N83447.AR.000382
NAS FORT WORTH
5090.3a

# FINAL 1998 BASEWIDE GROUNDWATER SAMPLING AND ANALYSIS PLAN ANNUAL REPORT APPENDICES NAS FORT WORTH TX

4/1/1998

HYDROGEOLOGIC

File: 17G
A.F.

# NAVAL AIR STATION
# FORT WORTH JRB
# CARSWELL FIELD
# TEXAS

# ADMINISTRATIVE RECORD
# COVER SHEET

**AR File Number** 425

425. 1

File: A.F. 17A-64
425

HYDRO GeoLogic INC.

# HQ Air Force Center for Environmental Excellence

# Final
# Basewide Groundwater Sampling and Analysis Program
# 1997 Annual Report
# Appendices

Contract No.: F41624-95-D-8005-0007

Prepared for:
HQ AFCEE/ERD
NAS Fort Worth JRB
Carswell Field, Texas

April 1998

HydroGeoLogic, Inc.
1155 Herndon Parkway
Suite 900
Herndon, Virginia 20170
(703) 478-5186

HQ Air Force Center for Environmental Excellence

# Final
# Basewide Groundwater Sampling and Analysis Program
# 1997 Annual Report
# Appendices

Contract No.: F41624-95-D-8005-0007

Prepared for:
HQ AFCEE/ERD
NAS Fort Worth JRB
Carswell Field, Texas

Prepared by:
HydroGeoLogic, Inc.
1155 Herndon Parkway, Suite 900
Herndon, VA 20170

April 1998

# Table of Contents
# Appendices


Appendix A

| | |
|---|---|
| Appendix A-1. | Field Notes |
| Appendix A-2. | Groundwater Field Sampling Data Sheets |

Appendix B

| | |
|---|---|
| Appendix B-1. | Water Level Measurements and Well Inspection Data |
| Appendix B-2. | Groundwater Ferrous Iron Concentrations |

Appendix C

| | |
|---|---|
| Appendix C-1. | Flightline Area Laboratory Results |
| Appendix C-2. | East Area Laboratory Results |
| Appendix C-3. | Landfill Area Laboratory Results |

# TAB

Appendix A Field Notes

Groundwater Field-Sampling Data Sheets

# TAB

Field Notes

10-30-97

0700 Begin Calibration of instruments

0745 - H.S meeting

0755 - WDOT - 10B WC02

0756 - Arrive at well

Well Depth 37.00

Depth to Water 29.16

0805 - Begin Purging

0840 - Begin Sampling

0845 - Begin Decon Procedures

0900 - Leave for well MW-14602

0910 - Arrive at well MW-14602 & Begin

Setup ORP - 10.57 TDS - 18.36

0915 - Begin Purging. DVM - 11.0 ppm

0940 - Sampled & Begin Decon

1000 - Leave well for fieldhouse

10/29/97

1410 - Sampled

1415 Begin Decon

1445 - Time to Next Well LF04-4FW002

1450 - Arrive at Well LF04-4FW002

& Begin Set up

1515 - Begin purging well

1600 Sampled & Began Decon of Equipment

1620 Arrive back at Fieldhouse & Begin

Unloading Van & Packaging Samples

1735 Finish For Day

10-29-97

0700 Arrive @ house. Begin calibration

0745 HAS Meeting

0800 Drive GMF-22-04MW002

0810 Begin set-up @ well

0830 well & pump surge

845 - Sample well

915 Begin Decon

930 End Decon Drive to IEOS-1MW002

945 Begin well Drw. 19.21 OVM 0.0
Trw. 23.59

1045 Begin Sampling

1055 Decon

11.05 END Decon

1110 Drive to house - lunch

1200 Return from lunch - Begin Tron Results

1220 Drive to GMF 04-01

1235 10 in of H2O in well - had Bail to purge
Let recharge - OVM 0.0

1250 Begin Sampling w/Bailer

1355 Decon

1300 Drive to WPOT-10C.WG002

Well Depth = 32.75
Depth to Water = 20.72
OVM 0.00 ppm

1330 Begin Pursing

10/28/97 (Cont.)

1640 - Sampled well after $H_2O$ level dropped 1/4 ft. last well recharge.

1650 Drive to house unload - Run from Park Rangers.

1830 Back at Office Lab

10/28/97

0805 - Jack & John on site at well LF05-02

OVM = 000.0 ppm

DTW = 25.56

DOW = 29.90

0845 - Started purging well. DTW = 25.7

0915 - Sampled well. Three well volumes drawn out.
- Pump surged during sampling.

1005 - on site at FT09/10C-WG02

OVM = 000.0 ppm

DTW = 31.75

DOW = 38.57

1025 - Started purging.

1100 - Sampled well. pump surged during sampling.

1200 - At field house

1230 - Ken, John & Chris go to lunch.

1305 - on site from lunch.

1350 - on site at well MW-5 WG02

OVM = 000.0 ppm

DTW = 5.14

DOW = 8.13

1440 - Recorded well volume let well recharge & sample.

1505 - Sampled well. Had problems with pump loosing suction.

1540 - Completed disassembling pump

1550 - on site at well STM-2. DTW = 16.20

OVM = 6.8 ppm DOW = 17.61

10/28/97

1600 Begin Unloading Equipment and Testing Ferrous Iron Samples.

1700 Finish with iron testing and begin packaging + preparing samples for shipment

1815 Finish loading coolers with samples. Leave for home.

27
10-26-97

0700 - Begin Calibration & loading VAN

0715 - Health & Safety Mtg

0800 - Arrive @ ITMW 602

0810 Begin set-up DTW - 9.58 DTM 8.3
DTW - 9.59
TDW 17.76

0900 Begin Sampling

0910 Begin Decon

0920 End Decon - Drive to get gas for gen.

1000 - Begin set-up ST1402MW602
DTW - 11.92 DTM - 8.4
TDW - 19.35

1050 Begin Sampling

1100 Decon

1115 Drive to House

12:30 Back to Gran Ranch - Run Fe samples

1330 Drive to ST14-MW6

1340 Begin packet. - DTW 8.0 DTM 8.2
TDW - 19.02

1410 - Begin Sampling

1420 Decon

1430 - Drive to USGA 4 TW602

1440 Begin parameters TDW - 20.17 DTM - 8.0
DTW - 18.19

1535 - Begin Sampling

1550 Drive to House

10 24 97

1400 Deserto STA-04

1415 Begin Setup - Rem - 0.0
TOC - 19.23
DTW - 2.8

1515 Pump Gauge

1530 Sampled 5 times with vol. on Sampling

1545 Begin Decon

1600 ~~[illegible]~~ Drive to well 17MW002

High Flow Bailer - Not able to Retrieve

1620 Drive to house

1625 - Unload Van - Clean out Van

1635 - Begin Ferrous Iron Sampling

1710 End Ferrous Iron Sampling on our Samples
- Begin Packaging Samples

1900 Tackle Chores EOD

10-24-97

7:00 Arrive at Field house & begin gathering and preparing equipment for sampling

0730 - Health Safety MTG

0800 - Arrive @ well ST-14-MW-29

810 - Begin set-up - OVM - 3.4
DTW - ~~[illegible]~~ 9.38
TDW - 15.68

9:24 Pump Surge

940 Begin Sampling

945 - Pump surge during sampling

950 - 55 begin decon

1005 - begin well ST14-28MW602

1015 begin Parameters OVM - 168.4
Temp - 3.5
DTW - 14.71
TDW - 17.0

1125 begin sampling

1235 - Decon

1240 Back to house for lunch

1255 MTG w/ Auditor

1315 - Begin Field Snap. from Morning Sample

10 23 97

7:00 Chris and I (Jack) arrive at Fieldhouse. We calibrate equipment. After discussions with Ken we decide that it is Raining too hard to Sample.

7:45 Leave for office. Ken will call if we are going to sample today.

10 22 97

0700 - Begin meter calibration

0720 Load VAN

0740 - H+S meeting

800 Drive to well 5013-01

8:10 Begin set-up at well DTW - 12.29 OVM - 21.5

9:00 - Chris - hits head + walk in van DTW - 17.48

9:15 - take samples

930 - Begin Decon

940 - Drive to well 5013-09

941 - arrive @ well Begin set-up - OVM 18.5
DTW 9.53
DTD 13.35

1035 Begin sampling pump surge
during alkalinity sample

1045 - Begin Decon

1100 Drive to house to meet Audible and Tlenk

1120 Pump out basement

1200 Tlenk shows up - discuss site

1230 Head out for lunch - Jack, Chris, + John

1:15 Arrive back at field house

2 - Talk with auditor until 2:30 about what he is here for.

2:30 Drive around with T long and show her the house + site (Jack + Chris)

5:00 Arrive back at side of house to pack up + ship out [illegible] - arrive at 7:00

10/21/97

1515 - Sample well

1520 - Begin Decon

1530 - Drive to well MW-8

1535 Arrive @ MW-8

1540 Begin set up - pump -
DTW - 6.65
TDW - 26.48

1625 Take Samples - 5 gal removed

1630 Begin Decon

1640 Drive to Empty Barrel

1700 Remove meters to house

1710 - Jack begin Decon sampling

1715 Chris Empty barrel due Jim

1720 - Begin packing samples

1845 - Jack + Chris off

10-21-97

0700 Jack Khers on

0705 Calibrate units - Load van

DO sensor not working on 110 unit

730 Health Safety etc

745 Drive to well ST 14-24W

805 Begin setup for parameters OVM-0.0
DTW - 11.42
TDW - 17.05

905 Take Samples

915 Begin Decon

930 End Decon - Paint well cover
5 gal Removed total

935 Drive to ST 14-26

940 Arrive @ ST 14-26 Begin setup OVM-0.0
DTW - 15.10
TDW - 27.20

1115 Take Samples

1130 Begin Decon

1140 End Decon
40 gal Removed total
Drive to House

1240 Arrive Back at House

1250 Begin equip Blank sampling John Khers

1350 Drive to well from Roger

1400 Begin set up for well - OVM - 0.0
DTW 32.95
TDW - 48.95

10/20/97 cont

1445 problems with flow rate - Jerky Pump

1530 Take Samples + 7 gal. Removed

1545 Begin Decon.

1600 END Decon - Leave Fac house

Ferrous Iron Results - Jack

1645

ST 14 - 14W602 - Iron($Fe^{+2}$) 1.26 mg/L

1705 Equipment Blank E6.02 097 - 0005

1730 Pack Sample coolers

1800 - Sell - Clock off

1.96
1.95

10/20/97

7:00 Arrive at Field house & begin decon, Calibration of Equipment loading of Van and Health & Safety Meeting.

8:15 - Drive to talk w/ Allen about opening gate

8:30 Arrive ST14-W14, Begin set-up

8:40 - Begin low flow parameters - OVM - 0.0
TDW - 30.36
DTW - 5.76

9:45 take sample - 5 gal. removed

10:00 begin Decon

10:20 Drive to ST14-24W602

10:25 remove measurement - Lots-o-Dust
Drive to LF01-1D

10:30 Arrive @ LF01-1D

10:45 Begin low flow parameters - OVM-0.0
DTW 19.62
TDW 28.05

12:10 take Samples - 5 gal removed

12:15 begin Decon

12:25 leave for house

2:00 Lunch Pack chairs

1:40 Restock Van

1:48 Leave for LF01-1E

2:00 Arrive at well

2:05 Begin set-up - OVM-0.0
DTW - 17.85
TDW - 32.05

10/17/97 cont.

1125 gauge well DTW - 32.84
TDW - 40.81
26 gal PURGED

1130 Decon Begin

1140 Paint well cover

1150 Drive back to house

1200 - Pump out Barrel

1215 Finish Pumping

1220 Back to house

300 Lunch

1405 Drive to well CF04-10 to finish purge

1415 Begin purge

1515 End purge

1520 Begin Parameters

1600 TDW 49.0'
total purge - 57.50'

1605 Begin Decon

1615 Drive to GMI04-01M

1620 gauge well - DTW - 19.8'
TDW - 20.5'

1630 - Empty Drum

1700 - Finish Dumping water
from Drum

1700 - Pack - Leave - off

Friday 10-17-97 Jack + Chris

7:15 Calibrate OVM - V-10

7:35 Safety Meeting

7:40 END MTG

8:00 Return to House on Dolphin Key

8:05 Return to well LF05-19

8:5 OVM Read. 0.2 LF05-19

8:20 Gauge well DTW - 14.21
TDW - 18.34

8:25 set-up for pumping

9:00 Begin Parameters

9:30 19.5 total purge, End parameters, TDW - 20.0'

9:32 Begin Decon

9:45 Finish Decon

9:48 Move to LF04-10

9:55 Arrive at Well

9:57 OVM - 0.0, DTW - 32.82
TDW - 47.28

No Tubing in Well

10:10 Begin pumping

10:5 Sprinklers shoot into van - short out pump

11:5 Dried pump - not working

Thursday, October 16, 1997 (cont)

1900 - purged out drum into storage tank

1910 - Ken and John finished for the day.

1920 - Ken and John off site.

JEB

Friday, October 17, 1997

0635 - Ken and John on site at field house.

0700 - Loaded Generator onto truck.

0705 - filled generator with gas. Chris on site

Thursday, October 16, 1971

0710 - Ken, Mike, John & Chris at field house

0730 - Safety meeting.

0816 - Ken, John & Jack to Pass office.

0810 - At Pass office. Need sponsor.

0812 - To AFBCA office

0820 - On site at field office.

0825 - To AFBCA with Alan Flowlo, to obtain letter for passes.

0905 - Jack and John on site at field office from Pass office.

0907 - Gary from Sunbelt stopped in to talk with Mike or Ken.

0937 - Jack & John at well LF 01 19D

0952 - 000.1 PPM

DTW - 19.67

DOW - ~~27.33~~ 27.90

1020 - finished tubing from well.

10:35 - Well is deeper than original - no need to develope - appears to have been a mistake reading the number on development.

Pumped out approximately 5 gallon - slight

Grey muddy color - also very little silt.

Slight product odor

Thursday, October 16, 1997 (cont)

1105 - Jack and Steve on site at Well ST14-04.

1107 - 000.0 PVM

DTW - 13.41

DOW - 17.99

1135 - Pump failed

1200 - To field office

1220 - To Rex's to fax an affidavit

1245 - Lunch

1315 - on site at field office

1345 - Jack & Chris back at well ST14-04

Begin Pumping - Water very dark & sandy.

Pumped 25 gallons of sandy water before beginning Readings

1430 begin Readings for redevelopment

1500 End Readings begin Decon

1530 Finish Decon head to fuel tank to pump kerosene

1600 Reach well w/ PVM - 10.6 for Redevelopment

1615 Set up Complete Ready to begin pumping

1710 - Empty Drum - 45 gal pumped out

1735 Begin Pump again

1805 Begin Readings

1825 Finish Readings

1830 - Decon

1840 Empty Drum - 62.5 total

Wednesday, October, 13, 1993

0700-Mike and John to Home Depot.
0715-Mike and John on site at field house
0940-Ken and Tim to field for sampling.
0942-Mike, John & Tim to field.
0950-on site at Base ops.
1004-on site at well GMI22-02M
1007-To field office
1030-on site at well GMI22-02M
1034-0.0ppm
1038-9.31 ft to top. 27.8 to bottom
1215-DTW=9.39/DOW=28.1
1230-Lunch
1300-on site across from field office to pump out drum.
1330-Ken on site. Pump failed. Ken will return pump
1405-on site at Well #4
DOW=24.95
DTW=20.93
1415-Purge #4, lots of silt and sand.
1440 high pH content in water continuing. Flow continued to surge well during pumping/recharge. Still not obtaining readings due to high turbidity. Fuel odor, no sheen
1500 pump turned off, well allowed to recharge
1510 pump turned on, water very turbid still. Slow recharge. Point 2' from the bottom of the well & notch on bailer when lowering the pump. This could indicate either the bailer cage is not secured on tight or a break in the screen exists. No sand pack has been observed.
1530 Flow rate/well yield=90 ccs/min/Liter or 0.670/min

10/5/97

1545 Tried to call office (Wanchese) when of Dowling problems & spot 35-9 made to reach Jim will discussion dredging at 1610 if well done not then go

1730 All permits obtained except turbidity which still is having around 100 NTU's

1745 - ON site at field house, off loaded equipment

1900 - off site from field house

10,14,97

8:30 Arrive at DFW (Mike & Ken). Go to meet John Duffard at terminal 4E.

9:35 John Duffard Arrives, We catch super shuttle to La Quinta

10:30 Arrive at La Quinta. Call Enterprise to come pick us up. Check into hotel.

11:30 Arrive at Enterprise. They only had one cargo van. We ~~[illegible]~~ Rented one cargo van and one full size Dodge truck.

12:15 - 12:45 Lunch

12:45 Arrive on-site. Pick up coolers. Meet Jack & Tim from Law Engineering

Call FedEx about Rental Equipment. Jack leaves to get Rental equipment.

15:00 Begin Transferring equipment to back rooms. John Duffard cleaning bathroom.

16:15 Farm tank arrives, place next to sanitary sewer manhole

17:00 Still working on moving/arranging HSL's & new office spaces.

17:30 ~~[illegible]~~ Jack & Tim studying calibration methods, Mike & Ken prep for beginning of sampling. John Duffard filling out Health & Safety forms.

18:30 Off-site

Wednesday, October 13, 1993

0700 - Mike and John to Home Depot
0715 - Mike and John on site at field house
0940 - Ken and Tim to field for sampling.
0942 - Mike, John & Tim to field.
0950 - on site at Base OPS.
1001 - on site at well GM102-02M
1002 - to field office
1030 - on site at well GM102-02M
1034 - 0.00ppm
1038 - 9.31 ft to top 27.8 to bottom
1215 - DTW = 9.39 / DOW = 28.1
1200 - Lunch
1300 - on site across from field office to pump out drum
1330 - Ken on site. Pump failed. Ken will return pump
1405 - on site at well # 4
DOW = 24.45
DTW = 20.23
1415 - Purge #4, lots of silt and sand
1440 high silt content in water. Continuing. Have continued to surge well during pumping/purging. Still not achieving readings due to high turbidity. Still odor, no sheen
1500 pump turned off, have allowed to recharge
1510 pump turned on, water very turbid still. Slow recharge. Point 2' from the bottom of the well a notch on bailer when lowering the pump. This could indicate either the bailer engage it not seated on tight or a break in the screen entry. No sand pack has been observed
1530 Slow rate / well yield = 90 ml/min / Line a 0.670 factor

10/5/97

1545 Tried to call office (unsuccessful) advise of drainage problem @ SPT 35-4 made to back Jim will discontinue development at 16th if will do not change go

1730 All personnel secured except Tabbitz which still is having around 100 hrs

1745 - On site at field house, off loaded equipment

1900 - off site from field house

Thursday, October 16, 1971

0710 - Ken, Mike, John + Chris at field house.
0750 - Safety meeting.
0806 - Ken, John + Jack to Press office.
0810 - At Press office, need sponsor.
0812 - To AFBCA office
0820 - On site at field office.
0825 - To AFBCA with Alan Flowlo, to obtain letter for passes.
0905 - Jack and John on site at field office from Press office.
0907 - Gary from Sunbelt stopped in to talk with Mike or Ken.
0907 - Jack + John at well LFC 1 PD
0952 - 660.1 PPM
DTW - 19.67
DOW - ~~27.33~~ 27.90
1020 - finished flushing from well
10:35 - Well is deeper than original - we need to deepen - appears to have been a mistake reading the number on drawdown.
Pumped out approximately 5 gallon - Slight Gray muddy color - also very little silt.
Slight product odor

Thursday, October 16, 1997 (Cont)

1105 - Jack and John on site at Well ST14-04.

1107 - 000.0 PPM

DTW - 10.41

DOW - 17.99

1135 - Pump failed

1200 - To field office

1220 - To Alex's to season at airfield

1245 - Lunch

1315 - on site at field office

1345 - Jack + Chris back at well ST14-04

Begin Pumping - Water very dark & Sandy.

Pumped 25 gallons of sandy water before beginning Readings

1430 begin Readings for redevelopment

1500 End Readings begin Decon

1530 Finish Decon head to farm Tank to pump barrell

1600 Reach well WPOT-10 for Redevelopment

1615 Set up Complete Ready to begin pumping

1710 - Empty Drum - 45 gal pumped out.

1735 Begin Pump again

1805 Begin Readings

1825 Finish Readings

1830 - Decon

1840 Empty Drum - 62.5 total

Thursday, October 16, 1997 (cont)

1900 - pumped out drum into storage tank

1910 - Ken and John finished for the day.

1920 - Ken and John off site.

Friday, October 17, 1997

0655 - Ken and John on site at field house.

0700 - Loaded generator onto truck.

0705 - filled generator with gas. Chris on site

Friday 10-17-97 Jack + Chris

715 Calibrate OVM - 0-10

735 Safety Meeting

740 END MTG

800 Return to Hotel for Dolphin Key

805 Return to well LFOS-19

815 OVM Read. 0.2 LFOS-19

820 Remove well DTW - 14.21
TDW - 19.34

825 set-up for pumping

900 Begin Parameters

930 19.5 total purge, End parameters, TDW - 20.0'

932 Begin Decon

945 Finish Decon

948 Move to LFOS-10

955 Arrive at Well

957 OVM - 0.0, DTW - 32.82
TDW - 47.28

No Tubing in Well

1010 Begin pumping

105 Sprinkler's shoot into van - short out pump

115 Dried pump - Not working

10/17/97 cont.

1125 - gauge well DTW - 32.84
TDW - 48.81
210 gal PURGED

1130 Decon Begin

1140 Paint well cover

1150 Drive back to house

1200 - Dump out Barrel

1215 Finish pumping

1220 Back to house

1300 Lunch

1405 Drive to well LF04-10 to finish purge

1410 Begin purge

1515 End purge

1520 Begin Parameters

1600 - TDW 48.0'
total purge - ~~54~~ 57.50'

1605 Begin Decon

1615 Drive to GMI 04-01M

1620 gauge well - DTW - 19.8
TDW - 20.5

1630 - Empty Drum

1700 - Finish Dumping Water
from Decon

1700 - Pack - Chris - OFF

10/20/97

7:00 Arrive at Field house & begin decon, Calibration of Equipment, Filling of Car and Health & Safety Meeting.

815 - Drive to talk w/ Allen about opening gate

830 Arrive STA-WA, begin set-up

840 - Begin low Flow Parameters - DTW - 0.0
TDW - 20.36
DTW - 5.76

945 take Sample - 5 gal. removed

10.00 Begin Decon

1020 Drive to STA 24W602

1025 Remove REAR WELL - Lots-o-Dust
Drive to LF01-1D

1030 Arrive @ LF01-1D

1045 Begin low flow parameters - DTW - 0.0
DTW - 19.62
TDW 28.05

1210 take Samples - 5 gal removed

1215 Begin Decon

1225 leave for house

1240 Lunch Ticket thes

1:40 Restock van

1:48 Move to LF01-1E

2:00 Arrive at well

205 Begin set-up - DTW - 0.0
DTW - 17.15
TDW - 32.05

10/20/97 cont

1445 problems with flow rate - Jerky Pump

1530 Take Samples - 7 gal. Removed

1545 Begin Decon.

1600 END Decon - Leave Fac house

Ferrous Iron Results - Jack

1645

ST 14 - 14WS02 - Iron ($Fe^{+2}$) 1.26 mg/L

1705 Equipment Blank Eb 102097 - 0.00 mg/L

1730 Pack Sample coolers

1800 - Self - check off

10-21-97

0700 Jack Chris on

0705 Calibrate units - Load VRU

DO sensor not working on VIO unit

730 Health Safety etc.

745 Drive to well STA-24W

805 Begin setup for parameters OVM-0.0
DTW-11.44
TDW-17.05

905 Take Samples

915 Begin Decon

930 End Decon - paint well cover

5 gal Removed total

935 Drive to STA-26

940 Arrive @ STA-26 Begin setup OVM-0.0
DTW-12.10
TDW-17.20

1115 Take Samples

1130 Begin Decon

1140 End Decon
10 gal Removed total
Drive to House

1240 Arrive Back at House

1250 Begin equip Blank sampling - John Chris

1350 Drive to well STA-10W

1400 Begin set up for well - OVM-0.0
DTW 32.96
TDW - 98.95

10/21/97

1515 - Sample well

1520 - Begin Decon

1530 - Drop Howell MW-8

1535 - Arrive @ MW-6

1540 - Begin set up - Dumo -
DTW - 6.65
TD - 26.48

1625 - Take Samples - 5 gal removed

1630 - Begin Decon

1640 - Move to Empty Barrel

1700 - Remove stakes & house

1710 - Jack begin new sampling

1710 - Chris Empty barrel for John

1720 - Begin packing samples

1845 - Jack & Chris off

10 22 97

0700 - Begin Metal Calibration

0720 Load VAN

0740 - H&S meeting

800 Drive to well 5D13-01

8:10 - Begin Set-up at well DTW - 12.29 OVM - 21.5

9:00 - Chris - bits head work in van

915 - hole Samples

930 - Begin Decon

940 - Drive to well 5D13-08

945 - arrive @ well Begin Setup OVM 18.5
DTW 9.58
TD 13.35

1035 Begin Sampling - pump surge
During Alkalinity sample

1045 - Begin Decon

1100 Drive to house to meet Auditor and Client

1120 Pump out Bore III

1200 Ellen - shows up - discuss Site

1230 head out for lunch - Jack, Chris & John

145 Arrive back at field house

2 - Talk with auditor until 2.30 about
what he is here for.

2.30 Drive around with Ellen and show
her the base & site (Jack & Chris)

5.00 Arrive back at site field house to pack up
& ship out. Arrive at 7.00

10 23 97

7:30 Chris and I (Jack) arrive at Fieldhouse. We Calibrate Equipment. After discussions with Ken we decide that it is Raining too hard to Sample.

7:45 Leave for office. Ken will call if we are going to sample today.

10-24-97

0700 Arrive at fieldhouse & begin gathering and preparing equipment for sampling

0730 - Health Safety Mtg

0800 - Arrive @ well 51-14-MW-29

810 - Begin set-up - OVM - 34
DTW - 9.38
TDW - 15.68

9:24 Pump Surge

940 Begin Sampling

945 - pump surge during sampling

9:55 Begin decon

1005 - begin well 51 14-28 10602

1015 Begin parameters OVM - 168.4
BZ - 3.5
DTW - 11.71
TDW - 17.0

1125 Begin sampling

1230 - Decon

1240 Back to house for lunch

1255 Mtg w/ Auditor

1315 - Begin Flow Step. From Monitoring Sample

10 24 97

1400 Ferrous STA-04

1415 Begin Setup - Rom - O.D
TDS 19.23
Dro - 2.8

1515 Pump Gauge

1530 - Sampled 5 times well vol. on Samples

1545 Begin Decon

1600 ~~Drive to~~ DRIVE to well 17MW002

Hitch for Bailer - Not able to
Remove

1620 Drive to house

1625 - Unload Van - Clean out Van

1635 - Begin Ferrous Iron Samplins

1710 - End Ferrous Iron Samplins on our Samples
- Begin Packaging Samples

1900 Turn Lights off

27
10-26-97

0700 - Begin Calibration & loading VAN

0715 - Health & Safety Mtg

0800 - Arrive @ 17Mile Cove

0810 Begin Set-up DTW - 9.58 OVM 8.3
DTW - 7.58
TDW 17.76

0900 Begin Sampling
0910 Begin Decon
0920 End Decon - Drive to get gas for gen.
1000 - Begin Set-up ST1402 in cove
DTW - 11.92 OVM - 5.4
TDW - 17.35

1050 Begin Sampling
1100 Decon
1115 Drive to House

12300 Back to Lab from lunch - Run Fe samples
1330 Drive to ST14-W16
1340 Begin packed. - DTW 8.0' OVM 4.2
TDW - 19.02
1410 - Begin Sampling
1420 Decon
1430 - Drive to ASARCO TDW 6.02
1440 Begin piezometers TDW - 22.17 OVM - 0.0
DTW - 18.19
1535 - Begin Sampling
1550 Drive to House

10/28/97

0805 - Jack & John on site at well LF05-02

OVM = 000.0 ppm

DTW = 25.56

DOW = 29.90

0845 - started purging well. DTW = 25.7

0915 - Sampled well. Three well volumes drawn out.
- Pump surged during sampling.

1005 - on site at 2109 DC-MW00-2

OVM = 000.0 ppm

DTW = 31.75

DOW = 38.57

1025 - started purging.

1100 - Sampled well. pump surged during sampling.

1200 - At field house

1230 - Kevin, John & Chris to lunch.

1305 - on site from lunch.

1350 - on site at well MW-5 MW00-2

OVM = 000.0 ppm

DTW = 5.14

DOW = 8.13

1440 - Reached well volume let well recharge & sample.

1505 - Sampled well. Had problems with pump losing suction.

1540 - Completed decontaminating pump

1550 - on site at well STM-2 DTW = 10.20

OVM = 0.0 ppm DOW = 17.61

10/28/97

0800 Begin Unloading Equipment and Testing Ferrous Iron Samples.

1100 Finish with iron testing and begin packaging & preparing samples for shipment

1215 Finish loading coolers with samples. Leave for home.

10/28/97 (Cont.)

1640 - Sampled well after $H_2O$ level dropped 10 ft. let well recharge

1650 Drive to house unload Ron from Park Cooler.

1830 Back at the house

10-29-97

0700 Office C. house begin calibration

0745 H&S Meeting

0800 Drive Site-22-04MW002

0810 Begin set-up @ well

0830 well pump survey

905 - Sample well

915 Begin Decon

930 End Decon Drive to LF05-18W002

945 Begin well - DTW 19.21 OVM - 0.0
TD - 23.59

1025 Begin Sampling

1055 Decon

11.05 End Decon

1110 Drive to House - lunch

1200 Return from lunch - Begin Tow Results

1220 Drive to GMF 04-01

1235 10 in of H2O in well - had to bail to purge
let recharge - OVM - 0.0

1250 Begin Sampling w/ Bailer
1255 Decon
1300 Drive to WP07-10CW002

Well Depth = 32.85
Depth to Water = 20.22
OVM 0.00 ppm

1330 Begin Purging

10/29/97

1410 - Sampled

1415 - Begin Decon

1445 - Time to next Well 4FON-4FWG02

1450 - Arrive at Well 4FON-4FWG02
& Begin Set up

1515 - Begin purging Well

1600 Sampled & Began Decon of Equipment

1620 Arrive back at Fieldhouse & Begin
Unloading Vgs & Packaging Samples

1735 Finish For Day

10-30-97

0700 Begin Calibration of Instruments

0745 - H&S meeting

0755 - WDO1 - 10B WCOC

0756 - Arrive at well

Well Depth 37.00

Depth to Water 29.18

0805 - Begin Purging

0810 - Begin Sampling

0845 - Begin Decon Procedures

0900 - Leave for well MW-1W602

0910 - Arrive at well MW-1W602 & Begin Setup OSV - 10.57 TOV 12.36

0915 - Begin Purging. OVA - 11.0 ppm

0940 - Sampled & Begin Decon

1000 - Leave well for Fieldhouse

# TAB

Groundwater Field Sampling Data Sheets

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: LSA1628-3 | Site: NAS Fort Worth JRB |
| Sampler(s): JD, Kit | Project No.: APC001-07GAA |
| Well Depth: 17.93 | Date: 10/29/97 Time: 1345 |
| DTW (ft): 9.75 DTP: | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 8.5-18.5 | |
| Well Diameter (in): 4" | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 13.5 | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): |
| Type of Pump: Grundfos 2" submersible | 75°F, Wind From the South |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) | Total Volume (gal) | pH | Temp. (C) | Cond. (~~umhos/cm~~ mS/cm) | ORP mV | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 1300 | 9.86 | 1.24pm | 1.5 | 6.88 | 26.7 | 1.21 | 4.8 | 0.27 | 4 | Clear |
| 1305 | 9.85 | | 2.5 | 6.88 | 26.8 | 1.21 | 3.7 | 0.42 | 3 | |
| 1310 | 9.82 | | 3.5 | 6.88 | 26.9 | 1.21 | -1.5 | 0.30 | 2 | |
| 1315 | 9.81 | | 4.5 | 6.87 | 27.6 | 1.20 | 4.8 | 0.14 | 4 | |
| 1320 | 9.85 | | 5.5 | 6.87 | 27.7 | 1.16 | 6.7 | 0.44 | 1 | |
| 1325 | 9.82 | | 6.5 | 6.87 | 27.7 | 1.16 | 9.5 | 0.15 | 2 | |
| 1330 | 9.78 | | 7.5 | 6.87 | 27.8 | 1.15 | 14.2 | 0.16 | 4 | |
| 1335 | 9.77 | | 8.5 | 6.87 | 28.1 | 1.16 | 25.1 | 0.15 | 4 | ORP=25.1 |
| 1340 | 9.81 | | 9.5 | 6.86 | 28.5 | 1.12 | 25.0 | 0.17 | 4 | |
| 1345 | 9.77 | | 10.5 | 6.86 | 28.6 | 1.09 | 24.6 | 0.16 | 1 | |
| | | | 1345 | Sampled | | | | | | |

## Observations

Color: (Clear) Other (describe):

Odor: (None) Low Medium High Very strong H2S Fuel-like

Sample Parameters: VOCs, Methane, TOC, $Fe^{2+}$, Anions, Alkalinity

Notes: 1V = 5.3, 3V = 15.951, 5V = 26.6

Signed/Sampler(s): Ken Hurley

Cap - Good Missing bolt
Lock - Dolphin

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: LF05-5G | Site: NAS Fort Worth JRB |
| Sampler(s): KH, JO | Project No.: APC001-07GAA |
| Well Depth: 30.26 | Date: 10/29/97 Time: 1540 |
| DTW (ft): 21.29 DTP: N/A | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 15.25-26 | |
| Well Diameter (in): KJH ~~15.25-26~~ 2" | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 28' | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): |
| Type of Pump: Grundfos 2" submersible | 10°F, Wind to the North |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) Lpm | Total Volume (gal) | pH | Temp. (C) | Cond. ~~(umhos/cm)~~ ms/cm | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 1515 | 21.51 | .8 | 2.0 | 6.98 | 23.8 | 1.08 | 67.8 | 2.02 | 12 | clear |
| 1520 | 21.47 | ↓ | 3.0 | 6.98 | 24.1 | 1.09 | 55.5 | 2.07 | 9 | ↓ |
| 1525 | 21.47 | ↓ | 3.5 | 6.98 | 24.4 | 1.10 | 45.5 | 2.13 | 5 | ↓ |
| 1530 | 21.48 | ↓ | 4.0 | 6.98 | 24.5 | 1.10 | 41.3 | 2.05 | 3 | ↓ |
| 1535 | 21.48 | ↓ | 4.5 | 6.98 | 24.6 | 1.10 | 41.4 | 1.98 | 3 | |
| 1540 | 21.48 | | 5.0 | 6.98 | 24.7 | 1.10 | 41.1 | 1.95 | 3 | |
| | | | | 1540 → Sampled | | | | | | |

## Observations

Color: (Clear) Other (describe):

Odor: (None) Low Medium High Very strong H2S Fuel-like

Sample Parameters: VOE's

Notes: 1V = 1.48 gal, 3V = 4.44 gal, 5V = 7.40

Signed/Sampler(s): Ken Hurley

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: LF04-4FWG02 | Site: NAS Fort Worth JRB |
| Sampler(s): CTW JM | Project No.: APC001-07GAA |
| Well Depth: 37.0' | Date: 10-29-97 Time: 1510 |
| DTW (ft): 29.48' DTP: -0- | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 21-34' | |
| Well Diameter (in): 2" | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 33' | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): East 65°F |
| Type of Pump: Grundfos 2" submersible | |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 1515 | 29.56 | 0.5 | 0.75 | 6.57 | 21.4 | 0.752 | -69.5 | 2.93 | 3 | |
| 1520 | 29.56 | | 1.25 | 6.57 | 22.4 | 0.759 | -92.1 | 1.82 | 1 | |
| 1525 | 29.54 | | 1.75 | 6.54 | 22.8 | 0.766 | -74.8 | 1.74 | 0 | |
| 1530 | 29.54 | | 2.75 | 6.54 | 23.1 | 0.770 | -74.1 | 8.67 | 1 | |
| 1535 | 29.54 | | 3.25 | 6.53 | 24.8 | 0.770 | -72.7 | 8.01 | 0 | |
| 1540 | 29.54 | | 3.5 | 6.54 | 24.5 | 0.772 | -73.6 | 1.66 | 0 | |
| 1545 | 29.60 | | 4.25 | 6.54 | 24.1 | 0.754 | -92.4 | 8.10 | 0 | |
| 50 | 29.61 | | 5.75 | 6.54 | 23.3 | 0.753 | -77.3 | 8.21 | 0 | |
| 1555 | 29.61 | | 6.00 | 6.54 | 22.8 | 0.753 | -76.8 | 8.32 | | |

## Observations

Color: (Clear) Other (describe):

Odor: (None) Low Medium High Very strong H2S Fuel-like

Sample Parameters: VOC's

Notes: OVM - 0.0. 6.01 = 5 Vol.

Signed/Sampler(s):

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: LFOS-1PWG02 | Site: NAS Fort Worth JRB |
| Sampler(s): JAM CTW | Project No.: APC001-07GAA |
| Well Depth: 23.59 | Date: 10/29/97 Time: 0955 |
| DTW (ft): 19.21 DTP: — | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 13.9 - 23.9 | |
| Well Diameter (in): 2 | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 21 | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): NE 65°F |
| Type of Pump: Grundfos 2" submersible | |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) LPM | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 1020 | 19.25 | 0.4 | 1.0 | 6.46 | 21.7 | 1.05 | -56.6 | 1.53 | 2 | Clear |
| 1025 | 19.25 | 0.4 | 1.5 | 6.47 | 23.3 | 1.04 | -54.6 | 1.60 | 0 | " |
| 1030 | 19.25 | 0.4 | 2.0 | 6.49 | 24.0 | 1.05 | -55.5 | 1.30 | 0 | " |
| 1035 | 19.29 | 0.4 | 2.5 | 6.50 | 23.2 | 1.05 | -56.7 | 1.36 | 1 | " |
| 1040 | 19.28 | 0.4 | 3.0 | 6.48 | 23.1 | 1.04 | -55.8 | 1.36 | 1 | " |
| | | | | | | | | | | Sampled |

## Observations

Color: (Clear) Other (describe):

Odor: (None) Low Medium High Very strong H2S Fuel-like

Sample Parameters: VOCs, Metals

Notes: OVM - 0.0 ppm

Sampled at 1045

Signed/Sampler(s):

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: GMI-04-01 MWG02 | Site: NAS Fort Worth JRB |
| Sampler(s): JAM CTW | Project No.: APC001-07GAA |
| Well Depth: 20.81 | Date: 10/29/97 Time: 12:30 pm |
| DTW (ft): 19.81 DTP: — | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 16.5 - 31.5 | |
| Well Diameter (in): 2 | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): NA | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): NE 75°F |
| Type of Pump: Grundfos 2" submersible | |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| | | NA | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | See | | Notes | | Below | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

## Observations

Color: Clear Other (describe):

Odor: None Low Medium High Very strong H2S Fuel-like

Sample Parameters: VOCs

Notes: Unable to pump due to 10" of water in well
Purged well with bailer, let recharge, and sampled.

