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BASEWIDE GROUNDWATER SAMPLING AND ANALYSIS PROGRAM QUARTERLY MONITORING REPORT JULY 1997 EVENT APPENDICES NAS FORT WORTH TX
1/1/1998
HYDROGEOLOGIC

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File: 17G
A.F.

NAVAL AIR STATION
FORT WORTH JRB
CARSWELL FIELD
TEXAS

ADMINISTRATIVE RECORD
COVER SHEET

AR File Number 408

File: A.F. 17A-64
408

HYDRO GeoLogic INC.

HQ Air Force Center for Environmental Excellence

Final
Basewide Groundwater Sampling and Analysis Program
Quarterly Monitoring Report
July 1997 Event
Appendices

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

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

January 1998

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408 2

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Submitted by:
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January 1998

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Appendix A
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Field Notes

7/7/97 AFC00107GMA

Quarterly Sampling at NAS Fort Worth JRB

Field Team - Mike Rodhang - Field Team Leader HGL
Lynn Morgan - HGL
Timothy Zoch - LAW
Jack McCranie - LAW

1100 Arrive at AFBCA, Meet Jack McCranie & Tim Zoch of LAW. Based on the Fire Drill performed by Elliot Smith of AFBCA, All Parties will get Stamps Required for Base Operations.

1700 Finish Briefing, Pass to the Field OPS and Lynn Morgan of HGL. Unload Back of Equipment Put Away at AFBCA.

1800 Leave Field OPS for day.

[signature]

1 of 3

NAS Ft Worth JRB

7/8/97 AFCEE/OT GAA

Jack - 7:10am 3 low
Tim - 7:15am 3 low

0-5mph breeze, 76° AM operations

6:55 Mike Radtang & Lynn Morgan on site

7:15 Began Safety Meeting - went over HASP & general protocol. Filled out forms (medical)

8:15 meeting finished

Got to pick up rental Ryder - Mike stays here to arrange equipment. Pick up 2 8' Ryder vans w Ryder located off I35W between Felix and Seminary Rds.

1000 Back on site - load vans - decon pumps, washing, fill Hexane, methanol & distilled water for field

0940 Calibrate PIDs to open ambient 100 open isobutylene 102.1

Called for order of Water (4) Sgal Kitzco

Sue Heinrich (HQ home office) processing requisition form.

1109 Leave for base ops to get visitor passes stop by (Mike) to see Elliot @ AF Base Conversion Office. He tells Mike to go to civil engineering office first, then base ops. Mike also asked about keys to wells. Elliot had one and suggested we bring our keys down to match. Need

1120 Stopped at visitors in office - He checked our truck rental agreements, licenses & id forms, took pictures. Bldg 3002 before main gate

Jack

NAS Ft Worth JRB

7/8/97 cont.

11:55 Leave Visitors Control Center w/badges

Need to obtain stamp on drivers license (airfield)

Went to bldgs 1425, 1423, & 1407 where we got the stamp. Bldg 1407 located off Carswell Ave on parking apron near intersection with Burke Ave.

12:24 Leaving for lunch

13:00 Done w/ lunch (Subway)

Go back towards field house stop at AFBRCA to pick up coolers & gloves from FedEx.

Mike drops 3 of us off & goes back to AFBRCA to get well keys. We fill coolers w/ gatorade

3:50 Start to guage GM-04-01M & LF04-417

14:10 start to guage LF04-416

4:20 open well - valve dropped as doing it - Mike went to get fish hook - got it out

4:45 Check w/ Tim & Jack before heading to Fuel Hydrant Storage Area for next set of wells

15:05 Find well tagged ST-14-W24 -

8:15 Head back to field house to meet Jack & Tim - they are already there. We tell them we're going to continue - then leave site.

9:00 do QA check on ST-14-03 & ST14W15 - which Jack & Tim did - all measurements with in 0.01.

9:30 Finish gauging for day - see coolers at AFBRCA pick up bad van. Mike calibrates PID - check contents of coolers

2:00 Leave site for hotel

JAM

3 of 3 NAS Fallon TRP

Well Name	DTW	TD	DTP	TD	OVM	Comments
7/8/97 GM1-04-01M	18.57	22.46		—	0	water in well, soft bottom
LF-04-41H	18.22	18.83		—	0	Same as prev. log sheet - 100's
LF-04-46	25.05	32.8		—	0	sand - soft
LF-05-56	20.36	30.23		—	0	sand
LF-05-5H	15.18	16.26		—	0	sand - no vapors soft bottom
ST-14-W06	8.29	22.61		—	0	
ST-14-W07	10.2	24.69		—	0	
ST-14-W09	6.89	20.9		—	0	
17I	9.78	19.76		—	0	
17K	8.74	18.54		—	0	clay bottom
ST-14-03	7.98	19.83		—	0	
ST-14-W15	9.84	18.12		—	0	hard bottom, odor [illegible]
ST14-02	11.29	19.38		—	0	
ST14-01	13.11	18.32		—	0	
ST14-30	5.20	14.03		—	0	inorganic material on probe
ST-14-29	8.88	15.75		—	0	odor - labeled ST14MW09 [illegible]
USGS 65P	37.78	92.0		—	0	
MW-3	10.25	19.35		—	0	
ST-14-W05	7.8	16.32		—	0	slight clay on bottom
ST14-24	10.75	17.00		—	0	no odor [illegible] clay seams [illegible]
ST-14-28	11.3	17.09		—	0	labeled ST-14W28
17J	10.11	21.18		—	0	
ST14-W13	6.45	17.09		—	0	
17L	9.35	20.83		—	0	slight odor
ST14-W12	4.33	10.23		—	0	soft bottom - odor slight [illegible]

7/8/97 25-2 GPS

23

JWM

7/8/97 AFC00107 GAA - Breezy, cooler, low 90s expected by midday. Partially cloudy

1 of 3

Quarterly Sampling Cont'd - Gauging Wells

0655 Stop on way to site to get ice

0705 Arrive on site - Jack already there

Unplug PIDs, load trucks

Tim arrives - calibrates PIDs

Decide they'll stick to the eastern half and we'll cover the western wells.

Conducted daily H&S briefing

0730 Gauging 1st well

1200 Leave landfill - flightline area - SWMU 17 to meet Jack & Tim for lunch - make phone calls to home office

12:18 They show up - Jack is going to his office for lunch - 3 guys head to lunch

Back from lunch - Jack already back

We check PIDs again - ours (Mike & Lynn) has crack in sampling tube - we modify attachment

Mike & I decide to finish the western wells close to flightline and Jack & Tim are to work on eastern half of wells down by the dock

Mike checks w/ Elliot at AFBCA office to see if he can escort us on flightline tomorrow. He says yes. We leave to go to Base Ops to inform them we'll be out close to flightline.

Continue w/ gauging in flightline - landfill area just west of field house.

1540 Sporadic heavy rain & thunderstorms begin - we wait for some to pass off & on

Used twine to measure DTG & DTP deep well along with interface probe

Gaa

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②3/9 - Gauging Data AFC 001-07-GAA NAS FtWorth JRB

Time	Well Name	DTW	TD	OVM	Comments
0945	MW-37	8.16	19.77	0	hard bottom
0940	ST14-25	5.56	16.35	0	silty bottom
0920	ST14-14	7.57	20.44	0	one bolt missing, locking cap hard to
0850	ST14-W08	9.24	25.98	0	
933	ST14-26	10.09	27.33	0	
~~1410~~	~~ST14-28~~	23.45	29.99	0	
1425	LF05-02 HM 122	17.07	27.8	1.8	
1050	FT08-11A	7.98	11.62	0	
1059	FT08-11B	7.66	7.02	0	no lock
1110	LF05-5C	9.62	21.22	0	hard bottom
1638	LF05-5D	9.48	21.0	0	
1445	HM-123	23.73	38.37	0	
1123	LF05-5A	22.68	30.45	0.1	
1115	W007-10A	26.71	37.78	0	
1624	MW-12A	DRY	16.38	0	no lock - dry well
1130	LF09-5E	26.52	35.53	0	measured from black mark on PVC
1138	LF04-01	28.99	41.28	0	poor pad
1147	FT09-12D	28.54	37.0	0.9	
1154	FT09-12B	28.97	37.72	0	sand bottom
1615	FT09-12E	29.27	38.65	0	" 12E
1605	FT09-12C	29.85	39.61	0.9	silty bottom - has broken
1514	USGS07P	86.84	138.5	0	used tape to measure
1503	USGS07I	8.19	25.58	0	
1550	FT09A-12A	14.19	27.88	0	extremely soft bottom, silty bottom
~~1550~~ 0900	ST14-N10	5.06	19.59	0	
0902	ST14-W11	5.85	16.3	0	needs new gasket.
1836	LF09-10	31.26	47.26	0	
1924	LF09-09	19.38	19.83	0	in woods square
1915	LF05-19	13.96	19.4	6.4	miss-ing 1 bolt
1805	LF04-4B	17.48	25.34	0	
1749	LF04-4A	8.19	24.87	0	
1845	LF05-7B	18.15	23.61	0	
1032	GTH23DSM	9.20	13.77	0	
	33				

1715 - Met Tim & Jack at field house - Tim needed to leave early - Jack was going to stay for a while to organize notes/maps.

Mike & I went back out to gauge wells just west of fence near treatment plant - 2 wells deep in waist high grass/weeds

924 Finished area - head back to field house

Check PID - calibration 0ppm ambient
98.5 ppm isobutylene

940 Leave site

back to hotel - drop off Mike

Go to Walmart - get bags & bungy cords

Lam

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7/10/97 NAS Ft Worth JRB

(1 of 3)

0700 Arrive on site, Jack soon to follow

- Check PID's - took apart Jack & Tim's - one screw had fallen out & was loose in machine - not essential to readings I believe. Put screw back - checked calibration. Min reading 99.16 - theirs 99.5. Ambients

- Replenish gatorade

- Mike's calling AF water supplier - be here at noon

- Also calling generator supplier should have this afternoon

0800 Leave field house

Gauge TMW-01T

Gauge MW-20

- Decide to get Elliot to escort us on flightline

- Stop at base ops to get radios & play for Elliot to

- Begin gauging

- Can't find HM-1D & 3 HM1114 on flightline. Guess to water high - skip them - looks like it may be moved this pm

1155 - Leave flightline for lunch

- Return from lunch - Sheffield Wichworth from Jaws Kennesaw, GA office is waiting at field house

- The 5 - Plus decide it would be best to all go out on flightline as to not waste Elliot time. We pick up Elliot & go to Base Ops

- After 2 wells we meet back up w/ Jack, Tim & They had pulled the manual pump from the well in order to get a more accurate total depth. In the process the PVC broke at the threads

7/10/97 NAS Ft Worth JKB

time	Well Name	DTW	TD	Comments
0803	IT MW-01T	10.75	21.56	
0947	HM-124	18.63	24.39	
	MW-20	19.43	19.71	
43	MW-19	16.03	19.68	BLD 1.6
22	HM-122	31.83	42.02	
1029	LFOS-01	17.33	27.54	PID 0.6 duct tape ID tag
1145	W-53	18.61	39.27	- PID 15.
1156	HM-116	21.11	31.15	- PID 0
	~~MW 20~~	~~19.43~~	~~19.70~~	
	SPOT 35-7	6.52	20.4	
	SPOT 35-2	20.96	26.28	PID 27.2
	SPOT 35-1	22.14	26.58	PID 30 ppm
	SPOT 35-4	19.94	24.45	
1108	HM-111	22.12	47.65	- PID 3.9
	HM-118			
	HM-119			
	MW157B			
	MW-56			
1144	US6501P	57.92	73.26	Pad labelled HC, H2O in early
1159	US6506T	17.21	21.82	
	MW-48	9.1	13.83	

108 16

7/10/97 - NAS Ft Worth JRB

(3.53) Cont'd

We removed the broken 5' section and removed 5' of the inner PVC so they'd be even. We drilled a small hole & wired the PVC pump to the well cap so it wouldn't drop. Consequently, the pump is now 5' section shorter.

- Continue gauging

1350 Eliot leaves - takes Jill w/him to drop her off so she can pickup generators. The 2 field crews split up to finish the remaining 3.

1655 Mike & I drop off radio to Base Ops. See Tim & Jack - they'll do the last well. Come back - pick up DI water at AFBCA.

Arrive at field house - Jills there w/generators. Unload equipment. Finish up notes.

Jack & Tim arrive - Jack & I check to make sure all wells were gauged.

Tim is taking our PID apart - a small amount of moisture came in at the 2nd to last well.

We decide to let the PID run over night to get air through it.

1840 Left site

LAM

0655 - On site, Jill, Mike, Lynn -

Weather - 77° - expected to be sunny mid 90's - heat index 110°

0700 Jack arrives

- PID - seems to be running fine. I recalibrate - 104.7
  recalibrate Jack's Tiny which is rdg 82.1 - now 102.7
  both ambients reading 0°
- Jill is calling Quantera - Tampa - the lab.
- Calibrating & learning how to use the different equipment.
  - HACH Kits - Draeger tubes
  - Spectrophotometer - PH/ISE meter

7:45-8:00 H.S briefing

Continue equip. set-up / waiting for drums to arrive. Called Dallas Steel Drum. They said their truck driver quit & they wouldn't be able to deliver till Mon. We said we needed them ASAP & they said they try for early this afternoon. Decided to ask Eliot if we could use any of the empty drums across the street. He said yes - we found a

11:00 Decide to take an early lunch rather than starting & fumbling in an hr.

11:40 Return from lunch - cart talking. Called Hach to get advice on PH/ISE meter calibration for Redox Potential. I tested a beaker of water with both meters & got 72 & (-)2.8 with them. Asked what the test was for Calibr. They said there was none & we'd have to send them in for them to do the test on. I told them I was going to use

both the meters in hopes that one was correct & they could call me w/ the serial #s in order to determine the correct values. He was going to have 2 new probes on the way for 3d deliver

12:30 We start to purge - set up hosing & red. flo Grundfos pump - Decon'd all equipment prior to leaving field house. Pump Generator (115V, 20 amp) shorts each time pump is turned to freq of 60 hz. We check w/ both crew to see if their generator works - it doesn't - Take pump back to field house to see if it works in outlet it does. Check other pump - works fine in outlet.

1420 Mike Rodtang calls A-1 Rental - Generator advise to play with screw behind carburetor - it adjusts the voltage supplied. We do this - helps some - but still not working to expectation. Mike & Jack take generators back for new ones

1440 - Back w/ 2 new generators - key start. Begin to purge wells

Time DTW PH

Sample well for VOCs by Method
3 VOAs w/HCl -
Decon equipment -
Take field blank sample for VOCs
Fill out Chain of Custody
Prepare sample cooler for shipment
Jack, Tim & Jill finish up - ~~Jack~~ Tim will
take cooler to DFW - FedEx
1930 Leave site

LAR

408 20

7/14/97 NAS Ft Worth JRB ~ Quarterly Sampling

Field Crews:

Mike Rodiang & Lynn Morgan } Hydro Geologic
Jack McCrume & Kim Kamarian
Jill Wellworth
this book

Weather: Summary, SSW wind 5 mph, 91°, expected 98° by mid day

7:10 Arrive onsite - 3 people from LA already here

Conduct H&S meeting, get fresh water & new buckets. Mike goes to Home Depot for buckets & chem
Calibrate PIDs, cut tubing for wells.

9:00 Start at WP07 10C

guage 19.21 TD - 32.5 Screen 20-30 in

Time	DTW	Flow Rate	Total Volume	pH	Temp	Cond.	ORP	DO	Turb
0933	19.21		~1 rod vol	6.58	21	1.24	414	16.2	
0937	19.85			6.61	21.8	0.824	209		
0942	19.80			6.64	20.9	0.802			0.48
0947	19.51			6.67	20.7	0.772	14.4	7.2	
0952	19.42			6.67	21.7	0.771	15.2	0.25	
0957	19.49			6.68	22.1	0.771	15.3	0.45	
1002	19.43			6.67	22.5	0.766	15.5	0.31	
1007	19.41			6.67	22.7	0.764	13.5	0.24	
1012	19.4			6.67	22.7	0.766	13.2	0.27	
1017	19.39			6.67	23.3	0.762	13.3	0.31	

22 gals

Sampled for VOCs

Clear - no odor

Move on to SMW-04-01 - Do last sampling

TD 20.46

DTW - 18.83

Pump at 20'

7/14/97 NAS Ft Worth JRB

GM11-04-01

Time	DTW	Total Volume	pH	Temp	Cond	ORP	DO	Turb
1112	18.8	0.02						
1117	18.8	0.2						
1125	19.0		6.95	24.4	1.02	3.3	0.93	480
1131	19.2		6.9	24.5	1.03	0.3	0.73	80
1136	19.15		6.9	24.8	1.03	1.7	0.56	49
1141	19.16		6.91	24.3	1.02	-1.3	0.53	24
1146	19.11		6.9	23.1	1.01	-2.0	0.65	11
1151	19.15		6.9	24.8	1.03	1.7	0.56	49
1156	19.17		6.9	22.5	1.01	-1.5	0.66	2
1201	19.16		6.9	22.5	1.00	-2.2	0.67	4
1206	19.16	12 gals	6.9	22.5	1.01	-1.8	0.66	3

1210 - Sampled for VOCs

Clear - colorless, roots in purge water at start

1255 went to lunch

1325 back @ site - cut tubing, replenish supplies

1509 - start purging UF-05-02

Time	DTW	Tot Vol	pH	Temp	Cond	ORP	DO	Turb
1509	24.10							
1514	24.28		6.67	23.5	0.726	-19.8	0.72	701
1519	24.30		6.72	21.9	0.724	-2.1	0.42	30
1524	24.31		6.77	21.7	0.681	[illegible]	0.37	13
1529	24.29		6.75	21.4	0.667	[illegible]	0.34	36
1534	24.30		6.75	21.5	0.657	8.8	0.34	23
1539	24.29		6.72	21.6	0.653	-0.2	0.35	11
1544	24.30		6.76	21.5	0.647	-1.3	0.25	5
1549	24.29		6.77	21.6	0.639	-0.8	0.25	1
1554	24.28		6.77	21.6	0.639	-0.9	0.28	5

1600-1608 sampled for VOCs, MS, & MSD taken as well

7/14/97 NAS Ft Worth JRB cont'd

1739 - Start LTF05-15W

Time	DTW	Total	pH	Temp	Cond	ORP	DO	Turb
1739	18.17							
1750	18.30		6.88	21.0	1.06	-3.7	6.74	
1755	18.25		6.85	22.0	1.07	-3.4	11.35	15
1800	18.24		6.83	22.5	1.07	-3.5	9.83	07
1805	18.20		6.83	23.3	1.06	2.2	9.01	5
1810	18.24	7 gals	6.83	23.7	1.05	-0.9	9.76	20
1815	18.20		6.81	25.0	1.06	4.7	8.91	4
1820	18.34		6.80	23.9	1.06	1.3	4.72	85
1825	18.30		6.82	22.1	1.06	1.2	2.66	8
1830	18.37		6.82	20.7	1.06	-0.8	1.41	2
1835	18.36		6.81	20.4	1.06	-1.1	1.72	1
1840	18.38		6.81	20.2	1.06	-1.0	1.25	2
1845	18.39		6.81	20.2	1.06	-1.0	1.24	0
1850	18.38		6.81	20.2	1.06	-1.1	1.26	0

1855 - Sampled for VOCs (SW8260A) & Meta

- Started grey turned clear - had a few finding light gray fog - think something Clogging at gland (on the well itself)
- Back to site to find out COC will ship tomo prepared sample bottles for tomorrow
- Jack B. & Kim were already on site. Jack was extremely pale & had suffered from heat exh earlier.
- Transferred drums - 2 new ones in each lot
- 1835 - left site

7/15/97 HAS Ft Worth TRR

0655 - Stopped for 10 oz of ice - Sunny 90°

0700 - On Site - Kim & Jill already there - Todd arrives same time

- Calibrate PIDs & meters, change alconox & rinse waters, fill methanol & hexane 3 containers

Mike goes to get generator's gas

When he returns - H&S meeting - particular attention to signs of heat exhaustion & stroke. Drink plenty of Gatorade

Cut tubing

0825 Leave site

0830 - Stop at Base Ops - DIN radio

0840 - Start at GM1 22-02M

TD - 27.77 Screen 15-30 Pump Placed @ 21'

TOC - 9.67 Well Diam 2"

Time	DTW	Total Depth	Temp	Cond	ORP	DO	Turb
8:47	9.12						
0852	10.35		7.03	20.9	0.407	-15	3.5	-10
0857	9.55		7.07	21.5	0.412	-13	3.31	-10
0902	9.41		7.08	21.6	0.412	-12.7	3.57	-10
0907	9.43		7.08	21.7	0.413	-8.3	3.5	-10
0912	9.42	Total	7.08	21.9	0.419	-12.2	9.2	-10
0917	9.40		7.08	22.0	0.419	-11.8	9.22	-10
0922	9.39		7.08	22.1	0.418	-11.2	9.28	-10

Turbid. meter not working

0930 Sample for VOCs, Anions & WQ's (Alkalinity, Chloride, Sulfate, TDS, Sulfide) Ferrous Iron

8142

1000 - Finished Sampling on MW 2 & 02 MW 3 & 5
Matrix Spike (MS) & MSD)

SPOT 35-S) Mike had to go back to get more ca 3a complem

Time	DTW	Total	pH	Temp	Cond.	ORP	DO	Turb
1115	21.35		6.52					
1120	25.22		6.55	25.5	1.46	4.1	0.8	33
1125	26.06			24.8	.50	8.0	0.42	27
1130	26.47		6.55	26.1	1.48	6.5	0.48	8
1135	26.46							
1137	26.31							
1142	26.12							
1152	25.83	2gal Tot						

Sampled for VOCs, methane, anions
Went to fieldhouse - other group already went to lux
Was back.
12:30 leave for lunch
1:00
Cut tubing, Mike calls PM - Jim Costello, 99
move sampling supplies

LF05-19A

Time	DTW	Total	pH	Temp	Cond	ORP	DO	Turb
1315	13.35		6.67	25.1	1.09	1.0	2.71	[illegible]
1320	13.35		6.64	25.2	0.768	-1.8	2.71	[illegible]
1325	13.35		6.66	25.5	0.773	3.0	2.43	[illegible]
1330	13.35		6.66	25.8	0.777	-5.2	2.48	36
1335	13.36		6.65	25.9	0.776	-2.1	2.51	[illegible]
1340	13.35		6.65	25.9	0.777	-1.5	2.60	5
1345	13.37	Faith	6.65	26.6	0.776	-1.5	2.55	0
1350	13.37		6.65	26.1	0.778	*	2.64	
1355	13.35		6.65	26.5	0.774	*	2.57	4

* meter got too hot - wouldn't run
Sampled for VOCs, methane, alkalinity, anions

Ft Worth IRB - 1/15/97 cont'd

Realized after sampling that my watch is off by 2 hrs (too slow) so sample times for previous wells are off

Back to field house - other team there -

Get ready to pack coolers & complete chain

Had to redo a dozen or so labels which were peeling - taped over them

Called for FedEx locations open late - Decide Kim can drop off at DFW open til 9:00pm.

7:30 - Realize we are not going to have ready - decide to just get the 14th's out. Separate & refill out chain w/just the 14ths.

0845 Kim takes cooler to Fort Worth FedEx who we found out is open 'til 9pm.

0100 Finished filling out & wrapping the 15th sample

7/16/97 NAS Ft Worth JRB

Sunny 72° NE

7:00 - At Site - Kim & Jack there already
Begin to cut tubing, arrange samples
fill Vacuum bottle buckets, methane, H2O
& Diwater filled.
Calibrate pH & Orion Ion Meter
Jack
Conduct H&S meeting.

8:45 Leave for SPOT 35-2
Stop at Base Ops. pick radio
Get out to well - Didn't have tubing - Go
back to get it. Stopped by Kim & Jack
well.
Get tubing - back @ well

DTW - 20.9 Screen - 7-25' Placement of Pump - 22'
TD - 24.28 Well Diam - 4"

SPOT 35-2 - Shown on well

Time	DTW	Total Volume	pH	Temp	Cond	ORP	D.O.	Turb
0:32	20.78	not enough water						
10:39	23.28				18.7			
1044	23.6		6.51	26.4	1.81	12.0	0.95	542
1049	23.6		6.54	26.9	1.83	15.1	1.19	389
1054	23.49		6.54	27.4	1.85	9.8	0.75	252
1059	24.3		6.55	27.5	1.88	2.1	0.90	330
1104	24.76		6.59	28.2	1.9	→	0.43	191
1109	24.90		6.59	29.0	1.90	↗	0.46	180
1114	24.61		6.59	29.4	1.89	↗	0.49	164
1119	25.46		6.60	29.4	1.89	↗	0.61	231
1143	24.27							
1149	24.47							
1154	24.15							
1205	23.9							

SPOT 35-2 cont'd

Strong smell (fuel) Clear H_2O,

* indicates OR meter get too hot & wouldn't run
Had hard time varying pump rate to get enough water for meters - but not pump dry
Pumped from 10:32 - 11:20 when it went down to 0.5' in well. Turned pumps off & waited for recharge.

1200 - Mike left w/ Jack to check out their pump which was stuck down the well

1220 - they returned with Richard Salness from Booz Allen - auditor

Finished cleaning & loading truck

1245 - arrived at field house

Finish notes & prepare for afternoon samples

Mike makes phone calls about pump

330-1424 - Lunch break

Mike & I prepare for samples in PM - Jack & Kem will try to retrieve pump using fish hooks. Bought earlier.

Richard Salness accompanies us for sampling of GMI-22-OHM - right in front of Base Ops in Glass Island.

We set well up for purging.

408 23

WELL

Time	DTW	Tot. Vol.	pH	Temp	Cond	ORP	D.O.	Turb.
				Pump @ 100 ml				
1500	19.08							
1502	20.33							
1506	20.00	.910m	6.89	26.5	1.06	-12.3	1.10	2.30
1509	19.36							
1514	19.36							
1519	19.36							
1524	19.37							
1529	19.36							

Richard Salness says he's impressed w/the way things are setup & the placement of the generator on the side of van - away from well.

Sampled well for VOCs, Anions, Alkalinity & Methane + TOC

well seemed to be well developed w/no petroleum or other odor

Finished sampling & decomm'd equipment.

Richard & us both drove to see how the other crew was doing fishing the pump out. They had "hooked" it once but the hook broke - it seems to be lodged at the bottom of the well in the sand.

We all ~~had~~ Mike & I head back to field house. Richard sticks around the field crew from UAW - tells some he'll probably be out tomorrow afternoon.

Mike & I need to leave a little early to get him to the AP. We pack the fedex cooler, do the chain & leave at 4:05 (1605)

Will drop cooler at DFW - FedEx

Lau

20 Sep 1997 Clear ~98° ~~[illegible]~~ in shade >100° in sun 0-Smallbrone 1/2

0930 Eric Dambaugh & Michael Rodberg Fill 2 5-gallon gas cans & purchase 5 10-lbs bags of ice.

0940 Arrive at USRS Ft Worth ARB. Survey Vans, Evaluate status of each van, Brief E. Dambaugh on the issues of the site.
Ft Worth ORS probe tool was giving a premature overload

1100 Leave Rock House for ST14-28 to try to retrieve Schlumberger pump that was lost on 16 Sep 1997.

1115 Arrive at ST14-28 assemble retrieval tool and survey water level & pump location/depth.

1120 Start "fishing" for pump

1145 Hook pump & retrieve pump. Did not introduce any water into the well.

1200 Decontaminate retrieved pump & other equipment.

1215 Leave well ST14-28 & go to lunch.

1305 Return to Rock House, pick up broken pump for return to MARCO.

1330 Gather sample glassware for sampling of BSS-H 20

1400 Calibrate DO/pH & thermo 0-10, no problems.
Fill both generators stack both UNAS

1500 Move to BSS-H

1510 Start pumping well

Static Outfall 4.75 TIC

	OTW	pH	Temp(C)	Cond	ORP	DO	Turb
1510	4.95	6.77	29.8	0.715	7.4	0.83	98
1515	4.94	6.76	30.2	0.720	6.4	0.88	15
1520	4.93	6.76	30.7	0.729	5.0	8.44	8
1525	4.94	6.75	30.3	0.736	5.0	8.46	4
1530	4.94	6.75	30.3	0.743	5.0	8.36	2
1535	4.94	6.75	30.9	0.743	4.9	8.23	2
1540	4.94	6.75	30.4	.703	6.4	8.17	2
1545	4.93	6.75	30.4	0.748	5.4	8.35	0
1550	4.94	6.75	30.3	0.750	5.0	8.36	0
1555	4.93	6.75	30.3	0.751	4.7	8.35	0
1600	4.93	6.75	30.2	0.752	4.8	8.31	0

Sample bottle labels were pre-labeled and the time written on the bottles state a time of 1545, which does not agree w/ the times stated above. Purged 13 gallons total

Sampled for BTEX (3), Methane (3), TOC (2), Alkalinity Anions (1) & Fe2+. Equipment blank prep performed following decon of equipment for all parameters listed above.

1615 Return to Rock House

1630 Store samples in Refrigerator for shipment on 21 July 97. unload Equipment

1700 Leave site.

[signature]

408-32

21 Jul 97 Clear 0-5 mph breeze from South ~98°F E. Dambaugh & M. Redding 1/4

0700 Arrive @ Site, prep for Sampling, Calibrate Instruments, Fill Water carboys etc.

0700-0745 Tailgate Briefing for E. Dambaugh, Kim and Jack McCrady. Given by M. Redding

0745 Resume prep for sampling, change out Drums for water. Jack performs Fe2+ Analyses on sample from 20 Jul 97

0930 Field Arrives w/ new pump & takes old pump for return.

1000 Arrive @ MW-1 E. Dambaugh & M. Redding prep for purge & sampling activities

1014 Initial ▼ 7.07 TIC

1015 Start purging MW-1

	DTW	pH	Temp(C)	Cond	ORP	DO	TURB
1015	8.07	6.68	24.0	0.896	7.1	0.67	424
1020	7.96	6.68	23.4	0.896	6.4	0.49	170
1025	8.10	6.67	23.7	0.904	7.0	0.53	120
1030	8.11	6.68	22.6	0.909	5.5	0.25	70
1035	8.05	6.68	23.6	0.893	6.8	0.39	56
1040	7.96	6.69	23.8	0.894	6.1	0.70	40
1045	7.96	6.66	24.2	0.900	6.1	0.49	57
1050	8.09	6.67	23.7	0.900	6.0	0.19	50
1055	8.05	6.68	23.7	0.897	6.6	0.16	49
1100	8.05	6.68	23.7	0.890	6.4	0.19	47

1110 Sample MW-1 for BTEX, Methane, TOC, Anions, Alkalinity, Fe2+

1120 Decon Equipment Prep for MW-10

1150 Begin @ MW-10 set up. ▼ @

1210 Break for lunch

1220 Arrive @ Rail House, store samples in Frig

1310 Return from lunch Tab to MW-10

1330 Arrive @ MW-10 Water level @ 11.29' TIC. Set up Pump

1345 Start purging MW-10

	DTW	pH	Temp	Cond	ORP	DO	TURB
1345	11.30	6.73	23.6	1.12	4.7	0.88	150
1350	11.47	6.73	22.9	1.12	5.7	0.54	89
1355	11.45	6.72	22.9	1.13	5.5	0.40	54
1400	11.46	6.71	22.9	1.11	8.5	0.43	25
1405	11.45	6.70	23.0	1.14	8.2	0.39	19
1410	11.47	6.70	23.0	1.14	8.3	0.35	7
1415	11.50	6.70	22.9	1.15	8.2	0.17	3
1420	11.50	6.70	23.0	1.15	7.8	0.17	2
1425	11.49	6.70	23.0	1.14	7.6	0.20	2

purged 15 gallons

1430 Sampled for VOCs & Metals

1435 Start Decon of all equipment & prep for MW-11

1500 Tab to MW-11

1510 Water level @ 22.82' TIC

1520 Start purging

	DTW	pH	Temp	Cond	ORP	DO	TURB
1520	25.35	7.73	24.0	1.16	8.9	11.14	572
1525	25.75	7.80	23.8	1.16	8.4	11.13	427
1530	25.78	7.72	25.9	1.17	10.4	10.26	220
1535	25.85	7.79	25.8	1.19	11.4	9.81	164
1540	25.85	7.74	26.8	1.18	9.9	9.64	115
1545	25.65	7.70	28.3	1.18	9.7	8.82	71
1550	25.40	7.72	29.7	0.986	7.7	8.90	77

3 of 4

	DTW	pH	Temp	Cond	ORP	DO	Turb
1555	25.40	7.74	26.6	0.987	8.3	1.11	86
1600	26.10	7.70	27.1	0.982	8.9	1.28	104
05	26.05	7.67	27.3	0.982	8.1	9.35	133
1610	25.91	7.63	28.1	0.985	8.6	1.45	235
1615	25.70	7.60	28.7	0.994	8.2	1.40	205
1620	26.01	7.56	28.9	0.983	8.7	1.50	155
1625	25.75	7.55	29.0	0.984	9.40	7.93	114
1630	26.30	7.55	28.1	0.992	9.2	1.33	120
1635	26.43	7.54	28.1	0.988	8.1	1.42	122
1640	26.37	7.52	28.2	0.983	7.9	1.18	145
1645	pump failed not sure why.						
1655	26.21	7.48	26.1	1.22	7.4	0.94	90
1700	27.39	7.50	24.1	1.20	9.5	0.72	90
1705	27.90	7.47	24.2	1.19	7.8	0.91	61
1710	27.95	7.46	24.0	1.20	7.10	0.91	68
1715	28.50	7.45	24.2	1.20	6.7	10.04	35
20	28.35	7.42	24.6	1.19	6.9	9.37	36
1725	28.52	7.43	24.7	1.19	6.8	9.45	38
1730	28.58	7.41	24.8	1.19	7.3	9.75	27
1735	28.60	7.39	24.9	1.20	7.3	9.10	17
1740	28.62	7.38	24.7	1.19	7.3	9.8	14
1745	28.62	7.36	24.8	1.20	~~6.5~~ 6.9	~~8.82~~ 9.05	10
1750	28.64	7.36	25.1	1.20	6.5	8.82	7
1755	28.65	7.35	25.2	1.19	6.4	8.78	5
1800	28.65	7.34	25.2	1.20	6.5	8.68	5
1805	28.65	7.33	25.3	1.19	6.4	8.59	5

Sample [illegible] for VOC + Metals

1815 Return to Rock House pack samples & fill out Chain of Custody

2015 Ship 09 boxes for Fed Ex w/ 1 copy Air Bill # 5 739019425

2030 Complete daily paper work

2200

2330 Finish paper work

[illegible]

22 Sep 1992 Sunny Clear 100°F Westerly 05 mph Wind

1/4

0700 Arrive @ the Rod House Eric Dandeneau & Mike Bradtmann
Start prepping for sampling activities MW-2, MW-12, MW-9,
MW-5, MW-3. Pack coolers, Test barrels, bin reactants
water coolers, Eric cuts tubing & Mike tags gallons
glassware for VOCs to be sampled
0730 Mike & Eric Bailing Since 1990 & 2/12/92
0810 Eric Dandeneau & Mike Bradtmann replace PVC dam w/ new Dam
#10 & #13 respectively

0900 MW-6 & MW-8 set up for purging

0915 Start purging well MW-8

	DTW	pH	Temp	Cond.	ORP	D.O.	Turb.
0915	5.03	7.11	23.5	0.530	3.7	0.9	29
0920	5.02	7.11	23.1	0.537	0.0	0.45	10
0925	5.01	7.09	23.2	0.561	0.0	0.50	9
0930	5.02	7.07	23.1	0.540	0.7	0.36	8
0935	5.02	7.06	23.0	0.539	1.5	0.42	6
0940	5.02	7.06	23.1	0.538	2.7	0.40	5
0945	5.03	7.06	23.1	0.540	2.5	0.66	7
0950	5.03	7.06	23.1	0.555	2.6	0.64	8
0955	5.02	7.06	23.1	0.555	3.2	0.61	6
1000	4.99	7.06	23.7	0.539	3.5	0.62	10
1005	4.98	7.05	23.7	0.537	4.0	0.69	11
1010	4.97	7.05	24.0	0.538	4.7	0.94	7
1015	4.97	7.05	24.1	0.557	5.2	0.25	8
1020	4.97	7.05	24.2	0.541	5.4	0.22	7
1025	4.96	7.05	24.4	0.540	6.4	0.29	9
1030	4.97	7.05	24.5	0.544	6.3	0.55	9
1035	4.97	7.05	24.5	0.544	6.1	0.66	10
1040	4.98	7.05	24.5	0.544	6.2	0.40	8
1045	4.98	7.04	24.5	0.543	6.4	0.45	8
1050	4.97	7.04	24.8	0.542	6.9	0.63	8

1110 Sampled MW-8

1035-1050 Jim Castillo & Allen Russell Arrive @ site

1110 Decon Equipment

1130 Arrive @ MW-9 Set up for Purging

1140 Start pump, Fill Chamber

	DTW	pH	Temp	Cond	ORP	DO	Turb
1145	6.65	6.94	22.1	1.16	9.2	0.79	422
1150	6.66	6.95	22.1	1.16	10.3	0.30	133
1155	6.66	6.95	22.1	1.16	9.7	0.18	32
1200	6.67	6.94	22.2	1.16	10.1	0.14	11
1205	6.67	6.94	22.2	1.17	10.6	0.13	10
1210	6.67	6.94	22.2	1.17	10.3	0.11	9
1215	6.67	6.94	22.2	1.17	10.0	0.10	7
1220	6.67	6.94	22.2	1.18	9.6	0.11	7
1225	6.67	6.94	22.3	1.18	9.7	0.12	7
1230	6.67	6.94	22.3	1.18	10.2	0.10	5
1235	6.67	6.94	22.3	1.18	10.5	0.11	5
1240	6.67	6.94	22.3	1.18	11.1	0.11	5

1245 Sample MW-9 for VOC (3) + Metals (1)

1255 Decon equipment

1315 Leave for Rock House & lunch

1330 Meet up w/ Jim Castillo @ Rock House

1345 Leave for lunch

1430 Return from lunch Move to MW-12

1445 Set up on MW-12

1455 Start pump very clear, Turbidity Readings High ? (600's)

	DTW	pH	Temp	Cond	ORP	DO	Turb
1200	5.69	6.85	25.4	1.27	9.5	1.03	543
1205	5.66	6.84	23.7	1.25	9.6	0.29	295
1210	5.66	6.83	23.8	1.28	8.7	0.24	58
1215	5.65	6.84	24.0	1.28	9.2	0.16	39
1220	5.65	6.84	24.4	1.29	10.0	0.16	21
1225	5.65	6.84	24.4	1.31	10.8	0.15	9
1230	5.65	6.83	24.4	1.33	11.8	0.13	6
1235	5.64	6.82	24.6	1.35	11.6	0.15	6
1240	5.64	6.82	24.6	1.37	11.6	0.13	5
1245	5.64	6.82	24.8	1.38	11.4	0.13	5
1250	5.64	6.82	24.7	1.40	12.4	0.13	5

1255 Sample MW-15 for VOC (3) + metals (1)
pumped 20 gallons @ a flow rate of ~1.5 l/min

1610 Begin equipment break system down

1620 move to MW-5

1640 Set up on MW-5

1655 Start pumping well

	DTW	pH	Temp	Cond	ORP	DO	Turb
1700	6.54	7.13	32.6	0.396	15.7	0.29	8
1705	6.95	7.09	31.8	0.475	16.1	0.31	9
1710	6.72	7.11	32.3	0.485	15.6	1.64	15
1715	6.62	7.11	33.2	0.535	15.7	1.64	15
1720	6.91	7.11	33.5	0.536	15.7	1.65	14
1725	6.95	7.08	33.1	0.526	16.3	0.91	15
1730	6.96	7.05	33.7	0.534	15.8	1.18	15
1735	6.77	7.04	34.5	0.584	15.9	1.27	15
1740	7.2	7.04	34.9	0.518	15.8	1.24	15

1200 Well recharge (by magnetic well sorting about pumps using ± 8.1m Sat. steel pipe) well after well to recharge & sample

1800 Sample well for BTEX, metals, TOC, Anions, Alkalinity + Fe 2+ purge 5 gallons,

1900 Begin H2 grant pumps return to Rock House

1800 Return to Rock House, start packing samples for shipment pump CH, run pump lines to Wednesday morning. Start analyzing Fe 2+ samples. Need to pick up additional HPLC lists, bottles. Sample to Johnson of SRI. He said we could come. Dave will pick it up on Wednesday.

Note: Need site, also to take a vacuum to Fred X

Pre-Dec Finish start pump work

~~Michael Johnson~~

23 Sep 1997 Clear, Sunny 100°F 0-2 mph breeze

0745 Pick up LCG 10 bags

0760 Arrive @ Rock House prepare daily sampling Equipment
Fill Generator, Calibrate (Lower & 0-10-Jack)

0800 Order 15 Bottles, Nalgene & Pre-Cleaned bottles from lab
Order an additional pack of Acrivac Ampoules for Fe^{2+} analysis

0930 Leave for SD13-07, gauged well DTW 17.88' DTW 17.95
bailed ~100 g which appears to be a light weight oil
(Hydraulic fluid)

0940 Move to SD13-08 gauge water @ 11.60'

1000 Start pumping well, water ran dry immediately. Could not
recover flow rate enough to equal recharge
1020 Shut pump down. Water recovering at a rate of 0.01' per 3 min.

1100 Well recovered to 12.70' enough to sample for VOC & metals

1110 Finish Sampling, decon Equipment

1150 Move to 07-15C prep for low pumping

1150 Start pumping

	DTW	pH	Temp	Cond	ORP	DO	Turb
1150	8.61	6.8	29.3	0.643	11.0	9.36	5
1155	8.50	6.78	29.7	0.644	10.9	9.39	4
1200	8.49	6.76	30.0	0.647	11.2	9.34	2
1205	8.50	6.76	30.1	0.648	11.2	9.28	1
1210	8.50	6.76	30.2	0.649	11.2	9.25	1

1215 Sample 07-15C for VOC & metals, start decon of Equipment

1230 Leave for Rock House, unload samples

1230 Lunch

1300 Return to Rock House, load van [illegible]

1400 Ribbon from hole that was [illegible] to USGS 047

1400 Board USGS 047 prep for pumping

	DTW	pH	Temp	Cond	ORP	DO	Turb
1500	17.31	7.15	25.3	0.615	10.9	1.44	999
1505	17.31	7.11	24.9	0.616	10.5	1.95	925
1510	17.31	7.09	24.9	0.620	10.5	2.11	674
1515	17.32	7.14	24.6	0.632	11.0	1.63	525
1520	17.32	7.10	24.9	0.622	11.3	2.91	275
1525	17.31	7.08	24.9	0.626	9.8	1.92	193
1530	17.31	7.07	25.0	0.633	9.0	1.69	125
1535	17.31	7.08	24.5	0.640	8.1	1.20	111
1540	17.31	7.07	24.5	0.636	8.9	1.43	91
1545	17.31	7.07	24.7	0.636	10.3	1.57	48
1550	17.31	7.06	24.5	0.643	10.1	0.42	23
1555	17.31	7.06	24.8	0.640	10.1	0.37	20
1600	17.31	7.06	24.6	0.643	9.9	0.42	13
1605	17.31	7.05	24.6	0.644	9.5	0.39	10
1610	17.31	7.05	24.6	0.645	9.1	0.32	9
1615	17.31	7.05	24.7	0.643	8.6	0.25	9
1620	17.31	7.05	24.6	0.650	9.3	0.22	9
1625	17.31	7.05	24.7	0.647	9.5	0.19	7
1630	17.31	7.05	24.8	0.647	9.8	0.20	6
1635	17.31	7.05	24.5	0.650	9.6	0.18	6
1640	17.31	7.04	24.4	0.649	9.6	0.18	5
1645	17.31	7.04	24.2	0.652	8.8	0.19	5
1650	17.31	7.04	24.3	0.652	8.9	0.17	5

Purged 20 gallons total. water was initially very turbid but eventually cleared up very well. 5 NTUs

Sampled for WC and Metals @ 1650

Started down of all equipment

1715 Drove to Rock House to pick samples

1730 Bear @ Rock House, unload rem Exc stuff Drawing Equipment to return to Vernon. Picked long pages COC for lab. Run x Grade already @ Rock House

~~Go to Hour tonight for Rock Tap Probe.~~

1900 Have Rock House Run to deliver samples to lab.

2000 Start paper work, Supply plan Detail sheet, Fax paper work. Finish daily notes

2200 Complete paper work

[signature]

Clear (0700 - 80) Sunny ~86 Humidity slight breeze from west

0730 Arrive @ Rig Floor, Inspect hole & find it full. Fill Finish & Mixing tanks & Eric & I will start start down of Drilling Equipment, return the rig to Gangway to sway up rods.

0800 Make A Safety Briefing

0805 Unclick PS Bridge, Pin & Spot rack to drillers Eric & I return Kim & Gerardo

0815 Return to mixing equipment. Move Jacks of backup Chuck & Mixing equipment.

1000 All Power equipment picked & loaded on pickup. Roberto calls, says she could bring Eric to return truck tonight if possible Eric & Roberto start preparing COC

1010 Start prepare Equipment barge

1030 Start start Fe2+ analysis from Finished Inhibitor, for start cleaning stand VFD & drawing Equipment

1100 lunch

1130 Start Fe2+ analysis from Finished Inhibitor, Start cleaning stand VFD & drawing Equipment

1200 Finish prepare COC & load truck, Kim & Gerardo start sort Jackets

1300 Finish picking equipment & left crane, Kim Rasa Place in Rental (Ryder & PH)

1330 Return @ PH Rental Return Gerardo

1400 Return Ryder truck, bear for Fedex

1500 Arrive Fedex drop truck, 3 Nitrogen bottles & 2 Dry-Sticks

1900 Arrive @ Dykes drop Eric off in 2031 Fairfield to Dykes

408 41

20R

[illegible] Area of [illegible] Counts

[illegible]

Chan to 0800 929 949 Humidity 11-Temple better than 50%

1800 Arrived at Hum Point, by survey stakes & bells in Flash Point walls, stakes for sampling LF05 & 08 sites for PDC2

1830 Arrived Rock House, picking survey point for Flash Point bell (cable) & charge for S.C. Aus

0900 Start staking PDC2 (LF05 & 08) sites for Diamond Wire survey

1200 Return Post (not helipad)

1230 Coffee Check in

1245 Return & conclude staking LF08 site

1300 return to Rock House drop off key get Alan Flash

1330 Finish Inventory of Drums that were accumulated during Country sampling

1400 Finish Drum Inventory return to Base Camp, get cleaned up

1530 Load & return Ship to Mark

1630 Drive to Port, pass ship off Dave

1700 Shower & Dinner

1730 Show & Dinner

1800 Start paper work

2000 Meet for Cards

2030 Bed

0030 Bump Down

0100 Meet in Mess after picking up Paige

0200 Arrived Mess.

July 8, 97

Weather: clear & warm, slight breeze

7:15-8:15 safety meeting

8:15-11:00 prepared equipment, calibrated OVMs, picked-up trans, prepared for gauging event

Crew: Richard Rothing, Lynn Ferguson, Jack McCune, Tim Bell

11:00-12:00 obtained visitor badges (9) visitor identification office

12:00-12:30 obtain construction stamp for airfield driver's license at base operations

12:30-13:00 lunch

13:00 Prepare for gauging wells

	Well	TOC	TD	OVM	comments
13:00	LF04-4C	17.03	27.12	0.5	
14:25	LF04-02	27.3	38.35	29.8	
14:40	LF04-4E	22.29	30.58	6.0	
14:55	LF04-4D	18.78	27.77	1.9	
15:15	LF04-4F	27.66	37.02	8.1	
15:35	WP07-10C	19.20	29.52	0.1	
15:45	WP01-10B	27.10	34.48	0.2	
16:05	CAR-RW7	23.46	33.17	6.1	This well should have been LF03-5F
16:15	17M	8.72	16.06	201	Heavy odor & oil-like product
17:04	ST14-01	13.12	22.31	0.7	
17:10	ST14-02	11.27	19.38	135	Rebekah ST14-W02

	Well	DTW	TD	OVM	Comments
17:30	MW1-16	8.63	15.30	1.5	
17:45	ST14-020	8.35	15.10	0.4	
17:55	ST14-04	11.70	17.90	0.0	

(2)

JM

July 9, 1997

Weather - partly cloudy - overcast - Humid - hot Slight Breeze

7:15 - 8:25 Calibrate equipment / restock van
Safety meeting

~~8:29~~	~~LF505~~ Well	DTW	TD	OVM	Comments
8:29	LF05-SB	3.44	12.47	0.0	Small padlock
8:41	LF05-14	16.23	25.78	0.0	Needed Socket.
9:07	ST14-27	7.67	15.82	0.0	Labeled ST14-027
9:16	ST14-016	7.07	18.61	25.8	
9:30	ST14-018	8.08	17.56	12.6	
9:45	ST14-019	8.78	16.67	35	
9:55	ST14-021	9.55	17.78	91	
10:11	ST14-028	11.31	17.08	91	
10:22	SD13-05	8.82	13.67	0	Less than .01 Free Product
10:31	ST14-022	9.56	11.03	0	
10:39	ST14-021	10.01	13.75	0	
10:45	SD13-02	12.63	16.76	.56	
11:00	SD13-01	11.68	11.43	26	
11:05	SD13-03	10.66	16.57	13	
11:09	SD13-04	9.10	13.37	93	
11:24	ST13-432	4.01	12.20	23	Outside fence - Heavy vegetation
11:30	OT15C	7.42	15.49	0.0	
11:38	15B	7.97	12.44	0.4	
11:52	SD13-06	9.91	13.80	0.7	Outside fence - heavy vegetation
12:00	SD13-07	~~21.91~~ 21.49 ←→	16.52	134	Outside fence - Heavy vegetation. Heavy odor
					.015 Free Product
12:30	Lunch				
13:30	Drive to next well				
14:02	ST14-028	5.39	10.00	0.0	
14:22	LF01-10	9.74	9.70	0.0	Asked to well could not reach behind fence

3

14.25 — Construction worker approached us about GW Monitoring. Informed Tim and I that the building they were currently constructing had to be moved 30' West because they were digging up concrete, rubber, and steel from old landfill. The building is located west of monitoring well LF01-1C

14.30 - ~~15.06~~ 14.55 Tried to find Access outside 6' Barbed wire fence to reach wells along Trinity River. Unable to find safe vehicle passageway to reach wells.

	Well	DTW	TD	OVM	Comments
~~15.06~~ 14:55	MW11	22.13	32.47	0.0	
15:06	MW2	7.92	47.20	0.0	
15:12	MW8	4.28	26.19	0.0	
15.26	MW10	9.60	32.82	0.0	Light Rain
15.38	MW9	5.61	27.26	0.0	Heavy Rain Waiting to Subside
16:15	BSSA	4.6	10.30	0.0	
16.25-16.35	Trying to Locate	MW-6 - Unable to locate			
16:39	BSS-B	9.21	12.77	247	Heavy Odor
16:45	MW-5	3.06	8.10	0.0	
16.55	MW-7	7.50	16.57	0.0	
17.10	MW4	2.05	9.98	770	Misidentified on MAP - 75' East

17:30 Return to Field office

17.30 - 18.30 Calibrated equipment / completed notes
Cleaned up

July 10, 1997

7:00-8:00 Replenish non supplies / calibrate equipment
Meeting to divide wells for gauging

	MW	DTW	TD	OVM	Comments
08:00	LF01-1D	14.18	28.01	0	broken hasp - Unable to lock
0838	LF01-1E	13.16	32.09	0	
0849	LF01-1C	13.41	32.52	0	
0920	MW1	7.27	18.93	0	2 wells near each other - no labels - gauged one according to map
0945	MW12	4.97	27.35		
1013	USGS03T	3.60	8.75		Well covered with Mud from construction - marked by two rebar - partly crushed on side casing
1030	DSGS0XT				
1053	MW1A				Both wells apparently have been destroyed by new construction Tim and I were unable to locate and a construction supervisor near MW1A informed us that the area was bulldozed and regraded. Found Lid to MW1A but no well.

	Well	DTW	TD	OVM	Comments
11:00	GM1-22-0xm	14.76	25.09	0	
11:15	USGS-01T	10.34	19.93	0	Two wells are side by side
11:22	USGS 01P	30.44	>100	0	
11:38	GM1-22-01M	14.18	23.28	0	
12:05	LSA1628-3	4.16	17.88	0	Water in Manway

Returned to Field house for Lunch
12:30 - 13:30 Lunch at Jack in the Box

13:30 - 13:50 Picked up equipment at AFBCA Building and unloaded it at Field House. Met Jill back at Field house

13:50 - 14:00 Picked up Elliot Smith and prepared to gauge wells along flight line.

	Well	DTW	TD	GUM	Comments
14:05	HM117	20.05	38.70	0.6	Hand pump in well broke pvc pipe during removal. Mike Rolle came out and repaired handpump and replaced it back in well.

↑ Handpump is suspended to MW cap with string.

	Well	DTW	TD	GUM	
14:52	HM120	2.82	17.63	0	
15:15	HM 121	17.12	50.44	2.1	
15:34	GM-22-02M	9.01	27.77	0	
15:41	SP01355S	21.35	27.53	35	Jagged edge along PVC casing
15:54	MW 11A	22.06	26.06	51	

16:05 - 16:25 Regroup on flight line to divide remaining wells to gauge.

16:33	GM-22-04M	19.09	25.58	0	
16:53	MW57	11.71	14.33	0	Had to remove clearance to reach this well behind Fire Station.
17:16	MW 38	15.50	18.4	///	6 wells in general vicinity - which appears to be one farthest to the SW. 4 of 6 are unlocked.

Now Cars

17:30 Arrived back at Fieldhouse.

17:30 - 18:30 I went over well gaugings with Lynn to make sure all wells were gauged. After this I did paperwork and helped unload generators for well pulling tomorrow. Tim worked on one of the GVM which had gotten some moisture inside the tubing.

gm

July 11, 1997

7:00 Arrive at site - Jill, Mike, and Lynn are there

7:00-8:00 preparation for sampling wells
Restock van, load equipment - Health & Safety Meet.

8:00-9:00 Calibrate equipment - Horiba U-10 and
The pH/ISE meters.

The pH/ISE meters are missing some
Instructions for calibrating - Lynn calls
Orion Technical office for assistance.
They fax instructions to Hazco.

9:00-11:00 continued preparation of sampling equipment
and loaded vans, meter and called regarding
delivery of 55-gallons drums from Dallas Steel
Drum Co., looked across street in drum storage
area for any empty 55-gallon drums, we
found two to use for purge water storage.

11:00-11:40 took an early lunch prior to start of
purge & sampling activities

11:40-12:30 cut fibers for two wells (LF04-4F and
WP07-10B). Called Hazco for help calibrating
pH/ISE meter for Redox Potential

12:30-14:20 started purge and monitoring of wells LF04-4F
and WP07-10B. Had problems with generators
frequency control unit for pumps. Pumps worked
correctly at field office with 120 outlets.

Redox meter: ~~32495~~ 2737

14:20-16:40 - left for A-1 Rental to exchange for better
generators

16:40-18:25 returned with new generators & started purging

(8)

408 51

1830-1923 Vials w/ HCl collected from LF04-4F,
secured well, decon. equipment, tube prepared
sample paper work and FedEx shipment

1930 left w/ HCl cooler for FedEx office @
O'Hare airport

19

WELL - LF04-10 408 55 7-14-97

July 14, 1997 WELL LF04-10

7:00 - 9:00 set up Kim, Jill, Jack, Lynn & Joe

8:00 CALIBRATION

8:45 - 9:30 Safety Meeting

9:30 - 9:45 Preparation of sampling equipment and unload van.

10:00 - 10:50 Analyze 8.4.0 [illegible] — [illegible]

	Time	Depth	mg/l	Temp	pH	Cond	D.O.	Dep.
TUCB	10:05	31.77	2.5	FR	6.7	940	23.3	10.41
Slez	10:10	31.77	6.0	(.94m)	6.72	↓	23.9	9.8
192								
11:30 well ID. LF05-56								
11:30 — Preparation Equipment					6.75	933	13.6	9.77
160								
23	10:15	31.38	10.6		6.75		16.7	9.35
69	10:20	31.39	12.5		6.74		12.7	9.9
27	10:25		15.0		6.77		12.9	9.72
15	10:31		11.5		6.78		13.9	8.40
9	10:35		21		6.78		16.6	8.33
2	10:40	31.40	22		6.78		13.6	8.06
2	10:45		25		6.79			
	10:52		32		6.80		12.1	7.9

Temp 20.8 — 21.4

(10)

WELL CFOS-56 408 56 7/14/97

11:30 WELL CFOS-56

11:32 – 12:00 Decontam equipment set up

12:02 PREP - SURG - H2O Clear

12:04 Drawdown too rapid - ADJ, see plan 20.34 – 20.00 – 20.75, ~~[illegible]~~ see plan OK (1.7), 12.3 check FR 1.7

12:20 2.0 FR (H2O Turb. d) increasing

1300 Samples VOC

TIME	D/H2O	FR	PV	PH	TEMP	Cond	ORP
12:0	20.69	(1.4/m)	3.5	6.74	21.1	1210	5.1
12.05	20.75		5.5	6.74	21.4	1220	5.3
12:10	20.73		8.0	6.75	21.4	1270	6.6
12:15	20.75		10.0		21.7		5.6
12:20	DRY		13.0		21.8		5.5
12.25	—		15	—	21.6	1250	5.4
3:35			20	6.77	21.0	1290	5.7
13:40			23		21.0	1300	5.6
13:45			28		21.3	1276	5.9
13:55			32	—	21.5	1290	

7/14/97 [illegible] 408 57

DO	ECS
7.73	114
10.46	47
10.15	9
9.69	4
8.75	2
9.10	45
8.7	25
9.05	6
9.04	4
9	4

WELL # ST 14 21 408 58 7/14/97

15:05 – trying to get pump to work, not working properly, not able to pump DW. (Brown-Tubes)
11:30 Go to next well – 9.82 1510 / 14.25 11.02
Petroleum odor – not able to get pump run.

(WELL # ST 14 24 – 16:45 – 18:35) 16:45 – 17:30 Setup equipment

TIME	DEPTH	FER	TV	PH	TEMP	COND
1708	11.73		2.5	6.89	24.7	620
1713	11.55		5.5	6.86	25.1	626
1720	11.79		8.0	6.86	25.2	625
1725	11.75		10	6.86	25	630
1730	11.87		15	6.87	25	625
1735	11.89		17	6.87	24.8	622
1740	11.89		20.2	6.87	24.7	625
1745	11.9		23	6.86	24.5	624
1750	12.0		30.5	6.87	24.5	627

1755 – Samples

ORP	D.O	NRO
10.5	8.44	412
8.1	8.01	26
7.1	8.04	12
2.3	8.06	12
2.1	8.~~25~~ 04	9
4.0	8.~~14~~ 05	7
2.5	8.~~3~~ 17	5
2.5	8.30	4
4.5	8.51	5

7-15-97 408 60 KCK, JEW, J

WE ARRIVED @ SITE 7:00 AM

7:30 – 9:150 AM

- ST-14-14 ✓ 15.5 (Screen @ 13.5) Dry @ end
  ST-14-21
- ST-14-02 ✓ ~~12.8~~ 12.5 (14.2) (Screen @) 7.05-16.8-H2O ~~14.2~~ 11.2
- 9:15 @ well - 14 H2O = Equipment set up
- 9:55 sample
- 11:15 Back to office - Re get another well field
- 11:30-12:30 Lunch
- ST-14-W16 @ 13.10-17 Problem w/pump leak
- ST-14-W18 @ 15.55-17.00

(ST-14-02W) –

TIME	DEPTH	FR	TV	PH	TEMP	COND	ORP	DO	NTU
10:30	11.76	1.84	2.5	6.90	22.3	734	1.0	12.9	87
10:35	11.77		5.5	6.89	21.9	733	-.5	13.10	2
10:40	11.72		12.5	6.89	21.8	733	2.0	13.30	Ø
10:45	11.76		15.0	6.89	21.9	731	1.2	12.55	Ø
10:50	11.76		25.0	6.9	21.9	730	1.3	11.92	Ø

– (ST-14-14W) –

TIME	DEPTH	FR	TV	PH	TEMP	COND	ORP	DO	NTU
10:30	6.90		3.5	6.92	23.5	557	-6.0	5.37	329
10:35	6.68		6.0	6.94	24.0	554	-4.0	5.28	26
10:40	6.64		8.5	6.94	24.4	554	-3.6	5.15	0
10:45	6.58		12.0	6.94	24.5	556	-4.0	5.26	0
10:50	6.75		18	6.94	24.4	557	-3.4	5.24	0

(63)

7/15/97

• WELL NO S

1500 Equipme

1700 leave

•

TIME Depth / ER

P

- Pumped

sample

WELL: 57-15

1335	7.72
1330	7.70
1335	7.68
1340	7.68
1345	7.67
1350	7.66
1355	7.67
1405	7.66
1410	7.65
1415	7.64

(16) sampled

408 61

Pump not working - Replace

Cond 1.0 RP 1.00 1.006

re-Charge

harge and

Clear

701	11.55	11.55	NC
695	11.88	11.88	Ø
691	11.69	11.69	
692	11.43	11.43	
692	11.37	11.37	
692	11.35	11.35	
692	11.36	11.36	
690	11.16	11.16	
689	11.11	11.11	
687	10.93	10.93	
686	10.94	10.94	

7/16/97 408 62

7:00 at site proper set-up. KCK, MR, JM,
8:45 2 well ST14-M21 ✓ done.
Purged well - sampled after recharge 10'-9'
@ 9:20 am ok, sample well 10 mo
9:55 leave well (iron + orange = 2.38 diluted.)

Well no. — ST-14-28601.
10:00 am unload truck, set up equipment, pump well
11:20 Pump is in well - can't remove recharge
11:30 Pack-up.
12:30 Back to office — Mr. Richard Sacness
Arrived on site w/ Boss. Allen & Hamilton.
Doing notes in office, book log
1330 - Lunch back @ 1424
1433 Go to well ST-14-28601
1659 Richard Sacness @ KCK.
We can't get pump out of well
Mike, Lynn Chris Lon, Release to go home
Back to office unload equip.
1745 Left office

7/16/97 5:15pm = 0.56 mg/l. fe

7-17-97 408 63 805 - 10:45 Dr

7:00 AM pick up ice / zip lock bags

7:10 load up truck KK, Lynn

7:45 off to wells

8:00 AM well ST-1029 60' OK

8:05 - 8:20 unload van, eq up man suit - set

9 - 10:30 WH SPELL, re-pump set

10:45 - Sampling

TIME | DP | TEMP (F) | TV | PH | Cond | ORP | DO | Turb

~~[illegible]~~ Non Lab = 1.0 gpm FR

MW-ST-14 OK (well ST-14 - 1029 60')

~~[illegible]~~

8:49	10.18	24.3	2.0	6.71	107	6.5	52	
8:59	10.64	25.7		6.72	737	8.4	.51	
9:00	11.44	25.3		6.70	737		1.53	
9:05	11.59							
9:11	11.74		4.0					
9:14	10.09							
9:14	9.44							
9:17	10.15	26.2	13.0	6.74	708	8.3	0.42	
9:31	10.15	28.3		6.74	705	8.3	0.64	
9:46	10.31	27.5		6.73	709	7.9	0.48	
9:45	10.41	26.8		6.72	714	8.7	0.43	
9:50	10.48	26.4		" "	714	8.5	0.64	
9:55	10.66	26.7		" "	713	7.2	1.63	
10:00	10.57	26.5		6.73	712	7.8	1.36	
10:05	10.58	26.8		" "	709	7.1		
10:14	10.54	26.9		6.74	708	1.9	1.55	
10:15	10.45	27.0		" "	710		0.50	
10:20				" "	709	7.1	0.83	
10:25	10.37	27.4	33.0	6.73	705	7.3	0.69	

11:20 packed up and went to another well. Equipment Decontamination

(17)

(Well No 57-41-04)
11:40 — 1330 Equipment set up, well recharge well.
Flow rate 1.74 l/m.
325 sampled. Same sand in well, recharge
was constant 12.4 feet.

