
|---|---|---|---|---|---|
| | SAMPLE LOCATION: | BS-11-ER | BS-1-FB | BS-2-FB | BS-3-FB |
| | LAB NUMBER: | 21012002 | 20865002 | 20997010 | 20997011 |
| | DATE SAMPLED: | 02/24/92 | 02/07/92 | 02/21/92 | 02/21/92 |
| | DATE ANALYZED: | 03/17/92 | 02/24/92 | 03/17/92 | 03/17/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 |
| SEMIVOLATILES -- METHOD 8270 | | | | | |
| ANALYTE | PQL | | | | |
| 1,2-Diphenylhydrazine | 10 | 10 U | 10 U | 10 U | 10 U |
| 4-Bromophenyl-phenylether | 10 | 10 U | 10 U | 10 U | 10 U |
| Hexachlorobenzene | 10 | 10 U | 10 U | 10 U | 10 U |
| Pentachlorophenol | 50 | 50 U | 50 U | 50 U | 50 U |
| Phenanthrene | 10 | 10 U | 10 U | 10 U | 10 U |
| Anthracene | 10 | 10 U | 10 U | 10 U | 10 U |
| Di-n-Butylphthalate | 10 | 3 J | 10 U | 10 U | 10 U |
| Fluoranthene | 10 | 10 U | 10 U | 10 U | 10 U |
| Pyrene | 10 | 10 U | 10 U | 10 U | 10 U |
| Butylbenzylphthalate | 10 | 10 U | 10 U | 10 U | 10 U |
| 3,3'-Dichlorobenzidine | 20 | 20 U | 20 U | 20 U | 20 U |
| Benzo (a) Anthracene | 10 | 10 U | 10 U | 10 U | 10 U |
| Chrysene | 10 | 10 U | 10 U | 10 U | 10 U |
| bis (2-Ethylhexyl) Phthalate | 10 | 10 U | 10 U | 10 U | 10 U |
| Di-n-Octyl Phthalate | 10 | 10 U | 10 U | 10 U | 10 U |
| Benzo (b) Fluoranthene | 10 | 10 U | 10 U | 10 U | 10 U |
| Benzo (k) Fluoranthene | 10 | 10 U | 10 U | 10 U | 10 U |
| Benzo (a) Pyrene | 10 | 10 U | 10 U | 10 U | 10 U |
| Indeno (1,2,3-cd) Pyrene | 10 | 10 U | 10 U | 10 U | 10 U |
| Dibenz (a,h) Anthracene | 10 | 10 U | 10 U | 10 U | 10 U |
| Benzo (g,h,i) Perylene | 10 | 10 U | 10 U | 10 U | 10 U |
| 2-Picoline | 50 | 50 U | 50 U | 50 U | 50 U |
| Methyl methanesulfonate | 10 | 10 U | 10 U | 10 U | 10 U |
| Ethyl methanesulfonate | 10 | 10 U | 10 U | 10 U | 10 U |
| Acetophenone | 10 | 10 U | 10 U | 10 U | 10 U |
| N-Nitrosopiperidine | 10 | 10 U | 10 U | 10 U | 10 U |
| Phenyl-tert-butylamine | 50 | 50 UR | 50 UR | 50 UR | 50 UR |
| 2,6-Dichlorophenol | 10 | 10 U | 10 U | 10 U | 10 U |
| N-Nitroso-di-n-butylamine | 10 | 10 U | 10 U | 10 U | 10 U |
| N-Nitrosodiethylamine | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| N-Nitrosopyrrolidine | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| Benzidine | 50 | 50 U | 50 U | 50 UJ | 50 UJ |
| 1,2,4,5-Tetrachlorobenzene | 50 | 50 U | 50 U | 50 U | 50 U |
| Pentachlorobenzene | 50 | 50 U | 50 U | 50 U | 50 U |
| 1-Naphthylamine | 50 | 50 U | 50 U | 50 U | 50 U |
| 2-Naphthylamine | 50 | 50 U | 50 U | 50 U | 50 U |
| 2,3,4,6-Tetrachlorophenol | 10 | 10 U | 10 U | 10 U | 10 U |
| Diphenylamine | 10 | 10 UR | 10 UR | 10 UR | 10 UR |
| Phenacetin | 10 | 10 U | 10 U | 10 U | 10 U |
| 4-Aminobiphenyl | 50 | 50 U | 50 U | 50 U | 50 U |
| Pentachloronitrobenzene | 50 | 50 U | 50 U | 50 U | 50 U |
| Pronamide | 10 | 10 U | 10 U | 10 U | 10 U |
| p-Dimethylaminoazobenzene | 10 | 10 U | 10 U | 10 U | 10 U |
| 7,12-Dimethylbenz (a) Anthracene | 10 | 10 U | 10 U | 10 U | 10 U |
| 3-Methylcholanthrene | 10 | 10 U | 10 U | 10 U | 10 U |

PROJECT: NSB KINGS BAY, GEORGIA

SEMIVOLATILE AQUEOUS ANALYSES (ug/l) (continued)

Validated Analytical Results

| | | | | | |
|---|---|---|---|---|---|
| | SAMPLE LOCATION: | BS-11-ER | BS-1-FB | BS-2-FB | BS-3-FB |
| | LAB NUMBER: | 21012002 | 20865002 | 20997010 | 20997011 |
| | DATE SAMPLED: | 02/24/92 | 02/07/92 | 02/21/92 | 02/21/92 |
| | DATE ANALYZED: | 03/17/92 | 02/24/92 | 03/17/92 | 03/17/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 |
| SEMIVOLATILES -- METHOD 8270 | | | | | |
| ANALYTE | PQL | | | | |
| Pyridine | 50 | 50 U | 50 U | 50 U | 50 U |
| N-Nitrosomethylethylamine | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| N-Nitrosomorpholine | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| o-Toluidine | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| 3- & 4- Methylphenol | 20 | 20 U | 20 U | 20 U | 20 U |
| Hexachloropropene | 50 | 50 UJ | 50 UJ | 50 UJ | 50 UJ |
| p-Phenylenediamine | 50 | 50 UJ | 50 UJ | 50 UJ | 50 UJ |
| Safrole | 50 | 50 UJ | 50 UJ | 50 UJ | 50 UJ |
| Isosafrole | 50 | 50 UJ | 50 UJ | 50 UJ | 50 UJ |
| 1,4-Naphthoquinone | 50 | 50 UJ | 50 UJ | 50 UJ | 50 UJ |
| 1,3-Dinitrobenzene | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| 5-Nitro-o-toluidine | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| 1,3,5-Trinitrobenzene | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| 4-Nitroquinoline-1-oxide | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| Methapyrilene | 50 | 50 UJ | 50 UJ | 50 UJ | 50 UJ |
| 3,3'-Dimethylbenzidine | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| 2-Acetamidofluorene | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| Hexachlorophene | 50 | 50 UJ | 50 UJ | 50 UJ | 50 UJ |

POLYCHLORINATED DIBENZO- FURANS/DIOXINS -- METHOD 8280 (ng/l)

| | | | | | |
|---|---|---|---|---|---|
| | DATE ANALYZED: | 03/04/92 | 02/12/92 | 03/06/92 | 03/05/92 |
| ANALYTE | PQL* | | | | |
| TCDFs (total) | -- | 0.049 U | 0.041 U | 0.079 U | 0.14 U |
| PeCDFs (total) | -- | 0.058 U | 0.086 U | 0.13 U | 0.15 U |
| HxCDFs (total) | -- | 0.11 U | 0.22 U | 0.18 U | 0.57 U |
| TCDDs (total) | -- | 0.047 U | 0.067 U | 0.068 U | 0.13 U |
| 2,3,7,8- TCDD | -- | 0.047 U | 0.067 U | 0.068 U | 0.13 U |
| PeCDDs (total) | -- | 0.11 U | 0.31 U | 0.24 U | 0.34 U |
| HxCDDs (total) | -- | 0.18 U | 0.25 U | 0.28 U | 0.74 U |

*PQLs are not listed for dioxins and furans because the data are reported relative to method detection limits (MDLs) based on MDL studies. There are no published PQLs for these analytes in the SW-846 method manual and these analytes are not included in the Contract Laboratory Program.

| PROJECT: NSB KINGS BAY, GEORGIA | | PESTICIDE/PCB/HERBICIDE AQUEOUS ANALYSES (ug/l) | | | | | Validated Analytical Results | |
|---|---|---|---|---|---|---|---|---|
| SAMPLE LOCATION: | | BS-1-ER | BS-2-ER | BS-5-ER | BS-6-ER | BS-7-ER | BS-8-ER | BS-10-ER |
| LAB NUMBER: | | 20865003 | 20867006 | 20900005 | 20917003 | 20940010 | 20985009 | 21002005 |
| DATE SAMPLED: | | 02/07/92 | 02/08/92 | 02/12/92 | 02/13/92 | 02/17/92 | 02/20/92 | 02/22/92 |
| ORGANOCHLORINE PESTICIDES AND PCBs -- METHOD 8080 | | | | | | | | |
| ANALYTE | PQL | | | | | | | |
| alpha-BHC | 0.01 | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U |
| beta-BHC | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| delta-BHC | 0.01 | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U |
| gamma-BHC (Lindane) | 0.01 | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U |
| Heptachlor | 0.01 | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U |
| Aldrin | 0.01 | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U |
| Heptachlor epoxide | 0.01 | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U |
| Endosulfan I | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Dieldrin | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| 4,4'- DDE | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Endrin | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Endosulfan II | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| 4,4'- DDD | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Endrin Aldehyde | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Endosulfan Sulfate | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| 4,4'- DDT | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Methoxychlor | 0.04 | 0.04 U | 0.04 U | 0.04 U | 0.04 U | 0.04 U | 0.04 U | 0.04 U |
| Endrin Ketone | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Chlordane | 0.1 | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Toxaphene | 0.5 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Aroclor-1016 | 0.8 | 0.8 U | 0.8 U | 0.8 U | 0.8 U | 0.8 U | 0.8 U | 0.8 U |
| Aroclor-1221 | 2 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Aroclor-1232 | 2 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Aroclor-1242 | 0.8 | 0.8 U | 0.8 U | 0.8 U | 0.8 U | 0.8 U | 0.8 U | 0.8 U |
| Aroclor-1248 | 0.4 | 0.4 U | 0.4 U | 0.4 U | 0.4 U | 0.4 U | 0.4 U | 0.4 U |
| Aroclor-1254 | 0.2 | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Aroclor-1260 | 0.2 | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Chlorobenzilate | 0.5 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Diallate | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Isodrin | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Kepone | NR | NR | NR | NR | NR | NR | NR | NR |
| ORGANOPHOSPHOROUS PESTICIDES -- METHOD 8140 | | | | | | | | |
| ANALYTE | PQL | | | | | | | |
| Triethylphosphorothioate | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Thionazin | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Phorate | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Sulfotepp | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Dimethoate | NR | NR | NR | NR | NR | NR | NR | NR |
| Disulfoton | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Methyl Parathion | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Ethyl Parathion | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Famphur | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| CHLORINATED HERBICIDES -- METHOD 8150 | | | | | | | | |
| ANALYTE | PQL | | | | | | | |
| 2,4-D | 2.5 | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U |
| Silvex | 0.5 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 2,4,5-T | 0.5 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Dinoseb | NR | NR | NR | NR | NR | NR | NR | NR |

PROJECT: NSB KINGS BAY, GEORGIA — PESTICIDE/PCB/HERBICIDE AQUEOUS ANALYSES (ug/l) — Validated Analytical Results

| | | | | | |
|---|---|---|---|---|---|
| | SAMPLE LOCATION: | BS-11-ER | BS-1-FB | BS-2-FB | BS-3-FB |
| | LAB NUMBER: | 21012002 | 20865002 | 20997010 | 20997011 |
| | DATE SAMPLED: | 02/24/92 | 02/07/92 | 02/21/92 | 02/21/92 |
| ORGANOCHLORINE PESTICIDES AND PCBs -- METHOD 8080 | | | | | |
| ANALYTE | PQL | | | | |
| alpha-BHC | 0.01 | 0.01 U | 0.01 U | 0.01 U | 0.01 U |
| beta-BHC | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| delta-BHC | 0.01 | 0.01 U | 0.01 U | 0.01 U | 0.01 U |
| gamma-BHC (Lindane) | 0.01 | 0.01 U | 0.01 U | 0.01 U | 0.01 U |
| Heptachlor | 0.01 | 0.01 U | 0.01 U | 0.01 U | 0.01 U |
| Aldrin | 0.01 | 0.01 U | 0.01 U | 0.01 U | 0.01 U |
| Heptachlor epoxide | 0.01 | 0.01 U | 0.01 U | 0.01 U | 0.01 U |
| Endosulfan I | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Dieldrin | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| 4,4'- DDE | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Endrin | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Endosulfan II | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| 4,4'- DDD | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Endrin Aldehyde | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Endosulfan Sulfate | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| 4,4'- DDT | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Methoxychlor | 0.04 | 0.04 U | 0.04 U | 0.04 U | 0.04 U |
| Endrin Ketone | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Chlordane | 0.1 | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Toxaphene | 0.5 | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Aroclor-1016 | 0.8 | 0.8 U | 0.8 U | 0.8 U | 0.8 U |
| Aroclor-1221 | 2 | 2 U | 2 U | 2 U | 2 U |
| Aroclor-1232 | 2 | 2 U | 2 U | 2 U | 2 U |
| Aroclor-1242 | 0.8 | 0.8 U | 0.8 U | 0.8 U | 0.8 U |
| Aroclor-1248 | 0.4 | 0.4 U | 0.4 U | 0.4 U | 0.4 U |
| Aroclor-1254 | 0.2 | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Aroclor-1260 | 0.2 | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Chlorobenzilate | 0.5 | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Diallate | 1 | 1 U | 1 U | 1 U | 1 U |
| Isodrin | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Kepone | NR | NR | NR | NR | NR |
| ORGANOPHOSPHOROUS PESTICIDES -- METHOD 8140 | | | | | |
| ANALYTE | PQL | | | | |
| Triethylphosphorothioate | 1 | 1 U | 1 U | 1 U | 1 U |
| Thionazin | 1 | 1 U | 1 U | 1 U | 1 U |
| Phorate | 1 | 1 U | 1 U | 1 U | 1 U |
| Sulfotepp | 1 | 1 U | 1 U | 1 U | 1 U |
| Dimethoate | NR | NR | NR | NR | NR |
| Disulfoton | 1 | 1 U | 1 UJ | 1 U | 1 U |
| Methyl Parathion | 1 | 1 U | 1 U | 1 U | 1 U |
| Ethyl Parathion | 1 | 1 U | 1 U | 1 U | 1 U |
| Famphur | 1 | 1 U | 1 U | 1 U | 1 U |
| CHLORINATED HERBICIDES -- METHOD 8150 | | | | | |
| ANALYTE | PQL | | | | |
| 2,4-D | 2.5 | 2.5 U | 2.5 U | 2.5 U | 2.5 U |
| Silvex | 0.5 | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 2,4,5-T | 0.5 | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Dinoseb | NR | NR | NR | NR | NR |

PROJECT: NSB KINGS BAY, GEORGIA — INORGANIC AQUEOUS ANALYSES (ug/l) — Validated Analytical Results

| ANALYTE | CRDL | BS-1-ER | BS-2-ER | BS-5-ER | BS-6-ER | BS-7-ER | BS-8-ER | BS-10-ER |
|---|---|---|---|---|---|---|---|---|
| SAMPLE LOCATION: | | BS-1-ER | BS-2-ER | BS-5-ER | BS-6-ER | BS-7-ER | BS-8-ER | BS-10-ER |
| LAB NUMBER: | | 20865003 | 20867006 | 32241004 | 20917003 | 20940010 | 20895009 | 21002005 |
| DATE SAMPLED: | | 02/07/92 | 02/08/92 | 02/12/92 | 02/13/92 | 02/17/92 | 02/20/92 | 02/22/92 |
| Antimony | 60 | 10.9 U | 10.9 U | 10.9 U | 10.9 U | 10.9 U | 10.9 U | 10.9 U |
| Arsenic | 10 | 0.69 U | 0.69 U | 0.40 U | 0.69 U | 0.69 U | 0.69 U | 0.69 U |
| Barium | 200 | 13.7 J | 13.6 J | 0.33 J | 1.1 U | 1.6 U | 11.1 J | 0.58 U |
| Beryllium | 5 | 0.19 U | 0.19 U | 0.30 U | 0.19 U | 0.19 U | 0.19 U | 0.19 U |
| Cadmium | 5 | 2.9 U | 2.9 U | 1.0 U | 2.9 U | 2.9 U | 2.9 U | 2.9 U |
| Chromium | 10 | 3.9 J | 2.1 U | 2.0 U | 4.1 J | 2.1 U | 3.4 U | 2.1 U |
| Cobalt | 50 | 3.6 U | 3.6 U | 3.1 U | 3.6 U | 3.6 U | 3.6 U | 3.6 U |
| Copper | 25 | 3.3 J | 7.5 J | 1.4 U | 2.9 U | 4.1 U | 4.8 U | 2.1 U |
| Lead | 5 | 0.92 J | 0.68 U | 0.70 J | 0.68 U | 1.3 J | 3.1 U | 1.6 J |
| Mercury | 0.2 | 0.16 U | 0.16 U | 0.10 U | 0.16 U | 0.16 U | 0.16 U | 0.16 UJ |
| Nickel | 40 | 4.3 J | 3.8 U | 6.5 U | 3.8 U | 3.8 U | 3.8 UJ | 3.8 U |
| Selenium | 5 | 1.3 U | 1.3 U | 0.60 U | 1.3 U | 1.3 U | 1.3 U | 6.4 U |
| Silver | 10 | 1.7 U | 1.7 U | 1.2 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U |
| Thallium | 10 | 1.4 U | 1.4 U | 0.90 U | 1.7 U | 1.4 U | 1.4 U | 1.7 UJ |
| Tin | 208 | 208 U | 208 U | 14.5 U | 208 U | 208 U | 208 U | 208 U |
| Vanadium | 50 | 1.9 J | 1.7 U | 1.2 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U |
| Zinc | 20 | 8.5 U | 10.4 U | 4.8 J | 11.0 U | 20.4 U | 7.5 UJ | 30.4 U |
| Cyanide | 10 | 1.8 U | 1.8 U | 3.0 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U |
| Sulfide | 100 | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U |

PROJECT: NSB KINGS BAY, GEORGIA — INORGANIC AQUEOUS ANALYSES (ug/l) — Validated Analytical Results

| ANALYTE | CRDL | BS-11-ER | BS-1-FB | BS-2-FB | BS-3-FB |
|---|---|---|---|---|---|
| SAMPLE LOCATION: | | BS-11-ER | BS-1-FB | BS-2-FB | BS-3-FB |
| LAB NUMBER: | | 21012002 | 20865002 | 20997010 | 20997011 |
| DATE SAMPLED: | | 02/24/92 | 02/07/92 | 02/21/92 | 02/21/92 |
| Antimony | 60 | 10.9 U | 10.9 U | 10.9 U | 10.9 U |
| Arsenic | 10 | 0.69 UJ | 1.4 J | 0.72 J | 0.69 U |
| Barium | 200 | 1.8 U | 0.69 U | 0.79 J | 2.1 J |
| Beryllium | 5 | 0.19 U | 0.19 U | 0.19 U | 0.19 U |
| Cadmium | 5 | 2.9 U | 2.9 U | 2.9 U | 2.9 U |
| Chromium | 10 | 2.3 J | 2.4 J | 2.1 UJ | 5.1 J |
| Cobalt | 50 | 3.6 U | 3.6 U | 3.6 U | 3.6 U |
| Copper | 25 | 5.8 U | 2.1 U | 3.9 U | 5.3 U |
| Lead | 5 | 0.68 UJ | 0.88 J | 0.68 UJ | 0.68 UJ |
| Mercury | 0.2 | 0.16 U | 0.16 U | 0.16 U | 0.16 U |
| Nickel | 40 | 3.8 U | 3.8 U | 3.8 U | 4.8 J |
| Selenium | 5 | 1.3 U | 1.3 U | 6.4 U | 6.4 U |
| Silver | 10 | 1.7 U | 1.7 U | 1.7 U | 1.7 U |
| Thallium | 10 | 1.7 U | 1.4 U | 1.7 U | 1.7 U |
| Tin | 208 | 208 U | 208 U | 208 UJ | 208 UJ |
| Vanadium | 50 | 1.7 U | 1.9 J | 1.7 U | 1.7 U |
| Zinc | 20 | 8.8 U | 6.5 U | 11.8 U | 11.3 U |
| Cyanide | 10 | 1.8 U | 1.8 U | 1.8 U | 1.8 U |
| Sulfide | 100 | 100 U | 100 U | 100 U | 100 U |

# Site 5 Groundwater Sampling Event No. 2
# May 1992

PROJECT: NSB KINGS BAY, GEORGIA

VOLATILE AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| SAMPLE LOCATION: | | KBA-5-1 | KBA-5-2 | KBA-5-3 | KBA-5-4 | KBA-5-5 | KBA-5-5D | KBA-5-6 | KBA-5-7 |
|---|---|---|---|---|---|---|---|---|---|
| LAB NUMBER: | | 21628002 | 21628003 | 21616004 | 21616006 | 21628005 | 21628006 | 21628008 | 21628007 |
| DATE SAMPLED: | | 05/06/92 | 05/06/92 | 05/05/92 | 05/05/92 | 05/06/92 | 05/06/92 | 05/06/92 | 05/06/92 |
| DATA ANALYZED: | | 05/13/92 | 05/13/92 | 05/08/92 | 05/08/92 | 05/13/92 | 05/13/92 | 05/13/92 | 05/13/92 |
| DILUTION FACTOR: | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| VOLATILES -- METHOD 8240 | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| Chloromethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromomethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Vinyl Chloride | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Chloroethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Methylene Chloride | 5 | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Acetone | 10 | 13 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Carbon Disulfide | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Trichlorofluoromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloroethene (total) | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chloroform | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 2-Butanone | 10 | 12 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,1,1-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Vinyl Acetate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromodichloromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloropropane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| cis-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Trichloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Dibromochloromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1,2-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Benzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| trans-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 2-Chloroethylvinylether | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromoform | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 2-Hexanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Methyl-2-Pentanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Tetrachloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1,2,2-Tetrachloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Toluene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Ethylbenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Styrene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Xylene (total) | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,3-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,4-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Acrolein | 100 | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U |
| Iodomethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Acrylonitrile | 100 | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U |
| Dibromomethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Ethyl Methacrylate | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2,3-Trichloropropane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| trans-1,4-Dichloro-2-Butene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Acetonitrile | 100 | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U |
| 3-Chloropropene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Propionitrile | 100 | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U |

PROJECT: NSB KINGS BAY, GEORGIA

VOLATILE AQUEOUS ANALYSES (ug/l) (continued)

Validated Analytical Results

| | SAMPLE LOCATION: | KBA-5-1 | KBA-5-2 | KBA-5-3 | KBA-5-4 | KBA-5-5 | KBA-5-5D | KBA-5-6 | KBA-5-7 |
|---|---|---|---|---|---|---|---|---|---|
| | LAB NUMBER: | 21628002 | 21628003 | 21616004 | 21616006 | 21628005 | 21628006 | 21628008 | 21628007 |
| | DATE SAMPLED: | 05/06/92 | 05/06/92 | 05/05/92 | 05/05/92 | 05/06/92 | 05/06/92 | 05/06/92 | 05/06/92 |
| | DATA ANALYZED: | 05/13/92 | 05/13/92 | 05/08/92 | 05/08/92 | 05/13/92 | 05/13/92 | 05/13/92 | 05/13/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| VOLATILES -- METHOD 8240 | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| Methacrylonitrile | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,4-Dioxane | 200 | 200 U | 200 U | 200 U | 200 U | 200 U | 200 U | 200 U | 200 U |
| Methyl Methacrylate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,2-Dibromoethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1,1,2-Tetrachloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dibromo-3-Chloropropane | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| Pentachloroethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Isobutyl alcohol | 200 | 200 U | 200 U | 200 U | 200 U | 200 U | 200 U | 200 U | 200 U |
| Chloroprene | 200 | 200 U | 200 U | 200 U | 200 U | 200 U | 200 U | 200 U | 200 U |

PROJECT: NSB KINGS BAY, GEORGIA

SEMIVOLATILE AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | SAMPLE LOCATION: | KBA-5-1 | KBA-5-2 | KBA-5-3 | KBA-5-4 | KBA-5-5 | KBA-5-5D | KBA-5-6 | KBA-5-7 |
| | LAB NUMBER: | 21628002 | 21628003 | 21616004 | 21616006 | 21628005 | 21628006 | 21628008 | 21628007 |
| | DATE SAMPLED: | 05/06/92 | 05/06/92 | 05/05/92 | 05/05/92 | 05/06/92 | 05/06/92 | 05/06/92 | 05/06/92 |
| | DATE ANALYZED: | 05/21/92 | 05/21/92 | 05/20/92 | 05/20/92 | 05/21/92 | 05/21/92 | 05/21/92 | 05/21/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| SEMIVOLATILES -- METHOD 8270 | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| N-Nitrosodimethylamine | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Phenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Aniline | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| bis (2-Chloroethyl) Ether | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2- Chlorophenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,3- Dichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,4- Dichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzyl Alcohol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,2- Dichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2- Methylphenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| bis (2- Chloroisopropyl) Ether | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| N-Nitroso-Di-n-Propylamine | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Hexachloroethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Nitrobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Isophorone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Nitrophenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2,4-Dimethylphenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzoic Acid | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| bis (2-Chloroethoxy) Methane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2,4-Dichlorophenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,2,4-Trichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Naphthalene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Chloroaniline | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Hexachlorobutadiene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Chloro-3-Methylphenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Methylnaphthalene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Hexachlorocyclopentadiene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2,4,6-Trichlorophenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2,4,5-Trichlorophenol | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| 2-Chloronaphthalene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Nitroaniline | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| Dimethylphthalate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Acenaphthylene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2,6-Dinitrotoluene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 3-Nitroaniline | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| Acenaphthene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2,4-Dinitrophenol | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| 4-Nitrophenol | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| Dibenzofuran | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2,4-Dinitrotoluene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Diethylphthalate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Chlorophenyl-phenylether | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Fluorene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Nitroaniline | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| 4,6-Dinitro-2-Methylphenol | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| N-Nitrosodiphenylamine & Diphenylamine | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,2-Diphenylhydrazine | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Bromophenyl-phenylether | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |

PROJECT: NSB KINGS BAY, GEORGIA

SEMIVOLATILE AQUEOUS ANALYSES (ug/l) (continued)

Validated Analytical Results

| | SAMPLE LOCATION: | KBA-5-1 | KBA-5-2 | KBA-5-3 | KBA-5-4 | KBA-5-5 | KBA-5-5D | KBA-5-6 | KBA-5-7 |
|---|---|---|---|---|---|---|---|---|---|
| | LAB NUMBER: | 21628002 | 21628003 | 21616004 | 21616006 | 21628005 | 21628006 | 21628008 | 21628007 |
| | DATE SAMPLED: | 05/06/92 | 05/06/92 | 05/05/92 | 05/05/92 | 05/06/92 | 05/06/92 | 05/06/92 | 05/06/92 |
| | DATE ANALYZED: | 05/21/92 | 05/21/92 | 05/20/92 | 05/20/92 | 05/21/92 | 05/21/92 | 05/21/92 | 05/21/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| SEMIVOLATILES -- METHOD 8270 | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| Hexachlorobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Pentachlorophenol | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| Phenanthrene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Anthracene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Di-n-Butylphthalate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Fluoranthene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Pyrene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Butylbenzylphthalate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 3,3'-Dichlorobenzidine | 20 | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U |
| Benzo (a) Anthracene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Chrysene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| bis (2-Ethylhexyl) Phthalate | 10 | 10 U | 2 J | 10 U | 10 U | 18 | 10 U | 10 U | 10 U |
| Di-n-Octyl Phthalate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzo (b) Fluoranthene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzo (k) Fluoranthene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzo (a) Pyrene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Indeno (1,2,3-cd) Pyrene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Dibenz (a,h) Anthracene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzo (g,h,i) Perylene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Picoline | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| Methyl methanesulfonate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Ethyl methanesulfonate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Acetophenone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| N-Nitrosopiperidine | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Phenyl-tert-butylamine | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| 2,6-Dichlorophenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| N-Nitroso-di-n-butylamine | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| N-Nitrosodiethylamine | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| N-Nitrosopyrrolidine | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzidine | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| 1,2,4,5-Tetrachlorobenzene | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| Pentachlorobenzene | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| 1-Naphthylamine | 50 | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ |
| 2-Naphthylamine | 50 | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ |
| 2,3,4,6-Tetrachlorophenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Phenacetin | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Aminobiphenyl | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| Pentachloronitrobenzene | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| Pronamide | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| p-Dimethylaminoazobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 7,12-Dimethylbenz (a) Anthracene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 3-Methylcholanthrene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Pyridine | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| N-Nitrosomethylethylamine | 10 | 10 U | 10 U | 10 UJ | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| N-Nitrosomorpholine | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| o-Toluidine | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 3- & 4- Methylphenol | 20 | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U |
| Hexachloropropene | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| p-Phenylenediamine | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |

PROJECT: NSB KINGS BAY, GEORGIA

SEMIVOLATILE AQUEOUS ANALYSES (ug/l) (continued)

Validated Analytical Results

| | SAMPLE LOCATION: | KBA-5-1 | KBA-5-2 | KBA-5-3 | KBA-5-4 | KBA-5-5 | KBA-5-5D | KBA-5-6 | KBA-5-7 |
|---|---|---|---|---|---|---|---|---|---|
| | LAB NUMBER: | 21628002 | 21628003 | 21616004 | 21616006 | 21628005 | 21628006 | 21628008 | 21628007 |
| | DATE SAMPLED: | 05/06/92 | 05/06/92 | 05/05/92 | 05/05/92 | 05/06/92 | 05/06/92 | 05/06/92 | 05/06/92 |
| | DATE ANALYZED: | 05/21/92 | 05/21/92 | 05/20/92 | 05/20/92 | 05/21/92 | 05/21/92 | 05/21/92 | 05/21/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| SEMIVOLATILES -- METHOD 8270 | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| Safrole | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| Isosafrole | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| 1,4-Naphthoquinone | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| 1,3-Dinitrobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 5-Nitro-o-toluidine | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,3,5-Trinitrobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Nitroquinoline-1-oxide | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Methapyrilene | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| 3,3'-Dimethylbenzidine | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Acetamidofluorene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Hexachlorophene | 50 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |

POLYCHLORINATED DIBENZO- FURANS/DIOXINS -- METHOD 8280 (ng/l)

| | DATE ANALYZED: | 05/21/92 | 05/21/92 | 05/20/92 | 05/20/92 | 05/21/92 | 05/21/92 | 05/21/92 | 05/21/92 |
|---|---|---|---|---|---|---|---|---|---|
| ANALYTE | PQL* | | | | | | | | |
| TCDFs (total) | -- | 0.018 U | 0.019 U | 0.051 U | 0.028 U | 0.031 U | 0.023 U | 0.063 U | 0.047 U |
| PeCDFs (total) | -- | 0.028 U | 0.033 U | 0.073 U | 0.033 U | 0.043 U | 0.037 U | 0.052 U | 0.048 U |
| HxCDFs (total) | -- | 0.061 U | 0.071 U | 0.15 U | 0.095 U | 0.082 U | 0.068 U | 0.089 U | 0.086 U |
| TCDDs (total) | -- | 0.040 U | 0.038 U | 0.10 U | 0.055 U | 0.041 U | 0.028 U | 0.050 U | 0.037 U |
| 2,3,7,8- TCDD | -- | 0.040 U | 0.038 U | 0.10 U | 0.055 U | 0.041 U | 0.028 U | 0.050 U | 0.037 U |
| PeCDDs (total) | -- | 0.062 U | 0.077 U | 0.23 U | 0.10 U | 0.092 U | 0.081 U | 0.13 U | 0.069 U |
| HeCDDs (total) | -- | 0.069 U | 0.059 U | 0.27 U | 0.15 U | 0.12 U | 0.087 U | 0.10 U | 0.12 U |

*PQLs are not listed for dioxins and furans because the data are reported relative to method detection limits (MDLs) based on MDL studies. There are no published PQLs for these analytes in the SW-846 method manual and these analytes are not included in the Contract Laboratory Program.

PROJECT: NSB KINGS BAY, GEORGIA — PESTICIDE/PCB/HERBICIDE AQUEOUS ANALYSES (ug/l) — Validated Analytical Results

| SAMPLE LOCATION: | | KBA-5-1 | KBA-5-2 | KBA-5-3 | KBA-5-4 | KBA-5-5 | KBA-5-5D | KBA-5-6 | KBA-5-7 |
|---|---|---|---|---|---|---|---|---|---|
| LAB NUMBER: | | 21628002 | 21628003 | 21616004 | 21616006 | 21628005 | 21628006 | 21628008 | 21628007 |
| DATE SAMPLED: | | 05/06/92 | 05/06/92 | 05/05/92 | 05/05/92 | 05/06/92 | 05/06/92 | 05/06/92 | 05/06/92 |
| ORGANOCHLORINE PESTICIDES AND PCBs -- METHOD 8080 | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| alpha-BHC | 0.05 | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| beta-BHC | 0.05 | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| delta-BHC | 0.05 | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| gamma-BHC (Lindane) | 0.05 | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| Heptachlor | 0.05 | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| Aldrin | 0.05 | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| Heptachlor epoxide | 0.05 | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| Endosulfan I | 0.05 | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| Dieldrin | 0.10 | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| 4,4'- DDE | 0.10 | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| Endrin | 0.10 | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| Endosulfan II | 0.10 | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| 4,4'- DDD | 0.10 | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| Endrin Aldehyde | 0.10 | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| Endosulfan Sulfate | 0.10 | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| 4,4'- DDT | 0.10 | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| Methoxychlor | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Endrin Ketone | 0.10 | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| Chlordane | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Toxaphene | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Aroclor-1016 | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Aroclor-1221 | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Aroclor-1232 | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Aroclor-1242 | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Aroclor-1248 | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Aroclor-1254 | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Aroclor-1260 | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Chlorobenzilate | 0.5 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Diallate | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Isodrin | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Kepone | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| ORGANOPHOSPHOROUS PESTICIDES -- METHOD 8140 | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| Triethylphosphorothioate | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Thionazin | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Phorate | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Sulfotepp | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Dimethoate | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Disulfoton | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Methyl Parathion | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Ethyl Parathion | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Famphur | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| CHLORINATED HERBICIDES -- METHOD 8150 | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| 2,4-D | 2.5 | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U |
| Silvex | 0.5 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 2,4,5-T | 0.5 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Dinoseb | 2.5 | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U |

PROJECT: NSB KINGS BAY, GEORGIA

INORGANIC AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| ANALYTE | CRDL | KBA-5-1 | KBA-5-2 | KBA-5-3 | KBA-5-4 | KBA-5-5 | KBA-5-5D | KBA-5-6 | KBA-5-7 |
|---|---|---|---|---|---|---|---|---|---|
| SAMPLE LOCATION: | | KBA-5-1 | KBA-5-2 | KBA-5-3 | KBA-5-4 | KBA-5-5 | KBA-5-5D | KBA-5-6 | KBA-5-7 |
| LAB NUMBER: | | 21628002 | 21628003 | 21616004 | 21616006 | 21628005 | 21628006 | 21628008 | 21628007 |
| DATE SAMPLED: | | 05/06/92 | 05/06/92 | 05/05/92 | 05/05/92 | 05/06/92 | 05/06/92 | 05/06/92 | 05/06/92 |
| Antimony | 60 | 11.0 U | 11.0 U | 11.0 U | 11.0 U | 11.0 U | 11.0 U | 11.0 U | 11.0 U |
| Arsenic | 10 | 10.5 J | 20.0 J | 28.5 | 12.5 | 22.5 J | 24.0 J | 3.2 J | 14.0 J |
| Barium | 200 | 417 | 181 J | 366 | 274 | 187 J | 187 J | 208 | 203 |
| Beryllium | 5 | 3.4 J | 1.4 J | 2.9 J | 2.3 J | 2.6 J | 2.3 J | 2.0 J | 2.0 J |
| Cadmium | 5 | 1.3 J | 1.0 UJ | 2.2 J | 1.8 J | 1.3 J | 3.1 J | 7.5 J | 5.5 J |
| Chromium | 10 | 56.8 | 24.7 | 59.5 | 31.4 | 30.8 | 30.2 | 34.7 | 35.2 |
| Cobalt | 50 | 16.8 J | 7.8 U | 14.1 J | 7.8 U | 14.7 J | 13.0 J | 7.8 U | 7.8 U |
| Copper | 25 | 14.6 J | 10.9 J | 22.2 J | 10.3 J | 9.6 J | 9.8 J | 10.7 J | 14.8 J |
| Lead | 5 | 13.1 | 10.0 | 18.0 | 14.0 | 17.8 | 16.9 | 11.3 | 12.7 |
| Mercury | 0.2 | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| Nickel | 40 | 24.3 J | 7.8 U | 21.3 J | 8.2 J | 24.3 J | 24.7 J | 9.4 J | 19.7 J |
| Selenium | 5 | 3.2 J | 2.3 J | 6.3 | 2.9 J | 3.3 J | 2.5 J | 2.7 J | 2.9 J |
| Silver | 10 | 1.4 U | 1.4 U | 1.4 U | 1.4 U | 1.4 U | 1.4 U | 1.4 U | 1.4 U |
| Thallium | 10 | 1.0 J | 0.80 U | 1.1 J | 1.1 J | 1.1 J | 1.3 J | 0.80 U | 0.80 U |
| Tin | 208 | 23.3 U | 23.3 U | 23.3 U | 23.3 U | 23.3 U | 23.3 U | 23.3 U | 23.3 U |
| Vanadium | 50 | 63.5 | 21.4 J | 52.3 | 31.5 J | 42.1 J | 37.6 J | 34.6 J | 34.3 J |
| Zinc | 20 | 62.0 | 130 | 76.1 | 41.0 | 62.9 | 62.2 | 44.0 | 45.3 |
| Cyanide | 10 | 1.8 U | 1.8 U | 1.8 U | 7.8 J | 1.8 U | 1.8 U | 10.3 | 5.7 J |
| Sulfide | 100 | 1800 | 100 U | 400 | 500 | 1200 | 3100 | 500 | 400 |

# Site 16 Groundwater Sampling Event No. 2
# May 1992

PROJECT: NSB KINGS BAY, GEORGIA

VOLATILE AQUEOUS ANALYSES (ug/l) (continued)

Validated Analytical Results

| | | | | | |
|---|---|---|---|---|---|
| | SAMPLE LOCATION: | KBA-16-1 | KBA-16-2 | KBA-16-3 | KBA-16-4 |
| | LAB NUMBER: | 21616003 | 21616002 | 21599002 | 21599003 |
| | DATE SAMPLED: | 05/05/92 | 05/05/92 | 05/04/92 | 05/04/92 |
| | DATE ANALYZED: | 05/08/92 | 05/08/92 | 05/08/92 | 05/08/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 |
| VOLATILES -- METHOD 8240 | | | | | |
| ANALYTE | PQL | | | | |
| Methacrylonitrile | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,4-Dioxane | 200 | 200 U | 200 U | 200 U | 200 U |
| Methyl Methacrylate | 10 | 10 U | 10 U | 10 U | 10 U |
| 1,2-Dibromoethane | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,1,1,2-Tetrachloroethane | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dibromo-3-Chloropropane | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| Pentachloroethane | 10 | 10 U | 10 U | 10 U | 10 U |
| Isobutyl alcohol | 200 | 200 U | 200 U | 200 U | 200 U |
| Chloroprene | 200 | 200 U | 200 U | 200 U | 200 U |

PROJECT: NSB KINGS BAY, GEORGIA

SEMIVOLATILE AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| | SAMPLE LOCATION: | KBA-16-1 | KBA-16-2 | KBA-16-3 | KBA-16-4 |
|---|---|---|---|---|---|
| | LAB NUMBER: | 21616003 | 21616002 | 21599002 | 21599003 |
| | DATE SAMPLED: | 05/05/92 | 05/05/92 | 05/04/92 | 05/04/92 |
| | DATE ANALYZED: | 05/20/92 | 05/20/92 | 05/20/92 | 05/20/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 |
| SEMIVOLATILES -- METHOD 8270 | | | | | |
| ANALYTE | PQL | | | | |
| N-Nitrosodimethylamine | 10 | 10 U | 10 U | 10 U | 10 U |
| Phenol | 10 | 10 U | 10 U | 10 U | 10 U |
| Aniline | 10 | 10 U | 10 U | 10 U | 10 U |
| bis (2-Chloroethyl) Ether | 10 | 10 U | 10 U | 10 U | 10 U |
| 2- Chlorophenol | 10 | 10 U | 10 U | 10 U | 10 U |
| 1,3- Dichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 U |
| 1,4- Dichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 U |
| Benzyl Alcohol | 10 | 10 U | 10 U | 10 U | 10 U |
| 1,2- Dichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 U |
| 2- Methylphenol | 10 | 10 U | 10 U | 10 U | 10 U |
| bis (2- Chloroisopropyl) Ether | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| N-Nitroso-Di-n-Propylamine | 10 | 10 U | 10 U | 10 U | 10 U |
| Hexachloroethane | 10 | 10 U | 10 U | 10 U | 10 U |
| Nitrobenzene | 10 | 10 U | 10 U | 10 U | 10 U |
| Isophorone | 10 | 10 U | 10 U | 10 U | 10 U |
| 2-Nitrophenol | 10 | 10 U | 10 U | 10 U | 10 U |
| 2,4-Dimethylphenol | 10 | 10 U | 10 U | 10 U | 10 U |
| Benzoic Acid | 50 | 50 U | 50 U | 50 U | 50 U |
| bis (2-Chloroethoxy) Methane | 10 | 10 U | 10 U | 10 U | 10 U |
| 2,4-Dichlorophenol | 10 | 10 U | 10 U | 10 U | 10 U |
| 1,2,4-Trichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 U |
| Naphthalene | 10 | 10 U | 10 U | 10 U | 10 U |
| 4-Chloroaniline | 10 | 10 U | 10 U | 10 U | 10 U |
| Hexachlorobutadiene | 10 | 10 U | 10 U | 10 U | 10 U |
| 4-Chloro-3-Methylphenol | 10 | 10 U | 10 U | 10 U | 10 U |
| 2-Methylnaphthalene | 10 | 10 U | 10 U | 10 U | 10 U |
| Hexachlorocyclopentadiene | 10 | 10 U | 10 U | 10 U | 10 U |
| 2,4,6-Trichlorophenol | 10 | 10 U | 10 U | 10 U | 10 U |
| 2,4,5-Trichlorophenol | 50 | 50 U | 50 U | 50 U | 50 U |
| 2-Chloronaphthalene | 10 | 10 U | 10 U | 10 U | 10 U |
| 2-Nitroaniline | 50 | 50 U | 50 U | 50 U | 50 U |
| Dimethylphthalate | 10 | 10 U | 10 U | 10 U | 10 U |
| Acenaphthylene | 10 | 10 U | 10 U | 10 U | 10 U |
| 2,6-Dinitrotoluene | 10 | 10 U | 10 U | 10 U | 10 U |
| 3-Nitroaniline | 50 | 50 U | 50 U | 50 U | 50 U |
| Acenaphthene | 10 | 10 U | 10 U | 10 U | 10 U |
| 2,4-Dinitrophenol | 50 | 50 U | 50 U | 50 U | 50 U |
| 4-Nitrophenol | 50 | 50 U | 50 U | 50 U | 50 U |
| Dibenzofuran | 10 | 10 U | 10 U | 10 U | 10 U |
| 2,4-Dinitrotoluene | 10 | 10 U | 10 U | 10 U | 10 U |
| Diethylphthalate | 10 | 10 U | 10 U | 10 U | 10 U |
| 4-Chlorophenyl-phenylether | 10 | 10 U | 10 U | 10 U | 10 U |
| Fluorene | 10 | 10 U | 10 U | 10 U | 10 U |
| 4-Nitroaniline | 50 | 50 U | 50 U | 50 U | 50 U |
| 4,6-Dinitro-2-Methylphenol | 50 | 50 U | 50 U | 50 U | 50 U |
| N-Nitrosodiphenylamine & Diphenylamine | 10 | 10 U | 10 U | 10 U | 10 U |
| 1,2-Diphenylhydrazine | 10 | 10 U | 10 U | 10 U | 10 U |
| 4-Bromophenyl-phenylether | 10 | 10 U | 10 U | 10 U | 10 U |

PROJECT: NSB KINGS BAY, GEORGIA

SEMIVOLATILE AQUEOUS ANALYSES (ug/l) (continued)

Validated Analytical Results

| | SAMPLE LOCATION: | KBA-16-1 | KBA-16-2 | KBA-16-3 | KBA-16-4 |
|---|---|---|---|---|---|
| | LAB NUMBER: | 21616003 | 21616002 | 21599002 | 21599003 |
| | DATE SAMPLED: | 05/05/92 | 05/05/92 | 05/04/92 | 05/04/92 |
| | DATE ANALYZED: | 05/20/92 | 05/20/92 | 05/20/92 | 05/20/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 |
| SEMIVOLATILES -- METHOD 8270 | | | | | |
| ANALYTE | PQL | | | | |
| Hexachlorobenzene | 10 | 10 U | 10 U | 10 U | 10 U |
| Pentachlorophenol | 50 | 50 U | 50 U | 50 U | 50 U |
| Phenanthrene | 10 | 10 U | 10 U | 10 U | 10 U |
| Anthracene | 10 | 10 U | 10 U | 10 U | 10 U |
| Di-n-Butylphthalate | 10 | 10 U | 10 U | 2 J | 10 U |
| Fluoranthene | 10 | 10 U | 10 U | 10 U | 10 U |
| Pyrene | 10 | 10 U | 10 U | 10 U | 10 U |
| Butylbenzylphthalate | 10 | 10 U | 10 U | 10 U | 10 U |
| 3,3'-Dichlorobenzidine | 20 | 20 U | 20 U | 20 U | 20 U |
| Benzo (a) Anthracene | 10 | 10 U | 10 U | 10 U | 10 U |
| Chrysene | 10 | 10 U | 10 U | 10 U | 10 U |
| bis (2-Ethylhexyl) Phthalate | 10 | 10 U | 28 | 75 | 10 U |
| Di-n-Octyl Phthalate | 10 | 10 U | 10 U | 10 U | 10 U |
| Benzo (b) Fluoranthene | 10 | 10 U | 10 U | 10 U | 10 U |
| Benzo (k) Fluoranthene | 10 | 10 U | 10 U | 10 U | 10 U |
| Benzo (a) Pyrene | 10 | 10 U | 10 U | 10 U | 10 U |
| Indeno (1,2,3-cd) Pyrene | 10 | 10 U | 10 U | 10 U | 10 U |
| Dibenz (a,h) Anthracene | 10 | 10 U | 10 U | 10 U | 10 U |
| Benzo (g,h,i) Perylene | 10 | 10 U | 10 U | 10 U | 10 U |
| 2-Picoline | 50 | 50 U | 50 U | 50 U | 50 U |
| Methyl methanesulfonate | 10 | 10 U | 10 U | 10 U | 10 U |
| Ethyl methanesulfonate | 10 | 10 U | 10 U | 10 U | 10 U |
| Acetophenone | 10 | 10 U | 10 U | 10 U | 10 U |
| N-Nitrosopiperidine | 10 | 10 U | 10 U | 10 U | 10 U |
| Phenyl-tert-butylamine | 50 | 50 U | 50 U | 50 U | 50 U |
| 2,6-Dichlorophenol | 10 | 10 U | 10 U | 10 U | 10 U |
| N-Nitroso-di-n-butylamine | 10 | 10 U | 10 U | 10 U | 10 U |
| N-Nitrosodiethylamine | 10 | 10 U | 10 U | 10 U | 10 U |
| N-Nitrosopyrrolidine | 10 | 10 U | 10 U | 10 U | 10 U |
| Benzidine | 50 | 50 U | 50 U | 50 U | 50 U |
| 1,2,4,5-Tetrachlorobenzene | 50 | 50 U | 50 U | 50 U | 50 U |
| Pentachlorobenzene | 50 | 50 U | 50 U | 50 U | 50 U |
| 1-Naphthylamine | 50 | 50 UJ | 50 UJ | 50 UJ | 50 UJ |
| 2-Naphthylamine | 50 | 50 UJ | 50 UJ | 50 UJ | 50 UJ |
| 2,3,4,6-Tetrachlorophenol | 10 | 10 U | 10 U | 10 U | 10 U |
| Phenacetin | 10 | 10 U | 10 U | 10 U | 10 U |
| 4-Aminobiphenyl | 50 | 50 U | 50 U | 50 U | 50 U |
| Pentachloronitrobenzene | 50 | 50 U | 50 U | 50 U | 50 U |
| Pronamide | 10 | 10 U | 10 U | 10 U | 10 U |
| p-Dimethylaminoazobenzene | 10 | 10 U | 10 U | 10 U | 10 U |
| 7,12-Dimethylbenz (a) Anthracene | 10 | 10 U | 10 U | 10 U | 10 U |
| 3-Methylcholanthrene | 10 | 10 U | 10 U | 10 U | 10 U |
| Pyridine | 50 | 50 U | 50 U | 50 U | 50 U |
| N-Nitrosomethylethylamine | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| N-Nitrosomorpholine | 10 | 10 U | 10 U | 10 U | 10 U |
| o-Toluidine | 10 | 10 U | 10 U | 10 U | 10 U |
| 3- & 4- Methylphenol | 20 | 20 U | 20 U | 20 U | 20 U |
| Hexachloropropene | 50 | 50 U | 50 U | 50 U | 50 U |
| p-Phenylenediamine | 50 | 50 U | 50 U | 50 U | 50 U |

PROJECT: NSB KINGS BAY, GEORGIA

SEMIVOLATILE AQUEOUS ANALYSES (ug/l) (continued)

Validated Analytical Results

| | SAMPLE LOCATION: | KBA-16-1 | KBA-16-2 | KBA-16-3 | KBA-16-4 |
|---|---|---|---|---|---|
| | LAB NUMBER: | 21616003 | 21616002 | 21599002 | 21599003 |
| | DATE SAMPLED: | 05/05/92 | 05/05/92 | 05/04/92 | 05/04/92 |
| | DATE ANALYZED: | 05/20/92 | 05/20/92 | 05/20/92 | 05/20/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 |
| SEMIVOLATILES -- METHOD 8270 | | | | | |
| ANALYTE | PQL | | | | |
| Safrole | 50 | 50 U | 50 U | 50 U | 50 U |
| Isosafrole | 50 | 50 U | 50 U | 50 U | 50 U |
| 1,4-Naphthoquinone | 50 | 50 U | 50 U | 50 U | 50 U |
| 1,3-Dinitrobenzene | 10 | 10 U | 10 U | 10 U | 10 U |
| 5-Nitro-o-toluidine | 10 | 10 U | 10 U | 10 U | 10 U |
| 1,3,5-Trinitrobenzene | 10 | 10 U | 10 U | 10 U | 10 U |
| 4-Nitroquinoline-1-oxide | 10 | 10 U | 10 U | 10 U | 10 U |
| Methapyrilene | 50 | 50 U | 50 U | 50 U | 50 U |
| 3,3'-Dimethylbenzidine | 10 | 10 U | 10 U | 10 U | 10 U |
| 2-Acetamidofluorene | 10 | 10 U | 10 U | 10 U | 10 U |
| Hexachlorophene | 50 | 50 U | 50 U | 50 U | 50 U |

POLYCHLORINATED DIBENZO- FURANS/DIOXINS -- METHOD 8280 (ng/l)

| | DATE ANALYZED: | 05/20/92 | 05/20/92 | 05/12/92 | 05/12/92 |
|---|---|---|---|---|---|
| ANALYTE | PQL* | | | | |
| TCDFs (total) | -- | 0.024 U | 0.030 U | 0.045 U | 0.047 U |
| PeCDFs (total) | -- | 0.042 U | 0.052 U | 0.055 U | 0.048 U |
| HxCDFs (total) | -- | 0.096 U | 0.086 U | 0.10 U | 0.077 U |
| TCDDs (total) | -- | 0.058 U | 0.048 U | 0.053 U | 0.044 U |
| 2,3,7,8- TCDD | -- | 0.058 U | 0.048 U | 0.053 U | 0.044 U |
| PeCDDs (total) | -- | 0.14 U | 0.20 U | 0.17 U | 0.12 U |
| HeCDDs (total) | -- | 0.16 U | 0.14 U | 0.14 U | 0.12 U |

*PQLs are not listed for dioxins and furans because the data are reported relative to method detection limits (MDLs) based on MDL studies. There are no published PQLs for these analytes in the SW-846 method manual and these analytes are not included in the Contract Laboratory Program.

PROJECT: NSB KINGS BAY, GEORGIA — PESTICIDE/PCB/HERBICIDE AQUEOUS ANALYSES (ug/l) — Validated Analytical Results

| | | | | | |
|---|---|---|---|---|---|
| SAMPLE LOCATION: | | KBA-16-1 | KBA-16-2 | KBA-16-3 | KBA-16-4 |
| LAB NUMBER: | | 21616003 | 21616002 | 21599002 | 21599003 |
| DATE SAMPLED: | | 05/05/92 | 05/05/92 | 05/04/92 | 05/04/92 |
| ORGANOCHLORINE PESTICIDES AND PCBs -- METHOD 8080 | | | | | |
| ANALYTE | PQL | | | | |
| alpha-BHC | 0.05 | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| beta-BHC | 0.05 | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| delta-BHC | 0.05 | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| gamma-BHC (Lindane) | 0.05 | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| Heptachlor | 0.05 | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| Aldrin | 0.05 | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| Heptachlor epoxide | 0.05 | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| Endosulfan I | 0.05 | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| Dieldrin | 0.10 | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| 4,4'- DDE | 0.10 | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| Endrin | 0.10 | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| Endosulfan II | 0.10 | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| 4,4'- DDD | 0.10 | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| Endrin Aldehyde | 0.10 | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| Endosulfan Sulfate | 0.10 | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| 4,4'- DDT | 0.10 | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| Methoxychlor | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Endrin Ketone | 0.10 | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| Chlordane | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Toxaphene | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Aroclor-1016 | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Aroclor-1221 | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Aroclor-1232 | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Aroclor-1242 | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Aroclor-1248 | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Aroclor-1254 | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Aroclor-1260 | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Chlorobenzilate | 0.5 | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Diallate | 1 | 1 U | 1 U | 1 U | 1 U |
| Isodrin | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Kepone | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| ORGANOPHOSPHOROUS PESTICIDES -- METHOD 8140 | | | | | |
| ANALYTE | PQL | | | | |
| Triethylphosphorothioate | 1 | 1 U | 1 U | 1 U | 1 U |
| Thionazin | 1 | 1 U | 1 U | 1 U | 1 U |
| Phorate | 1 | 1 U | 1 U | 1 U | 1 U |
| Sulfotepp | 1 | 1 U | 1 U | 1 U | 1 U |
| Dimethoate | 5 | 5 U | 5 U | 5 U | 5 U |
| Disulfoton | 1 | 1 U | 1 U | 1 U | 1 U |
| Methyl Parathion | 1 | 1 U | 1 U | 1 U | 1 U |
| Ethyl Parathion | 1 | 1 U | 1 U | 1 U | 1 U |
| Famphur | 1 | 1 U | 1 U | 1 U | 1 U |
| CHLORINATED HERBICIDES -- METHOD 8150 | | | | | |
| ANALYTE | PQL | | | | |
| 2,4-D | 2.5 | 2.5 U | 2.5 U | 2.5 UJ | 2.5 UJ |
| Silvex | 0.5 | 0.5 U | 0.5 U | 0.5 UJ | 0.5 UJ |
| 2,4,5-T | 0.5 | 0.5 U | 0.5 U | 0.5 UJ | 0.5 UJ |
| Dinoseb | 2.5 | 2.5 U | 2.5 U | 2.5 UJ | 2.5 UJ |

PROJECT: NSB KINGS BAY, GEORGIA

INORGANIC AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| ANALYTE | SAMPLE LOCATION: | KBA-16-1 | KBA-16-2 | KBA-16-3 | KBA-16-4 |
|---|---|---|---|---|---|
| | LAB NUMBER: | 21616003 | 21616002 | 21599002 | 21599003 |
| | DATE SAMPLED: | 05/05/92 | 05/05/92 | 05/04/92 | 05/04/92 |
| | CRDL | | | | |
| Antimony | 60 | 11.0 U | 11.0 U | 11.0 U | 11.3 J |
| Arsenic | 10 | 8.5 J | 19.5 | 10.2 J | 1.5 J |
| Barium | 200 | 70.8 J | 82.2 J | 119 J | 37.1 J |
| Beryllium | 5 | 1.1 J | 1.7 J | 4.7 J | 0.80 U |
| Cadmium | 5 | 1.5 J | 1.6 J | 1.0 UJ | 1.0 UJ |
| Chromium | 10 | 32.0 | 28.1 | 20.7 | 3.3 U |
| Cobalt | 50 | 7.8 U | 9.1 J | 7.8 U | 7.8 U |
| Copper | 25 | 9.2 J | 3.8 J | 5.5 J | 4.2 J |
| Lead | 5 | 7.6 | 11.5 | 4.3 J | 2.5 U |
| Mercury | 0.2 | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| Nickel | 40 | 7.8 UJ | 19.4 J | 7.8 U | 7.8 U |
| Selenium | 5 | 10.6 | 1.6 J | 1.1 J | 0.88 J |
| Silver | 10 | 1.4 J | 1.4 U | 1.4 U | 1.4 U |
| Thallium | 10 | 0.90 J | 0.80 U | 0.80 U | 0.80 U |
| Tin | 23.3 | 23.3 U | 23.3 U | 23.3 U | 23.3 U |
| Vanadium | 50 | 44.4 J | 48.0 J | 33.6 J | 12.0 J |
| Zinc | 20 | 15.1 U | 65.7 | 56.2 | 10.8 U |
| Cyanide | 10 | 8.4 J | 8.5 J | 1.8 U | 18.5 |
| Sulfide | 100 | 100 U | 2400 | 1400 | 200 |

**Trip Blanks**
**Source Water Blanks**
**Sampling Event No. 2**
**May 1992**

PROJECT: NSB KINGS BAY, GEORGIA

VOLATILE AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| | SAMPLE LOCATION: | BT-12-FB | BT-13-FB | BT-14-FB | BS-12-FB | BS-13-FB | BS-14-FB | BS-4-FB | BS-5-FB |
|---|---|---|---|---|---|---|---|---|---|
| | LAB NUMBER: | 21599004 | 21616001 | 21628001 | 21599001 | 21616005 | 21628004 | 21652003 | 21652002 |
| | DATE SAMPLED: | 05/04/92 | 05/05/92 | 05/06/92 | 05/04/92 | 05/05/92 | 05/06/92 | 05/08/92 | 05/08/92 |
| | DATA ANALYZED: | 05/08/92 | 05/08/92 | 05/13/92 | 05/08/92 | 05/08/92 | 05/13/92 | 05/14/92 | 05/14/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| ANALYTE | PQL | | | | | | | | |
| Chloromethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromomethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Vinyl Chloride | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Chloroethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Methylene Chloride | 5 | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U |
| Acetone | 10 | 10 U | 10 U | 10 U | 100 U | 72 U | 280 | 35 J | 10 UJ |
| Carbon Disulfide | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Trichlorofluoromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 2 J |
| 1,1-Dichloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloroethene (total) | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chloroform | 5 | 4 J | 5 U | 4 J | 8 | 11 | 3 J | 16 | 5 U |
| 1,2-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 2-Butanone | 10 | 10 U | 18 | 11 | 71 | 42 | 170 | 28 | 10 U |
| 1,1,1-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Vinyl Acetate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromodichloromethane | 5 | 5 U | 5 U | 5 U | 2 J | 4 J | 5 U | 6 | 5 U |
| 1,2-Dichloropropane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| cis-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Trichloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Dibromochloromethane | 5 | 5 U | 5 U | 5 U | 5 U | 2 J | 5 U | 3 J | 5 U |
| 1,1,2-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Benzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| trans-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 2-Chloroethylvinylether | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromoform | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 2-Hexanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Methyl-2-Pentanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Tetrachloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1,2,2-Tetrachloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Toluene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chlorobenzene | 5 | 5 U | 5 U | 5 U | 2 J | 5 U | 2 J | 2 J | 5 U |
| Ethylbenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Styrene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Xylene (total) | 5 | 1 J | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,3-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,4-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Acrolein | 100 | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U |
| Iodomethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Acrylonitrile | 100 | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U |
| Dibromomethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Ethyl Methacrylate | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2,3-Trichloropropane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |

PROJECT: NSB KINGS BAY, GEORGIA

VOLATILE AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| | SAMPLE LOCATION: | BT-12-FB | BT-13-FB | BT-14-FB | BS-12-ER | BS-13-ER | BS-14-ER | BS-4-FB | BS-5-FB |
|---|---|---|---|---|---|---|---|---|---|
| | LAB NUMBER: | 21599004 | 21616001 | 21628001 | 21599001 | 21616005 | 21628004 | 21652003 | 21652002 |
| | DATE SAMPLED: | 05/04/92 | 05/05/92 | 05/06/92 | 05/04/92 | 05/05/92 | 05/06/92 | 05/08/92 | 05/08/92 |
| | DATA ANALYZED: | 05/08/92 | 05/08/92 | 05/13/92 | 05/08/92 | 05/08/92 | 05/13/92 | 05/14/92 | 05/14/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| ANALYTE | PQL | | | | | | | | |
| trans-1,4-Dichloro-2-Butene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Acetonitrile | 100 | 100 U | 100 U | 100 U | 36 J | 100 U | 100 U | 100 U | 100 U |
| 3-Chloropropene | 5 | 5 U | 5 U | 5 U | 3 J | 5 U | 5 | 5 U | 5 U |
| Propionitrile | 100 | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U |
| Methacrylonitrile | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,4-Dioxane | 200 | 200 U | 200 U | 200 U | 200 U | 200 U | 200 U | 200 U | 200 U |
| Methyl Methacrylate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,2-Dibromoethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1,1,2-Tetrachloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dibromo-3-Chloropropane | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| Pentachloroethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Isobutyl alcohol | 200 | 200 U | 200 U | 200 U | 200 U | 200 U | 200 U | 200 U | 200 U |
| Chloroprene | 200 | 200 U | 200 U | 200 U | 200 U | 200 U | 200 U | 200 U | 200 U |

PROJECT: NSB KINGS BAY, GEORGIA

SEMIVOLATILE AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| | | | | | | |
|---|---|---|---|---|---|---|
| | SAMPLE LOCATION: | BS-12-ER | BS-13-ER | BS-14-ER | BS-4-FB | BS-5-FB |
| | LAB NUMBER: | 21599001 | 21616005 | 21628004 | 21652003 | 21652002 |
| | DATE SAMPLED: | 05/04/92 | 05/05/92 | 05/06/92 | 05/08/92 | 05/08/92 |
| | DATE ANALYZED: | 05/20/92 | 05/20/92 | 05/21/92 | 05/22/92 | 05/22/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| SEMIVOLATILES -- METHOD 8270 | | | | | | |
| ANALYTE | PQL | | | | | |
| N-Nitrosodimethylamine | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Phenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Aniline | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| bis (2-Chloroethyl) Ether | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2- Chlorophenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,3- Dichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,4- Dichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzyl Alcohol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,2- Dichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2- Methylphenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| bis (2- Chloroisopropyl) Ether | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| N-Nitroso-Di-n-Propylamine | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Hexachloroethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Nitrobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Isophorone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Nitrophenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2,4-Dimethylphenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzoic Acid | 50 | 50 U | 50 U | 50 U | 50 U | 50 U |
| bis (2-Chloroethoxy) Methane | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 UJ |
| 2,4-Dichlorophenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,2,4-Trichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Naphthalene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Chloroaniline | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Hexachlorobutadiene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Chloro-3-Methylphenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Methylnaphthalene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Hexachlorocyclopentadiene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2,4,6-Trichlorophenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2,4,5-Trichlorophenol | 50 | 50 U | 50 U | 50 U | 50 U | 50 U |
| 2-Chloronaphthalene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Nitroaniline | 50 | 50 U | 50 U | 50 U | 50 U | 50 U |
| Dimethylphthalate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Acenaphthylene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2,6-Dinitrotoluene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 3-Nitroaniline | 50 | 50 U | 50 U | 50 U | 50 U | 50 U |
| Acenaphthene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2,4-Dinitrophenol | 50 | 50 U | 50 U | 50 U | 50 U | 50 U |
| 4-Nitrophenol | 50 | 50 U | 50 U | 50 U | 50 U | 50 U |
| Dibenzofuran | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2,4-Dinitrotoluene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Diethylphthalate | 10 | 10 U | 10 U | 10 U | 2 J | 10 U |
| 4-Chlorophenyl-phenylether | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Fluorene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Nitroaniline | 50 | 50 U | 50 U | 50 U | 50 U | 50 U |
| 4,6-Dinitro-2-Methylphenol | 50 | 50 U | 50 U | 50 U | 50 U | 50 U |

PROJECT: NSB KINGS BAY, GEORGIA

SEMIVOLATILE AQUEOUS ANALYSES (ug/l) (continued)

Validated Analytical Results

| | | | | | | |
|---|---|---|---|---|---|---|
| | SAMPLE LOCATION: | BS-12-ER | BS-13-ER | BS-14-ER | BS-4-FB | BS-5-FB |
| | LAB NUMBER: | 21599001 | 21616005 | 21628004 | 21652003 | 21652002 |
| | DATE SAMPLED: | 05/04/92 | 05/05/92 | 05/06/92 | 05/08/92 | 05/08/92 |
| | DATE ANALYZED: | 05/20/92 | 05/20/92 | 05/21/92 | 05/22/92 | 05/22/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| SEMIVOLATILES -- METHOD 8270 | | | | | | |
| ANALYTE | PQL | | | | | |
| N-Nitrosodiphenylamine & Diphenylamine | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,2-Diphenylhydrazine | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Bromophenyl-phenylether | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Hexachlorobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Pentachlorophenol | 50 | 50 U | 50 U | 50 U | 50 U | 50 U |
| Phenanthrene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Anthracene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Di-n-Butylphthalate | 10 | 10 U | 14 U | 10 U | 10 U | 10 U |
| Fluoranthene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Pyrene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Butylbenzylphthalate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 3,3'-Dichlorobenzidine | 20 | 20 U | 20 U | 20 U | 20 U | 20 U |
| Benzo (a) Anthracene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Chrysene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| bis (2-Ethylhexyl) Phthalate | 10 | 10 U | 3 J | 10 U | 3 J | 10 U |
| Di-n-Octyl Phthalate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzo (b) Fluoranthene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzo (k) Fluoranthene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzo (a) Pyrene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Indeno (1,2,3-cd) Pyrene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Dibenz (a,h) Anthracene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzo (g,h,i) Perylene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Picoline | 50 | 50 U | 50 U | 50 U | 50 U | 50 U |
| Methyl methanesulfonate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Ethyl methanesulfonate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Acetophenone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| N-Nitrosopiperidine | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Phenyl-tert-butylamine | 50 | 50 U | 50 U | 50 U | 50 U | 50 U |
| 2,6-Dichlorophenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| N-Nitroso-di-n-butylamine | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| N-Nitrosodiethylamine | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| N-Nitrosopyrrolidine | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzidine | 50 | 50 U | 50 U | 50 U | 50 U | 50 U |
| 1,2,4,5-Tetrachlorobenzene | 50 | 50 U | 50 U | 50 U | 50 U | 50 U |
| Pentachlorobenzene | 50 | 50 U | 50 U | 50 U | 50 U | 50 U |
| 1-Naphthylamine | 50 | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ |
| 2-Naphthylamine | 50 | 50 UJ | 50 UJ | 50 UJ | 50 UJ | 50 UJ |
| 2,3,4,6-Tetrachlorophenol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Phenacetin | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Aminobiphenyl | 50 | 50 U | 50 U | 50 U | 50 UJ | 50 UJ |
| Pentachloronitrobenzene | 50 | 50 U | 50 U | 50 U | 50 U | 50 U |
| Pronamide | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| p-Dimethylaminoazobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 7,12-Dimethylbenz (a) Anthracene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 3-Methylcholanthrene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |

PROJECT: NSB KINGS BAY, GEORGIA

SEMIVOLATILE AQUEOUS ANALYSES (ug/l) (continued)

Validated Analytical Results

| | | | | | | |
|---|---|---|---|---|---|---|
| | SAMPLE LOCATION: | BS-12-ER | BS-13-ER | BS-14-ER | BS-4-FB | BS-5-FB |
| | LAB NUMBER: | 21599001 | 21616005 | 21628004 | 21652003 | 21652002 |
| | DATE SAMPLED: | 05/04/92 | 05/05/92 | 05/06/92 | 05/08/92 | 05/08/92 |
| | DATE ANALYZED: | 05/20/92 | 05/20/92 | 05/21/92 | 05/22/92 | 05/22/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| SEMIVOLATILES -- METHOD 8270 | | | | | | |
| ANALYTE | PQL | | | | | |
| Pyridine | 50 | 50 U | 50 U | 50 U | 50 U | 50 U |
| N-Nitrosomethylethylamine | 10 | 10 UJ | 10 UJ | 10 U | 10 U | 10 U |
| N-Nitrosomorpholine | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| o-Toluidine | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 3- & 4- Methylphenol | 20 | 20 U | 20 U | 20 U | 20 U | 20 U |
| Hexachloropropene | 50 | 50 U | 50 U | 50 U | 50 U | 50 U |
| p-Phenylenediamine | 50 | 50 U | 50 U | 50 U | 50 U | 50 U |
| Safrole | 50 | 50 U | 50 U | 50 U | 50 U | 50 U |
| Isosafrole | 50 | 50 U | 50 U | 50 U | 50 U | 50 U |
| 1,4-Naphthoquinone | 50 | 50 U | 50 U | 50 U | 50 U | 50 U |
| 1,3-Dinitrobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 5-Nitro-o-toluidine | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,3,5-Trinitrobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Nitroquinoline-1-oxide | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Methapyrilene | 50 | 50 U | 50 U | 50 U | 50 U | 50 U |
| 3,3'-Dimethylbenzidine | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 UJ |
| 2-Acetamidofluorene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Hexachlorophene | 50 | 50 U | 50 U | 50 U | 50 U | 50 U |

POLYCHLORINATED DIBENZO- FURANS/DIOXINS -- METHOD 8280 (ng/l)

| | | | | | | |
|---|---|---|---|---|---|---|
| | DATE ANALYZED: | 05/12/92 | 05/20/92 | 05/21/92 | 05/26/92 | 05/26/92 |
| ANALYTE | PQL* | | | | | |
| TCDFs (total) | -- | 0.029 U | 0.048 U | 0.014 U | 0.044 U | 0.047 U |
| PeCDFs (total) | -- | 0.035 U | 0.066 U | 0.029 U | 0.073 U | 0.10 U |
| HxCDFs (total) | -- | 0.060 U | 0.15 U | 0.054 U | 0.18 U | 0.25 U |
| TCDDs (total) | -- | 0.038 U | 0.074 U | 0.033 U | 0.060 U | 0.095 U |
| 2,3,7,8- TCDD | -- | 0.038 U | 0.074 U | 0.033 U | 0.060 U | 0.095 U |
| PeCDDs (total) | -- | 0.092 U | 0.22 U | 0.067 U | 0.17 U | 0.25 U |
| HxCDDs (total) | -- | 0.071 U | 0.28 U | 0.060 U | 0.25 U | 0.38 U |

*PQLs are not listed for dioxins and furans because the data are reported relative to method detection limits (MDLs) based on MDL studies. There are no published PQLs for these analytes in the SW-846 method manual and these analytes are not included in the Contract Laboratory Program.

PROJECT: NSB KINGS BAY, GEORGIA — PESTICIDE/PCB/HERBICIDE AQUEOUS ANALYSES (ug/l) — Validated Analytical Results

| SAMPLE LOCATION: | | BS-12-ER | BS-13-ER | BS-14-ER | BS-4-FB | BS-5-FB |
|---|---|---|---|---|---|---|
| LAB NUMBER: | | 21599001 | 21616005 | 21628004 | 21652003 | 21652002 |
| DATE SAMPLED: | | 05/04/92 | 05/05/92 | 05/06/92 | 05/08/92 | 05/08/92 |
| ORGANOCHLORINE PESTICIDES AND PCBs -- METHOD 8080 | | | | | | |
| ANALYTE | PQL | | | | | |
| alpha-BHC | 0.05 | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| beta-BHC | 0.05 | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| delta-BHC | 0.05 | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| gamma-BHC (Lindane) | 0.05 | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| Heptachlor | 0.05 | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| Aldrin | 0.05 | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| Heptachlor epoxide | 0.05 | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| Endosulfan I | 0.05 | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| Dieldrin | 0.10 | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| 4,4'- DDE | 0.10 | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| Endrin | 0.10 | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| Endosulfan II | 0.10 | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| 4,4'- DDD | 0.10 | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| Endrin Aldehyde | 0.10 | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| Endosulfan Sulfate | 0.10 | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| 4,4'- DDT | 0.10 | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| Methoxychlor | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Endrin Ketone | 0.10 | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| Chlordane | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Toxaphene | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Aroclor-1016 | 0.5 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Aroclor-1221 | 0.5 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Aroclor-1232 | 0.5 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Aroclor-1242 | 0.5 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Aroclor-1248 | 0.5 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Aroclor-1254 | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Aroclor-1260 | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Chlorobenzilate | 0.5 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Diallate | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Isodrin | 0.02 | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Kepone | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| ORGANOPHOSPHOROUS PESTICIDES -- METHOD 8140 | | | | | | |
| ANALYTE | PQL | | | | | |
| Triethylphosphorothioate | 1 | 1 U | 1 U | 1 U | 1 U | 1 U |
| Thionazin | 1 | 1 U | 1 U | 1 U | 1 U | 1 U |
| Phorate | 1 | 1 U | 1 U | 1 U | 1 U | 1 U |
| Sulfotepp | 1 | 1 U | 1 U | 1 U | 1 U | 1 U |
| Dimethoate | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| Disulfoton | 1 | 1 U | 1 U | 1 U | 1 U | 1 U |
| Methyl Parathion | 1 | 1 U | 1 U | 1 U | 1 U | 1 U |
| Ethyl Parathion | 1 | 1 U | 1 U | 1 U | 1 U | 1 U |
| Famphur | 1 | 1 U | 1 U | 1 U | 1 U | 1 U |
| CHLORINATED HERBICIDES -- METHOD 8150 | | | | | | |
| ANALYTE | PQL | | | | | |
| 2,4-D | 2.5 | 2.5 UJ | 2.5 U | 2.5 U | 2.5 U | 2.5 U |
| Silvex | 0.5 | 0.5 UJ | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 2,4,5-T | 0.5 | 0.5 UJ | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Dinoseb | 2.5 | 2.5 UJ | 2.5 U | 2.5 U | 2.5 U | 2.5 U |

PROJECT: NSB KINGS BAY, GEORGIA

INORGANIC AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| ANALYTE | CRDL | BS-12-ER | BS-13-ER | BS-14-ER | BS-4-FB | BS-5-FB |
|---|---|---|---|---|---|---|
| SAMPLE LOCATION: | | BS-12-ER | BS-13-ER | BS-14-ER | BS-4-FB | BS-5-FB |
| LAB NUMBER: | | 21599001 | 21616005 | 21628004 | 21652003 | 21652002 |
| DATE SAMPLED: | | 05/04/92 | 05/05/92 | 05/06/92 | 05/08/92 | 05/08/92 |
| Antimony | 60 | 11.0 U | 11.0 U | 11.0 U | 11.0 U | 11.0 U |
| Arsenic | 10 | 0.70 UJ | 0.70 U | 0.70 UJ | 0.70 U | 0.70 U |
| Barium | 200 | 0.54 U | 0.30 U | 0.30 U | 0.30 U | 0.30 U |
| Beryllium | 5 | 0.80 U | 0.80 U | 0.80 U | 0.80 U | 0.80 U |
| Cadmium | 5 | 1.0 UJ | 1.0 U | 1.0 UJ | 1.0 U | 1.0 U |
| Chromium | 10 | 3.3 U | 3.3 U | 6.0 J | 4.1 J | 3.3 U |
| Cobalt | 50 | 7.8 U | 7.8 U | 7.8 U | 7.8 U | 7.8 U |
| Copper | 25 | 28.9 | 33.0 | 205 | 15.2 J | 1.1 U |
| Lead | 5 | 1.8 U | 0.90 J | 2.1 U | 0.90 J | 0.50 U |
| Mercury | 0.2 | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| Nickel | 40 | 7.8 U | 7.8 UJ | 7.8 U | 7.8 UJ | 7.8 UJ |
| Selenium | 5 | 0.40 U | 0.40 U | 0.40 U | 0.40 U | 0.40 U |
| Silver | 10 | 1.4 U | 1.4 U | 1.4 U | 1.4 U | 1.4 U |
| Thallium | 10 | 0.80 U | 0.90 J | 0.80 U | 0.80 U | 0.80 U |
| Tin | 23.3 | 23.3 U | 23.3 U | 23.3 U | 23.3 U | 23.3 U |
| Vanadium | 50 | 1.3 UJ | 1.3 U | 1.3 UJ | 1.3 U | 1.3 U |
| Zinc | 20 | 7.0 U | 6.0 U | 21.6 | 4.3 U | 3.4 U |
| Cyanide | 10 | 1.8 U | 1.8 U | 1.8 U | 1.8 UJ | 1.8 UJ |
| Sulfide | 100 | 100 U | 100 U | 100 U | 100 U | 100 U |

# Site 5 Groundwater Sampling Event No. 3
# July 1992

PROJECT: NSB KINGS BAY, GEORGIA — VOLATILE AQUEOUS ANALYSES (ug/l) — Validated Analytical Results

| SAMPLE LOCATION: | | KBA-5-1 | KBA-5-2 | KBA-5-3 | KBA-5-3D | KBA-5-4 | KBA-5-5 | KBA-5-6 | KBA-5-7 |
|---|---|---|---|---|---|---|---|---|---|
| LAB NUMBER: | | 22201009 | 22201010 | 22201011 | 22201016 | 22203006 | 22203005 | 22203004 | 22203003 |
| DATE SAMPLED: | | 07/10/92 | 07/10/92 | 07/10/92 | 07/10/92 | 07/12/92 | 07/12/92 | 07/12/92 | 07/12/92 |
| DATA ANALYZED: | | 07/13/92 | 07/13/92 | 07/13/92 | 07/17/92 | 07/20/92 | 07/20/92 | 07/20/92 | 07/20/92 |
| DILUTION FACTOR: | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| VOLATILES -- METHOD 8240 | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| Chloromethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromomethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Vinyl Chloride | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Chloroethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Methylene Chloride | 5 | 5 U | 6 U | 6 U | 7 U | 5 U | 5 U | 5 U | 5 U |
| Acetone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Carbon Disulfide | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Trichlorofluoromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloroethene (total) | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chloroform | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 2-Butanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,1,1-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Vinyl Acetate | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| Bromodichloromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloropropane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| cis-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Trichloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Dibromochloromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1,2-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Benzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| trans-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Bromoform | 5 | 5 U | 5 U | 5 U | 5 U | 5 UJ | 5 UJ | 5 UJ | 5 UJ |
| 2-Hexanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Methyl-2-Pentanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| Tetrachloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1,2,2-Tetrachloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 UJ | 5 UJ | 5 UJ | 5 UJ |
| Toluene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Ethylbenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Styrene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Xylene (total) | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,3-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,4-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 UJ | 5 UJ | 5 UJ | 5 UJ |
| 1,2-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 UJ | 5 UJ | 5 UJ | 5 UJ |

PROJECT: NSB KINGS BAY, GEORGIA — PCB AQUEOUS ANALYSES (ug/l) — Validated Analytical Results

| SAMPLE LOCATION: | | KBA-5-1 | KBA-5-2 | KBA-5-3 | KBA-5-3D | KBA-5-4 | KBA-5-5 | KBA-5-6 | KBA-5-7 |
|---|---|---|---|---|---|---|---|---|---|
| LAB NUMBER: | | 22201009 | 22201010 | 22201013 | 22201012 | 22203006 | 22203005 | 22203004 | 22203003 |
| DATE SAMPLED: | | 07/10/92 | 07/10/92 | 07/10/92 | 07/10/92 | 07/12/92 | 07/12/92 | 07/12/92 | 07/12/92 |
| DATE EXTRACTED: | | 07/13/92 | 07/13/92 | 07/13/92 | 07/13/92 | 07/13/92 | 07/13/92 | 07/13/92 | 07/13/92 |
| DATE ANALYZED: | | 08/04/92 | 08/04/92 | 08/04/92 | 08/04/92 | 08/07/92 | 08/07/92 | 08/07/92 | 08/07/92 |
| DILUTION: | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| POLYCHLORINATED BIPHENYLS (PCBs) -- METHOD 8080 | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| Aroclor-1016 | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Aroclor-1221 | 2.0 | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U |
| Aroclor-1232 | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Aroclor-1242 | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Aroclor-1248 | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Aroclor-1254 | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Aroclor-1260 | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |

PROJECT: NSB KINGS BAY, GEORGIA — PCB SOIL ANALYSES (ug/kg) — Validated Analytical Results

| SAMPLE LOCATION: | | 05-SS-08 | 05-SS-08D | 05-SS-09 | 05-SS-10 | 05-SS-11 | 05-SS-12 | 05-SS-13 | 05-SS-14 |
|---|---|---|---|---|---|---|---|---|---|
| LAB NUMBER: | | 22208006 | 22208007 | 22208008 | 22208009 | 22208010 | 22208011 | 22208012 | 22208013 |
| DATE SAMPLED: | | 07/13/92 | 07/13/92 | 07/13/92 | 07/13/92 | 07/13/92 | 07/13/92 | 07/13/92 | 07/13/92 |
| DATE EXTRACTED: | | 07/14/92 | 07/14/92 | 07/14/92 | 07/14/92 | 07/14/92 | 07/14/92 | 07/14/92 | 07/14/92 |
| DATE ANALYZED: | | 08/08/92 | 08/08/92 | 08/08/92 | 08/08/92 | 08/08/92 | 08/08/92 | 08/08/92 | 08/08/92 |
| DILUTION: | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| PERCENT SOLIDS: | | 86 | 87 | 85 | 82 | 85 | 89 | 84 | 92 |
| POLYCHLORINATED BIPHENYLS (PCBs) -- METHOD 8080 | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| Aroclor-1016 | 33 | 38 U | 38 U | 39 U | 40 U | 39 U | 37 U | 39 U | 36 U |
| Aroclor-1221 | 67 | 78 U | 77 U | 79 U | 82 U | 79 U | 75 U | 80 U | 73 U |
| Aroclor-1232 | 33 | 38 U | 38 U | 39 U | 40 U | 39 U | 37 U | 39 U | 36 U |
| Aroclor-1242 | 33 | 38 U | 38 U | 39 U | 40 U | 39 U | 37 U | 39 U | 36 U |
| Aroclor-1248 | 33 | 38 U | 38 U | 39 U | 40 U | 39 U | 37 U | 39 U | 36 U |
| Aroclor-1254 | 33 | 38 U | 38 U | 39 U | 40 U | 39 U | 37 U | 39 U | 36 U |
| Aroclor-1260 | 33 | 8.7 J | 14 J | 39 U | 40 U | 39 U | 37 U | 4.4 J | 7.9 J |

PROJECT: NSB KINGS BAY, GEORGIA — INORGANIC AQUEOUS ANALYSES (ug/l) — Validated Analytical Results

| ANALYTE | CRDL | KBA-5-1 | KBA-5-1F | KBA-5-2 | KBA-5-2F | KBA-5-3 | KBA-5-3D | KBA-5-3F | KBA-5-4 |
|---|---|---|---|---|---|---|---|---|---|
| SAMPLE LOCATION: | | KBA-5-1 | KBA-5-1F | KBA-5-2 | KBA-5-2F | KBA-5-3 | KBA-5-3D | KBA-5-3F | KBA-5-4 |
| LAB NUMBER: | | 22201009 | 22202005 | 22201010 | 22202006 | 22201011 | 22201012 | 22202007 | 22203006 |
| DATE SAMPLED: | | 07/10/92 | 07/10/92 | 07/10/92 | 07/10/92 | 07/10/92 | 07/10/92 | 07/10/92 | 07/12/92 |
| Antimony | 60 | 12.4 U | 12.4 U | 12.4 U | 12.4 U | 12.4 U | 12.4 U | 12.4 U | 12.4 UJ |
| Arsenic | 10 | 5.1 J | 1.6 J | 21.4 | 18.4 | 6.7 J | 5.8 J | 2.8 J | 5.9 J |
| Barium | 200 | 132 J | 62.2 J | 115 J | 15.9 U | 92.8 J | 82.6 J | 46.1 J | 132 J |
| Beryllium | 5 | 0.48 J | 0.20 U | 0.41 J | 0.20 U | 0.20 U | 0.26 J | 0.20 U | 0.41 J |
| Cadmium | 5 | 2.7 U | 3.1 J | 2.7 U | 2.8 J | 2.7 U | 2.7 U | 2.7 U | 2.7 U |
| Chromium | 10 | 13.0 J | 1.9 UJ | 21.2 J | 4.2 J | 13.5 J | 12.9 J | 1.9 UJ | 18.4 |
| Cobalt | 50 | 4.8 J | 2.1 J | 4.0 J | 3.5 J | 3.3 J | 1.6 U | 2.5 J | 1.6 UJ |
| Copper | 25 | 26.2 J | 6.3 UJ | 37.3 J | 15.1 J | 61.8 J | 69.9 J | 6.5 UJ | 76.5 |
| Lead | 5 | 9.1 J | 4.0 J | 10.0 J | 2.0 J | 6.1 J | 14.7 J | 0.96 J | 7.0 U |
| Mercury | 0.2 | 0.16 U | 0.16 U | 0.16 U | 0.16 U | 0.16 U | 0.16 U | 0.16 U | 0.16 U |
| Nickel | 40 | 15.4 J | 10.7 U | 10.7 U | 10.7 U | 109 | 30.2 J | 10.7 U | 42.6 |
| Selenium | 5 | 1.9 U | 1.9 U | 2.4 J | 1.9 U | 1.9 U | 1.9 U | 1.9 U | 1.9 U |
| Silver | 10 | 1.5 U | 1.5 U | 1.5 U | 1.5 U | 1.5 U | 1.5 U | 1.5 U | 1.5 U |
| Thallium | 10 | 2.1 U | 2.1 U | 2.1 U | 2.1 U | 2.1 U | 2.1 U | 2.1 U | 2.1 U |
| Tin | 200 | 26.4 U | 26.4 U | 26.4 U | 26.4 U | 26.4 U | 26.4 U | 26.4 U | 26.4 U |
| Vanadium | 50 | 13.6 J | 1.3 U | 20.6 J | 4.9 J | 12.7 J | 9.2 J | 1.6 J | 12.1 J |
| Zinc | 20 | 85.6 J | 20.5 J | 162 J | 132 J | 199 J | 123 J | 26.6 J | 129 |
| Cyanide | 10 | 2.2 U | 2.2 U | 2.2 U | 2.2 U | 2.2 U | 2.2 U | 2.2 U | 2.2 U |
| Sulfide | 100 | 200 | 100 U | 200 | 100 U | 100 U | 200 | 100 U | 300 |
| Total Dissolved Solids (mg/L) | | 121 | --- | 194 | --- | 177 | 160 | --- | 540 |
| Total Suspended Solids (mg/L) | | 292 | --- | 464 | --- | 79 | 152 | --- | 294 |