Signed/Sampler(s):

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: WP07-10C W602 | Site: NAS Fort Worth JRB |
| Sampler(s): CTW JM | Project No.: APC001-07GAA |
| Well Depth: 32.85 | Date: 10-29-97 / Time: |
| DTW (ft): 20.82 / DTP: ~~32.85~~ | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 20 30' | |
| Well Diameter (in): 2 | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 26' | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): 68°F - wind E |
| Type of Pump: Grundfos 2" submersible | |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate ~~(gpm)~~ L/m | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 1935 | 20.85 | 0.4 | | | | | | | | |
| 1940 | 20.92 | 0.5 | 0.5 | 6.22 | 21.6 | 1.01 | -56.3 | 8.63 | 1 | |
| 1945 | 20.86 | | 1.0 | 6.21 | 22.9 | 1.00 | -58.6 | 8.20 | 0 | |
| 1950 | 20.94 | | 2.5 | 6.21 | 23.3 | 1.42 | -56.7 | 2.00 | 0 | |
| 1955 | 20.89 | | 3.5 | 6.22 | 23.2 | 1.41 | -56.4 | 8.41 | 0 | |
| 1800 | 20.86 | | 4.0 | 6.21 | 23.3 | 1.40 | -57.3 | 8.27 | 0 | |
| 1805 | 20.87 | | 5.0 | 6.21 | 23.6 | 1.38 | -56.4 | 7.70 | 0 | |

## Observations

Color: (Clear) Other (describe):

Odor: (None) Low Medium High Very strong H2S Fuel-like

Sample Parameters: VOC's

Notes: ~~EE~~ 978= 5 volumes, OVM - 0.0, 1446 pump surge

Signed/Sampler(s):

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: [illegible] | Site: NAS Fort Worth JRB |
| Sampler(s): [illegible] | Project No.: APC001-07GAA |
| Well Depth: 25.60 | Date: 10/29/97 Time: 0805 |
| DTW (ft): 19.58 DTP: — | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 13-23 | |
| Well Diameter (in): 2 | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 21 | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): NE 60 °F |
| Type of Pump: Grundfos 2" submersible | |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 0835 | 19.87 | 0.4 | 1.0 | 6.41 | 23.9 | 1.12 | -66.2 | 7.13 | 27 | Clear |
| 0840 | 19.79 | 0.4 | 1.5 | 6.52 | 24.0 | 1.11 | -66.4 | 0.95 | 10 | " |
| 0845 | 19.69 | 0.4 | 2.0 | 6.57 | 24.6 | 1.09 | -65.0 | 0.71 | 4 | " |
| 0850 | 19.73 | 0.4 | 2.5 | 6.61 | 25.2 | 1.10 | -61.8 | 0.71 | 2 | " |
| 0855 | 19.79 | 0.4 | 3.0 | 6.59 | 25.5 | 1.09 | -59.8 | 0.70 | 2 | " |

## Observations

Color: Clear Other (describe):

Odor: None Low Medium High Very strong H2S Fuel-like

Sample Parameters: VOCs, Anions, Alkalinity, Methane, TOC, Ferrous

Notes: OVM 0.00 ppm

48 gallons = 5X static water Volume

Sampled at 0905

Signed/Sampler(s):

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: MW-10 | Site: NAS Fort Worth JRB |
| Sampler(s): KH, TD | Project No.: APC001-07GAA |
| Well Depth: 32.88 | Date: 10/30/97 — Time: 845 |
| DTW (ft): 13.05 — DTP: N/A | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 12-32 | |
| Well Diameter (in): 4" | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 22' | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): 65°, Wind to the North |
| Type of Pump: Grundfos 2" submersible | |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate ~~(gpm)~~ Lpm | Total Volume (gal) | pH | Temp. (C) | Cond. ~~(umhos/cm)~~ mS/cm | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 810 | 13.80 | 1.2 | | | | | | ~~1.2~~ | ~~0~~ | |
| 815 | 13.76 | | 1.5 | 6.22 | 22.1 | 1.10 | -67.8 | 1.23 | 0 | |
| 820 | 13.88 | | 2.5 | 6.28 | 22.9 | 1.10 | -84.1 | 0.73 | 0 | |
| 825 | 14.00 | | 3.0 | 6.32 | 23.4 | 1.10 | -90.4 | 0.66 | 0 | |
| 830 | 14.04 | | 4.0 | 6.36 | 23.6 | 1.10 | -90.8 | 0.68 | 0 | |
| KJ ~~840~~ 835 | 14.06 | | 5.0 | 6.41 | 23.7 | 1.10 | -91.7 | 0.61 | 0 | |
| 840 | 14.07 | | 6.0 | 6.44 | 23.8 | 1.11 | -89.7 | 0.61 | 0 | |
| 845 | 14.08 | | 7.0 | 6.44 | 23.9 | 1.11 | -89.1 | 0.62 | 0 | |
| | | | | | | | | | | |
| | | | | 845 | Sampled | | | | | |

## Observations

Color: (Clear) Other (describe):

Odor: None Low Medium (High) Very strong H2S (Fuel-like)

Sample Parameters: VOCs, BTEX (MTBE), Metals

Notes: 1V=12.88, 3V=38.66, 5V=64.4

Signed Sampler(s): Ken Hurley

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: BGS MW06 | Site: NAS Fort Worth JRB |
| Sampler(s): KH, JD | Project No.: APC001-07GAA |
| Well Depth: 17.0 | Date: 10/30/97 Time: 1030 |
| DTW (ft): 10.83 DTP: — | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 7 | |
| Well Diameter (in): 4" | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 14.0' | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): |
| Type of Pump: Grundfos 2" submersible | 70°F, Wind Northerly dire |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) mS/cm | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 945 | 11.02 | 0.8-1.0lpm | 1.5 | 6.41 | 26.2 | 0.92 | 24.0 | 1.06 | 0 | clear |
| 950 | 11.00 | | 2.0 | 6.44 | 27.3 | 0.93 | 17.2 | 0.96 | 0 | |
| 955 | 11.00 | | 2.75 | 6.40 | 27.6 | 0.92 | -18.7 | 0.88 | 0 | |
| 1000 | 11.01 | | 4.0 | 6.43 | 27.7 | 0.91 | -50.8 | 0.81 | 0 | |
| 1005 | 11.01 | | 5.5 | 6.45 | 27.8 | 0.953 | -61.0 | 0.80 | 0 | |
| 1010 | 11.03 | | 7.0 | 6.46 | 27.6 | 0.945 | -65.3 | 0.85 | 0 | |
| 1015 | 11.06 | | 8.0 | 6.46 | 27.6 | 0.938 | -71.0 | 0.65 | 0 | |
| 1020 | 11.05 | | 9.5 | 6.45 | 27.6 | 0.928 | -76.6 | 0.64 | 0 | |
| 1025 | 11.06 | | 10.5 | 6.46 | 27.5 | 0.920 | -77.6 | 0.64 | 0 | |
| 1030 | 11.06 | | 12 | 6.46 | 27.5 | 0.917 | -80.1 | 0.62 | 0 | |
| | | | | 10:30 | Sampled | | | | | |

## Observations

Color: Clear Other (describe):

Odor: None Low Medium High Very strong H2S Fuel-like

Sample Parameters: BTEX w MTBE

Notes: 1V=4, 3V=12, 5V=20gal

Signed/Sampler(s): Ken Hurley

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: MW-1WGC2 | Site: NAS Fort Worth JRB |
| Sampler(s): JAM CTW | Project No.: APC001-07GAA |
| Well Depth: 18.86 | Date: 10/30/97 Time: 910 - sampled @ 940 |
| DTW (ft): 10.57 DTP: -0- | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 8.6-48.6 | |
| Well Diameter (in): 4" | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 12.5' | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): 70°F |
| Type of Pump: Grundfos 2" submersible | |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 915 | 10.65 | 0.5 | 0.5 | 6.77 | 23.8 | 1.01 | -127.4 | 7.70 | 15 | CLEAR & STINKY |
| 920 | 10.80 | 1.25 | 0.5 | 6.77 | 24.5 | 1.02 | -130.1 | 0.40 | 16 | ↓ |
| 925 | 10.76 | 2.00 | 0.5 | 6.78 | 24.4 | 1.03 | -129.4 | 0.25 | 9 | ↓ |
| 930 | 10.64 | 3.5 | 0.5 | 6.78 | 24.7 | 1.03 | -125.8 | 0.35 | 6 | ↓ |
| 935 | 10.64 | 4.25 | 0.5 | 6.78 | 25.2 | 1.03 | -127.3 | 0.42 | 8 | ↓ |

## Observations

Color: Clear Other (describe):

Odor: None Low Medium High Very strong H2S Fuel-like - TAR-LIKE

Sample Parameters: BTEX-MTBE, ANIONS, alkalinity, methane, TOC, Ferrous

Notes: OVM - 7.4, ~~6.65 gall = 5 volumes~~ 26.9 gal. = 5 vol.

Signed/Sampler(s):

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: WP07-10BWG02 | Site: NAS Fort Worth JRB |
| Sampler(s): JAM CTW | Project No.: APC001-07GAA |
| Well Depth: ~~37.00~~ 37.00 | Date: 10/30/97 Time: Sampled @ 840 |
| DTW (ft): 29.16 DTP: -0- | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 23-33 | |
| Well Diameter (in): 2 | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 32 | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): N 65°F |
| Type of Pump: Grundfos 2" submersible | |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 810 | 29.68 | 0.5 | 1.5 | 6.88 | 20.5 | 0.946 | -116.5 | 8.81 | 9 | |
| 815 | 29.37 | ~~1.25~~ 1.00 | 2.37 | 6.88 | 21.2 | 0.943 | -119.5 | 8.47 | 6 | |
| 820 | 29.28 | | 2.75 | 6.88 | 22.4 | 0.936 | -113.1 | 8.22 | 4 | |
| 825 | 29.25 | | 3.00 | 6.89 | 22.9 | 0.938 | -108.5 | 8.06 | 3 | |
| 830 | 29.25 | | 3.5 | 6.89 | 23.0 | 0.939 | 117.8 | 8.08 | 4 | |

## Observations

Color: (Clear) Other (describe):

Odor: (None) Low Medium High Very strong H2S Fuel-like

Sample Parameters: VOCs

Notes: DVM - 111.0 ppm ~~BD~~ BZ - 0.0 ppm 5 vol = 6.2 gal.

Signed/Sampler(s):

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: ST14-W18 | Site: NAS Fort Worth JRB |
| Sampler(s): KH, JD | Project No.: APC001-07GAA |
| Well Depth: 17.51 | Date: 10/27/97 Time: 1410 |
| DTW (ft): 8.47 DTP: N/A | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 4.19 - 15.89 | |
| Well Diameter (in): 2" | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 12' | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): 70°F |
| Type of Pump: Grundfos 2" submersible | |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 1350 | 9.96 | 0.5 lpm | | ~~7.69~~ KJH | 29.3 | 0.997 | -137.2 | 0.54 | 19 | |
| | Note: drawdown too much, increased flow rate. FAST Purge | | | | | | | | | |
| | | | | | | | | 0.25 | 28 | |
| 1335 | 10.11 | | 2.0 | ~~7.65~~ KJH | 30.2 | 0.861 | -147.2 | | | |
| 1340 | 10.24 | | 2.4 | 6.89 | 30.3 | 0.867 | -141.4 | 0.32 | 17 | |
| 1345 | 12.8 | | 4.5 | | | | | | | |
| 1350 | 16.2 | → well pumped dry. (TOTAL purged = 6 gal) | | | | | | | | |
| 1355 | KJH 13.90 | 90% of original water column = 9.37' below TOC. | | | | | | | | |
| 1400 | 10.12 | | | | | | | | | |
| 1405 | 9.70 | | | | | | | | | |
| 1410 | 9.31 | | | | | | | | | |
| | | 14:10 | Sampled ~~[illegible]~~ KJH ST14-W18 | | | | | | | |

## Observations

Color: Clear Other (describe):

Odor: None Low Medium High Very strong H2S Fuel-like

Sample Parameters: BTEX, Methane, TOC, $Fe^{2+}$, Anions, Alkalinity, Metals.

Notes: 1V = 1.22 gal, 3V's = 3.67, 5V = 6.12 gal.

Drawdown exceeded 0.4m (1.3 ft), we used FAST purge to purge 5 ~~gal~~ KJH well volumes. Lowered pump.

Signed/Sampler(s): Kent Hurley

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: BGSMW05 | Site: NAS Fort Worth JRB |
| Sampler(s): KH, JD | Project No.: APC001-07GAA |
| Well Depth: 12.66' | Date: 10/27/97 Time: 1640 |
| DTW (ft): 6.14' DTP: N/A | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): ? | |
| Well Diameter (in): 4" | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): ~~[illegible]~~ KSH 9' | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): |
| Type of Pump: Grundfos 2" submersible | 70°F, From North |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate ~~(gpm)~~ LPM | Total Volume (gal) | pH | Temp. (C) | Cond. ~~(umhos/cm)~~ mS/cm | ORP mV | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 1555 | 6.27 | 1.0-1.2 | 2.5 | 7.16 | 26.3 | 0.902 | 21.2 | 0.51 | 8 | clear |
| 1600 | 6.26 | ↓ | 3.5 | 7.07 | 26.6 | 0.925 | 48.6 | 0.34 | 5 | |
| 1605 | 6.25 | ↓ | 4.5 | 7.02 | 26.9 | 0.941 | 48.0 | 0.23 | 3 | |
| 1610 | 6.17 | ↓ | 5.5 | 7.00 | 26.9 | 0.952 | 76.3 | ~~26.46~~ 0.24 | 2 | |
| 1615 | 6.29 | 1.5 | 6.5 | 7.07 | 27.5 | 0.922 | 55.4 | 0.37 | 3 | Pump surged |
| 1620 | 6.23 | ↓ | 7.5 | 6.99 | 27.3 | 0.953 | 78.9 | 0.25 | 1 | |
| 1625 | 6.42 | ↓ | 8.5 | 6.98 | 27.2 | 0.962 | 75.7 | 0.23 | 0 | Pump surged |
| 30 | 6.43 | ↓ | 10.0 | 6.93 | 26.4 | 0.983 | ~~[illegible]~~ KSH 0.10 | 0 | | ORP=75.8 |
| 1635 | 6.43 | ↓ | 12.0 | 6.91 | 26.4 | 0.988 | 78.7 | 0.08 | 0 | |
| 1640 | 6.43 | ↓ | 14.0 | 6.91 | 26.4 | 0.988 | 78.4 | 0.08 | 0 | |
| | | | | | | | | | | |
| | | | 1640 Collected sample | | | | | | | |

## Observations

Color: (Clear) Other (describe):

Odor: (None) Low Medium High Very strong H2S Fuel-like

Sample Parameters: BTEX with MTBE

Notes: 1V = 4.25, 3V = 12.76, 5V = 21.2

Signed/Sampler(s): Ken Hurley

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: BSS-A | Site: NAS Fort Worth JRB |
| Sampler(s): JO, KH | Project No.: APC001-07GAA |
| Well Depth: 10.39 | Date: 10/27/97 Time: 905 |
| DTW (ft): 5.05 DTP: — | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 5-10 | |
| Well Diameter (in): 2" | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 7.5' | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): |
| Type of Pump: Grundfos 2" submersible | 50°, W from North |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate ~~(gpm)~~ LPM | Total Volume (gal) | pH | Temp. (C) | Cond. ~~(umhos/cm)~~ mS/cm | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 830 | 5.26 | 0.4 | 1.1 | 6.79 | 25.9 | 0.980 | 84.4 | 0.58 | 3 | clear |
| 835 | 5.18 | 1 | 1.3 | 6.83 | 26.7 | 0.992 | -62.0 | 0.30 | 3 | |
| 840 | 5.16 | | 1.7 | 6.84 | 28.0 | 0.996 | -86.2 | 0.26 | 3 | |
| 845 | 5.16 | | 2.2 | 6.85 | 28.7 | 0.991 | -95.6 | 0.18 | 4 | |
| 850 | 5.16 | | 2.7 | 6.85 | 29.0 | 0.992 | -98.6 | 0.13 | 4 | |
| 855 | 5.16 | | 3.2 | 6.85 | 29.3 | 0.995 | -99.6 | 0.13 | 4 | |
| 900 | 5.16 | | 3.7 | 6.85 | 29.4 | 0.993 | -97.6 | 0.13 | 4 | |
| 905 | 5.16 | | 4.4 | 6.84 | 29.5 | 0.996 | -95.6 | 0.12 | 4 | |
| | | 905 Sampled | | | | | | | | |

## Observations

Color: Clear Other (describe): Murky at First

Odor: None Low Medium (High) Very strong H2S (Fuel-like)

Sample Parameters: BTEX, TOC, Methane, Ferrous IRON, Alkalinity + Anions

Notes: 1V = 0.881, 3V's = 2.64, 5V's = 4.4, DTW$_{Afterpump}$ = 5.06

8:20 Initial flow = 0.4 lpm. (DTW = 5.15)

Signed/Sampler(s): Ken Hurley

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: BSS-B | Site: NAS Fort Worth JRB |
| Sampler(s): KH, JD | Project No.: APC001-07GAA |
| Well Depth: 12.84 | Date: 10/27/97 Time: 1115 |
| DTW (ft): 9.61 DTP: | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 3.3-8.8' (BGS) | |
| Well Diameter (in): 2" | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 11' | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): |
| Type of Pump: Grundfos 2" submersible | |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) | Total Volume (gal) | pH | Temp. (C) | Cond. (~~umhos/cm~~) mS/cm | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 1015 | 10.02 | 0.3-0.4 | 1.1 | 6.74 | 25.3 | 1.111 | -112.9 | 0.88 | 32 | |
| 1020 | 9.80 | ↓ | 1.3 | 6.78 | 25.5 | 1.10 | -129.3 | 7.8 | 23 | Pump air locked |
| 1025 | 10.33 | | 1.4 | 6.76 | 28.0 | 1.10 | -132.6 | 6.88 | 56 | |
| 1030 | 10.03 | | 1.6 | 6.76 | 28.6 | 1.10 | -136.9 | 6.59 | 56 | |
| 1035 | 9.77 | | 1.8 | 6.76 | 28.4 | 1.10 | -160.4 | 6.68 | 56 | |
| 1040 | 9.79 | | 2.0 | 6.77 | 26.7 | ~~2.04 mS~~ | -144.8 | 6.82 | 27 | Cond. 1.10 |
| | | | | | | | | | | Pump air locked, stopped to let recov |
| 1100 | 10.21 | 0.4 | 2.15 | 6.77 | 26.1 | 1.09 | -146.5 | 7.08 | 40 | |
| 1105 | 10.14 | ↓ | 2.3 | 6.77 | 26.8 | 1.09 | -141.6 | 6.82 | 49 | |
| 1110 | 9.94 | | 2.5 | 6.77 | 26.9 | 1.09 | -143.3 | 6.85 | 35 | |
| 1115 | 9.86 | | 3.0 | 6.75 | 26.8 | 1.07 | -146.4 | 6.83 | 38 | |

1115 → Sampled BSS-A after 5 volumes had been purged, the sample was clear but was "fizzy".

## Observations

Color: Clear Other (describe): Nearly clear when sample was collected.

Odor: None Low Medium High (Very strong) H2S (Fuel-like)

Sample Parameters: BTEX w/ MTBE, TOC, Methane, Ferrous Iron, Alkalinity, Anions.

Notes: 1V = 0.53 gal, 3V = 1.59, 5V = 2.66

Signed/Sampler(s): Ken Hurley

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: VSGS04TWG02 | Site: NAS Fort Worth JRB |
| Sampler(s): JAM TW | Project No.: APC001-07GAA |
| Well Depth: 22.47 | Date: 10/27/97 Time: 3-08 1500 |
| DTW (ft): 18.19 DTP: — | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 15.5 - 25.5 | |
| Well Diameter (in): 2 | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 20' | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): SE 75°F |
| Type of Pump: Grundfos 2" submersible | |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 1505 | 18.25 | 0.4 | 1.25 | 6.82 | 23.0 | .835 | 124.7 | 9.01 | 200 | Sandy |
| 1510 | 18.25 | 0.4 | 1.50 | 6.82 | 23.7 | .830 | 104.1 | 8.70 | 50 | Clearing |
| 1515 | 18.22 | 0.4 | 2.00 | 6.82 | 24.4 | .831 | 75.2 | 8.48 | 28 | " |
| 1520 | 18.21 | 0.4 | 2.25 | 6.82 | 25.0 | .832 | 60.0 | 8.32 | 16 | " |
| 1525 | 18.25 | 0.4 | 2.50 | 6.79 | 25.6 | .829 | 34.9 | 8.13 | 16 | Turn up over 7 |
| 1530 | 18.21 | 0.4 | 3.00 | 6.77 | 27.2 | .833 | 26.2 | 7.60 | 15 | Steady flow |
| ~~1535~~ | | | | | | | | | | Sampled - 5x |
| | | | | | | | | | | Static Water |
| | | | | | | | | | | Volume |

## Observations

Color: Clear Other (describe): Color was very sandy

Odor: None Low Medium High Very strong H2S Fuel-like

Sample Parameters: VOCs, Metals

Notes: 5X Static Water Volume = 3.4 gallons Trouble Steadying flow
Very Sandy Color OVA = 0.0 ppm
Sampled at 1535

Signed/Sampler(s):

Flushmount - No Pad Missing Two Bolts
Bailer ✓
Lock ✓

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: ST 1402 W 602 | Site: NAS Fort Worth JRB |
| Sampler(s): SAM CTW | Project No.: APC001-07GAA |
| Well Depth: 19.35 | Date: 10/~~26~~ 27/97 Time: 10:00 AM |
| DTW (ft): 11.92 DTP: — | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 7.05 - 16.8 | |
| Well Diameter (in): 2" | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 14' | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): NA 65 °F |
| Type of Pump: Grundfos 2" submersible | |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 1020 | 11.92 | 0.4 | 0.5 | 6.64 | 23.0 | .746 | -135.1 | 6.43 | 5 | Clear |
| 1025 | 11.92 | 0.4 | 0.75 | 6.65 | 23.8 | .749 | -115.5 | 6.28 | 1 | " |
| 1030 | 11.92 | 0.4 | 1.25 | 6.72 | 24.6 | .744 | -119.4 | 1.63 | 1 | " |
| 1035 | 11.92 | 0.4 | 1.75 | 6.74 | 24.9 | .750 | -122.8 | 0.64 | 0 | " |
| 1040 | 11.92 | 0.4 | 2.25 | 6.74 | 25.0 | .750 | -122.2 | 0.65 | 1 | " |
| 1045 | 11.93 | 0.4 | 3.00 | 6.73 | 25.4 | .750 | -123.9 | 0.64 | 1 | " |
| | | | | | | | | | | Sampled |

## Observations

Color: Clear Other (describe):

Odor: None Low Medium High Very strong H2S Fuel-like

Sample Parameters: BTEX, Anions, Alkalinity, Methane, TOC, Ferrous

Notes: OVM 24.0 ppm BZ - 0.00 ppm

Due to construction - Well is surrounded by 2-8 foot dirt piles

5x static water volume = 5.95 gallons

Sampled at 1050 AM

Signed/Sampler(s): [illegible] CW

Stand pipe - ✓

Lock - yes

Bailer - yes

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: 17MW602 | Site: NAS Fort Worth JRB |
| Sampler(s): JAM CTW | Project No.: APC001-07GAA |
| Well Depth: 17.76 | Date: 10/27/97 Time: 8:05 AM |
| DTW (ft): ~~9.58~~ 9.59 DTP: 9.58 | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 5.9-15.9 | |
| Well Diameter (in): 2 | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 12 | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): East 55°F |
| Type of Pump: Grundfos 2" submersible | |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 0830 | 9.66 | 0.4 | 0.5 | 6.46 | 22.3 | .686 | -80.9 | 1.40 | 3 | |
| 0835 | 9.66 | 0.4 | 1.0 | 6.60 | 22.9 | .695 | -92.3 | 1.46 | 3 | |
| 0840 | 9.65 | 0.4 | 1.5 | 6.67 | 23.4 | .714 | -92.0 | 1.22 | 3 | |
| 0845 | 9.64 | 0.4 | 2.0 | 6.68 | 23.9 | .720 | -94.7 | 1.47 | 2 | |
| 0850 | 9.64 | 0.4 | 2.5 | 6.67 | 24.2 | .726 | -96.2 | 1.50 | 2 | |
| 0855 | 9.63 | 0.4 | 3.0 | 6.66 | 24.4 | .722 | -96.7 | 1.42 | 1 | Sampled |

## Observations

Color: (Clear) Other (describe):

Odor: None Low (Medium) High Very strong H2S Fuel-like

Sample Parameters: BTEX, chloride, Alkalinity, Methane, TOC, Ferrous

Notes: 5x Well Volume = 6.5 gallons O/M = 2.3 ppm BZ-0.00 ppm

Sampled at 0906

Approximately .1 inch of product

Signed/Sampler(s):

Lead pipe - OK
lock - yes
No Bailer

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: STM-W16 G02 | Site: NAS Fort Worth JRB |
| Sampler(s): JAM CTW | Project No.: APC001-07GAA |
| Well Depth: 19.02 | Date: 10/27/97 Time: 1:30 pm |
| DTW (ft): 8.00 DTP: — | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 7.19 - 18.89 | |
| Well Diameter (in): 2' | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 13' | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): S East 75°F |
| Type of Pump: Grundfos 2" submersible | |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 1350 | 8.04 | 0.4 | 0.75 | 6.67 | 24.7 | .746 | -110.4 | 2.40 | 3 | Clear |
| 1355 | 8.04 | 0.4 | 1.00 | 6.70 | 26.2 | .746 | -120.2 | 0.58 | 1 | " |
| 1400 | 8.04 | 0.4 | 1.50 | 6.66 | 26.8 | .746 | -123.8 | 0.53 | 1 | " |
| 1405 | 8.05 | 0.4 | 2.00 | 6.68 | 27.1 | .745 | -123.9 | 0.54 | 0 | |
| 1410 | | | | | | | | | | Sampled |
| 1415 | | | | | | | | | | |

## Observations

Color: Clear Other (describe):

Odor: None Low Medium High Very strong H2S Fuel-like

Sample Parameters: BTEX Anions, Alkalinity, Methane, TOC, Ferrous UVA - 4.2 ppm

Notes: 5X Static Water Volume = 8.8 gallons

Sampled at 1410 —

Signed/Sampler(s):

Flushmount - OK Missing one bolt

Bailer ✓

lock - ✓

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: LF05-0261G02 | Site: NAS Fort Worth JRB |
| Sampler(s): JAM JED | Project No.: APC001-07GAA |
| Well Depth: 29.90 | Date: 10/28/97 Time: 0845 |
| DTW (ft): 25.56 DTP: — | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 17-27 | |
| Well Diameter (in): 2 | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 27 | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): |
| Type of Pump: Grundfos 2" submersible | Partly Cloudy N 65 °F |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 0850 | 25.62 | 0.4 | 1.0 | 6.83 | 20.8 | .975 | -91.3 | 7.92 | 75 | Sandy-Iron |
| 0855 | 25.60 | 0.4 | 1.5 | 6.86 | 21.7 | .936 | -98.0 | 0.90 | 45 | " |
| 0900 | 25.57 | 0.4 | 2.0 | 6.89 | 22.4 | .882 | -103.6 | 0.38 | 33 | " |
| 0905 | 25.59 | 0.4 | 3.0 | 6.90 | 23.1 | .870 | -105.1 | 0.33 | 37 | |
| 0910 | 25.64 | 0.4 | 4.0 | 6.92 | 24.3 | .873 | -104.1 | 0.25 | ~~37~~ 33 | |
| | | | | | | | | | | Sampled |

## Observations

Color: Clear Other (describe): Clayey-Iron Color

Odor: None Low Medium High Very strong H2S Fuel-like

Sample Parameters: See Below

Notes: VOC - Spike - Duplicate - Ambient

5x static water volume = 2.6 gallons

Reached 5x static water volume & sampled - lots of clayey debris in samples

Signed/Sampler(s):

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: FT09-12CW602 | Site: NAS Fort Worth JRB |
| Sampler(s): JAM JED | Project No.: APC001-07GAA |
| Well Depth: 39.57 | Date: 10/28/91 Time: 10:00 AM |
| DTW (ft): 31.75 DTP: — | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 27.5 - 37.5 | |
| Well Diameter (in): 2 | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 34 | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): N 70°F |
| Type of Pump: Grundfos 2" submersible | |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 1035 | 31.78 | 0.4 | 0.5 | 6.77 | 21.8 | .960 | -47.7 | 9.06 | 40 | Clear |
| 1040 | 31.77 | 0.4 | 0.75 | 6.77 | 22.2 | .961 | -62.1 | 2.30 | 23 | " |
| 1045 | 31.75 | 0.4 | 1.00 | 6.77 | 23.3 | .959 | -64.9 | 0.28 | 10 | " |
| 1050 | 31.76 | 0.4 | 1.50 | 6.77 | 23.8 | .956 | -66.5 | 0.26 | 9 | " |
| 1055 | 31.84 | 0.4 | 2.25 | 6.77 | 23.9 | .955 | -70.1 | 0.23 | 9 | " |

## Observations

Color: (Clear) Other (describe):

Odor: (None) Low Medium High Very strong H2S Fuel-like

Sample Parameters: ~~TO CM~~ VOC

Notes: Very Silty on Bottom OVM - 0.00 ppm
c.25 gallons - 5x Static water Volume
Surge while Sampling at 1100

Signed/Sampler(s):

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: MW-SWG02 | Site: NAS Fort Worth JRB |
| Sampler(s): JAM JED | Project No.: APC001-07GAA |
| Well Depth: 8.13 | Date: 10/28/97 Time: 1350 |
| DTW (ft): 5.14 DTP: — | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 3.5 - 11 | |
| Well Diameter (in): 4 | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 6.5 | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): N 75°F |
| Type of Pump: Grundfos 2" submersible | |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |
| | See | | | Notes | | | | | | |

## Observations

Color: (Clear) Other (describe):

Odor: None (Low) Medium High Very strong H2S Fuel-like

Sample Parameters: BTEX, Anions, Alkalinity, Methane, TOC, Ferrous

Notes: OVM - 0.0 ppm

Unable to obtain enough steady flow to fill chamber + analyze parameters

Purged well and sampled after 90% recharge of well

Signed/Sampler(s):

Standpipe ✓ lock ✓ - Severe erosion beneath Pad

Bailer ✓

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: ST14-W21WG02 | Site: NAS Fort Worth JRB |
| Sampler(s): JAM JED | Project No.: APC001-07GAA |
| Well Depth: 17.61 | Date: 10/28/97 Time: 1550 |
| DTW (ft): 10.20 DTP: --- | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 7.99-16.89 | |
| Well Diameter (in): 2" | Sampling Method (G=grab, B=bailer, SP=submersible pump): SP |
| Placement of Pump (ft): 13 | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): N 75°F |
| Type of Pump: Grundfos 2" submersible | |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | See | | Notes | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

## Observations

Color: Clear Other (describe):

Odor: None Low Medium High Very strong H2S Fuel-like

Sample Parameters: BTEX, Anions, Alkalinity, Methane, TOC, Ferrous, Metals

Notes: OVM = 1.4 ppm

Water dropped over 2 feet during initial flow -

Purged well and then sampled at 1640 after 90% recharge

Signed/Sampler(s):

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: Spot 35-4 | Site: NAS Fort Worth JRB |
| Sampler(s): CTW, KH | Project No.: APC001-07GAA |
| Well Depth: 24.38 | Date: 10/28/97 Time: 930 |
| DTW (ft): 20.25 DTP: N/A | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 14.3-24.3 | |
| Well Diameter (in): 2 | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 22 | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): |
| Type of Pump: Grundfos 2" submersible | Windy (from South), 60° |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate ~~(gpm)~~ LPM | Total Volume (gal) | pH | Temp. (C) | Cond. ~~(umhos/cm)~~ mS/cm | ORP mV | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 845 | 21.40 | 0.5 | 1.0 | 6.29 | 26.7 | 1.20 | -118.1 | 1.10 | 178 | murky |
| 850 | 21.23 | | 1.2 | 6.43 | 26.5 | 1.20 | -115.5 | 0.72 | 137 | |
| 855 | 21.15 | | 1.5 | 6.55 | 25.9 | 1.22 | -114.2 | 0.70 | 131 | |
| 900 | Pump shut down - No current. | | | | | | | | | |
| | Must FAST purge in order to keep pump from clogging. | | | | | | | | | |
| 910 | 22.4 | 1.5 | 3.0 | | | | | | | |
| 915 | >22.4 | | 3.5 | Discontinue Purging (5 well volumes = 3.5 gallons) | | | | | | |
| 915 | >22.4 | | | | | | | | | |
| 920 | 21.27 | | | | | | | | | |
| 925 | 20.84 | | | | | | | | | |
| 930 | 20.58 | | | | | | | | | |
| | | 9:30 Sampled Spot-35-4WG02, Sample slightly turbid | | | | | | | | |

## Observations

Color: Clear Other (describe):

Odor: None Low Medium High Very strong H2S Fuel-like

Sample Parameters: VOCs, Methane, TOC, $Fe^{2+}$, Anions, Alkalinity

Notes: 1V = 0.68, 3V = 2.04, 5V = 3.4 gal

Pump surged while purging (sand locked at no flow), so we had to abandon low flow, fast purged + waited for well to recover to 90% of orig. water column.

Signed/Sampler(s): Ken Hurley

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: Spot-35-2 | Site: NAS Fort Worth JRB |
| Sampler(s): 21.85 | Project No.: APC001-07GAA |
| Well Depth: 26.3 | Date: 10/28/97 Time: 1140 |
| DTW (ft): 21.25 DTP: N/A | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 7-25 | |
| Well Diameter (in): 4" | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 24' | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): |
| Type of Pump: Grundfos 2" submersible | 60°F, Wind from South. |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) | Total Volume (gal) | pH | Temp. (C) | Cond. ~~(umhos/cm)~~ mS/cm | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 1025 | 23.68 | | 2.0 | 6.33 | 24.4 | 1.82 | -121.8 | 0.72 | 10 | |
| KJT | ~~Flow rate~~ Drawdown exceeds 1.3ft → Fast purge | | | | | | | | | Lowered pump |
| 1030 | 24.95 | | | 6.37 | 24.8 | 1.80 | -120.6 | 0.66 | 20 | |
| 1032 | Well goes dry. (3.75 gallons purged), Begin waiting for well to recharge (90% 21.75) | | | | | | | | | |
| 1037 | 23.45 | | | | | | | | | |
| 1042 | 23.16 | | | | | | | | | |
| 1047 | 22.94 | | | | | | | | | |
| 52 | 22.73 | | | | | | | | | |
| 1057 | 22.53 | | | | | | | | | |
| 1102 | 22.33 | | | | | | | | | |
| 1107 | 22.19 | | | | | | | | | |
| 1112 | 22.09 | | | | | | | | | |
| 1117 | 21.99 | | | | | | | | | |
| 1122 | 21.94 | | | | | | | | | |
| 1127 | 21.88 | | | | | | | | | |
| 1132 | 21.83 | | | | | | | | | |
| 1137 | 21.78 | | | | | | | | | |
| | | | 1140 | Sampled | Spot-35-2WG02 | | -115.4 | 0.68 | | |
| | | | | | 24.6 | | | | | |

## Observations

Color: (Clear) Other (describe):

Odor: None (Low) Medium High Very strong H2S (Fuel-like)

Sample Parameters:

Notes: 1V = 3.3 gal, 3V = 9.88, 5V = 16.4 gal, DTW after pump = 21.20
Initial Flow = 0.75 lpm, DTW = 21.93 (Begin at 1015)

Signed/Sampler(s):

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: Spot 35-5 | Site: NAS Fort Worth JRB |
| Sampler(s): KH, CW | Project No.: APC001-07GAA |
| Well Depth: | Date: 10-28-97 / Time: |
| DTW (ft): / DTP: | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): | |
| Well Diameter (in): | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): |
| Type of Pump: Grundfos 2" submersible | |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) | Total Volume (gal) | pH | Temp. (C) | Cond. ~~(umhos/cm)~~ mS/cm | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 1525 | 23.59 | | | | | | | | | |
| 1530 | 23.53 | | | | | | | | | |
| 1535 | 23.49 | | | | | | | | | |
| 1540 | 23.41 | | | | | | | | | |
| 1545 | 23.38 | | | | | | | | | |
| 1550 | 23.32 | | | | | | | | | |
| 1555 | 23.28 | | | | | | | | | |
| 1600 | 23.22 | | | | | | | | | |
| 1605 | 23.17 | | | | | | | | | |
| 1610 | 23.11 | | | | | | | | | |
| 1615 | 23.08 | | | | | | | | | |
| 1620 | 23.98 | | | | | | | | | |
| 1625 | 22.97 | | | | | | | | | |
| 1630 | 22.94 | | | | | | | | | |
| 1635 | 22.91 | | | | | | | | | |
| 1645 | 22.84 | | | | | | | | | |
| 1650 | 22.80 | | | | | | | | | |
| 1650 | SAMPled | | | 6.32 | 23.1 | 1.45 | -139.4 | 7.98 | 7 | Clear, fizzy |
| | | | | | | | | | | |

## Observations

Color: Clear Other (describe):

Odor: None Low Medium High Very strong H2S Fuel-like

Sample Parameters:

Notes:

Signed/Sampler(s): Ken Hurley

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: Spot 35-5 | Site: NAS Fort Worth JRB |
| Sampler(s): KH, CW | Project No.: APC001-07GAA |
| Well Depth: 27.53 | Date: 10/28/97 Time: |
| DTW (ft): 21.65 DTP: N/A | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 16.6 - 26.6 | |
| Well Diameter (in): 4" | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 24.5 | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): |
| Type of Pump: Grundfos 2" submersible | |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 1400 | Begin Purging → Flow = 0.8 Lpm, DTW = 22.89 | | | | | | | | | |
| 1405 | 23.2 | too much drawdown for low flow → begin fast purge, lowered pump | | | | | | | | |
| | | to 0.5' off Bottom | | | | | | | | |
| 1410 | 25.60 | 2.0 Lpm | 2.0 | 6.13 | 23.1 | 1.47 | -111.9 | 1.46 | 2 | |
| 1415 | >25.8 | | 3.5 | 6.34 | 23.6 | 1.45 | | 0.71 | 4 | |
| 1417 | >25.8 | Well goes dry, will wait till 90% recovery, then sample | | | | | | | | |
| 1420 | 24.70 | | | | | | (22.24) | | | |
| 25 | 24.56 | | | | | | 80% 22.82 | | | |
| 1430 | 24.46 | | | | | | | | | |
| 1435 | 24.34 | | | | | | | | | |
| 1440 | 24.25 | | | | | | | | | |
| 1445 | 24.16 | | | | | | | | | |
| 1450 | 20.09 | | | | | | | | | |
| 1455 | 24.01 | | | | | | | | | |
| 1500 | 23.91 | | | | | | | | | |
| 1505 | 23.85 | | | | | | | | | |
| 1510 | 23.79 | | | | | | | | | |
| 1515 | 23.74 | | | | | | | | | |
| 1520 | 23.66 | | | | | | | | | |

## Observations

Color: (Clear) Other (describe):

Odor: None Low (Medium) High Very strong H2S (Fuel-like)

Sample Parameters:

Notes: 1V = 3.822, 3V = 11.466, 5V = 19.11

Signed/Sampler(s): Ken Hurley

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: GMI-22-06M | Site: NAS Fort Worth JRB |
| Sampler(s): KH, JD | Project No.: APC001-07GAA |
| Well Depth: 26.6 | Date: 10/29/97 Time: 920 |
| DTW (ft): 18.33 DTP: N/A | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 13.5 - 23.5 | |
| Well Diameter (in): 2" | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 21.5' | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): |
| Type of Pump: Grundfos 2" submersible | 65°, W from South |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate ~~(gpm)~~ Lpm | Total Volume (gal) | pH | Temp. (C) | Cond. ~~(umhos/cm)~~ mS/cm | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 825 | 18.51 | | | | | | | | | dirty |
| 830 | 18.50 | | | | | | | | | |
| 835 | 18.44 | 0.8 | 2.5 | 6.94 | 24.4 | 1.33 | 46.7 | 0.60 | 157 | clearer |
| 840 | 18.38 | ↓ | 3.0 | 6.95 | 24.3 | 1.34 | 32.1 | 0.34 | 126 | |
| 845 | 18.42 | 0.6-0.8 | 3.5 | 6.96 | 26.0 | 1.34 | 20.1 | 0.34 | 79 | Pump surged |
| 850 | 18.41 | ↓ | 4.0 | 6.96 | 26.4 | 1.35 | 11.0 | 0.17 | 94 | |
| 855 | 18.41 | ↓ | 4.5 | 6.96 | 26.0 | 1.35 | 10.1 | 0.18 | 48 | |
| 900 | 18.43 | | 5.0 | 6.96 | 26.5 | 1.34 | 6.7 | 0.24 | 37 | Pump surged |
| 905 | 18.41 | | 5.5 | 6.96 | 26.1 | 1.34 | 7.9 | 0.25 | 21 | |
| 910 | 18.39 | | 6.0 | 6.97 | 26.0 | 1.35 | 5.4 | 0.24 | 18 | |
| 915 | 18.38 | | 6.5 | 6.96 | 26.6 | 1.35 | 4.0 | 0.23 | 18 | clear |
| 920 | | | 7.0 | 6.96 | 26.5 | 1.35 | 3.8 | 0.22 | 14 | |
| | | | | | | | | | | |
| | | | 9:20 | → Sampled after 5 well volumes had been | | | | | | |
| | | | | Removed. | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

## Observations

Color: Clear Other (describe):

Odor: None Low Medium High Very strong H2S Fuel-like

Sample Parameters: VOCs, Methane, TOC, $Fe^{2+}$, Anions, Alkalinity

Notes: 1V = 1.36, 3V = 4.09, 5V = 6.82

Pump was surging, we had to increase flow periodically

Signed/Sampler(s): Ken Hurley

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: LF05-19 | Site: NAS Fort Worth JRB |
| Sampler(s): KH, TO | Project No.: APC001-07GAA |
| Well Depth: 20.05 | Date: 10/29/97 Time: 1040 |
| DTW (ft): 14.19 DTP: N/A | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 10 - 20.25 | |
| Well Diameter (in): 2" | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 17' | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): |
| Type of Pump: Grundfos 2" submersible | 65°, Wind From South. |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate ~~(gpm)~~ Lpm | Total Volume (gal) | pH | Temp. (C) | Cond. ~~(umhos/cm)~~ mS/cm | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 1010 | 14.20 | 0.5 Lpm | | | | | | | | clear |
| 1015 | 14.20 | | 1.0 | 6.90 | 23.6 | 0.93 | 99.6 | 3.26 | 2 | |
| 1020 | 14.20 | | 1.5 | 6.91 | 23.8 | 0.93 | 87.8 | 2.86 | 5 | |
| 1025 | 14.20 | | 1.8 | 6.91 | 25.0 | 0.93 | 65.1 | 3.35 | 4 | |
| 1030 | 14.20 | | 2.0 | 6.90 | 25.8 | 0.93 | 64.3 | 3.24 | 4 | |
| 1035 | 14.20 | | 2.3 | 6.91 | 26.0 | 0.93 | 62.4 | 3.27 | 4 | |
| 1040 | 14.20 | | 2.6 | 6.91 | 26.3 | 0.93 | 60.1 | 3.29 | 4 | |
| | | 1040 | Collected Sample | | | | | | | |

## Observations

Color: Clear Other (describe):

Odor: None Low Medium High Very strong H2S Fuel-like

Sample Parameters: VOCs, Metals (Field Dup → DUP01-WG02

Notes: 1V = 0.967, 3V = 2.9, 5V = 4.83

Signed/Sampler(s): Ken Hurley

New lock

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: BGS MW-3 | Site: NAS Fort Worth JRB |
| Sampler(s): KH, JO | Project No.: APC001-07GAA |
| Well Depth: 20.67 | Date: 10/24/97 Time: 915 |
| DTW (ft): 10.64 DTP: — | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): ? | |
| Well Diameter (in): 4" | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 15' | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): 70° To North |
| Type of Pump: Grundfos 2" submersible | |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate ~~(gpm)~~ Lpm | Total Volume (gal) | pH | Temp. (C) | Cond. ~~(umhos/cm)~~ mS/cm | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 840 | 10.90 | 1.2 | 2.5 | 6.43 | 24.2 | 0.99 | -101.0 | 0.73 | 4 | Low D.O. |
| 845 | 10.90 | ↓ | 3.5 | 6.48 | 24.8 | 0.96 | -110.4 | 0.60 | 2 | ← Running |
| 850 | 10.90 | ↓ | 4.5 | 6.50 | 25.0 | 0.93 | -110.0 | 0.57 | 2 | Switched to |
| 855 | 10.90 | ↓ | 5.5 | 6.53 | 25.2 | 0.955 | -111.1 | 7.56 | 1 | bucket change |
| 900 | 10.91 | ↓ | 6.8 | 6.52 | 25.3 | 0.939 | -111.6 | 7.21 | 0 | Must have had |
| 905 | 10.91 | ↓ | 8.0 | 6.52 | 25.3 | 0.920 | -112.0 | 0.76 | 0 | an air bubble |
| 910 | 10.91 | ↓ | 9.5 | 6.51 | 25.3 | 0.918 | -111.5 | 0.70 | 0 | Mixing chamber |
| 915 | 10.91 | | 10.7 | 6.50 | 25.4 | 0.915 | -114.2 | 0.75 | 0 | |
| | | 915 | Collected sample. | | | | | | | |

## Observations

Color: Clear Other (describe):

Odor: None Low Medium (High) Very strong H2S (Fuel-like) Strong fuel odor

Sample Parameters: BTEX with MTBE (8020)

Notes: 1V = 6.54 gal, 3V = 19.64, 5V = 32.7 gal

Signed/Sampler(s): Ken Hurley

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: MW-3 | Site: NAS Fort Worth JRB |
| Sampler(s): KH, JD | Project No.: APC001-07GAA |
| Well Depth: 19.97 | Date: 10/24/97 Time: 1035 |
| DTW (ft): 11.16 DTP: | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): | |
| Well Diameter (in): 4" | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 15' | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): 70°F |
| Type of Pump: Grundfos 2" submersible | |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate ~~(gpm)~~ LPM | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 1000 | 11.77 | 1.0 Lpm | 2.0 | 6.59 | 26.0 | 0.856 | 16.8 | 1.55 | 0 | Clear |
| 1005 | 11.82 | ↓ | 3.0 | 6.59 | 26.2 | 0.859 | 6.4 | 1.97 | 1 | |
| 1010 | 11.83 | | 4.0 | 6.59 | 26.3 | 0.859 | 5.2 | 1.95 | 2 | |
| 1015 | 11.84 | | 5.0 | 6.58 | 26.3 | 0.859 | 5.4 | 1.92 | 2 | |
| 1020 | 11.86 | | 6.0 | 6.59 | 26.3 | 0.859 | 2.4 | 1.84 | 1 | |
| 1025 | 11.89 | | 7.0 | 6.58 | 26.3 | 0.859 | 3.0 | 1.79 | 1 | |
| 1030 | 11.91 | | 8.5 | 6.58 | 26.2 | 0.859 | 3.5 | 1.71 | 1 | |
| 1035 | 11.92 | ↓ | 10.0 | 6.58 | 26.2 | 0.859 | 3.3 | 1.72 | 1 | |
| | | | | | | | | | | |
| | | | 10:35 | Sample MW-3WG02, MS + MSD | | | | | | |

## Observations

Color: (Clear) Other (describe):

Odor: (None) Low Medium High Very strong H2S Fuel-like

Sample Parameters:

Notes: 1V = 5.73, 3V = 17.17, 5V = 28.6.
Needs a Lock
No odor.