TIME	DEPTH H2O	FR	TV	PH	TEMP	COND	D.O.	TORP
11:55	12.23	(1.84 l/m)	2.0	6.91	25.8	620	89	504
12:00	12.21		2.5	6.94	27.2	624	1.57	163
12:05	12.22			6.93	28.0	627	1.50	94
12:10	12.25		—	6.95	25.3	631	0.41	994
12:15	12.21		3.0	6.96	26.7	627	9.07	242
12:20	12.22		5.5	6.94	26.4	625	9.24	172
12:25	12.23		6.0	6.94	26.7	607	8.45	187
								77
12:30	12.22		—	6.94	26.7	626	8.70	
12:35	12.21		10.0	6.93	27.0	628	0.90	37
12:40	12.24		—	6.95	28.5	624	0.85	37
12:45	12.25		13.0	6.94	27.5	630	.22	147
12:50	12.21		15.0	6.94	27.5	625	.76	81
12:55	12.23		—	6.93	28.3	630	8.30	138
1300	12.22		20.0	6.94	29.0	627	8.22	125

1315 Samples obtained (Brix → Ferns Dam)
*orp - 4.5 → 8.8
13:40 lunch
14:50
15:00 → Decon the pump (Fill out chain-of-custody
Do the Log Book etc.
Miss Richard Salness & office

• Weep 17 meet. not able to reach well while Richard Salinas to meet for well work. Left well go to office for more info.

• Well EMJ-22 - COMPLETED! — Richard Salinas
1600 @ well on com. truck, set up — Fresh
1815 Equip sampler, will sample @ 1805
1835 Left for truck = leave well @ 185

TIME	HOLDER FT	TV	TEMP	COND.	DO	PH	TURB
1710	18.16	(1.74 m) 3	24.4	1.180	9.6	1.68	79.5
1715	18.15	5	23.7	1.190	1.6	0.95	537
1720	18.12	10	23.3	1.210	0.3	0.61	221
1725	17.92	15	23.6	1.210	0.5	0.47	215
1730	17.12	20	24.2	1.210	0.8	0.38	176
1735	17.98	—	24.5	1.220	0.7	2.33	155
1740	17.98	25	24.7	1.220	0.6	1.30	137
1745	17.98	—	24.7	1.220	0.6	1.15	112
1750	17.97	30	24.8	1.230	0.9	0.57	75
1755	17.91	35.5	25.0	1.220	0.9	0.31	187

1900 Do final D.O. sample @ office and unload equipment (0.96 mg/L)

Leave office @ 20.08 go to Red Ox

7/8/97 NAS Ft Worth JRB

0530 - Lynn arrives at site - cleans up field office, writes out labels & does trip blanks - fills out waste forms. Begins COC for day

0650 - Jack arrives

Conduct HSS meeting

Lynn goes to store to buy more packing tape

Jack calibrates equipment, loads gatorade, ice, equipment into van. Cuts new tubing for LTM to reach across to parking lot

0835 - Left house for LFA 1628-3

Time

0800 Arrived at LSA 1628-3, set up equipment and began to pump + sample

~~Arrived at LSA 1628-3~~

Time	DTW	TV	pH	Temp	Cond	ORP	DO	Turb
8:05	9.32	2.0	6.79	23.8	0.99	0.7	9.45	43
8:10	9.31	3.5	6.78	24.5	1.25	0.9	9.11	26
8:15	9.31	5.0	6.78	24.5	1.26	1.5	9.09	15
8:20	9.31	6.5	6.79	24.6	1.25	1.9	8.84	7
8:25	9.31	7.5	6.79	24.6	1.25	2.1	8.94	4
8:30	9.31	9.0	6.80	24.6	1.24	2.1	2.40	4
8:35	9.31	10.5	6.80	24.7	1.24	2.3	.56	3
8:40	9.31	12.0	6.80	24.7	1.24	2.5	.47	3
8:45	9.31	13.5	6.81	24.8	1.24	2.6	.39	3

Fe^{2+} = 0.0 mg/L

No problems with LSA 1628. Water was clear, no odors, and recharge sufficiently for low flow sampling.

8:45-9:10 packed up and decontaminated equipment. Headed out for well GMI-22-07 MW601

9:15 Arrived at GMI-22-07 MW601 and began set up for sampling.

Time	DTW	TV	pH	Temp	Cond	ORP	DO	Turb
9:40	20.56	4.0	6.90	26.4	0.629	6.3	2.97	999
9:45	18.40	4.5	6.94	26.8	0.625	3.1	3.38	999
9:50	18.35	5.0	6.90	26.2	0.624	4.1	3.53	737
9:55	18.06	5.5	6.87	25.9	0.622	4.1	3.19	422
10:00	17.96	6.0	6.86	26.1	0.618	6.4	8.56	240
10:05	18.03	6.5	6.85	26.0	0.617	6.6	3.08	220
10:10	18.04	7.0	6.86	25.9	0.616	5.8	3.04	160
10:15	18.02	7.5	6.84	26.0	0.616	5.9	2.99	90
10:20	17.89	8.5	6.83	25.8	0.617	6.0	3.10	58
10:25	17.88	9.0	6.83	26.0	0.617	6.4	3.30	42
10:30	17.88	9.5	6.82	26.2	0.613	7.2	2.56	37
10:35	17.87	10.0	6.82	26.2	0.611	7.3	2.53	27
10:40	17.88	10.5	6.82	26.1	0.611		2.63	21
10:45	17.88	11.0	6.82	26.2	0.611		2.57	10

Total = 00 mg/L

Well was very sandy with an orange/brown color. No odors present. Recharge was slow and had to drop pump slightly below the middle of the screen interval to keep a steady flow.

10:45 - 11:15 Decon equipment and pack up to move to well 17MW601

11:20 Arrive at well 17MW601 and began setup to pump and sample

Time	DTW	TV	pH	Temp	Cond	ORP	DO	Turb
11:25	9.87	1.5	6.91	24.8	.597	*	9.51	632
11:30	9.64	2.0	6.89	25.5	.622	*	1.48	299
11:35	9.55	3.0	6.88	26.5	.626	*	.88	138
11:40	9.46	3.5	6.87	27.3	.635	*	.64	65
11:45	9.40	4.0	6.86	28.0	.634	6.2	.44	62
11:50	9.70	5.0	6.87	27.9	.611	5.6	8.16	140
11:55	9.72	6.0	6.88	26.4	.625	6.2	8.11	55
12:00	9.72	7.0	6.88	25.5	.624	4.25	8.96	42
12:05	9.71	8.0	6.88	25.7	.624	*	8.83	40
12:10	9.72	9.0	6.88	25.4	.625	4.5	8.81	32
12:15	9.72	10.0	6.88	25.3	.624	4.2	8.86	29

Fe^{++} = 2.62 mg/L after 1 to 1 dilution

* Meter overheated and screen went black

Water was slightly cloudy/grey with a strong fuel odor.

12:15 - 12:30 Packed up + Decon equipment and headed back to Field House

12:30 - 1:00 Filled out chain of custody and packed samples for Fedex shipment.

1:00 I left to go my office and then to drop off samples at Fedex

in Northwest Fort Worth.
Lynn Secured Vans at Field office before
Departing to Airport and back to Maryland.

2:15 I arrive back at Field office and
begin setup for Iron testing on the
wells sampled in the morning.

2:30 Complete Fe^{2+} on GMT-22-67MW001

Fe^{2+} = 0.0 mg/L

2:45 Complete Fe^{2+} on LSA 1128-3WG001

Fe^{2+} = 0.0 mg/L

2:55 Complete Fe^{2+} on 117MW001

Fe^{2+} = 2.62 after a 1 to 1 dilution
of 25 ml of DI water with 25 ml of sample

Finish Iron sampling, clean equipment, and
Depart for the weekend.

JM

7/21/97 MONDAY

7:00 AM ARRIVE ON-SITE MIKE, JACK, ERICK ON SITE for SAFETY MEETING.
Preparing Equipment, samples, doing calibration, wet new pump.
7:30 Talking with Don. Jack conducting calibration of equipment, Kick calib. ovm
7:38 EQES Arrive w/ pump equipment, Put back flow valve on unit.
8:45 Put samples in cooler
11:30 Back at office put samples in fridge
12:00 Lunch — 12:45 BSS-BW601

Time	DTW	TV	PH	Temp	Cond	ORP	DO	Turb
Well no →			EFO1 - BW601				7/21/97	
1320	13.60	—	6.74	26.5	814	*	1.34	461
1325	13.70	—	6.74	26.9	798	6.77	1.35	362
1330	13.40	2	6.71	26.6	802	6.75	1.46	248
1335	13.74	—	6.70	27.3	803	6.84	0.65	300
1340	—	—	—					Dock
1345	12.24	3	6.69	28.5	800	6.51	1.76	
1350	12.08	—	6.67	30.5	797	6.68	1.24	
1355	—	3.5	6.68	32.3	792	6.89	0.71	
1400	13.10	4	—	30.3	795	6.89	0.43	
1405	13.10	4.5	—	30.2	799	6.90	0.65	
1410	—	6.5	6.61	29.8	786	6.87	1.11	
1420	—	05 take samples						

BW601 (Dup Sample @ 7:15PM Diluted 1:10 = 3.00 mg/L)

30

7/21/97 – MONDAY 108 71

@ well no LFOI-1BW601

7/21/97 13:- – 1420 Pump not [illegible] 2.0 [illegible]
Pump Dry. Lot resorge. Thousand. Dry up to
5-6 gal to the volume not able to do well.

~~[illegible]~~

LFOI-1DW601 14:46 – 1610
H2O 10-7

The pump was blocked once 2 times and
we were not able to establish flow rate of
any kind. After numerous attempts obtain
sample.

LFOI-1DW601

Time	DTW	FR	TV	Ph	Temp	Cond	ORP	DO	Turb	
1505	17.54	1.4	–							→ pump blocked
1510	16.32		1	6.72	24.8	.980		18.9	1.66	1
1515	17.11		1.5	6.71	24.9	1.000		18.0	0.81	-8
1520	16.20		–	6.70	26.0	"	"	16.3	0.30	6
1525	15.92		2.0	6.68	27.0	1.010		9.8	1.51	2
1530	15.38		2.5	6.67	28.4	"	"	9.6	0.18	4
1535	16.52		–	6.67	29.0	"	"	9.5	0.06	3
1540	16.74		–	6.67	28.6	"	"	9.6	0.56	3
1545	16.08		6.5	6.69	28.5	"	"	10.1	0.6	1

1545 – 1550 obtained sample
Clear/Low fuel-like odor
Flow Rate 1.4 L/m.

Not able to stabilize

–8 zero (calibrated Turb)

7/21/97 – MONDAY

WELL NO – GMI-22-05MW601

1620 @ WELL GMI-22-05 ONBOARD EQUIPMENT AS

16.45 H2O DEPTH

FLOW RATE = 0.8 L/m @ TIME 16.55 HRS

TIME	DTW	FR	TV	PH	TEMP	Cond	ORP	D.O.	Turbidity
16.55	11.45	(0.8L)	–	6.90	27.3	0.940	7.8	2.60	97
1700	10.82		2.0	6.87	27.5	1.000	8.2	1.07	76
1705	10.86		–	" "	27.9	1.030	7.6	1.15	58
1710	10.85		3.5	" "	28.0	1.040	8.3	1.05	33
1715	10.82		–	6.86	28.3	" "	7.2	1.00	17
1720	10.70		5.0	" "	28.5	" "	3.2	0.67	14
1725	10.71		–	6.85	29.4	1.060	0.7	1.30	12
1730	10.65		5.2	" "	30.2	1.070	0.9	0.53	7
1735	10.98		–	6.84	30.1	" "	2.4	0.67	29
1740	11.09		6.0	6.86	29.5	1.050	1.6	0.78	37
1745	10.80		8.0	6.87	28.3	1.030	1.4	0.47	22
1750	10.74		–	" "	28.2	1.040	1.7	0.52	16
1755	10.66		10.0	6.85	29.1	.050	1.9	0.32	7
1800	10.63		12.0	6.86	29.8	1.080	*	0.30	9
1805	10.80		–	6.84	30.7	1.090	*	0.42	11

2010 LEAVE FOR FED EX facility

TO DROP-OFF SAMPLES.

TUESDAY 7/22/97 — 408 73

7:00 AM on-site | Mike, Jack, Kim, [illegible]
Calibrate equipment, load up vans, SAFETY TALK
Today's Work to Do the following:
• Wells — ST-14.28, LF01-16W01, LF01-15W001
Leave for wells 8:20 — Drop down and pump groundwater

WELL LF01-15W001

TIME	DTW	FR	TV	pH	TEMP	Cond	ORP	D.O.	Turb
9:10	5.0	(1.24)	1.0	6.68	21.8	700	12.8	.10	314
9:15	14.96		1.5	6.71	22.5	671	16.9	.32	204
9:20	14.93		2.5	6.71	23.2	685	13.4	.25	122
9:25	14.95		5.5	6.71	23.9	202	11.5	6.86	81
9:30	14.95		—	6.72	24.1	682	5.5	3.92	74
9:35	14.96		—	6.72	24.3	681	8.0	.24	66
9:40	14.95		7.0	6.72	24.5	683	7.0	.06	48
9:45	14.94		7.5	6.72	24.6	681	8.0	.21	32
9:50	14.93		9.0	6.72	24.7	682	8.7	.31	19
9:55	14.78		—	" "	25.3	681	7.8	2.20	14
10:00	14.77		10.0	" "	26.2	690	5.3	.18	15
10:05	14.70		12.5	" "	27.0	681	18.0	.83	7
10:10	14.78		—	" "	27.3	684	17.9	.88	5
10:15	14.79		—	" "	27.6	690	16.8	.88	4
10:20	15.05		—	6.73	28.0	683	16.7	.81	5
10:25	5.09		15.0	6.74	28.0	683	15.9	.79	4

7/22/97 - TUESDAY

11:05 @ well no = LF01-IC W601
unload van, set up equipment, flow cap = 1.8 l/m.
Clear liquid w/ medium Fe. odor.
Run equipment then purge
Lunch Break - 12:30 - 1400
Samples obtained @ 12:15

LF01-IC W601

Time	DTW	FR	TV	pH	Temp	Cond	ORP	DO	Turb
11:25	15.67		2	6.69	23.9	1,040	15.6	.96	330
11:30	15.67		—	6.71	23.2	1,070	20.1	.11	99
11:35	15.66		5	6.72	23.7	1,040	19.3	9.21	3
11:40	15.68		—	" "	23.9	1,020	9.3	.3	2
11:45	" "		10	6.73	23.3	1,010	8.0	.69	1
11:50	" "		—	6.73	23.8	1,000	11.1	.30	1
11:55	15.66		15	" "	24.0	" "	8.1	.30	2
12:00	15.67		—	6.72	23.9	" "	8.2	.28	2
12:05	15.65		22	6.72	23.6	1,020	8.1	.33	2

~~[illegible]~~ well no ST-14-28W601
ST 1415 arrive at well. unload equipment.
1430 - 1445 must add to establish a continuous water flow. Can't DP pumps. Purge well before dry then conduct sampling.
1500 conducted sampling
1530 Pickup other equipment decon, leave for next well
[illegible]

ST-14-28 PDN = 264 mg/L
@ 19:35 (Interim 1/3)

7/22/97 - TUESDAY

WELL NO - SD13 - OMW001

ARRIVED @ 1500 - LEAVE 1730

TIME	DTW	FR	TV	PH	TEMP	Cond	ORP	D.O.	Turb
16:10	12.28	(1.24)	—	6.93	27.5	656	0.8	.16	367
16:15	12.27		—	6.91	28.2	661	4.1	.60	126
16:20	12.28		2	6.88	29.0	679	4.9	.63	13
16:25	12.27		—	6.86	30.3	682	5.6	.05	5
16:30	12.39		6	6.80	26.9	676	3.6	.30	5
16:35	12.32		8	6.80	25.5	673	4.7	.59	1
16:40	12.32		—	" "	25.4	676	3.8	.58	1
16:45	12.33		10	6.86	25.4	675	4.0	.50	1
16:50	—	—	15.5	DONE					1

- Unload equipment and set-up. Flow Rate 1.24 lm, is at 1500 Conducted Sampling.
  At 1730 Conducted Equip Blank.
  Load up coolers.
  2015 Leave for Fed Ex.
  SD13 Iron Sample = 2.71 mg/L @ 19:10

7/23/97 WED.

7:30 ARRIVE ON SITE - JACK, Mike, Erick on site.
JACK conducting equipment calibration
Rinse filters w/ ICE and H2O. Take Decon
water and put in Decon Drum.
Pick cutting totes for wells.
Mike/Erick drying files and samples.
Put ALPHA-Wipes in one
SAFETY meeting - Environmental Hazards
8:30 Go to PROJECT
wells - SD13-03, SD13-04, SD14-R31, SD13-02, SD14-R30
(10 in 7/24/97)

WELL SD13-04 - 1960'
Arrive @ well @ 8:30 am. We were not able to obtain water flow constant. Purged the well then sampled.
Finished sampling @ 9:30 am. Left well @ 10:00 am. Drum = 0.73 mgk.

WELL SD13-02 - 1960'
Arrive @ well 10:10. Unload equipment, set-up for pumping.
Flow Rate = 1.8 l/m. Water

Time	DW	Cl	Fe	Ph	Temp	Cond	ORP	DO	Turb
25	13.15		1.5	6.74	26.2	752	13.0	.85	343
10:30	13.13		2.0	6.78	26.5	740	13.0	.05	94
10:35	13.15		5.0	6.79	26.9	726	12.7	0.06	12
10:40	3.14		7.5	6.78	27.1	722	10.6	0.50	5
10:45	3.13		10.5	"	"	27.6	720	9.9	"	3
10:50	3.14		12.0	"	"	28.0	715	9.7	0.39	2

Lauren Brown - Geol. Erec Phillips - Clinton
Flow rate 1.8 l/m.
Done well at 11:30 go to next.
Drum = 2.53 mgk. DWP = full

7/23/97 - WED

408 77

ST14-03W601 - Kim K, Jack M.
11:35 Arrive @ well - Unload truck and equip
11:20 start pump. Establish flow rate of
from 11:50 - 12:55 conduct field parameter
checks per sampling requirements conduct
sampling - Sampled at 1300 - 1310
left well @ 1330 (60 to lunch) lunch 1330 - 1

TIME	DTW	FR	TV	pH	TEMP	Cond	Orp	DO	Turbidity
11:50	9.41	(.74 gm)	—	6.90	24.9	661	-5	.92	175
11:55	9.21		—	6.95	25.0	671	1.4	.41	65
12:00	9.18		2	6.94	26.1	679	2.0	.16	50
1205	9.24		2.5	6.93	26.4	677	0.3	.05	55
1210	"	"	3.0	6.93	25.9	677	3.7	.06	28
1215	"	"	—	6.93	25.3	684	2.1	-.11	23
1220	"	"	5.0	6.92	25.9	675	-6.1	-.24	15
1225	"	"	—	6.93	26.0	677	8.1	-.34	11
1230	"	"	7.0	6.92	26.1	671	-7.9	-.37	8
1235	9.19		—	6.92	26.5	670	-8.5	-.44	6
1240	9.14		7.5	6.92	27.1	680	-8.7	-.25	8
1245	9.16		8.0	6.91	28.4	682	-6.6	-.26	7
1250	9.14		9.5	6.91	28.6	684	8.5	-.11	6
1255	9.50		10.5	6.92	27.7	625	-7.9	-.41	5
300	9.55		13.0	6.93	27.7	623	-1.8	-.49	5

Recharge O.K. - Conducted sampling as
matrix Decomposition.

KK

Dan L. Stamk.

7/23/97 - WED

WELL NO ST14-26 REC'D - Kim K, Jack H
ARRIVE AT 1430. WATER WAS ADDED TO THE
BRAIN [illegible] TURBIDITY FINALLY CLEARED
UP. 14-45 gallons of well volume well volume
P. 14-55 gallons. Flow rate 1.2-1.5 gpm.
LAST READING TAKEN AT 999. Recovered the
well volume [illegible]

Time	DTW	FR	TV	PH	Temp (C)	ORP	DO	Turb
500	11.20	1.2 gpm	—	6.69	26.3	680	9.6	1.45	508
1505	11.21		5	6.73	25.1	699	14.2	0.35	160
1510	11.23		—	" "	24.9	710	11.3	0.69	125
1515	11.21		7	6.72	25.1	706	13.2	0.40	85
1520	11.28		—	" "	24.9	712	10.8	0.25	278
1525	11.21		10	6.71	25.2	716	11.2	0.21	690
1530	" "		15	6.72	25.2	712	10.1	0.21	999 *
1535	11.20		20	" "	25.2	713	9.6	0.24	999 —
1540	" "		22	" "	25.1	715	7.7	0.35	999
1545	" "		23.5	6.73	24.2	718	2.2	" "	999
550	11.23		25	" "	23.5	723	3.1	0.23	800
1555	11.32		27.5	" "	23.5	705	0.1	-0.06	504
1600	" "		30.5	" "	23.2	" "	0.1	-0.07	276
1605	" "		33	" "	23.3	" "	2.0	0.00	186
1610	" "		35	" "	23.2	724	1.3	-0.01	66
1615	11.33		37.5	" "	" "	726	-1.2	-0.24	39
1620	11.32		—	" "	" "	725	-2.6	0.61	27
1625	11.33		40	" "	" "	727	-2.3	-0.38	15
1630	11.32		42	" "	" "	727	-2.4	-0.67	11
1635	11.33		45	6.74	" "	727	-2.6	-0.45	10

KEY WELL 1710-60 TO OFFICE

(3) [illegible]

7-23-97 - WED

408 71

At Fairchild 1730. Complete field work
[illegible] & samples to SHL. Pick up equipment
leave for home at 1915
~~Iron~~ Iron = 0.0 mg/L.

THURSDAY 7/24/97

7/24/97 Conduct on-site sampling MW-3, ST-14
Arrive on-site @ 7:30 am load-up remaining
equipment
Arrive @ well ST-14-W31 800 not able to stop
flow rate at 1.8 gpm, well volumes = 15.5 gal

ST-14-W31

TIME	DTW	FR	TV	pH	Temp	Cond	ORP	DO	Turb
8:20	10.35 (1.81')			6.61	26.0	.748	-4.4	3.72	180
8:25	" "		2	6.62	27.3	749	-4.3	2.87	96
8:30	" "		—	6.64	27.8	750	-6.6	2.67	63
8:35	" "		5	6.66	27.9	751	-3.4	2.59	38
8:40	" "		—	6.66	28.2	753	-4.1	1.70	16
8:45	" "		7	6.67	" "	754	-2.7	0.83	13
8:50	" "		—	" "	28.4	" "	-2.0	0.61	6
8:55	" "		—	" "	28.7	" "	-2.4	0.71	4
9:00	" "		8.5	" "	29.1	735	0.5	0.56	1
9:05	" "		—	" "	29.5	739	0.3	0.48	14
9:10	" "		9	" "	30.4	754	0.3	0.96	72
9:15	10.37		10	" "	29.7	731	0.7	0.93	82

(Total Gallons = 15.5)

Iron = 0.01 mg/L.

7-24-97 - Thursday

MW-3WC01 - Arrived at well @ 9:50. Unload van and equipment - Set up pump. Started at 1:44 hr. Water recharge ok and conduct Field Parameters. Obtained samples @ this time were at 1200. Break for lunch 1200-1230. Back at office at 12:45. Doing pure and back up Iron = (0.01) Lead (0.08) Lead (0.08) 3WC01

TIME	DTW	PR	IV	PH	TEMP	Cond	Orp	D.O.	Turb
10:10	11.77	6.4 l/m	—	6.74	23.7	801	6.7	1.46	84
10:15	11.62		—	6.76	24.3	809		1.38	79
10:20	11.68		2	" "	24.6	816		1.35	60
10:25	11.62		—	" "	24.8	817		1.48	38
10:30	11.65		5	6.77	25.0	819		1.50	30
10:35	11.64		6.5	6.76	25.2	825		1.72	22
10:40	11.65		—	6.77	25.1	" "		1.64	17
10:45	" "		8	" "	25.	826		1.69	13
50	" "		10	" "	25.4	825		1.59	12
10:55	" "		—	" "	25.5	826		1.59	9
11:00	" "		12.0	" "	25.5	827		1.61	4

Last water level
Leave notes at 1450

Equipment Blank - 6.0 Dem

Groundwater Field Sampling Data Sheets

GROUNDWATER FIELD SAMPLING DATA SHEET

408 82

Well No.: ST14-03	Site: NAS Fort Worth JRB
Sampler(s): KLK, JM	Project No.: APC001-07GAA
Well Depth: ~~[illegible]~~ 17.9	Date: 7/23/97 Time: 11:35 – 1330
DTW (ft): 9.08 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): 12.5	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Type of Pump: Grundfos 2" submersible	96° - Wind EASTERLY [redacted]

1.7 l/m.

Field Parameters

Time	Depth to Water (ft)	Flow Rate (gpm)	Total Volume (gal)	pH	Temp. (C)	Cond. (umhos/cm)	ORP EH	D.O. (mg/L)	Turb. (N.T.U.)	Description
1150	9.41		—	6.90	24.9	661	1.5	.92	175	
1155	9.21		—	6.95	25.0	671	2.4	.41	65	
1200	9.18		2.0	6.94	26.1	679	2.0	.16	50	
1205	9.29		2.5	6.93	26.4	677	0.3	.05	55	
1210	9.29		3.0	6.93	25.9	677	0.7	.06	28	
1215	9.29		—	6.93	25.3	684	2.1	-.11	23	
1220	9.29		5.0	6.92	25.9	675	-6.4	-.24	15	
1225	9.29		—	6.93	26.0	674	-8.9	-.34	11	
1230	9.29		7.0	6.92	26.1	671	-7.9	-.37	8	
1235	9.19		—	6.92	26.5	676	-8.5	-.44	6	
1240	9.14		7.5	6.92	27.1	680	-8.7	-.28	8	
1245	9.16		8.0	6.91	28.4	682	-6.6	-.26	7	
1250	9.14		9.5	6.91	28.6	684	-8.5	-.11	6	H2O Surge
~~1255~~	9.52		10.5	6.92	27.2	675	-7.9	-.41	5	Stable
1255 KLK	9.55		13.0	6.93	27.2	673	-7.8	-.49	5	
1300										
		Conduct sampling 1302								
		Iron = 1.87 mg/L								

Observations

Color: Clear Other (describe):

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

Sample Parameters: Conducted sampling @ 1300, Iron = 1.87 mg/L.

Notes: Fuel AREA. Workers also tearing up a concrete slab.

Depth to H2O (DTW) – 9.08, 9.49 (Recharge ok)

Flow RATE = 1.7 l/m.

1340 - 14:25

Signed/Sampler(s):

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: ST14-26WG01	Site: NAS Fort Worth JRB
Sampler(s): KCK, JM	Project No.: APC001-07GAA
Well Depth: 28	Date: 7/23/97 Time: 1430-1610
DTW (ft): 10.98 DTP:	Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand
Screen Interval (ft): 8-13'	
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	98°-100° / wind direction west [redacted]

1.24m.

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
1500	11.20		—	6.69	26.3	690	9.6	1.45	508	
1505	11.21		5.0	6.73	25.1	699	14.2	-0.35	160	
1510	11.23		—	6.73	24.9	710	11.3	-0.69	125	
1515	11.21		7.0	6.72	25.1	706	13.2	-0.40	85	
1520	11.28		—	6.72	24.9	712	10.8	0.29	278	HEAT IS A Problem
1525	11.27		10.0	6.71	25.2	716	11.2	0.29	690	* Re Turbidity?
1530	11.27		15.0	6.72	25.2	712	10.4	0.21	999	*
1535	11.28		20.0	6.72	25.2	713	9.6	0.15	999	*
1540	11.28		22.0	6.72	25.1	718	2.7	0.74	" "	*
1545	11.28		23.5	6.73	24.2	718	2.2	-0.35	800	Clearing
1550	11.23		25.0	6.73	23.5	723	3.1	0.35	504	
1555	11.32		27.5	6.73	23.3	725	0.1	-0.43	276	
1600	11.32		30.5	6.73	23.2	725	0.1	-0.03	186	
1605	11.32		33.0	6.73	23.3	725	2.0	-0.06	66	
1610	11.32		35.0	6.73	23.2	724	1.3	-0.07	39	
1615	11.33		37.5	6.73	23.2	726	-4.2	-0.26	27	
1620	11.32		—	6.73	23.2	725	-2.0	-0.61	15	
1625	11.33		40.0	6.73	23.2	727	-2.3	-0.38	11	
1630	11.32		42.5	6.73	23.2	726	-2.4	-0.61	10	
1635	11.33		45.0	6.74	23.2	726	-2.6	-0.05	2	(SAMPLE AFTER)

Observations

Color: Clear Other (describe): Brown - Cloudy ✓ after 45-48 gal Clear

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

Sample Parameters: IF H2O DOES NOT CLEAR (TURB) WE WILL DO 45 gallons (3 well vol)

Notes: ~~[illegible]~~ KCK TOTAL Gallons 55 —

• FLOW RATE = 1.24m.

* NOTE THE TURBIDITY is MAXED OUT. Continue up to 45 gall.

→ OBTAINED SAMPLES @ 1645

Signed/Sampler(s): Iron = 0.0 mg/L.

GROUNDWATER FIELD SAMPLING DATA SHEET

408 84

Well No.: ST14-W31	Site: NAS Fort Worth JRB
Sampler(s): KLK, JM	Project No.: APC001-07GAA
Well Depth: 14.5 AT GAUGING (13.75)	Date: 7/24/97 — Time: 8:00 — 9:45
DTW (ft): 10.01 — DTP:	Courier Air Bill No.: 3938919353 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): 89°F / wind
Type of Pump: Grundfos 2" submersible	

1.84m

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
8:20	10.35		—	6.61	26.0	.748	-9.4	3.72	180	
8:25	10.35		2.0	6.62	27.3	749	-4.3	2.87	96	
8:30	10.35		—	6.64	27.8	750	-6.6	2.67	63	
8:35	10.35		5.0	6.66	27.9	751	-3.4	2.59	38	
8:40	10.35		—	6.66	28.2	753	-4.7	1.70	16	
8:45	10.35		7.0	6.67	28.2	736	-2.7	0.83	13	
8:50	10.35		—	6.67	28.4	736	-2.0	0.61	6	
8:55	10.35		—	6.67	28.7	736	-2.4	0.71	4	
9:00	10.35		8.5	6.67	29.1	735	-0.5	0.56	1	adjust flow
9:05	10.35		—	6.67	29.5	739	0.3	0.48	14	A LITTLE HIGH
9:10	10.35		9.0	6.67	30.4	754	0.3	0.92	12	Turbidity UP
9:15	10.37		10.0	6.67	29.7	738	-0.7	0.99	187	H2O Dirty
		—	15.5							
	A TOTAL OF 3 WELL VOLUMES and Turb @ 187 — sample now									
			9:30 Sampled							
			Iron =		0.01	mg/L.				

Observations

Color: Clear Other (describe): Brown - Cloudy -

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

Sample Parameters: 9:30 Sample, 0.01 mg/L Iron

Notes: 8:20 Pump on - Flow rate @ 1.84m.

DTW 10.35, 10.42

- Turbidity not stable as noted above. Well volumes, then sample.

Signed/Sampler(s):

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: MW-3WG01	Site: NAS Fort Worth JRB
Sampler(s): KLK JM	Project No.: APC001-07GAA
Well Depth: ?	Date: 7/24/97 Time: 9:50-1200
DTW (ft): 11.1 DTP:	Courier Air Bill No.: 3933919353 FedEx ____ UPS ____ Other ____ Hand
Screen Interval (ft): 10-20'	
Well Diameter (in): 2" 4"	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	

Field Parameters

1.44/m

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
10:10	11.77		—	6.74	23.7	.801	6.7	1.46	84	—
10:15	11.62		—	6.76	24.3	809	5.7	1.38	79	
10:20	11.68		2.0	6.76	24.6	816	3.7	1.35	60	
10:25	11.62		—	6.76	24.8	817	1.1	1.48	38	
10:30	11.65		5.0	6.77	25.0	819	-2.5	1.48	30	
10:35	11.64		6.5	6.76	25.2	825	-0.6	1.50	22	
10:40	11.65		—	6.77	25.1	825	-0.7	1.72	17	
10:45	11.65		8.0	6.77	25.1	826	-1.6	1.64	13	
10:50	11.65		10.0	6.77	25.4	825	-1.2	1.59	12	
10:55	11.65		—	6.77	25.5	826	-1.6	1.59	9	stable
11:00	11.65		13.0	6.77	25.5	828	-1.8	1.61	4	
		11:15 Conducted Sampling								

Observations

Color: Clear Other (describe): MINOR Cloudy — clear @ 10:57

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

Sample Parameters: Conducted Sampling @ 11:15, Iron = 3WG01MD(0.07), 3WG01MS(0.[illegible] 3WG01(0.06

Notes: FLOW RATE = 1.44/m. PUMP ON AT 10:00

DTW 11.1, 11.4, 11.45

Equipment Blank Iron = 0.0.

Signed/Sampler(s):

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: WP 07 10B	Site: NAS Fort Worth JRB
Sampler(s): Mike Rectang, Lynn Morgan	Project No.: ~~AFC~~ AEC 001-07GAA
Well Depth:	Date: 7/11/97 Time: 1650
DTW (ft): 27.13 DTP: Ø	Courier Air Bill No.: 5739019355 FedEx ____ UPS ____ Other ____ Hand
Screen Interval (ft): 23'-33'	
Well Diameter (in): 2"	Sampling Method (G=grab, B=bailer, SP=submersible pump): SP
Placement of Pump (ft): 28'	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Type of Pump: Grundfos 2" submersible	Sunny, westwinds, [redacted]

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
1650	27.13	1.25								
1655	27.21	1.25		6.8	27.7°	0.744		1.59	5	
1700	27.30	1.25		6.75	27.8°	0.738		1.68	10	
1705	27.39	1.25		6.75	27.8°	0.738		2.54	10	
1710	27.42	1.25	9	6.74	27.7°	0.741		2.51	10	

Observations

Color: (Clear) Other (describe):

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

Sample Parameters: VOC 3 40ml + 1 Equipment Blank for VOA's

Notes: OB

Signed/Sampler(s):

408 87

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: LF04-4F	Site: NAS Fort Worth JRB
Sampler(s): JM, TZ, JEW	Project No.: APC001-07GAA
Well Depth: 37.02	Date: 7-11-97 Time: 12:42 -
DTW (ft): 27.65 DTP:	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): SP
Placement of Pump (ft): 27 1/2	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Type of Pump: Grundfos 2" submersible	Sun/Clear 88°

.84/m.

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
14:37				6.94		.554				
17:00				6.75						
17:20			5	6.56		568	-18	8.25	365	
17:25	27.68		7.5	6.53	28.7	590		8.68	222	
17:30	27.68		8.5	6.51	29.1	596	10.7	8.71	64	
17:35	27.68		9.0	6.52	29.5	600	-9.0	8.64	5	
17:42	27.76		10.00	6.68	30.2	599		7.97	-6	surged well
7:52	27.74		11.5	6.84	29.4	600	-5.4	8.30	1	
17:57	27.72		13.0	6.72	29.0	602	-3.7	8.58	-2	
18:02	27.71		13.5	6.70	28.9	605	-2.7	8.61	-4	
18:07	27.72		14.5	6.68	28.7	609	-0.8	8.63	-4	
18:15	27.72		15.0	6.82	28.8	608	-2.9	9.32	-4	
18:20	27.70		16.0	6.68	28.5	607	-3.2	9.35	-7	
18:25	27.72		17.0	6.66	28.4	609	-2.0	9.30	-9	Took Sly w/ Rodger [illegible]

Observations

Color: Clear Other (describe):

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

Sample Parameters: VOC (SW8260A)

Notes: Gallons purged (gallons): 5

Purged + sampled @ ≈ .8 G/minutes

Signed/Sampler(s):

GROUNDWATER FIELD SAMPLING DATA SHEET

408 83

Well No.: WP0710C	Site: NAS Fort Worth JRB
Sampler(s): Mike Rodtang, Lynn Morg	Project No.: APC001-07GAA
Well Depth: 32.5	Date: 7/14/97 Time: 0925
DTW (ft): 19.21 DTP: —	Courier Air Bill No.: 573901936 (FedEx) ____ UPS ____ Other ____ Hand
Screen Interval (ft): 20-30	
Well Diameter (in): 2"	Sampling Method (G=grab, B=bailer, SP=submersible pump): SP
Placement of Pump (ft): 25	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Type of Pump: Grundfos 2" submersible	Sun, SSW, 91° [redacted]

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
0933	19.21	2.468								
0937	19.85			6.52	21°	1.24	41.4	1.62	35	Pump @ 105 Hz
0942	19.80			6.61	21.5	0.824	20.8	0.08	33	
0947	19.51			6.64	20.9	0.802	14.4	72	22	
0952	19.42			6.67	21.7	0.777	15.2	2.25	14	
0957	19.49			6.67	22.1	0.77T	15.3	0.5	9	
1002	19.43			6.68	22.1	0.771	18.5	0.37	5	
1007	19.41			6.67	22.5	0.766	13.5	0.29	3	
1012	19.4			6.67	22.7	0.766	13.2	0.27	2	
1017	19.39			6.67	23.3	0.762	13.3	0.31	1	
			22 gals							

Observations

Color: Clear Other (describe):

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

Sample Parameters: VOC SW8260A

Notes:

Signed/Sampler(s): [signature]

408 80

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: GM1-04-01	Site: NAS Fort Worth JRB
Sampler(s): LAM, MJR	Project No.: APC001-07GAA
Well Depth: 20.46	Date: 7/14/97 Time: 1059
DTW (ft): 18.83 DTP: NA	Courier Air Bill No.: 5739 0936 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): 20'	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Type of Pump: Grundfos 2" submersible	Sun, SSW, 94° [redacted]

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
* 1112	18.8	0.317								roots in purge vac
* 1117	18.8									
1125	19.0			6.95	24.4	1.02	3.3	0.93	480	
1131	19.2			6.9	24.5	1.03	0.3	0.93	80	
1136	19.15			6.9	24.8	1.03	1.7	0.56	49	
1141	19.16			6.91	24.3	1.02	-1.3	0.53	24	
1146	19.11			6.9	23.1	1.01	-2.7	0.65	11	
1251	19.15			6.9	22.8	1.01	-2.8	0.76	3	
1156	19.17			6.9	22.5	1.01	-1.5	0.66	2	
1201	19.16			6.9	22.5	1.00	-2.2	0.67	4	
1206	19.16			6.9	22.5	1.01	-1.8	0.66	3	
1210	sampled									
			12 gals							

Observations

Color: (Clear) Other (describe):

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

Sample Parameters: Volatiles VOCs (SW8260A)

Notes: * - not enough water to measure phys. parameters
Very small water column.

Signed/Sampler(s): [signature]

GROUNDWATER FIELD SAMPLING DATA SHEET 408 90

Well No.: LF-05-02	Site: NAS Fort Worth JRB
Sampler(s): Lynn Morgan, Mike Podtey	Project No.: APC001-07GAA
Well Depth: 1	Date: 7/14/97 Time: 1509-
DTW (ft): 24.10 DTP:	Courier Air Bill No.: 5739019366 FedEx ____ UPS ____ Other ____ Hand
Screen Interval (ft): 17-27	
Well Diameter (in): 2"	Sampling Method (G=grab, B=bailer, SP=submersible pump): SP
Placement of Pump (ft): 26.5'	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Type of Pump: Grundfos 2" submersible	SUN, SSW 0-3mph, ~~Avg~~ 106° [redacted]

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
15:09	24.10									
15:14	24.28	0.465	2.32	6.67	23.5	0.726	-19.8	0.52	701	Iron color
15:19	24.30	0.465	4.65	6.72	21.9	0.724	~~-18.8~~ -21.8	0.42	310	
15:24	24.31	0.465	6.97	6.77	21.6	0.664	*	0.37	43	
15:29	24.29	0.465	9.29	6.75	21.4	0.667	*	0.34	36	clearer
15:34	24.30	0.465	11.61	6.75	21.5	0.657	8.8	0.34	23	
15:39	24.29	0.465	13.93	6.76	21.6	0.653	-0.2	0.35	11	
15:44	24.30	0.465	16.25 gals	6.76	21.5	0.647	-1.3	0.25	5	
15:49	24.29	0.465	18.57	6.77	21.6	0.639	-0.8	0.25	4	
15:54	24.28	0.465	~~25~~ 20 gals	6.77	21.6	0.639	-0.9	0.20	5	
1600	- sampled		VOCs							
1605	- sampled		MS							
1608	- "		MSD							

Observations

Color: Clear Other (describe): started out reddish-orange turned clear w/in 10-15 min

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

Sample Parameters: VOCs (W/ 260B)

Notes: *meter got too hot - won't turn on (screen fried)

Sampled - for VOCs - took MS & MSD

Signed/Sampler(s): Lynn Morgan

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: FT 09 12C	Site: NAS Fort Worth JRB
Sampler(s): Lynn Morgan, Mike Rodhos	Project No.: APC001-07GAA
Well Depth: 39.64	Date: 7/14/97 Time: 1630 - 1715
DTW (ft): 29.85 DTP: —	Courier Air Bill No.: 5739019366 FedEx ____ UPS ____ Other ____ Hand
Screen Interval (ft): 27.5 - 37.5	
Well Diameter (in): 2"	Sampling Method (G=grab, B=bailer, SP=submersible pump): SP
Placement of Pump (ft): 32.5	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Type of Pump: Grundfos 2" submersible	Sunny, SSW - 0-2mph, 103° [redacted]

Field Parameters

Time	Depth to Water (ft)	Flow Rate (gpm)	Total Volume (gal)	pH	Temp. (C)	Cond. (umhos/cm)	ORP mV	D.O. (mg/L)	Turb. (N.T.U.)	Description
1630	30.01									grey/cloudy
16:35	30.7	0.425	2.125	6.58	23.8	0.679	12.3	1.00	768	118 Hz - Pump
16:40	29.89		4.25	6.59	23.3	0.697	15.4	0.64	320	
16:45	29.84		6.38	6.60	23.0	0.703	12.1	0.51	127	
16:50	29.90		8.5	6.60	23.0	0.704	11.1	0.42	55	
16:55	29.89		10.75	6.60	22.9	0.700	11.2	0.28	20	clear
17:00	29.90		17	6.60	22.8	0.698	12.7	0.42	5	
1705	29.90			6.61	22.8	0.698	12.3	0.41	4	
1710	29.90		2	6.61	22.8	0.697	12.5	0.43	3	
			17 gals							
1715 Sampled										

Observations

Color: Clear Other (describe): grey/cloudy turning

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

Sample Parameters: VOCs (SW 8260A)

Notes:

Signed/Sampler(s): L. Morgan [redacted]

GROUNDWATER FIELD SAMPLING DATA SHEET

408 92

Well No.: LF05-18W	Site: NAS Fort Worth JRB
Sampler(s): Lynn Morgan, Mike Rodtung	Project No.: APC001-07GAA
Well Depth:	Date: 7/14/97 Time: 1739
DTW (ft): 18.17 DTP: NA	Courier Air Bill No.: 5739019346 FedEx ____ UPS ____ Other ____ Hand
Screen Interval (ft): 13.9-23.9	
Well Diameter (in): 2"	Sampling Method (G=grab, B=bailer, SP=submersible pump): SP
Placement of Pump (ft): 20'	Weather (sun/clear, overcast/rain, wind direction, ambient temperature): Sun, no wind, 99°
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
1739	18.17									Pump at 116 ft
1750	18.30	0.282	1.4	6.88	21.0	1.06	-3.7	1.67	472	Pump at 98 ft
1755	18.25		2.8	6.85	22.0	1.07	-3.1	11.35	134	
1800	18.26		4.2	6.83	22.5	1.07	-3.5	9.83	57	
1805	18.20		5.6	6.83	23.3	1.06	2.2	9.69	29	Pump @ 103
1810	18.20		7.0	6.83	23.7	1.05	-0.9	9.76	21	Pump @ 121
1815	18.20		8.4	6.81	25.9	1.06	4.2	8.91	48	" 144
1820	18.34		9.8	6.80	23.9	1.06	1.3	4.20	35	Pump @ 158
1825	18.36		11.2	6.82	22.1	1.06	1.2	2.06	9	" 100
1830	18.37		12.6	6.82	20.7	1.06	-0.8	1.41	2	
1835	18.36		14	6.81	20.4	1.06	-1.1	1.72	1	
1840	18.38		15.4	6.81	20.2	1.06	-1.0	1.25	0	
1845	18.39		16.8	6.81	20.2	1.06	-1.0	1.24	0	
1850	18.38		18.2	6.81	20.2	1.06	-1.1	1.26	0	
			Vigil							
	1855	Sampled								

Observations

Color: Clear Other (describe): grayish at start cleared in 5 min

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

Sample Parameters: VOCs, metals

Notes:

Signed/Sampler(s): Lynn Morgan Mike Rodtung

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: LF04-10	Site: NAS Fort Worth JRB
Sampler(s): KLL, JEW	Project No.: APC001-07GAA
Well Depth: 47.26	Date: 7-14-97 / Time: 9:50-11:30
DTW (ft): 31.37 / DTP: NA	Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand
Screen Interval (ft): 39-49	
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): Sun/clear 88° [redacted]
Type of Pump: Grundfos 2" submersible	

1.8 l/m

Field Parameters

Time 10:05	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
10:50	31.37		2.5	6.7	20.8	.940	23.3	10.41	562	Brownish —
10:10	31.37		6.0	6.72	21.1	.940	23.9	9.80	192	↓
10:15	31.38		10.0	6.75	21.3	.930	13.6	9.77	160	↓
10:20	31.39		12.5	6.75	21.3	.930	16.7	9.35	123	↓
10:25	31.39		15.0	6.76	21.4	.930	12.7	9.1	69	L. Brownish
10:30	31.39		17.5	6.77	21.3	.930	12.9	8.77	27	↓
10:35	31.39		20	6.78	21.4	930	13.4	8.40	15	clearer
10:40	31.40		22	6.78	21.4	930	16.6	8.33	9	↓
10:45	31.40		25	6.79	21.5	930	13.6	8.06	2	clear/clearer
10:50	31.40		32	6.80	21.4	930	12.9	7.97	2	clear

Observations

Color: Clear Other (describe): Brownish color - fairly turbid. to clear @ sample.

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

Sample Parameters: VOC (SW8260A)

Notes: Gallons Purged
Approx 1.8 Liters per min. NOTE Landscape Crew applying Pesticide?
Samples Collected @ 10:55
QA - Equipment (EB-071497) Decon Samples 11:15

Signed/Sampler(s):

GROUNDWATER FIELD SAMPLING DATA SHEET

408 94

Well No.: LF05-56	Site: NAS Fort Worth JRB
Sampler(s): JM, KLK, JEW	Project No.: APC001-07GAA
Well Depth: 30.23	Date: 7/14/97 Time: 11:30-13:30
DTW (ft): 20.36 DTP: NA	Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand
Screen Interval (ft): 15.25-26	
Well Diameter (in): 2	Sampling Method (G=grab, B=bailer, SP=submersible pump):
Placement of Pump (ft):	Weather (sun/clear, overcast/rain, wind direction, ambient temperature): 90°F / EAST [redacted]
Type of Pump: Grundfos 2" submersible	

1.84m.

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
1200	20.69		3.5	6.74	21.1	1216	5.1	7.73	114	Clear
1205	20.75		5.5	6.74	21.6	1220	5.3	10.46	47	|
1210	20.73		8.0	6.75	21.4	1270	6.6	10.15	9	|
1215	20.75		10.0	6.75	21.7	1270	5.6	9.69	4	|
1220	—		13.0	6.75	21.8	1270	5.9	8.75	2	WELL Surg
1225	—		15.0	6.75	21.6	1250	5.5	9.10	45	—
1235	20.89		20	6.77	21.2	1290	5.4	8.7	25	Cloudy
1240	20.85		23	6.77	21.0	1300	5.7	9.05	6	Clear
1245	20.74		28	6.77	21.3	1276	5.6	9.09	4	WELL Surg
1255	20.73		32	6.77	21.5	1290	5.9	9	4	Clear

Observations

Color: Clear Other (describe):

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

Sample Parameters: •

Notes: Approx - 1.84m, 12:20 Surge (1.74m) 12:30 (2.0) Cloudy
1300 - 3 Samples. (8026 OA)

Signed/Sampler(s):

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: ST-14-24	Site: NAS Fort Worth JRB
ampler(s): JM, KLK, JEW	Project No.: APC001-07GAA
Well Depth: 17	Date: 7-14-97 Time: 16:45 - 1835
DTW (ft): 11.09 DTP: NA	Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand
Screen Interval (ft): 7-16.5	
Well Diameter (in): 2	Sampling Method (G=grab, B=bailer, SP=submersible pump):
Placement of Pump (ft):	Weather (sun/clear, overcast/rain, wind direction, ambient temperature): Sun/clear 99°+ [redacted]
Type of Pump: Grundfos 2" submersible	

Field Parameters

Time	Depth to Water (ft)	Flow Rate (gpm) 2 l/m	Total Volume (gal)	pH	Temp. (C)	Cond. (umhos/cm)	ORP	D.O. (mg/L)	Turb. (N.T.U.)	Description
17:08	11.73		2.5	6.89	24.7	620	10.5	8.44	412	Cloudy-Brown
1713	11.55		5.5	6.86	25.1	626	8.1	8.01	26	" "
1720	11.79		8.0	6.86	25.2	625	7.1	8.06	12	Clear
1725	11.75		10.	6.87	25.0	630	2.3	8.06	12	
1730	11.87		15	6.87	25.0	625	2.1	8.06	9	
1735	11.89		17	6.87	24.8	622	4.0	8:25	7	
1740	11.89		20.2	6.87	24.7	625	2.5	8:14	5	
1745	11.9		23	6.86	24.5	626	2.5	8:30	4	
1750	12.0		30.5	6.87	24.5	627	4.5	8:51	5	
				~~6.87~~						

Observations

Color: Clear Other (describe): Sample Clear

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

Sample Parameters: Ferrous iron - 0.7 mg/L ST-14-① (no color)

Notes: Flow Rate 2 l/m
1755 obtained samples VOCs, metals

Signed/Sampler(s):

GROUNDWATER FIELD SAMPLING DATA SHEET

408 96

Well No.: ST-14-14	Site: NAS Fort Worth JRB
Sampler(s): KLK, JEW, J	Project No.: APC001-07GAA
Well Depth: 21.66	Date: 7/15/97 Time: 7:15-9:45
DTW (ft): 6.90 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): 12.5	Weather (sun/clear, overcast/rain, wind direction, ambient temperature): 83° [redacted]
Type of Pump: Grundfos 2" submersible	

1.84 m.

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
8:55	6.90		3.5	6.92	23.5	557	-6.0	5.37	329	[redacted] clear
8:00	6.68		6.0	6.94	24.0	554	-4.0	5.28	26	
9:05	6.64		8.5	6.94	24.4	554	-3.6	5.15	~~>10.0~~	CALIBRATED = 0
9:10	6.58		12.0	6.94	24.45	556	-4.0	5.26	0	
9:15	6.75		18.0	6.94	24.4	557	-3.6	5.24	0	

Observations

Color: Clear Other (describe):

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

Sample Parameters:

Notes: Approx - 1.8 L/m. @ 8:55

*9:15 Samples (VOC, METALS, ALK, ANION, TOC, METHANE)

9:25 - 9:40 Equip Check, Decon

11:26 Iron Test (Color Change) 0.82 mg/L.

Signed/Sampler(s):

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: ST-14-02W601	Site: NAS Fort Worth JRB
Sampler(s): KLK, JEW, JM	Project No.: APC001-07GAA
Well Depth: 17.1	Date: 7/15/97 Time: 9:50-11:10
DTW (ft): 11.71 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): 13½	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Type of Pump: Grundfos 2" submersible	Sun/clear 87° [redacted]

1.84/m.

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
10:30	11.76		2.5	6.90	22.3	734	1.0	12.9	87	Clear
10:35	11.77		5.5	6.89	21.9	733	-.5	13.67	2	
10:40	11.72		12.5	6.89	21.8	733	2.0	13.30	0	
10:45	11.76		15.0	6.89	21.9	731	1.2	12.55	0	Pump cut off
10:50	11.76		25	6.9	21.9	730	1.3	11.92	0	

Observations

Color: (Clear) Other (describe): petroleum

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

Sample Parameters: SAMPLED @ 10:55 (VOC, — METALS)

Notes: 10:28 - AT 1.84m.

10:11 - BACK TO OFFICE GET TUBE (intake)
10:26

11:32 ~~10:55~~ Iron Sample = (color) 3.3mg/L. (dilute/re-run = 1/1 ratio 0.30 mL)

Signed/Sampler(s):

GROUNDWATER FIELD SAMPLING DATA SHEET

408 98

Well No.: ST-14-W16601	Site: NAS Fort Worth JRB
Sampler(s): KLK, JM, JED	Project No.: APC001-07GAA
Well Depth: –	Date: 7/15/97 Time: 13:10 – 14:48
DTW (ft): 7.57 DTP:	Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand
Screen Interval (ft): 7.19-18.85	
Well Diameter (in): 2	Sampling Method (G=grab, B=bailer, SP=submersible pump):
Placement of Pump (ft): 13.04	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Type of Pump: Grundfos 2" submersible	Sun/Clear 90°F [redacted]

1.64m.

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
1325	7.72		3.5	6.88	23.6	701	2.5	11.59	Ø	Clear
1330	7.70		6.0	6.91	23.6	695	-3.4	11.88	Ø	
1335	7.68		10.5	6.92	24.2	691	4.8	11.69	Ø	
1340	7.68		12	6.91	24.5	692	0.8	11.43	Ø	
1345	7.68		15	6.91	24.6	692	-1.9	11.37	Ø	
1350	7.66		17.5	6.91	24.7	692	-0.3	11.39	Ø	
1355	7.67		18	6.91	24.8	692	9.6	11.36	Ø	
[illegible]	7.66		20	6.91	24.9	690	5.9	11.16	Ø	
1405	7.65		22	6.91	25.0	689	7.9	11.11	Ø	
1410	7.65		23	6.91	25.1	687	4.1	10.93	Ø	
1415	7.66		25	6.91	25.0	686	3.7	10.94	Ø	

Observations

Color: Clear Other (describe):

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

Sample Parameters:

Notes:

*Flow Rate = 1.6 L/m @ 13:35

ORP - Jumping around -

Iron Reading - 1725 (Color) Dilute 1/1 – 6.50 mL.

Signed/Sampler(s):

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: ST14-W18W601	Site: NAS Fort Worth JRB
mpler(s): KLL, JEW, JM	Project No.: APC001-07GAA
Well Depth: 20'	Date: 7/15/97 Time: 1500 – 1700
DTW (ft): 9.63 DTP:	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): SP
Placement of Pump (ft): 10.03	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Type of Pump: Grundfos 2" submersible	Sun/clear 67° -EAST

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

Observations

Color: Clear Other (describe):

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

Sample Parameters:

Notes: 1520 1530 Pump not working, IF no work on 3rd AM. Purge then Sample

1535 H2O Depth – 9.35 INT – PUMP → 10.1 H2O Drop – 15.52-56 Remove

H2O (3.594C)

Iron – (color) 1735 Over / need to dilute. 6.40 → 1.23mL (3d/s.

Signed/Sampler(s):

GROUNDWATER FIELD SAMPLING DATA SHEET 408 100

Well No.: GM122-02M	Site: NAS Fort Worth JRB
Sampler(s): Lynn Morgan M. Ice Roditang	Project No.: APC001-07GAA
Well Depth: 27.77	Date: 7/15/97 Time: 0840
DTW (ft): 9.07 DTP: NA	Courier Air Bill No.: 5739019346 FedEx ____ UPS ____ Other ____ Hand
Screen Interval (ft): 15-30	
Well Diameter (in): 2"	Sampling Method (G=grab, B=bailer, SP=submersible pump): SP
Placement of Pump (ft): 21.0'	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Type of Pump: Grundfos 2" submersible	Sun, NNE, 90° [redacted]

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
0847	9.12									
0852	10.35	1L/min		7.02	20.9	0.407	-15.0	3.50	10	
0857	9.55			7.07	21.5	0.412	-13.0	3.31	10	Pump at 80Hz
0902	9.41			7.08	21.6	0.412	-12.7	3.57	10	
0907	9.43			7.08	21.7	0.413	-8.3	3.50	10	
0912	9.42		7 gals	7.08	21.9	0.419	-12.2	9.20	10	
0917	9.40			7.08	22.0	0.419	-11.8	9.22	10	
0922	9.39			7.08	22.1	0.418	-11.2	9.28	10	
			10 gals							

Observations

Color: Clear Other (describe):

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

Sample Parameters: VOCs - SW8260A, Anions SW9056, Alkalinity E310.1, Methane RSK
TOC SW9060, Ferrous 14th Ed

Notes: 0930 - Sampled
0935 - " MS Fe^{2+} 0.02 mg
0940 " MSD
0950 - " Non-Volatiles for req. MS & MSD

Signed/Sampler(s): [signature]

408 101

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: SPOT 35-5	Site: NAS Fort Worth JRB
Sampler(s): lynn morgan / mike rodtang	Project No.: APC001-07GAA
Well Depth: 27.53	Date: 7/15/97 Time: 11:10
DTW (ft): 21.35 DTP: NA	Courier Air Bill No.: 513901936 FedEx ____ UPS ____ Other ____ Hand
Screen Interval (ft): 16.6-26.6	
Well Diameter (in): Ø 4"	Sampling Method (G=grab, B=bailer, SP=submersible pump):
Placement of Pump (ft): 23	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Type of Pump: Grundfos 2" submersible	Sun, NNE, 100° [redacted]

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
1115	21.35									
1120	25.22			6.52	25.5	1.46	4.1	0.80	335	1.9 Hz
1125	26.10			6.55	24.8	1.50	8.0	0.42	271	
1130	26.47			6.55	26.1	1.48		0.68	81	1.3 Hz
1135	26.40			no readings - not enough flow -						
1137	26.31									
1142	26.12									
1149	25.9									
~~1150~~	~~25~~									
	1155 - Sampled									

Observations

Color: (Clear) Other (describe):

Odor: None Low Medium (High) Very strong H2S (Fuel-like) or possibly TCE - mike (Lynn)

Sample Parameters: Fe^{2+} 0.17 mm

Notes: 1135 - Turned off pump as to not suck well dry. Waiting for recharge - then sample.

Signed/Sampler(s): Lynn Morgan

GROUNDWATER FIELD SAMPLING DATA SHEET

408 102

Well No.: LF-05-19A	Site: NAS Fort Worth JRB
Sampler(s): Lynn Morgan / Mike Rodtag	Project No.: APC001-07GAA
Well Depth: 19.24	Date: 7/15/97 Time: 1315
DTW (ft): 13.35 DTP: NA	Courier Air Bill No.: 5739019361 FedEx ____ UPS ____ Other ____ Hand
Screen Interval (ft): 10.25-20.25	
Well Diameter (in): 2"	Sampling Method (G=grab, B=bailer, SP=submersible pump):
Placement of Pump (ft): 15.2'	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Type of Pump: Grundfos 2" submersible	Sunny, SSE 0.2 mph, 110° [redacted]

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
1315	13.35			6.67	25.1	1.09	1.9	2.70	556	
1320	13.35			6.66	25.2	0.768	-1.8	2.70	93	
1325	13.35			6.66	25.5	0.773	3.0	2.43	84	
1330	13.36			6.66	25.8	0.777	-5.2	2.48	34	
1335	13.35			6.65	25.9	0.776	-2.1	2.51	18	
1340	13.35			6.65	25.9	0.777	-1.5	2.69	5	
1345	13.35		7 gals	6.65	26.0	0.776	-1.8	2.55	6	
1350	13.35		7	6.65	26.1	0.779	[illegible]	2.64	3	
1355	13.35			6.65	26.5	0.774	[illegible]	2.57	4	

Observations

Color: (Clear) Other (describe):

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

Sample Parameters: VOCs, methane, Alk, Anions

Notes:

Signed/Sampler(s): [illegible]

408 103

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: SPOT-35 4W	Site: NAS Fort Worth JRB
Sampler(s): Luan Morgan M. Richardson	Project No.: APC001-07GAA
Well Depth: 24.45'	Date: 7/15/97 Time: 1609
DTW (ft): 19.9 DTP: NA	Courier Air Bill No.: 8573401936 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	Sun. NE 10mph, 100° [redacted]

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
1609	19.4	not enough		H2O	for	analysis				pump off
1610	19.8						1.6			[illegible]
1621	20.8			6.71	27.3	1.29	1.6	0.71	575	
1626	19.8			6.70	27.6	1.28	-2.1	0.77	262	
1631	20.0			6.71	27.9	1.30	-3.4	0.69	269	
1636	20.4			6.70	27.8	1.31	-2.9	1.78	239	
1642	21.0			not enough						
1647	DRY									
1654	DRY									
1656	21.55									
1658	21.2									

Observations

Color: Clear Other (describe): Turbid - brownish yellow (indicative of [illegible])

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

Sample Parameters:

Notes: 1654 - Well went dry for 2nd time - waiting to recharge then sample

Signed/Sampler(s):

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: ST4-W21	Site: NAS Fort Worth JRB
Sampler(s): KLK, JM	Project No.: APC001-07GAA
Well Depth: 18'	Date: 7/16/97 Time: 8:40 - 9:55
DTW (ft): 12 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):
Placement of Pump (ft): 13.5	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Type of Pump: Grundfos 2" submersible	Sun/clear 82° WD -

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
	Purged	WELL	—		From	12'	—	9'		Samples
	@	9:20 AM	ob							

Observations

Color: Clear Other (describe): Light Brownish

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

Sample Parameters:

Notes: 8:52 Pump Dry — 5 min MAX, DEPTH @ 12' — 11.9', 10 min 10.6 (original DTW = 9.8 on 7/14/97).
9:55 Leave
Ferris Iron — (Orange) DILUTED [redacted] 2.38

Signed/Sampler(s):

408 105

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: ST14-W28601	Site: NAS Fort Worth JRB
Sampler(s): KLK	Project No.: APC001-07GAA
Well Depth: ~~[illegible]~~ 17.08	Date: 7/16/97 Time: 10:30 – 11:30
DTW (ft): 11.55 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): 13.5 - 17	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Type of Pump: Grundfos 2" submersible	[redacted]

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
10:55 Try to pull up pump probe to conduct sampling of H2O. Pump probe stuck.										
11:06 Get Mike see how to retrieve.										
11:24 Mike @ site - we pulled and pump is stuck in well - Sandy Cobbs										
1435 — Trying to fish out pump.										
1442 - Depth to H2O 11.55										
1605 Added 1-gal Deionized										
Hooked twice, one hook broke.										
1615 - Richard										
1639										

Observations

Color: Clear Other (describe): Brownish

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

Sample Parameters:

Notes: 2nd Level - reading for H2O 11.8 below from Pump - Purge. Pump Dry - Let recharge then sample. Pump probe stuck @ bottom of well.

Signed/Sampler(s):

GROUNDWATER FIELD SAMPLING DATA SHEET

408 106

Well No.: SPOT 35-2	Site: NAS Fort Worth JRB
Sampler(s): Lynn Morgan, Mike Rodtang	Project No.: APC001-07GAA
Well Depth: 26.28	Date: 7/16/97 Time: 1032
DTW (ft): 20.9 DTP: 0	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): 22', 25	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Type of Pump: Grundfos 2" submersible	Sun, NE, 92° [redacted]

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
1032	20.78									
1039	23.28						18.7			not enough H_2O for sa
1044	23.6			6.51	26.4	1.81	12.0	0.95	542	lower pump to
1049	23.6			6.54	26.9	1.83	15.1	1.19	389	pump
1054	23.49			6.54	27.6	1.85	9.8	0.75	252	pump @ 117
1059	24.3			6.55	27.5	1.88	2.1	0.90	330	
1104	24.76			6.59	28.2	1.91	*	0.43	191	
109	24.90			6.59	29.0	1.90	*	0.46	180	turned to 160 to see
114	24.64			6.59	29.4	1.89	*	0.49	164	ft
1119	25.45			6.60	29.4	1.89	*	0.61	231	
1143	24.67									
1147	24.47									
1154	24.15									
1205	23.9									
		2 gals total								
		Sampled @ 1215								

Observations

Color: (Clear) Other (describe): Ferrous IRON ~~3502~~

Odor: None Low Medium (High) Very strong H2S (Fuel-like) Dilution 1:1 2.8 mg/L

Sample Parameters:

Notes: sheen

*-ORP meter got too hot - would not run.