PROJECT: NSB KINGS BAY, GEORGIA — INORGANIC AQUEOUS ANALYSES (ug/l) — Validated Analytical Results

| ANALYTE | CRDL | KBA-5-4F | KBA-5-5 | KBA-5-5DF | KBA-5-5F | KBA-5-6 | KBA-5-6F | KBA-5-7 | KBA-5-7F |
|---|---|---|---|---|---|---|---|---|---|
| SAMPLE LOCATION: | | KBA-5-4F | KBA-5-5 | KBA-5-5DF | KBA-5-5F | KBA-5-6 | KBA-5-6F | KBA-5-7 | KBA-5-7F |
| LAB NUMBER: | | 22203011 | 22203005 | 22203007 | 22203010 | 22203004 | 22203009 | 22203003 | 22203008 |
| DATE SAMPLED: | | 07/12/92 | 07/12/92 | 07/12/92 | 07/12/92 | 07/12/92 | 07/12/92 | 07/12/92 | 07/12/92 |
| Antimony | 60 | 12.4 UJ | 12.4 UJ | 12.4 UJ | 12.4 UJ | 12.4 UJ | 12.4 UJ | 12.4 UJ | 12.4 UJ |
| Arsenic | 10 | 5.2 J | 37.0 | 8.3 J | 2.6 J | 6.3 J | 3.0 J | 135 | 2.7 J |
| Barium | 200 | 23.2 U | 207 | 22.9 U | 51.8 J | 131 J | 30.3 J | 1080 | 32.0 J |
| Beryllium | 5 | 0.24 UJ | 1.7 J | 0.24 UJ | 0.24 UJ | 0.56 J | 0.24 UJ | 8.2 | 0.24 UJ |
| Cadmium | 5 | 2.7 U | 2.7 U | 2.7 U | 2.7 U | 2.7 U | 3.0 J | 27.4 | 2.7 U |
| Chromium | 10 | 1.9 U | 46.4 | 1.9 U | 1.9 U | 23.0 | 1.9 J | 271 | 1.9 U |
| Cobalt | 50 | 1.6 UJ | 10.8 J | 1.6 UJ | 1.6 UJ | 1.6 UJ | 1.6 UJ | 62.6 J | 1.6 UJ |
| Copper | 25 | 2.7 J | 38.2 | 13.1 J | 1.8 J | 19.1 J | 19.1 J | 249 | 19.1 J |
| Lead | 5 | 2.1 U | 36.9 | 5.4 U | 1.8 U | 10.7 U | 1.8 U | 68.9 | 1.8 U |
| Mercury | 0.2 | 0.16 U | 0.27 | 0.16 U | 0.16 U | 0.16 U | 0.16 U | 0.41 | 0.16 U |
| Nickel | 40 | 10.7 U | 56.9 | 10.7 U | 10.7 U | 25.0 J | 10.7 U | 128 | 10.7 U |
| Selenium | 5 | 1.9 U | 1.9 U | 1.9 U | 1.9 U | 1.9 U | 1.9 U | 1.9 U | 1.9 U |
| Silver | 10 | 1.5 U | 1.5 U | 1.5 U | 1.5 U | 1.5 U | 1.5 U | 1.5 U | 1.5 U |
| Thallium | 10 | 2.1 U | 3.0 J | 2.1 U | 2.1 U | 2.1 U | 2.1 U | 3.4 J | 2.1 U |
| Tin | 200 | 26.4 U | 26.4 U | 26.4 U | 26.4 U | 26.4 U | 26.4 U | 26.4 U | 26.4 U |
| Vanadium | 50 | 1.3 U | 42.1 J | 1.3 U | 1.9 J | 18.4 J | 1.5 J | 251 | 1.3 U |
| Zinc | 20 | 20.0 | 135 | 23.9 | 30.8 | 68.8 | 27.2 | 519 | 40.4 |
| Cyanide | 10 | 2.2 U | 2.2 U | 2.2 U | 2.2 U | 2.2 U | 2.2 U | 2.2 U | 2.2 U |
| Sulfide | 100 | 100 U | 300 | 200 | 200 | 300 | 200 | 300 | 100 U |
| Total Dissolved Solids (mg/L) | | --- | 107 | --- | --- | 116 | --- | 288 | --- |
| Total Suspended Solids (mg/L) | | --- | 1450 | --- | --- | 355 | --- | 2990 | --- |

Note:

| | |
|---|---|
| --- | -analysis not requested or performed |
| KBA-XX-X | -unfiltered sample |
| KBA-XX-XD | -duplicate, unfiltered sample |
| KBA-XX-XF | -filtered sample |
| KBA-XX-XDF | -duplicate, filtered sample |

# Site 16 Groundwater Sampling Event No. 3
July 1992

PROJECT: NSB KINGS BAY, GEORGIA

VOLATILE AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| | | | | | |
|---|---|---|---|---|---|
| | SAMPLE LOCATION: | KBA-16-1 | KBA-16-2 | KBA-16-3 | KBA-16-4 |
| | LAB NUMBER: | 22205006 | 22205005 | 22205004 | 22205003 |
| | DATE SAMPLED: | 07/11/92 | 07/11/92 | 07/11/92 | 07/11/92 |
| | DATE ANALYZED: | 07/20/92 | 07/20/92 | 07/20/92 | 07/20/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 |
| VOLATILES -- METHOD 8240 | | | | | |
| ANALYTE | PQL | | | | |
| Chloromethane | 10 | 10 U | 10 U | 10 U | 10 U |
| Bromomethane | 10 | 10 U | 10 U | 10 U | 10 U |
| Vinyl Chloride | 10 | 10 U | 10 U | 10 U | 10 U |
| Chloroethane | 10 | 10 U | 10 U | 10 U | 10 U |
| Methylene Chloride | 5 | 5 U | 5 U | 5 U | 6 U |
| Acetone | 10 | 12 U | 10 U | 10 U | 12 U |
| Carbon Disulfide | 5 | 5 U | 5 U | 5 U | 5 U |
| Trichlorofluoromethane | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethene | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloroethene (total) | 5 | 5 U | 5 U | 5 U | 5 U |
| Chloroform | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U |
| 2-Butanone | 10 | 10 U | 10 U | 10 U | 10 U |
| 1,1,1-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | 5 | 5 U | 5 U | 5 U | 5 U |
| Vinyl Acetate | 10 | 10 U | 10 U | 10 U | 10 U |
| Bromodichloromethane | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloropropane | 5 | 5 U | 5 U | 5 U | 5 U |
| cis-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U |
| Trichloroethene | 5 | 5 U | 5 U | 5 U | 5 U |
| Dibromochloromethane | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,1,2-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U |
| Benzene | 5 | 5 U | 5 U | 5 U | 5 U |
| trans-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U |
| Bromoform | 5 | 5 UJ | 5 UJ | 5 UJ | 5 UJ |
| 2-Hexanone | 10 | 10 U | 10 U | 10 U | 10 U |
| 4-Methyl-2-Pentanone | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| Tetrachloroethene | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,1,2,2-Tetrachloroethane | 5 | 5 UJ | 5 UJ | 5 UJ | 5 UJ |
| Toluene | 5 | 5 U | 5 U | 5 | 5 U |
| Chlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U |
| Ethylbenzene | 5 | 5 U | 5 U | 5 U | 5 U |
| Styrene | 5 | 5 U | 5 U | 5 U | 5 U |
| Xylene (total) | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,3-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,4-Dichlorobenzene | 5 | 5 UJ | 5 UJ | 5 UJ | 5 UJ |
| 1,2-Dichlorobenzene | 5 | 5 UJ | 5 UJ | 5 UJ | 5 UJ |

PROJECT: NSB KINGS BAY, GEORGIA

SEMIVOLATILE AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| | SAMPLE LOCATION: | KBA-16-1 | KBA-16-2 | KBA-16-2D | KBA-16-3 | KBA-16-4 |
|---|---|---|---|---|---|---|
| | LAB NUMBER: | 22205006 | 22205005 | 22205011 | 22205004 | 22205003 |
| | DATE SAMPLED: | 07/11/92 | 07/11/92 | 07/11/92 | 07/11/92 | 07/11/92 |
| | DATE EXTRACTED: | 07/14/92 | 07/14/92 | 07/14/92 | 07/14/92 | 07/14/92 |
| | DATE ANALYZED: | 07/17/92 | 07/16/92 | 07/17/92 | 07/16/92 | 07/16/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| SEMIVOLATILES -- METHOD 8270 | | | | | | |
| ANALYTE | PQL | | | | | |
| bis (2-Chloroethyl) Ether | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,3- Dichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,4- Dichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzyl Alcohol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,2- Dichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| bis (2- Chloroisopropyl) Ether | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| N-Nitroso-Di-n-Propylamine | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Hexachloroethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Nitrobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Isophorone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| bis (2-Chloroethoxy) Methane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,2,4-Trichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Naphthalene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Chloroaniline | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Hexachlorobutadiene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Methylnaphthalene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Hexachlorocyclopentadiene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Chloronaphthalene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Nitroaniline | 50 | 50 U | 50 U | 50 U | 50 U | 50 U |
| Dimethylphthalate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Acenaphthylene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2,6-Dinitrotoluene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 3-Nitroaniline | 50 | 50 U | 50 U | 50 U | 50 U | 50 U |
| Acenaphthene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Dibenzofuran | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2,4-Dinitrotoluene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Diethylphthalate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Chlorophenyl-phenylether | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Fluorene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Nitroaniline | 50 | 50 U | 50 U | 50 U | 50 U | 50 U |
| N-Nitrosodiphenylamine | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Bromophenyl-phenylether | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Hexachlorobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Phenanthrene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Anthracene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Di-n-Butylphthalate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Fluoranthene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Pyrene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Butylbenzylphthalate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 3,3'-Dichlorobenzidine | 20 | 20 U | 20 U | 20 U | 20 U | 20 U |
| Benzo (a) Anthracene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Chrysene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| bis (2-Ethylhexyl) Phthalate | 10 | 10 U | 3 J | 6 J | 7 J | 3 J |
| Di-n-Octyl Phthalate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzo (b) Fluoranthene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzo (k) Fluoranthene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzo (a) Pyrene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Indeno (1,2,3-cd) Pyrene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Dibenz (a,h) Anthracene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzo (g,h,i) Perylene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |

PROJECT: NSB KINGS BAY, GEORGIA

INORGANIC AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| ANALYTE | CRDL | KBA-16-1 | KBA-16-1F | KBA-16-2 | KBA-16-2F | KBA-16-3 | KBA-16-3F | KBA-16-4 | KBA-16-4F |
|---|---|---|---|---|---|---|---|---|---|
| SAMPLE LOCATION: | | KBA-16-1 | KBA-16-1F | KBA-16-2 | KBA-16-2F | KBA-16-3 | KBA-16-3F | KBA-16-4 | KBA-16-4F |
| LAB NUMBER: | | 22205006 | 22205007 | 22205005 | 22205010 | 22205004 | 22205009 | 22205003 | 22205008 |
| DATE SAMPLED: | | 07/11/92 | 07/11/92 | 07/11/92 | 07/11/92 | 07/11/92 | 07/11/92 | 07/11/92 | 07/11/92 |
| Antimony | 60 | 12.4 U | 12.4 U | 12.4 U | 12.4 U | 12.4 U | 12.4 U | 12.4 U | 12.4 U |
| Arsenic | 10 | 4.4 J | 1.1 J | 21.4 J | 3.2 J | 8.3 J | 6.2 J | 3.5 J | 1.00 UJ |
| Barium | 200 | 35.4 J | 18.2 J | 74.2 J | 17.4 J | 83.3 J | 19.5 J | 38.4 J | 24.9 J |
| Beryllium | 5 | 0.24 U | 0.24 U | 0.64 J | 0.24 U | 1.5 J | 0.24 U | 0.24 U | 0.24 U |
| Cadmium | 5 | 3.4 J | 2.7 U | 2.7 U | 2.7 U | 2.7 U | 2.7 U | 2.7 U | 2.7 U |
| Chromium | 10 | 16.4 | 4.1 U | 40.7 | 4.0 U | 31.2 | 4.7 U | 11.3 U | 4.0 U |
| Cobalt | 50 | 2.9 U | 2.1 U | 11.9 U | 2.6 U | 5.8 U | 1.6 U | 1.6 U | 1.6 U |
| Copper | 25 | 23.9 J | 18.6 J | 30.4 | 24.8 J | 82.8 | 15.8 U | 14.6 U | 11.8 U |
| Lead | 5 | 12.5 J | 1.4 J | 14.9 J | 0.94 UJ | 6.2 J | 0.94 UJ | 5.2 J | 1.0 J |
| Mercury | 0.2 | 0.25 U | 0.17 U | 0.26 U | 0.20 U | 0.22 U | 0.17 U | 0.17 U | 0.20 U |
| Nickel | 40 | 10.7 U | 10.7 U | 24.3 J | 10.7 U | 274 | 10.7 U | 10.9 J | 10.7 U |
| Selenium | 5 | 2.1 J | 1.9 U | 2.2 J | 1.9 U | 1.9 U | 1.9 U | 1.9 U | 1.9 U |
| Silver | 10 | 1.5 U | 1.5 J | 1.6 J | 1.5 J | 1.5 U | 1.5 U | 1.5 U | 1.5 U |
| Thallium | 10 | 2.1 UJ | 2.1 UJ | 2.1 UJ | 2.1 UJ | 2.1 UJ | 2.1 UJ | 2.1 UJ | 2.1 UJ |
| Tin | 200 | 26.4 U | 26.4 U | 26.4 U | 26.4 U | 26.4 U | 26.4 U | 26.4 U | 26.4 U |
| Vanadium | 50 | 16.4 J | 2.4 J | 40.7 J | 2.9 J | 28.1 J | 5.3 J | 10.6 J | 5.7 J |
| Zinc | 20 | 31.3 U | 55.5 U | 77.0 | 41.7 U | 268 | 31.6 U | 32.6 U | 35.2 U |
| Cyanide | 10 | 2.2 U | 2.2 U | 2.2 U | 2.2 U | 2.2 U | 2.2 U | 2.2 U | 2.2 U |
| Sulfide | 100 | 200 | 300 | 500 | 100 U | 200 | 300 | 400 | 500 |
| Total Dissolved Solids (mg/L) | | 430 | --- | 300 | --- | 280 | --- | 659 | --- |
| Total Suspended Solids (mg/L) | | 304 | --- | 716 | --- | 326 | --- | 171 | --- |

Note:

| | |
|---|---|
| --- | -analysis not requested or performed |
| KBA-XX-X | -unfiltered sample |
| KBA-XX-XF | -filtered sample |

**Trip Blanks**
**Source Water Blanks**
**Sampling Event No. 3**
**July 1992**

PROJECT: NSB KINGS BAY, GEORGIA

VOLATILE AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SAMPLE LOCATION: | | BT-17-FB | BT-18-FB | BT-19-FB | BT-20-FB | BS-17-ER | BS-18-ER | BS-19-ER |
| LAB NUMBER: | | 22191006 | 22201002 | 22205002 | 22203001 | 22191011 | 22201005 | 22205001 |
| DATE SAMPLED: | | 07/09/92 | 07/10/92 | 07/11/92 | 07/12/92 | 07/09/92 | 07/10/92 | 07/11/92 |
| DATA ANALYZED: | | 07/10/92 | 07/13/92 | 07/20/92 | 07/20/92 | 07/13/92 | 07/13/92 | 07/20/92 |
| DILUTION FACTOR: | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| VOLATILES -- METHOD 8240 | | | | | | | | |
| ANALYTE | PQL | | | | | | | |
| Chloromethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromomethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Vinyl Chloride | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Chloroethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Methylene Chloride | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Acetone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Carbon Disulfide | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Trichlorofluoromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloroethene (total) | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chloroform | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 2-Butanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,1,1-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Vinyl Acetate | 10 | 10 U | 10 UJ | 10 U | 10 U | 10 UJ | 10 UJ | 10 U |
| Bromodichloromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloropropane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| cis-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Trichloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Dibromochloromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1,2-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Benzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| trans-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Bromoform | 5 | 5 U | 5 U | 5 UJ | 5 UJ | 5 U | 5 U | 5 UJ |
| 2-Hexanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Methyl-2-Pentanone | 10 | 10 U | 10 U | 10 UJ | 10 UJ | 10 U | 10 U | 10 UJ |
| Tetrachloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1,2,2-Tetrachloroethane | 5 | 5 U | 5 U | 5 UJ | 5 UJ | 5 U | 5 U | 5 UJ |
| Toluene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Ethylbenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Styrene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Xylene (total) | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,3-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,4-Dichlorobenzene | 5 | 5 U | 5 U | 5 UJ | 5 UJ | 5 U | 5 U | 5 UJ |
| 1,2-Dichlorobenzene | 5 | 5 U | 5 U | 5 UJ | 5 UJ | 5 U | 5 U | 5 UJ |

PROJECT: NSB KINGS BAY, GEORGIA

VOLATILE AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| | | | | | |
|---|---|---|---|---|---|
| | SAMPLE LOCATION: | BS-20-ER | BS-06-FB | BS-08-FB | BT-21-FB |
| | LAB NUMBER: | 22203002 | 22208003 | 22208002 | 22208004 |
| | DATE SAMPLED: | 07/12/92 | 07/13/92 | 07/13/92 | 07/13/92 |
| | DATE ANALYZED: | 07/20/92 | 07/21/92 | 07/20/92 | 07/21/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 |
| VOLATILES -- METHOD 8240 | | | | | |
| ANALYTE | PQL | | | | |
| Chloromethane | 10 | 10 U | 10 U | 10 U | 10 U |
| Bromomethane | 10 | 10 U | 10 U | 10 U | 10 U |
| Vinyl Chloride | 10 | 10 U | 10 U | 10 U | 10 U |
| Chloroethane | 10 | 10 U | 10 U | 10 U | 10 U |
| Methylene Chloride | 5 | 5 U | 5 U | 5 U | 18 U |
| Acetone | 10 | 10 U | 10 U | 10 U | 10 U |
| Carbon Disulfide | 5 | 5 U | 5 U | 5 U | 5 U |
| Trichlorofluoromethane | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethene | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloroethene (total) | 5 | 5 U | 5 U | 5 U | 5 U |
| Chloroform | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U |
| 2-Butanone | 10 | 10 U | 10 U | 10 U | 10 U |
| 1,1,1-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | 5 | 5 U | 5 U | 5 U | 5 U |
| Vinyl Acetate | 10 | 10 U | 10 U | 10 U | 10 U |
| Bromodichloromethane | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloropropane | 5 | 5 U | 5 U | 5 U | 5 U |
| cis-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U |
| Trichloroethene | 5 | 5 U | 5 U | 5 U | 5 U |
| Dibromochloromethane | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,1,2-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U |
| Benzene | 5 | 5 U | 5 U | 5 U | 5 U |
| trans-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U |
| Bromoform | 5 | 5 UJ | 5 UJ | 5 UJ | 5 UJ |
| 2-Hexanone | 10 | 10 U | 10 U | 10 U | 10 U |
| 4-Methyl-2-Pentanone | 10 | 10 UJ | 10 UJ | 10 UJ | 10 UJ |
| Tetrachloroethene | 5 | 5 U | 5 U | 5 U | 5 UJ |
| 1,1,2,2-Tetrachloroethane | 5 | 5 UJ | 5 UJ | 5 UJ | 5 U |
| Toluene | 5 | 5 U | 5 U | 5 U | 5 U |
| Chlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U |
| Ethylbenzene | 5 | 5 U | 5 U | 5 U | 5 U |
| Styrene | 5 | 5 U | 5 U | 5 U | 5 U |
| Xylene (total) | 5 | 2 J | 5 U | 5 U | 5 U |
| 1,3-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 UJ |
| 1,4-Dichlorobenzene | 5 | 5 UJ | 5 UJ | 5 UJ | 5 UJ |
| 1,2-Dichlorobenzene | 5 | 5 UJ | 5 UJ | 5 UJ | 5 UJ |

PROJECT: NSB KINGS BAY, GEORGIA

SEMIVOLATILE AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| | | | | |
|---|---|---|---|---|
| | SAMPLE LOCATION: | BS-19-ER | BS-06-FB | BS-08-FB |
| | LAB NUMBER: | 22205001 | 22208003 | 22208002 |
| | DATE SAMPLED: | 07/11/92 | 07/13/92 | 07/13/92 |
| | DATE EXTRACTED: | 07/14/92 | 07/14/92 | 07/14/92 |
| | DATE ANALYZED: | 07/16/92 | 07/21/92 | 07/21/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 |
| SEMIVOLATILES -- METHOD 8270 | | | | |
| ANALYTE | PQL | | | |
| bis (2-Chloroethyl) Ether | 10 | 10 U | 10 U | 10 U |
| 1,3- Dichlorobenzene | 10 | 10 U | 10 U | 10 U |
| 1,4- Dichlorobenzene | 10 | 10 U | 10 U | 10 U |
| Benzyl Alcohol | 10 | 10 U | 10 U | 10 U |
| 1,2- Dichlorobenzene | 10 | 10 U | 10 U | 10 U |
| bis (2- Chloroisopropyl) Ether | 10 | 10 U | 10 U | 10 U |
| N-Nitroso-Di-n-Propylamine | 10 | 10 U | 10 U | 10 U |
| Hexachloroethane | 10 | 10 U | 10 U | 10 U |
| Nitrobenzene | 10 | 10 U | 10 U | 10 U |
| Isophorone | 10 | 10 U | 10 U | 10 U |
| bis (2-Chloroethoxy) Methane | 10 | 10 U | 10 U | 10 U |
| 1,2,4-Trichlorobenzene | 10 | 10 U | 10 U | 10 U |
| Naphthalene | 10 | 10 U | 10 U | 10 U |
| 4-Chloroaniline | 10 | 10 U | 10 U | 10 U |
| Hexachlorobutadiene | 10 | 10 U | 10 U | 10 U |
| 2-Methylnaphthalene | 10 | 10 U | 10 UJ | 10 UJ |
| Hexachlorocyclopentadiene | 10 | 10 U | 10 U | 10 U |
| 2-Chloronaphthalene | 10 | 10 U | 10 U | 10 U |
| 2-Nitroaniline | 50 | 50 U | 50 U | 50 U |
| Dimethylphthalate | 10 | 10 U | 10 U | 10 U |
| Acenaphthylene | 10 | 10 U | 10 U | 10 U |
| 2,6-Dinitrotoluene | 10 | 10 U | 10 U | 10 U |
| 3-Nitroaniline | 50 | 50 U | 50 U | 50 U |
| Acenaphthene | 10 | 10 U | 10 U | 10 U |
| Dibenzofuran | 10 | 10 U | 10 U | 10 U |
| 2,4-Dinitrotoluene | 10 | 10 U | 10 U | 10 U |
| Diethylphthalate | 10 | 10 U | 10 U | 10 U |
| 4-Chlorophenyl-phenylether | 10 | 10 U | 10 U | 10 U |
| Fluorene | 10 | 10 U | 10 U | 10 U |
| 4-Nitroaniline | 50 | 50 U | 50 U | 50 U |
| N-Nitrosodiphenylamine | 10 | 10 U | 10 U | 10 U |
| 4-Bromophenyl-phenylether | 10 | 10 U | 10 U | 10 U |
| Hexachlorobenzene | 10 | 10 U | 10 U | 10 U |
| Phenanthrene | 10 | 10 U | 10 U | 10 U |
| Anthracene | 10 | 10 U | 10 U | 10 U |
| Di-n-Butylphthalate | 10 | 10 U | 10 U | 10 U |
| Fluoranthene | 10 | 10 U | 10 U | 10 U |
| Pyrene | 10 | 10 U | 10 U | 10 U |
| Butylbenzylphthalate | 10 | 10 U | 10 U | 10 U |
| 3,3'-Dichlorobenzidine | 20 | 20 U | 20 U | 20 U |
| Benzo (a) Anthracene | 10 | 10 U | 10 U | 10 U |
| Chrysene | 10 | 10 U | 10 U | 10 U |
| bis (2-Ethylhexyl) Phthalate | 10 | 10 U | 10 U | 10 U |
| Di-n-Octyl Phthalate | 10 | 10 U | 10 U | 10 U |
| Benzo (b) Fluoranthene | 10 | 10 U | 10 U | 10 U |
| Benzo (k) Fluoranthene | 10 | 10 U | 10 U | 10 U |
| Benzo (a) Pyrene | 10 | 10 U | 10 U | 10 U |
| Indeno (1,2,3-cd) Pyrene | 10 | 10 U | 10 U | 10 U |
| Dibenz (a,h) Anthracene | 10 | 10 U | 10 U | 10 U |
| Benzo (g,h,i) Perylene | 10 | 10 U | 10 U | 10 U |

PROJECT: NSB KINGS BAY, GEORGIA

PCB AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| | | | | | | |
|---|---|---|---|---|---|---|
| SAMPLE LOCATION: | | BS-18-ER | BS-20-ER | BS-21-ER | BS-06-FB | BS-08-FB |
| LAB NUMBER: | | 22201014 | 22203002 | 22208005 | 22208003 | 22208002 |
| DATE SAMPLED: | | 07/10/92 | 07/12/92 | 07/13/92 | 07/13/92 | 07/13/92 |
| DATE EXTRACTED: | | 07/13/92 | 07/13/92 | 07/14/92 | 07/14/92 | 07/14/92 |
| DATE ANALYZED: | | 08/04/92 | 08/07/92 | 08/07/92 | 08/07/92 | 08/07/92 |
| DILUTION: | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| POLYCHLORINATED BIPHENYLS (PCBs) -- METHOD 8080 | | | | | | |
| ANALYTE | PQL | | | | | |
| Aroclor-1016 | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Aroclor-1221 | 2.0 | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U |
| Aroclor-1232 | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Aroclor-1242 | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Aroclor-1248 | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Aroclor-1254 | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Aroclor-1260 | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |

PROJECT: NSB KINGS BAY, GEORGIA

INORGANIC AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| ANALYTE | CRDL | BS-17-ER | BS-18-ER | BS-19-ER | BS-20-ER | BS-06-FB | BS-07-FB | BS-08-FB |
|---|---|---|---|---|---|---|---|---|
| SAMPLE LOCATION: | | BS-17-ER | BS-18-ER | BS-19-ER | BS-20-ER | BS-06-FB | BS-07-FB | BS-08-FB |
| LAB NUMBER: | | 22191011 | 22201005 | 22205001 | 22203002 | 22208003 | 22208001 | 22208002 |
| DATE SAMPLED: | | 07/09/92 | 07/10/92 | 07/11/92 | 07/12/92 | 07/13/92 | 07/13/92 | 07/13/92 |
| Antimony | 60 | 12.4 U | 12.4 U | 12.4 U | 12.4 UJ | 12.4 U | 12.4 U | 12.4 U |
| Arsenic | 10 | 1.0 UJ | 1.0 U | 1.0 UJ | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Barium | 200 | 1.0 J | 6.4 U | 0.57 U | 9.5 U | 1.0 U | 0.57 U | 1.3 U |
| Beryllium | 5 | 0.24 U | 0.20 U | 0.24 U | 0.24 UJ | 0.28 J | 0.24 UJ | 0.24 UJ |
| Cadmium | 5 | 2.7 U | 2.7 U | 2.7 U | 2.7 U | 2.7 U | 2.7 U | 2.7 U |
| Chromium | 10 | 2.9 U | 1.9 UJ | 1.9 U | 1.9 U | 1.9 U | 1.9 U | 1.9 U |
| Cobalt | 50 | 5.4 U | 1.6 U | 1.6 U | 1.6 UJ | 1.6 UJ | 1.6 UJ | 1.6 UJ |
| Copper | 25 | 9.1 U | 6.8 UJ | 5.9 U | 18.5 J | 2.6 J | 3.1 J | 1.8 U |
| Lead | 5 | 1.5 J | 0.94 U | 0.94 UJ | 4.3 U | 0.94 U | 0.94 U | 0.94 U |
| Mercury | 0.2 | 0.16 U | 0.16 U | 0.17 U | 0.16 U | 0.16 U | 0.16 U | 0.16 U |
| Nickel | 40 | 10.7 U | 10.7 U | 10.7 U | 10.7 U | 10.7 U | 10.7 U | 10.7 U |
| Selenium | 5 | 1.9 U | 1.9 U | 1.9 U | 1.9 U | 1.9 U | 1.9 U | 1.9 U |
| Silver | 10 | 1.5 U | 1.5 U | 1.5 U | 1.5 U | 1.5 U | 1.5 U | 1.5 U |
| Thallium | 10 | 2.1 UJ | 2.1 U | 2.1 UJ | 2.1 U | 2.1 U | 2.1 U | 2.1 U |
| Vanadium | 50 | 1.3 U | 1.3 U | 1.3 U | 1.3 U | 1.3 U | 1.3 U | 1.3 U |
| Zinc | 20 | 12.9 U | 14.9 J | 35.9 U | 22.8 | 7.6 U | 7.6 U | 7.6 U |
| Cyanide | 10 | 2.2 U | 2.2 U | 2.2 U | 2.2 U | 2.2 U | 2.2 U | 2.2 U |
| Tin | 200 | 26.4 U | 26.4 U | 26.4 U | 26.4 U | 26.4 U | 26.4 U | 26.4 U |
| Sulfide | 100 | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U |
| Total Dissolved Solids (mg/L) | | 20 | 10 U | 10 U | 10 U | 10 U | --- | 10 U |
| Total Suspended Solids (mg/L) | | 4 | 4 U | 4 U | 4 U | 4 U | --- | 4 U |

# Site 5 Groundwater Sampling Event No. 4
# September 1992

PROJECT: NSB KINGS BAY, GEORGIA

VOLATILE AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SAMPLE LOCATION: | | KBA-5-1 | KBA-5-2 | KBA-5-3 | KBA-5-3D | KBA-5-4 | KBA-5-5 | KBA-5-6 | KBA-5-7 |
| LAB NUMBER: | | 22727005 | 22727006 | 22727007 | 22727008 | 22727001 | 22725003 | 22725006 | 22725007 |
| DATE SAMPLED: | | 09/12/92 | 09/12/92 | 09/12/92 | 09/12/92 | 09/12/92 | 09/13/92 | 09/13/92 | 09/13/92 |
| DATA ANALYZED: | | 09/24/92 | 09/24/92 | 09/24/92 | 09/24/92 | 09/23/92 | 09/24/92 | 09/24/92 | 09/24/92 |
| DILUTION FACTOR: | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| VOLATILES -- METHOD 8240 | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| Chloromethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromomethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Vinyl Chloride | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Chloroethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Methylene Chloride | 5 | 7 U | 7 U | 5 U | 8 U | 5 U | 7 U | 5 U | 6 U |
| Acetone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Carbon Disulfide | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Trichlorofluoromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloroethene (total) | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chloroform | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 2-Butanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,1,1-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Vinyl Acetate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromodichloromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloropropane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| cis-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Trichloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Dibromochloromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1,2-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Benzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| trans-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Bromoform | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 2-Hexanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Methyl-2-Pentanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Tetrachloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1,2,2-Tetrachloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Toluene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Ethylbenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Styrene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Xylene (total) | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,3-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,4-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |

PROJECT: NSB KINGS BAY, GEORGIA — PCB AQUEOUS ANALYSES (ug/l) — Validated Analytical Results

| | SAMPLE LOCATION: | KBA-5-1 | KBA-5-2 | KBA-5-3 | KBA-5-3D |
|---|---|---|---|---|---|
| | LAB NUMBER: | 22727005 | 22727006 | 22727007 | 22727008 |
| | DATE SAMPLED: | 09/12/92 | 09/12/92 | 09/12/92 | 09/12/92 |
| | DATE EXTRACTED: | 09/14/92 | 09/14/92 | 09/14/92 | 09/14/92 |
| | DATE ANALYZED: | 10/03/92 | 10/03/92 | 10/03/92 | 10/04/92 |
| | DILUTION: | 1.0 | 1.0 | 1.0 | 1.0 |
| POLYCHLORINATED BIPHENYLS (PCBs) -- METHOD 8080 | | | | | |
| ANALYTE | PQL | | | | |
| Aroclor-1016 | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Aroclor-1221 | 2.0 | 2.0 U | 2.0 U | 2.0 U | 2.0 U |
| Aroclor-1232 | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Aroclor-1242 | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Aroclor-1248 | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Aroclor-1254 | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Aroclor-1260 | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U |

PROJECT: NSB KINGS BAY, GEORGIA — PCB AQUEOUS ANALYSES (ug/l) — Validated Analytical Results

| | SAMPLE LOCATION: | KBA-5-4 | KBA-5-5 | KBA-5-6 | KBA-5-7 |
|---|---|---|---|---|---|
| | LAB NUMBER: | 22727001 | 22725003 | 22725006 | 22725007 |
| | DATE SAMPLED: | 09/12/92 | 09/13/92 | 09/13/92 | 09/13/92 |
| | DATE EXTRACTED: | 09/14/92 | 09/15/92 | 09/15/92 | 09/15/92 |
| | DATE ANALYZED: | 10/03/92 | 10/03/92 | 10/03/92 | 10/04/92 |
| | DILUTION: | 1.0 | 1.0 | 1.0 | 1.0 |
| POLYCHLORINATED BIPHENYLS (PCBs) -- METHOD 8080 | | | | | |
| ANALYTE | PQL | | | | |
| Aroclor-1016 | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Aroclor-1221 | 2.0 | 2.0 U | 2.0 U | 2.0 U | 2.0 U |
| Aroclor-1232 | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Aroclor-1242 | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Aroclor-1248 | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Aroclor-1254 | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Aroclor-1260 | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U |

PROJECT: NSB KINGS BAY, GEORGIA — INORGANIC AQUEOUS ANALYSES (ug/l) — Validated Analytical Results

| ANALYTE | CRDL | KBA-5-1 | KBA-5-1F | KBA-5-2 | KBA-5-2F | KBA-5-3 | KBA-5-3D | KBA-5-3F | KBA-5-4 |
|---|---|---|---|---|---|---|---|---|---|
| SAMPLE LOCATION: | | KBA-5-1 | KBA-5-1F | KBA-5-2 | KBA-5-2F | KBA-5-3 | KBA-5-3D | KBA-5-3F | KBA-5-4 |
| LAB NUMBER: | | 22727005 | 22727010 | 22727006 | 22727011 | 22727007 | 22727008 | 22727009 | 22727001 |
| DATE SAMPLED: | | 09/12/92 | 09/12/92 | 09/12/92 | 09/12/92 | 09/12/92 | 09/12/92 | 09/12/92 | 09/12/92 |
| Antimony | 60 | 12.4 U | 12.4 U | 12.4 U | 12.4 U | 12.4 U | 12.4 U | 12.4 U | 12.4 U |
| Arsenic | 10 | 5.5 J | 1.0 J | 5.3 J | 3.3 J | 10.4 | 7.6 J | 1.7 J | 3.9 J |
| Barium | 200 | 146 J | 64.2 U | 124 J | 109 U | 124 J | 119 J | 49.6 U | 53.4 J |
| Beryllium | 5 | 0.76 J | 0.31 U | 0.89 J | 0.74 U | 1.0 J | 0.66 J | 0.24 U | 0.24 U |
| Cadmium | 5 | 2.7 U | 2.7 U | 2.7 U | 2.7 U | 2.7 U | 2.7 U | 2.7 U | 4.1 J |
| Chromium | 10 | 16.8 | 2.0 J | 4.3 J | 2.7 J | 24.6 | 17.2 | 1.9 U | 5.6 J |
| Cobalt | 50 | 5.5 J | 2.1 U | 6.8 J | 6.6 U | 7.2 J | 4.8 J | 1.6 U | 5.6 J |
| Copper | 25 | 17.6 J | 4.8 J | 7.4 J | 10.1 J | 14.9 J | 18.7 J | 5.0 J | 4.5 J |
| Lead | 5 | 5.3 J | 1.4 UJ | 2.4 J | 7.2 J | 5.2 J | 4.7 J | 3.1 J | 2.4 J |
| Mercury | 0.2 | 0.49 | 0.37 | 0.49 | 0.03 J | 0.37 | 0.26 | 0.61 | 0.37 |
| Nickel | 40 | 18.1 U | 10.7 U | 13.0 U | 14.8 U | 20.4 U | 15.1 U | 10.7 U | 15.1 U |
| Selenium | 5 | 2.1 UJ | 2.1 UJ | 2.1 UJ | 2.1 UJ | 2.1 UJ | 2.1 UJ | 2.1 UJ | 2.1 UJ |
| Silver | 10 | 1.6 J | 1.5 U | 1.5 U | 1.5 U | 1.5 U | 1.5 U | 1.5 U | 1.6 J |
| Thallium | 10 | 1.6 UJ | 1.6 UJ | 1.6 UJ | 1.6 UJ | 1.6 UJ | 1.6 UJ | 1.6 UJ | 1.6 UJ |
| Vanadium | 50 | 17.6 J | 2.5 U | 7.8 U | 4.4 U | 23.1 J | 15.7 J | 1.3 U | 5.9 U |
| Zinc | 20 | 50.2 J | 14.6 J | 78.1 J | 89.4 J | 54.5 J | 48.4 J | 12.4 J | 39.9 J |
| Cyanide | 10 | 2.2 U | 2.2 U | 2.2 U | 2.2 U | 2.2 U | 2.2 U | 2.2 U | 7.4 J |
| Tin | 200 | 26.4 U | 26.4 U | 26.4 U | 26.4U | 26.4 U | 26.4 U | 26.4 U | 26.4 U |
| Sulfide | 100 | 100 | 100 | 300 | 300 | 200 | 200 | 100 U | 200 |
| Total Dissolved Solids (mg/L) | | 225 | --- | 290 | --- | 214 | 254 | --- | 763 |
| Total Suspended Solids (mg/L) | | 290 | --- | 24 | --- | 303 | 234 | --- | 84 |

PROJECT: NSB KINGS BAY, GEORGIA — INORGANIC AQUEOUS ANALYSES (ug/l) — Validated Analytical Results

| ANALYTE | CRDL | KBA-5-4F | KBA-5-5 | KBA-5-5DF | KBA-5-5F | KBA-5-6 | KBA-5-6F | KBA-5-7 | KBA-5-7F |
|---|---|---|---|---|---|---|---|---|---|
| SAMPLE LOCATION: | | KBA-5-4F | KBA-5-5 | KBA-5-5DF | KBA-5-5F | KBA-5-6 | KBA-5-6F | KBA-5-7 | KBA-5-7F |
| LAB NUMBER: | | 22727002 | 22725003 | 22725004 | 22725005 | 22725006 | 22725011 | 22725007 | 22725012 |
| DATE SAMPLED: | | 09/12/92 | 09/13/92 | 09/13/92 | 09/13/92 | 09/13/92 | 09/13/92 | 09/13/92 | 09/13/92 |
| Antimony | 60 | 12.4 U | 17.0 J | 12.4 U | 12.4 U | 12.4 U | 12.4 U | 12.4 U | 12.4 U |
| Arsenic | 10 | 1.0 U | 9.9 J | 2.3 J | 2.3 J | 7.5 J | 1.5 J | 8.3 J | 2.3 J |
| Barium | 200 | 36.6 U | 93.6 J | 28.4 U | 29.4 U | 180 J | 28.7 U | 82.1 J | 38.3 U |
| Beryllium | 5 | 0.26 U | 0.72 J | 0.27 U | 0.24 U | 1.6 J | 0.24 U | 0.68 J | 0.24 U |
| Cadmium | 5 | 2.7 U | 2.7 U | 2.7 U | 2.7 U | 4.3 J | 2.7 U | 2.7 U | 2.7 U |
| Chromium | 10 | 1.9 U | 21.6 | 4.2 J | 1.9 U | 44.5 | 2.0 J | 15.7 | 5.3 J |
| Cobalt | 50 | 5.4 U | 6.4 J | 1.6 U | 1.6 U | 11.0 J | 3.2 U | 3.2 J | 1.6 U |
| Copper | 25 | 6.8 J | 14.5 J | 1.8 U | 1.8 U | 29.2 | 1.8 U | 4.7 J | 1.8 U |
| Lead | 5 | 3.2 J | 9.6 | 1.6 U | 2.2 U | 14.5 | 1.8 U | 7.6 | 1.0 U |
| Mercury | 0.2 | 0.49 | 0.26 U | 0.14 U | 0.14 U | 0.42 U | 0.26 U | 0.38 U | 0.14 U |
| Nickel | 40 | 10.7 U | 10.8 J | 10.7 U | 10.7 U | 25.1 J | 10.7 U | 10.7 U | 10.7 U |
| Selenium | 5 | 2.1 UJ | 2.1 U | 2.1 U | 2.1 U | 2.1 U | 2.1 U | 2.1 U | 2.1 U |
| Silver | 10 | 2.7 J | 1.5 U | 1.5 U | 1.5 U | 4.5 J | 1.6 J | 3.0 J | 1.5 U |
| Thallium | 10 | 1.6 UJ | 1.6 U | 1.6 U | 1.6 U | 1.6 U | 1.6 U | 1.6 U | 1.6 U |
| Vanadium | 50 | 3.8 U | 18.8 J | 1.3 U | 1.3 U | 32.7 J | 1.3 U | 13.0 J | 1.3 U |
| Zinc | 20 | 33.2 J | 45.2 | 12.7 J | 14.4 J | 66.9 | 16.4 J | 28.8 | 10.0 J |
| Cyanide | 10 | 2.2 U | 2.2 UJ | 2.2 UJ | 3.8 J | 3.6 J | 2.2 UJ | 2.2 UJ | 2.2 UJ |
| Tin | 200 | 26.4 U | 26.4 U | 26.4 U | 26.4 U | 26.4 U | 26.4 U | 26.4 U | 26.4 U |
| Sulfide | 100 | 100 U | 200 | 100 U | 100 U | 200 | 200 | 300 | 100 U |
| Total Dissolved Solids (mg/L) | | --- | 102 | --- | --- | 122 | --- | 212 | --- |
| Total Suspended Solids (mg/L) | | --- | 303 | --- | --- | 572 | --- | 167 | --- |

Note:

| | |
|---|---|
| --- | -analysis not requetsed or performed |
| KBA-XX-X | -unfiltered sample |
| KBA-XX-XF | -filtered sample |
| KBA-XX-XD | -unfiltered, duplicate sample |
| KBA-XX-XDF | -filtered, duplicate sample |

# Site 16 Groundwater Sampling Event No. 4
# September 1992

PROJECT: NSB KINGS BAY, GEORGIA

VOLATILE AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| | | | | | |
|---|---|---|---|---|---|
| | SAMPLE LOCATION: | KBA-16-1 | KBA-16-2 | KBA-16-3 | KBA-16-4 |
| | LAB NUMBER: | 22723001 | 22723004 | 22723005 | 22723006 |
| | DATE SAMPLED: | 09/11/92 | 09/11/92 | 09/11/92 | 09/11/92 |
| | DATE ANALYZED: | 09/18/92 | 09/23/92 | 09/23/92 | 09/24/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 |
| VOLATILES -- METHOD 8240 | | | | | |
| ANALYTE | PQL | | | | |
| Chloromethane | 10 | 10 U | 10 U | 10 U | 10 U |
| Bromomethane | 10 | 10 U | 10 U | 10 U | 10 U |
| Vinyl Chloride | 10 | 10 U | 10 U | 10 U | 10 U |
| Chloroethane | 10 | 10 U | 10 U | 10 U | 10 U |
| Methylene Chloride | 5 | 5 U | 9 U | 6 U | 5 U |
| Acetone | 10 | 10 U | 10 U | 28 U | 10 U |
| Carbon Disulfide | 5 | 5 U | 5 U | 5 U | 5 U |
| Trichlorofluoromethane | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethene | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloroethene (total) | 5 | 5 U | 5 U | 5 U | 5 U |
| Chloroform | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U |
| 2-Butanone | 10 | 10 U | 10 U | 10 U | 10 U |
| 1,1,1-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | 5 | 5 U | 5 U | 5 U | 5 U |
| Vinyl Acetate | 10 | 10 U | 10 U | 10 U | 10 U |
| Bromodichloromethane | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloropropane | 5 | 5 U | 5 U | 5 U | 5 U |
| cis-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U |
| Trichloroethene | 5 | 5 U | 5 U | 5 U | 5 U |
| Dibromochloromethane | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,1,2-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U |
| Benzene | 5 | 5 U | 5 U | 5 U | 5 U |
| trans-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U |
| Bromoform | 5 | 5 U | 5 U | 5 U | 5 U |
| 2-Hexanone | 10 | 10 U | 10 U | 10 U | 10 U |
| 4-Methyl-2-Pentanone | 10 | 10 U | 10 U | 10 U | 10 U |
| Tetrachloroethene | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,1,2,2-Tetrachloroethane | 5 | 5 U | 5 U | 5 U | 5 U |
| Toluene | 5 | 5 U | 5 U | 5 U | 5 U |
| Chlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U |
| Ethylbenzene | 5 | 5 U | 5 U | 5 U | 5 U |
| Styrene | 5 | 5 U | 5 U | 5 U | 5 U |
| Xylene (total) | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,3-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,4-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U |

PROJECT: NSB KINGS BAY, GEORGIA

SEMIVOLATILE AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| | | | | | | |
|---|---|---|---|---|---|---|
| | SAMPLE LOCATION: | KBA-16-1 | KBA-16-2 | KBA-16-2D | KBA-16-3 | KBA-16-4 |
| | LAB NUMBER: | 22723001 | 22723004 | 22723009 | 22723005 | 22723006 |
| | DATE SAMPLED: | 09/11/92 | 09/11/92 | 09/11/92 | 09/11/92 | 09/11/92 |
| | DATE EXTRACTED: | 09/14/92 | 09/14/92 | 09/14/92 | 09/14/92 | 09/14/92 |
| | DATE ANALYZED: | 10/15/92 | 10/15/92 | 10/15/92 | 10/14/92 | 10/15/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| SEMIVOLATILES -- METHOD 8270 | | | | | | |
| ANALYTE | PQL | | | | | |
| bis (2-Chloroethyl) Ether | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| 1,3- Dichlorobenzene | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| 1,4- Dichlorobenzene | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| Benzyl Alcohol | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| 1,2- Dichlorobenzene | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| bis (2- Chloroisopropyl) Ether | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| N-Nitroso-Di-n-Propylamine | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| Hexachloroethane | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| Nitrobenzene | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| Isophorone | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| bis (2-Chloroethoxy) Methane | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| 1,2,4-Trichlorobenzene | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| Naphthalene | 10 | 10 UJ | 1 J | 10 U | 10 UJ | 10 UJ |
| 4-Chloroaniline | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| Hexachlorobutadiene | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| 2-Methylnaphthalene | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| Hexachlorocyclopentadiene | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| 2-Chloronaphthalene | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| 2-Nitroaniline | 50 | 50 UJ | 50 UJ | 50 U | 50 UJ | 50 UJ |
| Dimethylphthalate | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| Acenaphthylene | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| 2,6-Dinitrotoluene | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| 3-Nitroaniline | 50 | 50 UJ | 50 UJ | 50 U | 50 UJ | 50 UJ |
| Acenaphthene | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| Dibenzofuran | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| 2,4-Dinitrotoluene | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| Diethylphthalate | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| 4-Chlorophenyl-phenylether | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| Fluorene | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| 4-Nitroaniline | 50 | 50 UJ | 50 UJ | 50 U | 50 UJ | 50 UJ |
| N-Nitrosodiphenylamine | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| 4-Bromophenyl-phenylether | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| Hexachlorobenzene | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| Phenanthrene | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| Anthracene | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| Di-n-Butylphthalate | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| Fluoranthene | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| Pyrene | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| Butylbenzylphthalate | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| 3,3'-Dichlorobenzidine | 20 | 20 UJ | 20 UJ | 20 U | 20 UJ | 20 UJ |
| Benzo (a) Anthracene | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| Chrysene | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| bis (2-Ethylhexyl) Phthalate | 10 | 10 UJ | 10 UJ | 1 J | 10 UJ | 10 UJ |
| Di-n-Octyl Phthalate | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| Benzo (b) Fluoranthene | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| Benzo (k) Fluoranthene | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| Benzo (a) Pyrene | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| Indeno (1,2,3-cd) Pyrene | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| Dibenz (a,h) Anthracene | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |
| Benzo (g,h,i) Perylene | 10 | 10 UJ | 10 UJ | 10 U | 10 UJ | 10 UJ |

PROJECT: NSB KINGS BAY, GEORGIA

INORGANIC AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| | SAMPLE LOCATION: | KBA-16-1 | KBA-16-1F | KBA-16-2 | KBA-16-2F | KBA-16-3 | KBA-16-3F | KBA-16-4 | KBA-16-4F |
|---|---|---|---|---|---|---|---|---|---|
| | LAB NUMBER: | 22723001 | 22723002 | 22723004 | 22723008 | 22723005 | 22723010 | 22723006 | 22723011 |
| | DATE SAMPLED: | 09/11/92 | 09/11/92 | 09/11/92 | 09/11/92 | 09/11/92 | 09/11/92 | 09/11/92 | 09/11/92 |
| ANALYTE | CRDL | | | | | | | | |
| Antimony | 60 | 12.4 U | 12.4 U | 12.4 U | 12.4 U | 12.4 U | 12.4 U | 12.4 U | 12.4 U |
| Arsenic | 10 | 12.1 | 2.4 J | 23.4 | 5.1 J | 63.2 | 4.2 J | 5.4 J | 1.0 U |
| Barium | 200 | 82.8 J | 15.1 U | 83.6 J | 17.4 U | 538 | 1.4 U | 109 J | 26.8 U |
| Beryllium | 5 | 1.4 J | 0.24 U | 1.1 J | 0.24 U | 15.9 | 0.24 U | 2.0 J | 0.24 U |
| Cadmium | 5 | 2.7 U | 2.7 U | 2.7 U | 2.7 U | 2.7 U | 2.7 U | 2.7 U | 2.7 U |
| Chromium | 10 | 38.6 | 1.9 U | 41.6 | 3.5 J | 205 | 1.9 U | 46.5 | 6.2 J |
| Cobalt | 50 | 6.7 J | 1.6 U | 12.0 J | 1.6 U | 39.0 J | 1.6 U | 5.0 J | 1.6 U |
| Copper | 25 | 53.4 | 1.8 U | 5.9 J | 1.8 U | 35.4 | 1.8 U | 32.5 | 2.4 J |
| Lead | 5 | 16.9 | 1.5 U | 17.6 | 1.6 U | 40.5 | 0.71 U | 13.4 | 1.1 U |
| Mercury | 0.2 | 0.34 U | 0.30 U | 0.34 U | 0.14 U | 0.80 | 0.14 U | 0.42 U | 0.14 U |
| Nickel | 40 | 20.2 J | 10.7 U | 30.6 J | 10.7 U | 66.2 | 10.7 U | 30.2 J | 12.5 J |
| Selenium | 5 | 2.1 U | 2.1 U | 2.1 U | 2.1 U | 2.1 U | 2.1 U | 2.1 U | 2.1 U |
| Silver | 10 | 3.6 J | 1.5 U | 1.5 U | 1.5 U | 1.5 U | 1.5 U | 1.9 J | 1.5 J |
| Thallium | 10 | 1.6 U | 1.6 U | 1.6 U | 1.6 U | 1.6 U | 1.6 U | 1.6 U | 1.6 U |
| Vanadium | 50 | 51.2 | 1.9 U | 44.1 J | 2.2 U | 199 | 1.3 U | 40.0 J | 7.4 U |
| Zinc | 20 | 39.3 | 10.0 J | 61.0 | 7.6 U | 210 | 22.9 | 42.5 | 8.6 J |
| Cyanide | 10 | 2.2 UJ | 3.7 J | 2.2 UJ | 4.0 J | 2.2 UJ | 2.2 UJ | 11.0 UJ | 11.0 UJ |
| Tin | 200 | 26.4 U | 26.4 U | 26.4 U | 26.4 U | 26.4 U | 26.4 U | 26.4 U | 26.4 U |
| Sulfide | 100 | 200 | 100 U | 200 | 300 | 300 | 100 U | 500 | 500 |
| Total Dissolved Solids (mg/L) | | 419 | --- | 389 | --- | 630 | --- | 623 | --- |
| Total Suspended Solids (mg/L) | | 450 | --- | 715 | --- | 4520 | --- | 580 | --- |

Note:

| | |
|---|---|
| --- | -analysis not requetsed or performed |
| KBA-XX-X | -unfiltered sample |
| KBA-XX-XF | -filtered sample |

**Trip Blanks**
**Source Water Blanks**
**Sampling Event No. 4**
**September 1992**

PROJECT: NSB KINGS BAY, GEORGIA

VOLATILE AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| SAMPLE LOCATION: | | BT-25-FB | BT-26-FB | BT-27-FB | BS-24-ER | BS-25-ER | BS-26-ER | BS-10-FB | BS-12-FB |
|---|---|---|---|---|---|---|---|---|---|
| LAB NUMBER: | | 22723003 | 22727004 | 22725001 | 22723007 | 22727003 | 22725002 | 22725008 | 22725009 |
| DATE SAMPLED: | | 09/11/92 | 09/12/92 | 09/13/92 | 09/11/92 | 09/12/92 | 09/13/92 | 09/13/92 | 09/13/92 |
| DATE ANALYZED: | | 09/24/92 | 09/23/92 | 09/24/92 | 09/18/92 | 09/23/92 | 09/24/92 | 09/24/92 | 09/24/92 |
| DILUTION FACTOR: | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| VOLATILES -- METHOD 8240 | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| Chloromethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromomethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Vinyl Chloride | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Chloroethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Methylene Chloride | 5 | 5 U | 8 | 9 U | 4 J | 11 U | 5 U | 5 U | 5 U |
| Acetone | 10 | 9 J | 8 J | 10 U | 10 U | 10 U | 6 J | 6 J | 7 J |
| Carbon Disulfide | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Trichlorofluoromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloroethene (total) | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chloroform | 5 | 1 J | 1 J | 1 J | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 2-Butanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,1,1-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Vinyl Acetate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromodichloromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloropropane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| cis-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Trichloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Dibromochloromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1,2-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Benzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| trans-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Bromoform | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 2-Hexanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Methyl-2-Pentanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Tetrachloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1,2,2-Tetrachloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Toluene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Ethylbenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Styrene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Xylene (total) | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,3-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,4-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |

PROJECT: NSB KINGS BAY, GEORGIA

SEMIVOLATILE AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| | | | | |
|---|---|---|---|---|
| | SAMPLE LOCATION: | BS-24-ER | BS-10-FB | BS-12-FB |
| | LAB NUMBER: | 22723007 | 22725008 | 22725009 |
| | DATE SAMPLED: | 09/11/92 | 09/13/92 | 09/13/92 |
| | DATE EXTRACTED: | 09/14/92 | 09/14/92 | 09/14/92 |
| | DATE ANALYZED: | 10/14/92 | 10/14/92 | 10/14/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 |
| SEMIVOLATILES -- METHOD 8270 | | | | |
| ANALYTE | PQL | | | |
| bis (2-Chloroethyl) Ether | 10 | 10 U | 10 U | 10 U |
| 1,3-Dichlorobenzene | 10 | 10 U | 10 U | 10 U |
| 1,4-Dichlorobenzene | 10 | 10 U | 10 U | 10 U |
| Benzyl Alcohol | 10 | 10 U | 10 U | 10 U |
| 1,2-Dichlorobenzene | 10 | 10 U | 10 U | 10 U |
| bis (2-Chloroisopropyl) Ether | 10 | 10 U | 10 U | 10 U |
| N-Nitroso-Di-n-Propylamine | 10 | 10 U | 10 U | 10 U |
| Hexachloroethane | 10 | 10 U | 10 U | 10 U |
| Nitrobenzene | 10 | 10 U | 10 U | 10 U |
| Isophorone | 10 | 10 U | 10 U | 10 U |
| bis (2-Chloroethoxy) Methane | 10 | 10 U | 10 U | 10 U |
| 1,2,4-Trichlorobenzene | 10 | 10 U | 10 U | 10 U |
| Naphthalene | 10 | 10 U | 10 U | 10 U |
| 4-Chloroaniline | 10 | 10 U | 10 U | 10 U |
| Hexachlorobutadiene | 10 | 10 U | 10 U | 10 U |
| 2-Methylnaphthalene | 10 | 10 U | 10 U | 10 U |
| Hexachlorocyclopentadiene | 10 | 10 U | 10 U | 10 U |
| 2-Chloronaphthalene | 10 | 10 U | 10 U | 10 U |
| 2-Nitroaniline | 50 | 50 U | 50 U | 50 U |
| Dimethylphthalate | 10 | 10 U | 10 U | 10 U |
| Acenaphthylene | 10 | 10 U | 10 U | 10 U |
| 2,6-Dinitrotoluene | 10 | 10 U | 10 U | 10 U |
| 3-Nitroaniline | 50 | 50 U | 50 U | 50 U |
| Acenaphthene | 10 | 10 U | 10 U | 10 U |
| Dibenzofuran | 10 | 10 U | 10 U | 10 U |
| 2,4-Dinitrotoluene | 10 | 10 U | 10 U | 10 U |
| Diethylphthalate | 10 | 10 U | 10 U | 10 U |
| 4-Chlorophenyl-phenylether | 10 | 10 U | 10 U | 10 U |
| Fluorene | 10 | 10 U | 10 U | 10 U |
| 4-Nitroaniline | 50 | 50 U | 50 U | 50 U |
| N-Nitrosodiphenylamine | 10 | 10 U | 10 U | 10 U |
| 4-Bromophenyl-phenylether | 10 | 10 U | 10 U | 10 U |
| Hexachlorobenzene | 10 | 10 U | 10 U | 10 U |
| Phenanthrene | 10 | 10 U | 10 U | 10 U |
| Anthracene | 10 | 10 U | 10 U | 10 U |
| Di-n-Butylphthalate | 10 | 10 U | 10 U | 10 U |
| Fluoranthene | 10 | 10 U | 10 U | 10 U |
| Pyrene | 10 | 10 U | 10 U | 10 U |
| Butylbenzylphthalate | 10 | 10 U | 10 U | 10 U |
| 3,3'-Dichlorobenzidine | 20 | 20 U | 20 U | 20 U |
| Benzo (a) Anthracene | 10 | 10 U | 10 U | 10 U |
| Chrysene | 10 | 10 U | 10 U | 10 U |
| bis (2-Ethylhexyl) Phthalate | 10 | 10 U | 10 U | 10 U |
| Di-n-Octyl Phthalate | 10 | 10 U | 10 U | 10 U |
| Benzo (b) Fluoranthene | 10 | 10 U | 10 U | 10 U |
| Benzo (k) Fluoranthene | 10 | 10 U | 10 U | 10 U |
| Benzo (a) Pyrene | 10 | 10 U | 10 U | 10 U |
| Indeno (1,2,3-cd) Pyrene | 10 | 10 U | 10 U | 10 U |
| Dibenz (a,h) Anthracene | 10 | 10 U | 10 U | 10 U |
| Benzo (g,h,i) Perylene | 10 | 10 U | 10 U | 10 U |

PROJECT: NSB KINGS BAY, GEORGIA

PCB AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| | | | | |
|---|---|---|---|---|
| SAMPLE LOCATION: | BS-25-ER | BS-26-ER | BS-10-FB | BS-12-FB |
| LAB NUMBER: | 22727003 | 22725002 | 22725008 | 22725009 |
| DATE SAMPLED: | 09/12/92 | 09/13/92 | 09/13/92 | 09/13/92 |
| DATE EXTRACTED: | 09/14/92 | 09/15/92 | 09/15/92 | 09/15/92 |
| DATE ANALYZED: | 10/03/92 | 10/03/92 | 10/03/92 | 10/03/92 |
| DILUTION: | 1.0 | 1.0 | 1.0 | 1.0 |

POLYCHLORINATED BIPHENYLS (PCBs) -- METHOD 8080

| ANALYTE | PQL | | | | |
|---|---|---|---|---|---|
| Aroclor-1016 | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Aroclor-1221 | 2.0 | 2.0 U | 2.0 U | 2.0 U | 2.0 U |
| Aroclor-1232 | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Aroclor-1242 | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Aroclor-1248 | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Aroclor-1254 | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Aroclor-1260 | 1.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U |

PROJECT: NSB KINGS BAY, GEORGIA

INORGANIC AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| ANALYTE | CRDL | BS-24-ER | BS-25-ER | BS-26-ER | BS-10-FB | BS-11-FB | BS-12-FB |
|---|---|---|---|---|---|---|---|
| SAMPLE LOCATION: | | BS-24-ER | BS-25-ER | BS-26-ER | BS-10-FB | BS-11-FB | BS-12-FB |
| LAB NUMBER: | | 22723007 | 22727003 | 22725002 | 22725008 | 22725010 | 22725009 |
| DATE SAMPLED: | | 09/11/92 | 09/12/92 | 09/13/92 | 09/13/92 | 09/13/92 | 09/13/92 |
| Antimony | 60 | 22.6 J | 12.4 U | 12.4 U | 12.4 U | 12.4 U | 12.4 U |
| Arsenic | 10 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Barium | 200 | 4.5 J | 0.63 J | 0.81 U | 1.1 U | 38.9 J | 1.2 U |
| Beryllium | 5 | 0.24 U | 0.24 U | 0.24 U | 0.24 U | 0.47 J | 0.24 U |
| Cadmium | 5 | 2.7 U | 2.7 U | 2.7 U | 2.7 U | 2.7 U | 2.7 U |
| Chromium | 10 | 5.9 U | 1.9 U | 4.4 U | 2.8 J | 3.5 J | 3.9 J |
| Cobalt | 50 | 1.6 U | 1.6 U | 1.6 U | 1.6 U | 3.2 J | 1.6 U |
| Copper | 25 | 1.8 U | 4.2 J | 1.8 U | 1.8 U | 1.8 U | 6.2 J |
| Lead | 5 | 1.5 U | 1.4 UJ | 1.2 U | 0.91 U | 2.1 U | 1.3 U |
| Mercury | 0.2 | 0.14 U | 0.03 U | 0.14 U | 0.22 U | 0.03 U | 0.18 U |
| Nickel | 40 | 10.7 U | 10.7 U | 10.7 U | 10.7 U | 10.7 U | 10.7 U |
| Selenium | 5 | 2.1 U | 2.1 UJ | 2.1 U | 2.1 U | 2.1 U | 2.1 U |
| Silver | 10 | 1.5 U | 1.6 J | 1.5 U | 1.5 U | 1.5 U | 1.8 J |
| Thallium | 10 | 1.6 U | 1.6 UJ | 1.6 U | 1.6 U | 1.6 U | 1.6 U |
| Vanadium | 50 | 1.3 U | 1.3 U | 1.3 U | 1.3 U | 6.3 J | 1.3 J |
| Zinc | 20 | 7.6 U | 7.6 U | 7.6 U | 7.7 J | 16.0 J | 8.4 J |
| Cyanide | 10 | 2.2 UJ | 2.2 U | 2.2 UJ | 2.2 UJ | 2.2 UJ | 2.2 UJ |
| Tin | 200 | 7420 | 26.4 U | 26.4 U | 26.4 U | 26.4 U | 26.4 U |
| Sulfide | 100 | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U |
| Total Dissolved Solids (mg/L) | | 10 U | 10 U | 10 U | 10 U | --- | 10 U |
| Total Suspended Solids (mg/L) | | 4 U | 4 U | 4 U | 4 U | --- | 4 U |

# Site 5 Groundwater Sampling Event No. 5
# November 1992

PROJECT: NSB KINGS BAY, GEORGIA

VOLATILE AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SAMPLE LOCATION: | | KBA-5-1 | KBA-5-2 | KBA-5-3 | KBA-5-3D | KBA-5-4 | KBA-5-5 | KBA-5-6 | KBA-5-7 |
| LAB NUMBER: | | 34463002 | 34463003 | 34463004 | 34463005 | 34463007 | 34463008 | 34466003 | 34466004 |
| DATE SAMPLED: | | 11/13/92 | 11/13/92 | 11/13/92 | 11/13/92 | 11/13/92 | 11/13/92 | 11/14/92 | 11/14/92 |
| DATA ANALYZED: | | 11/25/92 | 11/25/92 | 11/25/92 | 11/25/92 | 11/26/92 | 11/26/92 | 11/27/92 | 11/27/92 |
| DILUTION FACTOR: | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| VOLATILES -- METHOD 8240 | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| Chloromethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromomethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Vinyl Chloride | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Chloroethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Methylene Chloride | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 8 U | 5 U | 5 U |
| Acetone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 34 U | 11 U |
| Carbon Disulfide | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Trichlorofluoromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloroethene (total) | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chloroform | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 2-Butanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,1,1-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Vinyl Acetate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromodichloromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloropropane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| cis-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Trichloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Dibromochloromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1,2-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Benzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| trans-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Bromoform | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 2-Hexanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Methyl-2-Pentanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Tetrachloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1,2,2-Tetrachloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Toluene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Ethylbenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Styrene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Xylene (total) | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,3-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,4-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |

PROJECT: NSB KINGS BAY, GEORGIA — PCB AQUEOUS ANALYSES (ug/l) — Validated Analytical Results

| | | | | | |
|---|---|---|---|---|---|
| SAMPLE LOCATION: | | KBA-5-1 | KBA-5-2 | KBA-5-3 | KBA-5-3D |
| LAB NUMBER: | | 23294002 | 23294003 | 23294004 | 23294005 |
| DATE SAMPLED: | | 11/13/92 | 11/13/92 | 11/13/92 | 11/13/92 |
| DATE EXTRACTED: | | 11/18/92 | 11/18/92 | 11/18/92 | 11/18/92 |
| DATE ANALYZED: | | 12/24/92 | 12/24/92 | 12/24/92 | 12/24/92 |
| DILUTION: | | 1.0 | 1.0 | 1.0 | 1.0 |
| POLYCHLORINATED BIPHENYLS (PCBs) -- METHOD 8080 | | | | | |
| ANALYTE | PQL | | | | |
| Aroclor-1016 | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Aroclor-1221 | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Aroclor-1232 | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Aroclor-1242 | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Aroclor-1248 | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Aroclor-1254 | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Aroclor-1260 | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U |

PROJECT: NSB KINGS BAY, GEORGIA — PCB AQUEOUS ANALYSES (ug/l) — Validated Analytical Results

| | | | | | |
|---|---|---|---|---|---|
| SAMPLE LOCATION: | | KBA-5-4 | KBA-5-5 | KBA-5-6 | KBA-5-7 |
| LAB NUMBER: | | 23294009 | 23294010 | 23300005 | 23300002 |
| DATE SAMPLED: | | 11/13/92 | 11/13/92 | 11/14/92 | 11/14/92 |
| DATE EXTRACTED: | | 11/18/92 | 11/18/92 | 11/19/92 | 11/19/92 |
| DATE ANALYZED: | | 12/24/92 | 12/24/92 | 12/24/92 | 12/24/92 |
| DILUTION: | | 1.0 | 1.0 | 1.0 | 1.0 |
| POLYCHLORINATED BIPHENYLS (PCBs) -- METHOD 8080 | | | | | |
| ANALYTE | PQL | | | | |
| Aroclor-1016 | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Aroclor-1221 | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Aroclor-1232 | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Aroclor-1242 | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Aroclor-1248 | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Aroclor-1254 | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Aroclor-1260 | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U |

PROJECT: NSB KINGS BAY, GEORGIA — INORGANIC AQUEOUS ANALYSES (ug/l) — Validated Analytical Results

| SAMPLE LOCATION: | | KBA-5-1 | KBA-5-1F | KBA-5-2 | KBA-5-2F | KBA-5-3 | KBA-5-3F | KBA-5-3D | KBA-5-3DF |
|---|---|---|---|---|---|---|---|---|---|
| LAB NUMBER: | | 23294002 | 23294011 | 23294003 | 23294012 | 23294004 | 23294006 | 23294005 | 23294007 |
| DATE SAMPLED: | | 11/13/92 | 11/13/92 | 11/13/92 | 11/13/92 | 11/13/92 | 11/13/92 | 11/13/92 | 11/13/92 |
| ANALYTE | CRDL | | | | | | | | |
| Antimony | 60 | 10.7 U | 10.7 U | 10.7 U | 10.7 U | 10.7 U | 10.7 U | 10.7 U | 10.7 U |
| Arsenic | 10 | 4.0 J | 2.7 J | 13.3 | 11.1 | 7.9 J | 4.8 J | 8.0 J | 4.2 J |
| Barium | 200 | 78.2 J | 59.0 J | 42.6 J | 29.9 J | 70.8 J | 38.6 J | 72.2 J | 35.4 J |
| Beryllium | 5 | 0.42 J | 0.38 J | 0.29 J | 0.30 J | 0.24 J | 0.22 U | 0.22 U | 0.22 U |
| Cadmium | 5 | 3.0 UJ | 3.0 UJ | 3.0 UJ | 3.0 UJ | 3.0 UJ | 3.0 UJ | 3.0 UJ | 3.0 UJ |
| Chromium | 10 | 4.2 J | 2.9 U | 8.1 J | 2.9 U | 8.5 J | 2.9 U | 8.9 J | 2.9 U |
| Cobalt | 50 | 3.3 U | 3.3 U | 5.0 J | 4.3 J | 3.4 J | 4.9 J | 3.3 U | 3.8 J |
| Copper | 25 | 16.6 J | 2.3 U | 7.3 J | 10.9 J | 9.1 J | 2.7 J | 7.3 J | 4.2 J |
| Lead | 3 | 3.6 | 1.4 U | 4.3 | 1.4 U | 2.3 J | 1.4 U | 2.4 J | 1.4 U |
| Mercury | 0.2 | 0.08 U | 0.10 J | 0.08 U | 0.10 J | 0.14 J | 0.08 U | 0.08 U | 0.08 U |
| Nickel | 40 | 5.3 UJ | 5.3 UJ | 10.9 J | 5.5 J | 12.6 J | 8.2 J | 5.3 UJ | 7.9 J |
| Selenium | 5 | 2.1 U | 2.1 U | 2.1 U | 2.1 U | 2.1 U | 2.1 U | 2.1 U | 2.1 U |
| Silver | 10 | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U |
| Thallium | 10 | 1.6 U | 1.6 U | 1.6 U | 1.6 U | 1.6 U | 1.6 U | 1.6 U | 1.6 U |
| Vanadium | 50 | 4.1 J | 2.6 U | 9.6 J | 5.3 J | 8.2 J | 2.6 U | 7.8 J | 2.6 U |
| Zinc | 20 | 36.7 | 10.9 J | 193 | 187 | 30.7 | 12.1 J | 25.3 | 19.6 J |
| Cyanide | 10 | 0.84 U | 0.84 U | 0.84 U | 0.84 U | 0.84 U | 0.84 U | 0.84 U | 0.84 U |
| Tin | 200 | 12.7 U | 12.7 U | 12.7 U | 12.7 U | 12.7 U | 12.7 U | 12.7 U | 12.7 U |
| Sulfide | 100 | 100 | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U |
| Total Dissolved Solids (mg/L) | | 159 | --- | 320 | --- | 201 | --- | 128 | --- |
| Total Suspended Solids (mg/L) | | 36 | --- | 1086 | --- | 7 | --- | 159 | --- |

PROJECT: NSB KINGS BAY, GEORGIA — INORGANIC AQUEOUS ANALYSES (ug/l) — Validated Analytical Results

| SAMPLE LOCATION: | | KBA-5-4 | KBA-5-4F | KBA-5-5 | KBA-5-5F | KBA-5-6 | KBA-5-6F | KBA-5-7 | KBA-5-7F |
|---|---|---|---|---|---|---|---|---|---|
| LAB NUMBER: | | 23294009 | 23294013 | 23294010 | 23294014 | 23300005 | 23300006 | 23300002 | 23300003 |
| DATE SAMPLED: | | 11/13/92 | 11/13/92 | 11/13/92 | 11/13/92 | 11/14/92 | 11/14/92 | 11/14/92 | 11/14/92 |
| ANALYTE | CRDL | | | | | | | | |
| Antimony | 60 | 12.1 J | 10.7 U | 10.7 U | 10.7 U | 10.7 UJ | 10.7 UJ | 10.7 UJ | 10.7 UJ |
| Arsenic | 10 | 4.0 J | 1.0 U | 13.7 | 10.3 | 2.8 J | 1.0 U | 10.5 | 5.5 J |
| Barium | 200 | 67.4 J | 30.6 J | 51.0 J | 28.7 J | 90.1 J | 28.5 J | 35.0 J | 28.9 J |
| Beryllium | 5 | 0.22 U | 0.22 U | 0.68 J | 0.22 U | 0.40 J | 0.22 U | 0.22 U | 0.22 U |
| Cadmium | 5 | 3.0 UJ | 3.0 UJ | 3.0 UJ | 3.0 UJ | 3.6 J | 3.0 U | 3.0 U | 3.0 U |
| Chromium | 10 | 4.5 J | 2.9 U | 4.6 J | 2.9 U | 15.5 | 2.9 U | 4.5 J | 2.9 U |
| Cobalt | 50 | 4.3 J | 3.3 U | 3.3 U | 3.3 U | 3.3 U | 3.3 U | 3.3 U | 4.8 J |
| Copper | 25 | 11.2 J | 2.3 U | 16.3 J | 3.0 J | 2.3 U | 2.3 U | 10.3 J | 3.5 J |
| Lead | 3 | 1.8 J | 1.4 U | 1.7 J | 1.4 U | 3.7 | 2.1 J | 2.3 J | 1.4 U |
| Mercury | 0.2 | 0.12 J | 0.10 J | 0.12 J | 0.08 U | 0.51 | 0.08 U | 0.08 U | 0.08 U |
| Nickel | 40 | 5.3 UJ | 5.3 UJ | 8.8 J | 5.3 UJ | 6.5 J | 5.3 U | 5.9 J | 14.4 J |
| Selenium | 5 | 2.1 U | 2.1 U | 2.1 U | 2.1 U | 2.1 U | 2.1 U | 2.1 U | 2.1 U |
| Silver | 10 | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U |
| Thallium | 10 | 1.6 U | 1.6 U | 1.6 U | 1.6 U | 1.6 U | 1.6 U | 1.6 U | 1.6 U |
| Vanadium | 50 | 3.9 J | 2.6 U | 4.1 J | 2.6 U | 13.5 J | 2.6 U | 8.9 J | 2.6 U |
| Zinc | 20 | 45.4 | 18.0 J | 38.2 | 22.5 | 41.2 | 11.5 J | 23.2 | 12.0 J |
| Cyanide | 10 | 5.6 J | 0.84 U | 2.0 J | 0.84 U | 0.84 U | 0.84 U | 1.1 J | 1.2 J |
| Tin | 200 | 12.7 U | 12.7 U | 12.7 U | 12.7 U | 12.7 U | 12.7 U | 12.7 U | 12.7 U |
| Sulfide | 100 | 300 | 100 U | 100 U | 100 U | 100 U | 200 | 100 U | 100 U |
| Total Dissolved Solids (mg/L) | | 694 | --- | 228 | --- | 251 | --- | 404 | --- |
| Total Suspended Solids (mg/L) | | 111 | --- | 76 | --- | 330 | --- | 48 | --- |

Note:

| | |
|---|---|
| --- | – analysis not requested or performed |
| KBA-XX-X | – unfiltered sample |
| KBA-XX-XD | – duplicate, unfiltered sample |
| KBA-XX-XF | – filtered sample |
| KBA-XX-XDF | – duplicate, filtered sample |

# Site 16 Groundwater Sampling Event No. 5
# November 1992

PROJECT: NSB KINGS BAY, GEORGIA

VOLATILE AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| | | | | | |
|---|---|---|---|---|---|
| | SAMPLE LOCATION: | KBA-16-1 | KBA-16-2 | KBA-16-3 | KBA-16-4 |
| | LAB NUMBER: | 34465006 | 34465005 | 34465004 | 34465003 |
| | DATE SAMPLED: | 11/12/92 | 11/12/92 | 11/12/92 | 11/12/92 |
| | DATE ANALYZED: | 11/25/92 | 11/25/92 | 11/25/92 | 11/25/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 |
| VOLATILES -- METHOD 8240 | | | | | |
| ANALYTE | PQL | | | | |
| Chloromethane | 10 | 10 U | 10 U | 10 U | 10 U |
| Bromomethane | 10 | 10 U | 10 U | 10 U | 10 U |
| Vinyl Chloride | 10 | 10 U | 10 U | 10 U | 10 U |
| Chloroethane | 10 | 10 U | 10 U | 10 U | 10 U |
| Methylene Chloride | 5 | 5 U | 5 U | 5 U | 5 U |
| Acetone | 10 | 10 U | 10 U | 10 U | 10 U |
| Carbon Disulfide | 5 | 5 U | 5 U | 5 U | 5 U |
| Trichlorofluoromethane | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethene | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloroethene (total) | 5 | 5 U | 5 U | 5 U | 5 U |
| Chloroform | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U |
| 2-Butanone | 10 | 10 U | 10 U | 10 U | 10 U |
| 1,1,1-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | 5 | 5 U | 5 U | 5 U | 5 U |
| Vinyl Acetate | 10 | 10 U | 10 U | 10 U | 10 U |
| Bromodichloromethane | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloropropane | 5 | 5 U | 5 U | 5 U | 5 U |
| cis-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U |
| Trichloroethene | 5 | 5 U | 5 U | 5 U | 5 U |
| Dibromochloromethane | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,1,2-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U |
| Benzene | 5 | 5 U | 5 U | 5 U | 5 U |
| trans-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U |
| Bromoform | 5 | 5 U | 5 U | 5 U | 5 U |
| 2-Hexanone | 10 | 10 U | 10 U | 10 U | 10 U |
| 4-Methyl-2-Pentanone | 10 | 10 U | 10 U | 10 U | 10 U |
| Tetrachloroethene | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,1,2,2-Tetrachloroethane | 5 | 5 U | 5 U | 5 U | 5 U |
| Toluene | 5 | 5 U | 5 U | 5 U | 5 U |
| Chlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U |
| Ethylbenzene | 5 | 5 U | 5 U | 5 U | 5 U |
| Styrene | 5 | 5 U | 5 U | 5 U | 5 U |
| Xylene (total) | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,3-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,4-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U |

PROJECT: NSB KINGS BAY, GEORGIA

SEMIVOLATILE AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| | SAMPLE LOCATION: | KBA-16-1 | KBA-16-2 | KBA-16-2D | KBA-16-3 | KBA-16-4 |
|---|---|---|---|---|---|---|
| | LAB NUMBER: | 23285007 | 23285006 | 23285010 | 23285005 | 23285003 |
| | DATE SAMPLED: | 11/12/92 | 11/12/92 | 11/12/92 | 11/12/92 | 11/12/92 |
| | DATE EXTRACTED: | 11/17/92 | 11/17/92 | 11/17/92 | 11/17/92 | 11/17/92 |
| | DATE ANALYZED: | 12/22/92 | 12/22/92 | 12/22/92 | 12/22/92 | 12/22/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| SEMIVOLATILES -- METHOD 8270 | | | | | | |
| ANALYTE | PQL | | | | | |
| bis (2-Chloroethyl) Ether | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,3- Dichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,4- Dichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzyl Alcohol | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,2- Dichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| bis (2- Chloroisopropyl) Ether | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| N-Nitroso-Di-n-Propylamine | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Hexachloroethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Nitrobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Isophorone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| bis (2-Chloroethoxy) Methane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,2,4-Trichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Naphthalene | 10 | 10 U | 2 J | 10 U | 10 U | 10 U |
| 4-Chloroaniline | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Hexachlorobutadiene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Methylnaphthalene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Hexachlorocyclopentadiene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Chloronaphthalene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Nitroaniline | 50 | 50 U | 50 U | 50 U | 50 U | 50 U |
| Dimethylphthalate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Acenaphthylene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2,6-Dinitrotoluene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 3-Nitroaniline | 50 | 50 U | 50 U | 50 U | 50 U | 50 U |
| Acenaphthene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Dibenzofuran | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2,4-Dinitrotoluene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Diethylphthalate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Chlorophenyl-phenylether | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Fluorene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Nitroaniline | 50 | 50 U | 50 U | 50 U | 50 U | 50 U |
| N-Nitrosodiphenylamine | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Bromophenyl-phenylether | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Hexachlorobenzene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Phenanthrene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Anthracene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Di-n-Butylphthalate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Fluoranthene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Pyrene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Butylbenzylphthalate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 3,3'-Dichlorobenzidine | 20 | 20 U | 20 U | 20 U | 20 U | 20 U |
| Benzo (a) Anthracene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Chrysene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| bis (2-Ethylhexyl) Phthalate | 10 | 10 U | 4 J | 3 J | 10 U | 10 U |
| Di-n-Octyl Phthalate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzo (b) Fluoranthene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzo (k) Fluoranthene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzo (a) Pyrene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Indeno (1,2,3-cd) Pyrene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Dibenz (a,h) Anthracene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzo (g,h,i) Perylene | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |

PROJECT: NSB KINGS BAY, GEORGIA

INORGANIC AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| | SAMPLE LOCATION: | KBA-16-1 | KBA-16-1F | KBA-16-2 | KBA-16-2F | KBA-16-3 | KBA-16-3F | KBA-16-4 | KBA-16-4F |
|---|---|---|---|---|---|---|---|---|---|
| | LAB NUMBER: | 23285007 | 23285014 | 23285006 | 23285011 | 23285005 | 23285013 | 23285003 | 23285004 |
| | DATE SAMPLED: | 11/12/92 | 11/12/92 | 11/12/92 | 11/12/92 | 11/12/92 | 11/12/92 | 11/12/92 | 11/12/92 |
| ANALYTE | CRDL | | | | | | | | |
| Antimony | 60 | 10.7 U | 10.7 U | 10.7 U | 10.7 U | 10.7 U | 10.7 U | 10.7 U | 10.7 U |
| Arsenic | 10 | 4.1 J | 1.0 U | 4.3 J | 2.0 J | 1.0 U | 6.2 J | 1.6 J | 1.0 U |
| Barium | 200 | 33.9 J | 16.0 J | 70.9 J | 21.0 J | 219 | 24.7 J | 37.8 J | 23.1 J |
| Beryllium | 5 | 0.22 U | 0.22 U | 0.44 J | 0.22 U | 5.7 | 0.22 U | 0.22 U | 0.22 U |
| Cadmium | 5 | 3.0 U | 3.0 U | 3.0 U | 3.0 U | 3.0 U | 3.0 U | 3.0 U | 3.0 U |
| Chromium | 10 | 15.7 | 2.9 U | 32.3 | 3.2 J | 90.6 | 2.9 U | 10.3 | 3.6 J |
| Cobalt | 50 | 3.3 U | 3.3 U | 8.1 J | 3.3 U | 13.3 J | 3.3 U | 3.3 U | 3.3 U |
| Copper | 25 | 15.3 J | 2.3 UJ | 65.1 J | 2.3 UJ | 31.0 J | 2.3 UJ | 64.5 J | 2.3 UJ |
| Lead | 3 | 3.6 | 1.4 U | 10.1 | 1.4 U | 13.6 | 1.4 U | 3.8 | 1.4 U |
| Mercury | 0.2 | 0.08 U | 0.08 U | 0.09 J | 0.08 U | 0.18 J | 0.08 U | 0.08 U | 0.08 U |
| Nickel | 40 | 5.3 UJ | 5.3 UJ | 34.6 J | 5.3 UJ | 32.4 J | 5.3 UJ | 40.1 J | 5.3 UJ |
| Selenium | 5 | 2.5 J | 2.1 U | 2.1 U | 2.1 U | 2.1 U | 2.1 U | 2.1 U | 2.1 U |
| Silver | 10 | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U |
| Thallium | 10 | 1.6 U | 1.6 U | 1.6 U | 1.6 U | 1.6 U | 1.6 U | 1.6 U | 1.6 U |
| Vanadium | 50 | 18.6 J | 2.6 U | 34.2 J | 2.6 U | 89.9 | 3.0 J | 10.7 J | 5.7 J |
| Zinc | 20 | 25.6 | 9.6 U | 96.4 | 9.6 U | 110 | 9.6 U | 84.1 | 9.6 U |
| Cyanide | 10 | 0.84 U | 0.84 U | 0.84 U | 0.84 U | 1.2 J | 0.84 U | 11.6 | 7.0 J |
| Tin | 200 | 12.7 U | 12.7 U | 12.7 U | 12.7 U | 12.7 U | 12.7 U | 12.7 U | 12.7 U |
| Sulfide | 100 | 200 | 200 | 400 | 400 | 100 U | 100 U | 300 | 1400 |
| Total Dissolved Solids (mg/L) | | 350 | --- | 261 | --- | 183 | --- | 181 | --- |
| Total Suspended Solids (mg/L) | | 189 | --- | 370 | --- | 494 | --- | 282 | --- |

Note:

--- – analysis not requested or performed
KBA-XX-X – unfiltered sample
KBA-XX-XF – filtered sample

**Trip Blanks**
**Source Water Blanks**
**Sampling Event No. 5**
**November 1992**

PROJECT: NSB KINGS BAY, GEORGIA

VOLATILE AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | SAMPLE LOCATION: | BT-30-FB | BT-31-FB | BT-32-FB | BS-29-ER | BS-30-ER | BS-31-ER | BS-13-FB |
| | LAB NUMBER: | 34465K01 | 34463K01 | 34466K01 | 34465K02 | 34463K06 | 34466K02 | 34465K07 |
| | DATE SAMPLED: | 11/12/92 | 11/13/92 | 11/14/92 | 11/12/92 | 11/13/92 | 11/14/92 | 11/12/92 |
| | DATE ANALYZED: | 11/25/92 | 11/25/92 | 11/27/92 | 11/25/92 | 11/26/92 | 11/27/92 | 11/25/92 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| VOLATILES -- METHOD 8240 | | | | | | | | |
| ANALYTE | PQL | | | | | | | |
| Chloromethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromomethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Vinyl Chloride | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Chloroethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Methylene Chloride | 5 | 5 U | 5 U | 6 U | 5 U | 9 U | 5 U | 5 U |
| Acetone | 10 | 10 U | 10 U | 70 | 10 U | 10 U | 20 U | 10 U |
| Carbon Disulfide | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Trichlorofluoromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloroethene (total) | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chloroform | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 2-Butanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,1,1-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Vinyl Acetate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromodichloromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloropropane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| cis-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Trichloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Dibromochloromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1,2-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Benzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| trans-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Bromoform | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 2-Hexanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Methyl-2-Pentanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Tetrachloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1,2,2-Tetrachloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Toluene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Ethylbenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Styrene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Xylene (total) | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,3-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,4-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |

PROJECT: NSB KINGS BAY, GEORGIA

VOLATILE AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| | |
|---|---|
| SAMPLE LOCATION: | BS-15-FB |
| LAB NUMBER: | 34465K08 |
| DATE SAMPLED: | 11/12/92 |
| DATE ANALYZED: | 11/25/92 |
| DILUTION FACTOR: | 1.0 |

VOLATILES -- METHOD 8240

| ANALYTE | PQL | |
|---|---|---|
| Chloromethane | 10 | 10 U |
| Bromomethane | 10 | 10 U |
| Vinyl Chloride | 10 | 10 U |
| Chloroethane | 10 | 10 U |
| Methylene Chloride | 5 | 5 U |
| Acetone | 10 | 10 U |
| Carbon Disulfide | 5 | 5 U |
| Trichlorofluoromethane | 5 | 5 U |
| 1,1-Dichloroethene | 5 | 5 U |
| 1,1-Dichloroethane | 5 | 5 U |
| 1,2-Dichloroethene (total) | 5 | 5 U |
| Chloroform | 5 | 5 U |
| 1,2-Dichloroethane | 5 | 5 U |
| 2-Butanone | 10 | 10 U |
| 1,1,1-Trichloroethane | 5 | 5 U |
| Carbon Tetrachloride | 5 | 5 U |
| Vinyl Acetate | 10 | 10 U |
| Bromodichloromethane | 5 | 5 U |
| 1,2-Dichloropropane | 5 | 5 U |
| cis-1,3-Dichloropropene | 5 | 5 U |
| Trichloroethene | 5 | 5 U |
| Dibromochloromethane | 5 | 5 U |
| 1,1,2-Trichloroethane | 5 | 5 U |
| Benzene | 5 | 5 U |
| trans-1,3-Dichloropropene | 5 | 5 U |
| Bromoform | 5 | 5 U |
| 2-Hexanone | 10 | 10 U |
| 4-Methyl-2-Pentanone | 10 | 10 U |
| Tetrachloroethene | 5 | 5 U |
| 1,1,2,2-Tetrachloroethane | 5 | 5 U |
| Toluene | 5 | 5 U |
| Chlorobenzene | 5 | 5 U |
| Ethylbenzene | 5 | 5 U |
| Styrene | 5 | 5 U |
| Xylene (total) | 5 | 5 U |
| 1,3-Dichlorobenzene | 5 | 5 U |
| 1,4-Dichlorobenzene | 5 | 5 U |
| 1,2-Dichlorobenzene | 5 | 5 U |