Signed/Sampler(s): Ken Hurley

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: MW-11 | Site: NAS Fort Worth JRB |
| Sampler(s): KH, JD | Project No.: APC001-07GAA |
| Well Depth: 32.32 | Date: 10/24/97 Time: 1700 |
| DTW (ft): 26.15 DTP: N/A | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 12.2 - 32.2 | |
| Well Diameter (in): 4" | Sampling Method (G=grab, B=bailer, SP=submersible pump): SP |
| Placement of Pump (ft): 29' | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): |
| Type of Pump: Grundfos 2" submersible | 80° Wind to SE |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 1455 | 28.10 | 1.5 | 1.5 | 6.37 | 24.0 | 1.04 | | 1.50 | 21 | |
| 14:57 | Lost Flow, had to pull pump, check valve is malfunctioning. | | | | | | | | | |
| | cleared it out, deconed pump. Had to remove check valve. | | | | | | | | | |
| 15:20 | Begin FAST purge, 3 to 5 gallons. | | | | | | | | | |
| 1522 | 29.40 | | 4gal | 6.56 | 22.6 | 1.04 | | 2.93 | | |
| 1535 | Pumped air locked again, remove old piece of piping that | | | | | | | | | |
| | was causing air | | | | | | | | | |
| 1540 | Continue with FAST purge. Purged dry at 10 gallons purged, | | | | | | | | | |
| | total depth = 31.5'. Will wait for water to recharge to 90% of | | | | | | | | | |
| | original water column. | | | | | | | | | |
| KSB 1545 | 30.55 | | | | | | | | | |
| 1550 | 30.21 | | | | | | | | | |
| 1555 | 29.97 | | | | | | | | | |
| 1600 | 29.68 | | | | | | | | | |
| 1605 | 29.46 | | | | | | | | | |
| 1610 | 29.22 | | | | | | | | | |
| 1615 | 29.01 | | | | | | | | | |
| 1620 | 28.79 | | | | | | | | | |
| 1625 | 28.61 | | | | | | | | | |

## Observations

Color: Clear Other (describe):

Odor: None Low Medium High Very strong H2S Fuel-like

Sample Parameters:

Notes: Drawdown exceeds 0.4m (1.3 feet), we will use a higher flow rate to get 3 to 5 well volumes, Untill parameters stabilize.
1V = 4.01 gal, 3V = 12.03 gal, 5V = 20.05 gal, Well needs a new cap & lock.

Signed/Sampler(s):

# GROUNDWATER FIELD SAMPLING DATA SHEET



| | |
|---|---|
| Well No.: MW-11 | Site: NAS Fort Worth JRB |
| Sampler(s): KH, JD | Project No.: APC001-07GAA |
| Well Depth: | Date: 10/24/97 Time: 1700 |
| DTW (ft): See Page 1 DTP: | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): | |
| Well Diameter (in): 4" | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): Started at 29' ended at bottom | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): |
| Type of Pump: Grundfos 2" submersible | 80° |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 1630 | 28.45 | | | | | | | | | |
| 1635 | 28.28 | | | | | | | | | |
| 1640 | 28.14 | | | | | | | | | |
| 1645 | 28.02 | | | | | | | | | |
| 1650 | 27.90 | | | | | | | | | |
| 1655 | 27.80 | | | | | | | | | |
| 1700 | 27.67 | | | | | | | | | |
| | | | 1700 | Sampled for | VOCs + Metals | using pump | | | | |

## Observations

Color: Clear Other (describe):

Odor: None Low Medium High Very strong H2S Fuel-like

Sample Parameters:

Notes:

Signed/Sampler(s):

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: ST14-04 WG02 | Site: NAS Fort Worth JRB |
| Sampler(s): JAM CTW | Project No.: APC001-07GAA |
| Well Depth: 19.23 | Date: 10-24-97 / Time: 2:15 pm |
| DTW (ft): 12.18 / DTP: — | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 6.45 - 16.2 | |
| Well Diameter (in): 2 | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 14' | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): NW 75°F |
| Type of Pump: Grundfos 2" submersible | |

## Field Parameters

| | Time | Depth to Water (ft) | Flow Rate (gpm) | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1445 | ~~1440~~ | 12.23 | 0.4 | 1.0 | 7.13 | 26.7 | .782 | -133.4 | 0.85 | 10 | Clear |
| | 1450 | 12.23 | 0.4 | 1.25 | 7.16 | 27.0 | .784 | -124.2 | 0.80 | 6 | " |
| | 1455 | 12.20 | 0.4 | 2.00 | 7.15 | 27.4 | .778 | -114.5 | 0.50 | 5 | " |
| | 1500 | 12.19 | 0.4 | 2.50 | 7.14 | 28.2 | .776 | -119.5 | 0.38 | 5 | " |
| 1504 | 1505 | 12.19 | 0.4 | 3.00 | 7.14 | 29.0 | .790 | -121.0 | 8.77 | 5 | " |
| 1510 | ~~1310~~ | 12.19 | 0.4 | 3.50 | 7.13 | 29.4 | .787 | -123.3 | 8.78 | 6 | " |
| 1515 | ~~1315~~ | 12.19 | 0.4 | 3.75 | 7.11 | 30.1 | .785 | -129.0 | 8.78 | 7 | Surge |
| 1520 | ~~1320~~ | 12.19 | 0.4 | 4.25 | 7.12 | 29.9 | .787 | -122.3 | 0.44 | 20 | |
| 1525 | ~~1325~~ | 12.19 | 0.4 | 4.75 | 7.12 | 29.9 | .782 | -136.2 | 0.38 | 17 | Sampled 5x Well Volume |

## Observations

Color: (Clear) Other (describe):

Odor: (None) Low Medium High Very strong H2S Fuel-like

Sample Parameters: BTEX, Anions, Alkalinity, Methane, TOC, Ferrous - Duplicate

Notes: Clear - No Odor 4.84 gallons = 5x Static Water Volume

Surge at 1515 - Turbidity up to 20 from 7

Signed/Sampler(s):

Stand pipe OK
Bailer ✓
Lock ✓

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: ST 14-296W602 | Site: NAS Fort Worth JRB |
| Sampler(s): JAM CTW | Project No.: APC001-07GAA |
| Well Depth: 15.68 | Date: 10-24-97 Time: 8:10 AM |
| DTW (ft): 9.38 DTP: — | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 6-16 | |
| Well Diameter (in): 2 | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 12' | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): SE 60°F |
| Type of Pump: Grundfos 2" submersible | |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) L/m | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 0845 | 9.78 | 0.4 | 0.75 | 6.79 | 25.4 | 0.940 | -94.6 | 0.34 | 11 | Clear |
| 0850 | 9.66 | 0.4 | 1.00 | 6.80 | 25.3 | 0.960 | -104.1 | 0.23 | 13 | " |
| 0855 | 9.66 | 0.4 | 1.25 | 6.80 | 25.6 | 0.970 | -96.8 | 0.24 | 15 | " |
| 0900 | 9.57 | 0.4 | 1.50 | 6.78 | 27.9 | 0.960 | -103.2 | 0.17 | 17 | " |
| 0905 | 9.73 | 0.4 | 2.00 | 6.78 | 28.6 | 0.960 | -98.6 | 0.22 | 41 | " |
| 0910 | 9.78 | 0.4 | 2.50 | 6.78 | 29.0 | 0.970 | -100.0 | 0.08 | 27 | " |
| 0915 | 9.66 | 0.4 | 2.75 | 6.77 | 28.3 | 0.980 | -102.5 | 0.17 | 19 | " |
| 0920 | 9.86 | 0.4 | 3.25 | 6.77 | 29.1 | 0.980 | -93.8 | 0.05 | 19 | Surge |
| 0925 | 10.00 | 0.4 | 3.50 | 6.79 | 26.2 | 0.980 | -89.4 | 1.01 | 20 | Clear |
| 0930 | 9.86 | 0.4 | 3.75 | 6.79 | 26.8 | 0.980 | -90.5 | 0.08 | 20 | Sample |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

## Observations

Color: Clear Other (describe):

Odor: None Low Medium High Very strong H2S Fuel-like

Sample Parameters: BTEX, Anions, Alkalinity, Methane, TOC, Ferrous

Notes: Water in well hole from rain - OVM 34.0 BZ-00
Trouble with Stradying Flow - Continually adjusting pump speed up + down
Surge at 9:24 AM - 2 more Readings - Sampled at approximately
4.5X static water Volume - Surge during Sampling

Signed/Sampler(s):

Flushmount - good
3X static water Volume = 3.024

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: ST14-28W602 | Site: NAS Fort Worth JRB |
| Sampler(s): JAM CTW | Project No.: APC001-07GAA |
| Well Depth: 17.0 | Date: 10-24-97 / Time: 10:15 AM |
| DTW (ft): 11.71 / DTP: — | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 7-17 | |
| Well Diameter (in): 2' | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 14' | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): None 70°F |
| Type of Pump: Grundfos 2" submersible | |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 1050 | 12.75 | 0.4 | 1.0 | 6.68 | 26.0 | 0.960 | -93.6 | 7.32 | 32 | |
| 1055 | 12.40 | 0.4 | 1.25 | 6.67 | 26.8 | 0.960 | -94.8 | 0.60 | 23 | |
| 1100 | 12.30 | 0.4 | 1.75 | 6.66 | 27.0 | 0.960 | -97.4 | 0.43 | 21 | |
| 1105 | 12.30 | 0.4 | 2.25 | 6.66 | 28.2 | 0.960 | -99.2 | 0.40 | 17 | |
| 1110 | 12.12 | 0.4 | 3.00 | 6.65 | 28.4 | 0.970 | -99.8 | 0.37 | 12 | |
| 1115 | 12.12 | 0.4 | 3.50 | 6.65 | 29.2 | 0.980 | -100.8 | 0.34 | 15 | |
| 1120 | 12.12 | 0.4 | 4.00 | 6.65 | 29.3 | 0.98 | -100.0 | 0.28 | 15 | Sampled |

## Observations

Color: Clear Other (describe):

Odor: None Low Medium High Very strong H2S Fuel-like

Sample Parameters:

Notes: OVM- 168.4ppm BZ- 3.5 ppm
4x static Water Column 3.38 gallons

Signed/Sampler(s):

Flush mount - lock ✓ - good shape

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: SD13-04 | Site: NAS Fort Worth JRB |
| Sampler(s): JAM CTW | Project No.: APC001-07GAA |
| Well Depth: 13.35 | Date: 10-22-97 / Time: 9:55 AM |
| DTW (ft): 9.53 / DTP: — | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 5.8-9.8 | |
| Well Diameter (in): 2" | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 11.5 | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): None 65°F |
| Type of Pump: Grundfos 2" submersible | |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) LFM | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 1010 | 10.61 | 0.4 | 1.25 | 6.89 | 25.8 | .934 | -94.6 | 0.62 | 24 | |
| 1015 | 10.46 | 0.4 | 1.75 | 6.87 | 26.3 | .927 | -99.3 | 0.49 | 17 | |
| 1020 | 10.34 | 0.4 | 2.25 | 6.86 | 26.6 | .926 | -101.0 | 0.41 | 10 | |
| 1025 | 10.12 | 0.4 | 3.00 | 6.87 | 27.0 | .919 | -103.3 | 0.36 | 8 | |
| 1030 | 9.95 | 0.4 | 3.5 | 6.86 | 27.3 | .926 | -102.1 | 0.36 | 6 | Sampled |

## Observations

Color: (Clear) Other (describe):

Odor: None Low Medium (High) Very strong H2S (Fuel-like)

Sample Parameters: BTEX, Anions, Alkalinity, Methane, TOC, Ferrous

Notes: Clear - with Fuel odor

Had Surge while filling last bottle - alkalinity

Signed/Sampler(s):

Standpipe - Lock ✓
No bailer ✓

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: SD 13-01 WG02 | Site: NAS Fort Worth JRB |
| Sampler(s): JAM CTW | Project No.: APC001-07GAA |
| Well Depth: 17.48 | Date: 10-22-97 Time: 8:05 AM |
| DTW (ft): 12.29 DTP: — | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 7.12 - 14.32 | |
| Well Diameter (in): 2 | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 14' | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): None 65°F |
| Type of Pump: Grundfos 2" submersible | |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 0840 | 12.30 | 0.4 | 1.0 | 6.96 | 25.7 | .827 | -110.8 | 0.63 | 3 | Clear - odor |
| 0845 | 12.31 | 0.4 | 1.5 | 6.96 | 27.2 | .826 | -117.9 | 6.89 | 3 | |
| 0850 | 12.31 | 0.4 | 2.0 | 6.97 | 27.2 | .834 | -115.7 | 0.60 | 3 | |
| 0855 | 12.31 | 0.4 | 2.5 | 6.97 | 26.8 | .830 | -117.3 | 0.39 | 3 | |
| 0900 | 12.31 | 0.4 | 3.0 | 6.97 | 26.9 | .828 | -118.0 | 0.15 | 3 | |
| 0905 | 12.31 | 0.4 | 3.5 | 6.97 | 27.0 | .825 | -115.5 | 0.13 | 3 | |
| 0910 | 12.31 | 0.4 | 4.0 | 6.97 | 26.9 | .829 | -118.3 | 0.10 | 2 | Sampled |

## Observations

Color: Clear Other (describe):

Odor: None Low Medium High Very strong H2S Fuel-like

Sample Parameters: BTEX, Anions, Alkalinity, Methane, TOC, Ferrous

Notes: OVM 21.5 ppm Clear - High fuel odor

Signed/Sampler(s):

Stand pipe - bailer ✓
good shape lock ✓

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: ST14-03 | Site: NAS Fort Worth JRB |
| Sampler(s): KH, JD | Project No.: APC001-07GAA |
| Well Depth: 19.75 | Date: 10/22/97 Time: 1005 |
| DTW (ft): 9.93 DTP: | Courier Air Bill No.: _____ (FedEx) _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 7.85-17.6 | |
| Well Diameter (in): 2" | Sampling Method (G=grab, B=bailer, (SP)=submersible pump): |
| Placement of Pump (ft): 14.5' | Weather (sun/clear, (overcast)/rain, wind direction, ambient temperature): |
| Type of Pump: Grundfos 2" submersible | 55°, No wind |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) mS/cm | ORP mV | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 945 | 10.07 | 0.4 | 1 | 6.61 | 25.7 | 0.698 | -39.0 | 0.67 | 7 | Clear |
| 950 | 10.08 | ↓ | 2 | 6.71 | 26.7 | 0.717 | -44.9 | 0.50 | 3 | |
| 955 | 10.01 | | 3 | 6.71 | 26.6 | 0.712 | -63.4 | 0.53 | 1 | |
| 1000 | 10.01 | | 3.5 | 6.70 | 27.2 | 0.719 | -68.5 | 0.50 | 1 | |
| 1005 | 10.01 | ↓ | 4.0 | 6.70 | 27.3 | 0.720 | -67.4 | 0.48 | 0 | |
| | | 1005 Collected Sample | | | | | | | | |

## Observations

Color: (Clear) Other (describe):

Odor: (None) Low Medium High Very strong H2S Fuel-like

Sample Parameters: BTEX, Methane, TOC, Ferrous Iron, Anions, Alkalinity

Notes: 1V=1.62, 3V=4.86, 5V=8.19 gal

Vibration from generator may have been affecting redox.

Signed/Sampler(s):

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: SD13-02 | Site: NAS Fort Worth JRB |
| Sampler(s): KH, JD | Project No.: APC001-07GAA |
| Well Depth: 16.43 | Date: / Time: |
| DTW (ft): 13.14 / DTP: — | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 9.5 - 13.5 BGS | |
| Well Diameter (in): 2" | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 15' | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): |
| Type of Pump: Grundfos 2" submersible | 60°F, |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 1120 | 13.15 | 0.6 | 1.2 | 6.56 | 27.3 | 0.784 | -99.0 | 1.18 | 2 | Clear |
| 1125 | 13.14 | ↓ | 1.4 | 6.60 | 27.2 | 0.783 | -103.5 | 1.01 | 2 | |
| 1130 | 13.15 | ↓ | 1.5 | 6.59 | 27.4 | 0.786 | -108.7 | 1.26 | 2 | |
| 1135 | 13.14 | | 1.7 | 6.60 | 28.3 | 0.782 | -113.2 | 1.26 | 2 | |
| 1140 | 13.15 | | 1.9 | 6.61 | 28.1 | 0.783 | -111.4 | 1.27 | 2 | |
| | | | | | | | | | | |
| | | 1140 → Sampled | | | | | | | | |

## Observations

Color: Clear Other (describe):

Odor: None (Low) Medium High Very strong H2S (Fuel-like)

Sample Parameters:

Notes: 1V = 0.54, 3V = 1.62, 5V = 2.71

Signed/Sampler(s): Ken Hurley

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: ST14-W31 | Site: NAS Fort Worth JRB |
| Sampler(s): KH JD | Project No.: APC001-07GAA |
| Well Depth: 13.67 | Date: 10/22/97 Time: 1515 |
| DTW (ft): 10.67 DTP: — | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 9-14 | |
| Well Diameter (in): 2" | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 12' | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): |
| Type of Pump: Grundfos 2" submersible | ≈ 65° |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate ~~(gpm)~~ LPM | Total Volume (gal) | pH | Temp. (C) | Cond. ~~(µmhos/cm)~~ mS/cm | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 1455 | 10.69 | 0.4 | 1.1 | 6.43 | 29.5 | 0.901 | 28.0 | 1.58 | 4 | Clear |
| 1500 | 10.68 | ↓ | 1.6 | 6.45 | 29.6 | 0.898 | 10.5 | 1.68 | 4 | |
| 1505 | 10.68 | ↓ | 2.0 | 6.45 | 29.7 | 0.903 | 17.2 | 1.53 | 4 | |
| 1510 | 10.67 | | | 6.46 | 30.3 | 0.92 | 19.6 | 1.43 | 4 | |
| | | | Collected samples at 1515 | | | | | | | |

## Observations

Color: (Clear) Other (describe):

Odor: (None) Low Medium High Very strong H2S Fuel-like

Sample Parameters: BTEX, Methane, TOC, Anions, Alkalinity, Ferrous Iron

Notes: 1V = 0.5 gal, 3V = 1.5, 5V = 2.475 gal

Pumped surged during sampling, causing increased turbidity, Collected sample since 3 to 5 well volumes had been purged.

Signed/Sampler(s):

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: LF04-10WG02 | Site: NAS Fort Worth JRB |
| Sampler(s): JAM CTW | Project No.: APC001-07GAA |
| Well Depth: 48.95 | Date: 10-21-97 / Time: 1:50 PM |
| DTW (ft): 32.91 / DTP: — | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 39.0-49.0 | |
| Well Diameter (in): 2" | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 44' | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): E 60°F |
| Type of Pump: Grundfos 2" submersible | |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) LPM | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 1420 | 32.94 | 0.4 | 2.5 | 7.04 | 20.8 | .883 | 112.4 | 4.26 | 311 | Sandy |
| 1425 | 32.95 | 0.4 | 3.0 | 7.08 | 20.8 | .884 | 119.8 | 4.66 | 257 | " |
| 1430 | 32.95 | 0.4 | 3.5 | 7.09 | 20.9 | .885 | 121.7 | 4.11 | 274 | Sandy |
| 1435 | 32.96 | 0.4 | 4.0 | 7.09 | 21.6 | .889 | 124.6 | 4.76 | 255 | " |
| 1440 | 32.96 | 0.4 | 4.5 | 7.09 | 21.6 | .890 | 123.8 | 3.70 | 172 | |
| 1445 | 32.97 | 0.4 | 5.0 | 7.10 | 20.9 | .894 | 132.4 | 9.71 | 162 | |
| 1450 | 32.94 | 0.4 | 5.5 | 7.10 | 21.6 | .890 | 134.3 | 4.95 | 165 | |
| 1455 | 32.93 | 0.4 | 6.0 | 7.10 | 22.8 | .897 | 134.1 | 4.15 | 98 | |
| 1500 | 32.93 | 0.4 | 6.5 | 7.11 | 22.2 | .896 | 130.4 | 3.68 | 73 | |
| 1505 | 32.93 | 0.4 | 7.0 | 7.07 | 22.0 | .889 | 130.6 | 4.90 | 44 | |
| 1510 | 32.93 | 0.4 | 7.5 | 7.05 | 22.2 | .894 | 130.8 | 4.37 | 38 | |
| | | | | | | | | | | Sampled 3X Static Water Volume |

## Observations

Color: Clear Other (describe): Sandy

Odor: None Low Medium High Very strong H2S Fuel-like

Sample Parameters: VOCs

Notes: 7.7 gallons = 3X Well Volume (Static Water Volume)

Signed/Sampler(s):

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: ST 14-26WG02 | Site: NAS Fort Worth JRB |
| Sampler(s): JAM CTW | Project No.: APC001-07GAA |
| Well Depth: 27.20 | Date: 10-21-97 Time: 9:45 AM |
| DTW (ft): 12.10 DTP: — | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 80-130 | |
| Well Diameter (in): 2 | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 13.5' | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): E 65°F |
| Type of Pump: Grundfos 2" submersible | |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 1020 | 12.14 | 0.4 | 1.5 | 6.96 | 24.6 | .829 | 113.6 | 0.65 | 200 | |
| 1025 | 12.14 | 0.4 | 2.0 | 6.95 | 26.4 | .832 | 103.1 | -0.28 | 150 | |
| 1030 | 12.14 | 0.4 | 2.25 | 6.94 | 26.9 | .832 | 102.6 | -0.35 | 151 | Sandy Color |
| 1035 | 12.14 | 0.4 | 2.75 | 6.94 | 27.8 | .833 | 103.6 | -0.33 | 140 | |
| 1040 | 12.14 | 0.4 | 3.00 | 6.95 | 27.5 | .833 | 116.6 | -0.43 | 121 | |
| 1045 | 12.14 | 0.4 | 3.50 | 6.95 | 27.8 | .840 | 111.5 | -0.49 | 136 | |
| 1050 | 12.15 | 0.5 | 4.00 | 6.95 | 27.7 | .829 | 120.3 | -0.71 | 150 | Turned up Flow |
| 1055 | 12.15 | 0.5 | 4.75 | 6.96 | 25.6 | .830 | 115.2 | 8.24 | 218 | to Steady flow |
| 1106 | 12.25 | 0.5 | 5.25 | 6.96 | 25.3 | .830 | 111.4 | 8.08 | 274 | |
| 1105 | 12.26 | 0.5 | 6.00 | 6.96 | 25.2 | .837 | 116.5 | -0.77 | 373 | |
| 1110 | 12.26 | 0.5 | 6.50 | 6.96 | 25.1 | .836 | 108.6 | -0.71 | 375 | Sampled |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

## Observations

Color: Clear Other (describe): Sandy

Odor: None Low Medium High Very strong H2S Fuel-like

Sample Parameters: VOC, Anions, Alkalinity, Methane, TOC, Ferrous, Metals – Duplicate

Notes: 7.24 = 3X Volume

10:55 – Surge of Water

11:15 – Sampled – Purged Approximately 7.5 gallons prior to sampling

Signed/Sampler(s):

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: ST 14-24W | Site: NAS Fort Worth JRB |
| Sampler(s): JAM CTW | Project No.: APC001-07GAA |
| Well Depth: 17.05 | Date: 10-21-97 Time: 8:15 AM |
| DTW (ft): 11.44 DTP: — | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 7.0-16.5 | |
| Well Diameter (in): 2 | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 13.5 | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): E 65°F |
| Type of Pump: Grundfos 2" submersible | |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (L/m) | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 0835 | 11.58 | 0.3 | 0.5 | 6.99 | 25.1 | .770 | 135.8 | 0.07 | 16 | Clear |
| 0840 | 11.63 | 0.3 | 0.75 | 7.00 | 25.7 | .764 | 120.6 | -0.19 | 10 | DO Sensor not w |
| 0845 | 11.64 | 0.3 | 1.00 | 7.00 | 26.6 | .766 | 109.8 | -0.55 | 6 | |
| 0850 | 11.63 | 0.3 | 1.25 | 7.01 | 26.9 | .768 | 102.0 | -0.76 | 3 | |
| 0855 | 11.65 | 0.3 | 1.50 | 7.01 | 27.3 | .767 | 97.3 | -0.77 | 2 | Sampled |

## Observations

Color: Clear Other (describe):

Odor: None Low Medium High Very strong H2S Fuel-like

Sample Parameters: VOC, Anions, Alkalinity, Methane, TOC, Ferrous, Metals

Notes: Sampled at 0905 - No problems

Signed/Sampler(s):

Flushmount - good shape, no bailer, no lock

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: MW-8WG02 | Site: NAS Fort Worth JRB |
| Sampler(s): JAM CTW | Project No.: APC001-07GAA |
| Well Depth: ~~23~~ 26.48 | Date: 10-21-97 / Time: 3:45 |
| DTW (ft): 6.65 / DTP: — | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 6-26 | |
| Well Diameter (in): 4 | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 15 | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): E 60°F |
| Type of Pump: Grundfos 2" submersible | |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) LPM | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 1555 | 6.75 | 0.4 | .75 | 7.33 | 21.9 | .748 | -25.8 | 7.29 | 7 | Clear |
| 1600 | 6.74 | 0.4 | 1.00 | 7.31 | 22.5 | .741 | -44.0 | 0.71 | 7 | |
| 1605 | 6.74 | 0.4 | 1.50 | 7.31 | 23.1 | .744 | -46.4 | 0.37 | 6 | |
| 1610 | 6.70 | 0.4 | 2.00 | 7.31 | 23.5 | .741 | -48.1 | 0.27 | 4 | |
| 1615 | 6.68 | 0.4 | 2.5 | 7.32 | 23.5 | .747 | -49.6 | 0.25 | 4 | |
| 1620 | 6.66 | 0.4 | 3.0 | 7.32 | 23.3 | .747 | -47.3 | 0.29 | 4 | Sampled |

## Observations

Color: Clear Other (describe):

Odor: None Low Medium High Very strong H2S Fuel-like

Sample Parameters: BTEX, Anions, Alkalinity, Methane, TOC, Ferrous

Notes: No Well Cover

Sampled - 1625

Signed/Sampler(s): JM CW

No Cover -
No bailer - No Lock

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: GMI22-02M | Site: NAS Fort Worth JRB |
| Sampler(s): JO, KH | Project No.: APC001-07GAA |
| Well Depth: 28.05 | Date: 10/21/97 Time: 915 |
| DTW (ft): 9.48 DTP: — | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 15-30' | |
| Well Diameter (in): 2" | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 22' | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): |
| Type of Pump: Grundfos 2" submersible | From North, 60-65° |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) | Total Volume (gal) | pH | Temp. (C) | Cond. ~~(umhos/cm)~~ MS/CM | ORP MV | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 845 | 9.62 | 0.5 | 1.5 | 6.37 | 22.6 | 0.571 | 96.8 | 2.51 | 17 | slightly murky |
| 850 | 9.62 | ↓ | 2.0 | 6.57 | 23.1 | 0.565 | 104.0 | 2.30 | 18 | |
| 855 | 9.63 | | 2.3 | 6.68 | 23.2 | 0.564 | 100.7 | 2.29 | 13 | |
| 900 | 9.63 | | 2.8 | 6.73 | 23.3 | 0.564 | 100.4 | 2.25 | 10 | |
| 905 | 9.63 | | 3.5 | 6.72 | 23.3 | 0.565 | 95.4 | 2.29 | 6 | |
| 0910 | 9.63 | | 4.2 | 6.70 | 23.4 | 0.567 | 93.3 | 2.23 | 5 | |
| | | | Sampled at 9:15 | | | | | | | |

## Observations

Color: Clear Other (describe):

Odor: None Low Medium High Very strong H2S Fuel-like

Sample Parameters: VOCs, Methane, TOC, Anions, Alkalinity, Ferrous Iron

Notes: 1V = 3.06, 3Vs = 9.19, 5Vs = 15.3

Signed/Sampler(s): Ken Hurley

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: GMI22-05M | Site: NAS Fort Worth JRB |
| Sampler(s): KH, JB | Project No.: APC001-07GAA |
| Well Depth: 13.75 | Date: 10/21/97 Time: 1125 |
| DTW (ft): 10.81 DTP: — | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 8.5-13.5 | |
| Well Diameter (in): 2" | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 12.5' | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): |
| Type of Pump: Grundfos 2" submersible | |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) | Total Volume (gal) | pH | Temp. (C) | Cond. ~~(umhos/cm)~~ mS/cm | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 1105 | 10.96 | 0.4 | ~~0.40.5~~ | 6.78 | 28.1 | 0.812 | 90.5 | 2.05 | 1 | clear |
| 1110 | 10.92 | ↓ | 1.50 | 6.83 | 30.3 | 0.830 | 85.2 | 1.65 | 1 | |
| 1115 | 10.89 | | 1.60 | 6.82 | 30.7 | 0.838 | 87.5 | 1.60 | 1 | |
| 1120 | 10.90 | | 1.70 | 6.80 | 30.9 | 0.840 | 88.3 | 1.62 | 1 | |
| | | 11:25 Collected sample + Duplicate | | | | | | | | |

## Observations

Color: Clear Other (describe):

Odor: None Low Medium High Very strong H2S Fuel-like

Sample Parameters: VOCs, METAL

Notes: 1V = 0.47 gal, 3V = 1.41, 5V = 2.3

Signed/Sampler(s):

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: GMI-22-07M | Site: NAS Fort Worth JRB |
| Sampler(s): KH, JD | Project No.: APC001-07GAA |
| Well Depth: 23.01 | Date: 10/21/97 Time: 1600 |
| DTW (ft): 15.52 DTP: — | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 10-20.5' BGS | |
| Well Diameter (in): 2" | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 18' | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): From North, 60°F |
| Type of Pump: Grundfos 2" submersible | |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 1445 | 16.43 | 0.5 gpm | 1.3 | 6.66 | 26.3 | 0.737 | 82.5 | 3.33 | 45 | |
| 1450 | 16.09 | 0.4 | 1.5 | 6.68 | 26.2 | 0.731 | 76.3 | 2.99 | 41 | |
| 1455 | 15.73 | 0.4 | | Pump cut out | | | | | 41 | |
| ~~1505~~ | ~~16.84~~ | Pump is cutting out, heating up, pull to check leads | | | | | | | | |
| 1515 | 16.70 | 0.4 | 2.0 | 6.66 | 28.4 | 0.724 | 56.2 | 6.25 | 122 | |
| 1520 | 16.19 | ↓ | 2.3 | 6.64 | 28.0 | 0.723 | 54.2 | 6.08 | 110 | |
| 1525 | 16.07 | ↓ | 2.6 | 6.64 | 27.4 | 0.720 | 61.6 | 3.49 | 86 | |
| 1530 | 15.91 | ↓ | | 6.64 | 26.8 | 0.722 | 62.4 | 3.28 | 92 | |
| | | Pump cut out again | | | | | | | | |
| 1545 | 17.45 | 1.0 gpm | 4.5 | 6.64 | 29.5 | 0.718 | 60.6 | 3.45 | 90 | |
| | Drawdown excessive abandon micropurge. | | | | | | | | | |
| | | | | | | | | | | |
| 1600 | Purged 5.5 gallons total, collect samples. | | | | | | | | | |

## Observations

Color: Clear Other (describe):

Odor: None Low Medium High Very strong H2S Fuel-like

Sample Parameters: VOCs, Methane, TOC, Anions, Alkalinity, Ferrous Iron

Notes: 1V-1.23, 3V-3.7, 5V=6.17.

Signed/Sampler(s):

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: LF01-1E | Site: NAS Fort Worth JRB |
| Sampler(s): JAM CTW | Project No.: APC001-07GAA |
| Well Depth: 32.08 | Date: 10-20-97 / Time: 2:15 |
| DTW (ft): 17.85 / DTP: — | Courier Air Bill No.: ____ FedEx ____ UPS ____ Other ____ Hand |
| Screen Interval (ft): 19.60 - 30.35 | |
| Well Diameter (in): 2 | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 25' | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): NE 80°F |
| Type of Pump: Grundfos 2" submersible | |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) LPM | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 1445 | 17.85 | 0.3 | 2.0 | 6.90 | 25.0 | .774 | 50.2 | 0.24 | 45 | Grey-Murky |
| 1450 | 17.85 | 0.3 | 2.25 | 6.88 | 24.8 | .782 | 33.3 | 0.45 | 30 | |
| 1455 | 17.85 | 0.3 | 2.50 | 6.88 | 25.4 | .785 | 39.8 | 0.15 | 33 | |
| 1500 | 17.90 | 0.3 | 2.75 | 6.87 | 27.4 | .783 | 41.4 | 0.10 | 45 | |
| 1505 | 17.94 | 0.3 | 3.0 | 6.86 | 27.3 | .787 | 50.4 | -.09 | 40 | |
| 1510 | — | 0.3 | 3.5 | — | — | | | — | | Adjusted Flow |
| 1515 | 18.13 | 0.4 | 5.0 | 6.86 | 24.6 | .793 | 41.0 | 9.49 | 152 | |
| 1520 | 18.19 | 0.5 | 6.0 | 6.86 | 24.2 | .741 | 44.3 | 9.52 | 88 | |

## Observations

Color: Clear Other (describe): Slightly Murky + Grey

Odor: None Low Medium High Very strong H2S Fuel-like

Sample Parameters: VOC + Metals

Notes: 0 ppm OVM - Grey Murky color to start

- Flow stopped - had to adjust flow - turbidity never stabilized

Purged 3X Well Volume - Sampled ≈ 7.0 gallons

6.83 gallons = 3X Volume in casing

Signed/Sampler(s):

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: ST 14 - 14WG02 | Site: NAS Fort Worth JRB |
| Sampler(s): JAM CTW | Project No.: APC001-07GAA |
| Well Depth: 20.36 | Date: 10-20-97 Time: 8:40 AM |
| DTW (ft): 7.76 DTP: — | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 6.7 - 20.55 | |
| Well Diameter (in): 2" | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 13' | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): Sun 70°F |
| Type of Pump: Grundfos 2" submersible | |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 0905 | 7.84 | 0.4 | .25 | 7.12 | 28.1 | .625 | -66.9 | -.05 | -10 | Clear |
| 0910 | 7.84 | 0.4 | 1.00 | 7.13 | 29.3 | .619 | -102.1 | -.08 | -10 | |
| 0915 | 7.85 | 0.4 | 1.25 | 7.14 | 30.1 | .618 | -95.1 | -.05 | -10 | |
| 0920 | 7.85 | 0.4 | 1.50 | 7.14 | 30.4 | .620 | -104.7 | -.20 | -10 | |
| 0925 | 7.85 | 0.4 | 1.75 | 7.14 | 31.0 | .618 | -97.4 | -.17 | -10 | |
| 0930 | 7.85 | 0.4 | 2.00 | 7.14 | 31.0 | .618 | -96.7 | -.21 | -10 | |
| 0935 | 7.86 | 0.4 | 2.25 | 7.14 | 31.3 | .618 | -97.9 | -.21 | -10 | |

## Observations

Color: (Clear) Other (describe):

Odor: None (Low) Medium High Very strong H2S Fuel-like

Sample Parameters: VOC, Anions, Alkalinity, Methane, TOC, Ferrous Metals

Notes: Problems with Horiba U-10 - Negative DO + Turbidity, Temp seems High

Signed/Sampler(s):

Missing bolt on cover
Bailer
No Lock on Cap

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: LF01-1C | Site: NAS Fort Worth JRB |
| mpler(s): Ken Hurley, Jack McCra | Project No.: APC001-07GAA |
| Well Depth: 33.2' | Date: 14:20 / Time: |
| DTW (ft): 18.45' / DTP: — | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 22.5 | |
| Well Diameter (in): 2' | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 25.5 | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): |
| Type of Pump: Grundfos 2" submersible | Sun, 78°F |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) LPM | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) mS/cm | ORP mV | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 14:35 | 18.90 | 1.0 | 1.5 gal | 6.42 | 24.9 | 0.95 | -93.8 | 1.02 | 10 | |
| 14:40 | 18.85 | " | 2.5 gal | 6.51 | 24.3 | 0.95 | -95.3 | 1.47 | 6 | |
| 14:45 | 18.84 | " | 3.5 | 6.43 | 24.3 | 0.94 | -121.5 | 1.01 | 5 | |
| 14:50 | 18.84 | | 4.5 | 6.42 | 24.3 | 0.93 | -99.4 | 0.82 | 1 | |
| 14:55 | 18.85 | | 6.0 | 6.39 | 24.2 | 0.93 | -103.2 | 1.66 | 1 | |
| 15:00 | 18.86 | " | 7.0 gal | 6.40 | 24.2 | 0.93 | -104.3 | 1.45 | 1 | Clear |
| 15:05 | 18.85 | " | 8.0 | 6.42 | 24.2 | 0.93 | -102.4 | 1.31 | 1 | |
| 15:10 | 18.86 | " | 9.0 | 6.43 | 24.3 | 0.92 | -104.7 | 1.40 | 0 | |
| :15 | 18.86 | " | 10.5 | 6.4 | 24.3 | 0.92 | -103.8 | 1.43 | 0 | Clear |
| | | | Collect sample at 15:15 | | | | | | | |

## Observations

Color: (Clear) Other (describe):

Odor: (None) Low Medium High Very strong H2S Fuel-like

Sample Parameters: VOCs, Metals

Notes: DTW after pump emplaced = 18.39, pump at 25.5'

Signed/Sampler(s): Ken Hurley

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: LF01-10 | Site: NAS Fort Worth JRB |
| Sampler(s): JAM CTW | Project No.: APC001-07GAA |
| Well Depth: 28.05 | Date: 10-20-97 Time: 10:40 AM |
| DTW (ft): 14.62 DTP: — | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 16.4 – 22.1 | |
| Well Diameter (in): 2" | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 21.0 | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): northeast 75°F |
| Type of Pump: Grundfos 2" submersible | |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) LPM | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 1135 | 19.85 | 0.3 | 1.5 | 6.29 | 27.1 | .940 | | 921 | 12 | Clear |
| | | | | 6.89 | 26.9 | . | | | | Trouble with |
| | | | | | | | | | | Flow - lowered |
| | | | | | | | | | | Pump |
| | | | | | | | | | | |
| 1155 | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

## Observations

Color: (Clear) Other (describe):

Odor: (None) Low Medium High Very strong H2S Fuel-like

Sample Parameters: VOC + Metals

Notes: 0 ppm OVM Drawdown 20.03 ft
Trouble with steadying flow - lowered pump - 2 ft drawdown when pump lowered - purged 5 gallons - let turbidity clear + then sampled 4 gallons = 3 X Volume Casing

Signed/Sampler(s): JM CW

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: MW-12 | Site: NAS Fort Worth JRB |
| Sampler(s): JD, KH | Project No.: APC001-07GAA |
| Well Depth: 26.5 | Date: 10/20/97 Time: 1055 |
| DTW (ft): 9.49 DTP: — | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 7.7 - 27.7 | |
| Well Diameter (in): 2" | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 17.5' | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): S-SW |
| Type of Pump: Grundfos 2" submersible | |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate ~~(gpm)~~ LPM | Total Volume (gal) | pH | Temp. (C) | Cond. ~~(umhos/cm)~~ mS/cm | ORP mV | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 1040 | 10.56 | 0.7 | 1.5 | 6.45 | 24.6 | 1.32 | 118.5 | ~~10~~ 2.69 | -10 | CLEAR |
| 1045 | 10.48 | ↓ | | 6.51 | 25.0 | 1.26 | 123.3 | 2.54 | -10 | |
| 1050 | 10.56 | | 3.5 | 6.50 | 25.1 | 1.29 | 120.0 | 2.41 | -10 | |
| 1055 | 10.49 | ↓ | 5.0 | 6.49 | 25.2 | 1.28 | | 2.35 | -10 | |
| | | Collected Sample at 10:55 (VOCs, Metals) | | | | | | | | |
| | | Total Volume Purged = 6.5 gallons. | | | | | | | | |

## Observations

Color: Clear Other (describe):

Odor: None Low Medium High Very strong H2S Fuel-like

Sample Parameters: 1V = 2.8, 3V = 8.41, 5V = 14.03

Notes:

Signed/Sampler(s): Ken Hurley

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: MW-9 | Site: NAS Fort Worth JRB |
| Sampler(s): J. Dufford, K. Hurley | Project No.: APC001-07GAA |
| Well Depth: 27.93 | Date: 10/20/97 Time: ~~[illegible]~~ 9:30 |
| DTW (ft): 10.07 DTP: — | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 6 to 26' | |
| Well Diameter (in): 2" | Sampling Method (G=grab, B=bailer, SP=submersible pump): SP |
| Placement of Pump (ft): 16' | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): |
| Type of Pump: Grundfos 2" submersible | Sun, 70° |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate ~~(gpm)~~ LPM | Total Volume (gal) | pH | Temp. (C) | Cond. ~~(umhos/cm)~~ mS/cm | ORP (mV) | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 915 | 10.30 | 0.4 lpm | 1.5 | 6.61 | 23.5 | 1.14 | -25.2 | 0.85 | 10 | clear |
| 920 | 10.29 | | 1.7 | 6.66 | 24.0 | 1.14 | -83.0 | 0.71 | 10 | |
| 925 | 10.31 | | 2.2 | 6.65 | 24.3 | 1.14 | -81.7 | 0.61 | 10 | |
| 930 | 10.31 | | 3.0 | 6.65 | 24.4 | 1.14 | -86.5 | 0.64 | 10 | |
| | | | | | | | | | | |
| | | | Collected Samples at 9:30 for VOCs & metals | | | | | | | |

## Observations

Color: Clear Other (describe):

Odor: None Low Medium High Very strong H2S Fuel-like

Sample Parameters:

Notes: 1V = 2.91, 3V = 8.7
5V = 14.5 gal

Signed/Sampler(s): Ken Hurley

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: OT15C | Site: NAS Fort Worth JRB |
| mpler(s): KH, JD | Project No.: APC001-07GAA |
| Well Depth: 15.49 | Date: 10/20/97 Time: 1320 |
| DTW (ft): ~~[illegible]~~ 8.45 DTP: — | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 5-10' | |
| Well Diameter (in): 2" | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 9.5' | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): 70-75° |
| Type of Pump: Grundfos 2" submersible | |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate ~~(gpm)~~ LPM | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) | ORP mV | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 1255 | 8.690 | 0.6 | 1.75 | 6.27 | 29.0 | 0.824 | 17.7 | 2.15 | -10 | very clear |
| 1300 | 8.75 | | 2.1 | 6.42 | 29.7 | 0.822 | 10.5 | 1.67 | -10 | |
| 1305 | 8.77 | | 3.0 | 6.49 | 29.7 | 0.823 | 9.7 | 1.28 | -10 | |
| 1310 | 8.78 | | 3.75 | 6.51 | 29.6 | 0.822 | 9.4 | 1.07 | -10 | |
| 1315 | 8.75 | | 4.5 | 6.51 | 29.6 | 0.821 | 9.5 | 0.95 | -10 | |
| 1320 | 8.75 | | 5.5 | 6.50 | 29.7 | 0.821 | 9.3 | 0.94 | -10 | |
| | | 1320 | Collected samples → VOCs, Metals | | | | | | | |

## Observations

Color. Clear Other (describe):

Odor: None Low Medium High Very strong H2S Fuel-like

Sample Parameters: VOCs, Metals

Notes: 1V = 1.16, 3V's = 3.5, 5V's = 5.8

Signed/Sampler(s): Ken Hurley

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: SD13-06 | Site: NAS Fort Worth JRB |
| Sampler(s): KJH, JD | Project No.: APC001-07GAA |
| Well Depth: 13.81 | Date: 10/20/97 Time: 14:50 |
| DTW (ft): 11.58 DTP: — | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): 6.17-10.83 | |
| Well Diameter (in): 4" | Sampling Method (G=grab, B=bailer, SP=submersible pump): |
| Placement of Pump (ft): 12.5' | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): |
| Type of Pump: Grundfos 2" submersible | 75° |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) | Total Volume (gal) | pH | Temp. (C) | Cond. (~~mmhos/cm~~) mS/cm | ORP mV | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| 14:10 | Well | purged | dry | AFTER | approximately | 1.25 | gallons | were | | |
| | purged. | Waiting | for | well | to | recharge | so | that | we | can sample. |
| | DTW = | 12.05. | | | | | | | | |
| 14:20 | DTW= | 11.96 | | | | | | | | |
| 14:30 | DTW | 11.95 | | | | | | | | |
| 14:40 | DTW | 11.95 | | | | | | | | |
| 14:50 | | 11.92 → | Sampled | for | VOCs, | Metals | | | | |
| | | | | 6.40 | 27.9 | 0.980 | -59.5 | 8.54 | -10 | |

## Observations

Color: Clear Other (describe):

Odor: None Low Medium High Very strong H2S Fuel-like

Sample Parameters:

Notes: 1V = 1.45, 3V⅓ = 4.36, 5V⅓ = 7.3 gal.