At 1117 - pump stopped - cranked it - something was blocking it -

1119 - Well almost dry - recharge cannot keep up w/pump - Turn off & wait for recharge to sample

Signed/Sampler(s): Lynn Morgan

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: G:Y11-22-04MWG01	Site: NAS Fort Worth JRB
Sampler(s): Lynn Morgan / Mike Radtang	Project No.: APC001-07GAA
Well Depth: 25.58	Date: 7/16/97 Time:
DTW (ft): 19.21 DTP: NA	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): SP
Placement of Pump (ft): ~~22~~ ~~20.10~~ 21'	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Type of Pump: Grundfos 2" submersible	Sun, NW 0-1mph, 106° [redacted]

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
1500	19.08									Pump @ 106 Hz
1502	20.33									Pump @ 105H
1504	20.00	.91pm		6.89	26.5	1.06	-12.3	1.10	232	Pump @ 100
1509	19.36			6.87	26.2	1.06	-7.3	0.60	70	
1514	19.36			6.87	26.3	1.07	-4.8	0.39	40	
1519	19.36		5gals	6.87	26.6	1.08	-4.6	0.55	11	
1524	19.37			6.87	26.6	1.09	-4.9	9.48	4	
529	19.36			6.87	26.8	1.09	-4.6	1.23	2	
1534	19.36			6.87	26.8	1.09	-4.3	9.64	2	
1539	19.33			6.87	26.9	1.09	-4.9	0.86	1	
1544	19.18			6.87	27.5	1.10	-4.5 ~~-3.9~~	0.88	0	
1549	19.18			6.87	27.9	1.09	-4.3	0.82	1	
			13 total							

Observations

Color: Clear Other (describe):

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

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

Notes:

Signed/Sampler(s):

Paul Hale

GROUNDWATER FIELD SAMPLING DATA SHEET

408 108

Well No.: ST-14-W29601	Site: NAS Fort Worth JRB
Sampler(s): KLK, LM	Project No.: APC001-07GAA
Well Depth: 16'	Date: 7/17/97 Time: 8:05 - 11:20
DTW (ft): 9.30 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): 11'	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Type of Pump: Grundfos 2" submersible	82° wind dir -

1.84 L/m

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
8:48	10.18		2.0	6.71	24.3	107	6.5	.52	799	
8:56	10.64			6.72	25.7	737	8.4	.51	999	
9:00	11.44			6.70	25.3	737		1.53	986	
9:06	11.59	—							9	
9:11	11.74	—	4.0	no water - Decon (re-pump)						
9:14	10.09	—								
9:17	9:44	—								
9:31	10.5	—	↓	6.74	26.2	708	8.3	0.42	999	
9:40	10.15		13.0	6.74	28.3	705	8.3	0.66	904	
9:43	10.31		—	6.73	27.5	709	7.9	0.48	500	
9:50	10.41		17.0	6.72	26.9	714	8.2	0.43	183	
9:55	10.48		18.5	6.72	26.4	714	8.5	0.64	68	
10:00	10.6		20.0	6.72	26.2	719	7.2	1.63	35	
10:05	10.57		22.0	6.73	26.5	717	7.8	1.30	30	
10:10	10.58		32.0	6.73	26.8	712	7.1	1.55	23	
10:15	10.50		33.0	6.74	26.9	710	6.9	0.50	18	
10:20	10.48			6.74	27.0	709	7.1	0.83	18	
10:25	10.37		—	6.73	27.4	705	7.3	0.69	25	

Observations

Color: Clear Other (describe): Black tint

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

Sample Parameters: BTEX, Anions, Alkalinity, Methane, TOC - Sampled @ 10:55

Notes: 9:36 9:32 @ 8:30, 10.39 @ 8:45, 10.18 8:48, @ 8:52 = 10.14

Flow rate 1.8 L/m. At 8:56 Pump was blocked, ~~attempt~~ to increase pump flow, 9:10 Pump blocked - increased flow.

Decon - Pump, re-dev: 9:00 - 9:30. Hydrogeologic - 2m

Signed/Sampler(s): ST14-29601 FC 14 3:30 Diluted 0.6 mg/L

Sampled

408 109

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: ST-14-04	Site: NAS Fort Worth JRB
Sampler(s): KCK,	Project No.: APC001-07GAA
Well Depth: 16.5 (8.88)	Date: 7/17/97 Time: 11:40 — 1330
DTW (ft): 12.22 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): 11'	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Type of Pump: Grundfos 2" submersible	Sun/clear - EAST

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
11:55	12.23		2.0	6.91	25.8	620	*	89	504	
11:00	12.21		2.0	6.94	27.2	624	*	1.57	153	
12:05	12.22		↓	6.93	28.0	627	*	1.50	94	
12:10	12.25		↓	6.95	25.3	631	*	0.41	494	
12:15	12.21		3.0	6.96	26.2	627	4.5	9.07	242	Surge —
12:20	12.22		5.5	6.94	26.9	625	5.6	9.24	172	
12:25	12.23		6.0	6.94	26.7	607	8.7	8.45	187	
30	12.22		↓	6.94	26.7	620	7.4	8.20	77	
12:35	12.21		10.0	6.94	27.0	628	4.8	9.90	37	
12:40	12.24		—	6.93	28.5	624	6.9	0.85	37	Surge - sand
12:45	12.25		13.0	6.94	27.5	630	7.0	.22	147	
12:50	12.21		15.0	6.94	27.5	625	7.9	.76	81	
12:55	12.23		↓	6.93	28.3	630	8.7	8.30	138	
1300	12.22		15.0	6.94	29.0	627	8.8	8.22	125	
				1315	Sampled					

Observations

Color: Clear Other (describe):

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

Sample Parameters:

Notes: 11:48 WD= 12.22, 11:52 12.21 Fe^{2+} 3.30 mg/L diluted 3.30 · 50

FR= 1.74 m @ 11:55 Dupl. 3.30 mg/L diluted 3.30 · 50

* ORP can't read monitor to hot.

1315 Sampled (one Dup) ✓

Signed/Sampler(s):

GROUNDWATER FIELD SAMPLING DATA SHEET

408 110

Well No.: WELL 17MG01	Site: NAS Fort Worth JRB
Sampler(s): KLK,	Project No.: APC001-07GAA
Well Depth:	Date: 7/17/97 Time: 16:00 - 16:15
DTW (ft): 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):
Placement of Pump (ft):	Weather (sun/clear, overcast/rain, wind direction, ambient temperature): 93° wind dir EAS
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

Observations

Color: Clear Other (describe):

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

Sample Parameters:

Notes: NOT able to reach +1 tubing, Left 16:15

Signed/Sampler(s):

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: 6MI-22-06MW601	Site: NAS Fort Worth JRB
Sampler(s): KLL, LM	Project No.: APC001-07GAA
Well Depth: 26.58	Date: 7/17/97 Time: 16:46 – 1855
DTW (ft): 17.84 DTP:	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): 20'	Weather (sun/clear, overcast/rain, wind direction, ambient temperature): 92° EAST WIND [redacted]
Type of Pump: Grundfos 2" submersible	

1.74/m

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
1710	18.16		3.0	6.99	24.4	1.180	4.6	1.68	795	Pump 1.62 Hz
1715	18.15		5.0	7.02	23.7	1.190	1.6	0.95	534	
1720	18.12		10.0	7.00	23.3	1.210	-0.3	0.61	221	
1725	17.92		15.0	7.00	23.6	1.210	0.5	0.47	213	
1730	18.12		20.0	6.99	24.2	1.210	0.8	0.38	176	
1735	17.98		—	6.99	24.5	1.220	0.3	2.33	155	
1740	17.98		25.0	6.99	24.7	1.210	0.6	1.30	132	
745	17.98		—	6.99	24.7	1.220	0.9	1.15	112	
1750	17.93		30.0	6.99	24.8	1.230	0.9	0.54	75	
1755	17.94		39.5	6.99	25.0	1.224		0.34	187	

• 3-5 Well volumes removed
• Equipment sampler

Sampled @ 1805

Observations

Color: (Clear) Other (describe):

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

Sample Parameters: (VOCs, Alkalinity → ~~[illegible]~~ — Richard Salness @ site

Notes: FIR – 1.74 mL.
17.83 17:01, 18.4 – 17:05, 18.15 @ 1707 (final)
1805 – obtain sample

Signed/Sampler(s):

GROUNDWATER FIELD SAMPLING DATA SHEET

408 112

Well No.: LSA 1628 - 3W601	Site: NAS Fort Worth JRB
Sampler(s): LAM JAM	Project No.: APC001-07GAA
Well Depth: 17.88	Date: 7-18-97 Time: 8:00 AM
DTW (ft): 9.22 DTP: NA	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): SP
Placement of Pump (ft): 11.5	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
8:05	9.32	2 gpm	2.0	6.79	23.8	0.99	0.7	9.45	43	Clear
8:10	9.31		3.5	6.78	24.5	1.25	0.9	9.11	26	pump at 7.85 Hz
8:15	9.31		5.0	6.78	24.5	1.26	1.5	9.09	15	
8:20	9.31		6.5	6.79	24.6	1.25	1.9	8.84	7	
8:25	9.31		7.5	6.79	24.6	1.25	2.1	8.94	4	
8:30	9.31		9.0	6.80	24.6	1.24	2.1	2.40	4	
8:35	9.31		10.5	6.80	24.7	1.24	2.3	.56	3	
8:40	9.31		12.0	6.80	24.7	1.24	2.5	.47	3	
8:45	9.31		13.5	6.81	24.8	1.24	2.6	.39	3	

Observations

Color: Clear Other (describe):

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

Sample Parameters:

Notes: Water clear all the way through - No problems

Signed/Sampler(s): JAM/LAM

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: MW 17 MW601	Site: NAS Fort Worth JRB
Sampler(s): Lynn M. Jack M	Project No.: APC001-07GAA
Well Depth: 16.06	Date: 7/18/97 Time: 11:25 am
DTW (ft): 9.31 DTP:	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): SP
Placement of Pump (ft): 11.5	Weather (sun/clear, overcast/rain, wind direction, ambient temperature): [redacted]
Type of Pump: Grundfos 2" submersible	

Field Parameters

2 L/m.

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
1125	9.87	2L/m	1.50	6.91	24.8	.597	*	9.51	632	
11:30	9.64		2.0	6.89	25.5	.622	*	1.48	299	
11:35	9.55		3.0	6.88	26.5	.626	*	.88	138	
11:40	9.46		3.5	6.87	27.3	.635	*	.64	~~18~~ 65	
11:45	9.40		4.0	6.86	28.0	.634	6.2	1.04	65	
11:50	9.70		5.0	6.87	27.9	.611	5.6	8.16	140	
11:55	9.72		6.0	6.88	26.4	.620	6.2	8.71	55	
12:00	9.72		7.0	6.88	25.5	.624	4.25	8.96	42	
12:05	9.71		8.0	6.88	25.7	.624	*	8.83	40	
12:10	9.72		9.0	6.88	25.4	.625	4.5	8.81	32	
12:15	9.72		10	6.88	25.3	.624	4.2	8.86	29	

Observations

Color: Clear Other (describe): Slightly Cloudy, greyish

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

Sample Parameters:

Notes: ≤ .01 Free Product

Temperature increase may be do 12 Ft' of tubing outside of well

* Meter overheated - Black Screen

Signed/Sampler(s): [signature]

GROUNDWATER FIELD SAMPLING DATA SHEET

408 114

Well No.: GMI-22-07MW601	Site: NAS Fort Worth JRB
Sampler(s): [illegible]	Project No.: APC001-07GAA
Well Depth: 23.28	Date: 7-18-97 / Time: 9:20 AM
DTW (ft): 15.20 / DTP:	Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand
Screen Interval (ft): 10 - 20.5	
Well Diameter (in): 2"	Sampling Method (G=grab, B=bailer, SP=submersible pump): SP
Placement of Pump (ft): 17 then 19	Weather (sun/clear, overcast/rain, wind direction, ambient temperature): 90°F [redacted]
Type of Pump: Grundfos 2" submersible	

1.94m

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
0940	20.56		4gals	6.90	26.4	0.729	6.3	2.97	999	
0945	18.40		4.5	6.94	26.8	0.625	3.1	3.38	999	
0950	18.35		5.0	6.90	26.2	0.624	4.1	3.53	787	
0955	18.06		5.5	6.87	25.9	0.622	4.1	3.19	422	
1000	17.96		6.0	6.86	26.1	0.618	6.4	8.56	290	
1005	18.03		6.5	6.85	26.0	0.617	6.6	3.08	220	
1010	18.01		7.0	6.86	25.9	0.616	5.8	3.04	160	
1015	18.02		7.5	6.84	26.0	0.616	5.9	2.89	90	
1020	17.89		8.5	6.83	25.8	0.617	6.0	3.10	58	
1025	17.88		9.0	6.83	26.0	0.617	6.4	3.30	42	
1030	17.88		9.5	6.82	26.2	0.613	7.2	2.56	37	
1035	17.87		10.0	6.82	26.2	0.601	7.3	2.53	27	
1040	17.88		10.5	6.82	26.1	0.611		2.63	21	
1045	17.88		11.0	6.82	26.2	0.611		2.57	10	

Observations

Color: Clear Other (describe): very turbid, sandy, orange

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

Sample Parameters: VOCs, Methane, TOC, Alk, Anions, Iro

Notes:

Signed/Sampler(s): [illegible]

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: BS-AWG-01	Site: NAS Fort Worth JRB
Sampler(s): M. Rodtong, E. Dambaugh	Project No.: APC001-07GAA
Well Depth: 11	Date: 7/20/97 Time: 3:00 pm
DTW (ft): 4.75 DTP: N/A	Courier Air Bill No.: 5731019435 FedEx ____ UPS ____ Other ____ Hand
Screen Interval (ft): 5-10	
Well Diameter (in): 2"	Sampling Method (G=grab, B=bailer, SP=submersible pump): SP
Placement of Pump (ft): 7.5	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Type of Pump: Grundfos 2" submersible	sun/clear 108°F in Sun. [redacted]

Field Parameters

Time	Depth to Water (ft)	Flow Rate ~~(gpm)~~ liter	Total Volume (gal)	pH	Temp. (C)	Cond. (umhos/cm)	ORP	D.O. (mg/L)	Turb. (N.T.U.)	Description
3:10 pm	4.95	1.5		6.77	29.8	0.715	7.4	~~2.482~~	98	66 hertz
3:15 pm	4.94	1.5		6.76	30.2	0.720	6.4	0.87	15	
3:20 pm	4.93	1.5		6.76	30.7	0.729	5.0	8.44	8	
3:25 pm	4.94			6.75	30.3	0.736	5.0	8.46	4	
3:30 pm	4.94			6.75	30.3	0.743	5.0	8.36	2	
3:35 pm	4.94			6.75	29.9	0.743	4.9	8.23	2	
3:40 pm	4.94			6.75	30.4	0.743	6.4	8.17	2	
45 pm	4.93			6.75	30.4	0.748	5.4	8.35	0	
3:50 pm	4.94			6.75	30.3	0.750	5.0	8.36	0	
3:55	4.93			6.75	30.3	0.751	4.7	8.35	0	
4:00	4.93			6.75	30.2	0.752	4.8	8.31	0	

Observations

Color: Clear Other (describe):

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

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

Notes: Time of Sample will not correspond. Labels pre-made @ 15:45

Purged 13 gallons total

Fe^{2+} 0.02 mg/L

Signed/Sampler(s):

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: MW 1	Site: NAS Fort Worth JRB
Sampler(s): E. Dambaugh, M. Rodtang	Project No.: APC001-07GAA
Well Depth: 48.6 ft (measured 18.9 ft)	Date: 7/21/97 Time:
DTW (ft): 7.90 ft DTP: N/A	Courier Air Bill No.: 5739014425 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):	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Type of Pump: Grundfos 2" submersible	95° [redacted]

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
10:15	8.07			6.68	24.0	0.896	7.1	0.67	424	77 hz
10:20	7.96			6.68	23.9	0.896	6.4	0.49	170	
10:25	8.10			6.67	23.7	0.904	7.0	0.53	120	
10:30	8.11			6.68	23.6	0.909	5.5	0.25	70	
10:35	8.05			6.68	23.6	0.893	6.8	0.39	56	
10:40	7.96			6.69	23.8	0.894	6.1	0.70	40	
10:45	7.96			6.66	24.2	0.900	6.1	0.44	57	
10:50	8.04			6.67	23.7	0.900	6.0	0.19	50	
10:55	8.05			6.68	23.7	0.897	6.6	0.16	49	
11:00	8.05		19.0	6.68	23.7	0.890	6.4	0.14	47	
[redacted]	[redacted]							[redacted]		

Observations

Color: Clear Other (describe): whitish-cloudy

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

Sample Parameters: BTEX, Methane, TOC, Anions, Alkalinity, Fe^{2+} + a EB for same Parameters

Notes: Slight sheen in water around well casing. Fe^{2+} Results 1.49 mg/l 4:1 dilution

Depth of well measured to be 18.90 ft Sample 1110

So pump set at 13.9 ft. Fe^{2+} Equipment Blank 0.0 mg/l no dilution

Some grout returned on probe when checking depth.

Signed/Sampler(s): Small bugs on depth probe were returned

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: MW-10	Site: NAS Fort Worth JRB
Sampler(s): E. Danbrugh M. Rodtang	Project No.: APC001-07GAA
Well Depth: 32 ft	Date: 7/21/97 Time: 13:45PM
DTW (ft): 11.29 DTP: Ø	Courier Air Bill No.: 5739019425 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 ft	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Type of Pump: Grundfos 2" submersible	100 [redacted] 111

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
13:45	11.50			6.73	23.6	1.12	4.7	[redacted]	[redacted] 150	
13:50	11.47			6.73	22.9	1.12	5.7	0.51	89	
13:55	11.45			6.72	23.4	1.13	5.5	0.40	54	
14:00	11.46			6.71	22.9	1.14	8.5	0.42	25	
14:05	11.45			6.70	23.0	1.14	8.2	0.39	19	
1410	11.47			6.70	23.0	1.14	8.2	0.35	7	
14:05	11.50			6.70	22.9	1.15	8.2	0.17	3	
1420	11.50			6.70	23.0	1.15	7.8	0.17	2	
1425	11.49		15.0	6.70	23.0	1.14	7.6	0.20	2	

Observations

Color: Clear Other (describe):

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

Sample Parameters: VOC, Metals

Notes: 15 gals DW

Signed/Sampler(s):

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: MW-11	Site: NAS Fort Worth JRB
Sampler(s): E. Dambaugh, M. Rodriguez	Project No.: APC001-07GAA
Well Depth: 32.43 ft	Date: 7/21/97 Time: 15:05 Sheet 1 of 2
DTW (ft): 22.82 DTP:	Courier Air Bill No.: 5739019425 FedEx ____ UPS ____ Other ____ Hand
Screen Interval (ft): 12.2-32.2	
Well Diameter (in): 4"	Sampling Method (G=grab, B=bailer, SP=submersible pump):
Placement of Pump (ft): 22.2 ft	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Type of Pump: Grundfos 2" submersible	110° [redacted]

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
15:20	25.35			7.73	24.0	1.16	8.9	11.14	572	
15:25	25.75			7.8	23.8	1.16	8.4	11.13	427	
1530	25.78			7.72	25.9	1.17	10.4	10.26	220	
1535	25.85			7.79	25.8	1.19	11.4	9.89	164	
1540	25.85			7.74	26.8	1.18	9.9	9.64	115	
1545	25.65			7.70	28.3	1.18	9.7	8.82	71	
1550	25.40			7.72	28.7	0.986	7.7	8.90	77	
1555	25.40			7.74	26.6	0.989	8.3	1.11	96	
1600	26.10			7.70	27.1	0.982	8.9	1.28	104	
1605	26.05			7.67	27.3	0.982	8.1	9.55	133	
1610	25.91			7.63	28.1	0.985	8.6	1.45	235	
1615	25.70			7.60	28.7	0.994	8.2	1.40	205	
1620	26.01			7.56	28.9	0.983	8.7	1.50	155	
1625	25.75			7.55	29.0	0.989	9.4	7.93	111	
1630	26.30			7.55	28.1	0.992	9.2	1.33	120	
1635	26.43			7.54	28.1	0.988	8.1	1.42	122	
1640	26.37			7.52	28.2	0.983	7.9	1.18	145	
1645	26.38									
1655	26.71			7.48	26.1	1.22	7.4	0.94	90	

Observations

Color: Clear Other (describe):

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

Sample Parameters:

Notes: Between 1645 and 1655 Pump was inoperable

Signed/Sampler(s):

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: MW-11	Site: NAS Fort Worth JRB
Sampler(s): M. Rodtang E. Dambaugh	Project No.: APC001-07GAA
Well Depth:	Date: 7/21/97 Time: Sheet 2 of 2
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)	ORP	D.O. (mg/L)	Turb. (N.T.U.)	Description
1700	27.39			7.50	24.1	1.20	9.5	0.72	42	
1705	27.90			7.47	24.2	1.19	7.8	0.91	61	
1710	27.95			7.46	24.0	1.20	7.10	9.1	68	
17[illegible]	28.50			7.45	24.2	1.20	6.7	10.04	55	
1720	28.52			7.43	24.7	1.19	6.8	9.45	38	125hz
1725	28.55			7.42	24.6	1.19	6.9	9.37	36	
1730	28.58			7.41	24.8	1.19	7.3	9.25	27	
1735	28.60			7.39	24.9	1.20	7.3	9.10	17	
1740	28.62			7.38	24.7	1.19	7.3	9.8	14	
1745	28.62			7.36	24.8	1.20	6.9	9.05	10	
1750	28.64			7.36	25.1	1.20	6.5	8.82	7	
1755	28.65			7.35	25.2	1.19	6.4	8.78	5	
1800	28.65			7.34	25.2	1.20	6.5	8.68	5	
1805	28.65		22.5	7.33	25.3	1.19	6.4	8.59	5	

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

408 120

Well No.: LF01-1BW601	Site: NAS Fort Worth JRB
Sampler(s): KLK, JM	Project No.: APC001-07GAA
Well Depth: 19.1	Date: 7/21/97 Time: 1300-1445
DTW (ft): 11.82 DTP:	Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand
Screen Interval (ft): 9'-19'	
Well Diameter (in): 2"	Sampling Method (G=grab, B=bailer, SP=submersible pump):
Placement of Pump (ft): 16.5	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Type of Pump: Grundfos 2" submersible	96° NW-wind [redacted]

Field Parameters

0.64m.

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
1320	13.60		—	6.74	26.5	814	*	1.34	401	
1325	13.70		—	6.74	26.9	798	6.77	1.35	362	
1330	13.40		2	6.71	26.6	802	6.75	1.46	248	
1335	13.74		—	6.70	27.3	803	6.84	0.65	300	
1340	—		—	—	—	—	—	—	—	Blocked
1345	12.21		3	6.69	28.9	800	6.51	1.76	356	
1350	12.08		—	6.67	30.5	797	6.68	1.24	502	
1355	—		3.5	6.66	32.3	792	6.89	0.71	848	
1400	13.50	14	—	6.67	30.3	795	6.89	0.43	926	
1405	13.52		4.5	6.68	30.2	799	6.90	0.65	948	
1410	13.42		6.5	6.68	29.8	786	6.89	1.17	806	
1412	—	—	—	—	—	—	—	—	—	Blocked
1430	obtain samples.									

Observations

Color: Clear Other (describe): Brownish-Black 1430 Sample.

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

Sample Parameters: Samples obtained @ 1430

Notes: Replaced battery in ORP.
Flow Rate 0.64m.
* ORP overheated not able to read.

Signed/Sampler(s):

408 121

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: BSS-BW601	Site: NAS Fort Worth JRB
mpler(s): KLK, JM.	Project No.: APC001-07GAA
Well Depth: 12.79	Date: 7/21/92 Time: 10:42
DTW (ft): 9.21 DTP:	Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand
Screen Interval (ft): 3.8 – 8.8	
Well Diameter (in): 2"	Sampling Method (G=grab, B=bailer, SP=submersible pump):
Placement of Pump (ft): 10.5	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Type of Pump: Grundfos 2" submersible	85° / wind S. WEST [redacted]

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
—										
11:00	not able to obtain flow rate, Purge and let recharge. Then sampled.									
11:30	sampled									

Observations

Color: Clear Other (describe): Blk-Grayish

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

Sample Parameters: 11:30 sampled

Notes: 10.73 DTW (10:48), 10:49 (9:52) 9:53 (10:52)

NOTED A Thin Sheen - Petroleum DNPAO

(Iron = 3.00 mg/L @ 7:15 pm)

Signed/Sampler(s):

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: LF01-IDW601	Site: NAS Fort Worth JRB
Sampler(s): KLK	Project No.: APC001-07GAA
Well Depth: ~~[illegible] 15.74~~ 20.0	Date: 7/21/97 Time: 1500 – 16:10
DTW (ft): 15.74 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): 20'	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Type of Pump: Grundfos 2" submersible	[redacted]

1.44m.

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	17.54		1							Blocked
1510	16.32		1.0	6.72	24.8	980	18.9	1.66	1	
1515	17.11		1.5	6.71	24.8	1.000	18.0	0.84	-8	(ZERO TURB)
1520	16.20		—	6.70	26.0	1.000	10.3	0.30	6	
1525	15.92		2.0	6.68	27.1	1.010	9.8	1.51	2	
1530	15.38		2.5	6.67	28.4	1.010	9.6	0.18	4	
1535	16.52		—	6.67	29.0	1.010	9.5	0.06	3	
1540	16.74			6.67	28.6	1.010	9.6	0.56	3	
1545	16.08		9.5	6.68	28.5	1.010	10.1	0.46	1	

Sampled @ 1545 - 1550

Observations

Color: Clear Other (describe):

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

Sample Parameters: 1545 Sampled

Notes: 1503 1.44m Flow Rate

~~1545~~

Signed/Sampler(s):

408 123

77 Pump

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: GMI-22-05	Site: NAS Fort Worth JRB
Sampler(s): KLK, JM	Project No.: APC001-07GAA
Well Depth: 13.77	Date: 7/21/97 Time: 1620-1820
DTW (ft): 11.5 DTP:	Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand
Screen Interval (ft): 5.5 - 10.5	
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	98° / WEST wind [redacted]

Field Parameters

0.94 L.

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
1655	11.45		—	6.90	27.3	0.940	7.8	2.60	197	Clear
1700	10.82		2.0	6.87	27.5	1.000	8.2	1.07	76	
1705	10.86		—	6.87	27.9	1.030	7.6	1.15	58	
1710	10.85		3.5	6.87	28.0	1.040	8.3	1.05	33	
1715	10.82		—	6.86	28.3	1.040	7.2	1.00	17	
1720	10.70		5.0	6.86	28.5	1.040	3.2	0.67	14	
1725	10.74		—	6.85	29.4	1.060	0.7	1.30	12	
1730	10.65		5.2	6.85	30.2	1.070	0.9	0.53	7	
1735	10.98		—	6.84	30.4	1.070	2.4	0.67	29	
1740	11.09		6.0	6.86	29.5	1.050	1.6	0.78	37	
1745	10.80		8.0	6.87	28.3	1.030	1.4	0.47	22	
1750	10.74		—	6.87	28.2	1.040	1.7	0.52	16	
1755	10.64		10.0	6.85	29.1	1.050	1.9	0.32	7	
1800	10.67		12.0	6.86	29.8	1.080	*	0.30	9	
1805	10.86		—	6.84	30.7	1.090	*	0.42	11	

Observations

Color: (Clear) Other (describe):

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

Sample Parameters: 1745-1810 Samples obtained *overheated

Notes: 10.45, 11.45 (10 min)

FLOW RATE = 0.8 @ 16:55

Signed/Sampler(s):

GROUNDWATER FIELD SAMPLING DATA SHEET

408 124

Well No.: MW-8	Site: NAS Fort Worth JRB
Sampler(s): M. Rottong, E. Dambaugh	Project No.: APC001-07GAA Sheet 1 of 2
Well Depth: 27 ft	Date: 7/22/97 Time: 9:05
DTW (ft): 7.45 ft measured DTP: 4.88 ft	Courier Air Bill No.: 5739019436 FedEx ____ UPS ____ Other ____ Hand
Screen Interval (ft): 6-26 ft	
Well Diameter (in): 4"	Sampling Method (G=grab, B=bailer, SP=submersible pump):
Placement of Pump (ft): 16 ft	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Type of Pump: Grundfos 2" submersible	100° [redacted]

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
9015	5.03			7.81	23.5	0.530	3.7	0.9	29	66 Hz
920	5.02			7.11	23.1	0.539	0.0	0.45	10	
925	5.01			7.09	23.2	0.561	0.0	0.50	9	
930	5.02			7.07	23.1	0.540	0.7	0.36	8	
935	5.02			7.06	23.0	0.539	1.5	0.42	6	
940	5.02			7.06	23.1	0.538	2.7	0.40	5	
945	5.03			7.06	23.1	0.540	2.5	0.66	7	
950	5.03			7.06	23.1	0.555	2.6	0.84	8	
955	5.02			7.06	23.1	0.555	3.2	0.61	6	
1000	4.99			7.06	23.3	0.539	3.5	0.47	10	
1005	4.98			7.05	23.7	0.537	4.0	0.64	11	
1010	4.97			7.05	24.0	0.538	4.7	0.94	7	
1015	4.97			7.05	24.1	0.557	5.2	0.25	8	
1020	4.97			7.05	24.2	0.541	5.9	0.22	7	
1025	4.96			7.05	24.4	0.540	6.4	0.24	9	
1030	4.97			7.05	24.5	0.544	6.3	0.55	9	
1035	4.97			7.05	24.5	0.544	6.1	0.66	10	
1040	4.98			7.05	24.5	0.544	6.2	0.40	8	
1045	4.98			7.04	24.5	0.543	6.4	0.45	8	

Observations

Color: Clear Other (describe):

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

Sample Parameters: BTEX, ANIONS, ALK, METHANE, TOC, FERROUS

Notes: H_2O Depth 5.05 at pump start.
Rate a little less than 1 Liter/min (10 seconds).
Fe^{2+} 0.03 mg/l

Signed/Sampler(s):

408 125

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: MW-8	Site: NAS Fort Worth JRB
Sampler(s): M. Cadang E. Dambaugh	Project No.: APC001-07GAA Sheet 2 of 2
Well Depth:	Date: 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)	ORP	D.O. (mg/L)	Turb. (N.T.U.)	Description
1050	4.97		20	7.04	24.8	0.542	6.9	0.63	8	

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

408 126

Well No.: MW-12	Site: NAS Fort Worth JRB
Sampler(s): M. Rodtang, E. Dambaugh	Project No.: APC001-07GAA
Well Depth: 28 ft	Date: 7/22/97 Time: 1445
DTW (ft): 10.41 ft measured DTP: 5.40 ft	Courier Air Bill No.: 5739019936 FedEx ____ UPS ____ Other ____ Hand
Screen Interval (ft): 7.7 - 27.7	
Well Diameter (in): 4"	Sampling Method (G=grab, B=bailer, SP=submersible pump):
Placement of Pump (ft): 17.7 ft	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Type of Pump: Grundfos 2" submersible	100° [redacted] HH

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
1500	5.69			6.85	23.9	1.27	9.5	1.03	543	
1505	5.66			6.84	23.7	1.28	9.6	0.29	245	
1510	5.66			6.83	23.8	1.28	8.7	0.24	58	
1515	5.65			6.84	24.0	1.28	9.2	0.18	39	
1520	5.65			6.84	24.4	1.29	10.0	0.16	21	
1525	5.65			6.84	24.4	1.31	10.8	0.18	9	
1530	5.65			6.83	24.4	1.33	11.8	0.13	6	
1535	5.64			6.82	24.6	1.35	11.6	0.15	6	
1540	5.64			6.82	24.6	1.37	11.6	0.13	5	
1545	5.64			6.82	24.8	1.38	11.4	0.13	5	
1550	5.64		20 gals	6.82	24.7	1.40	12.4	0.13	5	

Observations

Color: (Clear) Other (describe):

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

Sample Parameters: VOC, Metals

Notes:

1.5 L/min flow

Signed/Sampler(s):

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: SD13-014/601	Site: NAS Fort Worth JRB
Sampler(s): KCK, JM	Project No.: APC001-07GAA
Well Depth: ~~14.2~~ 17.43	Date: 7/22/97 Time: 1500-1730
DTW (ft): 11.63 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): 13'	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Type of Pump: Grundfos 2" submersible	99° / wind dir. [redacted]

1.24m.

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
16:10	12.28		—	6.93	27.5	656	0.8	.16	367	
16:15	12.27		—	6.91	28.2	661	4.1	.60	126	
16:20	12.28		2.0	6.88	29.0	679	4.4	.63	13	
16:25	12.27		—	6.86	30.3	682	5.6	.05	5	
16:30	12.34		6.0	6.87	26.9	676	3.6	.30	5	
16:35	12.32		8.0	6.87	25.5	673	4.7	-.59	1	Stabalized
16:40	12.32		—	6.87	25.4	676	3.8	-.58	1	
16:45	12.33		10.0	6.86	25.4	675	4.0	-.50	1	
16:50	- DONE		~~15.5~~ 12.5 gal							
		Sampled at 1700								
			Iron Sample = 2.71 mg/L 219:10 (3/1 Dilution							

Observations

Color: Clear Other (describe):

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

Sample Parameters: Samples @ 1700

Notes: Flow Rate: 1.24m.

12.82DTW @ 16:07

Iron Sample 2.71 mg/L. - 219:20 PGAD

1730 Equipment Blank

Signed/Sampler(s):

GROUNDWATER FIELD SAMPLING DATA SHEET

408 128

Well No.: MW-5	Site: NAS Fort Worth JRB
Sampler(s): M. Cadtamy E. Dunbaugh	Project No.: APC001-07GAA
Well Depth: 8.08 4.85 ft	Date: 7/22/97 Time: 1645
DTW (ft): 3.35 measured DTP:	Courier Air Bill No.: 573901 9436 FedEx ____ UPS ____ Other ____ Hand
Screen Interval (ft): 3.5-18	
Well Diameter (in): 4	Sampling Method (G=grab, B=bailer, SP=submersible pump):
Placement of Pump (ft): 7.25 ft	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Type of Pump: Grundfos 2" submersible	100° [redacted]

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
1700	6.54			7.13	32.0	0.396	15.7	~~15.9~~ 0.29	8	66 Hz
1705	6.95			7.09	31.8	0.475	16.1	~~16.2~~ 0.21	9	59 Hz
1710	6.72			7.11	32.3	0.483	15.6	1.64	15	81 Hz
1715	6.62			7.11	33.6	0.535	15.7	1.69	15	81 Hz
1720	6.41			7.11	33.5	0.535	15.7	1.65	14	85 Hz
1725	6.95			7.08	33.1	0.526	16.3	0.91	15	
1730	6.96			7.05	33.7	0.534	15.8	1.18	15	
1735	6.77			7.04	34.5	0.584	15.9	1.27	15	
1740	7.2			7.04	34.2	0.578	15.8	1.24	15	shut down pump
				STOP	Purging					
1810	5.65	Sample	MW-5							
			5 gals							

Observations

Color: Clear Other (describe): Brown but yet clear ("tea-like")

Odor: None (Low) Medium High Very strong H2S Fuel-like stagnant smell later turning to a very strong gasoline smell

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

Notes: Slow recharge < 3/4 L/min

3/4 L/min initial flow, 1505 decreased flow rate to 1/2 L/min water level starting to increase

1740 shut pump down wait let recharge & sample

Fe^{2+} 0.24 mg/l

Signed/Sampler(s):

408 129

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: MW-9	Site: NAS Fort Worth JRB
ampler(s): M. Coltay, E. Dambaugh	Project No.: APC001-07GAA
Well Depth: 29 ft	Date: 7/22/97 Time: 11:45
DTW (ft): 6.31 Measured DTP: 6.27	Courier Air Bill No.: 573901943[illegible] FedEx ____ UPS ____ Other ____ Hand
Screen Interval (ft): 8.1-28.1	
Well Diameter (in): 4	Sampling Method (G=grab, B=bailer, SP=submersible pump):
Placement of Pump (ft): 18	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Type of Pump: Grundfos 2" submersible	100° [redacted] 11[illegible]

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
1145	6.65			6.97	22.1	1.16	9.7	0.79	472	
1150	6.66			6.95	22.1	1.16	10.3	0.30	133	
1155	6.66			6.95	22.1	1.16	9.7	0.18	32	
1200	6.67			6.94	22.2	1.6	10.1	0.14	11	
1205	6.67			6.94	22.2	1.17	10.6	0.13	10	
1210	6.67			6.94	22.2	1.17	10.3	0.11	9	
1215	6.67			6.94	22.2	1.17	10.0	0.10	7	
1220	6.67			6.94	22.3	1.18	9.6	0.14	7	
1225	6.67			6.94	22.3	1.18	9.7	0.12	7	
1230	6.67			6.94	22.3	1.18	10.2	0.10	5	
1235	6.67			6.94	22.3	1.18	10.5	0.11	5	
1240	6.67			6.94	22.3	1.18	11.1	0.11	5	

Observations

Color: Clear Other (describe):

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

Sample Parameters:

Notes: Slightly strong petroleum odor in purge water at pump start. Sampled 1245

Signed/Sampler(s):

GROUNDWATER FIELD SAMPLING DATA SHEET

408 130

Well No.: LF01-IEW601	Site: NAS Fort Worth JRB
Sampler(s): KLK, JM	Project No.: APC001-07GAA
Well Depth: 32.07	Date: 7/22/97 — Time: 8:45 – 10:50
DTW (ft): 13.60 14.65 — DTP:	Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand
Screen Interval (ft): 19.6-30.35	
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):
Type of Pump: Grundfos 2" submersible	88° / WIND DIRECTION [redacted]

1.24/m

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
9:10	15.0		1.0	6.68	21.8	700	12.8	1.10	314	
9:15	14.96		1.5	6.71	22.5	671	16.9	1.52	204	
9:20	14.93		2.5	6.71	23.2	685	13.4	.25	122	
9:25	14.95		5.5	6.72	23.9	702	11.5	6.86	81	
9:30	14.95		—	6.72	24.1	682	5.5	3.92	74	
9:35	14.96		—	6.72	24.3	681	8.0	.24	66	
9:40	14.95		7.0	6.72	24.5	683	7.0	.06	48	
9:45	14.94		7.5	6.72	24.6	681	8.0	.21	32	
9:50	14.93		9.0	6.72	24.7	682	8.7	.31	19	shade —
9:55	14.78		—	6.72	25.3	691	7.8	2.20	14	
10:00	14.77		10.0	6.72	26.2	690	5.3	.18	15	
10:05	14.70		12.5	6.72	27.0	687	18.0	.83	7	
10:10	14.78		—	6.72	27.3	689	17.9	.84	5	stable
10:15	14.79		—	6.72	27.6	690	16.8	.63	4	stable
10:20	15.05			6.73	28.0	683	16.7	.81	5	stable
10:25	15.09			6.74	28.0	683	15.9	.79	4	

Observations

Color: Clear Other (describe): BLACKISH-BROWN

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

Sample Parameters: Sample @ 10:35

Notes: 1.24/m FLOW RATE @ 8:50

shade may change value by 10 points.

Signed/Sampler(s):

408 131

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: LF01-ICWG01	Site: NAS Fort Worth JRB
mpler(s): KLK, JM	Project No.: APC001-07GAA
Well Depth: 32.52	Date: 7/22/97 Time: 11:05 – 12:40
DTW (ft): 13.41 15.72 DTP:	Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand
Screen Interval (ft): 22.7 – 32.7	Sampling Method (G=grab, B=bailer, SP=submersible pump):
Well Diameter (in): 2"	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Placement of Pump (ft): ~~30.2~~ 27.0	West wind, 97° [redacted]
Type of Pump: Grundfos 2" submersible	

Field Parameters

1.84 m.

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
11:25	15.67		2.0	6.69	23.9	1,040	15.6	.96	330	Petroleum odor
11:30	15.67		—	6.71	23.2	1,070	20.1	.11	49	
11:35	15.66		5.0	6.72	23.7	1,040	19.3	9.21	3	
11:40	15.68		—	6.72	23.9	1,020	9.3	.3	2	
11:45	15.68		10.0	6.73	23.3	1,010	8.0	.69	1	
11:50	15.68		—	6.73	23.8	1,000	11.1	.30	1	
11:55	15.66		15.0	6.73	24.0	1,000	8.1	24.30	2	stable
12:00	15.67		—	6.72	23.9	1,000	8.2	.28	2	
12:05	15.65		22.0	6.72	23.6	1,020	8.1	.33	2	
~~12:10~~										
~~12:15~~										
	Sampled @ 12:15									

Observations

Color: Clear Other (describe):

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

Sample Parameters: Sampled @ 12:15

Notes: FLOW RATE < 1.84 m.
DEPTH @ 15.72 (time 11:19)

Signed/Sampler(s): KLK, JM

HydroGeoLogic, Inc.

gwsmpfdsy.frm

GROUNDWATER FIELD SAMPLING DATA SHEET

408 132

Well No.: ST-14-28WG01	Site: NAS Fort Worth JRB
Sampler(s): KLK, JM	Project No.: APC001-07GAA
Well Depth: 17.03	Date: 7/22/97 Time: 1415 – 1540
DTW (ft): 11.31 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): [redacted]
Placement of Pump (ft): 12' - Drop to 15	Weather (sun/clear, overcast/rain, wind direction, ambient temperature): Some Clouds, wind dir: S. West
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
1430	13.8	—	—	—	—	—	—	—	—	—
1440	11.85	—	—	—	—	—	—	—	—	—
1445	11.85									
→ not able to obtain enough H2O to do paramiters. Purged pump-out twice.										

Observations

Color: Clear Other (describe):

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

Sample Parameters: 1500 Conducted Sampling

Notes: Iron = 2.64 (1/3 Bilure) @ 19:35

Signed/Sampler(s): KLK, JM

408 133

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: SD13-07	Site: NAS Fort Worth JRB
Sampler(s): M. Rodtang, E. Dambaugh	Project No.: APC001-07GAA
Well Depth: 19.13 ft	Date: 7/23/97 Time: 9:20
DTW (ft): Measured 17.95 DTP:	Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand
Screen Interval (ft): 9-18.6	
Well Diameter (in): 4"	Sampling Method (G=grab, B=bailer, SP=submersible pump):
Placement of Pump (ft): N/A	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Type of Pump: Grundfos 2" submersible	100°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

Observations

Color: Clear Other (describe): Brown

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

Sample Parameters:

Notes: Depth to product 17.88
Depth to water 17.95
Sample taken in Jar. (Product sample)
∴ Well not sampled for required parameters

Signed/Sampler(s):

GROUNDWATER FIELD SAMPLING DATA SHEET

408 134

Well No.: OT-15C	Site: NAS Fort Worth JRB
ampler(s): M. Rattany, E. Dambaugh	Project No.: APC001-07GAA
Well Depth: 12.0	Date: 7/23/97 Time:
DTW (ft): Measured 8.26 PE 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 ft	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Type of Pump: Grundfos 2" submersible	100° [redacted] 4½ gals

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
1150	8.61	75 c/m		6.8	29.3	.643	11.0	9.36	5	66 Hz
1155	8.50			6.78	29.7	.644	10.9	9.39	4	
1200	8.49			6.76	30.0	.647	11.2	9.36	2	
1205	8.50			6.76	30.1	.648	11.2	9.28	1	
1210	8.50			6.76	30.2	.649	11.2	9.23	1	

Observations

Color: Clear Other (describe):

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

Sample Parameters: VOC + Metals

Notes: Flow

1320 Sample OT-15C

Signed/Sampler(s):

408 135

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: SD13-06	Site: NAS Fort Worth JRB
ampler(s): M. Rodtang, E. Dambaugh	Project No.: APC001-07GAA
Well Depth: 11.36 13.83 measured	Date: 7/23/97 Time: 9:40
DTW (ft): measured 11.62 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): 8.5 ft	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Type of Pump: Grundfos 2" submersible	100° [redacted] 5 gals

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	13.06			6.58	24.5	1.09	9.7	1.75	63	
			5 gals							

Observations

Color: Clear Other (describe):

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

Sample Parameters: VOC, Metals

Notes: Pumped begin @ 1000. Not flowing through chamber
Very irony water ORP 11.0 @ 1st beaker, ORP 9.7 @ 2nd beaker
Began to clear up, chamber opened, water level 12.24. Pumped stopped due to lack of water
Water level @ 12.94 @ 1035 hours; 12.90 @ 1053
Well recovery is approx 0.01 ft/3min.
Sampled @ 1100 hours via pump

Signed/Sampler(s):

GROUNDWATER FIELD SAMPLING DATA SHEET

408 136

Well No.: USGS04T	Site: NAS Fort Worth JRB
Sampler(s): M. Rottang, E. Dambaugh	Project No.: APC001-07GAA 1of2
Well Depth: 26ft	Date: 7/23/97 Time: Arv. 1435
DTW (ft): 17.27 measured DTP:	Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand
Screen Interval (ft): 15.5-25.5ft	
Well Diameter (in): 2	Sampling Method (G=grab, B=bailer, SP=submersible pump):
Placement of Pump (ft): 20.5 ft	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Type of Pump: Grundfos 2" submersible	100° [redacted] 111

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
1500	17.31			7.15	25.3	0.605	10.9	1.44	999	
1505	17.31			7.11	24.9	0.616	10.5	1.95	925	
1510	17.31			7.09	24.9	0.620	10.5	2.11	674	
1515	17.32			7.14	24.6	0.632	11.9	1.63	522	
1520	17.32			7.10	24.9	0.622	11.3	2.44	275	
1525	17.31			7.08	24.9	0.626	9.8	1.95	143	
1530	17.31			7.07	25.0	0.633	9.0	1.64	125	
1535	17.31			7.08	24.5	0.640	8.1	1.20	111	
1540	17.31			7.07	24.5	0.636	8.9	1.43	81	
1545	17.31			7.07	24.7	0.636	10.3	1.57	48	
1550	17.31			7.06	24.5	0.643	10.1	0.42	23	
1555	17.31			7.06	24.8	0.640	10.1	0.34	20	
1600	17.31			7.06	24.6	0.643	9.9	0.42	13	
1605	17.31			7.05	24.6	0.644	9.5	0.89	10	
1610	17.31			7.05	24.6	0.645	9.1	0.37	9	
1615	17.31			7.05	24.7	0.645	8.6	0.25	9	
1620	17.31			7.05	24.6	0.650	9.3	0.22	9	
1625	17.31			7.05	24.7	0.647	9.5	0.19	7	
1630	17.31			7.05	24.8	0.647	9.8	0.20	6	

Observations

Color: Clear Other (describe):

Odor: None (Low) Medium High Very strong H2S Fuel-like (a) very slight when well 1st opened Purged water No smell.

Sample Parameters: VOC + Metals

Notes: Rate: 1 L/min 20 gal purged
Water extremely cloudy-brown at pump start and first few intervals.

Signed/Sampler(s):

408 137

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: USG504T	Site: NAS Fort Worth JRB
mpler(s):	Project No.: APC001-07GAA 2412
Well Depth:	Date: 23 Jul 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)	ORP	D.O. (mg/L)	Turb. (N.T.U.)	Description
1635	17.31			7.05	24.5	0.650	9.6	0.19	6	
1640	17.31			7.04	24.4	0.649	9.6	0.18	5	
1645	17.31			7.04	24.2	0.652	8.8	0.19	5	
1650	17.31		20 gal	7.04	24.3	0.652	8.9	0.17	5	

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

408 138

Well No.: SD13-04W601	Site: NAS Fort Worth JRB
Sampler(s): KLK, OM	Project No.: APC001-07GAA
Well Depth: 13.37	Date: 7/23/97 Time: 8:30 – 10:00
DTW (ft): (9.10) 9.48 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 – 11.5	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Type of Pump: Grundfos 2" submersible	90° / wind SLIGHT [redacted]

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 able to have enough water flow. Purged well									
	2 TIMES AND WILL let Recharge.									
	Conduct Sampling @ 9:30 AM									
			2 gallons H2O Purged							
	WATER extremely SANDY –									
	Iron = 0.73 mg/L.									

Observations

Color: (Clear) Other (describe):

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

Sample Parameters: Sampled @ 9:30 AM Iron = 0.73 mg/L

Notes: FLOW RATE = 1.8 L/min

Recharge DEPTHS 9.95, 9.6, 9.58, 9.58. – Put on Low Flow.

9:05 Put PUMP BACK on (slow dribble H2O) 403 H2 indicated on pump. WELL PURGED

drop tube to 13' for purge.

Signed/Sampler(s):

408 139

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: SD-13-02W601	Site: NAS Fort Worth JRB
ampler(s): KLK, JM	Project No.: APC001-07GAA
Well Depth: 16.46	Date: 7/23/97 Time: 10:10-11:30
DTW (ft): (12.65) 13.04 DTP:	Courier Air Bill No.: _____ FedEx _____ UPS _____ Other _____ Hand
Screen Interval (ft): 9.5 - 13.5	
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): 10:30 MILD WIND 90° / very little wind EAST [redacted]
Type of Pump: Grundfos 2" submersible	

Field Parameters

1.84m.

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
10:25	13.15		1.5	6.74	26.2	752	13.0	.85	343	
10:30	13.13		2.0	6.78	26.5	740	13.3	-.03	44	
10:35	13.15		5.0	6.79	26.9	726	12.7	0.06	12	
10:40	13.14		7.5	6.78	27.1	722	10.6	0.38	5	
10:45	13.13		10.5	6.78	27.6	720	9.9	-0.38	3	stable
10:50	13.14		12.0	6.78	28.0	715	9.7	-0.39	2	
	Obtain samples @ 11:10									

Observations

Color: Clear Other (describe): Brownish / Cloudy → Clear

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

Sample Parameters: 11:05 WATER SAMPLE, Iron = 2.53 mg/L (1/1 Dilut).

Notes: Free-phase < 10th inch. DUP = 0.0

FLOW RATE = 1.84 m.

H2O Depths - 13.14

Signed/Sampler(s):

TAB

Appendix B

Appendix B
Field Data Results

TABLE B.1: WATER LEVEL MEASUREMENTS AND WELL INSPECTION DATA

Well ID	DTW	TD	DATE	TIME	CASING DIA	OVM BG	OVM BZ	OVM TOC	ID Plate	Pad Condition	LOCK	CAP	Manhole Gasket	BOLTS	Logbook Entry	Sampler Name(s)	COMMENTS
PI-U9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Abandon
BSS-A	4.61	10.36	7/8/97	4:15 PM	2	0	0	0	NO	NA	NO	SLIP	YES	NO BOLTS		Jack McCrarnie, Tim Zoch	No bolts, no lock, flush mount, dedicated PVC bailer
USGS05P	37.78	92.00	7/8/97	6:10 PM	2	0	0	0								Lynn Morgan, Mike Rodtang	No product. Also check w/ o/w interp tech.
MW-3	10.25	19.35	7/8/97	6:02 PM	4	0	0	0								Lynn Morgan, Mike Rodtang	Soft bottom.
MW-37	8.60	19.77	7/8/97	9:43 AM	4	0	0	0								Lynn Morgan, Mike Rodtang	Hard bottom
ST14-W05	7.80	16.32	7/8/97	3:22 PM	2	0	0	0								Lynn Morgan, Mike Rodtang	Silty clay on bottom, no bailer
ST14-24	10.75	17.00	7/8/97	3:11 PM	2	0	0	0	YES	GOOD	YES, NEEDS REPLACEMENT					Lynn Morgan, Mike Rodtang	Soft bottom, no odor, tag says ST-14MQ-NE of AST
ST14-25	5.56	16.35	7/8/97	8:40 AM	2	0	0	0								Lynn Morgan, Mike Rodtang	Silty bottom
ST14-14	7.57	20.44	7/8/97	9:21 AM	2	0	0	0						One bolt missing		Lynn Morgan, Mike Rodtang	Same, kink in well, dedicated PVC bailer binds when lowered into wel
ST14-W08	9.24	25.98	7/8/97	8:50 AM	2	0	0	0						Stripped		Lynn Morgan, Mike Rodtang	Hard bottom; dedicated PVC bailer
ST14-26	10.09	27.33	7/8/97	9:33 AM	2	0	0	0								Lynn Morgan, Mike Rodtang	Water in manhole, soft bottom. (This well was labelled incorrectly as S
ST14-28	11.31	17.09	7/8/97	10:11 AM	2	0	0	91	YES	GOOD	NO	MONITORING WELL	YES	REPLACED 2 BOLTS		Jack McCrarnie, Tim Zoch	Water in manhole. (This was labelled incorrectly as ST14-W28 in field
HM-116	21.11	31.45	7/10/97	11:56 AM	4	0	0	0								Lynn Morgan, Mike Rodtang	Manual pump in well.
W-153	18.61	39.27	7/10/97	11:45 AM	2	0	0	15.1								Lynn Morgan, Mike Rodtang	Water in manhole.
HM-114	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	Lynn Morgan, Mike Rodtang	Could not find due to tall grass
HM-126	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	Lynn Morgan, Mike Rodtang	Could not find due to tall grass
LF05-01	17.33	27.54	7/10/97	10:27 AM	2	0	0	0.6								Lynn Morgan, Mike Rodtang	ID plate fell off, duct taped it to stick up
HM-127	37.83	42.02	7/10/97	10:22 AM	4	0	0	0								Lynn Morgan, Mike Rodtang	Manual pump in well.
LF05-02	23.45	29.99	7/8/97	2:15 PM	2	0	0	0								Lynn Morgan, Mike Rodtang	
HM-122	17.07	27.80	7/8/97	2:25 PM	4	0	0	1.8								Lynn Morgan, Mike Rodtang	Hand (manual pump) in well.
MW-20	19.43	19.70			4	0	0	0								Lynn Morgan, Mike Rodtang	
USGS06P	57.92	73.26	7/10/97	4:44 PM	2	0	0	0								Lynn Morgan, Mike Rodtang	Pad labeled T4C water in manhole
USGS06T	17.21	21.82	7/10/97	4:59 PM	2	0	0	0								Lynn Morgan, Mike Rodtang	Manhole cracked, bailer, soft bottom. This well is incorrectly labelled a
FT08-11A	7.98	17.62	7/8/97	10:50 AM	2	0	0	0								Lynn Morgan, Mike Rodtang	Bailer in well.
FT08-11B	7.66	17.02	7/8/97	10:59 AM	2	0	0	0			NONE					Lynn Morgan, Mike Rodtang	Bailer in well, soft bottom.
LF05-5C	9.82	21.22	7/10/97	11:10 AM	2	0	0	0								Lynn Morgan, Mike Rodtang	Hard bottom
LF05-5D	9.48	21.00	7/8/97	4:38 PM	2	0	0	0								Lynn Morgan, Mike Rodtang	Bailer in well.
HM-123	23.73	38.37	7/8/97	2:45 PM	4	0	0	0								Lynn Morgan, Mike Rodtang	Cracked manhole, manual pump in well.
LF05-5A	22.68	30.45	7/8/97	11:23 AM	2	0	0	0.1								Lynn Morgan, Mike Rodtang	
WP07-10A	26.71	37.78	7/8/97	11:15 AM	2	0	0	0								Lynn Morgan, Mike Rodtang	
MW-12A	Dry	16.38	7/8/97	4:24 PM	Dry	0	0	0			NONE					Lynn Morgan, Mike Rodtang	Dry well
LF05-5E	26.52	85.53	7/8/97	11:30 AM	2	0	0	0								Lynn Morgan, Mike Rodtang	Measured from black mark on top PVC (PVC extension)
LF04-01	28.99	41.28	7/8/97	11:38 AM	2	0	0	0		POOR						Lynn Morgan, Mike Rodtang	
FT09-12D	28.54	37.00	7/8/97	11:47 AM	2	0	0	2.9								Lynn Morgan, Mike Rodtang	
FT09-12B	28.94	37.72	7/8/97	11:54 AM	2	0	0	0								Lynn Morgan, Mike Rodtang	Bailer in well.
FT09-12E	29.27	38.65	7/8/97	4:15 PM	2	0	0	0								Lynn Morgan, Mike Rodtang	Hard bottom
FT09-12C	29.85	39.64	7/8/97	4:05 PM	2	0	0	0.9								Lynn Morgan, Mike Rodtang	Silty bottom, dedicated PVC bailer
USGS07P	86.84	138.50	7/8/97	3:14 PM	2	0	0	0								Lynn Morgan, Mike Rodtang	
USGS07T	8.19	23.58	7/8/97	3:03 PM	2	0	0	0								Lynn Morgan, Mike Rodtang	Bailer in well.
FT09-12A	14.19	27.88	7/8/97	3:50 PM	2	0	0	0								Lynn Morgan, Mike Rodtang	Extremely soft bottom, dedicated PVC bailer, silt on probe
SD13-06	9.91	13.80	7/8/97	11:52 AM	4	0	0	10.7	NO	CRACKED	YES	SLIP-ON	NO	NONE		Jack McCrarnie, Tim Zoch	Stand pipe, 3' dedicated PVC bailer
ST14-W10	5.06	19.59	7/8/97	9:09 AM	2	0	0	0								Lynn Morgan, Mike Rodtang	
17J	10.11	21.18	7/8/97	5:25 PM	2	0	0	0								Lynn Morgan, Mike Rodtang	Soft bottom.
ST14-W13	6.95	17.09	7/8/97	5:18 PM	2	0	0	0						NO BOLTS		Lynn Morgan, Mike Rodtang	Dedicated PVC bailer
17L	9.35	20.85	7/8/97	5:08 PM	2	0	0	0								Lynn Morgan, Mike Rodtang	Slight odor
ST14-W12	4.33	17.73	7/8/97	4:58 PM	2	0	0	0					NONE			Lynn Morgan, Mike Rodtang	Soft bottom, odor slight on probe
ST14-W11	5.85	16.30	7/8/97	9:02 AM	2	0	0	0				NEEDS NEW GASKET				Lynn Morgan, Mike Rodtang	No water in manhole, dedicated PVC bailer, soft bottom.
LF04-10	31.26	47.26	7/8/97	6:36 PM	2	0	0	0								Lynn Morgan, Mike Rodtang	Blank
LF04-04	19.38	19.83	7/8/97	7:24 PM	2	0	0	0								Lynn Morgan, Mike Rodtang	Pos. product, thin layer 0.01 or less.
LF05-19	13.26	19.40	7/8/97	7:15 PM	2	0	0	6.4						REPLACED 1 BOLT		Lynn Morgan, Mike Rodtang	Bailer in well.
LF01-1D	14.18	28.01	7/10/97	8:00 AM	2	0	0	0	NO	NA	YES, NOT ON	THREADED	NA	NA		Jack McCrarnie, Tim Zoch	Unable to lock due to broken Hasp, Bailer, 3' Stand pipe
MW-38	15.50	18.40	7/10/97	5:16 PM	4	0	0	111	NO	FAIR	NONE	MONITORING WELL - TIGHT	GOOD	GOOD		Jack McCrarnie, Tim Zoch	Flush mount, in concrete
SPOT35-7	6.52	20.4	7/10/97	3:55 PM	4	0	0	0								Lynn Morgan, Mike Rodtang	Water in manhole, odor.
SPOT35-2	20.96	26.28	7/10/97	3:51 PM	4	0	0	27.2								Lynn Morgan, Mike Rodtang	Odor, water in manhole.
SPOT35-1	22.14	26.58	7/10/97	3:48 PM	2	0	0	30								Lynn Morgan, Mike Rodtang	Water in manhole covering casing.
SPOT35-4	19.94	24.45	7/10/97	3:44 PM	2	0	0	0								Lynn Morgan, Mike Rodtang	Top of casing in bad condition.
SPOT35-5	21.35	27.53	7/10/97	3:41 PM	4	0	0	35	NO	NONE	YES	MONITORING WELL - LOOSE	GOOD	YES		Jack McCrarnie, Tim Zoch	Flush mount in asphalt, jagged casing edge
GMI-22-02M	9.01	27.77	7/10/97	3:34 PM	2	0	0	0	NO	GOOD	NO	MONITORING WELL - TIGHT	GOOD	GOOD		Jack McCrarnie, Tim Zoch	Flush mount, dedicated PVC bailer
MW-11A	22.06	26.06	7/10/97	3:54 PM	4	0	0	51	NO	NONE	YES	MONITORING WELL - TIGHT	FAIR	NONE		Jack McCrarnie, Tim Zoch	Flush mount in asphalt
MW-53	14.71	19.65	7/8/97	9:28 AM	4	0	0	0								Lynn Morgan, Mike Rodtang	Silty bottom.
MW-IT-02T	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	N/A	Manual pump in well, no notch, measured from North side.
HM-111	22.42	47.55	7/10/97	11:08 AM	4	0	0	3.9									