PROJECT: NSB KINGS BAY, GEORGIA

PCB AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| | | | | | |
|---|---|---|---|---|---|
| SAMPLE LOCATION: | | BS-30-ER | BS-31-ER | BS-13-FB | BS-15-FB |
| LAB NUMBER: | | 23294008 | 23300001 | 23285008 | 23285009 |
| DATE SAMPLED: | | 11/13/92 | 11/14/92 | 11/12/92 | 11/12/92 |
| DATE EXTRACTED: | | 11/18/92 | 11/19/92 | 11/25/92 | 11/25/92 |
| DATE ANALYZED: | | 12/24/92 | 12/24/92 | 12/24/92 | 12/24/92 |
| DILUTION: | | 1.0 | 1.0 | 1.0 | 1.0 |
| POLYCHLORINATED BIPHENYLS (PCBs) -- METHOD 8080 | | | | | |
| ANALYTE | PQL | | | | |
| Aroclor-1016 | 0.05 | 0.05 U | 0.05 U | 0.05 UJ | 0.05 UJ |
| Aroclor-1221 | 0.05 | 0.05 U | 0.05 U | 0.05 UJ | 0.05 UJ |
| Aroclor-1232 | 0.05 | 0.05 U | 0.05 U | 0.05 UJ | 0.05 UJ |
| Aroclor-1242 | 0.05 | 0.05 U | 0.05 U | 0.05 UJ | 0.05 UJ |
| Aroclor-1248 | 0.05 | 0.05 U | 0.05 U | 0.05 UJ | 0.05 UJ |
| Aroclor-1254 | 0.05 | 0.05 U | 0.05 U | 0.05 UJ | 0.05 UJ |
| Aroclor-1260 | 0.05 | 0.05 U | 0.05 U | 0.05 UJ | 0.05 UJ |

PROJECT: NSB KINGS BAY, GEORGIA

INORGANIC AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| ANALYTE | CRDL | BS-29-ER | BS-30-ER | BS-31-ER | BS-13-FB | BS-14-FB | BS-15-FB |
|---|---|---|---|---|---|---|---|
| SAMPLE LOCATION: | | BS-29-ER | BS-30-ER | BS-31-ER | BS-13-FB | BS-14-FB | BS-15-FB |
| LAB NUMBER: | | 23285002 | 22727003 | 23300001 | 23285008 | 23285012 | 23285009 |
| DATE SAMPLED: | | 11/12/92 | 11/13/92 | 11/14/92 | 11/12/92 | 11/12/92 | 11/12/92 |
| Antimony | 60 | 10.7 U | 10.7 U | 10.7 UJ | 10.7 U | 10.7 U | 10.7 U |
| Arsenic | 10 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| Barium | 200 | 0.46 U | 2.4 U | 3.7 U | 2.8 J | 0.65 U | 2.6 J |
| Beryllium | 5 | 0.22 U | 0.22 U | 0.22 U | 0.22 U | 0.22 U | 0.22 U |
| Cadmium | 5 | 3.0 U | 3.0 UJ | 3.0 U | 3.0 U | 3.0 U | 3.0 U |
| Chromium | 10 | 2.9 U | 2.9 U | 2.9 U | 2.9 U | 2.9 U | 3.7 J |
| Cobalt | 50 | 3.3 U | 3.3 U | 3.3 U | 3.3 U | 3.3 U | 3.3 U |
| Copper | 25 | 2.3 UJ | 2.3 U | 8.8 J | 2.3 UJ | 2.3 UJ | 2.3 UJ |
| Lead | 3 | 1.4 U | 1.4 U | 1.4 U | 1.4 U | 1.4 U | 1.4 U |
| Mercury | 0.2 | 0.08 U | 0.08 U | 0.08 U | 0.08 U | 0.08 U | 0.08 U |
| Nickel | 40 | 5.3 UJ | 5.3 UJ | 5.3 U | 5.3 UJ | 5.3 UJ | 5.3 UJ |
| Selenium | 5 | 2.1 U | 2.1 U | 2.1 U | 2.1 U | 2.1 U | 2.1 U |
| Silver | 10 | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U |
| Thallium | 10 | 1.6 U | 1.6 U | 1.6 U | 1.6 U | 1.6 U | 1.6 U |
| Vanadium | 50 | 2.6 U | 2.6 U | 2.6 U | 2.6 U | 2.6 U | 2.6 U |
| Zinc | 20 | 9.6 U | 21.0 | 12.6 J | 9.6 U | 9.6 U | 10.1 J |
| Cyanide | 10 | 0.84 U | 0.84 U | 0.84 U | 0.84 U | 0.84 U | 0.84 U |
| Tin | 200 | 12.7 U | 12.7 U | 12.7 U | 12.7 U | 12.7 U | 12.7 U |
| Sulfide | 100 | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U |
| Total Dissolved Solids (mg/L) | | 10 U | 42 | 38 | 20 | --- | 40 |
| Total Suspended Solids (mg/L) | | 4 U | 4 U | 4 U | 4 U | --- | 4 U |

# Site 5 Groundwater Sampling Event No. 6
# January 1993

PROJECT: NSB KINGS BAY, GEORGIA

VOLATILE AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SAMPLE LOCATION: | | KBA-5-1 | KBA-5-2 | KBA-5-3 | KBA-5-3D | KBA-5-4 | KBA-5-5 | KBA-5-6 | KBA-5-7 |
| LAB NUMBER: | | 01134004 | 01134005 | 01133005 | 01133006 | 01134003 | 01133007 | 01134002 | 01134001 |
| DATE SAMPLED: | | 1/14/93 | 1/14/93 | 1/14/93 | 1/14/93 | 1/14/93 | 1/14/93 | 1/14/93 | 1/14/93 |
| DATA ANALYZED: | | 1/26/93 | 1/26/93 | 1/25/93 | 1/26/93 | 1/26/93 | 1/25/93 | 1/26/93 | 1/26/93 |
| DILUTION FACTOR: | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| VOLATILES -- METHOD 8240 | | | | | | | | | |
| ANALYTE | PQL | | | | | | | | |
| Chloromethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromomethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Vinyl Chloride | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Chloroethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Methylene Chloride | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Acetone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Carbon Disulfide | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Trichlorofluoromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloroethene (total) | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chloroform | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 2-Butanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,1,1-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Vinyl Acetate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromodichloromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloropropane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| cis-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Trichloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Dibromochloromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1,2-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Benzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| trans-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Bromoform | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 4-Methyl-2-Pentanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Hexanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Tetrachloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1,2,2-Tetrachloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Toluene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Ethylbenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Styrene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Xylene (total) | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,3-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,4-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |

PROJECT: NSB KINGS BAY, GEORGIA — PCB AQUEOUS ANALYSES (ug/l) — Validated Analytical Results

| | | | | | |
|---|---|---|---|---|---|
| SAMPLE LOCATION: | | KBA-5-1 | KBA-5-2 | KBA-5-3 | KBA-5-3D |
| LAB NUMBER: | | 23740007 | 23740009 | 23739006 | 23739007 |
| DATE SAMPLED: | | 1/14/93 | 1/14/93 | 1/14/93 | 1/14/93 |
| DATE EXTRACTED: | | 1/18/93 | 1/18/93 | 1/18/93 | 1/18/93 |
| DATE ANALYZED: | | 1/31/93 | 1/31/93 | 1/31/93 | 1/31/93 |
| DILUTION: | | 1.0 | 1.0 | 1.0 | 1.0 |
| POLYCHLORINATED BIPHENYLS (PCBs) -- METHOD 8080 | | | | | |
| ANALYTE | PQL | | | | |
| Aroclor-1016 | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Aroclor-1221 | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Aroclor-1232 | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Aroclor-1242 | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Aroclor-1248 | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Aroclor-1254 | 1.00 | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Aroclor-1260 | 1.00 | 1.00 U | 1.00 U | 1.00 U | 1.00 U |

PROJECT: NSB KINGS BAY, GEORGIA — PCB AQUEOUS ANALYSES (ug/l) — Validated Analytical Results

| | | | | | |
|---|---|---|---|---|---|
| SAMPLE LOCATION: | | KBA-5-4 | KBA-5-5 | KBA-5-6 | KBA-5-7 |
| LAB NUMBER: | | 23740005 | 23739010 | 23740003 | 23740001 |
| DATE SAMPLED: | | 1/14/93 | 1/14/93 | 1/14/93 | 1/14/93 |
| DATE EXTRACTED: | | 1/18/93 | 1/18/93 | 1/18/93 | 1/18/93 |
| DATE ANALYZED: | | 1/31/93 | 1/31/93 | 1/31/93 | 1/31/93 |
| DILUTION: | | 1.0 | 1.0 | 1.0 | 1.0 |
| POLYCHLORINATED BIPHENYLS (PCBs) -- METHOD 8080 | | | | | |
| ANALYTE | PQL | | | | |
| Aroclor-1016 | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Aroclor-1221 | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Aroclor-1232 | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Aroclor-1242 | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Aroclor-1248 | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U |
| Aroclor-1254 | 1.0 | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Aroclor-1260 | 1.0 | 1.00 U | 1.00 U | 1.00 U | 1.00 U |

PROJECT: NSB KINGS BAY, GEORGIA — INORGANIC AQUEOUS ANALYSES (ug/l) — Validated Analytical Results

| ANALYTE | CRDL | KBA-5-1 | KBA-5-1F | KBA-5-2 | KBA-5-2F | KBA-5-3 | KBA-5-3F | KBA-5-3D | KBA-5-3DF |
|---|---|---|---|---|---|---|---|---|---|
| LAB NUMBER: | | 23740007 | 23740008 | 23740009 | 23740010 | 23739006 | 23739008 | 23739007 | 23739009 |
| DATE SAMPLED: | | 1/14/93 | 1/14/93 | 1/14/93 | 1/14/93 | 1/14/93 | 1/14/93 | 1/14/93 | 1/14/93 |
| Antimony | 60 | 16.4 U | 16.4 U | 16.4 U | 17.9 J | 16.4 U | 16.4 U | 16.4 U | 17.6 J |
| Arsenic | 10 | 3.4 J | 1.5 J | 7.9 J | 4.3 J | 6.7 J | 2.6 J | 6.2 J | 2.0 J |
| Barium | 200 | 80.0 J | 47.5 J | 57.5 J | 13.4 J | 76.3 J | 48.5 J | 80.8 J | 44.1 J |
| Beryllium | 5 | 0.38 J | 0.30 J | 0.26 U | 0.26 U | 0.38 J | 0.26 U | 0.42 J | 0.26 U |
| Cadmium | 5 | 2.8 U | 2.8 U | 3.0 J | 2.8 U | 2.8 U | 3.4 J | 2.8 U | 2.8 U |
| Chromium | 10 | 7.6 J | 2.8 U | 12.5 | 3.5 J | 15.6 | 2.8 U | 13.4 | 2.8 U |
| Cobalt | 50 | 3.9 J | 4.6 J | 2.6 U | 2.6 U | 4.5 J | 3.4 J | 5.7 J | 4.8 J |
| Copper | 25 | 5.0 J | 1.2 U | 6.5 J | 1.2 U | 6.5 J | 1.2 U | 6.5 J | 1.2 U |
| Lead | 3 | 3.6 J | 1.7 UJ | 7.7 J | 2.4 UJ | 5.2 J | 2.6 J | 6.9 J | 1.7 UJ |
| Mercury | 0.2 | 0.07 U | 0.07 U | 0.08 U | 0.07 U | 0.07 U | 0.08 U | 0.07 U | 0.07 U |
| Nickel | 40 | 9.4 U | 9.4 U | 9.4 U | 9.4 U | 9.4 U | 9.4 U | 9.4 U | 9.4 U |
| Selenium | 5 | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U |
| Silver | 10 | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U |
| Thallium | 10 | 2.3 U | 2.3 U | 2.3 U | 2.3 U | 2.3 U | 2.3 U | 2.3 U | 2.3 U |
| Vanadium | 50 | 7.3 J | 2.6 U | 12.4 J | 5.2 J | 10.5 J | 2.6 U | 11.8 J | 2.6 U |
| Zinc | 20 | 31.7 | 25.4 | 196 | 151 | 56.3 | 18.5 J | 78.5 | 46.7 |
| Cyanide | 10 | 1.4 U | 1.4 U | 1.4 U | 1.4 U | 1.4 U | 1.4 U | 1.4 U | 1.4 U |
| Tin | 200 | 12.7 UJ | 12.7 UJ | 12.7 UJ | 12.7 UJ | 702 J | 12.7 UJ | 12.7 UJ | 15.8 J |
| Sulfide | 100 | 200 | 100 U | 100 U | 100 U | 100 U | 200 | 200 | 100 U |
| Total Dissolved Solids (mg/L) | | 106 | --- | 195 | --- | 167 | --- | 159 | --- |
| Total Suspended Solids (mg/L) | | 89 | --- | 258 | --- | 1020 | --- | 289 | --- |

PROJECT: NSB KINGS BAY, GEORGIA — INORGANIC AQUEOUS ANALYSES (ug/l) — Validated Analytical Results

| ANALYTE | CRDL | KBA-5-4 | KBA-5-4F | KBA-5-5 | KBA-5-5F | KBA-5-6 | KBA-5-6F | KBA-5-7 | KBA-5-7F |
|---|---|---|---|---|---|---|---|---|---|
| LAB NUMBER: | | 23740005 | 23740006 | 23739010 | 23739011 | 23740003 | 23740004 | 23740001 | 23740002 |
| DATE SAMPLED: | | 1/14/93 | 1/14/93 | 1/14/93 | 1/14/93 | 1/14/93 | 1/14/93 | 1/14/93 | 1/14/93 |
| Antimony | 60 | 16.4 U | 16.4 U | 16.4 U | 16.4 U | 16.4 U | 16.4 U | 16.4 U | 16.4 U |
| Arsenic | 10 | 3.2 J | 1.8 J | 8.8 J | 2.1 J | 3.4 J | 1.9 J | 6.9 J | 1.5 J |
| Barium | 200 | 60.6 J | 32.6 J | 60.8 J | 19.2 J | 73.6 J | 28.7 J | 35.5 J | 16.1 J |
| Beryllium | 5 | 0.33 J | 0.26 U | 0.47 J | 0.26 U | 0.48 J | 0.26 U | 0.26 U | 0.26 U |
| Cadmium | 5 | 2.8 U | 3.8 J | 2.8 U | 2.8 U | 4.2 J | 2.8 U | 4.2 J | 4.2 J |
| Chromium | 10 | 9.2 J | 2.8 U | 15.3 | 2.8 U | 13.2 | 2.8 U | 8.0 J | 2.8 U |
| Cobalt | 50 | 6.1 J | 6.6 J | 7.0 J | 2.6 U | 5.7 J | 2.6 U | 4.6 J | 5.1 J |
| Copper | 25 | 4.3 J | 1.5 J | 6.8 J | 1.2 U | 6.5 J | 1.2 U | 5.5 J | 2.0 J |
| Lead | 3 | 6.4 J | 1.7 UJ | 8.1 J | 1.7 UJ | 6.1 J | 1.7 UJ | 6.6 J | 1.7 UJ |
| Mercury | 0.2 | 0.15 U | 0.10 U | 0.15 U | 0.07 U | 0.13 U | 0.07 U | 0.09 U | 0.07 U |
| Nickel | 40 | 9.4 U | 9.4 U | 9.4 U | 9.4 U | 9.4 U | 9.4 U | 9.4 U | 9.4 U |
| Selenium | 5 | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 2.0 J | 2.0 J |
| Silver | 10 | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U |
| Thallium | 10 | 2.3 U | 2.3 U | 2.3 U | 2.3 U | 2.3 U | 2.3 U | 2.3 U | 2.3 U |
| Vanadium | 50 | 8.2 J | 3.4 J | 13.1 J | 2.6 U | 11.1 J | 2.6 U | 11.2 J | 3.9 J |
| Zinc | 20 | 84.6 | 38.3 | 73.4 | 28.6 | 55.1 | 22.7 | 77.2 | 24.4 |
| Cyanide | 10 | 1.4 U | 1.4 U | 1.4 U | 1.4 U | 1.4 U | 1.4 U | 1.4 U | 1.4 U |
| Tin | 200 | 12.7 UJ | 12.7 UJ | 12.7 UJ | 12.7 UJ | 12.7 UJ | 12.7 UJ | 12.7 UJ | 12.7 UJ |
| Sulfide | 100 | 300 | 100 U | 100 U | 100 U | 300 | 200 | 300 | 200 |
| Total Dissolved Solids (mg/L) | | 384 | --- | 194 | --- | 99 | --- | 474 | --- |
| Total Suspended Solids (mg/L) | | 183 | --- | 112 | --- | 221 | --- | 74 | --- |

Note:

| | |
|---|---|
| --- | = analysis not requested or performed |
| KBA-XX-X | = unfiltered groundwater sample |
| KBA-XX-XD | = duplicate, unfiltered groundwater sample |
| KBA-XX-XF | = filtered groundwater sample |
| KBA-XX-XDF | = duplicate, filtered groundwater sample |

# Site 16 Groundwater Sampling Event No. 6
# January 1993

PROJECT: NSB KINGS BAY, GEORGIA

VOLATILE AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| | | | | | | |
|---|---|---|---|---|---|---|
| | SAMPLE LOCATION: | KBA-16-1 | KBA-16-2 | KBA-16-2D | KBA-16-3 | KBA-16-4 |
| | LAB NUMBER: | 01145003 | 01145004 | 01145005 | 01145006 | 01145007 |
| | DATE SAMPLED: | 1/15/93 | 1/15/93 | 1/15/93 | 1/15/93 | 1/15/93 |
| | DATE ANALYZED: | 1/26/93 | 1/26/93 | 1/26/93 | 1/26/93 | 1/26/93 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| VOLATILES - - METHOD 8240 | | | | | | |
| ANALYTE | PQL | | | | | |
| Chloromethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromomethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Vinyl Chloride | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Chloroethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Methylene Chloride | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| Acetone | 10 | 10 U | 10 U | 10 U | 10 | 10 U |
| Carbon Disulfide | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| Trichlorofluoromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloroethene (total) | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chloroform | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| 2-Butanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,1,1-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| Vinyl Acetate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromodichloromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloropropane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| cis-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| Trichloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| Dibromochloromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1,2-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| Benzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| trans-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| Bromoform | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| 4-Methyl-2-Pentanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Hexanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Tetrachloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1,2,2-Tetrachloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| Toluene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| Ethylbenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| Styrene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| Xylene (total) | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,3-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,4-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U |

PROJECT: NSB KINGS BAY, GEORGIA

SEMIVOLATILE AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| | | | | | | |
|---|---|---|---|---|---|---|
| | SAMPLE LOCATION: | KBA-16-1 | KBA-16-2 | KBA-16-2D | KBA-16-3 | KBA-16-4 |
| | LAB NUMBER: | 23751003 | 23751005 | 23751006 | 23751008 | 23751010 |
| | DATE SAMPLED: | 1/15/93 | 1/15/93 | 1/15/93 | 1/15/93 | 1/15/93 |
| | DATE EXTRACTED: | 1/18/93 | 1/18/93 | 1/18/93 | 1/18/93 | 1/18/93 |
| | DATE ANALYZED: | 1/28/93 | 1/28/93 | 1/28/93 | 1/28/93 | 1/28/93 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| SEMIVOLATILES -- METHOD 8270 | | | | | | |
| ANALYTE | PQL | | | | | |
| bis (2-Chloroethyl) Ether | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| 1,3- Dichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| 1,4- Dichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| Benzyl Alcohol | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| 1,2- Dichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| bis (2- Chloroisopropyl) Ether | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| N-Nitroso-Di-n-Propylamine | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| Hexachloroethane | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| Nitrobenzene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| Isophorone | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| bis (2-Chloroethoxy) Methane | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| 1,2,4-Trichlorobenzene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| Naphthalene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| 4-Chloroaniline | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| Hexachlorobutadiene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| 2-Methylnaphthalene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| Hexachlorocyclopentadiene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| 2-Chloronaphthalene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| 2-Nitroaniline | 50 | 50 U | 50 U | 50 U | 50 UJ | 50 U |
| Dimethylphthalate | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| Acenaphthylene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| 2,6-Dinitrotoluene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| 3-Nitroaniline | 50 | 50 U | 50 U | 50 U | 50 UJ | 50 U |
| Acenaphthene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| Dibenzofuran | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| 2,4-Dinitrotoluene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| Diethylphthalate | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| 4-Chlorophenyl-phenylether | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| Fluorene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| 4-Nitroaniline | 50 | 50 U | 50 U | 50 U | 50 UJ | 50 U |
| N-Nitrosodiphenylamine | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| 4-Bromophenyl-phenylether | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| Hexachlorobenzene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| Phenanthrene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| Anthracene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| Di-n-Butylphthalate | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| Fluoranthene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| Pyrene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| Butylbenzylphthalate | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| 3,3'-Dichlorobenzidine | 20 | 20 U | 20 U | 20 U | 20 UJ | 20 U |
| Benzo (a) Anthracene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| Chrysene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| bis (2-Ethylhexyl) Phthalate | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| Di-n-Octyl Phthalate | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| Benzo (b) Fluoranthene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| Benzo (k) Fluoranthene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| Benzo (a) Pyrene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| Indeno (1,2,3-cd) Pyrene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| Dibenz (a,h) Anthracene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |
| Benzo (g,h,i) Perylene | 10 | 10 U | 10 U | 10 U | 10 UJ | 10 U |

PROJECT: NSB KINGS BAY, GEORGIA — INORGANIC AQUEOUS ANALYSES (ug/l) — Validated Analytical Results

| SAMPLE LOCATION: | | KBA-16-1 | KBA-16-1F | KBA-16-2 | KBA-16-2D | KBA-16-2F |
|---|---|---|---|---|---|---|
| LAB NUMBER: | | 23751003 | 23751004 | 23751005 | 23751006 | 23751007 |
| DATE SAMPLED: | | 1/15/93 | 1/15/93 | 1/15/93 | 1/15/93 | 1/15/93 |
| ANALYTE | CRDL | | | | | |
| Antimony | 60 | 16.4 U | 16.4 U | 16.4 U | 16.4 U | 16.4 U |
| Arsenic | 10 | 10.0 | 1.1 J | 17.7 | [illegible] | 2.3 J |
| Barium | 200 | 62.4 J | 11.0 J | 68.8 J | [illegible] | 22.7 J |
| Beryllium | 5 | 0.86 J | 0.26 U | 0.85 J | 0.99 J | 0.26 U |
| Cadmium | 5 | 2.8 U | 2.8 U | 2.8 U | 2.8 U | 2.8 U |
| Chromium | 10 | 32.8 | 2.8 U | 33.0 | 38.4 | 2.8 U |
| Cobalt | 50 | 4.4 J | 2.6 U | 12.3 J | 13.5 J | 3.8 J |
| Copper | 25 | 9.5 J | 1.2 UJ | 9.8 J | 10.3 J | 1.2 UJ |
| Lead | 3 | 12.3 J | 2.4 J | 10.7 J | 12.4 J | 2.0 J |
| Mercury | 0.2 | 0.23 U | 0.22 U | 0.29 U | 0.18 U | 0.16 U |
| Nickel | 40 | 10.4 J | 9.4 U | 24.5 J | 23.8 J | 9.4 U |
| Selenium | 5 | 4.8 J | 1.8 UJ | 2.6 J | 2.6 J | 1.8 UJ |
| Silver | 10 | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U |
| Thallium | 10 | 2.3 U | 2.3 U | 2.3 U | 2.3 U | 2.3 U |
| Vanadium | 50 | 40.0 J | 2.6 UJ | 34.2 J | 40.6 J | 2.6 UJ |
| Zinc | 20 | 64.4 | 27.7 U | 59.5 | 70.2 | 9.0 U |
| Cyanide | 10 | 3.5 J | 1.4 U | 4.2 J | 7.0 U | 1.4 U |
| Tin | 200 | 12.7 U | 12.7 U | 12.7 U | 12.7 U | 12.7 U |
| Sulfide | 100 | 200 | 100 U | 300 | 100 U | 100U |
| Total Dissolved Solids (mg/L) | | 349 | --- | 411 | 361 | --- |
| Total Suspended Solids (mg/L) | | 535 | --- | 543 | 530 | --- |

PROJECT: NSB KINGS BAY, GEORGIA — INORGANIC AQUEOUS ANALYSES (ug/l) — Validated Analytical Results

| SAMPLE LOCATION: | | KBA-16-3 | KBA-16-3F | KBA-16-4 | KBA-16-4F |
|---|---|---|---|---|---|
| LAB NUMBER: | | 23751008 | 23751009 | 23751010 | 23751011 |
| DATE SAMPLED: | | 1/15/93 | 1/15/93 | 1/15/93 | 1/15/93 |
| ANALYTE | CRDL | | | | |
| Antimony | 60 | 23.1J | 16.4 U | 16.4 U | 16.4 U |
| Arsenic | 10 | 20.8 | 9.2 J | 6.2 J | 0.68 U |
| Barium | 200 | 152 J | 26.4 J | 139 J | 29.3 J |
| Beryllium | 5 | 4.0 J | 0.26 U | 2.1 J | 0.26 U |
| Cadmium | 5 | 2.8 U | 2.8 U | 2.8 U | 2.8 U |
| Chromium | 10 | 64.9 | 3.0 J | 46.8 | 3.1 J |
| Cobalt | 50 | 13.7 J | 2.6 U | 5.2 J | 2.6 U |
| Copper | 25 | 13.6 J | 1.2 UJ | 15.2 J | 1.2 UJ |
| Lead | 3 | 41.2 J | 2.3 J | 1.7 UJ | 2.6 J |
| Mercury | 0.2 | 0.33 U | 0.14 U | 0.25 U | 0.10 U |
| Nickel | 40 | 28.3 J | 9.4 U | 16.2 J | 9.4 U |
| Selenium | 5 | 2.1 J | 1.8 UJ | 4.3 J | 1.8 UJ |
| Silver | 10 | 2.0 U | 2.0 U | 2.0 U | 2.0 U |
| Thallium | 10 | 2.3 U | 2.3 U | 2.3 U | 2.3 U |
| Vanadium | 50 | 60.1 | 2.6 UJ | 41.2 J | 3.6 J |
| Zinc | 20 | 107 | 20.9 U | 66.1 | 12.2 U |
| Cyanide | 10 | 1.4 U | 1.7 J | 7.0 U | 7.0 U |
| Tin | 200 | 12.7 U | 12.7 U | 12.7 U | 12.7 U |
| Sulfide | 100 | 200 | 100 U | 800 | 1800 |
| Total Dissolved Solids (mg/L) | | 400 | --- | 556 | --- |
| Total Suspended Solids (mg/L) | | 831 | --- | 1070 | --- |

Note:

| | |
|---|---|
| --- | = analysis not requested or performed |
| KBA-XX-X | = unfiltered groundwater sample |
| KBA-XX-XD | = duplicate, unfiltered groundwater sample |
| KBA-XX-XF | = filtered groundwater sample |

**Trip Blanks**
**Source Water Blanks**
**Sampling Event No. 6**
**January 1993**

PROJECT: NSB KINGS BAY, GEORGIA

VOLATILE AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | SAMPLE LOCATION: | BT-35-FB | BT-36-FB | BS-35-ER | BS-36-ER | BS-19-FB | BS-21-FB |
| | LAB NUMBER: | 01133001 | 01145001 | 01133004 | 01145002 | 01133003 | 01133002 |
| | DATE SAMPLED: | 1/14/93 | 1/15/93 | 1/14/93 | 1/15/93 | 1/14/93 | 1/14/93 |
| | DATE ANALYZED: | 1/23/93 | 1/26/93 | 1/25/93 | 1/26/93 | 1/23/93 | 1/23/93 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| VOLATILES -- METHOD 8240 | | | | | | | |
| ANALYTE | PQL | | | | | | |
| Chloromethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromomethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Vinyl Chloride | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Chloroethane | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Methylene Chloride | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Acetone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 11 |
| Carbon Disulfide | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Trichlorofluoromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloroethene (total) | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chloroform | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 2 J |
| 1,2-Dichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 2-Butanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,1,1-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Vinyl Acetate | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromodichloromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloropropane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| cis-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Trichloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Dibromochloromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1,2-Trichloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Benzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| trans-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Bromoform | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 4-Methyl-2-Pentanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Hexanone | 10 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Tetrachloroethene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1,2,2-Tetrachloroethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Toluene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Ethylbenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Styrene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Xylene (total) | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,3-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,4-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |

PROJECT: NSB KINGS BAY, GEORGIA

SEMIVOLATILE AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| | | | | |
|---|---|---|---|---|
| | SAMPLE LOCATION: | BS-36-ER | BS-19-FB | BS-21-FB |
| | LAB NUMBER: | 23751002 | 23739003 | 23739002 |
| | DATE SAMPLED: | 1/15/93 | 1/14/93 | 1/14/93 |
| | DATE EXTRACTED: | 1/18/93 | 1/18/93 | 1/18/93 |
| | DATE ANALYZED: | 1/28/93 | 1/28/93 | 1/28/93 |
| | DILUTION FACTOR: | 1.0 | 1.0 | 1.0 |
| SEMIVOLATILES. -- METHOD 8270 | | | | |
| ANALYTE | PQL | | | |
| bis (2-Chloroethyl) Ether | 10 | 10 U | 10 U | 10 U |
| 1,3- Dichlorobenzene | 10 | 10 U | 10 U | 10 U |
| 1,4- Dichlorobenzene | 10 | 10 U | 10 U | 10 U |
| Benzyl Alcohol | 10 | 10 U | 10 U | 10 U |
| 1,2- Dichlorobenzene | 10 | 10 U | 10 U | 10 U |
| bis (2- Chloroisopropyl) Ether | 10 | 10 U | 10 U | 10 U |
| N-Nitroso-Di-n-Propylamine | 10 | 10 U | 10 U | 10 U |
| Hexachloroethane | 10 | 10 U | 10 U | 10 U |
| Nitrobenzene | 10 | 10 U | 10 U | 10 U |
| Isophorone | 10 | 10 U | 10 U | 10 U |
| bis (2-Chloroethoxy) Methane | 10 | 10 U | 10 U | 10 U |
| 1,2,4-Trichlorobenzene | 10 | 10 U | 10 U | 10 U |
| Naphthalene | 10 | 10 U | 10 U | 10 U |
| 4-Chloroaniline | 10 | 10 U | 10 U | 10 U |
| Hexachlorobutadiene | 10 | 10 U | 10 U | 10 U |
| 2-Methylnaphthalene | 10 | 10 U | 10 U | 10 U |
| Hexachlorocyclopentadiene | 10 | 10 U | 10 U | 10 U |
| 2-Chloronaphthalene | 10 | 10 U | 10 U | 10 U |
| 2-Nitroaniline | 50 | 50 U | 50 U | 50 U |
| Dimethylphthalate | 10 | 10 U | 10 U | 10 U |
| Acenaphthylene | 10 | 10 U | 10 U | 10 U |
| 2,6-Dinitrotoluene | 10 | 10 U | 10 U | 10 U |
| 3-Nitroaniline | 50 | 50 U | 50 U | 50 U |
| Acenaphthene | 10 | 10 U | 10 U | 10 U |
| Dibenzofuran | 10 | 10 U | 10 U | 10 U |
| 2,4-Dinitrotoluene | 10 | 10 U | 10 U | 10 U |
| Diethylphthalate | 10 | 10 U | 10 U | 10 U |
| 4-Chlorophenyl-phenylether | 10 | 10 U | 10 U | 10 U |
| Fluorene | 10 | 10 U | 10 U | 10 U |
| 4-Nitroaniline | 50 | 50 U | 50 U | 50 U |
| N-Nitrosodiphenylamine | 10 | 10 U | 10 U | 10 U |
| 4-Bromophenyl-phenylether | 10 | 10 U | 10 U | 10 U |
| Hexachlorobenzene | 10 | 10 U | 10 U | 10 U |
| Phenanthrene | 10 | 10 U | 10 U | 10 U |
| Anthracene | 10 | 10 U | 10 U | 10 U |
| Di-n-Butylphthalate | 10 | 10 U | 10 U | 10 U |
| Fluoranthene | 10 | 10 U | 10 U | 10 U |
| Pyrene | 10 | 10 U | 10 U | 10 U |
| Butylbenzylphthalate | 10 | 10 U | 10 U | 10 U |
| 3,3'-Dichlorobenzidine | 20 | 20 U | 20 U | 20 U |
| Benzo (a) Anthracene | 10 | 10 U | 10 U | 10 U |
| Chrysene | 10 | 10 U | 10 U | 10 U |
| bis (2-Ethylhexyl) Phthalate | 10 | 10 U | 10 U | 10 U |
| Di-n-Octyl Phthalate | 10 | 10 U | 10 U | 10 U |
| Benzo (b) Fluoranthene | 10 | 10 U | 10 U | 10 U |
| Benzo (k) Fluoranthene | 10 | 10 U | 10 U | 10 U |
| Benzo (a) Pyrene | 10 | 10 U | 10 U | 10 U |
| Indeno (1,2,3-cd) Pyrene | 10 | 10 U | 10 U | 10 U |
| Dibenz (a,h) Anthracene | 10 | 10 U | 10 U | 10 U |
| Benzo (g,h,i) Perylene | 10 | 10 U | 10 U | 10 U |

PROJECT: NSB KINGS BAY, GEORGIA

PCB AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| | | | |
|---|---|---|---|
| SAMPLE LOCATION: | BS-35-ER | BS-19-FB | BS-21-FB |
| LAB NUMBER: | 23739005 | 23739003 | 23739002 |
| DATE SAMPLED: | 1/14/93 | 1/14/93 | 1/14/93 |
| DATE EXTRACTED: | 1/18/93 | 1/18/93 | 1/18/93 |
| DATE ANALYZED: | 1/31/93 | 1/31/93 | 1/30/93 |
| DILUTION: | 1.0 | 1.0 | 1.0 |

POLYCHLORINATED BIPHENYLS (PCBs) -- METHOD 8080

| ANALYTE | PQL | | | |
|---|---|---|---|---|
| Aroclor-1016 | 0.05 | 0.05 U | 0.05 U | 0.05 U |
| Aroclor-1221 | 0.05 | 0.05 U | 0.05 U | 0.05 U |
| Aroclor-1232 | 0.05 | 0.05 U | 0.05 U | 0.05 U |
| Aroclor-1242 | 0.05 | 0.05 U | 0.05 U | 0.05 U |
| Aroclor-1248 | 0.05 | 0.05 U | 0.05 U | 0.05 U |
| Aroclor-1254 | 1.00 | 1.00 U | 1.00 U | 1.00 U |
| Aroclor-1260 | 1.00 | 1.00 U | 1.00 U | 1.00 U |

PROJECT: NSB KINGS BAY, GEORGIA

INORGANIC AQUEOUS ANALYSES (ug/l)

Validated Analytical Results

| ANALYTE | CRDL | BS-35-ER | BS-36-ER | BS-19-FB | BS-20-FB | BS-21-FB |
|---|---|---|---|---|---|---|
| SAMPLE LOCATION: | | BS-35-ER | BS-36-ER | BS-19-FB | BS-20-FB | BS-21-FB |
| LAB NUMBER: | | 23739005 | 23751002 | 23739003 | 23739004 | 23739002 |
| DATE SAMPLED: | | 1/14/93 | 1/15/93 | 1/14/93 | 1/14/93 | 1/14/93 |
| Antimony | 60 | 16.4 U | 16.4 U | 16.4 U | 16.4 U | 16.4 U |
| Arsenic | 10 | 0.68 U | 0.68 U | 0.68 U | 0.68 U | 0.68 U |
| Barium | 200 | 1.4 J | 0.92 J | 1.8 J | 1.0 J | 1.6 J |
| Beryllium | 5 | 0.26 U | 0.26 U | 0.26 U | 0.26 U | 0.26 U |
| Cadmium | 5 | 2.8 U | 2.8 U | 2.8 U | 2.8 U | 2.8 U |
| Chromium | 10 | 2.8 U | 2.8 U | 2.8 U | 2.8 U | 2.8 U |
| Cobalt | 50 | 2.6 U | 2.6 U | 2.6 U | 2.6 U | 2.6 U |
| Copper | 25 | 1.2 U | 1.2 UJ | 1.2 U | 1.2 U | 1.2 J |
| Lead | 3 | 4.5 J | 1.7 UJ | 1.7 UJ | 1.7 UJ | 1.7 UJ |
| Mercury | 0.2 | 0.22 | 0.28 U | 0.21 | 0.32 | 0.07 U |
| Nickel | 40 | 9.4 U | 9.4 U | 9.4 U | 9.4 U | 9.4 U |
| Selenium | 5 | 1.8 U | 1.8 UJ | 1.8 U | 1.8 U | 1.8 U |
| Silver | 10 | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U |
| Thallium | 10 | 2.3 U | 2.3 U | 2.3 U | 2.3 U | 2.3 U |
| Vanadium | 50 | 2.6 U | 2.6 UJ | 2.6 U | 2.6 U | 2.6 U |
| Zinc | 20 | 9.0 U | 9.0 U | 9.0 U | 9.0 U | 9.0 U |
| Cyanide | 10 | 1.4 U | 1.4 U | 1.4 U | 1.4 U | 1.4 U |
| Tin | 200 | 12.7 UJ | 12.7 U | 12.7 UJ | 12.7 UJ | 12.7 UJ |
| Sulfide | 100 | 100 U | 100 U | 100 U | 100 U | 100 U |
| Total Dissolved Solids (mg/L) | | 10 U | 10 U | 10 U | --- | 10 U |
| Total Suspended Solids (mg/L) | | 4 U | 4 U | 4 U | --- | 4 U |

# Appendix G

## Sites 5 and 16 Groundwater Monitoring Program Summary Tables

# Site 5

## Table G-1
## Summary of Laboratory Analysis of Groundwater Samples Collected from Site 5[1] - Round 1

RFI Report for Sites 5 and 16 and
Site History and File Information for Site 12
Naval Installation Restoration Program
Naval Submarine Base, Kings Bay, Georgia

| | | Monitoring Well Number | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Compounds Detected** | **PQL** | **KBA-5-1** | **KBA-5-2** | **KBA-5-3** | **KBA-5-4** | **KBA-5-4D** | **KBA-5-5** | **KBA-5-6** | **KBA-5-7** |
| **VOLATILE ORGANIC COMPOUNDS (μg/L)** | | | | | | | | | |
| Acetone | 10 | 72 | 12 U | 10 U | 10 U | 12 U | 12 U | 14 U | 10 U |
| Carbon Disulfide[2] | 5 | 2 J | 1 J | 2 J | 5 U | 5 U | 1 J | 5 U | 5 U |
| Trichlorofluoromethane | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 7 | 5 U |
| 4-Methyl-2-Pentanone[2] | 10 | 10 U | 3 J | 10 U | 10 U | 10 U | 3 J | 10 U | 10 U |
| Ethylbenzene[2] | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 1 J | 5 U | 5 U |
| Xylene (total)[2] | 5 | 5 U | 4 J | 5 U | 5 U | 5 U | 6 | 5 U | 5 U |
| **SEMIVOLATILE ORGANIC COMPOUNDS (μg/L)** | | | | | | | | | |
| Diethylphthalate[2,5] | 10 | 10 U | 10 U | 10 U | 2 J | 10 U | 10 U | 10 U | 10 U |
| **INORGANIC ANALYTES (μg/L)** | **CRDL[6]** | | | | | | | | |
| Antimony[2] | 60 | 10.9 U | 10.9 U | 10.9 U | 14.0 J | 10.9 U | 10.9 U | 11.3 J | 16.8 J |
| Arsenic | 10 | 36.5 | 27.9 | 22.5 | 15.9 | 18.0 | 33.2 | 14.9 | 76.9 |
| Barium[2] | 200 | 742 | 459 | 161 J | 601 | 588 | 332 | 640 | 748 |
| Beryllium[2] | 5 | 4.2 J | 2.7 J | 0.92 J | 3.1 J | 2.9 J | 3.0 J | 5.1 | 6.1 |
| Cadmium[2] | 5 | 2.9 U | 2.9 U | 2.9 U | 2.9 U | 3.7 J | 2.9 U | 25.4 | 25.9 |
| Chromium | 10 | 134 | 95.7 | 29.5 | 103 | 101 | 102 | 152 | 228 |
| Cobalt[2] | 50 | 36.4 J | 21.3 J | 11.8 J | 28.5 J | 29.1 J | 29.2 J | 30.4 J | 48.4 J |
| Copper | 25 | 37.8 | 51.5 | 77.6 | 31.7 | 36.9 | 77.4 | 63.3 | 73.4 |
| Lead | 5 | 30.2 | 23.2 | 7.2 | 22.0 | 25.2 | 23.0 | 32.0 | 43.0 |

See notes at end of table.

## Table G-1 (Continued)
## Summary of Laboratory Analysis of Groundwater Samples Collected from Site 5[1] - Round 1

RFI Report for Sites 5 and 16 and
Site History and File Information for Site 12
Naval Installation Restoration Program
Naval Submarine Base, Kings Bay, Georgia

| | | Monitoring Well Number | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Compounds Detected** | **CRDL[6]** | **KBA-5-1** | **KBA-5-2** | **KBA-5-3** | **KBA-5-4** | **KBA-5-4D** | **KBA-5-5** | **KBA-5-6** | **KBA-5-7** |
| **INORGANIC ANALYTES (μg/L)** | | | | | | | | | |
| Mercury | 0.2 | 0.16 U | 0.16 U | 0.16 U | 0.16 U | 0.16 U | 0.16 U | 0.40 | 0.16 U |
| Nickel[3] | 40 | 49.0 | 50.3 | 79.8 | 40.2 J | 42.7 J | 77.2 | 59.8 | 84.4 |
| Selenium[2] | 5 | 1.3 U | 1.4 J | 1.3 U | 2.0 J | 1.6 J | 2.2 J | 1.3 U | 1.7 J |
| Thallium[2] | 10 | 1.4 U | 1.4 U | 1.4 U | 1.6 J | 1.5 J | 1.6 J | 1.6 J | 2.2 J |
| Tin | 208 | 208 U | 208 U | 208 U | 232 | 208 U | 208 U | 208 U | 208 U |
| Vanadium[2] | 50 | 117 | 80.6 | 24.4 J | 84.7 | 82.6 | 81.8 | 138 | 183 |
| Zinc[4] | 20 | 168 J | 322 J | 100 J | 153 J | 177 J | 200 J | 235 J | 260 J |
| Cyanide[2] | 10 | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.9 J | 5.6 J |
| Sulfide | 100 | 300 | 300 | 200 | 300 | 400 | 200 | 2100 | 300 |

[1] No pesticides, PCBs, herbicides, dioxins, or furans were detected in groundwater samples.

Data Qualifiers:

[2] Values flagged J as estimated because concentrations are less than the quantitation limit.
[3] Values flagged J as estimated because preparation blank exhibited negative bias for nickel.
[4] Values flagged J as estimated because the duplicate analysis for zinc was outside QC limits.
[5] Values flagged J as estimated because the surrogate recoveries were below the lower control limits.
[6] The CRDLs listed for inorganic analytes are from the Contract Laboratory Program (CLP) because SW-846 analytical data are reported using CLP protocol when analyses are conducted at a CLP laboratory. This protocol results in qualification of values as estimated when the values are greater than the method detection limit but less than the CLP contract required detection limits. The SW-846 methods do not specify required quantitation limits for inorganic data.

**Notes:** CRDL = Contract Required Detection Limit.
μg/L = micrograms per liter.
U = not detected above or below quantitation limit.
PQL = practical quantitation limit.

## Table G-2
## Summary of Laboratory Analysis of Groundwater Samples Collected from Site 5[1] - Round 2

RFI Report for Sites 5 and 16 and
Site History and File Information for Site 12
Naval Installation Restoration Program
Naval Submarine Base, Kings Bay, Georgia

| | | Monitoring Well Number | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Compounds Detected** | **PQL** | **KBA-5-1** | **KBA-5-2** | **KBA-5-3** | **KBA-5-4** | **KBA-5-5** | **KBA-5-5D** | **KBA-5-6** | **KBA-5-7** |
| **SEMIVOLATILE ORGANIC COMPOUNDS (μg/L)** | | | | | | | | | |
| bis(2-Ethylhexyl)-Phthalate[2] | 10 | 10 U | 2 J | 10 U | 10 U | 18 | 10 U | 10 U | 10 U |
| **INORGANIC ANALYTES (μg/L)** | **CRDL[6]** | | | | | | | | |
| Arsenic[3] | 10 | 10.5 J | 20.0 J | 28.5 | 12.5 | 22.5 J | 24.0 J | 3.2 J | 14.0 J |
| Barium[2] | 200 | 417 | 181 J | 366 | 274 | 187 J | 187 J | 208 | 203 |
| Beryllium[2] | 5 | 3.4 J | 1.4 J | 2.9 J | 2.3 J | 2.6 J | 2.3 J | 2.0 J | 2.0 J |
| Cadmium[2,4] | 5 | 1.3 J | 1.0 UJ | 2.2 J | 1.8 J | 1.3 J | 3.1 J | 7.5 J | 5.5 J |
| Chromium | 10 | 56.8 | 24.7 | 59.5 | 31.4 | 30.8 | 30.2 | 34.7 | 35.2 |
| Cobalt[2] | 50 | 16.8 J | 7.8 U | 14.1 J | 7.8 U | 14.7 J | 13.0 J | 7.8 U | 7.8 U |
| Copper[2] | 25 | 14.6 J | 10.9 J | 22.2 J | 10.3 J | 9.6 J | 9.8 J | 10.7 J | 14.8 J |
| Lead | 5 | 13.1 | 10.0 | 18.0 | 14.0 | 17.8 | 16.9 | 11.3 | 12.7 |
| Nickel[2,4] | 40 | 24.3 J | 7.8 U | 21.3 J | 8.2 J | 24.3 J | 24.7 J | 9.4 J | 19.7 J |
| Selenium[2,3] | 5 | 3.2 J | 2.3 J | 6.3 | 2.9 J | 3.3 J | 2.5 J | 2.7 J | 2.9 J |
| Thallium[2] | 10 | 1.0 J | 0.80 U | 1.1 J | 1.1 J | 1.1 J | 1.3 J | 0.80 U | 0.80 U |
| Vanadium[2,4] | 50 | 63.5 | 21.4 J | 52.3 | 31.5 J | 42.1 J | 37.6 J | 34.6 J | 34.3 J |
| Zinc | 20 | 62.O | 130 | 76.1 | 41.0 | 62.9 | 62.2 | 44.0 | 45.3 |
| Cyanide[2] | 10 | 1.8 U | 1.8 U | 1.8 U | 7.8 J | 1.8 U | 1.8 U | 10.3 | 5.7 J |
| Sulfide | 100 | 1,800 | 100 U | 400 | 500 | 1,200 | 3,100 | 500 | 400 |

See notes at end of table.

## Table G-2 (Continued)
## Summary of Laboratory Analysis of Groundwater Samples Collected from Site 5[1] - Round 2

RFI Report for Sites 5 and 16 and
Site History and File Information for Site 12
Naval Installation Restoration Program
Naval Submarine Base, Kings Bay, Georgia

[1] No VOCs, pesticides, PCBs, herbicides, dioxins, or furans were detected in groundwater samples.

Data Qualifiers:

[2] Values flagged J as estimated because concentrations are less than the quantitation limit.
[3] Quantitation limits flagged UJ as estimated and values flagged J as estimated due to low matrix spike recovery for arsenic and selenium.
[4] Values flagged J as estimated because the preparation blank exhibited negative bias for cadmium, nickel, and vanadium.
[5] The CRDLs listed for inorganic analytes are from the Contract Laboratory Program (CLP) because SW-846 analytical data are reported using CLP protocol when analyses are conducted at a CLP laboratory. This protocol results in qualification of values as estimated when the values are greater than the method detection limit but less than the CLP contract required detection limits. The SW-846 methods do not specify required quantitation limits for inorganic data.

**Notes:**
CRDL = Contract Required Detection Limit.
$\mu$g/L = micrograms per liter.
U = not detected above or below the quantitation limit.
PQL = Practical Quantitation Limit.

## Table G-3
## Summary of Laboratory Analysis of Groundwater Samples Collected from Site 5[1] - Round 3

RFI Report for Sites 5 and 16 and
Site History and File Information for Site 12
Naval Installation Restoration Program
Naval Submarine Base, Kings Bay, Georgia

| Compounds Detected | | CRDL[6] | KBA-5-1 | KBA-5-2 | KBA-5-3 | KBA-5-3D | KBA-5-4 | KBA-5-5 | KBA-5-5DF | KBA-5-6 | KBA-5-7 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Monitoring Well Number | | | | | | | | |
| **INORGANIC ANALYTES (μg/L)** | | | | | | | | | | | |
| Arsenic[2] | unfiltered | 10 | 5.1 J | 21.4 | 6.7 J | 5.8 J | 5.9 J | 37.0 | --- | 6.3 J | 135 |
| | filtered | | 1.6 J | 18.4 | 2.8 J | --- | 5.2 J | 2.6 J | 8.3 J | 3.0 J | 2.7 J |
| Barium[2] | unfiltered | 200 | 132 J | 115 J | 92.8 J | 82.6 J | 132 J | 207 | --- | 131 J | 1,080 |
| | filtered | | 62.2 J | 15.9 U | 46.1 J | --- | 23.2 U | 51.8 J | 22.9 U | 30.3 J | 32.0 J |
| Beryllium[2,3] | unfiltered | 5 | 0.48 J | 0.41 J | 0.20 U | 0.26 J | 0.41 J | 1.7 J | --- | 0.56 J | 8.2 |
| | filtered | | 0.20 U | 0.20 U | 0.20 U | --- | 0.24 UJ | 0.24 UJ | 0.24 UJ | 0.24 UJ | 0.24 UJ |
| Cadmium[2] | unfiltered | 5 | 2.7 U | 2.7 U | 2.7 U | 2.7 U | 2.7 U | 2.7 U | --- | 2.7 U | 27.4 |
| | filtered | | 3.1 J | 2.8 J | 2.7 U | --- | 2.7 U | 2.7 U | 2.7 U | 3.0 J | 2.7 U |
| Chromium[2,3] | unfiltered | 10 | 13.0 J | 21.2 J | 13.5 J | 12.9 J | 18.4 | 46.4 | --- | 23.0 | 271 |
| | filtered | | 1.9 UJ | 4.2 J | 1.9 UJ | --- | 1.9 U | 1.9 U | 1.9 U | 1.9 J | 1.9 U |
| Cobalt[2,3] | unfiltered | 50 | 4.8 J | 4.0 J | 3.3 J | 1.6 U | 1.6 UJ | 10.8 J | --- | 1.6 UJ | 62.6 J |
| | filtered | | 2.1 J | 3.5 J | 2.5 J | --- | 1.6 UJ | 1.6 UJ | 1.6 UJ | 1.6 UJ | 1.6 UJ |
| Copper[2,4] | unfiltered | 25 | 26.2 J | 37.3 J | 61.8 J | 89.9 J | 76.5 | 38.2 | --- | 19.1 J | 249 |
| | filtered | | 6.3 UJ | 15.1 J | 6.5 UJ | --- | 2.7 J | 1.8 J | 13.1 J | 19.1 J | 19.1 J |
| Lead[2,5] | unfiltered | 5 | 9.1 J | 10.0 J | 6.1 J | 14.7 J | 7.0 U | 36.9 | --- | 10.7 U | 68.9 |
| | filtered | | 4.0 J | 2.0 J | 0.96 J | --- | 2.1 U | 1.8 U | 5.4 U | 1.8 U | 1.8 U |
| Mercury | unfiltered | 0.2 | 0.16 U | 0.16 U | 0.16 U | 0.16 U | 0.16 U | 0.27 | --- | 0.16 U | 0.41 |
| | filtered | | 0.16 U | 0.16 U | 0.16 U | --- | 0.16 U | 0.16 U | 0.16 U | 0.16 U | 0.16 U |
| Nickel[2] | unfiltered | 40 | 15.4 J | 10.7 U | 109 | 30.2 J | 42.6 | 56.9 | --- | 25.0 J | 128 |
| | filtered | | 10.7 U | 10.7 U | 10.7 U | --- | 10.7 U | 10.7 U | 10.7 U | 10.7 U | 10.7 U |
| Selenium[2] | unfiltered | 5 | 1.9 U | 2.4 J | 1.9 U | 1.9 U | 1.9 U | 1.9 U | --- | 1.9 U | 1.9 U |
| | filtered | | 1.9 U | 1.9 U | 1.9 U | --- | 1.9 U | 1.9 U | 1.9 U | 1.9 U | 1.9 U |
| Thallium[2] | unfiltered | 10 | 2.1 U | 2.1 U | 2.1 U | 2.1 U | 2.1 U | 3.0 J | --- | 2.1 U | 3.4 J |
| | filtered | | 2.1 U | 2.1 U | 2.1 U | --- | 2.1 U | 2.1 U | 2.1 U | 2.1 U | 2.1 U |

See notes at end of table.

## Table G-3 (Continued)
## Summary of Laboratory Analysis of Groundwater Samples Collected from Site 5[1] - Round 3

RFI Report for Sites 5 and 16 and
Site History and File Information for Site 12
Naval Installation Restoration Program
Naval Submarine Base, Kings Bay, Georgia

| | | | Monitoring Well Number | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds Detected** | | **CRDL[6]** | **KBA-5-1** | **KBA-5-2** | **KBA-5-3** | **KBA-5-3D** | **KBA-5-4** | **KBA-5-5** | **KBA-5-5DF** | **KBA-5-6** | **KBA-5-7** |
| **INORGANIC ANALYTES (μg/L)** | | | | | | | | | | | |
| Vanadium[2] | unfiltered | 50 | 13.6 J | 20.6 J | 12.7 J | 9.2 J | 12.1 J | 42.1 J | --- | 18.4 J | 251 |
| | filtered | | 1.3 U | 4.9 J | 1.6 J | --- | 1.3 U | 1.9 J | 1.3 U | 1.5 J | 1.3 U |
| Zinc[4] | unfiltered | 20 | 85.6 J | 162 J | 199 J | 123 J | 129 | 135 | --- | 68.8 | 519 |
| | filtered | | 20.5 J | 132 J | 26.6 J | --- | 20.0 | 30.8 | 23.9 | 27.2 | 40.4 |
| Sulfide | unfiltered | 100 | 200 | 200 | 100 U | 200 | 300 | 300 | --- | 300 | 300 |
| | filtered | | 100 U | 100 U | 100 U | --- | 100 U | 200 | 200 | 200 | 100 U |
| **PHYSICAL PARAMETERS** | | | | | | | | | | | |
| Total Solids (mg/L) | | | 413 | 658 | 256 | 312 | 834 | 1,557 | --- | 471 | 3,278 |
| TDS (mg/L) | | | 121 | 194 | 177 | 160 | 540 | 107 | --- | 116 | 288 |
| TSS (mg/L) | | | 292 | 464 | 79 | 152 | 294 | 1,450 | --- | 355 | 2,990 |
| % TSS | | | 71 | 71 | 31 | 49 | 35 | 93 | --- | 75 | 91 |

See notes at end of table.

## Table G-3 (Continued)
## Summary of Laboratory Analysis of Groundwater Samples Collected from Site 5[1] - Round 3

RFI Report for Sites 5 and 16 and
Site History and File Information for Site 12
Naval Installation Restoration Program
Naval Submarine Base, Kings Bay, Georgia

[1] Groundwater samples were analyzed for VOCs, PCBs, and inorganic analytes only. No VOCs or PCBs were detected in groundwater samples.

Data Qualifiers:

[2] Values flagged J as estimated because concentrations are less than the quantitation limit.
[3] Values flagged J and UJ as estimated because the preparation blank exhibited negative bias for beryllium, chromium, and cobalt.
[4] Values flagged J and UJ as estimated because duplicate analysis for copper and zinc exceeded QC limits.
[5] Values flagged J as estimated because matrix spike recovery for lead was outside QC limits.
[6] The CRDLs listed for inorganic analytes are from the Contract Laboratory Program (CLP) because SW-846 analytical data are reported using CLP protocol when analyses are conducted at a CLP laboratory. This protocol results in qualification of values as estimated when the values are greater than the method detection limit but less than the CLP contract required detection limits. The SW-846 methods do not specify required quantitation limits for inorganic data.

**Notes:**

| | | |
|---|---|---|
| --- | = | analysis not required/performed. |
| CRDL | = | Contract Required Detection Limit. |
| µg/L | = | micrograms per liter. |
| mg/L | = | milligrams per liter. |
| % | = | percent. |
| TDS | = | total dissolved solids. |
| TSS | = | total suspended solids. |
| U | = | not detected above or below the quantitation limit. |

## Table G-4
## Summary of Compounds Detected in Groundwater Samples Collected from Site 5[1] - Round 4

RFI Report for Sites 5 and 16 and
Site History and File Information for Site 12
Naval Installation Restoration Program
Naval Submarine Base, Kings Bay, Georgia

| Compounds Detected | | CRDL[6] | Monitoring Well Number | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | KBA-5-1 | KBA-5-2 | KBA-5-3 | KBA-5-3D | KBA-5-4 | KBA-5-5 | KBA-5-5DF | KBA-5-6 | KBA-5-7 |
| **INORGANIC ANALYTES (μg/L)** | | | | | | | | | | | |
| Antimony[2] | unfiltered | 60 | 12.4 U | 12.4 U | 12.4 U | 12.4 U | 12.4 U | 17.0 J | ----- | 12.4 U | 12.4 U |
| | filtered | | 12.4 U | 12.4 U | 12.4 U | ----- | 12.4 U | 12.4 U | 12.4 U | 12.4 U | 12.4 U |
| Arsenic[2] | unfiltered | 10 | 5.5 J | 5.3 J | 10.4 | 7.6 J | 3.9 J | 9.9 J | ----- | 7.5 J | 8.3 J |
| | filtered | | 1.0 J | 3.3 J | 1.7 J | ----- | 1.0 U | 2.3 J | 2.3 J | 1.5 J | 2.3 J |
| Barium[2] | unfiltered | 200 | 146 J | 124 J | 124 J | 119 J | 53.4 J | 93.6 J | ----- | 180 J | 82.1 J |
| | filtered | | 64.2 U | 109 U | 49.6 U | ----- | 36.6 U | 29.4 U | 28.4 U | 28.7 U | 38.3 U |
| Beryllium[2] | unfiltered | 5 | 0.76 J | 0.89 J | 1.0 J | 0.66 J | 0.24 U | 0.72 J | ----- | 1.6 J | 0.68 J |
| | filtered | | 0.31 U | 0.74 U | 0.24 U | ----- | 0.26 U | 0.24 U | 0.27 U | 0.24 U | 0.24 U |
| Cadmium[2] | unfiltered | 5 | 2.7 U | 2.7 U | 2.7 U | 2.7 U | 4.1 J | 2.7 U | ----- | 4.3 J | 2.7 U |
| | filtered | | 2.7 U | 2.7 U | 2.7 U | ----- | 2.7 U | 2.7 U | 2.7 U | 2.7 U | 2.7 U |
| Chromium[2] | unfiltered | 10 | 16.8 | 4.3 J | 24.6 | 17.2 | 5.6 J | 21.6 | ----- | 44.5 | 15.7 |
| | filtered | | 2.0 J | 2.7 J | 1.9 U | ----- | 1.9 U | 1.9 U | 4.2 J | 2.0 J | 5.3 J |
| Cobalt[2] | unfiltered | 50 | 5.5 J | 6.8 J | 7.2 J | 4.8 J | 5.6 J | 6.4 J | ----- | 11.0 J | 3.2 J |
| | filtered | | 2.1 U | 6.6 U | 1.6 U | ----- | 5.4 U | 1.6 U | 1.6 U | 3.2 U | 1.6 U |
| Copper[2] | unfiltered | 25 | 17.6 J | 7.4 J | 14.9 J | 18.7 J | 4.5 J | 14.5 J | ----- | 29.2 | 4.7 J |
| | filtered | | 4.8 J | 10.1 J | 5.0 J | ----- | 6.8 J | 1.8 U | 1.8 U | 1.8 U | 1.8 U |
| Lead[3] | unfiltered | 5 | 5.3 J | 2.4 J | 5.2 J | 4.7 J | 2.4 J | 9.6 | ----- | 14.5 | 7.6 |
| | filtered | | 1.4 UJ | 7.2 J | 3.1 J | ----- | 3.2 J | 2.2 U | 1.6 U | 1.8 U | 1.0 U |
| Mercury | unfiltered | 0.2 | 0.49 | 0.49 | 0.37 | 0.26 | 0.37 | 0.26 U | ----- | 0.42 U | 0.38 U |
| | filtered | | 0.37 | 0.03 J | 0.61 | ----- | 0.49 | 0.14 U | 0.14 U | 0.26 U | 0.14 U |
| Nickel[4] | unfiltered | 40 | 18.1 U | 13.0 U | 20.4 U | 15.1 U | 15.1 U | 10.8 J | ----- | 25.1 J | 10.7 U |
| | filtered | | 10.7 U | 14.8 U | 10.7 U | ----- | 10.7 U | 10.7 U | 10.7 U | 10.7 U | 10.7 U |

See notes at end of table.

## G-4 Continued)
## Summary of Compounds Detected in Groundwater Samples Collected from Site 5[1] - Round 4

RFI Report for Sites 5 and 16 and
Site History and File Information for Site 12
Naval Installation Restoration Program
Naval Submarine Base, Kings Bay, Georgia

| | | | Monitoring Well Number | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds Detected** | | **CRDL[6]** | **KBA-5-1** | **KBA-5-2** | **KBA-5-3** | **KBA-5-3D** | **KBA-5-4** | **KBA-5-5** | **KBA-5-5DF** | **KBA-5-6** | **KBA-5-7** |
| **INORGANIC ANALYTES (μg/L)** | | | | | | | | | | | |
| Silver[2] | unfiltered | 5 | 1.6 J | 1.5 U | 1.5 U | 1.5 U | 1.6 J | 1.5 U | ----- | 4.5 J | 3.0 J |
| | filtered | | 1.5 U | 1.5 U | 1.5 U | ----- | 2.7 J | 1.5 U | 1.5 U | 1.6 J | 1.5 U |
| Cyanide[5] | unfiltered | 10 | 2.2 U | 2.2 U | 2.2 U | 2.2 U | 7.4 J | 2.2 UJ | ----- | 3.6 J | 2.2 UJ |
| | filtered | | 2.2 U | 2.2 U | 2.2 U | ----- | 2.2 U | 3.8 J | 2.2 UJ | 2.2 UJ | 2.2 UJ |
| Vanadium[2] | unfiltered | 50 | 17.6 J | 7.8 U | 23.1 J | 15.7 J | 5.9 U | 18.8 J | ----- | 32.7 J | 13.0 J |
| | filtered | | 2.5 U | 4.4 U | 1.3 U | ----- | 3.8 U | 1.3 U | 1.3 U | 1.3 U | 1.3 U |
| Zinc[4] | unfiltered | 20 | 50.2 J | 78.1 J | 54.5 J | 48.4 J | 39.9 J | 45.2 | ----- | 66.9 | 28.8 |
| | filtered | | 14.6 J | 89.4 J | 12.4 J | ----- | 33.2 J | 14.4 J | 12.7 J | 16.4 J | 10.0 J |
| Sulfide | unfiltered | 100 | 100 | 300 | 200 | 200 | 200 | 200 | ----- | 200 | 300 |
| | filtered | | 100 | 300 | 100 U | ----- | 100 U | 100 U | 100 U | 200 | 100 U |
| **PHYSICAL PARAMETERS** | | | | | | | | | | | |
| Total Solids (mg/L) | | | 515 | 314 | 517 | 488 | 847 | 405 | ----- | 694 | 379 |
| TDS (mg/L) | | | 225 | 290 | 214 | 254 | 763 | 102 | ----- | 122 | 212 |
| TSS (mg/L) | | | 290 | 24 | 303 | 234 | 84 | 303 | ----- | 572 | 167 |
| % TSS | | | 56 | 8 | 59 | 48 | 10 | 75 | ----- | 82 | 44 |

See notes at end of table.

## Table G-4 Continued)
## Summary of Compounds Detected in Groundwater Samples Collected from Site 5[1] - Round 4

RFI Report for Sites 5 and 16 and
Site History and File Information for Site 12
Naval Installation Restoration Program
Naval Submarine Base, Kings Bay, Georgia

[1] Groundwater samples were analyzed for VOCs, PCBs, and inorganic analytes only. No VOCs or PCBs were detected in groundwater samples.

Data Qualifiers:

[2] Values flagged J as estimated because concentrations are less than the quantitation limit.
[3] Values flagged J and UJ as estimated because matrix spike recovery for lead was below QC limits.
[4] Values flagged J as estimated because matrix spike recovery for nickel and zinc was above QC limits.
[5] Values flagged J as estimated because matrix spike recovery for cyanide was outside QC limits.
[6] The CRDLs listed for inorganic analytes are from the Contract Laboratory Program (CLP) because SW-846 analytical data are reported using CLP protocol when analyses are conducted at a CLP laboratory. This protocol results in qualification of values as estimated when the values are greater than the method detection limit but less than the CLP contract required detection limits. The SW-846 methods do not specify required quantitation limits for inorganic data.

**Notes:**

| | | |
|---|---|---|
| --- | = | analysis not required/performed. |
| CRDL | = | Contract Required Detection Limit. |
| µg/L | = | micrograms per liter. |
| mg/L | = | milligrams per liter. |
| % | = | percent. |
| U | = | not detected above or below the quantitation limit. |
| TDS | = | total dissolved solids. |
| TSS | = | total suspended solids. |

## Table G-5
## Summary of Compounds Detected in Groundwater Samples Collected from Site 5[1] - Round 5

RFI Report for Sites 5 and 16 and
Site History and File Information for Site 12
Naval Installation Restoration Program
Naval Submarine Base, Kings Bay, Georgia

| Compounds Detected | | CRDL[5] | Monitoring Well Number | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | KBA-5-1 | KBA-5-2 | KBA-5-3 | KBA-5-3D | KBA-5-4 | KBA-5-5 | KBA-5-6 | KBA-5-7 |
| **INORGANIC ANALYTES (μg/L)** | | | | | | | | | | |
| Antimony[2,3] | unfiltered | 60 | 10.7 U | 10.7 U | 10.7 U | 10.7 U | 12.1 J | 10.7 U | 10.7 UJ | 10.7 UJ |
| | filtered | | 10.7 U | 10.7 U | 10.7 U | 10.7 U | 10.7 U | 10.7 U | 10.7 UJ | 10.7 UJ |
| Arsenic[2] | unfiltered | 10 | 4.0 J | 13.3 | 7.9 J | 8.0 J | 4.0 J | 13.7 | 2.8 J | 10.5 |
| | filtered | | 2.7 J | 11.1 | 4.8 J | 4.2 J | 1.0 U | 10.3 | 1.0 U | 5.5 J |
| Barium[2] | unfiltered | 200 | 78.2 J | 42.6 J | 70.8 J | 72.2 J | 67.4 J | 51.0 J | 90.1 J | 35.0 J |
| | filtered | | 59.0 J | 29.9 J | 38.6 J | 35.4 J | 30.6 J | 28.7 J | 28.5 J | 28.9 J |
| Beryllium[2] | unfiltered | 5 | 0.42 J | 0.29 J | 0.24 J | 0.22 U | 0.22 U | 0.68 J | 0.40 J | 0.22 U |
| | filtered | | 0.38 J | 0.30 J | 0.22 U | 0.22 U | 0.22 U | 0.22 U | 0.22 U | 0.22 U |
| Cadmium[2,3] | unfiltered | 5 | 3.0 UJ | 3.0 UJ | 3.0 UJ | 3.0 UJ | 3.0 UJ | 3.0 UJ | 3.6 J | 3.0 U |
| | filtered | | 3.0 UJ | 3.0 UJ | 3.0 UJ | 3.0 UJ | 3.0 UJ | 3.0 UJ | 3.0 U | 3.0 U |
| Chromium[2] | unfiltered | 10 | 4.2 J | 8.1 J | 8.5 J | 8.9 J | 4.5 J | 4.6 J | 15.5 | 4.5 J |
| | filtered | | 2.9 U | 2.9 U | 2.9 U | 2.9 U | 2.9 U | 2.9 U | 2.9 U | 2.9 U |
| Cobalt[2] | unfiltered | 50 | 3.3 U | 5.0 J | 3.4 J | 3.3 U | 4.3 J | 3.3 U | 3.3 U | 3.3 U |
| | filtered | | 3.3 U | 4.3 J | 4.9 J | 3.8 J | 3.3 U | 3.3 U | 3.3 U | 4.8 J |
| Copper[2] | unfiltered | 25 | 16.6 J | 7.3 J | 9.1 J | 7.3 J | 11.2 J | 16.3 J | 2.3 U | 10.3 J |
| | filtered | | 2.3 U | 10.9 J | 2.7 J | 4.2 J | 2.3 U | 3.0 J | 2.3 U | 3.5 J |
| Lead[2] | unfiltered | 3 | 3.6 | 4.3 | 2.3 J | 2.4 J | 1.8 J | 1.7 J | 3.7 | 2.3 J |
| | filtered | | 1.4 U | 1.4 U | 1.4 U | 1.4 U | 1.4 U | 1.4 U | 2.1 J | 1.4 U |
| Mercury[2] | unfiltered | 0.2 | 0.08 U | 0.08 U | 0.14 J | 0.08 U | 0.12 J | 0.12 J | 0.51 | 0.08 U |
| | filtered | | 0.10 J | 0.10 J | 0.08 U | 0.08 U | 0.10 J | 0.08 U | 0.08 U | 0.08 U |
| Nickel[2,3] | unfiltered | 40 | 5.3 UJ | 10.9 J | 12.6 J | 5.3 UJ | 5.3 UJ | 8.8 J | 6.5 J | 5.9 J |
| | filtered | | 5.3 UJ | 5.5 J | 8.2 J | 7.9 J | 5.3 UJ | 5.3 UJ | 5.3 U | 14.4 J |

See notes at end of table.

## Table G-5 (Continued)
## Summary of Compounds Detected in Groundwater Samples Collected from Site 5[1] - Round 5

RFI Report for Sites 5 and 16 and
Site History and File Information for Site 12
Naval Installation Restoration Program
Naval Submarine Base, Kings Bay, Georgia

| Compounds Detected | | CRDL[6] | Monitoring Well Number | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | KBA-5-1 | KBA-5-2 | KBA-5-3 | KBA-5-3D | KBA-5-4 | KBA-5-5 | KBA-5-6 | KBA-5-7 |
| **INORGANIC ANALYTES (μg/L)** | | | | | | | | | | |
| Vanadium[2] | unfiltered | 50 | 4.1 J | 9.6 J | 8.2 J | 7.8 J | 3.9 J | 4.1 J | 13.5 J | 8.9 J |
| | filtered | | 2.6 U | 5.3 J | 2.6 U | 2.6 U | 2.6 U | 2.6 U | 2.6 U | 2.6 U |
| Cyanide[2] | unfiltered | 10 | 0.84 U | 0.84 U | 0.84 U | 0.84 U | 5.6 J | 2.0 J | 0.84 U | 1.1 J |
| | filtered | | 0.84 U | 0.84 U | 0.84 U | 0.84 U | 0.84 U | 0.84 U | 0.84 U | 1.2 J |
| Zinc[2,4] | unfiltered | 20 | 36.7 | 193 | 30.7 | 25.3 | 45.4 | 38.2 | 41.2 | 23.2 |
| | filtered | | 10.9 J | 187 | 12.1 J | 19.6 J | 18.0 J | 22.5 | 11.5 J | 12.0 J |
| Sulfide | unfiltered | 100 | 100 | 100 U | 100 U | 100 U | 300 | 100 U | 100 U | 100 U |
| | filtered | | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U | 200 | 100 U |
| **PHYSICAL PARAMETERS** | | | | | | | | | | |
| Total Solids (mg/L) | | | 195 | 1,406 | 208 | 287 | 805 | 304 | 581 | 452 |
| TDS (mg/L) | | | 159 | 320 | 201 | 128 | 694 | 228 | 251 | 404 |
| TSS (mg/L) | | | 36 | 1,086 | 7 | 159 | 111 | 76 | 330 | 48 |
| % TSS | | | 18 | 77 | 3 | 55 | 14 | 25 | 57 | 11 |

See notes at end of table.

## Table G-5 (Continued)
## Summary of Compounds Detected in Groundwater Samples Collected from Site 5[1] - Round 5

RFI Report for Sites 5 and 16 and
Site History and File Information for Site 12
Naval Installation Restoration Program
Naval Submarine Base, Kings Bay, Georgia

[1] Groundwater samples were analyzed for VOCs, PCBs, and inorganic analytes only. No VOCs or PCBs were detected in groundwater samples.

Data Qualifiers:

[2] Values flagged J as estimated because concentrations are less than the quantitation limit.
[3] Quantitation limits flagged UJ as estimated because preparation blanks exhibited negative bias for antimony, cadmium, and nickel.
[4] Samples results are considered bias high due to the presence of zinc in associated rinsate blanks.
[5] The CRDLs listed for inorganic analytes are from the Contract Laboratory Program (CLP) because SW-846 analytical data are reported using CLP protocol when analyses are conducted at a CLP laboratory. This protocol results in qualification of values as estimated when the values are greater than the method detection limit but less than the CLP contract required detection limits. The SW-846 methods do not specify required quantitation limits for inorganic data.

**Notes:**

| | | |
|---|---|---|
| CRDL | = | Contract Required Detection Limit. |
| µg/L | = | micrograms per liter. |
| mg/L | = | milligrams per liter. |
| % | = | percent. |
| U | = | not detected above or below the quantitation limit. |
| TDS | = | total dissolved solids. |
| TSS | = | total suspended solids. |

## Table G-6
## Summary of Laboratory Analysis of Groundwater Samples Collected from Site 5[1] - Round 6

RFI Report for Sites 5 and 16 and
Site History and File Information for Site 12
Naval Installation Restoration Program
Naval Submarine Base, Kings Bay, Georgia

| Compounds Detected | | CRDL[5] | Monitoring Well Number | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | KBA-5-1 | KBA-5-2 | KBA-5-3 | KBA-5-3D | KBA-5-4 | KBA-5-5 | KBA-5-6 | KBA-5-7 |
| **INORGANIC ANALYTES (μg/L)** | | | | | | | | | | |
| Antimony | unfiltered | 60 | 16.4 U | 16.4 U | 16.4 U | 16.4 U | 16.4 U | 16.4 U | 16.4 U | 16.4 U |
| | filtered | | 16.4 U | 17.9 J | 16.4 U | 17.6 J | 16.4 U | 16.4 U | 16.4 U | 16.4 U |
| Arsenic[2] | unfiltered | 10 | 3.4 J | 7.9 J | 6.7 J | 6.2 J | 3.2 J | 8.8 J | 3.4 J | 6.9 J |
| | filtered | | 1.5 J | 4.3 J | 2.6 J | 2.0 J | 1.8 J | 2.1 J | 1.9 J | 1.5 J |
| Barium[2] | unfiltered | 200 | 80.0 J | 57.5 J | 76.3 J | 80.8 J | 60.6 J | 60.8 J | 73.6 J | 35.5 J |
| | filtered | | 47.5 J | 13.4 J | 48.5 J | 44.1 J | 32.6 J | 19.2 J | 28.7 J | 16.1 J |
| Beryllium[2] | unfiltered | 5 | 0.38 J | 0.26 U | 0.38 J | 0.42 J | 0.33 J | 0.47 J | 0.48 J | 0.26 U |
| | filtered | | 0.30 J | 0.26 U | 0.26 U | 0.26 U | 0.26 U | 0.26 U | 0.26 U | 0.26 U |
| Cadmium[2] | unfiltered | 5 | 2.8 U | 3.0 J | 2.8 U | 2.8 U | 2.8 U | 2.8 U | 4.2 J | 4.2 J |
| | filtered | | 2.8 U | 2.8 U | 3.4 J | 2.8 U | 3.8 J | 2.8 U | 2.8 U | 4.2 J |
| Chromium[2] | unfiltered | 10 | 7.6 J | 12.5 | 15.6 | 13.4 | 9.2 J | 15.3 | 13.2 | 8.0 J |
| | filtered | | 2.8 U | 3.5 J | 2.8 U | 2.8 U | 2.8 U | 2.8 U | 2.8 U | 2.8 U |
| Cobalt[2] | unfiltered | 50 | 3.9 J | 2.6 U | 4.5 J | 5.7 J | 6.1 J | 7.0 J | 5.7 J | 4.6 J |
| | filtered | | 4.6 J | 2.6 U | 3.4 J | 4.8 J | 6.6 J | 2.6 U | 2.6 U | 5.1 J |
| Copper[2] | unfiltered | 25 | 5.0 J | 6.5 J | 6.5 J | 6.5 J | 4.3 J | 6.8 J | 6.5 J | 5.5 J |
| | filtered | | 1.2 U | 1.2 U | 1.2 U | 1.2 U | 1.5 J | 1.2 U | 1.2 U | 2.0 J |
| Lead[3,4] | unfiltered | 3 | 3.6 J | 7.7 J | 5.2 J | 6.9 J | 6.4 J | 8.1 J | 6.1 J | 6.6 J |
| | filtered | | 1.7 UJ | 2.4 UJ | 2.6 J | 1.7 UJ | 1.7 UJ | 1.7 UJ | 1.7 UJ | 1.7 UJ |
| Selenium[2] | unfiltered | 5 | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 2.0 J |
| | filtered | | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 2.0 J |
| Tin[4] | unfiltered | 200 | 12.7 UJ | 12.7 UJ | 702 J | 12.7 UJ | 12.7 UJ | 12.7 UJ | 12.7 UJ | 12.7 UJ |
| | filtered | | 12.7 UJ | 12.7 UJ | 12.7 UJ | 15.8 J | 12.7 UJ | 12.7 UJ | 12.7 UJ | 12.7 UJ |
| Vanadium[2] | unfiltered | 50 | 7.3 J | 12.4 J | 10.5 J | 11.8 J | 8.2 J | 13.1 J | 11.1 J | 11.2 J |
| | filtered | | 2.6 U | 5.2 J | 2.6 U | 2.6 U | 3.4 J | 2.6 U | 2.6 U | 3.9 J |
| Zinc[2] | unfiltered | 20 | 31.7 | 196 | 56.3 | 78.5 | 84.6 | 73.4 | 55.1 | 77.2 |
| | filtered | | 25.4 | 151 | 18.5 J | 46.7 | 38.3 | 28.6 | 22.7 | 24.4 |

See notes at end of table.

## Table G-6 (Continued)
## Summary of Laboratory Analysis of Groundwater Samples Collected from Site 5[1] - Round 6

RFI Report for Sites 5 and 16 and
Site History and File Information for Site 12
Naval Installation Restoration Program
Naval Submarine Base, Kings Bay, Georgia

| | | | Monitoring Well Number | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds Detected** | | **CRDL[5]** | **KBA-5-1** | **KBA-5-2** | **KBA-5-3** | **KBA-5-3D** | **KBA-5-4** | **KBA-5-5** | **KBA-5-6** | **KBA-5-7** |
| **INORGANIC ANALYTES (μg/L)** | | | | | | | | | | |
| Sulfide | unfiltered | 100 | 200 | 100 U | 100 U | 200 | 300 | 100 U | 300 | 300 |
| | filtered | | 100 U | 100 U | 200 | 100 U | 100 U | 100 U | 200 | 200 |
| **PHYSICAL PARAMETERS** | | | | | | | | | | |
| Total Solids (mg/L) | | | 195 | 453 | 1,187 | 448 | 567 | 306 | 320 | 548 |
| TDS (mg/L) | | | 106 | 195 | 167 | 159 | 384 | 194 | 99 | 474 |
| TSS (mg/L) | | | 89 | 258 | 1,020 | 289 | 183 | 112 | 221 | 74 |
| % TSS | | | 46 | 57 | 86 | 65 | 32 | 37 | 69 | 14 |

[1] Groundwater samples were analyzed for VOCs, PCBs, and inorganic analytes only. No VOCs or PCBs were detected in groundwater samples.

Data Qualifiers:

[2] Values flagged J as estimated because concentrations are less than the quantitation limit.
[3] Values for unfiltered samples are considered bias high due to rinsate blank contamination.
[4] Values flagged J and UJ as estimated because matrix spike recovery for lead and tin were below QC limits.
[5] The CRDLs listed for inorganic analytes are from the Contract Laboratory Program (CLP) because SW-846 analytical data are reported using CLP protocol when analyses are conducted at a CLP laboratory. This protocol results in qualification of values as estimated when the values are greater than the method detection limit but less than the CLP contract required detection limits. The SW-846 methods do not specify required quantitation limits for inorganic data.

**Notes:**
CRDL = Contract Required Detection Limit.
μg/L = micrograms per liter.
mg/L = milligrams per liter.
% = percent.
U = not detected above or below the quantitation limit.
TDS = total dissolved solids.
TSS = total suspended solids.

# Site 16

## Table G-7
## Summary of Laboratory Analysis of Groundwater Samples Collected from Site 16[1] - Round 1

RFI Report for Sites 5 and 16 and
Site History and File Information for Site 12
Naval Installation Restoration Program
Naval Submarine Base, Kings Bay, Georgia

| Compounds Detected | PQL | Monitoring Well Number | | | |
|---|---|---|---|---|---|
| | | KBA-16-1 | KBA-16-2 | KBA-16-3 | KBA-16-4 |
| **VOLATILE ORGANIC COMPOUNDS (μg/L)** | | | | | |
| 4-Methyl-2-Pentanone[2] | 10 | 10 U | 3 J | 10 U | 10 U |
| Ethylbenzene[2] | 5 | 5 U | 2 J | 5 U | 5 U |
| Xylene (total)[2] | 5 | 5 U | 3 J | 5 U | 5 U |
| **INORGANIC ANALYTES (μg/L)** | **CRDL[4]** | | | | |
| Antimony[2] | 60 | 18.5 J | 13.3 J | 11.4 J | 10.9 U |
| Arsenic[2] | 10 | 29.9 | 19.3 | 25.8 | 4.9 J |
| Barium[2] | 200 | 171 J | 478 | 519 | 386 |
| Beryllium[2] | 5 | 2.5 J | 6.2 | 13.1 | 2.4 J |
| Chromium | 10 | 84.6 | 256 | 194 | 34.0 |
| Cobalt[2] | 50 | 11.6 J | 74.4 | 29.1 J | 3.6 U |
| Lead | 5 | 14.8 J | 36.3 J | 19.9 J | 12.0 J |
| Mercury | 0.2 | 0.16 U | 0.60 | 0.82 | 0.16 U |
| Nickel | 40 | 27.0 J | 132 | 54.7 | 10.5 U |
| Selenium | 5 | 3.2 J | 8.0 | 1.3 U | 2.3 J |
| Thallium | 10 | 17.3 J | 1.9 J | 1.7 UJ | 1.7 U |
| Vanadium | 50 | 119 | 257 | 175 | 29.8 J |
| Zinc | 20 | 50.0 U | 297 | 182 | 43.6 U |

See notes at end of table.

## Table G-7 (Continued)
## Summary of Laboratory Analysis of Groundwater Samples Collected from Site 16[1] - Round 1

RFI Report for Sites 5 and 16 and
Site History and File Information for Site 12
Naval Installation Restoration Program
Naval Submarine Base, Kings Bay, Georgia

| Compounds Detected | CRDL[4] | Monitoring Well Number | | | |
|---|---|---|---|---|---|
| | | KBA-16-1 | KBA-16-2 | KBA-16-3 | KBA-16-4 |
| **INORGANIC ANALYTES (μg/L)** | | | | | |
| Cyanide | 10 | 3.4 J | 2.6 J | 1.9 J | 1.8 U |
| Sulfide | 100 | 400 | 1,800 | 200 | 300 |

[1] No Appendix IX semivolatile compounds, pesticides, PCBs, herbicides, or dioxins/furans were detected in groundwater samples.

Data Qualifiers:

[2] Value(s) flagged J as estimated because concentrations are less than the quantitation limit.
[3] Values flagged J as estimated because matrix spike recovery for lead was below QC limits.
[4] The CRDLs listed for inorganic analytes are from the Contract Laboratory Program (CLP) because SW-846 analytical data are reported using CLP protocol when analyses are conducted at a CLP laboratory. This protocol results in qualification of values as estimated when the values are greater than the method detection limit but less than the CLP contract required detection limits. The SW-846 methods do not specify required quantitation limits for inorganic data.

**Notes:** CRDL = Contract Required Detection Limit.
μg/L = micrograms per liter.
U = not detected above or below the quantitation limit.
PQL = Practical Quantitation Limit.

## Table G-8
## Summary of Laboratory Analysis of Groundwater Samples Collected from Site 16[1] - Round 2

RFI Report for Sites 5 and 16 and
Site History and File Information for Site 12
Naval Installation Restoration Program
Naval Submarine Base, Kings Bay, Georgia

| | | Monitoring Well Number | | | |
|---|---|---|---|---|---|
| **Compounds Detected** | **PQL** | **KBA-16-1** | **KBA-16-2** | **KBA-16-3** | **KBA-16-4** |
| **SEMIVOLATILE ORGANIC COMPOUNDS (μg/L)** | | | | | |
| Di-n-Butylphthalate[2] | 10 | 10 U | 10 U | 2 J | 10 U |
| bis(2-Ethylhexyl) Phthalate | 10 | 10 U | 28 | 75 | 10 U |
| **INORGANIC ANALYTES (μg/L)** | **CRDL[6]** | | | | |
| Antimony[2] | 60 | 11.0 U | 11.0 U | 11.0 U | 11.3 J |
| Arsenic[2,3] | 10 | 8.5 J | 19.5 | 10.2 J | 1.5 J |
| Barium[2] | 200 | 70.8 J | 82.2 J | 119 J | 37.1 J |
| Beryllium[2] | 5 | 1.1 J | 1.7 J | 4.7 J | 0.80 U |
| Cadmium[2,4] | 5 | 1.5 J | 1.6 J | 1.0 UJ | 1.0 UJ |
| Chromium | 10 | 32.0 | 28.1 | 20.7 | 3.3 U |
| Cobalt[2] | 50 | 7.8 U | 9.1 J | 7.8 U | 7.8 U |
| Copper[2] | 25 | 9.2 J | 3.8 J | 5.5 J | 4.2 J |
| Lead[2] | 5 | 7.6 | 11.5 | 4.3 J | 2.5 U |
| Nickel[4,5] | 40 | 7.8 UJ | 19.4 J | 7.8 U | 7.8 U |
| Selenium[2] | 5 | 10.6 | 1.6 J | 1.1 J | 0.88 J |
| Silver[2] | 10 | 1.4 J | 1.4 U | 1.4 U | 1.4 U |
| Thallium[2] | 10 | 0.90 J | 0.80 U | 0.80 U | 0.80 U |

See notes at end of table.

## Table G-8 (Continued)
## Summary of Laboratory Analysis of Groundwater Samples Collected from Site 16[1] - Round 2

RFI Report for Sites 5 and 16 and
Site History and File Information for Site 12
Naval Installation Restoration Program
Naval Submarine Base, Kings Bay, Georgia

| | | Monitoring Well Number | | | |
|---|---|---|---|---|---|
| **Compounds Detected** | **CRDL[6]** | **KBA-16-1** | **KBA-16-2** | **KBA-16-3** | **KBA-16-4** |
| **INORGANIC ANALYTES (μg/L)** | | | | | |
| Vanadium[2] | 50 | 44.4 J | 48.0 J | 33.6 J | 12.0 J |
| Zinc | 20 | 15.1 U | 65.7 | 56.2 | 10.8 U |
| Cyanide[2] | 10 | 8.4 J | 8.5 J | 1.8 U | 18.5 |
| Sulfide | 100 | 100 U | 2,400 | 1,400 | 200 |

[1] No Appendix IX VOCs, pesticides, PCBs, herbicides, or dioxins/furans were detected in groundwater samples.

Data Qualifiers:

[2] Value(s) flagged J as estimated because concentrations are less than the quantitation limit.
[3] Values flagged J as estimated because matrix spike recovery for arsenic was below QC limits.
[4] Quantitation limits flagged UJ as estimated because the preparation blank exhibited negative bias for cadmium and nickel.
[5] Values flagged J as estimated because the preparation blank exhibited negative bias for and nickel.
[6] The CRDLs listed for inorganic analytes are from the Contract Laboratory Program (CLP) because SW-846 analytical data are reported using CLP protocol when analyses are conducted at a CLP laboratory. This protocol results in qualification of values as estimated when the values are greater than the method detection limit but less than the CLP contract required detection limits. The SW-846 methods do not specify required quantitation limits for inorganic data.