Signed/Sampler(s): Ken Hurley

# GROUNDWATER FIELD SAMPLING DATA SHEET

| | |
|---|---|
| Well No.: LF01-1B | Site: NAS Fort Worth JRB |
| Sampler(s): JAM | Project No.: APC001-07GAA |
| Well Depth: 19.72 | Date: 10-15-97 / Time: 10:30 AM |
| DTW (ft): 14.58½ / DTP: | Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand |
| Screen Interval (ft): | |
| Well Diameter (in): 2 | Sampling Method (G=grab, B=bailer, SP=submersible pump): SP |
| Placement of Pump (ft): | Weather (sun/clear, overcast/rain, wind direction, ambient temperature): |
| Type of Pump: Grundfos 2" submersible | |

## Field Parameters

| Time | Depth to Water (ft) | Flow Rate (gpm) | Total Volume (gal) | pH | Temp. (C) | Cond. (umhos/cm) | ORP | D.O. (mg/L) | Turb. (N.T.U.) | Description |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | Not Collected | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | Purged Well Dry | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

## Observations

Color: Clear Other (describe):

Odor: None Low Medium High Very strong H2S Fuel-like

Sample Parameters:

Notes: OVM - 0.0ppm, well went dry before flow through chamber was filled (3.5 gallons) We allowed well to recharge to 14.92' & then collected samples.

Signed/Sampler(s):

# TAB

Appendix B Water Level
Measurements and Well Inspection Data
Groundwater Ferrous Iron Concentrations

# TAB

Water Level Measurements and Well Inspection Data

## Table B-1: Water Level Measurements and Well Inspection Data

| Well_ID | DTW | DTP | TD | Date | Comments |
|---|---|---|---|---|---|
| LF01-1B | 14.55 | NA | 19.72 | 10/15/97 | |
| ST14-14 | 7.76 | NA | 20.36 | 10/20/97 | Missing bolt on cover and lock on cap |
| LF01-1C | 18.45 | NA | 33.2 | 10/20/97 | |
| LF01-1D | 19.62 | NA | 28.05 | 10/20/97 | |
| LF01-1E | 17.85 | NA | 32.08 | 10/20/97 | |
| MW-9 | 10.07 | NA | 27.93 | 10/20/97 | Ant problem; Needs new cap, lock, cover pad; No way to fasten bolts (casing damage) |
| MW-12 | 9.49 | NA | 26.5 | 10/20/97 | Well needs new cap, lid, lock; Ant population |
| OT15C | 8.45 | NA | 15.49 | 10/20/97 | Needs lock |
| SD13-06 | 11.58 | NA | 13.81 | 10/20/97 | |
| GMI-22-02M | 9.48 | NA | 28.05 | 10/21/97 | |
| GMI-22-05M | 10.81 | NA | 13.75 | 10/21/97 | |
| GMI-22-07M | 15.52 | NA | 23.01 | 10/21/97 | |
| ST14-24 | 11.44 | NA | 17.05 | 10/21/97 | No Lock; No bailer; Well in good shape (flushmount) |
| ST14-26 | 12.1 | NA | 27.2 | 10/21/97 | |
| LF04-10 | 32.91 | NA | 48.95 | 10/21/97 | No tubing in well |
| MW-8 | 6.65 | NA | 26.48 | 10/21/97 | No well cover; No bailer; No lock |
| SD13-07 | 18.34 | 18.1 | 21.5 | 10/22/97 | Strong petrol odor; Used pad to absorb free product |
| ST14-03 | 9.93 | NA | 19.75 | 10/22/97 | |
| SD13-04 | 9.53 | NA | 13.35 | 10/22/97 | Strong fuel-like odor; No bailer |
| SD13-01 | 12.29 | NA | 17.48 | 10/22/97 | Well in good condition (standpipe) |
| SD13-02 | 13.14 | NA | 16.43 | 10/22/97 | Petrol odor; no product detected |
| ST14-W31 | 10.67 | NA | 13.67 | 10/22/97 | |
| BGSMW3 | 10.64 | NA | 20.67 | 10/24/97 | Well in excellent condition; Strong fuel-like odor |
| MW-03 | 11.16 | NA | 19.97 | 10/24/97 | Needs a lock |
| MW-11 | 26.15 | NA | 32.32 | 10/24/97 | Needs new cap and lock |
| ST14-29 | 9.38 | NA | 15.68 | 10/24/97 | Well in good condition (flushmount) |
| ST14-28 | 11.71 | NA | 17 | 10/24/97 | Well in good condition (flushmount) |
| ST14-04 | 12.18 | NA | 19.23 | 10/24/97 | Well in good condition (standpipe) |
| BSS-A | 5.05 | NA | 10.39 | 10/27/97 | Needs lockable cap and lock; petrol odor |
| BSS-B | 9.61 | NA | 12.84 | 10/27/97 | Strong petrol odor |
| ST14-W18 | 8.47 | NA | 17.51 | 10/27/97 | Needs new lock; has dolphin lock |
| BGSMW05 | 6.14 | NA | 12.66 | 10/27/97 | No lock |
| 17M | 9.59 | 9.58 | 17.76 | 10/27/97 | Well in goood condition; absorbent pads used to remove product; no bailer |
| ST14-02 | 11.92 | NA | 19.35 | 10/27/97 | Due to construction 2-8 ft piles of dirt surround well (standpipe) |
| ST14-W16 | 8 | NA | 19.02 | 10/27/97 | Petrol odor; no product detected; Missing one bolt |

## Table B-1: Water Level Measurements and Well Inspection Data

| Well_ID | DTW | DTP | TD | Date | Comments |
|---|---|---|---|---|---|
| USGS04T | 18.19 | NA | 22.47 | 10/27/97 | Flushmount - no pad; Missing two bolts |
| SPOT35-2 | 21.25 | NA | 26.3 | 10/28/97 | Slight petrol odor |
| SPOT35-4 | 20.25 | NA | 24.38 | 10/28/97 | |
| SPOT35-5 | 21.65 | NA | 27.53 | 10/28/97 | Fuel-like odor observed |
| LF05-02 | 25.56 | NA | 29.9 | 10/28/97 | |
| FT09-12C | 31.75 | NA | 39.57 | 10/28/97 | |
| LF05-19 | 14.19 | NA | 20.05 | 10/28/97 | New lock |
| MW-5 | 5.14 | NA | 8.13 | 10/28/97 | Severe erosion beneath pad |
| ST14-W21 | 10.2 | NA | 17.61 | 10/28/97 | |
| GMI-04-01M | 19.81 | NA | 20.81 | 10/29/97 | |
| LF04-4F | 29.48 | NA | 37 | 10/29/97 | |
| GMI-22-04M | 19.58 | NA | 25.6 | 10/29/97 | |
| LF05-18 | 19.21 | NA | 23.59 | 10/29/97 | |
| WP07-10C | 20.82 | NA | 32.85 | 10/29/97 | |
| GMI-22-06M | 18.33 | NA | 26.6 | 10/29/97 | |
| LSA1628-3 | 9.75 | NA | 17.93 | 10/29/97 | Missing bolt for coverplate; Free product removed on 10/31/97 |
| LF05-5G | 21.29 | NA | 30.26 | 10/29/97 | |
| MW-1 | 10.57 | NA | 18.86 | 10/30/97 | |
| MW-10 | 13.05 | NA | 32.88 | 10/30/97 | Dolphin lock; torn cover lid |
| BGSMW06 | 10.83 | NA | 17 | 10/30/97 | |
| WP07-10B | 29.16 | NA | 37 | 10/30/97 | |

# TAB

Groundwater Ferrous Iron Concentrations

# Table B-2
## Groundwater Ferrous Iron Concentrations
## Fourth Quarter 1997
## Carswell NAS JRB

| Sample Location | Sample Date | Fe2+ (mg/L) |
|---|---|---|
| ST14-14 | 10/20/97 | 1.26 |
| GMI-22-02M | 10/21/97 | 0.08 |
| ST14-26 | 10/21/97 | 0.95 |
| ST14-24 | 10/21/97 | 0.02 |
| GMI-22-07M | 10/21/97 | 1.45 |
| MW-8 | 10/21/97 | 0.45 |
| SD13-02 | 10/22/97 | 7.2 |
| ST14-03 | 10/22/97 | 2.7 |
| SD13-01 | 10/22/97 | 7.86 |
| ST14-W31 | 10/22/97 | 0.02 |
| SD13-04 | 10/22/97 | 7.68 |
| ST14-29 | 10/24/97 | 16.3 |
| ST14-28 | 10/24/97 | 15.2 |
| MW-3 | 10/24/97 | 0.16 |
| ST14-04 | 10/24/97 | 5.7 |
| ST14-02 | 10/27/97 | 7.8 |
| 17M | 10/27/97 | 5.31 |
| BSS-A | 10/27/97 | 2.1 |
| BSS-B | 10/27/97 | 9.33 |
| ST14-W16 | 10/27/97 | 5.74 |
| ST14-W18 | 10/27/97 | 8.68 |
| SPOT35-4 | 10/28/97 | 6.48 |
| SPOT35-2 | 10/28/97 | 11.68 |
| ST14-W21 | 10/28/97 | 7.32 |
| SPOT35-5 | 10/28/97 | 10.36 |
| MW-5 | 10/28/97 | 1.44 |
| GMI-22-06M | 10/29/97 | 0.01 |
| GMI-22-04M | 10/29/97 | 0.01 |
| LSA1628-3 | 10/29/97 | 0.01 |
| MW-1 | 10/30/97 | 11.45 |

# TAB

Appendix C

# TAB

Appendix C Laboratory Results

# TAB

Flightline Area Laboratory Results

Data Summary Table
Carswell AFB
Flightline Area Groundwater

| Locxref: | | GMI-22-02M | | GMI-22-04M | | GMI-22-05M | | GMI-22-05M | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | PQL | MI-22-02MWG02 | | MI-22-04MWG02 | | DUP02-WG02 | | MI-22-05MWG02 | |
| Sample Date: | | 21-Oct-97 | | 29-Oct-97 | | 21-Oct-97 | | 21-Oct-97 | |
| **Alkalinity (Titrimetric) - E310.1/NONE (mg/l)** | | | | | | | | | |
| Alkalinity as CaCO3 to pH 4.5 | 5 | 310 | | 390 | | NA | | NA | |
| **EPA-9/RSK-175 Modified A2720C - M2720C/METHOD (ug/l)** | | | | | | | | | |
| Ethane | 0.092 | 0.13 | F | 2.5 | UJ | NA | | NA | |
| Ethene | 0.1 | 0.1 | UJ | 0.1 | UJ | NA | | NA | |
| Methane | 0.052 | 0.31 | F | 17 | J | NA | | NA | |
| **Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3050 (mg/l)** | | | | | | | | | |
| Calcium | 0.053 | NA | | NA | | 122 | | 120 | |
| Magnesium | 0.021 | NA | | NA | | 9.3 | | 9.1 | |
| Potassium | 0.3 | NA | | NA | | 4 | F | 4.1 | F |
| Sodium | 0.12 | NA | | NA | | 46.8 | | 46.4 | |
| **Inductively Coupled Plasma Mass Spectrometry - SW6020/SW3020 (mg/l)** | | | | | | | | | |
| Aluminum | 0.0026 | NA | | NA | | 0.034 | F | 0.029 | F |
| Antimony | 0.00017 | NA | | NA | | 0.00028 | F | 0.00017 | F |
| Arsenic | 0.00019 | NA | | NA | | 0.0013 | F | 0.0014 | F |
| Barium | 0.0002 | NA | | NA | | 0.14 | | 0.13 | |
| Beryllium | 0.000069 | NA | | NA | | 0.000069 | U | 0.000069 | U |
| Cadmium | 0.00004 | NA | | NA | | 0.000051 | F | 0.000068 | F |
| Chromium | 0.0002 | NA | | NA | | 0.0015 | F | 0.0012 | F |
| Cobalt | 0.00002 | NA | | NA | | 0.0032 | F | 0.0029 | F |
| Copper | 0.00084 | NA | | NA | | 0.0025 | F | 0.0026 | F |
| Iron | 0.012 | NA | | NA | | 0.88 | | 0.87 | |
| Lead | 0.0002 | NA | | NA | | 0.0005 | R | 0.00048 | R |
| Manganese | 0.0002 | NA | | NA | | 0.071 | | 0.079 | |
| Molybdenum | 0.0002 | NA | | NA | | 0.0023 | F | 0.0016 | F |
| Nickel | 0.0002 | NA | | NA | | 0.0099 | F | 0.0094 | F |
| Selenium | 0.00007 | NA | | NA | | 0.004 | F | 0.004 | F |
| Silver | 0.0002 | NA | | NA | | 0.0002 | U | 0.000083 | F |
| Thallium | 0.00002 | NA | | NA | | 0.00002 | U | 0.00002 | U |
| Vanadium | 0.00017 | NA | | NA | | 0.0002 | F | 0.0002 | F |
| Zinc | 0.0011 | NA | | NA | | 0.015 | F | 0.017 | F |
| **Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)** | | | | | | | | | |
| Mercury | 0.000053 | NA | | NA | | 0.000053 | U | 0.000095 | F |
| **Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)** | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.1 | 0.1 | U | 0.1 | U | 0.1 | U | 0.1 | U |
| 1,1,1-Trichloroethane | 0.11 | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U |
| 1,1,2,2-Tetrachloroethane | 0.13 | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| 1,1,2-Trichloroethane | 0.074 | 0.074 | U | 0.074 | U | 0.074 | U | 0.074 | U |
| 1,1-Dichloroethane | 0.075 | 0.075 | U | 0.075 | U | 0.075 | U | 0.075 | U |
| 1,1-Dichloroethene | 0.14 | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |

Data Summary Table
Carswell AFB
Flightline Area Groundwater

| Locxref<br>Sample ID<br>Sample Date | PQL | GMI-22-02M<br>MI-22-02MWG02<br>21-Oct-97 | | GMI-22-04M<br>MI-22-04MWG02<br>29-Oct-97 | | GMI-22-05M<br>DUP02-WG02<br>21-Oct-97 | | GMI-22-05M<br>MI-22-05MWG02<br>21-Oct-97 | |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | 0.15 | 0.15 | U | 0.15 | U | 0.15 | U | 0.15 | U |
| 1,2,3-Trichlorobenzene | 0.12 | 0.12 | U | 0.12 | U | 0.12 | U | 0.12 | U |
| 1,2,3-Trichloropropane | 0.2 | 0.2 | U | 0.2 | U | 0.2 | U | 0.2 | U |
| 1,2,4-Trichlorobenzene | 0.11 | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U |
| 1,2,4-Trimethylbenzene | 0.12 | 0.12 | U | 0.12 | U | 0.12 | U | 0.12 | U |
| 1,2-Dibromo-3-chloropropane (DBCP) | 0.29 | 0.29 | U | 0.29 | U | 0.29 | U | 0.29 | U |
| 1,2-Dibromoethane (EDB) | 0.08 | 0.08 | U | 0.08 | U | 0.08 | U | 0.08 | U |
| 1,2-Dichlorobenzene | 0.13 | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| 1,2-Dichloroethane | 0.077 | 0.077 | U | 0.077 | U | 0.077 | U | 0.077 | U |
| 1,2-Dichloropropane | 0.085 | 0.085 | U | 0.085 | U | 0.085 | U | 0.085 | U |
| 1,3,5-Trimethylbenzene | 0.15 | 0.15 | U | 0.15 | U | 0.15 | U | 0.15 | U |
| 1,3-Dichlorobenzene | 0.11 | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U |
| 1,3-Dichloropropane | 0.066 | 0.066 | U | 0.066 | U | 0.066 | U | 0.066 | U |
| 1,4-Dichlorobenzene | 0.14 | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| 1-Chlorohexane | 0.11 | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U |
| 2,2-Dichloropropane | 0.15 | 0.15 | U | 0.15 | U | 0.15 | U | 0.15 | U |
| 2-Chlorotoluene | 0.14 | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| 4-Chlorotoluene | 0.12 | 0.12 | U | 0.12 | U | 0.12 | U | 0.12 | U |
| Benzene | 0.11 | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U |
| Bromobenzene | 0.13 | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| Bromochloromethane | 0.13 | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| Bromodichloromethane | 0.11 | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U |
| Bromoform | 0.4 | 0.4 | U | 0.4 | U | 0.4 | U | 0.4 | U |
| Bromomethane | 0.17 | 0.17 | U | 0.17 | U | 0.17 | U | 0.17 | U |
| Carbon tetrachloride | 0.14 | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| Chlorobenzene | 0.14 | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| Chloroethane | 0.066 | 0.066 | U | 0.066 | U | 0.066 | U | 0.066 | U |
| Chloroform | 0.097 | 0.097 | U | 0.097 | U | 0.097 | U | 0.097 | U |
| Chloromethane | 0.08 | 0.08 | U | 0.08 | U | 0.08 | U | 0.08 | U |
| Dibromochloromethane | 0.1 | 0.1 | U | 0.1 | U | 0.1 | U | 0.1 | U |
| Dibromomethane | 0.096 | 0.096 | U | 0.096 | U | 0.096 | U | 0.096 | U |
| Dichlorodifluoromethane | 0.14 | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| Ethylbenzene | 0.16 | 0.16 | U | 0.16 | U | 0.16 | U | 0.16 | U |
| Hexachlorobutadiene | 0.15 | 0.15 | U | 0.15 | U | 0.15 | U | 0.15 | U |
| Isopropylbenzene | 0.13 | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| Methylene chloride | 0.086 | 0.086 | U | 0.086 | U | 0.086 | U | 0.086 | U |
| Naphthalene | 0.088 | 0.088 | U | 0.088 | U | 0.088 | U | 0.088 | U |
| Styrene | 0.094 | 0.094 | U | 0.094 | U | 0.094 | U | 0.094 | U |
| Tetrachloroethene | 0.13 | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| Toluene | 0.14 | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| Trichloroethene | 0.097 | 0.097 | U | 480 | | 0.42 | F | 0.53 | F |
| Trichlorofluoromethane | 0.16 | 0.16 | U | 0.16 | U | 0.16 | U | 0.16 | U |
| Vinyl chloride | 0.13 | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| cis-1,2-Dichloroethene | 0.13 | 0.13 | U | 68 | | 0.13 | U | 0.13 | U |
| cis-1,3-Dichloropropene | 0.081 | 0.081 | U | 0.081 | U | 0.081 | U | 0.081 | U |

Data Summary Table
Carswell AFB
Flightline Area Groundwater

| Locxref : | | GMI-22-02M | | GMI-22-04M | | GMI-22-05M | | GMI-22-05M | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID : | PQL | MI-22-02MWG02 | | MI-22-04MWG02 | | DUP02-WG02 | | MI-22-05MWG02 | |
| Sample Date : | | 21-Oct-97 | | 29-Oct-97 | | 21-Oct-97 | | 21-Oct-97 | |
| m-Xylene & p-Xylene | 0.27 | 0.27 | U | 0.27 | U | 0.27 | U | 0.27 | U |
| n-Butylbenzene | 0.14 | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| n-Propylbenzene | 0.12 | 0.12 | U | 0.12 | U | 0.12 | U | 0.12 | U |
| o-Xylene | 0.11 | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U |
| p-Isopropyltoluene | 0.13 | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| sec-Butylbenzene | 0.14 | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| tert-Butylbenzene | 0.13 | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| trans-1,2-Dichloroethene | 0.088 | 0.088 | U | 7 | F | 0.088 | U | 0.088 | U |
| trans-1,3-Dichloropropene | 0.11 | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U |
| **SW846 9056 - SW9056/NONE (mg/l)** | | | | | | | | | |
| Chloride | 0.1 | 3.2 | | 97.4 | | NA | | NA | |
| Nitrate as N | 0.02 | 0.02 | U | 9.4 | | NA | | NA | |
| Sulfate | 0.2 | 4.9 | | 40.9 | | NA | | NA | |
| **Total Organic Carbon - SW9060/NONE (mg/l)** | | | | | | | | | |
| Total Organic Carbon | 0.2 | 1.8 | U | 2 | U | NA | | NA | |

Data Summary Table
Carswell AFB
Flightline Area Groundwater

| Locxref | GMI-22-07M | | LSA1628-3 | | SPOT35-2 | | SPOT35-4 | | SPOT35-5 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | MI-22-07MWG02 | | LSA1628-3WG02 | | SPOT35-2WG02 | | SPOT35-4WG02 | | SPOT35-5WG02 | |
| Sample Date | 21-Oct-97 | | 29-Oct-97 | | 28-Oct-97 | | 28-Oct-97 | | 28-Oct-97 | |
| **Alkalinity (Titrimetric) - E310.1/NONE (mg/l)** | | | | | | | | | | |
| Alkalinity as CaCO3 to pH 4.5 | 250 | | 460 | | 430 | | 470 | | 480 | |
| **EPA-9/RSK-175 Modified A2720C - M2720C/METHOD (ug/l)** | | | | | | | | | | |
| Ethane | 0.017 | F | 1.1 | J | 9.2 | UJ | 4.6 | UJ | 9.2 | UJ |
| Ethene | 0.01 | F | 0.1 | UJ | 10 | UJ | 5.2 | UJ | 10 | UJ |
| Methane | 0.11 | F | 14 | J | 4000 | J | 1900 | J | 5200 | J |
| **Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3050 (mg/l)** | | | | | | | | | | |
| Calcium | NA | | NA | | NA | | NA | | NA | |
| Magnesium | NA | | NA | | NA | | NA | | NA | |
| Potassium | NA | | NA | | NA | | NA | | NA | |
| Sodium | NA | | NA | | NA | | NA | | NA | |
| **Inductively Coupled Plasma Mass Spectrometry - SW6020/SW3020 (mg/l)** | | | | | | | | | | |
| Aluminum | NA | | NA | | NA | | NA | | NA | |
| Antimony | NA | | NA | | NA | | NA | | NA | |
| Arsenic | NA | | NA | | NA | | NA | | NA | |
| Barium | NA | | NA | | NA | | NA | | NA | |
| Beryllium | NA | | NA | | NA | | NA | | NA | |
| Cadmium | NA | | NA | | NA | | NA | | NA | |
| Chromium | NA | | NA | | NA | | NA | | NA | |
| Cobalt | NA | | NA | | NA | | NA | | NA | |
| Copper | NA | | NA | | NA | | NA | | NA | |
| Iron | NA | | NA | | NA | | NA | | NA | |
| Lead | NA | | NA | | NA | | NA | | NA | |
| Manganese | NA | | NA | | NA | | NA | | NA | |
| Molybdenum | NA | | NA | | NA | | NA | | NA | |
| Nickel | NA | | NA | | NA | | NA | | NA | |
| Selenium | NA | | NA | | NA | | NA | | NA | |
| Silver | NA | | NA | | NA | | NA | | NA | |
| Thallium | NA | | NA | | NA | | NA | | NA | |
| Vanadium | NA | | NA | | NA | | NA | | NA | |
| Zinc | NA | | NA | | NA | | NA | | NA | |
| **Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)** | | | | | | | | | | |
| Mercury | NA | | NA | | NA | | NA | | NA | |
| **Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.1 | U | 0.1 | U | 0.5 | U | 0.1 | U | 0.1 | U |
| 1,1,1-Trichloroethane | 0.11 | U | 0.11 | U | 0.55 | U | 0.11 | U | 0.11 | U |
| 1,1,2,2-Tetrachloroethane | 0.13 | U | 0.13 | U | 0.65 | U | 0.13 | U | 0.13 | U |
| 1,1,2-Trichloroethane | 0.074 | U | 0.074 | U | 0.37 | U | 0.074 | U | 0.074 | U |
| 1,1-Dichloroethane | 0.075 | U | 0.075 | U | 0.38 | U | 0.075 | U | 0.075 | U |
| 1,1-Dichloroethene | 0.14 | U | 0.14 | U | 0.7 | U | 0.14 | U | 0.14 | U |

Data Summary Table
Carswell AFB
Flightline Area Groundwater

| Locxref: | GMI-22-07M | | LSA1628-3 | | SPOT35-2 | | SPOT35-4 | | SPOT35-5 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | MI-22-07MWG02 | | LSA1628-3WG02 | | SPOT35-2WG02 | | SPOT35-4WG02 | | SPOT35-5WG02 | |
| Sample Date: | 21-Oct-97 | | 29-Oct-97 | | 28-Oct-97 | | 28-Oct-97 | | 28-Oct-97 | |
| 1,1-Dichloropropene | 0.15 | U | 0.15 | U | 0.75 | U | 0.15 | U | 0.15 | U |
| 1,2,3-Trichlorobenzene | 0.12 | U | 0.12 | U | 0.6 | U | 0.12 | U | 0.12 | U |
| 1,2,3-Trichloropropane | 0.2 | U | 0.2 | U | 1 | U | 0.2 | U | 0.2 | U |
| 1,2,4-Trichlorobenzene | 0.11 | U | 0.11 | U | 0.55 | U | 0.11 | U | 0.11 | U |
| 1,2,4-Trimethylbenzene | 0.12 | U | 0.12 | U | 0.6 | U | 0.12 | U | 0.12 | U |
| 1,2-Dibromo-3-chloropropane (DBCP) | 0.29 | U | 0.29 | U | 1.4 | U | 0.29 | U | 0.29 | U |
| 1,2-Dibromoethane (EDB) | 0.08 | U | 0.08 | U | 0.4 | U | 0.08 | U | 0.08 | U |
| 1,2-Dichlorobenzene | 0.13 | U | 0.13 | U | 0.65 | U | 0.13 | U | 0.13 | U |
| 1,2-Dichloroethane | 0.077 | U | 0.077 | U | 0.38 | U | 0.077 | U | 0.077 | U |
| 1,2-Dichloropropane | 0.085 | U | 0.085 | U | 0.42 | U | 0.085 | U | 0.085 | U |
| 1,3,5-Trimethylbenzene | 0.15 | U | 0.15 | U | 0.75 | U | 0.15 | U | 0.15 | U |
| 1,3-Dichlorobenzene | 0.11 | U | 0.11 | U | 0.55 | U | 0.11 | U | 0.11 | U |
| 1,3-Dichloropropane | 0.066 | U | 0.066 | U | 0.33 | U | 0.066 | U | 0.066 | U |
| 1,4-Dichlorobenzene | 0.14 | U | 0.14 | U | 0.7 | U | 0.14 | U | 0.14 | U |
| 1-Chlorohexane | 0.11 | U | 0.11 | U | 0.55 | U | 0.11 | U | 0.11 | U |
| 2,2-Dichloropropane | 0.15 | U | 0.15 | U | 0.75 | U | 0.15 | U | 0.15 | U |
| 2-Chlorotoluene | 0.14 | U | 0.14 | U | 0.7 | U | 0.14 | U | 0.14 | U |
| 4-Chlorotoluene | 0.12 | U | 0.12 | U | 0.6 | U | 0.12 | U | 0.12 | U |
| Benzene | 0.11 | U | 0.11 | U | 0.55 | U | 0.11 | U | 0.11 | U |
| Bromobenzene | 0.13 | U | 0.13 | U | 0.65 | U | 0.13 | U | 0.13 | U |
| Bromochloromethane | 0.13 | U | 0.13 | U | 0.65 | U | 0.13 | U | 0.13 | U |
| Bromodichloromethane | 0.11 | U | 0.11 | U | 0.55 | U | 0.11 | U | 0.11 | U |
| Bromoform | 0.4 | U | 0.4 | U | 2 | U | 0.4 | U | 0.4 | U |
| Bromomethane | 0.17 | U | 0.17 | U | 0.85 | U | 0.17 | U | 0.17 | U |
| Carbon tetrachloride | 0.14 | U | 0.14 | U | 0.7 | U | 0.14 | U | 0.14 | U |
| Chlorobenzene | 0.14 | U | 0.14 | U | 0.7 | U | 0.14 | U | 0.14 | U |
| Chloroethane | 0.066 | U | 0.066 | U | 0.33 | U | 0.066 | U | 0.066 | U |
| Chloroform | 0.097 | U | 0.097 | U | 0.48 | U | 0.097 | U | 0.097 | U |
| Chloromethane | 0.08 | U | 0.08 | U | 0.4 | U | 0.08 | U | 0.08 | U |
| Dibromochloromethane | 0.1 | U | 0.1 | U | 0.5 | U | 0.1 | U | 0.1 | U |
| Dibromomethane | 0.096 | U | 0.096 | U | 0.48 | U | 0.096 | U | 0.096 | U |
| Dichlorodifluoromethane | 0.14 | U | 0.14 | U | 0.7 | U | 0.14 | U | 0.14 | U |
| Ethylbenzene | 0.16 | U | 0.16 | U | 0.8 | U | 0.16 | U | 0.16 | U |
| Hexachlorobutadiene | 0.15 | U | 0.15 | U | 0.75 | U | 0.15 | U | 0.15 | U |
| Isopropylbenzene | 0.13 | U | 0.13 | U | 46 | | 49 | | 48 | |
| Methylene chloride | 0.086 | U | 0.086 | U | 0.43 | U | 0.086 | U | 0.086 | U |
| Naphthalene | 0.088 | U | 0.088 | U | 73 | | 100 | | 110 | |
| Styrene | 0.094 | U | 0.094 | U | 0.47 | U | 0.094 | U | 0.094 | U |
| Tetrachloroethene | 0.13 | U | 0.13 | U | 0.65 | U | 0.13 | U | 0.13 | U |
| Toluene | 0.14 | U | 0.14 | U | 2.8 | F | 0.14 | U | 5.7 | F |
| Trichloroethene | 0.22 | F | 320 | | 0.48 | U | 0.097 | U | 0.097 | U |
| Trichlorofluoromethane | 0.16 | U | 0.16 | U | 0.8 | U | 0.16 | U | 0.16 | U |
| Vinyl chloride | 0.13 | U | 0.13 | U | 0.65 | U | 0.13 | U | 0.13 | U |
| cis-1,2-Dichloroethene | 0.13 | U | 32 | | 0.65 | U | 0.13 | U | 0.13 | U |
| cis-1,3-Dichloropropene | 0.081 | U | 0.081 | U | 0.4 | U | 0.081 | U | 0.081 | U |

Data Summary Table
Carswell AFB
Flightline Area Groundwater

| Locxref: | GMI-22-07M | | LSA1628-3 | | SPOT35-2 | | SPOT35-4 | | SPOT35-5 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | MI-22-07MWG02 | | LSA1628-3WG02 | | SPOT35-2WG02 | | SPOT35-4WG02 | | SPOT35-5WG02 | |
| Sample Date: | 21-Oct-97 | | 29-Oct-97 | | 28-Oct-97 | | 28-Oct-97 | | 28-Oct-97 | |
| m-Xylene & p-Xylene | 0.27 | U | 0.27 | U | 2.7 | | 0.27 | U | 4 | F |
| n-Butylbenzene | 0.14 | U | 0.14 | U | 5.4 | F | 5.5 | F | 3.2 | F |
| n-Propylbenzene | 0.12 | U | 0.12 | U | 46 | | 51 | | 52 | |
| o-Xylene | 0.11 | U | 0.11 | U | 0.55 | U | 0.11 | U | 2.7 | F |
| p-Isopropyltoluene | 0.13 | U | 0.13 | U | 0.65 | U | 0.13 | U | 0.13 | U |
| sec-Butylbenzene | 0.14 | U | 0.14 | U | 25 | | 22 | | 16 | |
| tert-Butylbenzene | 0.13 | U | 0.13 | U | 3.9 | F | 3.8 | F | 2.6 | F |
| trans-1,2-Dichloroethene | 0.088 | U | 17 | | 0.44 | U | 0.088 | U | 0.088 | U |
| trans-1,3-Dichloropropene | 0.11 | U | 0.11 | U | 0.55 | U | 0.11 | U | 0.11 | U |
| **SW846 9056 - SW9056/NONE (mg/l)** | | | | | | | | | | |
| Chloride | 22.3 | | 112 | | 352 | | 119 | | 154 | |
| Nitrate as N | 4.8 | | 5.5 | | 0.45 | | 0.24 | | 0.37 | |
| Sulfate | 61 | | 65.7 | | 0.42 | F | 3.3 | | 0.4 | F |
| **Total Organic Carbon - SW9060/NONE (mg/l)** | | | | | | | | | | |
| Total Organic Carbon | 1.8 | U | 2.4 | U | 21 | | 6.4 | | 12 | |

Data Summary Table
Carswell AFB
Flightline Area Groundwater

| | Locxref | USGS04T | |
|---|---|---|---|
| | Sample ID : | USGA04TWG02 | |
| | Sample Date | 27-Oct-97 | |
| **Alkalinity (Titrimetric) - E310.1/NONE (mg/l)** | | | |
| Alkalinity as CaCO3 to pH 4.5 | | NA | |
| **EPA-9/RSK-175 Modified A2720C - M2720C/METHOD (ug/l)** | | | |
| Ethane | | NA | |
| Ethene | | NA | |
| Methane | | NA | |
| **Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3050 (mg/l)** | | | |
| Calcium | | 113 | |
| Magnesium | | 14.5 | |
| Potassium | | 5.8 | |
| Sodium | | 41.6 | |
| **Inductively Coupled Plasma Mass Spectrometry - SW6020/SW3020 (mg/l)** | | | |
| Aluminum | | 0.049 | F |
| Antimony | | 0.00017 | U |
| Arsenic | | 0.0019 | F |
| Barium | | 0.023 | F |
| Beryllium | | 0.000069 | U |
| Cadmium | | 0.00004 | U |
| Chromium | | 0.00067 | F |
| Cobalt | | 0.00095 | F |
| Copper | | 0.0015 | F |
| Iron | | 1.3 | |
| Lead | | 0.00028 | F |
| Manganese | | 0.13 | |
| Molybdenum | | 0.00023 | F |
| Nickel | | 0.0078 | F |
| Selenium | | 0.0038 | F |
| Silver | | 0.0002 | U |
| Thallium | | 0.00002 | U |
| Vanadium | | 0.0005 | F |
| Zinc | | 0.0054 | F |
| **Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)** | | | |
| Mercury | | 0.000053 | U |
| **Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)** | | | |
| 1,1,1,2-Tetrachloroethane | | 0.1 | U |
| 1,1,1-Trichloroethane | | 0.11 | U |
| 1,1,2,2-Tetrachloroethane | | 0.13 | U |
| 1,1,2-Trichloroethane | | 0.074 | U |
| 1,1-Dichloroethane | | 0.075 | U |
| 1,1-Dichloroethene | | 0.14 | U |

Data Summary Table
Carswell AFB
Flightline Area Groundwater

| | Locxref : | USGS04T | |
|---|---|---|---|
| | Sample ID : | USGA04TWG02 | |
| | Sample Date : | 27-Oct-97 | |
| 1,1-Dichloropropene | | 0.15 | U |
| 1,2,3-Trichlorobenzene | | 0.12 | U |
| 1,2,3-Trichloropropane | | 0.2 | U |
| 1,2,4-Trichlorobenzene | | 0.11 | U |
| 1,2,4-Trimethylbenzene | | 0.12 | U |
| 1,2-Dibromo-3-chloropropane (DBCP) | | 0.29 | U |
| 1,2-Dibromoethane (EDB) | | 0.08 | U |
| 1,2-Dichlorobenzene | | 0.13 | U |
| 1,2-Dichloroethane | | 0.077 | U |
| 1,2-Dichloropropane | | 0.085 | U |
| 1,3,5-Trimethylbenzene | | 0.15 | U |
| 1,3-Dichlorobenzene | | 0.11 | U |
| 1,3-Dichloropropane | | 0.066 | U |
| 1,4-Dichlorobenzene | | 0.14 | U |
| 1-Chlorohexane | | 0.11 | U |
| 2,2-Dichloropropane | | 0.15 | U |
| 2-Chlorotoluene | | 0.14 | U |
| 4-Chlorotoluene | | 0.12 | U |
| Benzene | | 0.11 | U |
| Bromobenzene | | 0.13 | U |
| Bromochloromethane | | 0.13 | U |
| Bromodichloromethane | | 0.11 | U |
| Bromoform | | 0.4 | U |
| Bromomethane | | 0.17 | U |
| Carbon tetrachloride | | 0.14 | U |
| Chlorobenzene | | 0.14 | U |
| Chloroethane | | 0.066 | U |
| Chloroform | | 0.097 | U |
| Chloromethane | | 0.08 | U |
| Dibromochloromethane | | 0.1 | U |
| Dibromomethane | | 0.096 | U |
| Dichlorodifluoromethane | | 0.14 | U |
| Ethylbenzene | | 0.16 | U |
| Hexachlorobutadiene | | 0.15 | UJ |
| Isopropylbenzene | | 0.13 | U |
| Methylene chloride | | 0.086 | U |
| Naphthalene | | 0.088 | U |
| Styrene | | 0.094 | U |
| Tetrachloroethene | | 0.13 | U |
| Toluene | | 0.54 | F |
| Trichloroethene | | 0.097 | U |
| Trichlorofluoromethane | | 0.16 | U |
| Vinyl chloride | | 0.13 | U |
| cis-1,2-Dichloroethene | | 0.13 | U |
| cis-1,3-Dichloropropene | | 0.081 | U |

Data Summary Table
Carswell AFB
Flightline Area Groundwater

| | Locxref : | USGS04T | |
|---|---|---|---|
| | Sample ID : | USGA04TWG02 | |
| | Sample Date : | 27-Oct-97 | |
| m-Xylene & p-Xylene | | 0.27 | U |
| n-Butylbenzene | | 0.14 | U |
| n-Propylbenzene | | 0.12 | U |
| o-Xylene | | 0.11 | U |
| p-Isopropyltoluene | | 0.13 | U |
| sec-Butylbenzene | | 0.14 | U |
| tert-Butylbenzene | | 0.13 | U |
| trans-1,2-Dichloroethene | | 0.088 | U |
| trans-1,3-Dichloropropene | | 0.11 | U |
| **SW846 9056 - SW9056/NONE (mg/l)** | | | |
| Chloride | | NA | |
| Nitrate as N | | NA | |
| Sulfate | | NA | |
| **Total Organic Carbon - SW9060/NONE (mg/l)** | | | |
| Total Organic Carbon | | NA | |