TABLE B.1: WATER LEVEL MEASUREMENTS AND WELL INSPECTION DATA

Well ID	DTW	TD	DATE	TIME	CASING DIA	OVM BG	OVM BZ	OVM TOC	ID Plate	Pad Condition	LOCK	CAP	Manhole Gasket	BOLTS	Logbook Entry	Sampler Name(s)	COMMENTS
LF04-4C	17.03	27.72	7/8/97	1:50 PM	2	0	0	0.5	YES	NO PAD	YES	YES	NA	NA		Jack McCranie, Tim Zoch	Stand pipe
LF04-4D	18.78	27.77	7/8/97	2:55 PM	2	0	1.8	0	YES	NO PAD	YES	YES	NA	NA		Jack McCranie, Tim Zoch	Stand pipe, dedicated PVC bailer
LF04-4E	22.29	30.58	7/8/97	2:40 PM	2	0	0	6.0	YES	NO PAD	YES	YES	NA	NA		Jack McCranie, Tim Zoch	Cap broken, dedicated PVC bailer, stand pipe
LF04-02	27.13	38.33	7/8/97	2:25 PM	2	0	0	29.8	YES	OK	YES	YES	NA	NA		Jack McCranie, Tim Zoch	Soft bottom of well, trace product.
LF04-4F	27.66	37.02	7/8/97	3:15 PM	2	0	0	8.1	NO	FAIR	YES	SLIP - GOOD	NA	NA		Jack McCranie, Tim Zoch	2' Stand pipe, dedicated PVC bailer
GMI-04-01M	18.57	20.46	7/8/97	1:50 PM	2	0	0	0	NO	GOOD	YES					Lynn Morgan, Mike Rodtang	Soft at bottom, no odor, dedicated PVC bailer
LF04-4H	18.22	18.83	7/8/97	2:10 PM	2	0	0	0	NO	GOOD	YES					Lynn Morgan, Mike Rodtang	Soft @ bottom.
LF04-4G	25.05	32.80	7/8/97	2:15 PM	2	0	0	0	NO	FAIR	YES					Lynn Morgan, Mike Rodtang	Dedicated PVC bailer
LF05-5G	20.36	30.23	7/8/97	2:40 PM	2	0	0	0	NO	FAIR	YES	THREADED	NA	NA		Lynn Morgan, Mike Rodtang	Soft bottom, organic matter on probe (roots).
LF05-5H	15.18	16.86	7/8/97	2:30 PM	2	0	0	0	NO	FAIR	YES					Lynn Morgan, Mike Rodtang	no roots, soft bottom
LF05-14	16.83	25.78	7/9/97	8:41 AM	6	0	0	0	NO	FAIR	NO	SLIP - GOOD	GOOD	YES		Jack McCranie, Tim Zoch	Soft bottom, organic matter on probe (roots).
LF05-5B	3.44	12.47	7/8/97	8:29 AM	2	0	0	0	NO	NONE	YES	THREADED-GOOD	NA	NA		Jack McCranie, Tim Zoch	Need Key, small lock, stand pipe
WP07-10C	19.20	29.52	7/8/97	3:35 PM	2	0	0	0.1	NO	NONE	YES	THREADED-GOOD	NA	NA		Jack McCranie, Tim Zoch	Stand pipe, dedicated PVC bailer
WP07-10B	27.10	34.48	7/8/97	3:45 PM	2	0	0	0.2	NO	NONE	YES	NONE	NA	NA		Jack McCranie, Tim Zoch	Stand pipe, dedicated PVC bailer
LF05-5F	23.48	33.77	7/8/97	4:05 PM	6	0	0	6.1	NO	FAIR	NONE	SLIP - GOOD	GOOD	YES		Jack McCranie, Tim Zoch	Flush mount, labeled "CAR-RW7"
ST14-W06	8.29	22.61	7/8/97	3:32 PM	2	0	0	0	YES	FAIR	NEED TO REPLACE					Lynn Morgan, Mike Rodtang	Bailer in well, soft bottom.
ST14-W07	10.20	24.69	7/8/97	3:40 PM	2	0	0	0	YES	GOOD	NEED TO REPLACE					Lynn Morgan, Mike Rodtang	Bailer in well.
ST14-W09	6.89	20.19	7/8/97	3:50 PM	2	0	0	0	YES	FAIR	NEED TO REPLACE					Lynn Morgan, Mike Rodtang	Bailer in well.
17I	9.78	19.76	7/8/97	4:05 PM	2	0	0	6.8	NO	FAIR	YES					Lynn Morgan, Mike Rodtang	OVM equilibrium to 3.2
17K	8.74	18.54	7/8/97	4:12 PM	2	0	0	0	NO	FAIR	YES					Lynn Morgan, Mike Rodtang	Clay on bottom
MW1-16	8.63	15.30	7/8/97	5:30 PM	4	0	0	1.5	NO	FAIR	NO	MONITORING WELL	NA	NA		Jack McCranie, Tim Zoch	Well has a casing extension, no lock
ST14-03	7.98	19.83	7/8/97		2	0	0	0	YES	FAIR	YES	GOOD	NA	NA	YES	Lynn Morgan, Mike Rodtang	Bailer in well, soft bottom.
ST14-W15	9.84	18.60	7/8/97	4:49 PM	2	0	0	0	YES	FAIR	NEED TO REPLACE	GOOD	YES	YES	YES	Lynn Morgan, Mike Rodtang	Hard bottom, odor, sheen on probe, dedicated PVC bailer
ST14-W02	11.27	19.38	7/8/97	5:10 PM	2	0	0	135	GOOD	OK	YES	YES - GOOD				Jack McCranie, Tim Zoch	2' Stand pipe, dedicated PVC bailer, vegetation overgrown
ST14-01	13.12	18.31	7/8/97	5:04 PM	2	0	0	0.7	GOOD	GOOD	YES	YES - GOOD	NA	NA		Jack McCranie, Tim Zoch	2' Stand pipe, dedicated PVC bailer
ST14-W21	9.55	17.78	7/8/97	5:55 AM	2	0	0	91	GOOD	GOOD	YES	MONITORING WELL	OK	GOOD		Jack McCranie, Tim Zoch	Flush mount, dedicated PVC bailer
ST14-04	11.70	17.90	7/8/97	5:55 PM	2	0	0	0	GOOD	GOOD	YES	SLIP - OK	NA	NA		Jack McCranie, Tim Zoch	2' Stand pipe, dedicated PVC bailer
ST14-W20	8.35	15.90	7/8/97	5:45 PM	2	0	0	0.9	GOOD	FAIR	YES	SLIP - OK	FAIR	OK		Jack McCranie, Tim Zoch	Pad Loose, broken casing
ST14-MW27	7.67	15.82	7/9/97	9:07 AM	2	0	0	0	NO	GOOD	NONE	MONITORING WELL CAP	GOOD	OK		Jack McCranie, Tim Zoch	Flush mount, flooded
ST14-W19	8.78	16.67	7/9/97	9:45 AM	2	0	0	35	NO	NONE	YES	yes	GOOD	OK - 1 MISSING		Jack McCranie, Tim Zoch	Flush mount, .01 product
ST14-W18	8.08	17.56	7/9/97	9:30 AM	2	0	0	12.6	NO	NONE	YES	MONITORING WELL CAP	GOOD	OK		Jack McCranie, Tim Zoch	Flush mount with no pad
ST14-W16	7.07	18.61	7/9/97	9:16 AM	2	0	0	25.8	GOOD	GOOD	YES	MONITORING WELL CAP	GOOD	1 MISSING		Jack McCranie, Tim Zoch	Flush mount, dedicated PVC bailer
LF01-1B	9.74	19.70	7/9/97	2:22 PM	2	0	0	0	NO	POOR	NONE	NEEDS REPLACEMENT	NONE	NONE		Jack McCranie, Tim Zoch	Flush mount, cracked pad
ST14-30	5.20	14.03	7/9/97	7:57 PM	2	0	0	0		GOOD	NEED TO REPLACE	GOOD	NO	YES	YES	Lynn Morgan, Mike Rodtang	Iron and organic material on probe
LF01-1E	13.16	32.09	7/10/97	8:38 AM	2	0	0	0	NO	OK	YES	SLIP	NA	NA	YES	Jack McCranie, Tim Zoch	2' stand pipe, dedicated PVC bailer
LF01-1C	13.41	32.52	7/10/97	8:44 AM	2	0	0	0	NO	OK	YES	SLIP	NA	NA	YES	Jack McCranie, Tim Zoch	2' stand pipe, dedicated PVC bailer
SD13-05	8.82	13.67	7/9/97	10:22 AM	4	0	0	0	NO	CRACKED	NO	MONITORING WELL	NO	OK	YES	Jack McCranie, Tim Zoch	< .01 Free product, flush mount
ST14-W31	10.01	13.75	7/9/97	10:39 AM	2	0	0	0	YES	CRACKED	YES	MONITORING WELL	OK	OK	YES	Jack McCranie, Tim Zoch	3' Stand pipe
ST14-W22	9.58	11.03	7/9/97	10:32 AM	2	0	0	0	YES	CRACKED	YES	MONITORING WELL	BROKEN	OK	YES	Jack McCranie, Tim Zoch	Flush mount
SD13-07	16.58	21.00	7/9/97	12:00 PM	4	0	0	134	NO	GOOD	YES	SLIP - OK	NONE	NONE	YES	Jack McCranie, Tim Zoch	3' Stand pipe with dedicated PVC bailer, 0.015" NAPL, 21.49' = TD
ST14-W32	4.01	12.22	7/9/97	11:24 AM	2	0	0	2.5	YES	OK	YES	MONITORING WELL	NA	NA	YES	Jack McCranie, Tim Zoch	3' Stand pipe
15B	7.97	12.44	7/9/97	11:38 AM	2	0	0	0.4	NO	NONE	YES	THREADED	NA	NA	YES	Jack McCranie, Tim Zoch	3' Stand pipe
OT-15C	7.92	15.49	7/9/97	11:30 AM	2	0	0	0	NO	COVERED	NO	MONITORING WELL	NA	NA	YES	Jack McCranie, Tim Zoch	3' Stand pipe, dedicated PVC bailer
SD13-04	9.10	13.37	7/9/97	11:09 AM	2	0	0	93	NO	OK	YES	MONITORING WELL	NA	NA	YES	Jack McCranie, Tim Zoch	2' Stand pipe
SD13-03	10.68	16.57	7/9/97	11:05 AM	2	0	0	13	NO	GOOD	YES	MONITORING WELL	NA	NA	YES	Jack McCranie, Tim Zoch	3' Stand pipe, dedicated PVC bailer
SD13-02	12.63	16.46	7/9/97	10:45 AM	2	0	0	56	YES	OK	YES	MONITORING WELL	NA	NA	YES	Jack McCranie, Tim Zoch	3' Stand pipe, dedicated PVC bailer
SD13-01	11.68	17.43	7/9/97	11:00 AM	2	0	0	26	YES	GOOD	YES	MONITORING WELL	NA	NA	YES	Jack McCranie, Tim Zoch	3' Stand pipe, dedicated PVC bailer
ST14-29	8.88	15.75	7/9/97	7:48 PM	2	0	0	0		GOOD	YES	REPLACED 1 BOLT		YES	YES	Lynn Morgan, Mike Rodtang	Odor, labelled ST14 MW29, had to bail casing
LF05-18	18.15	23.81	7/9/97	8:51 PM	2	0	0	2.3		FAIR	NEED TO REPLACE	GOOD	YES	YES	YES	Lynn Morgan, Mike Rodtang	
LF04-4B	17.46	25.34	7/9/97	8:05 PM	2	0	0	0		NO PAD	NEED TO REPLACE	GOOD	YES	YES	YES	Lynn Morgan, Mike Rodtang	Bailer in well.
LF04-4A	8.19	24.87	7/9/97	8:49 PM	2	0	0	0		NO PAD	NEED TO REPLACE	THREADED CAP	NA	NA	YES	Lynn Morgan, Mike Rodtang	
ITMW-01T	10.75	21.66	7/10/97	8:03 AM	4	0	0	0		GOOD	NEED TO REPLACE	THREADED CAP	NA	NA	YES	Lynn Morgan, Mike Rodtang	
17M	8.72	16.06	7/9/97	4:45 PM	2	0	0	201	NO	FAIR	NEED TO REPLACE	GOOD	NO	YES	YES	Jack McCranie, Tim Zoch	Free product, <.01
ST14-W23	5.39	10.00	7/9/97	2:02 PM	2	0	0	0	YES	GOOD	YES	MONITORING WELL	NO	YES		Jack McCranie, Tim Zoch	Flush mount, dedicated PVC bailer
MW-2	7.92	47.80	7/9/97	3:06 PM	4	0	0	0	NO	BAD	YES	MONITORING WELL	NO	NO		Jack McCranie, Tim Zoch	Flush mount, one missing, surface damage
MW-1	7.27	18.93	7/10/97	9:20 AM	4	0	0	0	NO	OK	NO	MONITORING WELL	YES	1 OF 2		Jack McCranie, Tim Zoch	Flush mount, no label, 2 well possible
MW-8	4.28	26.19	7/9/97	3:12 PM	4	0	0	0	NO	GOOD	NONE	MONITORING WELL	NO	NO		Jack McCranie, Tim Zoch	Flush mount, cover missing, surface damage
MW-11	22.13	32.47	7/9/97	2:55 PM	4	0	0	0	NO	GOOD	YES	MONITORING WELL	YES	YES		Jack McCranie, Tim Zoch	Flush mount, dedicated PVC bailer
MW-12	4.97	27.35	7/10/97	9:45 AM	4	0	0	0	NO	OK	YES	MONITORING WELL	NO	YES		Jack McCranie, Tim Zoch	Casing is in poor condition, dedicated PVC bailer
MW-10	9.60	32.82	7/9/97	3:26 PM	4	0	0	0	NO	FAIR	YES	MONITORING WELL - LOOSE	YES	ONE MISSING		Jack McCranie, Tim Zoch	Flush mount, dedicated PVC bailer, broken manway
MW-9	5.61	27.86	7/9/97	3:38 PM	4	0	0	0	NO	FAIR	NO	MONITORING WELL - LOOSE	NO	NONE		Jack McCranie, Tim Zoch	Flush mount, broken manway, needs new cap
GMI-22-05M	9.20	13.79	7/9/97	10:32 AM	2	0	0	0		GOOD	YES	GOOD	NA	NA	YES	Lynn Morgan, Mike Rodtang	Bailer in well.
USGS04T	16.86	22.46	7/9/97	11:50 AM	2	0	0	0	NO	FAIR	YES	MONITORING WELL - TIGHT	YES	2 OF 3		Jack McCranie, Tim Zoch	Flush mount, dedicated PVC bailer
USGS03T	3.60	8.75	7/10/97	10:13 AM	2	0	0	0	NO	NONE	YES	MONITORING WELL - LOOSE	BROKEN	BROKEN LID		Jack McCranie, Tim Zoch	Inner manway, broken cover

Table B.2
Groundwater Ferrous Iron Concentrations
Third Quarter 1997
Carswell NAS JRB

Sample Location	Date Sampled	Fe^{2+} (mg/L)
ST14-03	7/23/97	1.87
ST14-26	7/23/97	0.0
ST14-W31	7/24/97	0.01
MW-3	7/24/97	0.07
ST14-24	7/14/97	0[2]
ST14-14	7/15/97	0.82
ST14-02	7/15/97	6.6
ST14-W16	7/15/97	6.5
ST14-W18	7/15/97	2.46
GMI-22-02M	7/15/97	0.02
SPOT35-5	7/15/97	0.17
ST14-W21	7/16/97	2.38
SPOT35-2	7/16/97	5.6
ST14-29	7/17/97	0.6
ST14-04	7/17/97	3.3
BSS-A	7/20/97	0.02
MW-1	7/21/97	7.45
BSS-B	7/21/97	3.00
MW-8	7/22/97	0.03
SD13-01	7/22/97	2.71
MW-5	7/22/97	0.24
ST14-28	7/22/97	10.56
SD13-04	7/23/97	0.73
SD13-02	7/23/97	5.06

Superscript	Definition
2	Value assumed to be zero; negative value recorded in the field

TAB

Appendix C

Appendix C
Analytical Data
Quality Control / Quality Assurance Program

East Area Lab Results

Data Summary Table
Carswell AFB
East Area Groundwater

Locxref : Sample ID : Sample Date :	Method Detection Limit	BSS-A BSS-AWG01 20-Jul-97		BSS-B BSS-BWG01 21-Jul-97		LF01-1B LF01-1BWG01 21-Jul-97		LF01-1C DUP04-WG01 22-Jul-97	
Alkalinity (Titrimetric) - E310.1/METHOD (mg/l)									
Alkalinity as CaCO3 to pH 4.5	5	390		460		NA		NA	
EPA-9/RSK-175 Modified A2720C - M2720C/METHOD (ug/l)									
Ethane	0.092	0.092	U	4.6	U	NA		NA	
Ethene	0.1	0.1	U	5.2	U	NA		NA	
Methane	0.052	0.92	U	2100		NA		NA	
Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3005 (mg/l)									
Aluminum	0.082	NA		NA		12.8		0.082	U
Antimony	0.0025	NA		NA		0.0046	F	0.0025	U
Arsenic	0.0029	NA		NA		0.0029	U	0.02	
Barium	0.001	NA		NA		0.21		0.18	
Beryllium	0.001	NA		NA		0.001	U	0.001	U
Cadmium	0.0029	NA		NA		0.0029	U	0.0029	U
Calcium	0.053	NA		NA		168		196	
Chromium	0.0023	NA		NA		1.4		0.0023	U
Cobalt	0.0031	NA		NA		0.07		0.0031	U
Copper	0.0025	NA		NA		0.041	F	0.0043	F
Iron	0.041	NA		NA		18.4		12	
Lead	0.0017	NA		NA		0.0081		0.0017	U
Magnesium	0.021	NA		NA		12.2		13.4	
Manganese	0.001	NA		NA		2.3		1.7	
Molybdenum	0.0065	NA		NA		0.25		0.0071	F
Nickel	0.01	NA		NA		1.3		0.01	U
Potassium	0.3	NA		NA		2.5	F	1	F
Selenium	0.0039	NA		NA		0.0039	U	0.0039	U
Sodium	0.12	NA		NA		22.2		26.8	
Vanadium	0.0021	NA		NA		0.025	F	0.0021	U
Zinc	0.012	NA		NA		0.051		0.012	U
Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)									
Mercury	0.000053	NA		NA		0.000053	U	0.000053	UJ
Silver (AA, Furnace Technique) - SW7761/SW3020 (mg/l)									
Silver	0.0002	NA		NA		0.0041		0.0002	UJ
Thallium (AA, Furnace Technique) - SW7841/SW3020 (mg/l)									
Thallium	0.002	NA		NA		0.002	U	0.002	U
Aromatic Volatile Organics - SW8020/SW5030 (ug/l)									
Benzene	0.21	0.21	U	21	U	NA		NA	
Ethylbenzene	0.35	0.35	U	1600	J	NA		NA	

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Data Summary Table
Carswell AFB
East Area Groundwater

Locxref :	Method	BSS-A		BSS-B		LF01-1B		LF01-1C	
Sample ID :	Detection	BSS-AWG01		BSS-BWG01		LF01-1BWG01		DUP04-WG01	
Sample Date :	Limit	20-Jul-97		21-Jul-97		21-Jul-97		22-Jul-97	
Toluene	0.13	0.13	U	9100		NA		NA	
Xylenes (total)	0.68	0.68	U	8500	J	NA		NA	
Volatile Organic Compounds by Gas Chromatograph/Mas - SW8260/SW5030 (ug/l)									
1,1,1,2-Tetrachloroethane	0.1	NA		NA		0.1	U	0.1	UJ
1,1,1-Trichloroethane	0.11	NA		NA		0.11	U	0.11	UJ
1,1,2,2-Tetrachloroethane	0.13	NA		NA		0.13	U	0.13	UJ
1,1,2-Trichloroethane	0.074	NA		NA		0.074	U	0.074	UJ
1,1-Dichloroethane	0.075	NA		NA		0.075	U	0.075	UJ
1,1-Dichloroethene	0.14	NA		NA		0.14	U	0.14	UJ
1,1-Dichloropropene	0.15	NA		NA		0.15	U	0.15	UJ
1,2,3-Trichlorobenzene	0.12	NA		NA		0.12	U	0.12	UJ
1,2,3-Trichloropropane	0.2	NA		NA		0.2	U	0.2	UJ
1,2,4-Trichlorobenzene	0.11	NA		NA		0.11	U	0.11	UJ
1,2,4-Trimethylbenzene	0.12	NA		NA		0.7	F	0.12	UJ
1,2-Dibromo-3-chloropropane (DBCP)	0.29	NA		NA		0.29	U	0.29	UJ
1,2-Dibromoethane (EDB)	0.08	NA		NA		0.08	U	0.08	UJ
1,2-Dichlorobenzene	0.13	NA		NA		0.13	U	0.13	UJ
1,2-Dichloroethane	0.077	NA		NA		0.077	U	0.077	UJ
1,2-Dichloropropane	0.085	NA		NA		0.085	U	0.085	UJ
1,3,5-Trimethylbenzene	0.15	NA		NA		0.15	U	0.15	UJ
1,3-Dichlorobenzene	0.11	NA		NA		0.11	U	0.11	UJ
1,3-Dichloropropane	0.066	NA		NA		0.066	U	0.066	UJ
1,4-Dichlorobenzene	0.14	NA		NA		0.14	U	0.14	UJ
1-Chlorohexane	0.11	NA		NA		0.11	U	0.11	UJ
2,2-Dichloropropane	0.15	NA		NA		0.15	U	0.15	UJ
2-Chlorotoluene	0.14	NA		NA		0.14	U	0.14	UJ
4-Chlorotoluene	0.12	NA		NA		0.12	U	0.12	UJ
Benzene	0.11	NA		NA		0.11	U	0.11	UJ
Bromobenzene	0.13	NA		NA		0.13	U	0.13	UJ
Bromochloromethane	0.13	NA		NA		0.13	U	0.13	UJ
Bromodichloromethane	0.11	NA		NA		0.11	U	0.11	UJ
Bromoform	0.4	NA		NA		0.4	U	0.4	UJ
Bromomethane	0.17	NA		NA		0.17	U	0.17	UJ
Carbon tetrachloride	0.14	NA		NA		0.14	U	0.14	UJ
Chlorobenzene	0.14	NA		NA		0.14	U	0.14	UJ
Chloroethane	0.066	NA		NA		0.066	U	0.066	UJ
Chloroform	0.097	NA		NA		0.097	U	0.097	UJ
Chloromethane	0.08	NA		NA		0.08	U	0.08	UJ
Dibromochloromethane	0.1	NA		NA		0.1	U	0.1	UJ
Dibromomethane	0.096	NA		NA		0.096	U	0.096	UJ
Dichlorodifluoromethane	0.14	NA		NA		0.14	U	0.14	UJ
Ethylbenzene	0.16	NA		NA		0.49	F	0.16	UJ

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Data Summary Table
Carswell AFB
East Area Groundwater

Locxref :	Method	BSS-A	BSS-B	LF01-1B		LF01-1C	
Sample ID :	Detection	BSS-AWG01	BSS-BWG01	LF01-1BWG01		DUP04-WG01	
Sample Date :	Limit	20-Jul-97	21-Jul-97	21-Jul-97		22-Jul-97	
Hexachlorobutadiene	0.15	NA	NA	0.15	U	0.15	UJ
Isopropylbenzene	0.13	NA	NA	0.13	U	1.8	J
Methylene chloride	0.086	NA	NA	0.086	U	0.086	UJ
Naphthalene	0.088	NA	NA	0.088	U	0.088	UJ
Styrene	0.094	NA	NA	0.094	U	0.094	UJ
Tetrachloroethene	0.13	NA	NA	0.13	U	0.13	UJ
Toluene	0.14	NA	NA	1.8		0.14	UJ
Trichloroethene	0.097	NA	NA	0.097	U	0.097	UJ
Trichlorofluoromethane	0.16	NA	NA	0.16	U	0.16	UJ
Vinyl chloride	0.13	NA	NA	0.13	U	0.13	UJ
cis-1,2-Dichloroethene	0.13	NA	NA	0.13	U	0.13	UJ
cis-1,3-Dichloropropene	0.081	NA	NA	0.081	U	0.081	UJ
m-Xylene & p-Xylene	0.27	NA	NA	2.1		0.27	UJ
n-Butylbenzene	0.14	NA	NA	0.14	U	0.14	UJ
n-Propylbenzene	0.12	NA	NA	0.12	U	0.12	UJ
o-Xylene	0.11	NA	NA	0.86	F	0.11	UJ
p-Isopropyltoluene	0.13	NA	NA	0.13	U	0.13	UJ
sec-Butylbenzene	0.14	NA	NA	0.14	U	5.2	J
tert-Butylbenzene	0.13	NA	NA	0.13	U	0.98	F
trans-1,2-Dichloroethene	0.088	NA	NA	0.088	U	0.088	UJ
trans-1,3-Dichloropropene	0.11	NA	NA	0.11	U	0.11	UJ
SW846 9056 - SW9056/METHOD (mg/l)							
Bromide	0.05	0.99	1.2	NA		NA	
Chloride	0.1	42.1	78.2	NA		NA	
Sulfate	0.2	49.9	4.7	NA		NA	
Total Organic Carbon - SW9060/METHOD (mg/l)							
Total Organic Carbon	0.2	2	24	NA		NA	

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Data Summary Table
Carswell AFB
East Area Groundwater

Locxref :	Method	LF01-1C		LF01-1D		LF01-1E		MW-1	
Sample ID :	Detection	LF01-1CWG01		LF01-1DWG01		LF01-1EWG01		MW-1WG01	
Sample Date :	Limit	22-Jul-97		21-Jul-97		22-Jul-97		21-Jul-97	
Alkalinity (Titrimetric) - E310.1/METHOD (mg/l)									
Alkalinity as CaCO3 to pH 4.5	5	NA		NA		NA		490	
EPA-9/RSK-175 Modified A2720C - M2720C/METHOD (ug/l)									
Ethane	0.092	NA		NA		NA		18	U
Ethene	0.1	NA		NA		NA		21	U
Methane	0.052	NA		NA		NA		7500	
Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3005 (mg/l)									
Aluminum	0.082	0.082	U	0.082	U	0.082	U	NA	
Antimony	0.0025	0.0025	U	0.0025	U	0.0025	U	NA	
Arsenic	0.0029	0.022		0.0029	U	0.0029	U	NA	
Barium	0.001	0.18		0.076		0.14		NA	
Beryllium	0.001	0.001	U	0.001	U	0.001	U	NA	
Cadmium	0.0029	0.0029	U	0.0029	U	0.0029	U	NA	
Calcium	0.053	193		198		134		NA	
Chromium	0.0023	0.0023	U	0.0023	U	0.0023	U	NA	
Cobalt	0.0031	0.0031	U	0.0055	F	0.0031	U	NA	
Copper	0.0025	0.0053	F	0.0043	F	0.0041	F	NA	
Iron	0.041	11.7		2.9		0.26		NA	
Lead	0.0017	0.0017	U	0.0017	U	0.0017	U	NA	
Magnesium	0.021	13.3		11.9		7.9		NA	
Manganese	0.001	1.7		0.49		3.8		NA	
Molybdenum	0.0065	0.0065	U	0.0065	U	0.0065	U	NA	
Nickel	0.01	0.01	U	0.012	F	0.01	U	NA	
Potassium	0.3	1.2	F	2.4	F	0.3	U	NA	
Selenium	0.0039	0.0039	U	0.0039	U	0.0039	U	NA	
Sodium	0.12	26.8		23.3		21.7		NA	
Vanadium	0.0021	0.0021	U	0.0021	U	0.0021	U	NA	
Zinc	0.012	0.012	U	0.012	U	0.012	U	NA	
Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)									
Mercury	0.000053	0.000053	UJ	0.000053	U	0.000053	UJ	NA	
Silver (AA, Furnace Technique) - SW7761/SW3020 (mg/l)									
Silver	0.0002	0.0002	UJ	0.0002	UJ	0.0002	UJ	NA	
Thallium (AA, Furnace Technique) - SW7841/SW3020 (mg/l)									
Thallium	0.002	0.002	U	0.002	U	0.002	U	NA	
Aromatic Volatile Organics - SW8020/SW5030 (ug/l)									
Benzene	0.21	NA		NA		NA		3200	J
Ethylbenzene	0.35	NA		NA		NA		1700	

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Data Summary Table
Carswell AFB
East Area Groundwater

Locxref :	Method	LF01-1C		LF01-1D		LF01-1E		MW-1	
Sample ID :	Detection	LF01-1CWG01		LF01-1DWG01		LF01-1EWG01		MW-1WG01	
Sample Date :	Limit	22-Jul-97		21-Jul-97		22-Jul-97		21-Jul-97	
Toluene	0.13	NA		NA		NA		240	J
Xylenes (total)	0.68	NA		NA		NA		3100	
Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)									
1,1,1,2-Tetrachloroethane	0.1	0.1	UJ	0.1	U	0.1	UJ	NA	
1,1,1-Trichloroethane	0.11	0.11	UJ	0.11	U	0.11	UJ	NA	
1,1,2,2-Tetrachloroethane	0.13	0.13	UJ	0.13	U	0.13	UJ	NA	
1,1,2-Trichloroethane	0.074	0.074	UJ	0.074	U	0.074	UJ	NA	
1,1-Dichloroethane	0.075	0.075	UJ	0.075	U	0.075	UJ	NA	
1,1-Dichloroethene	0.14	0.14	UJ	0.14	U	0.14	UJ	NA	
1,1-Dichloropropene	0.15	0.15	UJ	0.15	U	0.15	UJ	NA	
1,2,3-Trichlorobenzene	0.12	0.12	UJ	0.12	U	0.12	UJ	NA	
1,2,3-Trichloropropane	0.2	0.2	UJ	0.2	U	0.2	UJ	NA	
1,2,4-Trichlorobenzene	0.11	0.11	UJ	0.11	U	0.11	UJ	NA	
1,2,4-Trimethylbenzene	0.12	0.12	UJ	0.32	F	0.12	UJ	NA	
1,2-Dibromo-3-chloropropane (DBCP)	0.29	0.29	UJ	0.29	U	0.29	UJ	NA	
1,2-Dibromoethane (EDB)	0.08	0.08	UJ	0.08	U	0.08	UJ	NA	
1,2-Dichlorobenzene	0.13	0.13	UJ	0.13	U	0.13	UJ	NA	
1,2-Dichloroethane	0.077	0.077	UJ	0.077	U	0.077	UJ	NA	
1,2-Dichloropropane	0.085	0.085	UJ	0.085	U	0.085	UJ	NA	
1,3,5-Trimethylbenzene	0.15	0.15	UJ	0.15	U	0.15	UJ	NA	
1,3-Dichlorobenzene	0.11	0.11	UJ	0.11	U	0.11	UJ	NA	
1,3-Dichloropropane	0.066	0.066	UJ	0.066	U	0.066	UJ	NA	
1,4-Dichlorobenzene	0.14	0.14	UJ	0.14	U	0.14	UJ	NA	
1-Chlorohexane	0.11	0.11	UJ	0.11	U	0.11	UJ	NA	
2,2-Dichloropropane	0.15	0.15	UJ	0.15	U	0.15	UJ	NA	
2-Chlorotoluene	0.14	0.14	UJ	0.14	U	0.14	UJ	NA	
4-Chlorotoluene	0.12	0.12	UJ	0.12	U	0.12	UJ	NA	
Benzene	0.11	0.11	UJ	0.11	U	0.11	UJ	NA	
Bromobenzene	0.13	0.13	UJ	0.13	U	0.13	UJ	NA	
Bromochloromethane	0.13	0.13	UJ	0.13	U	0.13	UJ	NA	
Bromodichloromethane	0.11	0.11	UJ	0.11	U	0.11	UJ	NA	
Bromoform	0.4	0.4	UJ	0.4	U	0.4	UJ	NA	
Bromomethane	0.17	0.17	UJ	0.17	U	0.17	UJ	NA	
Carbon tetrachloride	0.14	0.14	UJ	0.14	U	0.14	UJ	NA	
Chlorobenzene	0.14	0.14	UJ	0.14	U	2	J	NA	
Chloroethane	0.066	0.066	UJ	0.066	U	0.066	UJ	NA	
Chloroform	0.097	0.097	UJ	0.097	U	0.097	UJ	NA	
Chloromethane	0.08	0.08	UJ	0.08	U	0.08	UJ	NA	
Dibromochloromethane	0.1	0.1	UJ	0.1	U	0.1	UJ	NA	
Dibromomethane	0.096	0.096	UJ	0.096	U	0.096	UJ	NA	
Dichlorodifluoromethane	0.14	0.14	UJ	0.14	U	0.14	UJ	NA	
Ethylbenzene	0.16	0.16	UJ	0.24	F	0.16	UJ	NA	

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Data Summary Table
Carswell AFB
East Area Groundwater

Locxref :	Method	LF01-1C		LF01-1D		LF01-1E		MW-1	
Sample ID :	Detection	LF01-1CWG01		LF01-1DWG01		LF01-1EWG01		MW-1WG01	
Sample Date :	Limit	22-Jul-97		21-Jul-97		22-Jul-97		21-Jul-97	
Hexachlorobutadiene	0.15	0.15	UJ	0.15	U	0.15	UJ	NA	
Isopropylbenzene	0.13	2	J	0.13	U	0.13	UJ	NA	
Methylene chloride	0.086	0.086	UJ	0.086	U	0.086	UJ	NA	
Naphthalene	0.088	0.088	UJ	0.088	U	0.088	UJ	NA	
Styrene	0.094	0.094	UJ	0.094	U	0.094	UJ	NA	
Tetrachloroethene	0.13	0.13	UJ	0.13	U	0.13	UJ	NA	
Toluene	0.14	0.14	UJ	0.75	F	0.14	UJ	NA	
Trichloroethene	0.097	0.097	UJ	0.097	U	0.097	UJ	NA	
Trichlorofluoromethane	0.16	0.16	UJ	0.16	U	0.16	UJ	NA	
Vinyl chloride	0.13	0.13	UJ	0.13	U	0.13	UJ	NA	
cis-1,2-Dichloroethene	0.13	0.13	UJ	0.13	U	0.3	F	NA	
cis-1,3-Dichloropropene	0.081	0.081	UJ	0.081	U	0.081	UJ	NA	
m-Xylene & p-Xylene	0.27	0.27	UJ	0.94		0.27	UJ	NA	
n-Butylbenzene	0.14	0.14	UJ	0.14	U	0.14	UJ	NA	
n-Propylbenzene	0.12	0.12	UJ	0.12	U	0.12	UJ	NA	
o-Xylene	0.11	0.11	UJ	0.36	F	0.11	UJ	NA	
p-Isopropyltoluene	0.13	0.13	UJ	0.13	U	0.13	UJ	NA	
sec-Butylbenzene	0.14	5.7	J	0.14	U	0.14	UJ	NA	
tert-Butylbenzene	0.13	1.1	F	0.13	U	0.13	UJ	NA	
trans-1,2-Dichloroethene	0.088	0.088	UJ	0.088	U	0.088	UJ	NA	
trans-1,3-Dichloropropene	0.11	0.11	UJ	0.11	U	0.11	UJ	NA	
SW846 9056 - SW9056/METHOD (mg/l)									
Bromide	0.05	NA		NA		NA		1.4	
Chloride	0.1	NA		NA		NA		67.8	
Sulfate	0.2	NA		NA		NA		0.94	F
Total Organic Carbon - SW9060/METHOD (mg/l)									
Total Organic Carbon	0.2	NA		NA		NA		14	

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Data Summary Table
Carswell AFB
East Area Groundwater

Locxref :	Method	MW-3		MW-5		MW-8		MW-9	
Sample ID :	Detection	MW-3WG01		MW-5WG01		MW-8WG01		MW-9WG01	
Sample Date :	Limit	24-Jul-97		22-Jul-97		22-Jul-97		22-Jul-97	
Alkalinity (Titrimetric) - E310.1/METHOD (mg/l)									
Alkalinity as CaCO3 to pH 4.5	5	370		370	J	250	J	NA	
EPA-9/RSK-175 Modified A2720C - M2720C/METHOD (ug/l)									
Ethane	0.092	0.092	U	9.2	UJ	0.65	J	NA	
Ethene	0.1	0.1	U	10	UJ	0.74	J	NA	
Methane	0.052	0.24	F	3400	J	20	J	NA	
Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3005 (mg/l)									
Aluminum	0.082	NA		NA		NA		0.082	U
Antimony	0.0025	NA		NA		NA		0.0025	U
Arsenic	0.0029	NA		NA		NA		0.0029	U
Barium	0.001	NA		NA		NA		0.14	
Beryllium	0.001	NA		NA		NA		0.001	U
Cadmium	0.0029	NA		NA		NA		0.0029	U
Calcium	0.053	NA		NA		NA		180	
Chromium	0.0023	NA		NA		NA		0.0023	U
Cobalt	0.0031	NA		NA		NA		0.0031	U
Copper	0.0025	NA		NA		NA		0.0039	F
Iron	0.041	NA		NA		NA		3.3	
Lead	0.0017	NA		NA		NA		0.0017	U
Magnesium	0.021	NA		NA		NA		13.5	
Manganese	0.001	NA		NA		NA		3.7	
Molybdenum	0.0065	NA		NA		NA		0.0065	U
Nickel	0.01	NA		NA		NA		0.01	U
Potassium	0.3	NA		NA		NA		0.34	F
Selenium	0.0039	NA		NA		NA		0.0039	U
Sodium	0.12	NA		NA		NA		78.8	
Vanadium	0.0021	NA		NA		NA		0.0021	U
Zinc	0.012	NA		NA		NA		0.012	U
Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)									
Mercury	0.000053	NA		NA		NA		0.000053	UJ
Silver (AA, Furnace Technique) - SW7761/SW3020 (mg/l)									
Silver	0.0002	NA		NA		NA		0.0002	UJ
Thallium (AA, Furnace Technique) - SW7841/SW3020 (mg/l)									
Thallium	0.002	NA		NA		NA		0.002	UJ
Aromatic Volatile Organics - SW8020/SW5030 (ug/l)									
Benzene	0.21	0.24	F	65	J	0.21	UJ	NA	
Ethylbenzene	0.35	0.35	U	360	J	0.46	F	NA	

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Data Summary Table
Carswell AFB
East Area Groundwater

Locxref:	Method	MW-3		MW-5		MW-8		MW-9	
Sample ID:	Detection	MW-3WG01		MW-5WG01		MW-8WG01		MW-9WG01	
Sample Date:	Limit	24-Jul-97		22-Jul-97		22-Jul-97		22-Jul-97	
Toluene	0.13	0.24	F	18	J	0.4	F	NA	
Xylenes (total)	0.68	0.9	F	22	J	1.3	F	NA	
Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)									
1,1,1,2-Tetrachloroethane	0.1	NA		NA		NA		0.1	UJ
1,1,1-Trichloroethane	0.11	NA		NA		NA		0.11	UJ
1,1,2,2-Tetrachloroethane	0.13	NA		NA		NA		0.13	UJ
1,1,2-Trichloroethane	0.074	NA		NA		NA		0.074	UJ
1,1-Dichloroethane	0.075	NA		NA		NA		0.075	UJ
1,1-Dichloroethene	0.14	NA		NA		NA		0.14	UJ
1,1-Dichloropropene	0.15	NA		NA		NA		0.15	UJ
1,2,3-Trichlorobenzene	0.12	NA		NA		NA		0.12	UJ
1,2,3-Trichloropropane	0.2	NA		NA		NA		0.2	UJ
1,2,4-Trichlorobenzene	0.11	NA		NA		NA		0.11	UJ
1,2,4-Trimethylbenzene	0.12	NA		NA		NA		0.12	UJ
1,2-Dibromo-3-chloropropane (DBCP)	0.29	NA		NA		NA		0.29	UJ
1,2-Dibromoethane (EDB)	0.08	NA		NA		NA		0.08	UJ
1,2-Dichlorobenzene	0.13	NA		NA		NA		0.13	UJ
1,2-Dichloroethane	0.077	NA		NA		NA		0.077	UJ
1,2-Dichloropropane	0.085	NA		NA		NA		0.085	UJ
1,3,5-Trimethylbenzene	0.15	NA		NA		NA		0.15	UJ
1,3-Dichlorobenzene	0.11	NA		NA		NA		0.11	UJ
1,3-Dichloropropane	0.066	NA		NA		NA		0.066	UJ
1,4-Dichlorobenzene	0.14	NA		NA		NA		0.14	UJ
1-Chlorohexane	0.11	NA		NA		NA		0.11	UJ
2,2-Dichloropropane	0.15	NA		NA		NA		0.15	UJ
2-Chlorotoluene	0.14	NA		NA		NA		0.14	UJ
4-Chlorotoluene	0.12	NA		NA		NA		0.12	UJ
Benzene	0.11	NA		NA		NA		0.11	UJ
Bromobenzene	0.13	NA		NA		NA		0.13	UJ
Bromochloromethane	0.13	NA		NA		NA		0.13	UJ
Bromodichloromethane	0.11	NA		NA		NA		0.11	UJ
Bromoform	0.4	NA		NA		NA		0.4	UJ
Bromomethane	0.17	NA		NA		NA		0.17	UJ
Carbon tetrachloride	0.14	NA		NA		NA		0.14	UJ
Chlorobenzene	0.14	NA		NA		NA		0.14	UJ
Chloroethane	0.066	NA		NA		NA		0.066	UJ
Chloroform	0.097	NA		NA		NA		0.097	UJ
Chloromethane	0.08	NA		NA		NA		0.08	UJ
Dibromochloromethane	0.1	NA		NA		NA		0.1	UJ
Dibromomethane	0.096	NA		NA		NA		0.096	UJ
Dichlorodifluoromethane	0.14	NA		NA		NA		0.14	UJ
Ethylbenzene	0.16	NA		NA		NA		0.16	UJ

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Data Summary Table
Carswell AFB
East Area Groundwater

Locxref :	Method	MW-3		MW-5		MW-8		MW-9	
Sample ID :	Detection	MW-3WG01		MW-5WG01		MW-8WG01		MW-9WG01	
Sample Date :	Limit	24-Jul-97		22-Jul-97		22-Jul-97		22-Jul-97	
Hexachlorobutadiene	0.15	NA		NA		NA		0.15	UJ
Isopropylbenzene	0.13	NA		NA		NA		0.13	UJ
Methylene chloride	0.086	NA		NA		NA		0.086	UJ
Naphthalene	0.088	NA		NA		NA		0.088	UJ
Styrene	0.094	NA		NA		NA		0.094	UJ
Tetrachloroethene	0.13	NA		NA		NA		0.13	UJ
Toluene	0.14	NA		NA		NA		0.14	UJ
Trichloroethene	0.097	NA		NA		NA		0.097	UJ
Trichlorofluoromethane	0.16	NA		NA		NA		0.16	UJ
Vinyl chloride	0.13	NA		NA		NA		0.13	UJ
cis-1,2-Dichloroethene	0.13	NA		NA		NA		0.13	UJ
cis-1,3-Dichloropropene	0.081	NA		NA		NA		0.081	UJ
m-Xylene & p-Xylene	0.27	NA		NA		NA		0.27	UJ
n-Butylbenzene	0.14	NA		NA		NA		0.14	UJ
n-Propylbenzene	0.12	NA		NA		NA		0.12	UJ
o-Xylene	0.11	NA		NA		NA		0.11	UJ
p-Isopropyltoluene	0.13	NA		NA		NA		0.13	UJ
sec-Butylbenzene	0.14	NA		NA		NA		0.14	UJ
tert-Butylbenzene	0.13	NA		NA		NA		0.13	UJ
trans-1,2-Dichloroethene	0.088	NA		NA		NA		0.088	UJ
trans-1,3-Dichloropropene	0.11	NA		NA		NA		0.11	UJ
SW846 9056 - SW9056/METHOD (mg/l)									
Bromide	0.05	0.92		1.2	J	0.74	J	NA	
Chloride	0.1	40.2		54.5	J	42.9	J	NA	
Sulfate	0.2	43.2		1.2	UJ	33.4	J	NA	
Total Organic Carbon - SW9060/METHOD (mg/l)									
Total Organic Carbon	0.2	2		13	J	3	J	NA	

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Data Summary Table
Carswell AFB
East Area Groundwater

Locxref :	Method	MW-10		MW-11		MW-12		OT-15C	
Sample ID :	Detection	MW-10WG01		MW-11WG01		MW-12WG01		OT-15CWG01	
Sample Date :	Limit	21-Jul-97		21-Jul-97		22-Jul-97		23-Jul-97	
Alkalinity (Titrimetric) - E310.1/METHOD (mg/l)									
Alkalinity as CaCO3 to pH 4.5	5	NA		NA		NA		NA	
EPA-9/RSK-175 Modified A2720C - M2720C/METHOD (ug/l)									
Ethane	0.092	NA		NA		NA		NA	
Ethene	0.1	NA		NA		NA		NA	
Methane	0.052	NA		NA		NA		NA	
Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3005 (mg/l)									
Aluminum	0.082	0.082	U	0.082	U	0.082	U	0.082	U
Antimony	0.0025	0.0025	U	0.0025	U	0.0025	U	0.0025	U
Arsenic	0.0029	0.019		0.0029	U	0.0029	U	0.0029	U
Barium	0.001	0.18		0.17		0.057		0.18	
Beryllium	0.001	0.001	U	0.001	U	0.001	U	0.001	U
Cadmium	0.0029	0.0029	U	0.0029	U	0.0029	U	0.0029	U
Calcium	0.053	179		189		294		142	
Chromium	0.0023	0.0023	U	0.0023	U	0.0023	U	0.0023	U
Cobalt	0.0031	0.005	F	0.0031	U	0.0031	U	0.0031	U
Copper	0.0025	0.0047	F	0.0052	F	0.0051	F	0.0052	F
Iron	0.041	6.3		0.25		0.041	U	0.041	U
Lead	0.0017	0.005		0.0017	U	0.0017	U	0.0017	U
Magnesium	0.021	13.6		14.7		9.2		4.5	
Manganese	0.001	5.9		0.14		0.084		0.046	
Molybdenum	0.0065	0.0065	U	0.0065	U	0.0065	U	0.0065	U
Nickel	0.01	0.01	U	0.01	U	0.01	U	0.01	U
Potassium	0.3	0.3	U	0.65	F	0.73	F	2.4	F
Selenium	0.0039	0.0039	U	0.0039	U	0.0039	U	0.0039	U
Sodium	0.12	54.8		61.6		50		21.1	
Vanadium	0.0021	0.0021	U	0.0021	U	0.0021	U	0.0021	U
Zinc	0.012	0.012	U	0.012	F	0.019	F	0.026	
Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)									
Mercury	0.000053	0.000053	U	0.000053	U	0.000053	UJ	0.000053	UJ
Silver (AA, Furnace Technique) - SW7761/SW3020 (mg/l)									
Silver	0.0002	0.0002	UJ	0.0002	UJ	0.0002	UJ	0.0002	UJ
Thallium (AA, Furnace Technique) - SW7841/SW3020 (mg/l)									
Thallium	0.002	0.002	UJ	0.002	UJ	0.002	U	0.002	U
Aromatic Volatile Organics - SW8020/SW5030 (ug/l)									
Benzene	0.21	NA		NA		NA		NA	
Ethylbenzene	0.35	NA		NA		NA		NA	

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Data Summary Table
Carswell AFB
East Area Groundwater

Locxref: / Sample ID: / Sample Date:	Method Detection Limit	MW-10 MW-10WG01 21-Jul-97		MW-11 MW-11WG01 21-Jul-97		MW-12 MW-12WG01 22-Jul-97		OT-15C OT-15CWG01 23-Jul-97	
Toluene	0.13	NA		NA		NA		NA	
Xylenes (total)	0.68	NA		NA		NA		NA	
Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)									
1,1,1,2-Tetrachloroethane	0.1	50	U	0.1	U	0.1	UJ	0.1	UJ
1,1,1-Trichloroethane	0.11	55	U	0.11	U	0.11	UJ	0.11	UJ
1,1,2,2-Tetrachloroethane	0.13	65	U	0.13	U	0.13	UJ	0.13	UJ
1,1,2-Trichloroethane	0.074	37	U	0.074	U	0.074	UJ	0.074	UJ
1,1-Dichloroethane	0.075	38	U	0.075	U	0.075	UJ	0.075	UJ
1,1-Dichloroethene	0.14	70	U	0.14	U	0.14	UJ	0.14	UJ
1,1-Dichloropropene	0.15	75	U	0.15	U	0.15	UJ	0.15	UJ
1,2,3-Trichlorobenzene	0.12	60	U	0.12	U	0.12	UJ	0.12	UJ
1,2,3-Trichloropropane	0.2	100	U	0.2	U	0.2	UJ	0.2	UJ
1,2,4-Trichlorobenzene	0.11	55	U	0.11	U	0.11	UJ	0.11	UJ
1,2,4-Trimethylbenzene	0.12	2600		1.2	F	0.12	UJ	0.12	UJ
1,2-Dibromo-3-chloropropane (DBCP)	0.29	140	U	0.29	U	0.29	UJ	0.29	UJ
1,2-Dibromoethane (EDB)	0.08	40	U	0.08	U	0.08	UJ	0.08	UJ
1,2-Dichlorobenzene	0.13	65	U	0.13	U	0.13	UJ	0.13	UJ
1,2-Dichloroethane	0.077	38	U	0.077	U	0.077	UJ	0.077	UJ
1,2-Dichloropropane	0.085	42	U	0.085	U	0.085	UJ	0.085	UJ
1,3,5-Trimethylbenzene	0.15	650		0.15	U	0.15	UJ	0.15	UJ
1,3-Dichlorobenzene	0.11	55	U	0.11	U	0.11	UJ	0.11	UJ
1,3-Dichloropropane	0.066	33	U	0.066	U	0.066	UJ	0.066	UJ
1,4-Dichlorobenzene	0.14	70	U	0.14	U	0.14	UJ	0.14	UJ
1-Chlorohexane	0.11	55	U	0.11	U	0.11	UJ	0.11	UJ
2,2-Dichloropropane	0.15	75	U	0.15	U	0.15	UJ	0.15	UJ
2-Chlorotoluene	0.14	70	U	0.14	U	0.14	UJ	0.14	UJ
4-Chlorotoluene	0.12	60	U	0.12	U	0.12	UJ	0.12	UJ
Benzene	0.11	4200		0.32	F	0.11	UJ	0.11	UJ
Bromobenzene	0.13	65	U	0.13	U	0.13	UJ	0.13	UJ
Bromochloromethane	0.13	65	U	0.13	U	0.13	UJ	0.13	UJ
Bromodichloromethane	0.11	55	U	0.11	U	0.11	UJ	0.11	UJ
Bromoform	0.4	200	U	0.4	U	0.4	UJ	0.4	UJ
Bromomethane	0.17	85	U	0.17	U	0.17	UJ	0.17	UJ
Carbon tetrachloride	0.14	70	U	0.14	U	0.14	UJ	0.14	UJ
Chlorobenzene	0.14	70	U	0.14	U	0.14	UJ	0.14	UJ
Chloroethane	0.066	33	U	0.066	U	0.066	UJ	0.066	UJ
Chloroform	0.097	48	U	0.097	U	0.097	UJ	0.36	UJ
Chloromethane	0.08	40	U	0.08	U	0.08	UJ	0.08	UJ
Dibromochloromethane	0.1	50	U	0.1	U	0.1	UJ	0.1	UJ
Dibromomethane	0.096	48	U	0.096	U	0.096	UJ	0.096	UJ
Dichlorodifluoromethane	0.14	70	U	0.14	U	0.14	UJ	0.14	UJ
Ethylbenzene	0.16	4800		1.7		0.32	F	0.49	F

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Data Summary Table
Carswell AFB
East Area Groundwater

Locxref :	Method	MW-10		MW-11		MW-12		OT-15C	
Sample ID :	Detection	MW-10WG01		MW-11WG01		MW-12WG01		OT-15CWG01	
Sample Date :	Limit	21-Jul-97		21-Jul-97		22-Jul-97		23-Jul-97	
Hexachlorobutadiene	0.15	75	U	0.15	U	0.15	UJ	0.15	UJ
Isopropylbenzene	0.13	200	F	0.13	U	0.13	UJ	0.13	UJ
Methylene chloride	0.086	43	U	0.086	U	0.086	UJ	0.086	UJ
Naphthalene	0.088	770		0.49		0.088	UJ	0.088	UJ
Styrene	0.094	47	U	0.094	U	0.094	UJ	0.094	UJ
Tetrachloroethene	0.13	65	U	0.13	U	0.13	UJ	1.2	F
Toluene	0.14	9000		1.5		0.14	UJ	0.14	UJ
Trichloroethene	0.097	48	U	0.097	U	0.097	UJ	0.097	UJ
Trichlorofluoromethane	0.16	80	U	0.16	U	0.16	UJ	0.16	UJ
Vinyl chloride	0.13	65	U	0.13	U	0.13	UJ	0.13	UJ
cis-1,2-Dichloroethene	0.13	65	U	0.13	U	0.13	UJ	0.13	UJ
cis-1,3-Dichloropropene	0.081	40	U	0.081	U	0.081	UJ	0.081	UJ
m-Xylene & p-Xylene	0.27	9400		3.3		0.56	J	0.79	J
n-Butylbenzene	0.14	70	U	0.14	U	0.14	UJ	0.14	UJ
n-Propylbenzene	0.12	400		0.12	U	0.12	UJ	0.12	UJ
o-Xylene	0.11	3700		0.98	F	0.19	F	0.22	F
p-Isopropyltoluene	0.13	65	U	0.13	U	0.13	UJ	0.13	UJ
sec-Butylbenzene	0.14	70	U	0.14	U	0.14	UJ	0.14	UJ
tert-Butylbenzene	0.13	65	U	0.13	U	0.13	UJ	0.13	UJ
trans-1,2-Dichloroethene	0.088	44	U	0.088	U	0.088	UJ	0.088	UJ
trans-1,3-Dichloropropene	0.11	55	U	0.11	U	0.11	UJ	0.11	UJ
SW846 9056 - SW9056/METHOD (mg/l)									
Bromide	0.05	NA		NA		NA		NA	
Chloride	0.1	NA		NA		NA		NA	
Sulfate	0.2	NA		NA		NA		NA	
Total Organic Carbon - SW9060/METHOD (mg/l)									
Total Organic Carbon	0.2	NA		NA		NA		NA	

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Data Summary Table
Carswell AFB
East Area Groundwater

Locxref :	Method	SD13-01		SD13-02		SD13-04		SD13-06	
Sample ID :	Detection	SD13-01WG01		SD13-02WG01		SD13-04WG01		SD13-06WG01	
Sample Date :	Limit	22-Jul-97		23-Jul-97		23-Jul-97		23-Jul-97	
Alkalinity (Titrimetric) - E310.1/METHOD (mg/l)									
Alkalinity as CaCO3 to pH 4.5	5	340	J	360	J	410	J	NA	
EPA-9/RSK-175 Modified A2720C - M2720C/METHOD (ug/l)									
Ethane	0.092	9.2	UJ	0.92	UJ	4.6	UJ	NA	
Ethene	0.1	10	UJ	1	UJ	5.2	UJ	NA	
Methane	0.052	4400	J	380	J	820	J	NA	
Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3005 (mg/l)									
Aluminum	0.082	NA		NA		NA		0.082	U
Antimony	0.0025	NA		NA		NA		0.0025	U
Arsenic	0.0029	NA		NA		NA		0.0029	U
Barium	0.001	NA		NA		NA		0.25	
Beryllium	0.001	NA		NA		NA		0.001	U
Cadmium	0.0029	NA		NA		NA		0.0029	U
Calcium	0.053	NA		NA		NA		203	
Chromium	0.0023	NA		NA		NA		0.0023	U
Cobalt	0.0031	NA		NA		NA		0.0031	U
Copper	0.0025	NA		NA		NA		0.024	F
Iron	0.041	NA		NA		NA		1.6	
Lead	0.0017	NA		NA		NA		0.0017	U
Magnesium	0.021	NA		NA		NA		11.7	
Manganese	0.001	NA		NA		NA		0.12	
Molybdenum	0.0065	NA		NA		NA		0.0065	U
Nickel	0.01	NA		NA		NA		0.01	U
Potassium	0.3	NA		NA		NA		0.4	F
Selenium	0.0039	NA		NA		NA		0.0039	U
Sodium	0.12	NA		NA		NA		31	
Vanadium	0.0021	NA		NA		NA		0.0021	U
Zinc	0.012	NA		NA		NA		0.076	
Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)									
Mercury	0.000053	NA		NA		NA		0.000053	UJ
Silver (AA, Furnace Technique) - SW7761/SW3020 (mg/l)									
Silver	0.0002	NA		NA		NA		0.0002	UJ
Thallium (AA, Furnace Technique) - SW7841/SW3020 (mg/l)									
Thallium	0.002	NA		NA		NA		0.002	U
Aromatic Volatile Organics - SW8020/SW5030 (ug/l)									
Benzene	0.21	0.21	UJ	0.21	UJ	0.21	UJ	NA	
Ethylbenzene	0.35	0.35	UJ	0.35	UJ	0.43	F	NA	

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Data Summary Table
Carswell AFB
East Area Groundwater

Locxref :	Method	SD13-01		SD13-02		SD13-04		SD13-06	
Sample ID :	Detection	SD13-01WG01		SD13-02WG01		SD13-04WG01		SD13-06WG01	
Sample Date :	Limit	22-Jul-97		23-Jul-97		23-Jul-97		23-Jul-97	
Toluene	0.13	0.13	UJ	0.13	UJ	1.3	F	NA	
Xylenes (total)	0.68	1.8	F	0.68	UJ	3.4	J	NA	
Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)									
1,1,1,2-Tetrachloroethane	0.1	NA		NA		NA		0.1	UJ
1,1,1-Trichloroethane	0.11	NA		NA		NA		0.11	UJ
1,1,2,2-Tetrachloroethane	0.13	NA		NA		NA		0.13	UJ
1,1,2-Trichloroethane	0.074	NA		NA		NA		0.074	UJ
1,1-Dichloroethane	0.075	NA		NA		NA		0.075	UJ
1,1-Dichloroethene	0.14	NA		NA		NA		0.14	UJ
1,1-Dichloropropene	0.15	NA		NA		NA		0.15	UJ
1,2,3-Trichlorobenzene	0.12	NA		NA		NA		0.12	UJ
1,2,3-Trichloropropane	0.2	NA		NA		NA		0.2	UJ
1,2,4-Trichlorobenzene	0.11	NA		NA		NA		0.11	UJ
1,2,4-Trimethylbenzene	0.12	NA		NA		NA		0.12	UJ
1,2-Dibromo-3-chloropropane (DBCP)	0.29	NA		NA		NA		0.29	UJ
1,2-Dibromoethane (EDB)	0.08	NA		NA		NA		0.08	UJ
1,2-Dichlorobenzene	0.13	NA		NA		NA		0.13	UJ
1,2-Dichloroethane	0.077	NA		NA		NA		0.077	UJ
1,2-Dichloropropane	0.085	NA		NA		NA		0.085	UJ
1,3,5-Trimethylbenzene	0.15	NA		NA		NA		0.15	UJ
1,3-Dichlorobenzene	0.11	NA		NA		NA		0.11	UJ
1,3-Dichloropropane	0.066	NA		NA		NA		0.066	UJ
1,4-Dichlorobenzene	0.14	NA		NA		NA		0.14	UJ
1-Chlorohexane	0.11	NA		NA		NA		0.11	UJ
2,2-Dichloropropane	0.15	NA		NA		NA		0.15	UJ
2-Chlorotoluene	0.14	NA		NA		NA		0.14	UJ
4-Chlorotoluene	0.12	NA		NA		NA		0.12	UJ
Benzene	0.11	NA		NA		NA		0.11	UJ
Bromobenzene	0.13	NA		NA		NA		0.13	UJ
Bromochloromethane	0.13	NA		NA		NA		0.13	UJ
Bromodichloromethane	0.11	NA		NA		NA		0.11	UJ
Bromoform	0.4	NA		NA		NA		0.4	UJ
Bromomethane	0.17	NA		NA		NA		0.17	UJ
Carbon tetrachloride	0.14	NA		NA		NA		0.14	UJ
Chlorobenzene	0.14	NA		NA		NA		0.14	UJ
Chloroethane	0.066	NA		NA		NA		0.066	UJ
Chloroform	0.097	NA		NA		NA		0.097	UJ
Chloromethane	0.08	NA		NA		NA		0.08	UJ
Dibromochloromethane	0.1	NA		NA		NA		0.1	UJ
Dibromomethane	0.096	NA		NA		NA		0.096	UJ
Dichlorodifluoromethane	0.14	NA		NA		NA		0.14	UJ
Ethylbenzene	0.16	NA		NA		NA		0.6	J

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Data Summary Table
Carswell AFB
East Area Groundwater

Locxref :	Method	SD13-01		SD13-02		SD13-04		SD13-06	
Sample ID :	Detection	SD13-01WG01		SD13-02WG01		SD13-04WG01		SD13-06WG01	
Sample Date :	Limit	22-Jul-97		23-Jul-97		23-Jul-97		23-Jul-97	
Hexachlorobutadiene	0.15	NA		NA		NA		0.15	UJ
Isopropylbenzene	0.13	NA		NA		NA		0.13	UJ
Methylene chloride	0.086	NA		NA		NA		0.086	UJ
Naphthalene	0.088	NA		NA		NA		0.088	UJ
Styrene	0.094	NA		NA		NA		0.094	UJ
Tetrachloroethene	0.13	NA		NA		NA		0.13	UJ
Toluene	0.14	NA		NA		NA		0.4	F
Trichloroethene	0.097	NA		NA		NA		0.097	UJ
Trichlorofluoromethane	0.16	NA		NA		NA		0.16	UJ
Vinyl chloride	0.13	NA		NA		NA		0.13	UJ
cis-1,2-Dichloroethene	0.13	NA		NA		NA		0.13	UJ
cis-1,3-Dichloropropene	0.081	NA		NA		NA		0.081	UJ
m-Xylene & p-Xylene	0.27	NA		NA		NA		0.94	J
n-Butylbenzene	0.14	NA		NA		NA		0.14	UJ
n-Propylbenzene	0.12	NA		NA		NA		0.12	UJ
o-Xylene	0.11	NA		NA		NA		0.29	F
p-Isopropyltoluene	0.13	NA		NA		NA		0.13	UJ
sec-Butylbenzene	0.14	NA		NA		NA		0.14	UJ
tert-Butylbenzene	0.13	NA		NA		NA		0.13	UJ
trans-1,2-Dichloroethene	0.088	NA		NA		NA		0.088	UJ
trans-1,3-Dichloropropene	0.11	NA		NA		NA		0.11	UJ
SW846 9056 - SW9056/METHOD (mg/l)									
Bromide	0.05	0.89	J	0.9	J	0.93	J	NA	
Chloride	0.1	30.5	J	21.3	J	27	J	NA	
Sulfate	0.2	0.45	F	3.6	J	2.2	J	NA	
Total Organic Carbon - SW9060/METHOD (mg/l)									
Total Organic Carbon	0.2	6	J	4	J	11	J	NA	

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Data Summary Table
Carswell AFB
East Area Groundwater

Locxref :	Method	ST14-02		ST14-03		ST14-04		ST14-04	
Sample ID :	Detection	ST14-02WG01		ST14-03WG01		DUP03-WG01		ST14-04WG01	
Sample Date :	Limit	15-Jul-97		23-Jul-97		17-Jul-97		17-Jul-97	
Alkalinity (Titrimetric) - E310.1/METHOD (mg/l)									
Alkalinity as CaCO3 to pH 4.5	5	360		290	J	360	U	360	U
EPA-9/RSK-175 Modified A2720C - M2720C/METHOD (ug/l)									
Ethane	0.092	1.8	U	0.46	UJ	9.2	U	9.2	U
Ethene	0.1	2.1	U	0.52	UJ	10	U	10	U
Methane	0.052	670		160	J	4000		4300	
Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3005 (mg/l)									
Aluminum	0.082	0.082	U	NA		NA		NA	
Antimony	0.0025	0.0025	U	NA		NA		NA	
Arsenic	0.0029	0.0078		NA		NA		NA	
Barium	0.001	0.12		NA		NA		NA	
Beryllium	0.001	0.001	U	NA		NA		NA	
Cadmium	0.0029	0.0029	U	NA		NA		NA	
Calcium	0.053	129		NA		NA		NA	
Chromium	0.0023	0.0023	U	NA		NA		NA	
Cobalt	0.0031	0.0031	U	NA		NA		NA	
Copper	0.0025	0.0025	U	NA		NA		NA	
Iron	0.041	11.2		NA		NA		NA	
Lead	0.0017	0.0017	U	NA		NA		NA	
Magnesium	0.021	6.4		NA		NA		NA	
Manganese	0.001	0.27		NA		NA		NA	
Molybdenum	0.0065	0.0065	U	NA		NA		NA	
Nickel	0.01	0.01	U	NA		NA		NA	
Potassium	0.3	2	F	NA		NA		NA	
Selenium	0.0039	0.0039	U	NA		NA		NA	
Sodium	0.12	26		NA		NA		NA	
Vanadium	0.0021	0.0021	U	NA		NA		NA	
Zinc	0.012	0.013	F	NA		NA		NA	
Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)									
Mercury	0.000053	0.000053	U	NA		NA		NA	
Silver (AA, Furnace Technique) - SW7761/SW3020 (mg/l)									
Silver	0.0002	0.00075	J	NA		NA		NA	
Thallium (AA, Furnace Technique) - SW7841/SW3020 (mg/l)									
Thallium	0.002	0.002	U	NA		NA		NA	
Aromatic Volatile Organics - SW8020/SW5030 (ug/l)									
Benzene	0.21	6.1		0.21	UJ	0.62	F	0.63	F
Ethylbenzene	0.35	0.35	U	0.35	UJ	0.35	U	0.35	U

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Data Summary Table
Carswell AFB
East Area Groundwater

Locxref :	Method	ST14-02		ST14-03		ST14-04		ST14-04	
Sample ID :	Detection	ST14-02WG01		ST14-03WG01		DUP03-WG01		ST14-04WG01	
Sample Date :	Limit	15-Jul-97		23-Jul-97		17-Jul-97		17-Jul-97	
Toluene	0.13	0.13	U	0.14	F	0.2	F	0.31	F
Xylenes (total)	0.68	0.68	U	0.68	UJ	0.92	F	0.68	UJ
Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)									
1,1,1,2-Tetrachloroethane	0.1	NA		NA		NA		NA	
1,1,1-Trichloroethane	0.11	NA		NA		NA		NA	
1,1,2,2-Tetrachloroethane	0.13	NA		NA		NA		NA	
1,1,2-Trichloroethane	0.074	NA		NA		NA		NA	
1,1-Dichloroethane	0.075	NA		NA		NA		NA	
1,1-Dichloroethene	0.14	NA		NA		NA		NA	
1,1-Dichloropropene	0.15	NA		NA		NA		NA	
1,2,3-Trichlorobenzene	0.12	NA		NA		NA		NA	
1,2,3-Trichloropropane	0.2	NA		NA		NA		NA	
1,2,4-Trichlorobenzene	0.11	NA		NA		NA		NA	
1,2,4-Trimethylbenzene	0.12	NA		NA		NA		NA	
1,2-Dibromo-3-chloropropane (DBCP)	0.29	NA		NA		NA		NA	
1,2-Dibromoethane (EDB)	0.08	NA		NA		NA		NA	
1,2-Dichlorobenzene	0.13	NA		NA		NA		NA	
1,2-Dichloroethane	0.077	NA		NA		NA		NA	
1,2-Dichloropropane	0.085	NA		NA		NA		NA	
1,3,5-Trimethylbenzene	0.15	NA		NA		NA		NA	
1,3-Dichlorobenzene	0.11	NA		NA		NA		NA	
1,3-Dichloropropane	0.066	NA		NA		NA		NA	
1,4-Dichlorobenzene	0.14	NA		NA		NA		NA	
1-Chlorohexane	0.11	NA		NA		NA		NA	
2,2-Dichloropropane	0.15	NA		NA		NA		NA	
2-Chlorotoluene	0.14	NA		NA		NA		NA	
4-Chlorotoluene	0.12	NA		NA		NA		NA	
Benzene	0.11	NA		NA		NA		NA	
Bromobenzene	0.13	NA		NA		NA		NA	
Bromochloromethane	0.13	NA		NA		NA		NA	
Bromodichloromethane	0.11	NA		NA		NA		NA	
Bromoform	0.4	NA		NA		NA		NA	
Bromomethane	0.17	NA		NA		NA		NA	
Carbon tetrachloride	0.14	NA		NA		NA		NA	
Chlorobenzene	0.14	NA		NA		NA		NA	
Chloroethane	0.066	NA		NA		NA		NA	
Chloroform	0.097	NA		NA		NA		NA	
Chloromethane	0.08	NA		NA		NA		NA	
Dibromochloromethane	0.1	NA		NA		NA		NA	
Dibromomethane	0.096	NA		NA		NA		NA	
Dichlorodifluoromethane	0.14	NA		NA		NA		NA	
Ethylbenzene	0.16	NA		NA		NA		NA	