**Notes:**
CRDL = Contract Required Detection Limit.
μg/L = micrograms per liter.
U = not detected above or below the quantitation limit.
PQL = Practical Quantitation Limit.

## Table G-9
## Summary of Laboratory Analysis of Groundwater Samples Collected from Site 16[1] - Round 3

RFI Report for Sites 5 and 16 and
Site History and File Information for Site 12
Naval Installation Restoration Program
Naval Submarine Base, Kings Bay, Georgia

| Compounds Detected | | PQL | Monitoring Well Number KBA-16-1 | KBA-16-2 | KBA-16-2D | KBA-16-3 | KBA-16-4 |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS (μg/L)** | | | | | | | |
| Toluene | | 5 | 5 U | 5 U | --- | 5 | 5 U |
| **SEMIVOLATILE ORGANIC COMPOUNDS (μg/L)** | | | | | | | |
| bis(2-Ethylhexyl) Phthalate[2] | | 10 | 10 U | 3 J | 6 J | 7 J | 3 J |
| **INORGANIC ANALYTES (μg/L)** | | **CRDL[4]** | | | | | |
| Arsenic[2,3] | unfiltered | 10 | 4.4 J | 21.4 J | --- | 8.3 J | 3.5 J |
| | filtered | | 1.1 J | 3.2 J | --- | 6.2 J | 1.00 UJ |
| Barium[2] | unfiltered | 200 | 35.4 J | 74.2 J | --- | 83.3 J | 38.4 J |
| | filtered | | 18.2 J | 17.4 J | --- | 19.5 J | 24.9 J |
| Beryllium[2] | unfiltered | 5 | 0.24 U | 0.64 J | --- | 1.5 J | 0.24 U |
| | filtered | | 0.24 U | 0.24 U | --- | 0.24 U | 0.24 U |
| Cadmium[2] | unfiltered | 5 | 3.4 J | 2.7 U | --- | 2.7 U | 2.7 U |
| | filtered | | 2.7 U | 2.7 U | --- | 2.7 U | 2.7 U |
| Chromium | unfiltered | 10 | 16.4 | 40.7 | --- | 31.2 | 11.3 U |
| | filtered | | 4.1 U | 4.0 U | --- | 4.7 U | 4.0 U |
| Copper[2] | unfiltered | 25 | 23.9 J | 30.4 | --- | 82.8 | 14.6 U |
| | filtered | | 18.6 J | 24.8 J | --- | 15.8 U | 11.8 U |
| Lead[2,3] | unfiltered | 5 | 12.5 J | 14.9 J | --- | 6.2 J | 5.2 J |
| | filtered | | 1.4 J | 0.94 UJ | --- | 0.94 UJ | 1.0 J |

See notes at end of table.

## Table G-9 (Continued)
## Summary of Laboratory Analysis of Groundwater Samples Collected from Site 16[1] - Round 3

RFI Report for Sites 5 and 16 and
Site History and File Information for Site 12
Naval Installation Restoration Program
Naval Submarine Base, Kings Bay, Georgia

| Compounds Detected | | CRDL[4] | Monitoring Well Number | | | | |
|---|---|---|---|---|---|---|---|
| | | | KBA-16-1 | KBA-16-2 | KBA-16-2D | KBA-16-3 | KBA-16-4 |
| **INORGANIC ANALYTES** | | | | | | | |
| Nickel[2] | unfiltered | 40 | 10.7 U | 24.3 J | --- | 274 | 10.9 J |
| | filtered | | 10.7 U | 10.7 U | --- | 10.7 U | 10.7 U |
| Selenium[2] | unfiltered | 5 | 2.1 J | 2.2 J | --- | 1.9 U | 1.9 U |
| | filtered | | 1.9 U | 1.9 U | --- | 1.9 U | 1.9 U |
| Silver[2] | unfiltered | 10 | 1.5 U | 1.6 J | --- | 1.5 U | 1.5 U |
| | filtered | | 1.5 J | 1.5 J | --- | 1.5 U | 1.5 U |
| Vanadium[2] | unfiltered | 50 | 16.4 J | 40.7 J | --- | 28.1 J | 10.6 J |
| | filtered | | 2.4 J | 2.9 J | --- | 5.3 J | 5.7 J |
| Zinc | unfiltered | 20 | 31.3 U | 77.0 | --- | 268 | 32.6 U |
| | filtered | | 55.5 U | 41.7 U | --- | 31.6 U | 35.2 U |
| Sulfide | unfiltered | 100 | 200 | 500 | --- | 200 | 400 |
| | filtered | | 300 | 100 U | --- | 300 | 500 |
| **PHYSICAL PARAMETERS** | | | | | | | |
| Total Solids (mg/L) | | | 734 | 1,016 | --- | 606 | 830 |
| TDS (mg/L) | | | 430 | 300 | --- | 280 | 659 |
| TSS (mg/L) | | | 304 | 716 | --- | 326 | 171 |
| % TSS | | | 41 | 70 | --- | 54 | 21 |

See notes at end of table.

## Table G-9 (Continued)
## Summary of Laboratory Analysis of Groundwater Samples Collected from Site 16[1] - Round 3

RFI Report for Sites 5 and 16 and
Site History and File Information for Site 12
Naval Installation Restoration Program
Naval Submarine Base, Kings Bay, Georgia

Data Qualifiers:

[1] Groundwater samples were analyzed for VOCs, SVOCs, and inorganic constituents only.
[2] Value(s) flagged J as estimated because concentrations are less than the quantitation limit.
[3] Values flagged J as estimated because matrix spike recovery for arsenic was below QC limits.
[4] The CRDLs listed for inorganic analytes are from the Contract Laboratory Program (CLP) because SW-846 analytical data are reported using CLP protocol when analyses are conducted at a CLP laboratory. This protocol results in qualification of values as estimated when the values are greater than the method detection limit but less than the CLP contract required detection limits. The SW-846 methods do not specify required quantitation limits for inorganic data.

**Notes:**

| | | |
|---|---|---|
| | --- | = analysis not required/performed. |
| | CRDL | = Contract Required Detection Limit. |
| | µg/L | = micrograms per liter. |
| | mg/L | = milligrams per liter. |
| | % | = percent. |
| | PQL | = Practical Quantitation Limit. |
| | U | = not detected above or below the quantitation limit. |
| | TDS | = total dissolved solids. |
| | TSS | = total suspended solids. |

## Table G-10
## Summary of Compounds Detected in Groundwater Samples Collected from Site 16[1] - Round 4

RFI Report for Sites 5 and 16 and
Site History and File Information for Site 12
Naval Installation Restoration Program
Naval Submarine Base, Kings Bay, Georgia

| Compounds Detected | | PQL | Monitoring Well Number KBA-16-1 | KBA-16-2 | KBA-16-2D | KBA-16-3 | KBA-16-4 |
|---|---|---|---|---|---|---|---|
| **SEMIVOLATILE ORGANIC COMPOUNDS (µg/L)** | | | | | | | |
| Naphthalene[2] | | 10 | 10 UJ | 1 J | 10 U | 10 UJ | 10 UJ |
| bis(2-Ethylhexyl)Phthalate[2] | | 10 | 10 UJ | 10 UJ | 1 J | 10 UJ | 10 UJ |
| **INORGANIC ANALYTES (µg/L)** | | **CRDL[5]** | | | | | |
| Arsenic[3] | unfiltered | 10 | 12.1 | 23.4 | ----- | 63.2 | 5.4 J |
| | filtered | | 2.4 J | 5.1 J | ----- | 4.2 J | 1.0 U |
| Barium[3] | unfiltered | 200 | 82.8 J | 83.6 J | ----- | 538 | 109 J |
| | filtered | | 15.1 U | 17.4 U | ----- | 1.4 U | 26.8 U |
| Beryllium[3] | unfiltered | 5 | 1.4 J | 1.1 J | ----- | 15.9 | 2.0 J |
| | filtered | | 0.24 U | 0.24 U | ----- | 0.24 U | 0.24 U |
| Chromium[3] | unfiltered | 10 | 38.6 | 41.6 | ----- | 205 | 46.5 |
| | filtered | | 1.9 U | 3.5 J | ----- | 1.9 U | 6.2 J |
| Copper[3] | unfiltered | 25 | 53.4 | 5.9 J | ----- | 35.4 | 32.5 |
| | filtered | | 1.8 U | 1.8 U | ----- | 1.8 U | 2.4 J |
| Cobalt[3] | unfiltered | 50 | 6.7 J | 12.0 J | ----- | 39.0 J | 5.0 J |
| | filtered | | 1.6 U | 1.6 U | ----- | 1.6 U | 1.6 U |
| Lead | unfiltered | 5 | 16.9 | 17.6 | ----- | 40.5 | 13.4 |
| | filtered | | 1.5 U | 1.6 U | ----- | 0.71 U | 1.1 U |
| Mercury | unfiltered | 0.2 | 0.34 U | 0.34 U | ----- | 0.80 | 0.42 U |
| | filtered | | 0.30 U | 0.14 U | ----- | 0.14 U | 0.14 U |

See notes at end of table.

## Table G-10 (Continued)
## Summary of Compounds Detected in Groundwater Samples Collected from Site 16[1] - Round 4

RFI Report for Sites 5 and 16 and
Site History and File Information for Site 12
Naval Installation Restoration Program
Naval Submarine Base, Kings Bay, Georgia

| Compounds Detected | | CRDL[6] | Monitoring Well Number KBA-16-1 | KBA-16-2 | KBA-16-2D | KBA-16-3 | KBA-16-4 |
|---|---|---|---|---|---|---|---|
| **INORGANIC ANALYTES (μg/L)** | | | | | | | |
| Nickel[3] | unfiltered | 40 | 20.2 J | 30.6 J | ----- | 66.2 | 30.2 J |
| | filtered | | 10.7 U | 10.7 U | ----- | 10.7 U | 12.5 J |
| Silver[3] | unfiltered | 10 | 3.6 J | 1.5 U | ----- | 1.5 U | 1.9 J |
| | filtered | | 1.5 U | 1.5 U | ----- | 1.5 U | 1.5 J |
| Vanadium[3] | unfiltered | 50 | 51.2 | 44.1 J | ----- | 199 | 40.0 J |
| | filtered | | 1.9 U | 2.2 U | ----- | 1.3 U | 7.4 U |
| Zinc | unfiltered | 20 | 39.3 | 61.0 | ----- | 210 | 42.5 |
| | filtered | | 10.0 J | 7.6 U | ----- | 22.9 | 8.6 J |
| Cyanide[4] | unfiltered | 10 | 2.2 UJ | 2.2 UJ | ----- | 2.2 UJ | 11.0 UJ |
| | filtered | | 3.7 J | 4.0 J | ----- | 2.2 UJ | 11.0 UJ |
| Sulfide | unfiltered | 100 | 200 | 200 | ----- | 300 | 500 |
| | filtered | | 100 U | 300 | ----- | 100 U | 500 |
| **PHYSICAL PARAMETERS** | | | | | | | |
| Total Solids (mg/L) | | | 869 | 1,104 | ----- | 5,150 | 1,203 |
| TDS (mg/L) | | | 419 | 389 | ----- | 630 | 623 |
| TSS (mg/L) | | | 450 | 715 | ----- | 4,520 | 580 |
| % TSS | | | 52 | 65 | ----- | 88 | 48 |

See notes at end of table.

## Table G-10 (Continued)
## Summary of Compounds Detected in Groundwater Samples Collected from Site 16[1] - Round 4

RFI Report for Sites 5 and 16 and
Site History and File Information for Site 12
Naval Installation Restoration Program
Naval Submarine Base, Kings Bay, Georgia

Data Qualifiers:

[1] Groundwater samples were analyzed for VOCs, SVOCs, and inorganic constituents only. No VOCs were detected in groundwater samples.
[2] Sample values and quantitation limits flagged J and UJ as estimated due to low surrogate recoveries.
[3] Values flagged J as estimated because concentrations are less than the quantitation limit.
[4] Sample values and quantitation limits flagged J and UJ as estimated because duplicate analysis for cyanide was outside QC limits.
[5] The CRDLs listed for inorganic analytes are from the Contract Laboratory Program (CLP) because SW-846 analytical data are reported using CLP protocol when analyses are conducted at a CLP laboratory. This protocol results in qualification of values as estimated when the values are greater than the method detection limit but less than the CLP contract required detection limits. The SW-846 methods do not specify required quantitation limits for inorganic data.

**Notes:**

| | |
|---|---|
| --- | = analysis not required/performed. |
| CRDL | = Contract Required Detection Limit. |
| µg/L | = micrograms per liter. |
| mg/L | = milligrams per liter. |
| % | = percent. |
| PQL | = Practical Quantitation Limit. |
| U | = not detected above or below the quantitation limit. |
| TDS | = total dissolved solids. |
| TSS | = total suspended solids. |

## Table G-11
## Summary of Compounds Detected in Groundwater Samples from Site 16[1] - Round 5

RFI Report for Sites 5 and 16 and
Site History and File Information for Site 12
Naval Installation Restoration Program
Naval Submarine Base, Kings Bay, Georgia

| Compounds Detected | | PQL | Monitoring Well Number | | | | |
|---|---|---|---|---|---|---|---|
| | | | KBA-16-1 | KBA-16-2 | KBA-16-2D | KBA-16-3 | KBA-16-4 |
| **SEMIVOLATILE ORGANIC COMPOUNDS (μg/L)** | | | | | | | |
| Naphthalene[2] | | 10 | 10 U | 2 J | 10 U | 10 U | 10 U |
| bis(2-Ethylhexyl)Phthalate[2] | | 10 | 10 U | 4 J | 3 J | 10 U | 10 U |
| **INORGANIC ANALYTES (μg/L)** | | CRDL[4] | | | | | |
| Arsenic[2] | unfiltered | 10 | 4.1 J | 4.3 J | ---- | 1.0 U | 1.6 J |
| | filtered | | 1.0 U | 2.0 J | ---- | 6.2 J | 1.0 U |
| Barium[2] | unfiltered | 200 | 33.9 J | 70.9 J | ---- | 219 | 37.8 J |
| | filtered | | 16.0 J | 21.0 J | ---- | 24.7 J | 23.1 J |
| Beryllium[2] | unfiltered | 5 | 0.22 U | 0.44 J | ---- | 5.7 | 0.22 U |
| | filtered | | 0.22 U | 0.22 U | ---- | 0.22 U | 0.22 U |
| Chromium[2] | unfiltered | 10 | 15.7 | 32.3 | ---- | 90.6 | 10.3 |
| | filtered | | 2.9 U | 3.2 J | ---- | 2.9 U | 3.6 J |
| Cobalt[2] | unfiltered | 50 | 3.3 U | 8.1 J | ---- | 13.3 J | 3.3 U |
| | filtered | | 3.3 U | 3.3 U | ---- | 3.3 U | 3.3 U |
| Copper[3] | unfiltered | 25 | 15.3 J | 65.1 J | ---- | 31.0 J | 64.5 J |
| | filtered | | 2.3 UJ | 2.3 UJ | ---- | 2.3 UJ | 2.3 UJ |
| Lead | unfiltered | 3 | 3.6 | 10.1 | ---- | 13.6 | 3.8 |
| | filtered | | 1.4 U | 1.4 U | ---- | 1.4 U | 1.4 U |
| Mercury | unfiltered | 0.2 | 0.08 U | 0.09 J | ---- | 0.18 J | 0.08 U |
| | filtered | | 0.08 U | 0.08 U | ---- | 0.08 U | 0.08 U |

See notes at end of table.

## Table G-11 (Continued)
## Summary of Compounds Detected in Groundwater Samples from Site 16[1] - Round 5

RFI Report for Sites 5 and 16 and
Site History and File Information for Site 12
Naval Installation Restoration Program
Naval Submarine Base, Kings Bay, Georgia

| Compounds Detected | | CRDL[4] | Monitoring Well Number KBA-16-1 | KBA-16-2 | KBA-16-2D | KBA-16-3 | KBA-16-4 |
|---|---|---|---|---|---|---|---|
| **INORGANIC ANALYTES (μg/L)** | | | | | | | |
| Nickel[3] | unfiltered | 40 | 5.3 UJ | 34.6 J | ---- | 32.4 J | 40.1 J |
| | filtered | | 5.3 UJ | 5.3 UJ | ---- | 5.3 UJ | 5.3 UJ |
| Selenium | unfiltered | 5 | 2.5 J | 2.1 U | ---- | 2.1 U | 2.1 U |
| | filtered | | 2.1 U | 2.1 U | ---- | 2.1 U | 2.1 U |
| Vanadium[3] | unfiltered | 50 | 18.6 J | 34.2 J | ---- | 89.9 | 10.7 J |
| | filtered | | 2.6 U | 2.6 U | ---- | 3.0 J | 5.7 J |
| Zinc | unfiltered | 20 | 25.6 | 96.4 | ---- | 110 | 84.1 |
| | filtered | | 9.6 U | 9.6 U | ---- | 9.6 U | 9.6 U |
| Cyanide[2] | unfiltered | 10 | 0.84 U | 0.84 U | ---- | 1.2 J | 11.6 |
| | filtered | | 0.84 U | 0.84 U | ---- | 0.84 U | 7.0 J |
| Sulfide | unfiltered | 100 | 200 | 400 | ---- | 100 U | 300 |
| | filtered | | 200 | 400 | ---- | 100 U | 1,400 |
| **PHYSICAL PARAMETERS** | | | | | | | |
| Total Solids (mg/L) | | | 539 | 631 | ---- | 677 | 463 |
| TDS (mg/L) | | | 350 | 261 | ---- | 183 | 181 |
| TSS (mg/L) | | | 189 | 370 | ---- | 494 | 282 |
| % TSS | | | 35 | 59 | ---- | 73 | 61 |

See notes at end of table.

## Table G-11 (Continued)
## Summary of Compounds Detected in Groundwater Samples from Site 16[1] - Round 5

RFI Report for Sites 5 and 16 and
Site History and File Information for Site 12
Naval Installation Restoration Program
Naval Submarine Base, Kings Bay, Georgia

Data Qualifiers:

[1] Groundwater samples were analyzed for VOCs, SVOCs, and inorganic constituents only. No VOCs were detected in groundwater samples.
[2] Values flagged J as estimated because concentrations are less than the quantitation limit.
[3] Sample values and quantitation limits flagged J and UJ as estimated because preparation blank exhibited negative bias for copper and lead.
[4] The CRDLs listed for inorganic analytes are from the Contract Laboratory Program (CLP) because SW-846 analytical data are reported using CLP protocol when analyses are conducted at a CLP laboratory. This protocol results in qualification of values as estimated when the values are greater than the method detection limit but less than the CLP contract required detection limits. The SW-846 methods do not specify required quantitation limits for inorganic data.

**Notes:**

| | |
|---|---|
| --- | = analysis not required or performed. |
| CRDL | = Contract Required Detection Limit. |
| µg/L | = micrograms per liter. |
| mg/L | = milligrams per liter. |
| % | = percent. |
| PQL | = Practical Quantitation Limit. |
| U | = not detected above or below CRQL. |
| TDS | = total dissolved solids. |
| TSS | = total suspended solids. |

## Table G-12
## Summary of Laboratory Analysis of Groundwater Samples Collected from Site 16[1] - Round 6

RFI Report for Sites 5 and 16 and
Site History and File Information for Site 12
Naval Installation Restoration Program
Naval Submarine Base, Kings Bay, Georgia

| Compounds Detected | | | Monitoring Well Number | | | | |
|---|---|---|---|---|---|---|---|
| | | | KBA-16-1 | KBA-16-2 | KBA-16-2D | KBA-16-3 | KBA-16-4 |
| **VOLATILE ORGANIC COMPOUNDS (μg/L)** | | **PQL** | | | | | |
| Acetone | | 10 | 10 U | 10 U | 10 U | 10 | 10 U |
| **INORGANIC ANALYTES (μg/L)** | | **CRDL[5]** | | | | | |
| Antimony[2] | unfiltered | 60 | 16.4 U | 16.4 U | 16.4 U | 23.1 J | 16.4 U |
| | filtered | | 16.4 U | 16.4 U | --- | 16.4 U | 16.4 U |
| Arsenic[2] | unfiltered | 10 | 10.0 | 17.7 | 21.4 | 20.8 | 6.2 J |
| | filtered | | 1.1 J | 2.3 J | --- | 9.2 J | 0.68 U |
| Barium[2] | unfiltered | 200 | 62.4 J | 68.8 J | 75.3 J | 152 J | 139 J |
| | filtered | | 11.0 J | 22.7 J | --- | 26.4 J | 29.3 J |
| Beryllium[2] | unfiltered | 5 | 0.88 J | 0.85 J | 0.99 J | 4.0 J | 2.1 J |
| | filtered | | 0.26 U | 0.26 U | --- | 0.26 U | 0.26 U |
| Chromium[2] | unfiltered | 10 | 32.8 | 33.0 | 38.4 | 64.9 | 46.8 |
| | filtered | | 2.8 U | 2.8 U | --- | 3.0 J | 3.1 J |
| Cobalt[2] | unfiltered | 50 | 4.4 J | 12.3 J | 13.5 J | 13.7 J | 5.2 J |
| | filtered | | 2.6 U | 3.8 J | --- | 2.6 U | 2.6 U |
| Copper[2,3] | unfiltered | 25 | 9.5 J | 9.8 J | 10.3 J | 13.6 J | 15.2 J |
| | filtered | | 1.2 UJ | 1.2 UJ | --- | 1.2 UJ | 1.2 UJ |
| Lead[2,4] | unfiltered | 3 | 12.3 J | 10.7 J | 12.4 J | 41.2 J | 1.7 UJ |
| | filtered | | 2.4 J | 2.0 J | --- | 2.3 J | 2.6 J |
| Selenium[2,4] | unfiltered | 5 | 4.8 J | 2.6 J | 2.6 J | 2.1 J | 4.3 J |
| | filtered | | 1.8 UJ | 1.8 UJ | --- | 1.8 UJ | 1.8 UJ |
| Vanadium[2,3] | unfiltered | 50 | 40.0 J | 34.2 J | 40.6 J | 60.1 | 41.2 J |
| | filtered | | 2.6 UJ | 2.6 UJ | --- | 2.6 UJ | 3.6 J |
| Zinc | unfiltered | 20 | 64.4 | 59.5 | 70.2 | 107 | 66.1 |
| | filtered | | 27.7 U | 9.0 U | --- | 20.9 U | 12.2 U |
| Sulfide | unfiltered | 100 | 200 | 300 | 100 U | 200 | 800 |
| | filtered | | 100 U | 100 U | --- | 100 U | 1,800 |

See notes at end of table.

## Table G-12 (Continued)
## Summary of Laboratory Analysis of Groundwater Samples Collected from Site 16[1] - Round 6

RFI Report for Sites 5 and 16 and
Site History and File Information for Site 12
Naval Installation Restoration Program
Naval Submarine Base, Kings Bay, Georgia

| | | Monitoring Well Number | | | | |
|---|---|---|---|---|---|---|
| **Compounds Detected** | **CRDL[5]** | **KBA-16-1** | **KBA-16-2** | **KBA-16-2D** | **KBA-16-3** | **KBA-16-4** |
| **PHYSICAL PARAMETERS** | | | | | | |
| Total Solids (mg/L) | | 884 | 954 | 891 | 1,231 | 1,626 |
| TDS (mg/L) | | 349 | 411 | 361 | 400 | 556 |
| TSS (mg/L) | | 535 | 543 | 530 | 831 | 1,070 |
| % TSS | | 61 | 57 | 59 | 68 | 66 |

[1] Groundwater samples were analyzed for VOCs, SVOCs, and inorganic analytes only. No SVOCS were detected in groundwater samples.

Data Qualifiers:

[2] Values flagged J as estimated because concentrations are less than the quantitation limit.
[3] Values flagged J and UJ as estimated because the preparation blank exhibited negative bias for copper and vanadium.
[4] Values flagged J and UJ as estimated because duplicate analysis for lead and selenium exceeded QC limits.
[5] The CRDLs listed for inorganic analytes are from the Contract Laboratory Program (CLP) because SW-846 analytical data are reported using CLP protocol when analyses are conducted at a CLP laboratory. This protocol results in qualification of values as estimated when the values are greater than the method detection limit but less than the CLP contract required detection limits. The SW-846 methods do not specify required quantitation limits for inorganic data.

**Notes:**
--- = analysis not required/performed.
CRDL = Contract Required Detection Limit.
µg/L = micrograms per liter.
mg/L = milligrams per liter.
PQL = Practical Quantitation Limit.
% = percent.
U = not detected above or below the quantitation limit.
TDS = total dissolved solids.
TSS = total suspended solids.

# Appendix H

## Sites 5 and 16 Groundwater Monitoring Program Field Measurements

# Site 5

Table H-1 Summary of Field Measurements for Monitoring Wells at Site 5 - Round 1

| Monitoring Well No. | FID Headspace Data (ppm) | Field Data[1] | Well Volume No. 1 | 2 | 3 | 4 | 5 | Total Purge Vol. (gal) |
|---|---|---|---|---|---|---|---|---|
| KBA-5-1 | 0 | pH | 4.49 | 4.65 | 4.61 | 4.58 | 4.59 | 6.0 |
| | | Cond. | 160 | 160 | 170 | 180 | 180 | |
| | | Temp. | 19.0 | 19.0 | 19.5 | 19.8 | 19.0 | |
| KBA-5-2 | 0 | pH | 4.43 | 4.51 | 4.58 | 4.58 | 4.61 | 8.5 |
| | | Cond. | 350 | 360 | 350 | 350 | 360 | |
| | | Temp. | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | |
| KBA-5-3 | 0 | pH | 4.70 | 4.70 | 4.71 | 4.74 | 4.80 | 8.0 |
| | | Cond. | 200 | 210 | 220 | 220 | 220 | |
| | | Temp. | 19.5 | 19.0 | 19.5 | 19.5 | 19.5 | |
| KBA-5-4 | 0 | pH | 4.81 | 4.74 | 4.77 | 4.79 | 4.84 | 7.8 |
| | | Cond. | 4.70 | 570 | 600 | 630 | 670 | |
| | | Temp. | 19.0 | 18.5 | 19.0 | 19.0 | 19.0 | |
| KBA-5-5 | 0 | pH | 4.86 | 4.97 | 5.00 | 5.01 | 5.02 | 8.0 |
| | | Cond. | 120 | 110 | 110 | 110 | 110 | |
| | | Temp. | 19.0 | 19.0 | 19.5 | 19.5 | 19.5 | |
| KBA-5-6 | 0 | pH | 5.37 | 5.29 | 5.21 | 5.22 | 5.21 | 5.0 |
| | | Cond. | 310 | 290 | 260 | 260 | 250 | |
| | | Temp. | error | error | error | error | error | |
| KBA-5-7 | 0 | pH | 6.40 | 6.45 | 6.43 | 6.40 | 6.38 | 6.0 |
| | | Cond. | 500 | 490 | 440 | 420 | 420 | |
| | | Temp. | error | error | error | error | error | |

Notes: FID = flame ionization detector
ppm = parts per million
error = analyzed, but readings were erroneous because of instrument malfunction. Instrument replaced.

1) Units are standard units (s.u.) for pH, micromhos per centimeter (umhos/cm) for specific conductance, and degrees Celsius (°C) for temperature.

Table H-2 Summary of Field Measurements for Monitoring Wells at Site 5 - Round 2

| Monitoring Well No. | FID Headspace Data (ppm) | Field Data[1] | Well Volume No. 1 | 2 | 3 | 4 | Total Purge Vol. (gal) |
|---|---|---|---|---|---|---|---|
| KBA-5-1 | 25 | pH | 4.74 | 4.53 | 4.47 | 4.44 | 5.0 |
| | | Cond. | error | error | error | error | |
| | | Temp. | error | error | error | error | |
| KBA-5-2 | 0 | pH | 4.94 | 4.64 | 4.60 | 4.54 | 6.0 |
| | | Cond. | error | error | error | error | |
| | | Temp. | error | error | error | error | |
| KBA-5-3 | 0 | pH | 4.84 | 4.65 | 4.63 | 4.63 | 6.0 |
| | | Cond. | error | error | error | error | |
| | | Temp. | error | error | error | error | |
| KBA-5-4 | 0 | pH | 5.11 | 4.87 | 5.00 | 4.93 | 5.0 |
| | | Cond. | error | error | error | error | |
| | | Temp. | error | error | error | error | |
| KBA-5-5 | NA | pH | 5.25 | 5.05 | 5.04 | 5.05 | 6.0 |
| | | Cond. | 140 | 130 | 125 | 125 | |
| | | Temp. | 25 | 23 | 23 | 22 | |
| KBA-5-6 | NA | pH | 5.40 | 5.37 | 5.38 | 5.34 | 5.0 |
| | | Cond. | 280 | 265 | 250 | 240 | |
| | | Temp. | 22 | 21 | 20 | 20 | |
| KBA-5-7 | NA | pH | 6.11 | 6.18 | 6.24 | 6.24 | 5.0 |
| | | Cond. | 550 | 440 | 390 | 350 | |
| | | Temp. | 21 | 21 | 21 | 21 | |

Notes: FID = flame ionization detector
ppm = parts per million
error = analyzed, but readings were erroneous because of instrument malfunction. Instrument replaced.
NA = not analyzed because of problems with FID gas cylinder O-ring.

1) Units are standard units (s.u.) for pH, micromhos per centimeter (umhos/cm) for specific conductance, and degrees Celsius (°C) for temperature.

Table H-3 Summary of Field Measurements for Monitoring Wells at Site 5 - Round 3

| Monitoring Well No. | FID Headspace Data (ppm) | Field Data[1] | Well Volume No. 1 | 2 | 3 | 4 | Total Purge Vol. (gal) |
|---|---|---|---|---|---|---|---|
| KBA-5-1 | 0 | pH | 4.3 | 3.8 | 3.7 | 3.7 | 4.0 |
| | | Cond. | 120 | 100 | 130 | 140 | |
| | | Temp. | 27 | 27 | 25 | 25 | |
| KBA-5-2 | 35 | pH | 4.7 | 4.5 | 4.5 | 4.5 | 4.0 |
| | | Cond. | 120 | 75 | 112 | 130 | |
| | | Temp. | 29 | 30 | 29 | 28 | |
| KBA-5-3 | 0 | pH | 5.3 | 4.5 | 4.3 | 4.3 | 5.6 |
| | | Cond. | 175 | 170 | 160 | 180 | |
| | | Temp. | 28 | 27 | 27 | 26 | |
| KBA-5-4 | 0 | pH | 4.5 | 4.6 | 4.6 | 4.7 | 5.2 |
| | | Cond. | 230 | 430 | 450 | 380 | |
| | | Temp. | 29 | 28 | 27 | 27 | |
| KBA-5-5 | 0 | pH | 5.0 | 4.7 | 4.6 | 4.8 | 5.6 |
| | | Cond. | 140 | 130 | 130 | 120 | |
| | | Temp. | 29 | 28 | 27 | 27 | |
| KBA-5-6 | >5000 | pH | 5.4 | 5.2 | 5.3 | 5.0 | 4.5 |
| | | Cond. | 250 | 270 | 260 | 210 | |
| | | Temp. | 27 | 26 | 26 | 25 | |
| KBA-5-7 | 0 | pH | 6.1 | 6.1 | 6.1 | 6.1 | 4.5 |
| | | Cond. | 450 | 400 | 400 | 400 | |
| | | Temp. | 26 | 26 | 25 | 25 | |

Notes: FID = flame ionization detector
ppm = parts per million

1) Units are standard units (s.u.) for pH, micromhos per centimeter (umhos/cm) for specific conductance, and degrees Celsius (°C) for temperature.

Table H-4 Summary of Field Measurements for Monitoring Wells at Site 5 - Round 4

| Monitoring Well No. | FID Headspace Data (ppm) | Field Data[1] | Well Volume No. 1 | 2 | 3 | 4 | Total Purge Vol. (gal) |
|---|---|---|---|---|---|---|---|
| KBA-5-1 | 0 | pH | 4.6 | 4.8 | 4.8 | | 3.1 |
| | | Cond. | 255 | 241 | 227 | | |
| | | Temp. | error | error | error | | |
| KBA-5-2 | 0 | pH | 5.0 | 4.7 | 4.7 | 5.1 | 4.1 |
| | | Cond. | 351 | 333 | 423 | 390 | |
| | | Temp. | error | error | error | error | |
| KBA-5-3 | 0 | pH | 6.3 | 5.4 | 5.6 | | 4.0 |
| | | Cond. | 195 | 165 | 181 | | |
| | | Temp. | error | error | error | | |
| KBA-5-4 | 0 | pH | 5.1 | 5.1 | 4.8 | 4.8 | 3.5 |
| | | Cond. | 631 | 510 | 781 | 700 | |
| | | Temp. | error | error | error | error | |
| KBA-5-5 | 0 | pH | 5.2 | 5.0 | 5.1 | 5.1 | 3.8 |
| | | Cond. | 182 | 155 | 166 | 160 | |
| | | Temp. | error | error | error | error | |
| KBA-5-6 | >5000 | pH | 5.7 | 5.6 | 5.7 | | 3.0 |
| | | Cond. | 288 | 269 | 292 | | |
| | | Temp. | error | error | error | | |
| KBA-5-7 | 0 | pH | 6.2 | 6.0 | 5.9 | | 3.4 |
| | | Cond. | 507 | 428 | 420 | | |
| | | Temp. | error | error | error | | |

Notes: FID = flame ionization detector
ppm = parts per million
error = analyzed, but readings were erroneous because of instrument malfunction. Instrument replaced.

1) Units are standard units (s.u.) for pH, micromhos per centimeter (umhos/cm) for specific conductance, and degrees Celsius (°C) for temperature.

Table H-5 Summary of Field Measurements for Monitoring Wells at Site 5 - Round 5

| Monitoring Well No. | FID Headspace Data (ppm) | Field Data[1] | Well Volume No. 1 | 2 | 3 | 4 | Total Purge Vol. (gal) |
|---|---|---|---|---|---|---|---|
| KBA-5-1 | 40 | pH | 4.7 | 4.8 | 4.7 | 4.7 | 5.4 |
| | | Cond. | 139 | 110 | 149 | 136 | |
| | | Temp. | 71.7 | 71.5 | 71.8 | 71.5 | |
| KBA-5-2 | 0 | pH | 5.4 | 5.3 | 5.3 | 5.3 | 5.0 |
| | | Cond. | 130 | 135 | 154 | 155 | |
| | | Temp. | 71.8 | 72.1 | 72.1 | 72.0 | |
| KBA-5-3 | 0 | pH | 4.9 | 4.8 | 4.8 | | 4.5 |
| | | Cond. | 149 | 155 | 156 | | |
| | | Temp. | 73.6 | 73.6 | 72.9 | | |
| KBA-5-4 | 0 | pH | 5.1 | 5.0 | 4.9 | 4.9 | 4.5 |
| | | Cond. | 223 | 291 | 357 | 339 | |
| | | Temp. | 71.9 | 71.6 | 71.5 | 71.4 | |
| KBA-5-5 | 50 | pH | 5.0 | 4.9 | 4.9 | | 4.2 |
| | | Cond. | 120 | 122 | 120 | | |
| | | Temp. | 74.8 | 73.9 | 73.2 | | |
| KBA-5-6 | 3500 | pH | 5.4 | 5.2 | 5.2 | | 3.5 |
| | | Cond. | 292 | 241 | 243 | | |
| | | Temp. | 69.1 | 69.7 | 69.1 | | |
| KBA-5-7 | 18 | pH | 6.2 | 6.2 | 6.1 | | 4.0 |
| | | Cond. | 411 | 395 | 371 | | |
| | | Temp. | 66.7 | 67.6 | 68.8 | | |

Notes: FID = flame ionization detector
ppm = parts per million

1) Units are standard units (s.u.) for pH, micromhos per centimeter (umhos/cm) for specific conductance, and degrees Fahrenheit (°F) for temperature.

Table H-6 Summary of Field Measurements for Monitoring Wells at Site 5 - Round 6

| Monitoring Well No. | FID Headspace Data (ppm) | Field Data[1] | Well Volume No. 1 | 2 | 3 | 4 | 5 | Total Purge Vol. (gal) |
|---|---|---|---|---|---|---|---|---|
| KBA-5-1 | 0 | pH | 4.15 | 4.16 | 4.21 | 4.19 | 4.25 | 5.0 |
| | | Cond. | 109 | 128 | 95.0 | 138 | 145 | |
| | | Temp. | 65.8 | 66.5 | 65.7 | 66.3 | 66.1 | |
| KBA-5-2 | 14 | pH | 5.05 | 5.06 | 5.01 | | | 7.0 |
| | | Cond. | 106 | 108 | 104 | | | |
| | | Temp. | 65.0 | 66.0 | 65.5 | | | |
| KBA-5-3 | 0 | pH | 5.73 | 4.67 | 4.66 | | | 6.0 |
| | | Cond. | 170 | 182 | 172 | | | |
| | | Temp. | 66.0 | 67.0 | 67.1 | | | |
| KBA-5-4 | 0 | pH | 4.89 | 4.36 | 4.48 | 4.42 | 4.43 | 8.0 |
| | | Cond. | 170 | 641 | 481 | 644 | 708 | |
| | | Temp. | 66.5 | 68.0 | 67.5 | 67.7 | 67.8 | |
| KBA-5-5 | 0 | pH | 4.77 | 4.65 | 4.63 | | | 6.0 |
| | | Cond. | 80.1 | 83.6 | 83.4 | | | |
| | | Temp. | 66.4 | 68.3 | 68.5 | | | |
| KBA-5-6 | >5000 | pH | 4.94 | 4.97 | 5.12 | 5.01 | 4.86 | 5.0 |
| | | Cond. | 202 | 200 | 223 | 201 | 177 | |
| | | Temp. | 67.9 | 68.9 | 68.3 | 68.3 | 68.5 | |
| KBA-5-7 | 0 | pH | 6.31 | 6.27 | 6.17 | 6.21 | | 6.0 |
| | | Cond. | 492 | 458 | 428 | 419 | | |
| | | Temp. | 67.1 | 67.3 | 67.2 | 67.4 | | |

Notes: FID = flame ionization detector
ppm = parts per million
error = analyzed, but readings were erroneous because of instrument malfunction. Instrument replaced.
1) Units are standard units (s.u.) for pH, micromhos per centimeter (umhos/cm) for specific conductance, and degrees Fahrenheit (°F) for temperature.

# Site 16

Table H-7 Summary of Field Measurements for Monitoring Wells at Site 16- Round 1

| Monitoring Well No. | FID Headspace Data (ppm) | Field Data[1] | Well Volume No. 1 | 2 | 3 | 4 | 5 | Total Purge Volume (gal) |
|---|---|---|---|---|---|---|---|---|
| KBA-16-1 | 0 | pH | 4.74 | 4.68 | 4.69 | 4.71 | 4.74 | 5.3 |
| | | Cond. | 810 | 800 | 790 | 790 | 790 | |
| | | Temp. | error | error | error | error | error | |
| KBA-16-2 | 0 | pH | 5.13 | 5.36 | 5.68 | 6.70 | 5.71 | 6.6 |
| | | Cond. | 710 | 690 | 670 | 660 | 660 | |
| | | Temp. | error | error | error | error | error | |
| KBA-16-3 | 0 | pH | 5.04 | 4.98 | 5.20 | 5.16 | 5.18 | 6.1 |
| | | Cond. | 110 | 110 | 130 | 130 | 130 | |
| | | Temp. | error | error | error | error | error | |
| KBA-16-4 | 0 | pH | 4.84 | 4.93 | 5.02 | | | 20.0 |
| | | Cond. | 800 | 790 | 790 | | | |
| | | Temp. | error | error | error | | | |

Notes: FID = flame ionization detector
ppm = parts per million
error = analyzed, but readings were erroneous because of instrument malfunction. Instrument replaced.

1) Units are standard units (s.u.) for pH, micromhos per centimeter (umhos/cm) for specific conductance, and degrees Celsius (°C) for temperature.

Table H-8 Summary of Field Measurements for Monitoring Wells at Site 16 - Round 2

| Monitoring Well No. | FID Headspace Data (ppm) | Field Data[1] | Well Volume No. 1 | 2 | 3 | 4 | Total Purge Vol. (gal) |
|---|---|---|---|---|---|---|---|
| KBA-16-1 | >5000 | pH | 5.51 | 5.51 | 5.48 | 5.48 | 4.5 |
| | | Cond. | error | error | error | error | |
| | | Temp. | error | error | error | error | |
| KBA-16-2 | >5000 | pH | 5.95 | 5.96 | 6.10 | 6.07 | 5.6 |
| | | Cond. | error | error | error | error | |
| | | Temp. | error | error | error | error | |
| KBA-16-3 | 2800 | pH | 5.67 | 5.94 | 5.73 | 5.78 | 5.5 |
| | | Cond. | error | error | error | error | |
| | | Temp. | error | error | error | error | |
| KBA-16-4 | >5000 | pH | 5.97 | 5.55 | 5.54 | 5.67 | 6.0 |
| | | Cond. | error | error | error | error | |
| | | Temp. | error | error | error | error | |

Notes: FID = flame ionization detector
ppm = parts per million
error = analyzed, but readings were erroneous because of instrument malfunction. Instrument replaced.

1) Units are standard units (s.u.) for pH, micromhos per centimeter (umhos/cm) for specific conductance, and degrees Celsius (°C) for temperature.

Table H-9 Summary of Field Measurements for Monitoring Wells at Site 16 - Round 3

| Monitoring Well No. | FID Headspace Data (ppm) | Field Data[1] | Well Volume No. 1 | 2 | 3 | 4 | Total Purge Vol. (gal) |
|---|---|---|---|---|---|---|---|
| KBA-16-1 | >5000 | pH | 5.7 | 5.5 | 5.6 | 5.6 | 5.5 |
| | | Cond. | 600 | 600 | 600 | 600 | |
| | | Temp. | 32 | 28 | 28 | 26 | |
| KBA-16-2 | >5000 | pH | 6.0 | 6.2 | 6.2 | 6.2 | 6.0 |
| | | Cond. | 500 | 500 | 500 | 500 | |
| | | Temp. | 29 | 28 | 27 | 26 | |
| KBA-16-3 | 1000 | pH | 6.0 | 6.0 | 6.0 | 6.0 | 5.5 |
| | | Cond. | 300 | 250 | 210 | 210 | |
| | | Temp. | 30 | 28 | 28 | 27 | |
| KBA-16-4 | >5000 | pH | 5.3 | 5.5 | 5.6 | 5.7 | 7.0 |
| | | Cond. | 500 | 600 | 700 | 900 | |
| | | Temp. | 31 | 28 | 27 | 26 | |

Notes: FID = flame ionization detector
ppm = parts per million

1) Units are standard units (s.u.) for pH, micromhos per centimeter (umhos/cm) for specific conductance, and degrees Celsius (°C) for temperature.

Table H-10 Summary of Field Measurements for Monitoring Wells at Site 16 - Round 4

| Monitoring Well No. | FID Headspace Data (ppm) | Field Data[1] | Well Volume No. 1 | 2 | 3 | 4 | Total Purge Vol. (gal) |
|---|---|---|---|---|---|---|---|
| KBA-16-1 | >5000 | pH | 5.7 | 5.8 | 5.9 | | 3.4 |
| | | Cond. | 870 | 718 | 683 | | |
| | | Temp. | error | error | error | | |
| KBA-16-2 | >5000 | pH | 7.4 | 7.2 | 6.9 | 7.2 | 4.2 |
| | | Cond. | 843 | 731 | 673 | 735 | |
| | | Temp. | error | error | error | error | |
| KBA-16-3 | >5000 | pH | 6.8 | 6.3 | 6.1 | 6.2 | 4.0 |
| | | Cond. | 480 | 243 | 333 | 338 | |
| | | Temp. | error | error | error | error | |
| KBA-16-4 | >5000 | pH | 8.0 | 7.2 | 7.1 | 7.0 | 4.7 |
| | | Cond. | 969 | 860 | 929 | 912 | |
| | | Temp. | error | error | error | error | |

Notes: FID = flame ionization detector
ppm = parts per million
error = analyzed, but readings were erroneous because of instrument malfunction. Instrument replaced.

1) Units are standard units (s.u.) for pH, micromhos per centimeter (umhos/cm) for specific conductance, and degrees Celsius (°C) for temperature.

Table H-11 Summary of Field Measurements for Monitoring Wells at Site 16 - Round 5

| Monitoring Well No. | FID Headspace Data (ppm) | Field Data[1] | Well Volume No. 1 | 2 | 3 | 4 | Total Purge Vol. (gal) |
|---|---|---|---|---|---|---|---|
| KBA-16-1 | 50 | pH | 5.4 | 5.5 | 5.5 | | 3.3 |
| | | Cond. | 575 | 577 | 549 | | |
| | | Temp. | 75.7 | 75.5 | 75.5 | | |
| KBA-16-2 | >5000 | pH | 6.3 | 6.1 | 6.2 | 6.3 | 4.2 |
| | | Cond. | 577 | 494 | 523 | 522 | |
| | | Temp. | 75.9 | 75.8 | 75.7 | 75.6 | |
| KBA-16-3 | 4000 | pH | 5.7 | 5.7 | 5.8 | 5.8 | 4.0 |
| | | Cond. | 157 | 141 | 159 | 146 | |
| | | Temp. | 77.6 | 77.7 | 77.8 | 77.7 | |
| KBA-16-4 | >5000 | pH | 5.6 | 5.7 | 5.8 | 5.7 | 5.0 |
| | | Cond. | 615 | 733 | 790 | 780 | |
| | | Temp. | 74.8 | 74.9 | 75.0 | 74.8 | |

Notes: FID = flame ionization detector
ppm = parts per million

1) Units are standard units (s.u.) for pH, micromhos per centimeter (umhos/cm) for specific conductance, and degrees Fahrenheit (°F) for temperature.

Table H-12 Summary of Field Measurements for Monitoring Wells at Site 16 - Round 6

| Monitoring Well No. | FID Headspace Data (ppm) | Field Data[1] | Well Volume No. 1 | 2 | 3 | 4 | 5 | Total Purge Vol. (gal) |
|---|---|---|---|---|---|---|---|---|
| KBA-16-1 | >5000 | pH | 5.00 | 5.06 | 5.10 | 5.16 | 5.12 | 6.0 |
| | | Cond. | 551 | 469 | 484 | 467 | 454 | |
| | | Temp. | 67.2 | 68.3 | 68.7 | 69.0 | 69.2 | |
| KBA-16-2 | >5000 | pH | 5.72 | 5.73 | 5.61 | 5.80 | 5.64 | 7.0 |
| | | Cond. | 497 | 499 | 488 | 502 | 484 | |
| | | Temp. | 69.9 | 69.3 | 69.6 | 69.1 | 69.3 | |
| KBA-16-3 | >5000 | pH | 5.54 | 5.56 | 5.55 | 5.54 | | 6.0 |
| | | Cond. | 122 | 126 | 118 | 122 | | |
| | | Temp. | 67.8 | 69.6 | 69.8 | 70.0 | | |
| KBA-16-4 | >5000 | pH | 5.42 | 5.50 | 5.54 | 5.53 | 5.56 | 6.0 |
| | | Cond. | 616 | 564 | 618 | 642 | 642 | |
| | | Temp. | 65.8 | 66.4 | 67.2 | 67.6 | 67.9 | |

Notes: FID = flame ionization detector
ppm = parts per million
error = analyzed, but readings were erroneous because of instrument malfunction. Instrument replaced.

1) Units are standard units (s.u.) for pH, micromhos per centimeter (umhos/cm) for specific conductance, and degrees Fahrenheit (°F) for temperature.

# Appendix I

# Hydraulic Conductivity Data

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# A Q T E S O L V   R E S U L T S

Version 1.10

05/05/93 15:03:55

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## TEST DESCRIPTION

Data set........... KBA-5-1.DAT
Data set title..... KBA-5-1

Knowns and Constants:
No. of data points.................. 64
Radius of well casing............... 0.083
Radius of well...................... 0.33
Aquifer saturated thickness......... 82.14
Well screen length.................. 7
Static height of water in well...... 7
Log(Re/Rw).......................... 1.814
A, B, C............................. 2.183, 0.345, 0.000

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## ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

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## RESULTS FROM STATISTICAL CURVE MATCHING

### STATISTICAL MATCH PARAMETER ESTIMATES

| | Estimate | | Std. Error |
|---|---|---|---|
| K = | 7.0543E-003 | +/- | 1.8843E-004 |
| y0 = | 1.6296E+000 | +/- | 1.9156E-002 |

### ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
Number of residuals............... 64
Number of estimated parameters.... 2
Degrees of freedom................ 62
Residual mean..................... 0.02689
Residual standard deviation....... 0.04651
Residual variance................. 0.002163

Model Residuals:

| Time | Observed | Calculated | Residual | Weight |
|---|---|---|---|---|
| 0.0033 | 1.636 | 1.5877 | 0.048331 | 1 |
| 0.0066 | 1.578 | 1.5468 | 0.03121 | 1 |
| 0.01 | 1.565 | 1.5058 | 0.059228 | 1 |
| 0.0133 | 1.478 | 1.467 | 0.010998 | 1 |
| 0.0166 | 1.421 | 1.4292 | -0.0082293 | 1 |
| 0.02 | 1.376 | 1.3913 | -0.015329 | 1 |
| 0.0233 | 1.347 | 1.3555 | -0.0085054 | 1 |
| 0.0266 | 1.324 | 1.3206 | 0.0033961 | 1 |
| 0.03 | 1.273 | 1.2856 | -0.012584 | 1 |
| 0.0333 | 1.237 | 1.2525 | -0.015483 | 1 |
| 0.05 | 1.067 | 1.0976 | -0.030595 | 1 |
| 0.0666 | 0.922 | 0.96262 | -0.040621 | 1 |
| 0.0833 | 0.8 | 0.84358 | -0.043578 | 1 |
| 0.1 | 0.7 | 0.73926 | -0.039257 | 1 |
| 0.1166 | 0.61 | 0.64835 | -0.038349 | 1 |
| 0.1333 | 0.533 | 0.56817 | -0.035171 | 1 |
| 0.15 | 0.469 | 0.49791 | -0.028908 | 1 |
| 0.16 | 0.414 | 0.46007 | -0.046065 | 1 |
| 0.1833 | 0.373 | 0.38268 | -0.0096769 | 1 |
| 0.2 | 0.331 | 0.33535 | -0.0043531 | 1 |
| 0.2166 | 0.305 | 0.29411 | 0.010886 | 1 |
| 0.2333 | 0.276 | 0.25774 | 0.018258 | 1 |
| 0.25 | 0.254 | 0.22587 | 0.028131 | 1 |
| 0.2666 | 0.241 | 0.19809 | 0.042907 | 1 |
| 0.2833 | 0.228 | 0.1736 | 0.054404 | 1 |
| 0.3 | 0.212 | 0.15213 | 0.059872 | 1 |
| 0.3166 | 0.202 | 0.13342 | 0.06858 | 1 |
| 0.3333 | 0.189 | 0.11692 | 0.072079 | 1 |
| 0.4166 | 0.151 | 0.060524 | 0.090476 | 1 |
| 0.5 | 0.128 | 0.031306 | 0.096694 | 1 |
| 0.5833 | 0.115 | 0.016205 | 0.098795 | 1 |
| 0.6666 | 0.099 | 0.0083887 | 0.090611 | 1 |
| 0.75 | 0.09 | 0.004339 | 0.085661 | 1 |
| 0.8333 | 0.08 | 0.0022461 | 0.077754 | 1 |
| 0.9166 | 0.073 | 0.0011627 | 0.071837 | 1 |
| 1 | 0.07 | 0.00060139 | 0.069399 | 1 |
| 1.0833 | 0.064 | 0.00031131 | 0.063689 | 1 |
| 1.1666 | 0.061 | 0.00016115 | 0.060839 | 1 |
| 1.25 | 0.054 | 8.3354E-005 | 0.053917 | 1 |
| 1.3333 | 0.054 | 4.3148E-005 | 0.053957 | 1 |
| 1.4166 | 0.051 | 2.2336E-005 | 0.050978 | 1 |
| 1.5 | 0.051 | 1.1553E-005 | 0.050988 | 1 |
| 1.5833 | 0.044 | 5.9804E-006 | 0.043994 | 1 |
| 1.6666 | 0.044 | 3.0957E-006 | 0.043997 | 1 |
| 1.75 | 0.041 | 1.6012E-006 | 0.040998 | 1 |
| 1.8333 | 0.041 | 8.2889E-007 | 0.040999 | 1 |
| 1.9166 | 0.041 | 4.2907E-007 | 0.041 | 1 |
| 2 | 0.038 | 2.2194E-007 | 0.038 | 1 |
| 2.5 | 0.032 | 4.2634E-009 | 0.032 | 1 |
| 3 | 0.028 | 8.1902E-011 | 0.028 | 1 |
| 3.5 | 0.028 | 1.5734E-012 | 0.028 | 1 |
| 4 | 0.025 | 3.0225E-014 | 0.025 | 1 |
| 4.5 | 0.022 | 5.8063E-016 | 0.022 | 1 |
| 5 | 0.022 | 1.1154E-017 | 0.022 | 1 |
| 5.5 | 0.019 | 2.1427E-019 | 0.019 | 1 |
| 6 | 0.019 | 4.1162E-021 | 0.019 | 1 |
| 6.5 | 0.019 | 7.9074E-023 | 0.019 | 1 |
| 7 | 0.016 | 1.519E-024 | 0.016 | 1 |
| 7.5 | 0.019 | 2.9181E-026 | 0.019 | 1 |

Model Residuals:

| Time | Observed | Calculated | Residual | Weight |
|---|---|---|---|---|
| 8 | 0.016 | 5.6058E-028 | 0.016 | 1 |
| 8.5 | 0.016 | 1.0769E-029 | 0.016 | 1 |
| 9 | 0.016 | 2.0687E-031 | 0.016 | 1 |
| 9.5 | 0.012 | 3.9741E-033 | 0.012 | 1 |
| 10 | 0.016 | 7.6344E-035 | 0.016 | 1 |

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

| | Estimate |
|---|---|
| K = | 7.0543E-003 |
| y0 = | 1.6296E+000 |

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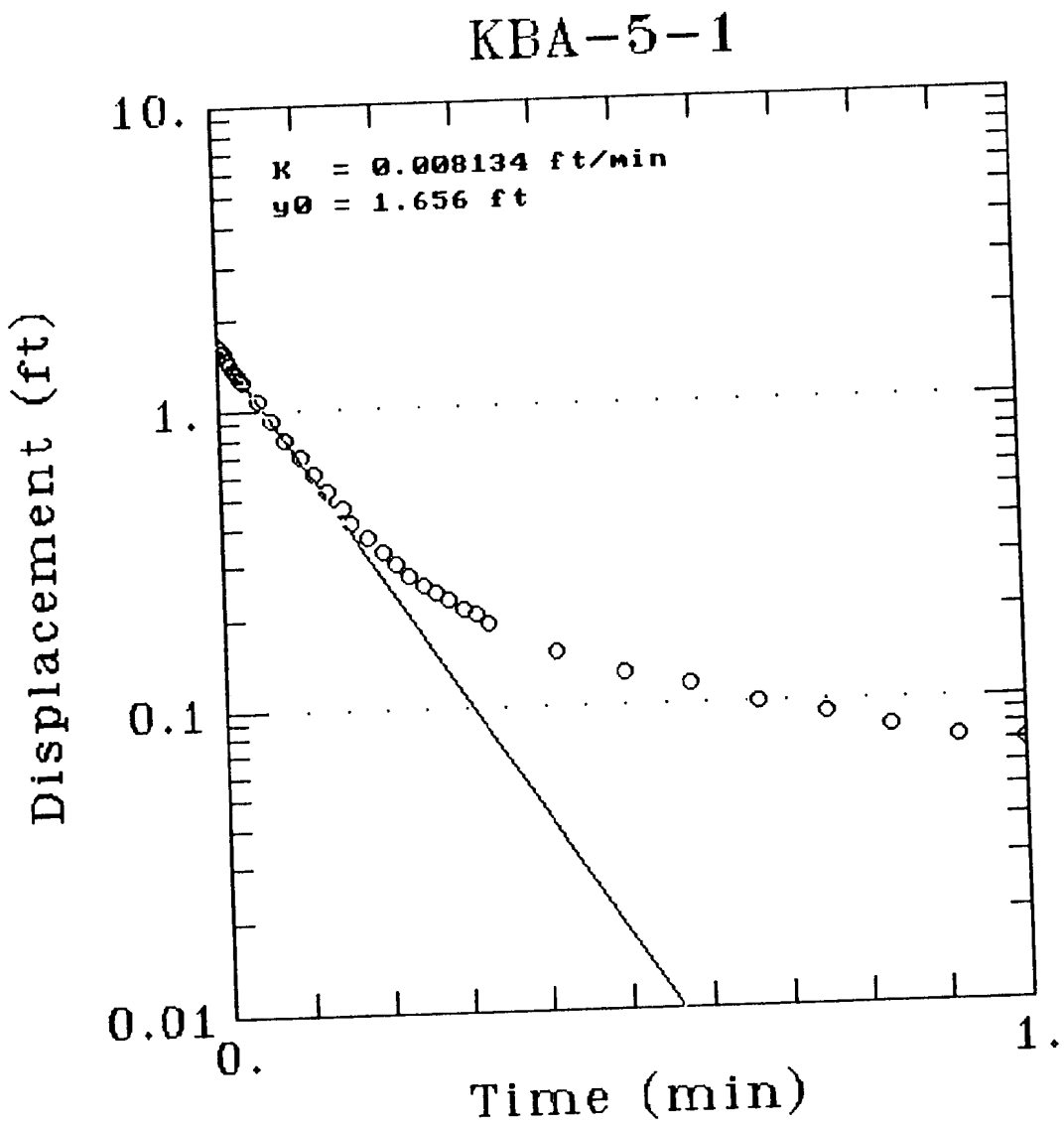
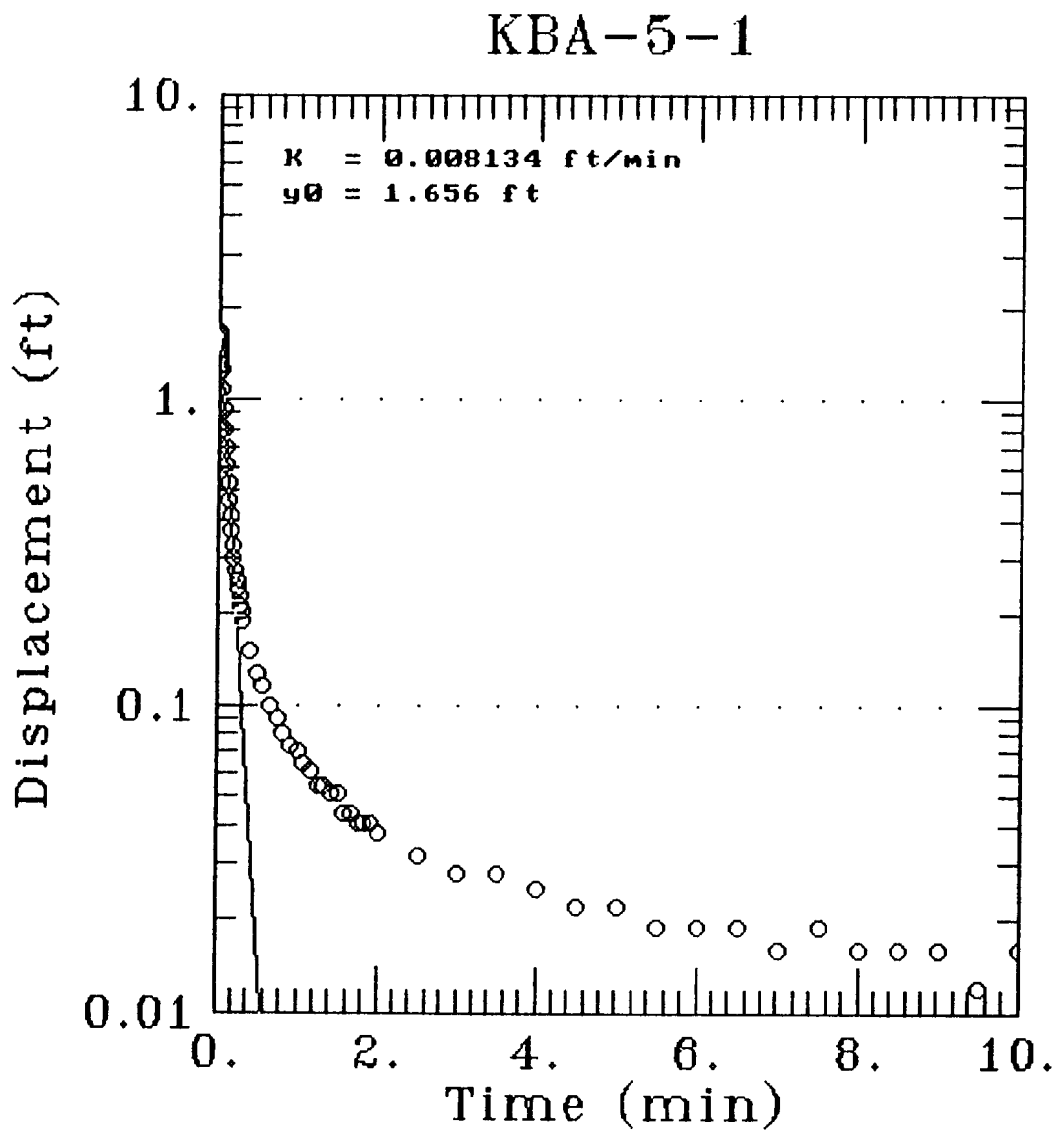
TYPE CURVE DATA

K = 8.13400E-003
y0 = 1.65600E+000

| Time | Drawdown | Time | Drawdown | Time | Drawdown |
|---|---|---|---|---|---|
| 0.000E+000 | 1.656E+000 | 1.000E+000 | 1.823E-004 | | |


KBA-5-1
K = 0.008134 ft/min
y0 = 1.656 ft
10.
1.
0.1
0.01
0.
1.
Displacement (ft)
Time (min)


KBA-5-1
K = 0.008134 ft/min
y0 = 1.656 ft
10.
1.
0.1
0.01
Displacement (ft)
0.
2.
4.
6.
8.
10.
Time (min)

# A Q T E S O L V   R E S U L T S
Version 1.10

05/05/93 15:52:41

## TEST DESCRIPTION

Data set........... KBA-5-2.DAT
Data set title..... KBA-5-2

Knowns and Constants:

No. of data points................... 64
Radius of well casing............... 0.083
Radius of well...................... 0.33
Aquifer saturated thickness......... 84.63
Well screen length.................. 9
Static height of water in well...... 9
Log(Re/Rw).......................... 2.018
A, B, C............................. 2.360, 0.382, 0.000

## ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

## RESULTS FROM STATISTICAL CURVE MATCHING

### STATISTICAL MATCH PARAMETER ESTIMATES

| | Estimate | | Std. Error |
|---|---|---|---|
| K = | 2.8643E-003 | +/- | 1.0863E-004 |
| y0 = | 1.6930E+000 | +/- | 2.5700E-002 |

### ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:

Number of residuals............... 64
Number of estimated parameters.... 2
Degrees of freedom................ 62
Residual mean..................... 0.03806
Residual standard deviation....... 0.07601
Residual variance................. 0.005778

Model Residuals:

| Time | Observed | Calculated | Residual | Weight |
|---|---|---|---|---|
| 0.0033 | 1.727 | 1.6724 | 0.054592 | 1 |
| 0.0066 | 1.775 | 1.6521 | 0.12293 | 1 |
| 0.01 | 1.627 | 1.6314 | -0.0043713 | 1 |
| 0.0133 | 1.64 | 1.6115 | 0.028469 | 1 |
| 0.0166 | 1.614 | 1.5919 | 0.022069 | 1 |
| 0.02 | 1.592 | 1.572 | 0.020012 | 1 |
| 0.0233 | 1.569 | 1.5529 | 0.016131 | 1 |
| 0.0266 | 1.547 | 1.534 | 0.013016 | 1 |
| 0.03 | 1.524 | 1.5148 | 0.0092344 | 1 |
| 0.0333 | 1.502 | 1.4963 | 0.0056568 | 1 |
| 0.05 | 1.389 | 1.4065 | -0.017495 | 1 |
| 0.0666 | 1.293 | 1.3225 | -0.029531 | 1 |
| 0.0833 | 1.203 | 1.2431 | -0.040119 | 1 |
| 0.1 | 1.126 | 1.1685 | -0.042476 | 1 |
| 0.1166 | 1.052 | 1.0987 | -0.046721 | 1 |
| 0.1333 | 0.984 | 1.0327 | -0.048748 | 1 |
| 0.15 | 0.926 | 0.97074 | -0.044736 | 1 |
| 0.16 | 0.868 | 0.9354 | -0.0674 | 1 |
| 0.1833 | 0.81 | 0.85798 | -0.047978 | 1 |
| 0.2 | 0.762 | 0.80646 | -0.04446 | 1 |
| 0.2166 | 0.717 | 0.75832 | -0.041317 | 1 |
| 0.2333 | 0.675 | 0.71278 | -0.037783 | 1 |
| 0.25 | 0.64 | 0.66998 | -0.029984 | 1 |
| 0.2666 | 0.601 | 0.62999 | -0.028988 | 1 |
| 0.2833 | 0.569 | 0.59216 | -0.02316 | 1 |
| 0.3 | 0.537 | 0.5566 | -0.019603 | 1 |
| 0.3166 | 0.511 | 0.52338 | -0.012376 | 1 |
| 0.3333 | 0.485 | 0.49195 | -0.0069496 | 1 |
| 0.4166 | 0.382 | 0.36122 | 0.020776 | 1 |
| 0.5 | 0.325 | 0.26514 | 0.059862 | 1 |
| 0.5833 | 0.286 | 0.19468 | 0.091317 | 1 |
| 0.6666 | 0.257 | 0.14295 | 0.11405 | 1 |
| 0.75 | 0.234 | 0.10493 | 0.12907 | 1 |
| 0.8333 | 0.218 | 0.077044 | 0.14096 | 1 |
| 0.9166 | 0.205 | 0.056571 | 0.14843 | 1 |
| 1 | 0.189 | 0.041523 | 0.14748 | 1 |
| 1.0833 | 0.183 | 0.030489 | 0.15251 | 1 |
| 1.1666 | 0.173 | 0.022387 | 0.15061 | 1 |
| 1.25 | 0.164 | 0.016432 | 0.14757 | 1 |
| 1.3333 | 0.157 | 0.012066 | 0.14493 | 1 |
| 1.4166 | 0.148 | 0.0088595 | 0.13914 | 1 |
| 1.5 | 0.141 | 0.0065028 | 0.1345 | 1 |
| 1.5833 | 0.128 | 0.0047749 | 0.12323 | 1 |
| 1.6666 | 0.115 | 0.003506 | 0.11149 | 1 |
| 1.75 | 0.109 | 0.0025734 | 0.10643 | 1 |
| 1.8333 | 0.102 | 0.0018896 | 0.10011 | 1 |
| 1.9166 | 0.093 | 0.0013875 | 0.091613 | 1 |
| 2 | 0.083 | 0.0010184 | 0.081982 | 1 |
| 2.5 | 0.061 | 0.00015949 | 0.060841 | 1 |
| 3 | 0.051 | 2.4978E-005 | 0.050975 | 1 |
| 3.5 | 0.045 | 3.9117E-006 | 0.044996 | 1 |
| 4 | 0.038 | 6.1261E-007 | 0.037999 | 1 |
| 4.5 | 0.038 | 9.594E-008 | 0.038 | 1 |
| 5 | 0.032 | 1.5025E-008 | 0.032 | 1 |
| 5.5 | 0.032 | 2.353E-009 | 0.032 | 1 |
| 6 | 0.028 | 3.6851E-010 | 0.028 | 1 |
| 6.5 | 0.022 | 5.7711E-011 | 0.022 | 1 |
| 7 | 0.022 | 9.0381E-012 | 0.022 | 1 |
| 7.5 | 0.019 | 1.4154E-012 | 0.019 | 1 |

Model Residuals:

| Time | Observed | Calculated | Residual | Weight |
|---|---|---|---|---|
| 8 | 0.012 | 2.2167E-013 | 0.012 | 1 |
| 8.5 | 0.012 | 3.4715E-014 | 0.012 | 1 |
| 9 | 0.012 | 5.4367E-015 | 0.012 | 1 |
| 9.5 | 0.009 | 8.5144E-016 | 0.009 | 1 |
| 10 | 0.009 | 1.3334E-016 | 0.009 | 1 |

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RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

| | Estimate |
|---|---|
| K = | 2.8643E-003 |
| y0 = | 1.6930E+000 |

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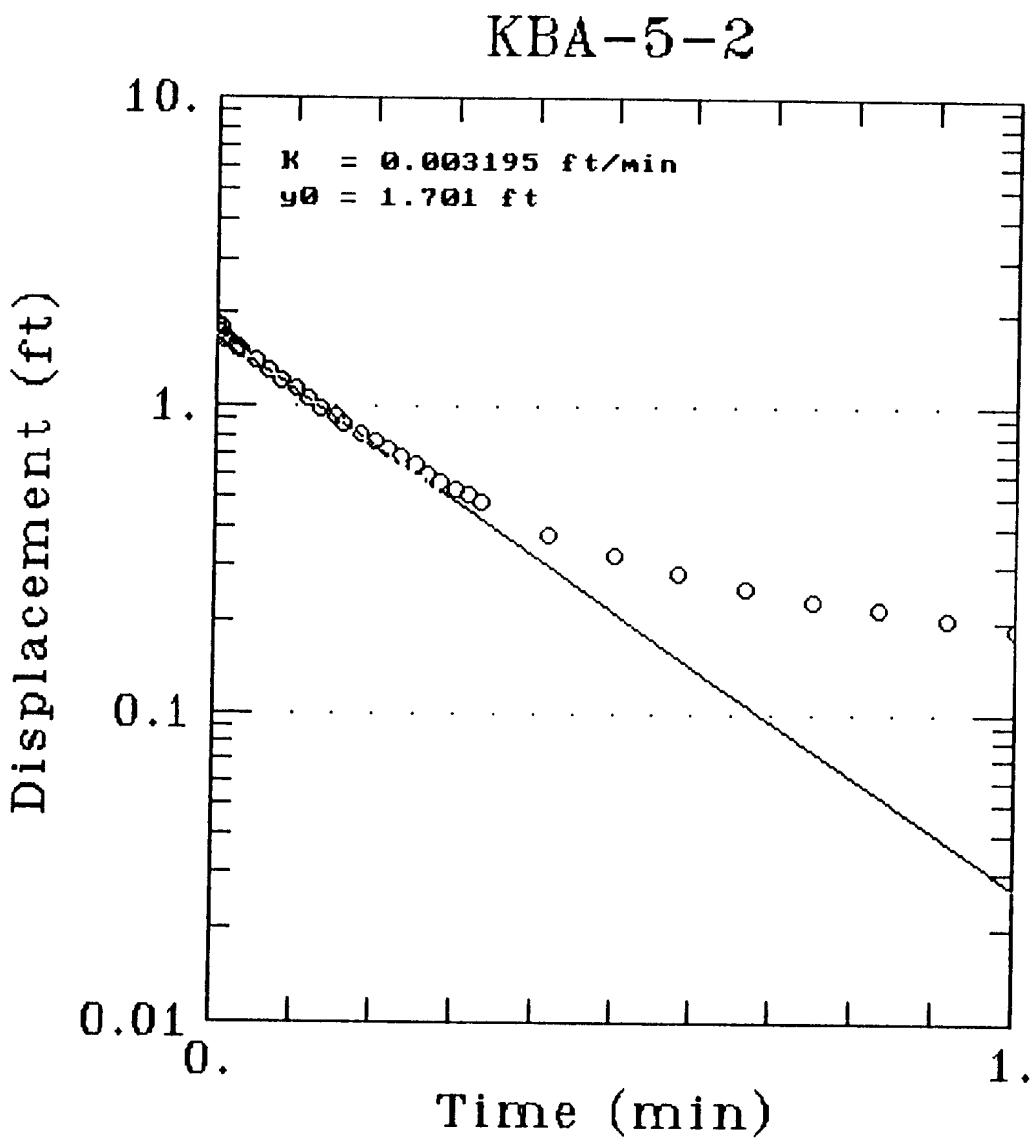
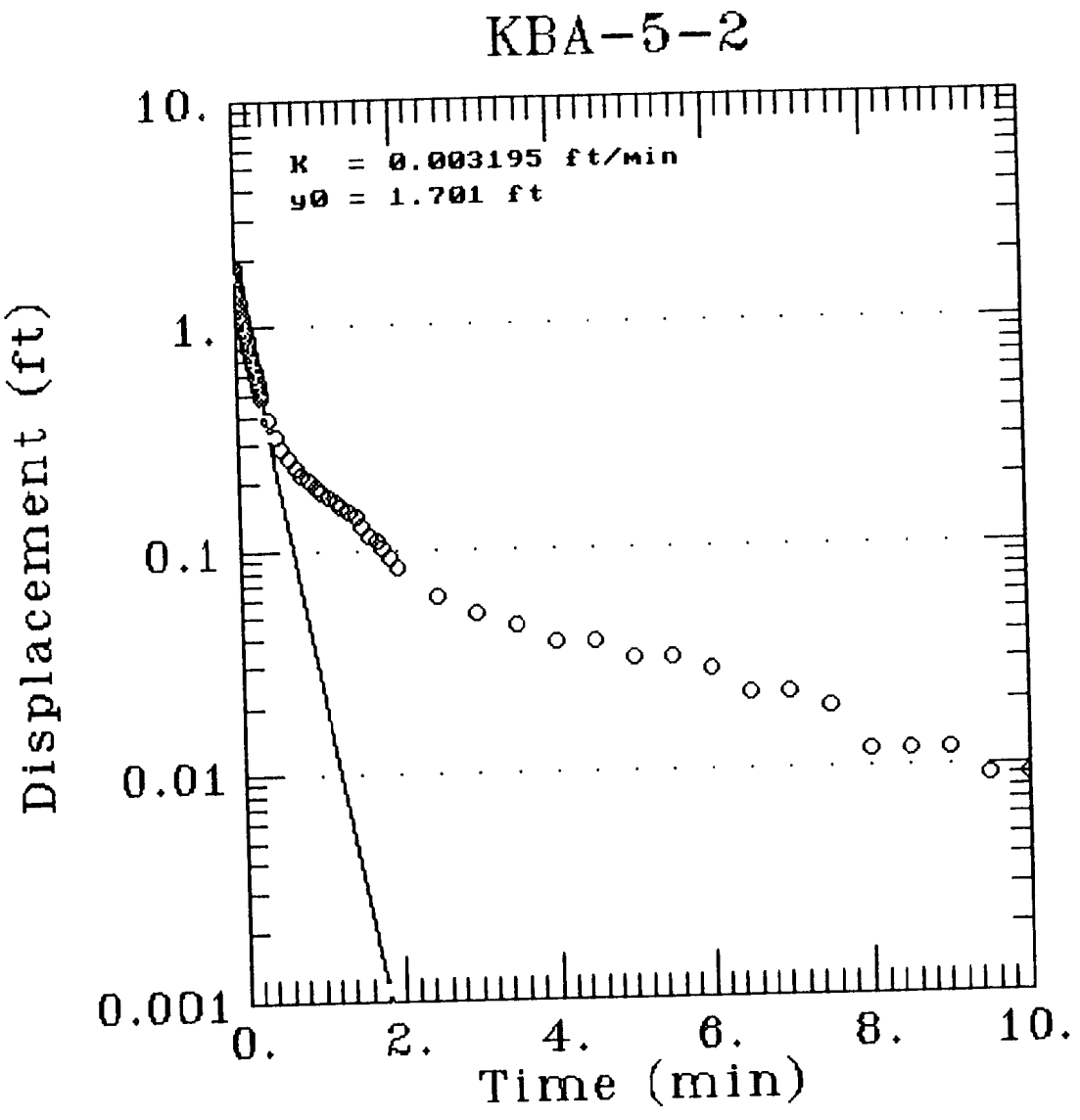
TYPE CURVE DATA

K = 3.19500E-003
y0 = 1.70100E+000

| Time | Drawdown | Time | Drawdown | Time | Drawdown |
|---|---|---|---|---|---|
| 0.000E+000 | 1.701E+000 | 1.000E+000 | 2.719E-002 | | |


KBA-5-2
K = 0.003195 ft/min
y0 = 1.701 ft
10.
1.
0.1
0.01
0.
1.
Displacement (ft)
Time (min)


KBA-5-2
K = 0.003195 ft/min
y0 = 1.701 ft
10.
1.
0.1
0.01
0.001
Displacement (ft)
0.
2.
4.
6.
8.
10.
Time (min)

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# A Q T E S O L V   R E S U L T S

Version 1.10

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## TEST DESCRIPTION

Data set........... KBA-5-4.DAT
Data set title..... KBA-5-4

Knowns and Constants:
No. of data points.................. 64
Radius of well casing............... 0.083
Radius of well...................... 0.33
Aquifer saturated thickness......... 82.32
Well screen length.................. 7
Static height of water in well...... 7
Log(Re/Rw).......................... 1.813
A, B, C............................. 2.183, 0.345, 0.000

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## ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

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## RESULTS FROM STATISTICAL CURVE MATCHING

### STATISTICAL MATCH PARAMETER ESTIMATES

| | Estimate | | Std. Error |
|---|---|---|---|
| K = | 9.1507E-003 | +/- | 3.0472E-004 |
| y0 = | 1.7984E+000 | +/- | 2.6335E-002 |

### ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
Number of residuals............... 63
Number of estimated parameters.... 2
Degrees of freedom................ 61
Residual mean..................... 0.02544
Residual standard deviation....... 0.05806
Residual variance................. 0.003371

Model Residuals:

| Time | Observed | Calculated | Residual | Weight |
|---|---|---|---|---|
| 0.0033 | 2.035 | 1.7386 | 0.29642 | 1 |
| 0.0066 | 1.684 | 1.6807 | 0.0032708 | 1 |
| 0.01 | 1.62 | 1.6231 | -0.0031403 | 1 |
| 0.0133 | 1.54 | 1.5691 | -0.029133 | 1 |
| 0.0166 | 1.498 | 1.5169 | -0.018922 | 1 |
| 0.02 | 1.437 | 1.4649 | -0.027946 | 1 |
| 0.0233 | 1.312 | 1.4162 | -0.1042 | 1 |
| 0.0266 | 1.324 | 1.3691 | -0.04508 | 1 |
| 0.03 | 1.283 | 1.3222 | -0.03917 | 1 |
| 0.0333 | 1.231 | 1.2782 | -0.047177 | 1 |
| 0.05 | 1.025 | 1.077 | -0.052007 | 1 |
| 0.0666 | 0.852 | 0.90843 | -0.05643 | 1 |
| 0.0833 | 0.733 | 0.76545 | -0.032454 | 1 |
| 0.1 | 0.623 | 0.64498 | -0.02198 | 1 |
| 0.1166 | 0.53 | 0.54403 | -0.014026 | 1 |
| 0.1333 | 0.456 | 0.4584 | -0.0024025 | 1 |
| 0.15 | 0.395 | 0.38626 | 0.0087447 | 1 |
| 0.16 | 0.34 | 0.34861 | -0.0086102 | 1 |
| 0.1833 | 0.302 | 0.27452 | 0.027479 | 1 |
| 0.2 | 0.27 | 0.23131 | 0.038686 | 1 |
| 0.2166 | 0.238 | 0.19511 | 0.042892 | 1 |
| 0.2333 | 0.215 | 0.1644 | 0.0506 | 1 |
| 0.25 | 0.199 | 0.13853 | 0.060474 | 1 |
| 0.2666 | 0.183 | 0.11684 | 0.066157 | 1 |
| 0.2833 | 0.167 | 0.098453 | 0.068547 | 1 |
| 0.3 | 0.157 | 0.082958 | 0.074042 | 1 |
| 0.3166 | 0.144 | 0.069973 | 0.074027 | 1 |
| 0.3333 | 0.141 | 0.05896 | 0.08204 | 1 |
| 0.4166 | 0.109 | 0.025095 | 0.083905 | 1 |
| 0.5 | 0.09 | 0.01067 | 0.07933 | 1 |
| 0.5833 | 0.073 | 0.0045415 | 0.068459 | 1 |
| 0.6666 | 0.07 | 0.001933 | 0.068067 | 1 |
| 0.75 | 0.061 | 0.00082188 | 0.060178 | 1 |
| 0.8333 | 0.057 | 0.00034982 | 0.05665 | 1 |
| 0.9166 | 0.054 | 0.00014889 | 0.053851 | 1 |
| 1 | 0.048 | 6.3307E-005 | 0.047937 | 1 |
| 1.0833 | 0.045 | 2.6945E-005 | 0.044973 | 1 |
| 1.1666 | 0.041 | 1.1469E-005 | 0.040989 | 1 |
| 1.3333 | 0.038 | 2.0755E-006 | 0.037998 | 1 |
| 1.4166 | 0.035 | 8.8338E-007 | 0.034999 | 1 |
| 1.5 | 0.035 | 3.756E-007 | 0.035 | 1 |
| 1.5833 | 0.032 | 1.5987E-007 | 0.032 | 1 |
| 1.6666 | 0.032 | 6.8044E-008 | 0.032 | 1 |
| 1.75 | 0.032 | 2.8931E-008 | 0.032 | 1 |
| 1.8333 | 0.032 | 1.2314E-008 | 0.032 | 1 |
| 1.9166 | 0.028 | 5.2412E-009 | 0.028 | 1 |
| 2 | 0.025 | 2.2285E-009 | 0.025 | 1 |
| 2.5 | 0.025 | 1.3222E-011 | 0.025 | 1 |
| 3 | 0.025 | 7.8446E-014 | 0.025 | 1 |
| 3.5 | 0.022 | 4.6543E-016 | 0.022 | 1 |
| 4 | 0.019 | 2.7614E-018 | 0.019 | 1 |
| 4.5 | 0.019 | 1.6384E-020 | 0.019 | 1 |
| 5 | 0.022 | 9.7206E-023 | 0.022 | 1 |
| 5.5 | 0.019 | 5.7673E-025 | 0.019 | 1 |
| 6 | 0.016 | 3.4218E-027 | 0.016 | 1 |
| 6.5 | 0.016 | 2.0302E-029 | 0.016 | 1 |
| 7 | 0.022 | 1.2045E-031 | 0.022 | 1 |
| 7.5 | 0.019 | 7.1465E-034 | 0.019 | 1 |
| 8 | 0.019 | 4.2401E-036 | 0.019 | 1 |

Model Residuals:

| Time | Observed | Calculated | Residual | Weight |
|---|---|---|---|---|
| 8.5 | 0.019 | 2.5157E-038 | 0.019 | 1 |
| 9 | 0.019 | 1.4926E-040 | 0.019 | 1 |
| 9.5 | 0.019 | 8.8555E-043 | 0.019 | 1 |
| 10 | 0.019 | 5.254E-045 | 0.019 | 1 |

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RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

| | Estimate |
|---|---|
| K = | 9.1507E-003 |
| y0 = | 1.7984E+000 |

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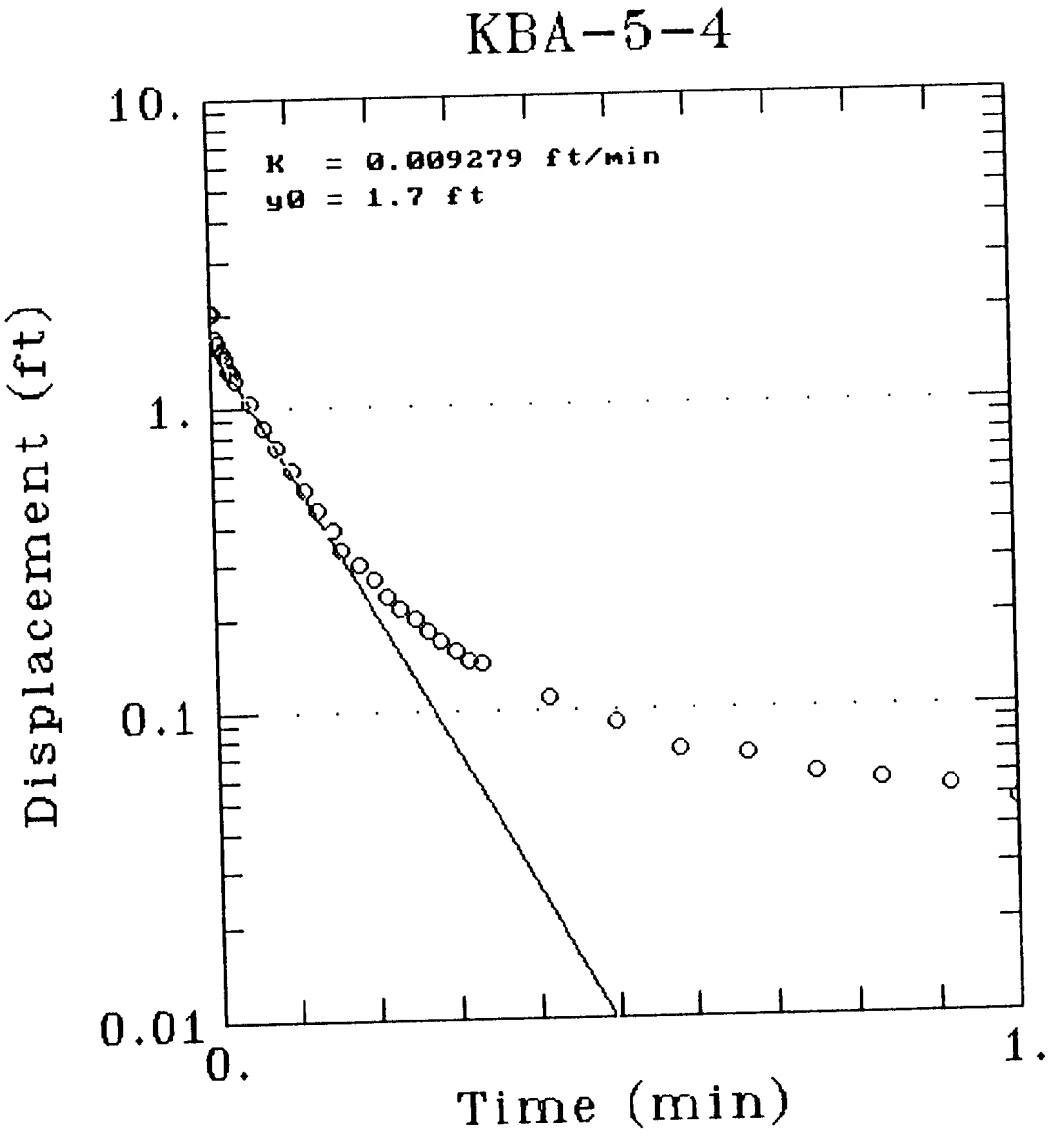
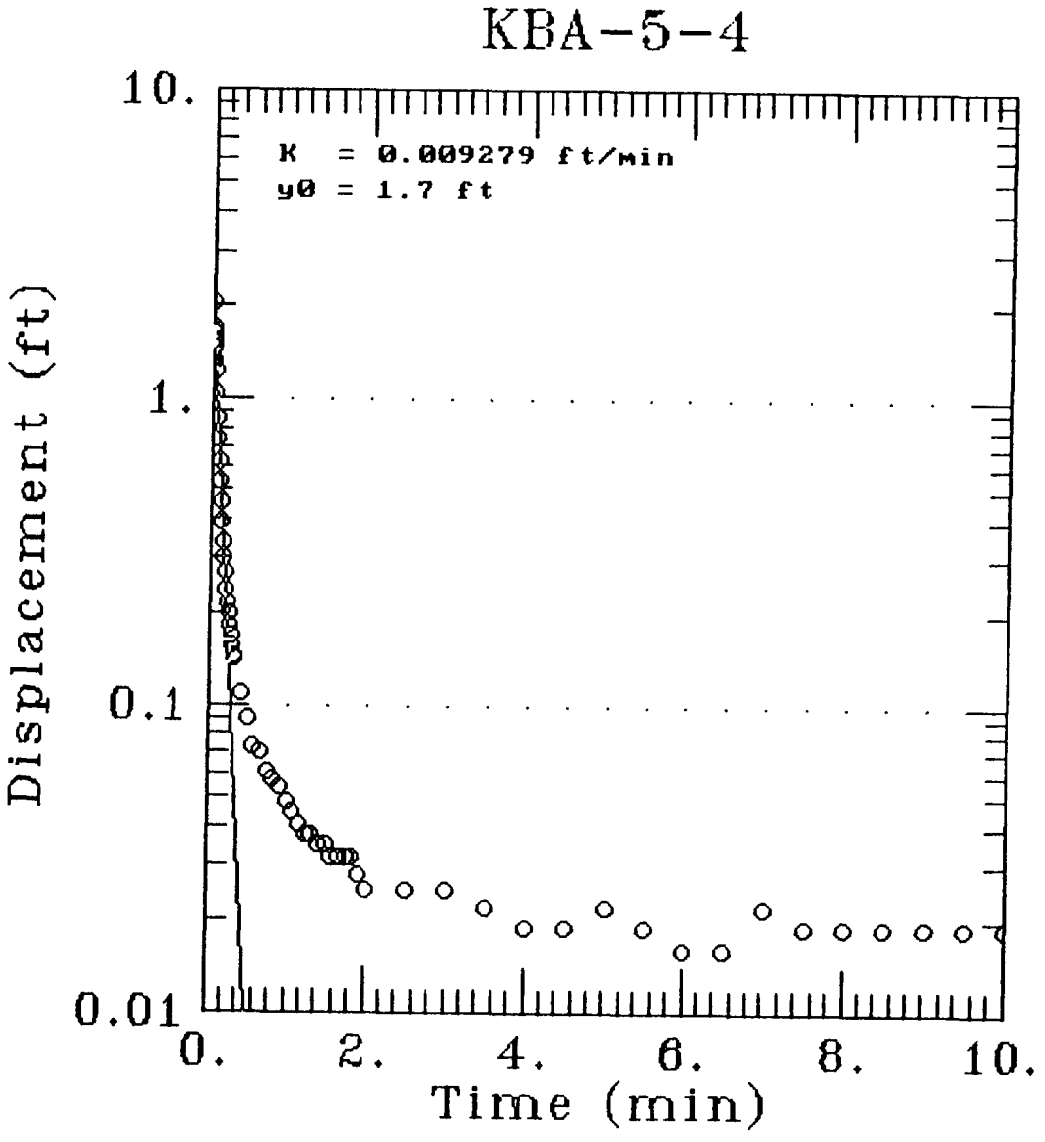
TYPE CURVE DATA