Table: _____
DQE: _____
Senior Reviewed: _____

Positive Results Summary Table
Carswell AFB
Flightline Area Groundwater

| Locxref :<br>Sample ID :<br>Sample Date | PQL | GMI-22-02M<br>MI-22-02MWG02<br>21-Oct-97 | | GMI-22-04M<br>MI-22-04MWG02<br>29-Oct-97 | | GMI-22-05M<br>DUP02-WG02<br>21-Oct-97 | | GMI-22-05M<br>MI-22-05MWG02<br>21-Oct-97 | |
|---|---|---|---|---|---|---|---|---|---|
| **Alkalinity (Titrimetric) - E310.1/NONE (mg/l)** | | | | | | | | | |
| Alkalinity as CaCO3 to pH 4 5 | 5 | 310 | | 390 | | NA | | NA | |
| **EPA-9/RSK-175 Modified A2720C - M2720C/METHOD (ug/l)** | | | | | | | | | |
| Ethane | 0.092 | 0.13 | F | 2.5 | UJ | NA | | NA | |
| Ethene | 0.1 | 0.1 | UJ | 0.1 | UJ | NA | | NA | |
| Methane | 0.052 | 0.31 | F | 17 | J | NA | | NA | |
| **Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3050 (mg/l)** | | | | | | | | | |
| Calcium | 0.053 | NA | | NA | | 122 | | 120 | |
| Magnesium | 0.021 | NA | | NA | | 9.3 | | 9.1 | |
| Potassium | 0.3 | NA | | NA | | 4 | F | 4.1 | F |
| Sodium | 0.12 | NA | | NA | | 46.8 | | 46.4 | |
| **Inductively Coupled Plasma Mass Spectrometry - SW6020/SW3020 (mg/l)** | | | | | | | | | |
| Aluminum | 0.0026 | NA | | NA | | 0.034 | F | 0.029 | F |
| Antimony | 0.00017 | NA | | NA | | 0.00028 | F | 0.00017 | F |
| Arsenic | 0.00019 | NA | | NA | | 0.0013 | F | 0.0014 | F |
| Barium | 0.0002 | NA | | NA | | 0.14 | | 0.13 | |
| Cadmium | 0.00004 | NA | | NA | | 0.000051 | F | 0.000068 | F |
| Chromium | 0.0002 | NA | | NA | | 0.0015 | F | 0.0012 | F |
| Cobalt | 0.00002 | NA | | NA | | 0.0032 | F | 0.0029 | F |
| Copper | 0.00084 | NA | | NA | | 0.0025 | F | 0.0026 | F |
| Iron | 0.012 | NA | | NA | | 0.88 | | 0.87 | |
| Lead | 0.0002 | NA | | NA | | 0.0005 | R | 0.00048 | R |
| Manganese | 0.0002 | NA | | NA | | 0.071 | | 0.079 | |
| Molybdenum | 0.0002 | NA | | NA | | 0.0023 | F | 0.0016 | F |
| Nickel | 0.0002 | NA | | NA | | 0.0099 | F | 0.0094 | F |
| Selenium | 0.00007 | NA | | NA | | 0.004 | F | 0.004 | F |
| Silver | 0.0002 | NA | | NA | | 0.0002 | U | 0.000083 | F |
| Vanadium | 0.00017 | NA | | NA | | 0.0002 | F | 0.0002 | F |
| Zinc | 0.0011 | NA | | NA | | 0.015 | F | 0.017 | F |
| **Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)** | | | | | | | | | |
| Mercury | 0.000053 | NA | | NA | | 0.000053 | U | 0.000095 | F |
| **Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)** | | | | | | | | | |
| Isopropylbenzene | 0.13 | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| Naphthalene | 0.088 | 0.088 | U | 0.088 | U | 0.088 | U | 0.088 | U |
| Toluene | 0.14 | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| Trichloroethene | 0.097 | 0.097 | U | 480 | | 0.42 | F | 0.53 | F |
| cis-1,2-Dichloroethene | 0.13 | 0.13 | U | 68 | | 0.13 | U | 0.13 | U |
| m-Xylene & p-Xylene | 0.27 | 0.27 | U | 0.27 | U | 0.27 | U | 0.27 | U |
| n-Butylbenzene | 0.14 | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| n-Propylbenzene | 0.12 | 0.12 | U | 0.12 | U | 0.12 | U | 0.12 | U |

Positive Results Summary Table
Carswell AFB
Flightline Area Groundwater

| Locxref : | | GMI-22-02M | | GMI-22-04M | | GMI-22-05M | | GMI-22-05M | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID : | PQL | MI-22-02MWG02 | | MI-22-04MWG02 | | DUP02-WG02 | | MI-22-05MWG02 | |
| Sample Date : | | 21-Oct-97 | | 29-Oct-97 | | 21-Oct-97 | | 21-Oct-97 | |
| o-Xylene | 0.11 | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U |
| sec-Butylbenzene | 0.14 | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| tert-Butylbenzene | 0.13 | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| trans-1,2-Dichloroethene | 0.088 | 0.088 | U | 7 | F | 0.088 | U | 0.088 | U |
| **SW846 9056 - SW9056/NONE (mg/l)** | | | | | | | | | |
| Chloride | 0.1 | 3.2 | | 97.4 | | NA | | NA | |
| Nitrate as N | 0.02 | 0.02 | U | 9.4 | | NA | | NA | |
| Sulfate | 0.2 | 4.9 | | 40.9 | | NA | | NA | |
| **Total Organic Carbon - SW9060/NONE (mg/l)** | | | | | | | | | |
| Total Organic Carbon | 0.2 | 1.8 | U | 2 | U | NA | | NA | |

Positive Results Summary Table
Carswell AFB
Flightline Area Groundwater

| Locxref: | GMI-22-07M | | LSA1628-3 | | SPOT35-2 | | SPOT35-4 | | SPOT35-5 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | MI-22-07MWG02 | | LSA1628-3WG02 | | SPOT35-2WG02 | | SPOT35-4WG02 | | SPOT35-5WG02 | |
| Sample Date: | 21-Oct-97 | | 29-Oct-97 | | 28-Oct-97 | | 28-Oct-97 | | 28-Oct-97 | |
| **Alkalinity (Titrimetric) - E310.1/NONE (mg/l)** | | | | | | | | | | |
| Alkalinity as CaCO3 to pH 4.5 | 250 | | 460 | | 430 | | 470 | | 480 | |
| **EPA-9/RSK-175 Modified A2720C - M2720C/METHOD (ug/l)** | | | | | | | | | | |
| Ethane | 0.017 | F | 1.1 | J | 9.2 | UJ | 4.6 | UJ | 9.2 | UJ |
| Ethene | 0.01 | F | 0.1 | UJ | 10 | UJ | 5.2 | UJ | 10 | UJ |
| Methane | 0.11 | F | 14 | J | 4000 | J | 1900 | J | 5200 | J |
| **Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3050 (mg/l)** | | | | | | | | | | |
| Calcium | NA | | NA | | NA | | NA | | NA | |
| Magnesium | NA | | NA | | NA | | NA | | NA | |
| Potassium | NA | | NA | | NA | | NA | | NA | |
| Sodium | NA | | NA | | NA | | NA | | NA | |
| **Inductively Coupled Plasma Mass Spectrometry - SW6020/SW3020 (mg/l)** | | | | | | | | | | |
| Aluminum | NA | | NA | | NA | | NA | | NA | |
| Antimony | NA | | NA | | NA | | NA | | NA | |
| Arsenic | NA | | NA | | NA | | NA | | NA | |
| Barium | NA | | NA | | NA | | NA | | NA | |
| Cadmium | NA | | NA | | NA | | NA | | NA | |
| Chromium | NA | | NA | | NA | | NA | | NA | |
| Cobalt | NA | | NA | | NA | | NA | | NA | |
| Copper | NA | | NA | | NA | | NA | | NA | |
| Iron | NA | | NA | | NA | | NA | | NA | |
| Lead | NA | | NA | | NA | | NA | | NA | |
| Manganese | NA | | NA | | NA | | NA | | NA | |
| Molybdenum | NA | | NA | | NA | | NA | | NA | |
| Nickel | NA | | NA | | NA | | NA | | NA | |
| Selenium | NA | | NA | | NA | | NA | | NA | |
| Silver | NA | | NA | | NA | | NA | | NA | |
| Vanadium | NA | | NA | | NA | | NA | | NA | |
| Zinc | NA | | NA | | NA | | NA | | NA | |
| **Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)** | | | | | | | | | | |
| Mercury | NA | | NA | | NA | | NA | | NA | |
| **Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)** | | | | | | | | | | |
| Isopropylbenzene | 0.13 | U | 0.13 | U | 46 | | 49 | | 48 | |
| Naphthalene | 0.088 | U | 0.088 | U | 73 | | 100 | | 110 | |
| Toluene | 0.14 | U | 0.14 | U | 2.8 | F | 0.14 | U | 5.7 | F |
| Trichloroethene | 0.22 | F | 320 | | 0.48 | U | 0.097 | U | 0.097 | U |
| cis-1,2-Dichloroethene | 0.13 | U | 32 | | 0.65 | U | 0.13 | U | 0.13 | U |
| m-Xylene & p-Xylene | 0.27 | U | 0.27 | U | 2.7 | | 0.27 | U | 4 | F |
| n-Butylbenzene | 0.14 | U | 0.14 | U | 5.4 | F | 5.5 | F | 3.2 | F |
| n-Propylbenzene | 0.12 | U | 0.12 | U | 46 | | 51 | | 52 | |

Positive Results Summary Table
Carswell AFB
Flightline Area Groundwater

| Locxref : | GMI-22-07M | | LSA1628-3 | | SPOT35-2 | | SPOT35-4 | | SPOT35-5 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID : | MI-22-07MWG02 | | LSA1628-3WG02 | | SPOT35-2WG02 | | SPOT35-4WG02 | | SPOT35-5WG02 | |
| Sample Date : | 21-Oct-97 | | 29-Oct-97 | | 28-Oct-97 | | 28-Oct-97 | | 28-Oct-97 | |
| o-Xylene | 0.11 | U | 0.11 | U | 0.55 | U | 0.11 | U | 2.7 | F |
| sec-Butylbenzene | 0.14 | U | 0.14 | U | 25 | | 22 | | 16 | |
| tert-Butylbenzene | 0.13 | U | 0.13 | U | 3.9 | F | 3.8 | F | 2.6 | F |
| trans-1,2-Dichloroethene | 0.088 | U | 17 | | 0.44 | U | 0.088 | U | 0.088 | U |
| **SW846 9056 - SW9056/NONE (mg/l)** | | | | | | | | | | |
| Chloride | 22.3 | | 112 | | 352 | | 119 | | 154 | |
| Nitrate as N | 4.8 | | 5.5 | | 0.45 | | 0.24 | | 0.37 | |
| Sulfate | 61 | | 65.7 | | 0.42 | F | 3.3 | | 0.4 | F |
| **Total Organic Carbon - SW9060/NONE (mg/l)** | | | | | | | | | | |
| Total Organic Carbon | 1.8 | U | 2.4 | U | 21 | | 6.4 | | 12 | |

Positive Results Summary Table
Carswell AFB
Flightline Area Groundwater

| | Locxref : | USGS04T | |
|---|---|---|---|
| | Sample ID : | USGA04TWG02 | |
| | Sample Date : | 27-Oct-97 | |
| **Alkalinity (Titrimetric) - E310.1/NONE (mg/l)** | | | |
| Alkalinity as CaCO3 to pH 4.5 | | NA | |
| **EPA-9/RSK-175 Modified A2720C - M2720C/METHOD (ug/l)** | | | |
| Ethane | | NA | |
| Ethene | | NA | |
| Methane | | NA | |
| **Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3050 (mg/l)** | | | |
| Calcium | | 113 | |
| Magnesium | | 14.5 | |
| Potassium | | 5.8 | |
| Sodium | | 41.6 | |
| **Inductively Coupled Plasma Mass Spectrometry - SW6020/SW3020 (mg/l)** | | | |
| Aluminum | | 0.049 | F |
| Antimony | | 0.00017 | U |
| Arsenic | | 0.0019 | F |
| Barium | | 0.023 | F |
| Cadmium | | 0.00004 | U |
| Chromium | | 0.00067 | F |
| Cobalt | | 0.00095 | F |
| Copper | | 0.0015 | F |
| Iron | | 1.3 | |
| Lead | | 0.00028 | F |
| Manganese | | 0.13 | |
| Molybdenum | | 0.00023 | F |
| Nickel | | 0.0078 | F |
| Selenium | | 0.0038 | F |
| Silver | | 0.0002 | U |
| Vanadium | | 0.0005 | F |
| Zinc | | 0.0054 | F |
| **Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)** | | | |
| Mercury | | 0.000053 | U |
| **Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)** | | | |
| Isopropylbenzene | | 0.13 | U |
| Naphthalene | | 0.088 | U |
| Toluene | | 0.54 | F |
| Trichloroethene | | 0.097 | U |
| cis-1,2-Dichloroethene | | 0.13 | U |
| m-Xylene & p-Xylene | | 0.27 | U |
| n-Butylbenzene | | 0.14 | U |
| n-Propylbenzene | | 0.12 | U |

Positive Results Summary Table
Carswell AFB
Flightline Area Groundwater

| | Locxref: | USGS04T | |
|---|---|---|---|
| | Sample ID: | USGA04TWG02 | |
| | Sample Date: | 27-Oct-97 | |
| o-Xylene | | 0.11 | U |
| sec-Butylbenzene | | 0.14 | U |
| tert-Butylbenzene | | 0.13 | U |
| trans-1,2-Dichloroethene | | 0.088 | U |
| **SW846 9056 - SW9056/NONE (mg/l)** | | | |
| Chloride | | NA | |
| Nitrate as N | | NA | |
| Sulfate | | NA | |
| **Total Organic Carbon - SW9060/NONE (mg/l)** | | | |
| Total Organic Carbon | | NA | |

Table: _____
DQE: _____
Senior Reviewed: _____

# TAB

East Area Laboratory Results

Data Summary Table
Carswell AFB
East Area Groundwater

| Locxref: | | 17M | | BSS-A | | BSS-B | | LF01-1B | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | PQL | 17MWG02 | | BSS-AWG02 | | BSS-BWG02 | | LF01-1BWG02 | |
| Sample Date: | | 27-Oct-97 | | 27-Oct-97 | | 27-Oct-97 | | 15-Oct-97 | |
| **Alkalinity (Titrimetric) - E310.1/NONE (mg/l)** | | | | | | | | | |
| Alkalinity as CaCO3 to pH 4.5 | 5 | 360 | | 390 | | 420 | | NA | |
| **EPA-9/RSK-175 Modified A2720C - M2720C/METHOD (ug/l)** | | | | | | | | | |
| Ethane | 0.092 | 4.6 | UJ | 0.092 | UJ | 4.6 | UJ | NA | |
| Ethene | 0.1 | 5.2 | UJ | 0.1 | UJ | 5.2 | UJ | NA | |
| Methane | 0.052 | 1000 | J | 3.4 | J | 2400 | J | NA | |
| **Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3050 (mg/l)** | | | | | | | | | |
| Calcium | 0.053 | NA | | NA | | NA | | 148 | |
| Magnesium | 0.021 | NA | | NA | | NA | | 10.3 | |
| Potassium | 0.3 | NA | | NA | | NA | | 0.92 | F |
| Sodium | 0.12 | NA | | NA | | NA | | 24.5 | |
| **Inductively Coupled Plasma Mass Spectrometry - SW6020/SW3020 (mg/l)** | | | | | | | | | |
| Aluminum | 0.0026 | NA | | NA | | NA | | 0.17 | F |
| Antimony | 0.00017 | NA | | NA | | NA | | 0.0002 | F |
| Arsenic | 0.00019 | NA | | NA | | NA | | 0.002 | F |
| Barium | 0.0002 | NA | | NA | | NA | | 0.14 | |
| Beryllium | 0.000069 | NA | | NA | | NA | | 0.000069 | U |
| Cadmium | 0.00004 | NA | | NA | | NA | | 0.00026 | F |
| Chromium | 0.0002 | NA | | NA | | NA | | 0.0032 | F |
| Cobalt | 0.00002 | NA | | NA | | NA | | 0.0024 | F |
| Copper | 0.00084 | NA | | NA | | NA | | 0.025 | F |
| Iron | 0.012 | NA | | NA | | NA | | 1.2 | |
| Lead | 0.0002 | NA | | NA | | NA | | 0.0068 | F |
| Manganese | 0.0002 | NA | | NA | | NA | | 1.8 | |
| Molybdenum | 0.0002 | NA | | NA | | NA | | 0.0021 | F |
| Nickel | 0.0002 | NA | | NA | | NA | | 0.02 | F |
| Selenium | 0.00007 | NA | | NA | | NA | | 0.0055 | F |
| Silver | 0.0002 | NA | | NA | | NA | | 0.0002 | U |
| Thallium | 0.00002 | NA | | NA | | NA | | 0.00002 | U |
| Vanadium | 0.00017 | NA | | NA | | NA | | 0.0014 | F |
| Zinc | 0.0011 | NA | | NA | | NA | | 0.12 | |
| **Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)** | | | | | | | | | |
| Mercury | 0.000053 | NA | | NA | | NA | | 0.000053 | U |
| **Aromatic Volatile Organics - SW8020/SW5030 (percent)** | | | | | | | | | |
| Benzene | 0.21 | 1.9 | F | 0.21 | U | 21 | U | NA | |
| Ethylbenzene | 0.35 | 0.35 | U | 0.35 | U | 1800 | | NA | |
| Methyl tert-butyl ether | 0.47 | NA | | NA | | 0.47 | U | NA | |
| Toluene | 0.13 | 1.7 | F | 1.2 | F | 9100 | | NA | |
| Xylenes (total) | 0.68 | 0.68 | UJ | 0.68 | UJ | 9400 | J | NA | |

Data Summary Table
Carswell AFB
East Area Groundwater

| Locxref: | | 17M | BSS-A | BSS-B | LF01-1B | |
|---|---|---|---|---|---|---|
| Sample ID: | PQL | 17MWG02 | BSS-AWG02 | BSS-BWG02 | LF01-1BWG02 | |
| Sample Date: | | 27-Oct-97 | 27-Oct-97 | 27-Oct-97 | 15-Oct-97 | |
| **Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)** | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.1 | NA | NA | NA | 0.1 | U |
| 1,1,1-Trichloroethane | 0.11 | NA | NA | NA | 0.11 | U |
| 1,1,2,2-Tetrachloroethane | 0.13 | NA | NA | NA | 0.13 | U |
| 1,1,2-Trichloroethane | 0.074 | NA | NA | NA | 0.074 | U |
| 1,1-Dichloroethane | 0.075 | NA | NA | NA | 0.075 | U |
| 1,1-Dichloroethene | 0.14 | NA | NA | NA | 0.14 | U |
| 1,1-Dichloropropene | 0.15 | NA | NA | NA | 0.15 | U |
| 1,2,3-Trichlorobenzene | 0.12 | NA | NA | NA | 0.12 | R |
| 1,2,3-Trichloropropane | 0.2 | NA | NA | NA | 0.2 | U |
| 1,2,4-Trichlorobenzene | 0.11 | NA | NA | NA | 0.11 | R |
| 1,2,4-Trimethylbenzene | 0.12 | NA | NA | NA | 0.12 | U |
| 1,2-Dibromo-3-chloropropane (DBCP) | 0.29 | NA | NA | NA | 0.29 | U |
| 1,2-Dibromoethane (EDB) | 0.08 | NA | NA | NA | 0.08 | U |
| 1,2-Dichlorobenzene | 0.13 | NA | NA | NA | 0.13 | U |
| 1,2-Dichloroethane | 0.077 | NA | NA | NA | 0.077 | U |
| 1,2-Dichloropropane | 0.085 | NA | NA | NA | 0.085 | U |
| 1,3,5-Trimethylbenzene | 0.15 | NA | NA | NA | 0.15 | U |
| 1,3-Dichlorobenzene | 0.11 | NA | NA | NA | 0.11 | U |
| 1,3-Dichloropropane | 0.066 | NA | NA | NA | 0.066 | U |
| 1,4-Dichlorobenzene | 0.14 | NA | NA | NA | 0.14 | U |
| 1-Chlorohexane | 0.11 | NA | NA | NA | 0.11 | U |
| 2,2-Dichloropropane | 0.15 | NA | NA | NA | 0.15 | U |
| 2-Chlorotoluene | 0.14 | NA | NA | NA | 0.14 | U |
| 4-Chlorotoluene | 0.12 | NA | NA | NA | 0.12 | U |
| Benzene | 0.11 | NA | NA | NA | 0.11 | U |
| Bromobenzene | 0.13 | NA | NA | NA | 0.13 | U |
| Bromochloromethane | 0.13 | NA | NA | NA | 0.13 | U |
| Bromodichloromethane | 0.11 | NA | NA | NA | 0.11 | U |
| Bromoform | 0.4 | NA | NA | NA | 0.4 | U |
| Bromomethane | 0.17 | NA | NA | NA | 0.17 | U |
| Carbon tetrachloride | 0.14 | NA | NA | NA | 0.14 | U |
| Chlorobenzene | 0.14 | NA | NA | NA | 0.14 | U |
| Chloroethane | 0.066 | NA | NA | NA | 0.066 | U |
| Chloroform | 0.097 | NA | NA | NA | 0.097 | U |
| Chloromethane | 0.08 | NA | NA | NA | 0.08 | U |
| Dibromochloromethane | 0.1 | NA | NA | NA | 0.1 | U |
| Dibromomethane | 0.096 | NA | NA | NA | 0.096 | U |
| Dichlorodifluoromethane | 0.14 | NA | NA | NA | 0.14 | U |
| Ethylbenzene | 0.16 | NA | NA | NA | 0.16 | U |
| Hexachlorobutadiene | 0.15 | NA | NA | NA | 0.15 | R |
| Isopropylbenzene | 0.13 | NA | NA | NA | 0.13 | U |
| Methylene chloride | 0.086 | NA | NA | NA | 0.086 | U |

Data Summary Table
Carswell AFB
East Area Groundwater

| Locxref : | | 17M | | BSS-A | BSS-B | LF01-1B | |
|---|---|---|---|---|---|---|---|
| Sample ID : | PQL | 17MWG02 | | BSS-AWG02 | BSS-BWG02 | LF01-1BWG02 | |
| Sample Date : | | 27-Oct-97 | | 27-Oct-97 | 27-Oct-97 | 15-Oct-97 | |
| Naphthalene | 0.088 | NA | | NA | NA | 0.088 | R |
| Styrene | 0.094 | NA | | NA | NA | 0.094 | U |
| Tetrachloroethene | 0.13 | NA | | NA | NA | 0.13 | U |
| Toluene | 0.14 | NA | | NA | NA | 0.14 | U |
| Trichloroethene | 0.097 | NA | | NA | NA | 0.097 | U |
| Trichlorofluoromethane | 0.16 | NA | | NA | NA | 0.16 | U |
| Vinyl chloride | 0.13 | NA | | NA | NA | 0.13 | U |
| cis-1,2-Dichloroethene | 0.13 | NA | | NA | NA | 0.13 | U |
| cis-1,3-Dichloropropene | 0.081 | NA | | NA | NA | 0.081 | U |
| m-Xylene & p-Xylene | 0.27 | NA | | NA | NA | 0.27 | U |
| n-Butylbenzene | 0.14 | NA | | NA | NA | 0.14 | U |
| n-Propylbenzene | 0.12 | NA | | NA | NA | 0.12 | U |
| o-Xylene | 0.11 | NA | | NA | NA | 0.11 | U |
| p-Isopropyltoluene | 0.13 | NA | | NA | NA | 0.13 | U |
| sec-Butylbenzene | 0.14 | NA | | NA | NA | 0.14 | U |
| tert-Butylbenzene | 0.13 | NA | | NA | NA | 0.13 | U |
| trans-1,2-Dichloroethene | 0.088 | NA | | NA | NA | 0.088 | U |
| trans-1,3-Dichloropropene | 0.11 | NA | | NA | NA | 0.11 | U |
| **SW846 9056 - SW9056/NONE (mg/l)** | | | | | | | |
| Chloride | 0.1 | 22.8 | | 38.9 | 108 | NA | |
| Nitrate as N | 0.02 | 0.18 | | 0.21 | 0.22 | NA | |
| Sulfate | 0.2 | 1.1 | U | 34 | 7.5 | NA | |
| **Total Organic Carbon - SW9060/NONE (mg/l)** | | | | | | | |
| Total Organic Carbon | 0.2 | 11 | | 4.2 | 17 | NA | |

Data Summary Table
Carswell AFB
East Area Groundwater

| Locxref: | LF01-1C | | LF01-1C | | LF01-1D | | LF01-1E | | MW-1 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | DUP04-WG02 | | LF01-1CWG02 | | LF01-1DWG02 | | LF01-1EWG02 | | MW-1WG02 | |
| Sample Date | 15-Oct-97 | | 15-Oct-97 | | 20-Oct-97 | | 20-Oct-97 | | 30-Oct-97 | |
| **Alkalinity (Titrimetric) - E310.1/NONE (mg/l)** | | | | | | | | | | |
| Alkalinity as CaCO3 to pH 4.5 | NA | | NA | | NA | | NA | | 440 | |
| **EPA-9/RSK-175 Modified A2720C - M2720C/METHOD (ug/l)** | | | | | | | | | | |
| Ethane | NA | | NA | | NA | | NA | | 9.2 | U |
| Ethene | NA | | NA | | NA | | NA | | 10 | U |
| Methane | NA | | NA | | NA | | NA | | 3200 | |
| **Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3050 (mg/l)** | | | | | | | | | | |
| Calcium | 180 | | 177 | | 208 | | 131 | | NA | |
| Magnesium | 10.9 | | 10.8 | | 11.6 | | 7.4 | | NA | |
| Potassium | 0.3 | U | 0.3 | U | 2.1 | F | 0.3 | U | NA | |
| Sodium | 33.7 | | 33.1 | | 29.2 | | 21.5 | | NA | |
| **Inductively Coupled Plasma Mass Spectrometry - SW6020/SW3020 (mg/l)** | | | | | | | | | | |
| Aluminum | 0.03 | F | 0.017 | F | 0.046 | F | 0.066 | F | NA | |
| Antimony | 0.00017 | U | 0.00034 | F | 0.00022 | F | 0.00017 | U | NA | |
| Arsenic | 0.026 | F | 0.026 | F | 0.0039 | F | 0.0033 | F | NA | |
| Barium | 0.15 | | 0.15 | | 0.09 | | 0.14 | | NA | |
| Beryllium | 0.000069 | U | 0.000069 | U | 0.000069 | U | 0.000069 | U | NA | |
| Cadmium | 0.000044 | F | 0.00004 | U | 0.00004 | U | 0.00004 | U | NA | |
| Chromium | 0.00071 | F | 0.00048 | F | 0.0011 | F | 0.00045 | F | NA | |
| Cobalt | 0.0017 | F | 0.0016 | F | 0.0012 | F | 0.0029 | F | NA | |
| Copper | 0.0034 | F | 0.0027 | F | 0.0032 | F | 0.0035 | F | NA | |
| Iron | 12.6 | J | 13.5 | J | 3.2 | | 1.2 | | NA | |
| Lead | 0.00074 | F | 0.00072 | F | 0.00066 | F | 0.0007 | F | NA | |
| Manganese | 1.3 | J | 1.2 | J | 0.3 | | 3.3 | | NA | |
| Molybdenum | 0.0066 | F | 0.0063 | F | 0.0033 | F | 0.0012 | F | NA | |
| Nickel | 0.012 | F | 0.011 | F | 0.015 | F | 0.0099 | F | NA | |
| Selenium | 0.0084 | F | 0.0079 | F | 0.0051 | F | 0.0057 | F | NA | |
| Silver | 0.0002 | U | 0.0002 | U | 0.00016 | F | 0.0002 | U | NA | |
| Thallium | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | NA | |
| Vanadium | 0.00023 | F | 0.00018 | F | 0.00055 | F | 0.0003 | F | NA | |
| Zinc | 0.032 | U | 0.026 | U | 0.014 | F | 0.02 | U | NA | |
| **Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)** | | | | | | | | | | |
| Mercury | 0.000053 | U | 0.000053 | U | 0.000053 | U | 0.000053 | U | NA | |
| **Aromatic Volatile Organics - SW8020/SW5030 (percent)** | | | | | | | | | | |
| Benzene | NA | | NA | | NA | | NA | | 3000 | |
| Ethylbenzene | NA | | NA | | NA | | NA | | 1700 | |
| Methyl tert-butyl ether | NA | | NA | | NA | | NA | | 300 | |
| Toluene | NA | | NA | | NA | | NA | | 160 | |
| Xylenes (total) | NA | | NA | | NA | | NA | | 2900 | J |

Data Summary Table
Carswell AFB
East Area Groundwater

| Locxref : | LF01-1C | | LF01-1C | | LF01-1D | | LF01-1E | | MW-1 |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID : | DUP04-WG02 | | LF01-1CWG02 | | LF01-1DWG02 | | LF01-1EWG02 | | MW-1WG02 |
| Sample Date : | 15-Oct-97 | | 15-Oct-97 | | 20-Oct-97 | | 20-Oct-97 | | 30-Oct-97 |
| **Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)** | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.1 | U | 0.1 | U | 0.1 | U | 0.1 | U | NA |
| 1,1,1-Trichloroethane | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U | NA |
| 1,1,2,2-Tetrachloroethane | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U | NA |
| 1,1,2-Trichloroethane | 0.074 | U | 0.074 | U | 0.074 | U | 0.074 | U | NA |
| 1,1-Dichloroethane | 0.075 | U | 0.075 | U | 0.075 | U | 0.075 | U | NA |
| 1,1-Dichloroethene | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U | NA |
| 1,1-Dichloropropene | 0.15 | U | 0.15 | U | 0.15 | U | 0.15 | U | NA |
| 1,2,3-Trichlorobenzene | 0.12 | R | 0.12 | R | 0.12 | U | 0.12 | U | NA |
| 1,2,3-Trichloropropane | 0.2 | U | 0.2 | U | 0.2 | U | 0.2 | U | NA |
| 1,2,4-Trichlorobenzene | 0.11 | R | 0.11 | R | 0.11 | U | 0.11 | U | NA |
| 1,2,4-Trimethylbenzene | 0.12 | U | 0.12 | U | 0.12 | U | 0.12 | U | NA |
| 1,2-Dibromo-3-chloropropane (DBCP) | 0.29 | U | 0.29 | U | 0.29 | U | 0.29 | U | NA |
| 1,2-Dibromoethane (EDB) | 0.08 | U | 0.08 | U | 0.08 | U | 0.08 | U | NA |
| 1,2-Dichlorobenzene | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U | NA |
| 1,2-Dichloroethane | 0.077 | U | 0.077 | U | 0.077 | U | 0.077 | U | NA |
| 1,2-Dichloropropane | 0.085 | U | 0.085 | U | 0.085 | U | 0.085 | U | NA |
| 1,3,5-Trimethylbenzene | 0.15 | U | 0.15 | U | 0.15 | U | 0.15 | U | NA |
| 1,3-Dichlorobenzene | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U | NA |
| 1,3-Dichloropropane | 0.066 | U | 0.066 | U | 0.066 | U | 0.066 | U | NA |
| 1,4-Dichlorobenzene | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U | NA |
| 1-Chlorohexane | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U | NA |
| 2,2-Dichloropropane | 0.15 | U | 0.15 | U | 0.15 | U | 0.15 | U | NA |
| 2-Chlorotoluene | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U | NA |
| 4-Chlorotoluene | 0.12 | U | 0.12 | U | 0.12 | U | 0.12 | U | NA |
| Benzene | 0.11 | U | 0.11 | U | 0.11 | U | 0.44 | | NA |
| Bromobenzene | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U | NA |
| Bromochloromethane | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U | NA |
| Bromodichloromethane | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U | NA |
| Bromoform | 0.4 | U | 0.4 | U | 0.4 | U | 0.4 | U | NA |
| Bromomethane | 0.17 | U | 0.17 | U | 0.17 | U | 0.17 | U | NA |
| Carbon tetrachloride | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U | NA |
| Chlorobenzene | 0.14 | U | 0.14 | U | 0.7 | | 0.65 | | NA |
| Chloroethane | 0.066 | U | 0.066 | U | 0.066 | U | 0.066 | U | NA |
| Chloroform | 0.097 | U | 0.097 | U | 0.097 | U | 0.097 | U | NA |
| Chloromethane | 0.08 | U | 0.08 | U | 0.08 | U | 0.08 | U | NA |
| Dibromochloromethane | 0.1 | U | 0.1 | U | 0.1 | U | 0.1 | U | NA |
| Dibromomethane | 0.096 | U | 0.096 | U | 0.096 | U | 0.096 | U | NA |
| Dichlorodifluoromethane | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U | NA |
| Ethylbenzene | 0.16 | U | 0.16 | U | 0.16 | U | 0.16 | U | NA |
| Hexachlorobutadiene | 0.15 | R | 0.15 | R | 0.15 | U | 0.15 | U | NA |
| Isopropylbenzene | 1.6 | | 1.6 | | 0.13 | U | 0.13 | U | NA |
| Methylene chloride | 0.086 | U | 0.086 | U | 0.086 | U | 0.086 | U | NA |

Data Summary Table
Carswell AFB
East Area Groundwater

| Locxref : | LF01-1C | | LF01-1C | | LF01-1D | | LF01-1E | | MW-1 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID : | DUP04-WG02 | | LF01-1CWG02 | | LF01-1DWG02 | | LF01-1EWG02 | | MW-1WG02 | |
| Sample Date : | 15-Oct-97 | | 15-Oct-97 | | 20-Oct-97 | | 20-Oct-97 | | 30-Oct-97 | |
| Naphthalene | 0.088 | R | 0.088 | R | 0.088 | U | 0.088 | U | NA | |
| Styrene | 0.094 | U | 0.094 | U | 0.094 | U | 0.094 | U | NA | |
| Tetrachloroethene | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U | NA | |
| Toluene | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U | NA | |
| Trichloroethene | 0.097 | U | 0.097 | U | 0.097 | U | 0.097 | U | NA | |
| Trichlorofluoromethane | 0.16 | U | 0.16 | U | 0.16 | U | 0.16 | U | NA | |
| Vinyl chloride | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U | NA | |
| cis-1,2-Dichloroethene | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U | NA | |
| cis-1,3-Dichloropropene | 0.081 | U | 0.081 | U | 0.081 | U | 0.081 | U | NA | |
| m-Xylene & p-Xylene | 0.27 | U | 0.27 | U | 0.27 | U | 0.27 | U | NA | |
| n-Butylbenzene | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U | NA | |
| n-Propylbenzene | 0.12 | U | 0.12 | U | 0.12 | U | 0.12 | U | NA | |
| o-Xylene | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U | NA | |
| p-Isopropyltoluene | 6.2 | | 6.3 | | 0.13 | U | 0.13 | U | NA | |
| sec-Butylbenzene | 2.4 | | 2.5 | | 0.14 | U | 0.14 | U | NA | |
| tert-Butylbenzene | 1.5 | | 1.5 | | 0.13 | U | 0.13 | U | NA | |
| trans-1,2-Dichloroethene | 0.088 | U | 0.088 | U | 0.088 | U | 0.088 | U | NA | |
| trans-1,3-Dichloropropene | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U | NA | |
| **SW846 9056 - SW9056/NONE (mg/l)** | | | | | | | | | | |
| Chloride | NA | | NA | | NA | | NA | | 78.8 | |
| Nitrate as N | NA | | NA | | NA | | NA | | 0.18 | U |
| Sulfate | NA | | NA | | NA | | NA | | 0.71 | |
| **Total Organic Carbon - SW9060/NONE (mg/l)** | | | | | | | | | | |
| Total Organic Carbon | NA | | NA | | NA | | NA | | 11 | |

Data Summary Table
Carswell AFB
East Area Groundwater

| Locxref : | MW-3 | | MW-5 | | MW-8 | | MW-9 | | MW-10 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID : | MW-3WG02 | | MW-5WG02 | | MW-8WG02 | | MW-9WG02 | | MW-10WG02 | |
| Sample Date : | 24-Oct-97 | | 28-Oct-97 | | 21-Oct-97 | | 20-Oct-97 | | 30-Oct-97 | |
| **Alkalinity (Titrimetric) - E310.1/NONE (mg/l)** | | | | | | | | | | |
| Alkalinity as CaCO3 to pH 4.5 | 380 | | 330 | | 240 | | NA | | NA | |
| **EPA-9/RSK-175 Modified A2720C - M2720C/METHOD (ug/l)** | | | | | | | | | | |
| Ethane | 0.092 | U | 0.43 | F | 0.013 | F | NA | | NA | |
| Ethene | 0.1 | U | 0.32 | U | 0.02 | F | NA | | NA | |
| Methane | 1.3 | U | 170 | | 7.9 | | NA | | NA | |
| **Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3050 (mg/l)** | | | | | | | | | | |
| Calcium | NA | | NA | | NA | | 170 | | 177 | |
| Magnesium | NA | | NA | | NA | | 12.6 | | 13 | |
| Potassium | NA | | NA | | NA | | 0.3 | U | 0.3 | U |
| Sodium | NA | | NA | | NA | | 76.9 | | 56 | |
| **Inductively Coupled Plasma Mass Spectrometry - SW6020/SW3020 (mg/l)** | | | | | | | | | | |
| Aluminum | NA | | NA | | NA | | 0.014 | F | 0.026 | F |
| Antimony | NA | | NA | | NA | | 0.00017 | U | 0.00087 | F |
| Arsenic | NA | | NA | | NA | | 0.0051 | F | 0.023 | F |
| Barium | NA | | NA | | NA | | 0.13 | | 0.18 | |
| Beryllium | NA | | NA | | NA | | 0.000069 | U | 0.000069 | U |
| Cadmium | NA | | NA | | NA | | 0.00004 | U | 0.00004 | U |
| Chromium | NA | | NA | | NA | | 0.00026 | F | 0.0002 | U |
| Cobalt | NA | | NA | | NA | | 0.00078 | F | 0.0068 | F |
| Copper | NA | | NA | | NA | | 0.0031 | F | 0.00098 | F |
| Iron | NA | | NA | | NA | | 4 | | 6.9 | |
| Lead | NA | | NA | | NA | | 0.00042 | F | 0.0064 | F |
| Manganese | NA | | NA | | NA | | 3.1 | | 5.4 | |
| Molybdenum | NA | | NA | | NA | | 0.0017 | F | 0.0028 | F |
| Nickel | NA | | NA | | NA | | 0.01 | F | 0.013 | F |
| Selenium | NA | | NA | | NA | | 0.0068 | F | 0.0067 | F |
| Silver | NA | | NA | | NA | | 0.00009 | F | 0.00015 | F |
| Thallium | NA | | NA | | NA | | 0.00002 | U | 0.00002 | U |
| Vanadium | NA | | NA | | NA | | 0.00018 | F | 0.00038 | F |
| Zinc | NA | | NA | | NA | | 0.022 | U | 0.013 | F |
| **Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)** | | | | | | | | | | |
| Mercury | NA | | NA | | NA | | 0.000053 | U | 0.000053 | U |
| **Aromatic Volatile Organics - SW8020/SW5030 (percent)** | | | | | | | | | | |
| Benzene | 0.21 | R | 4 | | 0.21 | U | NA | | 2600 | J |
| Ethylbenzene | 0.35 | R | 15 | J | 0.35 | U | NA | | 4900 | |
| Methyl tert-butyl ether | NA | | NA | | NA | | NA | | 380 | J |
| Toluene | 0.48 | F | 1.5 | F | 0.13 | U | NA | | 7300 | |
| Xylenes (total) | 0.68 | R | 1.1 | F | 0.68 | UJ | NA | | 13000 | J |

Data Summary Table
Carswell AFB
East Area Groundwater

| Locxref: | MW-3 | | MW-5 | MW-8 | MW-9 | | MW-10 | |
|---|---|---|---|---|---|---|---|---|
| Sample ID: | MW-3WG02 | | MW-5WG02 | MW-8WG02 | MW-9WG02 | | MW-10WG02 | |
| Sample Date: | 24-Oct-97 | | 28-Oct-97 | 21-Oct-97 | 20-Oct-97 | | 30-Oct-97 | |
| **Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)** | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | NA | | NA | NA | 0.1 | U | 50 | U |
| 1,1,1-Trichloroethane | NA | | NA | NA | 0.11 | U | 55 | U |
| 1,1,2,2-Tetrachloroethane | NA | | NA | NA | 0.13 | U | 65 | U |
| 1,1,2-Trichloroethane | NA | | NA | NA | 0.074 | U | 37 | U |
| 1,1-Dichloroethane | NA | | NA | NA | 0.075 | U | 38 | U |
| 1,1-Dichloroethene | NA | | NA | NA | 0.14 | U | 70 | U |
| 1,1-Dichloropropene | NA | | NA | NA | 0.15 | U | 75 | U |
| 1,2,3-Trichlorobenzene | NA | | NA | NA | 0.12 | U | 60 | U |
| 1,2,3-Trichloropropane | NA | | NA | NA | 0.2 | U | 100 | U |
| 1,2,4-Trichlorobenzene | NA | | NA | NA | 0.11 | U | 55 | U |
| 1,2,4-Trimethylbenzene | NA | | NA | NA | 0.12 | U | 3000 | |
| 1,2-Dibromo-3-chloropropane (DBCP) | NA | | NA | NA | 0.29 | U | 140 | U |
| 1,2-Dibromoethane (EDB) | NA | | NA | NA | 0.08 | U | 40 | U |
| 1,2-Dichlorobenzene | NA | | NA | NA | 0.13 | U | 65 | U |
| 1,2-Dichloroethane | NA | | NA | NA | 0.077 | U | 38 | U |
| 1,2-Dichloropropane | NA | | NA | NA | 0.085 | U | 42 | U |
| 1,3,5-Trimethylbenzene | NA | | NA | NA | 0.15 | U | 780 | |
| 1,3-Dichlorobenzene | NA | | NA | NA | 0.11 | U | 55 | U |
| 1,3-Dichloropropane | NA | | NA | NA | 0.066 | U | 33 | U |
| 1,4-Dichlorobenzene | NA | | NA | NA | 0.14 | U | 70 | U |
| 1-Chlorohexane | NA | | NA | NA | 0.11 | U | 55 | U |
| 2,2-Dichloropropane | NA | | NA | NA | 0.15 | U | 75 | U |
| 2-Chlorotoluene | NA | | NA | NA | 0.14 | U | 70 | U |
| 4-Chlorotoluene | NA | | NA | NA | 0.12 | U | 60 | U |
| Benzene | NA | | NA | NA | 0.11 | U | 5500 | |
| Bromobenzene | NA | | NA | NA | 0.13 | U | 65 | U |
| Bromochloromethane | NA | | NA | NA | 0.13 | U | 65 | U |
| Bromodichloromethane | NA | | NA | NA | 0.11 | U | 55 | U |
| Bromoform | NA | | NA | NA | 0.4 | U | 200 | U |
| Bromomethane | NA | | NA | NA | 0.17 | U | 85 | U |
| Carbon tetrachloride | NA | | NA | NA | 0.14 | U | 70 | U |
| Chlorobenzene | NA | | NA | NA | 0.14 | U | 70 | U |
| Chloroethane | NA | | NA | NA | 0.066 | U | 33 | U |
| Chloroform | NA | | NA | NA | 0.097 | U | 48 | U |
| Chloromethane | NA | | NA | NA | 0.08 | U | 40 | U |
| Dibromochloromethane | NA | | NA | NA | 0.1 | U | 50 | U |
| Dibromomethane | NA | | NA | NA | 0.096 | U | 48 | U |
| Dichlorodifluoromethane | NA | | NA | NA | 0.14 | U | 70 | U |
| Ethylbenzene | NA | | NA | NA | 0.16 | U | 6000 | |
| Hexachlorobutadiene | NA | | NA | NA | 0.15 | U | 75 | U |
| Isopropylbenzene | NA | | NA | NA | 0.13 | U | 300 | |
| Methylene chloride | NA | | NA | NA | 0.086 | U | 43 | U |