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Data Summary Table
Carswell AFB
East Area Groundwater

Locxref :	Method	ST14-02		ST14-03		ST14-04		ST14-04	
Sample ID :	Detection	ST14-02WG01		ST14-03WG01		DUP03-WG01		ST14-04WG01	
Sample Date :	Limit	15-Jul-97		23-Jul-97		17-Jul-97		17-Jul-97	
Hexachlorobutadiene	0.15	NA		NA		NA		NA	
Isopropylbenzene	0.13	NA		NA		NA		NA	
Methylene chloride	0.086	NA		NA		NA		NA	
Naphthalene	0.088	NA		NA		NA		NA	
Styrene	0.094	NA		NA		NA		NA	
Tetrachloroethene	0.13	NA		NA		NA		NA	
Toluene	0.14	NA		NA		NA		NA	
Trichloroethene	0.097	NA		NA		NA		NA	
Trichlorofluoromethane	0.16	NA		NA		NA		NA	
Vinyl chloride	0.13	NA		NA		NA		NA	
cis-1,2-Dichloroethene	0.13	NA		NA		NA		NA	
cis-1,3-Dichloropropene	0.081	NA		NA		NA		NA	
m-Xylene & p-Xylene	0.27	NA		NA		NA		NA	
n-Butylbenzene	0.14	NA		NA		NA		NA	
n-Propylbenzene	0.12	NA		NA		NA		NA	
o-Xylene	0.11	NA		NA		NA		NA	
p-Isopropyltoluene	0.13	NA		NA		NA		NA	
sec-Butylbenzene	0.14	NA		NA		NA		NA	
tert-Butylbenzene	0.13	NA		NA		NA		NA	
trans-1,2-Dichloroethene	0.088	NA		NA		NA		NA	
trans-1,3-Dichloropropene	0.11	NA		NA		NA		NA	
SW846 9056 - SW9056/METHOD (mg/l)									
Bromide	0.05	0.73		0.76	J	0.86		0.87	
Chloride	0.1	29.7		30	J	24.6		24.8	
Sulfate	0.2	0.84	U	31.5	J	0.62	U	0.68	U
Total Organic Carbon - SW9060/METHOD (mg/l)									
Total Organic Carbon	0.2	3		2	J	9	U	10	U

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Data Summary Table
Carswell AFB
East Area Groundwater

Locxref :	Method	ST14-14		ST14-W16		ST14-W18		ST14-W21	
Sample ID :	Detection	ST14-14WG01		ST14-W16WG01		ST14-W18WG01		ST14-W21WG01	
Sample Date :	Limit	15-Jul-97		15-Jul-97		15-Jul-97		16-Jul-97	
Alkalinity (Titrimetric) - E310.1/METHOD (mg/l)									
Alkalinity as CaCO3 to pH 4.5	5	290		320		390		470	
EPA-9/RSK-175 Modified A2720C - M2720C/METHOD (ug/l)									
Ethane	0.092	1.8	U	1.8	U	9.2	U	2.3	U
Ethene	0.1	2.1	U	2.1	U	10	U	2.6	U
Methane	0.052	870		600		1800		690	
Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3005 (mg/l)									
Aluminum	0.082	0.082	U	NA		0.59		3.2	
Antimony	0.0025	0.0025	U	NA		0.0025	U	0.0025	U
Arsenic	0.0029	0.0042	F	NA		0.058		0.047	
Barium	0.001	0.049		NA		0.22		0.19	
Beryllium	0.001	0.001	U	NA		0.001	U	0.001	U
Cadmium	0.0029	0.0029	U	NA		0.0029	U	0.0029	U
Calcium	0.053	92.8		NA		153		190	
Chromium	0.0023	0.0023	U	NA		0.0023	U	0.0057	F
Cobalt	0.0031	0.0031	U	NA		0.0031	U	0.0031	U
Copper	0.0025	0.0026	F	NA		0.0055	F	0.0058	F
Iron	0.041	1.5		NA		14		10.2	
Lead	0.0017	0.0017	U	NA		0.014		0.0035	F
Magnesium	0.021	4.9		NA		6.5		6.1	
Manganese	0.001	0.24		NA		0.21		0.63	
Molybdenum	0.0065	0.0065	U	NA		0.0065	U	0.0065	U
Nickel	0.01	0.01	U	NA		0.01	U	0.017	F
Potassium	0.3	0.78	F	NA		1.3	F	1.3	F
Selenium	0.0039	0.0039	U	NA		0.0039	U	0.0039	U
Sodium	0.12	27.2		NA		21.8		12	
Vanadium	0.0021	0.0021	U	NA		0.0021	U	0.0071	F
Zinc	0.012	0.012	U	NA		0.015	F	0.024	
Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)									
Mercury	0.000053	0.000053	U	NA		0.000053	U	0.000053	U
Silver (AA, Furnace Technique) - SW7761/SW3020 (mg/l)									
Silver	0.0002	0.2	U	NA		0.2	U	0.0002	UJ
Thallium (AA, Furnace Technique) - SW7841/SW3020 (mg/l)									
Thallium	0.002	0.002	U	NA		0.002	U	0.002	U
Aromatic Volatile Organics - SW8020/SW5030 (ug/l)									
Benzene	0.21	NA		6.6	J	2.7	J	9.3	J
Ethylbenzene	0.35	NA		0.35	U	0.35	U	0.35	U

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Data Summary Table
Carswell AFB
East Area Groundwater

Locxref :	Method	ST14-14		ST14-W16		ST14-W18		ST14-W21	
Sample ID :	Detection	ST14-14WG01		ST14-W16WG01		ST14-W18WG01		ST14-W21WG01	
Sample Date :	Limit	15-Jul-97		15-Jul-97		15-Jul-97		16-Jul-97	
Toluene	0.13	NA		0.53	F	0.63	F	0.89	F
Xylenes (total)	0.68	NA		0.68	U	1.5	F	0.68	U
Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)									
1,1,1,2-Tetrachloroethane	0.1	0.1	U	NA		NA		NA	
1,1,1-Trichloroethane	0.11	0.11	U	NA		NA		NA	
1,1,2,2-Tetrachloroethane	0.13	0.13	U	NA		NA		NA	
1,1,2-Trichloroethane	0.074	0.074	U	NA		NA		NA	
1,1-Dichloroethane	0.075	0.075	U	NA		NA		NA	
1,1-Dichloroethene	0.14	0.14	U	NA		NA		NA	
1,1-Dichloropropene	0.15	0.15	U	NA		NA		NA	
1,2,3-Trichlorobenzene	0.12	0.12	U	NA		NA		NA	
1,2,3-Trichloropropane	0.2	0.2	U	NA		NA		NA	
1,2,4-Trichlorobenzene	0.11	0.11	U	NA		NA		NA	
1,2,4-Trimethylbenzene	0.12	0.12	U	NA		NA		NA	
1,2-Dibromo-3-chloropropane (DBCP)	0.29	0.29	U	NA		NA		NA	
1,2-Dibromoethane (EDB)	0.08	0.08	U	NA		NA		NA	
1,2-Dichlorobenzene	0.13	0.13	U	NA		NA		NA	
1,2-Dichloroethane	0.077	0.077	U	NA		NA		NA	
1,2-Dichloropropane	0.085	0.085	U	NA		NA		NA	
1,3,5-Trimethylbenzene	0.15	0.15	U	NA		NA		NA	
1,3-Dichlorobenzene	0.11	0.11	U	NA		NA		NA	
1,3-Dichloropropane	0.066	0.066	U	NA		NA		NA	
1,4-Dichlorobenzene	0.14	0.14	U	NA		NA		NA	
1-Chlorohexane	0.11	0.11	U	NA		NA		NA	
2,2-Dichloropropane	0.15	0.15	U	NA		NA		NA	
2-Chlorotoluene	0.14	0.14	U	NA		NA		NA	
4-Chlorotoluene	0.12	0.12	U	NA		NA		NA	
Benzene	0.11	0.11	U	NA		NA		NA	
Bromobenzene	0.13	0.13	U	NA		NA		NA	
Bromochloromethane	0.13	0.13	U	NA		NA		NA	
Bromodichloromethane	0.11	0.11	U	NA		NA		NA	
Bromoform	0.4	0.4	U	NA		NA		NA	
Bromomethane	0.17	0.17	U	NA		NA		NA	
Carbon tetrachloride	0.14	0.14	U	NA		NA		NA	
Chlorobenzene	0.14	0.14	U	NA		NA		NA	
Chloroethane	0.066	0.066	U	NA		NA		NA	
Chloroform	0.097	0.097	U	NA		NA		NA	
Chloromethane	0.08	0.08	U	NA		NA		NA	
Dibromochloromethane	0.1	0.1	U	NA		NA		NA	
Dibromomethane	0.096	0.096	U	NA		NA		NA	
Dichlorodifluoromethane	0.14	0.14	U	NA		NA		NA	
Ethylbenzene	0.16	0.16	U	NA		NA		NA	

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Data Summary Table
Carswell AFB
East Area Groundwater

Locxref: / Sample ID: / Sample Date:	Method Detection Limit	ST14-14 ST14-14WG01 15-Jul-97		ST14-W16 ST14-W16WG01 15-Jul-97		ST14-W18 ST14-W18WG01 15-Jul-97		ST14-W21 ST14-W21WG01 16-Jul-97	
Hexachlorobutadiene	0.15	0.15	U	NA		NA		NA	
Isopropylbenzene	0.13	0.13	U	NA		NA		NA	
Methylene chloride	0.086	0.086	U	NA		NA		NA	
Naphthalene	0.088	0.088	U	NA		NA		NA	
Styrene	0.094	0.094	U	NA		NA		NA	
Tetrachloroethene	0.13	0.13	U	NA		NA		NA	
Toluene	0.14	0.14	U	NA		NA		NA	
Trichloroethene	0.097	0.097	U	NA		NA		NA	
Trichlorofluoromethane	0.16	0.16	U	NA		NA		NA	
Vinyl chloride	0.13	0.13	U	NA		NA		NA	
cis-1,2-Dichloroethene	0.13	0.13	U	NA		NA		NA	
cis-1,3-Dichloropropene	0.081	0.081	U	NA		NA		NA	
m-Xylene & p-Xylene	0.27	0.27	U	NA		NA		NA	
n-Butylbenzene	0.14	0.14	U	NA		NA		NA	
n-Propylbenzene	0.12	0.12	U	NA		NA		NA	
o-Xylene	0.11	0.11	U	NA		NA		NA	
p-Isopropyltoluene	0.13	0.13	U	NA		NA		NA	
sec-Butylbenzene	0.14	0.14	U	NA		NA		NA	
tert-Butylbenzene	0.13	1.1	F	NA		NA		NA	
trans-1,2-Dichloroethene	0.088	0.088	U	NA		NA		NA	
trans-1,3-Dichloropropene	0.11	0.11	U	NA		NA		NA	
SW846 9056 - SW9056/METHOD (mg/l)									
Bromide	0.05	0.69		0.81		1.2		0.88	
Chloride	0.1	25.2		28.6		33.7		11.3	
Sulfate	0.2	4.2		16.4		1	U	1.1	U
Total Organic Carbon - SW9060/METHOD (mg/l)									
Total Organic Carbon	0.2	2		3		10		7	U

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Data Summary Table
Carswell AFB
East Area Groundwater

Locxref :	Method	ST14-24		ST14-26		ST14-26		ST14-28	
Sample ID :	Detection	ST14-24WG01		DUP05WG01		ST14-26WG01		ST14-28WG01	
Sample Date :	Limit	15-Jul-97		23-Jul-97		23-Jul-97		22-Jul-97	
Alkalinity (Titrimetric) - E310.1/METHOD (mg/l)									
Alkalinity as CaCO3 to pH 4.5	5	320		350	J	360	J	460	J
EPA-9/RSK-175 Modified A2720C - M2720C/METHOD (ug/l)									
Ethane	0.092	0.092	U	0.092	UJ	0.092	UJ	9.2	UJ
Ethene	0.1	0.1	U	0.1	UJ	0.1	UJ	39	F
Methane	0.052	9.1		0.28	F	0.4	F	3400	J
Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3005 (mg/l)									
Aluminum	0.082	1.1		0.082	U	0.082	U	NA	
Antimony	0.0025	0.0025	U	0.0025	U	0.0025	U	NA	
Arsenic	0.0029	0.0029	U	0.0029	U	0.0029	U	NA	
Barium	0.001	0.25		0.12		0.13		NA	
Beryllium	0.001	0.001	U	0.001	U	0.001	U	NA	
Cadmium	0.0029	0.0029	U	0.0029	U	0.0029	U	NA	
Calcium	0.053	121		134		141		NA	
Chromium	0.0023	0.005	F	0.0023	U	0.0023	U	NA	
Cobalt	0.0031	0.0031	U	0.0031	U	0.0031	U	NA	
Copper	0.0025	0.0048	F	0.0038	F	0.0033	F	NA	
Iron	0.041	1.1		0.043	F	0.057	F	NA	
Lead	0.0017	0.0017	U	0.0017	U	0.0017	U	NA	
Magnesium	0.021	9.2		7.1		7.3		NA	
Manganese	0.001	0.097		0.054		0.055		NA	
Molybdenum	0.0065	0.0065	U	0.0065	U	0.0065	U	NA	
Nickel	0.01	0.01	U	0.01	U	0.01	U	NA	
Potassium	0.3	3.2	F	0.6	F	0.72	F	NA	
Selenium	0.0039	0.0039	U	0.0039	U	0.0039	U	NA	
Sodium	0.12	29.6		18.9		19.4		NA	
Vanadium	0.0021	0.0021	U	0.011	F	0.011	F	NA	
Zinc	0.012	0.018	F	0.012	U	0.012	U	NA	
Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)									
Mercury	0.000053	0.000053	U	0.000053	UJ	0.000053	UJ	NA	
Silver (AA, Furnace Technique) - SW7761/SW3020 (mg/l)									
Silver	0.0002	0.2	UJ	0.0002	UJ	0.0002	UJ	NA	
Thallium (AA, Furnace Technique) - SW7841/SW3020 (mg/l)									
Thallium	0.002	0.002	U	0.002	U	0.002	U	NA	
Aromatic Volatile Organics - SW8020/SW5030 (ug/l)									
Benzene	0.21	NA		NA		NA		0.48	F
Ethylbenzene	0.35	NA		NA		NA		0.54	F

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Data Summary Table
Carswell AFB
East Area Groundwater

Locxref: / Sample ID: / Sample Date:	Method Detection Limit	ST14-24 ST14-24WG01 15-Jul-97		ST14-26 DUP05WG01 23-Jul-97		ST14-26 ST14-26WG01 23-Jul-97		ST14-28 ST14-28WG01 22-Jul-97	
Toluene	0.13	NA		NA		NA		0.13	UJ
Xylenes (total)	0.68	NA		NA		NA		1.5	F
Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)									
1,1,1,2-Tetrachloroethane	0.1	0.1	U	0.1	UJ	0.1	UJ	NA	
1,1,1-Trichloroethane	0.11	0.11	U	0.11	UJ	0.11	UJ	NA	
1,1,2,2-Tetrachloroethane	0.13	0.13	U	0.13	UJ	0.13	UJ	NA	
1,1,2-Trichloroethane	0.074	0.074	U	0.074	UJ	0.074	UJ	NA	
1,1-Dichloroethane	0.075	0.075	U	0.075	UJ	0.075	UJ	NA	
1,1-Dichloroethene	0.14	0.14	U	0.14	UJ	0.14	UJ	NA	
1,1-Dichloropropene	0.15	0.15	U	0.15	UJ	0.15	UJ	NA	
1,2,3-Trichlorobenzene	0.12	0.12	U	0.12	UJ	0.12	UJ	NA	
1,2,3-Trichloropropane	0.2	0.2	U	0.2	UJ	0.2	UJ	NA	
1,2,4-Trichlorobenzene	0.11	0.11	U	0.11	UJ	0.11	UJ	NA	
1,2,4-Trimethylbenzene	0.12	0.12	U	0.12	UJ	0.12	UJ	NA	
1,2-Dibromo-3-chloropropane (DBCP)	0.29	0.29	U	0.29	UJ	0.29	UJ	NA	
1,2-Dibromoethane (EDB)	0.08	0.08	U	0.08	UJ	0.08	UJ	NA	
1,2-Dichlorobenzene	0.13	0.13	U	0.13	UJ	0.13	UJ	NA	
1,2-Dichloroethane	0.077	0.077	U	0.077	UJ	0.077	UJ	NA	
1,2-Dichloropropane	0.085	0.085	U	0.085	UJ	0.085	UJ	NA	
1,3,5-Trimethylbenzene	0.15	0.15	U	0.15	UJ	0.15	UJ	NA	
1,3-Dichlorobenzene	0.11	0.11	U	0.11	UJ	0.11	UJ	NA	
1,3-Dichloropropane	0.066	0.066	U	0.066	UJ	0.066	UJ	NA	
1,4-Dichlorobenzene	0.14	0.14	U	0.14	UJ	0.14	UJ	NA	
1-Chlorohexane	0.11	0.11	U	0.11	UJ	0.11	UJ	NA	
2,2-Dichloropropane	0.15	0.15	U	0.15	UJ	0.15	UJ	NA	
2-Chlorotoluene	0.14	0.14	U	0.14	UJ	0.14	UJ	NA	
4-Chlorotoluene	0.12	0.12	U	0.12	UJ	0.12	UJ	NA	
Benzene	0.11	0.11	U	0.11	UJ	0.11	UJ	NA	
Bromobenzene	0.13	0.13	U	0.13	UJ	0.13	UJ	NA	
Bromochloromethane	0.13	0.13	U	0.13	UJ	0.13	UJ	NA	
Bromodichloromethane	0.11	0.11	U	0.11	UJ	0.11	UJ	NA	
Bromoform	0.4	0.4	U	0.4	UJ	0.4	UJ	NA	
Bromomethane	0.17	0.17	U	0.17	UJ	0.17	UJ	NA	
Carbon tetrachloride	0.14	0.14	U	0.14	UJ	0.14	UJ	NA	
Chlorobenzene	0.14	0.14	U	0.14	UJ	0.14	UJ	NA	
Chloroethane	0.066	0.066	U	0.066	UJ	0.066	UJ	NA	
Chloroform	0.097	0.097	U	0.097	UJ	0.097	UJ	NA	
Chloromethane	0.08	0.08	U	0.08	UJ	0.08	UJ	NA	
Dibromochloromethane	0.1	0.1	U	0.1	UJ	0.1	UJ	NA	
Dibromomethane	0.096	0.096	U	0.096	UJ	0.096	UJ	NA	
Dichlorodifluoromethane	0.14	0.14	U	0.14	UJ	0.14	UJ	NA	
Ethylbenzene	0.16	0.16	U	0.16	UJ	0.16	UJ	NA	

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Data Summary Table
Carswell AFB
East Area Groundwater

Locxref :	Method	ST14-24		ST14-26		ST14-26		ST14-28	
Sample ID :	Detection	ST14-24WG01		DUP05WG01		ST14-26WG01		ST14-28WG01	
Sample Date :	Limit	15-Jul-97		23-Jul-97		23-Jul-97		22-Jul-97	
Hexachlorobutadiene	0.15	0.15	U	0.15	UJ	0.15	UJ	NA	
Isopropylbenzene	0.13	0.13	U	0.13	UJ	0.13	UJ	NA	
Methylene chloride	0.086	0.086	U	0.086	UJ	0.086	UJ	NA	
Naphthalene	0.088	0.088	U	0.088	UJ	0.088	UJ	NA	
Styrene	0.094	0.094	U	0.094	UJ	0.094	UJ	NA	
Tetrachloroethene	0.13	0.13	U	0.13	UJ	0.13	UJ	NA	
Toluene	0.14	0.14	U	0.14	UJ	0.14	UJ	NA	
Trichloroethene	0.097	0.097	U	0.097	UJ	0.097	UJ	NA	
Trichlorofluoromethane	0.16	0.16	U	0.16	UJ	0.16	UJ	NA	
Vinyl chloride	0.13	1.4		0.13	UJ	0.13	UJ	NA	
cis-1,2-Dichloroethene	0.13	0.13	U	0.13	UJ	0.13	UJ	NA	
cis-1,3-Dichloropropene	0.081	0.081	U	0.081	UJ	0.081	UJ	NA	
m-Xylene & p-Xylene	0.27	0.27	U	0.27	UJ	0.27	UJ	NA	
n-Butylbenzene	0.14	0.14	U	0.14	UJ	0.14	UJ	NA	
n-Propylbenzene	0.12	0.12	U	0.12	UJ	0.12	UJ	NA	
o-Xylene	0.11	0.11	U	0.11	UJ	0.11	UJ	NA	
p-Isopropyltoluene	0.13	0.13	U	0.13	UJ	0.13	UJ	NA	
sec-Butylbenzene	0.14	0.14	U	0.14	UJ	0.14	UJ	NA	
tert-Butylbenzene	0.13	0.13	U	0.13	UJ	0.13	UJ	NA	
trans-1,2-Dichloroethene	0.088	0.088	U	0.088	UJ	0.088	UJ	NA	
trans-1,3-Dichloropropene	0.11	0.11	U	0.11	UJ	0.11	UJ	NA	
SW846 9056 - SW9056/METHOD (mg/l)									
Bromide	0.05	0.64		0.84	J	0.79	J	2	J
Chloride	0.1	15.2		22.7	J	22.5	J	36.6	J
Sulfate	0.2	20.6		24.7	J	24.7	J	0.95	UJ
Total Organic Carbon - SW9060/METHOD (mg/l)									
Total Organic Carbon	0.2	2		2	J	2	J	15	J

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Data Summary Table
Carswell AFB
East Area Groundwater

Locxref: / Sample ID: / Sample Date:	Method Detection Limit	ST14-29 ST14-29WG01 17-Jul-97		ST14-W31 ST14-W31WG01 24-Jul-97		17M 17MWG01 18-Jul-97	
Alkalinity (Titrimetric) - E310.1/METHOD (mg/l)							
Alkalinity as CaCO3 to pH 4.5	5	390		320		360	
EPA-9/RSK-175 Modified A2720C - M2720C/METHOD (ug/l)							
Ethane	0.092	9.2	U	0.092	U	9.2	U
Ethene	0.1	10	U	0.1	U	10	U
Methane	0.052	3200		0.11	F	3800	
Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3005 (mg/l)							
Aluminum	0.082	NA		NA		NA	
Antimony	0.0025	NA		NA		NA	
Arsenic	0.0029	NA		NA		NA	
Barium	0.001	NA		NA		NA	
Beryllium	0.001	NA		NA		NA	
Cadmium	0.0029	NA		NA		NA	
Calcium	0.053	NA		NA		NA	
Chromium	0.0023	NA		NA		NA	
Cobalt	0.0031	NA		NA		NA	
Copper	0.0025	NA		NA		NA	
Iron	0.041	NA		NA		NA	
Lead	0.0017	NA		NA		NA	
Magnesium	0.021	NA		NA		NA	
Manganese	0.001	NA		NA		NA	
Molybdenum	0.0065	NA		NA		NA	
Nickel	0.01	NA		NA		NA	
Potassium	0.3	NA		NA		NA	
Selenium	0.0039	NA		NA		NA	
Sodium	0.12	NA		NA		NA	
Vanadium	0.0021	NA		NA		NA	
Zinc	0.012	NA		NA		NA	
Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)							
Mercury	0.000053	NA		NA		NA	
Silver (AA, Furnace Technique) - SW7761/SW3020 (mg/l)							
Silver	0.0002	NA		NA		NA	
Thallium (AA, Furnace Technique) - SW7841/SW3020 (mg/l)							
Thallium	0.002	NA		NA		NA	
Aromatic Volatile Organics - SW8020/SW5030 (ug/l)							
Benzene	0.21	0.41	F	0.21	U	0.39	F
Ethylbenzene	0.35	0.35	U	0.35	U	0.42	F

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Data Summary Table
Carswell AFB
East Area Groundwater

Locxref :	Method	ST14-29		ST14-W31		17M	
Sample ID :	Detection	ST14-29WG01		ST14-W31WG01		17MWG01	
Sample Date :	Limit	17-Jul-97		24-Jul-97		18-Jul-97	
Toluene	0.13	0.24	F	0.23	F	0.35	F
Xylenes (total)	0.68	1	F	0.85	F	0.95	F
Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)							
1,1,1,2-Tetrachloroethane	0.1	NA		NA		NA	
1,1,1-Trichloroethane	0.11	NA		NA		NA	
1,1,2,2-Tetrachloroethane	0.13	NA		NA		NA	
1,1,2-Trichloroethane	0.074	NA		NA		NA	
1,1-Dichloroethane	0.075	NA		NA		NA	
1,1-Dichloroethene	0.14	NA		NA		NA	
1,1-Dichloropropene	0.15	NA		NA		NA	
1,2,3-Trichlorobenzene	0.12	NA		NA		NA	
1,2,3-Trichloropropane	0.2	NA		NA		NA	
1,2,4-Trichlorobenzene	0.11	NA		NA		NA	
1,2,4-Trimethylbenzene	0.12	NA		NA		NA	
1,2-Dibromo-3-chloropropane (DBCP)	0.29	NA		NA		NA	
1,2-Dibromoethane (EDB)	0.08	NA		NA		NA	
1,2-Dichlorobenzene	0.13	NA		NA		NA	
1,2-Dichloroethane	0.077	NA		NA		NA	
1,2-Dichloropropane	0.085	NA		NA		NA	
1,3,5-Trimethylbenzene	0.15	NA		NA		NA	
1,3-Dichlorobenzene	0.11	NA		NA		NA	
1,3-Dichloropropane	0.066	NA		NA		NA	
1,4-Dichlorobenzene	0.14	NA		NA		NA	
1-Chlorohexane	0.11	NA		NA		NA	
2,2-Dichloropropane	0.15	NA		NA		NA	
2-Chlorotoluene	0.14	NA		NA		NA	
4-Chlorotoluene	0.12	NA		NA		NA	
Benzene	0.11	NA		NA		NA	
Bromobenzene	0.13	NA		NA		NA	
Bromochloromethane	0.13	NA		NA		NA	
Bromodichloromethane	0.11	NA		NA		NA	
Bromoform	0.4	NA		NA		NA	
Bromomethane	0.17	NA		NA		NA	
Carbon tetrachloride	0.14	NA		NA		NA	
Chlorobenzene	0.14	NA		NA		NA	
Chloroethane	0.066	NA		NA		NA	
Chloroform	0.097	NA		NA		NA	
Chloromethane	0.08	NA		NA		NA	
Dibromochloromethane	0.1	NA		NA		NA	
Dibromomethane	0.096	NA		NA		NA	
Dichlorodifluoromethane	0.14	NA		NA		NA	
Ethylbenzene	0.16	NA		NA		NA	

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Data Summary Table
Carswell AFB
East Area Groundwater

Locxref :	Method	ST14-29		ST14-W31	17M	
Sample ID :	Detection	ST14-29WG01		ST14-W31WG01	17MWG01	
Sample Date :	Limit	17-Jul-97		24-Jul-97	18-Jul-97	
Hexachlorobutadiene	0.15	NA		NA	NA	
Isopropylbenzene	0.13	NA		NA	NA	
Methylene chloride	0.086	NA		NA	NA	
Naphthalene	0.088	NA		NA	NA	
Styrene	0.094	NA		NA	NA	
Tetrachloroethene	0.13	NA		NA	NA	
Toluene	0.14	NA		NA	NA	
Trichloroethene	0.097	NA		NA	NA	
Trichlorofluoromethane	0.16	NA		NA	NA	
Vinyl chloride	0.13	NA		NA	NA	
cis-1,2-Dichloroethene	0.13	NA		NA	NA	
cis-1,3-Dichloropropene	0.081	NA		NA	NA	
m-Xylene & p-Xylene	0.27	NA		NA	NA	
n-Butylbenzene	0.14	NA		NA	NA	
n-Propylbenzene	0.12	NA		NA	NA	
o-Xylene	0.11	NA		NA	NA	
p-Isopropyltoluene	0.13	NA		NA	NA	
sec-Butylbenzene	0.14	NA		NA	NA	
tert-Butylbenzene	0.13	NA		NA	NA	
trans-1,2-Dichloroethene	0.088	NA		NA	NA	
trans-1,3-Dichloropropene	0.11	NA		NA	NA	
SW846 9056 - SW9056/METHOD (mg/l)						
Bromide	0.05	0.74		0.77	0.94	
Chloride	0.1	22.4		29.4	19.9	
Sulfate	0.2	0.82	U	28.1	1.6	U
Total Organic Carbon - SW9060/METHOD (mg/l)						
Total Organic Carbon	0.2	8	U	1	15	

Table: _____
DQE: _____
Senior Reviewed: _____

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Flightline Area Lab Results

Data Summary Table
Carswell AFB
Flightline Area Groundwater

Locxref :	Method	SPOT35-4		SPOT35-5		USGA04T	
Sample ID :	Detection	SPOT35-4WG01		SPOT35-5WG01		USGA04T-WG01	
Sample Date :	Limit	15-Jul-97		15-Jul-97		23-Jul-97	
Residue, Filterable (TDS) - E160.1/FLDFLT (mg/l)							
Total Dissolved Solids	3.8	NA		NA		NA	
Alkalinity (Titrimetric) - E310.1/METHOD (mg/l)							
Alkalinity as CaCO3 to pH 4.5	5	390		430		NA	
EPA-9/RSK-175 Modified A2720C - M2720C/METHOD (ug/l)							
Ethane	0.092	6.9	U	9.2	U	NA	
Ethene	0.1	7.9	U	10	U	NA	
Methane	0.052	3400		3500		NA	
Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3005 (mg/l)							
Aluminum	0.082	NA		NA		0.082	U
Antimony	0.0025	NA		NA		0.0025	U
Arsenic	0.0029	NA		NA		0.0029	U
Barium	0.001	NA		NA		0.032	
Beryllium	0.001	NA		NA		0.001	U
Cadmium	0.0029	NA		NA		0.0029	U
Calcium	0.053	NA		NA		110	
Chromium	0.0023	NA		NA		0.0023	U
Cobalt	0.0031	NA		NA		0.0031	U
Copper	0.0025	NA		NA		0.0053	F
Iron	0.041	NA		NA		0.61	
Lead	0.0017	NA		NA		0.0017	U
Magnesium	0.021	NA		NA		14.7	
Manganese	0.001	NA		NA		0.25	
Molybdenum	0.0065	NA		NA		0.0065	U
Nickel	0.01	NA		NA		0.01	U
Potassium	0.3	NA		NA		4.9	F
Selenium	0.0039	NA		NA		0.0039	U
Sodium	0.12	NA		NA		35.3	
Vanadium	0.0021	NA		NA		0.0021	U
Zinc	0.012	NA		NA		0.012	U
Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)							
Mercury	0.000053	NA		NA		0.000053	UJ
Silver (AA, Furnace Technique) - SW7761/SW3020 (mg/l)							
Silver	0.0002	NA		NA		0.0002	UJ
Thallium (AA, Furnace Technique) - SW7841/SW3020 (mg/l)							
Thallium	0.002	NA		NA		0.002	UJ

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Data Summary Table
Carswell AFB
Flightline Area Groundwater

Locxref :	Method	SPOT35-4		SPOT35-5		USGA04T	
Sample ID :	Detection	SPOT35-4WG01		SPOT35-5WG01		USGA04T-WG01	
Sample Date :	Limit	15-Jul-97		15-Jul-97		23-Jul-97	
Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)							
1,1,1,2-Tetrachloroethane	0.1	1	U	1	U	0.1	UJ
1,1,1-Trichloroethane	0.11	1.1	U	1.1	U	0.11	UJ
1,1,2,2-Tetrachloroethane	0.13	1.3	U	1.3	U	0.13	UJ
1,1,2-Trichloroethane	0.074	0.74	U	0.74	U	0.074	UJ
1,1-Dichloroethane	0.075	0.75	U	0.75	U	0.075	UJ
1,1-Dichloroethene	0.14	1.4	U	1.4	U	0.14	UJ
1,1-Dichloropropene	0.15	1.5	U	1.5	U	0.15	UJ
1,2,3-Trichlorobenzene	0.12	1.2	U	1.2	U	0.12	UJ
1,2,3-Trichloropropane	0.2	2	U	2	U	0.2	UJ
1,2,4-Trichlorobenzene	0.11	1.1	U	1.1	U	0.11	UJ
1,2,4-Trimethylbenzene	0.12	1.2	U	1.2	U	0.12	UJ
1,2-Dibromo-3-chloropropane (DBCP)	0.29	2.9	U	2.9	U	0.29	UJ
1,2-Dibromoethane (EDB)	0.08	0.8	U	0.8	U	0.08	UJ
1,2-Dichlorobenzene	0.13	1.3	U	1.3	U	0.13	UJ
1,2-Dichloroethane	0.077	0.77	U	0.77	U	0.077	UJ
1,2-Dichloropropane	0.085	0.85	U	0.85	U	0.085	UJ
1,3,5-Trimethylbenzene	0.15	1.5	U	1.5	U	0.15	UJ
1,3-Dichlorobenzene	0.11	1.1	U	1.1	U	0.11	UJ
1,3-Dichloropropane	0.066	0.66	U	0.66	U	0.066	UJ
1,4-Dichlorobenzene	0.14	1.4	U	1.4	U	0.14	UJ
1-Chlorohexane	0.11	1.1	U	1.1	U	0.11	UJ
2,2-Dichloropropane	0.15	1.5	U	1.5	U	0.15	UJ
2-Chlorotoluene	0.14	1.4	U	1.4	U	0.14	UJ
4-Chlorotoluene	0.12	1.2	U	1.2	U	0.12	UJ
Benzene	0.11	1.1	U	1.1	U	0.11	UJ
Bromobenzene	0.13	1.3	U	1.3	U	0.13	UJ
Bromochloromethane	0.13	1.3	U	1.3	U	0.13	UJ
Bromodichloromethane	0.11	1.1	U	1.1	U	0.11	UJ
Bromoform	0.4	4	U	4	U	0.4	UJ
Bromomethane	0.17	1.7	U	1.7	U	0.17	UJ
Carbon tetrachloride	0.14	1.4	U	1.4	U	0.14	UJ
Chlorobenzene	0.14	1.4	U	1.4	U	0.14	UJ
Chloroethane	0.066	0.66	U	0.66	U	0.066	UJ
Chloroform	0.097	0.97	U	0.97	U	0.097	UJ
Chloromethane	0.08	0.8	U	0.8	U	0.08	UJ
Dibromochloromethane	0.1	1	U	1	U	0.1	UJ
Dibromomethane	0.096	0.96	U	0.96	U	0.096	UJ
Dichlorodifluoromethane	0.14	1.4	U	1.4	U	0.14	UJ
Ethylbenzene	0.16	1.6	U	1.6	U	0.23	F
Hexachlorobutadiene	0.15	1.5	U	1.5	U	0.15	UJ
Isopropylbenzene	0.13	38		29		0.13	UJ
Methylene chloride	0.086	0.86	U	0.86	U	0.086	UJ

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Data Summary Table
Carswell AFB
Flightline Area Groundwater

Locxref :	Method	SPOT35-4		SPOT35-5		USGA04T	
Sample ID :	Detection	SPOT35-4WG01		SPOT35-5WG01		USGA04T-WG01	
Sample Date :	Limit	15-Jul-97		15-Jul-97		23-Jul-97	
Naphthalene	0.088	72	J	76	J	0.088	UJ
Styrene	0.094	0.94	U	0.94	U	0.094	UJ
Tetrachloroethene	0.13	1.3	U	1.3	U	0.13	UJ
Toluene	0.14	1.4	U	1.4	U	0.14	UJ
Trichloroethene	0.097	0.97	U	0.97	U	0.097	UJ
Trichlorofluoromethane	0.16	1.6	U	1.6	U	0.16	UJ
Vinyl chloride	0.13	1.3	U	1.3	U	0.13	UJ
cis-1,2-Dichloroethene	0.13	1.3	U	1.3	U	0.13	UJ
cis-1,3-Dichloropropene	0.081	0.81	U	0.81	U	0.081	UJ
m-Xylene & p-Xylene	0.27	2.7	U	2.7	U	0.37	F
n-Butylbenzene	0.14	3.5	F	1.4	U	0.14	UJ
n-Propylbenzene	0.12	38		31		0.12	UJ
o-Xylene	0.11	1.1	U	1.1	U	0.4	F
p-Isopropyltoluene	0.13	1.3	U	1.3	U	0.13	UJ
sec-Butylbenzene	0.14	13		1.4	U	0.14	UJ
tert-Butylbenzene	0.13	1.3	U	1.3	U	0.13	UJ
trans-1,2-Dichloroethene	0.088	0.88	U	0.88	U	0.088	UJ
trans-1,3-Dichloropropene	0.11	1.1	U	1.1	U	0.11	UJ
SW846 9056 - SW9056/METHOD (mg/l)							
Bromide	0.05	4.4		3.1		NA	
Chloride	0.1	108		147		NA	
Sulfate	0.2	8.2	U	2.8	U	NA	
Total Organic Carbon - SW9060/METHOD (mg/l)							
Total Organic Carbon	0.2	4		12		NA	

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Data Summary Table
Carswell AFB
Flightline Area Groundwater

Locxref :	Method	GMI-22-02M		GMI-22-04M		GMI-22-05M		GMI-22-05M	
Sample ID :	Detection	GMI-22-02MWG01		GMI-22-04MWG01		DUP02-WG01		GMI-22-05MWG01	
Sample Date :	Limit	15-Jul-97		16-Jul-97		21-Jul-97		21-Jul-97	
Residue, Filterable (TDS) - E160.1/FLDFLT (mg/l)									
Total Dissolved Solids	3.8	300		NA		NA		NA	
Alkalinity (Titrimetric) - E310.1/METHOD (mg/l)									
Alkalinity as CaCO3 to pH 4.5	5	280		380		NA		NA	
EPA-9/RSK-175 Modified A2720C - M2720C/METHOD (ug/l)									
Ethane	0.092	0.13	F	22		NA		NA	
Ethene	0.1	0.14	F	0.32	U	NA		NA	
Methane	0.052	0.25	F	140		NA		NA	
Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3005 (mg/l)									
Aluminum	0.082	NA		NA		0.082	U	0.1	F
Antimony	0.0025	NA		NA		0.0025	U	0.0025	U
Arsenic	0.0029	NA		NA		0.0029	U	0.0029	U
Barium	0.001	NA		NA		0.14		0.13	
Beryllium	0.001	NA		NA		0.001	U	0.001	U
Cadmium	0.0029	NA		NA		0.0029	U	0.0029	U
Calcium	0.053	NA		NA		157		156	
Chromium	0.0023	NA		NA		0.0023	U	0.0023	U
Cobalt	0.0031	NA		NA		0.0051	F	0.0036	F
Copper	0.0025	NA		NA		0.0063	F	0.007	F
Iron	0.041	NA		NA		0.18		0.28	
Lead	0.0017	NA		NA		0.0017	U	0.0017	U
Magnesium	0.021	NA		NA		14.6		14.2	
Manganese	0.001	NA		NA		0.16		0.17	
Molybdenum	0.0065	NA		NA		0.0065	U	0.0065	U
Nickel	0.01	NA		NA		0.01	U	0.01	U
Potassium	0.3	NA		NA		4.5	F	4.7	F
Selenium	0.0039	NA		NA		0.0039	U	0.0039	U
Sodium	0.12	NA		NA		56.9		56.3	
Vanadium	0.0021	NA		NA		0.0021	U	0.0021	U
Zinc	0.012	NA		NA		0.025		0.017	F
Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)									
Mercury	0.000053	NA		NA		0.000053	U	0.000053	U
Silver (AA, Furnace Technique) - SW7761/SW3020 (mg/l)									
Silver	0.0002	NA		NA		0.0002	UJ	0.0002	UJ
Thallium (AA, Furnace Technique) - SW7841/SW3020 (mg/l)									
Thallium	0.002	NA		NA		0.002	U	0.002	U

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Data Summary Table
Carswell AFB
Flightline Area Groundwater

Locxref :	Method	GMI-22-02M		GMI-22-04M		GMI-22-05M		GMI-22-05M	
Sample ID :	Detection	GMI-22-02MWG01		GMI-22-04MWG01		DUP02-WG01		GMI-22-05MWG01	
Sample Date :	Limit	15-Jul-97		16-Jul-97		21-Jul-97		21-Jul-97	
Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)									
1,1,1,2-Tetrachloroethane	0.1	0.1	U	5	U	0.1	U	0.1	U
1,1,1-Trichloroethane	0.11	0.11	U	5.5	U	0.11	U	0.11	U
1,1,2,2-Tetrachloroethane	0.13	0.13	U	6.5	U	0.13	U	0.13	U
1,1,2-Trichloroethane	0.074	0.074	U	3.7	U	0.074	U	0.074	U
1,1-Dichloroethane	0.075	0.075	U	3.8	U	0.075	U	0.075	U
1,1-Dichloroethene	0.14	0.14	U	7	U	0.14	U	0.14	U
1,1-Dichloropropene	0.15	0.15	U	7.5	U	0.15	U	0.15	U
1,2,3-Trichlorobenzene	0.12	0.12	U	6	U	0.12	U	0.12	U
1,2,3-Trichloropropane	0.2	0.2	U	10	U	0.2	U	0.2	U
1,2,4-Trichlorobenzene	0.11	0.11	U	5.5	U	0.11	U	0.11	U
1,2,4-Trimethylbenzene	0.12	0.12	U	6	U	0.74	F	1	F
1,2-Dibromo-3-chloropropane (DBCP)	0.29	0.29	U	14	U	0.29	U	0.29	U
1,2-Dibromoethane (EDB)	0.08	0.08	U	4	U	0.08	U	0.08	U
1,2-Dichlorobenzene	0.13	0.13	U	6.5	U	0.13	U	0.13	U
1,2-Dichloroethane	0.077	0.077	U	3.8	U	0.077	U	0.077	U
1,2-Dichloropropane	0.085	0.085	U	4.2	U	0.085	U	0.085	U
1,3,5-Trimethylbenzene	0.15	0.15	U	7.5	U	0.15	U	0.15	U
1,3-Dichlorobenzene	0.11	0.11	U	5.5	U	0.11	U	0.11	U
1,3-Dichloropropane	0.066	0.066	U	3.3	U	0.066	U	0.066	U
1,4-Dichlorobenzene	0.14	0.14	U	7	U	0.14	U	0.14	U
1-Chlorohexane	0.11	0.11	U	5.5	U	0.11	U	0.11	U
2,2-Dichloropropane	0.15	0.15	U	7.5	U	0.15	U	0.15	U
2-Chlorotoluene	0.14	0.14	U	7	U	0.14	U	0.14	U
4-Chlorotoluene	0.12	0.12	U	6	U	0.12	U	0.12	U
Benzene	0.11	0.11	U	5.5	U	0.11	U	0.11	U
Bromobenzene	0.13	0.13	U	6.5	U	0.13	U	0.13	U
Bromochloromethane	0.13	0.13	U	6.5	U	0.13	U	0.13	U
Bromodichloromethane	0.11	0.11	U	5.5	U	0.11	U	0.11	U
Bromoform	0.4	0.4	U	20	U	0.4	U	0.4	U
Bromomethane	0.17	0.17	U	8.5	U	0.17	U	0.17	U
Carbon tetrachloride	0.14	0.14	U	7	U	0.14	U	0.14	U
Chlorobenzene	0.14	0.14	U	7	U	0.14	U	0.14	U
Chloroethane	0.066	0.066	U	3.3	U	0.066	U	0.066	U
Chloroform	0.097	0.097	U	4.8	U	0.097	U	0.097	U
Chloromethane	0.08	0.08	U	4	U	0.08	U	0.08	U
Dibromochloromethane	0.1	0.1	U	5	U	0.1	U	0.1	U
Dibromomethane	0.096	0.096	U	4.8	U	0.096	U	0.096	U
Dichlorodifluoromethane	0.14	0.14	U	7	U	0.14	U	0.14	U
Ethylbenzene	0.16	0.16	U	8	U	0.45	F	0.7	J
Hexachlorobutadiene	0.15	0.15	U	7.5	U	0.15	U	0.15	U
Isopropylbenzene	0.13	0.13	U	6.5	U	0.13	U	0.13	U
Methylene chloride	0.086	0.086	U	4.3	U	0.086	U	0.086	U

Data Summary Table
Carswell AFB
Flightline Area Groundwater

Locxref :	Method	GMI-22-02M		GMI-22-04M		GMI-22-05M		GMI-22-05M	
Sample ID :	Detection	GMI-22-02MWG01		GMI-22-04MWG01		DUP02-WG01		GMI-22-05MWG01	
Sample Date :	Limit	15-Jul-97		16-Jul-97		21-Jul-97		21-Jul-97	
Naphthalene	0.088	0.088	UJ	4.4	UJ	0.088	UJ	0.38	F
Styrene	0.094	0.094	U	4.7	U	0.094	U	0.094	U
Tetrachloroethene	0.13	0.13	U	6.5	U	0.13	U	0.13	U
Toluene	0.14	0.14	U	7	U	1.2	J	1.9	J
Trichloroethene	0.097	0.097	U	440		0.097	U	0.097	U
Trichlorofluoromethane	0.16	0.16	U	8	U	0.16	U	0.16	U
Vinyl chloride	0.13	0.13	U	6.5	U	0.13	U	0.13	U
cis-1,2-Dichloroethene	0.13	0.13	U	55	F	0.13	U	0.13	U
cis-1,3-Dichloropropene	0.081	0.081	U	4	U	0.081	U	0.081	U
m-Xylene & p-Xylene	0.27	0.27	U	14	U	2	J	3	J
n-Butylbenzene	0.14	0.14	U	7	U	0.14	U	0.14	U
n-Propylbenzene	0.12	0.12	U	6	U	0.12	U	0.12	U
o-Xylene	0.11	0.11	U	5.5	U	0.84	F	1.3	J
p-Isopropyltoluene	0.13	0.13	U	6.5	U	0.13	U	0.13	U
sec-Butylbenzene	0.14	0.14	U	7	U	0.14	U	0.14	U
tert-Butylbenzene	0.13	0.13	U	6.5	U	0.13	U	0.13	U
trans-1,2-Dichloroethene	0.088	0.088	U	4.4	U	0.088	U	0.088	U
trans-1,3-Dichloropropene	0.11	0.11	U	5.5	U	0.11	U	0.11	U
SW846 9056 - SW9056/METHOD (mg/l)									
Bromide	0.05	0.05	U	1.4		NA		NA	
Chloride	0.1	1.6		87.5		NA		NA	
Sulfate	0.2	5		43.4		NA		NA	
Total Organic Carbon - SW9060/METHOD (mg/l)									
Total Organic Carbon	0.2	1		2	U	NA		NA	

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Data Summary Table
Carswell AFB
Flightline Area Groundwater

Locxref : / Sample ID : / Sample Date :	Method Detection Limit	GMI-22-06M GMI-22-06MWG01 17-Jul-97		GMI-22-07M GMI-22-07MWG01 18-Jul-97		LSA1628-3 LSA1628-3WG01 18-Jul-97		SPOT35-2 SPOT35-2WG01 16-Jul-97	
Residue, Filterable (TDS) - E160.1/FLDFLT (mg/l)									
Total Dissolved Solids	3.8	NA		NA		NA		NA	
Alkalinity (Titrimetric) - E310.1/METHOD (mg/l)									
Alkalinity as CaCO3 to pH 4.5	5	440		250		370		390	
EPA-9/RSK-175 Modified A2720C - M2720C/METHOD (ug/l)									
Ethane	0.092	8.3		0.092	U	0.74		9.2	U
Ethene	0.1	0.21	U	0.1	U	0.1	U	10	U
Methane	0.052	75		0.18	F	3.1		4100	
Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3005 (mg/l)									
Aluminum	0.082	NA		NA		NA		NA	
Antimony	0.0025	NA		NA		NA		NA	
Arsenic	0.0029	NA		NA		NA		NA	
Barium	0.001	NA		NA		NA		NA	
Beryllium	0.001	NA		NA		NA		NA	
Cadmium	0.0029	NA		NA		NA		NA	
Calcium	0.053	NA		NA		NA		NA	
Chromium	0.0023	NA		NA		NA		NA	
Cobalt	0.0031	NA		NA		NA		NA	
Copper	0.0025	NA		NA		NA		NA	
Iron	0.041	NA		NA		NA		NA	
Lead	0.0017	NA		NA		NA		NA	
Magnesium	0.021	NA		NA		NA		NA	
Manganese	0.001	NA		NA		NA		NA	
Molybdenum	0.0065	NA		NA		NA		NA	
Nickel	0.01	NA		NA		NA		NA	
Potassium	0.3	NA		NA		NA		NA	
Selenium	0.0039	NA		NA		NA		NA	
Sodium	0.12	NA		NA		NA		NA	
Vanadium	0.0021	NA		NA		NA		NA	
Zinc	0.012	NA		NA		NA		NA	
Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)									
Mercury	0.000053	NA		NA		NA		NA	
Silver (AA, Furnace Technique) - SW7761/SW3020 (mg/l)									
Silver	0.0002	NA		NA		NA		NA	
Thallium (AA, Furnace Technique) - SW7841/SW3020 (mg/l)									
Thallium	0.002	NA		NA		NA		NA	

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Data Summary Table
Carswell AFB
Flightline Area Groundwater

Locxref :	Method	GMI-22-06M		GMI-22-07M		LSA1628-3		SPOT35-2	
Sample ID :	Detection	GMI-22-06MWG01		GMI-22-07MWG01		LSA1628-3WG01		SPOT35-2WG01	
Sample Date :	Limit	17-Jul-97		18-Jul-97		18-Jul-97		16-Jul-97	
Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)									
1,1,1,2-Tetrachloroethane	0.1	2.5	U	0.1	U	5	U	1	U
1,1,1-Trichloroethane	0.11	2.8	U	0.11	U	5.5	U	1.1	U
1,1,2,2-Tetrachloroethane	0.13	3.2	U	0.13	U	6.5	U	1.3	U
1,1,2-Trichloroethane	0.074	1.8	U	0.074	U	3.7	U	0.75	U
1,1-Dichloroethane	0.075	1.9	U	0.075	U	3.8	U	0.75	U
1,1-Dichloroethene	0.14	3.5	U	0.14	U	7	U	1.4	U
1,1-Dichloropropene	0.15	3.8	U	0.15	U	7.5	U	1.5	U
1,2,3-Trichlorobenzene	0.12	3	U	0.12	U	6	U	1.2	U
1,2,3-Trichloropropane	0.2	5	U	0.2	U	10	U	2	U
1,2,4-Trichlorobenzene	0.11	2.8	U	0.11	U	5.5	U	1.1	U
1,2,4-Trimethylbenzene	0.12	3	U	0.12	U	6	U	1.2	U
1,2-Dibromo-3-chloropropane (DBCP)	0.29	7.2	U	0.29	U	14	U	2.9	U
1,2-Dibromoethane (EDB)	0.08	2	U	0.08	U	4	U	0.8	U
1,2-Dichlorobenzene	0.13	3.2	U	0.13	U	6.5	U	1.3	U
1,2-Dichloroethane	0.077	1.9	U	0.077	U	3.8	U	0.77	U
1,2-Dichloropropane	0.085	2.1	U	0.085	U	4.2	U	0.85	U
1,3,5-Trimethylbenzene	0.15	3.8	U	0.15	U	7.5	U	1.5	U
1,3-Dichlorobenzene	0.11	2.8	U	0.11	U	5.5	U	1.1	U
1,3-Dichloropropane	0.066	1.6	U	0.066	U	3.3	U	0.66	U
1,4-Dichlorobenzene	0.14	3.5	U	0.14	U	7	U	1.4	U
1-Chlorohexane	0.11	2.8	U	0.11	U	5.5	U	1.1	U
2,2-Dichloropropane	0.15	3.8	U	0.15	U	7.5	U	1.5	U
2-Chlorotoluene	0.14	3.5	U	0.14	U	7	U	1.4	U
4-Chlorotoluene	0.12	3	U	0.12	U	6	U	1.2	U
Benzene	0.11	2.8	U	0.11	U	5.5	U	1.1	U
Bromobenzene	0.13	3.2	U	0.13	U	6.5	U	1.3	U
Bromochloromethane	0.13	3.2	U	0.13	U	6.5	U	1.3	U
Bromodichloromethane	0.11	2.8	U	0.11	U	5.5	U	1.1	U
Bromoform	0.4	10	U	0.4	U	20	U	4	U
Bromomethane	0.17	4.2	U	0.17	U	8.5	U	1.7	U
Carbon tetrachloride	0.14	3.5	U	0.14	U	7	U	1.4	U
Chlorobenzene	0.14	3.5	U	0.14	U	7	U	1.4	U
Chloroethane	0.066	1.6	U	0.066	U	3.3	U	0.66	U
Chloroform	0.097	2.4	U	0.097	U	4.8	U	0.97	U
Chloromethane	0.08	2	U	0.08	U	4	U	0.8	U
Dibromochloromethane	0.1	2.5	U	0.1	U	5	U	1	U
Dibromomethane	0.096	2.4	U	0.096	U	4.8	U	0.96	U
Dichlorodifluoromethane	0.14	3.5	U	0.14	U	7	U	1.4	U
Ethylbenzene	0.16	4	U	0.16	U	8	U	1.6	U
Hexachlorobutadiene	0.15	3.8	U	0.15	U	7.5	U	1.5	U
Isopropylbenzene	0.13	3.2	U	0.13	U	6.5	U	24	
Methylene chloride	0.086	2.2	U	0.086	U	4.3	U	0.86	U

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Data Summary Table
Carswell AFB
Flightline Area Groundwater

Locxref :	Method	GMI-22-06M		GMI-22-07M		LSA1628-3		SPOT35-2	
Sample ID :	Detection	GMI-22-06MWG01		GMI-22-07MWG01		LSA1628-3WG01		SPOT35-2WG01	
Sample Date :	Limit	17-Jul-97		18-Jul-97		18-Jul-97		16-Jul-97	
Naphthalene	0.088	2.2	UJ	0.088	UJ	4.4	UJ	140	J
Styrene	0.094	2.4	U	0.094	U	4.7	U	0.94	U
Tetrachloroethene	0.13	3.2	U	0.13	U	6.5	U	1.3	U
Toluene	0.14	3.5	U	0.14	U	7	U	1.4	U
Trichloroethene	0.097	220		0.097	U	400		0.97	U
Trichlorofluoromethane	0.16	4	U	0.16	U	8	U	1.6	U
Vinyl chloride	0.13	3.2	U	0.13	U	6.5	U	1.3	U
cis-1,2-Dichloroethene	0.13	99		0.13	U	25	F	1.3	U
cis-1,3-Dichloropropene	0.081	2	U	0.081	U	4	U	0.81	U
m-Xylene & p-Xylene	0.27	6.8	U	0.27	U	14	U	2.7	U
n-Butylbenzene	0.14	3.5	U	0.14	U	7	U	1.4	U
n-Propylbenzene	0.12	3	U	0.12	U	6	U	24	
o-Xylene	0.11	2.8	U	0.11	U	5.5	U	1.1	U
p-Isopropyltoluene	0.13	3.2	U	0.13	U	6.5	U	1.3	U
sec-Butylbenzene	0.14	3.5	U	0.14	U	7	U	1.4	U
tert-Butylbenzene	0.13	3.2	U	0.13	U	6.5	U	1.3	U
trans-1,2-Dichloroethene	0.088	67		0.088	U	17	F	0.88	U
trans-1,3-Dichloropropene	0.11	2.8	U	0.11	U	5.5	U	1.1	U
SW846 9056 - SW9056/METHOD (mg/l)									
Bromide	0.05	2.7		1.8		1.1		5.5	
Chloride	0.1	104		22.6		56.1		353	
Sulfate	0.2	61.6		85.4		51.2		5.5	
Total Organic Carbon - SW9060/METHOD (mg/l)									
Total Organic Carbon	0.2	3	U	2		2		29	

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Landfill Area Lab Results

Data Summary Table
Carswell AFB
Landfill Area Groundwater

Locxref: / Sample ID: / Sample Date:	Method Detection Limit	FT09-12C FT09-12CWG01 14-Jul-97		GMI-04-01M GMI-04-01MWG01 14-Jul-97		LF04-4F LF04-4FWG01 11-Jul-97		LF04-10 LF04-10WG01 14-Jul-97	
Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3005 (mg/l)									
Aluminum	0.082	NA		NA		NA		NA	
Antimony	0.0025	NA		NA		NA		NA	
Arsenic	0.0029	NA		NA		NA		NA	
Barium	0.001	NA		NA		NA		NA	
Beryllium	0.001	NA		NA		NA		NA	
Cadmium	0.0029	NA		NA		NA		NA	
Calcium	0.053	NA		NA		NA		NA	
Chromium	0.0023	NA		NA		NA		NA	
Cobalt	0.0031	NA		NA		NA		NA	
Copper	0.0025	NA		NA		NA		NA	
Iron	0.041	NA		NA		NA		NA	
Lead	0.0017	NA		NA		NA		NA	
Magnesium	0.021	NA		NA		NA		NA	
Manganese	0.001	NA		NA		NA		NA	
Molybdenum	0.0065	NA		NA		NA		NA	
Nickel	0.01	NA		NA		NA		NA	
Potassium	0.3	NA		NA		NA		NA	
Selenium	0.0039	NA		NA		NA		NA	
Sodium	0.12	NA		NA		NA		NA	
Vanadium	0.0021	NA		NA		NA		NA	
Zinc	0.012	NA		NA		NA		NA	
Mercury in Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)									
Mercury	0.000053	NA		NA		NA		NA	
Silver (AA, Furnace Technique) - SW7761/SW3020 (mg/l)									
Silver	0.0002	NA		NA		NA		NA	
Thallium (AA, Furnace Technique) - SW7841/SW3020 (mg/l)									
Thallium	0.002	NA		NA		NA		NA	
Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)									
1,1,1,2-Tetrachloroethane	0.1	0.25	U	15	U	20	U	0.1	U
1,1,1-Trichloroethane	0.11	0.275	U	16	U	22	U	0.11	U
1,1,2,2-Tetrachloroethane	0.13	0.325	U	20	U	26	U	0.13	U
1,1,2-Trichloroethane	0.074	0.185	U	11	U	15	U	0.074	U
1,1-Dichloroethane	0.075	0.188	U	11	U	15	U	0.075	U
1,1-Dichloroethene	0.14	0.35	U	21	U	28	U	0.14	U
1,1-Dichloropropene	0.15	0.375	U	22	U	30	U	0.15	U
1,2,3-Trichlorobenzene	0.12	0.3	U	18	U	24	U	0.12	U
1,2,3-Trichloropropane	0.2	0.5	U	30	U	40	U	0.2	U
1,2,4-Trichlorobenzene	0.11	0.275	U	16	U	22	U	0.11	U

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Data Summary Table
Carswell AFB
Landfill Area Groundwater

Locxref: / Sample ID: / Sample Date:	Method Detection Limit	FT09-12C FT09-12CWG01 14-Jul-97		GMI-04-01M GMI-04-01MWG01 14-Jul-97		LF04-4F LF04-4FWG01 11-Jul-97		LF04-10 LF04-10WG01 14-Jul-97	
1,2,4-Trimethylbenzene	0.12	0.3	U	18	U	24	U	0.12	U
1,2-Dibromo-3-chloropropane (DBCP)	0.29	0.725	U	44	U	58	U	0.29	U
1,2-Dibromoethane (EDB)	0.08	0.2	U	12	U	16	U	0.08	U
1,2-Dichlorobenzene	0.13	2.6		20	U	26	U	0.13	U
1,2-Dichloroethane	0.077	0.193	U	12	U	15	U	0.077	U
1,2-Dichloropropane	0.085	0.213	U	13	U	17	U	0.085	U
1,3,5-Trimethylbenzene	0.15	0.375	U	22	U	30	U	0.15	U
1,3-Dichlorobenzene	0.11	0.275	U	16	U	22	U	0.11	U
1,3-Dichloropropane	0.066	0.165	U	9.9	U	13	U	0.066	U
1,4-Dichlorobenzene	0.14	1.4		21	U	28	U	0.14	U
1-Chlorohexane	0.11	0.275	U	16	U	22	U	0.11	U
2,2-Dichloropropane	0.15	0.375	U	22	U	30	U	0.15	U
2-Chlorotoluene	0.14	0.35	U	21	U	28	U	0.14	U
4-Chlorotoluene	0.12	0.3	U	18	U	24	U	0.12	U
Benzene	0.11	3		16	U	22	U	0.11	U
Bromobenzene	0.13	0.325	U	20	U	26	U	0.13	U
Bromochloromethane	0.13	0.325	U	20	U	26	U	0.13	U
Bromodichloromethane	0.11	0.275	U	16	U	22	U	0.11	U
Bromoform	0.4	1	U	60	U	80	U	0.4	U
Bromomethane	0.17	0.425	U	26	U	34	U	0.17	U
Carbon tetrachloride	0.14	0.35	U	21	U	28	U	0.14	U
Chlorobenzene	0.14	0.35	U	21	U	28	U	0.14	U
Chloroethane	0.066	0.165	U	9.9	U	13	U	0.066	U
Chloroform	0.097	0.243	U	15	U	19	U	0.097	U
Chloromethane	0.08	0.2	U	12	U	16	U	0.08	U
Dibromochloromethane	0.1	0.25	U	15	U	20	U	0.1	U
Dibromomethane	0.096	0.24	U	14	U	19	U	0.096	U
Dichlorodifluoromethane	0.14	0.35	U	21	U	28	U	0.14	U
Ethylbenzene	0.16	0.4	U	24	U	32	U	0.16	U
Hexachlorobutadiene	0.15	0.375	U	22	U	30	U	0.15	U
Isopropylbenzene	0.13	0.325	U	20	U	26	U	0.13	U
Methylene chloride	0.086	0.215	U	13	U	17	U	0.086	U
Naphthalene	0.088	0.22	U	13	U	18	U	0.088	U
Styrene	0.094	0.235	U	14	U	19	U	0.094	U
Tetrachloroethene	0.13	0.325	U	20	U	26	U	0.13	U
Toluene	0.14	0.35	U	21	U	28	U	0.14	U
Trichloroethene	0.097	3.3		1400		2300		0.097	U
Trichlorofluoromethane	0.16	0.4	U	24	U	32	U	0.16	U
Vinyl chloride	0.13	6.6		20	U	26	U	0.13	U
cis-1,2-Dichloroethene	0.13	43		280		390		0.13	U
cis-1,3-Dichloropropene	0.081	0.203	U	12	U	16	U	0.081	U
m-Xylene & p-Xylene	0.27	0.675	U	40	U	54	U	0.27	U
n-Butylbenzene	0.14	0.35	U	21	U	28	U	0.14	U

Data Summary Table
Carswell AFB
Landfill Area Groundwater

Locxref :	Method	FT09-12C		GMI-04-01M		LF04-4F		LF04-10	
Sample ID :	Detection	FT09-12CWG01		GMI-04-01MWG01		LF04-4FWG01		LF04-10WG01	
Sample Date :	Limit	14-Jul-97		14-Jul-97		11-Jul-97		14-Jul-97	
n-Propylbenzene	0.12	0.3	U	18	U	24	U	0.12	U
o-Xylene	0.11	0.275	U	16	U	22	U	0.11	U
p-Isopropyltoluene	0.13	0.325	U	20	U	26	U	0.13	U
sec-Butylbenzene	0.14	0.35	U	21	U	28	U	0.14	U
tert-Butylbenzene	0.13	0.97	F	20	U	26	U	0.13	U
trans-1,2-Dichloroethene	0.088	0.22	U	13	U	18	U	0.088	U
trans-1,3-Dichloropropene	0.11	0.275	U	16	U	22	U	0.11	U

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Data Summary Table
Carswell AFB
Landfill Area Groundwater