K = 9.27900E-003
y0 = 1.70000E+000

| Time | Drawdown | Time | Drawdown | Time | Drawdown |
|---|---|---|---|---|---|
| 0.000E+000 | 1.700E+000 | 1.000E+000 | 5.183E-005 | | |


KBA-5-4
K = 0.009279 ft/min
y0 = 1.7 ft
10.
1.
0.1
0.01
0.
1.
Displacement (ft)
Time (min)


KBA-5-4
K = 0.009279 ft/min
y0 = 1.7 ft
10.
1.
0.1
0.01
Displacement (ft)
0.
2.
4.
6.
8.
10.
Time (min)

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# A Q T E S O L V   R E S U L T S

Version 1.10

05/07/93 08:16:38

## TEST DESCRIPTION

```
Data set........... KBA-5-5.DAT
Data set title..... KBA-5-5

Knowns and Constants:
   No. of data points.................. 64
   Radius of well casing............... 0.083
   Radius of well...................... 0.33
   Aquifer saturated thickness......... 82.68
   Well screen length.................. 6
   Static height of water in well...... 6
   Log(Re/Rw).......................... 1.689
   A, B, C............................. 2.101, 0.324, 0.000
```

## ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

## RESULTS FROM STATISTICAL CURVE MATCHING

### STATISTICAL MATCH PARAMETER ESTIMATES

```
          Estimate          Std. Error
   K  =  2.6638E-003 +/-   1.4923E-004
   y0 =  1.7557E+000 +/-   3.6750E-002
```

### ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

```
Weighted Residual Statistics:
   Number of residuals............... 63
   Number of estimated parameters.... 2
   Degrees of freedom................ 61
   Residual mean..................... 0.01171
   Residual standard deviation....... 0.1167
   Residual variance................. 0.01362
```

Model Residuals:

| Time | Observed | Calculated | Residual | Weight |
|---|---|---|---|---|
| 0.0033 | 1.579 | 1.7398 | -0.16081 | 1 |
| 0.0066 | 1.36 | 1.7241 | -0.36411 | 1 |
| 0.01 | 1.215 | 1.7081 | -0.49308 | 1 |
| 0.0133 | 1.46 | 1.6927 | -0.23266 | 1 |
| 0.0166 | 1.72 | 1.6774 | 0.042612 | 1 |
| 0.02 | 2.006 | 1.6618 | 0.34421 | 1 |
| 0.0233 | 1.913 | 1.6468 | 0.2662 | 1 |
| 0.0266 | 1.778 | 1.6319 | 0.14607 | 1 |
| 0.03 | 1.816 | 1.6168 | 0.19924 | 1 |
| 0.0333 | 1.771 | 1.6022 | 0.16883 | 1 |
| 0.05 | 1.688 | 1.5303 | 0.15767 | 1 |
| 0.0666 | 1.546 | 1.4621 | 0.083896 | 1 |
| 0.0833 | 1.456 | 1.3965 | 0.05946 | 1 |
| 0.1 | 1.376 | 1.3339 | 0.042084 | 1 |
| 0.1166 | 1.302 | 1.2745 | 0.027549 | 1 |
| 0.1333 | 1.228 | 1.2173 | 0.010698 | 1 |
| 0.15 | 1.164 | 1.1627 | 0.0012847 | 1 |
| 0.16 | 1.106 | 1.1312 | -0.025208 | 1 |
| 0.1833 | 1.045 | 1.0611 | -0.016068 | 1 |
| 0.2 | 0.993 | 1.0135 | -0.020487 | 1 |
| 0.2166 | 0.945 | 0.96831 | -0.023306 | 1 |
| 0.2333 | 0.897 | 0.92489 | -0.027885 | 1 |
| 0.25 | 0.852 | 0.88341 | -0.031411 | 1 |
| 0.2666 | 0.807 | 0.84403 | -0.037029 | 1 |
| 0.2833 | 0.768 | 0.80618 | -0.038181 | 1 |
| 0.3 | 0.733 | 0.77003 | -0.03703 | 1 |
| 0.3166 | 0.694 | 0.7357 | -0.041703 | 1 |
| 0.3333 | 0.659 | 0.70271 | -0.043712 | 1 |
| 0.4166 | 0.511 | 0.55897 | -0.047974 | 1 |
| 0.5 | 0.408 | 0.44452 | -0.036516 | 1 |
| 0.5833 | 0.328 | 0.35359 | -0.025591 | 1 |
| 0.6666 | 0.266 | 0.28127 | -0.015265 | 1 |
| 0.75 | 0.225 | 0.22367 | 0.0013284 | 1 |
| 0.8333 | 0.193 | 0.17792 | 0.01508 | 1 |
| 0.9166 | 0.167 | 0.14153 | 0.025473 | 1 |
| 1 | 0.147 | 0.11255 | 0.034453 | 1 |
| 1.0833 | 0.135 | 0.089526 | 0.045474 | 1 |
| 1.1666 | 0.119 | 0.071214 | 0.047786 | 1 |
| 1.3333 | 0.099 | 0.045048 | 0.053952 | 1 |
| 1.4166 | 0.093 | 0.035833 | 0.057167 | 1 |
| 1.5 | 0.083 | 0.028496 | 0.054504 | 1 |
| 1.5833 | 0.08 | 0.022667 | 0.057333 | 1 |
| 1.6666 | 0.077 | 0.018031 | 0.058969 | 1 |
| 1.75 | 0.07 | 0.014339 | 0.055661 | 1 |
| 1.8333 | 0.067 | 0.011406 | 0.055594 | 1 |
| 1.9166 | 0.064 | 0.0090727 | 0.054927 | 1 |
| 2 | 0.064 | 0.0072149 | 0.056785 | 1 |
| 2.5 | 0.045 | 0.0018267 | 0.043173 | 1 |
| 3 | 0.035 | 0.00046252 | 0.034537 | 1 |
| 3.5 | 0.028 | 0.0001171 | 0.027883 | 1 |
| 4 | 0.025 | 2.965E-005 | 0.02497 | 1 |
| 4.5 | 0.016 | 7.5071E-006 | 0.015992 | 1 |
| 5 | 0.016 | 1.9007E-006 | 0.015998 | 1 |
| 5.5 | 0.012 | 4.8124E-007 | 0.012 | 1 |
| 6 | 0.009 | 1.2185E-007 | 0.0089999 | 1 |
| 6.5 | 0.009 | 3.085E-008 | 0.009 | 1 |
| 7 | 0.0026 | 7.8111E-009 | 0.0026 | 1 |
| 7.5 | 0.009 | 1.9777E-009 | 0.009 | 1 |
| 8 | 0.006 | 5.0073E-010 | 0.006 | 1 |
| 8.5 | 0.006 | 1.2678E-010 | 0.006 | 1 |
| 9 | 0.006 | 3.21E-011 | 0.006 | 1 |
| 9.5 | 0.003 | 8.1274E-012 | 0.003 | 1 |
| 10 | 0.00 | | | |

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A Q T E S O L V   R E S U L T S
Version 1.10

05/07/93 08:10:46

TEST DESCRIPTION

Data set........... KBA-5-5.DAT
Data set title..... KBA-5-5

Knowns and Constants:
No. of data points.................. 64
Radius of well casing............... 0.083
Radius of well...................... 0.33
Aquifer saturated thickness......... 82.68
Well screen length.................. 6
Static height of water in well...... 6
Log(Re/Rw).......................... 1.689
A, B, C............................. 2.101, 0.324, 0.000

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

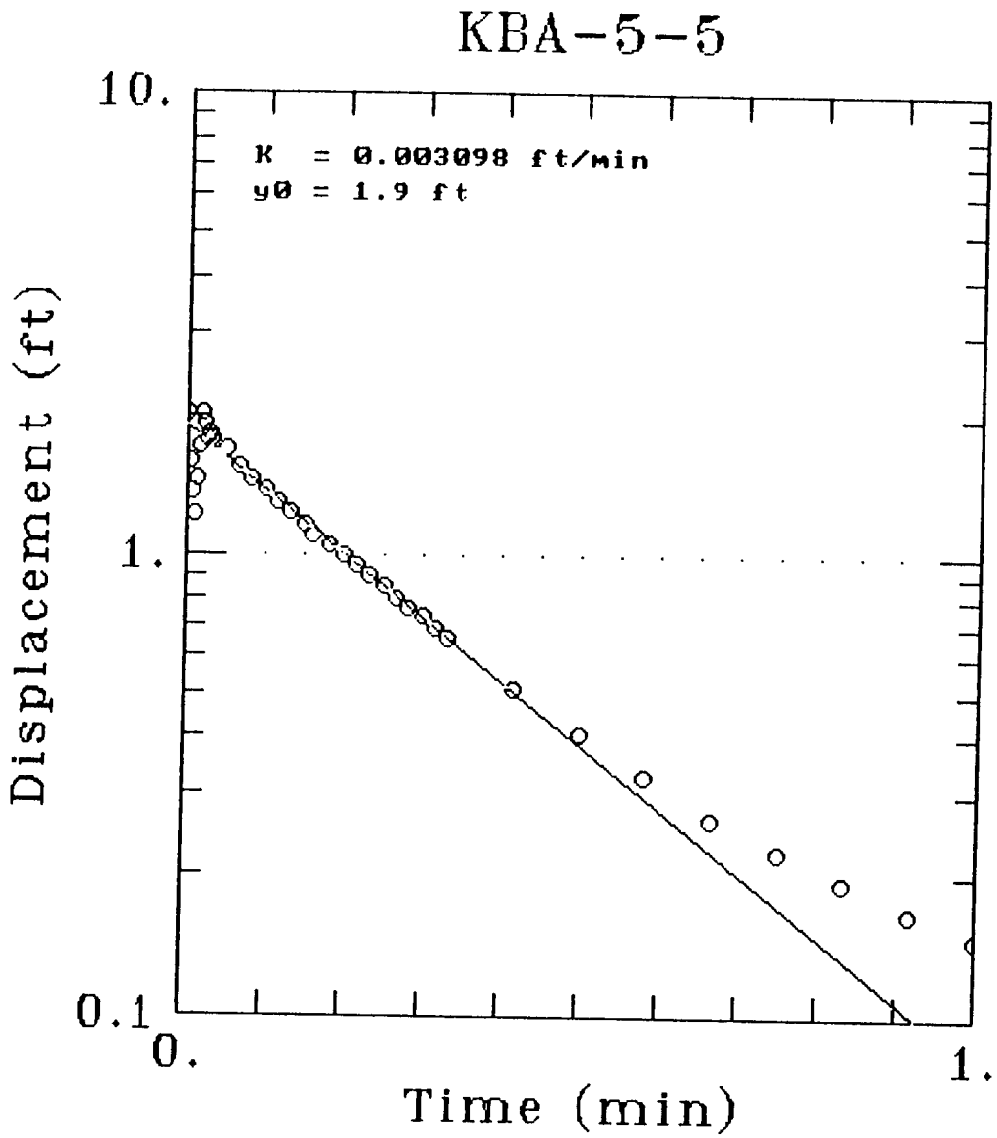
| | Estimate |
|---|---|
| K = | 6.3806E-004 |
| y0 = | 1.7984E+000 |

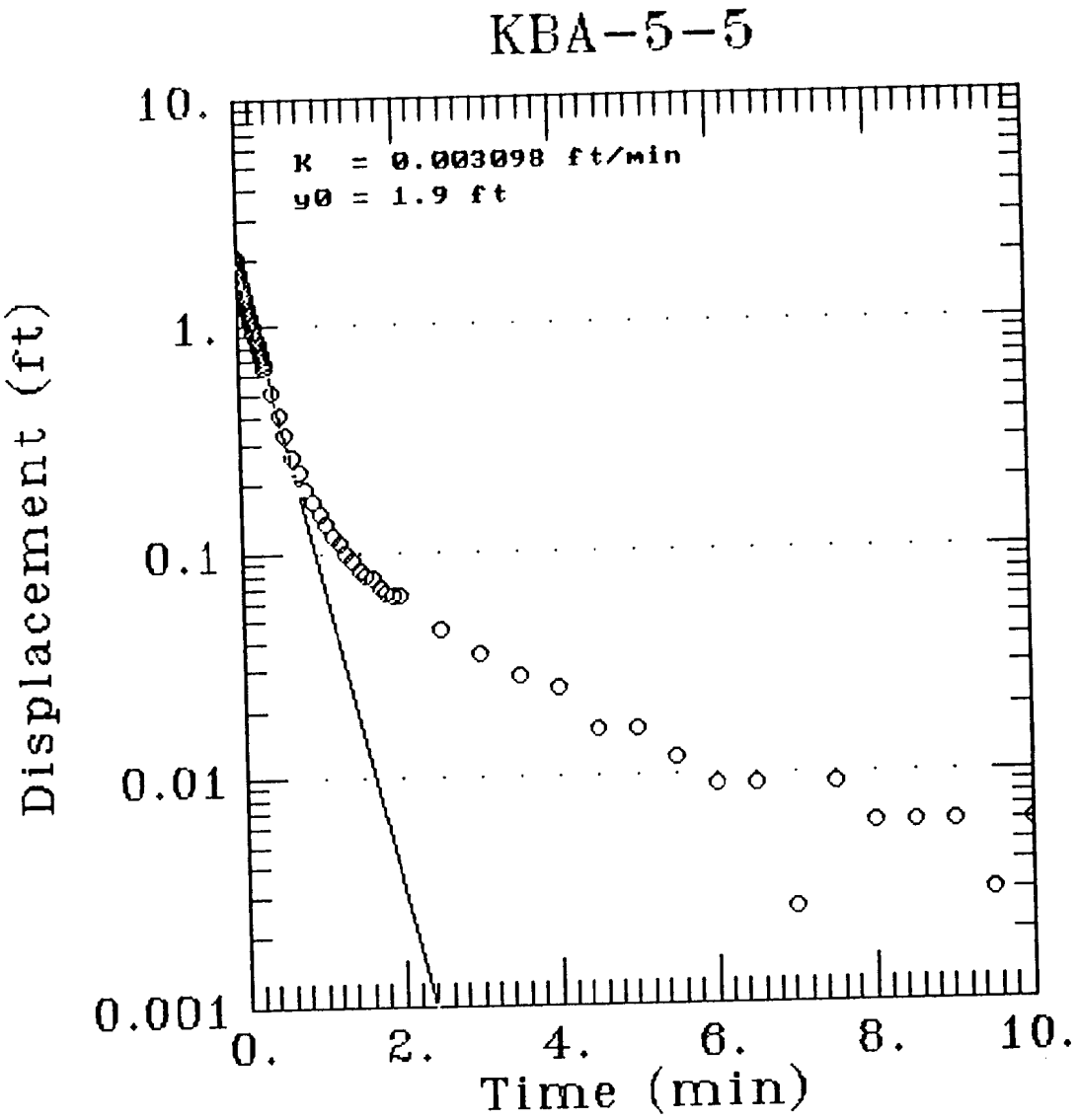
<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

TYPE CURVE DATA

K = 3.09800E-003
y0 = 1.90000E+000

| Time | Drawdown | Time | Drawdown | Time | Drawdown |
|---|---|---|---|---|---|
| 0.000E+000 | 1.900E+000 | 1.000E+000 | 7.783E-002 | | |


KBA-5-5
K = 0.003098 ft/min
y0 = 1.9 ft
10.
1.
0.1
0.
1.
Displacement (ft)
Time (min)


KBA-5-5
K = 0.003098 ft/min
y0 = 1.9 ft
10.
1.
0.1
0.01
0.001
Displacement (ft)
0.
2.
4.
6.
8.
10.
Time (min)

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# A Q T E S O L V   R E S U L T S

Version 1.10

05/07/93 08:39:51

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## TEST DESCRIPTION

Data set........... KBA-16-1.DAT
Data set title..... KBA-16-1

Knowns and Constants:

No. of data points.................. 64
Radius of well casing............... 0.083
Radius of well...................... 0.33
Aquifer saturated thickness......... 76.74
Well screen length.................. 5.5
Static height of water in well...... 5.5
Log(Re/Rw).......................... 1.624
A, B, C............................. 2.062, 0.314, 0.000

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## ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

================================================================================

## RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

| | Estimate | | Std. Error |
|---|---|---|---|
| K = | 8.2638E-003 | +/- | 1.6831E-004 |
| y0 = | 1.3267E+000 | +/- | 1.1895E-002 |

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:

Number of residuals............... 64
Number of estimated parameters.... 2
Degrees of freedom................ 62
Residual mean..................... 0.0151
Residual standard deviation....... 0.02861
Residual variance................. 0.0008188

Model Residuals:

| Time | Observed | Calculated | Residual | Weight |
|---|---|---|---|---|
| 0.0033 | 1.304 | 1.2916 | 0.012367 | 1 |
| 0.0066 | 1.256 | 1.2575 | -0.0014577 | 1 |
| 0.01 | 1.224 | 1.2232 | 0.00080816 | 1 |
| 0.0133 | 1.198 | 1.1908 | 0.007173 | 1 |
| 0.0166 | 1.169 | 1.1593 | 0.0096815 | 1 |
| 0.02 | 1.134 | 1.1277 | 0.006273 | 1 |
| 0.0233 | 1.111 | 1.0979 | 0.013112 | 1 |
| 0.0266 | 1.07 | 1.0688 | 0.0011613 | 1 |
| 0.03 | 1.05 | 1.0397 | 0.010287 | 1 |
| 0.0333 | 1.022 | 1.0122 | 0.0097974 | 1 |
| 0.05 | 0.864 | 0.88376 | -0.019755 | 1 |
| 0.0666 | 0.761 | 0.77224 | -0.011235 | 1 |
| 0.0833 | 0.655 | 0.67424 | -0.01924 | 1 |
| 0.1 | 0.565 | 0.58868 | -0.02368 | 1 |
| 0.1166 | 0.485 | 0.51439 | -0.029395 | 1 |
| 0.1333 | 0.417 | 0.44912 | -0.032119 | 1 |
| 0.15 | 0.366 | 0.39213 | -0.026126 | 1 |
| 0.16 | 0.321 | 0.36152 | -0.040523 | 1 |
| 0.1833 | 0.286 | 0.29916 | -0.013163 | 1 |
| 0.2 | 0.257 | 0.2612 | -0.0041998 | 1 |
| 0.2166 | 0.231 | 0.22824 | 0.0027607 | 1 |
| 0.2333 | 0.212 | 0.19928 | 0.012724 | 1 |
| 0.25 | 0.196 | 0.17399 | 0.022012 | 1 |
| 0.2666 | 0.18 | 0.15203 | 0.027967 | 1 |
| 0.2833 | 0.163 | 0.13274 | 0.03026 | 1 |
| 0.3 | 0.157 | 0.1159 | 0.041104 | 1 |
| 0.3166 | 0.144 | 0.10127 | 0.042729 | 1 |
| 0.3333 | 0.138 | 0.08842 | 0.04958 | 1 |
| 0.4166 | 0.106 | 0.044934 | 0.061066 | 1 |
| 0.5 | 0.086 | 0.022817 | 0.063183 | 1 |
| 0.5833 | 0.074 | 0.011595 | 0.062405 | 1 |
| 0.6666 | 0.067 | 0.0058927 | 0.061107 | 1 |
| 0.75 | 0.057 | 0.0029922 | 0.054008 | 1 |
| 0.8333 | 0.054 | 0.0015206 | 0.052479 | 1 |
| 0.9166 | 0.048 | 0.00077277 | 0.047227 | 1 |
| 1 | 0.045 | 0.0003924 | 0.044608 | 1 |
| 1.0833 | 0.041 | 0.00019941 | 0.040801 | 1 |
| 1.1666 | 0.035 | 0.00010134 | 0.034899 | 1 |
| 1.25 | 0.035 | 5.1459E-005 | 0.034949 | 1 |
| 1.3333 | 0.035 | 2.6151E-005 | 0.034974 | 1 |
| 1.4166 | 0.028 | 1.329E-005 | 0.027987 | 1 |
| 1.5 | 0.028 | 6.7483E-006 | 0.027993 | 1 |
| 1.5833 | 0.025 | 3.4294E-006 | 0.024997 | 1 |
| 1.6666 | 0.025 | 1.7428E-006 | 0.024998 | 1 |
| 1.75 | 0.022 | 8.8497E-007 | 0.021999 | 1 |
| 1.8333 | 0.022 | 4.4974E-007 | 0.022 | 1 |
| 1.9166 | 0.019 | 2.2855E-007 | 0.019 | 1 |
| 2 | 0.019 | 1.1605E-007 | 0.019 | 1 |
| 2.5 | 0.012 | 1.9959E-009 | 0.012 | 1 |
| 3 | 0.009 | 3.4324E-011 | 0.009 | 1 |
| 3.5 | 0.009 | 5.903E-013 | 0.009 | 1 |
| 4 | 0.006 | 1.0152E-014 | 0.006 | 1 |
| 4.5 | 0.006 | 1.7459E-016 | 0.006 | 1 |
| 5 | 0.006 | 3.0025E-018 | 0.006 | 1 |
| 5.5 | 0.006 | 5.1635E-020 | 0.006 | 1 |
| 6 | 0.003 | 8.8801E-022 | 0.003 | 1 |
| 6.5 | 0.006 | 1.5272E-023 | 0.006 | 1 |
| 7 | 0.006 | 2.6264E-025 | 0.006 | 1 |
| 7.5 | 0.006 | 4.5167E-027 | 0.006 | 1 |

Model Residuals:

| Time | Observed | Calculated | Residual | Weight |
|---|---|---|---|---|
| 8 | 0.006 | 7.7677E-029 | 0.006 | 1 |
| 8.5 | 0.006 | 1.3359E-030 | 0.006 | 1 |
| 9 | 0.006 | 2.2974E-032 | 0.006 | 1 |
| 9.5 | 0.009 | 3.951E-034 | 0.009 | 1 |
| 10 | 0.006 | 6.7947E-036 | 0.006 | 1 |

================================================================================

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

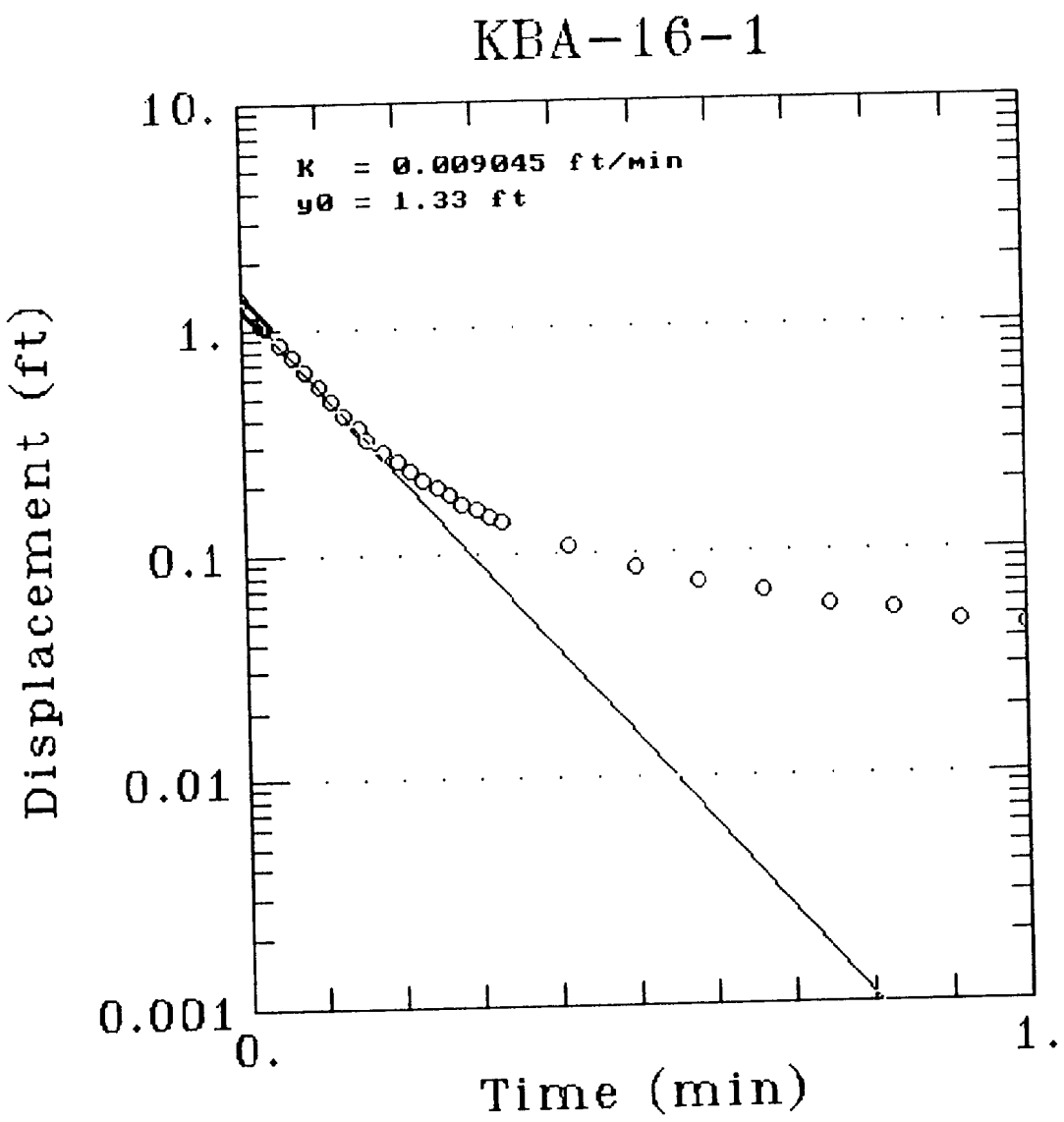
| | Estimate |
|---|---|
| K = | 8.2638E-003 |
| y0 = | 1.3267E+000 |

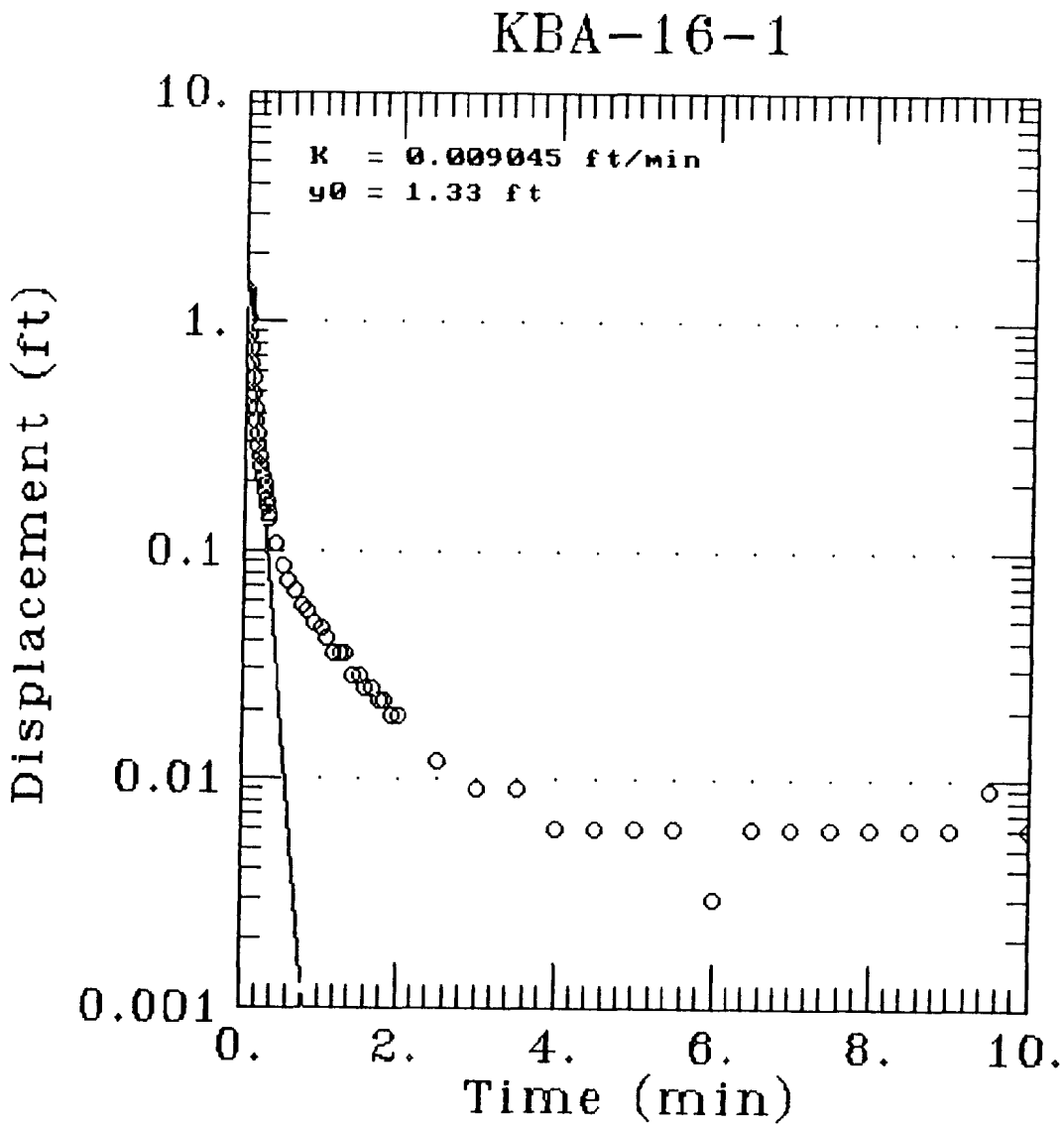
<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

TYPE CURVE DATA

K = 9.04500E-003
y0 = 1.33000E+000

| Time | Drawdown | Time | Drawdown | Time | Drawdown |
|---|---|---|---|---|---|
| 0.000E+000 | 1.330E+000 | 1.000E+000 | 1.825E-004 | | |


KBA-16-1
K = 0.009045 ft/min
y0 = 1.33 ft
10.
1.
0.1
0.01
0.001
0.
1.
Displacement (ft)
Time (min)


KBA-16-1
K = 0.009045 ft/min
y0 = 1.33 ft
10.
1.
0.1
0.01
0.001
Displacement (ft)
0.
2.
4.
6.
8.
10.
Time (min)

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# A Q T E S O L V   R E S U L T S

Version 1.10

05/07/93 09:04:07

==============================================================================

## TEST DESCRIPTION

Data set........... KBA-16-2.DAT
Data set title..... KBA-16-2

Knowns and Constants:
   No. of data points.................... 58
   Radius of well casing................. 0.083
   Radius of well........................ 0.33
   Aquifer saturated thickness........... 78.36
   Well screen length.................... 6
   Static height of water in well........ 6
   Log(Re/Rw)............................ 1.692
   A, B, C............................... 2.101, 0.324, 0.000

==============================================================================

## ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

==============================================================================

## RESULTS FROM STATISTICAL CURVE MATCHING

### STATISTICAL MATCH PARAMETER ESTIMATES

| | Estimate | | Std. Error |
|---|---|---|---|
| K = | 2.7750E-003 | +/- | 7.3689E-005 |
| y0 = | 1.7407E+000 | +/- | 1.7460E-002 |

### ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
   Number of residuals................ 58
   Number of estimated parameters.... 2
   Degrees of freedom................ 56
   Residual mean..................... 0.01906
   Residual standard deviation....... 0.05496
   Residual variance................. 0.003021

Model Residuals:

| Time | Observed | Calculated | Residual | Weight |
|---|---|---|---|---|
| 0.0033 | 1.575 | 1.7244 | -0.14938 | 1 |
| 0.0066 | 1.717 | 1.7082 | 0.0087985 | 1 |
| 0.01 | 1.884 | 1.6917 | 0.19231 | 1 |
| 0.0133 | 1.672 | 1.6758 | -0.0038149 | 1 |
| 0.0166 | 1.691 | 1.6601 | 0.03091 | 1 |
| 0.02 | 1.726 | 1.644 | 0.081958 | 1 |
| 0.0233 | 1.646 | 1.6286 | 0.017385 | 1 |
| 0.0266 | 1.639 | 1.6133 | 0.025667 | 1 |
| 0.03 | 1.643 | 1.5977 | 0.045263 | 1 |
| 0.0333 | 1.591 | 1.5827 | 0.0082551 | 1 |
| 0.05 | 1.517 | 1.509 | 0.0079964 | 1 |
| 0.0666 | 1.424 | 1.4391 | -0.015109 | 1 |
| 0.0833 | 1.35 | 1.3721 | -0.02206 | 1 |
| 0.1 | 1.283 | 1.3081 | -0.025135 | 1 |
| 0.1166 | 1.215 | 1.2475 | -0.032544 | 1 |
| 0.1333 | 1.154 | 1.1894 | -0.03542 | 1 |
| 0.15 | 1.096 | 1.134 | -0.038004 | 1 |
| 0.16 | 1.041 | 1.1021 | -0.061065 | 1 |
| 0.1833 | 0.996 | 1.0311 | -0.035092 | 1 |
| 0.2 | 0.951 | 0.98305 | -0.032053 | 1 |
| 0.2166 | 0.91 | 0.93752 | -0.027519 | 1 |
| 0.2333 | 0.865 | 0.89384 | -0.02884 | 1 |
| 0.25 | 0.766 | 0.8522 | -0.086195 | 1 |
| 0.2666 | 0.791 | 0.81272 | -0.021723 | 1 |
| 0.2833 | 0.755 | 0.77486 | -0.019857 | 1 |
| 0.3 | 0.726 | 0.73876 | -0.012756 | 1 |
| 0.3166 | 0.694 | 0.70454 | -0.010538 | 1 |
| 0.3333 | 0.665 | 0.67171 | -0.0067134 | 1 |
| 0.4166 | 0.54 | 0.52945 | 0.010545 | 1 |
| 0.5 | 0.437 | 0.41721 | 0.019795 | 1 |
| 0.5833 | 0.363 | 0.32885 | 0.034152 | 1 |
| 0.6666 | 0.305 | 0.2592 | 0.045797 | 1 |
| 0.75 | 0.257 | 0.20425 | 0.052751 | 1 |
| 0.8333 | 0.221 | 0.16099 | 0.060007 | 1 |
| 0.9166 | 0.189 | 0.1269 | 0.062103 | 1 |
| 1 | 0.164 | 0.099993 | 0.064007 | 1 |
| 1.0833 | 0.147 | 0.078816 | 0.068184 | 1 |
| 1.1666 | 0.131 | 0.062124 | 0.068876 | 1 |
| 1.25 | 0.119 | 0.048953 | 0.070047 | 1 |
| 1.3333 | 0.109 | 0.038586 | 0.070414 | 1 |
| 1.4166 | 0.099 | 0.030414 | 0.068586 | 1 |
| 1.5 | 0.093 | 0.023966 | 0.069034 | 1 |
| 1.5833 | 0.086 | 0.01889 | 0.06711 | 1 |
| 1.6666 | 0.08 | 0.01489 | 0.06511 | 1 |
| 1.75 | 0.077 | 0.011733 | 0.065267 | 1 |
| 1.8333 | 0.074 | 0.009248 | 0.064752 | 1 |
| 1.9166 | 0.07 | 0.0072894 | 0.062711 | 1 |
| 2 | 0.064 | 0.005744 | 0.058256 | 1 |
| 2.5 | 0.051 | 0.0013767 | 0.049623 | 1 |
| 3 | 0.038 | 0.00032996 | 0.03767 | 1 |
| 3.5 | 0.032 | 7.9083E-005 | 0.031921 | 1 |
| 4 | 0.025 | 1.8954E-005 | 0.024981 | 1 |
| 4.5 | 0.019 | 4.5428E-006 | 0.018995 | 1 |
| 5 | 0.016 | 1.0888E-006 | 0.015999 | 1 |
| 5.5 | 0.009 | 2.6096E-007 | 0.0089997 | 1 |
| 6 | 0.006 | 6.2545E-008 | 0.0059999 | 1 |
| 6.5 | 0.003 | 1.499E-008 | 0.003 | 1 |
| 12 | 0.006 | 2.2473E-015 | 0.006 | 1 |

==========================================================================================

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

| | Estimate |
|---|---|
| K = | 2.7750E-003 |
| y0 = | 1.7407E+000 |

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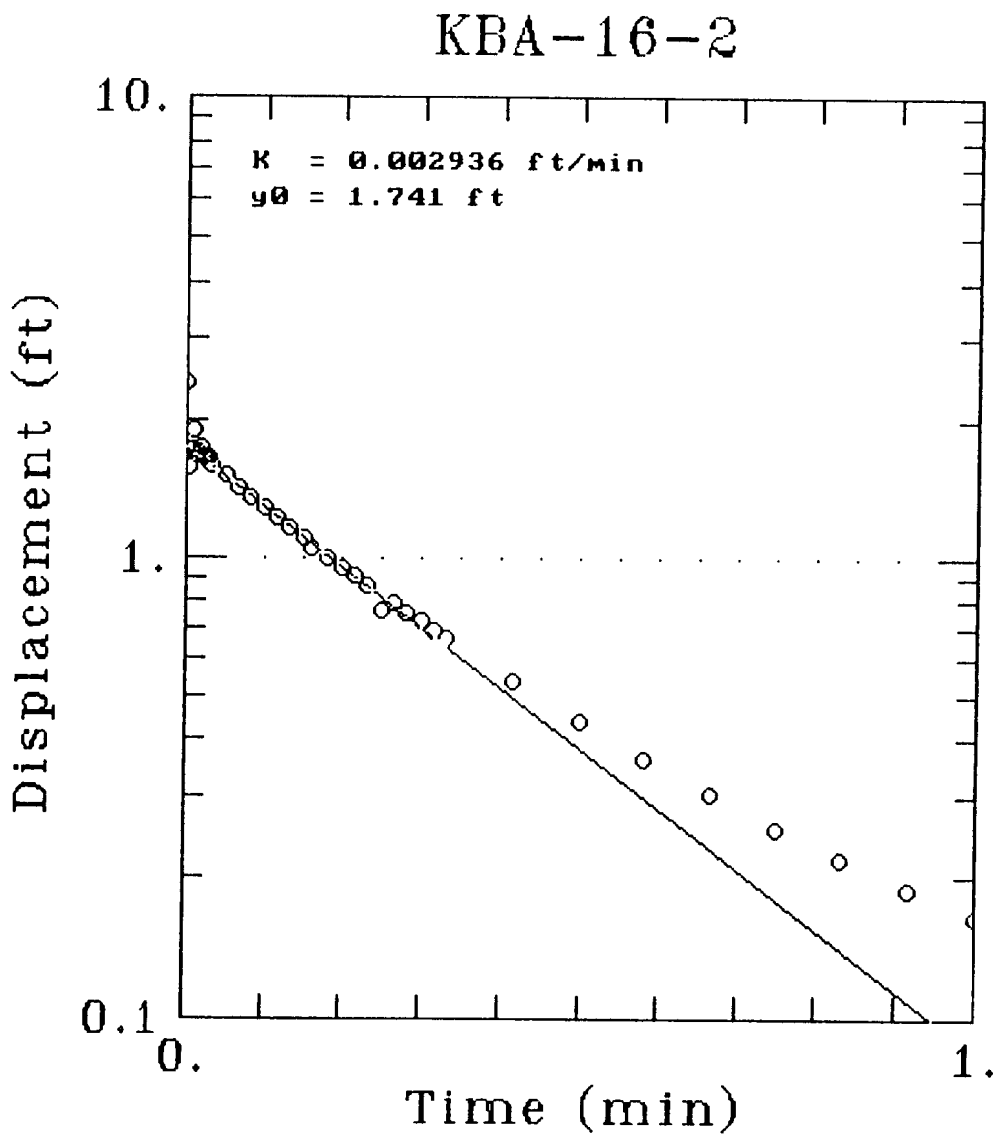
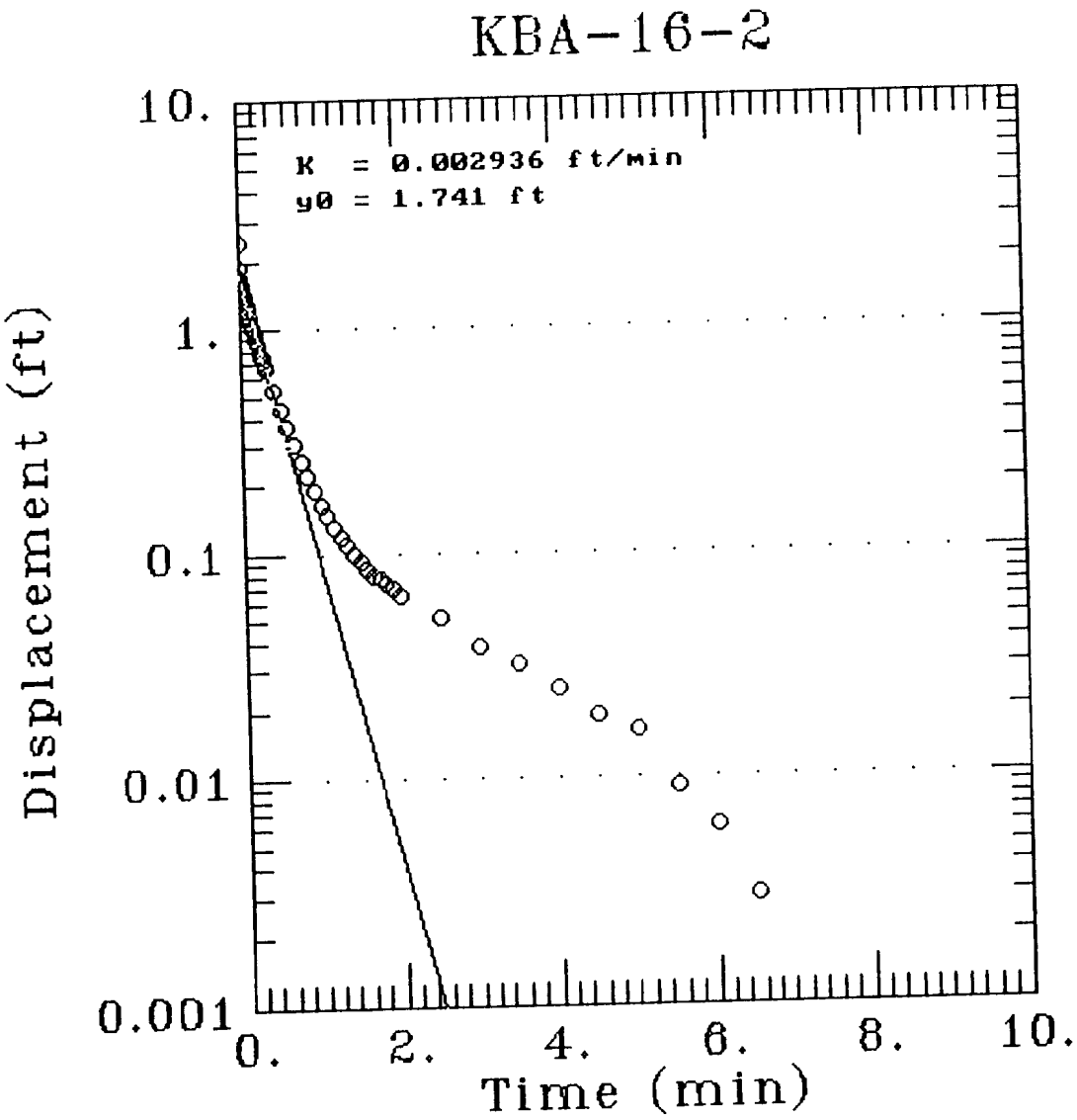
TYPE CURVE DATA

K = 2.93600E-003
y0 = 1.74100E+000

| Time | Drawdown | Time | Drawdown | Time | Drawdown |
|---|---|---|---|---|---|
| 0.000E+000 | 1.741E+000 | 1.000E+000 | 8.474E-002 | | |


KBA-16-2
K = 0.002936 ft/min
y0 = 1.741 ft
10.
1.
0.1
0.
1.
Displacement (ft)
Time (min)


KBA-16-2
K = 0.002936 ft/min
y0 = 1.741 ft
10.
1.
0.1
0.01
0.001
Displacement (ft)
0.
2.
4.
6.
8.
10.
Time (min)

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# A Q T E S O L V   R E S U L T S
Version 1.10

05/07/93 09:13:05

================================================================================

## TEST DESCRIPTION

Data set........... KBA-16-3.DAT
Data set title..... KBA-16-3

Knowns and Constants:
- No. of data points.................. 68
- Radius of well casing............... 0.083
- Radius of well...................... 0.33
- Aquifer saturated thickness......... 78.36
- Well screen length.................. 7
- Static height of water in well...... 7
- Log(Re/Rw).......................... 1.816
- A, B, C............................. 2.183, 0.345, 0.000

================================================================================

## ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

================================================================================

## RESULTS FROM STATISTICAL CURVE MATCHING

### STATISTICAL MATCH PARAMETER ESTIMATES

| | Estimate | | Std. Error |
|---|---|---|---|
| K = | 1.7597E-003 | +/- | 2.9588E-004 |
| y0 = | 1.8883E+000 | +/- | 1.1228E-001 |

### ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
- Number of residuals............... 68
- Number of estimated parameters.... 2
- Degrees of freedom................ 66
- Residual mean..................... 0.214
- Residual standard deviation....... 0.3903
- Residual variance................. 0.1523

Model Residuals:

| Time | Observed | Calculated | Residual | Weight |
|---|---|---|---|---|
| 0.0033 | 2.51 | 1.8761 | 0.63391 | 1 |
| 0.0066 | 2.093 | 1.8639 | 0.22906 | 1 |
| 0.01 | 2.057 | 1.8515 | 0.20549 | 1 |
| 0.0133 | 2.15 | 1.8395 | 0.31048 | 1 |
| 0.0166 | 2.099 | 1.8276 | 0.2714 | 1 |
| 0.02 | 2.054 | 1.8154 | 0.23859 | 1 |
| 0.0233 | 2.015 | 1.8037 | 0.21135 | 1 |
| 0.0266 | 1.993 | 1.792 | 0.20103 | 1 |
| 0.03 | 1.961 | 1.78 | 0.18098 | 1 |
| 0.0333 | 1.913 | 1.7685 | 0.14451 | 1 |
| 0.05 | 1.755 | 1.7113 | 0.043713 | 1 |
| 0.0666 | 1.614 | 1.6563 | -0.042261 | 1 |
| 0.0833 | 1.488 | 1.6027 | -0.11469 | 1 |
| 0.1 | 1.376 | 1.5508 | -0.17485 | 1 |
| 0.1166 | 1.279 | 1.501 | -0.22198 | 1 |
| 0.1333 | 1.189 | 1.4524 | -0.26343 | 1 |
| 0.15 | 1.112 | 1.4055 | -0.29345 | 1 |
| 0.16 | 1.041 | 1.3781 | -0.33705 | 1 |
| 0.1833 | 0.984 | 1.3163 | -0.33226 | 1 |
| 0.2 | 0.929 | 1.2737 | -0.34469 | 1 |
| 0.2166 | 0.887 | 1.2327 | -0.34573 | 1 |
| 0.2333 | 0.852 | 1.1929 | -0.34086 | 1 |
| 0.25 | 0.82 | 1.1543 | -0.33428 | 1 |
| 0.2666 | 0.794 | 1.1172 | -0.32316 | 1 |
| 0.2833 | 0.771 | 1.081 | -0.31003 | 1 |
| 0.3 | 0.758 | 1.0461 | -0.28806 | 1 |
| 0.3166 | 0.746 | 1.0124 | -0.26643 | 1 |
| 0.3333 | 0.73 | 0.97968 | -0.24968 | 1 |
| 0.4166 | 0.688 | 0.83149 | -0.14349 | 1 |
| 0.5 | 0.659 | 0.70558 | -0.046577 | 1 |
| 0.5833 | 0.639 | 0.59885 | 0.040151 | 1 |
| 0.6666 | 0.623 | 0.50827 | 0.11473 | 1 |
| 0.75 | 0.617 | 0.4313 | 0.1857 | 1 |
| 0.8333 | 0.604 | 0.36606 | 0.23794 | 1 |
| 0.9166 | 0.598 | 0.31069 | 0.28731 | 1 |
| 1 | 0.591 | 0.26364 | 0.32736 | 1 |
| 1.0833 | 0.585 | 0.22376 | 0.36124 | 1 |
| 1.1666 | 0.578 | 0.18992 | 0.38808 | 1 |
| 1.25 | 0.575 | 0.16116 | 0.41384 | 1 |
| 1.3333 | 0.572 | 0.13678 | 0.43522 | 1 |
| 1.4166 | 0.569 | 0.11609 | 0.45291 | 1 |
| 1.5 | 0.562 | 0.09851 | 0.46349 | 1 |
| 1.5833 | 0.559 | 0.083609 | 0.47539 | 1 |
| 1.6666 | 0.556 | 0.070962 | 0.48504 | 1 |
| 1.75 | 0.556 | 0.060216 | 0.49578 | 1 |
| 1.8333 | 0.553 | 0.051108 | 0.50189 | 1 |
| 1.9166 | 0.549 | 0.043377 | 0.50562 | 1 |
| 2 | 0.546 | 0.036809 | 0.50919 | 1 |
| 2.5 | 0.537 | 0.013754 | 0.52325 | 1 |
| 3 | 0.527 | 0.0051391 | 0.52186 | 1 |
| 3.5 | 0.517 | 0.0019202 | 0.51508 | 1 |
| 4 | 0.514 | 0.0007175 | 0.51328 | 1 |
| 4.5 | 0.508 | 0.0002681 | 0.50773 | 1 |
| 5 | 0.504 | 0.00010018 | 0.5039 | 1 |
| 5.5 | 0.504 | 3.7431E-005 | 0.50396 | 1 |
| 6 | 0.501 | 1.3986E-005 | 0.50099 | 1 |
| 6.5 | 0.495 | 5.226E-006 | 0.49499 | 1 |
| 7 | 0.495 | 1.9527E-006 | 0.495 | 1 |
| 7.5 | 0.492 | 7.2963E-007 | 0.492 | 1 |

Model Residuals:

| Time | Observed | Calculated | Residual | Weight |
|---|---|---|---|---|
| 8 | 0.492 | 2.7263E-007 | 0.492 | 1 |
| 8.5 | 0.492 | 1.0187E-007 | 0.492 | 1 |
| 9 | 0.492 | 3.8063E-008 | 0.492 | 1 |
| 9.5 | 0.492 | 1.4223E-008 | 0.492 | 1 |
| 10 | 0.492 | 5.3143E-009 | 0.492 | 1 |
| 12 | 0.492 | 1.0359E-010 | 0.492 | 1 |
| 14 | 0.485 | 2.0193E-012 | 0.485 | 1 |
| 16 | 0.488 | 3.9361E-014 | 0.488 | 1 |
| 18 | 0.479 | 7.6725E-016 | 0.479 | 1 |

================================================================================

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

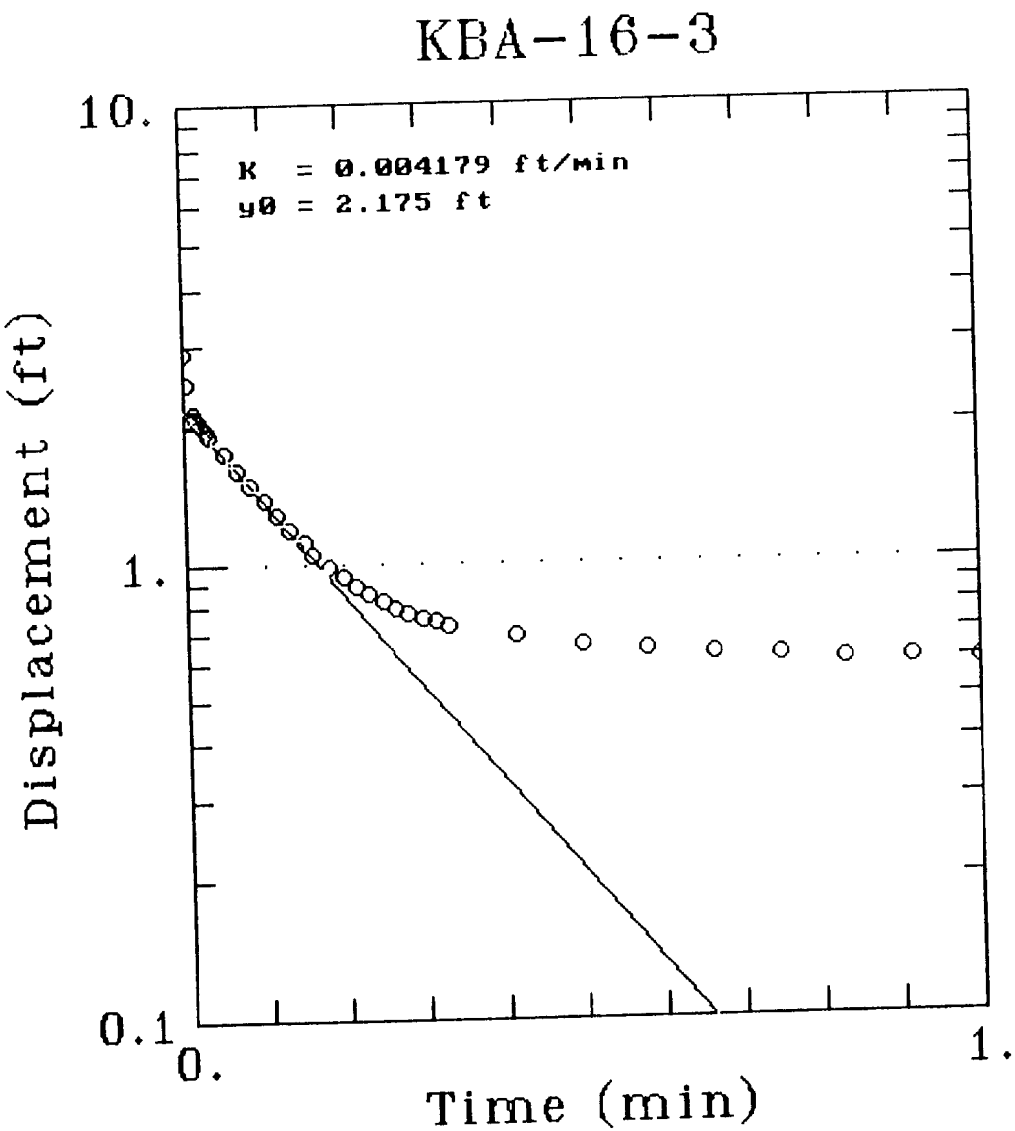
| | Estimate |
|---|---|
| K = | 1.7597E-003 |
| y0 = | 1.8883E+000 |

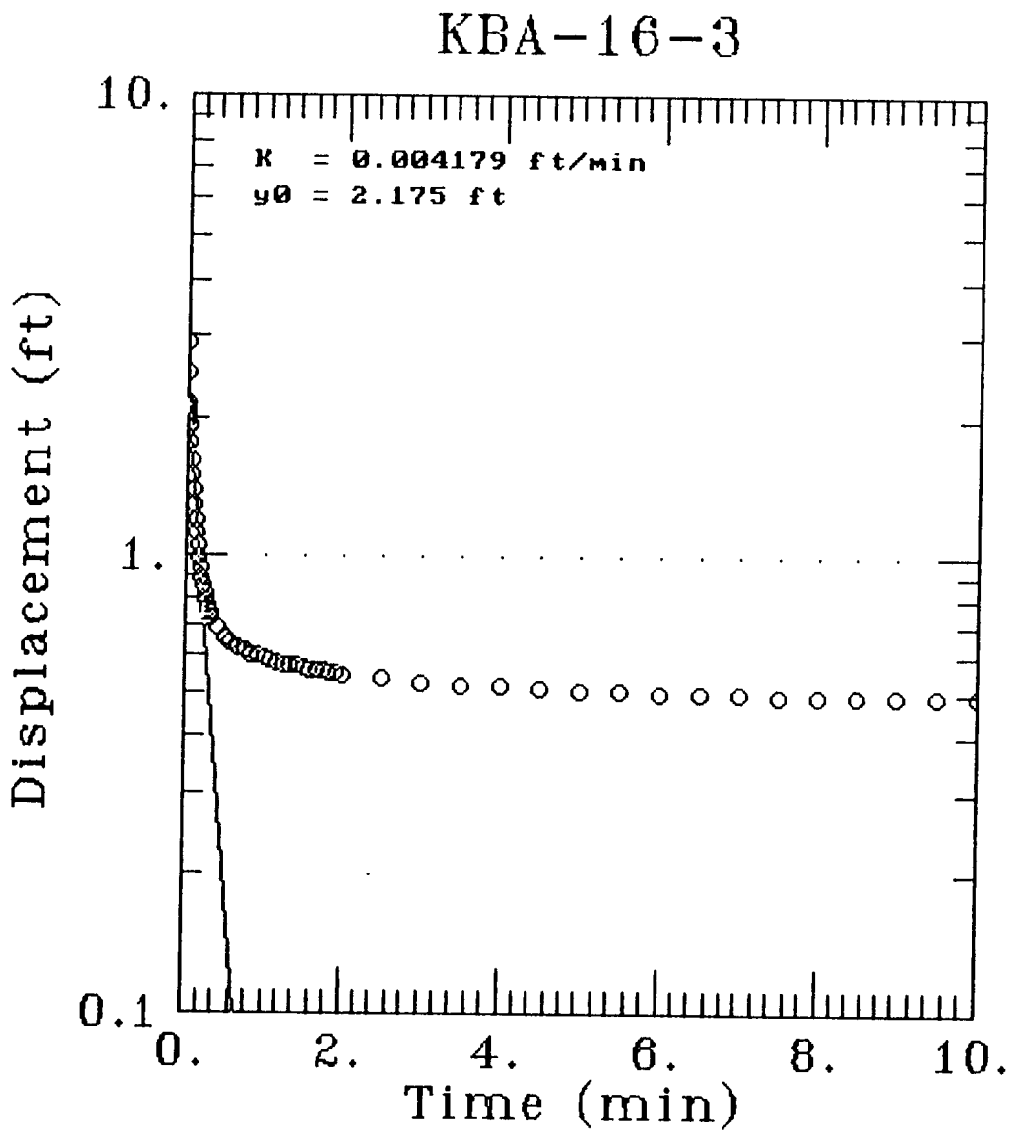
<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

TYPE CURVE DATA

K = 4.17900E-003
y0 = 2.17500E+000

| Time | Drawdown | Time | Drawdown | Time | Drawdown |
|---|---|---|---|---|---|
| 0.000E+000 | 2.175E+000 | 1.000E+000 | 2.027E-002 | | |


KBA-16-3
K = 0.004179 ft/min
y0 = 2.175 ft
10.
1.
0.1
0.
1.
Displacement (ft)
Time (min)


KBA-16-3
K = 0.004179 ft/min
y0 = 2.175 ft
10.
1.
0.1
Displacement (ft)
0.
2.
4.
6.
8.
10.
Time (min)

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# A Q T E S O L V   R E S U L T S

Version 1.10

05/07/93 09:31:56

================================================================================

## TEST DESCRIPTION

Data set........... KBA-16-4.DAT
Data set title..... KBA-16-4

Knowns and Constants:

| | |
|---|---|
| No. of data points.................. | 77 |
| Radius of well casing............... | 0.083 |
| Radius of well...................... | 0.33 |
| Aquifer saturated thickness......... | 81.25 |
| Well screen length.................. | 7 |
| Static height of water in well...... | 7 |
| Log(Re/Rw).......................... | 1.814 |
| A, B, C............................. | 2.183, 0.345, 0.000 |

================================================================================

## ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

================================================================================

## RESULTS FROM STATISTICAL CURVE MATCHING

### STATISTICAL MATCH PARAMETER ESTIMATES

| | Estimate | | Std. Error |
|---|---|---|---|
| K = | 5.5176E-004 | +/- | 7.1370E-005 |
| y0 = | 1.1572E+000 | +/- | 4.5839E-002 |

### ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:

| | |
|---|---|
| Number of residuals............... | 77 |
| Number of estimated parameters.... | 2 |
| Degrees of freedom................ | 75 |
| Residual mean..................... | 0.08753 |
| Residual standard deviation....... | 0.2075 |
| Residual variance................. | 0.04305 |

Model Residuals:

| Time | Observed | Calculated | Residual | Weight |
|---|---|---|---|---|
| 0.0033 | 1.412 | 1.1548 | 0.25717 | 1 |
| 0.0066 | 1.37 | 1.1525 | 0.21752 | 1 |
| 0.01 | 1.376 | 1.1501 | 0.22594 | 1 |
| 0.0133 | 1.392 | 1.1477 | 0.24429 | 1 |
| 0.0166 | 1.383 | 1.1454 | 0.23762 | 1 |
| 0.02 | 1.357 | 1.143 | 0.21403 | 1 |
| 0.0233 | 1.338 | 1.1406 | 0.19736 | 1 |
| 0.0266 | 1.334 | 1.1383 | 0.19568 | 1 |
| 0.03 | 1.328 | 1.1359 | 0.19207 | 1 |
| 0.0333 | 1.318 | 1.1336 | 0.18438 | 1 |
| 0.05 | 1.257 | 1.122 | 0.13502 | 1 |
| 0.0666 | 1.206 | 1.1105 | 0.095477 | 1 |
| 0.0833 | 1.154 | 1.0991 | 0.05488 | 1 |
| 0.1 | 1.109 | 1.0878 | 0.021166 | 1 |
| 0.1166 | 1.067 | 1.0767 | -0.0097298 | 1 |
| 0.1333 | 1.029 | 1.0657 | -0.036674 | 1 |
| 0.15 | 0.99 | 1.0547 | -0.064731 | 1 |
| 0.16 | 0.955 | 1.0482 | -0.093232 | 1 |
| 0.1833 | 0.926 | 1.0332 | -0.10725 | 1 |
| 0.2 | 0.891 | 1.0226 | -0.13164 | 1 |
| 0.2166 | 0.862 | 1.0122 | -0.1502 | 1 |
| 0.2333 | 0.833 | 1.0018 | -0.1688 | 1 |
| 0.25 | 0.81 | 0.99152 | -0.18152 | 1 |
| 0.2666 | 0.784 | 0.9814 | -0.1974 | 1 |
| 0.2833 | 0.772 | 0.97132 | -0.19932 | 1 |
| 0.3 | 0.746 | 0.96135 | -0.21535 | 1 |
| 0.3166 | 0.73 | 0.95153 | -0.22153 | 1 |
| 0.3333 | 0.71 | 0.94176 | -0.23176 | 1 |
| 0.4166 | 0.649 | 0.8945 | -0.2455 | 1 |
| 0.5 | 0.608 | 0.84956 | -0.24156 | 1 |
| 0.5833 | 0.585 | 0.80693 | -0.22193 | 1 |
| 0.6666 | 0.566 | 0.76644 | -0.20044 | 1 |
| 0.75 | 0.546 | 0.72793 | -0.18193 | 1 |
| 0.8333 | 0.537 | 0.69141 | -0.15441 | 1 |
| 0.9166 | 0.53 | 0.65671 | -0.12671 | 1 |
| 1 | 0.517 | 0.62372 | -0.10672 | 1 |
| 1.0833 | 0.511 | 0.59242 | -0.08142 | 1 |
| 1.1666 | 0.505 | 0.56269 | -0.057692 | 1 |
| 1.25 | 0.498 | 0.53442 | -0.036422 | 1 |
| 1.3333 | 0.488 | 0.5076 | -0.019605 | 1 |
| 1.4166 | 0.482 | 0.48213 | -0.00013282 | 1 |
| 1.5 | 0.479 | 0.45791 | 0.021089 | 1 |
| 1.5833 | 0.472 | 0.43493 | 0.037068 | 1 |
| 1.6666 | 0.466 | 0.41311 | 0.052893 | 1 |
| 1.75 | 0.463 | 0.39235 | 0.070647 | 1 |
| 1.8333 | 0.463 | 0.37266 | 0.090336 | 1 |
| 1.9166 | 0.456 | 0.35396 | 0.10204 | 1 |
| 2 | 0.453 | 0.33618 | 0.11682 | 1 |
| 2.5 | 0.434 | 0.24681 | 0.18719 | 1 |
| 3 | 0.418 | 0.1812 | 0.2368 | 1 |
| 3.5 | 0.402 | 0.13303 | 0.26897 | 1 |
| 4 | 0.392 | 0.097666 | 0.29433 | 1 |
| 4.5 | 0.379 | 0.071703 | 0.3073 | 1 |
| 5 | 0.369 | 0.052641 | 0.31636 | 1 |
| 5.5 | 0.363 | 0.038647 | 0.32435 | 1 |
| 6 | 0.353 | 0.028373 | 0.32463 | 1 |
| 6.5 | 0.347 | 0.020831 | 0.32617 | 1 |
| 7 | 0.337 | 0.015293 | 0.32171 | 1 |
| 7.5 | 0.331 | 0.011228 | 0.31977 | 1 |

Model Residuals:

| Time | Observed | Calculated | Residual | Weight |
| --- | --- | --- | --- | --- |
| 8 | 0.324 | 0.0082429 | 0.31576 | 1 |
| 8.5 | 0.321 | 0.0060516 | 0.31495 | 1 |
| 9 | 0.312 | 0.0044429 | 0.30756 | 1 |
| 9.5 | 0.305 | 0.0032618 | 0.30174 | 1 |
| 10 | 0.302 | 0.0023947 | 0.29961 | 1 |
| 12 | 0.289 | 0.0006957 | 0.2883 | 1 |
| 14 | 0.267 | 0.00020211 | 0.2668 | 1 |
| 16 | 0.254 | 5.8716E-005 | 0.25394 | 1 |
| 18 | 0.234 | 1.7058E-005 | 0.23398 | 1 |
| 20 | 0.225 | 4.9556E-006 | 0.225 | 1 |
| 22 | 0.209 | 1.4397E-006 | 0.209 | 1 |
| 24 | 0.202 | 4.1825E-007 | 0.202 | 1 |
| 26 | 0.189 | 1.2151E-007 | 0.189 | 1 |
| 28 | 0.18 | 3.53E-008 | 0.18 | 1 |
| 30 | 0.173 | 1.0255E-008 | 0.173 | 1 |
| 32 | 0.164 | 2.9793E-009 | 0.164 | 1 |
| 34 | 0.157 | 8.6553E-010 | 0.157 | 1 |
| 36 | 0.151 | 2.5145E-010 | 0.151 | 1 |

================================================================================

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

| | Estimate |
| --- | --- |
| K = | 5.5176E-004 |
| y0 = | 1.1572E+000 |

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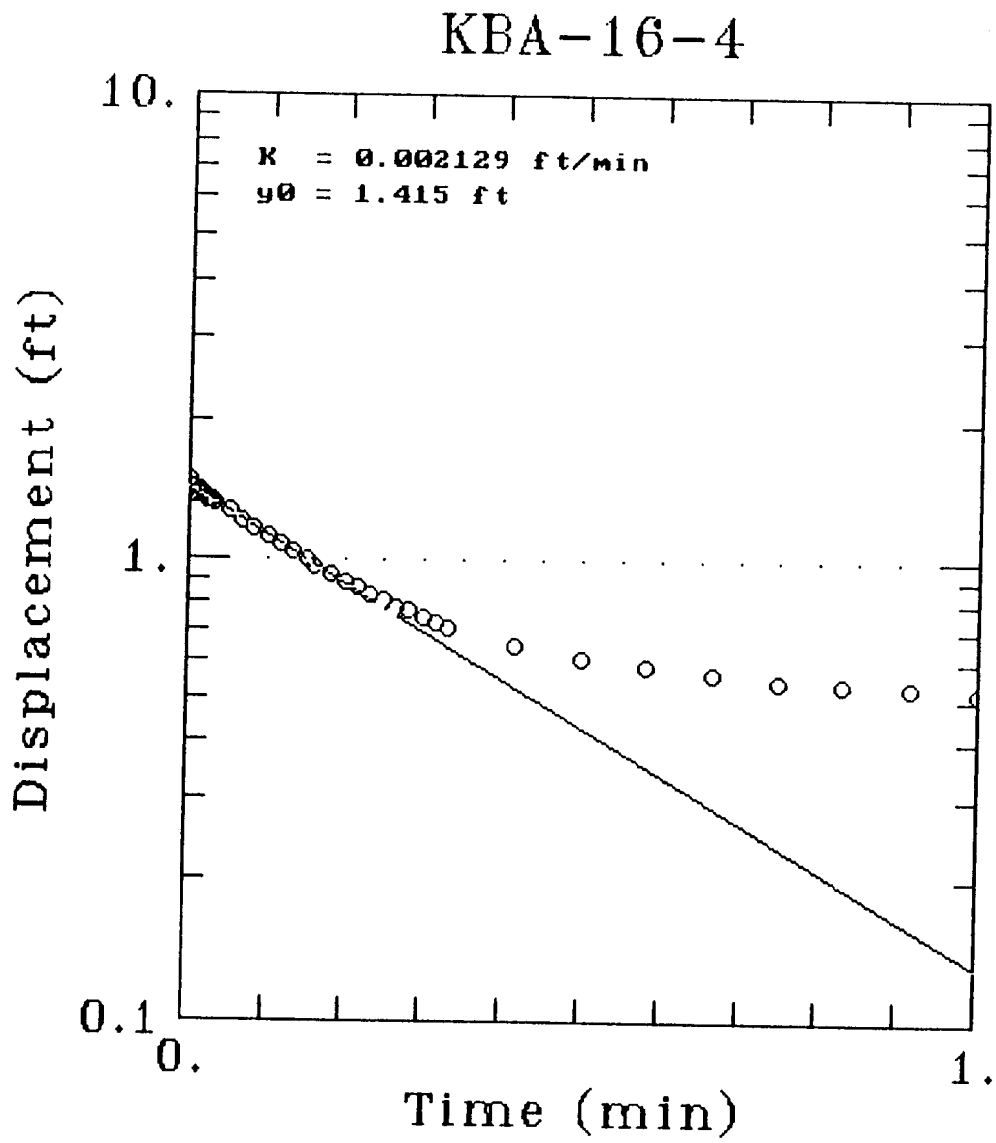
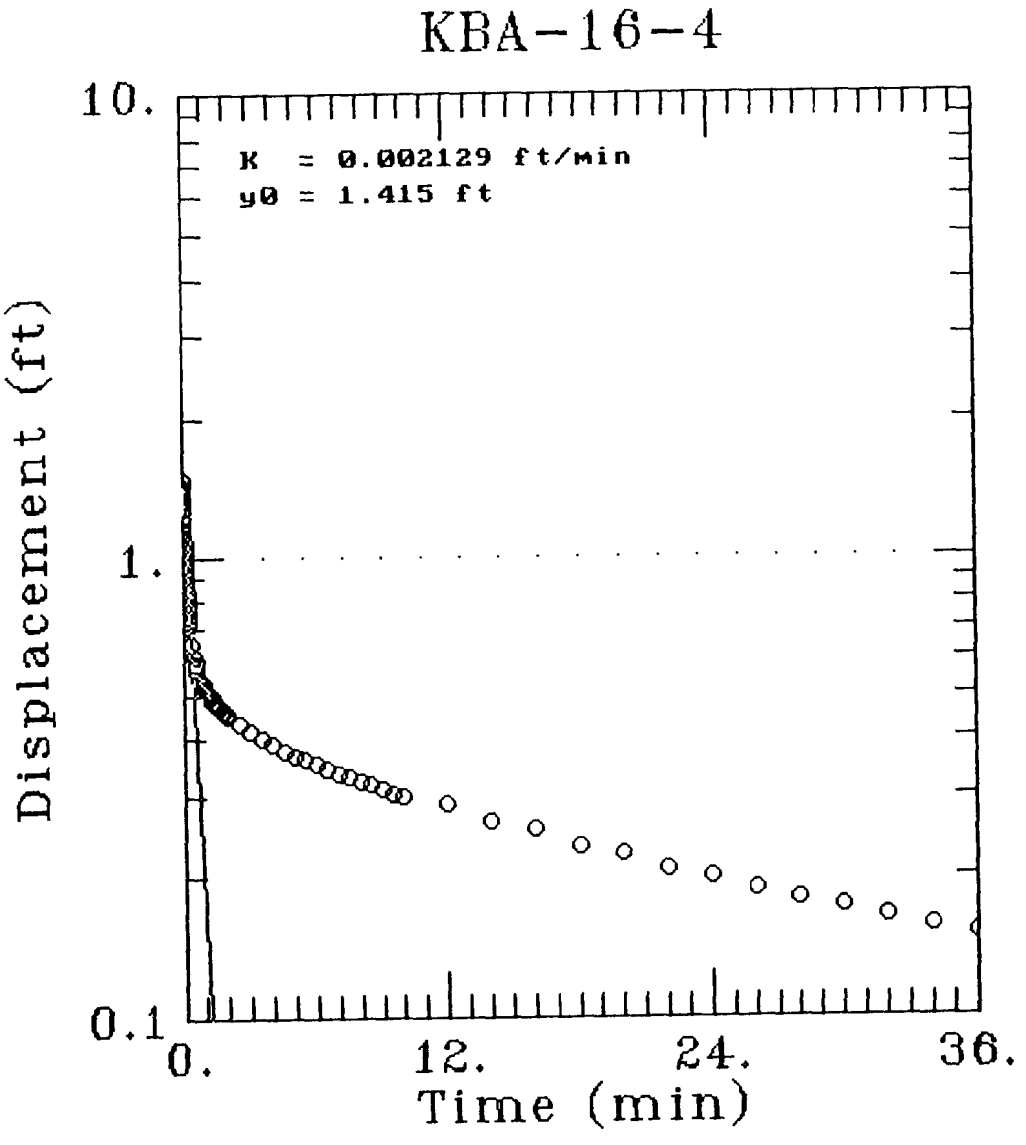
TYPE CURVE DATA

K = 2.12899E-003
y0 = 1.41504E+000

| Time | Drawdown | Time | Drawdown | Time | Drawdown |
| --- | --- | --- | --- | --- | --- |
| 0.000E+000 | 1.415E+000 | 1.000E+000 | 1.303E-001 | | |


KBA-16-4
K = 0.002129 ft/min
y0 = 1.415 ft
10.
1.
0.1
0.
1.
Displacement (ft)
Time (min)


KBA-16-4
K = 0.002129 ft/min
y0 = 1.415 ft
10.
1.
0.1
Displacement (ft)
0.
12.
24.
36.
Time (min)

Hydraulic Conductivity Estimates Based on Hydrocone Data

| | Depth (ft bgs) | | Depth (ft MLW) | | K–Estimate | |
|---|---|---|---|---|---|---|
| Sample ID | upper | lower | upper | lower | cm/sec | ft/min |
| 05H10125 | 25 | 26 | −7.7 | −8.7 | 1.3 E−04 | 2.6 E−04 |
| 05H10215 | 15 | 16 | 1.7 | 0.7 | 2.0 E−04 | 3.9 E−04 |
| 05H10315 | 15 | 16 | 1.5 | 0.5 | 3.0 E−04 | 5.9 E−04 |
| 05H10415 | 15 | 16 | 3.0 | 2.0 | 1.3 E−04 | 2.6 E−04 |
| 05H10515 | 15 | 16 | 2.9 | 1.9 | 1.6 E−04 | 3.2 E−04 |
| 05H10520 | 20 | 21 | −2.1 | −3.1 | 9.3 E−04 | 18.3 E−04 |
| 05H10615 | 15 | 16 | 1.9 | 0.9 | 2.1 E−04 | 4.1 E−04 |
| 05H10715 | 15 | 16 | 3.5 | 2.5 | 6.1 E−04 | 12.0 E−04 |
| 05H11115 | 15 | 16 | 3.0 | 2.0 | 2.3 E−04 | 4.5 E−04 |
| 05H11215 | 15 | 16 | 4.6 | 3.6 | 2.2 E−04 | 4.3 E−04 |
| 05H11223 | 23 | 24 | −3.4 | −4.4 | 4.1 E−04 | 8.1 E−04 |
| 05H11315 | 15 | 16 | 2.9 | 1.9 | 1.4 E−04 | 2.8 E−04 |
| 16H10118 | 18 | 19 | 2.9 | 1.9 | 2.1 E−04 | 4.1 E−04 |
| 16H10123 | 23 | 24 | −2.1 | −3.1 | 2.5 E−04 | 4.9 E−04 |
| 16H10128 | 28 | 29 | −7.1 | −8.1 | 3.8 E−04 | 7.5 E−04 |
| 16H10218 | 18 | 19 | 2.4 | 1.4 | 4.3 E−04 | 8.5 E−04 |
| 16H10227 | 27 | 28 | −6.6 | −7.6 | 3.9 E−04 | 7.7 E−04 |
| 16H10236 | 36 | 37 | −15.6 | −16.6 | 7.3 E−04 | 14.4 E−04 |
| 16H10318 | 18 | 19 | 0.7 | −0.3 | 1.8 E−04 | 3.5 E−04 |
| 16H10327 | 27 | 28 | −8.3 | −9.3 | 6.7 E−04 | 13.2 E−04 |
| 16H10336 | 36 | 37 | −17.3 | −18.3 | 7.8 E−04 | 15.4 E−04 |
| 16H10418 | 18 | 19 | 2.4 | 1.4 | 1.2 E−04 | 2.4 E−04 |
| 16H10424 | 24 | 25 | −3.6 | −4.6 | 5.2 E−04 | 10.2 E−04 |
| 16H10430 | 30 | 31 | −9.6 | −10.6 | 6.9 E−04 | 13.6 E−04 |

Note:
Hydraulic conductivity estimates were calculated based on time lag using methods developed by Hvorslev (1951) as presented by Cedergren (1989). These estimates are similar to those obtained by rising head slug tests.