Data Summary Table
Carswell AFB
East Area Groundwater

| Locxref : | MW-3 | | MW-5 | | MW-8 | | MW-9 | | MW-10 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID : | MW-3WG02 | | MW-5WG02 | | MW-8WG02 | | MW-9WG02 | | MW-10WG02 | |
| Sample Date : | 24-Oct-97 | | 28-Oct-97 | | 21-Oct-97 | | 20-Oct-97 | | 30-Oct-97 | |
| Naphthalene | NA | | NA | | NA | | 0.088 | U | 950 | |
| Styrene | NA | | NA | | NA | | 0.094 | U | 47 | U |
| Tetrachloroethene | NA | | NA | | NA | | 0.13 | U | 65 | U |
| Toluene | NA | | NA | | NA | | 0.14 | U | 8700 | |
| Trichloroethene | NA | | NA | | NA | | 0.097 | U | 48 | U |
| Trichlorofluoromethane | NA | | NA | | NA | | 0.16 | U | 80 | U |
| Vinyl chloride | NA | | NA | | NA | | 0.13 | U | 65 | U |
| cis-1,2-Dichloroethene | NA | | NA | | NA | | 0.13 | U | 65 | U |
| cis-1,3-Dichloropropene | NA | | NA | | NA | | 0.081 | U | 40 | U |
| m-Xylene & p-Xylene | NA | | NA | | NA | | 0.27 | U | 11000 | |
| n-Butylbenzene | NA | | NA | | NA | | 0.14 | U | 70 | U |
| n-Propylbenzene | NA | | NA | | NA | | 0.12 | U | 60 | U |
| o-Xylene | NA | | NA | | NA | | 0.11 | U | 4300 | |
| p-Isopropyltoluene | NA | | NA | | NA | | 0.13 | U | 65 | U |
| sec-Butylbenzene | NA | | NA | | NA | | 0.48 | F | 70 | U |
| tert-Butylbenzene | NA | | NA | | NA | | 0.13 | U | 65 | U |
| trans-1,2-Dichloroethene | NA | | NA | | NA | | 0.088 | U | 44 | U |
| trans-1,3-Dichloropropene | NA | | NA | | NA | | 0.11 | U | 55 | U |
| **SW846 9056 - SW9056/NONE (mg/l)** | | | | | | | | | | |
| Chloride | 38.4 | | 21.4 | | 44.2 | | NA | | NA | |
| Nitrate as N | 1 | | 0.083 | F | 0.18 | | NA | | NA | |
| Sulfate | 24.2 | | 61.3 | | 26.2 | | NA | | NA | |
| **Total Organic Carbon - SW9060/NONE (mg/l)** | | | | | | | | | | |
| Total Organic Carbon | 2.4 | U | 30 | | 3.2 | U | NA | | NA | |

Data Summary Table
Carswell AFB
East Area Groundwater

| Locxref: | MW-11 | | MW-12 | | OT-15C | | SD13-01 | | SD13-02 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | MW-11GW02 | | MW-12WG02 | | OT15CWG02 | | SD13-01WG02 | | SD13-02WG02 | |
| Sample Date: | 24-Oct-97 | | 20-Oct-97 | | 20-Oct-97 | | 22-Oct-97 | | 22-Oct-97 | |
| **Alkalinity (Titrimetric) - E310.1/NONE (mg/l)** | | | | | | | | | | |
| Alkalinity as CaCO3 to pH 4.5 | NA | | NA | | NA | | 330 | | 350 | |
| **EPA-9/RSK-175 Modified A2720C - M2720C/METHOD (ug/l)** | | | | | | | | | | |
| Ethane | NA | | NA | | NA | | 4.6 | U | 3.5 | F |
| Ethene | NA | | NA | | NA | | 5.2 | U | 2.6 | U |
| Methane | NA | | NA | | NA | | 3200 | | 980 | |
| **Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3050 (mg/l)** | | | | | | | | | | |
| Calcium | 154 | | 254 | | 147 | | NA | | NA | |
| Magnesium | 11 | | 9.2 | | 4.4 | | NA | | NA | |
| Potassium | 0.73 | F | 0.3 | U | 2.1 | F | NA | | NA | |
| Sodium | 57.7 | | 51 | | 24.3 | | NA | | NA | |
| **Inductively Coupled Plasma Mass Spectrometry - SW6020/SW3020 (mg/l)** | | | | | | | | | | |
| Aluminum | 0.023 | F | 0.03 | F | 0.032 | F | NA | | NA | |
| Antimony | 0.00017 | U | 0.00016 | F | 0.00017 | U | NA | | NA | |
| Arsenic | 0.0038 | F | 0.0016 | F | 0.0012 | F | NA | | NA | |
| Barium | 0.14 | | 0.069 | | 0.17 | | NA | | NA | |
| Beryllium | 0.000069 | U | 0.000069 | U | 0.000069 | U | NA | | NA | |
| Cadmium | 0.00005 | F | 0.00004 | U | 0.00004 | U | NA | | NA | |
| Chromium | 0.0017 | F | 0.00037 | F | 0.00027 | F | NA | | NA | |
| Cobalt | 0.003 | F | 0.00067 | F | 0.00039 | F | NA | | NA | |
| Copper | 0.0022 | F | 0.0039 | F | 0.0039 | F | NA | | NA | |
| Iron | 1.5 | | 1.6 | | 0.93 | | NA | | NA | |
| Lead | 0.00038 | F | 0.00037 | F | 0.00088 | F | NA | | NA | |
| Manganese | 0.8 | | 0.03 | | 0.07 | | NA | | NA | |
| Molybdenum | 0.0012 | F | 0.00036 | F | 0.00066 | F | NA | | NA | |
| Nickel | 0.013 | F | 0.014 | F | 0.009 | F | NA | | NA | |
| Selenium | 0.0067 | F | 0.0059 | F | 0.0048 | F | NA | | NA | |
| Silver | 0.0002 | U | 0.0002 | U | 0.0002 | U | NA | | NA | |
| Thallium | 0.00002 | U | 0.00002 | U | 0.00004 | F | NA | | NA | |
| Vanadium | 0.0014 | F | 0.00067 | F | 0.00056 | F | NA | | NA | |
| Zinc | 0.018 | F | 0.015 | F | 0.026 | U | NA | | NA | |
| **Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)** | | | | | | | | | | |
| Mercury | 0.000053 | U | 0.000053 | U | 0.000053 | U | NA | | NA | |
| **Aromatic Volatile Organics - SW8020/SW5030 (percent)** | | | | | | | | | | |
| Benzene | NA | | NA | | NA | | 0.21 | U | 0.21 | U |
| Ethylbenzene | NA | | NA | | NA | | 0.35 | U | 0.35 | U |
| Methyl tert-butyl ether | NA | | NA | | NA | | NA | | NA | |
| Toluene | NA | | NA | | NA | | 0.3 | F | 0.15 | F |
| Xylenes (total) | NA | | NA | | NA | | 0.81 | F | 0.68 | UJ |

Data Summary Table
Carswell AFB
East Area Groundwater

| Locxref : | MW-11 | | MW-12 | | OT-15C | | SD13-01 | SD13-02 |
|---|---|---|---|---|---|---|---|---|
| Sample ID : | MW-11GW02 | | MW-12WG02 | | OT15CWG02 | | SD13-01WG02 | SD13-02WG02 |
| Sample Date : | 24-Oct-97 | | 20-Oct-97 | | 20-Oct-97 | | 22-Oct-97 | 22-Oct-97 |
| **Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)** | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.1 | U | 0.1 | U | 0.1 | U | NA | NA |
| 1,1,1-Trichloroethane | 0.11 | U | 0.11 | U | 0.11 | U | NA | NA |
| 1,1,2,2-Tetrachloroethane | 0.13 | U | 0.13 | U | 0.13 | U | NA | NA |
| 1,1,2-Trichloroethane | 0.074 | U | 0.074 | U | 0.074 | U | NA | NA |
| 1,1-Dichloroethane | 0.075 | U | 0.075 | U | 0.075 | U | NA | NA |
| 1,1-Dichloroethene | 0.14 | U | 0.14 | U | 0.14 | U | NA | NA |
| 1,1-Dichloropropene | 0.15 | U | 0.15 | U | 0.15 | U | NA | NA |
| 1,2,3-Trichlorobenzene | 0.12 | U | 0.12 | U | 0.12 | U | NA | NA |
| 1,2,3-Trichloropropane | 0.2 | U | 0.2 | U | 0.2 | U | NA | NA |
| 1,2,4-Trichlorobenzene | 0.11 | U | 0.11 | U | 0.11 | U | NA | NA |
| 1,2,4-Trimethylbenzene | 0.12 | U | 0.12 | U | 0.12 | U | NA | NA |
| 1,2-Dibromo-3-chloropropane (DBCP) | 0.29 | U | 0.29 | U | 0.29 | U | NA | NA |
| 1,2-Dibromoethane (EDB) | 0.08 | U | 0.08 | U | 0.08 | U | NA | NA |
| 1,2-Dichlorobenzene | 0.13 | U | 0.13 | U | 0.13 | U | NA | NA |
| 1,2-Dichloroethane | 0.077 | U | 0.077 | U | 0.077 | U | NA | NA |
| 1,2-Dichloropropane | 0.085 | U | 0.085 | U | 0.085 | U | NA | NA |
| 1,3,5-Trimethylbenzene | 0.15 | U | 0.15 | U | 0.15 | U | NA | NA |
| 1,3-Dichlorobenzene | 0.11 | U | 0.11 | U | 0.11 | U | NA | NA |
| 1,3-Dichloropropane | 0.066 | U | 0.066 | U | 0.066 | U | NA | NA |
| 1,4-Dichlorobenzene | 0.14 | U | 0.14 | U | 0.14 | U | NA | NA |
| 1-Chlorohexane | 0.11 | U | 0.11 | U | 0.11 | U | NA | NA |
| 2,2-Dichloropropane | 0.15 | U | 0.15 | U | 0.15 | U | NA | NA |
| 2-Chlorotoluene | 0.14 | U | 0.14 | U | 0.14 | U | NA | NA |
| 4-Chlorotoluene | 0.12 | U | 0.12 | U | 0.12 | U | NA | NA |
| Benzene | 0.11 | U | 0.11 | U | 0.11 | U | NA | NA |
| Bromobenzene | 0.13 | U | 0.13 | U | 0.13 | U | NA | NA |
| Bromochloromethane | 0.13 | U | 0.13 | U | 0.13 | U | NA | NA |
| Bromodichloromethane | 0.11 | U | 0.11 | U | 0.11 | U | NA | NA |
| Bromoform | 0.4 | U | 0.4 | U | 0.4 | U | NA | NA |
| Bromomethane | 0.17 | U | 0.17 | U | 0.17 | U | NA | NA |
| Carbon tetrachloride | 0.14 | U | 0.14 | U | 0.14 | U | NA | NA |
| Chlorobenzene | 0.14 | U | 0.14 | U | 0.14 | U | NA | NA |
| Chloroethane | 0.066 | U | 0.066 | U | 0.066 | U | NA | NA |
| Chloroform | 0.097 | U | 0.097 | U | 0.097 | U | NA | NA |
| Chloromethane | 0.08 | U | 0.08 | U | 0.08 | U | NA | NA |
| Dibromochloromethane | 0.1 | U | 0.1 | U | 0.1 | U | NA | NA |
| Dibromomethane | 0.096 | U | 0.096 | U | 0.096 | U | NA | NA |
| Dichlorodifluoromethane | 0.14 | U | 0.14 | U | 0.14 | U | NA | NA |
| Ethylbenzene | 0.16 | U | 0.16 | U | 0.16 | U | NA | NA |
| Hexachlorobutadiene | 0.15 | U | 0.15 | U | 0.15 | U | NA | NA |
| Isopropylbenzene | 0.13 | U | 0.13 | U | 0.13 | U | NA | NA |
| Methylene chloride | 0.086 | U | 0.086 | U | 0.086 | U | NA | NA |

Data Summary Table
Carswell AFB
East Area Groundwater

| Locxref: | MW-11 | | MW-12 | | OT-15C | | SD13-01 | | SD13-02 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | MW-11GW02 | | MW-12WG02 | | OT15CWG02 | | SD13-01WG02 | | SD13-02WG02 | |
| Sample Date: | 24-Oct-97 | | 20-Oct-97 | | 20-Oct-97 | | 22-Oct-97 | | 22-Oct-97 | |
| Naphthalene | 0.088 | U | 0.088 | U | 0.088 | U | NA | | NA | |
| Styrene | 0.094 | U | 0.094 | U | 0.094 | U | NA | | NA | |
| Tetrachloroethene | 0.13 | U | 0.13 | U | 0.13 | U | NA | | NA | |
| Toluene | 0.3 | F | 0.14 | U | 0.14 | U | NA | | NA | |
| Trichloroethene | 0.097 | U | 0.097 | U | 0.097 | U | NA | | NA | |
| Trichlorofluoromethane | 0.16 | U | 0.16 | U | 0.16 | U | NA | | NA | |
| Vinyl chloride | 0.13 | U | 0.13 | U | 0.13 | U | NA | | NA | |
| cis-1,2-Dichloroethene | 0.13 | U | 0.13 | U | 0.13 | U | NA | | NA | |
| cis-1,3-Dichloropropene | 0.081 | U | 0.081 | U | 0.081 | U | NA | | NA | |
| m-Xylene & p-Xylene | 0.27 | U | 0.27 | U | 0.27 | U | NA | | NA | |
| n-Butylbenzene | 0.14 | U | 0.14 | U | 0.14 | U | NA | | NA | |
| n-Propylbenzene | 0.12 | U | 0.12 | U | 0.12 | U | NA | | NA | |
| o-Xylene | 0.11 | U | 0.11 | U | 0.11 | U | NA | | NA | |
| p-Isopropyltoluene | 0.13 | U | 0.13 | U | 0.13 | U | NA | | NA | |
| sec-Butylbenzene | 0.14 | U | 0.14 | U | 0.14 | U | NA | | NA | |
| tert-Butylbenzene | 0.13 | U | 0.13 | U | 0.13 | U | NA | | NA | |
| trans-1,2-Dichloroethene | 0.088 | U | 0.088 | U | 0.088 | U | NA | | NA | |
| trans-1,3-Dichloropropene | 0.11 | U | 0.11 | U | 0.11 | U | NA | | NA | |
| **SW846 9056 - SW9056/NONE (mg/l)** | | | | | | | | | | |
| Chloride | NA | | NA | | NA | | 25.3 | | 25.7 | |
| Nitrate as N | NA | | NA | | NA | | 0.2 | | 0.2 | |
| Sulfate | NA | | NA | | NA | | 0.53 | U | 1.1 | U |
| **Total Organic Carbon - SW9060/NONE (mg/l)** | | | | | | | | | | |
| Total Organic Carbon | NA | | NA | | NA | | 7.7 | | 4.4 | |

Data Summary Table
Carswell AFB
East Area Groundwater

| Locxref: | SD13-04 | | SD13-06 | | ST14-02 | | ST14-03 | | ST14-04 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | SD13-04WG02 | | SD13-06WG02 | | ST14-02WG02 | | ST14-03WG02 | | DUP03-WG02 | |
| Sample Date: | 22-Oct-97 | | 20-Oct-97 | | 27-Oct-97 | | 22-Oct-97 | | 24-Oct-97 | |
| **Alkalinity (Titrimetric) - E310.1/NONE (mg/l)** | | | | | | | | | | |
| Alkalinity as CaCO3 to pH 4.5 | 380 | | NA | | 340 | | 300 | | 310 | |
| **EPA-9/RSK-175 Modified A2720C - M2720C/METHOD (ug/l)** | | | | | | | | | | |
| Ethane | 4.6 | U | NA | | 4.6 | UJ | 1.7 | F | 6.6 | F |
| Ethene | 5.2 | U | NA | | 5.2 | UJ | 1.1 | F | 5.2 | U |
| Methane | 2800 | | NA | | 430 | J | 170 | | 3000 | |
| **Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3050 (mg/l)** | | | | | | | | | | |
| Calcium | NA | | 172 | | 119 | | NA | | NA | |
| Magnesium | NA | | 9.8 | | 5.8 | | NA | | NA | |
| Potassium | NA | | 0.59 | F | 1.9 | F | NA | | NA | |
| Sodium | NA | | 28.4 | | 25.2 | | NA | | NA | |
| **Inductively Coupled Plasma Mass Spectrometry - SW6020/SW3020 (mg/l)** | | | | | | | | | | |
| Aluminum | NA | | 0.02 | F | 0.011 | F | NA | | NA | |
| Antimony | NA | | 0.00017 | U | 0.00033 | F | NA | | NA | |
| Arsenic | NA | | 0.0077 | F | 0.011 | F | NA | | NA | |
| Barium | NA | | 0.24 | | 0.11 | | NA | | NA | |
| Beryllium | NA | | 0.000069 | U | 0.000069 | U | NA | | NA | |
| Cadmium | NA | | 0.000054 | F | 0.00004 | U | NA | | NA | |
| Chromium | NA | | 0.0017 | F | 0.00039 | F | NA | | NA | |
| Cobalt | NA | | 0.0068 | F | 0.00036 | F | NA | | NA | |
| Copper | NA | | 0.0046 | F | 0.00068 | F | NA | | NA | |
| Iron | NA | | 8.4 | | 9.7 | | NA | | NA | |
| Lead | NA | | 0.0011 | F | 0.00051 | F | NA | | NA | |
| Manganese | NA | | 0.71 | | 0.22 | | NA | | NA | |
| Molybdenum | NA | | 0.004 | F | 0.0022 | F | NA | | NA | |
| Nickel | NA | | 0.013 | F | 0.0074 | F | NA | | NA | |
| Selenium | NA | | 0.0066 | F | 0.0035 | F | NA | | NA | |
| Silver | NA | | 0.0002 | U | 0.0001 | F | NA | | NA | |
| Thallium | NA | | 0.00002 | U | 0.00002 | U | NA | | NA | |
| Vanadium | NA | | 0.00041 | F | 0.00017 | U | NA | | NA | |
| Zinc | NA | | 0.046 | U | 0.0099 | F | NA | | NA | |
| **Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)** | | | | | | | | | | |
| Mercury | NA | | 0.000053 | U | 0.000053 | U | NA | | NA | |
| **Aromatic Volatile Organics - SW8020/SW5030 (percent)** | | | | | | | | | | |
| Benzene | 0.21 | U | NA | | 1.5 | F | 0.21 | U | 0.21 | U |
| Ethylbenzene | 0.35 | U | NA | | 0.35 | U | 0.35 | U | 0.35 | U |
| Methyl tert-butyl ether | NA | | NA | | NA | | NA | | NA | |
| Toluene | 0.13 | U | NA | | 0.62 | F | 0.13 | U | 0.13 | UJ |
| Xylenes (total) | 1.2 | F | NA | | 0.68 | UJ | 0.68 | UJ | 0.68 | UJ |

Data Summary Table
Carswell AFB
East Area Groundwater

| Locxref: | SD13-04 | SD13-06 | | ST14-02 | ST14-03 | ST14-04 |
|---|---|---|---|---|---|---|
| Sample ID: | SD13-04WG02 | SD13-06WG02 | | ST14-02WG02 | ST14-03WG02 | DUP03-WG02 |
| Sample Date: | 22-Oct-97 | 20-Oct-97 | | 27-Oct-97 | 22-Oct-97 | 24-Oct-97 |
| **Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)** | | | | | | |
| 1,1,1,2-Tetrachloroethane | NA | 0.1 | U | NA | NA | NA |
| 1,1,1-Trichloroethane | NA | 0.11 | U | NA | NA | NA |
| 1,1,2,2-Tetrachloroethane | NA | 0.13 | U | NA | NA | NA |
| 1,1,2-Trichloroethane | NA | 0.074 | U | NA | NA | NA |
| 1,1-Dichloroethane | NA | 0.075 | U | NA | NA | NA |
| 1,1-Dichloroethene | NA | 0.14 | U | NA | NA | NA |
| 1,1-Dichloropropene | NA | 0.15 | U | NA | NA | NA |
| 1,2,3-Trichlorobenzene | NA | 0.12 | U | NA | NA | NA |
| 1,2,3-Trichloropropane | NA | 0.2 | U | NA | NA | NA |
| 1,2,4-Trichlorobenzene | NA | 0.11 | U | NA | NA | NA |
| 1,2,4-Trimethylbenzene | NA | 0.12 | U | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane (DBCP) | NA | 0.29 | U | NA | NA | NA |
| 1,2-Dibromoethane (EDB) | NA | 0.08 | U | NA | NA | NA |
| 1,2-Dichlorobenzene | NA | 0.13 | U | NA | NA | NA |
| 1,2-Dichloroethane | NA | 0.077 | U | NA | NA | NA |
| 1,2-Dichloropropane | NA | 0.085 | U | NA | NA | NA |
| 1,3,5-Trimethylbenzene | NA | 0.15 | U | NA | NA | NA |
| 1,3-Dichlorobenzene | NA | 0.11 | U | NA | NA | NA |
| 1,3-Dichloropropane | NA | 0.066 | U | NA | NA | NA |
| 1,4-Dichlorobenzene | NA | 0.14 | U | NA | NA | NA |
| 1-Chlorohexane | NA | 0.11 | U | NA | NA | NA |
| 2,2-Dichloropropane | NA | 0.15 | U | NA | NA | NA |
| 2-Chlorotoluene | NA | 0.14 | U | NA | NA | NA |
| 4-Chlorotoluene | NA | 0.12 | U | NA | NA | NA |
| Benzene | NA | 0.11 | U | NA | NA | NA |
| Bromobenzene | NA | 0.13 | U | NA | NA | NA |
| Bromochloromethane | NA | 0.13 | U | NA | NA | NA |
| Bromodichloromethane | NA | 0.11 | U | NA | NA | NA |
| Bromoform | NA | 0.4 | U | NA | NA | NA |
| Bromomethane | NA | 0.17 | U | NA | NA | NA |
| Carbon tetrachloride | NA | 0.14 | U | NA | NA | NA |
| Chlorobenzene | NA | 0.14 | U | NA | NA | NA |
| Chloroethane | NA | 0.066 | U | NA | NA | NA |
| Chloroform | NA | 0.097 | U | NA | NA | NA |
| Chloromethane | NA | 0.08 | U | NA | NA | NA |
| Dibromochloromethane | NA | 0.1 | U | NA | NA | NA |
| Dibromomethane | NA | 0.096 | U | NA | NA | NA |
| Dichlorodifluoromethane | NA | 0.14 | U | NA | NA | NA |
| Ethylbenzene | NA | 0.16 | U | NA | NA | NA |
| Hexachlorobutadiene | NA | 0.15 | U | NA | NA | NA |
| Isopropylbenzene | NA | 2.1 | | NA | NA | NA |
| Methylene chloride | NA | 0.086 | U | NA | NA | NA |

Data Summary Table
Carswell AFB
East Area Groundwater

| Locxref : | SD13-04 | | SD13-06 | | ST14-02 | | ST14-03 | ST14-04 | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID : | SD13-04WG02 | | SD13-06WG02 | | ST14-02WG02 | | ST14-03WG02 | DUP03-WG02 | |
| Sample Date : | 22-Oct-97 | | 20-Oct-97 | | 27-Oct-97 | | 22-Oct-97 | 24-Oct-97 | |
| Naphthalene | NA | | 0.088 | U | NA | | NA | NA | |
| Styrene | NA | | 0.094 | U | NA | | NA | NA | |
| Tetrachloroethene | NA | | 0.13 | U | NA | | NA | NA | |
| Toluene | NA | | 0.14 | U | NA | | NA | NA | |
| Trichloroethene | NA | | 0.75 | F | NA | | NA | NA | |
| Trichlorofluoromethane | NA | | 0.16 | U | NA | | NA | NA | |
| Vinyl chloride | NA | | 0.13 | U | NA | | NA | NA | |
| cis-1,2-Dichloroethene | NA | | 0.13 | U | NA | | NA | NA | |
| cis-1,3-Dichloropropene | NA | | 0.081 | U | NA | | NA | NA | |
| m-Xylene & p-Xylene | NA | | 0.27 | U | NA | | NA | NA | |
| n-Butylbenzene | NA | | 0.14 | U | NA | | NA | NA | |
| n-Propylbenzene | NA | | 0.77 | | NA | | NA | NA | |
| o-Xylene | NA | | 0.11 | U | NA | | NA | NA | |
| p-Isopropyltoluene | NA | | 0.13 | U | NA | | NA | NA | |
| sec-Butylbenzene | NA | | 0.14 | U | NA | | NA | NA | |
| tert-Butylbenzene | NA | | 0.81 | F | NA | | NA | NA | |
| trans-1,2-Dichloroethene | NA | | 0.088 | U | NA | | NA | NA | |
| trans-1,3-Dichloropropene | NA | | 0.11 | U | NA | | NA | NA | |
| **SW846 9056 - SW9056/NONE (mg/l)** | | | | | | | | | |
| Chloride | 26.2 | | NA | | 29.9 | | 26.6 | 41 | |
| Nitrate as N | 0.21 | | NA | | 0.15 | | 0.11 | 0.02 | U |
| Sulfate | 0.62 | U | NA | | 0.62 | U | 27.4 | 0.2 | U |
| **Total Organic Carbon - SW9060/NONE (mg/l)** | | | | | | | | | |
| Total Organic Carbon | 9.6 | | NA | | 2.9 | | 4.2 | 6.4 | U |

Data Summary Table
Carswell AFB
East Area Groundwater

| Locxref | ST14-04 | | ST14-14 | | ST14-24 | | ST14-26 | | ST14-26 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | ST14-04WG02 | | ST14-14WG02 | | ST14-24WG02 | | DUP05-WG02 | | ST14-26WG02 | |
| Sample Date | 24-Oct-97 | | 20-Oct-97 | | 21-Oct-97 | | 21-Oct-97 | | 21-Oct-97 | |
| **Alkalinity (Titrimetric) - E310.1/NONE (mg/l)** | | | | | | | | | | |
| Alkalinity as CaCO3 to pH 4.5 | 290 | | 250 | | 320 | | 350 | | 360 | |
| **EPA-9/RSK-175 Modified A2720C - M2720C/METHOD (ug/l)** | | | | | | | | | | |
| Ethane | 5 | F | 230 | | 0.032 | F | 0.021 | F | 0.024 | F |
| Ethene | 5.2 | U | 64 | | 0.15 | F | 0.014 | F | 0.013 | F |
| Methane | 3200 | | 2600 | | 21 | | 0.13 | F | 0.22 | F |
| **Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3050 (mg/l)** | | | | | | | | | | |
| Calcium | NA | | 90.1 | | 113 | | 152 | | 152 | |
| Magnesium | NA | | 4.7 | | 9.2 | | 7.3 | | 7.4 | |
| Potassium | NA | | 0.68 | F | 2.8 | F | 0.57 | F | 0.66 | F |
| Sodium | NA | | 30.1 | | 29.6 | | 20.4 | | 20.7 | |
| **Inductively Coupled Plasma Mass Spectrometry - SW6020/SW3020 (mg/l)** | | | | | | | | | | |
| Aluminum | NA | | 0.023 | F | 0.019 | F | 0.36 | F | 0.46 | F |
| Antimony | NA | | 0.00018 | F | 0.00017 | U | 0.00017 | U | 0.00017 | U |
| Arsenic | NA | | 0.0031 | F | 0.0013 | F | 0.0036 | F | 0.004 | F |
| Barium | NA | | 0.044 | F | 0.26 | | 0.13 | | 0.12 | |
| Beryllium | NA | | 0.000069 | U | 0.000069 | U | 0.00011 | F | 0.000092 | F |
| Cadmium | NA | | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U |
| Chromium | NA | | 0.00055 | F | 0.00027 | F | 0.0013 | F | 0.0015 | F |
| Cobalt | NA | | 0.00025 | F | 0.00034 | F | 0.0013 | F | 0.0013 | F |
| Copper | NA | | 0.0028 | F | 0.001 | F | 0.0033 | F | 0.0032 | F |
| Iron | NA | | 1.8 | | 0.78 | | 1.9 | J | 1.6 | J |
| Lead | NA | | 0.00087 | F | 0.00015 | R | 0.0021 | R | 0.002 | R |
| Manganese | NA | | 0.17 | | 0.077 | | 0.06 | | 0.056 | |
| Molybdenum | NA | | 0.0039 | F | 0.0016 | F | 0.00051 | F | 0.00081 | F |
| Nickel | NA | | 0.0056 | F | 0.0073 | F | 0.011 | F | 0.01 | F |
| Selenium | NA | | 0.0029 | F | 0.0036 | F | 0.0047 | F | 0.005 | F |
| Silver | NA | | 0.0002 | U | 0.0002 | U | 0.00023 | F | 0.00033 | F |
| Thallium | NA | | 0.00002 | U | 0.000028 | F | 0.00002 | U | 0.00002 | U |
| Vanadium | NA | | 0.00017 | U | 0.002 | F | 0.018 | F | 0.018 | F |
| Zinc | NA | | 0.01 | F | 0.017 | F | 0.016 | F | 0.016 | F |
| **Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)** | | | | | | | | | | |
| Mercury | NA | | 0.000053 | U | 0.000053 | U | 0.000053 | U | 0.000053 | U |
| **Aromatic Volatile Organics - SW8020/SW5030 (percent)** | | | | | | | | | | |
| Benzene | 0.21 | U | NA | | NA | | NA | | NA | |
| Ethylbenzene | 0.35 | U | NA | | NA | | NA | | NA | |
| Methyl tert-butyl ether | NA | | NA | | NA | | NA | | NA | |
| Toluene | 1.6 | F | NA | | NA | | NA | | NA | |
| Xylenes (total) | 0.68 | UJ | NA | | NA | | NA | | NA | |

Data Summary Table
Carswell AFB
East Area Groundwater

| Locxref : | ST14-04 | | ST14-14 | | ST14-24 | | ST14-26 | | ST14-26 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID : | ST14-04WG02 | | ST14-14WG02 | | ST14-24WG02 | | DUP05-WG02 | | ST14-26WG02 | |
| Sample Date : | 24-Oct-97 | | 20-Oct-97 | | 21-Oct-97 | | 21-Oct-97 | | 21-Oct-97 | |
| **Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | NA | | 0.1 | U | 0.1 | U | 0.1 | U | 0.1 | U |
| 1,1,1-Trichloroethane | NA | | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U |
| 1,1,2,2-Tetrachloroethane | NA | | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| 1,1,2-Trichloroethane | NA | | 0.074 | U | 0.074 | U | 0.074 | U | 0.074 | U |
| 1,1-Dichloroethane | NA | | 0.075 | U | 0.075 | U | 0.075 | U | 0.075 | U |
| 1,1-Dichloroethene | NA | | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| 1,1-Dichloropropene | NA | | 0.15 | U | 0.15 | U | 0.15 | U | 0.15 | U |
| 1,2,3-Trichlorobenzene | NA | | 0.12 | U | 0.12 | U | 0.12 | U | 0.12 | U |
| 1,2,3-Trichloropropane | NA | | 0.2 | U | 0.2 | U | 0.2 | U | 0.2 | U |
| 1,2,4-Trichlorobenzene | NA | | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U |
| 1,2,4-Trimethylbenzene | NA | | 0.12 | U | 0.12 | U | 0.12 | U | 0.12 | U |
| 1,2-Dibromo-3-chloropropane (DBCP) | NA | | 0.29 | U | 0.29 | U | 0.29 | U | 0.29 | U |
| 1,2-Dibromoethane (EDB) | NA | | 0.08 | U | 0.08 | U | 0.08 | U | 0.08 | U |
| 1,2-Dichlorobenzene | NA | | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| 1,2-Dichloroethane | NA | | 0.077 | U | 0.077 | U | 0.077 | U | 0.077 | U |
| 1,2-Dichloropropane | NA | | 0.085 | U | 0.085 | U | 0.085 | U | 0.085 | U |
| 1,3,5-Trimethylbenzene | NA | | 0.15 | U | 0.15 | U | 0.15 | U | 0.15 | U |
| 1,3-Dichlorobenzene | NA | | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U |
| 1,3-Dichloropropane | NA | | 0.066 | U | 0.066 | U | 0.066 | U | 0.066 | U |
| 1,4-Dichlorobenzene | NA | | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| 1-Chlorohexane | NA | | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U |
| 2,2-Dichloropropane | NA | | 0.15 | U | 0.15 | U | 0.15 | U | 0.15 | U |
| 2-Chlorotoluene | NA | | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| 4-Chlorotoluene | NA | | 0.12 | U | 0.12 | U | 0.12 | U | 0.12 | U |
| Benzene | NA | | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U |
| Bromobenzene | NA | | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| Bromochloromethane | NA | | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| Bromodichloromethane | NA | | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U |
| Bromoform | NA | | 0.4 | U | 0.4 | U | 0.4 | U | 0.4 | U |
| Bromomethane | NA | | 0.17 | U | 0.17 | U | 0.17 | U | 0.17 | U |
| Carbon tetrachloride | NA | | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| Chlorobenzene | NA | | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| Chloroethane | NA | | 0.066 | U | 0.066 | U | 0.066 | U | 0.066 | U |
| Chloroform | NA | | 0.097 | U | 0.097 | U | 0.097 | U | 0.097 | U |
| Chloromethane | NA | | 0.08 | U | 0.08 | U | 0.08 | U | 0.08 | U |
| Dibromochloromethane | NA | | 0.1 | U | 0.1 | U | 0.1 | U | 0.1 | U |
| Dibromomethane | NA | | 0.096 | U | 0.096 | U | 0.096 | U | 0.096 | U |
| Dichlorodifluoromethane | NA | | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| Ethylbenzene | NA | | 0.16 | U | 0.16 | U | 0.16 | U | 0.16 | U |
| Hexachlorobutadiene | NA | | 0.15 | U | 0.15 | U | 0.15 | U | 0.15 | U |
| Isopropylbenzene | NA | | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| Methylene chloride | NA | | 0.086 | U | 0.086 | U | 0.086 | U | 0.086 | U |

Data Summary Table
Carswell AFB
East Area Groundwater

| Locxref: | ST14-04 | | ST14-14 | | ST14-24 | | ST14-26 | | ST14-26 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | ST14-04WG02 | | ST14-14WG02 | | ST14-24WG02 | | DUP05-WG02 | | ST14-26WG02 | |
| Sample Date: | 24-Oct-97 | | 20-Oct-97 | | 21-Oct-97 | | 21-Oct-97 | | 21-Oct-97 | |
| Naphthalene | NA | | 0.088 | U | 0.088 | U | 0.088 | U | 0.088 | U |
| Styrene | NA | | 0.094 | U | 0.094 | U | 0.094 | U | 0.094 | U |
| Tetrachloroethene | NA | | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| Toluene | NA | | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| Trichloroethene | NA | | 0.097 | U | 0.097 | U | 0.097 | U | 0.097 | U |
| Trichlorofluoromethane | NA | | 0.16 | U | 0.16 | U | 0.16 | U | 0.16 | U |
| Vinyl chloride | NA | | 0.13 | U | 3.4 | | 0.13 | U | 0.13 | U |
| cis-1,2-Dichloroethene | NA | | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| cis-1,3-Dichloropropene | NA | | 0.081 | U | 0.081 | U | 0.081 | U | 0.081 | U |
| m-Xylene & p-Xylene | NA | | 0.27 | U | 0.27 | U | 0.27 | U | 0.27 | U |
| n-Butylbenzene | NA | | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| n-Propylbenzene | NA | | 0.12 | U | 0.12 | U | 0.12 | U | 0.12 | U |
| o-Xylene | NA | | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U |
| p-Isopropyltoluene | NA | | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| sec-Butylbenzene | NA | | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| tert-Butylbenzene | NA | | 1.2 | F | 0.13 | U | 0.13 | U | 0.13 | U |
| trans-1,2-Dichloroethene | NA | | 0.088 | U | 0.088 | U | 0.088 | U | 0.088 | U |
| trans-1,3-Dichloropropene | NA | | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U |
| **SW846 9056 - SW9056/NONE (mg/l)** | | | | | | | | | | |
| Chloride | 41.1 | | 31.1 | | 16.7 | | 25 | | 25.3 | |
| Nitrate as N | 0.02 | U | 0.13 | | 0.17 | | 0.2 | | 0.2 | |
| Sulfate | 0.2 | U | 0.41 | F | 18.1 | | 17.8 | | 17.6 | |
| **Total Organic Carbon - SW9060/NONE (mg/l)** | | | | | | | | | | |
| Total Organic Carbon | 6.2 | U | 2.7 | U | 2.3 | U | 2.8 | U | 2.7 | U |

Data Summary Table
Carswell AFB
East Area Groundwater

| Locxref : | ST14-28 | | ST14-29 | | ST14-W16 | | ST14-W18 | | ST14-W21 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID : | ST14-28WG02 | | ST14-29WG02 | | ST14-W16WG02 | | ST14-W18WG02 | | ST14-W21WG02 | |
| Sample Date : | 24-Oct-97 | | 24-Oct-97 | | 27-Oct-97 | | 27-Oct-97 | | 28-Oct-97 | |
| **Alkalinity (Titrimetric) - E310.1/NONE (mg/l)** | | | | | | | | | | |
| Alkalinity as CaCO3 to pH 4.5 | 450 | | 520 | | 330 | | 360 | | 420 | |
| **EPA-9/RSK-175 Modified A2720C - M2720C/METHOD (ug/l)** | | | | | | | | | | |
| Ethane | 12 | U | 4.6 | U | 4.6 | UJ | 30 | F | 6.2 | F |
| Ethene | 13 | U | 5.2 | U | 5.2 | UJ | 10 | UJ | 2.1 | U |
| Methane | 3300 | | 2200 | | 740 | J | 4500 | J | 720 | |
| **Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3050 (mg/l)** | | | | | | | | | | |
| Calcium | NA | | NA | | NA | | 150 | | 169 | |
| Magnesium | NA | | NA | | NA | | 6 | | 5.6 | |
| Potassium | NA | | NA | | NA | | 1 | F | 0.73 | F |
| Sodium | NA | | NA | | NA | | 21.5 | | 12.9 | |
| **Inductively Coupled Plasma Mass Spectrometry - SW6020/SW3020 (mg/l)** | | | | | | | | | | |
| Aluminum | NA | | NA | | NA | | 0.2 | F | 0.42 | F |
| Antimony | NA | | NA | | NA | | 0.01 | F | 0.00054 | F |
| Arsenic | NA | | NA | | NA | | 0.07 | F | 0.068 | F |
| Barium | NA | | NA | | NA | | 0.21 | | 0.19 | |
| Beryllium | NA | | NA | | NA | | 0.00014 | F | 0.00013 | F |
| Cadmium | NA | | NA | | NA | | 0.000061 | F | 0.000044 | F |
| Chromium | NA | | NA | | NA | | 0.0025 | F | 0.0088 | F |
| Cobalt | NA | | NA | | NA | | 0.0029 | F | 0.0019 | F |
| Copper | NA | | NA | | NA | | 0.0045 | F | 0.0045 | F |
| Iron | NA | | NA | | NA | | 13 | | 8.7 | |
| Lead | NA | | NA | | NA | | 0.02 | F | 0.0028 | F |
| Manganese | NA | | NA | | NA | | 0.18 | | 0.44 | |
| Molybdenum | NA | | NA | | NA | | 0.0035 | F | 0.0036 | F |
| Nickel | NA | | NA | | NA | | 0.012 | F | 0.016 | F |
| Selenium | NA | | NA | | NA | | 0.01 | F | 0.0054 | F |
| Silver | NA | | NA | | NA | | 0.000067 | F | 0.0002 | U |
| Thallium | NA | | NA | | NA | | 0.00002 | U | 0.00002 | U |
| Vanadium | NA | | NA | | NA | | 0.0022 | F | 0.003 | F |
| Zinc | NA | | NA | | NA | | 0.025 | | 0.025 | |
| **Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)** | | | | | | | | | | |
| Mercury | NA | | NA | | NA | | 0.000053 | U | 0.000053 | U |
| **Aromatic Volatile Organics - SW8020/SW5030 (percent)** | | | | | | | | | | |
| Benzene | 0.21 | U | 0.21 | U | 6 | | 0.21 | U | 1.2 | F |
| Ethylbenzene | 0.35 | U | 0.35 | U | 0.35 | U | 9 | | 0.35 | U |
| Methyl tert-butyl ether | NA | | NA | | NA | | NA | | NA | |
| Toluene | 1.3 | F | 2.5 | U | 1.8 | F | 41 | | 0.13 | U |
| Xylenes (total) | 0.75 | F | 0.71 | F | 0.68 | UJ | 61 | J | 0.68 | UJ |

Data Summary Table
Carswell AFB
East Area Groundwater

| Locxref | ST14-28 | ST14-29 | ST14-W16 | ST14-W18 | ST14-W21 |
|---|---|---|---|---|---|
| Sample ID | ST14-28WG02 | ST14-29WG02 | ST14-W16WG02 | ST14-W18WG02 | ST14-W21WG02 |
| Sample Date | 24-Oct-97 | 24-Oct-97 | 27-Oct-97 | 27-Oct-97 | 28-Oct-97 |
| **Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)** | | | | | |
| 1,1,1,2-Tetrachloroethane | NA | NA | NA | NA | NA |
| 1,1,1-Trichloroethane | NA | NA | NA | NA | NA |
| 1,1,2,2-Tetrachloroethane | NA | NA | NA | NA | NA |
| 1,1,2-Trichloroethane | NA | NA | NA | NA | NA |
| 1,1-Dichloroethane | NA | NA | NA | NA | NA |
| 1,1-Dichloroethene | NA | NA | NA | NA | NA |
| 1,1-Dichloropropene | NA | NA | NA | NA | NA |
| 1,2,3-Trichlorobenzene | NA | NA | NA | NA | NA |
| 1,2,3-Trichloropropane | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | NA | NA | NA | NA | NA |
| 1,2,4-Trimethylbenzene | NA | NA | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane (DBCP) | NA | NA | NA | NA | NA |
| 1,2-Dibromoethane (EDB) | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | NA | NA | NA | NA | NA |
| 1,2-Dichloroethane | NA | NA | NA | NA | NA |
| 1,2-Dichloropropane | NA | NA | NA | NA | NA |
| 1,3,5-Trimethylbenzene | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | NA | NA | NA | NA | NA |
| 1,3-Dichloropropane | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | NA | NA | NA | NA | NA |
| 1-Chlorohexane | NA | NA | NA | NA | NA |
| 2,2-Dichloropropane | NA | NA | NA | NA | NA |
| 2-Chlorotoluene | NA | NA | NA | NA | NA |
| 4-Chlorotoluene | NA | NA | NA | NA | NA |
| Benzene | NA | NA | NA | NA | NA |
| Bromobenzene | NA | NA | NA | NA | NA |
| Bromochloromethane | NA | NA | NA | NA | NA |
| Bromodichloromethane | NA | NA | NA | NA | NA |
| Bromoform | NA | NA | NA | NA | NA |
| Bromomethane | NA | NA | NA | NA | NA |
| Carbon tetrachloride | NA | NA | NA | NA | NA |
| Chlorobenzene | NA | NA | NA | NA | NA |
| Chloroethane | NA | NA | NA | NA | NA |
| Chloroform | NA | NA | NA | NA | NA |
| Chloromethane | NA | NA | NA | NA | NA |
| Dibromochloromethane | NA | NA | NA | NA | NA |
| Dibromomethane | NA | NA | NA | NA | NA |
| Dichlorodifluoromethane | NA | NA | NA | NA | NA |
| Ethylbenzene | NA | NA | NA | NA | NA |
| Hexachlorobutadiene | NA | NA | NA | NA | NA |
| Isopropylbenzene | NA | NA | NA | NA | NA |
| Methylene chloride | NA | NA | NA | NA | NA |