Locxref: / Sample ID: / Sample Date:	Method Detection Limit	LF05-02 LF05-02WG01 14-Jul-97		LF05-5G LF05-5GWG01 14-Jul-97		LF05-18 LF05-18WG01 14-Jul-97		LF05-19 DUP01-WG01 15-Jul-97	
Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3005 (mg/l)									
Aluminum	0.082	NA		NA		0.11	F	0.082	U
Antimony	0.0025	NA		NA		0.0025	U	0.0025	U
Arsenic	0.0029	NA		NA		0.0029	U	0.0029	U
Barium	0.001	NA		NA		0.14		0.13	
Beryllium	0.001	NA		NA		0.001	U	0.001	U
Cadmium	0.0029	NA		NA		0.0029	U	0.0029	U
Calcium	0.053	NA		NA		165		171	
Chromium	0.0023	NA		NA		0.0023	U	0.0023	U
Cobalt	0.0031	NA		NA		0.0031	U	0.0031	U
Copper	0.0025	NA		NA		0.0025	U	0.0031	F
Iron	0.041	NA		NA		0.069	F	0.041	U
Lead	0.0017	NA		NA		0.0017	U	0.0017	U
Magnesium	0.021	NA		NA		10.4		10	
Manganese	0.001	NA		NA		0.0016	F	0.001	U
Molybdenum	0.0065	NA		NA		0.0065	U	0.0065	U
Nickel	0.01	NA		NA		0.01	U	0.01	U
Potassium	0.3	NA		NA		1.7	F	1.8	F
Selenium	0.0039	NA		NA		0.0039	U	0.0039	U
Sodium	0.12	NA		NA		59.1		35.9	
Vanadium	0.0021	NA		NA		0.0021	U	0.0021	U
Zinc	0.012	NA		NA		0.012	U	0.012	U
Mercury in Liquid Waste (Manual Cold-Vapor Technig - SW7470/METHOD (mg/l)									
Mercury	0.000053	NA		NA		0.000053	U	0.000053	U
Silver (AA, Furnace Technique) - SW7761/SW3020 (mg/l)									
Silver	0.0002	NA		NA		0.2	U	0.2	U
Thallium (AA, Furnace Technique) - SW7841/SW3020 (mg/l)									
Thallium	0.002	NA		NA		0.002	UJ	0.002	U
Volatile Organic Compounds by Gas Chromatgraph/Mas - SW8260/SW5030 (ug/l)									
1,1,1,2-Tetrachloroethane	0.1	5	U	5	U	10	U	2.5	U
1,1,1-Trichloroethane	0.11	5.5	U	5.5	U	11	U	2.8	U
1,1,2,2-Tetrachloroethane	0.13	6.5	U	6.5	U	13	U	3.2	U
1,1,2-Trichloroethane	0.074	3.7	U	3.7	U	7.4	U	1.8	U
1,1-Dichloroethane	0.075	3.8	U	3.8	U	7.5	U	1.9	U
1,1-Dichloroethene	0.14	7	U	7	U	14	U	3.5	U
1,1-Dichloropropene	0.15	7.5	U	7.5	U	15	U	3.8	U
1,2,3-Trichlorobenzene	0.12	6	U	6	U	12	U	3	U
1,2,3-Trichloropropane	0.2	10	U	10	U	20	U	5	U
1,2,4-Trichlorobenzene	0.11	5.5	U	5.5	U	11	U	2.8	U

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Data Summary Table
Carswell AFB
Landfill Area Groundwater

Locxref :	Method	LF05-02		LF05-5G		LF05-18		LF05-19	
Sample ID :	Detection	LF05-02WG01		LF05-5GWG01		LF05-18WG01		DUP01-WG01	
Sample Date :	Limit	14-Jul-97		14-Jul-97		14-Jul-97		15-Jul-97	
1,2,4-Trimethylbenzene	0.12	6	U	6	U	12	U	3	U
1,2-Dibromo-3-chloropropane (DBCP)	0.29	14	U	14	U	29	U	7.2	U
1,2-Dibromoethane (EDB)	0.08	4	U	4	U	8	U	2	U
1,2-Dichlorobenzene	0.13	6.5	U	6.5	U	13	U	3.2	U
1,2-Dichloroethane	0.077	3.8	U	3.8	U	7.7	U	1.9	U
1,2-Dichloropropane	0.085	4.2	U	4.2	U	8.5	U	2.1	U
1,3,5-Trimethylbenzene	0.15	7.5	U	7.5	U	15	U	3.8	U
1,3-Dichlorobenzene	0.11	5.5	U	5.5	U	11	U	2.8	U
1,3-Dichloropropane	0.066	3.3	U	3.3	U	6.6	U	1.6	U
1,4-Dichlorobenzene	0.14	7	U	7	U	14	U	3.5	U
1-Chlorohexane	0.11	5.5	U	5.5	U	11	U	2.8	U
2,2-Dichloropropane	0.15	7.5	U	7.5	U	15	U	3.8	U
2-Chlorotoluene	0.14	7	U	7	U	14	U	3.5	U
4-Chlorotoluene	0.12	6	U	6	U	12	U	3	U
Benzene	0.11	5.5	U	5.5	U	11	U	2.8	U
Bromobenzene	0.13	6.5	U	6.5	U	13	U	3.2	U
Bromochloromethane	0.13	6.5	U	6.5	U	13	U	3.2	U
Bromodichloromethane	0.11	5.5	U	5.5	U	11	U	2.8	U
Bromoform	0.4	20	U	20	U	40	U	10	U
Bromomethane	0.17	8.5	U	8.5	U	17	U	4.2	U
Carbon tetrachloride	0.14	7	U	7	U	14	U	3.5	U
Chlorobenzene	0.14	7	U	7	U	14	U	3.5	U
Chloroethane	0.066	3.3	U	3.3	U	6.6	U	1.6	U
Chloroform	0.097	4.8	U	4.8	U	9.7	U	2.4	U
Chloromethane	0.08	4	U	4	U	8	U	2	U
Dibromochloromethane	0.1	5	U	5	U	10	U	2.5	U
Dibromomethane	0.096	4.8	U	4.8	U	9.6	U	2.4	U
Dichlorodifluoromethane	0.14	7	U	7	U	14	U	3.5	U
Ethylbenzene	0.16	8	U	8	U	16	U	4	U
Hexachlorobutadiene	0.15	7.5	U	7.5	U	15	U	3.8	U
Isopropylbenzene	0.13	6.5	U	6.5	U	13	U	3.2	U
Methylene chloride	0.086	4.3	U	4.3	U	8.6	U	2.2	U
Naphthalene	0.088	4.4	U	4.4	U	8.8	U	2.2	U
Styrene	0.094	4.7	U	4.7	U	9.4	U	2.4	U
Tetrachloroethene	0.13	6.5	U	6.5	U	13	U	3.2	U
Toluene	0.14	7	U	7	U	14	U	3.5	U
Trichloroethene	0.097	130		420		660		310	J
Trichlorofluoromethane	0.16	8	U	8	U	16	U	4	U
Vinyl chloride	0.13	16	U	6.5	U	13	U	3.2	U
cis-1,2-Dichloroethene	0.13	370		140		200		85	
cis-1,3-Dichloropropene	0.081	4	U	4	U	8.1	U	2	U
m-Xylene & p-Xylene	0.27	14	U	14	U	27	U	6.8	U
n-Butylbenzene	0.14	7	U	7	U	14	U	3.5	U

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Data Summary Table
Carswell AFB
Landfill Area Groundwater

Locxref :	Method	LF05-02		LF05-5G		LF05-18		LF05-19	
Sample ID :	Detection	LF05-02WG01		LF05-5GWG01		LF05-18WG01		DUP01-WG01	
Sample Date :	Limit	14-Jul-97		14-Jul-97		14-Jul-97		15-Jul-97	
n-Propylbenzene	0.12	6	U	6	U	12	U	3	U
o-Xylene	0.11	5.5	U	5.5	U	11	U	2.8	U
p-Isopropyltoluene	0.13	6.5	U	6.5	U	13	U	3.2	U
sec-Butylbenzene	0.14	7	U	7	U	14	U	3.5	U
tert-Butylbenzene	0.13	6.5	U	6.5	U	13	U	3.2	U
trans-1,2-Dichloroethene	0.088	35	U	4.4	U	28	F	2.2	U
trans-1,3-Dichloropropene	0.11	5.5	U	5.5	U	11	U	2.8	U

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Data Summary Table
Carswell AFB
Landfill Area Groundwater

Locxref :	Method	LF05-19		WP07-10B		WP07-10C	
Sample ID :	Detection	LF05-19WG01		WP07-10BWG01		WP07-10CWG01	
Sample Date :	Limit	15-Jul-97		11-Jul-97		14-Jul-97	
Inductively Coupled Plasma Atomic Emission Spectro - SW6010/SW3005 (mg/l)							
Aluminum	0.082	0.082	U	NA		NA	
Antimony	0.0025	0.0025	U	NA		NA	
Arsenic	0.0029	0.0029	U	NA		NA	
Barium	0.001	0.14		NA		NA	
Beryllium	0.001	0.001	U	NA		NA	
Cadmium	0.0029	0.0029	U	NA		NA	
Calcium	0.053	173		NA		NA	
Chromium	0.0023	0.0023	U	NA		NA	
Cobalt	0.0031	0.0031	U	NA		NA	
Copper	0.0025	0.0052	F	NA		NA	
Iron	0.041	0.041	U	NA		NA	
Lead	0.0017	0.0017	U	NA		NA	
Magnesium	0.021	10.1		NA		NA	
Manganese	0.001	0.0094	F	NA		NA	
Molybdenum	0.0065	0.0065	U	NA		NA	
Nickel	0.01	0.01	U	NA		NA	
Potassium	0.3	1.9	F	NA		NA	
Selenium	0.0039	0.0039	U	NA		NA	
Sodium	0.12	35.6		NA		NA	
Vanadium	0.0021	0.0021	U	NA		NA	
Zinc	0.012	0.012	U	NA		NA	
Mercury In Liquid Waste (Manual Cold-Vapor Techniq - SW7470/METHOD (mg/l)							
Mercury	0.000053	0.000053	U	NA		NA	
Silver (AA, Furnace Technique) - SW7761/SW3020 (mg/l)							
Silver	0.0002	0.2	U	NA		NA	
Thallium (AA, Furnace Technique) - SW7841/SW3020 (mg/l)							
Thallium	0.002	0.002	U	NA		NA	
Volatile Organic Compounds by Gas Chromatograph/Mas - SW8260/SW5030 (ug/l)							
1,1,1,2-Tetrachloroethane	0.1	2.5	U	25	U	15	U
1,1,1-Trichloroethane	0.11	2.8	U	28	U	16	U
1,1,2,2-Tetrachloroethane	0.13	3.2	U	32	U	20	U
1,1,2-Trichloroethane	0.074	1.8	U	18	U	11	U
1,1-Dichloroethane	0.075	1.9	U	19	U	11	U
1,1-Dichloroethene	0.14	3.5	U	35	U	21	U
1,1-Dichloropropene	0.15	3.8	U	38	U	22	U
1,2,3-Trichlorobenzene	0.12	3	U	30	U	18	U
1,2,3-Trichloropropane	0.2	5	U	50	U	30	U
1,2,4-Trichlorobenzene	0.11	2.8	U	28	U	16	U

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Data Summary Table
Carswell AFB
Landfill Area Groundwater

Locuref :	Method	LF05-19		WP07-10B		WP07-10C	
Sample ID :	Detection	LF05-19WG01		WP07-10BWG01		WP07-10CWG01	
Sample Date :	Limit	15-Jul-97		11-Jul-97		14-Jul-97	
1,2,4-Trimethylbenzene	0.12	3	U	30	U	18	U
1,2-Dibromo-3-chloropropane (DBCP)	0.29	7.2	U	72	U	44	U
1,2-Dibromoethane (EDB)	0.08	2	U	20	U	12	U
1,2-Dichlorobenzene	0.13	3.2	U	32	U	20	U
1,2-Dichloroethane	0.077	1.9	U	19	U	12	U
1,2-Dichloropropane	0.085	2.1	U	21	U	13	U
1,3,5-Trimethylbenzene	0.15	3.8	U	38	U	22	U
1,3-Dichlorobenzene	0.11	2.8	U	28	U	16	U
1,3-Dichloropropane	0.066	1.6	U	16	U	9.9	U
1,4-Dichlorobenzene	0.14	3.5	U	35	U	21	U
1-Chlorohexane	0.11	2.8	U	28	U	16	U
2,2-Dichloropropane	0.15	3.8	U	38	U	22	U
2-Chlorotoluene	0.14	3.5	U	35	U	21	U
4-Chlorotoluene	0.12	3	U	30	U	18	U
Benzene	0.11	2.8	U	28	U	16	U
Bromobenzene	0.13	3.2	U	32	U	20	U
Bromochloromethane	0.13	3.2	U	32	U	20	U
Bromodichloromethane	0.11	2.8	U	28	U	16	U
Bromoform	0.4	10	U	100	U	60	U
Bromomethane	0.17	4.2	U	42	U	26	U
Carbon tetrachloride	0.14	3.5	U	35	U	21	U
Chlorobenzene	0.14	3.5	U	35	U	21	U
Chloroethane	0.066	1.6	U	16	U	9.9	U
Chloroform	0.097	2.4	U	24	U	15	U
Chloromethane	0.08	2	U	20	U	12	U
Dibromochloromethane	0.1	2.5	U	25	U	15	U
Dibromomethane	0.096	2.4	U	24	U	14	U
Dichlorodifluoromethane	0.14	3.5	U	35	U	21	U
Ethylbenzene	0.16	4	U	40	U	24	U
Hexachlorobutadiene	0.15	3.8	U	38	U	22	U
Isopropylbenzene	0.13	3.2	U	32	U	20	U
Methylene chloride	0.086	2.2	U	22	U	13	U
Naphthalene	0.088	2.2	U	22	U	13	U
Styrene	0.094	2.4	U	24	U	14	U
Tetrachloroethene	0.13	3.2	U	32	U	20	U
Toluene	0.14	3.5	U	35	U	21	U
Trichloroethene	0.097	240	J	2800		1400	
Trichlorofluoromethane	0.16	4	U	40	U	24	U
Vinyl chloride	0.13	3.2	U	32	U	20	U
cis-1,2-Dichloroethene	0.13	77		320		230	
cis-1,3-Dichloropropene	0.081	2	U	20	U	12	U
m-Xylene & p-Xylene	0.27	6.8	U	68	U	40	U
n-Butylbenzene	0.14	3.5	U	35	U	21	U

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Data Summary Table
Carswell AFB
Landfill Area Groundwater

Locxref :	Method	LF05-19		WP07-10B		WP07-10C	
Sample ID :	Detection	LF05-19WG01		WP07-10BWG01		WP07-10CWG01	
Sample Date :	Limit	15-Jul-97		11-Jul-97		14-Jul-97	
n-Propylbenzene	0.12	3	U	30	U	18	U
o-Xylene	0.11	2.8	U	28	U	16	U
p-Isopropyltoluene	0.13	3.2	U	32	U	20	U
sec-Butylbenzene	0.14	3.5	U	35	U	21	U
tert-Butylbenzene	0.13	3.2	U	32	U	20	U
trans-1,2-Dichloroethene	0.088	2.2	U	42	F	13	U
trans-1,3-Dichloropropene	0.11	2.8	U	28	U	16	U

Table: _____
DQE: _____
enior Reviewed: _____

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WELL SAMPLING DATES

Date	Wells Sampled
July 11, 1997	LF04-4F WP07-10B
July 14-15, 1997	FT-09-12C GMI-22-02M GMI04-01M LF04-10 LF05-02 LF05-5C LF05-18 LF05-19 SPOT-35-4 SPOT-35-5 ST14-02 ST14-14 ST14-24 ST14-W16 ST14-W18 WP07-10C
July 16-17, 1997	ST14-W21 SPOT-35-2 GMI-22-04M ST14-04 ST14-29 GMI-22-06M
July 18, 1997	17M GMI-22-07M LSA 1628-3
July 20-21, 1997	BSS-A BSS-B GMI-22-05M LF01-1B LF01-1D MW-1 MW-10 MW-11

Date	Wells Sampled
July 22, 1997	LF01-1C LF01-1E MW-5 MW-8 MW-9 MW-12 SD13-01 ST14-28
July 23, 1997	OT-15C SD13-02 SD13-04 SD13-06 ST14-03 ST14-26 USGS04T
July 24, 1997	MW-3 ST14-W31

Analytical Report for Wells Sampled July 11, 1997

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Quanterra
Environmental Services

Quanterra Incorporated
5910 Breckenridge Parkway, Suite H
Tampa, Florida 33610

813 621-0784 Telephone
813 623-6021 Fax

ANALYTICAL REPORT

PROJECT NO. 12001-7-5001

NAS FT. WORTH JRB,1ST QTR

Lot #: B7G120106

Jim Costello

HydroGeoLogic, Inc.

QUANTERRA INCORPORATED

Certification Numbers: E84059,HRS84297
FDEP CompQAP: 870270G

Michele H. Lersch

Michele Lersch
Project Manager

August 1, 1997

Quanterra
Environmental Services

NARI

HydroGeoLogic

:S Ft. Worth JRB, 1st Qtr

Quanterra Lot Number: B7G1201016
Matrix: Groundwater
Method: 8260A

No QC problems were encountered with the analy le organic compounds by method 8260A.

Quanterra
Environmental Services

SAMPLE SUMMARY

B7G120106

WO #	SAMPLE#	CLIENT SAMPLE ID	DATE	TIME
CALPM	001	WP07-10BWG01	07/11/97	16:50
CALPP	002	LF04-4FWG01	07/11/97	18:00
CALPR	003	EB-071197	07/11/97	17:40
CALPV	004	TB-071197	07/11/97	14:00

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Quanterra Environmental Services

EXECUTIVE SUMMARY - Detection Highlights

B7G120106

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
WP07-10BWG01 07/11/97 16:50 001				
cis-1,2-Dichloroethene	320	300	ug/L	SW846 8260A
Trichloroethene	2800	250	ug/L	SW846 8260A
trans-1,2-Dichloroethene	42 F	150	ug/L	SW846 8260A
LF04-4FWG01 07/11/97 18:00 002				
cis-1,2-Dichloroethene	390	240	ug/L	SW846 8260A
Trichloroethene	2300	200	ug/L	SW846 8260A
EB-071197 07/11/97 17:40 003				
Chloroform	0.73	0.30	ug/L	SW846 8260A
Toluene	1.6	1.1	ug/L	SW846 8260A

Quanterra
Environmental Services

METHODS SUMMARY

B7G120106

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Volatile Organics by GC/MS	SW846 8260A	SW846 5030/8260

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

Quanterra
Environmental Services

METHOD / ANALYST SUMMARY

B7G120106

ANALYTICAL METHOD	ANALYST	ANALYST ID
SW846 8260A	Stephen C. Bell	007084

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

Quanterra Environmental Services

QC DATA ASSOCIATION SUMMARY

B7G120106

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WG	SW846 8260A		7208107	
002	WG	SW846 8260A		7208107	
003	WQ	SW846 8260A		7208107	
004	WQ	SW846 8260A		7208107	

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: WP07-10BWG01

GC/MS Volatiles

Lot-Sample #...: B7G120106-001 Work Order #...: CALPM101 Matrix.....: WG
Date Sampled...: 07/11/97 Date Received..: 07/12/97
Prep Date.....: 07/23/97 Analysis Date..: 07/23/97
Prep Batch #...: 7208107 Analysis Time..: 13:00
Dilution Factor: 250
Analyst ID.....: 007084 Instrument ID..: VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	120	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	200	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	100	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	250	ug/L	SW846 8260A
1,1-Dichloroethane	ND	100	ug/L	SW846 8260A
1,1-Dichloroethene	ND	300	ug/L	SW846 8260A
1,1-Dichloropropene	ND	250	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	75	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	800	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	100	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	320	ug/L	SW846 8260A
1,2-Dichloroethane	ND	150	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	75	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	650	ug/L	SW846 8260A
1,2-Dichloropropane	ND	100	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	150	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	120	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	300	ug/L	SW846 8260A
1,3-Dichloropropane	ND	100	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	75	ug/L	SW846 8260A
1-Chlorohexane	ND	120	ug/L	SW846 8260A
2,2-Dichloropropane	ND	880	ug/L	SW846 8260A
2-Chlorotoluene	ND	100	ug/L	SW846 8260A
4-Chlorotoluene	ND	150	ug/L	SW846 8260A
Benzene	ND	100	ug/L	SW846 8260A
Bromobenzene	ND	75	ug/L	SW846 8260A
Bromochloromethane	ND	100	ug/L	SW846 8260A
Bromodichloromethane	ND	200	ug/L	SW846 8260A
Bromoform	ND	300	ug/L	SW846 8260A
Bromomethane	ND	280	ug/L	SW846 8260A
Carbon tetrachloride	ND	520	ug/L	SW846 8260A
Chlorobenzene	ND	100	ug/L	SW846 8260A
Chloroethane	ND	250	ug/L	SW846 8260A
Chloroform	ND	75	ug/L	SW846 8260A
Chloromethane	ND	320	ug/L	SW846 8260A
cis-1,2-Dichloroethene	**320**	**300**	**ug/L**	**SW846 8260A**
cis-1,3-Dichloropropene	ND	250	ug/L	SW846 8260A

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: WP07-10BWG01

GC/MS Volatiles

Lot-Sample #...: B7G120106-001 **Work Order #...:** CALPM101 **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	120	ug/L	SW846 8260A
Dibromomethane	ND	600	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	250	ug/L	SW846 8260A
Ethylbenzene	ND	150	ug/L	SW846 8260A
Hexachlorobutadiene	ND	280	ug/L	SW846 8260A
Isopropylbenzene	ND	120	ug/L	SW846 8260A
m-Xylene & p-Xylene	ND	120	ug/L	SW846 8260A
Methylene chloride	ND	75	ug/L	SW846 8260A
n-Butylbenzene	ND	280	ug/L	SW846 8260A
n-Propylbenzene	ND	100	ug/L	SW846 8260A
Naphthalene	ND	100	ug/L	SW846 8260A
o-Xylene	ND	280	ug/L	SW846 8260A
p-Isopropyltoluene	ND	300	ug/L	SW846 8260A
sec-Butylbenzene	ND	320	ug/L	SW846 8260A
Styrene	ND	100	ug/L	SW846 8260A
Trichloroethene	**2800**	**250**	**ug/L**	**SW846 8260A**
tert-Butylbenzene	ND	350	ug/L	SW846 8260A
Tetrachloroethene	ND	350	ug/L	SW846 8260A
Toluene	ND	280	ug/L	SW846 8260A
trans-1,2-Dichloroethene	**42 F**	**150**	**ug/L**	**SW846 8260A**
trans-1,3-Dichloropropene	ND	250	ug/L	SW846 8260A
Trichlorofluoromethane	ND	200	ug/L	SW846 8260A
Vinyl chloride	ND	280	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	105	(75 - 125)
4-Bromofluorobenzene	94	(75 - 125)
1,2-Dichloroethane-d4	97	(62 - 139)
Dibromofluoromethane	98	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: LF04-4FWG01

GC/MS Volatiles

Lot-Sample #...: B7G120106-002 **Work Order #...:** CALPP101 **Matrix.....:** WG
Date Sampled...: 07/11/97 **Date Received..:** 07/12/97
Prep Date.....: 07/23/97 **Analysis Date..:** 07/23/97
Prep Batch #...: 7208107 **Analysis Time..:** 12:35
Dilution Factor: 200
Analyst ID.....: 007084 **Instrument ID..:** VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	100	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	160	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	80	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	200	ug/L	SW846 8260A
1,1-Dichloroethane	ND	80	ug/L	SW846 8260A
1,1-Dichloroethene	ND	240	ug/L	SW846 8260A
1,1-Dichloropropene	ND	200	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	60	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	640	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	80	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	260	ug/L	SW846 8260A
1,2-Dichloroethane	ND	120	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	60	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	520	ug/L	SW846 8260A
1,2-Dichloropropane	ND	80	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	120	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	100	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	240	ug/L	SW846 8260A
1,3-Dichloropropane	ND	80	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	60	ug/L	SW846 8260A
1-Chlorohexane	ND	100	ug/L	SW846 8260A
2,2-Dichloropropane	ND	700	ug/L	SW846 8260A
2-Chlorotoluene	ND	80	ug/L	SW846 8260A
4-Chlorotoluene	ND	120	ug/L	SW846 8260A
Benzene	ND	80	ug/L	SW846 8260A
Bromobenzene	ND	60	ug/L	SW846 8260A
Bromochloromethane	ND	80	ug/L	SW846 8260A
Bromodichloromethane	ND	160	ug/L	SW846 8260A
Bromoform	ND	240	ug/L	SW846 8260A
Bromomethane	ND	220	ug/L	SW846 8260A
Carbon tetrachloride	ND	420	ug/L	SW846 8260A
Chlorobenzene	ND	80	ug/L	SW846 8260A
Chloroethane	ND	200	ug/L	SW846 8260A
Chloroform	ND	60	ug/L	SW846 8260A
Chloromethane	ND	260	ug/L	SW846 8260A
cis-1,2-Dichloroethene	**390**	**240**	**ug/L**	**SW846 8260A**
cis-1,3-Dichloropropene	ND	200	ug/L	SW846 8260A

(Continued on next page)

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: LF04-4FWG01

GC/MS Volatiles

Lot-Sample #...: B7G120106-002 Work Order #...: CALPP101 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	100	ug/L	SW846 8260A
Dibromomethane	ND	480	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	200	ug/L	SW846 8260A
Ethylbenzene	ND	120	ug/L	SW846 8260A
Hexachlorobutadiene	ND	220	ug/L	SW846 8260A
Isopropylbenzene	ND	100	ug/L	SW846 8260A
m-Xylene & p-Xylene	ND	100	ug/L	SW846 8260A
Methylene chloride	ND	60	ug/L	SW846 8260A
n-Butylbenzene	ND	220	ug/L	SW846 8260A
n-Propylbenzene	ND	80	ug/L	SW846 8260A
Naphthalene	ND	80	ug/L	SW846 8260A
o-Xylene	ND	220	ug/L	SW846 8260A
p-Isopropyltoluene	ND	240	ug/L	SW846 8260A
sec-Butylbenzene	ND	260	ug/L	SW846 8260A
Styrene	ND	80	ug/L	SW846 8260A
Trichloroethene	**2300**	**200**	**ug/L**	**SW846 8260A**
tert-Butylbenzene	ND	280	ug/L	SW846 8260A
Tetrachloroethene	ND	280	ug/L	SW846 8260A
Toluene	ND	220	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	120	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	200	ug/L	SW846 8260A
Trichlorofluoromethane	ND	160	ug/L	SW846 8260A
Vinyl chloride	ND	220	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	104	(75 - 125)
4-Bromofluorobenzene	94	(75 - 125)
1,2-Dichloroethane-d4	98	(62 - 139)
Dibromofluoromethane	94	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra
Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: EB-071197

GC/MS Volatiles

Lot-Sample #...: B7G120106-003 Work Order #...: CALPR101 Matrix.....: WQ
Date Sampled...: 07/11/97 Date Received..: 07/12/97
Prep Date.....: 07/23/97 Analysis Date..: 07/23/97
Prep Batch #...: 7208107 Analysis Time..: 12:11
Dilution Factor: 1
Analyst ID.....: 007084 Instrument ID..: VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	0.80	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	0.40	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	0.40	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.2	ug/L	SW846 8260A
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	3.2	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	0.40	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	1.3	ug/L	SW846 8260A
1,2-Dichloroethane	ND	0.60	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.6	ug/L	SW846 8260A
1,2-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	0.60	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	0.50	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	1.2	ug/L	SW846 8260A
1,3-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1-Chlorohexane	ND	0.50	ug/L	SW846 8260A
2,2-Dichloropropane	ND	3.5	ug/L	SW846 8260A
2-Chlorotoluene	ND	0.40	ug/L	SW846 8260A
4-Chlorotoluene	ND	0.60	ug/L	SW846 8260A
Benzene	ND	0.40	ug/L	SW846 8260A
Bromobenzene	ND	0.30	ug/L	SW846 8260A
Bromochloromethane	ND	0.40	ug/L	SW846 8260A
Bromodichloromethane	ND	0.80	ug/L	SW846 8260A
Bromoform	ND	1.2	ug/L	SW846 8260A
Bromomethane	ND	1.1	ug/L	SW846 8260A
Carbon tetrachloride	ND	2.1	ug/L	SW846 8260A
Chlorobenzene	ND	0.40	ug/L	SW846 8260A
Chloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	**0.73**	**0.30**	**ug/L**	**SW846 8260A**
Chloromethane	ND	1.3	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	1.2	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A

(Continued on next page)

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: EB-071197

GC/MS Volatiles

Lot-Sample #...: B7G120106-003 Work Order #...: CALPR101 Matrix.....: WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	0.50	ug/L	SW846 8260A
Dibromomethane	ND	2.4	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	ND	0.60	ug/L	SW846 8260A
Hexachlorobutadiene	ND	1.1	ug/L	SW846 8260A
Isopropylbenzene	ND	0.50	ug/L	SW846 8260A
m-Xylene & p-Xylene	ND	0.50	ug/L	SW846 8260A
Methylene chloride	ND	0.30	ug/L	SW846 8260A
n-Butylbenzene	ND	1.1	ug/L	SW846 8260A
n-Propylbenzene	ND	0.40	ug/L	SW846 8260A
Naphthalene	ND	0.40	ug/L	SW846 8260A
o-Xylene	ND	1.1	ug/L	SW846 8260A
p-Isopropyltoluene	ND	1.2	ug/L	SW846 8260A
sec-Butylbenzene	ND	1.3	ug/L	SW846 8260A
Styrene	ND	0.40	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
tert-Butylbenzene	ND	1.4	ug/L	SW846 8260A
Tetrachloroethene	ND	1.4	ug/L	SW846 8260A
Toluene	**1.6**	**1.1**	**ug/L**	**SW846 8260A**
trans-1,2-Dichloroethene	ND	0.60	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichlorofluoromethane	ND	0.80	ug/L	SW846 8260A
Vinyl chloride	ND	1.1	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	101	(75 - 125)
4-Bromofluorobenzene	96	(75 - 125)
1,2-Dichloroethane-d4	100	(62 - 139)
Dibromofluoromethane	98	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: TB-071197

GC/MS Volatiles

Lot-Sample #...: B7G120106-004 **Work Order #...:** CALPV101 **Matrix.....:** WQ
Date Sampled...: 07/11/97 **Date Received..:** 07/12/97
Prep Date.....: 07/23/97 **Analysis Date..:** 07/23/97
Prep Batch #...: 7208107 **Analysis Time..:** 11:46
Dilution Factor: 1
Analyst ID.....: 007084 **Instrument ID..:** VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	0.80	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	0.40	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	0.40	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.2	ug/L	SW846 8260A
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	3.2	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	0.40	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	1.3	ug/L	SW846 8260A
1,2-Dichloroethane	ND	0.60	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.6	ug/L	SW846 8260A
1,2-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	0.60	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	0.50	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	1.2	ug/L	SW846 8260A
1,3-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1-Chlorohexane	ND	0.50	ug/L	SW846 8260A
2,2-Dichloropropane	ND	3.5	ug/L	SW846 8260A
2-Chlorotoluene	ND	0.40	ug/L	SW846 8260A
4-Chlorotoluene	ND	0.60	ug/L	SW846 8260A
Benzene	ND	0.40	ug/L	SW846 8260A
Bromobenzene	ND	0.30	ug/L	SW846 8260A
Bromochloromethane	ND	0.40	ug/L	SW846 8260A
Bromodichloromethane	ND	0.80	ug/L	SW846 8260A
Bromoform	ND	1.2	ug/L	SW846 8260A
Bromomethane	ND	1.1	ug/L	SW846 8260A
Carbon tetrachloride	ND	2.1	ug/L	SW846 8260A
Chlorobenzene	ND	0.40	ug/L	SW846 8260A
Chloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	0.30	ug/L	SW846 8260A
Chloromethane	ND	1.3	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	1.2	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: TB-071197

GC/MS Volatiles

Lot-Sample #...: B7G120106-004 **Work Order #...:** CALPV101 **Matrix.....:** WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	0.50	ug/L	SW846 8260A
Dibromomethane	ND	2.4	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	ND	0.60	ug/L	SW846 8260A
Hexachlorobutadiene	ND	1.1	ug/L	SW846 8260A
Isopropylbenzene	ND	0.50	ug/L	SW846 8260A
m-Xylene & p-Xylene	ND	0.50	ug/L	SW846 8260A
Methylene chloride	ND	0.30	ug/L	SW846 8260A
n-Butylbenzene	ND	1.1	ug/L	SW846 8260A
n-Propylbenzene	ND	0.40	ug/L	SW846 8260A
Naphthalene	ND	0.40	ug/L	SW846 8260A
o-Xylene	ND	1.1	ug/L	SW846 8260A
p-Isopropyltoluene	ND	1.2	ug/L	SW846 8260A
sec-Butylbenzene	ND	1.3	ug/L	SW846 8260A
Styrene	ND	0.40	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
tert-Butylbenzene	ND	1.4	ug/L	SW846 8260A
Tetrachloroethene	ND	1.4	ug/L	SW846 8260A
Toluene	ND	1.1	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	0.60	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichlorofluoromethane	ND	0.80	ug/L	SW846 8260A
Vinyl chloride	ND	1.1	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	103	(75 - 125)
4-Bromofluorobenzene	93	(75 - 125)
1,2-Dichloroethane-d4	97	(62 - 139)
Dibromofluoromethane	95	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

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Quanterra
Environmental Services

Quality Control Summary

Quanterra QC Program Summary

Method Blanks

Laboratory Control Samples

Matrix Spike/Matrix Spike Duplicates

Chain-of-Custody

Quanterra Environmental Services

Quanterra Quality Control Program Summary

Quanterra Environmental Services considers continuous analytical method performance evaluations to be an integral portion of the data package, and routinely includes the pertinent QA/QC data associated with analytical results. Brief discussions of the various QA/QC procedures utilized to measure acceptable method and matrix performance follow. Further documentation of specific policies and procedures in use are available, upon request, from the Quanterra Quality Control Department.

The program described below provides Quanterra's interpretation of QC requirements described in SW-846, 3rd edition -Final Update II. Additional interpretations specific to other aspects of methods performed, such as instrument calibration and bench procedures, are described in program-specific documents (e.g. US Corps of Engineers, AFCEE, etc.) and associated method standard operating procedures. Where explicit program requirements or project requirements exist, certain elements of the Quanterra QC Program may be superseded by these requirements.

Elements of the Quanterra QC Program

Where other clear regulatory guidance, contract specifications, or client requirements are not available, the Quanterra QC Program provides guidance for Batch QC requirements. The Quality Control Batch is a set of up to 20 field samples of similar matrix, which are processed together under the same conditions, within the same time frame. Included in each Quality Control Batch is a Method Blank, Laboratory Control Sample, and Matrix Spike Duplicate. For methods that require independent sample preparation prior to analysis, the QC Batch is defined at the preparation stage. For methods that do not require independent sample preparation, the QC Batch is defined at the instrument. The QC Batch Number is provided on each result page in association with the parameter(s) presented, and may be used to cross-reference sample results with the associated QC data.

Method Blank Evaluations

Laboratory analytical method blanks are systematically prepared and analyzed in order to continuously evaluate the system interference and background contamination levels associated with each applicable analytical method. Method blanks include all aspects of actual laboratory procedures involving sample preparation and analysis, substituting analyte-free water or solid for the actual sample. Under normal circumstances, the Method Blank should not exhibit analytes of interest above the reported detection limit. Due to the presence of some analytes in a typical laboratory setting, the following common laboratory contaminants are exceptions to this rule, provided they are not present in the method blank at greater than five times the reporting limit.

Volatiles	Semi-Volatiles	Metals
Methylene chloride	Dimethyl phthalate	Calcium
Toluene	Diethyl phthalate	Magnesium
2-Butanone	Di-n-butyl-phthalate	Sodium
Acetone	Butyl benzyl phthalate	
	Bis (2-ethylhexyl) phthalate	

A method blank is performed with each analytical batch. A minimum of 5% of all laboratory analyses are method blanks.

Laboratory Control Sample (LCS) Evaluations

Known concentrations of designated matrix spike (target analyte) compounds are added to a method blank prior to extraction and analysis. Percent recovery determinations of individual target analytes in the LCS demonstrate the laboratory's method performance for the QC Batch relative to these target analytes (or other individual components represented by a subset of control analytes). Percent recovery data is displayed alongside acceptance criteria, that is typically derived from laboratory historical data. Failure of a Laboratory Control Sample to meet established recovery criteria for control analytes is cause for corrective actions to occur, which typically includes re-extraction and re-analysis of all samples associated with the QC Batch. An LCS is performed with each analytical batch. A minimum of 5% of all laboratory analyses are laboratory control samples.

Quanterra
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Quanterra Quality Control Program Summary (continued)

Surrogate Spike Recovery Evaluations

For GC and GC/MS analyses, known concentrations of designated surrogate spikes, consisting of a number of similar, non-method compounds or method compound analogues, are added to sample fractions prior to sample extraction and analysis. The percent recovery determinations calculated from the subsequent analysis is one indication of the overall method efficiency for the individual sample. The surrogate spike recovery data is displayed alongside acceptance limits at the bottom of each applicable analytical result report page. Where sufficient laboratory-generated data does not yet exist to determine appropriate control limits, advisory limits may be enacted until sufficient data is collected to allow implementation of control limits.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Evaluations

In conjunction with the analysis of a client-provided field sample, a known concentration of designated matrix spike compounds (target analytes) are added to two aliquots of the actual sample. Percent recovery determinations are calculated from both spiked aliquots, using target analyte concentrations already present in the actual sample as a baseline. The percent recovery determinations indicate the accuracy of the method specific to the target analytes (or other individual components represented by a subset of control analytes) in the individual sample matrix. Comparison of the percent recoveries in the two spiked aliquots yields a relative percent difference (RPD). Percent recovery and relative percent difference data is displayed alongside historical criteria, that may be used to judge individual sample matrix effects for specific analytes. MS/MSD data is evaluated by the laboratory with respect to the individual sample matrix. In cases where MS/MSD data indicate sample method performance outside of historical criteria, the laboratory control sample results are referenced to ensure acceptable method performance by the laboratory for the sample batch. For analyses which are inappropriately suited for matrix spikes (e.g. pH), non-spiked duplicate analyses are performed to generate precision data. Matrix spike duplicates are typically performed on at least one sample within each analytical batch. A minimum of 10% of all laboratory analyses are matrix spikes or duplicates.

Corrective Action Evaluations

The goal of the Quanterra Quality Control Program is to generate data that demonstrates process control, and allows for client usability of data. Where the analytical process is demonstrated to vary from established criteria, or client requirements have not been met, data evaluation resulting in corrective action may be required. Corrective action may include re-preparation and/or reanalysis of field samples and QC samples. Where appropriate or necessary to allow proper interpretation of results presented in the final report, details of corrective actions taken during the laboratory processing of samples are presented as a case narrative at the front of the report. Alternatively, routine corrective action, such as reanalysis, may be footnoted on individual sample result pages.

Analytical Result Qualifier Flags

Where applicable, data qualifiers may be appended to analytical results in order to allow for proper interpretation of the result presented. Typically, the presence of data qualifier flag on an analytical result page is accompanied by a footnote explaining the qualifier.

Quanterra Environmental Services

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: B7G120106
MB Lot-Sample #: B7G270000-107
Work Order #...: CAX4T101
Matrix.....: WATER
Prep Date.....: 07/23/97
Analysis Time..: 10:23
Analysis Date..: 07/23/97
Prep Batch #...: 7208107
Instrument ID..: VO4
Dilution Factor: 1
Analyst ID.....: 007084

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	0.80	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	0.40	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	0.40	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.2	ug/L	SW846 8260A
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	3.2	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	0.40	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	1.3	ug/L	SW846 8260A
1,2-Dichloroethane	ND	0.60	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.6	ug/L	SW846 8260A
1,2-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	0.60	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	0.50	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	1.2	ug/L	SW846 8260A
1,3-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1-Chlorohexane	ND	0.50	ug/L	SW846 8260A
2,2-Dichloropropane	ND	3.5	ug/L	SW846 8260A
2-Chlorotoluene	ND	0.40	ug/L	SW846 8260A
4-Chlorotoluene	ND	0.60	ug/L	SW846 8260A
Benzene	ND	0.40	ug/L	SW846 8260A
Bromobenzene	ND	0.30	ug/L	SW846 8260A
Bromochloromethane	ND	0.40	ug/L	SW846 8260A
Bromodichloromethane	ND	0.80	ug/L	SW846 8260A
Bromoform	ND	1.2	ug/L	SW846 8260A
Bromomethane	ND	1.1	ug/L	SW846 8260A
Carbon tetrachloride	ND	2.1	ug/L	SW846 8260A
Chlorobenzene	ND	0.40	ug/L	SW846 8260A
Chloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	0.30	ug/L	SW846 8260A
Chloromethane	ND	1.3	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	1.2	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Dibromochloromethane	ND	0.50	ug/L	SW846 8260A
Dibromomethane	ND	2.4	ug/L	SW846 8260A

(Continued on next page)

Quanterra Environmental Services

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: B7G120106 **Work Order #...:** CAX4T101 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	ND	0.60	ug/L	SW846 8260A
Hexachlorobutadiene	ND	1.1	ug/L	SW846 8260A
Isopropylbenzene	ND	0.50	ug/L	SW846 8260A
m-Xylene & p-Xylene	ND	0.50	ug/L	SW846 8260A
Methylene chloride	ND	0.30	ug/L	SW846 8260A
n-Butylbenzene	ND	1.1	ug/L	SW846 8260A
n-Propylbenzene	ND	0.40	ug/L	SW846 8260A
Naphthalene	ND	0.40	ug/L	SW846 8260A
o-Xylene	ND	1.1	ug/L	SW846 8260A
p-Isopropyltoluene	ND	1.2	ug/L	SW846 8260A
sec-Butylbenzene	ND	1.3	ug/L	SW846 8260A
Styrene	ND	0.40	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
tert-Butylbenzene	ND	1.4	ug/L	SW846 8260A
Tetrachloroethene	ND	1.4	ug/L	SW846 8260A
Toluene	ND	1.1	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	0.60	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichlorofluoromethane	ND	0.80	ug/L	SW846 8260A
Vinyl chloride	ND	1.1	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	102	(75 - 125)
4-Bromofluorobenzene	95	(75 - 125)
1,2-Dichloroethane-d4	95	(62 - 139)
Dibromofluoromethane	93	(75 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: B7G120106 Work Order #...: CAX4T102 Matrix.....: WATER
LCS Lot-Sample#: B7G270000-107
Prep Date.....: 07/23/97 Analysis Date..: 07/23/97
Prep Batch #...: 7208107 Analysis Time..: 11:22
Dilution Factor: 1 Instrument ID..: VO4
Analyst ID.....: 007084

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
1,1,1,2-Tetrachloroethane	5.0	4.4	ug/L	88	SW846 8260A
1,1,1-Trichloroethane	5.0	4.4	ug/L	89	SW846 8260A
1,1,2,2-Tetrachloroethane	5.0	4.3	ug/L	86	SW846 8260A
1,1,2-Trichloroethane	5.0	4.4	ug/L	88	SW846 8260A
1,1-Dichloroethane	5.0	4.5	ug/L	90	SW846 8260A
1,1-Dichloroethene	5.0	3.8	ug/L	77	SW846 8260A
1,1-Dichloropropene	5.0	4.7	ug/L	94	SW846 8260A
1,2,3-Trichlorobenzene	5.0	4.7	ug/L	94	SW846 8260A
1,2,3-Trichloropropane	5.0	4.7	ug/L	94	SW846 8260A
1,2,4-Trichlorobenzene	5.0	4.5	ug/L	90	SW846 8260A
1,2,4-Trimethylbenzene	5.0	4.9	ug/L	99	SW846 8260A
1,2-Dichloroethane	5.0	4.4	ug/L	89	SW846 8260A
1,2-Dichlorobenzene	5.0	4.8	ug/L	95	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	5.0	4.7	ug/L	94	SW846 8260A
1,2-Dichloropropane	5.0	4.3	ug/L	86	SW846 8260A
1,2-Dibromoethane (EDB)	5.0	4.2	ug/L	83	SW846 8260A
1,3,5-Trimethylbenzene	5.0	4.9	ug/L	98	SW846 8260A
1,3-Dichlorobenzene	5.0	4.7	ug/L	94	SW846 8260A
1,3-Dichloropropane	5.0	4.3	ug/L	86	SW846 8260A
1,4-Dichlorobenzene	5.0	4.6	ug/L	92	SW846 8260A
1-Chlorohexane	5.0	5.0	ug/L	101	SW846 8260A
2,2-Dichloropropane	5.0	4.8	ug/L	95	SW846 8260A
2-Chlorotoluene	5.0	4.6	ug/L	93	SW846 8260A
4-Chlorotoluene	5.0	4.9	ug/L	98	SW846 8260A
Benzene	5.0	4.7	ug/L	93	SW846 8260A
Bromobenzene	5.0	4.7	ug/L	94	SW846 8260A
Bromochloromethane	5.0	4.5	ug/L	90	SW846 8260A
Bromodichloromethane	5.0	4.3	ug/L	86	SW846 8260A
Bromoform	5.0	4.5	ug/L	90	SW846 8260A
Bromomethane	5.0	4.1	ug/L	82	SW846 8260A
Carbon tetrachloride	5.0	4.4	ug/L	87	SW846 8260A
Chlorobenzene	5.0	4.5	ug/L	91	SW846 8260A
Chloroethane	5.0	4.4	ug/L	88	SW846 8260A

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Quanterra
Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: B7G120106 **Work Order #...:** CAX4T102 **Matrix.....:** WATER
LCS Lot-Sample#: B7G270000-107

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Chloroform	5.0	4.4	ug/L	88	SW846 8260A
Chloromethane	5.0	4.2	ug/L	85	SW846 8260A
cis-1,2-Dichloroethene	5.0	4.5	ug/L	91	SW846 8260A
cis-1,3-Dichloropropene	5.0	3.8	ug/L	77	SW846 8260A
Dibromochloromethane	5.0	4.3	ug/L	87	SW846 8260A
Dibromomethane	5.0	4.2	ug/L	84	SW846 8260A
Dichlorodifluoromethane	5.0	4.0	ug/L	79	SW846 8260A
Ethylbenzene	5.0	4.9	ug/L	97	SW846 8260A
Hexachlorobutadiene	5.0	5.5	ug/L	111	SW846 8260A
Isopropylbenzene	5.0	5.5	ug/L	110	SW846 8260A
m-Xylene & p-Xylene	10	9.5	ug/L	95	SW846 8260A
Methylene chloride	5.0	4.2	ug/L	84	SW846 8260A
n-Butylbenzene	5.0	5.2	ug/L	103	SW846 8260A
n-Propylbenzene	5.0	5.1	ug/L	102	SW846 8260A
Naphthalene	5.0	4.0	ug/L	81	SW846 8260A
o-Xylene	5.0	4.7	ug/L	94	SW846 8260A
p-Isopropyltoluene	5.0	5.3	ug/L	105	SW846 8260A
sec-Butylbenzene	5.0	5.2	ug/L	104	SW846 8260A
Styrene	5.0	4.8	ug/L	96	SW846 8260A
Trichloroethene	5.0	4.6	ug/L	91	SW846 8260A
Tetrachloroethene	5.0	5.0	ug/L	99	SW846 8260A
Toluene	5.0	4.8	ug/L	95	SW846 8260A
trans-1,2-Dichloroethene	5.0	4.4	ug/L	89	SW846 8260A
trans-1,3-Dichloropropene	5.0	4.1	ug/L	81	SW846 8260A
Trichlorofluoromethane	5.0	4.4	ug/L	87	SW846 8260A
Vinyl chloride	5.0	4.4	ug/L	88	SW846 8260A
tert-Butylbenzene	5.0	5.0	ug/L	99	SW846 8260A
Dichloropropene	10	7.8	ug/L	78	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	105	(75 - 125)
4-Bromofluorobenzene	98	(75 - 125)
1,2-Dichloroethane-d4	91	(62 - 139)
Dibromofluoromethane	93	(75 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: B7G120106 Work Order #...: CAX4T102 Matrix.....: WATER
LCS Lot-Sample#: B7G270000-107
Prep Date.....: 07/23/97 Analysis Date..: 07/23/97
Prep Batch #...: 7208107 Analysis Time..: 11:22
Dilution Factor: 1 Instrument ID..: VO4
Analyst ID.....: 007084

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
1,1,1,2-Tetrachloroethane	88	(72 - 125)	SW846 8260A
1,1,1-Trichloroethane	89	(75 - 125)	SW846 8260A
1,1,2,2-Tetrachloroethane	86	(74 - 125)	SW846 8260A
1,1,2-Trichloroethane	88	(75 - 127)	SW846 8260A
1,1-Dichloroethane	90	(72 - 125)	SW846 8260A
1,1-Dichloroethene	77	(75 - 125)	SW846 8260A
1,1-Dichloropropene	94	(75 - 125)	SW846 8260A
1,2,3-Trichlorobenzene	94	(75 - 137)	SW846 8260A
1,2,3-Trichloropropane	94	(75 - 125)	SW846 8260A
1,2,4-Trichlorobenzene	90	(75 - 135)	SW846 8260A
1,2,4-Trimethylbenzene	99	(75 - 125)	SW846 8260A
1,2-Dichloroethane	89	(68 - 127)	SW846 8260A
1,2-Dichlorobenzene	95	(75 - 125)	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	94	(59 - 125)	SW846 8260A
1,2-Dichloropropane	86	(70 - 125)	SW846 8260A
1,2-Dibromoethane (EDB)	83	(75 - 125)	SW846 8260A
1,3,5-Trimethylbenzene	98	(72 - 112)	SW846 8260A
1,3-Dichlorobenzene	94	(75 - 125)	SW846 8260A
1,3-Dichloropropane	86	(75 - 125)	SW846 8260A
1,4-Dichlorobenzene	92	(75 - 125)	SW846 8260A
1-Chlorohexane	101	(75 - 125)	SW846 8260A
2,2-Dichloropropane	95	(50 - 125)	SW846 8260A
2-Chlorotoluene	93	(73 - 125)	SW846 8260A
4-Chlorotoluene	98	(74 - 125)	SW846 8260A
Benzene	93	(75 - 125)	SW846 8260A
Bromobenzene	94	(75 - 125)	SW846 8260A
Bromochloromethane	90	(73 - 125)	SW846 8260A
Bromodichloromethane	86	(75 - 125)	SW846 8260A
Bromoform	90	(75 - 125)	SW846 8260A
Bromomethane	82	(50 - 125)	SW846 8260A
Carbon tetrachloride	87	(62 - 125)	SW846 8260A
Chlorobenzene	91	(75 - 125)	SW846 8260A
Chloroethane	88	(50 - 125)	SW846 8260A

(Continued on next page)

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: B7G120106 **Work Order #...:** CAX4T102 **Matrix.....:** WATER
LCS Lot-Sample#: B7G270000-107

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Chloroform	**88**	**(74 - 125)**	**SW846 8260A**
Chloromethane	**85**	**(50 - 125)**	**SW846 8260A**
cis-1,2-Dichloroethene	**91**	**(75 - 125)**	**SW846 8260A**
cis-1,3-Dichloropropene	**77**	**(74 - 125)**	**SW846 8260A**
Dibromochloromethane	**87**	**(73 - 125)**	**SW846 8260A**
Dibromomethane	**84**	**(69 - 127)**	**SW846 8260A**
Dichlorodifluoromethane	**79**	**(50 - 150)**	**SW846 8260A**
Ethylbenzene	**97**	**(75 - 125)**	**SW846 8260A**
Hexachlorobutadiene	**111**	**(75 - 125)**	**SW846 8260A**
Isopropylbenzene	**110**	**(75 - 125)**	**SW846 8260A**
m-Xylene & p-Xylene	**95**	**(75 - 125)**	**SW846 8260A**
Methylene chloride	**84**	**(75 - 125)**	**SW846 8260A**
n-Butylbenzene	**103**	**(75 - 125)**	**SW846 8260A**
n-Propylbenzene	**102**	**(75 - 125)**	**SW846 8260A**
Naphthalene	**81**	**(75 - 125)**	**SW846 8260A**
o-Xylene	**94**	**(75 - 125)**	**SW846 8260A**
p-Isopropyltoluene	**105**	**(75 - 125)**	**SW846 8260A**
sec-Butylbenzene	**104**	**(75 - 125)**	**SW846 8260A**
Styrene	**96**	**(75 - 125)**	**SW846 8260A**
Trichloroethene	**91**	**(71 - 125)**	**SW846 8260A**
Tetrachloroethene	**99**	**(71 - 125)**	**SW846 8260A**
Toluene	**95**	**(74 - 125)**	**SW846 8260A**
trans-1,2-Dichloroethene	**89**	**(75 - 125)**	**SW846 8260A**
trans-1,3-Dichloropropene	**81**	**(66 - 125)**	**SW846 8260A**
Trichlorofluoromethane	**87**	**(50 - 125)**	**SW846 8260A**
Vinyl chloride	**88**	**(46 - 134)**	**SW846 8260A**
tert-Butylbenzene	**99**	**(75 - 125)**	**SW846 8260A**
Dichloropropene	**78**	**(75 - 125)**	**SW846 8260A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	105	(75 - 125)
4-Bromofluorobenzene	98	(75 - 125)
1,2-Dichloroethane-d4	91	(62 - 139)
Dibromofluoromethane	93	(75 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

408 221

Quanterra *Environmental Services*

TAMPA LABORATORY
CONDITION UPON RECEIPT FORM

Client: Hydrogeologic **Project Name/Lot #:** NAS Ft. Worth
Date Received: 7/2/97 **Received By:** Carol McNulty
CUR Completed By: Carol McNulty

Cooler/Shipping information:
TYPE: Quanterra Cooler X Client Cooler ___ Quanterra Shipper ___ Box ___ Other ___/___

Cooler ID/Track #					
Temp (Celsius)	4°				
Cooler ID/Track #					
Temp (Celsius)					

Any "NO" responses or discrepancies should be explained in the "Comments" section below.

CHECKLIST	YES	NO	NA
1. Were custody seals on shipping container(s) intact? ~~Check "NA" if hand delivered~~ Circle One: CUSTODY SEAL SAVED UNABLE TO SAVE CUSTODY SEAL	X		
2. Were custody papers properly included with samples?	X		
3. Were custody papers properly filled out (ink, signed, match labels)?	X		
4. Did all bottles arrive in good condition (unbroken)?	X		
Were all bottle labels complete (sample #, date, signed, analysis, preservatives)?	X		
6. Were correct bottles used for the tests indicated?	X		
7. Were proper sample preservation techniques indicated?	X		
8. Were samples received within adequate holding times? If "NO", complete 8.a. or 8.b.	X		
a. Was sample hold time exceeded (NCM required)?			
b. Did the samples arrive with more than half the hold time exceeded (NCM required)?			
9. Were all VOA bottles checked for the presence of air bubbles? If air bubbles were found, indicate in comment section.	X		
10. Were samples in direct contact with wet ice? If "NO", circle one: NO ICE BLUE ICE	X		
11. Were the samples received with a temperature blank? NOTE TEMPERATURE ABOVE If "NO", circle one: UNABLE TO DETERMINE TEMP TEMP TAKEN FROM THE COOLER ICE/WATER NEAR SAMPLES	X		
12. Were sample pHs checked and recorded by S.R. (see back for Page 2 - Sample pH)? *TOC and VOA samples are checked by laboratory analysts.*			X
13. Were samples accepted into the laboratory?	X		

Comments: Rec'd 2 Vials for TB-071197 - but also 3 Vials marked "Trip blank Paragon Analytics"

Project Manager initials/date reviewed: MZ 7/14/97

Corrective Action: per Mike Rodtang: the 3 vials marked Paragon Analytics are in no way associated with these samples - do not analyze for HCL; HCL/Lab sent 2 vials for Trip Blank

Corrective Action completed by/date: MZ 7/14/97

Chain of Custody Record

Quanterra

QUA-4124

Client	Project Manager	Date	Chain Of Custody Number
HydroGeologic, Inc	James Castell	11 Jul 97	01346
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	
1155 Herndon Pkwy Suite 900	703/478-5186		Page 1 of 1
City / State / Zip Code	**Site Contact**		
Herndon / VA / 20170	Michael Rattray		
Project Name	**Carrier/Waybill Number**		
NAS Ft. Worth JRB, 1st Qtrly Sampling	Fed Ex 5739019355		
Contract/Purchase Order/Quote No.			
AFC001-07GAA			

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	SW8260A
WP07-10BWG01	11 Jul 97	1650	GW	40 ml	VOA	3	HCl		✓
LF04-4FWG01	11 Jul 97	1800	GW	40 ml	VOA	3	HCl		✓
EB-071197	11 Jul 97	1740	EB	40 ml	VOA	3	HCl		✓
TB-071197	11 Jul 97	1400	TB	40 ml	VOA	3	HCl		✓

Special Instructions

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Turn Around Time Required: ☒ Normal ☐ Rush 21 Day TAT

QC Level: ☐ I. ☐ II. ☐ III.

Project Specific (Specify):

	Date	Time		Date	Time
1. Relinquished By	11 Jul 97		1. Received By: Carol McNally	7/12/97	0900
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

Project ID on Sample bottles is 12001-7-5001. For billing purposes use AFC001-07GAA

DISTRIBUTION: White with Shipment to CAN; Return with Client Report; Pink Field Copy

408 222

408 223

Analytical Report for Wells Sampled July 14-15, 1997

408 224

Quanterra
Environmental Services

Quanterra Incorporated
5910 Breckenridge Parkway, Suite H
Tampa, Florida 33610

813 621-0784 Telephone
813 623-6021 Fax

ANALYTICAL REPORT

REVISED

Carswell AFB

Lot #: B7G180111

Jim Costello

HydroGeoLogic, Inc.

QUANTERRA INCORPORATED

Certification Numbers: E84059,HRS84297
FDEP CompQAP: 870270G

Michele H. Lersch

Michele Lersch
Project Manager

August 13, 1997

Quanterra
Environmental Services

NARRATIVE

HydroGeoLogic

Project: 12001-7-5001/NAS Ft. Worth JRB, 1st Qtr (Carswell AFB)

Quanterra Lot Number: B7G180111
Matrix: Groundwater
Analyses: 8260A, 8020A, 6010A, 7470A, 7841, RSK-175, 9060, 310.1, 9056, 160.1

8260A
The recovery of isopropylbenzene from the matrix spike (MS) is 127%, which exceeds Quanterra control limits of 75-125%. The recovery of this compound from the MSD is within control limits, at 115%.
The percent recoveries of naphthalene from the MS/MSD are 99% and 123%, respectively, which are within the 75-125% accuracy control limits. However, the relative percent difference between the two recoveries is 22%, which exceeds the 0-20% precision control limits.
Dichloroproprene was recovered from the MS at 74%, which exceeds the 75-125% control limits. Recovery of this compound from the MSD is within control limits, at 81%.

6010A
The accuracy (0/18%) and precision (200%) of the recoveries of calcium from the MS/MSD are outside laboratory control limits of 80-120% and 0-15%, respectively. The sample concentration is 173 mg/l. The added spike amount was 10 mg/l, which was insufficient to be recovered due to the high native concentration of calcium in the sample.
The method blank had a quantifiable amount of magnesium below the reporting limit (RL). No corrective action is required if a target compound is found in the blank at a level below the RL.

9056
The method blank had a quantifiable amount of sulfate below the RL. No corrective action is required if a target compound is found in the blank at a level below the RL.

9060
The "TOC Range" footnote on the General Chemistry report page for each sample indicates the lowest and highest concentrations of the quadruplicate analyses, as required by the method. The reported result is an average of the quadruplicate analyses, rounded according to Quanterra protocols.