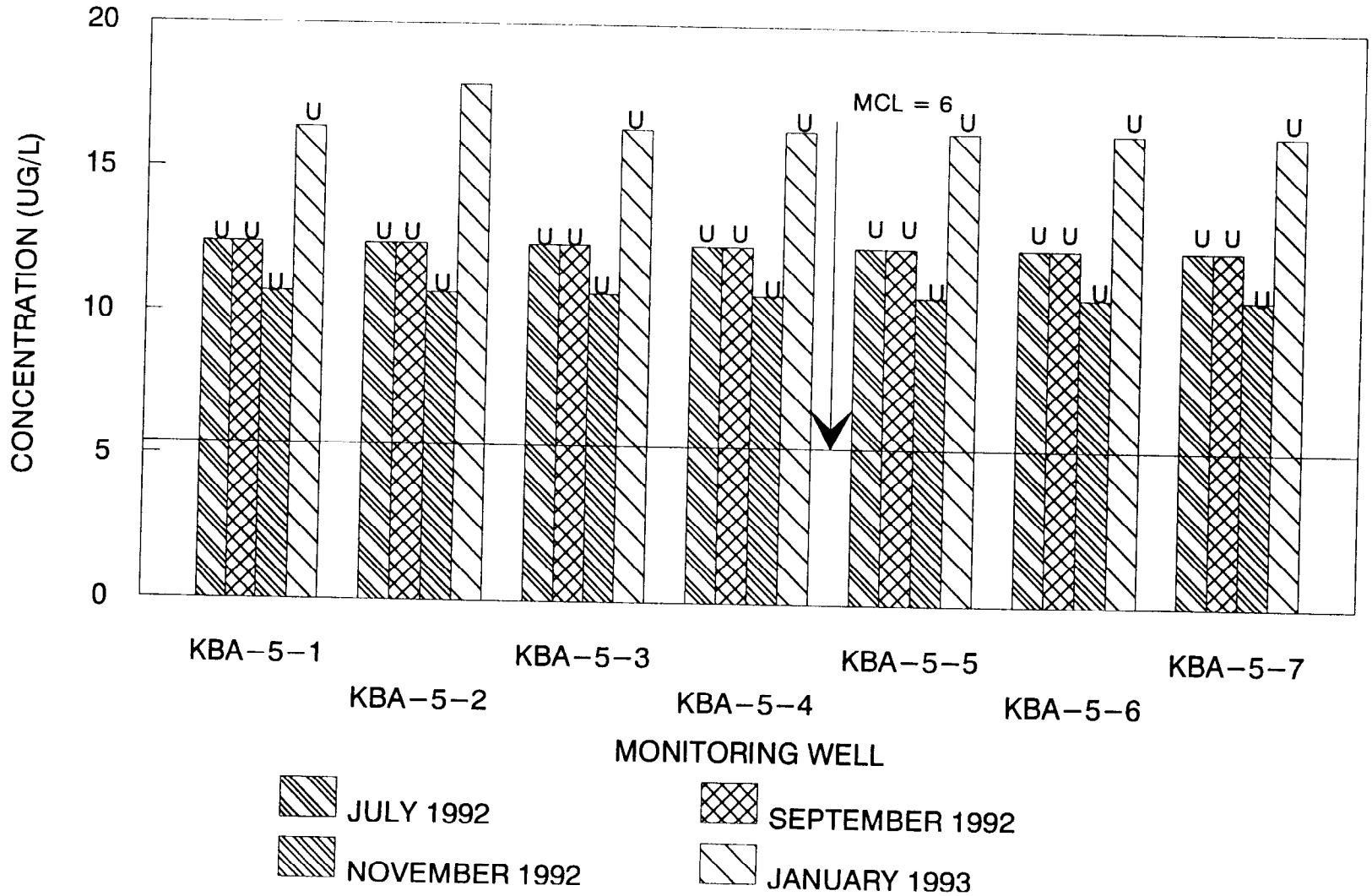
# Appendix J

## Sites 5 and 16 Bar Chart
## Graphics of Groundwater Inorganic Data

# Site 5

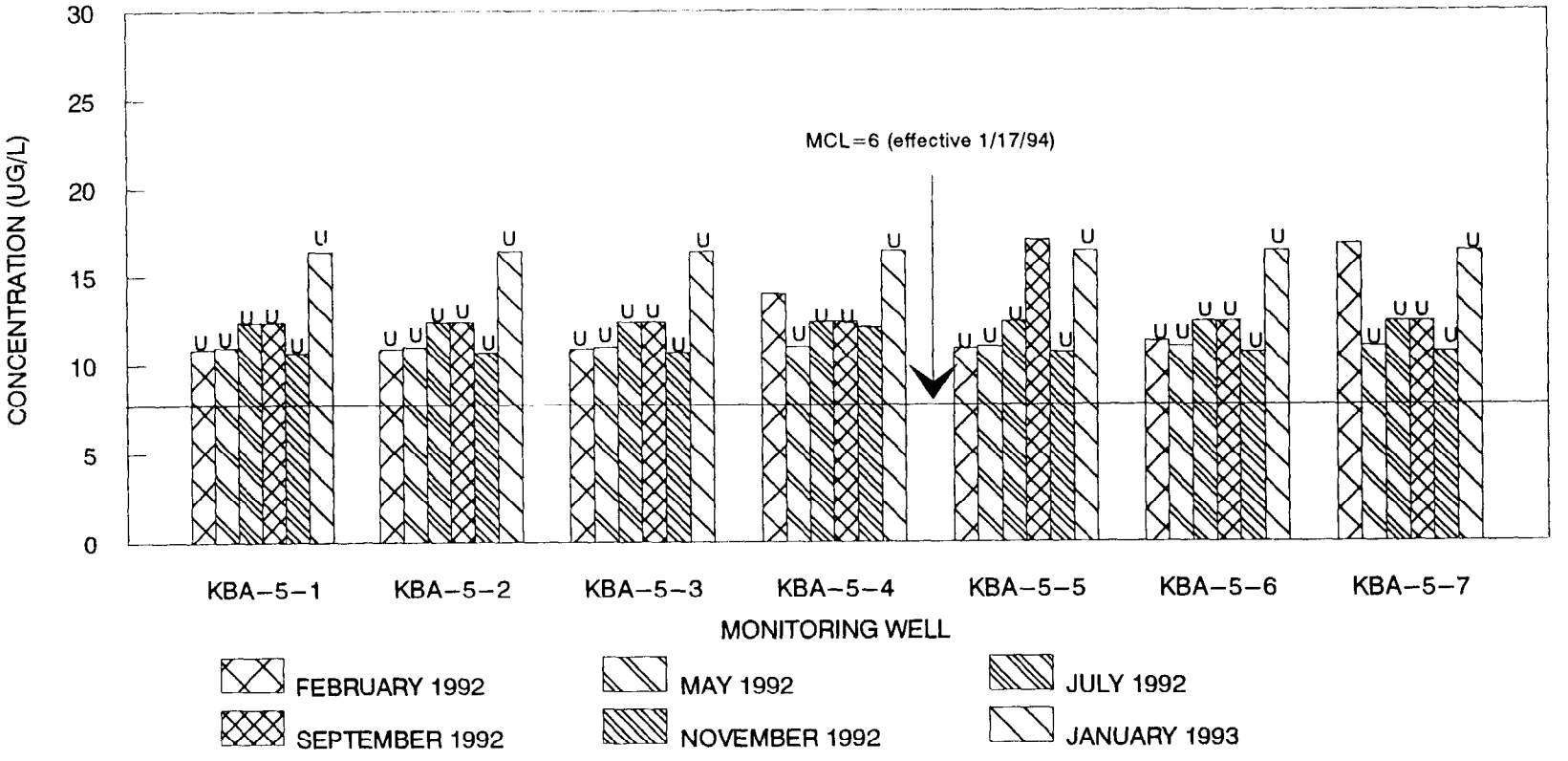
NSB KINGS BAY, GEORGIA

SITE 5 – ANTIMONY IN FILTERED GROUNDWATER SAMPLES



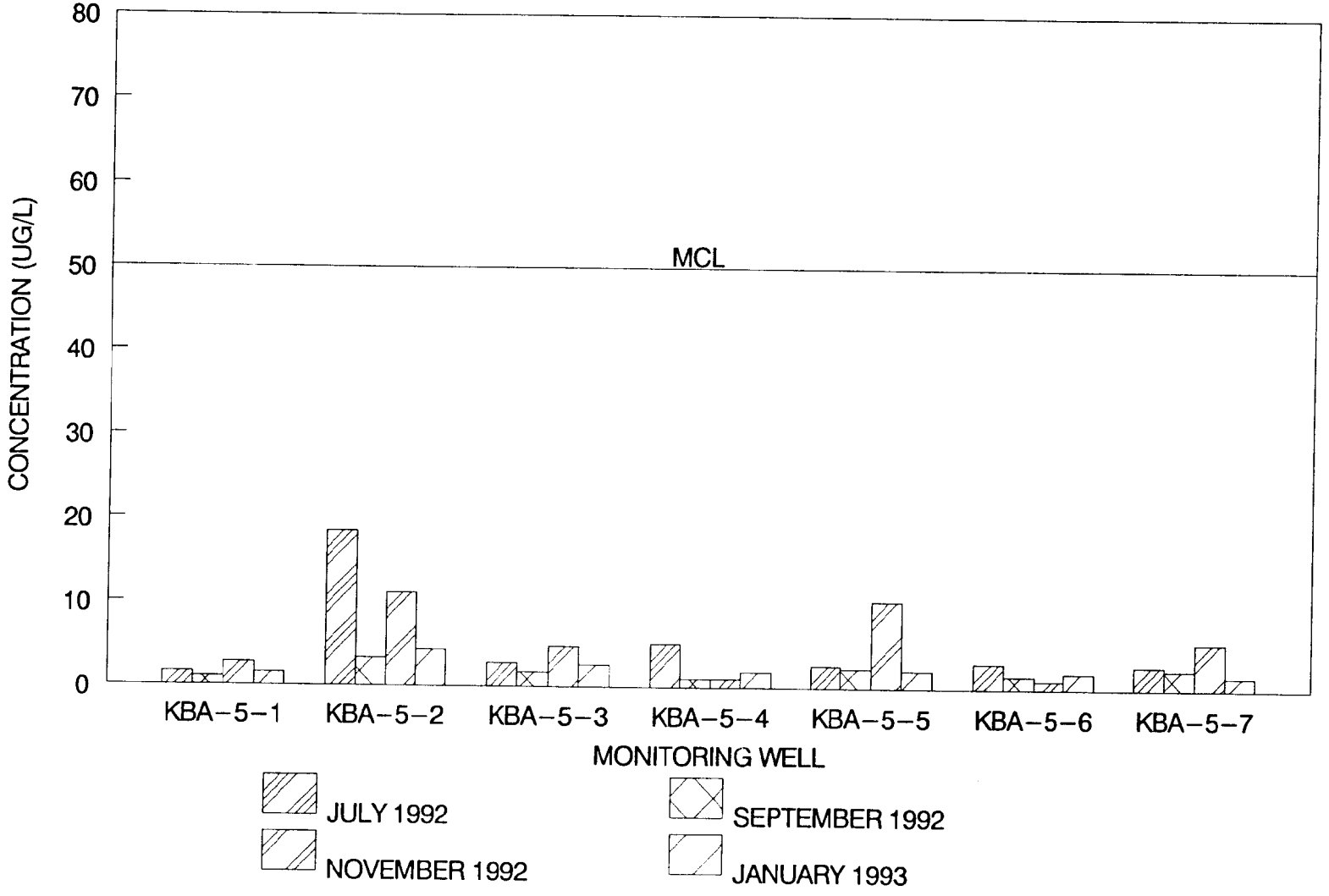
NSB KINGS BAY, GEORGIA

SITE 5 – ANTIMONY IN UNFILTERED GROUNDWATER SAMPLES



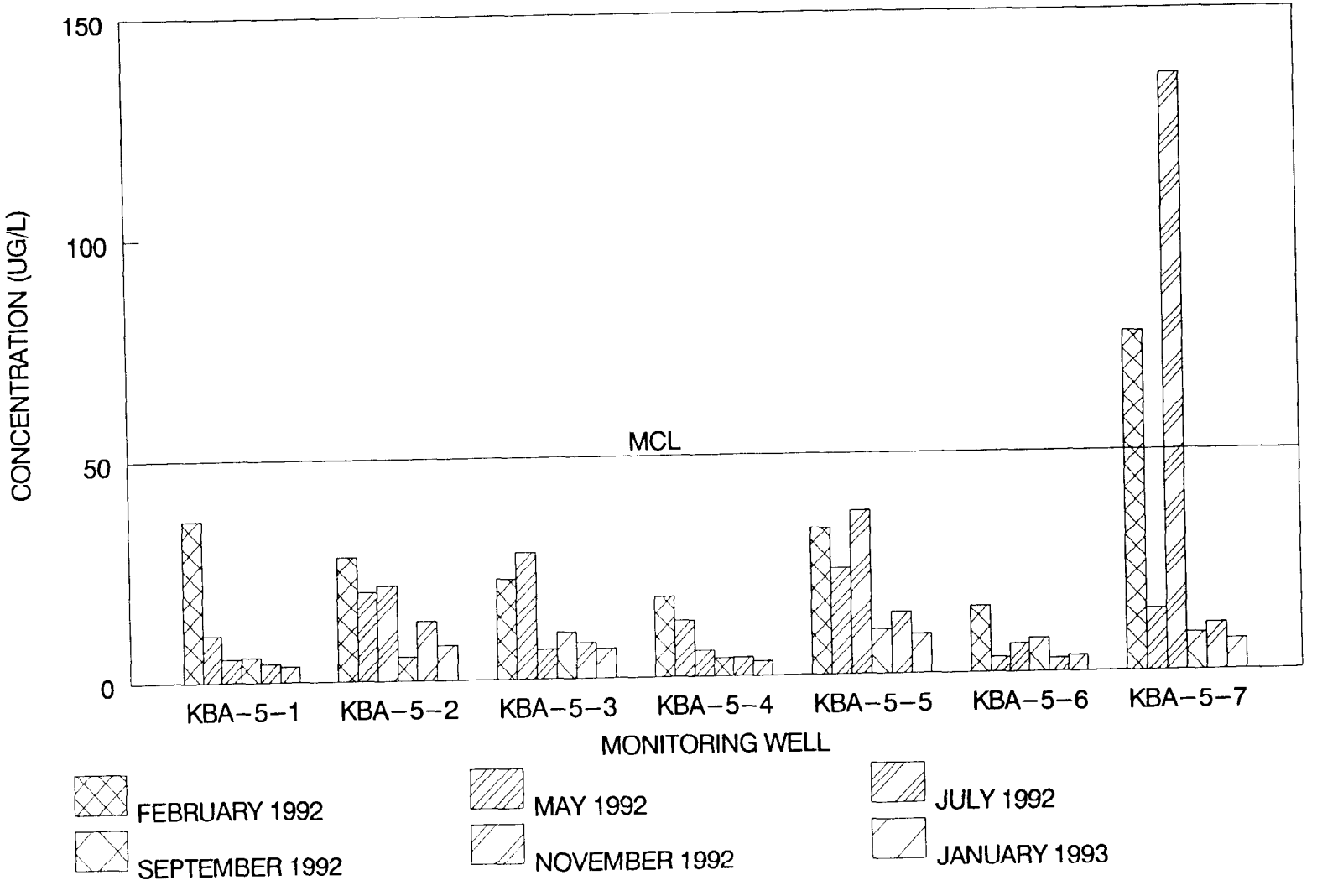
NSB KINGS BAY, GEORGIA

SITE 5 – ARSENIC IN FILTERED GROUNDWATER SAMPLES



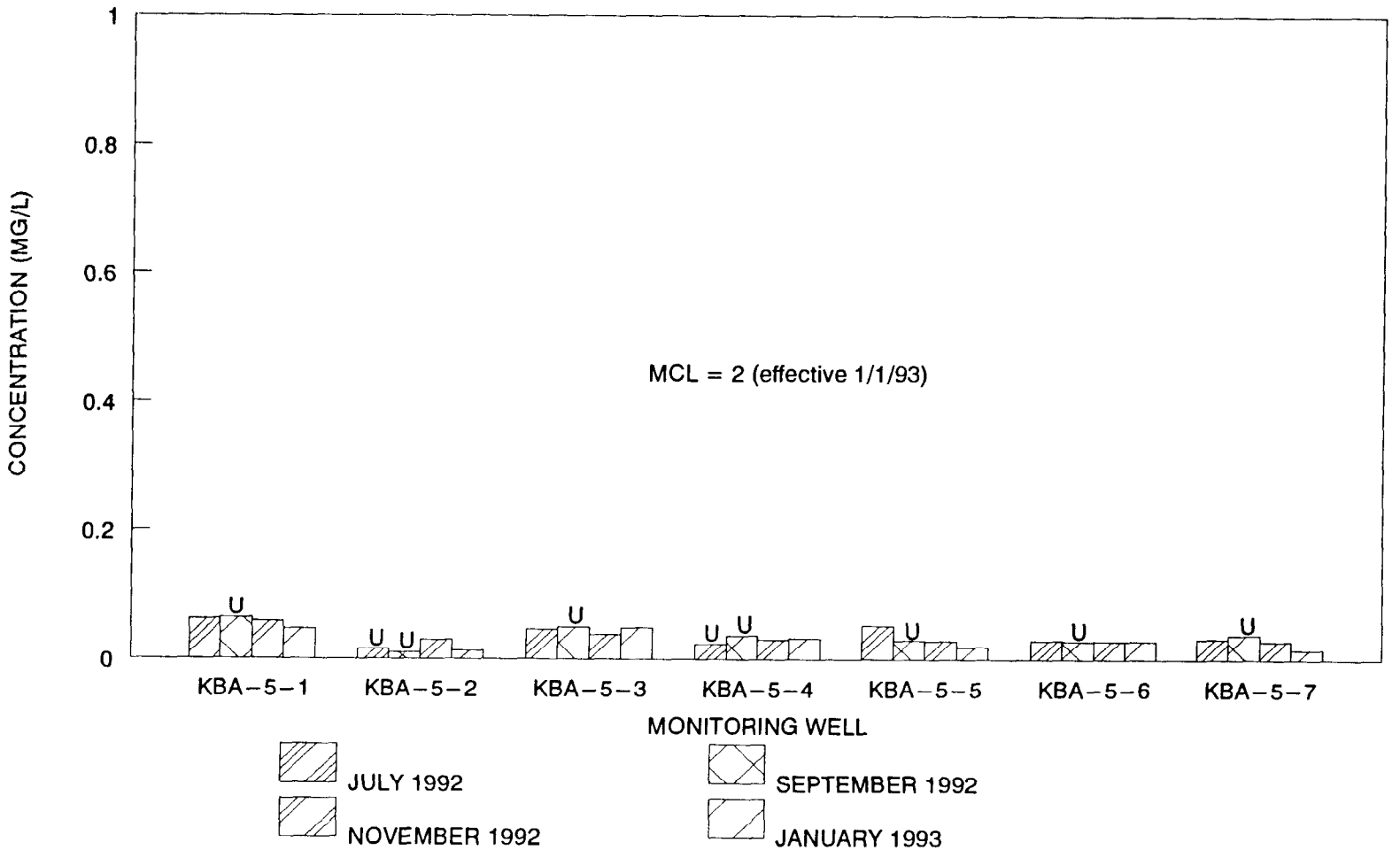
NSB KINGS BAY, GEORGIA

SITE 5 – ARSENIC IN UNFILTERED GROUNDWATER SAMPLES



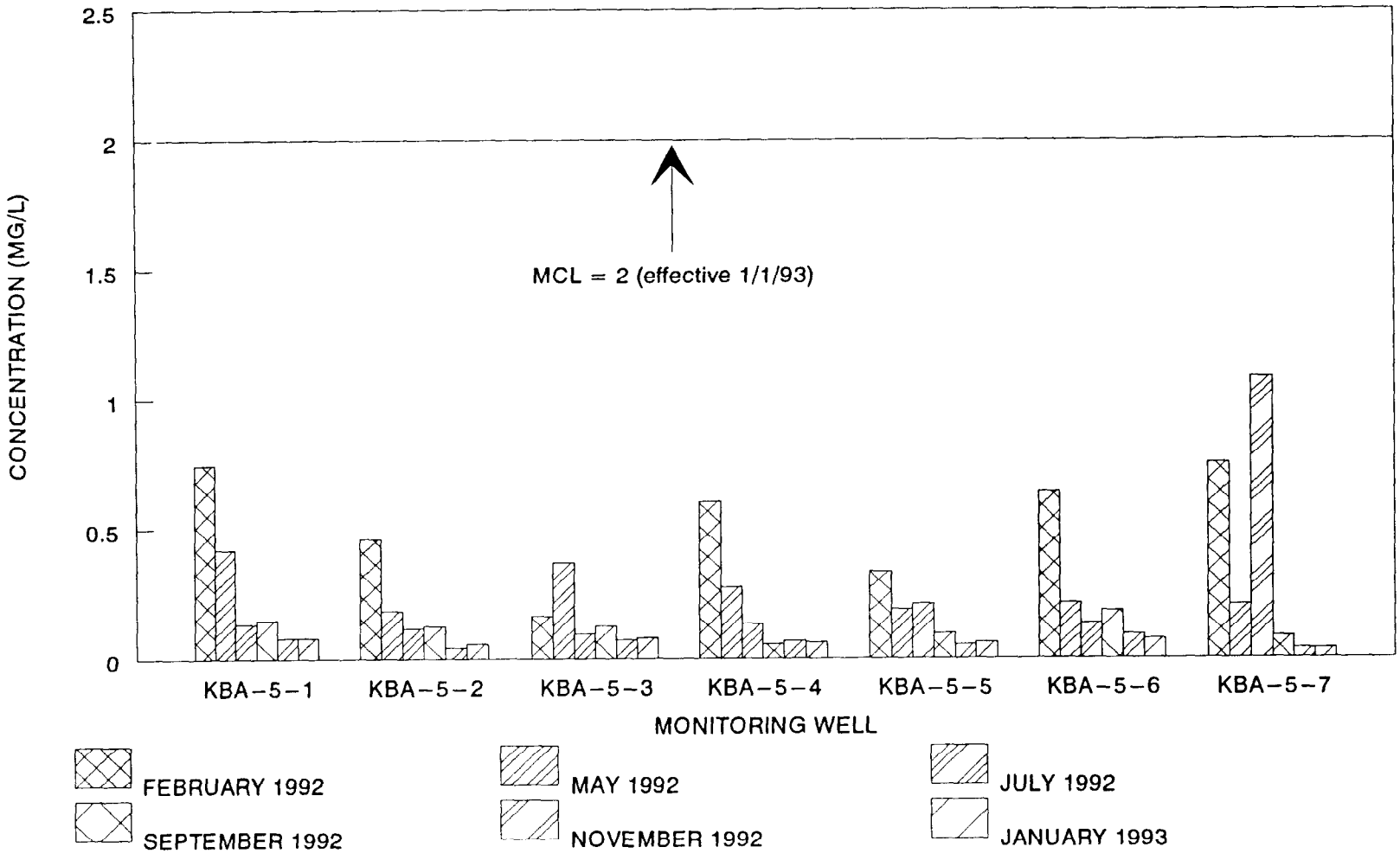
NSB KINGS BAY, GEORGIA

SITE 5 – BARIUM IN FILTERED GROUNDWATER SAMPLES



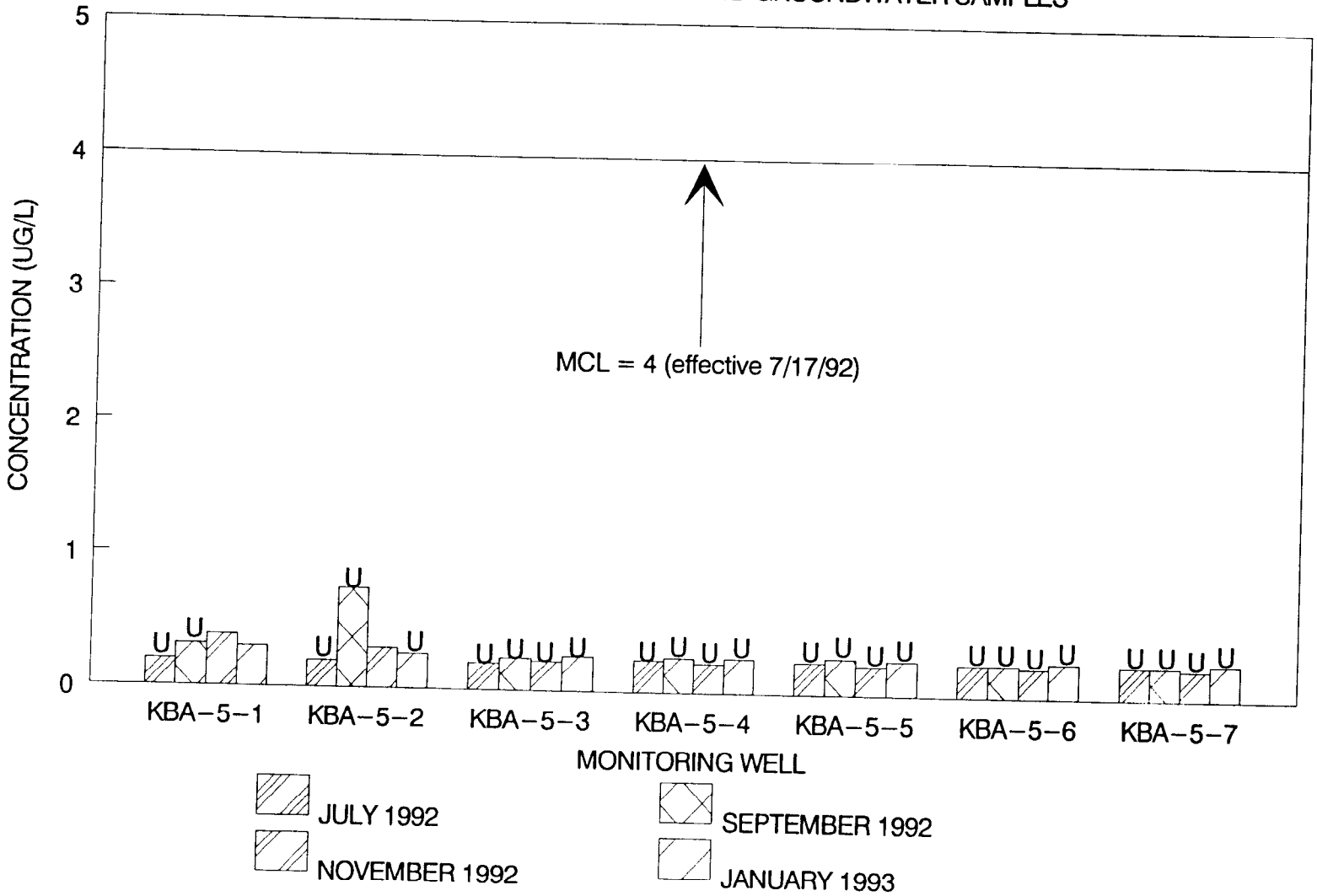
NSB KINGS BAY, GEORGIA

SITE 5 – BARIUM IN UNFILTERED GROUNDWATER SAMPLES



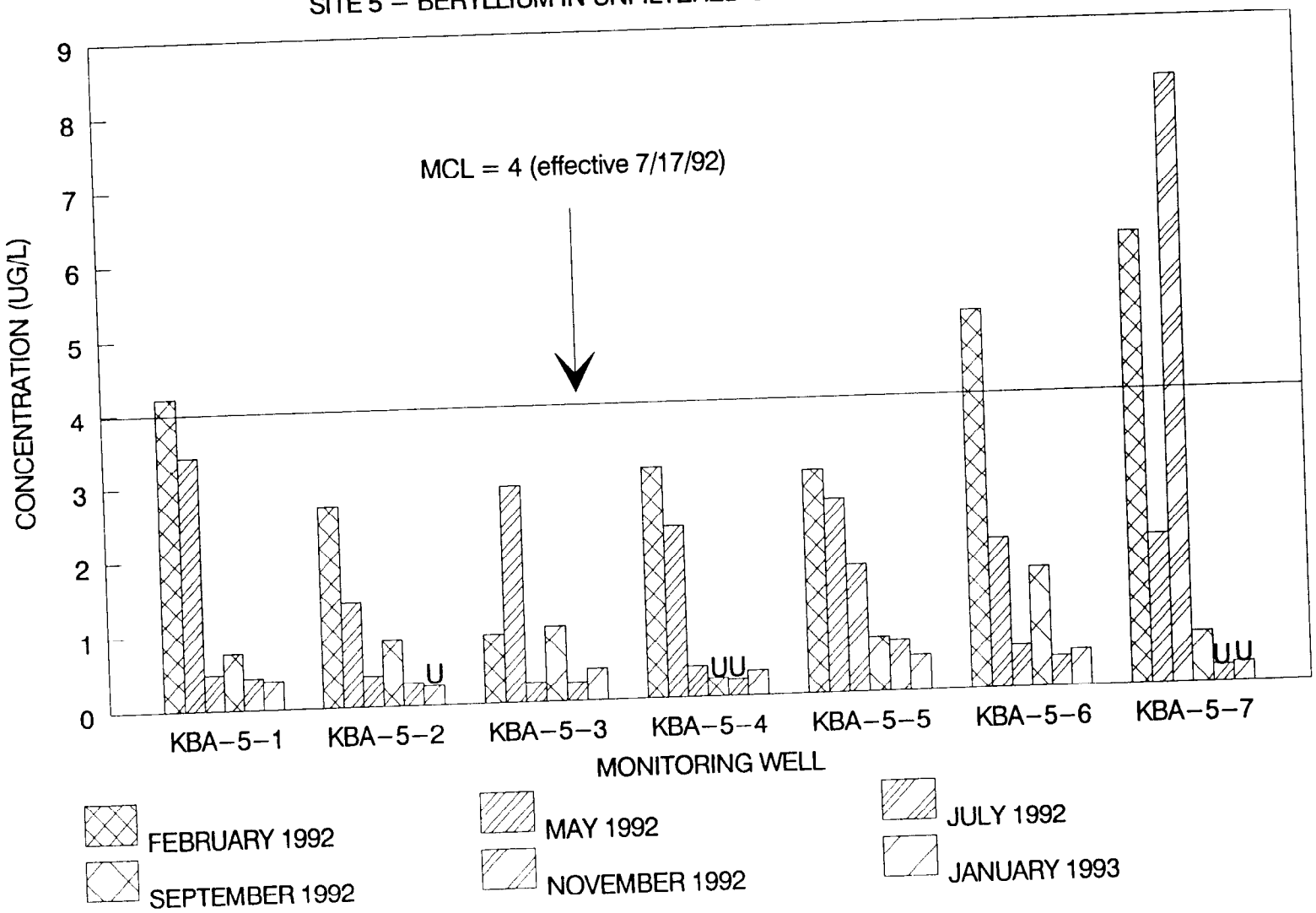
NSB KINGS BAY, GEORGIA

SITE 5 – BERYLLIUM IN FILTERED GROUNDWATER SAMPLES



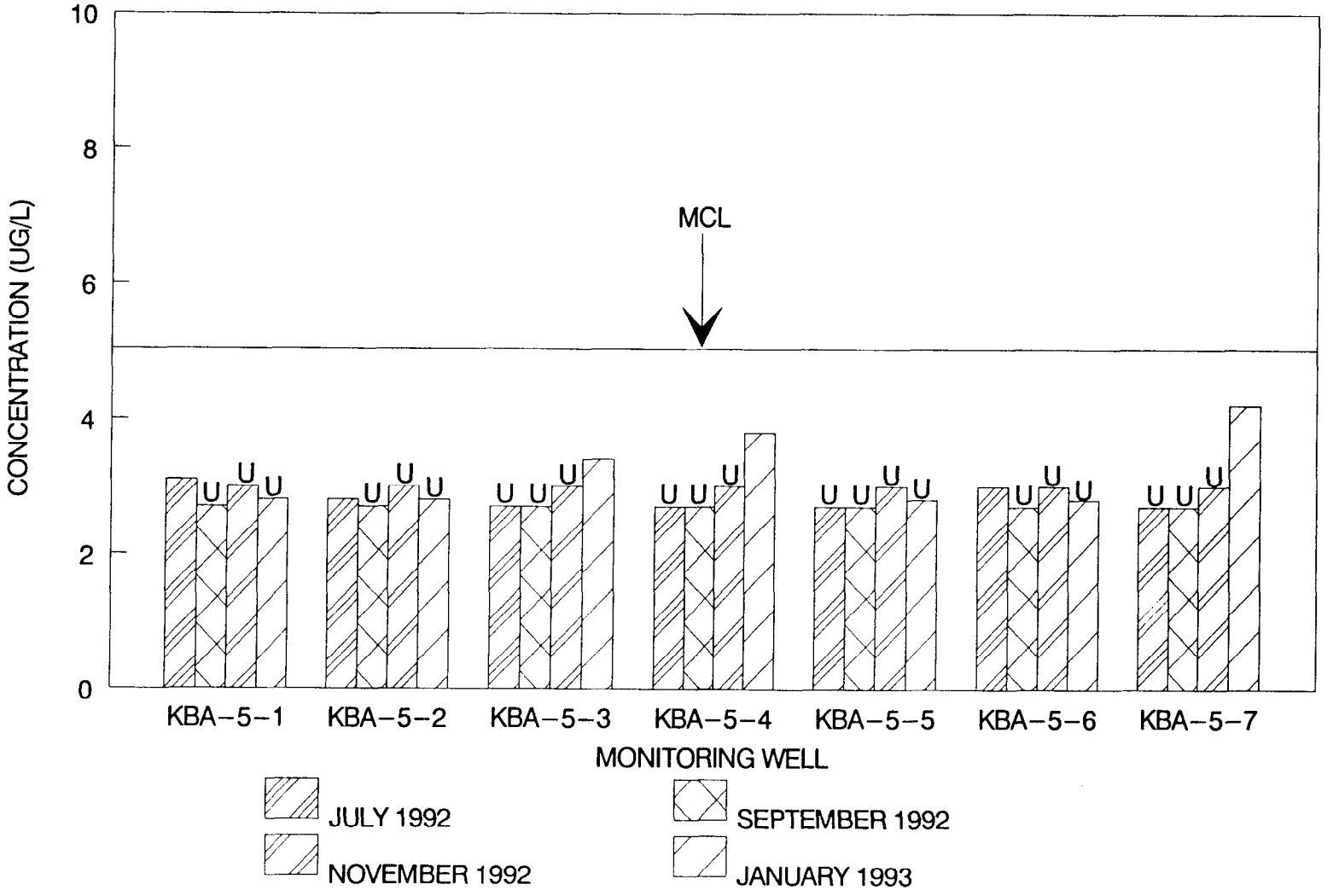
NSB KINGS BAY, GEORGIA

SITE 5 – BERYLLIUM IN UNFILTERED GROUNDWATER SAMPLES



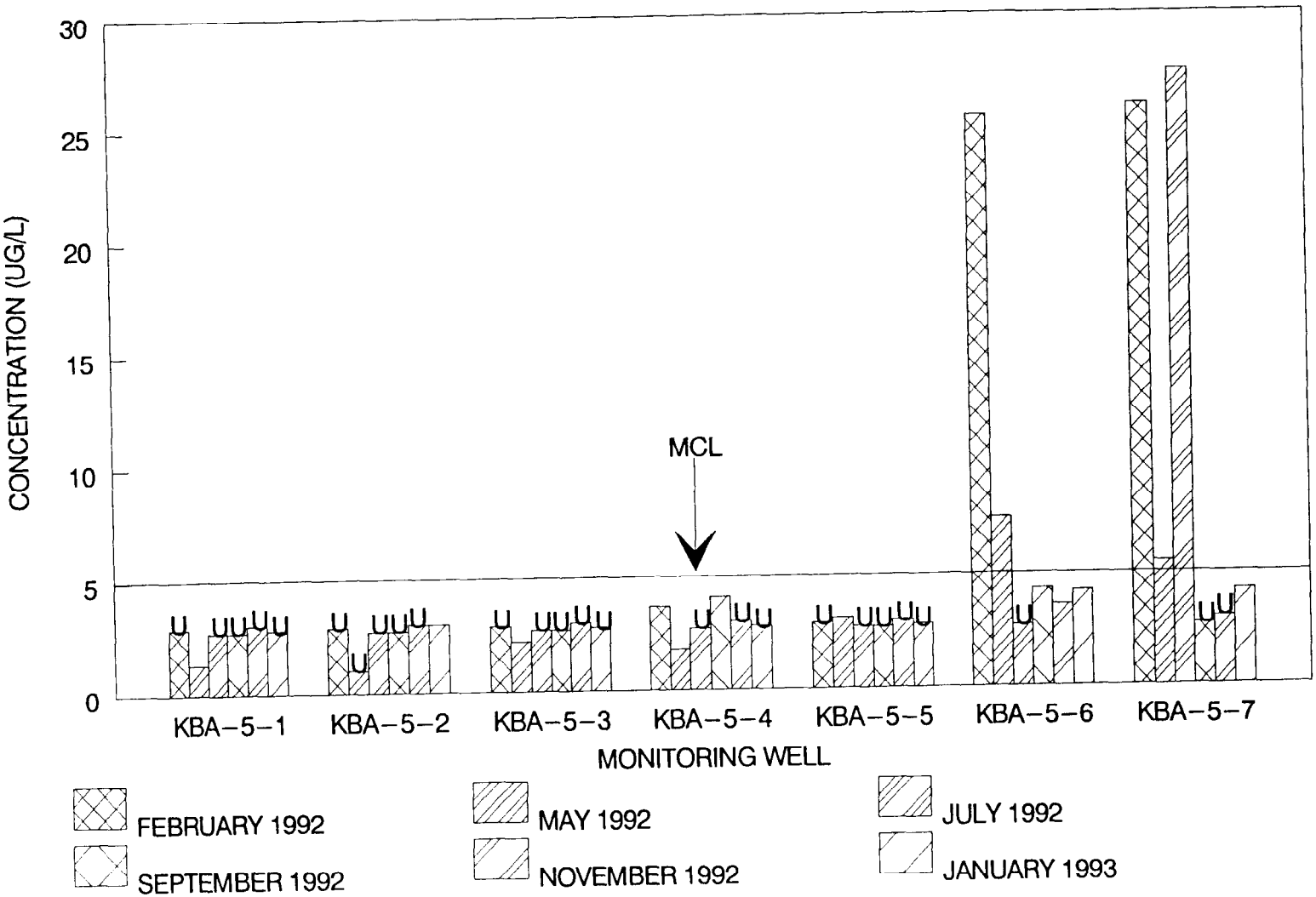
NSB KINGS BAY, GEORGIA

SITE 5 – CADMIUM IN FILTERED GROUNDWATER SAMPLES



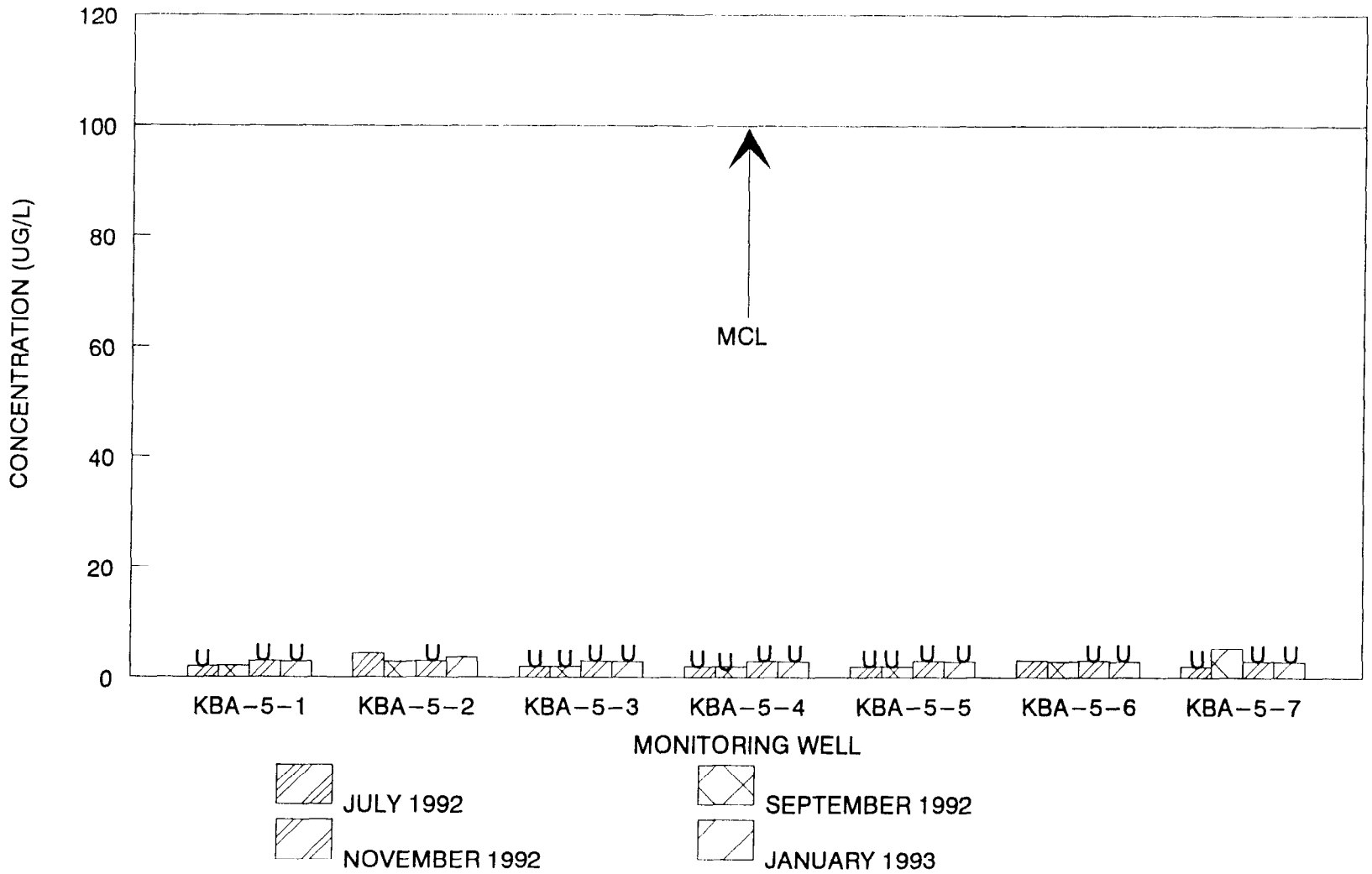
NSB KINGS BAY, GEORGIA

SITE 5 – CADMIUM IN UNFILTERED GROUNDWATER SAMPLES



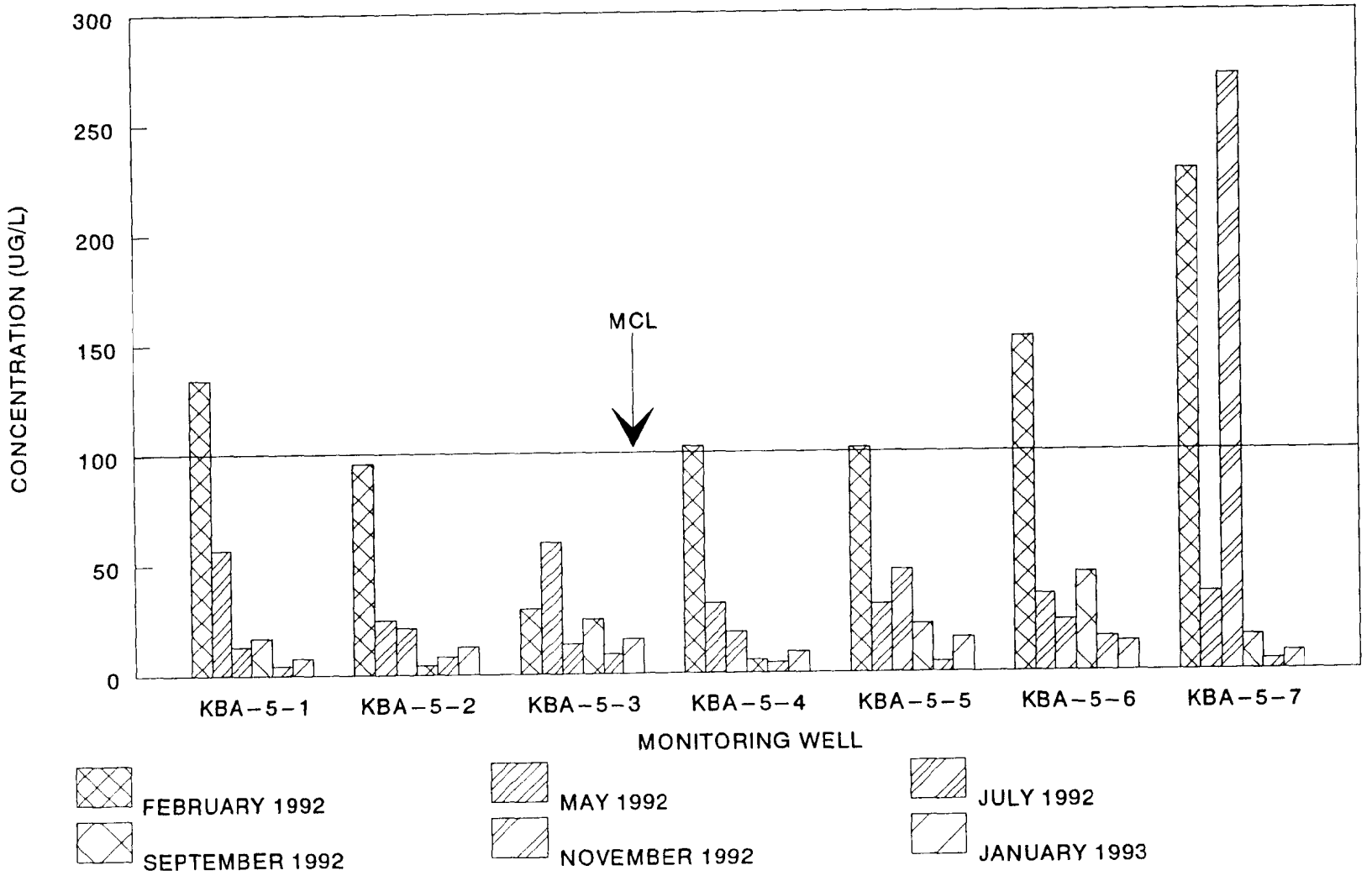
NSB KINGS BAY, GEORGIA

SITE 5 – CHROMIUM IN FILTERED GROUNDWATER SAMPLES



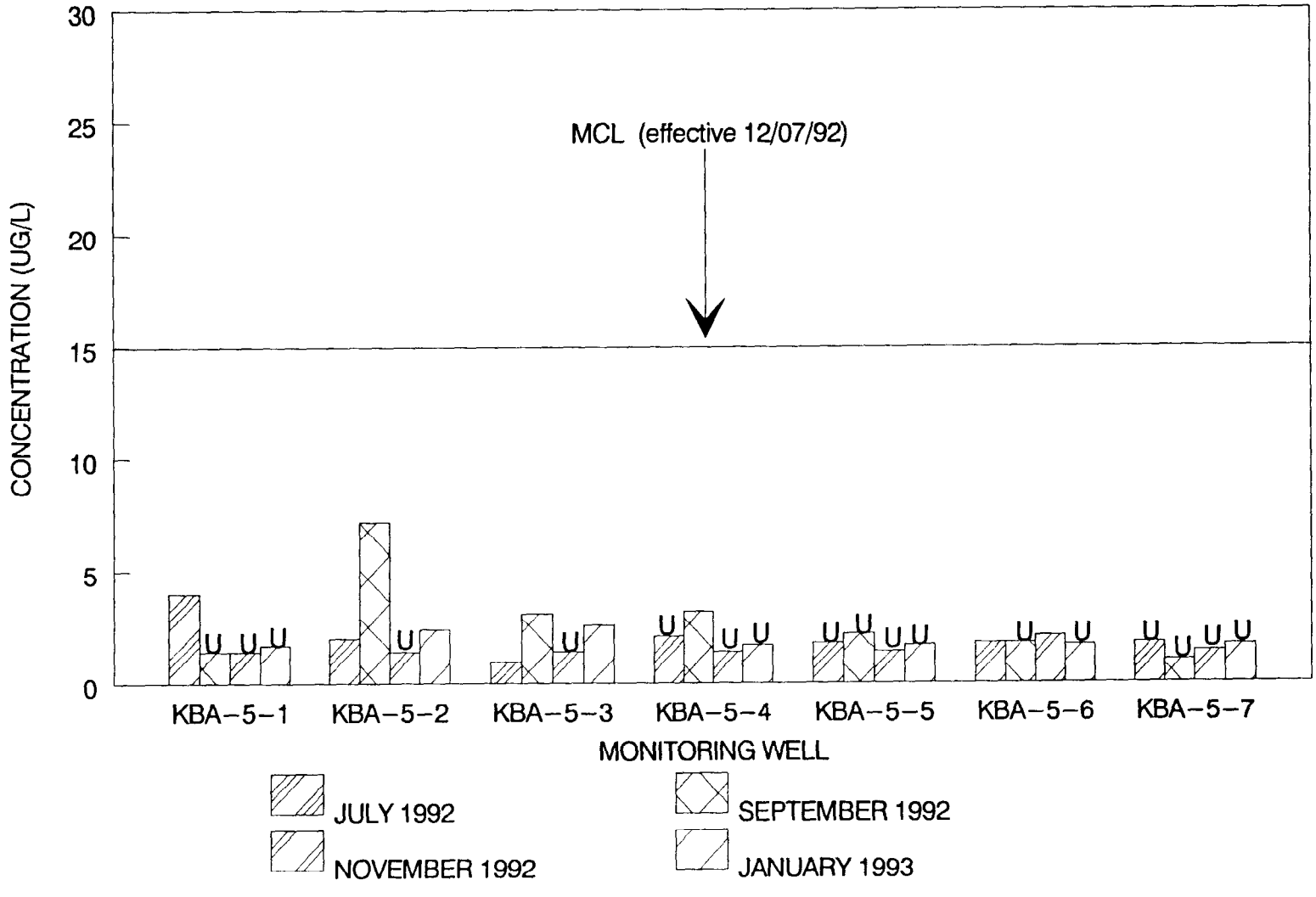
## NSB KINGS BAY, GEORGIA

### SITE 5 – CHROMIUM IN UNFILTERED GROUNDWATER SAMPLES



NSB KINGS BAY, GEORGIA

SITE 5 – LEAD IN FILTERED GROUNDWATER SAMPLES



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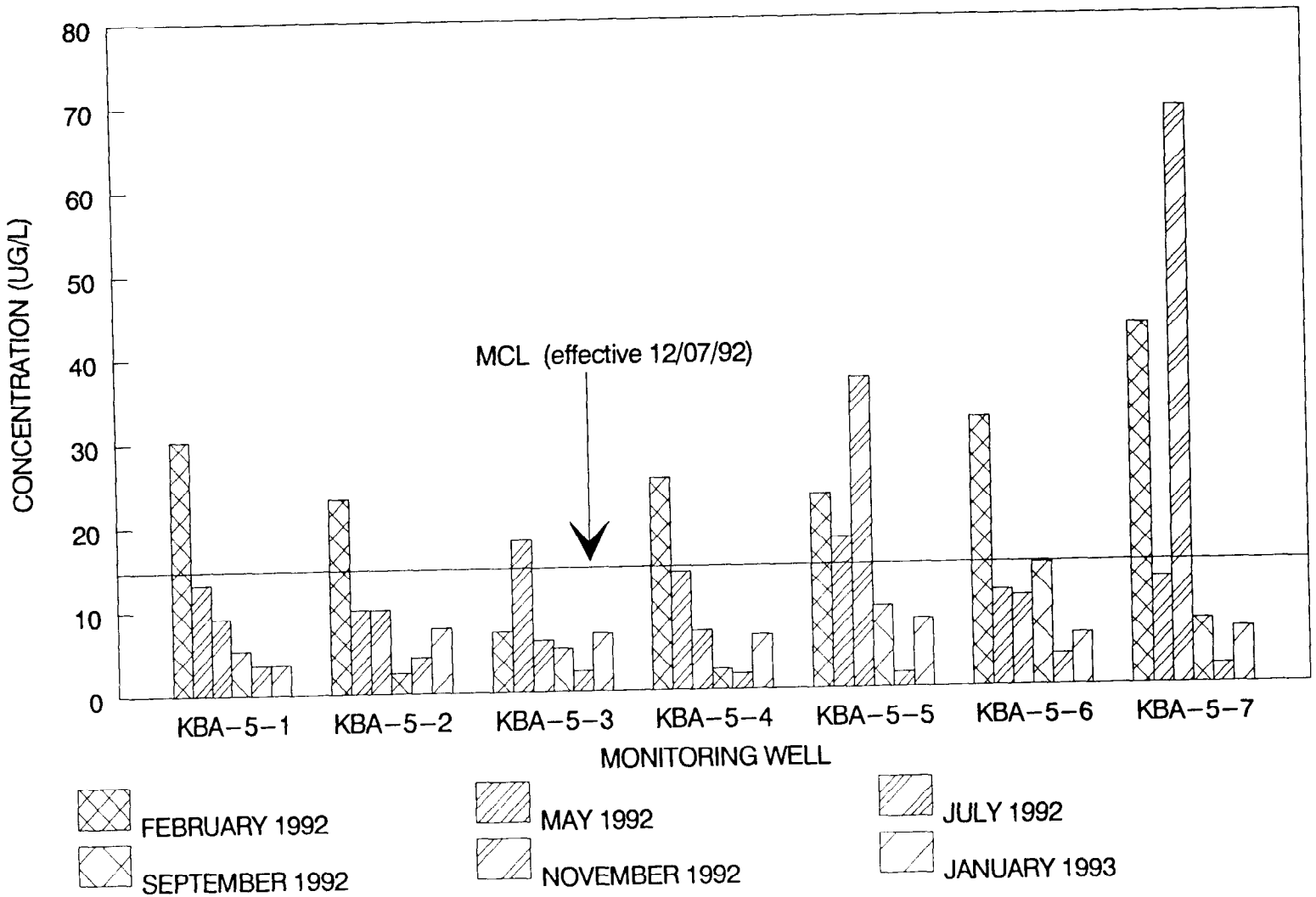
SITE 5 – LEAD IN UNFILTERED GROUNDWATER SAMPLES



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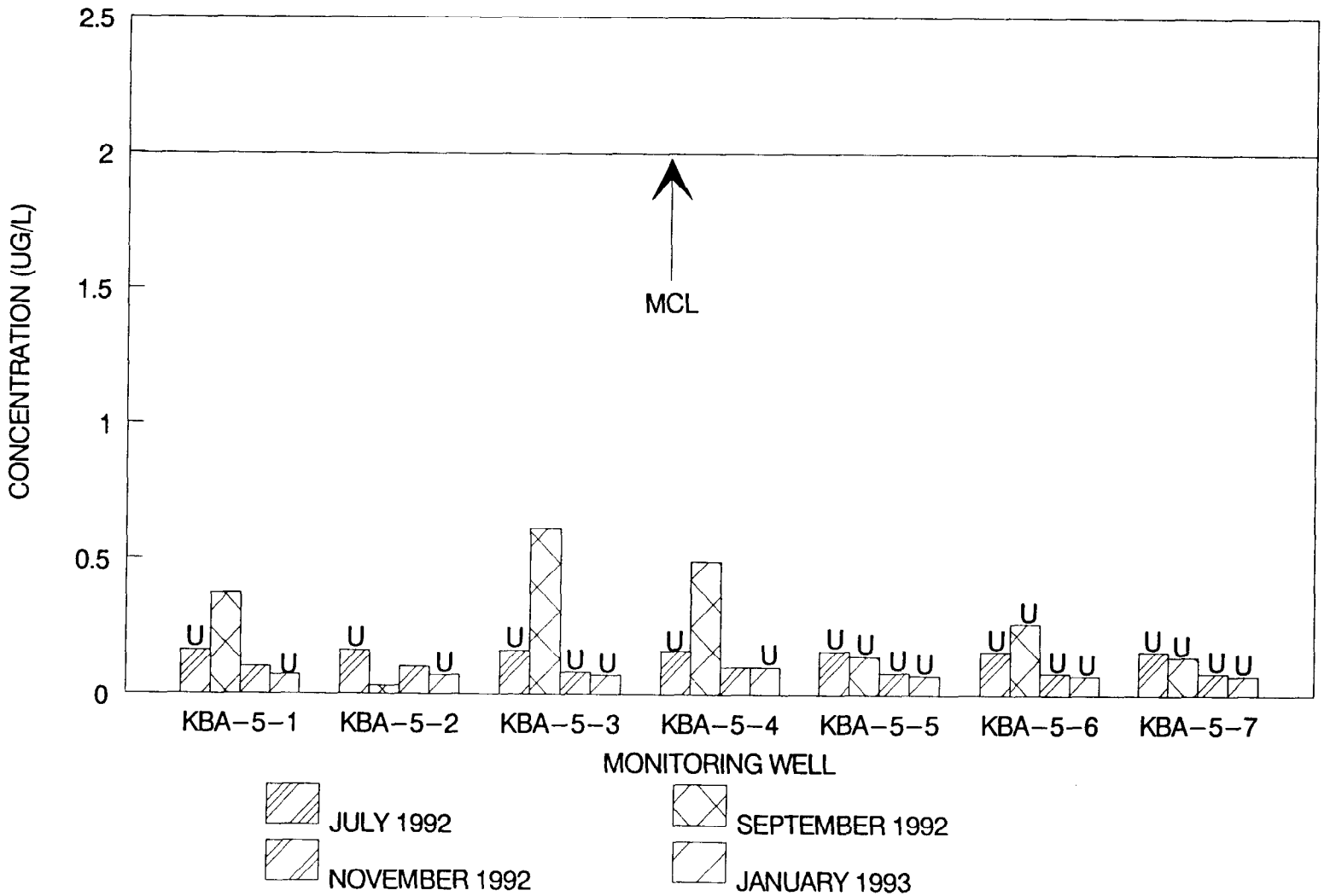
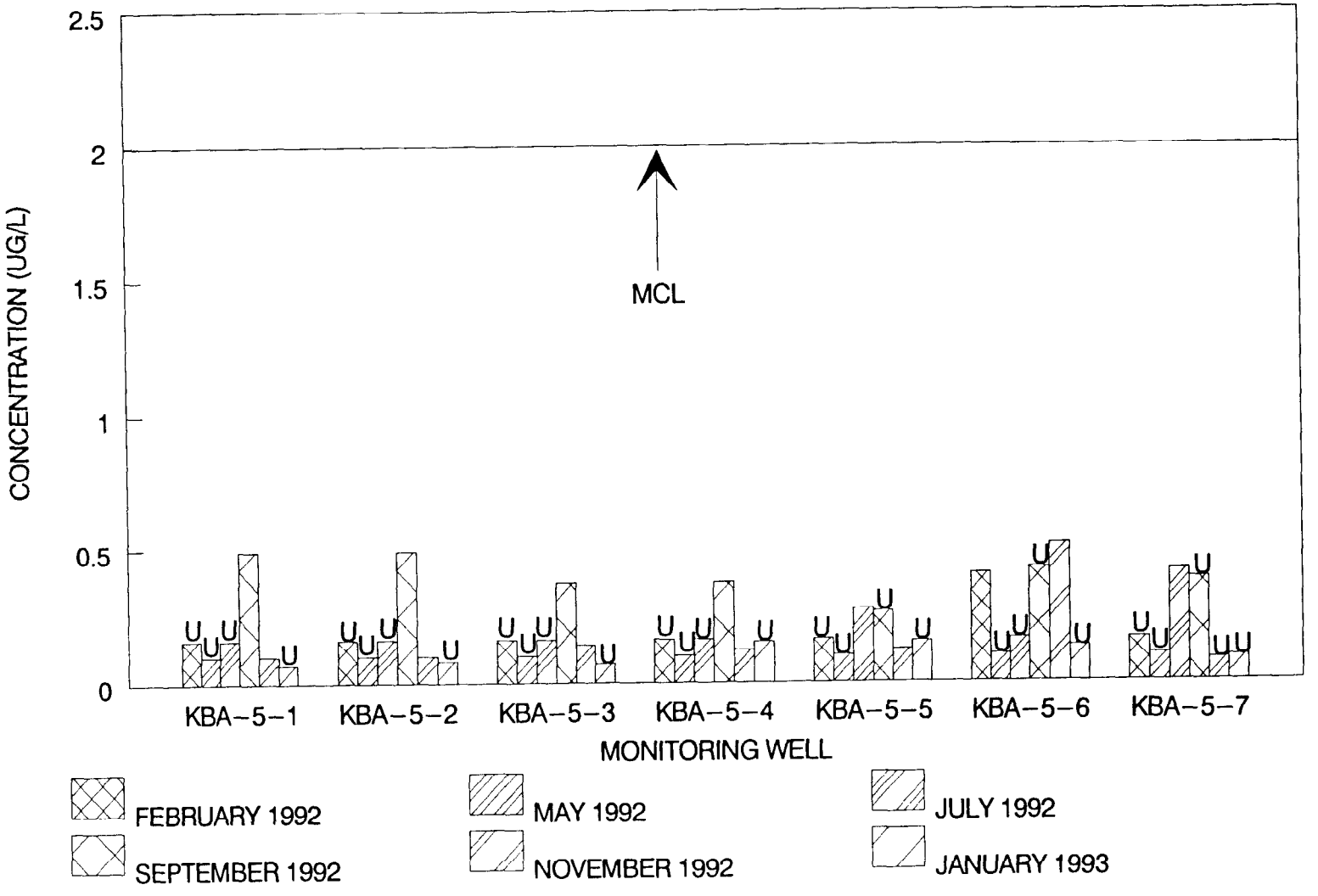
SITE 5 – MERCURY IN FILTERED GROUNDWATER SAMPLES



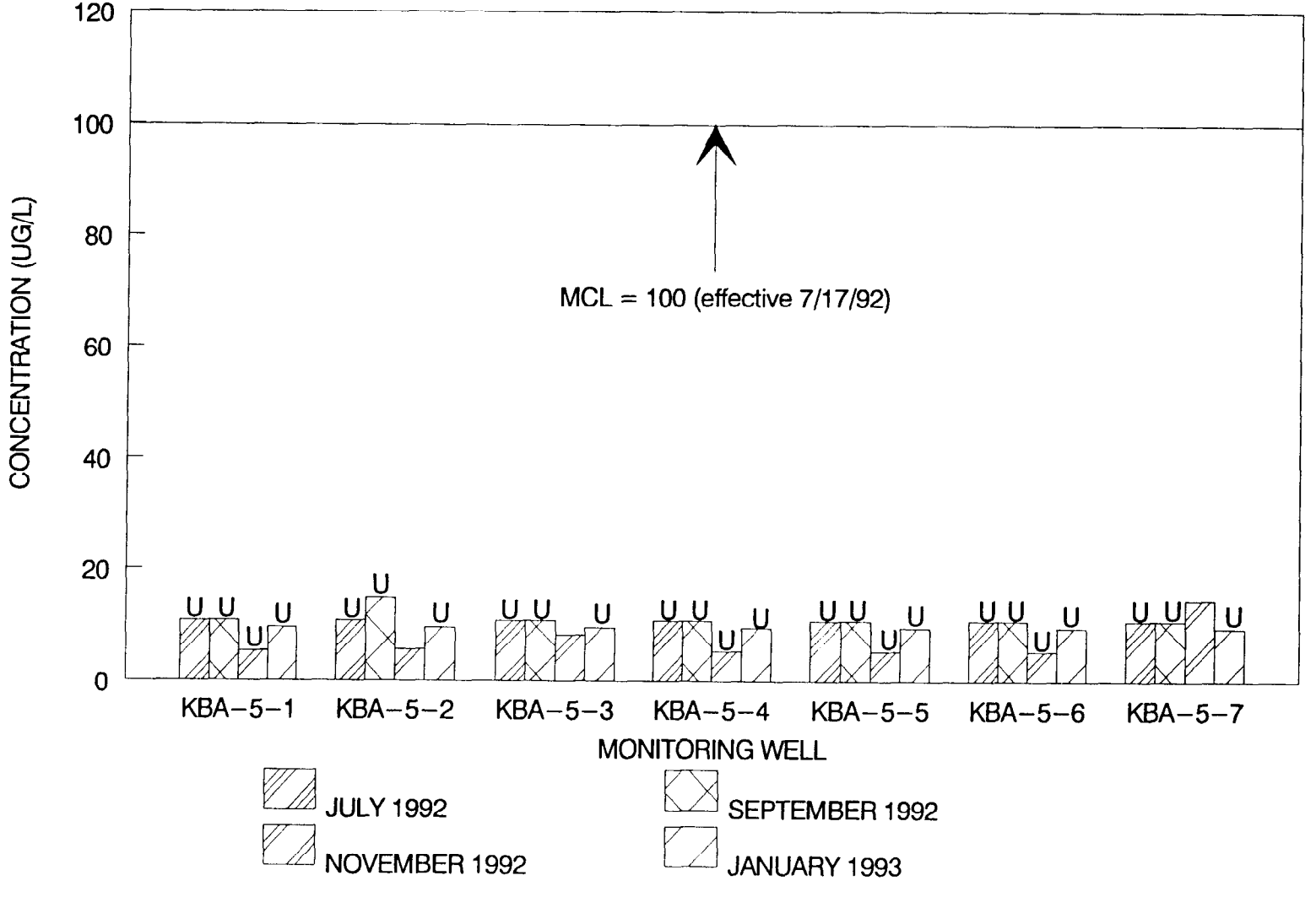
NSB KINGS BAY, GEORGIA

SITE 5 – MERCURY IN UNFILTERED GROUNDWATER SAMPLES



NSB KINGS BAY, GEORGIA

SITE 5 – NICKEL IN FILTERED GROUNDWATER SAMPLES



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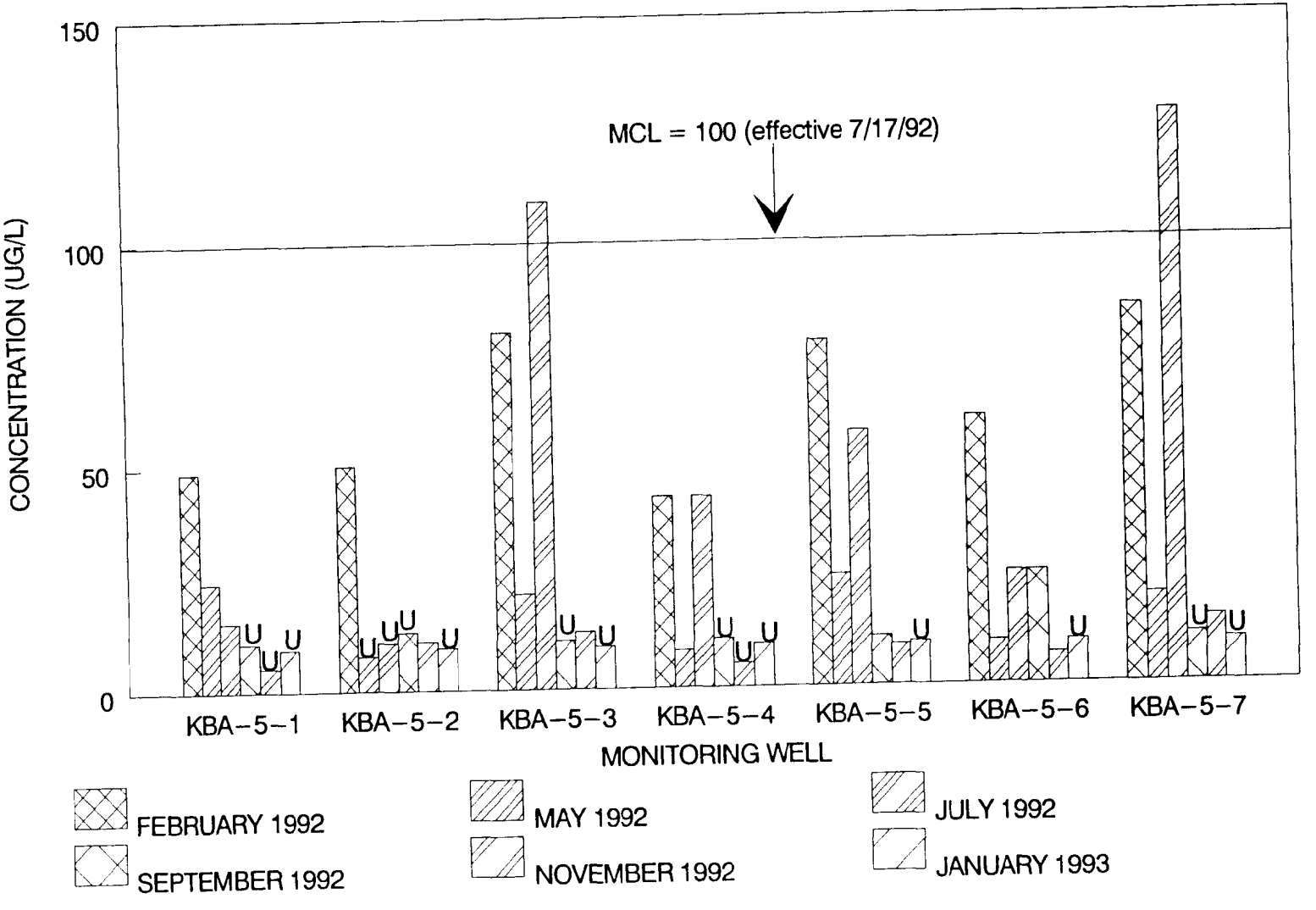
SITE 5 – NICKEL IN UNFILTERED GROUNDWATER SAMPLES



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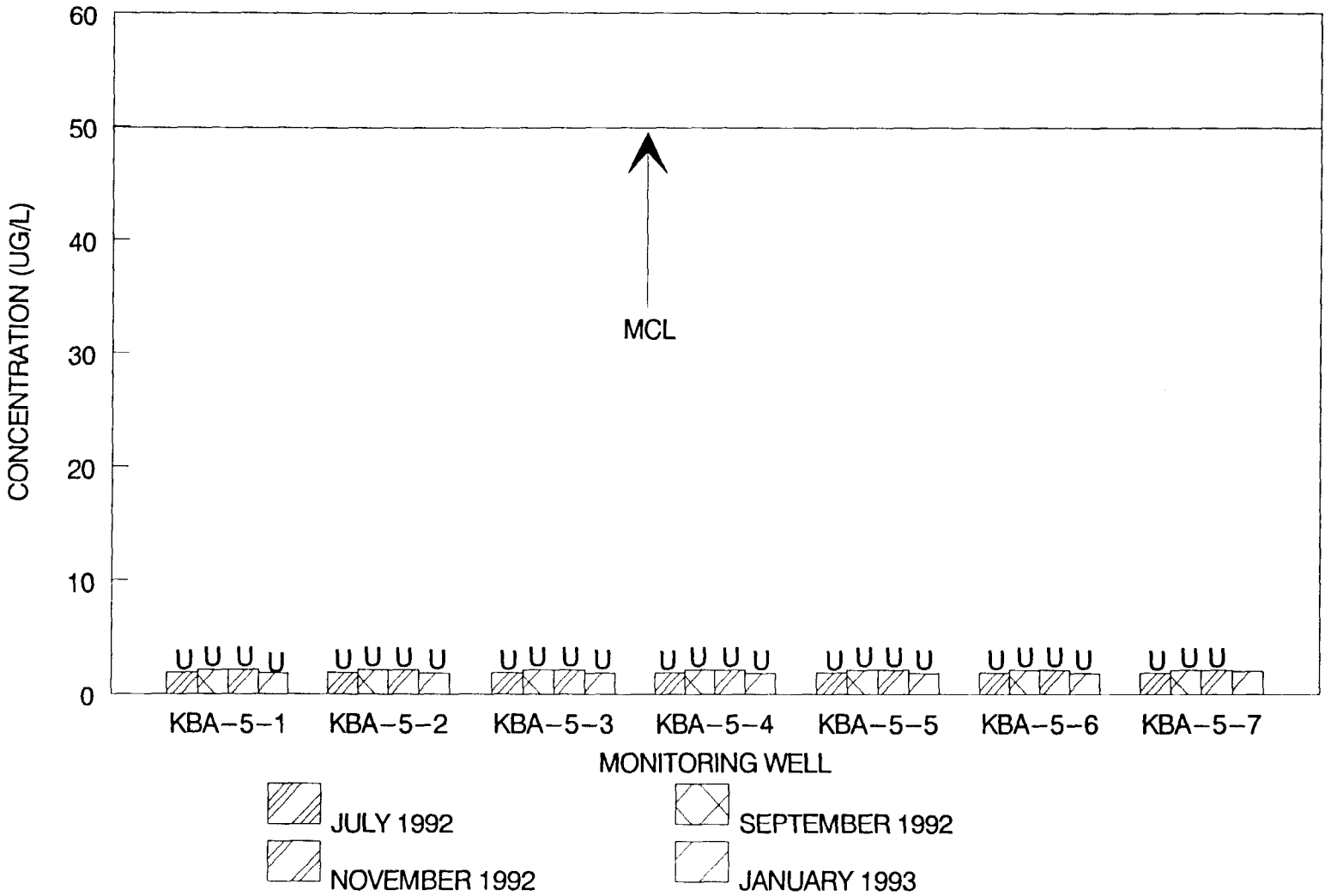
SITE 5 – SELENIUM IN FILTERED GROUNDWATER SAMPLES



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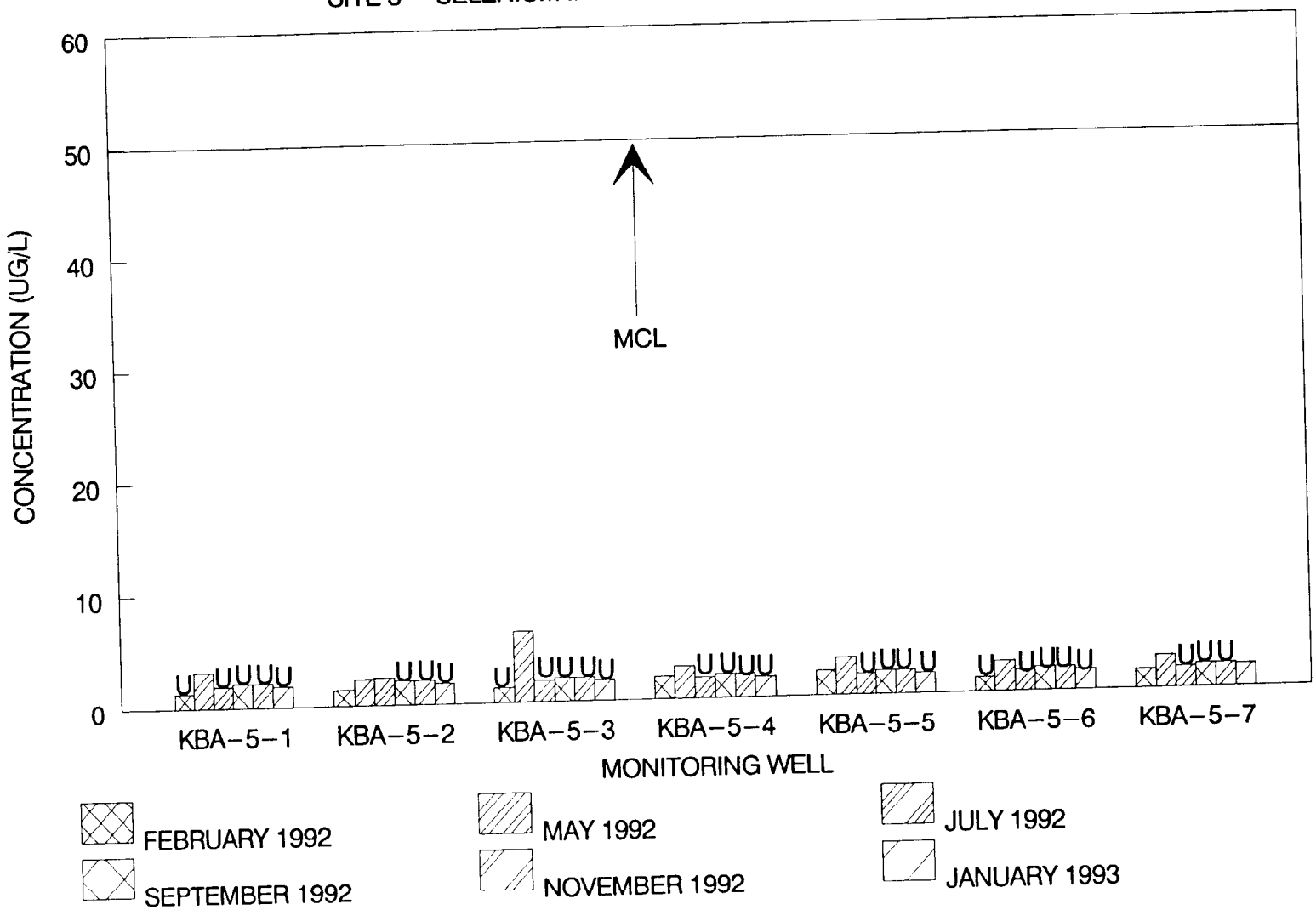
SITE 5 – SELENIUM IN UNFILTERED GROUNDWATER SAMPLES



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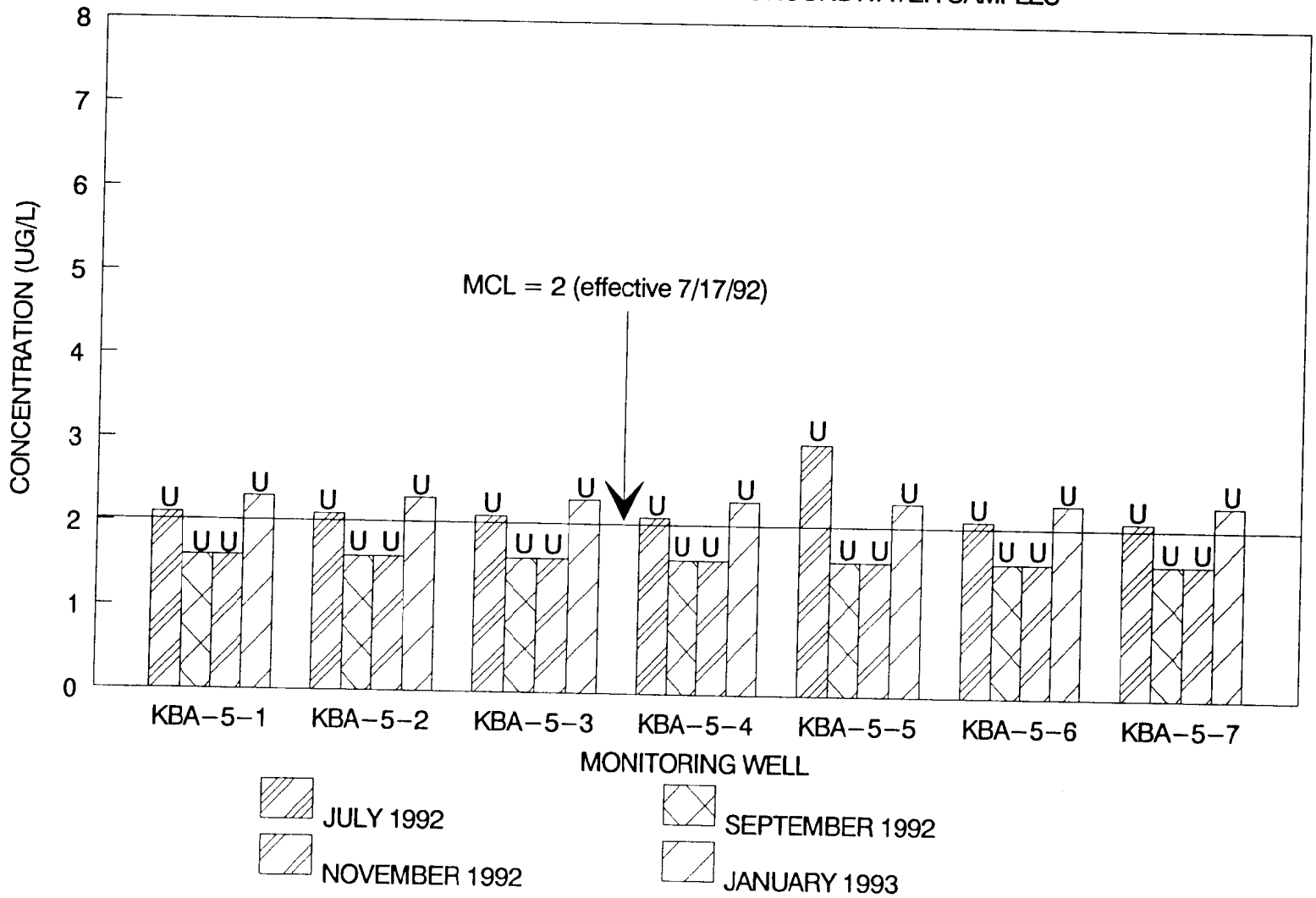

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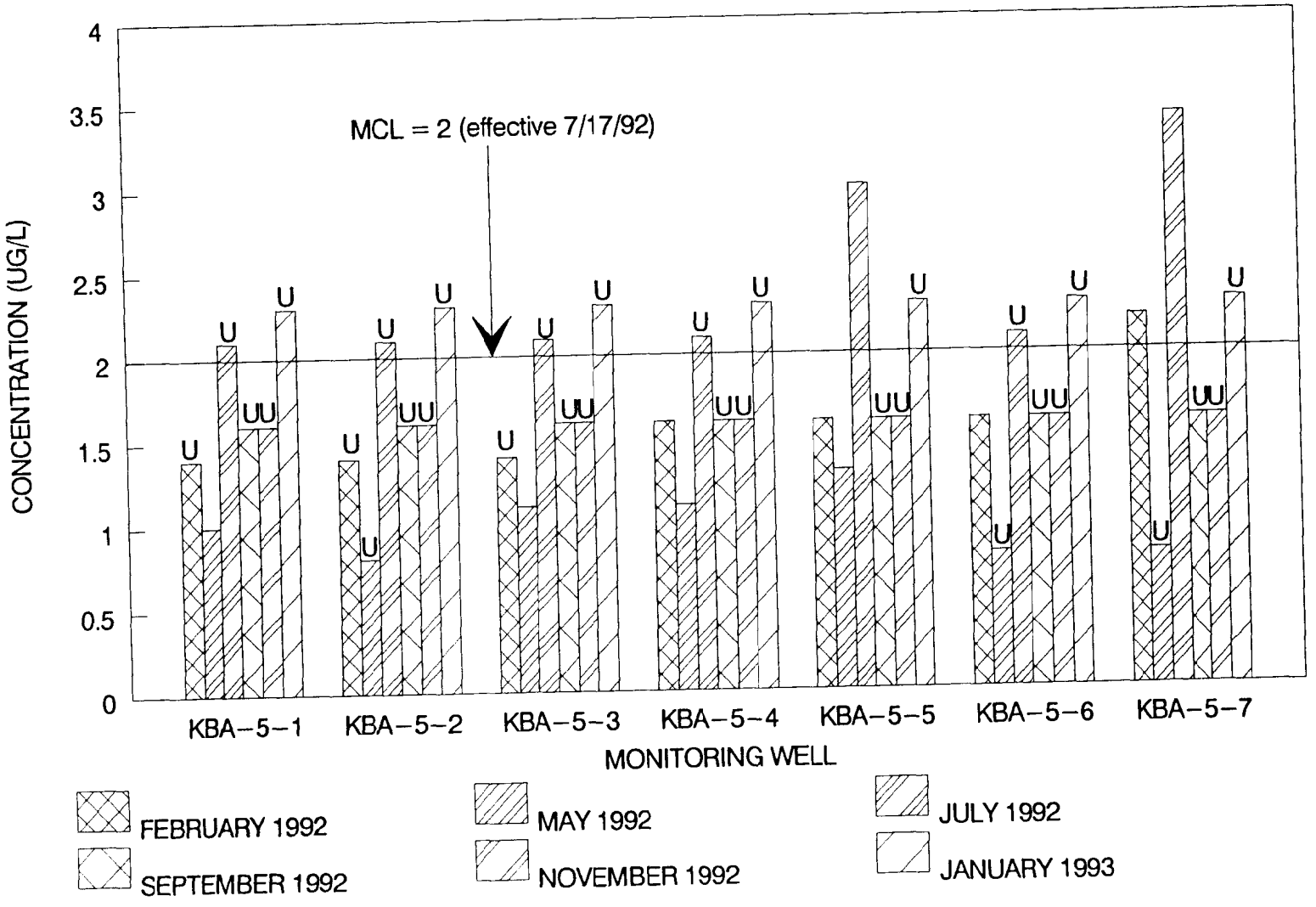
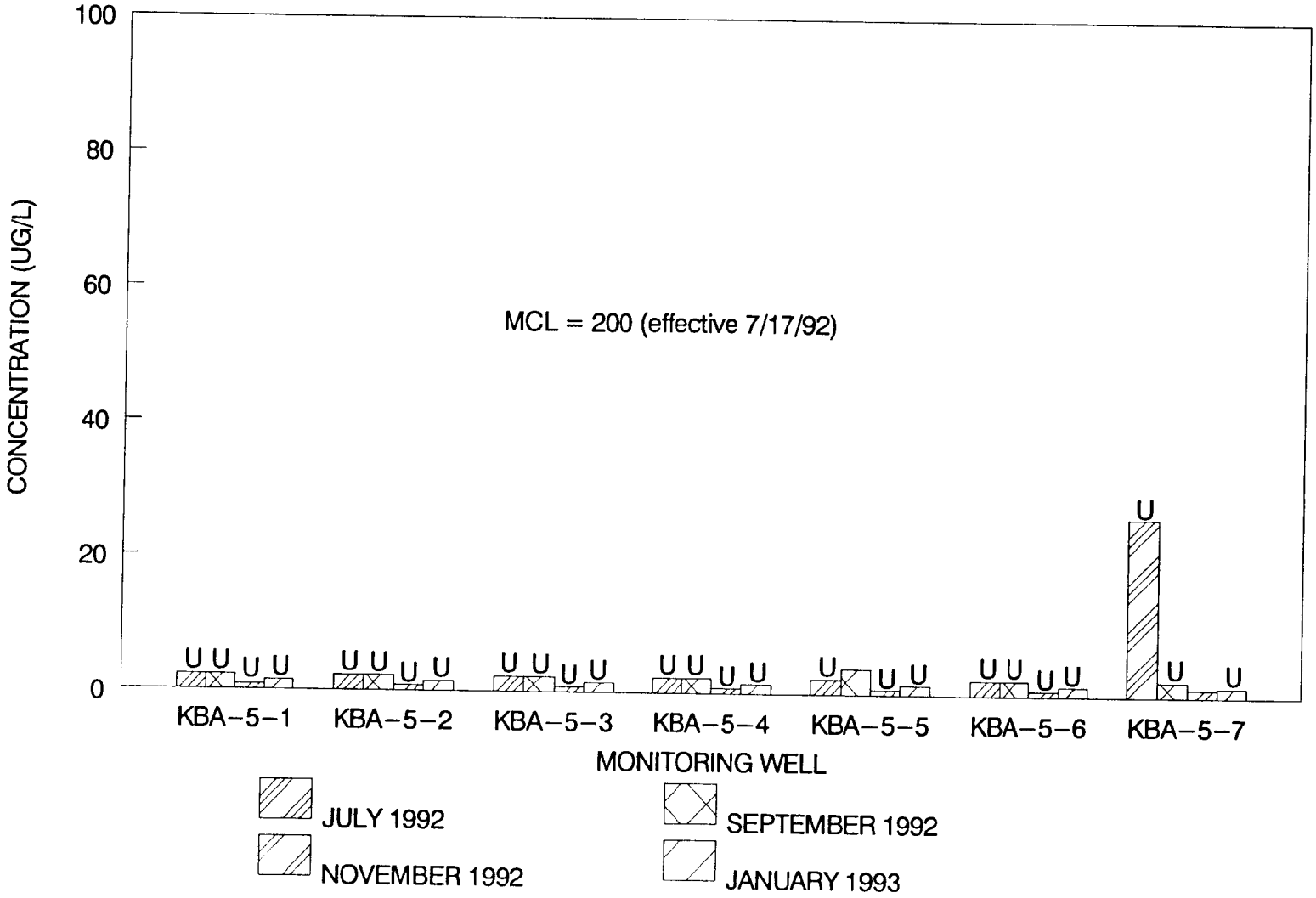


NSB KINGS BAY, GEORGIA

SITE 5 – CYANIDE IN FILTERED GROUNDWATER SAMPLES



NSB KINGS BAY, GEORGIA

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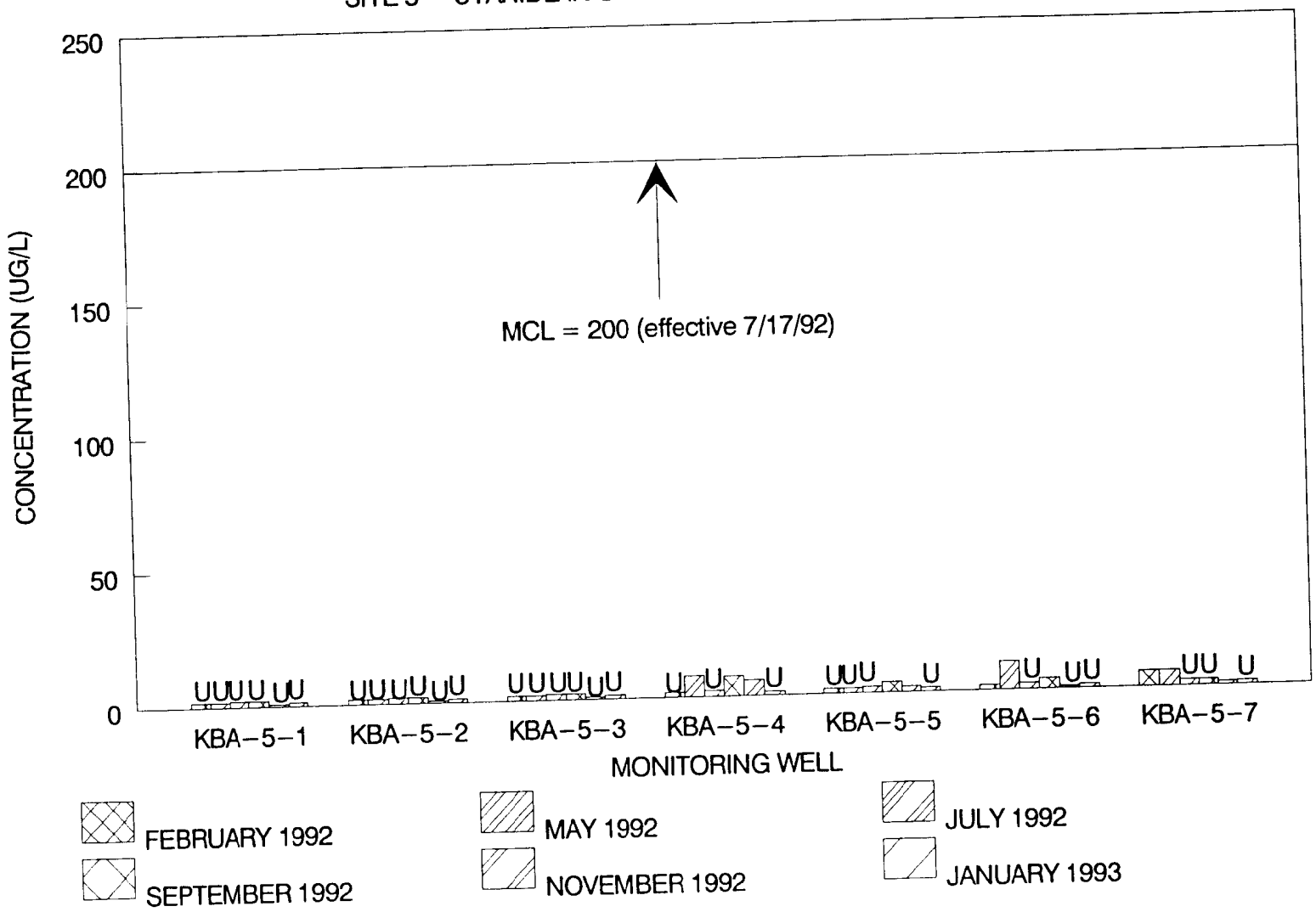
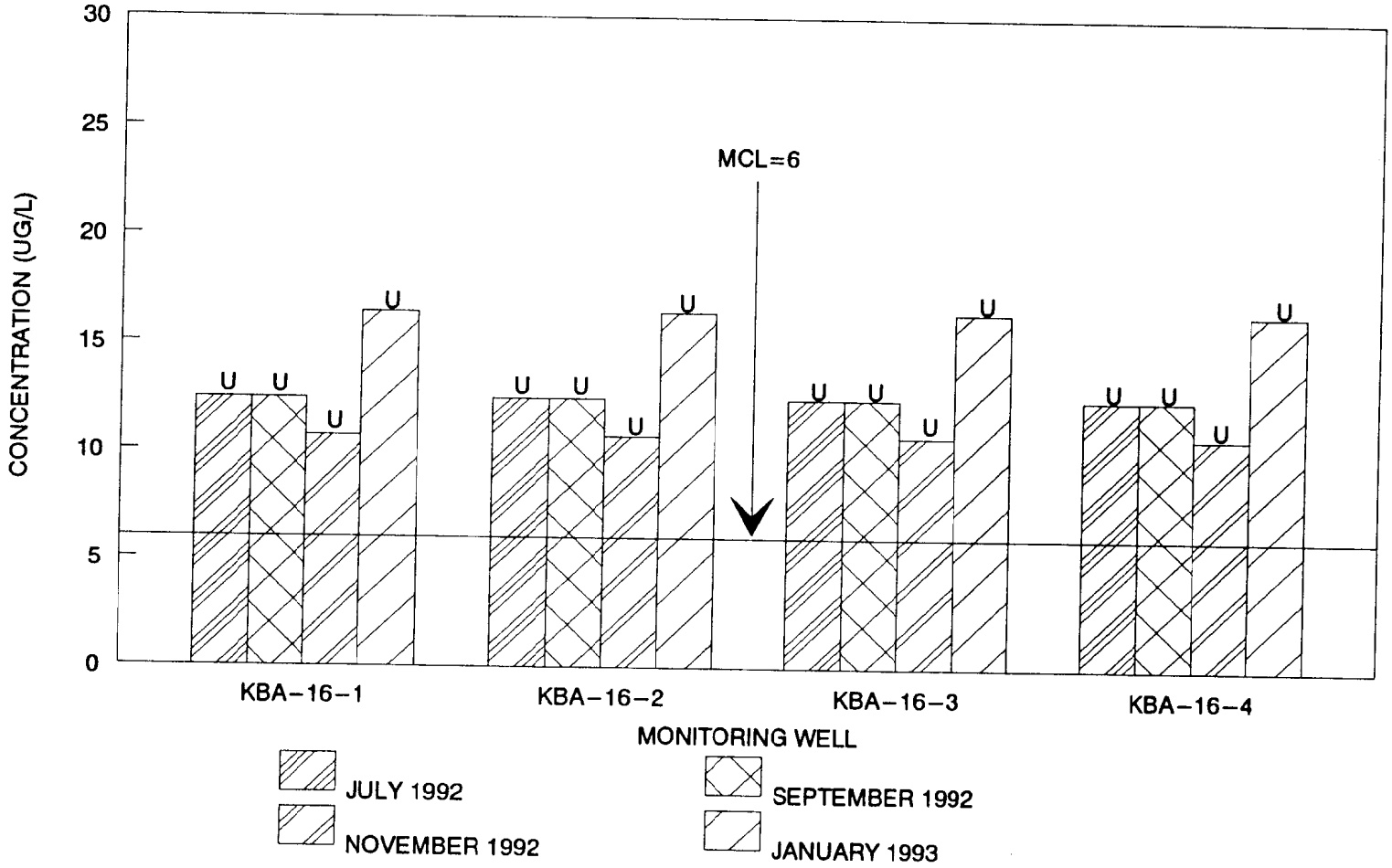