Data Summary Table
Carswell AFB
East Area Groundwater

| Locxref : | ST14-28 | | ST14-29 | | ST14-W16 | | ST14-W18 | | ST14-W21 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID : | ST14-28WG02 | | ST14-29WG02 | | ST14-W16WG02 | | ST14-W18WG02 | | ST14-W21WG02 | |
| Sample Date : | 24-Oct-97 | | 24-Oct-97 | | 27-Oct-97 | | 27-Oct-97 | | 28-Oct-97 | |
| Naphthalene | NA | | NA | | NA | | NA | | NA | |
| Styrene | NA | | NA | | NA | | NA | | NA | |
| Tetrachloroethene | NA | | NA | | NA | | NA | | NA | |
| Toluene | NA | | NA | | NA | | NA | | NA | |
| Trichloroethene | NA | | NA | | NA | | NA | | NA | |
| Trichlorofluoromethane | NA | | NA | | NA | | NA | | NA | |
| Vinyl chloride | NA | | NA | | NA | | NA | | NA | |
| cis-1,2-Dichloroethene | NA | | NA | | NA | | NA | | NA | |
| cis-1,3-Dichloropropene | NA | | NA | | NA | | NA | | NA | |
| m-Xylene & p-Xylene | NA | | NA | | NA | | NA | | NA | |
| n-Butylbenzene | NA | | NA | | NA | | NA | | NA | |
| n-Propylbenzene | NA | | NA | | NA | | NA | | NA | |
| o-Xylene | NA | | NA | | NA | | NA | | NA | |
| p-Isopropyltoluene | NA | | NA | | NA | | NA | | NA | |
| sec-Butylbenzene | NA | | NA | | NA | | NA | | NA | |
| tert-Butylbenzene | NA | | NA | | NA | | NA | | NA | |
| trans-1,2-Dichloroethene | NA | | NA | | NA | | NA | | NA | |
| trans-1,3-Dichloropropene | NA | | NA | | NA | | NA | | NA | |
| **SW846 9056 - SW9056/NONE (mg/l)** | | | | | | | | | | |
| Chloride | 30.7 | | 15.7 | | 26.5 | | 42.6 | | 14.9 | |
| Nitrate as N | 0.27 | | 0.097 | F | 0.18 | | 0.28 | | 0.19 | |
| Sulfate | 0.2 | U | 0.2 | U | 5.4 | | 1.2 | U | 0.54 | U |
| **Total Organic Carbon - SW9060/NONE (mg/l)** | | | | | | | | | | |
| Total Organic Carbon | 17 | | 11 | | 5 | | 18 | | 6.7 | |

Data Summary Table
Carswell AFB
East Area Groundwater

| | Locxref : | ST14-W31 | |
|---|---|---|---|
| | Sample ID : | ST14-W31WG02 | |
| | Sample Date : | 22-Oct-97 | |
| **Alkalinity (Titrimetric) - E310.1/NONE (mg/l)** | | | |
| Alkalinity as CaCO3 to pH 4 5 | | 360 | |
| **EPA-9/RSK-175 Modified A2720C - M2720C/METHOD (ug/l)** | | | |
| Ethane | | 0 12 | F |
| Ethene | | 0.12 | F |
| Methane | | 13 | U |
| **Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3050 (mg/l)** | | | |
| Calcium | | NA | |
| Magnesium | | NA | |
| Potassium | | NA | |
| Sodium | | NA | |
| **Inductively Coupled Plasma Mass Spectrometry - SW6020/SW3020 (mg/l)** | | | |
| Aluminum | | NA | |
| Antimony | | NA | |
| Arsenic | | NA | |
| Barium | | NA | |
| Beryllium | | NA | |
| Cadmium | | NA | |
| Chromium | | NA | |
| Cobalt | | NA | |
| Copper | | NA | |
| Iron | | NA | |
| Lead | | NA | |
| Manganese | | NA | |
| Molybdenum | | NA | |
| Nickel | | NA | |
| Selenium | | NA | |
| Silver | | NA | |
| Thallium | | NA | |
| Vanadium | | NA | |
| Zinc | | NA | |
| **Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)** | | | |
| Mercury | | NA | |
| **Aromatic Volatile Organics - SW8020/SW5030 (percent)** | | | |
| Benzene | | 0.21 | U |
| Ethylbenzene | | 0.35 | U |
| Methyl tert-butyl ether | | NA | |
| Toluene | | 0.13 | U |
| Xylenes (total) | | 0.68 | UJ |

Data Summary Table
Carswell AFB
East Area Groundwater

| | Locxref : | ST14-W31 |
|---|---|---|
| | Sample ID : | ST14-W31WG02 |
| | Sample Date : | 22-Oct-97 |

| Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l) | |
|---|---|
| 1,1,1,2-Tetrachloroethane | NA |
| 1,1,1-Trichloroethane | NA |
| 1,1,2,2-Tetrachloroethane | NA |
| 1,1,2-Trichloroethane | NA |
| 1,1-Dichloroethane | NA |
| 1,1-Dichloroethene | NA |
| 1,1-Dichloropropene | NA |
| 1,2,3-Trichlorobenzene | NA |
| 1,2,3-Trichloropropane | NA |
| 1,2,4-Trichlorobenzene | NA |
| 1,2,4-Trimethylbenzene | NA |
| 1,2-Dibromo-3-chloropropane (DBCP) | NA |
| 1,2-Dibromoethane (EDB) | NA |
| 1,2-Dichlorobenzene | NA |
| 1,2-Dichloroethane | NA |
| 1,2-Dichloropropane | NA |
| 1,3,5-Trimethylbenzene | NA |
| 1,3-Dichlorobenzene | NA |
| 1,3-Dichloropropane | NA |
| 1,4-Dichlorobenzene | NA |
| 1-Chlorohexane | NA |
| 2,2-Dichloropropane | NA |
| 2-Chlorotoluene | NA |
| 4-Chlorotoluene | NA |
| Benzene | NA |
| Bromobenzene | NA |
| Bromochloromethane | NA |
| Bromodichloromethane | NA |
| Bromoform | NA |
| Bromomethane | NA |
| Carbon tetrachloride | NA |
| Chlorobenzene | NA |
| Chloroethane | NA |
| Chloroform | NA |
| Chloromethane | NA |
| Dibromochloromethane | NA |
| Dibromomethane | NA |
| Dichlorodifluoromethane | NA |
| Ethylbenzene | NA |
| Hexachlorobutadiene | NA |
| Isopropylbenzene | NA |
| Methylene chloride | NA |

Data Summary Table
Carswell AFB
East Area Groundwater

| | Locxref : | ST14-W31 | |
|---|---|---|---|
| | Sample ID : | ST14-W31WG02 | |
| | Sample Date | 22-Oct-97 | |
| Naphthalene | | NA | |
| Styrene | | NA | |
| Tetrachloroethene | | NA | |
| Toluene | | NA | |
| Trichloroethene | | NA | |
| Trichlorofluoromethane | | NA | |
| Vinyl chloride | | NA | |
| cis-1,2-Dichloroethene | | NA | |
| cis-1,3-Dichloropropene | | NA | |
| m-Xylene & p-Xylene | | NA | |
| n-Butylbenzene | | NA | |
| n-Propylbenzene | | NA | |
| o-Xylene | | NA | |
| p-Isopropyltoluene | | NA | |
| sec-Butylbenzene | | NA | |
| tert-Butylbenzene | | NA | |
| trans-1,2-Dichloroethene | | NA | |
| trans-1,3-Dichloropropene | | NA | |
| **SW846 9056 - SW9056/NONE (mg/l)** | | | |
| Chloride | | 41 | |
| Nitrate as N | | 3.6 | |
| Sulfate | | 44.7 | |
| **Total Organic Carbon - SW9060/NONE (mg/l)** | | | |
| Total Organic Carbon | | 2.3 | U |

Table: _____
DQE: _____
Senior Reviewed: _____

Positive Results Summary Table
Carswell AFB
East Area Groundwater

| Locxref : | | 17M | | BSS-A | | BSS-B | | LF01-1B | | LF01-1C |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID : | PQL | 17MWG02 | | BSS-AWG02 | | BSS-BWG02 | | LF01-1BWG02 | | DUP04-WG02 |
| Sample Date : | | 27-Oct-97 | | 27-Oct-97 | | 27-Oct-97 | | 15-Oct-97 | | 15-Oct-97 |
| **Alkalinity (Titrimetric) - E310.1/NONE (mg/l)** | | | | | | | | | | |
| Alkalinity as CaCO3 to pH 4.5 | 5 | 360 | | 390 | | 420 | | NA | | NA |
| **EPA-9/RSK-175 Modified A2720C - M2720C/METHOD (ug/l)** | | | | | | | | | | |
| Ethane | 0.092 | 4.6 | UJ | 0.092 | UJ | 4.6 | UJ | NA | | NA |
| Ethene | 0.1 | 5.2 | UJ | 0.1 | UJ | 5.2 | UJ | NA | | NA |
| Methane | 0.052 | 1000 | J | 3.4 | J | 2400 | J | NA | | NA |
| **Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3050 (mg/l)** | | | | | | | | | | |
| Calcium | 0.053 | NA | | NA | | NA | | 148 | | 180 |
| Magnesium | 0.021 | NA | | NA | | NA | | 10.3 | | 10.9 |
| Potassium | 0.3 | NA | | NA | | NA | | 0.92 | F | 0.3 |
| Sodium | 0.12 | NA | | NA | | NA | | 24.5 | | 33.7 |
| **Inductively Coupled Plasma Mass Spectrometry - SW6020/SW3020 (mg/l)** | | | | | | | | | | |
| Aluminum | 0.0026 | NA | | NA | | NA | | 0.17 | F | 0.03 |
| Antimony | 0.00017 | NA | | NA | | NA | | 0.0002 | F | 0.00017 |
| Arsenic | 0.00019 | NA | | NA | | NA | | 0.002 | F | 0.026 |
| Barium | 0.0002 | NA | | NA | | NA | | 0.14 | | 0.15 |
| Beryllium | 0.000069 | NA | | NA | | NA | | 0.000069 | U | 0.000069 |
| Cadmium | 0.00004 | NA | | NA | | NA | | 0.00026 | F | 0.000044 |
| Chromium | 0.0002 | NA | | NA | | NA | | 0.0032 | F | 0.00071 |
| Cobalt | 0.00002 | NA | | NA | | NA | | 0.0024 | F | 0.0017 |
| Copper | 0.00084 | NA | | NA | | NA | | 0.025 | F | 0.0034 |
| Iron | 0.012 | NA | | NA | | NA | | 1.2 | | 12.6 |
| Lead | 0.0002 | NA | | NA | | NA | | 0.0068 | F | 0.00074 |
| Manganese | 0.0002 | NA | | NA | | NA | | 1.8 | | 1.3 |
| Molybdenum | 0.0002 | NA | | NA | | NA | | 0.0021 | F | 0.0066 |
| Nickel | 0.0002 | NA | | NA | | NA | | 0.02 | F | 0.012 |
| Selenium | 0.00007 | NA | | NA | | NA | | 0.0055 | F | 0.0084 |
| Silver | 0.0002 | NA | | NA | | NA | | 0.0002 | U | 0.0002 |
| Thallium | 0.00002 | NA | | NA | | NA | | 0.00002 | U | 0.00002 |
| Vanadium | 0.00017 | NA | | NA | | NA | | 0.0014 | F | 0.00023 |
| Zinc | 0.0011 | NA | | NA | | NA | | 0.12 | | 0.032 |
| **Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)** | No Analytes Detected | | | | | | | | | |
| **Aromatic Volatile Organics - SW8020/SW5030 (percent)** | | | | | | | | | | |
| Benzene | 0.21 | 1.9 | F | 0.21 | U | 21 | U | NA | | NA |
| Ethylbenzene | 0.35 | 0.35 | U | 0.35 | U | 1800 | | NA | | NA |
| Methyl tert-butyl ether | 0.47 | NA | | NA | | 0.47 | U | NA | | NA |
| Toluene | 0.13 | 1.7 | F | 1.2 | F | 9100 | | NA | | NA |
| Xylenes (total) | 0.68 | 0.68 | UJ | 0.68 | UJ | 9400 | J | NA | | NA |
| **Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)** | | | | | | | | | | |

Positive Results Summary Table
Carswell AFB
East Area Groundwater

| Locxref : | | 17M | | BSS-A | BSS-B | LF01-1B | | LF01-1C |
|---|---|---|---|---|---|---|---|---|
| Sample ID : | PQL | 17MWG02 | | BSS-AWG02 | BSS-BWG02 | LF01-1BWG02 | | DUP04-WG02 |
| Sample Date : | | 27-Oct-97 | | 27-Oct-97 | 27-Oct-97 | 15-Oct-97 | | 15-Oct-97 |
| 1,2,4-Trimethylbenzene | 0.12 | NA | | NA | NA | 0.12 | U | 0.12 |
| 1,3,5-Trimethylbenzene | 0.15 | NA | | NA | NA | 0.15 | U | 0.15 |
| Benzene | 0.11 | NA | | NA | NA | 0.11 | U | 0.11 |
| Chlorobenzene | 0.14 | NA | | NA | NA | 0.14 | U | 0.14 |
| Ethylbenzene | 0.16 | NA | | NA | NA | 0.16 | U | 0.16 |
| Isopropylbenzene | 0.13 | NA | | NA | NA | 0.13 | U | 1.6 |
| Naphthalene | 0.088 | NA | | NA | NA | 0.088 | R | 0.088 |
| Toluene | 0.14 | NA | | NA | NA | 0.14 | U | 0.14 |
| Trichloroethene | 0.097 | NA | | NA | NA | 0.097 | U | 0.097 |
| Vinyl chloride | 0.13 | NA | | NA | NA | 0.13 | U | 0.13 |
| m-Xylene & p-Xylene | 0.27 | NA | | NA | NA | 0.27 | U | 0.27 |
| n-Propylbenzene | 0.12 | NA | | NA | NA | 0.12 | U | 0.12 |
| o-Xylene | 0.11 | NA | | NA | NA | 0.11 | U | 0.11 |
| p-Isopropyltoluene | 0.13 | NA | | NA | NA | 0.13 | U | 6.2 |
| sec-Butylbenzene | 0.14 | NA | | NA | NA | 0.14 | U | 2.4 |
| tert-Butylbenzene | 0.13 | NA | | NA | NA | 0.13 | U | 1.5 |
| **SW846 9056 - SW9056/NONE (mg/l)** | | | | | | | | |
| Chloride | 0.1 | 22.8 | | 38.9 | 108 | NA | | NA |
| Nitrate as N | 0.02 | 0.18 | | 0.21 | 0.22 | NA | | NA |
| Sulfate | 0.2 | 1.1 | U | 34 | 7.5 | NA | | NA |
| **Total Organic Carbon - SW9060/NONE (mg/l)** | | | | | | | | |
| Total Organic Carbon | 0.2 | 11 | | 4.2 | 17 | NA | | NA |

Positive Results Summary Table
Carswell AFB
East Area Groundwater

| Locxref: | LF01-1C | | LF01-1D | | LF01-1E | | MW-1 | | MW-3 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | LF01-1CWG02 | | LF01-1DWG02 | | LF01-1EWG02 | | MW-1WG02 | | MW-3WG02 | |
| Sample Date: | 15-Oct-97 | | 20-Oct-97 | | 20-Oct-97 | | 30-Oct-97 | | 24-Oct-97 | |
| **Alkalinity (Titrimetric) - E310.1/NONE (mg/l)** | | | | | | | | | | |
| Alkalinity as CaCO3 to pH 4.5 | NA | | NA | | NA | | 440 | | 380 | |
| **EPA-9/RSK-175 Modified A2720C - M2720C/METHOD (ug/l)** | | | | | | | | | | |
| Ethane | NA | | NA | | NA | | 9.2 | U | 0.092 | U |
| Ethene | NA | | NA | | NA | | 10 | U | 0.1 | U |
| Methane | NA | | NA | | NA | | 3200 | | 1.3 | U |
| **Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3050 (mg/l)** | | | | | | | | | | |
| Calcium | 177 | | 208 | | 131 | | NA | | NA | |
| Magnesium | 10.8 | | 11.6 | | 7.4 | | NA | | NA | |
| Potassium | U 0.3 | U | 2.1 | F | 0.3 | U | NA | | NA | |
| Sodium | 33.1 | | 29.2 | | 21.5 | | NA | | NA | |
| **Inductively Coupled Plasma Mass Spectrometry - SW6020/SW3020 (mg/l)** | | | | | | | | | | |
| Aluminum | F 0.017 | F | 0.046 | F | 0.066 | F | NA | | NA | |
| Antimony | U 0.00034 | F | 0.00022 | F | 0.00017 | U | NA | | NA | |
| Arsenic | F 0.026 | F | 0.0039 | F | 0.0033 | F | NA | | NA | |
| Barium | 0.15 | | 0.09 | | 0.14 | | NA | | NA | |
| Beryllium | U 0.000069 | U | 0.000069 | U | 0.000069 | U | NA | | NA | |
| Cadmium | F 0.00004 | U | 0.00004 | U | 0.00004 | U | NA | | NA | |
| Chromium | F 0.00048 | F | 0.0011 | F | 0.00045 | F | NA | | NA | |
| Cobalt | F 0.0016 | F | 0.0012 | F | 0.0029 | F | NA | | NA | |
| Copper | F 0.0027 | F | 0.0032 | F | 0.0035 | F | NA | | NA | |
| Iron | J 13.5 | J | 3.2 | | 1.2 | | NA | | NA | |
| Lead | F 0.00072 | F | 0.00066 | F | 0.0007 | F | NA | | NA | |
| Manganese | J 1.2 | J | 0.3 | | 3.3 | | NA | | NA | |
| Molybdenum | F 0.0063 | F | 0.0033 | F | 0.0012 | F | NA | | NA | |
| Nickel | F 0.011 | F | 0.015 | F | 0.0099 | F | NA | | NA | |
| Selenium | F 0.0079 | F | 0.0051 | F | 0.0057 | F | NA | | NA | |
| Silver | U 0.0002 | U | 0.00016 | F | 0.0002 | U | NA | | NA | |
| Thallium | U 0.00002 | U | 0.00002 | U | 0.00002 | U | NA | | NA | |
| Vanadium | F 0.00018 | F | 0.00055 | F | 0.0003 | F | NA | | NA | |
| Zinc | U 0.026 | U | 0.014 | F | 0.02 | U | NA | | NA | |
| **Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)** | | | | | | | | | | |
| **Aromatic Volatile Organics - SW8020/SW5030 (percent)** | | | | | | | | | | |
| Benzene | NA | | NA | | NA | | 3000 | | 0.21 | R |
| Ethylbenzene | NA | | NA | | NA | | 1700 | | 0.35 | R |
| Methyl tert-butyl ether | NA | | NA | | NA | | 300 | | NA | |
| Toluene | NA | | NA | | NA | | 160 | | 0.48 | F |
| Xylenes (total) | NA | | NA | | NA | | 2900 | J | 0.68 | R |
| **Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)** | | | | | | | | | | |

Positive Results Summary Table
Carswell AFB
East Area Groundwater

| Locxref: | | LF01-1C | | LF01-1D | | LF01-1E | | MW-1 | | MW-3 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | | LF01-1CWG02 | | LF01-1DWG02 | | LF01-1EWG02 | | MW-1WG02 | | MW-3WG02 | |
| Sample Date: | | 15-Oct-97 | | 20-Oct-97 | | 20-Oct-97 | | 30-Oct-97 | | 24-Oct-97 | |
| 1,2,4-Trimethylbenzene | U | 0.12 | U | 0.12 | U | 0.12 | U | NA | | NA | |
| 1,3,5-Trimethylbenzene | U | 0.15 | U | 0.15 | U | 0.15 | U | NA | | NA | |
| Benzene | U | 0.11 | U | 0.11 | U | 0.44 | | NA | | NA | |
| Chlorobenzene | U | 0.14 | U | 0.7 | | 0.65 | | NA | | NA | |
| Ethylbenzene | U | 0.16 | U | 0.16 | U | 0.16 | U | NA | | NA | |
| Isopropylbenzene | | 1.6 | | 0.13 | U | 0.13 | U | NA | | NA | |
| Naphthalene | R | 0.088 | R | 0.088 | U | 0.088 | U | NA | | NA | |
| Toluene | U | 0.14 | U | 0.14 | U | 0.14 | U | NA | | NA | |
| Trichloroethene | U | 0.097 | U | 0.097 | U | 0.097 | U | NA | | NA | |
| Vinyl chloride | U | 0.13 | U | 0.13 | U | 0.13 | U | NA | | NA | |
| m-Xylene & p-Xylene | U | 0.27 | U | 0.27 | U | 0.27 | U | NA | | NA | |
| n-Propylbenzene | U | 0.12 | U | 0.12 | U | 0.12 | U | NA | | NA | |
| o-Xylene | U | 0.11 | U | 0.11 | U | 0.11 | U | NA | | NA | |
| p-Isopropyltoluene | | 6.3 | | 0.13 | U | 0.13 | U | NA | | NA | |
| sec-Butylbenzene | | 2.5 | | 0.14 | U | 0.14 | U | NA | | NA | |
| tert-Butylbenzene | | 1.5 | | 0.13 | U | 0.13 | U | NA | | NA | |
| **SW846 9056 - SW9056/NONE (mg/l)** | | | | | | | | | | | |
| Chloride | | NA | | NA | | NA | | 78.8 | | 38.4 | |
| Nitrate as N | | NA | | NA | | NA | | 0.18 | U | 1 | |
| Sulfate | | NA | | NA | | NA | | 0.71 | | 24.2 | |
| **Total Organic Carbon - SW9060/NONE (mg/l)** | | | | | | | | | | | |
| Total Organic Carbon | | NA | | NA | | NA | | 11 | | 2.4 | U |

Positive Results Summary Table
Carswell AFB
East Area Groundwater

| Locxref: | MW-5 | | MW-8 | | MW-9 | | MW-10 | | MW-11 | | MW-12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | MW-5WG02 | | MW-8WG02 | | MW-9WG02 | | MW-10WG02 | | MW-11GW02 | | MW-12WG02 |
| Sample Date: | 28-Oct-97 | | 21-Oct-97 | | 20-Oct-97 | | 30-Oct-97 | | 24-Oct-97 | | 20-Oct-97 |
| **Alkalinity (Titrimetric) - E310.1/NONE (mg/l)** | | | | | | | | | | | |
| Alkalinity as CaCO3 to pH 4.5 | 330 | | 240 | | NA | | NA | | NA | | NA |
| **EPA-9/RSK-175 Modified A2720C - M2720C/METHOD (ug/l)** | | | | | | | | | | | |
| Ethane | 0.43 | F | 0.013 | F | NA | | NA | | NA | | NA |
| Ethene | 0.32 | U | 0.02 | F | NA | | NA | | NA | | NA |
| Methane | 170 | | 7.9 | | NA | | NA | | NA | | NA |
| **Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3050 (mg/l)** | | | | | | | | | | | |
| Calcium | NA | | NA | | 170 | | 177 | | 154 | | 254 |
| Magnesium | NA | | NA | | 12.6 | | 13 | | 11 | | 9.2 |
| Potassium | NA | | NA | | 0.3 | U | 0.3 | U | 0.73 | F | 0.3 |
| Sodium | NA | | NA | | 76.9 | | 56 | | 57.7 | | 51 |
| **Inductively Coupled Plasma Mass Spectrometry - SW6020/SW3020 (mg/l)** | | | | | | | | | | | |
| Aluminum | NA | | NA | | 0.014 | F | 0.026 | F | 0.023 | F | 0.03 |
| Antimony | NA | | NA | | 0.00017 | U | 0.00087 | F | 0.00017 | U | 0.00016 |
| Arsenic | NA | | NA | | 0.0051 | F | 0.023 | F | 0.0038 | F | 0.0016 |
| Barium | NA | | NA | | 0.13 | | 0.18 | | 0.14 | | 0.069 |
| Beryllium | NA | | NA | | 0.000069 | U | 0.000069 | U | 0.000069 | U | 0.000069 |
| Cadmium | NA | | NA | | 0.00004 | U | 0.00004 | U | 0.00005 | F | 0.00004 |
| Chromium | NA | | NA | | 0.00026 | F | 0.0002 | U | 0.0017 | F | 0.00037 |
| Cobalt | NA | | NA | | 0.00078 | F | 0.0068 | F | 0.003 | F | 0.00067 |
| Copper | NA | | NA | | 0.0031 | F | 0.00098 | F | 0.0022 | F | 0.0039 |
| Iron | NA | | NA | | 4 | | 6.9 | | 1.5 | | 1.6 |
| Lead | NA | | NA | | 0.00042 | F | 0.0064 | F | 0.00038 | F | 0.00037 |
| Manganese | NA | | NA | | 3.1 | | 5.4 | | 0.8 | | 0.03 |
| Molybdenum | NA | | NA | | 0.0017 | F | 0.0028 | F | 0.0012 | F | 0.00036 |
| Nickel | NA | | NA | | 0.01 | F | 0.013 | F | 0.013 | F | 0.014 |
| Selenium | NA | | NA | | 0.0068 | F | 0.0067 | F | 0.0067 | F | 0.0059 |
| Silver | NA | | NA | | 0.00009 | F | 0.00015 | F | 0.0002 | U | 0.0002 |
| Thallium | NA | | NA | | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 |
| Vanadium | NA | | NA | | 0.00018 | F | 0.00038 | F | 0.0014 | F | 0.00067 |
| Zinc | NA | | NA | | 0.022 | U | 0.013 | F | 0.018 | F | 0.015 |
| **Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)** | | | | | | | | | | | |
| **Aromatic Volatile Organics - SW8020/SW5030 (percent)** | | | | | | | | | | | |
| Benzene | 4 | | 0.21 | U | NA | | 2600 | J | NA | | NA |
| Ethylbenzene | 15 | J | 0.35 | U | NA | | 4900 | | NA | | NA |
| Methyl tert-butyl ether | NA | | NA | | NA | | 380 | J | NA | | NA |
| Toluene | 1.5 | F | 0.13 | U | NA | | 7300 | | NA | | NA |
| Xylenes (total) | 1.1 | F | 0.68 | UJ | NA | | 13000 | J | NA | | NA |
| **Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)** | | | | | | | | | | | |

Positive Results Summary Table
Carswell AFB
East Area Groundwater

| Locxref: | MW-5 | | MW-8 | | MW-9 | | MW-10 | | MW-11 | | MW-12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | MW-5WG02 | | MW-8WG02 | | MW-9WG02 | | MW-10WG02 | | MW-11GW02 | | MW-12WG02 |
| Sample Date: | 28-Oct-97 | | 21-Oct-97 | | 20-Oct-97 | | 30-Oct-97 | | 24-Oct-97 | | 20-Oct-97 |
| 1,2,4-Trimethylbenzene | NA | | NA | | 0.12 | U | 3000 | | 0.12 | U | 0.12 |
| 1,3,5-Trimethylbenzene | NA | | NA | | 0.15 | U | 780 | | 0.15 | U | 0.15 |
| Benzene | NA | | NA | | 0.11 | U | 5500 | | 0.11 | U | 0.11 |
| Chlorobenzene | NA | | NA | | 0.14 | U | 70 | U | 0.14 | U | 0.14 |
| Ethylbenzene | NA | | NA | | 0.16 | U | 6000 | | 0.16 | U | 0.16 |
| Isopropylbenzene | NA | | NA | | 0.13 | U | 300 | | 0.13 | U | 0.13 |
| Naphthalene | NA | | NA | | 0.088 | U | 950 | | 0.088 | U | 0.088 |
| Toluene | NA | | NA | | 0.14 | U | 8700 | | 0.3 | F | 0.14 |
| Trichloroethene | NA | | NA | | 0.097 | U | 48 | U | 0.097 | U | 0.097 |
| Vinyl chloride | NA | | NA | | 0.13 | U | 65 | U | 0.13 | U | 0.13 |
| m-Xylene & p-Xylene | NA | | NA | | 0.27 | U | 11000 | | 0.27 | U | 0.27 |
| n-Propylbenzene | NA | | NA | | 0.12 | U | 60 | U | 0.12 | U | 0.12 |
| o-Xylene | NA | | NA | | 0.11 | U | 4300 | | 0.11 | U | 0.11 |
| p-Isopropyltoluene | NA | | NA | | 0.13 | U | 65 | U | 0.13 | U | 0.13 |
| sec-Butylbenzene | NA | | NA | | 0.48 | F | 70 | U | 0.14 | U | 0.14 |
| tert-Butylbenzene | NA | | NA | | 0.13 | U | 65 | U | 0.13 | U | 0.13 |
| **SW846 9056 - SW9056/NONE (mg/l)** | | | | | | | | | | | |
| Chloride | 21.4 | | 44.2 | | NA | | NA | | NA | | NA |
| Nitrate as N | 0.083 | F | 0.18 | | NA | | NA | | NA | | NA |
| Sulfate | 61.3 | | 26.2 | | NA | | NA | | NA | | NA |
| **Total Organic Carbon - SW9060/NONE (mg/l)** | | | | | | | | | | | |
| Total Organic Carbon | 30 | | 3.2 | U | NA | | NA | | NA | | NA |

Positive Results Summary Table
Carswell AFB
East Area Groundwater

| Locxref: | | OT-15C | | SD13-01 | | SD13-02 | | SD13-04 | | SD13-06 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | | OT15CWG02 | | SD13-01WG02 | | SD13-02WG02 | | SD13-04WG02 | | SD13-06WG02 | |
| Sample Date: | | 20-Oct-97 | | 22-Oct-97 | | 22-Oct-97 | | 22-Oct-97 | | 20-Oct-97 | |
| **Alkalinity (Titrimetric) - E310.1/NONE (mg/l)** | | | | | | | | | | | |
| Alkalinity as CaCO3 to pH 4.5 | | NA | | 330 | | 350 | | 380 | | NA | |
| **EPA-9/RSK-175 Modified A2720C - M2720C/METHOD (ug/l)** | | | | | | | | | | | |
| Ethane | | NA | | 4.6 | U | 3.5 | F | 4.6 | U | NA | |
| Ethene | | NA | | 5.2 | U | 2.6 | U | 5.2 | U | NA | |
| Methane | | NA | | 3200 | | 980 | | 2800 | | NA | |
| **Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3050 (mg/l)** | | | | | | | | | | | |
| Calcium | | 147 | | NA | | NA | | NA | | 172 | |
| Magnesium | | 4.4 | | NA | | NA | | NA | | 9.8 | |
| Potassium | U | 2.1 | F | NA | | NA | | NA | | 0.59 | F |
| Sodium | | 24.3 | | NA | | NA | | NA | | 28.4 | |
| **Inductively Coupled Plasma Mass Spectrometry - SW6020/SW3020 (mg/l)** | | | | | | | | | | | |
| Aluminum | F | 0.032 | F | NA | | NA | | NA | | 0.02 | F |
| Antimony | F | 0.00017 | U | NA | | NA | | NA | | 0.00017 | U |
| Arsenic | F | 0.0012 | F | NA | | NA | | NA | | 0.0077 | F |
| Barium | | 0.17 | | NA | | NA | | NA | | 0.24 | |
| Beryllium | U | 0.000069 | U | NA | | NA | | NA | | 0.000069 | U |
| Cadmium | U | 0.00004 | U | NA | | NA | | NA | | 0.000054 | F |
| Chromium | F | 0.00027 | F | NA | | NA | | NA | | 0.0017 | F |
| Cobalt | F | 0.00039 | F | NA | | NA | | NA | | 0.0068 | F |
| Copper | F | 0.0039 | F | NA | | NA | | NA | | 0.0046 | F |
| Iron | | 0.93 | | NA | | NA | | NA | | 8.4 | |
| Lead | F | 0.00088 | F | NA | | NA | | NA | | 0.0011 | F |
| Manganese | | 0.07 | | NA | | NA | | NA | | 0.71 | |
| Molybdenum | F | 0.00066 | F | NA | | NA | | NA | | 0.004 | F |
| Nickel | F | 0.009 | F | NA | | NA | | NA | | 0.013 | F |
| Selenium | F | 0.0048 | F | NA | | NA | | NA | | 0.0066 | F |
| Silver | U | 0.0002 | U | NA | | NA | | NA | | 0.0002 | U |
| Thallium | U | 0.00004 | F | NA | | NA | | NA | | 0.00002 | U |
| Vanadium | F | 0.00056 | F | NA | | NA | | NA | | 0.00041 | F |
| Zinc | F | 0.026 | U | NA | | NA | | NA | | 0.046 | U |
| **Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)** | | | | | | | | | | | |
| **Aromatic Volatile Organics - SW8020/SW5030 (percent)** | | | | | | | | | | | |
| Benzene | | NA | | 0.21 | U | 0.21 | U | 0.21 | U | NA | |
| Ethylbenzene | | NA | | 0.35 | U | 0.35 | U | 0.35 | U | NA | |
| Methyl tert-butyl ether | | NA | | NA | | NA | | NA | | NA | |
| Toluene | | NA | | 0.3 | F | 0.15 | F | 0.13 | U | NA | |
| Xylenes (total) | | NA | | 0.81 | F | 0.68 | UJ | 1.2 | F | NA | |
| **Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)** | | | | | | | | | | | |

Positive Results Summary Table
Carswell AFB
East Area Groundwater

| Locxref : | | OT-15C | | SD13-01 | | SD13-02 | | SD13-04 | | SD13-06 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID : | | OT15CWG02 | | SD13-01WG02 | | SD13-02WG02 | | SD13-04WG02 | | SD13-06WG02 | |
| Sample Date : | | 20-Oct-97 | | 22-Oct-97 | | 22-Oct-97 | | 22-Oct-97 | | 20-Oct-97 | |
| 1,2,4-Trimethylbenzene | U | 0.12 | U | NA | | NA | | NA | | 0.12 | U |
| 1,3,5-Trimethylbenzene | U | 0.15 | U | NA | | NA | | NA | | 0.15 | U |
| Benzene | U | 0.11 | U | NA | | NA | | NA | | 0.11 | U |
| Chlorobenzene | U | 0.14 | U | NA | | NA | | NA | | 0.14 | U |
| Ethylbenzene | U | 0.16 | U | NA | | NA | | NA | | 0.16 | U |
| Isopropylbenzene | U | 0.13 | U | NA | | NA | | NA | | 2.1 | |
| Naphthalene | U | 0.088 | U | NA | | NA | | NA | | 0.088 | U |
| Toluene | U | 0.14 | U | NA | | NA | | NA | | 0.14 | U |
| Trichloroethene | U | 0.097 | U | NA | | NA | | NA | | 0.75 | F |
| Vinyl chloride | U | 0.13 | U | NA | | NA | | NA | | 0.13 | U |
| m-Xylene & p-Xylene | U | 0.27 | U | NA | | NA | | NA | | 0.27 | U |
| n-Propylbenzene | U | 0.12 | U | NA | | NA | | NA | | 0.77 | |
| o-Xylene | U | 0.11 | U | NA | | NA | | NA | | 0.11 | U |
| p-Isopropyltoluene | U | 0.13 | U | NA | | NA | | NA | | 0.13 | U |
| sec-Butylbenzene | U | 0.14 | U | NA | | NA | | NA | | 0.14 | U |
| tert-Butylbenzene | U | 0.13 | U | NA | | NA | | NA | | 0.81 | F |
| **SW846 9056 - SW9056/NONE (mg/l)** | | | | | | | | | | | |
| Chloride | | NA | | 25.3 | | 25.7 | | 26.2 | | NA | |
| Nitrate as N | | NA | | 0.2 | | 0.2 | | 0.21 | | NA | |
| Sulfate | | NA | | 0.53 | U | 1.1 | U | 0.62 | U | NA | |
| **Total Organic Carbon - SW9060/NONE (mg/l)** | | | | | | | | | | | |
| Total Organic Carbon | | NA | | 7.7 | | 4.4 | | 9.6 | | NA | |

Positive Results Summary Table
Carswell AFB
East Area Groundwater

| Locxref : | ST14-02 | | ST14-03 | | ST14-04 | | ST14-04 | | ST14-14 | | ST14-24 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID : | ST14-02WG02 | | ST14-03WG02 | | DUP03-WG02 | | ST14-04WG02 | | ST14-14WG02 | | ST14-24WG02 |
| Sample Date : | 27-Oct-97 | | 22-Oct-97 | | 24-Oct-97 | | 24-Oct-97 | | 20-Oct-97 | | 21-Oct-97 |
| **Alkalinity (Titrimetric) - E310.1/NONE (mg/l)** | | | | | | | | | | | |
| Alkalinity as CaCO3 to pH 4.5 | 340 | | 300 | | 310 | | 290 | | 250 | | 320 |
| **EPA-9/RSK-175 Modified A2720C - M2720C/METHOD (ug/l)** | | | | | | | | | | | |
| Ethane | 4.6 | UJ | 1.7 | F | 6.6 | F | 5 | F | 230 | | 0.032 |
| Ethene | 5.2 | UJ | 1.1 | F | 5.2 | U | 5.2 | U | 64 | | 0.15 |
| Methane | 430 | J | 170 | | 3000 | | 3200 | | 2600 | | 21 |
| **Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3050 (mg/l)** | | | | | | | | | | | |
| Calcium | 119 | | NA | | NA | | NA | | 90.1 | | 113 |
| Magnesium | 5.8 | | NA | | NA | | NA | | 4.7 | | 9.2 |
| Potassium | 1.9 | F | NA | | NA | | NA | | 0.68 | F | 2.8 |
| Sodium | 25.2 | | NA | | NA | | NA | | 30.1 | | 29.6 |
| **Inductively Coupled Plasma Mass Spectrometry - SW6020/SW3020 (mg/l)** | | | | | | | | | | | |
| Aluminum | 0.011 | F | NA | | NA | | NA | | 0.023 | F | 0.019 |
| Antimony | 0.00033 | F | NA | | NA | | NA | | 0.00018 | F | 0.00017 |
| Arsenic | 0.011 | F | NA | | NA | | NA | | 0.0031 | F | 0.0013 |
| Barium | 0.11 | | NA | | NA | | NA | | 0.044 | F | 0.26 |
| Beryllium | 0.000069 | U | NA | | NA | | NA | | 0.000069 | U | 0.000069 |
| Cadmium | 0.00004 | U | NA | | NA | | NA | | 0.00004 | U | 0.00004 |
| Chromium | 0.00039 | F | NA | | NA | | NA | | 0.00055 | F | 0.00027 |
| Cobalt | 0.00036 | F | NA | | NA | | NA | | 0.00025 | F | 0.00034 |
| Copper | 0.00068 | F | NA | | NA | | NA | | 0.0028 | F | 0.001 |
| Iron | 9.7 | | NA | | NA | | NA | | 1.8 | | 0.78 |
| Lead | 0.00051 | F | NA | | NA | | NA | | 0.00087 | F | 0.00015 |
| Manganese | 0.22 | | NA | | NA | | NA | | 0.17 | | 0.077 |
| Molybdenum | 0.0022 | F | NA | | NA | | NA | | 0.0039 | F | 0.0016 |
| Nickel | 0.0074 | F | NA | | NA | | NA | | 0.0056 | F | 0.0073 |
| Selenium | 0.0035 | F | NA | | NA | | NA | | 0.0029 | F | 0.0036 |
| Silver | 0.0001 | F | NA | | NA | | NA | | 0.0002 | U | 0.0002 |
| Thallium | 0.00002 | U | NA | | NA | | NA | | 0.00002 | U | 0.000028 |
| Vanadium | 0.00017 | U | NA | | NA | | NA | | 0.00017 | U | 0.002 |
| Zinc | 0.0099 | F | NA | | NA | | NA | | 0.01 | F | 0.017 |
| **Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)** | | | | | | | | | | | |
| **Aromatic Volatile Organics - SW8020/SW5030 (percent)** | | | | | | | | | | | |
| Benzene | 1.5 | F | 0.21 | U | 0.21 | U | 0.21 | U | NA | | NA |
| Ethylbenzene | 0.35 | U | 0.35 | U | 0.35 | U | 0.35 | U | NA | | NA |
| Methyl tert-butyl ether | NA | | NA | | NA | | NA | | NA | | NA |
| Toluene | 0.62 | F | 0.13 | U | 0.13 | UJ | 1.6 | F | NA | | NA |
| Xylenes (total) | 0.68 | UJ | 0.68 | UJ | 0.68 | UJ | 0.68 | UJ | NA | | NA |
| **Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)** | | | | | | | | | | | |

Positive Results Summary Table
Carswell AFB
East Area Groundwater

| Locxref : | ST14-02 | | ST14-03 | | ST14-04 | | ST14-04 | | ST14-14 | | ST14-24 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID : | ST14-02WG02 | | ST14-03WG02 | | DUP03-WG02 | | ST14-04WG02 | | ST14-14WG02 | | ST14-24WG02 |
| Sample Date : | 27-Oct-97 | | 22-Oct-97 | | 24-Oct-97 | | 24-Oct-97 | | 20-Oct-97 | | 21-Oct-97 |
| 1,2,4-Trimethylbenzene | NA | | NA | | NA | | NA | | 0.12 | U | 0.12 |
| 1,3,5-Trimethylbenzene | NA | | NA | | NA | | NA | | 0.15 | U | 0.15 |
| Benzene | NA | | NA | | NA | | NA | | 0.11 | U | 0.11 |
| Chlorobenzene | NA | | NA | | NA | | NA | | 0.14 | U | 0.14 |
| Ethylbenzene | NA | | NA | | NA | | NA | | 0.16 | U | 0.16 |
| Isopropylbenzene | NA | | NA | | NA | | NA | | 0.13 | U | 0.13 |
| Naphthalene | NA | | NA | | NA | | NA | | 0.088 | U | 0.088 |
| Toluene | NA | | NA | | NA | | NA | | 0.14 | U | 0.14 |
| Trichloroethene | NA | | NA | | NA | | NA | | 0.097 | U | 0.097 |
| Vinyl chloride | NA | | NA | | NA | | NA | | 0.13 | U | 3.4 |
| m-Xylene & p-Xylene | NA | | NA | | NA | | NA | | 0.27 | U | 0.27 |
| n-Propylbenzene | NA | | NA | | NA | | NA | | 0.12 | U | 0.12 |
| o-Xylene | NA | | NA | | NA | | NA | | 0.11 | U | 0.11 |
| p-Isopropyltoluene | NA | | NA | | NA | | NA | | 0.13 | U | 0.13 |
| sec-Butylbenzene | NA | | NA | | NA | | NA | | 0.14 | U | 0.14 |
| tert-Butylbenzene | NA | | NA | | NA | | NA | | 1.2 | F | 0.13 |
| **SW846 9056 - SW9056/NONE (mg/l)** | | | | | | | | | | | |
| Chloride | 29.9 | | 26.6 | | 41 | | 41.1 | | 31.1 | | 16.7 |
| Nitrate as N | 0.15 | | 0.11 | | 0.02 | U | 0.02 | U | 0.13 | | 0.17 |
| Sulfate | 0.62 | U | 27.4 | | 0.2 | U | 0.2 | U | 0.41 | F | 18.1 |
| **Total Organic Carbon - SW9060/NONE (mg/l)** | | | | | | | | | | | |
| Total Organic Carbon | 2.9 | | 4.2 | | 6.4 | U | 6.2 | U | 2.7 | U | 2.3 |