Quanterra
Environmental Services

SAMPLE SUMMARY

B7G180111

WO #	SAMPLE#	CLIENT SAMPLE ID	DATE	TIME
CAQAC	001	DUP01-WG01	07/15/97	14:00
CAQAX	002	LF05-19WG	07/15/97	14:00
CAQC1	003	GMI-22-02	07/15/97	09:50
CAQC3	004	SPOT35-4WG	07/15/97	17:10
CAQC4	005	SPOT35-5WG	07/15/97	11:55
CAQC5	006	LF05-18WG	07/14/97	18:55
CAQC7	007	ST14-02WG	07/15/97	10:55
CAQC9	008	ST14-14WG	07/15/97	09:15
CAQCA	009	ST14-W16WG	07/15/97	14:15
CAQCE	010	ST14-W18WG	07/15/97	16:15
CAQCG	011	ST14-24WG	07/15/97	17:55
CAQCN	012	EB071497	07/14/97	00:00
CAQCP	013	EB071597	07/15/97	00:00
CAQD7	014	TB071597	07/15/97	00:00
CAQD9	015	TB071497	07/14/97	00:00
CAQDE	016	WP07-10CWG	07/14/97	10:25
CAQDH	017	GMI-04-01	07/14/97	12:10
CAQDL	018	FT09-12CWG	07/14/97	17:15
CAQDN	019	LF04-10WG	07/14/97	10:55
CAQDT	020	LF05-02WG	07/14/97	16:00
CAQDW	021	LF05-5GWG	07/14/97	13:00

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Quanterra Environmental Services

METHODS SUMMARY

B7G180111

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Alkalinity	MCAWW 310.1	MCAWW 310.1
Aromatic Volatile Organics by GC	SW846 8020A	SW846 5030
Bromide	SW846 9056	SW846 9056
Chloride	SW846 9056	SW846 9056
Dissolved Gasses in Water	EPA-9 RSK-175	
Filterable Residue (TDS)	MCAWW 160.1	MCAWW 160.1
Inductively Coupled Plasma (ICP) Metals	SW846 6010A	SW846 3005
Mercury in Liquid Waste (Manual Cold-Vapor)	SW846 7470A	SW846 7470A
Silver (AA, Furnace Technique)	SW846 7761	
Sulfate	SW846 9056	SW846 9056
Thallium (AA, Furnace Technique)	SW846 7841	SW846 3020
Total Organic Carbon	SW846 9060	SW846 9060
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010A	SW846 3005
Volatile Organics by GC/MS	SW846 8260A	SW846 5030/8260

References:

EPA-9 Sample Prep and Calculations for Dissolved Gas Analysis in Water Samples Using a GC Headspace Equilibration Technique, RSKSOP-175, REV. 0, 8/11/94, USEPA Research Lab

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

Quanterra Environmental Services

EXECUTIVE SUMMARY - Detection Highlights

B7G180111

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
DUP01-WG01 07/15/97 14:00 001				
Barium	0.13	0.020	mg/L	SW846 6010A
Calcium	171	1.0	mg/L	SW846 6010A
Copper	0.0031 F	0.060	mg/L	SW846 6010A
Potassium	1.8 F	5.0	mg/L	SW846 6010A
Magnesium	10.0	1.0	mg/L	SW846 6010A
Sodium	35.9	1.0	mg/L	SW846 6010A
cis-1,2-Dichloroethene	85	30	ug/L	SW846 8260A
Trichloroethene	310	25	ug/L	SW846 8260A
LF05-19WG 07/15/97 14:00 002				
Barium	0.14	0.020	mg/L	SW846 6010A
Calcium	173	1.0	mg/L	SW846 6010A
Copper	0.0052 F	0.060	mg/L	SW846 6010A
Potassium	1.9 F	5.0	mg/L	SW846 6010A
Magnesium	10.1	1.0	mg/L	SW846 6010A
Manganese	0.0094 F	0.020	mg/L	SW846 6010A
Sodium	35.6	1.0	mg/L	SW846 6010A
cis-1,2-Dichloroethene	77	30	ug/L	SW846 8260A
Trichloroethene	240	25	ug/L	SW846 8260A
GMI-22-02 07/15/97 09:50 003				
Ethane	0.13 F	0.50	ug/L	EPA-9 RSK-175
Ethene	0.14 F	0.50	ug/L	EPA-9 RSK-175
Methane	0.25 F	0.50	ug/L	EPA-9 RSK-175
Total Dissolved Solids	300	10	mg/L	MCAWW 160.1
Total Organic Carbon	1	1	mg/L	SW846 9060
Chloride	1.6	0.20	mg/L	SW846 9056
Sulfate	5.0	0.50	mg/L	SW846 9056
Alkalinity as CaCO3 to pH 4.5	280	10	mg/L	MCAWW 310.1
SPOT35-4WG 07/15/97 17:10 004				
Methane	3400	38	ug/L	EPA-9 RSK-175
Isopropylbenzene	38	5.0	ug/L	SW846 8260A
n-Butylbenzene	3.5 F	11	ug/L	SW846 8260A
n-Propylbenzene	38	4.0	ug/L	SW846 8260A
Naphthalene	72	4.0	ug/L	SW846 8260A
sec-Butylbenzene	13	13	ug/L	SW846 8260A
Total Organic Carbon	4	1	mg/L	SW846 9060
Chloride	108	2.0	mg/L	SW846 9056

(Continued on next page)

Quanterra Environmental Services

EXECUTIVE SUMMARY - Detection Highlights

B7G180111

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
SPOT35-4WG 07/15/97 17:10 004				
Sulfate	8.2	5.0	mg/L	SW846 9056
Bromide	4.4	2.0	mg/L	SW846 9056
Alkalinity as CaCO3 to pH 4.5	390	10	mg/L	MCAWW 310.1
SPOT35-5WG 07/15/97 11:55 005				
Methane	3500	50	ug/L	EPA-9 RSK-175
Isopropylbenzene	29	5.0	ug/L	SW846 8260A
n-Propylbenzene	31	4.0	ug/L	SW846 8260A
Naphthalene	76	4.0	ug/L	SW846 8260A
Total Organic Carbon	12	2	mg/L	SW846 9060
Chloride	147	1.0	mg/L	SW846 9056
Sulfate	2.8	2.5	mg/L	SW846 9056
Bromide	3.1	1.0	mg/L	SW846 9056
Alkalinity as CaCO3 to pH 4.5	430	10	mg/L	MCAWW 310.1
LF05-18WG 07/14/97 18:55 006				
Aluminum	0.11 F	0.50	mg/L	SW846 6010A
Barium	0.14	0.020	mg/L	SW846 6010A
Calcium	165	1.0	mg/L	SW846 6010A
Iron	0.069 F	0.070	mg/L	SW846 6010A
Potassium	1.7 F	5.0	mg/L	SW846 6010A
Magnesium	10.4	1.0	mg/L	SW846 6010A
Manganese	0.0016 F	0.020	mg/L	SW846 6010A
Sodium	59.1	1.0	mg/L	SW846 6010A
cis-1,2-Dichloroethene	200	120	ug/L	SW846 8260A
Trichloroethene	660	100	ug/L	SW846 8260A
trans-1,2-Dichloroethene	28 F	60	ug/L	SW846 8260A
ST14-02WG 07/15/97 10:55 007				
Methane	670	10	ug/L	EPA-9 RSK-175
Benzene	6.1	2.0	ug/L	SW846 8020A
Barium	0.12	0.020	mg/L	SW846 6010A
Calcium	129	1.0	mg/L	SW846 6010A
Iron	11.2	0.070	mg/L	SW846 6010A
Potassium	2.0 F	5.0	mg/L	SW846 6010A
Magnesium	6.4	1.0	mg/L	SW846 6010A
Manganese	0.27	0.020	mg/L	SW846 6010A
Sodium	26.0	1.0	mg/L	SW846 6010A
Zinc	0.013 F	0.020	mg/L	SW846 6010A
Silver	0.00075	0.00020	mg/L	SW846 7761

(Continued on next page)

Quanterra Environmental Services

EXECUTIVE SUMMARY - Detection Highlights

B7G180111

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
ST14-02WG 07/15/97 10:55 007				
Arsenic	0.0078	0.0050	mg/L	SW846 6010A
Total Organic Carbon	3	1	mg/L	SW846 9060
Chloride	29.7	0.20	mg/L	SW846 9056
Sulfate	0.84	0.50	mg/L	SW846 9056
Bromide	0.73	0.20	mg/L	SW846 9056
Alkalinity as CaCO3 to pH 4.5	360	10	mg/L	MCAWW 310.1
ST14-14WG 07/15/97 09:15 008				
Methane	870	10	ug/L	EPA-9 RSK-175
Barium	0.049	0.020	mg/L	SW846 6010A
Calcium	92.8	1.0	mg/L	SW846 6010A
Copper	0.0026 F	0.060	mg/L	SW846 6010A
Iron	1.5	0.070	mg/L	SW846 6010A
Potassium	0.78 F	5.0	mg/L	SW846 6010A
Magnesium	4.9	1.0	mg/L	SW846 6010A
Manganese	0.24	0.020	mg/L	SW846 6010A
Sodium	27.2	1.0	mg/L	SW846 6010A
Arsenic	0.0042 F	0.0050	mg/L	SW846 6010A
tert-Butylbenzene	1.1 F	1.4	ug/L	SW846 8260A
Total Organic Carbon	2	1	mg/L	SW846 9060
Chloride	25.2	0.20	mg/L	SW846 9056
Sulfate	4.2	0.50	mg/L	SW846 9056
Bromide	0.69	0.20	mg/L	SW846 9056
Alkalinity as CaCO3 to pH 4.5	290	10	mg/L	MCAWW 310.1
ST14-W16WG 07/15/97 14:15 009				
Methane	600	10	ug/L	EPA-9 RSK-175
Benzene	6.6	2.0	ug/L	SW846 8020A
Toluene	0.53 F	2.0	ug/L	SW846 8020A
Total Organic Carbon	3	1	mg/L	SW846 9060
Chloride	28.6	0.20	mg/L	SW846 9056
Sulfate	16.4	0.50	mg/L	SW846 9056
Bromide	0.81	0.20	mg/L	SW846 9056
Alkalinity as CaCO3 to pH 4.5	320	10	mg/L	MCAWW 310.1
ST14-W18WG 07/15/97 16:15 010				
Methane	1800	50	ug/L	EPA-9 RSK-175
Benzene	2.7	2.0	ug/L	SW846 8020A
Toluene	0.63 F	2.0	ug/L	SW846 8020A
Xylenes (total)	1.5 F	2.0	ug/L	SW846 8020A

(Continued on next page)

Quanterra Environmental Services

EXECUTIVE SUMMARY - Detection Highlights

B7G180111

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
ST14-W18WG 07/15/97 16:15 010				
Aluminum	0.59	0.50	mg/L	SW846 6010A
Barium	0.22	0.020	mg/L	SW846 6010A
Calcium	153	1.0	mg/L	SW846 6010A
Copper	0.0055 F	0.060	mg/L	SW846 6010A
Iron	14.0	0.070	mg/L	SW846 6010A
Potassium	1.3 F	5.0	mg/L	SW846 6010A
Magnesium	6.5	1.0	mg/L	SW846 6010A
Manganese	0.21	0.020	mg/L	SW846 6010A
Sodium	21.8	1.0	mg/L	SW846 6010A
Zinc	0.015 F	0.020	mg/L	SW846 6010A
Arsenic	0.058	0.0050	mg/L	SW846 6010A
Lead	0.014	0.0050	mg/L	SW846 6010A
Total Organic Carbon	10	2	mg/L	SW846 9060
Chloride	33.7	0.20	mg/L	SW846 9056
Sulfate	1.0	0.50	mg/L	SW846 9056
Bromide	1.2	0.20	mg/L	SW846 9056
Alkalinity as CaCO3 to pH 4.5	390	10	mg/L	MCAWW 310.1
ST14-24WG 07/15/97 17:55 011				
Methane	9.1	0.50	ug/L	EPA-9 RSK-175
Aluminum	1.1	0.50	mg/L	SW846 6010A
Barium	0.25	0.020	mg/L	SW846 6010A
Calcium	121	1.0	mg/L	SW846 6010A
Chromium	0.0050 F	0.070	mg/L	SW846 6010A
Copper	0.0048 F	0.060	mg/L	SW846 6010A
Iron	1.1	0.070	mg/L	SW846 6010A
Potassium	3.2 F	5.0	mg/L	SW846 6010A
Magnesium	9.2	1.0	mg/L	SW846 6010A
Manganese	0.097	0.020	mg/L	SW846 6010A
Sodium	29.6	1.0	mg/L	SW846 6010A
Zinc	0.018 F	0.020	mg/L	SW846 6010A
Vinyl chloride	1.4	1.1	ug/L	SW846 8260A
Total Organic Carbon	2	1	mg/L	SW846 9060
Chloride	15.2	0.20	mg/L	SW846 9056
Sulfate	20.6	0.50	mg/L	SW846 9056
Bromide	0.64	0.20	mg/L	SW846 9056
Alkalinity as CaCO3 to pH 4.5	320	10	mg/L	MCAWW 310.1

(Continued on next page)

Quanterra Environmental Services

EXECUTIVE SUMMARY - Detection Highlights

B7G180111

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
EB071497 07/14/97 00:00 012				
Chloroform	2.2	0.30	ug/L	SW846 8260A
EB071597 07/15/97 00:00 013				
Methane	0.32 F	0.50	ug/L	EPA-9 RSK-175
Chloroform	0.74	0.30	ug/L	SW846 8260A
Toluene	0.70 F	1.1	ug/L	SW846 8260A
Chloride	0.20	0.20	mg/L	SW846 9056
Sulfate	0.69	0.50	mg/L	SW846 9056
TB071597 07/15/97 00:00 014				
Methane	0.47 F	0.50	ug/L	EPA-9 RSK-175
TB071497 07/14/97 00:00 015				
Methane	0.44 F	0.50	ug/L	EPA-9 RSK-175
WP07-10CWG 07/14/97 10:25 016				
cis-1,2-Dichloroethene	230	180	ug/L	SW846 8260A
Trichloroethene	1400	150	ug/L	SW846 8260A
GMI-04-01 07/14/97 12:10 017				
cis-1,2-Dichloroethene	280	180	ug/L	SW846 8260A
Trichloroethene	1400	150	ug/L	SW846 8260A
FT09-12CWG 07/14/97 17:15 018				
1,2-Dichlorobenzene	2.6	0.75	ug/L	SW846 8260A
1,4-Dichlorobenzene	1.4	0.75	ug/L	SW846 8260A
Benzene	3.0	1.0	ug/L	SW846 8260A
cis-1,2-Dichloroethene	43	3.0	ug/L	SW846 8260A
Trichloroethene	3.3	2.5	ug/L	SW846 8260A
tert-Butylbenzene	0.97 F	3.5	ug/L	SW846 8260A
Vinyl chloride	6.6	2.8	ug/L	SW846 8260A
LF05-02WG 07/14/97 16:00 020				
cis-1,2-Dichloroethene	370	60	ug/L	SW846 8260A
Trichloroethene	130	50	ug/L	SW846 8260A
trans-1,2-Dichloroethene	35	30	ug/L	SW846 8260A

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Quanterra Environmental Services

EXECUTIVE SUMMARY - Detection Highlights

B7G180111

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
LF05-02WG 07/14/97 16:00 020				
Vinyl chloride	16 F	55	ug/L	SW846 8260A
LF05-5GWG 07/14/97 13:00 021				
cis-1,2-Dichloroethene	140	60	ug/L	SW846 8260A
Trichloroethene	420	50	ug/L	SW846 8260A

Quanterra Environmental Services

QC DATA ASSOCIATION SUMMARY

B7G180111

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WG	SW846 6010A		7205193	7205073
	WG	SW846 7761		7205193	7205073
	WG	SW846 8260A		7211177	
	WG	SW846 7470A		7205191	7205070
	WG	SW846 7841		7205193	7205073
002	WG	SW846 6010A		7205193	7205073
	WG	SW846 7761		7205193	7205073
	WG	SW846 8260A		7211177	
	WG	SW846 7470A		7205191	7205070
	WG	SW846 7841		7205193	7205073
003	WG	MCAWW 160.1		7211188	7211072
	WG	SW846 9060		7213183	7213057
	WG	SW846 9056		7212154	7212037
	WG	SW846 9056		7212157	7212039
	WG	EPA-9 RSK-175		7210204	7210051
	WG	SW846 9056		7212150	7212033
	WG	SW846 8260A		7208107	7208004
	WG	MCAWW 310.1		7210205	7210052
004	WG	SW846 9060		7213183	7213057
	WG	SW846 9056		7212154	7212037
	WG	SW846 9056		7212157	7212039
	WG	EPA-9 RSK-175		7210204	7210051
	WG	SW846 9056		7212150	7212033
	WG	SW846 8260A		7211177	
	WG	MCAWW 310.1		7210205	7210052
005	WG	SW846 9060		7213184	7213057
	WG	SW846 9056		7213173	
	WG	SW846 9056		7213175	
	WG	EPA-9 RSK-175		7210204	7210051
	WG	SW846 9056		7213174	
	WG	SW846 8260A		7211177	
	WG	MCAWW 310.1		7210205	7210052
006	WG	SW846 6010A		7205193	7205073
	WG	SW846 7761		7205193	7205073
	WG	SW846 8260A		7211177	
	WG	SW846 7470A		7205191	7205070
	WG	SW846 7841		7205193	7205073

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Quanterra Environmental Services

QC DATA ASSOCIATION SUMMARY

B7G180111

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
007	WG	SW846 6010A		7205193	7205073
	WG	SW846 9060		7213183	7213057
	WG	SW846 9056		7212154	7212037
	WG	SW846 9056		7212157	7212039
	WG	SW846 7761		7205193	7205073
	WG	EPA-9 RSK-175		7210208	7210054
	WG	SW846 9056		7212150	7212033
	WG	SW846 8020A		7206190	7206052
	WG	SW846 7470A		7205191	7205070
	WG	SW846 7841		7205193	7205073
	WG	MCAWW 310.1		7210205	7210052
008	WG	SW846 6010A		7205193	7205073
	WG	SW846 9060		7213183	7213057
	WG	SW846 9056		7212154	7212037
	WG	SW846 9056		7212157	7212039
	WG	SW846 7761		7205193	7205073
	WG	EPA-9 RSK-175		7210208	7210054
	WG	SW846 9056		7212150	7212033
	WG	SW846 8260A		7211177	
	WG	SW846 7470A		7205191	7205070
	WG	SW846 7841		7205193	7205073
	WG	MCAWW 310.1		7210205	7210052
009	WG	SW846 9060		7213183	7213057
	WG	SW846 9056		7212154	7212037
	WG	SW846 9056		7212157	7212039
	WG	EPA-9 RSK-175		7210208	7210054
	WG	SW846 9056		7212150	7212033
	WG	SW846 8020A		7206190	7206052
	WG	MCAWW 310.1		7210205	7210052
010	WG	SW846 6010A		7205193	7205073
	WG	SW846 9060		7213184	7213057
	WG	SW846 9056		7212154	7212037
	WG	SW846 9056		7212157	7212039
	WG	SW846 7761		7205193	7205073
	WG	EPA-9 RSK-175		7210208	7210054
	WG	SW846 9056		7212150	7212033
	WG	SW846 8020A		7206190	7206052
	WG	SW846 7470A		7205191	7205070
	WG	SW846 7841		7205193	7205073
	WG	MCAWW 310.1		7210205	7210052

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: DUP01-WG01

GC/MS Volatiles

Lot-Sample #...: B7G180111-001 **Work Order #...:** CAQAC10T **Matrix.....:** WG
Date Sampled...: 07/15/97 **Date Received..:** 07/17/97
Prep Date.....: 07/23/97 **Analysis Date..:** 07/23/97
Prep Batch #...: 7211177 **Analysis Time..:** 21:59
Dilution Factor: 25
Analyst ID.....: 007084 **Instrument ID..:** VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	12	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	20	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	10	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	25	ug/L	SW846 8260A
1,1-Dichloroethane	ND	10	ug/L	SW846 8260A
1,1-Dichloroethene	ND	30	ug/L	SW846 8260A
1,1-Dichloropropene	ND	25	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	7.5	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	80	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	10	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	32	ug/L	SW846 8260A
1,2-Dichloroethane	ND	15	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	7.5	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	65	ug/L	SW846 8260A
1,2-Dichloropropane	ND	10	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	15	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	12	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	30	ug/L	SW846 8260A
1,3-Dichloropropane	ND	10	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	7.5	ug/L	SW846 8260A
1-Chlorohexane	ND	12	ug/L	SW846 8260A
2,2-Dichloropropane	ND	88	ug/L	SW846 8260A
2-Chlorotoluene	ND	10	ug/L	SW846 8260A
4-Chlorotoluene	ND	15	ug/L	SW846 8260A
Benzene	ND	10	ug/L	SW846 8260A
Bromobenzene	ND	7.5	ug/L	SW846 8260A
Bromochloromethane	ND	10	ug/L	SW846 8260A
Bromodichloromethane	ND	20	ug/L	SW846 8260A
Bromoform	ND	30	ug/L	SW846 8260A
Bromomethane	ND	28	ug/L	SW846 8260A
Carbon tetrachloride	ND	52	ug/L	SW846 8260A
Chlorobenzene	ND	10	ug/L	SW846 8260A
Chloroethane	ND	25	ug/L	SW846 8260A
Chloroform	ND	7.5	ug/L	SW846 8260A
Chloromethane	ND	32	ug/L	SW846 8260A
cis-1,2-Dichloroethene	**85**	**30**	**ug/L**	**SW846 8260A**
cis-1,3-Dichloropropene	ND	25	ug/L	SW846 8260A

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: DUP01-WG01

GC/MS Volatiles

Lot-Sample #...: B7G180111-001 Work Order #...: CAQAC10T Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	12	ug/L	SW846 8260A
Dibromomethane	ND	60	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	25	ug/L	SW846 8260A
Ethylbenzene	ND	15	ug/L	SW846 8260A
Hexachlorobutadiene	ND	28	ug/L	SW846 8260A
Isopropylbenzene	ND	12	ug/L	SW846 8260A
m-Xylene & p-Xylene	ND	12	ug/L	SW846 8260A
Methylene chloride	ND	7.5	ug/L	SW846 8260A
n-Butylbenzene	ND	28	ug/L	SW846 8260A
n-Propylbenzene	ND	10	ug/L	SW846 8260A
Naphthalene	ND	10	ug/L	SW846 8260A
o-Xylene	ND	28	ug/L	SW846 8260A
p-Isopropyltoluene	ND	30	ug/L	SW846 8260A
sec-Butylbenzene	ND	32	ug/L	SW846 8260A
Styrene	ND	10	ug/L	SW846 8260A
Trichloroethene	**310**	**25**	**ug/L**	**SW846 8260A**
tert-Butylbenzene	ND	35	ug/L	SW846 8260A
Tetrachloroethene	ND	35	ug/L	SW846 8260A
Toluene	ND	28	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	15	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	25	ug/L	SW846 8260A
Trichlorofluoromethane	ND	20	ug/L	SW846 8260A
Vinyl chloride	ND	28	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	102	(75 - 125)
4-Bromofluorobenzene	99	(75 - 125)
1,2-Dichloroethane-d4	96	(62 - 139)
Dibromofluoromethane	96	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: DUP01-WG01

TOTAL Metals

Lot-Sample #...: B7G180111-001 Matrix.....: WG
Date Sampled...: 07/15/97 Date Received..: 07/17/97

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7205191						
Mercury	ND	0.0010	mg/L	SW846 7470A	07/24/97	CAQAC101
		Dilution Factor: 1				
		Analysis Time..: 20:56	Analyst ID.....: 001702	Instrument ID..: CV		
Prep Batch #...: 7205193						
Silver	ND	0.00040	mg/L	SW846 7761	07/24-08/11/97	CAQAC10U
		Dilution Factor: 2				
		Analysis Time..: 10:58	Analyst ID.....: 001863	Instrument ID..: F1		
Antimony	ND	0.0050	mg/L	SW846 6010A	07/24-07/31/97	CAQAC10M
		Dilution Factor: 1				
		Analysis Time..: 20:00	Analyst ID.....: 001702	Instrument ID..: P2		
Arsenic	ND	0.0050	mg/L	SW846 6010A	07/24-07/25/97	CAQAC10N
		Dilution Factor: 1				
		Analysis Time..: 12:55	Analyst ID.....: 001863	Instrument ID..: P2		
Lead	ND	0.0050	mg/L	SW846 6010A	07/24-07/25/97	CAQAC10P
		Dilution Factor: 1				
		Analysis Time..: 12:55	Analyst ID.....: 001863	Instrument ID..: P2		
Selenium	ND	0.0050	mg/L	SW846 6010A	07/24-07/25/97	CAQAC10Q
		Dilution Factor: 1				
		Analysis Time..: 12:55	Analyst ID.....: 001863	Instrument ID..: P2		
Thallium	ND	0.0020	mg/L	SW846 7841	07/24/97	CAQAC10R
		Dilution Factor: 1				
		Analysis Time..: 17:32	Analyst ID.....: 001702	Instrument ID..: F1		
Aluminum	ND	0.50	mg/L	SW846 6010A	07/24-07/25/97	CAQAC103
		Dilution Factor: 1				
		Analysis Time..: 12:55	Analyst ID.....: 001863	Instrument ID..: P2		
Barium	**0.13**	**0.020**	**mg/L**	**SW846 6010A**	**07/24-07/25/97**	**CAQAC104**
		Dilution Factor: 1				
		Analysis Time..: 12:55	Analyst ID.....: 001863	Instrument ID..: P2		
Beryllium	ND	0.0030	mg/L	SW846 6010A	07/24-07/25/97	CAQAC105
		Dilution Factor: 1				
		Analysis Time..: 12:55	Analyst ID.....: 001863	Instrument ID..: P2		
Calcium	**171**	**1.0**	**mg/L**	**SW846 6010A**	**07/24-07/25/97**	**CAQAC106**
		Dilution Factor: 1				
		Analysis Time..: 12:55	Analyst ID.....: 001863	Instrument ID..: P2		

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: DUP01-WG01

TOTAL Metals

Lot-Sample #...: B7G180111-001 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Cadmium	ND	0.040	mg/L	SW846 6010A	07/24-07/25/97	CAQAC107
		Dilution Factor: 1				
		Analysis Time..: 12:55	Analyst ID.....: 001863	Instrument ID..: P2		
Cobalt	ND	0.070	mg/L	SW846 6010A	07/24-07/25/97	CAQAC108
		Dilution Factor: 1				
		Analysis Time..: 12:55	Analyst ID.....: 001863	Instrument ID..: P2		
Chromium	ND	0.070	mg/L	SW846 6010A	07/24-07/25/97	CAQAC109
		Dilution Factor: 1				
		Analysis Time..: 12:55	Analyst ID.....: 001863	Instrument ID..: P2		
Copper	0.0031 F	0.060	mg/L	SW846 6010A	07/24-07/25/97	CAQAC10A
		Dilution Factor: 1				
		Analysis Time..: 12:55	Analyst ID.....: 001863	Instrument ID..: P2		
Iron	ND	0.070	mg/L	SW846 6010A	07/24-07/25/97	CAQAC1[illegible]
		Dilution Factor: 1				
		Analysis Time..: 12:55	Analyst ID.....: 001863	Instrument ID..: P2		
Potassium	1.8 F	5.0	mg/L	SW846 6010A	07/24-07/25/97	CAQAC10D
		Dilution Factor: 1				
		Analysis Time..: 10:34	Analyst ID.....: 001863	Instrument ID..: P1		
Magnesium	10.0	1.0	mg/L	SW846 6010A	07/24-07/25/97	CAQAC10E
		Dilution Factor: 1				
		Analysis Time..: 12:55	Analyst ID.....: 001863	Instrument ID..: P2		
Manganese	ND	0.020	mg/L	SW846 6010A	07/24-07/25/97	CAQAC10F
		Dilution Factor: 1				
		Analysis Time..: 12:55	Analyst ID.....: 001863	Instrument ID..: P2		
Molybdenum	ND	0.080	mg/L	SW846 6010A	07/24-07/25/97	CAQAC10G
		Dilution Factor: 1				
		Analysis Time..: 12:55	Analyst ID.....: 001863	Instrument ID..: P2		
Sodium	35.9	1.0	mg/L	SW846 6010A	07/24-07/25/97	CAQAC10H
		Dilution Factor: 1				
		Analysis Time..: 10:34	Analyst ID.....: 001863	Instrument ID..: P1		
Nickel	ND	0.15	mg/L	SW846 6010A	07/24-07/25/97	CAQAC10J
		Dilution Factor: 1				
		Analysis Time..: 12:55	Analyst ID.....: 001863	Instrument ID..: P2		

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: DUP01-WG01

TOTAL Metals

Lot-Sample #...: B7G180111-001 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Vanadium	ND	0.080	mg/L	SW846 6010A	07/24-07/25/97	CAQAC10K
		Dilution Factor: 1				
		Analysis Time..: 12:55		Analyst ID.....: 001863	Instrument ID..: P2	
Zinc	ND	0.020	mg/L	SW846 6010A	07/24-07/31/97	CAQAC10L
		Dilution Factor: 1				
		Analysis Time..: 20:00		Analyst ID.....: 001702	Instrument ID..: P2	

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: LF05-19WG

GC/MS Volatiles

Lot-Sample #...: B7G180111-002 **Work Order #...:** CAQAX10T **Matrix.....:** WG
Date Sampled...: 07/15/97 **Date Received..:** 07/17/97
Prep Date.....: 07/23/97 **Analysis Date..:** 07/23/97
Prep Batch #...: 7211177 **Analysis Time..:** 22:22
Dilution Factor: 25
Analyst ID.....: 007084 **Instrument ID..:** VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	12	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	20	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	10	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	25	ug/L	SW846 8260A
1,1-Dichloroethane	ND	10	ug/L	SW846 8260A
1,1-Dichloroethene	ND	30	ug/L	SW846 8260A
1,1-Dichloropropene	ND	25	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	7.5	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	80	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	10	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	32	ug/L	SW846 8260A
1,2-Dichloroethane	ND	15	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	7.5	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	65	ug/L	SW846 8260A
1,2-Dichloropropane	ND	10	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	15	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	12	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	30	ug/L	SW846 8260A
1,3-Dichloropropane	ND	10	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	7.5	ug/L	SW846 8260A
1-Chlorohexane	ND	12	ug/L	SW846 8260A
2,2-Dichloropropane	ND	88	ug/L	SW846 8260A
2-Chlorotoluene	ND	10	ug/L	SW846 8260A
4-Chlorotoluene	ND	15	ug/L	SW846 8260A
Benzene	ND	10	ug/L	SW846 8260A
Bromobenzene	ND	7.5	ug/L	SW846 8260A
Bromochloromethane	ND	10	ug/L	SW846 8260A
Bromodichloromethane	ND	20	ug/L	SW846 8260A
Bromoform	ND	30	ug/L	SW846 8260A
Bromomethane	ND	28	ug/L	SW846 8260A
Carbon tetrachloride	ND	52	ug/L	SW846 8260A
Chlorobenzene	ND	10	ug/L	SW846 8260A
Chloroethane	ND	25	ug/L	SW846 8260A
Chloroform	ND	7.5	ug/L	SW846 8260A
Chloromethane	ND	32	ug/L	SW846 8260A
cis-1,2-Dichloroethene	**77**	**30**	**ug/L**	**SW846 8260A**
cis-1,3-Dichloropropene	ND	25	ug/L	SW846 8260A

(Continued on next page)

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: LF05-19WG

GC/MS Volatiles

Lot-Sample #...: B7G180111-002 Work Order #...: CAQAX10T Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	12	ug/L	SW846 8260A
Dibromomethane	ND	60	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	25	ug/L	SW846 8260A
Ethylbenzene	ND	15	ug/L	SW846 8260A
Hexachlorobutadiene	ND	28	ug/L	SW846 8260A
Isopropylbenzene	ND	12	ug/L	SW846 8260A
m-Xylene & p-Xylene	ND	12	ug/L	SW846 8260A
Methylene chloride	ND	7.5	ug/L	SW846 8260A
n-Butylbenzene	ND	28	ug/L	SW846 8260A
n-Propylbenzene	ND	10	ug/L	SW846 8260A
Naphthalene	ND	10	ug/L	SW846 8260A
o-Xylene	ND	28	ug/L	SW846 8260A
p-Isopropyltoluene	ND	30	ug/L	SW846 8260A
sec-Butylbenzene	ND	32	ug/L	SW846 8260A
Styrene	ND	10	ug/L	SW846 8260A
Trichloroethene	**240**	**25**	**ug/L**	**SW846 8260A**
tert-Butylbenzene	ND	35	ug/L	SW846 8260A
Tetrachloroethene	ND	35	ug/L	SW846 8260A
Toluene	ND	28	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	15	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	25	ug/L	SW846 8260A
Trichlorofluoromethane	ND	20	ug/L	SW846 8260A
Vinyl chloride	ND	28	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	104	(75 - 125)
4-Bromofluorobenzene	98	(75 - 125)
1,2-Dichloroethane-d4	96	(62 - 139)
Dibromofluoromethane	99	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: LF05-19WG

TOTAL Metals

Lot-Sample #...: B7G180111-002 Matrix.....: WG
Date Sampled...: 07/15/97 Date Received..: 07/17/97

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7205191						
Mercury	ND	0.0010	mg/L	SW846 7470A	07/24/97	CAQAX101
		Dilution Factor: 1				
		Analysis Time..: 21:01		Analyst ID.....: 001702	Instrument ID..: CV	
Prep Batch #...: 7205193						
Silver	ND	0.00020	mg/L	SW846 7761	07/24-08/11/97	CAQAX136
		Dilution Factor: 1				
		Analysis Time..: 09:40		Analyst ID.....: 001863	Instrument ID..: F1	
Antimony	ND	0.0050	mg/L	SW846 6010A	07/24-07/31/97	CAQAX10M
		Dilution Factor: 1				
		Analysis Time..: 20:11		Analyst ID.....: 001702	Instrument ID..: P2	
Arsenic	ND	0.0050	mg/L	SW846 6010A	07/24-07/25/97	CAQAX
		Dilution Factor: 1				
		Analysis Time..: 13:06		Analyst ID.....: 001863	Instrument ID..: P2	
Lead	ND	0.0050	mg/L	SW846 6010A	07/24-07/25/97	CAQAX10P
		Dilution Factor: 1				
		Analysis Time..: 13:06		Analyst ID.....: 001863	Instrument ID..: P2	
Selenium	ND	0.0050	mg/L	SW846 6010A	07/24-07/25/97	CAQAX10Q
		Dilution Factor: 1				
		Analysis Time..: 13:06		Analyst ID.....: 001863	Instrument ID..: P2	
Thallium	ND	0.0020	mg/L	SW846 7841	07/24/97	CAQAX10R
		Dilution Factor: 1				
		Analysis Time..: 17:42		Analyst ID.....: 001702	Instrument ID..: F1	
Aluminum	ND	0.50	mg/L	SW846 6010A	07/24-07/25/97	CAQAX103
		Dilution Factor: 1				
		Analysis Time..: 13:06		Analyst ID.....: 001863	Instrument ID..: P2	
Barium	0.14	0.020	mg/L	SW846 6010A	07/24-07/25/97	CAQAX104
		Dilution Factor: 1				
		Analysis Time..: 13:06		Analyst ID.....: 001863	Instrument ID..: P2	
Beryllium	ND	0.0030	mg/L	SW846 6010A	07/24-07/25/97	CAQAX105
		Dilution Factor: 1				
		Analysis Time..: 13:06		Analyst ID.....: 001863	Instrument ID..: P2	
Calcium	173	1.0	mg/L	SW846 6010A	07/24-07/25/97	CAQAX106
		Dilution Factor: 1				
		Analysis Time..: 13:06		Analyst ID.....: 001863	Instrument ID..: P2	

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: LF05-19WG

TOTAL Metals

Lot-Sample #...: B7G180111-002 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Cadmium	ND	0.040	mg/L	SW846 6010A	07/24-07/25/97	CAQAX107
		Dilution Factor: 1				
		Analysis Time..: 13:06	Analyst ID.....: 001863		Instrument ID..: P2	
Cobalt	ND	0.070	mg/L	SW846 6010A	07/24-07/25/97	CAQAX108
		Dilution Factor: 1				
		Analysis Time..: 13:06	Analyst ID.....: 001863		Instrument ID..: P2	
Chromium	ND	0.070	mg/L	SW846 6010A	07/24-07/25/97	CAQAX109
		Dilution Factor: 1				
		Analysis Time..: 13:06	Analyst ID.....: 001863		Instrument ID..: P2	
Copper	0.0052 F	0.060	mg/L	SW846 6010A	07/24-07/25/97	CAQAX10A
		Dilution Factor: 1				
		Analysis Time..: 13:06	Analyst ID.....: 001863		Instrument ID..: P2	
Iron	ND	0.070	mg/L	SW846 6010A	07/24-07/25/97	CAQAX10C
		Dilution Factor: 1				
		Analysis Time..: 13:06	Analyst ID.....: 001863		Instrument ID..: P2	
Potassium	1.9 F	5.0	mg/L	SW846 6010A	07/24-07/25/97	CAQAX10D
		Dilution Factor: 1				
		Analysis Time..: 10:46	Analyst ID.....: 001863		Instrument ID..: P1	
Magnesium	10.1	1.0	mg/L	SW846 6010A	07/24-07/25/97	CAQAX10E
		Dilution Factor: 1				
		Analysis Time..: 13:06	Analyst ID.....: 001863		Instrument ID..: P2	
Manganese	0.0094 F	0.020	mg/L	SW846 6010A	07/24-07/25/97	CAQAX10F
		Dilution Factor: 1				
		Analysis Time..: 13:06	Analyst ID.....: 001863		Instrument ID..: P2	
Molybdenum	ND	0.080	mg/L	SW846 6010A	07/24-07/25/97	CAQAX10G
		Dilution Factor: 1				
		Analysis Time..: 13:06	Analyst ID.....: 001863		Instrument ID..: P2	
Sodium	35.6	1.0	mg/L	SW846 6010A	07/24-07/25/97	CAQAX10H
		Dilution Factor: 1				
		Analysis Time..: 10:46	Analyst ID.....: 001863		Instrument ID..: P1	
Nickel	ND	0.15	mg/L	SW846 6010A	07/24-07/25/97	CAQAX10J
		Dilution Factor: 1				
		Analysis Time..: 13:06	Analyst ID.....: 001863		Instrument ID..: P2	

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: LF05-19WG

TOTAL Metals

Lot-Sample #...: B7G180111-002 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Vanadium	ND	0.080	mg/L	SW846 6010A	07/24-07/25/97	CAQAX10K
		Dilution Factor: 1				
		Analysis Time..: 13:06	Analyst ID.....: 001863	Instrument ID..: P2		
Zinc	ND	0.020	mg/L	SW846 6010A	07/24-07/31/97	CAQAX10L
		Dilution Factor: 1				
		Analysis Time..: 20:11	Analyst ID.....: 001702	Instrument ID..: P2		

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra
Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: GMI-22-02

GC Volatiles

Lot-Sample #...: B7G180111-003 Work Order #...: CAQC110A Matrix.....: WG
Date Sampled...: 07/15/97 Date Received..: 07/17/97
Prep Date.....: 07/24/97 Analysis Date..: 07/24/97
Prep Batch #...: 7210204 Analysis Time..: 18:33
Dilution Factor: 1
Analyst ID.....: 074741 Instrument ID..: K1A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Ethane	0.13 F	0.50	ug/L	EPA-9 RSK-175
Ethene	0.14 F	0.50	ug/L	EPA-9 RSK-175
Methane	0.25 F	0.50	ug/L	EPA-9 RSK-175

NOTE(S):

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: GMI-22-02

GC/MS Volatiles

Lot-Sample #...: B7G180111-003 **Work Order #...:** CAQC1107 **Matrix.....:** WG
Date Sampled...: 07/15/97 **Date Received..:** 07/17/97
Prep Date.....: 07/23/97 **Analysis Date..:** 07/23/97
Prep Batch #...: 7208107 **Analysis Time..:** 17:03
Dilution Factor: 1
Analyst ID.....: 007084 **Instrument ID..:** VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	0.80	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	0.40	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	0.40	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.2	ug/L	SW846 8260A
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	3.2	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	0.40	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	1.3	ug/L	SW846 8260A
1,2-Dichloroethane	ND	0.60	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.6	ug/L	SW846 8260A
1,2-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	0.60	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	0.50	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	1.2	ug/L	SW846 8260A
1,3-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1-Chlorohexane	ND	0.50	ug/L	SW846 8260A
2,2-Dichloropropane	ND	3.5	ug/L	SW846 8260A
2-Chlorotoluene	ND	0.40	ug/L	SW846 8260A
4-Chlorotoluene	ND	0.60	ug/L	SW846 8260A
Benzene	ND	0.40	ug/L	SW846 8260A
Bromobenzene	ND	0.30	ug/L	SW846 8260A
Bromochloromethane	ND	0.40	ug/L	SW846 8260A
Bromodichloromethane	ND	0.80	ug/L	SW846 8260A
Bromoform	ND	1.2	ug/L	SW846 8260A
Bromomethane	ND	1.1	ug/L	SW846 8260A
Carbon tetrachloride	ND	2.1	ug/L	SW846 8260A
Chlorobenzene	ND	0.40	ug/L	SW846 8260A
Chloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	0.30	ug/L	SW846 8260A
Chloromethane	ND	1.3	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	1.2	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: GMI-22-02

GC/MS Volatiles

Lot-Sample #...: B7G180111-003 **Work Order #...:** CAQC1107 **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	0.50	ug/L	SW846 8260A
Dibromomethane	ND	2.4	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	ND	0.60	ug/L	SW846 8260A
Hexachlorobutadiene	ND	1.1	ug/L	SW846 8260A
Isopropylbenzene	ND	0.50	ug/L	SW846 8260A
m-Xylene & p-Xylene	ND	0.50	ug/L	SW846 8260A
Methylene chloride	ND	0.30	ug/L	SW846 8260A
n-Butylbenzene	ND	1.1	ug/L	SW846 8260A
n-Propylbenzene	ND	0.40	ug/L	SW846 8260A
Naphthalene	ND	0.40	ug/L	SW846 8260A
o-Xylene	ND	1.1	ug/L	SW846 8260A
p-Isopropyltoluene	ND	1.2	ug/L	SW846 8260A
sec-Butylbenzene	ND	1.3	ug/L	SW846 8260A
Styrene	ND	0.40	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
tert-Butylbenzene	ND	1.4	ug/L	SW846 8260A
Tetrachloroethene	ND	1.4	ug/L	SW846 8260A
Toluene	ND	1.1	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	0.60	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichlorofluoromethane	ND	0.80	ug/L	SW846 8260A
Vinyl chloride	ND	1.1	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	104	(75 - 125)
4-Bromofluorobenzene	95	(75 - 125)
1,2-Dichloroethane-d4	96	(62 - 139)
Dibromofluoromethane	94	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: GMI-22-02

General Chemistry

Lot-Sample #...: B7G180111-003 Work Order #...: CAQC1 Matrix.....: WG
Date Sampled...: 07/15/97 Date Received..: 07/17/97

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH 4.5	280	10	mg/L	MCAWW 310.1	07/25/97	7210205
	Dilution Factor: 1					
	Analysis Time..: 00:00		Analyst ID.....: 090000		Instrument ID..: NO INST	
Bromide	ND	0.20	mg/L	SW846 9056	07/30/97	7212150
	Dilution Factor: 1					
	Analysis Time..: 12:01		Analyst ID.....: 004003		Instrument ID..: IC	
Chloride	1.6	0.20	mg/L	SW846 9056	07/30/97	7212154
	Dilution Factor: 1					
	Analysis Time..: 12:01		Analyst ID.....: 004003		Instrument ID..: IC	
Sulfate	5.0	0.50	mg/L	SW846 9056	07/30/97	7212157
	Dilution Factor: 1					
	Analysis Time..: 12:01		Analyst ID.....: 004003		Instrument ID..: IC	
Total Dissolved Solids	300	10	mg/L	MCAWW 160.1	07/29-07/30/97	7211188
	Dilution Factor: 1					
	Analysis Time..: 12:30		Analyst ID.....: 090000		Instrument ID..: NA	
Total Organic Carbon	1	1	mg/L	SW846 9060	07/31/97	7213183
	Dilution Factor: 1					
	Analysis Time..: 18:12		Analyst ID.....: 004003		Instrument ID..: TOC	

NOTE(S):

RL Reporting Limit

ND = The analyte was analyzed for but not detected at or above the MDL.

TOC Range:1.2-1.5

Quanterra
Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: SPOT35-4WG

GC Volatiles

Lot-Sample #...: B7G180111-004 Work Order #...: CAQC3104 Matrix.....: WG
Date Sampled...: 07/15/97 Date Received..: 07/17/97
Prep Date.....: 07/24/97 Analysis Date..: 07/24/97
Prep Batch #...: 7210204 Analysis Time..: 22:42
Dilution Factor: 75
Analyst ID.....: 074741 Instrument ID..: K1A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Ethane	ND	38	ug/L	EPA-9 RSK-175
Ethene	ND	38	ug/L	EPA-9 RSK-175
Methane	**3400**	**38**	**ug/L**	**EPA-9 RSK-175**

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: SPOT35-4WG

GC/MS Volatiles

Lot-Sample #...: B7G180111-004 Work Order #...: CAQC3103 Matrix.....: WG
Date Sampled...: 07/15/97 Date Received..: 07/17/97
Prep Date.....: 07/23/97 Analysis Date..: 07/24/97
Prep Batch #...: 7211177 Analysis Time..: 04:32
Dilution Factor: 10
Analyst ID.....: 007084 Instrument ID..: VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	8.0	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	4.0	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	10	ug/L	SW846 8260A
1,1-Dichloroethane	ND	4.0	ug/L	SW846 8260A
1,1-Dichloroethene	ND	12	ug/L	SW846 8260A
1,1-Dichloropropene	ND	10	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	3.0	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	32	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	4.0	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	13	ug/L	SW846 8260A
1,2-Dichloroethane	ND	6.0	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	3.0	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	26	ug/L	SW846 8260A
1,2-Dichloropropane	ND	4.0	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	6.0	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	5.0	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	12	ug/L	SW846 8260A
1,3-Dichloropropane	ND	4.0	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	3.0	ug/L	SW846 8260A
1-Chlorohexane	ND	5.0	ug/L	SW846 8260A
2,2-Dichloropropane	ND	35	ug/L	SW846 8260A
2-Chlorotoluene	ND	4.0	ug/L	SW846 8260A
4-Chlorotoluene	ND	6.0	ug/L	SW846 8260A
Benzene	ND	4.0	ug/L	SW846 8260A
Bromobenzene	ND	3.0	ug/L	SW846 8260A
Bromochloromethane	ND	4.0	ug/L	SW846 8260A
Bromodichloromethane	ND	8.0	ug/L	SW846 8260A
Bromoform	ND	12	ug/L	SW846 8260A
Bromomethane	ND	11	ug/L	SW846 8260A
Carbon tetrachloride	ND	21	ug/L	SW846 8260A
Chlorobenzene	ND	4.0	ug/L	SW846 8260A
Chloroethane	ND	10	ug/L	SW846 8260A
Chloroform	ND	3.0	ug/L	SW846 8260A
Chloromethane	ND	13	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	12	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	10	ug/L	SW846 8260A

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: SPOT35-4WG

GC/MS Volatiles

Lot-Sample #...: B7G180111-004 **Work Order #...:** CAQC3103 **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	5.0	ug/L	SW846 8260A
Dibromomethane	ND	24	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	10	ug/L	SW846 8260A
Ethylbenzene	ND	6.0	ug/L	SW846 8260A
Hexachlorobutadiene	ND	11	ug/L	SW846 8260A
Isopropylbenzene	**38**	**5.0**	**ug/L**	**SW846 8260A**
m-Xylene & p-Xylene	ND	5.0	ug/L	SW846 8260A
Methylene chloride	ND	3.0	ug/L	SW846 8260A
n-Butylbenzene	**3.5 F**	**11**	**ug/L**	**SW846 8260A**
n-Propylbenzene	**38**	**4.0**	**ug/L**	**SW846 8260A**
Naphthalene	**72**	**4.0**	**ug/L**	**SW846 8260A**
o-Xylene	ND	11	ug/L	SW846 8260A
p-Isopropyltoluene	ND	12	ug/L	SW846 8260A
sec-Butylbenzene	**13**	**13**	**ug/L**	**SW846 8260A**
Styrene	ND	4.0	ug/L	SW846 8260A
Trichloroethene	ND	10	ug/L	SW846 8260A
tert-Butylbenzene	ND	14	ug/L	SW846 8260A
Tetrachloroethene	ND	14	ug/L	SW846 8260A
Toluene	ND	11	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	6.0	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	10	ug/L	SW846 8260A
Trichlorofluoromethane	ND	8.0	ug/L	SW846 8260A
Vinyl chloride	ND	11	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	105	(75 - 125)
4-Bromofluorobenzene	98	(75 - 125)
1,2-Dichloroethane-d4	95	(62 - 139)
Dibromofluoromethane	92	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: SPOT35-4WG

General Chemistry

Lot-Sample #...: B7G180111-004 Work Order #...: CAQC3 Matrix.....: WG
Date Sampled...: 07/15/97 Date Received..: 07/17/97

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH 4.5	390	10	mg/L	MCAWW 310.1	07/25/97	7210205
	Dilution Factor: 1					
	Analysis Time..: 00:00	Analyst ID.....: 090000		Instrument ID..: NO INST		
Bromide	4.4	2.0	mg/L	SW846 9056	07/30/97	7212150
	Dilution Factor: 10					
	Analysis Time..: 12:35	Analyst ID.....: 004003		Instrument ID..: IC		
Chloride	108	2.0	mg/L	SW846 9056	07/30/97	7212154
	Dilution Factor: 10					
	Analysis Time..: 12:35	Analyst ID.....: 004003		Instrument ID..: IC		
Sulfate	8.2	5.0	mg/L	SW846 9056	07/30/97	7212157
	Dilution Factor: 10					
	Analysis Time..: 12:35	Analyst ID.....: 004003		Instrument ID..: IC		
Total Organic Carbon	4	1	mg/L	SW846 9060	07/31/97	7213183
	Dilution Factor: 1					
	Analysis Time..: 19:53	Analyst ID.....: 004003		Instrument ID..: TOC		

NOTE(S):

RL Reporting Limit

TOC Range:3.9-4.4

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: SPOT35-5WG

GC Volatiles

Lot-Sample #...: B7G180111-005 Work Order #...: CAQC4104 Matrix.....: WG
Date Sampled...: 07/15/97 Date Received..: 07/17/97
Prep Date.....: 07/24/97 Analysis Date..: 07/24/97
Prep Batch #...: 7210204 Analysis Time..: 22:57
Dilution Factor: 100
Analyst ID.....: 074741 Instrument ID..: K1A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Ethane	ND	50	ug/L	EPA-9 RSK-175
Ethene	ND	50	ug/L	EPA-9 RSK-175
Methane	3500	50	ug/L	EPA-9 RSK-175

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: SPOT35-5WG

GC/MS Volatiles

Lot-Sample #...: B7G180111-005 Work Order #...: CAQC4103 Matrix.....: WG
Date Sampled...: 07/15/97 Date Received..: 07/17/97
Prep Date.....: 07/23/97 Analysis Date..: 07/24/97
Prep Batch #...: 7211177 Analysis Time..: 04:56
Dilution Factor: 10
Analyst ID.....: 007084 Instrument ID..: VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	8.0	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	4.0	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	10	ug/L	SW846 8260A
1,1-Dichloroethane	ND	4.0	ug/L	SW846 8260A
1,1-Dichloroethene	ND	12	ug/L	SW846 8260A
1,1-Dichloropropene	ND	10	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	3.0	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	32	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	4.0	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	13	ug/L	SW846 8260A
1,2-Dichloroethane	ND	6.0	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	3.0	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	26	ug/L	SW846 8260A
1,2-Dichloropropane	ND	4.0	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	6.0	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	5.0	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	12	ug/L	SW846 8260A
1,3-Dichloropropane	ND	4.0	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	3.0	ug/L	SW846 8260A
1-Chlorohexane	ND	5.0	ug/L	SW846 8260A
2,2-Dichloropropane	ND	35	ug/L	SW846 8260A
2-Chlorotoluene	ND	4.0	ug/L	SW846 8260A
4-Chlorotoluene	ND	6.0	ug/L	SW846 8260A
Benzene	ND	4.0	ug/L	SW846 8260A
Bromobenzene	ND	3.0	ug/L	SW846 8260A
Bromochloromethane	ND	4.0	ug/L	SW846 8260A
Bromodichloromethane	ND	8.0	ug/L	SW846 8260A
Bromoform	ND	12	ug/L	SW846 8260A
Bromomethane	ND	11	ug/L	SW846 8260A
Carbon tetrachloride	ND	21	ug/L	SW846 8260A
Chlorobenzene	ND	4.0	ug/L	SW846 8260A
Chloroethane	ND	10	ug/L	SW846 8260A
Chloroform	ND	3.0	ug/L	SW846 8260A
Chloromethane	ND	13	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	12	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	10	ug/L	SW846 8260A

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: SPOT35-5WG

GC/MS Volatiles

Lot-Sample #...: B7G180111-005 **Work Order #...:** CAQC4103 **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	5.0	ug/L	SW846 8260A
Dibromomethane	ND	24	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	10	ug/L	SW846 8260A
Ethylbenzene	ND	6.0	ug/L	SW846 8260A
Hexachlorobutadiene	ND	11	ug/L	SW846 8260A
Isopropylbenzene	**29**	**5.0**	**ug/L**	**SW846 8260A**
m-Xylene & p-Xylene	ND	5.0	ug/L	SW846 8260A
Methylene chloride	ND	3.0	ug/L	SW846 8260A
n-Butylbenzene	ND	11	ug/L	SW846 8260A
n-Propylbenzene	**31**	**4.0**	**ug/L**	**SW846 8260A**
Naphthalene	**76**	**4.0**	**ug/L**	**SW846 8260A**
o-Xylene	ND	11	ug/L	SW846 8260A
p-Isopropyltoluene	ND	12	ug/L	SW846 8260A
sec-Butylbenzene	ND	13	ug/L	SW846 8260A
Styrene	ND	4.0	ug/L	SW846 8260A
Trichloroethene	ND	10	ug/L	SW846 8260A
tert-Butylbenzene	ND	14	ug/L	SW846 8260A
Tetrachloroethene	ND	14	ug/L	SW846 8260A
Toluene	ND	11	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	6.0	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	10	ug/L	SW846 8260A
Trichlorofluoromethane	ND	8.0	ug/L	SW846 8260A
Vinyl chloride	ND	11	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	104	(75 - 125)
4-Bromofluorobenzene	98	(75 - 125)
1,2-Dichloroethane-d4	97	(62 - 139)
Dibromofluoromethane	93	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: SPOT35-5WG

General Chemistry

Lot-Sample #...: B7G180111-005 Work Order #...: CAQC4 Matrix.....: WG
Date Sampled...: 07/15/97 Date Received..: 07/17/97

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH 4.5	430	10	mg/L	MCAWW 310.1	07/25/97	7210205
	Dilution Factor: 1					
	Analysis Time..: 00:00		Analyst ID.....: 090000		Instrument ID..: NA	
Bromide	3.1	1.0	mg/L	SW846 9056	07/31/97	7213174
	Dilution Factor: 5					
	Analysis Time..: 13:54		Analyst ID.....: 004003		Instrument ID..: IC	
Chloride	147	1.0	mg/L	SW846 9056	07/31/97	7213173
	Dilution Factor: 5					
	Analysis Time..: 13:54		Analyst ID.....: 004003		Instrument ID..: IC	
Sulfate	2.8	2.5	mg/L	SW846 9056	07/31/97	7213175
	Dilution Factor: 5					
	Analysis Time..: 13:54		Analyst ID.....: 004003		Instrument ID..: IC	
Total Organic Carbon	12	2	mg/L	SW846 9060	07/30-07/31/97	7213184
	Dilution Factor: 2					
	Analysis Time..: 00:41		Analyst ID.....: 004003		Instrument ID..: TOC	

NOTE(S):

RL Reporting Limit

TOC Range:11.4-13.1

Quanterra
Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: LF05-18WG

GC/MS Volatiles

Lot-Sample #...: B7G180111-006 **Work Order #...:** CAQC510T **Matrix.....:** WG
Date Sampled...: 07/14/97 **Date Received..:** 07/17/97
Prep Date.....: 07/23/97 **Analysis Date..:** 07/23/97
Prep Batch #...: 7211177 **Analysis Time..:** 22:45
Dilution Factor: 100
Analyst ID.....: 007084 **Instrument ID..:** VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	50	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	80	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	40	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	100	ug/L	SW846 8260A
1,1-Dichloroethane	ND	40	ug/L	SW846 8260A
1,1-Dichloroethene	ND	120	ug/L	SW846 8260A
1,1-Dichloropropene	ND	100	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	30	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	320	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	40	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	130	ug/L	SW846 8260A
1,2-Dichloroethane	ND	60	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	30	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	260	ug/L	SW846 8260A
1,2-Dichloropropane	ND	40	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	60	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	50	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	120	ug/L	SW846 8260A
1,3-Dichloropropane	ND	40	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	30	ug/L	SW846 8260A
1-Chlorohexane	ND	50	ug/L	SW846 8260A
2,2-Dichloropropane	ND	350	ug/L	SW846 8260A
2-Chlorotoluene	ND	40	ug/L	SW846 8260A
4-Chlorotoluene	ND	60	ug/L	SW846 8260A
Benzene	ND	40	ug/L	SW846 8260A
Bromobenzene	ND	30	ug/L	SW846 8260A
Bromochloromethane	ND	40	ug/L	SW846 8260A
Bromodichloromethane	ND	80	ug/L	SW846 8260A
Bromoform	ND	120	ug/L	SW846 8260A
Bromomethane	ND	110	ug/L	SW846 8260A
Carbon tetrachloride	ND	210	ug/L	SW846 8260A
Chlorobenzene	ND	40	ug/L	SW846 8260A
Chloroethane	ND	100	ug/L	SW846 8260A
Chloroform	ND	30	ug/L	SW846 8260A
Chloromethane	ND	130	ug/L	SW846 8260A
cis-1,2-Dichloroethene	**200**	**120**	**ug/L**	**SW846 8260A**
cis-1,3-Dichloropropene	ND	100	ug/L	SW846 8260A

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: LF05-18WG

GC/MS Volatiles

Lot-Sample #...: B7G180111-006 **Work Order #...:** CAQC510T **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	50	ug/L	SW846 8260A
Dibromomethane	ND	240	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	100	ug/L	SW846 8260A
Ethylbenzene	ND	60	ug/L	SW846 8260A
Hexachlorobutadiene	ND	110	ug/L	SW846 8260A
Isopropylbenzene	ND	50	ug/L	SW846 8260A
m-Xylene & p-Xylene	ND	50	ug/L	SW846 8260A
Methylene chloride	ND	30	ug/L	SW846 8260A
n-Butylbenzene	ND	110	ug/L	SW846 8260A
n-Propylbenzene	ND	40	ug/L	SW846 8260A
Naphthalene	ND	40	ug/L	SW846 8260A
o-Xylene	ND	110	ug/L	SW846 8260A
p-Isopropyltoluene	ND	120	ug/L	SW846 8260A
sec-Butylbenzene	ND	130	ug/L	SW846 8260A
Styrene	ND	40	ug/L	SW846 8260A
Trichloroethene	**660**	**100**	**ug/L**	**SW846 8260A**
tert-Butylbenzene	ND	140	ug/L	SW846 8260A
Tetrachloroethene	ND	140	ug/L	SW846 8260A
Toluene	ND	110	ug/L	SW846 8260A
trans-1,2-Dichloroethene	**28 F**	**60**	**ug/L**	**SW846 8260A**
trans-1,3-Dichloropropene	ND	100	ug/L	SW846 8260A
Trichlorofluoromethane	ND	80	ug/L	SW846 8260A
Vinyl chloride	ND	110	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	101	(75 - 125)
4-Bromofluorobenzene	96	(75 - 125)
1,2-Dichloroethane-d4	94	(62 - 139)
Dibromofluoromethane	97	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: LF05-18WG

TOTAL Metals

Lot-Sample #...: B7G180111-006 Matrix.....: WG
Date Sampled...: 07/14/97 Date Received..: 07/17/97

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7205191						
Mercury	ND	0.0010	mg/L	SW846 7470A	07/24/97	CAQC5101
		Dilution Factor: 1				
		Analysis Time..: 21:08		Analyst ID.....: 001702	Instrument ID..: CV	
Prep Batch #...: 7205193						
Silver	ND	0.00040	mg/L	SW846 7761	07/24-08/11/97	CAQC510U
		Dilution Factor: 2				
		Analysis Time..: 11:03		Analyst ID.....: 001863	Instrument ID..: F1	
Antimony	ND	0.0050	mg/L	SW846 6010A	07/24-07/31/97	CAQC510M
		Dilution Factor: 1				
		Analysis Time..: 20:27		Analyst ID.....: 001702	Instrument ID..: P2	
Arsenic	ND	0.0050	mg/L	SW846 6010A	07/24-07/25/97	CAQC510N
		Dilution Factor: 1				
		Analysis Time..: 13:28		Analyst ID.....: 001863	Instrument ID..: P2	
Lead	ND	0.0050	mg/L	SW846 6010A	07/24-07/25/97	CAQC510P
		Dilution Factor: 1				
		Analysis Time..: 13:28		Analyst ID.....: 001863	Instrument ID..: P2	
Selenium	ND	0.0050	mg/L	SW846 6010A	07/24-07/25/97	CAQC510Q
		Dilution Factor: 1				
		Analysis Time..: 13:28		Analyst ID.....: 001863	Instrument ID..: P2	
Thallium	ND	0.0020	mg/L	SW846 7841	07/24/97	CAQC510R
		Dilution Factor: 1				
		Analysis Time..: 17:52		Analyst ID.....: 001702	Instrument ID..: F1	
Aluminum	**0.11 F**	**0.50**	**mg/L**	**SW846 6010A**	**07/24-07/25/97**	**CAQC5103**
		Dilution Factor: 1				
		Analysis Time..: 13:28		Analyst ID.....: 001863	Instrument ID..: P2	
Barium	**0.14**	**0.020**	**mg/L**	**SW846 6010A**	**07/24-07/25/97**	**CAQC5104**
		Dilution Factor: 1				
		Analysis Time..: 13:28		Analyst ID.....: 001863	Instrument ID..: P2	
Beryllium	ND	0.0030	mg/L	SW846 6010A	07/24-07/25/97	CAQC5105
		Dilution Factor: 1				
		Analysis Time..: 13:28		Analyst ID.....: 001863	Instrument ID..: P2	
Calcium	**165**	**1.0**	**mg/L**	**SW846 6010A**	**07/24-07/25/97**	**CAQC5106**
		Dilution Factor: 1				
		Analysis Time..: 13:28		Analyst ID.....: 001863	Instrument ID..: P2	

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: LF05-18WG

TOTAL Metals

Lot-Sample #...: B7G180111-006 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Cadmium	ND	0.040	mg/L	SW846 6010A	07/24-07/25/97	CAQC5107
		Dilution Factor: 1				
		Analysis Time..: 13:28	Analyst ID.....: 001863	Instrument ID..: P2		
Cobalt	ND	0.070	mg/L	SW846 6010A	07/24-07/25/97	CAQC5108
		Dilution Factor: 1				
		Analysis Time..: 13:28	Analyst ID.....: 001863	Instrument ID..: P2		
Chromium	ND	0.070	mg/L	SW846 6010A	07/24-07/25/97	CAQC5109
		Dilution Factor: 1				
		Analysis Time..: 13:28	Analyst ID.....: 001863	Instrument ID..: P2		
Copper	ND	0.060	mg/L	SW846 6010A	07/24-07/25/97	CAQC510A
		Dilution Factor: 1				
		Analysis Time..: 13:28	Analyst ID.....: 001863	Instrument ID..: P2		
Iron	0.069 F	0.070	mg/L	SW846 6010A	07/24-07/25/97	CAQC5
		Dilution Factor: 1				
		Analysis Time..: 13:28	Analyst ID.....: 001863	Instrument ID..: P2		
Potassium	1.7 F	5.0	mg/L	SW846 6010A	07/24-07/25/97	CAQC510D
		Dilution Factor: 1				
		Analysis Time..: 11:08	Analyst ID.....: 001863	Instrument ID..: P1		
Magnesium	10.4	1.0	mg/L	SW846 6010A	07/24-07/25/97	CAQC510E
		Dilution Factor: 1				
		Analysis Time..: 13:28	Analyst ID.....: 001863	Instrument ID..: P2		
Manganese	0.0016 F	0.020	mg/L	SW846 6010A	07/24-07/25/97	CAQC510F
		Dilution Factor: 1				
		Analysis Time..: 13:28	Analyst ID.....: 001863	Instrument ID..: P2		
Molybdenum	ND	0.080	mg/L	SW846 6010A	07/24-07/25/97	CAQC510G
		Dilution Factor: 1				
		Analysis Time..: 13:28	Analyst ID.....: 001863	Instrument ID..: P2		
Sodium	59.1	1.0	mg/L	SW846 6010A	07/24-07/25/97	CAQC510H
		Dilution Factor: 1				
		Analysis Time..: 11:08	Analyst ID.....: 001863	Instrument ID..: P1		
Nickel	ND	0.15	mg/L	SW846 6010A	07/24-07/25/97	CAQC510J
		Dilution Factor: 1				
		Analysis Time..: 13:28	Analyst ID.....: 001863	Instrument ID..: P2		

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: LF05-18WG

TOTAL Metals

Lot-Sample #...: B7G180111-006 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Vanadium	ND	0.080	mg/L	SW846 6010A	07/24-07/25/97	CAQC510K
		Dilution Factor: 1				
		Analysis Time..: 13:28		Analyst ID.....: 001863	Instrument ID..: P2	
Zinc	ND	0.020	mg/L	SW846 6010A	07/24-07/31/97	CAQC510L
		Dilution Factor: 1				
		Analysis Time..: 20:27		Analyst ID.....: 001702	Instrument ID..: P2	

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra
Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-02WG

GC Volatiles

Lot-Sample #...: B7G180111-007 Work Order #...: CAQC710W Matrix.....: WG
Date Sampled...: 07/15/97 Date Received..: 07/17/97
Prep Date.....: 07/25/97 Analysis Date..: 07/25/97
Prep Batch #...: 7210208 Analysis Time..: 14:43
Dilution Factor: 20
Analyst ID.....: 014906 Instrument ID..: K1A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Ethane	ND	10	ug/L	EPA-9 RSK-175
Ethene	ND	10	ug/L	EPA-9 RSK-175
Methane	670	10	ug/L	EPA-9 RSK-175

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-02WG

GC Volatiles

Lot-Sample #...:	B7G180111-007	Work Order #...:	CAQC7101	Matrix.....:	WG
Date Sampled...:	07/15/97	Date Received..:	07/17/97		
Prep Date.....:	07/24/97	Analysis Date..:	07/24/97		
Prep Batch #...:	7206190	Analysis Time..:	15:11		
Dilution Factor:	1				
Analyst ID.....:	001854	Instrument ID..:	V2A		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	**6.1**	**2.0**	**ug/L**	**SW846 8020A**
Ethylbenzene	ND	2.0	ug/L	SW846 8020A
Toluene	ND	2.0	ug/L	SW846 8020A
Xylenes (total)	ND	2.0	ug/L	SW846 8020A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	92	(46 - 136)
Bromofluorobenzene	91	(48 - 138)
Fluorobenzene	95	(44 - 165)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-02WG

TOTAL Metals

Lot-Sample #...: B7G180111-007 Matrix.....: WG
Date Sampled...: 07/15/97 Date Received..: 07/17/97

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7205191						
Mercury	ND	0.0010	mg/L	SW846 7470A	07/24/97	CAQC7104
		Dilution Factor: 1				
		Analysis Time..: 21:10		Analyst ID.....: 001702	Instrument ID..: CV	
Prep Batch #...: 7205193						
Silver	0.00075	0.00020	mg/L	SW846 7761	07/24-08/11/97	CAQC7114
		Dilution Factor: 1				
		Analysis Time..: 11:43		Analyst ID.....: 001863	Instrument ID..: F1	
Antimony	ND	0.0050	mg/L	SW846 6010A	07/24-07/31/97	CAQC710Q
		Dilution Factor: 1				
		Analysis Time..: 20:32		Analyst ID.....: 001702	Instrument ID..: P2	
Arsenic	0.0078	0.0050	mg/L	SW846 6010A	07/24-07/25/97	CAQC7
		Dilution Factor: 1				
		Analysis Time..: 13:34		Analyst ID.....: 001863	Instrument ID..: P2	
Lead	ND	0.0050	mg/L	SW846 6010A	07/24-07/25/97	CAQC710T
		Dilution Factor: 1				
		Analysis Time..: 13:34		Analyst ID.....: 001863	Instrument ID..: P2	
Selenium	ND	0.0050	mg/L	SW846 6010A	07/24-07/25/97	CAQC710U
		Dilution Factor: 1				
		Analysis Time..: 13:34		Analyst ID.....: 001863	Instrument ID..: P2	
Thallium	ND	0.0020	mg/L	SW846 7841	07/24/97	CAQC710V
		Dilution Factor: 1				
		Analysis Time..: 18:02		Analyst ID.....: 001702	Instrument ID..: F1	
Aluminum	ND	0.50	mg/L	SW846 6010A	07/24-07/25/97	CAQC7106
		Dilution Factor: 1				
		Analysis Time..: 13:34		Analyst ID.....: 001863	Instrument ID..: P2	
Barium	0.12	0.020	mg/L	SW846 6010A	07/24-07/25/97	CAQC7107
		Dilution Factor: 1				
		Analysis Time..: 13:34		Analyst ID.....: 001863	Instrument ID..: P2	
Beryllium	ND	0.0030	mg/L	SW846 6010A	07/24-07/25/97	CAQC7108
		Dilution Factor: 1				
		Analysis Time..: 13:34		Analyst ID.....: 001863	Instrument ID..: P2	
Calcium	129	1.0	mg/L	SW846 6010A	07/24-07/25/97	CAQC7109
		Dilution Factor: 1				
		Analysis Time..: 13:34		Analyst ID.....: 001863	Instrument ID..: P2	