# Site 16

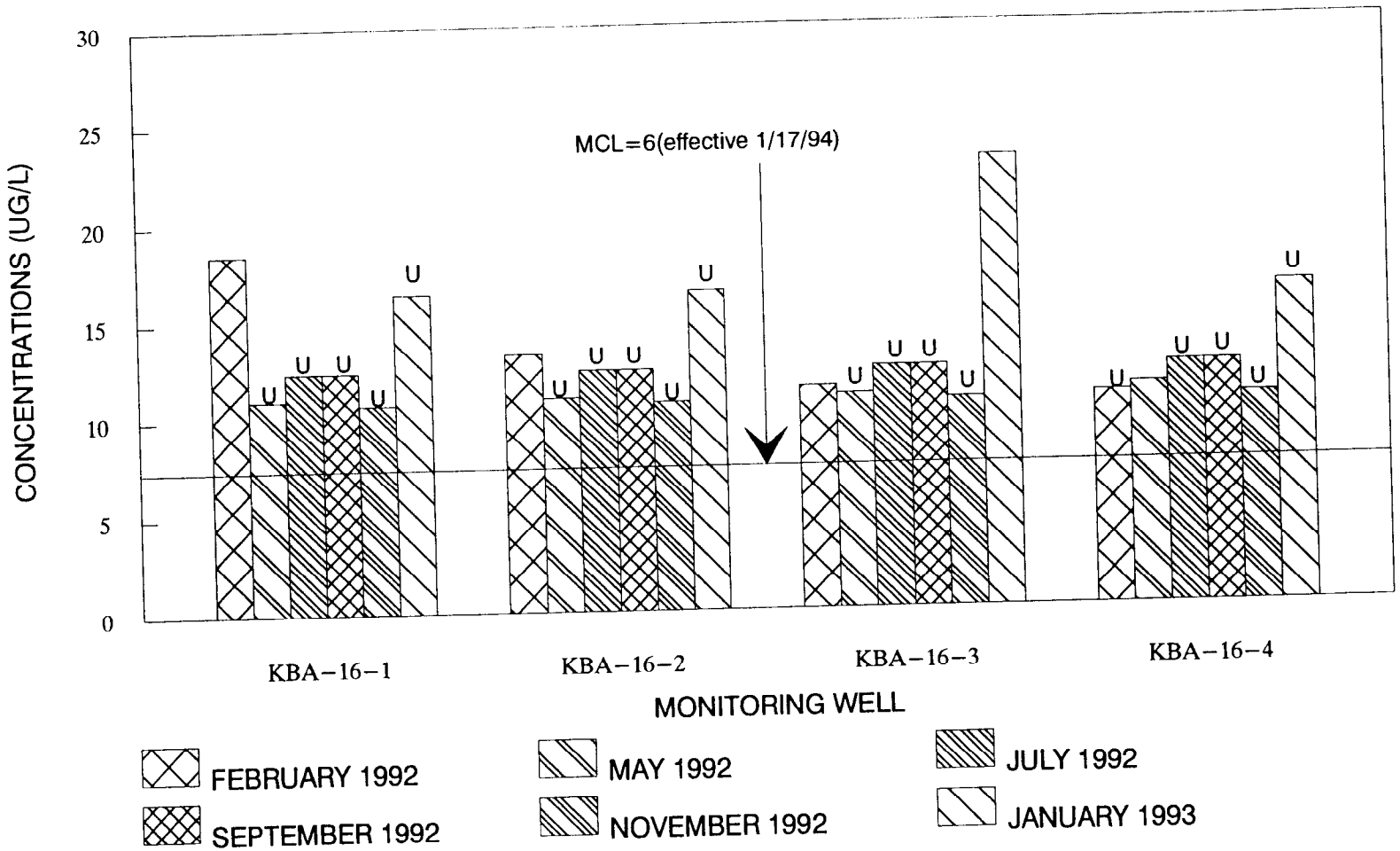
NSB KINGS BAY, GEORGIA

SITE 16 – ANTIMONY IN FILTERED GROUNDWATER SAMPLES



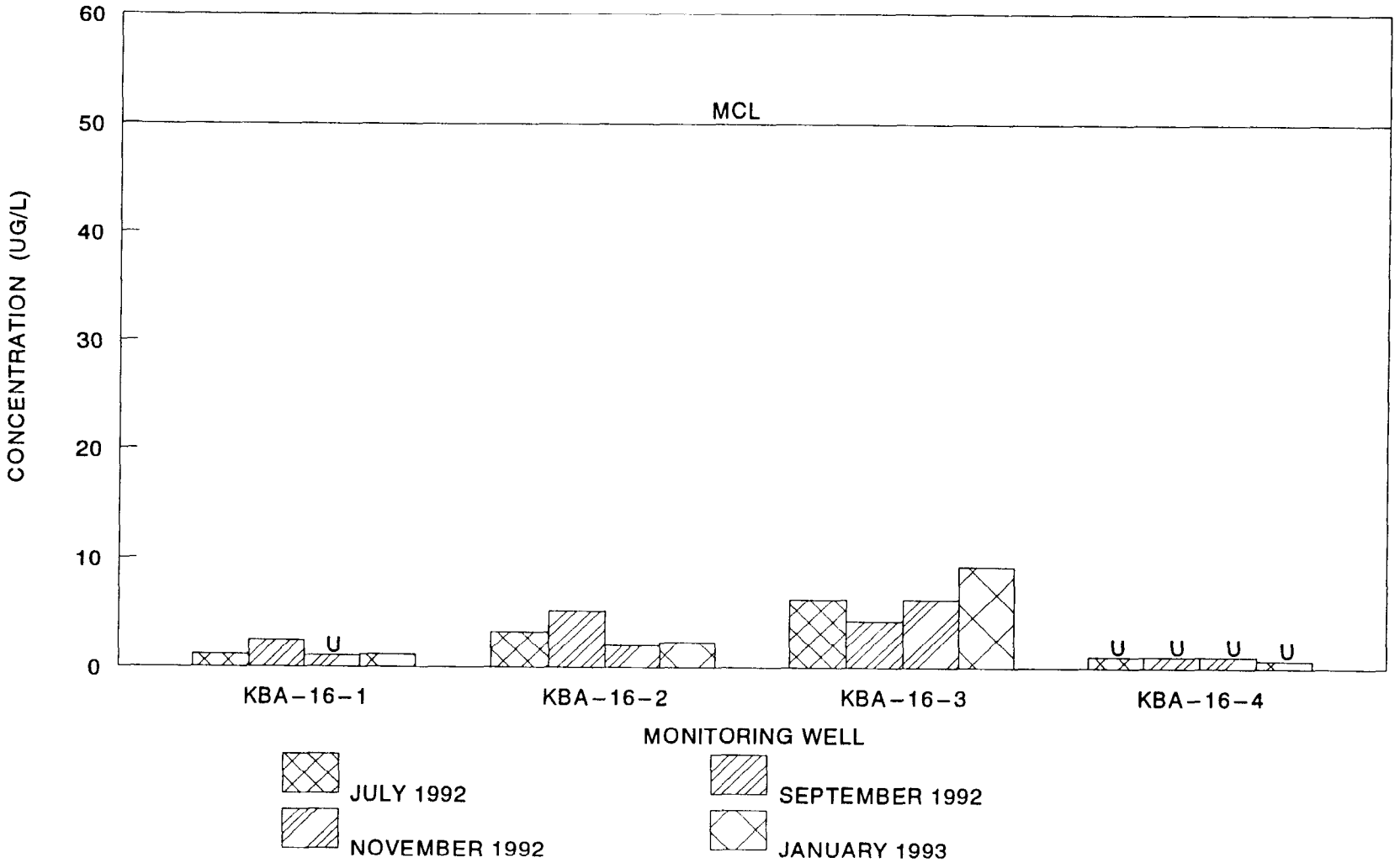
NSB KINGS BAY, GEORGIA

SITE 16 –ANTIMONY IN UNFILTERED GROUNDWATER SAMPLES



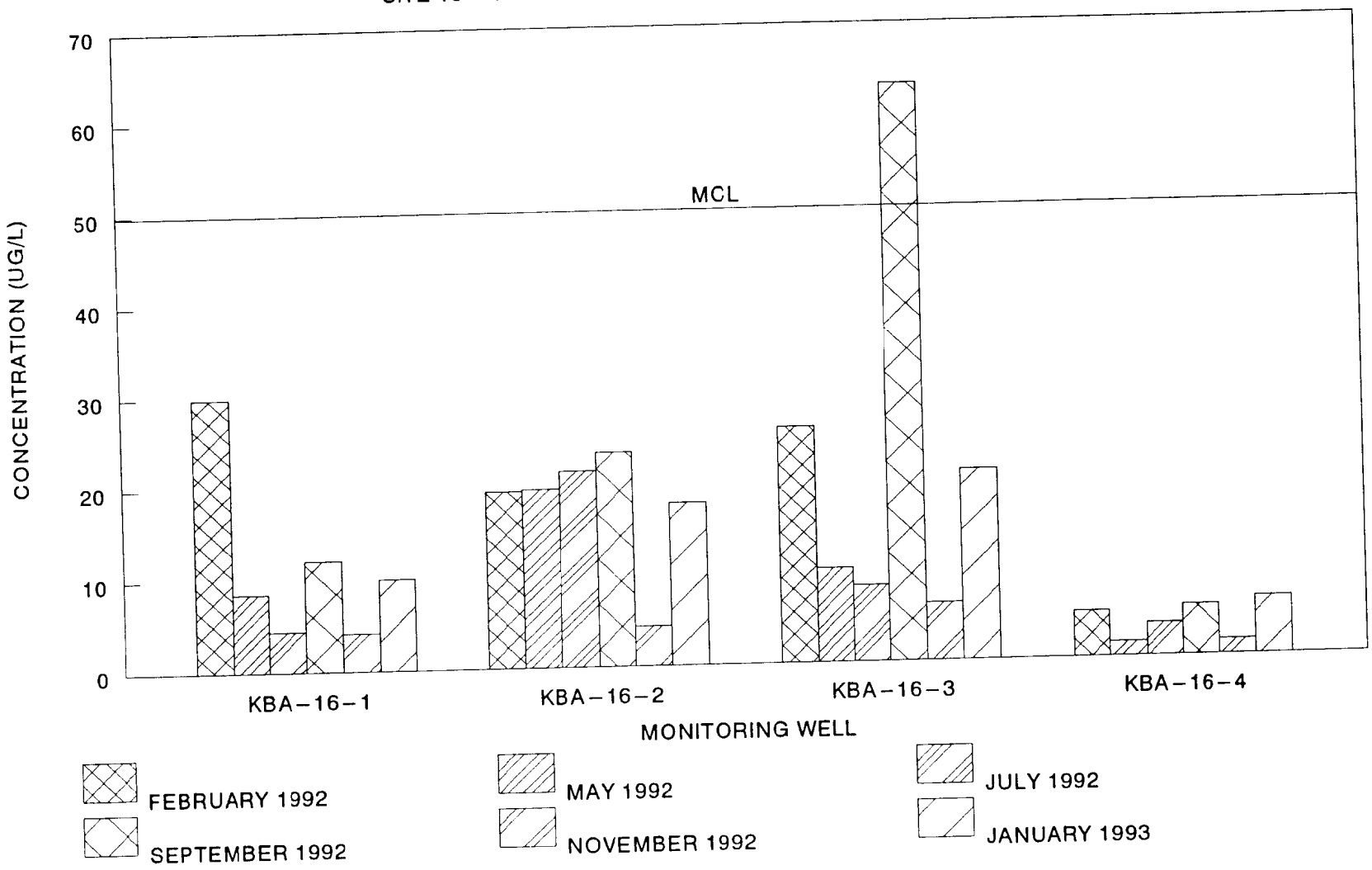
NSB KINGS BAY, GEORGIA

SITE 16 – ARSENIC IN FILTERED GROUNDWATER SAMPLES



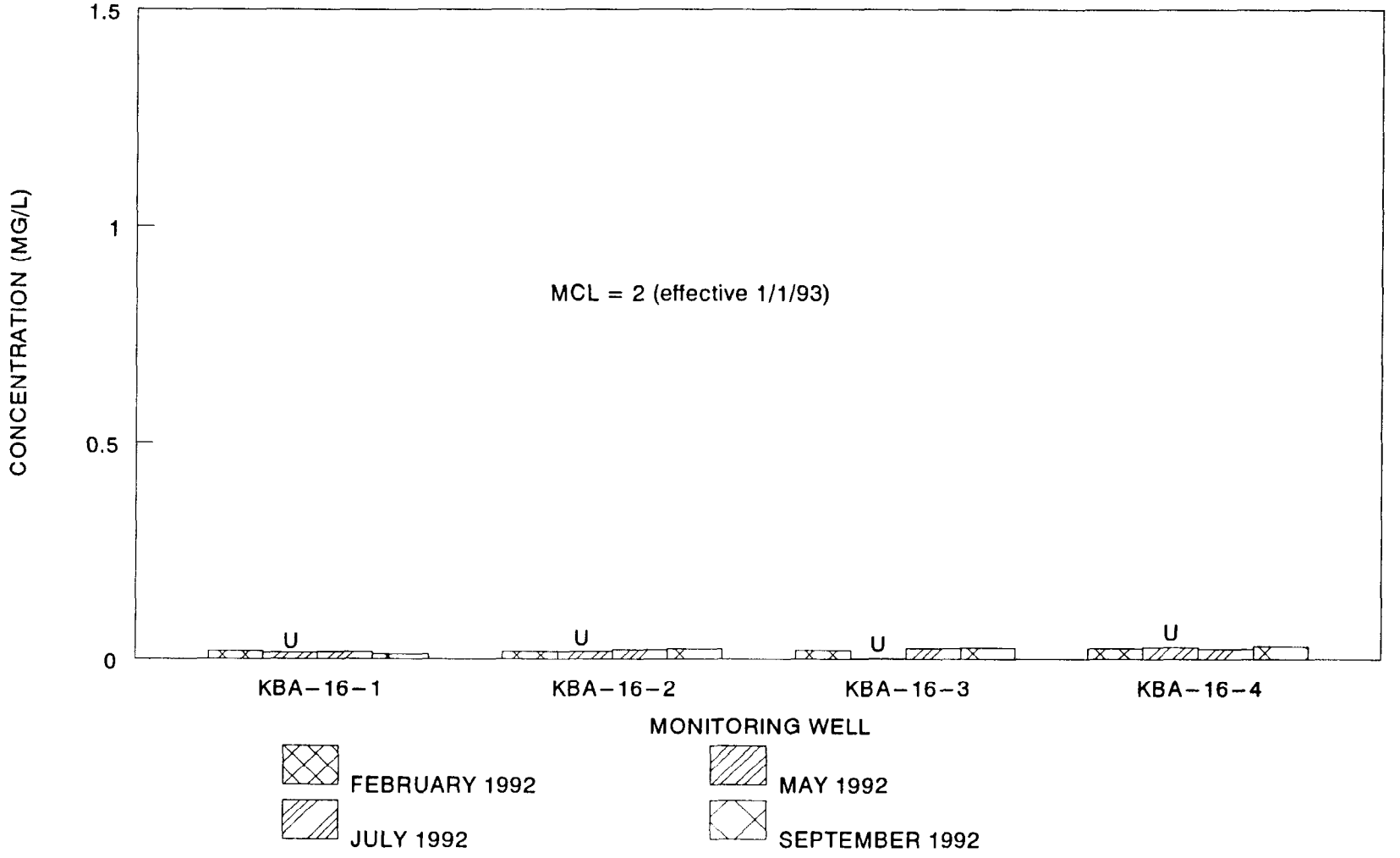
## NSB KINGS BAY, GEORGIA

### SITE 16 – ARSENIC IN UNFILTERED GROUNDWATER SAMPLES



NSB KINGS BAY, GEORGIA

SITE 16 – BARIUM IN FILTERED GROUNDWATER SAMPLES



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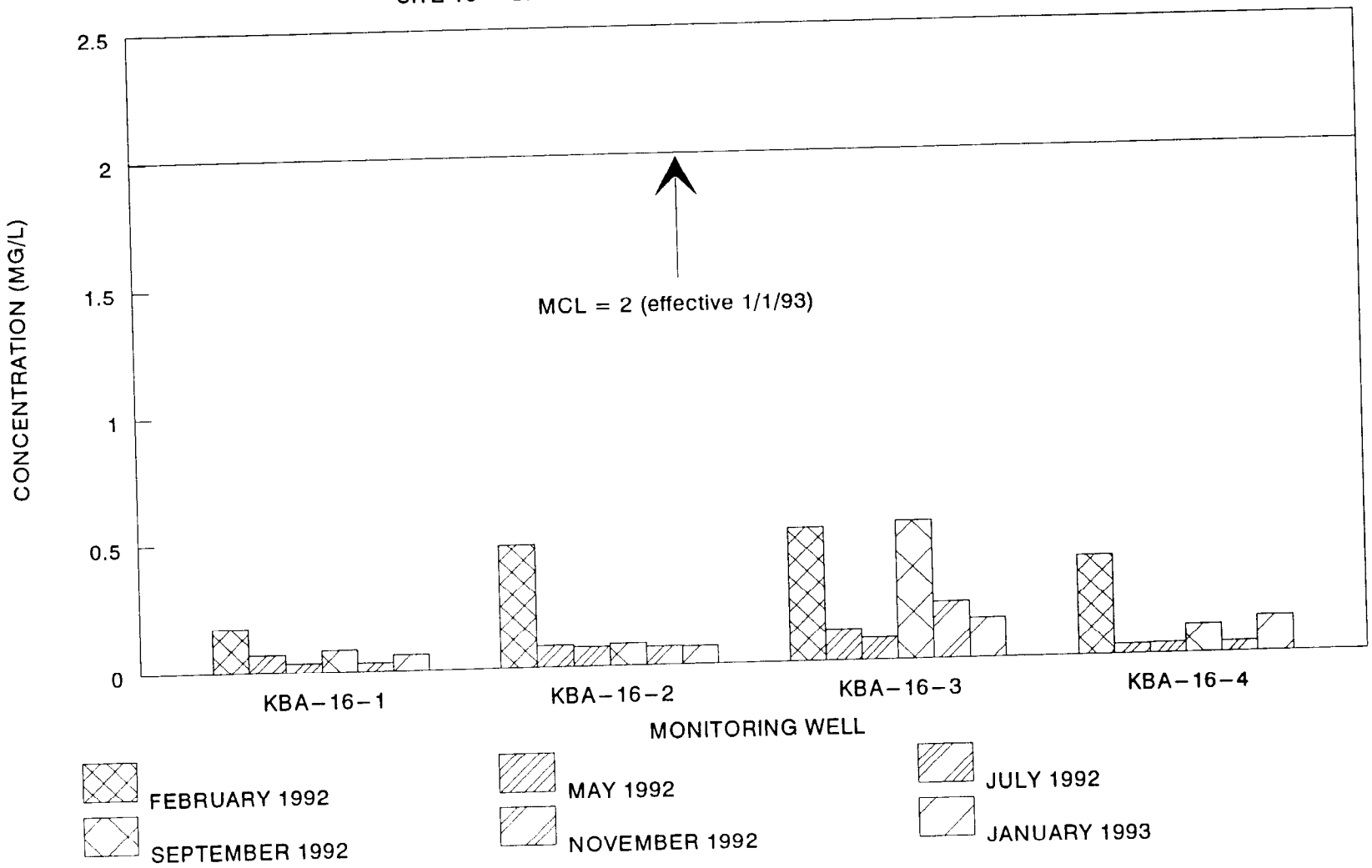
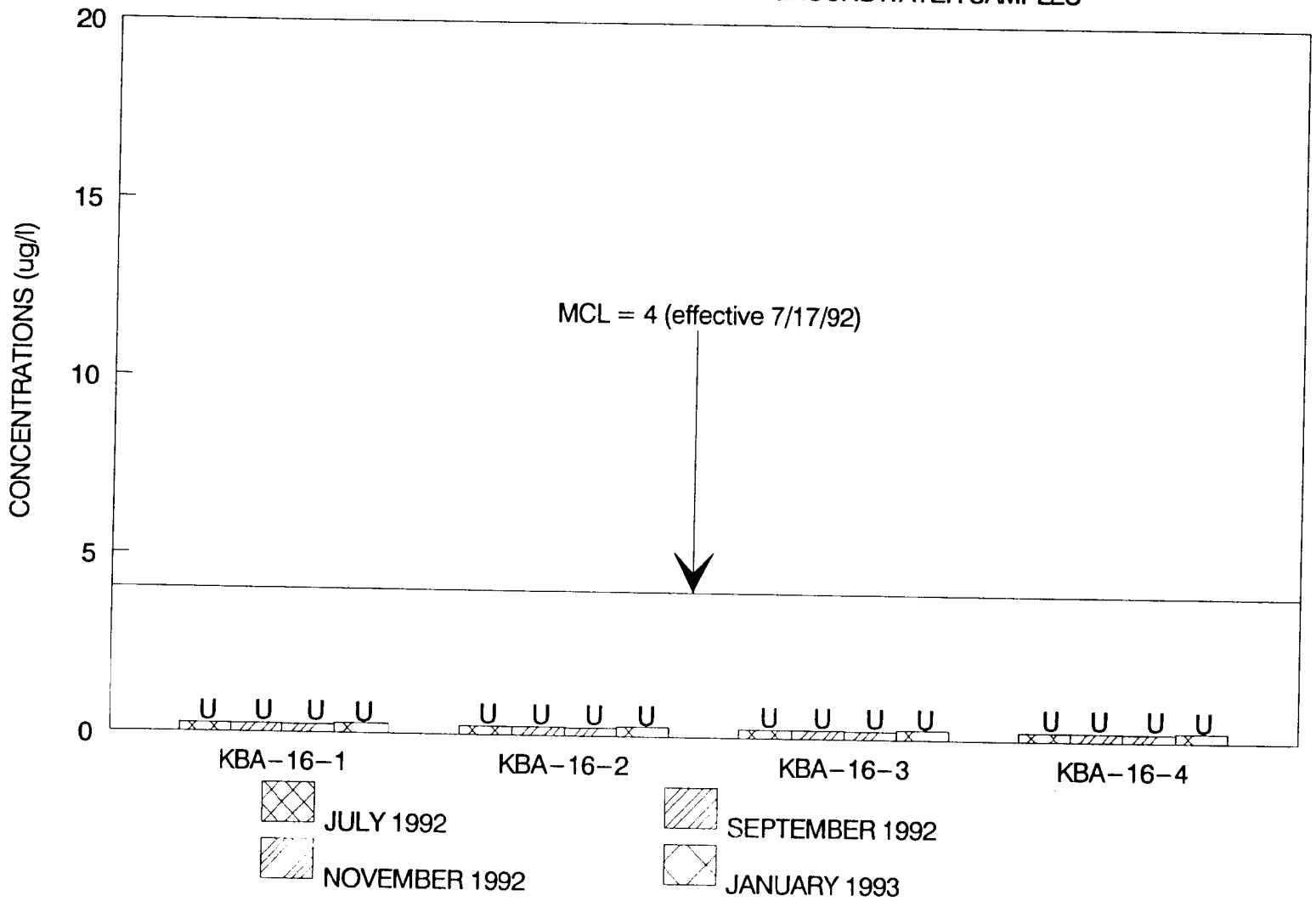
SITE 16 – BARIUM IN UNFILTERED GROUNDWATER SAMPLES



NSB KINGSBAY, GEORGIA

SITE 16 – BERYLLIUM IN FILTERED GROUNDWATER SAMPLES



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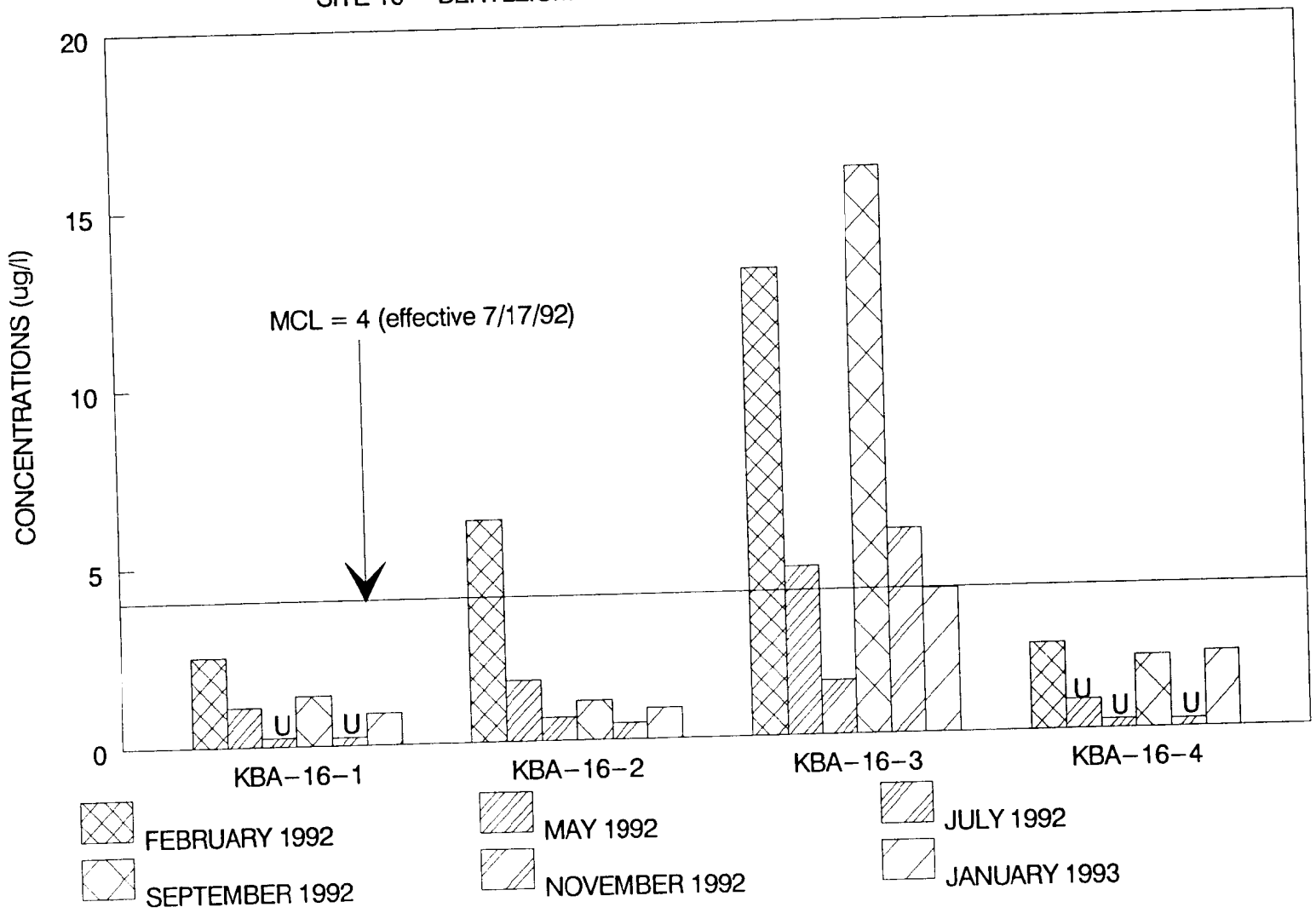
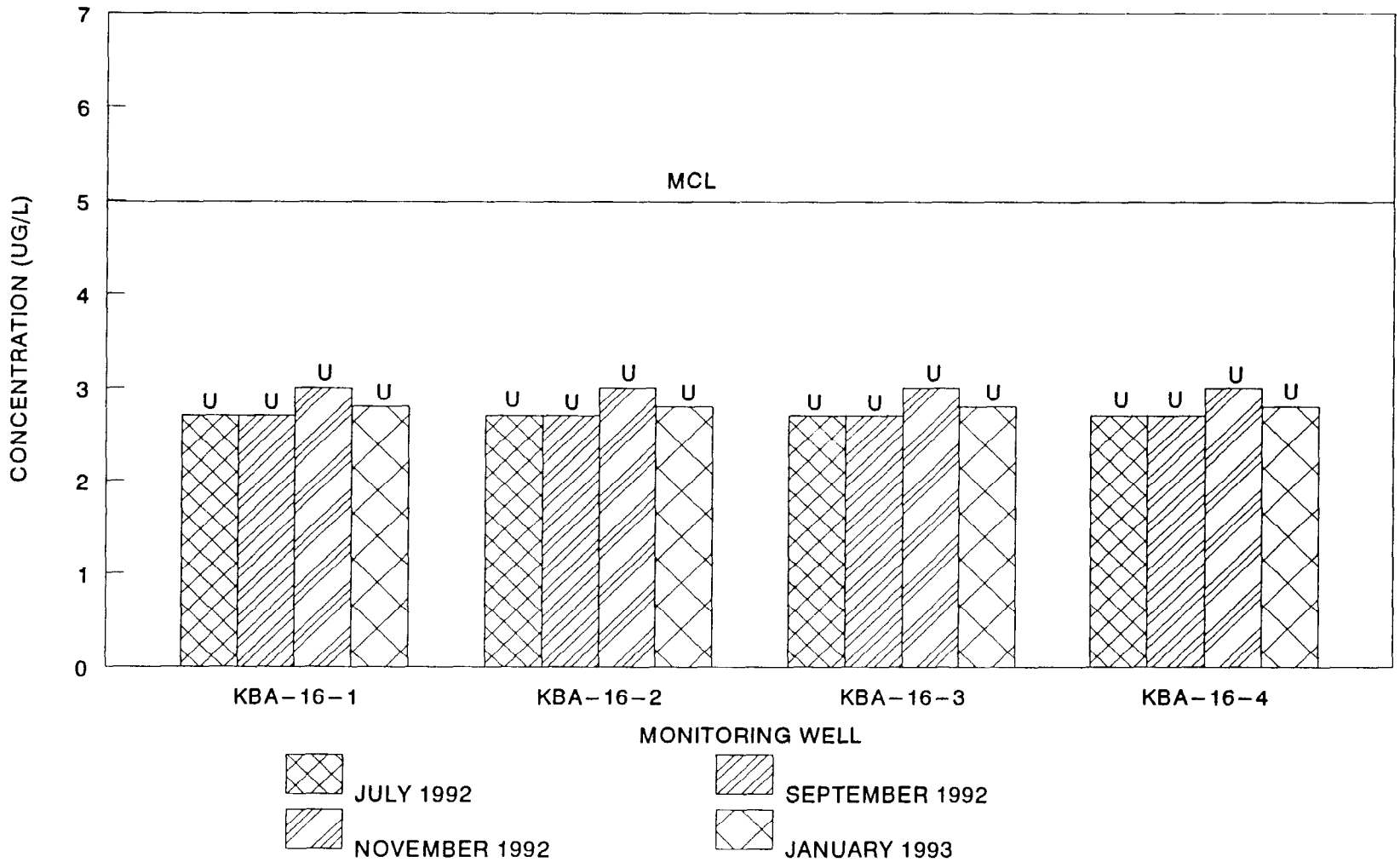
SITE 16 – BERYLLIUM IN UNFILTERED GROUNDWATER SAMPLES



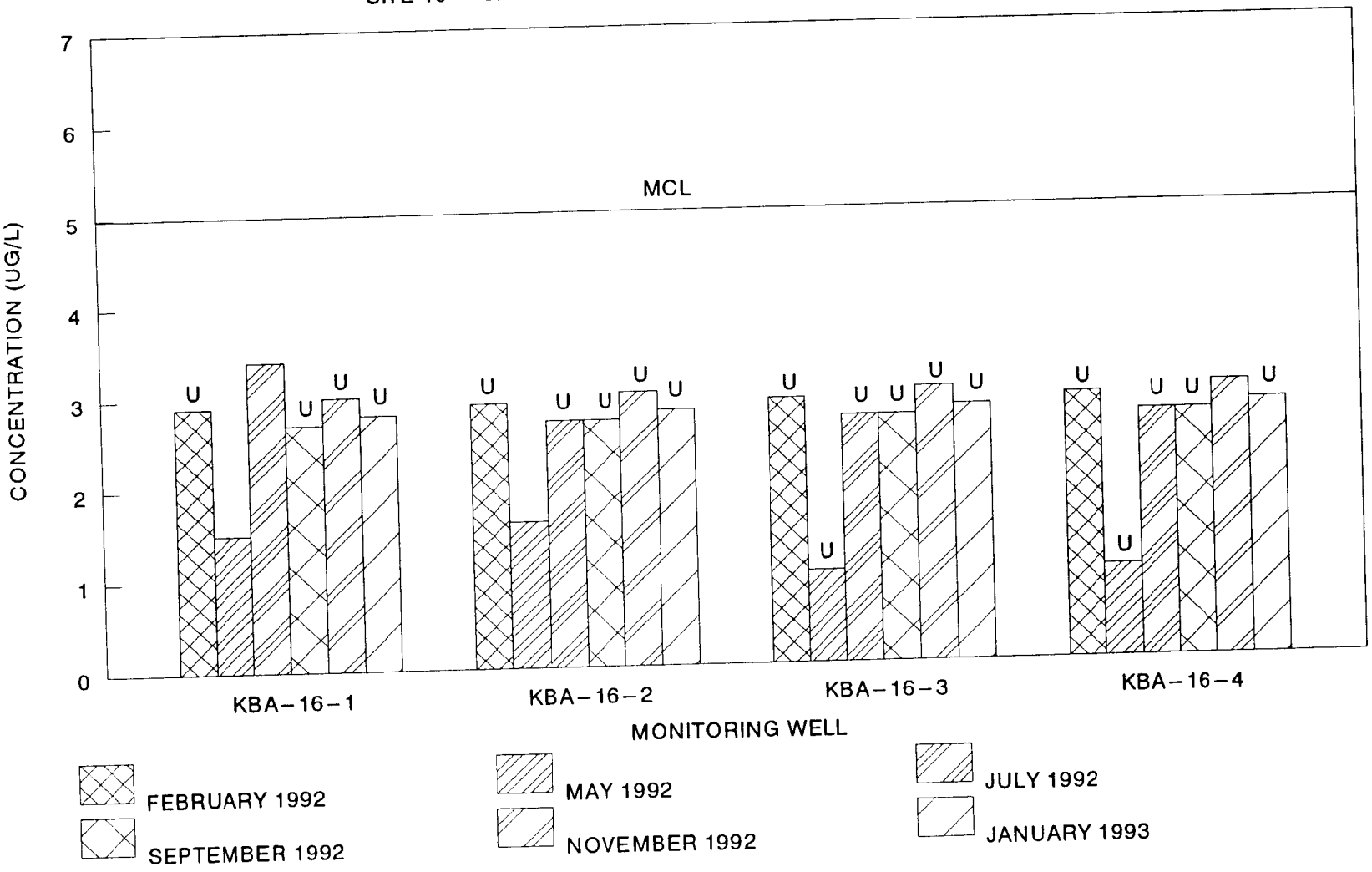
# NSB KINGS BAY, GEORGIA

## SITE 16 – CADMIUM IN FILTERED GROUNDWATER SAMPLES



NSB KINGS BAY, GEORGIA

SITE 16 – CADMIUM IN UNFILTERED GROUNDWATER SAMPLES



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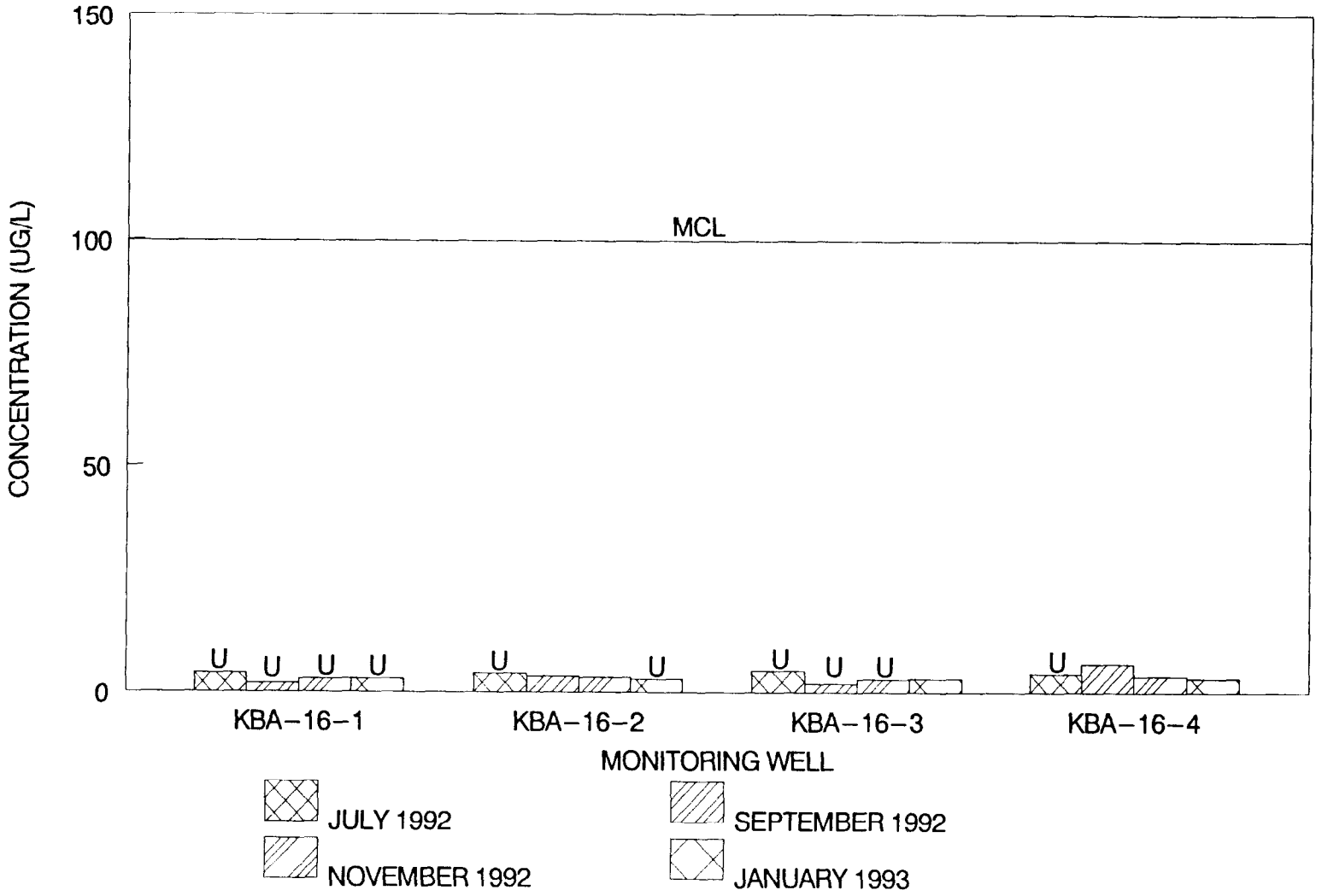
SITE 16 – CHROMIUM IN FILTERED GROUNDWATER SAMPLES



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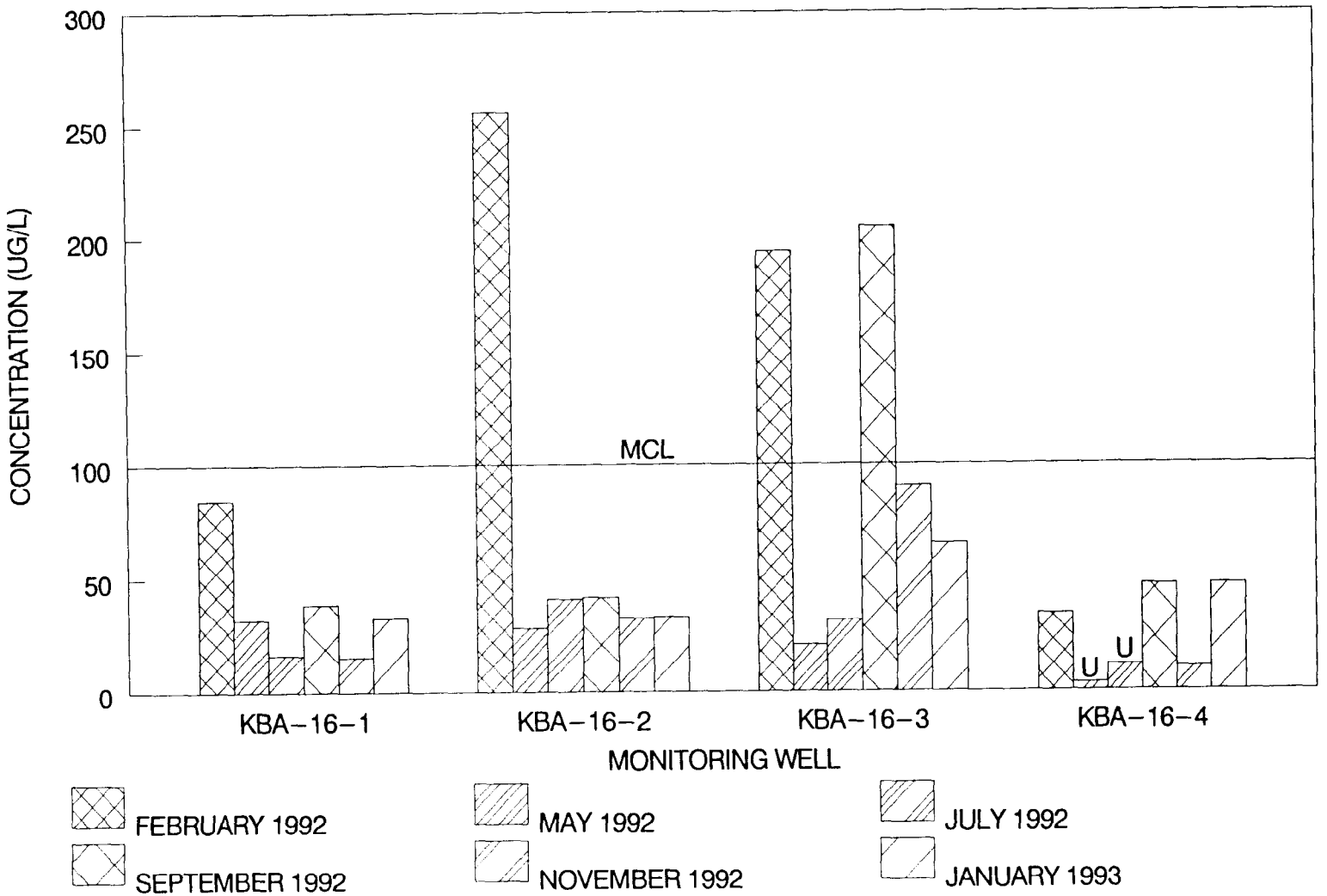
SITE 16 – CHROMIUM IN UNFILTERED GROUNDWATER SAMPLES



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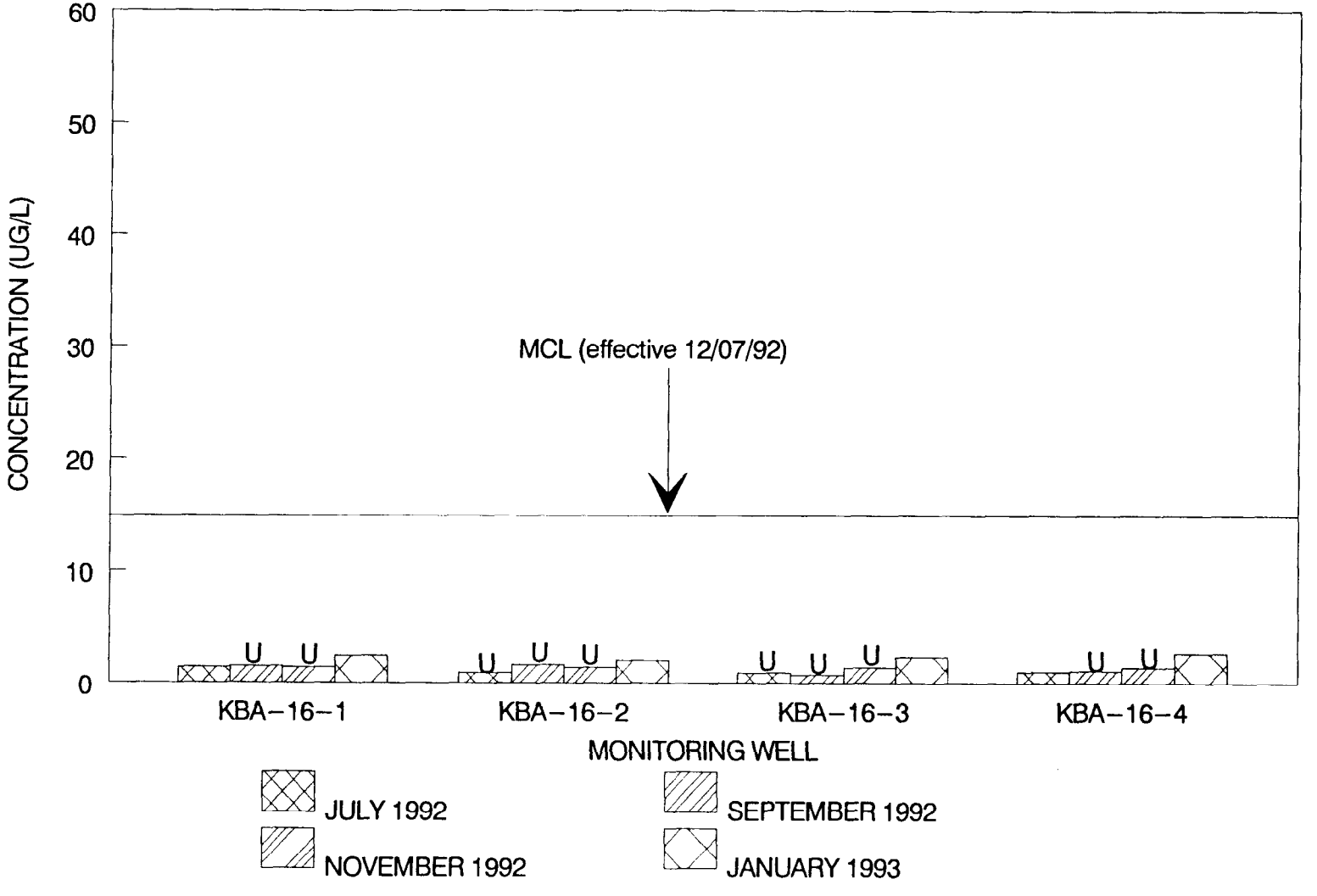

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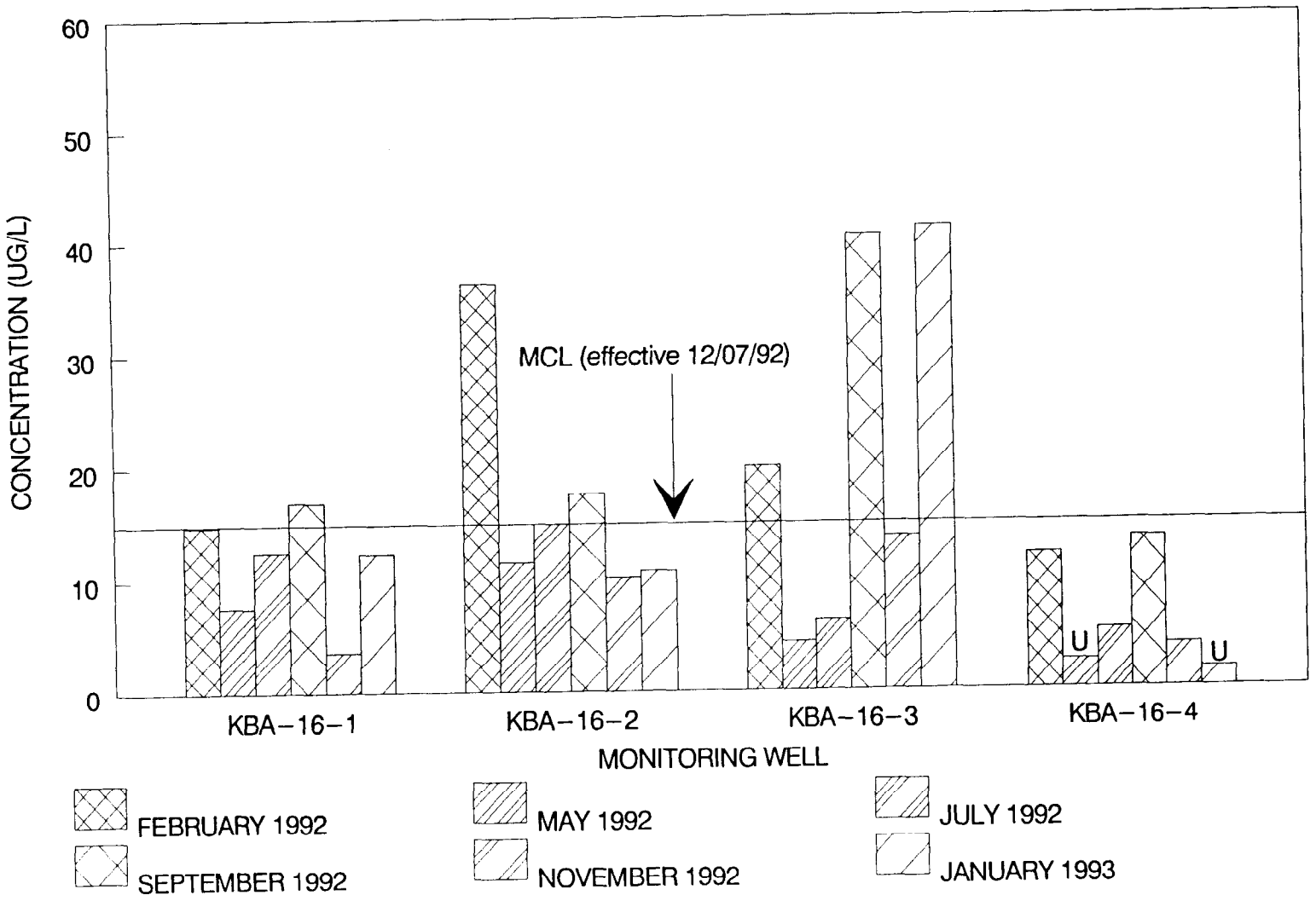

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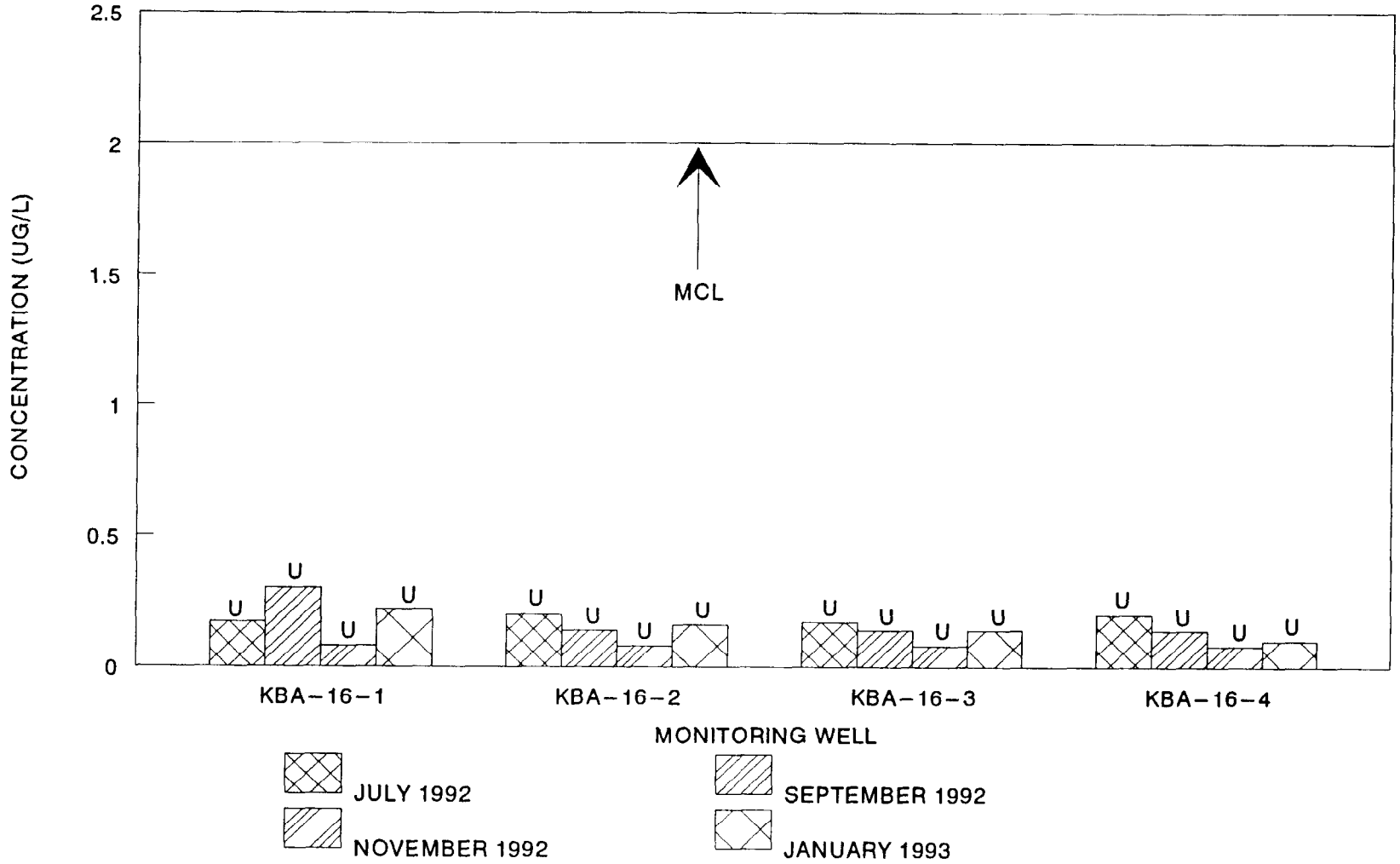
SITE 16 – MERCURY IN FILTERED GROUNDWATER SAMPLES



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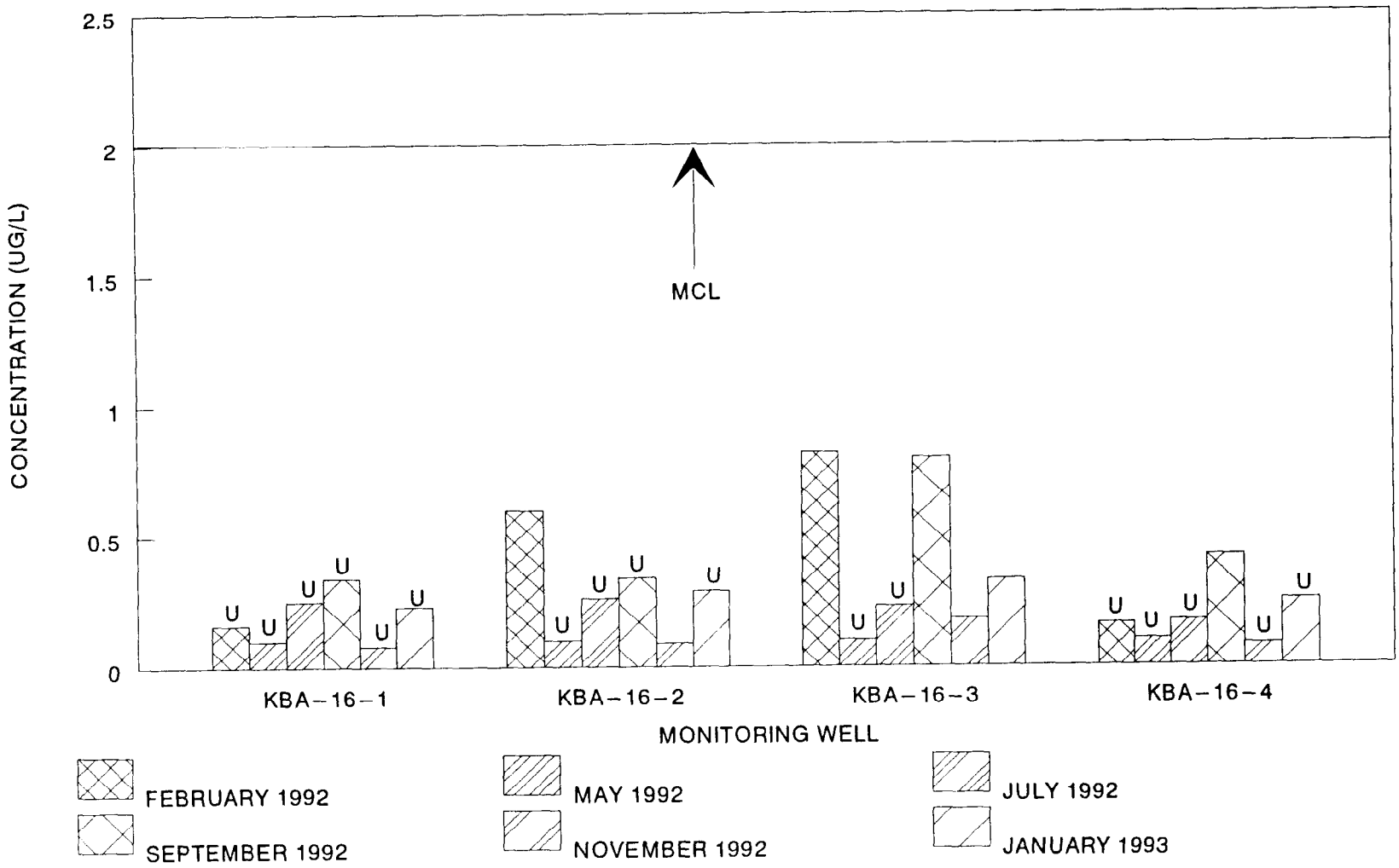

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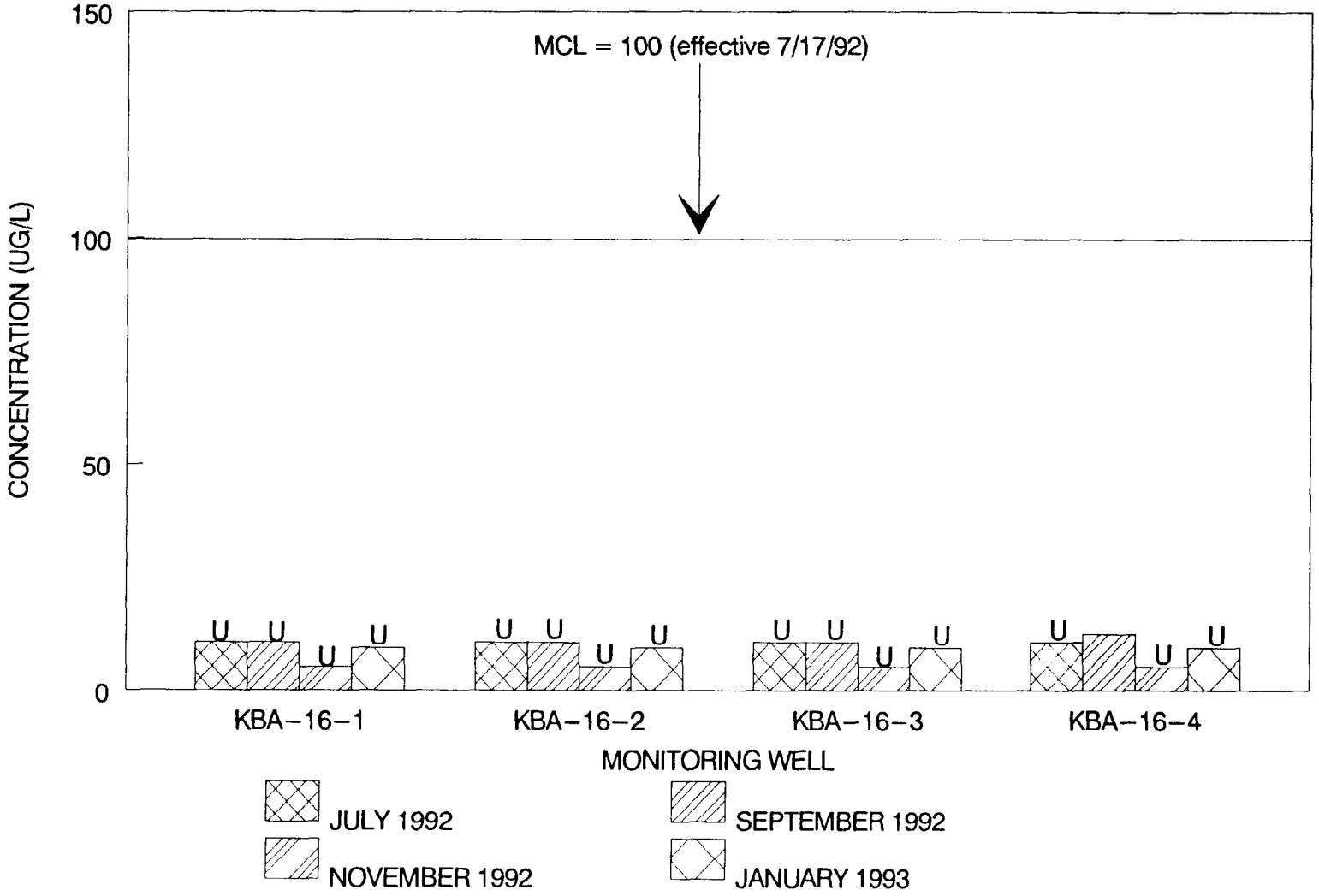
SITE 16 – NICKEL IN FILTERED GROUNDWATER SAMPLES



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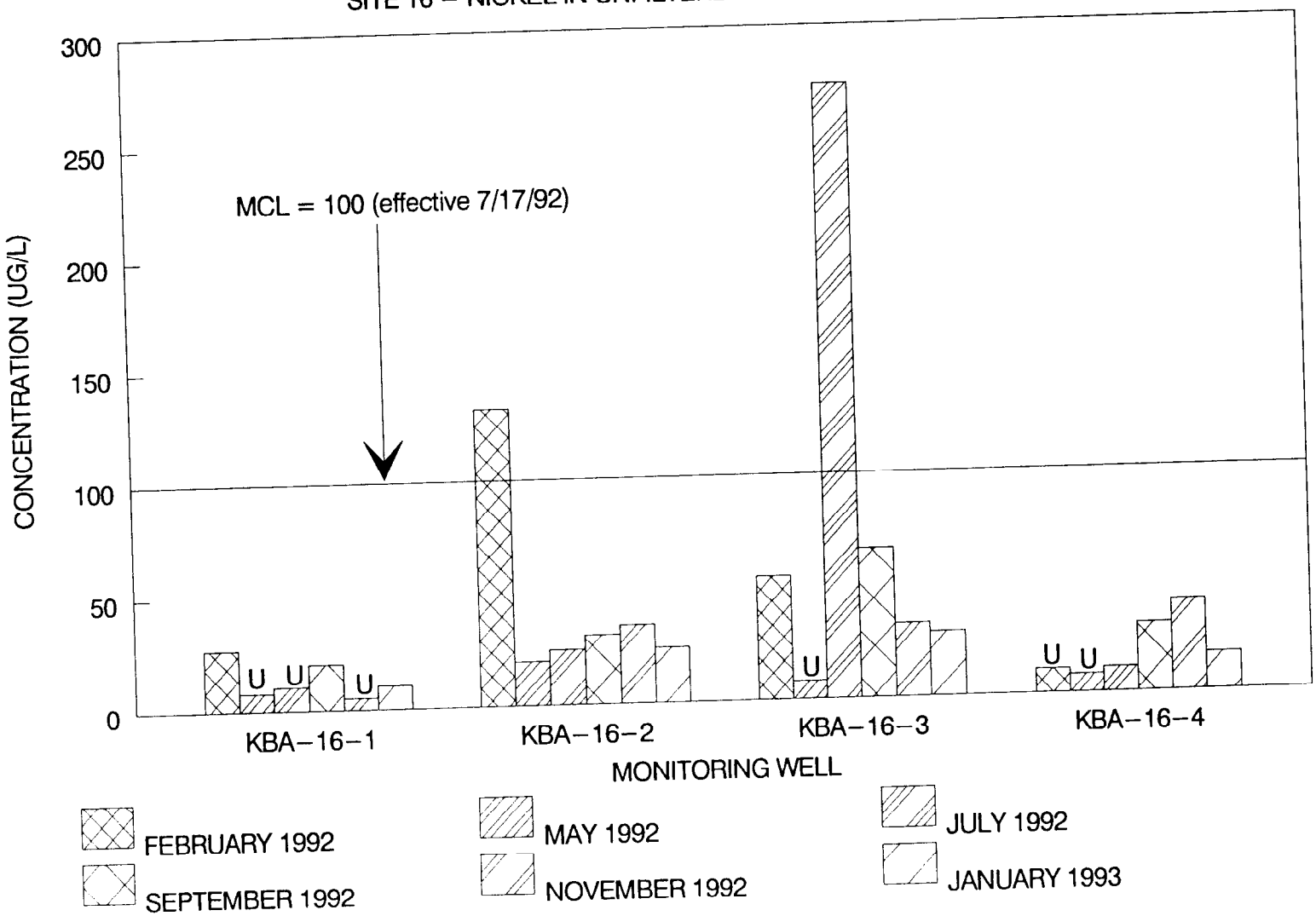

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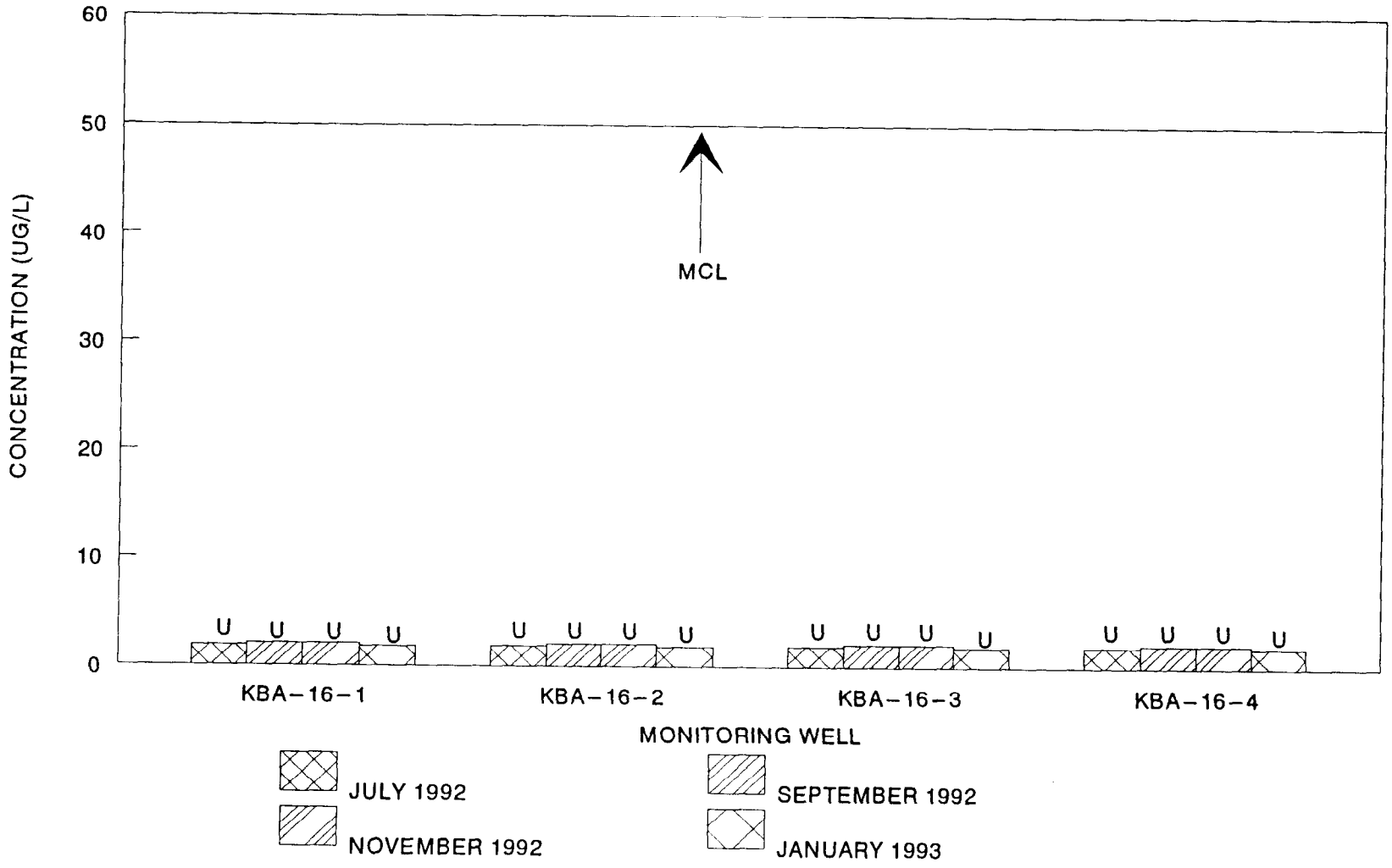
SITE 16 – SELENIUM IN FILTERED GROUNDWATER SAMPLES



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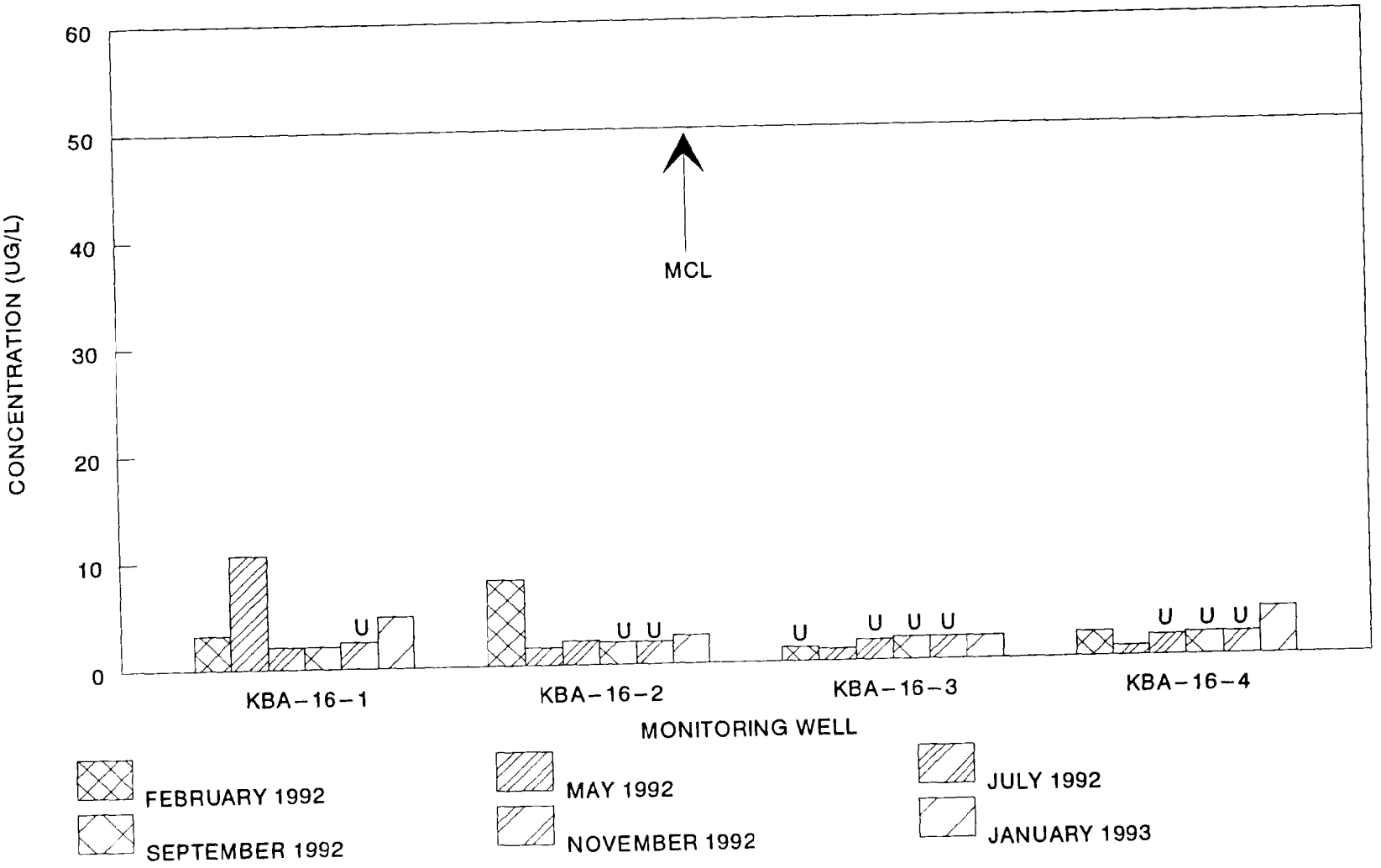

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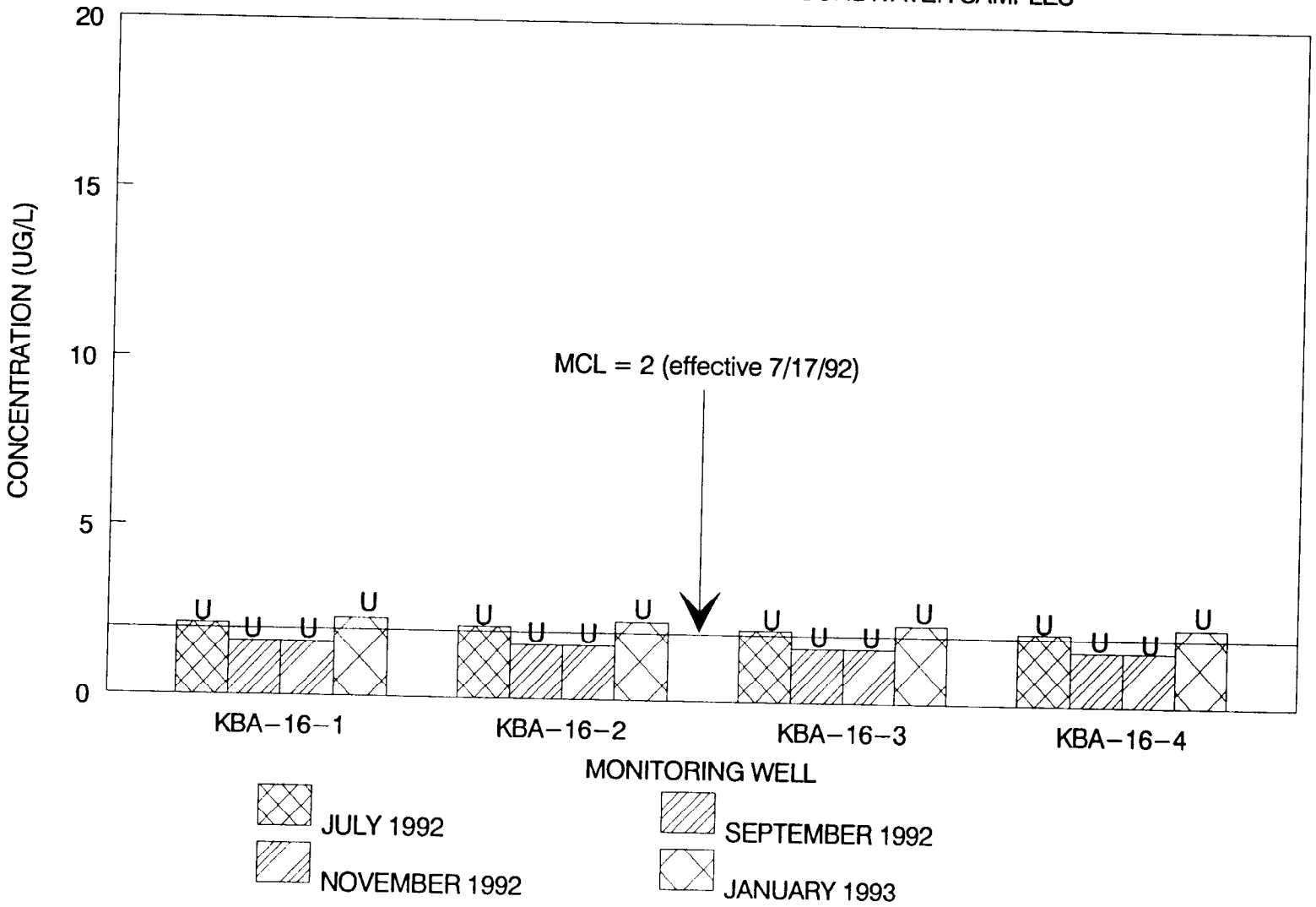

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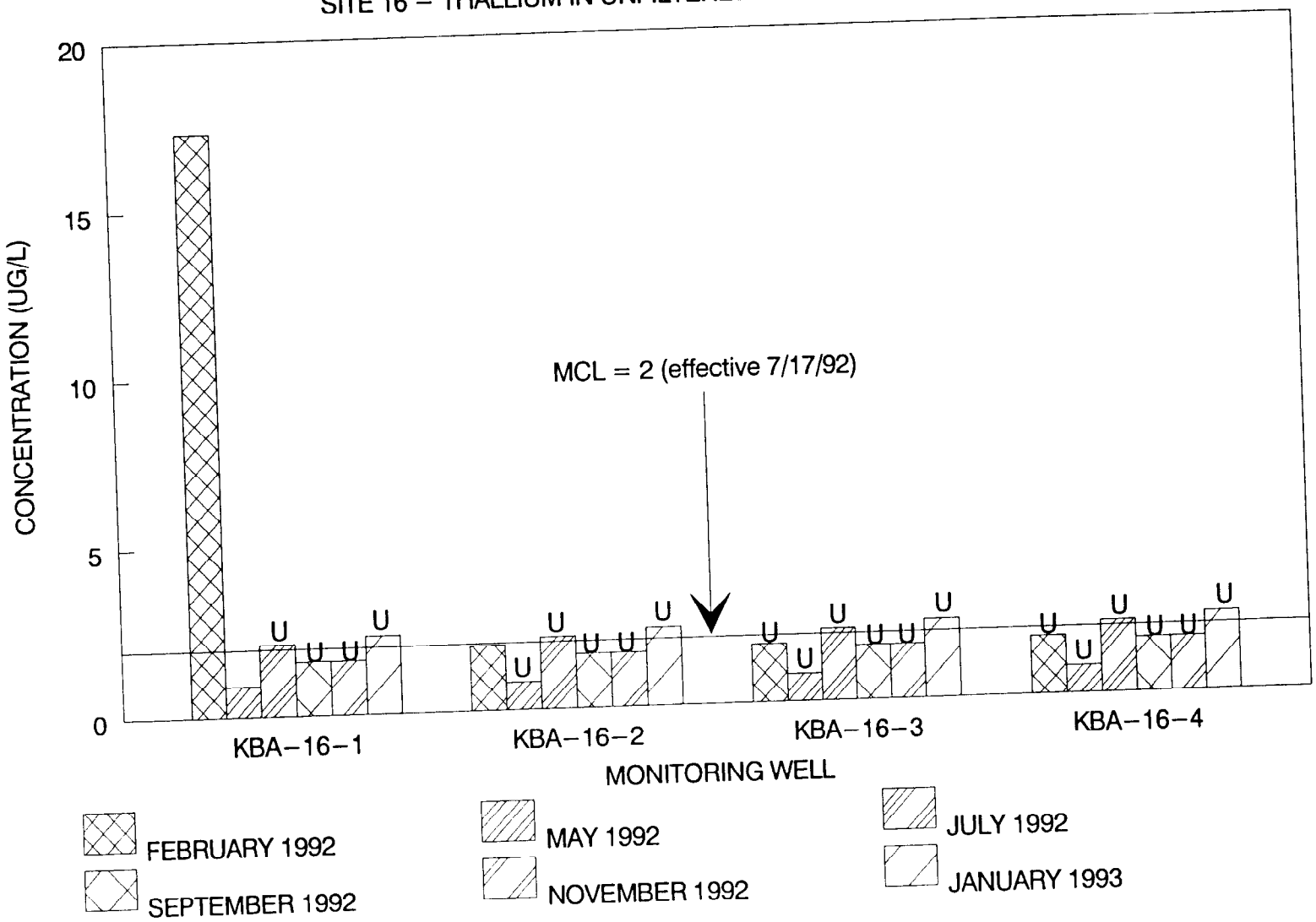

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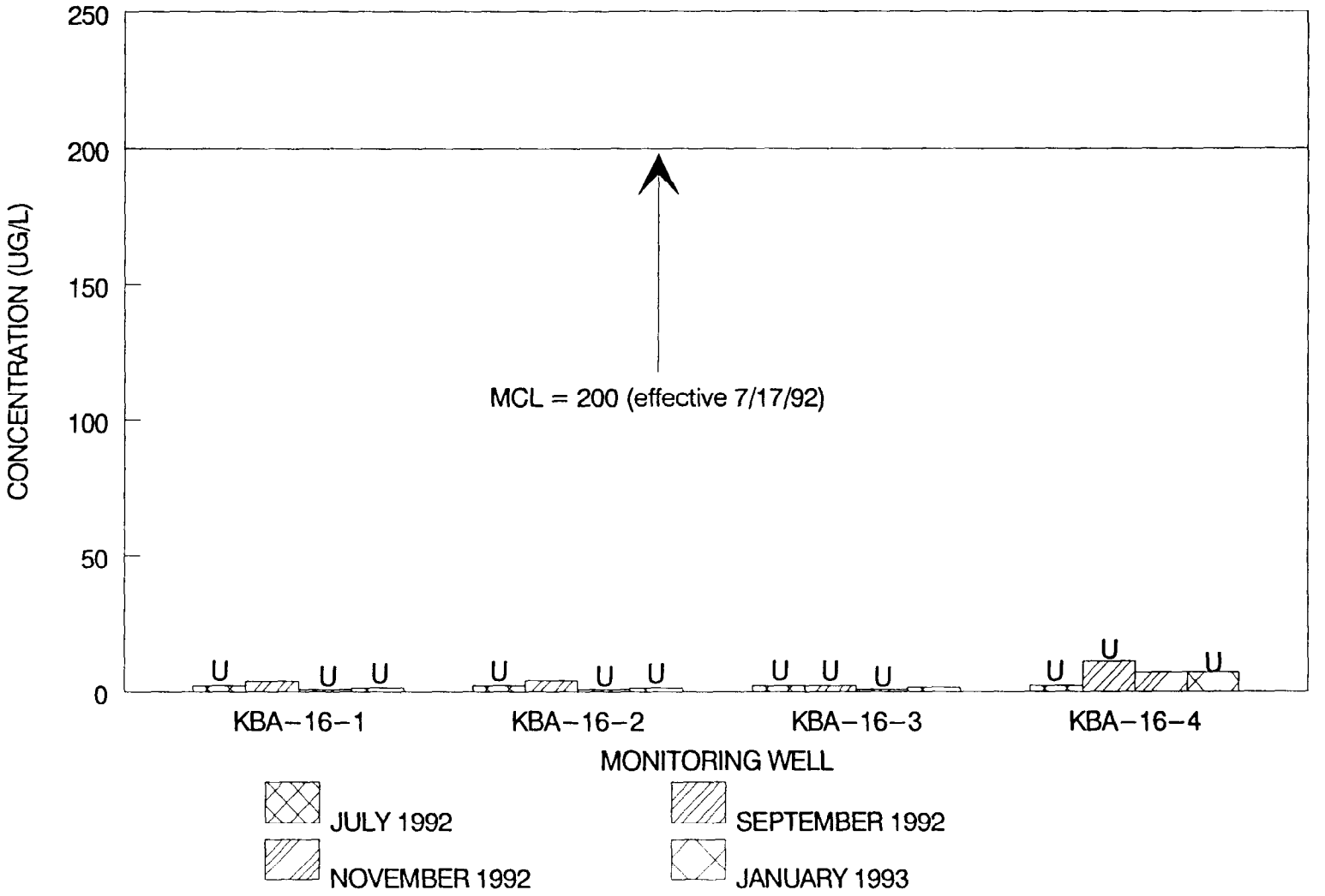
SITE 16 – CYANIDE IN FILTERED GROUNDWATER SAMPLES



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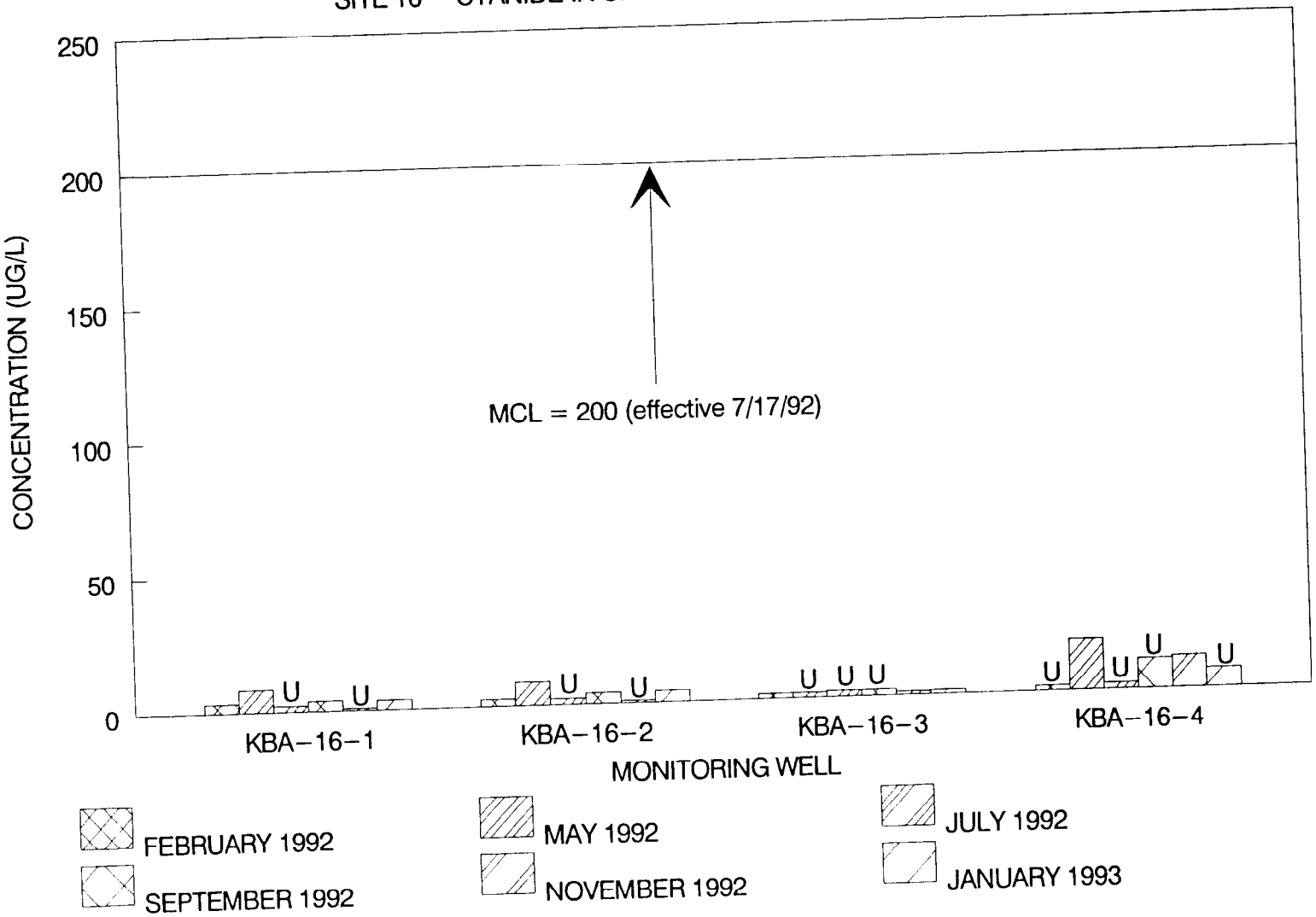

# Appendix K

# File Information for Site 12

## Reference 1

bc: Jim More

Georgia Department of Natural Resources
205 Butler Street, S.E., Suite 1252, Atlanta, Georgia 30334
Lonice C. Barrett, Commissioner
Harold F. Reheis, Assistant Director
Environmental Protection Division

September 28, 1990

Commanding Officer
Naval Submarine Base
Kings Bay, Georgia 31547-5000

Subject: RCRA Facility Investigation

Dear Sir:

On April 16, 1990, Naval Submarine Base, Kings Bay, submitted a work plan for the investigation of possible releases from solid waste management units at the base. This work plan is acceptable as submitted, and is hereby approved. Naval Submarine Base, Kings Bay, is to implement the plan according to the schedule therein. Because of the delay in approval of the work plan, the schedule should be reset to reflect the approval date of the plan.

If you have any questions or comments, please contact me at (404)656-2833.

Sincerely,

for

Jim Ussery
Unit Coordinator
Hazardous Waste Management Program

cc: Jennifer Kaduck
Art Linton, USEPA
File: Naval Sub Base (R)
bh.nsbrfi

**RESOURCE CONSERVATION ACT (RCRA)**
**RCRA FACILITY INVESTIGATION (RFI) PLAN**

KINGS BAY NAVAL SUBMARINE BASE (KBNSB)

## I. Potential Pathway To Be Investigated.

A. Purpose. Groundwater monitoring will be performed to investigate the need for further or permanent monitoring for groundwater contamination from three of the four inactive landfill sites referenced in the Hazardous Waste Facility (HWF) Permit, number HW-014(S)(2). Investigation of potential groundwater contamination was requested by the Georgia Department of Natural Resources (DNR) during the RCRA Facilities Assessment.