Positive Results Summary Table
Carswell AFB
East Area Groundwater

| Locxref : | | ST14-26 | | ST14-26 | | ST14-28 | | ST14-29 | | ST14-W16 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID : | | DUP05-WG02 | | ST14-26WG02 | | ST14-28WG02 | | ST14-29WG02 | | ST14-W16WG02 | |
| Sample Date : | | 21-Oct-97 | | 21-Oct-97 | | 24-Oct-97 | | 24-Oct-97 | | 27-Oct-97 | |
| **Alkalinity (Titrimetric) - E310.1/NONE (mg/l)** | | | | | | | | | | | |
| Alkalinity as CaCO3 to pH 4.5 | | 350 | | 360 | | 450 | | 520 | | 330 | |
| **EPA-9/RSK-175 Modified A2720C - M2720C/METHOD (ug/l)** | | | | | | | | | | | |
| Ethane | F | 0.021 | F | 0.024 | F | 12 | U | 4.6 | U | 4.6 | UJ |
| Ethene | F | 0.014 | F | 0.013 | F | 13 | U | 5.2 | U | 5.2 | UJ |
| Methane | | 0.13 | F | 0.22 | F | 3300 | | 2200 | | 740 | J |
| **Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3050 (mg/l)** | | | | | | | | | | | |
| Calcium | | 152 | | 152 | | NA | | NA | | NA | |
| Magnesium | | 7.3 | | 7.4 | | NA | | NA | | NA | |
| Potassium | F | 0.57 | F | 0.66 | F | NA | | NA | | NA | |
| Sodium | | 20.4 | | 20.7 | | NA | | NA | | NA | |
| **Inductively Coupled Plasma Mass Spectrometry - SW6020/SW3020 (mg/l)** | | | | | | | | | | | |
| Aluminum | F | 0.36 | F | 0.46 | F | NA | | NA | | NA | |
| Antimony | U | 0.00017 | U | 0.00017 | U | NA | | NA | | NA | |
| Arsenic | F | 0.0036 | F | 0.004 | F | NA | | NA | | NA | |
| Barium | | 0.13 | | 0.12 | | NA | | NA | | NA | |
| Beryllium | U | 0.00011 | F | 0.000092 | F | NA | | NA | | NA | |
| Cadmium | U | 0.00004 | U | 0.00004 | U | NA | | NA | | NA | |
| Chromium | F | 0.0013 | F | 0.0015 | F | NA | | NA | | NA | |
| Cobalt | F | 0.0013 | F | 0.0013 | F | NA | | NA | | NA | |
| Copper | F | 0.0033 | F | 0.0032 | F | NA | | NA | | NA | |
| Iron | | 1.9 | J | 1.6 | J | NA | | NA | | NA | |
| Lead | R | 0.0021 | R | 0.002 | R | NA | | NA | | NA | |
| Manganese | | 0.06 | | 0.056 | | NA | | NA | | NA | |
| Molybdenum | F | 0.00051 | F | 0.00081 | F | NA | | NA | | NA | |
| Nickel | F | 0.011 | F | 0.01 | F | NA | | NA | | NA | |
| Selenium | F | 0.0047 | F | 0.005 | F | NA | | NA | | NA | |
| Silver | U | 0.00023 | F | 0.00033 | F | NA | | NA | | NA | |
| Thallium | F | 0.00002 | U | 0.00002 | U | NA | | NA | | NA | |
| Vanadium | F | 0.018 | F | 0.018 | F | NA | | NA | | NA | |
| Zinc | F | 0.016 | F | 0.016 | F | NA | | NA | | NA | |
| **Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)** | | | | | | | | | | | |
| **Aromatic Volatile Organics - SW8020/SW5030 (percent)** | | | | | | | | | | | |
| Benzene | | NA | | NA | | 0.21 | U | 0.21 | U | 6 | |
| Ethylbenzene | | NA | | NA | | 0.35 | U | 0.35 | U | 0.35 | U |
| Methyl tert-butyl ether | | NA | | NA | | NA | | NA | | NA | |
| Toluene | | NA | | NA | | 1.3 | F | 2.5 | U | 1.8 | F |
| Xylenes (total) | | NA | | NA | | 0.75 | F | 0.71 | F | 0.68 | UJ |
| **Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)** | | | | | | | | | | | |

**Positive Results Summary Table**
**Carswell AFB**
**East Area Groundwater**

| Locxref : | | ST14-26 | | ST14-26 | | ST14-28 | | ST14-29 | | ST14-W16 |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID : | | DUP05-WG02 | | ST14-26WG02 | | ST14-28WG02 | | ST14-29WG02 | | ST14-W16WG02 |
| Sample Date : | | 21-Oct-97 | | 21-Oct-97 | | 24-Oct-97 | | 24-Oct-97 | | 27-Oct-97 |
| 1,2,4-Trimethylbenzene | U | 0.12 | U | 0.12 | U | NA | | NA | | NA |
| 1,3,5-Trimethylbenzene | U | 0.15 | U | 0.15 | U | NA | | NA | | NA |
| Benzene | U | 0.11 | U | 0.11 | U | NA | | NA | | NA |
| Chlorobenzene | U | 0.14 | U | 0.14 | U | NA | | NA | | NA |
| Ethylbenzene | U | 0.16 | U | 0.16 | U | NA | | NA | | NA |
| Isopropylbenzene | U | 0.13 | U | 0.13 | U | NA | | NA | | NA |
| Naphthalene | U | 0.088 | U | 0.088 | U | NA | | NA | | NA |
| Toluene | U | 0.14 | U | 0.14 | U | NA | | NA | | NA |
| Trichloroethene | U | 0.097 | U | 0.097 | U | NA | | NA | | NA |
| Vinyl chloride | | 0.13 | U | 0.13 | U | NA | | NA | | NA |
| m-Xylene & p-Xylene | U | 0.27 | U | 0.27 | U | NA | | NA | | NA |
| n-Propylbenzene | U | 0.12 | U | 0.12 | U | NA | | NA | | NA |
| o-Xylene | U | 0.11 | U | 0.11 | U | NA | | NA | | NA |
| p-Isopropyltoluene | U | 0.13 | U | 0.13 | U | NA | | NA | | NA |
| sec-Butylbenzene | U | 0.14 | U | 0.14 | U | NA | | NA | | NA |
| tert-Butylbenzene | U | 0.13 | U | 0.13 | U | NA | | NA | | NA |
| **SW846 9056 - SW9056/NONE (mg/l)** | | | | | | | | | | |
| Chloride | | 25 | | 25.3 | | 30.7 | | 15.7 | | 26.5 |
| Nitrate as N | | 0.2 | | 0.2 | | 0.27 | | 0.097 | F | 0.18 |
| Sulfate | | 17.8 | | 17.6 | | 0.2 | U | 0.2 | U | 5.4 |
| **Total Organic Carbon - SW9060/NONE (mg/l)** | | | | | | | | | | |
| Total Organic Carbon | U | 2.8 | U | 2.7 | U | 17 | | 11 | | 5 |

Positive Results Summary Table
Carswell AFB
East Area Groundwater

| Locxref: | ST14-W18 | | ST14-W21 | | ST14-W31 | |
|---|---|---|---|---|---|---|
| Sample ID: | ST14-W18WG02 | | ST14-W21WG02 | | ST14-W31WG02 | |
| Sample Date | 27-Oct-97 | | 28-Oct-97 | | 22-Oct-97 | |
| **Alkalinity (Titrimetric) - E310.1/NONE (mg/l)** | | | | | | |
| Alkalinity as CaCO3 to pH 4.5 | 360 | | 420 | | 360 | |
| **EPA-9/RSK-175 Modified A2720C - M2720C/METHOD (ug/l)** | | | | | | |
| Ethane | 30 | F | 6.2 | F | 0.12 | F |
| Ethene | 10 | UJ | 2.1 | U | 0.12 | F |
| Methane | 4500 | J | 720 | | 13 | U |
| **Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3050 (mg/l)** | | | | | | |
| Calcium | 150 | | 169 | | NA | |
| Magnesium | 6 | | 5.6 | | NA | |
| Potassium | 1 | F | 0.73 | F | NA | |
| Sodium | 21.5 | | 12.9 | | NA | |
| **Inductively Coupled Plasma Mass Spectrometry - SW6020/SW3020 (mg/l)** | | | | | | |
| Aluminum | 0.2 | F | 0.42 | F | NA | |
| Antimony | 0.01 | F | 0.00054 | F | NA | |
| Arsenic | 0.07 | F | 0.068 | F | NA | |
| Barium | 0.21 | | 0.19 | | NA | |
| Beryllium | 0.00014 | F | 0.00013 | F | NA | |
| Cadmium | 0.000061 | F | 0.000044 | F | NA | |
| Chromium | 0.0025 | F | 0.0088 | F | NA | |
| Cobalt | 0.0029 | F | 0.0019 | F | NA | |
| Copper | 0.0045 | F | 0.0045 | F | NA | |
| Iron | 13 | | 8.7 | | NA | |
| Lead | 0.02 | F | 0.0028 | F | NA | |
| Manganese | 0.18 | | 0.44 | | NA | |
| Molybdenum | 0.0035 | F | 0.0036 | F | NA | |
| Nickel | 0.012 | F | 0.016 | F | NA | |
| Selenium | 0.01 | F | 0.0054 | F | NA | |
| Silver | 0.000067 | F | 0.0002 | U | NA | |
| Thallium | 0.00002 | U | 0.00002 | U | NA | |
| Vanadium | 0.0022 | F | 0.003 | F | NA | |
| Zinc | 0.025 | | 0.025 | | | |
| **Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)** | | | | | | |
| **Aromatic Volatile Organics - SW8020/SW5030 (percent)** | | | | | | |
| Benzene | 0.21 | U | 1.2 | F | 0.21 | U |
| Ethylbenzene | 9 | | 0.35 | U | 0.35 | U |
| Methyl tert-butyl ether | NA | | NA | | NA | |
| Toluene | 41 | | 0.13 | U | 0.13 | U |
| Xylenes (total) | 61 | J | 0.68 | UJ | 0.68 | UJ |
| **Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)** | | | | | | |

Positive Results Summary Table
Carswell AFB
East Area Groundwater

| Locxref: | ST14-W18 | | ST14-W21 | | ST14-W31 | |
|---|---|---|---|---|---|---|
| Sample ID: | ST14-W18WG02 | | ST14-W21WG02 | | ST14-W31WG02 | |
| Sample Date: | 27-Oct-97 | | 28-Oct-97 | | 22-Oct-97 | |
| 1,2,4-Trimethylbenzene | NA | | NA | | NA | |
| 1,3,5-Trimethylbenzene | NA | | NA | | NA | |
| Benzene | NA | | NA | | NA | |
| Chlorobenzene | NA | | NA | | NA | |
| Ethylbenzene | NA | | NA | | NA | |
| Isopropylbenzene | NA | | NA | | NA | |
| Naphthalene | NA | | NA | | NA | |
| Toluene | NA | | NA | | NA | |
| Trichloroethene | NA | | NA | | NA | |
| Vinyl chloride | NA | | NA | | NA | |
| m-Xylene & p-Xylene | NA | | NA | | NA | |
| n-Propylbenzene | NA | | NA | | NA | |
| o-Xylene | NA | | NA | | NA | |
| p-Isopropyltoluene | NA | | NA | | NA | |
| sec-Butylbenzene | NA | | NA | | NA | |
| tert-Butylbenzene | NA | | NA | | NA | |
| **SW846 9056 - SW9056/NONE (mg/l)** | | | | | | |
| Chloride | 42.6 | | 14.9 | | 41 | |
| Nitrate as N | 0.28 | | 0.19 | | 3.6 | |
| Sulfate | 1.2 | U | 0.54 | U | 44.7 | |
| **Total Organic Carbon - SW9060/NONE (mg/l)** | | | | | | |
| Total Organic Carbon | 18 | | 6.7 | | 2.3 | U |

Table: _____
DQE: _____
Senior Reviewed: _____

# TAB

Landfill Area Laboratory Results

Data Summary Table
Carswell AFB
Landfill Area Groundwater

| Locxref : | PQL | FT09-12C | | GMI-04-01M | | LF04-4F | | LF04-10 | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID : | | FT09-12CWG02 | | MI-04-01MWG02 | | LF04-4FWG02 | | LF04-10WG02 | |
| Sample Date : | | 28-Oct-97 | | 29-Oct-97 | | 29-Oct-97 | | 21-Oct-97 | |
| **Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3050 (mg/l)** | | | | | | | | | |
| Calcium | 0.053 | NA | | NA | | NA | | NA | |
| Magnesium | 0.021 | NA | | NA | | NA | | NA | |
| Potassium | 0.3 | NA | | NA | | NA | | NA | |
| Sodium | 0.12 | NA | | NA | | NA | | NA | |
| **Inductively Coupled Plasma Mass Spectrometry - SW6020/SW3020 (mg/l)** | | | | | | | | | |
| Aluminum | 0.0026 | NA | | NA | | NA | | NA | |
| Antimony | 0.00017 | NA | | NA | | NA | | NA | |
| Arsenic | 0.00019 | NA | | NA | | NA | | NA | |
| Barium | 0.0002 | NA | | NA | | NA | | NA | |
| Beryllium | 0.000069 | NA | | NA | | NA | | NA | |
| Cadmium | 0.00004 | NA | | NA | | NA | | NA | |
| Chromium | 0.0002 | NA | | NA | | NA | | NA | |
| Cobalt | 0.00002 | NA | | NA | | NA | | NA | |
| Copper | 0.00084 | NA | | NA | | NA | | NA | |
| Iron | 0.012 | NA | | NA | | NA | | NA | |
| Lead | 0.0002 | NA | | NA | | NA | | NA | |
| Manganese | 0.0002 | NA | | NA | | NA | | NA | |
| Molybdenum | 0.0002 | NA | | NA | | NA | | NA | |
| Nickel | 0.0002 | NA | | NA | | NA | | NA | |
| Selenium | 0.00007 | NA | | NA | | NA | | NA | |
| Silver | 0.0002 | NA | | NA | | NA | | NA | |
| Thallium | 0.00002 | NA | | NA | | NA | | NA | |
| Vanadium | 0.00017 | NA | | NA | | NA | | NA | |
| Zinc | 0.0011 | NA | | NA | | NA | | NA | |
| **Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)** | | | | | | | | | |
| Mercury | 0.000053 | NA | | NA | | NA | | NA | |
| **Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)** | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.1 | 0.1 | U | 0.1 | U | 0.1 | U | 0.1 | U |
| 1,1,1-Trichloroethane | 0.11 | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U |
| 1,1,2,2-Tetrachloroethane | 0.13 | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| 1,1,2-Trichloroethane | 0.074 | 0.074 | U | 0.074 | U | 0.074 | U | 0.074 | U |
| 1,1-Dichloroethane | 0.075 | 0.075 | U | 0.075 | U | 0.075 | U | 0.075 | U |
| 1,1-Dichloroethene | 0.14 | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| 1,1-Dichloropropene | 0.15 | 0.15 | U | 0.15 | U | 0.15 | U | 0.15 | U |
| 1,2,3-Trichlorobenzene | 0.12 | 0.12 | U | 0.12 | U | 0.12 | U | 0.12 | U |
| 1,2,3-Trichloropropane | 0.2 | 0.2 | U | 0.2 | U | 0.2 | U | 0.2 | U |
| 1,2,4-Trichlorobenzene | 0.11 | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U |
| 1,2,4-Trimethylbenzene | 0.12 | 0.12 | U | 0.12 | U | 0.12 | U | 0.12 | U |
| 1,2-Dibromo-3-chloropropane (DBCP) | 0.29 | 0.29 | UJ | 0.29 | UJ | 0.29 | UJ | 0.29 | UJ |
| 1,2-Dibromoethane (EDB) | 0.08 | 0.08 | U | 0.08 | U | 0.08 | U | 0.08 | U |
| 1,2-Dichlorobenzene | 0.13 | 3.7 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| 1,2-Dichloroethane | 0.077 | 0.077 | U | 0.077 | U | 0.077 | U | 0.077 | U |
| 1,2-Dichloropropane | 0.085 | 0.085 | U | 0.085 | U | 0.085 | U | 0.085 | U |
| 1,3,5-Trimethylbenzene | 0.15 | 0.15 | U | 0.15 | U | 0.15 | U | 0.15 | U |
| 1,3-Dichlorobenzene | 0.11 | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U |

Data Summary Table
Carswell AFB
Landfill Area Groundwater

| Locxref : | | FT09-12C | | GMI-04-01M | | LF04-4F | | LF04-10 | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID : | PQL | FT09-12CWG02 | | MI-04-01MWG02 | | LF04-4FWG02 | | LF04-10WG02 | |
| Sample Date | | 28-Oct-97 | | 29-Oct-97 | | 29-Oct-97 | | 21-Oct-97 | |
| 1,3-Dichloropropane | 0.066 | 0.066 | U | 0.066 | U | 0.066 | U | 0.066 | U |
| 1,4-Dichlorobenzene | 0.14 | 2 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| 1-Chlorohexane | 0.11 | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U |
| 2,2-Dichloropropane | 0.15 | 0.15 | U | 0.15 | U | 0.15 | U | 0.15 | U |
| 2-Chlorotoluene | 0.14 | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| 4-Chlorotoluene | 0.12 | 0.12 | U | 0.12 | U | 0.12 | U | 0.12 | U |
| Benzene | 0.11 | 5 | | 0.11 | U | 0.11 | U | 0.11 | U |
| Bromobenzene | 0.13 | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| Bromochloromethane | 0.13 | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| Bromodichloromethane | 0.11 | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U |
| Bromoform | 0.4 | 0.4 | U | 0.4 | U | 0.4 | U | 0.4 | U |
| Bromomethane | 0.17 | 0.17 | U | 0.17 | U | 0.17 | U | 0.17 | U |
| Carbon tetrachloride | 0.14 | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| Chlorobenzene | 0.14 | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| Chloroethane | 0.066 | 0.066 | U | 0.066 | U | 0.066 | U | 0.066 | U |
| Chloroform | 0.097 | 0.097 | U | 0.097 | U | 0.097 | U | 0.097 | U |
| Chloromethane | 0.08 | 0.08 | U | 0.08 | U | 0.08 | U | 0.08 | U |
| Dibromochloromethane | 0.1 | 0.1 | U | 0.1 | U | 0.1 | U | 0.1 | U |
| Dibromomethane | 0.096 | 0.096 | U | 0.096 | U | 0.096 | U | 0.096 | U |
| Dichlorodifluoromethane | 0.14 | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| Ethylbenzene | 0.16 | 0.16 | U | 0.16 | U | 0.16 | U | 0.16 | U |
| Hexachlorobutadiene | 0.15 | 0.15 | U | 0.15 | U | 0.15 | U | 0.15 | U |
| Isopropylbenzene | 0.13 | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| Methylene chloride | 0.086 | 0.086 | U | 0.086 | U | 0.086 | U | 0.086 | U |
| Naphthalene | 0.088 | 0.088 | UJ | 0.088 | UJ | 0.088 | UJ | 0.088 | UJ |
| Styrene | 0.094 | 0.094 | U | 0.094 | U | 0.094 | U | 0.094 | U |
| Tetrachloroethene | 0.13 | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| Toluene | 0.14 | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| Trichloroethene | 0.097 | 5.9 | | 880 | | 2700 | | 0.16 | F |
| Trichlorofluoromethane | 0.16 | 0.16 | U | 0.16 | U | 0.16 | U | 0.16 | U |
| Vinyl chloride | 0.13 | 11 | | 0.13 | U | 0.13 | U | 0.13 | U |
| cis-1,2-Dichloroethene | 0.13 | 60 | | 240 | | 600 | | 0.13 | U |
| cis-1,3-Dichloropropene | 0.081 | 0.081 | U | 0.081 | U | 0.081 | U | 0.081 | U |
| m-Xylene & p-Xylene | 0.27 | 0.27 | U | 0.27 | U | 0.27 | U | 0.27 | U |
| n-Butylbenzene | 0.14 | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| n-Propylbenzene | 0.12 | 0.12 | U | 0.12 | U | 0.12 | U | 0.12 | U |
| o-Xylene | 0.11 | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U |
| p-Isopropyltoluene | 0.13 | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| sec-Butylbenzene | 0.14 | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| tert-Butylbenzene | 0.13 | 1.8 | F | 0.13 | U | 0.13 | U | 0.13 | U |
| trans-1,2-Dichloroethene | 0.088 | 0.088 | U | 41 | | 0.088 | U | 0.088 | U |
| trans-1,3-Dichloropropene | 0.11 | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U |

Data Summary Table
Carswell AFB
Landfill Area Groundwater

| Locxref: | LF05-02 | | LF05-5G | | LF05-18 | | LF05-19 | | LF05-19 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID : | LF05-02WG02 | | LF05-5GWG02 | | LF05-18WG02 | | DUP01-WG02 | | LF05-19WG02 | |
| Sample Date | 28-Oct-97 | | 29-Oct-97 | | 29-Oct-97 | | 29-Oct-97 | | 29-Oct-97 | |
| **Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3050 (mg/l)** | | | | | | | | | | |
| Calcium | NA | | NA | | 178 | | 159 | | 162 | |
| Magnesium | NA | | NA | | 9.1 | | 9.6 | | 9.8 | |
| Potassium | NA | | NA | | 1.8 | F | 1.8 | F | 1.7 | F |
| Sodium | NA | | NA | | 52.5 | | 38.7 | | 39.2 | |
| **Inductively Coupled Plasma Mass Spectrometry - SW6020/SW3020 (mg/l)** | | | | | | | | | | |
| Aluminum | NA | | NA | | 0.053 | F | 0.022 | F | 0.021 | F |
| Antimony | NA | | NA | | 0.00027 | F | 0.000019 | F | 0.00017 | U |
| Arsenic | NA | | NA | | 0.0021 | F | 0.001 | F | 0.001 | F |
| Barium | NA | | NA | | 0.15 | U | 0.13 | | 0.13 | U |
| Beryllium | NA | | NA | | 0.000069 | U | 0.000069 | U | 0.000069 | U |
| Cadmium | NA | | NA | | 0.00004 | U | 0.00004 | U | 0.00004 | U |
| Chromium | NA | | NA | | 0.0019 | F | 0.00022 | F | 0.0002 | U |
| Cobalt | NA | | NA | | 0.00065 | F | 0.0006 | F | 0.0005 | F |
| Copper | NA | | NA | | 0.0018 | F | 0.0013 | F | 0.0012 | F |
| Iron | NA | | NA | | 1.1 | U | 0.94 | | 0.98 | U |
| Lead | NA | | NA | | 0.0004 | F | 0.0012 | F | 0.00014 | F |
| Manganese | NA | | NA | | 0.0071 | F | 0.0046 | F | 0.0033 | F |
| Molybdenum | NA | | NA | | 0.0011 | F | 0.00074 | F | 0.00075 | F |
| Nickel | NA | | NA | | 0.014 | F | 0.01 | F | 0.0099 | F |
| Selenium | NA | | NA | | 0.0072 | F | 0.0036 | F | 0.0037 | F |
| Silver | NA | | NA | | 0.00013 | F | 0.00041 | F | 0.0002 | F |
| Thallium | NA | | NA | | 0.000026 | F | 0.00002 | U | 0.00002 | U |
| Vanadium | NA | | NA | | 0.0016 | F | 0.0011 | F | 0.0011 | F |
| Zinc | NA | | NA | | 0.012 | F | 0.012 | F | 0.0095 | F |
| **Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)** | | | | | | | | | | |
| Mercury | NA | | NA | | 0.000066 | F | 0.000053 | U | 0.000053 | U |
| **Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 5 | U | 0.1 | U | 0.1 | U | 0.1 | U | 0.1 | U |
| 1,1,1-Trichloroethane | 5.5 | U | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U |
| 1,1,2,2-Tetrachloroethane | 6.5 | U | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| 1,1,2-Trichloroethane | 3.7 | U | 0.074 | U | 0.074 | U | 0.074 | U | 0.074 | U |
| 1,1-Dichloroethane | 3.8 | U | 0.075 | U | 0.075 | U | 0.075 | U | 0.075 | U |
| 1,1-Dichloroethene | 7 | U | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| 1,1-Dichloropropene | 7.5 | U | 0.15 | U | 0.15 | U | 0.15 | U | 0.15 | U |
| 1,2,3-Trichlorobenzene | 6 | U | 0.12 | U | 0.12 | U | 0.12 | U | 0.12 | U |
| 1,2,3-Trichloropropane | 10 | U | 0.2 | U | 0.2 | U | 0.2 | U | 0.2 | U |
| 1,2,4-Trichlorobenzene | 5.5 | U | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U |
| 1,2,4-Trimethylbenzene | 6 | U | 0.12 | U | 0.12 | U | 0.12 | U | 0.12 | U |
| 1,2-Dibromo-3-chloropropane (DBCP) | 14 | UJ | 0.29 | UJ | 0.29 | UJ | 0.29 | UJ | 0.29 | UJ |
| 1,2-Dibromoethane (EDB) | 4 | U | 0.08 | U | 0.08 | U | 0.08 | U | 0.08 | U |
| 1,2-Dichlorobenzene | 6.5 | U | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| 1,2-Dichloroethane | 3.8 | U | 0.077 | U | 0.077 | U | 0.077 | U | 0.077 | U |
| 1,2-Dichloropropane | 4.2 | U | 0.085 | U | 0.085 | U | 0.085 | U | 0.085 | U |
| 1,3,5-Trimethylbenzene | 7.5 | U | 0.15 | U | 0.15 | U | 0.15 | U | 0.15 | U |
| 1,3-Dichlorobenzene | 5.5 | U | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U |

Data Summary Table
Carswell AFB
Landfill Area Groundwater

| Locxref : | LF05-02 | | LF05-5G | | LF05-18 | | LF05-19 | | LF05-19 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID : | LF05-02WG02 | | LF05-5GWG02 | | LF05-18WG02 | | DUP01-WG02 | | LF05-19WG02 | |
| Sample Date : | 28-Oct-97 | | 29-Oct-97 | | 29-Oct-97 | | 29-Oct-97 | | 29-Oct-97 | |
| 1,3-Dichloropropane | 3.3 | U | 0.066 | U | 0.066 | U | 0.066 | U | 0.066 | U |
| 1,4-Dichlorobenzene | 7 | U | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| 1-Chlorohexane | 5.5 | U | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U |
| 2,2-Dichloropropane | 7.5 | U | 0.15 | U | 0.15 | U | 0.15 | U | 0.15 | U |
| 2-Chlorotoluene | 7 | U | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| 4-Chlorotoluene | 6 | U | 0.12 | U | 0.12 | U | 0.12 | U | 0.12 | U |
| Benzene | 5.5 | U | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U |
| Bromobenzene | 6.5 | U | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| Bromochloromethane | 6.5 | U | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| Bromodichloromethane | 5.5 | U | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U |
| Bromoform | 20 | U | 0.4 | U | 0.4 | U | 0.4 | U | 0.4 | U |
| Bromomethane | 8.5 | U | 0.17 | U | 0.17 | U | 0.17 | U | 0.17 | U |
| Carbon tetrachloride | 7 | U | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| Chlorobenzene | 7 | U | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| Chloroethane | 3.3 | U | 0.066 | U | 0.066 | U | 0.066 | U | 0.066 | U |
| Chloroform | 4.8 | U | 0.097 | U | 0.097 | U | 0.097 | U | 0.097 | U |
| Chloromethane | 4 | U | 0.08 | U | 0.08 | U | 0.08 | U | 0.08 | U |
| Dibromochloromethane | 5 | U | 0.1 | U | 0.1 | U | 0.1 | U | 0.1 | U |
| Dibromomethane | 4.8 | U | 0.096 | U | 0.096 | U | 0.096 | U | 0.096 | U |
| Dichlorodifluoromethane | 7 | U | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| Ethylbenzene | 8 | U | 0.16 | U | 0.16 | U | 0.16 | U | 0.16 | U |
| Hexachlorobutadiene | 7.5 | U | 0.15 | U | 0.15 | U | 0.15 | U | 0.15 | U |
| Isopropylbenzene | 6.5 | U | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| Methylene chloride | 4.3 | U | 0.086 | U | 0.086 | U | 0.086 | U | 0.086 | U |
| Naphthalene | 4.4 | UJ | 0.088 | UJ | 0.088 | UJ | 0.088 | UJ | 0.088 | UJ |
| Styrene | 4.7 | U | 0.094 | U | 0.094 | U | 0.094 | U | 0.094 | U |
| Tetrachloroethene | 6.5 | U | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| Toluene | 7 | U | 0.14 | U | 0.14 | U | 6.2 | J | 2.4 | F |
| Trichloroethene | 210 | | 590 | | 860 | | 59 | | 68 | |
| Trichlorofluoromethane | 8 | U | 0.16 | U | 0.16 | U | 0.16 | U | 0.16 | U |
| Vinyl chloride | 24 | F | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| cis-1,2-Dichloroethene | 650 | | 220 | | 310 | | 19 | | 22 | |
| cis-1,3-Dichloropropene | 4 | U | 0.081 | U | 0.081 | U | 0.081 | U | 0.081 | U |
| m-Xylene & p-Xylene | 14 | U | 0.27 | U | 0.27 | U | 4.9 | J | 2.9 | J |
| n-Butylbenzene | 7 | U | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| n-Propylbenzene | 6 | U | 0.12 | U | 0.12 | U | 0.12 | U | 0.12 | U |
| o-Xylene | 5.5 | U | 0.11 | U | 0.11 | U | 2 | F | 0.11 | UJ |
| p-Isopropyltoluene | 6.5 | U | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| sec-Butylbenzene | 7 | U | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| tert-Butylbenzene | 6.5 | U | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| trans-1,2-Dichloroethene | 46 | | 15 | F | 41 | | 0.088 | U | 0.088 | U |
| trans-1,3-Dichloropropene | 5.5 | U | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U |

Data Summary Table
Carswell AFB
Landfill Area Groundwater

| | | |
|---|---|---|
| | Locxref : | WP07-10B |
| | Sample ID : | WP07-10BWG02 |
| | Sample Date : | 30-Oct-97 |
| **Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3050 (mg/l)** | | |
| Calcium | NA | |
| Magnesium | NA | |
| Potassium | NA | |
| Sodium | NA | |
| **Inductively Coupled Plasma Mass Spectrometry - SW6020/SW3020 (mg/l)** | | |
| Aluminum | NA | |
| Antimony | NA | |
| Arsenic | NA | |
| Barium | NA | |
| Beryllium | NA | |
| Cadmium | NA | |
| Chromium | NA | |
| Cobalt | NA | |
| Copper | NA | |
| Iron | NA | |
| Lead | NA | |
| Manganese | NA | |
| Molybdenum | NA | |
| Nickel | NA | |
| Selenium | NA | |
| Silver | NA | |
| Thallium | NA | |
| Vanadium | NA | |
| Zinc | NA | |
| **Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)** | | |
| Mercury | NA | |
| **Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)** | | |
| 1,1,1,2-Tetrachloroethane | 20 | U |
| 1,1,1-Trichloroethane | 22 | U |
| 1,1,2,2-Tetrachloroethane | 26 | U |
| 1,1,2-Trichloroethane | 15 | U |
| 1,1-Dichloroethane | 15 | U |
| 1,1-Dichloroethene | 28 | U |
| 1,1-Dichloropropene | 30 | U |
| 1,2,3-Trichlorobenzene | 24 | U |
| 1,2,3-Trichloropropane | 40 | U |
| 1,2,4-Trichlorobenzene | 22 | U |
| 1,2,4-Trimethylbenzene | 24 | U |
| 1,2-Dibromo-3-chloropropane (DBCP) | 58 | UJ |
| 1,2-Dibromoethane (EDB) | 16 | U |
| 1,2-Dichlorobenzene | 26 | U |
| 1,2-Dichloroethane | 15 | U |
| 1,2-Dichloropropane | 17 | U |
| 1,3,5-Trimethylbenzene | 30 | U |
| 1,3-Dichlorobenzene | 22 | U |

Data Summary Table
Carswell AFB
Landfill Area Groundwater

| | Locxref: | WP07-10B | |
|---|---|---|---|
| | Sample ID: | WP07-10BWG02 | |
| | Sample Date | 30-Oct-97 | |
| 1,3-Dichloropropane | | 13 | U |
| 1,4-Dichlorobenzene | | 28 | U |
| 1-Chlorohexane | | 22 | U |
| 2,2-Dichloropropane | | 30 | U |
| 2-Chlorotoluene | | 28 | U |
| 4-Chlorotoluene | | 24 | U |
| Benzene | | 22 | U |
| Bromobenzene | | 26 | U |
| Bromochloromethane | | 26 | U |
| Bromodichloromethane | | 22 | U |
| Bromoform | | 80 | U |
| Bromomethane | | 34 | U |
| Carbon tetrachloride | | 28 | U |
| Chlorobenzene | | 28 | U |
| Chloroethane | | 13 | U |
| Chloroform | | 19 | U |
| Chloromethane | | 16 | U |
| Dibromochloromethane | | 20 | U |
| Dibromomethane | | 19 | U |
| Dichlorodifluoromethane | | 28 | U |
| Ethylbenzene | | 32 | U |
| Hexachlorobutadiene | | 30 | U |
| Isopropylbenzene | | 26 | U |
| Methylene chloride | | 17 | U |
| Naphthalene | | 18 | UJ |
| Styrene | | 19 | U |
| Tetrachloroethene | | 26 | U |
| Toluene | | 28 | U |
| Trichloroethene | | 2500 | |
| Trichlorofluoromethane | | 32 | U |
| Vinyl chloride | | 26 | U |
| cis-1,2-Dichloroethene | | 450 | |
| cis-1,3-Dichloropropene | | 16 | U |
| m-Xylene & p-Xylene | | 54 | U |
| n-Butylbenzene | | 28 | U |
| n-Propylbenzene | | 24 | U |
| o-Xylene | | 22 | U |
| p-Isopropyltoluene | | 26 | U |
| sec-Butylbenzene | | 28 | U |
| tert-Butylbenzene | | 26 | U |
| trans-1,2-Dichloroethene | | 45 | F |
| trans-1,3-Dichloropropene | | 22 | U |

Table _____
DQE _____
Senior Reviewed _____

Positive Results Summary Table
Carswell AFB
Landfill Area Groundwater

| Locxref : | | FT09-12C | | GMI-04-01M | | LF04-4F | | LF04-10 | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID : | PQL | FT09-12CWG02 | | MI-04-01MWG02 | | LF04-4FWG02 | | LF04-10WG02 | |
| Sample Date | | 28-Oct-97 | | 29-Oct-97 | | 29-Oct-97 | | 21-Oct-97 | |
| **Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3050 (mg/l)** | | | | | | | | | |
| Calcium | 0.053 | NA | | NA | | NA | | NA | |
| Magnesium | 0.021 | NA | | NA | | NA | | NA | |
| Potassium | 0.3 | NA | | NA | | NA | | NA | |
| Sodium | 0.12 | NA | | NA | | NA | | NA | |
| **Inductively Coupled Plasma Mass Spectrometry - SW6020/SW3020 (mg/l)** | | | | | | | | | |
| Aluminum | 0.0026 | NA | | NA | | NA | | NA | |
| Antimony | 0.00017 | NA | | NA | | NA | | NA | |
| Arsenic | 0.00019 | NA | | NA | | NA | | NA | |
| Barium | 0.0002 | NA | | NA | | NA | | NA | |
| Chromium | 0.0002 | NA | | NA | | NA | | NA | |
| Cobalt | 0.00002 | NA | | NA | | NA | | NA | |
| Copper | 0.00084 | NA | | NA | | NA | | NA | |
| Iron | 0.012 | NA | | NA | | NA | | NA | |
| Lead | 0.0002 | NA | | NA | | NA | | NA | |
| Manganese | 0.0002 | NA | | NA | | NA | | NA | |
| Molybdenum | 0.0002 | NA | | NA | | NA | | NA | |
| Nickel | 0.0002 | NA | | NA | | NA | | NA | |
| Selenium | 0.00007 | NA | | NA | | NA | | NA | |
| Silver | 0.0002 | NA | | NA | | NA | | NA | |
| Thallium | 0.00002 | NA | | NA | | NA | | NA | |
| Vanadium | 0.00017 | NA | | NA | | NA | | NA | |
| Zinc | 0.0011 | NA | | NA | | NA | | NA | |
| **Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)** | | | | | | | | | |
| Mercury | 0.000053 | NA | | NA | | NA | | NA | |
| **Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)** | | | | | | | | | |
| 1,2-Dichlorobenzene | 0.13 | 3.7 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| 1,4-Dichlorobenzene | 0.14 | 2 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| Benzene | 0.11 | 5 | | 0.11 | U | 0.11 | U | 0.11 | U |
| Toluene | 0.14 | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| Trichloroethene | 0.097 | 5.9 | | 880 | | 2700 | | 0.16 | F |
| Vinyl chloride | 0.13 | 11 | | 0.13 | U | 0.13 | U | 0.13 | U |
| cis-1,2-Dichloroethene | 0.13 | 60 | | 240 | | 600 | | 0.13 | U |
| m-Xylene & p-Xylene | 0.27 | 0.27 | U | 0.27 | U | 0.27 | U | 0.27 | U |
| o-Xylene | 0.11 | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U |
| tert-Butylbenzene | 0.13 | 1.8 | F | 0.13 | U | 0.13 | U | 0.13 | U |
| trans-1,2-Dichloroethene | 0.088 | 0.088 | U | 41 | | 0.088 | U | 0.088 | U |

Positive Results Summary Table
Carswell AFB
Landfill Area Groundwater

| Locxref | LF05-02 | | LF05-5G | | LF05-18 | | LF05-19 | | LF05-19 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | LF05-02WG02 | | LF05-5GWG02 | | LF05-18WG02 | | DUP01-WG02 | | LF05-19WG02 | |
| Sample Date | 28-Oct-97 | | 29-Oct-97 | | 29-Oct-97 | | 29-Oct-97 | | 29-Oct-97 | |
| **Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3050 (mg/l)** | | | | | | | | | | |
| Calcium | NA | | NA | | 178 | | 159 | | 162 | |
| Magnesium | NA | | NA | | 9.1 | | 9.6 | | 9.8 | |
| Potassium | NA | | NA | | 1.8 | F | 1.8 | F | 1.7 | F |
| Sodium | NA | | NA | | 52.5 | | 38.7 | | 39.2 | |
| **Inductively Coupled Plasma Mass Spectrometry - SW6020/SW3020 (mg/l)** | | | | | | | | | | |
| Aluminum | NA | | NA | | 0.053 | F | 0.022 | F | 0.021 | F |
| Antimony | NA | | NA | | 0.00027 | F | 0.000019 | F | 0.00017 | U |
| Arsenic | NA | | NA | | 0.0021 | F | 0.001 | F | 0.001 | F |
| Barium | NA | | NA | | 0.15 | U | 0.13 | | 0.13 | U |
| Chromium | NA | | NA | | 0.0019 | F | 0.00022 | F | 0.0002 | U |
| Cobalt | NA | | NA | | 0.00065 | F | 0.0006 | F | 0.0005 | F |
| Copper | NA | | NA | | 0.0018 | F | 0.0013 | F | 0.0012 | F |
| Iron | NA | | NA | | 1.1 | U | 0.94 | | 0.98 | U |
| Lead | NA | | NA | | 0.0004 | F | 0.0012 | F | 0.00014 | F |
| Manganese | NA | | NA | | 0.0071 | F | 0.0046 | F | 0.0033 | F |
| Molybdenum | NA | | NA | | 0.0011 | F | 0.00074 | F | 0.00075 | F |
| Nickel | NA | | NA | | 0.014 | F | 0.01 | F | 0.0099 | F |
| Selenium | NA | | NA | | 0.0072 | F | 0.0036 | F | 0.0037 | F |
| Silver | NA | | NA | | 0.00013 | F | 0.00041 | F | 0.0002 | F |
| Thallium | NA | | NA | | 0.000026 | F | 0.00002 | U | 0.00002 | U |
| Vanadium | NA | | NA | | 0.0016 | F | 0.0011 | F | 0.0011 | F |
| Zinc | NA | | NA | | 0.012 | F | 0.012 | F | 0.0095 | F |
| **Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)** | | | | | | | | | | |
| Mercury | NA | | NA | | 0.000066 | F | 0.000053 | U | 0.000053 | U |
| **Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)** | | | | | | | | | | |
| 1,2-Dichlorobenzene | 6.5 | U | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| 1,4-Dichlorobenzene | 7 | U | 0.14 | U | 0.14 | U | 0.14 | U | 0.14 | U |
| Benzene | 5.5 | U | 0.11 | U | 0.11 | U | 0.11 | U | 0.11 | U |
| Toluene | 7 | U | 0.14 | U | 0.14 | U | 6.2 | J | 2.4 | F |
| Trichloroethene | 210 | | 590 | | 860 | | 59 | | 68 | |
| Vinyl chloride | 24 | F | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| cis-1,2-Dichloroethene | 650 | | 220 | | 310 | | 19 | | 22 | |
| m-Xylene & p-Xylene | 14 | U | 0.27 | U | 0.27 | U | 4.9 | J | 2.9 | J |
| o-Xylene | 5.5 | U | 0.11 | U | 0.11 | U | 2 | F | 0.11 | UJ |
| tert-Butylbenzene | 6.5 | U | 0.13 | U | 0.13 | U | 0.13 | U | 0.13 | U |
| trans-1,2-Dichloroethene | 46 | | 15 | F | 41 | | 0.088 | U | 0.088 | U |

Positive Results Summary Table
Carswell AFB
Landfill Area Groundwater

| | | |
|---|---|---|
| | Locxref : | WP07-10B |
| | Sample ID : | WP07-10BWG02 |
| | Sample Date : | 30-Oct-97 |
| **Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3050 (mg/l)** | | |
| Calcium | NA | |
| Magnesium | NA | |
| Potassium | NA | |
| Sodium | NA | |
| **Inductively Coupled Plasma Mass Spectrometry - SW6020/SW3020 (mg/l)** | | |
| Aluminum | NA | |
| Antimony | NA | |
| Arsenic | NA | |
| Barium | NA | |
| Chromium | NA | |
| Cobalt | NA | |
| Copper | NA | |
| Iron | NA | |
| Lead | NA | |
| Manganese | NA | |
| Molybdenum | NA | |
| Nickel | NA | |
| Selenium | NA | |
| Silver | NA | |
| Thallium | NA | |
| Vanadium | NA | |
| Zinc | NA | |
| **Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)** | | |
| Mercury | | |
| **Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)** | | |
| 1,2-Dichlorobenzene | 26 | U |
| 1,4-Dichlorobenzene | 28 | U |
| Benzene | 22 | U |
| Toluene | 28 | U |
| Trichloroethene | 2500 | |
| Vinyl chloride | 26 | U |
| cis-1,2-Dichloroethene | 450 | |
| m-Xylene & p-Xylene | 54 | U |
| o-Xylene | 22 | U |
| tert-Butylbenzene | 26 | U |
| trans-1,2-Dichloroethene | 45 | F |

TABLE: _____
DQE: _____
Senior Reviewed. _____

# FINAL PAGE

## ADMINISTRATIVE RECORD

FINAL PAGE

# FINAL PAGE

# ADMINISTRATIVE RECORD

# FINAL PAGE