B. Specific Actions.

1. Army Reserve Disposal Area, Towhee Trail.

This disposal site was used by the Army Reserve from approximately 1969 to 1974. The site covers a total area of approximately 8.5 acres located on both sides of Towhee Trail (see exhibit 1). The area on the west side of the road is reportedly about 7 acres in size while that on the east side is about 1.5 acres. The areas were both excavated to a depth of five feet before wastes were placed in them. Wastes disposed of in the site included tree stumps, wooden pallets, metal ammo boxes (some empty and some filled with concrete), aluminum sheeting, concrete blocks and kitchen waste. Also, a large pile of dredge spoils and gravel (from abandoned railroad tracks) were spread over most of the western portion of the site. The spoils and gravel were spread to a depth of about 2 feet. Burning of wastes occurred twice a year on the western side of the road. No burning occurred on the eastern side of the road. A total of approximately 30 to 40 gallons of diesel fuel and waste engine oil were used to ignite the wastes.

Therefore, over the 5 years that the site was in use a total of 300 to 400 gallons of waste oil and fuel were burned. Quantities of wastes disposed are approximated at 69,000 cubic yards.

This site will be studied as requested under the HWF Permit RFI requirements. Four monitoring wells will be installed (one upgradient and three downgradient) at this site.

2. Old Camden County Landfill.

Located in the far western area of the activity (see exhibit 2), this 35 acres landfill was operated by Camden County from 1974 to October 1981 (Knowlton, 1981). Reportedly, hazardous wastes were not accepted at the landfill. Only domestic wastes were accepted including general household and office wastes, scrap paper, wood, and sludge and grit from the base wastewater treatment plants. The landfill was a trench and fill operation with trenches oriented in an east-west direction across the landfill (approximately 800 feet long by 20 feet wide). Excavation was into the water table which is four to eight feet below the surface at the site. Burning of wastes took place once per week during the first year of the operation only. This practice was discontinued in 1975. At the end of each day the wastes and ashes were compacted and covered with at least six inches of soil. Upon closure, a final soil cover of two feet was placed on the landfill. Estimated waste quantity is 500,000 cubic yards.

This site will be studied as requested under the HWF Permit RFI requirements. Six monitoring wells will be installed (two upgradient and four downgradient) at this site.

3. Army Reserve Disposal Area, Existing Dry Dock.

Site 12 is located along Kings Bay in the dry dock area (see exhibit 3). The site was used by the Army Reserve for amphibious ship-to-shore materials loading and offloading training operations from 1974 to 1978. The size of the disposal area is approximately 41 acres. Wastes included empty wooden and metal ammo boxes, concrete slabs, dummy cargo, and six to eight 55-gallon drums of waste engine oil.

Waste quantity was estimated at 467,000 cubic yards. In 1983, a contractor operating a backhoe at the site uncovered six to eight 55-gallon drums of waste oil. One of the drums was punctured by the backhoe, causing a spill. The stained soils and drums were removed from the base by a waste disposal contractor in 1983. The remaining inert wastes were excavated in late 1983 and buried in the dredge spoil area. Since all wastes were excavated from the Site 12, this site does not pose a potential threat to human health or to the environment. Therefore, no further action under the NACIP program is recommended for Site 12.

Since, in 1983 all the drums of oil and stained soil were removed and disposed of by a waste disposal contractor and the remaining inert wastes relocated this area will not be part of the RFI program.

4. Army Reserve Disposal Area near Old Sewage Lagoon 3990.

This site, located west of Woodrow Wilson Avenue and south of old sewage lagoon 3990 (see exhibit 4), was used every six months by the Army Reserve from 1958 to 1964. The site covered an area of one acre and was excavated three to five feet deep. Wastes disposed here included food, wood, trash, scrap metal, tree limbs, and empty paint and solvent cans (about 1 or 2 gallon cans per month). The waste quantity is estimated at approximately 4000 cubic yards. Reportedly, burning of waste took place at this site. It is unknown how often burning occurred or if any fuel was used to ignite the wastes. The site was covered with soil upon closure.

This site will be studied as requested under the HWF Permit RFI requirements. Four monitoring wells will be installed (one upgradient and three downgradient) at this site.

5. All Sites.

The groundwater monitoring wells will sample the water table aquifer as described in the Initial Assessment Study of Naval Submarine Base Kings Bay, Georgia NEESA 13-086 of September 1985. The Monitoring wells will be installed per the guidelines in the Georgia Environmental Protection Division, Manual for Groundwater Monitoring of April 1988.

The general pattern of groundwater flow has been established as moving from west to east, where it discharges naturally to the tidal streams that flow into Kings Bay. Based on this fact the upgradient monitoring wells will be located to the west of the sites and the downgradient monitoring wells will be east of the sites.

Initial testing will be done for all wells every other month for one year to establish background data concerning the water table quality. From this initial monitoring it will be determined what, if any, further monitoring will be necessary. Testing Parameters to be tested for at each sampling event will be all compounds on the Clean Water Act Priority Pollutant List plus chlorides, specific conductance, total organic carbon (TOC), and pH. All sampling will be done according to the Groundwater Monitoring Plan Kings Bay Naval Submarine Base, exhibit 5.

**II. Schedule Of Implementation.**

The following schedule of implementation is provided.

1. 1 Nov 90 Initiate Design
2. 25 Jan 91 Design Complete
3. 28 June 91 Construction Complete
4. 28 June 91 Begin Initial Sampling
5. 30 June 92 End Initial Sampling
6. 31 July 92 Finish Analysis
7. 30 Sept 92 Final Report/Recommend.

mendations

**III. Pathways Not Selected To Be Investigated.**

1. General. If further information becomes available, either through the groundwater monitoring and investigation or from other sources, which would point out the need to investigate the pathways not selected they will be added to this RFI.

2. Air. The areas to be investigated are all landfills. Considering the age of these landfills, the type materials placed in them, and the fact that the materials are now covered the air pathway is not selected for investigation.

3. Surfacewater. Based on personal observations and areal photographs of the vegetation, which would be effected by surfacewater contamination, appears to be healthy. Again, considering the fact that these solid waste management units are landfills it is not likely that surfacewater contamination would be a potential pathway.

4. Land. Considering the stable nature of the material known to have been placed in the landfills and the lack of erosion for transportation of soils offsite this is not a potential pathway of migration.

## IV. Certification.

I certify under penalty of law that this document and all the attachments were prepared under my direction or 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 submitted is, to be 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.

Signature _____ Date 4/10/90

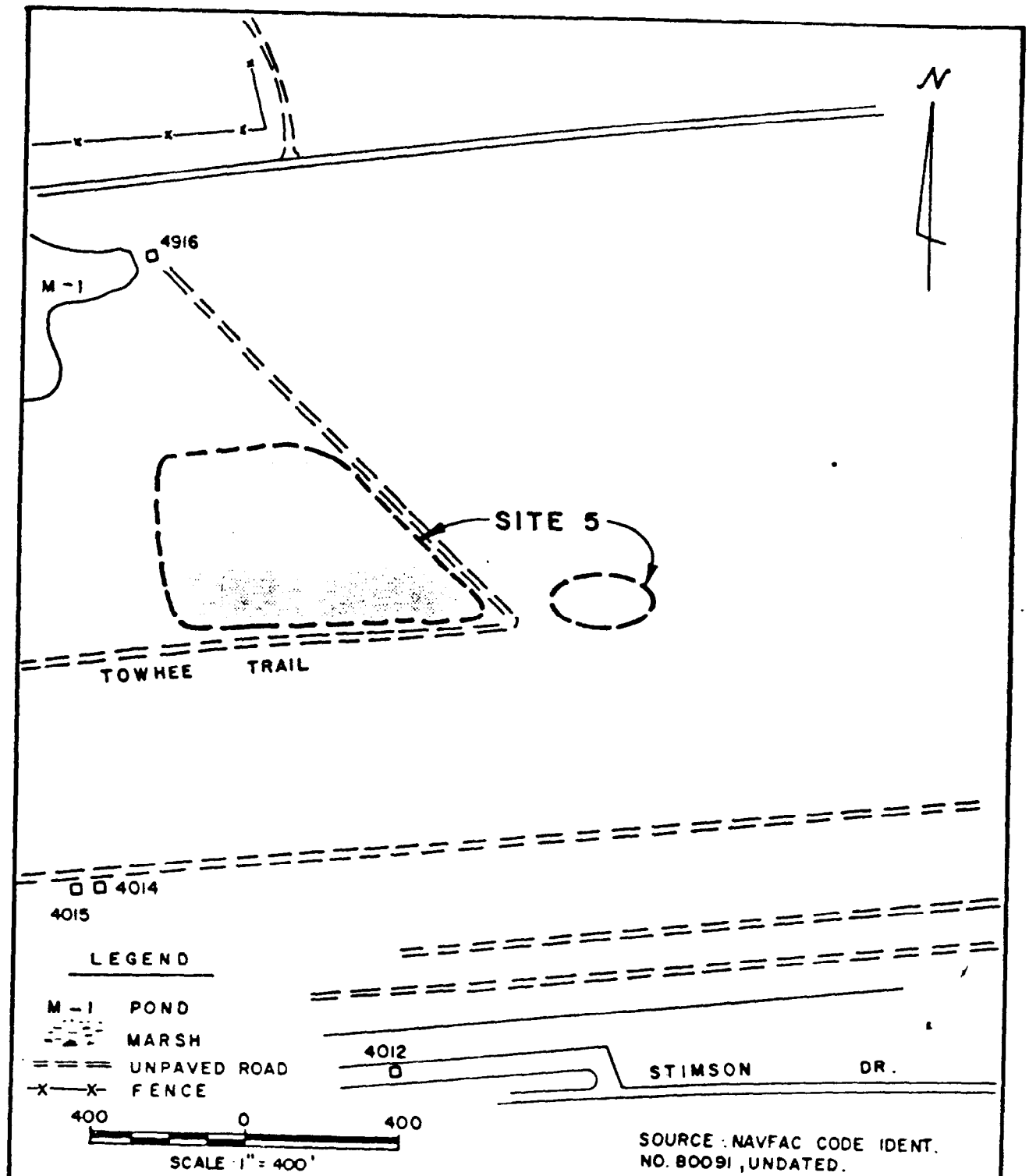


FIGURE 2-6
SITE 5 - ARMY RESERVE DISPOSAL AREA, TOWHEE TRAIL.

INITIAL ASSESSMENT STUDY
NAVAL SUBMARINE BASE
KINGS BAY, GEORGIA



EXHIBIT 1

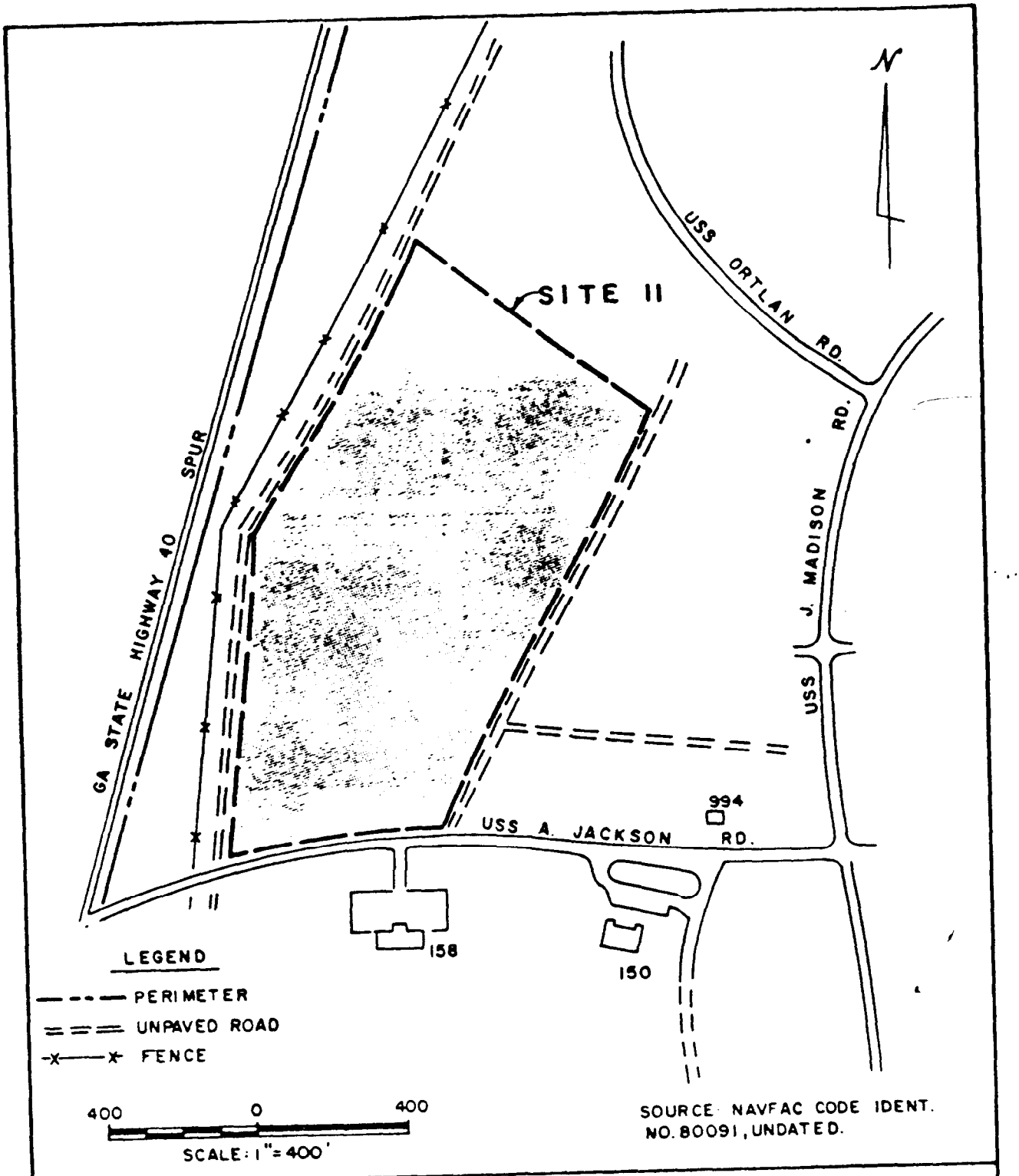


FIGURE 2-8
SITE II - OLD CAMDEN COUNTY LANDFILL.

INITIAL ASSESSMENT STUDY
NAVAL SUBMARINE BASE
KINGS BAY, GEORGIA



EXHIBIT 2

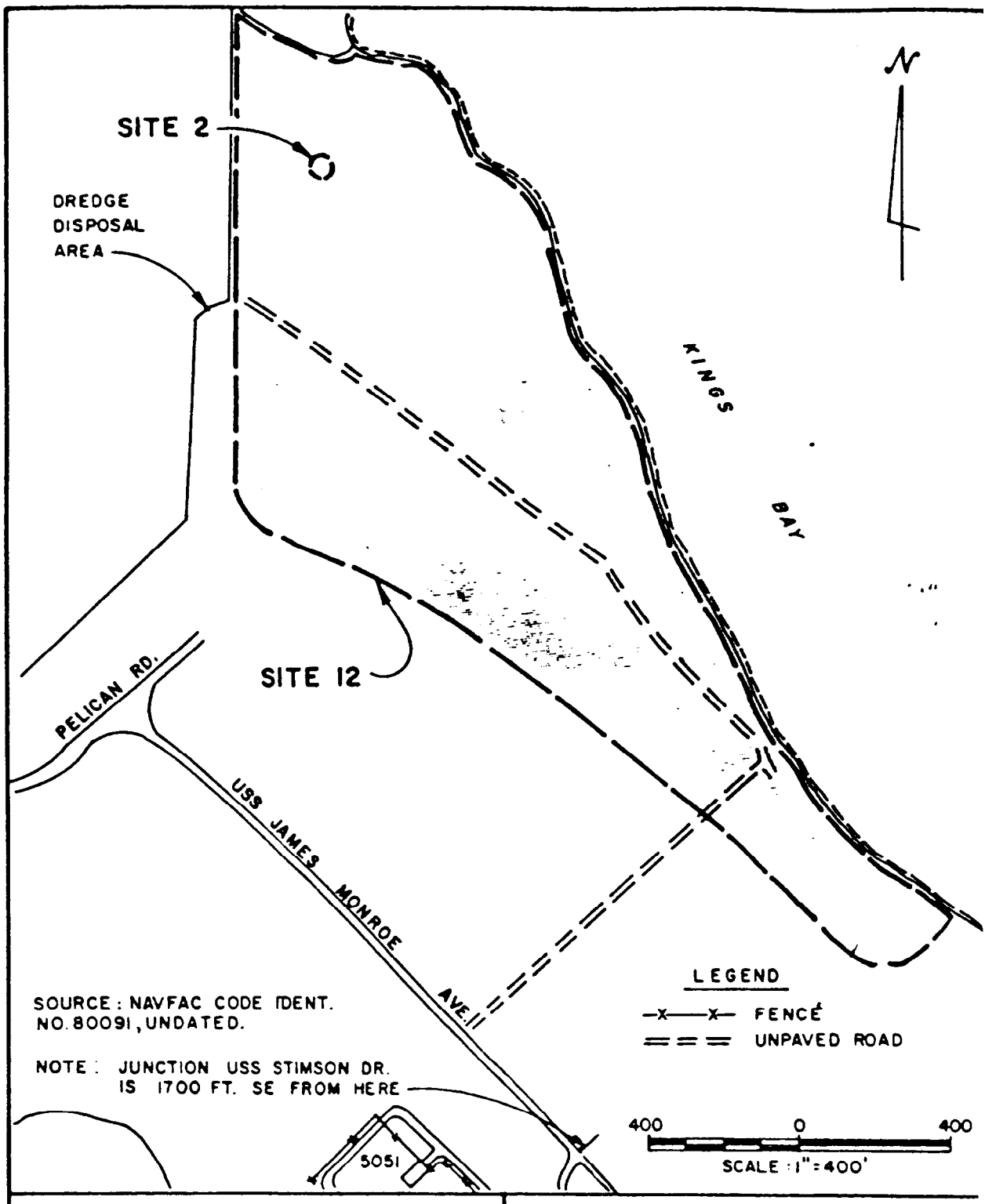


FIGURE 2 - 3
SITE 2 - FIRE FIGHTING PIT.
SITE 12 - ARMY RESERVE DISPOSAL AREA, FUTURE DRY DOCK.

INITIAL ASSESSMENT STUDY
NAVAL SUBMARINE BASE
KINGS BAY, GEORGIA



EXHIBIT 3

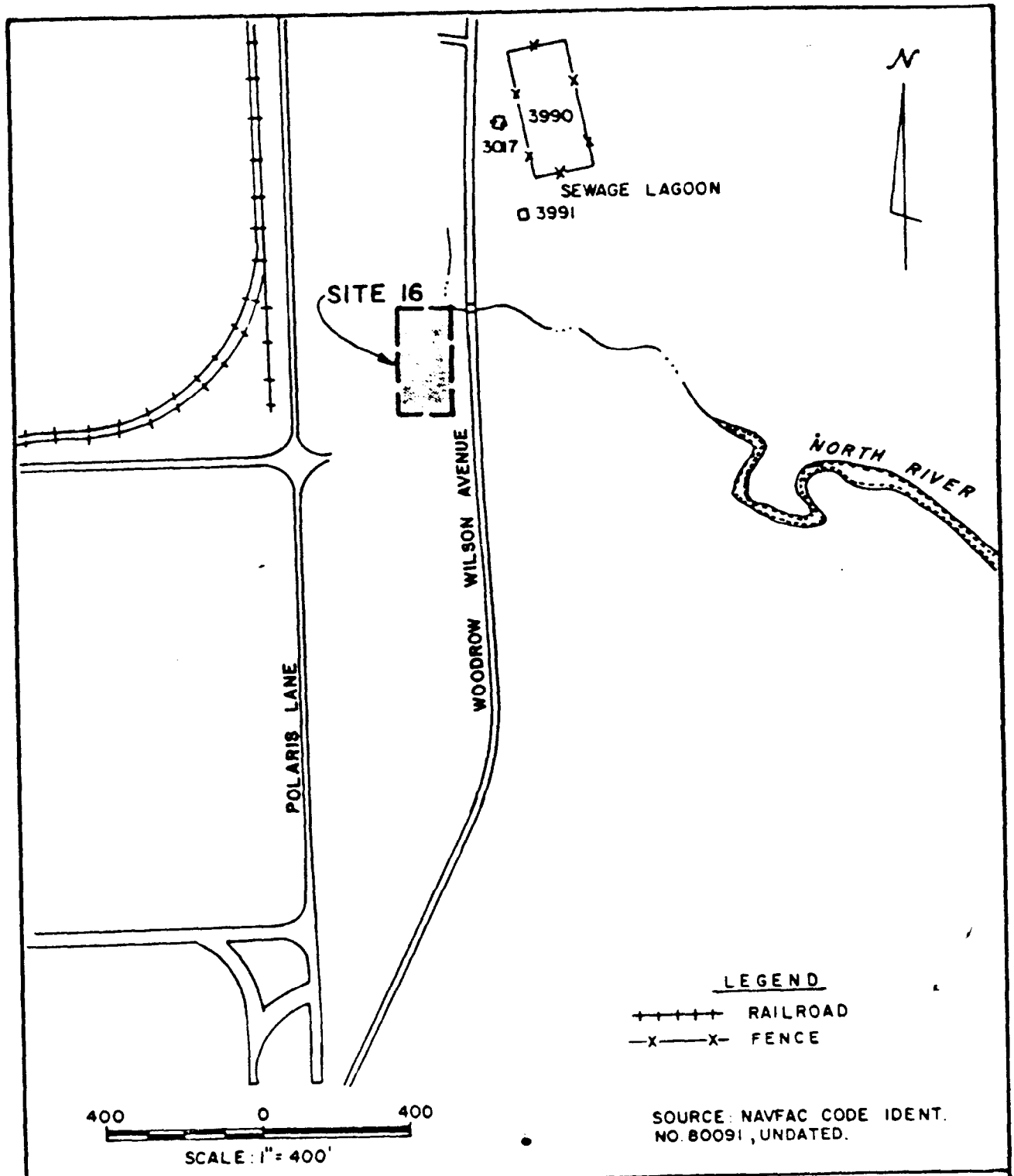


FIGURE 2 - 9

SITE 16 - ARMY RESERVE DISPOSAL AREA NEAR OLD SEWAGE LAGOON 3990

INITIAL ASSESSMENT STUDY
NAVAL SUBMARINE BASE
KINGS BAY, GEORGIA



EXHIBIT 4

# GROUNDWATER MONITORING PLAN KINGS

# BAY NAVAL SUBMARINE BASE

PREPARED BY JAMES E. MORE

APRIL 30, 1990

GROUNDWATER MONITORING PLAN KINGS BAY NAVAL SUBMARINE BASE

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FIGURE


| NUMBER | TITLE | PAGE NO |
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# GROUNDWATER MONITORING PLAN KINGS BAY NAVAL SUBMARINE BASE

## 1. PURPOSE - SCOPE.

The purpose of this plan is to provide groundwater sampling and analysis procedures. The testing objectives, for any particular project, will be specified ahead of time within the ground water monitoring section of the project. This plan outlines the requirements for groundwater monitoring at Kings Bay Naval SUBASE. This plan identifies requirements for well preparation, sampling, sample handling and preservation, chain of custody, analytical procedures, and field and laboratory quality control.

## 2. WELL PREPARATION.

Before any sampling is done the monitoring well must be evacuated of water before taking the sample. For rapid recovery wells, which cannot be evacuated, 3 well volumes will be removed instead of complete evacuation. The following equipment will be required for well preparation.

| Item | Quantity |
|---|---|
| Plastic sheet (approx 8'x 8') | 1 ea. |
| Plastic gloves | 3 Pair (min.) |
| Bailer | 1 ea. |
| Electronic sounder | 1 ea. |
| Bailer rope, nylon | 1 roll |
| Scissors or knife | 1 ea. |
| Volumetric container (2 gal) | 1 ea. |
| Dish Pan | 2 ea. |
| Aluminum foil | 1 roll |
| Trash bag, large | 1 ea |

Only bailers of teflon or 316 stainless steel will be used. New nylon rope will be used for bailer rope. Clean unused plastic gloves will be worn as indicated in this procedure. The following procedures will be performed when evacuating wells.

A. Assemble Equipment.

1. Place a plastic sheet, such as a painter's drop cloth, around the well as a work area. Unlock the protective well casing.

2. Bring the sounder to the plastic sheet. The sounder probe will have been precleaned in the lab and wrapped in foil. Unwrap without touching it.

3. Put on a pair of new gloves. Unlock and remove the well cap. Place it top-down on a corner of the plastic sheet.

B. Calculate the volume of water to be evacuated:

1. Use the sounder to measure the distance from the top of the casing to the top of water.

2. Subtract the distance from the top of the casing from the distance to the bottom of the well, provided by the well log, to obtain the height (h) of the column of water in the well.

3. Multiply h times the appropriate conversion factor to obtain the volume of water in the well in gallons.

   a. For a 2-inch inside diameter well, h x 0.1623 = Volume (gal)

   b. For a 4-inch inside diameter well, h x 0.6 = Volume (gal)

4. Clean the sounder probe by rinsing with isopropanol followed by distilled water. Wrap in foil for use on the next well.

C. Evacuate the Well

1. Bring 2 dishpans and a measuring container to the plastic sheet and line one dishpan with aluminum foil.

2. Bring the bailer, which has been precleaned in the laboratory and wrapped in foil, to the plastic sheet. Unwrap it without touching the bailer.

3. Bring the roll of bailer cord to the sheet. This roll has also been covered with foil to keep it clean. Place it in the unlined dishpan and unwrap it without handling the rope.

4. At this point both bailer-handler and helper will put on a new pair of gloves.

5. The end of the bailer rope is tied to the top of the bailer. Use foil where needed to assure that the rope does not touch any item while in use.

6. The bailer is lifted and lowered carefully into the well until it is submerged.

7. The bailer is raised in a hand over hand manner and the rope is allowed to fall into the dishpan lined with foil.

8. Pour groundwater from bailer into the measuring container. Repeat bailing procedure until a 3 times the volume of water in the well has been evacuated. If the bailer touches the measuring container, line the lip with aluminum foil.

9. If the well goes dry before 3 volumes is obtained, then stop evacuating the well.

10. Save the evacuated water in the measuring container for proper disposal.

11. The used gloves, bailer rope, foil and the plastic sheet are rolled up and discarded in a large trash bag provided.

D. Replace the well cap and lock protective casing. Allow up to 24 hours for well water stabilization.

3. SAMPLING PROCEDURE:

When more than one well is to be sampled sample the upgradient wells first and then proceed to the more contaminated or downgradient wells. The following equipment will be required for sampling wells.

| Item | Quantity |
|---|---|
| Plastic sheet (approx 8'x 8') | 1 ea. |
| Plastic gloves | 3 Pair (min.) |
| Bailer | 1 ea. |
| Bailer rope, nylon | 1 roll |
| Bailer rope, teflon | 1 roll (when needed) |
| Scissors or knife | 1 ea. |
| Sample Bottles | 1 set (no. varies per analysis) |
| Labels (for sample bottles) | 1 set |
| Permanent marker pen | 1 ea. |
| Ice cooler | 1 ea. |
| Ice | 1 bag |
| Dish Pan | 2 ea. |
| Aluminum foil | 1 roll |
| Trash bag, large | 1 ea |

Only bailers of teflon or 316 stainless steel will be used. New nylon rope will be used for bailer rope. Where organic contaminants are of interest use teflon rope for the first 10 feet of cord and discard after each well. It is advisable to take an extra set of sample bottles to the field in case of breakage or accidental contamination. It is not good practice to leave samples in the sun. Sampler will be removed to the ice chest as soon as soon as possible. Clean unused plastic gloves will be worn as indicated in this procedure.

A. Assemble Equipment.

1. Place a plastic sheet such as a painter's drop cloth, around the well as a work area, to prevent sample bottle contact with the ground. Unlock the well cap.

2. If the labels are not pre-filled out label them now. The label must have:
   a. Name of location
   b. Date of sampling and time
   c. Sample description including monitoring well ID No.
   d. Sample No.
   e. Sampler's name

Note that several bottles collected for different parameters will have the same ID number if they come from the same sampling point.

3. Bring 2 dishpans to the sheet and line one with aluminum foil.

4. Arrange sample bottles on the sheet. Place a waste water container in the vicinity of the well.

5. Bring the bailer, which has been precleaned in the laboratory and wrapped in foil, to the plastic sheet. Unwrap it without touching the bailer.

6. Bring the roll of bailer cord to the sheet. The roll is also covered with foil to keep it clean. Place it in the unlined dishpan and unwrap it without handling the rope.

7. Unlock and remove the well-cap. Place it top-down on a corner of the plastic sheet.

B. Sampling procedure.

1. At this point both bailer-handler and helper will put on a new pair of gloves.

2. Tie the end of the bailer rope to the top of the bailer. The rope must not touch anything but clean aluminum foil. Use foil where needed. Do not allow the bailer to touch the sample bottles, or allow any rope end or gloved fingers to contact the sample well water while pouring.

3. The bailer is lifted and lowered carefully into the well until it is submerged.

4. The helper will unscrew the appropriate sample caps and place them top down on the plastic sheet without touching the interiors or dislodging any teflon discs inside the caps.

5. The bailer is raised in a hand over hand manner and the rope is allowed to fall into the dishpan lined with foil. The first bailer-full is discarded into the waste container.

6. The samples are poured into the bottles without bubbles, and are filled to the top without headspace. The helper can hold the bottle and be responsible for recapping without touching the interior of the cap, and screwing down tightly. Samples will be placed in an ice chest as soon as possible.

7. Organic samples are the most delicate and should be collected first and as soon as the well has settled. The vial for volatile analysis must be filled so that the sample has a meniscus. The cap is slid over it and closed so that no bubbles can be seen when the sample vial is upended. The volatile samples are always collected in pairs. Other organics usually require two or three 1-liter bottles without preservative and these should be collected next, also without headspace.

   If a sample is to be collected for dissolved metals it will not have preservative and should be collected next. If there is a sediment problem this sample will be collected right after the volatile samples in order to minimize the sediment requiring removal.

   Finally, preserved samples will be collected, taking great care that the acids and salts in the bottles do not contact the helper's gloves and thus pass to other caps and bottles.

8. All remaining sample bottles should now be carried to the ice chest where they are labeled and iced down.

9. The well cap is replaced and locked. Lock the protective well casing.

10. The used gloves, bailer rope, foil and plastic sheet are folded up and discarded in a large trash bag provided.

11. Proceed to the next well and repeat the procedure.

C. BAILER CLEANING

The best procedure is one bailer for one well. However, when this is not possible a single bailer may be cleaned between wells as follows:

1. The sampler, without removing gloves, will untie the rope and open the bailer to allow the helper to pour distilled water into and around the bailer. This will be shaken and poured out.

2. The helper will then pour spectrograde isopropanol into and around the bailer. It is again shaken and poured out.

3. A final rinse is now performed with distilled water in copious amounts into and around the bailer.

4. A fresh piece of aluminum foil is placed on the plastic sheet and the bailer is placed in it. The foil is folded around it for carrying.

5. When sampling is finished the bailer is then returned to the laboratory for a thorough cleaning and foil wrapping.

   NOTE 1: For wells that are badly contaminated with insoluble wastes field cleaning is not recommended.

   NOTE 2: If isopropanol appears in the test results, a resampling will have to be done.

C. SPLIT SAMPLES

In order to keep sample handling to a minimum the parallel splitting procedure should be used.

1. The 2 sample bottles for a given test are lined up and caps removed.

2. One bailer-full is poured into one bottle, and the next bailer-full is poured into the other bottle, alternating until the 2 sample bottles are full. They are then capped as usual.

3. The 2 sample bottles for another test are then lined up, and filled as in 2.

4. This procedure is continued until all test bottles for a given well are filled for both parties.

## 4. SAMPLE HANDLING AND PRESERVATION

### A. General

All sample bottles should be filled to the top, capped with a teflon seal, and be placed on ice immediately after sampling. On arrival at the laboratory they are transferred to a refrigerator. Samples for volatile organic analysis must be filled to the top without headspace. Special vials with septum caps are available for this purpose. Figure 4-1 provides preservation procedures and holding times for samples.

### B. Dissolved Metals

The well water must not receive preservative before performing a filtration to remove the sediment which may have been stirred up during the purging operation. The sample bottle is filled to the top without headspace, placed on ice, and filtered in the laboratory immediately after arrival. A 0.45 micron filter disc is used and the filtrate receiving flask must contain the acid preservative. The filtrate is tested for the Drinking Water Standard Metals.

### C. PH and Specific Conductance

Ph and Specific Conductance will be performed immediately after collection. The calibration and procedure will be recorded in the field log book. If the samples are returned to the laboratory, they should be tested immediately on arrival and this alternate procedure recorded.

### D. Sample Transportation

Sample delivery to the laboratory will be in the shortest possible time after collection. If delay is incurred this will be entered in the field log book along with the time increment.

### E. Blanks and Background

A distilled water blank will be carried to the field and put through the entire sampling procedure for each sampling event. If positives are found, this will alert the collector to field sampling error.

Figure 4.1
Preservation Procedures and Holding Times

| Parameter | Recommended Container | Preservative Indicators of Groundwater Contamination | Holding Time | Volume Required For One Analysis |
|---|---|---|---|---|
| ph | T, P, G | Field determined | None | 25 ml |
| Specific conductance | T, P, G | Field determined | None | 100 ml |
| TOC | G, T-lined cap | Cool 4°C HCL to ph 2 | 28 days | 4 x 15 ml |
| TOX | G, amber, T-lined septa or caps | Cool 4°C, add 1 ml of 1.1M sodium sulfite | 7 days | 4 x 15 ml |
| Chloride | T, P, G | 4°C | 28 days | 50 ml |
| Arsenic<br>Barium<br>Cadmium<br>Chromium<br>Lead<br>Mercury<br>Selenium | T, P | Total Metals<br>Field Acidified to ph 2 with HNO3<br>Dissolved Metals<br>1. Field filtration if possible<br>2. Acidify the filtrate to ph 2 with HNO3 | 6 months<br>6 months | 1,000 ml<br>1,000 ml |
| Fluoride | T, P | Cool 4°C | 28 days | 300 ml |
| Nitrate/Nitrite | T, P, G | 4°C/H2SO4 to ph 2 | 14 days | 1,000 ml |
| Volatile Organics | G, T-lined septa or caps | Cool 4°C | 7-14 days (extract in 5 days) | 60 ml |
| Pesticides | G | Cool 4°C | (5 days to extract) 30 days | 2,000 ml |
| Extractable Organics | G | Cool 4°C | 30 days (extract in 5 days) | |
| Cyanide | P, G | Cool 4°C<br>NaOH to ph 12<br>0.6g ascorbic acid (see method) | 14 days* | 500 ml |
| Oil & Grease | G only | Cool 4°C, H2SO4 to ph 2 | 28 days | 100 ml |
| Phenols | G | Cool 4°C, H2SO4 to ph 2 | (5 days to extract) 30 days | 500 ml |

* Unless sulfide is present, then 24 hours (see lab method)
P = polyethylene, G = glass, T = fluorocarbon resins (Teflon, PTFE, FEP, etc.)

## 5. CHAIN OF CUSTODY

Custody and protection of samples is an important legal consideration. As few people as possible should handle the samples. The sampler is personally responsible for collected samples, and must be able to attest to the integrity of samples until transfer. Any ice chest must be locked or located in a place which is locked, and having access only by responsible officials. The Chain of Custody Record SUBASE Kings Bay Form 5090/11 will be used. See figure 5.1. Each time the samples are transfered from one individual to the next the chain of custody form must be signed, dated, and time recorded by both the persons. If the samples are to be shipped they must be sealed. The driver for the delivery service must sign the chain of custody form and a bill of lading must be secured. All chain of custody sheets must be returned and kept on file with the analysis for three years.

## 6. ANALYTICAL PROCEDURES

All analytical procedures used will be performed using methods specified in EPA Manual SW-846 or EPA manual 600/4-79-020, use latest editions.

## 7. FIELD AND LABORATORY QUALITY CONTROL

### A. Field Quality Control.

A field sampling logbook recording field observations and events will be kept.

1. A field blank will be part of each sampling event. Distilled water is taken to the site, and handled like a sample. It is poured into a bailer, and sample bottles filled using identical technique. Analysis of the blank alerts the sampler to technical error. The blank test results are not used to correct the sampler results, but are reported as-is. If the contaminant levels in the blank are within one order of magnitude of the groundwater sample results, the wells should be resampled.

2. All field instruments will be calibrated prior to field use and recalibrated in the field before measuring each sample.

### B. Laboratory Quality Control

Laboratories will follow quality control criteria as specified per EPA guidelines. This will include running spiked samples to determine percent recovery. Spiked sample results along with % recovery will be included with laboratory reports.

FIGURE 5.1

# CHAIN OF CUSTODY RECORD KINGS BAY NAVAL SUBASE

KINGS BAY, GA 31558

PROJECT NAME

SAMPLERS (SIGNATURE)

| STATION NO. | DATE | TIME | SAMPLE TYPE COMP.GRAB | SAMPLE ID NUMBER | NO. OF CONTAINERS | DESCRIPTION |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

| RELINQUISHED BY (SIGNATURE) | DATE/TIME | RECEIVED BY (SIGNATURE) | REMARKS |
|---|---|---|---|
| RELINQUISHED BY (SIGNATURE) | DATE/TIME | RECEIVED BY (SIGNATURE) | |
| RELINQUISHED BY (SIGNATURE) | DATE/TIME | RECEIVED BY (SIGNATURE) | |

**Reference 2**

SHOP
INTERVIEW FORM

NAME: Chief Rainey

DATE: 3/13/85 TIME: 3:25

SHOP:

POSITION:

BUILDING #:

PHONE:

YRS AT THIS SHOP: 19___ to 19___ TOTAL:

LONGEST PREVIOUS POSITION:

YEARS: 19___ to 19___ TOTAL:

---

Prior to 1980: No Firefighting training. Only 2 persons on duty. Functioned mostly as security

--History of your shop (buildings)
--Operations you were involved in (how differ in past)
--Types, quantities, years chemicals u
--Where materials, wastes stored
--Wastes generated (quantities, years)
--How, where waste disposal (years)
(ever into storm/sanitary sewer)
(ever on ground--back door disposal)
--Chemical spills, accidents, stained soil
--Recall any pollution incidents
--What know about existing sites
--Who had your job before you, phone #
--Who else should I interview

1980-81 Firefighting training
quantities: 3 to 6 barrels of waste oil/burn
Once every 2 months
Paint thinner, possibly minor quantity solvents were burnt but mainly diesel and waste motor oil.

After 1981: No training since 1981

ACTIVITY: _____

NACIP

INTERVIEWER: _____

INTERVIEW FORM

DATE: _____ TIME: _____

NAME: Chief W.A Rainey SHOP: _____

POSITION: Leroy Coxwell Tech Rep for Comm. Office BUILDING #: _____

PHONE: Base Safety Officer (See Card) YRS AT THIS SHOP: 19__ to 19__ TOTAL: _____

LONGEST PREVIOUS POSITION: _____ YEARS: 19__ to 19__ TOTAL: _____

---

1. Site 3 Fire Fighting Pit 20'x20'x2' deep used for fire fighting training
Contam diesel fuel paint paint thinner (little) was burnt in it

Enter Leroy Coxwell

NB Don't go into Site 3 areas without Leroy Coxwell. Coordinate with Mike Anderson

--History of your shop (buildings)
--Operations you were involved in (how differ in past)
--Types, quantities, years chemicals
--Where materials, wastes stored
--Wastes generated (quantities, years
--How, where waste disposal (years) (ever into storm/sanitary sewer) (ever on ground--back door disposal
--Chemical spills, accidents, stained soil
--Recall any pollution incidents
--What know about existing sites
--Who had your job before you, phone
--Who else should I interview

Doesn't recall hydrazine being burnt but it may have been.
Ships stacked waste there thinking Fire Dept burnt it all ⟹ Dept refused to accept. It was hauled in 55 gln drums by disposal company

Period of Op. Less than 1 Year in 1980/81 not 1979 Thanksgiving 1980

Site cleaned up. Soil removed in 55 gln drums

2. Dump Around Site 3 (Army) 3000' x 600' = 180000

Period 1974 — 1978 approx

Wastes: Old Army Dummy Cargo, Wooden ~ Metal Ammo Boxes, Concrete Slabs few barrels (55 gln drums) 25-30 tractor trailer loads came with majority going out but < 5%

3

NACIP

INTERVIEW FORM

ACTIVITY: _____

INTERVIEWER: _____

DATE: _____ TIME: _____

NAME: Chief Rainey

SHOP: _____

POSITION: _____

BUILDING #: _____

PHONE: _____

YRS AT THIS SHOP: 19__ to 19__ TOTAL: _____

LONGEST PREVIOUS POSITION: _____

YEARS: 19__ to 19__ TOTAL: _____

2. Continued (Dumped Around Site 3)
Area has been cleaned up.

--History of your shop (buildings)
--Operations you were involved in (how differ in past)
--Types, quantities, years chemicals
--Where materials, wastes stored
--Wastes generated (quantities, years
--How, where waste disposal (years) (ever into storm/sanitary sewer) (ever on ground--back door disposal
--Chemical spills, accidents, stained soil
--Recall any pollution incidents
--What know about existing sites
--Who had your job before you, phone
--Who else should I interview

3/ Site 6

Operation 1983 - Present

Wastes Dredge Disposal
Old Dirt from swamp
& tree stumps from around the base
Burn Site within it for burning tree stumps etc
Fire Dept issues burning permits.
No garbage burn there.

Old Timers

J. W. Williams: On Wharf - Port Services as rigger or Crane Operator
Danny Sylvester: " "
? Jacobs: " "
Robert Thrift: " "
George Nestler: " "

- 4 -

ACTIVITY: NSB King Bay

NACIP

INTERVIEWER:

INTERVIEW FORM

DATE: 3/11/85 TIME: 1:40 p

NAME: Leroy Coxwell

SHOP:

POSITION: in presence of Chief Rainey.

BUILDING #:

PHONE:

YRS AT THIS SHOP: 19___ to 19___ TOTAL:

LONGEST PREVIOUS POSITION:

YEARS: 19___ to 19___ TOTAL:

Site (~~10~~ 5) Near Old Pest Control Bldg

Area ≈ 1 Acre

Period: Army Days

Dates: Earlier than 1975 to 1979

Types: Scrap Metal, Ammo Boxes (Metal Containers) some full of concrete used in loading/off loading training for Army Reserve.

Used to be for Army what Site 6 is for Navy.

Wastes still visible at site

Disposal On Surface — No hole

--History of your shop (buildings)
--Operations you were involved in (how differ in past)
--Types, quantities, years chemicals
--Where materials, wastes stored
--Wastes generated (quantities, years
--How, where waste disposal (years) (ever into storm/sanitary sewer) (ever on ground--back door disposal
--Chemical spills, accidents, stained soil
--Recall any pollution incidents
--What know about existing sites
--Who had your job before you, phone
--Who else should I interview

Site (~~11~~ 6)

Army Operation Prior to 1975 — 1979

Area: 1/4 acre in pits 5' to 6' deep

Wastes: Dry wastes, office type garbage

No Chemicals

Was covered up (but not cleaned up with dirt ≈ 1 ft to 2 ft thick.

ACTIVITY: NSB - Kings Bay

NACIP

INTERVIEWER: U.P. Gibson

INTERVIEW FORM

DATE: 3/13/85 TIME: 1:30pm

NAME: Henry Thriff SHOP:

POSITION: Co. SLF Supervisor BUILDING #:

PHONE: (912) 576-5343 YRS AT THIS SHOP: 19___ to 19___ TOTAL:

LONGEST PREVIOUS POSITION: YEARS: 19___ to 19___ TOTAL:

---

Blue Star Shipping Co. 5-10%
Scraps paper, board (small quantities)
Oil once sent in drums
was returned to them

Base
Paper wastes, from offices
during Army Years 20-30%

County
Wastes 60%

--History of your shop (buildings)
--Operations you were involved in (how differ in past)
--Types, quantities, years chemicals u
--Where materials, wastes stored
--Wastes generated (quantities, years)
--How, where waste disposal (years)
(ever into storm/sanitary sewer)
(ever on ground--back door disposal)
--Chemical spills, accidents, stained soil
--Recall any pollution incidents
--What know about existing sites
--Who had your job before you, phone #
--Who else should I interview

Control: He checked all wastes coming into the Landfill. Site Fenced — 1 entry

Years of Operation: Doesn't Recall

Quantities: Av 12 Truck Loads/Day
Monday — Friday
Sometimes on Saturdays

**Reference 3**

ACTIVITY: NSB Kings

NACIP

INTERVIEWER: W. Gibson

INTERVIEW FORM

Jimmy Johnson Retiree 729-5497

NAME: Jimmy Robinson X 4638 SHOP:

DATE: 3/12/85 TIME:

POSITION: BUILDING #:

PHONE: YRS AT THIS SHOP: 19__ to 19__ TOTAL:

LONGEST PREVIOUS POSITION: YEARS: 19__ to 19__ TOTAL:

J. Johnson: Civilian In Charge Army Terminal

1956-60 Electrician
1960-65 M'tce Foreman
1965-79 Civilian In Charge Army
1979-84 Asst Pub Works Officer & Head of Operations Pub.

--History of your shop (buildings)
--Operations you were involved in (how differ in past)
--Types, quantities, years chemicals
--Where materials, wastes stored
--Wastes generated (quantities, years
--How, where waste disposal (years) (ever into storm/sanitary sewer) (ever on ground--back door disposal
--Chemical spills, accidents, stained soil
--Recall any pollution incidents
--What know about existing sites
--Who had your job before you, phone
--Who else should I interview

J. Robinson

1971 — 1973/4 Tractor Oper
1973/4 — 1981 Water/Waste Water Plant Operator
1981 — Present Utilities Operating Inspector

Caretaker Force ≈ 18 persons on Base fi
start.
Fire & Security — 8
M'tce — 8
Himself & Sectry — 2

Blue Star Shipping Co ≈ 1959 — 1979
Commercial Shipper — Explosives
Fert. Grade Ammonium Nitr.
Dynamite, Explosives
Storage Building on wharf
Rock Salt

Explosives in by truck to holding area for shipping.
Owner Mr Marion Martin (St Thomas)
Mr Mickey Davis — Supt (Savannah)

ACTIVITY: _____

NACIP

INTERVIEWER: _____

INTERVIEW FORM

DATE: _____ TIME: _____

NAME: T. Robinson & J. Johnson SHOP: _____

POSITION: _____ BUILDING #: _____

PHONE: _____ YRS AT THIS SHOP: 19___ to 19___ TOTAL: _____

LONGEST PREVIOUS POSITION: _____ YEARS: 19___ to 19___ TOTAL: _____

--History of your shop (buildings)
--Operations you were involved in (how differ in past)
--Types, quantities, years chemicals u
--Where materials, wastes stored
--Wastes generated (quantities, years)
--How, where waste disposal (years) (ever into storm/sanitary sewer) (ever on ground--back door disposal)
--Chemical spills, accidents, stained soil
--Recall any pollution incidents
--What know about existing sites
--Who had your job before you, phone #
--Who else should I interview

Henry Thrift — Operator Landfill in Wardbine Local Tel County L.F.

Cooter Greene - Camden County L.F.

Old Camden Co. L.F. 1974 - 1981

Household Wastes from around Co.

Wastes from Base - All Types Household type + Blue Star Shipping Waste on Wastes

Size — See Photograph

Trenches & Fill Operations -

West to East 20 ft wide, 12 ft deep Compacted & covered daily.

No liners in L.F.

Ground Water was in the trenches

Water Table on base ≈ 4 to 8 feet.

Blue Star Shipping Co. L.Fs

(14) ~~(12)~~ 9 L.F. on Parking Lot Area. 1/4 acre 3 to 4 ft deep Pallets, Paper, Dunnage } Burnt

Old Dynamite (Indv. Sticks) also burnt there

(15) ~~(13)~~ 10 Same as (12) located near T-Shed Fence Line

Both completely excavated during construction

Both [illegible]

(3)

NACIP

INTERVIEW FORM

ACTIVITY: _____

INTERVIEWER: _____

DATE: _____ TIME: _____

NAME: J. Robinson/J. Johnson

SHOP: _____

POSITION: _____

BUILDING #: _____

PHONE: _____

YRS AT THIS SHOP: 19___ to 19___ TOTAL: _____

LONGEST PREVIOUS POSITION: _____

YEARS: 19___ to 19___ TOTAL: _____

---

Larger Area Around Site ~~3~~ 2 (site 12)

Confirmed but dug out in 1983

Waste was buried in dredge spoil area

Metal, Metal Drums (empty), Dummy Cargo

--History of your shop (buildings)
--Operations you were involved in (how differ in past)
--Types, quantities, years chemicals us
--Where materials, wastes stored
--Wastes generated (quantities, years)
--How, where waste disposal (years) (ever into storm/sanitary sewer) (ever on ground--back door disposal)
--Chemical spills, accidents, stained soil
--Recall any pollution incidents
--What know about existing sites
--Who had your job before you, phone #
--Who else should I interview

Site (4)

Area with Trees dumped or buried

Not aware of anything in that area

Dredge Spoil

Army did not tests for contaminants

Site 9. ARDM. Storage

Mostly small cans

Operation 1980 — Jan 1985

Present (Mike Anderson expects continued use

Paints, solvents

Site 10: Wastes: Stumps, Pallets, Metal Ammo Box-

some kitchen wastes Junk Automobiles, concrete blocks

Operation: 1972-76 / Silt from road dit. gravel (reused)

(4)

ACTIVITY: _____

NACIP

INTERVIEWER: _____

INTERVIEW FORM

DATE: _____ TIME: _____

NAME: J. Robinson / J Johnson SHOP: _____

POSITION: _____ BUILDING #: _____

PHONE: _____ YRS AT THIS SHOP: 19___ to 19___ TOTAL: _____

LONGEST PREVIOUS POSITION: _____ YEARS: 19___ to 19___ TOTAL: _____

---

Site [11 (0)] Army Res Dump

Kitchen garbage mainly

Only things supposed

to have gone in

≈ ½ acre x 8 ft deep

Used during summer

camps

Operation 1971 — 1977

--History of your shop (buildings)
--Operations you were involved in (how differ in past)
--Types, quantities, years chemicals u
--Where materials, wastes stored
--Wastes generated (quantities, years)
--How, where waste disposal (years) (ever into storm/sanitary sewer) (ever on ground--back door disposal)
--Chemical spills, accidents, stained soil
--Recall any pollution incidents
--What know about existing sites
--Who had your job before you, phone #
--Who else should I interview

✓ Site 11 (6)

Both dispute this site as located

See location given on map (during tour)

Site 11 5 73 (8) 14' x 100' x (5 - 8 ft deep)

Op. 1973-74 approx 1 Yr (6 weeks)

Army Reserve use

General household wastes

paper, wood, Kitchen

5

ACTIVITY: NSE King Bay

NACIP

INTERVIEWER:

INTERVIEW FORM

DATE: 3/12/85 TIME:

NAME: T. Johnson T. Robinson SHOP:

POSITION: BUILDING #:

PHONE: YRS AT THIS SHOP: 19___ to 19___ TOTAL:

LONGEST PREVIOUS POSITION: YEARS: 19___ to 19___ TOTAL:

Pesticide Storage Area

25 Drums 55 gln
most empty, 1 filled

Markings

FLIT MLO

Fire Haz. 1. Above 200°F

Health Haz 0. Normal Material

Specific Haz W. Use no Water

Reactivity 1. Unstable if Heated

Dated (Barrels) 5/2/78

Operation: 1980's to Present

Filled Drums used to be laid out on the Wooden runners

--History of your shop (buildings)
--Operations you were involved in (how differ in past)
--Types, quantities, years chemicals u
--Where materials, wastes stored
--Wastes generated (quantities, years)
--How, where waste disposal (years) (ever into storm/sanitary sewer) (ever on ground--back door disposal)
--Chemical spills, accidents, stained soil
--Recall any pollution incidents
--What know about existing sites
--Who had your job before you, phone #
--Who else should I interview

Bldg. 4019

- 20 Gln Drum filled with creamish/white powder
  Unmarked contents
  Old Lavatory; Metal scrap, 55 Gln empty drum
  in addition to the 20 Gln drum
  (behind the door)
- Other half of bldg.: Pump Stn (Water
  Old pump & connection
  Well 50 feet away

**Reference 4**

ACTIVITY: NSB Kings Bay

NACIP

INTERVIEWER: U.P. Gibson

INTERVIEW FORM

DATE: 3/11/85 TIME: 1:40p

NAME: Chief W.A. Rainey SHOP: Fire Dept

POSITION: Fire Chief BUILDING #: 2004

PHONE: 2263 or 8 YRS AT THIS SHOP: 1975 to 19 Present TOTAL: 10 Yrs

LONGEST PREVIOUS POSITION: Fire Chief Overseas YEARS: 19__ to 19__ TOTAL:

In 1975 only 18 persons on base
Fire Dept had 8 persons responsible for security as well
Big operation was Blue Star Shipping which leased the wharf — Primarily shipping dynamite & other high explosives
blasting caps, black powder, possibly some plastics
some ships with "hush hush" sensitive cargoes (Israeli, Iranian)
During Summer: — Army & Reserve outfits from South Eastern United States with 1000 — 1600 military personnel on base. Brought in their own cargoes

Fire Dept
Fought fires
Had Military help with security
Above had been going on for sometime preceding his arrival. (from others on base)

Underwent training in loading dummy cargoes (Dearmed rocket casing, bomb casings, old mines etc
which in many cases were disposed of around the base: See area marked Army Dump Site 3

--History of your shop (buildings)
--Operations you were involved in (how differ in past)
--Types, quantities, years chemicals u
--Where materials, wastes stored
--Wastes generated (quantities, years)
--How, where waste disposal (years) (ever into storm/sanitary sewer) (ever on ground--back door disposal)
--Chemical spills, accidents, stained soil
--Recall any pollution incidents
--What know about existing sites
--Who had your job before you, phone #
--Who else should I interview

**Reference 5**

INFORMATION TRANSFER 3/11/85

RE: DISPOSAL SITE @ CONSTRUCTION
SITE 18 SITE OF THE NEW DRY DOCK FACILITY

[INFO. FROM INTERVIEW W/ DAVE LOVETTE, PW Chief of Engr., X4616]

SINCE THE EARLY 80's (?) (SINCE THE CONSTRUCTION BEGAN OF THE NEW DRY-DOCK FACILITY DOWN BY THE WATERFRONT) BACK-HOE OPERATORS HAVE DUG UP SCRAP METAL, DUNNAGE, NAIL KEGS AND OXYGEN-BREATHING APPARATUS (OBA) CANISTERS.

FROM 1955 - 1978, THE ARMY USED THIS AREA FOR Amphibeans ship-to-shore transporting of MATERIAL TRAINING OPERATIONS. ARMY UNITS TRAINED AND CAMPED IN THIS AREA.

SINCE 1978', CONTRACTORS DEVELOPING THE NEW DRY-DOCK FACILITY HAVE USED THIS AREA AS A LAY-DOWN AREA (i.e. temp. storage area for construction MAT'LS). NO DISPOSAL FROM CONTRACTORS HAS BEEN REPORTED.

From Aug. 83' through Spring 84', THE AMERICAN DREDGING Co. USED THE AREA FOR STORAGE (IN 55-gal drums) OF TOVEX, AN AMMONIA BASED UNDERWATER DREDGING EXPLOSIVE. TOVEX WAS BROUGHT IN ON TANK TRUCKS & PUMPED INTO 55 gal drums. (TOVEX is A gel MATERIAL). TOVEX WAS THEN TAKEN BY BOAT OUT TO THE SITE FOR DREDGING, AND PUMPED THROUGH A HOSE INTO A HOLE IN THE CHANNEL BOTTOM. A CHARGE WAS THEN DETONATED.

THERE WERE NO REPORTS OF SPILLAGE. Reportedly, between .25 MILLION AND 2 million lbs OF TOVEX (TOTAL) WERE STORED IN THIS AREA.

THE LAPORT DREDGING Co. (SINCE Spring 84 ?) HAS USED THIS AREA FOR MAT'L STORAGE.

**Reference 6**

This initial notification information is required by Section 103(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and must be mailed by June 9, 1981.

Please type or print in ink. If you need additional space, use separate sheets of paper. Indicate the letter of the item which applies.

**Person Required to Notify:**
Enter the name and address of the person or organization required to notify.

Name: Naval Submarine Support Base
Street:
City: Kings Bay State: GA Zip Code: 31547

**Site Location:**
Enter the common name (if known) and actual location of the site.

Name of Site: Borrow Pit
Street: Naval Submarine Support Base
City: Kings Bay County: Camden State: GA Zip Code: 31547

**Person to Contact:**
Enter the name, title (if applicable), and business telephone number of the person to contact regarding information submitted on this form.

Name (Last, First and Title): Anderson, Michael Environmental Engr.
Phone: (912) 673-2054

**Dates of Waste Handling:**
Enter the years that you estimate waste treatment, storage, or disposal began and ended at the site.

From (Year): 1979 To (Year): Present

**Waste Type:** Choose the option you prefer to complete

**Option I:** Select general waste types and source categories. If you do not know the general waste types or sources, you are encouraged to describe the site in Item I—Description of Site.

**General Type of Waste:**
Place an X in the appropriate boxes. The categories listed overlap. Check each applicable category.

1. ☐ Organics
2. ☐ Inorganics
3. ☐ Solvents
4. ☐ Pesticides
5. ☐ Heavy metals
6. ☐ Acids
7. ☐ Bases
8. ☐ PCBs
9. ☐ Mixed Municipal Waste
10. ☐ Unknown
11. ☐ Other (Specify)

**Source of Waste:**
Place an X in the appropriate boxes.

1. ☐ Mining
2. ☐ Construction
3. ☐ Textiles
4. ☐ Fertilizer
5. ☐ Paper/Printing
6. ☐ Leather Tanning
7. ☐ Iron/Steel Foundry
8. ☐ Chemical, General
9. ☐ Plating/Polishing
10. ☐ Military/Ammunition
11. ☐ Electrical Conductors
12. ☐ Transformers
13. ☐ Utility Companies
14. ☐ Sanitary/Refuse
15. ☐ Photofinish
16. ☐ Lab/Hospital
17. ☐ Unknown
18. ☐ Other (Specify)

**Option 2:** This option is available to persons familiar with the Resource Conservation and Recovery Act (RCRA) Section 3001 regulations (40 CFR Part 261).

**Specific Type of Waste:**
EPA has assigned a four-digit number to each hazardous waste listed in the regulations under Section 3001 of RCRA. Enter the appropriate four-digit number in the boxes provided. A copy of the list of hazardous wastes and codes can be obtained by contacting the EPA Region serving the State in which the site is located.

| | | |
|---|---|---|
| | | |
| F017 | | |
| | | |
| | | |
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| | | |
| | | |
| | | |

Form Approved
OMB No. 2000-0138
EPA Form 8900-1

Waste Quantity:

Place an X in the appropriate boxes to indicate the facility types found at the site.

In the "total facility waste amount" space give the estimated combined quantity (volume) of hazardous wastes at the site using cubic feet or gallons.

In the "total facility area" space, give the estimated area size which the facilities occupy using square feet or acres.

1. ☒ Piles
2. ☐ Land Treatment
3. ☐ Landfill
4. ☐ Tanks
5. ☐ Impoundment
6. ☐ Underground Injection
7. ☐ Drums, Above Ground
8. ☐ Drums, Below Ground
9. ☐ Other (Specify) _____

cubic feet _____

gallons 20

Total Facility Area

square feet 400

acres _____

**Known, Suspected or Likely Releases to the Environment:**

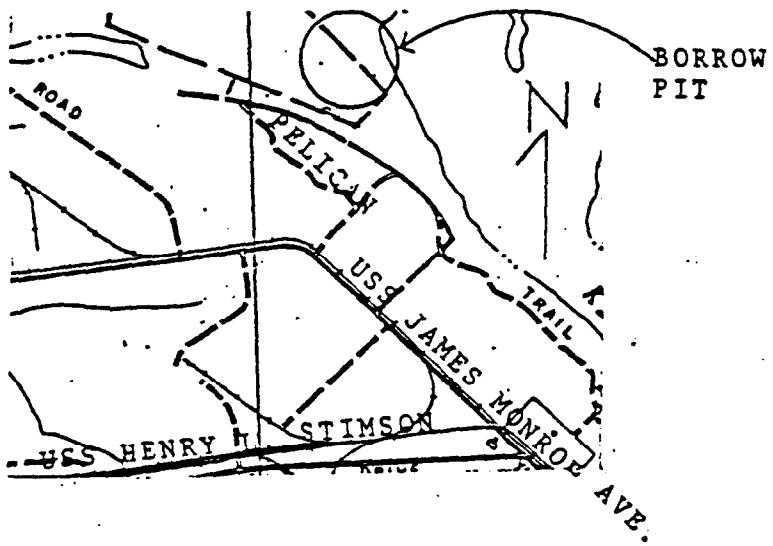
Place an X in the appropriate boxes to indicate any known, suspected, or likely releases of wastes to the environment.

☐ Known ☐ Suspected ☒ Likely ☐ None

Note: Items H and I are optional. Completing these items will assist EPA and State and local governments in locating and assessin hazardous waste sites. Although completing the items is not required, you are encouraged to do so.

**H Sketch Map of Site Location: (Optional)**

Sketch a map showing streets, highways, routes or other prominent landmarks near the site. Place an X on the map to indicate the site location. Draw an arrow showing the direction north. You may substitute a publishing map showing the site location.




**I Description of Site: (Optional)**

Describe the history and present conditions of the site. Give directions to the site and describe any nearby wells, springs, lakes, or housing. Include such information as how waste was disposed and where the waste came from. Provide any other information or comments which may help describe the site conditions.

This area is located within a borrow pit. The waste was placed in a 30 ft by 30 ft depression and burned for training fire fighting personnel. The borrow pit is located off of Pelican Rd. which is near the intersection of USS HENRY L. STIMSON DR. and USS JAMES MONROE AVE.

**J Signature and Title:**

The person or authorized representative (such as plant managers, superintendents, trustees or attorneys) of persons required to notify must sign the form and provide a mailing address (if different than address in item A). For other persons providing notification, the signature is optional. Check the boxes which best describe the relationship to the site of the person required to notify. If you are not required to notify check "Other".

Name R.A. CURRIER
Captain, USN, Commanding Officer

Street Naval Submarine Support Base

City Kings Bay State GA Zip Code 31547

Signature RA Currier Date 6/3/81

☐ Owner, Preser
☐ Owner, Past
☐ Transpor
☐ Operatc
☐ Operator, Past
☐ Other

## Reference 7

ACTIVITY Naval Submarine Support Base, Kings Bay, GA.

UIC 42237

SITE NUMBER 1

SECTION III. DETAILED DISPOSAL INFORMATION

This section should be completed only if active or past disposal sites were identified in section II. Section III should be completed for each site. As an example, say your activity has three sites. Make three copies of section III and complete them. Assign a number to each site (1, 2, and 3) and enter it in the upper right-hand corner.

1. Is this disposal site currently in operation or has it been closed?

It is corrently in operation.

Years of operation: From Sept. 1979 To present

2. What is/~~was~~ the name of the site (e.g., slurry pit)? Firefighting pit.

3. Where is/~~was~~ the site located (provide a description and give activity map coordinates)?

Site is located in the waterfront area, approximately feet northwest of the wharf and approximately. feet from mean high tide.

4. Describe how the site is/was operated.

Waste oil is poured into a 20 feet by 20 feet pit that is bermed with railroad ties. Burning is done approximately every month.

(Continued)



ENCLOSURE(1)

UIC N42237

SITE NUMBER 1

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

5. If the site was closed, briefly describe the closure procedures. N/A

6. As well as possible, describe the wastes that entered the site.

| Type of Waste | Quantity | Origin |
|---|---|---|
| Waste oil | 50 gallons | Vehicle and machinery maintenance |
| Paint | Unknown | |
| Solvents | Unknown | COMSUBRON SIXTEEN |

(Continued)



ENCLOSURE(1)

ACTIVITY Naval Submarine Support Base, Kings Bay, Ga

UIC 42237

SITE NUMBER 1

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

7. Describe the site's hydrogeology, including information on terrain, soils, water table depth, groundwater quality, nearby surface waters, etc.

The site is surrounded by soil with a thin layer of limestone dredge spoils overlaying organic silty clay. The area is nearly flat with the water table at or near grade. Kings Bay is the nearest surface water with the edge of the marsh approximately 300 feet from the pit.

8. Briefly describe animal and plant life surrounding the site, including any peculiarities (e.g., dying plants).

The pit is adjacent to salt marsh inhabited by crustaceans, shellfish, fish, birds and alligators. The plant life consists of cattails with assorted varieties of grass.

9. Do personnel live or work near the site? Please explain.

Limestone dredge deposits are loaded into trucks positioned no closer than 200 feet.



(Continued)

ENCLOSURE(1)

ACTIVITY Naval Submarine Support Base, Kings Bay, Ga.

UIC 42237

SITE NUMBER 1

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

10. Have there been any incidents or complaints concerning this site? Explain.

11. How close is the site to the activity's boundaries?

The pit is approximately 300 feet from the boundary defined by the mean low water line at Kings Bay.

12. Additional comments



ENCLOSURE(1)

**Reference 8**

# TECHNICAL SERVICES, INC.

ENVIRONMENTAL CONSULTANTS — INDUSTRIAL CHEMISTS
105 STOCKTON STREET — P.O. BOX 52329
JACKSONVILLE, FLORIDA 32201
(904) 353-5761


Laboratory No. 41658 August 20, 19 81

Sample of Sludge

Date Received July 14, 1981

For Commanding Officer, Southern Division
Naval Facilities Engineering Command
Marks: P. O. Box 10068, Charleston, S.C. 29411

CERTIFICATE OF ANALYSIS OR TESTS

Naval Submarine Support Base, Kings Bay, Ga.
Taken at Firefighting Training Pit - 6 July 1981
Contract No. N62467-80-C-0464

E.P. EXTRACTION PROCEDURE TOXICITY TESTS

| | |
|---|---|
| Arsenic, mg/l | 0.017 |
| Barium, mg/l | 0.2 |
| Cadmium, mg/l | <0.002 |
| Chromium, mg/l | 0.014 |
| Lead, mg/l | 0.057 |
| Mercury, mg/l | <0.0002 |
| Selenium, mg/l | <0.01 |
| Silver, mg/l | 0.005 |
| Endrin, mg/l | <0.0005 |
| Lindane, mg/l | <0.0005 |
| Methoxychlor, mg/l | <0.001 |
| Toxaphene, mg/l | <0.005 |
| 2,4-D, mg/l | <0.05 |
| 2,4-5 TP Silvex, mg/l | <0.001 |

CC: Dept. of the Navy
Naval Support Base
Kings Bay, Ga 31547
ATTN: Code N5211

Respectfully submitted,

TECHNICAL SERVICES, INC.

BY Harvey C. Gray, Jr.



APPENDIX J

**Reference 9**

N5211:WPC:amw
6240
17 SEP 1981

Mr. Craig Root
Camden County Administrator
P. O. Box 99
Woodbine, Georgia 31669

Dear Mr. Root:

As explained in a recent telephone conversation between Michael Anderson of my Public Works Department and yourself, the Naval Submarine Support Base plans to remove some firefighting training pit sludges from a proposed dredge spoils disposal area. Clearing operations for this area are expected to begin in November 1981.

A certificate of analysis is enclosed which shows that this material does not exceed the maximum concentration of contaminants for characteristic of EP toxicity as described in 40 CFR, part 261.24 under Section 3001 of the Resource Conservation Act of 1976.

Permission is requested to dispose of this material in the Camden County landfill. For further information on this subject, please contact Mr. Michael Anderson who may be reached at 673-2054.

Sincerely,

R. A. CURRIER
Captain, U. S. Navy
Commanding Officer

Copy to:
OICC TRIDENT
✓SOUTHNAVFACENGCOM (Code 114)

Encl: (1) Certificate of Analysis, Lab No. 41658, Technical Services, Inc. of 20 AUG 81

File 7210.1

[illegible]

☐ LONG DISTANCE ☒ LOCAL

INSTRUCTIONS

To be used for both incoming and outgoing calls

| CONVERSATION INITIATED BY: | CODE | DATE | HOUR | TELEPHONE NO. | EXT. |
|---|---|---|---|---|---|
| ANDERSON, Michael | N5211 | 9 Sept 81 | 1000 | 673-2054 | |
| PERSON CALLED OR RECEIVING CALL (Name of Person and Activity) | CODE | DATE | HOUR | TELEPHONE NO. | EXT. |
| ROOT, Craig CAM. CO. ADMINISTRATOR | | 9 Sept 81 | 1000 | 576-5601 | |

SUBJECT:

Landfill of Firefighting Training Pit wastes

REFERENCE:

(a) Certificate of Analysis, Technical Service, Jacksonville, Fla. 20 August 1981

RESUME:

I described to Mr. Root the wastes which are located in the firefighting training pit and I requested permission to bury these wastes in the Camden County landfill located in Kingsland. Mr. Root requested a copy of reference (a) and said that permission is granted to dispose of approximately 100 cubic yards of this material.

COPY TO:

N52A, N5211, File

SIGNATURE

Michael Anderson

MICHAEL ANDERSON

**Reference 10**

CAMDEN COUNTY

CAMDEN COUNTY HEALTH DEPT.
P. O. Box 366
Woodbine, Georgia 31569

December 18, 1981

Commanding Officer
Kings Bay Naval Base
Kings Bay, Georgia 35148

Dear Sir:

We have been contacted concerning the disposal of fire-fighting (drills) residues to be disposed of at the county sanitary landfill.

We do hereby give approval to the disposal of burnt oils, gasoline, etc., to be buried at the county landfill.

If I can be of service to you feel free to call on us.

Sincerely yours,

Baxter G. Hammond
Senior Sanitarian

VGH:ea

cc: File

3235-81



Enclosure (1)

**Reference 11**

INFORMATION TRANSFER 3/11/85

RE: ~~[illegible]~~

OLD SITE 18 — CURRENT SITE 12

[INFO. FROM INTERVIEW w/ DAVE LOUETTE, PW Chief of Engr., X4616

About 1982', A CONTRACTOR OPERATING A BACKHOE UNCOVERED 6-8 55gal drums of waste oil IN AN area SOMEWHERE ABOUT 100 ft. FROM THE OLD F.F. TRAINING FACILITY. 1 55gal drum WAS PUNCTURED (?) w/ THE BACKHOE CAUSING A SPILL. THE SPILLED OIL, STAINED SEDIMENT, & REMAING 6-8 55 gal drums WERE RECOVERED/REMOVED FROM THE AREA AND DISPOSED OF OFF-STATION THROUGH PUBLIC WORKS.

THE U.SS. SIMON LAKE (Sub tender) USED TO GIVE WASTE OIL IN 55-gal drums TO THE OLD FIRE FIGHTING TR. FAC.

CHECK w/ CHIEF RAINEY OF FIRE Dept. X2263/2220

THE DRUMS WERE I.D./DUG UP AFTER THE FIRE F. TRAINING FACILITY WAS CLOSED DOWN & CLEANED UP.

**Reference 12**

WORK REQUEST (MAINTENANCE MANAGEMENT)
[illegible]
Supersedes NAVDOCKS 2051

Site 18
12

Requestor see Instructions on Reverse Side

PART I—REQUEST (Filled out by Requestor)

| | |
|---|---|
| 1. FROM<br>Public Works Officer | 2. REQUEST NO.<br>83-346 |
| 3. TO<br>BOS Contractor | 4. DATE OF REQUEST<br>1/25/83 |
| 5. REQUEST FOR<br>[X] COST ESTIMATE [X] PERFORMANCE OF WORK | 5a. REQUEST WORK START<br>1/26/83 |
| 6. FOR FURTHER INFORMATION CALL<br>Michael Anderson extension 2054 | 7. SKETCH/PLAN ATTACHED<br>[ ] YES [ ] NO |

8. DESCRIPTION OF WORK AND JUSTIFICATION (Including location, type, size, quantity, etc.)

1-Excavate buried oil drums and debris from the new drydock site next to Kings Bay.
2-Dispose of waste oil by placing into 78 Waste Water Treatment Plant oil separator (if non-PCB contaminated) or by placing into 55 gallon DOT approved drums (if PCB contaminated).
3-Dispose of sand/soil containing minor amounts of oil by air drying and hauling to county disposal area (if non-PCB contaminated) or by placing into 55 gallon DOT approved drums (if PCB contaminated).
4-Coordinate with the base environmental engineer to excavate, segregate, and label drums. Samples will be collected by the base environmental engineer for laboratory analysis.

NOTE: It is anticipated that excavation will require the following: Backhoe, bulldozer, oil tanker, truck, portable pump, 55 gallon drums, (DOT 17E approved drums - approximately 20) and disposable protective clothing.

| | |
|---|---|
| 9. FUNDS CHARGEABLE | 10. SIGNATURE (Requesting Official)<br>[signature] |

PART II—COST ESTIMATE
(Filled out by Maintenance Control Division if estimate requested)

| | |
|---|---|
| 11. TO: | 12. ESTIMATE NO. |

| 13. COST ESTIMATE | |
|---|---|
| a. Labor | $ |
| b. Material | $ |
| c. Overhead and/or Surcharge | $ |
| d. Equipment Rental/Usage | $ |
| e. Contingency | $ |
| f. TOTAL | $ |

14. SKETCH/PLAN ATTACHED
[ ] YES [ ] NO

15.
[ ] APPROVED. PROGRAMMING TO START IN _____
[ ] APPROVED. BASED ON PRESENT WORKLOAD, THIS JOB CAN BE PROGRAMMED TO START IN _____ IF AUTHORIZED BY 25TH OF _____ AND FUNDS ARE MADE AVAILABLE.
[ ] DISAPPROVED. (See Reverse Side)

| | |
|---|---|
| 16. SIGNATURE | 17. DATE |

PART III—ACTION (Filled out by Requestor)

18. TO:

| | |
|---|---|
| 19. AUTHORIZATION TO PROCEED IS ATTACHED (Check one if other than PW funds are involved)<br>[ ] NAVCOMPT 140 [ ] OTHER | 20. WORK REQUESTED<br>[ ] HAS BEEN CANCELLED [ ] HAS BEEN DEFERRED [ ] WILL BE PERFORMED BY OTHERS |
| 21. SIGNATURE | 22. DATE |

K-58

(See Part IV on Reverse Side)

## Reference 13

INVOICE: UNDERWOOD INDUSTRIES

# ALABAMA HAZARDOUS WASTE MANIFEST

CWMA

№ 89019

## IDENTIFICATION INFORMATION

| NAME | ADDRESS | PHONE | EPA ID CODE |
|---|---|---|---|
| GENERATOR<br>DPDO KINGS BAY SUB BASE | CODE N5211<br>KINGS BAY, GA. 31547 | 912<br>673-4220 | GA4170090001 |
| TRANSPORTER NO. 1<br>RAMSEY CHEMICAL CO. INC. | AZELEA CITY INDUSTRIAL PARK<br>VALDOSTA, GA 31603-5006 | 912<br>247-7797 | GAD 093380814 |
| TRANSPORTER NO. 2 | | | |
| DISPOSER<br>Chemical Waste Management, Inc.<br>Emelle Facility | P. O. Box 55<br>Emelle, Alabama 35459 | 205-652-9531 | ALD000622464 |

## WASTE INFORMATION

| CONTAINER NO. | CONTAINER TYPE | DESCRIPTION/CLASS | TOTAL QUAN. | UNIT | EPA Hazardous Waste ID No. | CWMA WASTE CODE | WEIGHT |
|---|---|---|---|---|---|---|---|
| 8 | 55 GAL DRUMS | HAZARDOUS WASTE SOLID NOS ORM-E NA9189 ( DIRT CONTAMINATED W/LEAD) | 4000<br>8 | lb<br>DR | 0009 | MARD24695 | 4000 1 |
| 48 | 55 GAL DRUMS | WASTE FLAMMABLE LIQUID NOS- FLAMMABLE UN1993 (PAINT & SOLVENT) | 2640 | GL | 0001 0007<br>0009 | MARD 45438 | |
| 17 | 55 GAL DRUMS | HAZARDOUS WASTE LIQUID NOS- ORM-E NA9189 (INSULATING VARNISH) | 935 | GL | | MARD45656 | |

## EMERGENCY INFORMATION

EMERGENCY NOS.: DISPOSER — (205) 652-9531 ; GENERATOR — ( 912 ) 673-4220 US COAST GUARD 1-800-424-8802

SPECIAL INSTRUCTIONS:

## CERTIFICATION

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, the U.S. Environmental Protection Agency:

James A Colson

DPDO Kings Bay GA - James A. Colson — Generator | C E R — Title | 3-20-84 — Date

This is to certify acceptance of the hazardous waste shipment described above:

Ramsey Chemical Co. — Transporter #1 | Driver — Title | 3-20-84 — Date

Transporter #2 | Title | Date

This is to certify acceptance of the hazardous waste shipment described above for treatment, storage or disposal:

Disposer | Title | Date

## DISPOSAL INFORMATION

| CWMA WASTE CODE | QUANTITY | UNIT | PROCESS CODE | LOCATION TRENCH | LOCATION LEVEL | LOCATION QUAD | COMMENTS |
|---|---|---|---|---|---|---|---|
| | 9 | 55 | S-D81 | 20 | | | [illegible] |
| | 14 | [illegible] | [illegible] | [illegible] | | | [illegible] |
| | [illegible] | [illegible] | [illegible] | [illegible] | | | |
| | 47 | [illegible] | T3X 745 [illegible] | 20 | | | |

K-60

PRODUCER NO. 2

NON PCB ONE TIME OR DELIVERY ORDER # 0005

INSTRUCTIONS ON REVERSE

TOR: Public Works Dept.
Naval Submarine Base, Kings Bay, GA

DPDO: Jacksonville
OSB-Kings Bay, GA

POINT OF CONTACT FOR PREBID/PROPOSAL SITE VISIT
Jerry J. Day
James A. Colson
Mike Anderson 860-4620

COMMERCIAL NO 904-772-9248
AUTOVON NO 942-3411 or 3412
COMMERCIAL NO
AUTOVON 860-2238

| 1 CLIN | 2 NSN/LSN | 3 ITEM NAME & CONTAMINANTS | 4 QTY | 5 STORAGE CONTAINER | 6 APPROX WEIGHT IN LBS | 7 STORAGE LOCATIONS | 8 DTID NUMBER | 9 REMARKS |
|---|---|---|---|---|---|---|---|---|
| 01BC | 8010-00-LSN-0000 | DIRT, LEAD CONT | 4,000 lb. | 8-55 GAL. DRUMS | 4,000 | Kings Bay, GA PWD HAZ. STOR. SITE | N42237-3318-8103 | NA2291 |
| 01AS | 6810-00-LSN-0000 | BERYLLIUM CONT SOLIDS | 1 lb. | CAN | 15 | " | [redacted] | UN1566 |
| 01B1 | 6810-00-LSN-0000 | PYROGALLOL | 4 GAL | 2-55 GAL. DRUMS | 50 | " | [redacted] | - |
| 01AD | 6810-00-LSN-0000 | TRASH, MERCURY CONT | 150 lb | 1-55 GAL. DRUM | 510 | " | 3322-8116 | Metallic NA2809 |
| 01AD | 6810-00-LSN-0000 | TRASH, MERCURY CONT | 150 lb | 3-55 GAL. DRUMS | 1,530 | " | 3322-8117 | Solid NA2025 |
| 01AF | 8010-00-LSN-0000 | PAINT WASTE, LIQ | 275 GAL | 5-55 GAL. DRUMS | 2,550 | " | [redacted] | UN1993 |
| 01A1 | 6810-00-LSN-0000 | ACETONE | 2 GAL | 1 DRUM | 30 | " | [redacted] | UN1090 |
| 01BE | 6810-00-LSN-0000 | MECURIC NITRATE | 10 GAL | 1 DRUM | 80 | " ✓ | [redacted] | UN1625 |
| 01BD | 8010-00-LSN-0000 | INSULATING VARNISH | 165 GAL | 3-55 GAL. DRUMS | 1,530 | " | [redacted] | UN1263 |
| 01BF | 6810-00-LSN-0000 | AMMONIUM HYDROXIDE | 6 GAL | 1-55 GAL DRUM | 80 | " | 3322-8109 | NA2672 |
| 01BH | 6810-00-LSN-0000 | ORTHOPHOSPHORIC ACID | 6 GAL | 1-55 GAL. DRUM | 80 | " | 3322-8105 | - |
| 01BB | 6810-00-LSN-0000 | RESIN ION COMPOUND | 5 GAL | 1-55 GAL. DRUM | 40 | " | [redacted] | - |
| 01AH | 6810-00-LSN-0000 | TRICHLOROETHYLENE | 55 GAL | 1-55 GAL. DRUM | 510 | " | [redacted] | UN1710 |
| 02AD | 6810-00-LSN-0000 | ETHYLENEDIAMINE - TETRACEDIC ACID | 825 GAL | 18-55 GAL. DRUMS | 9,180 | " | 3327-8101 | UN2029 |
| 01A1 | 9150-00-LSN-0000 | PETROLEUM DISTALLATE (NAPTHA) | 55 GAL | 1-55 GAL. DRUM | 510 | " | [redacted] | UN1268 |
| 01BG | 6810-00-LSN-0000 | ETCHING ACID (NITRIC) | 110 GAL | 3-55 GAL. DRUMS | [illegible] | " | 3322-8111 | NA[illegible]90 |
| | 6810-00-[illegible] | [illegible] | 270 GAL | 5-55 GAL. DRUMS | 3,600 | " | [redacted] | UN[illegible]17 |

| DOC IDENT | RI FROM | M&S | STOCK NUMBER FSC | STOCK NUMBER NIIN | ADD | UNIT OF ISSUE | QUANTITY | SUF | DOCUMENT NUMBER REQUISITIONER | DATE | SERIAL | SUPPL SERV | SUPPLEMENTARY ADDRESS | SIGNAL | FUND | DISTRIBUTION | PRI | REQ'D DEL DATE | ADVICE | RI | UNIT PRICE DOLLARS | CTS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 681000 | LSN0000 | | GL | 055 | | N42237 | 500381 | 17 | N42237 | | | | H | | NA | | EST | 10 | |

| SHIPPED FROM | SHIP TO | MARK FOR | PROJECT | TOTAL PRICE DOLLARS | CTS. |
|---|---|---|---|---|---|
| Nav l Submarine Base<br>Ki. Bay, GA<br>912-673-4620<br>A ID NO. GA4170090001 | DPDO<br>NSB<br>Kings Bay, GA<br>912-673-2238 | C H/W | D | E 550 | |

| WA JSE LOCATION | TYPE OF CARGO | UNIT PACK | UNIT WEIGHT | UNIT CUBE | U F C | N M F C | FREIGHT RATE | | DOCUMENT DATE | MAT COND | QUANTITY | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| F | G | H GL | I | J | K | L | M | N | O | P H | Q 00055 | R | S 55 |

SUBSTITUTE DATA (ITEM ORIGINALLY REQUEST'D) T

FREIGHT CLASSIFICATION NOMENCLATURE U Lead Contaminated Dirt UN2291

ITEM NOMENCLATURE X Miscellaneous Chemicals - Toxic 0002ac
Lead Contaminated Waste

Y H IN CC 60 MEANS HAZARDOUS WASTE

| SHIPPERS USE | SELECTED BY AND DATE | TYPE OF CONTAINER(S) | TOTAL WEIGHT | RECEIVERS USE | RECEIVED BY AND DATE | INSPECTED BY AND DATE |
|---|---|---|---|---|---|---|
| | 1 XXI | 2 55 GAL DRUM | 3 1000 | | 7 5004 APPROVED FOR TRANSFER | C. CLEMENTS, CDR, USN |
| | PACKED BY AND DATE 4 | NO OF CONTAINER(S) 5 1 | TOTAL CUBE 6 | | WAREHOUSED BY AND DATE 9 5004 | WAREHOUSE LOCATION 10 SUPPLY OFFICER SKYPW1016 |

REMARKS AA

CC

DD This is to certify that the above named materials are properly classified, described, packaged, marked, labeled, and are in proper condition for transportation according to the applicable regulations of DOT and EPA.

DESTINATION ADDRESS 11

DATE SHIPPED 12

FF

13 TRANSPORTATION CHARGEABLE TO

14 B/LADING, AWB, OR RECEIVER'S SIGNATURE (AND DATE) APPROVED: PUBLIC WORKS OFFICER

15 RECEIVER'S DOCUMENT NUMBER

DD FORM 1348 1 1 MAR 74 EDITION OF 1 JAN 64 MAY BE USED UNTIL EXHAUSTED

S/N 0102 LF 013 1040

DOD SINGLE LINE ITEM RELEASE/RECEIPT DOCUMENT 4

K-62

# STATE OF ALABAMA

## DIVISION OF SOLID WASTE AND VECTOR CONTROL

Instructions for the preparation of the Hazardous Waste Manifest:

### A. IDENTIFICATION INFORMATION:

1. Generator and Transporter(s) name, address, phone number and EPA ID Code are listed here.

### B. WASTE INFORMATION:

1. Container, no., and type are listed here. For container type use drums, tank, bag, carton, bulk, roll-off, etc.

2. Description/Class: List the proper US DOT Shipping Name and US DOT Hazard Class for each waste as identified in 49 CFR 171 through 177. When a waste is described by an N.O.S. description, the technical name(s) of the hazardous constituent(s) must be identified in addition to the proper shipping name. Common or trade names are not acceptable. For example: waste, cement, liquid, n.o.s (hexane, toluene, 2-butanone), flammable liquid.

When shipping PCB's use one of the following descriptions:

| CLASS | DESCRIPTION | SPECIFIC EXAMPLES |
|---|---|---|
| A | PCB Articles | Transformers (drained & flushed) Capacitors, Elec. Motors. Pumps, Pipe |
| B | PCB Equipment | Mfd. Items (except class C or F) Containing Class A Items - Such as fluorescent ballasts, Microwave Ovens, etc. |
| C | PCB Article container | Any Drum, can, package, barrel, etc. containing Class A or B items. But which is not in surface contact with PCB's. |
| D | PCB Mixtures | PCB contaminated soil, debris, sludge, slurries, rags, etc. with (Must be non-liquid to be acceptable) Over 500 ppm PCB |
| E | PCB Chemical Substances | Askarel, Arochlor, etc. - NOT ACCEPTABLE |
| F | PCB Container | Any container with Class A, B, D, or E items but where surfaces have been PCB contaminated. Example = Drum of soil |

3. Quantity and unit are listed here. For unit use drums, cu. ft., gallons, etc.

4. EPA Hazardous Waste ID Number: The EPA Hazardous Waste numbers are listed in 40 CFR Part 261. The number or combination of numbers describing the waste are to be placed in this section.

5. CWMA Waste Code: Enter the Waste Code Number given to you by Chemical Waste Management-Alabama when waste was approved.

6. Weight: Self-explanatory.

### C. EMERGENCY INFORMATION:

Indicate special handling instructions.

### D. CERTIFICATION:

Self-explanatory. Only a Generator's authorized representative can sign the manifest.

### E. DISPOSAL INFORMATION:

For Disposer's use only.

## ROUTING OF MANIFEST

After the Generator has completed his portion of the manifest he must have Transporter No. 1 sign and certify receipt of shipment. The Generator will then retain Producer's No. 1 copy and forward all other copies with the shipment.

If there is more than one Transporter, Transporter No. 1 must have Transporter No. 2 sign and certify receipt of shipment. Transporter No. 1 must make a photocopy for his records. Do not retain any original copies.

When shipment has been received at TSD Facility, the TSD Facility's authorized representative will sign for acceptance storage or disposal.

Transporter's copy will be given to the delivering Transporter and Producer's Copy No. 2 will be returned to the Generator. The Regulatory copy will be forwarded to the Regulatory Agency by the Disposer.