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-02WG

TOTAL Metals

Lot-Sample #...: B7G180111-007 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Cadmium	ND	0.040	mg/L	SW846 6010A	07/24-07/25/97	CAQC710A
		Dilution Factor: 1				
		Analysis Time..: 13:34	Analyst ID.....: 001863	Instrument ID..: P2		
Cobalt	ND	0.070	mg/L	SW846 6010A	07/24-07/25/97	CAQC710C
		Dilution Factor: 1				
		Analysis Time..: 13:34	Analyst ID.....: 001863	Instrument ID..: P2		
Chromium	ND	0.070	mg/L	SW846 6010A	07/24-07/25/97	CAQC710D
		Dilution Factor: 1				
		Analysis Time..: 13:34	Analyst ID.....: 001863	Instrument ID..: P2		
Copper	ND	0.060	mg/L	SW846 6010A	07/24-07/25/97	CAQC710E
		Dilution Factor: 1				
		Analysis Time..: 13:34	Analyst ID.....: 001863	Instrument ID..: P2		
Iron	11.2	0.070	mg/L	SW846 6010A	07/24-07/25/97	CAQC710F
		Dilution Factor: 1				
		Analysis Time..: 13:34	Analyst ID.....: 001863	Instrument ID..: P2		
Potassium	2.0 F	5.0	mg/L	SW846 6010A	07/24-07/25/97	CAQC710G
		Dilution Factor: 1				
		Analysis Time..: 11:14	Analyst ID.....: 001863	Instrument ID..: P1		
Magnesium	6.4	1.0	mg/L	SW846 6010A	07/24-07/25/97	CAQC710H
		Dilution Factor: 1				
		Analysis Time..: 13:34	Analyst ID.....: 001863	Instrument ID..: P2		
Manganese	0.27	0.020	mg/L	SW846 6010A	07/24-07/25/97	CAQC710J
		Dilution Factor: 1				
		Analysis Time..: 13:34	Analyst ID.....: 001863	Instrument ID..: P2		
Molybdenum	ND	0.080	mg/L	SW846 6010A	07/24-07/25/97	CAQC710K
		Dilution Factor: 1				
		Analysis Time..: 13:34	Analyst ID.....: 001863	Instrument ID..: P2		
Sodium	26.0	1.0	mg/L	SW846 6010A	07/24-07/25/97	CAQC710L
		Dilution Factor: 1				
		Analysis Time..: 11:14	Analyst ID.....: 001863	Instrument ID..: P1		
Nickel	ND	0.15	mg/L	SW846 6010A	07/24-07/25/97	CAQC710M
		Dilution Factor: 1				
		Analysis Time..: 13:34	Analyst ID.....: 001863	Instrument ID..: P2		

(Continued on next page)

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-02WG

TOTAL Metals

Lot-Sample #...: B7G180111-007 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Vanadium	ND	0.080	mg/L	SW846 6010A	07/24-07/25/97	CAQC710N
		Dilution Factor: 1				
		Analysis Time..: 13:34		Analyst ID.....: 001863	Instrument ID..: P2	
Zinc	0.013 F	0.020	mg/L	SW846 6010A	07/24-07/31/97	CAQC710P
		Dilution Factor: 1				
		Analysis Time..: 20:32		Analyst ID.....: 001702	Instrument ID..: P2	

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-02WG

General Chemistry

Lot-Sample #...: B7G180111-007 Work Order #...: CAQC7 Matrix.....: WG
Date Sampled...: 07/15/97 Date Received..: 07/17/97

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH 4.5	360	10	mg/L	MCAWW 310.1	07/25/97	7210205
	Dilution Factor: 1					
	Analysis Time..: 00:00		Analyst ID.....: 090000		Instrument ID..: NO INST	
Bromide	0.73	0.20	mg/L	SW846 9056	07/30/97	7212150
	Dilution Factor: 1					
	Analysis Time..: 12:58		Analyst ID.....: 004003		Instrument ID..: IC	
Chloride	29.7	0.20	mg/L	SW846 9056	07/30/97	7212154
	Dilution Factor: 1					
	Analysis Time..: 12:58		Analyst ID.....: 004003		Instrument ID..: IC	
Sulfate	0.84	0.50	mg/L	SW846 9056	07/30/97	7212157
	Dilution Factor: 1					
	Analysis Time..: 12:58		Analyst ID.....: 004003		Instrument ID..: IC	
Total Organic Carbon	3	1	mg/L	SW846 9060	07/31/97	7213183
	Dilution Factor: 1					
	Analysis Time..: 21:01		Analyst ID.....: 004003		Instrument ID..: TOC	

NOTE(S):

RL Reporting Limit

TOC Range:2.9-3.2

Quanterra
Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-14WG

GC Volatiles

Lot-Sample #...: B7G180111-008 Work Order #...: CAQC910W Matrix.....: WG
Date Sampled...: 07/15/97 Date Received..: 07/17/97
Prep Date.....: 07/25/97 Analysis Date..: 07/25/97
Prep Batch #...: 7210208 Analysis Time..: 15:35
Dilution Factor: 20
Analyst ID.....: 014906 Instrument ID..: K1A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Ethane	ND	10	ug/L	EPA-9 RSK-175
Ethene	ND	10	ug/L	EPA-9 RSK-175
Methane	870	10	ug/L	EPA-9 RSK-175

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-14WG

GC/MS Volatiles

Lot-Sample #...: B7G180111-008 **Work Order #...:** CAQC910V **Matrix.....:** WG
Date Sampled...: 07/15/97 **Date Received..:** 07/17/97
Prep Date.....: 07/23/97 **Analysis Date..:** 07/23/97
Prep Batch #...: 7211177 **Analysis Time..:** 23:08
Dilution Factor: 1
Analyst ID.....: 007084 **Instrument ID..:** VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	0.80	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	0.40	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	0.40	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.2	ug/L	SW846 8260A
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	3.2	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	0.40	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	1.3	ug/L	SW846 8260A
1,2-Dichloroethane	ND	0.60	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.6	ug/L	SW846 8260A
1,2-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	0.60	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	0.50	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	1.2	ug/L	SW846 8260A
1,3-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1-Chlorohexane	ND	0.50	ug/L	SW846 8260A
2,2-Dichloropropane	ND	3.5	ug/L	SW846 8260A
2-Chlorotoluene	ND	0.40	ug/L	SW846 8260A
4-Chlorotoluene	ND	0.60	ug/L	SW846 8260A
Benzene	ND	0.40	ug/L	SW846 8260A
Bromobenzene	ND	0.30	ug/L	SW846 8260A
Bromochloromethane	ND	0.40	ug/L	SW846 8260A
Bromodichloromethane	ND	0.80	ug/L	SW846 8260A
Bromoform	ND	1.2	ug/L	SW846 8260A
Bromomethane	ND	1.1	ug/L	SW846 8260A
Carbon tetrachloride	ND	2.1	ug/L	SW846 8260A
Chlorobenzene	ND	0.40	ug/L	SW846 8260A
Chloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	0.30	ug/L	SW846 8260A
Chloromethane	ND	1.3	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	1.2	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-14WG

GC/MS Volatiles

Lot-Sample #...: B7G180111-008 **Work Order #...:** CAQC910V **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	0.50	ug/L	SW846 8260A
Dibromomethane	ND	2.4	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	ND	0.60	ug/L	SW846 8260A
Hexachlorobutadiene	ND	1.1	ug/L	SW846 8260A
Isopropylbenzene	ND	0.50	ug/L	SW846 8260A
m-Xylene & p-Xylene	ND	0.50	ug/L	SW846 8260A
Methylene chloride	ND	0.30	ug/L	SW846 8260A
n-Butylbenzene	ND	1.1	ug/L	SW846 8260A
n-Propylbenzene	ND	0.40	ug/L	SW846 8260A
Naphthalene	ND	0.40	ug/L	SW846 8260A
o-Xylene	ND	1.1	ug/L	SW846 8260A
p-Isopropyltoluene	ND	1.2	ug/L	SW846 8260A
sec-Butylbenzene	ND	1.3	ug/L	SW846 8260A
Styrene	ND	0.40	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
tert-Butylbenzene	**1.1 F**	**1.4**	**ug/L**	**SW846 8260A**
Tetrachloroethene	ND	1.4	ug/L	SW846 8260A
Toluene	ND	1.1	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	0.60	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichlorofluoromethane	ND	0.80	ug/L	SW846 8260A
Vinyl chloride	ND	1.1	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	104	(75 - 125)
4-Bromofluorobenzene	98	(75 - 125)
1,2-Dichloroethane-d4	97	(62 - 139)
Dibromofluoromethane	93	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-14WG

TOTAL Metals

Lot-Sample #...: B7G180111-008 Matrix.....: WG
Date Sampled...: 07/15/97 Date Received..: 07/17/97

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7205191						
Mercury	ND	0.0010	mg/L	SW846 7470A	07/24/97	CAQC9103
		Dilution Factor: 1				
		Analysis Time..: 21:12	Analyst ID.....: 001702		Instrument ID..: CV	
Prep Batch #...: 7205193						
Silver	ND	0.00020	mg/L	SW846 7761	07/24-08/11/97	CAQC9112
		Dilution Factor: 1				
		Analysis Time..: 10:03	Analyst ID.....: 001863		Instrument ID..: F1	
Antimony	ND	0.0050	mg/L	SW846 6010A	07/24-07/31/97	CAQC910P
		Dilution Factor: 1				
		Analysis Time..: 20:37	Analyst ID.....: 001702		Instrument ID..: P2	
Arsenic	**0.0042 F**	**0.0050**	**mg/L**	**SW846 6010A**	**07/24-07/25/97**	**CAQC910Q**
		Dilution Factor: 1				
		Analysis Time..: 13:51	Analyst ID.....: 001863		Instrument ID..: P2	
Lead	ND	0.0050	mg/L	SW846 6010A	07/24-07/25/97	CAQC910R
		Dilution Factor: 1				
		Analysis Time..: 13:51	Analyst ID.....: 001863		Instrument ID..: P2	
Selenium	ND	0.0050	mg/L	SW846 6010A	07/24-07/25/97	CAQC910T
		Dilution Factor: 1				
		Analysis Time..: 13:51	Analyst ID.....: 001863		Instrument ID..: P2	
Thallium	ND	0.0020	mg/L	SW846 7841	07/24/97	CAQC910U
		Dilution Factor: 1				
		Analysis Time..: 18:08	Analyst ID.....: 001702		Instrument ID..: F1	
Aluminum	ND	0.50	mg/L	SW846 6010A	07/24-07/25/97	CAQC9105
		Dilution Factor: 1				
		Analysis Time..: 13:51	Analyst ID.....: 001863		Instrument ID..: P2	
Barium	**0.049**	**0.020**	**mg/L**	**SW846 6010A**	**07/24-07/25/97**	**CAQC9106**
		Dilution Factor: 1				
		Analysis Time..: 13:51	Analyst ID.....: 001863		Instrument ID..: P2	
Beryllium	ND	0.0030	mg/L	SW846 6010A	07/24-07/25/97	CAQC9107
		Dilution Factor: 1				
		Analysis Time..: 13:51	Analyst ID.....: 001863		Instrument ID..: P2	
Calcium	**92.8**	**1.0**	**mg/L**	**SW846 6010A**	**07/24-07/25/97**	**CAQC9108**
		Dilution Factor: 1				
		Analysis Time..: 13:51	Analyst ID.....: 001863		Instrument ID..: P2	

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-14WG

TOTAL Metals

Lot-Sample #...: B7G180111-008 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Cadmium	ND	0.040	mg/L	SW846 6010A	07/24-07/25/97	CAQC9109
		Dilution Factor: 1				
		Analysis Time..: 13:51	Analyst ID.....: 001863	Instrument ID..: P2		
Cobalt	ND	0.070	mg/L	SW846 6010A	07/24-07/25/97	CAQC910A
		Dilution Factor: 1				
		Analysis Time..: 13:51	Analyst ID.....: 001863	Instrument ID..: P2		
Chromium	ND	0.070	mg/L	SW846 6010A	07/24-07/25/97	CAQC910C
		Dilution Factor: 1				
		Analysis Time..: 13:51	Analyst ID.....: 001863	Instrument ID..: P2		
Copper	0.0026 F	0.060	mg/L	SW846 6010A	07/24-07/25/97	CAQC910D
		Dilution Factor: 1				
		Analysis Time..: 13:51	Analyst ID.....: 001863	Instrument ID..: P2		
Iron	1.5	0.070	mg/L	SW846 6010A	07/24-07/25/97	CAQC9[illegible]
		Dilution Factor: 1				
		Analysis Time..: 13:51	Analyst ID.....: 001863	Instrument ID..: P2		
Potassium	0.78 F	5.0	mg/L	SW846 6010A	07/24-07/25/97	CAQC910F
		Dilution Factor: 1				
		Analysis Time..: 11:31	Analyst ID.....: 001863	Instrument ID..: P1		
Magnesium	4.9	1.0	mg/L	SW846 6010A	07/24-07/25/97	CAQC910G
		Dilution Factor: 1				
		Analysis Time..: 13:51	Analyst ID.....: 001863	Instrument ID..: P2		
Manganese	0.24	0.020	mg/L	SW846 6010A	07/24-07/25/97	CAQC910H
		Dilution Factor: 1				
		Analysis Time..: 13:51	Analyst ID.....: 001863	Instrument ID..: P2		
Molybdenum	ND	0.080	mg/L	SW846 6010A	07/24-07/25/97	CAQC910J
		Dilution Factor: 1				
		Analysis Time..: 13:51	Analyst ID.....: 001863	Instrument ID..: P2		
Sodium	27.2	1.0	mg/L	SW846 6010A	07/24-07/25/97	CAQC910K
		Dilution Factor: 1				
		Analysis Time..: 11:31	Analyst ID.....: 001863	Instrument ID..: P1		
Nickel	ND	0.15	mg/L	SW846 6010A	07/24-07/25/97	CAQC910L
		Dilution Factor: 1				
		Analysis Time..: 13:51	Analyst ID.....: 001863	Instrument ID..: P2		

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-14WG

TOTAL Metals

Lot-Sample #...: B7G180111-008 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Vanadium	ND	0.080	mg/L	SW846 6010A	07/24-07/25/97	CAQC910M
		Dilution Factor: 1				
		Analysis Time..: 13:51		Analyst ID.....: 001863	Instrument ID..: P2	
Zinc	ND	0.020	mg/L	SW846 6010A	07/24-07/31/97	CAQC910N
		Dilution Factor: 1				
		Analysis Time..: 20:37		Analyst ID.....: 001702	Instrument ID..: P2	

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-14WG

General Chemistry

Lot-Sample #...: B7G180111-008 Work Order #...: CAQC9 Matrix.....: WG
Date Sampled...: 07/15/97 Date Received..: 07/17/97

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH 4.5	290	10	mg/L	MCAWW 310.1	07/25/97	7210205
	Dilution Factor: 1					
	Analysis Time..: 00:00		Analyst ID.....: 090000		Instrument ID..: NO INST	
Bromide	0.69	0.20	mg/L	SW846 9056	07/30/97	7212150
	Dilution Factor: 1					
	Analysis Time..: 13:09		Analyst ID.....: 004003		Instrument ID..: IC	
Chloride	25.2	0.20	mg/L	SW846 9056	07/30/97	7212154
	Dilution Factor: 1					
	Analysis Time..: 13:09		Analyst ID.....: 004003		Instrument ID..: IC	
Sulfate	4.2	0.50	mg/L	SW846 9056	07/30/97	72121
	Dilution Factor: 1					
	Analysis Time..: 13:09		Analyst ID.....: 004003		Instrument ID..: IC	
Total Organic Carbon	2	1	mg/L	SW846 9060	07/31/97	7213183
	Dilution Factor: 1					
	Analysis Time..: 22:42		Analyst ID.....: 004003		Instrument ID..: TOC	

NOTE(S):

RL Reporting Limit

TOC Range:2.2-2.5

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-W16WG

GC Volatiles

Lot-Sample #...: B7G180111-009 Work Order #...: CAQCA104 Matrix.....: WG
Date Sampled...: 07/15/97 Date Received..: 07/17/97
Prep Date.....: 07/25/97 Analysis Date..: 07/25/97
Prep Batch #...: 7210208 Analysis Time..: 15:39
Dilution Factor: 20
Analyst ID.....: 014906 Instrument ID..: K1A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Ethane	ND	10	ug/L	EPA-9 RSK-175
Ethene	ND	10	ug/L	EPA-9 RSK-175
Methane	**600**	**10**	**ug/L**	**EPA-9 RSK-175**

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra
Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-W16WG

GC Volatiles

Lot-Sample #...: B7G180111-009 Work Order #...: CAQCA101 Matrix.....: WG
Date Sampled...: 07/15/97 Date Received..: 07/17/97
Prep Date.....: 07/24/97 Analysis Date..: 07/24/97
Prep Batch #...: 7206190 Analysis Time..: 16:29
Dilution Factor: 1
Analyst ID.....: 001854 Instrument ID..: V2A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	6.6	2.0	ug/L	SW846 8020A
Ethylbenzene	ND	2.0	ug/L	SW846 8020A
Toluene	0.53 F	2.0	ug/L	SW846 8020A
Xylenes (total)	ND	2.0	ug/L	SW846 8020A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	93	(46 - 136)
Bromofluorobenzene	89	(48 - 138)
Fluorobenzene	96	(44 - 165)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-W16WG

General Chemistry

Lot-Sample #...: B7G180111-009 Work Order #...: CAQCA Matrix.....: WG
Date Sampled...: 07/15/97 Date Received..: 07/17/97

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH 4.5	320	10	mg/L	MCAWW 310.1	07/25/97	7210205
	Dilution Factor: 1					
	Analysis Time..: 00:00		Analyst ID.....: 090000		Instrument ID..: NO INST	
Bromide	0.81	0.20	mg/L	SW846 9056	07/30/97	7212150
	Dilution Factor: 1					
	Analysis Time..: 11:50		Analyst ID.....: 004003		Instrument ID..: IC	
Chloride	28.6	0.20	mg/L	SW846 9056	07/30/97	7212154
	Dilution Factor: 1					
	Analysis Time..: 11:50		Analyst ID.....: 004003		Instrument ID..: IC	
Sulfate	16.4	0.50	mg/L	SW846 9056	07/30/97	7212157
	Dilution Factor: 1					
	Analysis Time..: 11:50		Analyst ID.....: 004003		Instrument ID..: IC	
Total Organic Carbon	3	1	mg/L	SW846 9060	07/31/97	7213183
	Dilution Factor: 1					
	Analysis Time..: 17:04		Analyst ID.....: 004003		Instrument ID..: TOC	

NOTE(S):

RL Reporting Limit

TOC Range:1.4-3.1

Quanterra
Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-W18WG

GC Volatiles

Lot-Sample #...: B7G180111-010 Work Order #...: CAQCE10W Matrix.....: WG
Date Sampled...: 07/15/97 Date Received..: 07/17/97
Prep Date.....: 07/25/97 Analysis Date..: 07/25/97
Prep Batch #...: 7210208 Analysis Time..: 15:50
Dilution Factor: 100
Analyst ID.....: 014906 Instrument ID..: K1A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Ethane	ND	50	ug/L	EPA-9 RSK-175
Ethene	ND	50	ug/L	EPA-9 RSK-175
Methane	1800	50	ug/L	EPA-9 RSK-175

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-W18WG

GC Volatiles

Lot-Sample #...: B7G180111-010 Work Order #...: CAQCE101 Matrix.....: WG
Date Sampled...: 07/15/97 Date Received..: 07/17/97
Prep Date.....: 07/24/97 Analysis Date..: 07/24/97
Prep Batch #...: 7206190 Analysis Time..: 16:54
Dilution Factor: 1
Analyst ID.....: 001854 Instrument ID..: V2A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	2.7	2.0	ug/L	SW846 8020A
Ethylbenzene	ND	2.0	ug/L	SW846 8020A
Toluene	0.63 F	2.0	ug/L	SW846 8020A
Xylenes (total)	1.5 F	2.0	ug/L	SW846 8020A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	86	(46 - 136)
Bromofluorobenzene	84	(48 - 138)
Fluorobenzene	81	(44 - 165)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-W18WG

TOTAL Metals

Lot-Sample #...: B7G180111-010 Matrix.....: WG
Date Sampled...: 07/15/97 Date Received..: 07/17/97

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7205191						
Mercury	ND	0.0010	mg/L	SW846 7470A	07/24/97	CAQCE104
		Dilution Factor: 1				
		Analysis Time..: 21:19		Analyst ID.....: 001702	Instrument ID..: CV	
Prep Batch #...: 7205193						
Silver	ND	0.00020	mg/L	SW846 7761	07/24-08/11/97	CAQCE112
		Dilution Factor: 1				
		Analysis Time..: 10:07		Analyst ID.....: 001863	Instrument ID..: F1	
Antimony	ND	0.0050	mg/L	SW846 6010A	07/24-07/31/97	CAQCE10Q
		Dilution Factor: 1				
		Analysis Time..: 20:53		Analyst ID.....: 001702	Instrument ID..: P2	
Arsenic	0.058	0.0050	mg/L	SW846 6010A	07/24-07/25/97	CAQCE1
		Dilution Factor: 1				
		Analysis Time..: 13:56		Analyst ID.....: 001863	Instrument ID..: P2	
Lead	0.014	0.0050	mg/L	SW846 6010A	07/24-07/25/97	CAQCE10T
		Dilution Factor: 1				
		Analysis Time..: 13:56		Analyst ID.....: 001863	Instrument ID..: P2	
Selenium	ND	0.0050	mg/L	SW846 6010A	07/24-07/25/97	CAQCE10U
		Dilution Factor: 1				
		Analysis Time..: 13:56		Analyst ID.....: 001863	Instrument ID..: P2	
Thallium	ND	0.0020	mg/L	SW846 7841	07/24/97	CAQCE10V
		Dilution Factor: 1				
		Analysis Time..: 18:13		Analyst ID.....: 001702	Instrument ID..: F1	
Aluminum	0.59	0.50	mg/L	SW846 6010A	07/24-07/25/97	CAQCE106
		Dilution Factor: 1				
		Analysis Time..: 13:56		Analyst ID.....: 001863	Instrument ID..: P2	
Barium	0.22	0.020	mg/L	SW846 6010A	07/24-07/25/97	CAQCE107
		Dilution Factor: 1				
		Analysis Time..: 13:56		Analyst ID.....: 001863	Instrument ID..: P2	
Beryllium	ND	0.0030	mg/L	SW846 6010A	07/24-07/25/97	CAQCE108
		Dilution Factor: 1				
		Analysis Time..: 13:56		Analyst ID.....: 001863	Instrument ID..: P2	
Calcium	153	1.0	mg/L	SW846 6010A	07/24-07/25/97	CAQCE109
		Dilution Factor: 1				
		Analysis Time..: 13:56		Analyst ID.....: 001863	Instrument ID..: P2	

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-W18WG

TOTAL Metals

Lot-Sample #...: B7G180111-010 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Cadmium	ND	0.040	mg/L	SW846 6010A	07/24-07/25/97	CAQCE10A
		Dilution Factor: 1				
		Analysis Time..: 13:56	Analyst ID.....: 001863	Instrument ID..: P2		
Cobalt	ND	0.070	mg/L	SW846 6010A	07/24-07/25/97	CAQCE10C
		Dilution Factor: 1				
		Analysis Time..: 13:56	Analyst ID.....: 001863	Instrument ID..: P2		
Chromium	ND	0.070	mg/L	SW846 6010A	07/24-07/25/97	CAQCE10D
		Dilution Factor: 1				
		Analysis Time..: 13:56	Analyst ID.....: 001863	Instrument ID..: P2		
Copper	0.0055 F	0.060	mg/L	SW846 6010A	07/24-07/25/97	CAQCE10E
		Dilution Factor: 1				
		Analysis Time..: 13:56	Analyst ID.....: 001863	Instrument ID..: P2		
Iron	14.0	0.070	mg/L	SW846 6010A	07/24-07/25/97	CAQCE10F
		Dilution Factor: 1				
		Analysis Time..: 13:56	Analyst ID.....: 001863	Instrument ID..: P2		
Potassium	1.3 F	5.0	mg/L	SW846 6010A	07/24-07/25/97	CAQCE10G
		Dilution Factor: 1				
		Analysis Time..: 11:37	Analyst ID.....: 001863	Instrument ID..: P1		
Magnesium	6.5	1.0	mg/L	SW846 6010A	07/24-07/25/97	CAQCE10H
		Dilution Factor: 1				
		Analysis Time..: 13:56	Analyst ID.....: 001863	Instrument ID..: P2		
Manganese	0.21	0.020	mg/L	SW846 6010A	07/24-07/25/97	CAQCE10J
		Dilution Factor: 1				
		Analysis Time..: 13:56	Analyst ID.....: 001863	Instrument ID..: P2		
Molybdenum	ND	0.080	mg/L	SW846 6010A	07/24-07/25/97	CAQCE10K
		Dilution Factor: 1				
		Analysis Time..: 13:56	Analyst ID.....: 001863	Instrument ID..: P2		
Sodium	21.8	1.0	mg/L	SW846 6010A	07/24-07/25/97	CAQCE10L
		Dilution Factor: 1				
		Analysis Time..: 11:37	Analyst ID.....: 001863	Instrument ID..: P1		
Nickel	ND	0.15	mg/L	SW846 6010A	07/24-07/25/97	CAQCE10M
		Dilution Factor: 1				
		Analysis Time..: 13:56	Analyst ID.....: 001863	Instrument ID..: P2		

(Continued on next page)

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-W18WG

TOTAL Metals

Lot-Sample #...: B7G180111-010 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Vanadium	ND	0.080	mg/L	SW846 6010A	07/24-07/25/97	CAQCE10N
		Dilution Factor: 1				
		Analysis Time..: 13:56		Analyst ID.....: 001863	Instrument ID..: P2	
Zinc	0.015 F	0.020	mg/L	SW846 6010A	07/24-07/31/97	CAQCE10I
		Dilution Factor: 1				
		Analysis Time..: 20:53		Analyst ID.....: 001702	Instrument ID..: P2	

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-W18WG

General Chemistry

Lot-Sample #...: B7G180111-010 Work Order #...: CAQCE Matrix.....: WG
Date Sampled...: 07/15/97 Date Received..: 07/17/97

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH 4.5	390	10	mg/L	MCAWW 310.1	07/25/97	7210205
	Dilution Factor: 1					
	Analysis Time..: 00:00	Analyst ID.....: 090000		Instrument ID..: NO INST		
Bromide	1.2	0.20	mg/L	SW846 9056	07/30/97	7212150
	Dilution Factor: 1					
	Analysis Time..: 13:43	Analyst ID.....: 004003		Instrument ID..: IC		
Chloride	33.7	0.20	mg/L	SW846 9056	07/30/97	7212154
	Dilution Factor: 1					
	Analysis Time..: 13:43	Analyst ID.....: 004003		Instrument ID..: IC		
Sulfate	1.0	0.50	mg/L	SW846 9056	07/30/97	7212157
	Dilution Factor: 1					
	Analysis Time..: 13:43	Analyst ID.....: 004003		Instrument ID..: IC		
Total Organic Carbon	10	2	mg/L	SW846 9060	07/30/97	7213184
	Dilution Factor: 2					
	Analysis Time..: 21:52	Analyst ID.....: 004003		Instrument ID..: TOC		

NOTE(S):

RL Reporting Limit

TOC Range: 9.7-10.9

408 285

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-24WG

GC Volatiles

Lot-Sample #...:	B7G180111-011	Work Order #...:	CAQCG10W	Matrix.....:	WG
Date Sampled...:	07/15/97	Date Received..:	07/17/97		
Prep Date.....:	07/24/97	Analysis Date..:	07/24/97		
Prep Batch #...:	7210204	Analysis Time..:	19:32		
Dilution Factor:	1				
Analyst ID.....:	074741	Instrument ID..:	K1A		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Ethane	ND	0.50	ug/L	EPA-9 RSK-175
Ethene	ND	0.50	ug/L	EPA-9 RSK-175
Methane	9.1	0.50	ug/L	EPA-9 RSK-175

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-24WG

GC/MS Volatiles

Lot-Sample #...: B7G180111-011 Work Order #...: CAQCG10V Matrix.....: WG
Date Sampled...: 07/15/97 Date Received..: 07/17/97
Prep Date.....: 07/23/97 Analysis Date..: 07/23/97
Prep Batch #...: 7211177 Analysis Time..: 23:31
Dilution Factor: 1
Analyst ID.....: 007084 Instrument ID..: VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	0.80	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	0.40	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	0.40	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.2	ug/L	SW846 8260A
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	3.2	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	0.40	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	1.3	ug/L	SW846 8260A
1,2-Dichloroethane	ND	0.60	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.6	ug/L	SW846 8260A
1,2-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	0.60	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	0.50	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	1.2	ug/L	SW846 8260A
1,3-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1-Chlorohexane	ND	0.50	ug/L	SW846 8260A
2,2-Dichloropropane	ND	3.5	ug/L	SW846 8260A
2-Chlorotoluene	ND	0.40	ug/L	SW846 8260A
4-Chlorotoluene	ND	0.60	ug/L	SW846 8260A
Benzene	ND	0.40	ug/L	SW846 8260A
Bromobenzene	ND	0.30	ug/L	SW846 8260A
Bromochloromethane	ND	0.40	ug/L	SW846 8260A
Bromodichloromethane	ND	0.80	ug/L	SW846 8260A
Bromoform	ND	1.2	ug/L	SW846 8260A
Bromomethane	ND	1.1	ug/L	SW846 8260A
Carbon tetrachloride	ND	2.1	ug/L	SW846 8260A
Chlorobenzene	ND	0.40	ug/L	SW846 8260A
Chloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	0.30	ug/L	SW846 8260A
Chloromethane	ND	1.3	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	1.2	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-24WG

GC/MS Volatiles

Lot-Sample #...: B7G180111-011 **Work Order #...:** CAQCG10V **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	0.50	ug/L	SW846 8260A
Dibromomethane	ND	2.4	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	ND	0.60	ug/L	SW846 8260A
Hexachlorobutadiene	ND	1.1	ug/L	SW846 8260A
Isopropylbenzene	ND	0.50	ug/L	SW846 8260A
m-Xylene & p-Xylene	ND	0.50	ug/L	SW846 8260A
Methylene chloride	ND	0.30	ug/L	SW846 8260A
n-Butylbenzene	ND	1.1	ug/L	SW846 8260A
n-Propylbenzene	ND	0.40	ug/L	SW846 8260A
Naphthalene	ND	0.40	ug/L	SW846 8260A
o-Xylene	ND	1.1	ug/L	SW846 8260A
p-Isopropyltoluene	ND	1.2	ug/L	SW846 8260A
sec-Butylbenzene	ND	1.3	ug/L	SW846 8260A
Styrene	ND	0.40	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
tert-Butylbenzene	ND	1.4	ug/L	SW846 8260A
Tetrachloroethene	ND	1.4	ug/L	SW846 8260A
Toluene	ND	1.1	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	0.60	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichlorofluoromethane	ND	0.80	ug/L	SW846 8260A
Vinyl chloride	**1.4**	**1.1**	**ug/L**	**SW846 8260A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	105	(75 - 125)
4-Bromofluorobenzene	98	(75 - 125)
1,2-Dichloroethane-d4	97	(62 - 139)
Dibromofluoromethane	97	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-24WG

TOTAL Metals

Lot-Sample #...: B7G180111-011 Matrix.....: WG
Date Sampled...: 07/15/97 Date Received..: 07/17/97

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7205191						
Mercury	ND	0.0010	mg/L	SW846 7470A	07/24/97	CAQCG103
		Dilution Factor: 1				
		Analysis Time..: 21:22	Analyst ID.....: 001702		Instrument ID..: CV	
Prep Batch #...: 7205193						
Silver	ND	0.00020	mg/L	SW846 7761	07/24-08/11/97	CAQCG112
		Dilution Factor: 1				
		Analysis Time..: 10:16	Analyst ID.....: 001863		Instrument ID..: F1	
Antimony	ND	0.0050	mg/L	SW846 6010A	07/24-07/31/97	CAQCG10P
		Dilution Factor: 1				
		Analysis Time..: 20:58	Analyst ID.....: 001702		Instrument ID..: P2	
Arsenic	ND	0.0050	mg/L	SW846 6010A	07/24-07/25/97	CAQCG10Q
		Dilution Factor: 1				
		Analysis Time..: 14:02	Analyst ID.....: 001863		Instrument ID..: P2	
Lead	ND	0.0050	mg/L	SW846 6010A	07/24-07/25/97	CAQCG10R
		Dilution Factor: 1				
		Analysis Time..: 14:02	Analyst ID.....: 001863		Instrument ID..: P2	
Selenium	ND	0.0050	mg/L	SW846 6010A	07/24-07/25/97	CAQCG10T
		Dilution Factor: 1				
		Analysis Time..: 14:02	Analyst ID.....: 001863		Instrument ID..: P2	
Thallium	ND	0.0020	mg/L	SW846 7841	07/24/97	CAQCG10U
		Dilution Factor: 1				
		Analysis Time..: 18:17	Analyst ID.....: 001702		Instrument ID..: F1	
Aluminum	**1.1**	**0.50**	**mg/L**	**SW846 6010A**	**07/24-07/25/97**	**CAQCG105**
		Dilution Factor: 1				
		Analysis Time..: 14:02	Analyst ID.....: 001863		Instrument ID..: P2	
Barium	**0.25**	**0.020**	**mg/L**	**SW846 6010A**	**07/24-07/25/97**	**CAQCG106**
		Dilution Factor: 1				
		Analysis Time..: 14:02	Analyst ID.....: 001863		Instrument ID..: P2	
Beryllium	ND	0.0030	mg/L	SW846 6010A	07/24-07/25/97	CAQCG107
		Dilution Factor: 1				
		Analysis Time..: 14:02	Analyst ID.....: 001863		Instrument ID..: P2	
Calcium	**121**	**1.0**	**mg/L**	**SW846 6010A**	**07/24-07/25/97**	**CAQCG108**
		Dilution Factor: 1				
		Analysis Time..: 14:02	Analyst ID.....: 001863		Instrument ID..: P2	

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-24WG

TOTAL Metals

Lot-Sample #...: B7G180111-011 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Cadmium	ND	0.040	mg/L	SW846 6010A	07/24-07/25/97	CAQCG109
		Dilution Factor: 1				
		Analysis Time..: 14:02	Analyst ID.....: 001863	Instrument ID..: P2		
Cobalt	ND	0.070	mg/L	SW846 6010A	07/24-07/25/97	CAQCG10A
		Dilution Factor: 1				
		Analysis Time..: 14:02	Analyst ID.....: 001863	Instrument ID..: P2		
Chromium	0.0050 F	0.070	mg/L	SW846 6010A	07/24-07/25/97	CAQCG10C
		Dilution Factor: 1				
		Analysis Time..: 14:02	Analyst ID.....: 001863	Instrument ID..: P2		
Copper	0.0048 F	0.060	mg/L	SW846 6010A	07/24-07/25/97	CAQCG10D
		Dilution Factor: 1				
		Analysis Time..: 14:02	Analyst ID.....: 001863	Instrument ID..: P2		
Iron	1.1	0.070	mg/L	SW846 6010A	07/24-07/25/97	CAQCGI
		Dilution Factor: 1				
		Analysis Time..: 14:02	Analyst ID.....: 001863	Instrument ID..: P2		
Potassium	3.2 F	5.0	mg/L	SW846 6010A	07/24-07/25/97	CAQCG10F
		Dilution Factor: 1				
		Analysis Time..: 11:42	Analyst ID.....: 001863	Instrument ID..: P1		
Magnesium	9.2	1.0	mg/L	SW846 6010A	07/24-07/25/97	CAQCG10G
		Dilution Factor: 1				
		Analysis Time..: 14:02	Analyst ID.....: 001863	Instrument ID..: P2		
Manganese	0.097	0.020	mg/L	SW846 6010A	07/24-07/25/97	CAQCG10H
		Dilution Factor: 1				
		Analysis Time..: 14:02	Analyst ID.....: 001863	Instrument ID..: P2		
Molybdenum	ND	0.080	mg/L	SW846 6010A	07/24-07/25/97	CAQCG10J
		Dilution Factor: 1				
		Analysis Time..: 14:02	Analyst ID.....: 001863	Instrument ID..: P2		
Sodium	29.6	1.0	mg/L	SW846 6010A	07/24-07/25/97	CAQCG10K
		Dilution Factor: 1				
		Analysis Time..: 11:42	Analyst ID.....: 001863	Instrument ID..: P1		
Nickel	ND	0.15	mg/L	SW846 6010A	07/24-07/25/97	CAQCG10L
		Dilution Factor: 1				
		Analysis Time..: 14:02	Analyst ID.....: 001863	Instrument ID..: P2		

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-24WG

TOTAL Metals

Lot-Sample #...: B7G180111-011 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Vanadium	ND	0.080	mg/L	SW846 6010A	07/24-07/25/97	CAQCG10M
		Dilution Factor: 1				
		Analysis Time..: 14:02		Analyst ID.....: 001863	Instrument ID..: P2	
Zinc	0.018 F	0.020	mg/L	SW846 6010A	07/24-07/31/97	CAQCG10N
		Dilution Factor: 1				
		Analysis Time..: 20:58		Analyst ID.....: 001702	Instrument ID..: P2	

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-24WG

General Chemistry

Lot-Sample #...: B7G180111-011 Work Order #...: CAQCG Matrix.....: WG
Date Sampled...: 07/15/97 Date Received..: 07/17/97

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH 4.5	320	10	mg/L	MCAWW 310.1	07/25/97	7210205
	Dilution Factor: 1					
	Analysis Time..: 00:00		Analyst ID.....: 090000		Instrument ID..: NO INST	
Bromide	0.64	0.20	mg/L	SW846 9056	07/30/97	7212150
	Dilution Factor: 1					
	Analysis Time..: 13:55		Analyst ID.....: 004003		Instrument ID..: IC	
Chloride	15.2	0.20	mg/L	SW846 9056	07/30/97	7212154
	Dilution Factor: 1					
	Analysis Time..: 13:55		Analyst ID.....: 004003		Instrument ID..: IC	
Sulfate	20.6	0.50	mg/L	SW846 9056	07/30/97	7212157
	Dilution Factor: 1					
	Analysis Time..: 13:55		Analyst ID.....: 004003		Instrument ID..: IC	
Total Organic Carbon	2	1	mg/L	SW846 9060	07/31/97	7213183
	Dilution Factor: 1					
	Analysis Time..: 23:16		Analyst ID.....: 004003		Instrument ID..: TOC	

NOTE(S):

RL Reporting Limit

TOC Range:1.5-1.7

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: EB071497

GC/MS Volatiles

Lot-Sample #...: B7G180111-012 Work Order #...: CAQCN101 Matrix.....: WQ
Date Sampled...: 07/14/97 Date Received..: 07/17/97
Prep Date.....: 07/23/97 Analysis Date..: 07/23/97
Prep Batch #...: 7211177 Analysis Time..: 23:54
Dilution Factor: 1
Analyst ID.....: 007084 Instrument ID..: VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	0.80	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	0.40	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	0.40	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.2	ug/L	SW846 8260A
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	3.2	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	0.40	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	1.3	ug/L	SW846 8260A
1,2-Dichloroethane	ND	0.60	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.6	ug/L	SW846 8260A
1,2-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	0.60	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	0.50	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	1.2	ug/L	SW846 8260A
1,3-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1-Chlorohexane	ND	0.50	ug/L	SW846 8260A
2,2-Dichloropropane	ND	3.5	ug/L	SW846 8260A
2-Chlorotoluene	ND	0.40	ug/L	SW846 8260A
4-Chlorotoluene	ND	0.60	ug/L	SW846 8260A
Benzene	ND	0.40	ug/L	SW846 8260A
Bromobenzene	ND	0.30	ug/L	SW846 8260A
Bromochloromethane	ND	0.40	ug/L	SW846 8260A
Bromodichloromethane	ND	0.80	ug/L	SW846 8260A
Bromoform	ND	1.2	ug/L	SW846 8260A
Bromomethane	ND	1.1	ug/L	SW846 8260A
Carbon tetrachloride	ND	2.1	ug/L	SW846 8260A
Chlorobenzene	ND	0.40	ug/L	SW846 8260A
Chloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	**2.2**	**0.30**	**ug/L**	**SW846 8260A**
Chloromethane	ND	1.3	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	1.2	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: EB071497

GC/MS Volatiles

Lot-Sample #...: B7G180111-012 Work Order #...: CAQCN101 Matrix.....: WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	0.50	ug/L	SW846 8260A
Dibromomethane	ND	2.4	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	ND	0.60	ug/L	SW846 8260A
Hexachlorobutadiene	ND	1.1	ug/L	SW846 8260A
Isopropylbenzene	ND	0.50	ug/L	SW846 8260A
m-Xylene & p-Xylene	ND	0.50	ug/L	SW846 8260A
Methylene chloride	ND	0.30	ug/L	SW846 8260A
n-Butylbenzene	ND	1.1	ug/L	SW846 8260A
n-Propylbenzene	ND	0.40	ug/L	SW846 8260A
Naphthalene	ND	0.40	ug/L	SW846 8260A
o-Xylene	ND	1.1	ug/L	SW846 8260A
p-Isopropyltoluene	ND	1.2	ug/L	SW846 8260A
sec-Butylbenzene	ND	1.3	ug/L	SW846 8260A
Styrene	ND	0.40	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
tert-Butylbenzene	ND	1.4	ug/L	SW846 8260A
Tetrachloroethene	ND	1.4	ug/L	SW846 8260A
Toluene	ND	1.1	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	0.60	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichlorofluoromethane	ND	0.80	ug/L	SW846 8260A
Vinyl chloride	ND	1.1	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	103	(75 - 125)
4-Bromofluorobenzene	99	(75 - 125)
1,2-Dichloroethane-d4	94	(62 - 139)
Dibromofluoromethane	92	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: EB071597

GC Volatiles

Lot-Sample #...: B7G180111-013 Work Order #...: CAQCP103 Matrix.....: WQ
Date Sampled...: 07/15/97 Date Received..: 07/17/97
Prep Date.....: 07/24/97 Analysis Date..: 07/24/97
Prep Batch #...: 7210204 Analysis Time..: 23:16
Dilution Factor: 1
Analyst ID.....: 074741 Instrument ID..: K1A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Ethane	ND	0.50	ug/L	EPA-9 RSK-175
Ethene	ND	0.50	ug/L	EPA-9 RSK-175
Methane	**0.32 F**	**0.50**	**ug/L**	**EPA-9 RSK-175**

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: EB071597

GC/MS Volatiles

Lot-Sample #...: B7G180111-013 **Work Order #...:** CAQCP102 **Matrix.....:** WQ
Date Sampled...: 07/15/97 **Date Received..:** 07/17/97
Prep Date.....: 07/23/97 **Analysis Date..:** 07/24/97
Prep Batch #...: 7211177 **Analysis Time..:** 00:18
Dilution Factor: 1
Analyst ID.....: 007084 **Instrument ID..:** VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	0.80	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	0.40	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	0.40	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.2	ug/L	SW846 8260A
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	3.2	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	0.40	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	1.3	ug/L	SW846 8260A
1,2-Dichloroethane	ND	0.60	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.6	ug/L	SW846 8260A
1,2-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	0.60	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	0.50	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	1.2	ug/L	SW846 8260A
1,3-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1-Chlorohexane	ND	0.50	ug/L	SW846 8260A
2,2-Dichloropropane	ND	3.5	ug/L	SW846 8260A
2-Chlorotoluene	ND	0.40	ug/L	SW846 8260A
4-Chlorotoluene	ND	0.60	ug/L	SW846 8260A
Benzene	ND	0.40	ug/L	SW846 8260A
Bromobenzene	ND	0.30	ug/L	SW846 8260A
Bromochloromethane	ND	0.40	ug/L	SW846 8260A
Bromodichloromethane	ND	0.80	ug/L	SW846 8260A
Bromoform	ND	1.2	ug/L	SW846 8260A
Bromomethane	ND	1.1	ug/L	SW846 8260A
Carbon tetrachloride	ND	2.1	ug/L	SW846 8260A
Chlorobenzene	ND	0.40	ug/L	SW846 8260A
Chloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	**0.74**	**0.30**	**ug/L**	**SW846 8260A**
Chloromethane	ND	1.3	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	1.2	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: EB071597

GC/MS Volatiles

Lot-Sample #...: B7G180111-013 Work Order #...: CAQCP102 Matrix.....: WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	0.50	ug/L	SW846 8260A
Dibromomethane	ND	2.4	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	ND	0.60	ug/L	SW846 8260A
Hexachlorobutadiene	ND	1.1	ug/L	SW846 8260A
Isopropylbenzene	ND	0.50	ug/L	SW846 8260A
m-Xylene & p-Xylene	ND	0.50	ug/L	SW846 8260A
Methylene chloride	ND	0.30	ug/L	SW846 8260A
n-Butylbenzene	ND	1.1	ug/L	SW846 8260A
n-Propylbenzene	ND	0.40	ug/L	SW846 8260A
Naphthalene	ND	0.40	ug/L	SW846 8260A
o-Xylene	ND	1.1	ug/L	SW846 8260A
p-Isopropyltoluene	ND	1.2	ug/L	SW846 8260A
sec-Butylbenzene	ND	1.3	ug/L	SW846 8260A
Styrene	ND	0.40	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
tert-Butylbenzene	ND	1.4	ug/L	SW846 8260A
Tetrachloroethene	ND	1.4	ug/L	SW846 8260A
Toluene	**0.70 F**	**1.1**	**ug/L**	**SW846 8260A**
trans-1,2-Dichloroethene	ND	0.60	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichlorofluoromethane	ND	0.80	ug/L	SW846 8260A
Vinyl chloride	ND	1.1	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	102	(75 - 125)
4-Bromofluorobenzene	98	(75 - 125)
1,2-Dichloroethane-d4	98	(62 - 139)
Dibromofluoromethane	96	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: EB071597

General Chemistry

Lot-Sample #...: B7G180111-013 Work Order #...: CAQCP Matrix.....: WQ
Date Sampled...: 07/15/97 Date Received..: 07/17/97

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH 4.5	ND	10	mg/L	MCAWW 310.1	07/25/97	7210205
	Dilution Factor: 1					
	Analysis Time..: 00:00		Analyst ID.....: 090000		Instrument ID..: NA	
Bromide	ND	0.20	mg/L	SW846 9056	07/30/97	7212150
	Dilution Factor: 1					
	Analysis Time..: 14:06		Analyst ID.....: 004003		Instrument ID..: IC	
Chloride	0.20	0.20	mg/L	SW846 9056	07/30/97	7212154
	Dilution Factor: 1					
	Analysis Time..: 14:06		Analyst ID.....: 004003		Instrument ID..: IC	
Sulfate	0.69	0.50	mg/L	SW846 9056	07/30/97	7212157
	Dilution Factor: 1					
	Analysis Time..: 14:06		Analyst ID.....: 004003		Instrument ID..: IC	

NOTE(S):

RL Reporting Limit

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: TB071597

GC Volatiles

Lot-Sample #...: B7G180111-014 Work Order #...: CAQD7103 Matrix.....: WQ
Date Sampled...: 07/15/97 Date Received..: 07/17/97
Prep Date.....: 07/24/97 Analysis Date..: 07/24/97
Prep Batch #...: 7210204 Analysis Time..: 21:19
Dilution Factor: 1
Analyst ID.....: 074741 Instrument ID..: K1A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Ethane	ND	0.50	ug/L	EPA-9 RSK-175
Ethene	ND	0.50	ug/L	EPA-9 RSK-175
Methane	**0.47 F**	**0.50**	**ug/L**	**EPA-9 RSK-175**

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: TB071597

GC Volatiles

Lot-Sample #...:	B7G180111-014	Work Order #...:	CAQD7101	Matrix.....:	WQ
Date Sampled...:	07/15/97	Date Received..:	07/17/97		
Prep Date.....:	07/25/97	Analysis Date..:	07/25/97		
Prep Batch #...:	7206190	Analysis Time..:	01:10		
Dilution Factor:	1				
Analyst ID.....:	001854	Instrument ID..:	V2A		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	2.0	ug/L	SW846 8020A
Ethylbenzene	ND	2.0	ug/L	SW846 8020A
Toluene	ND	2.0	ug/L	SW846 8020A
Xylenes (total)	ND	2.0	ug/L	SW846 8020A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	81	(46 - 136)
Bromofluorobenzene	84	(48 - 138)
Fluorobenzene	96	(44 - 165)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: TB071597

GC/MS Volatiles

Lot-Sample #...: B7G180111-014 Work Order #...: CAQD7102 Matrix.....: WQ
Date Sampled...: 07/15/97 Date Received..: 07/17/97
Prep Date.....: 07/23/97 Analysis Date..: 07/24/97
Prep Batch #...: 7211177 Analysis Time..: 00:41
Dilution Factor: 1
Analyst ID.....: 007084 Instrument ID..: VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	0.80	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	0.40	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	0.40	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.2	ug/L	SW846 8260A
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	3.2	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	0.40	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	1.3	ug/L	SW846 8260A
1,2-Dichloroethane	ND	0.60	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.6	ug/L	SW846 8260A
1,2-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	0.60	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	0.50	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	1.2	ug/L	SW846 8260A
1,3-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1-Chlorohexane	ND	0.50	ug/L	SW846 8260A
2,2-Dichloropropane	ND	3.5	ug/L	SW846 8260A
2-Chlorotoluene	ND	0.40	ug/L	SW846 8260A
4-Chlorotoluene	ND	0.60	ug/L	SW846 8260A
Benzene	ND	0.40	ug/L	SW846 8260A
Bromobenzene	ND	0.30	ug/L	SW846 8260A
Bromochloromethane	ND	0.40	ug/L	SW846 8260A
Bromodichloromethane	ND	0.80	ug/L	SW846 8260A
Bromoform	ND	1.2	ug/L	SW846 8260A
Bromomethane	ND	1.1	ug/L	SW846 8260A
Carbon tetrachloride	ND	2.1	ug/L	SW846 8260A
Chlorobenzene	ND	0.40	ug/L	SW846 8260A
Chloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	0.30	ug/L	SW846 8260A
Chloromethane	ND	1.3	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	1.2	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: TB071597

GC/MS Volatiles

Lot-Sample #...: B7G180111-014 **Work Order #...:** CAQD7102 **Matrix.....:** WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	0.50	ug/L	SW846 8260A
Dibromomethane	ND	2.4	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	ND	0.60	ug/L	SW846 8260A
Hexachlorobutadiene	ND	1.1	ug/L	SW846 8260A
Isopropylbenzene	ND	0.50	ug/L	SW846 8260A
m-Xylene & p-Xylene	ND	0.50	ug/L	SW846 8260A
Methylene chloride	ND	0.30	ug/L	SW846 8260A
n-Butylbenzene	ND	1.1	ug/L	SW846 8260A
n-Propylbenzene	ND	0.40	ug/L	SW846 8260A
Naphthalene	ND	0.40	ug/L	SW846 8260A
o-Xylene	ND	1.1	ug/L	SW846 8260A
p-Isopropyltoluene	ND	1.2	ug/L	SW846 8260A
sec-Butylbenzene	ND	1.3	ug/L	SW846 8260A
Styrene	ND	0.40	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
tert-Butylbenzene	ND	1.4	ug/L	SW846 8260A
Tetrachloroethene	ND	1.4	ug/L	SW846 8260A
Toluene	ND	1.1	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	0.60	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichlorofluoromethane	ND	0.80	ug/L	SW846 8260A
Vinyl chloride	ND	1.1	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	102	(75 - 125)
4-Bromofluorobenzene	96	(75 - 125)
1,2-Dichloroethane-d4	101	(62 - 139)
Dibromofluoromethane	94	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra
Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: TB071497

GC Volatiles

Lot-Sample #...: B7G180111-015 Work Order #...: CAQD9102 Matrix.....: WQ
Date Sampled...: 07/14/97 Date Received..: 07/17/97
Prep Date.....: 07/24/97 Analysis Date..: 07/24/97
Prep Batch #...: 7210204 Analysis Time..: 23:08
Dilution Factor: 1
Analyst ID.....: 074741 Instrument ID..: K1A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Ethane	ND	0.50	ug/L	EPA-9 RSK-175
Ethene	ND	0.50	ug/L	EPA-9 RSK-175
Methane	0.44 F	0.50	ug/L	EPA-9 RSK-175

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: TB071497

GC/MS Volatiles

Lot-Sample #...: B7G180111-015 **Work Order #...:** CAQD9101 **Matrix.....:** WQ
Date Sampled...: 07/14/97 **Date Received..:** 07/17/97
Prep Date.....: 07/23/97 **Analysis Date..:** 07/24/97
Prep Batch #...: 7211177 **Analysis Time..:** 01:04
Dilution Factor: 1
Analyst ID.....: 007084 **Instrument ID..:** VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	0.80	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	0.40	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	0.40	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.2	ug/L	SW846 8260A
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	3.2	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	0.40	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	1.3	ug/L	SW846 8260A
1,2-Dichloroethane	ND	0.60	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.6	ug/L	SW846 8260A
1,2-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	0.60	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	0.50	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	1.2	ug/L	SW846 8260A
1,3-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1-Chlorohexane	ND	0.50	ug/L	SW846 8260A
2,2-Dichloropropane	ND	3.5	ug/L	SW846 8260A
2-Chlorotoluene	ND	0.40	ug/L	SW846 8260A
4-Chlorotoluene	ND	0.60	ug/L	SW846 8260A
Benzene	ND	0.40	ug/L	SW846 8260A
Bromobenzene	ND	0.30	ug/L	SW846 8260A
Bromochloromethane	ND	0.40	ug/L	SW846 8260A
Bromodichloromethane	ND	0.80	ug/L	SW846 8260A
Bromoform	ND	1.2	ug/L	SW846 8260A
Bromomethane	ND	1.1	ug/L	SW846 8260A
Carbon tetrachloride	ND	2.1	ug/L	SW846 8260A
Chlorobenzene	ND	0.40	ug/L	SW846 8260A
Chloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	0.30	ug/L	SW846 8260A
Chloromethane	ND	1.3	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	1.2	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: TB071497

GC/MS Volatiles

Lot-Sample #...: B7G180111-015 **Work Order #...:** CAQD9101 **Matrix.....:** WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	0.50	ug/L	SW846 8260A
Dibromomethane	ND	2.4	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	ND	0.60	ug/L	SW846 8260A
Hexachlorobutadiene	ND	1.1	ug/L	SW846 8260A
Isopropylbenzene	ND	0.50	ug/L	SW846 8260A
m-Xylene & p-Xylene	ND	0.50	ug/L	SW846 8260A
Methylene chloride	ND	0.30	ug/L	SW846 8260A
n-Butylbenzene	ND	1.1	ug/L	SW846 8260A
n-Propylbenzene	ND	0.40	ug/L	SW846 8260A
Naphthalene	ND	0.40	ug/L	SW846 8260A
o-Xylene	ND	1.1	ug/L	SW846 8260A
p-Isopropyltoluene	ND	1.2	ug/L	SW846 8260A
sec-Butylbenzene	ND	1.3	ug/L	SW846 8260A
Styrene	ND	0.40	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
tert-Butylbenzene	ND	1.4	ug/L	SW846 8260A
Tetrachloroethene	ND	1.4	ug/L	SW846 8260A
Toluene	ND	1.1	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	0.60	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichlorofluoromethane	ND	0.80	ug/L	SW846 8260A
Vinyl chloride	ND	1.1	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	103	(75 - 125)
4-Bromofluorobenzene	97	(75 - 125)
1,2-Dichloroethane-d4	96	(62 - 139)
Dibromofluoromethane	94	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

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Quanterra Environmental Services

QC DATA ASSOCIATION SUMMARY

B7G180111

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
011	WG	SW846 6010A		7205193	7205073
	WG	SW846 9060		7213183	7213057
	WG	SW846 9056		7212154	7212037
	WG	SW846 9056		7212157	7212039
	WG	SW846 7761		7205193	7205073
	WG	EPA-9 RSK-175		7210204	7210051
	WG	SW846 9056		7212150	7212033
	WG	SW846 8260A		7211177	
	WG	SW846 7470A		7205191	7205070
	WG	SW846 7841		7205193	7205073
	WG	MCAWW 310.1		7210205	7210052
012	WQ	SW846 8260A		7211177	
013	WQ	SW846 9056		7212154	7212037
	WQ	SW846 9056		7212157	7212039
	WQ	EPA-9 RSK-175		7210204	7210051
	WQ	SW846 9056		7212150	7212033
	WQ	SW846 8260A		7211177	
	WQ	MCAWW 310.1		7210205	7210052
014	WQ	EPA-9 RSK-175		7210204	7210051
	WQ	SW846 8260A		7211177	
	WQ	SW846 8020A		7206190	7206052
015	WQ	EPA-9 RSK-175		7210204	7210051
	WQ	SW846 8260A		7211177	
016	WG	SW846 8260A		7211177	
017	WG	SW846 8260A		7211177	
018	WG	SW846 8260A		7211184	
019	WG	SW846 8260A		7211177	
020	WG	SW846 8260A		7211177	7211065
021	WG	SW846 8260A		7211177	

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: WP07-10CWG

GC/MS Volatiles

Lot-Sample #...: B7G180111-016 Work Order #...: CAQDE101 Matrix.....: WG
Date Sampled...: 07/14/97 Date Received..: 07/17/97
Prep Date.....: 07/23/97 Analysis Date..: 07/24/97
Prep Batch #...: 7211177 Analysis Time..: 01:27
Dilution Factor: 150
Analyst ID.....: 007084 Instrument ID..: VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	75	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	120	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	60	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	150	ug/L	SW846 8260A
1,1-Dichloroethane	ND	60	ug/L	SW846 8260A
1,1-Dichloroethene	ND	180	ug/L	SW846 8260A
1,1-Dichloropropene	ND	150	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	45	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	480	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	60	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	200	ug/L	SW846 8260A
1,2-Dichloroethane	ND	90	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	45	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	390	ug/L	SW846 8260A
1,2-Dichloropropane	ND	60	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	90	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	75	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	180	ug/L	SW846 8260A
1,3-Dichloropropane	ND	60	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	45	ug/L	SW846 8260A
1-Chlorohexane	ND	75	ug/L	SW846 8260A
2,2-Dichloropropane	ND	520	ug/L	SW846 8260A
2-Chlorotoluene	ND	60	ug/L	SW846 8260A
4-Chlorotoluene	ND	90	ug/L	SW846 8260A
Benzene	ND	60	ug/L	SW846 8260A
Bromobenzene	ND	45	ug/L	SW846 8260A
Bromochloromethane	ND	60	ug/L	SW846 8260A
Bromodichloromethane	ND	120	ug/L	SW846 8260A
Bromoform	ND	180	ug/L	SW846 8260A
Bromomethane	ND	160	ug/L	SW846 8260A
Carbon tetrachloride	ND	320	ug/L	SW846 8260A
Chlorobenzene	ND	60	ug/L	SW846 8260A
Chloroethane	ND	150	ug/L	SW846 8260A
Chloroform	ND	45	ug/L	SW846 8260A
Chloromethane	ND	200	ug/L	SW846 8260A
cis-1,2-Dichloroethene	**230**	**180**	**ug/L**	**SW846 8260A**
cis-1,3-Dichloropropene	ND	150	ug/L	SW846 8260A

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: WP07-10CWG

GC/MS Volatiles

Lot-Sample #...: B7G180111-016 **Work Order #...:** CAQDE101 **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	75	ug/L	SW846 8260A
Dibromomethane	ND	360	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	150	ug/L	SW846 8260A
Ethylbenzene	ND	90	ug/L	SW846 8260A
Hexachlorobutadiene	ND	160	ug/L	SW846 8260A
Isopropylbenzene	ND	75	ug/L	SW846 8260A
m-Xylene & p-Xylene	ND	75	ug/L	SW846 8260A
Methylene chloride	ND	45	ug/L	SW846 8260A
n-Butylbenzene	ND	160	ug/L	SW846 8260A
n-Propylbenzene	ND	60	ug/L	SW846 8260A
Naphthalene	ND	60	ug/L	SW846 8260A
o-Xylene	ND	160	ug/L	SW846 8260A
p-Isopropyltoluene	ND	180	ug/L	SW846 8260A
sec-Butylbenzene	ND	200	ug/L	SW846 8260A
Styrene	ND	60	ug/L	SW846 8260A
Trichloroethene	**1400**	**150**	**ug/L**	**SW846 8260A**
tert-Butylbenzene	ND	210	ug/L	SW846 8260A
Tetrachloroethene	ND	210	ug/L	SW846 8260A
Toluene	ND	160	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	90	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	150	ug/L	SW846 8260A
Trichlorofluoromethane	ND	120	ug/L	SW846 8260A
Vinyl chloride	ND	160	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	103	(75 - 125)
4-Bromofluorobenzene	82	(75 - 125)
1,2-Dichloroethane-d4	98	(62 - 139)
Dibromofluoromethane	96	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: GMI-04-01

GC/MS Volatiles

Lot-Sample #...: B7G180111-017 **Work Order #...:** CAQDH101 **Matrix.....:** WG
Date Sampled...: 07/14/97 **Date Received..:** 07/17/97
Prep Date.....: 07/23/97 **Analysis Date..:** 07/24/97
Prep Batch #...: 7211177 **Analysis Time..:** 01:50
Dilution Factor: 150
Analyst ID.....: 007084 **Instrument ID..:** VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	75	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	120	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	60	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	150	ug/L	SW846 8260A
1,1-Dichloroethane	ND	60	ug/L	SW846 8260A
1,1-Dichloroethene	ND	180	ug/L	SW846 8260A
1,1-Dichloropropene	ND	150	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	45	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	480	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	60	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	200	ug/L	SW846 8260A
1,2-Dichloroethane	ND	90	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	45	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	390	ug/L	SW846 8260A
1,2-Dichloropropane	ND	60	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	90	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	75	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	180	ug/L	SW846 8260A
1,3-Dichloropropane	ND	60	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	45	ug/L	SW846 8260A
1-Chlorohexane	ND	75	ug/L	SW846 8260A
2,2-Dichloropropane	ND	520	ug/L	SW846 8260A
2-Chlorotoluene	ND	60	ug/L	SW846 8260A
4-Chlorotoluene	ND	90	ug/L	SW846 8260A
Benzene	ND	60	ug/L	SW846 8260A
Bromobenzene	ND	45	ug/L	SW846 8260A
Bromochloromethane	ND	60	ug/L	SW846 8260A
Bromodichloromethane	ND	120	ug/L	SW846 8260A
Bromoform	ND	180	ug/L	SW846 8260A
Bromomethane	ND	160	ug/L	SW846 8260A
Carbon tetrachloride	ND	320	ug/L	SW846 8260A
Chlorobenzene	ND	60	ug/L	SW846 8260A
Chloroethane	ND	150	ug/L	SW846 8260A
Chloroform	ND	45	ug/L	SW846 8260A
Chloromethane	ND	200	ug/L	SW846 8260A
cis-1,2-Dichloroethene	**280**	**180**	**ug/L**	**SW846 8260A**
cis-1,3-Dichloropropene	ND	150	ug/L	SW846 8260A

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: GMI-04-01

GC/MS Volatiles

Lot-Sample #...: B7G180111-017 **Work Order #...:** CAQDH101 **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	75	ug/L	SW846 8260A
Dibromomethane	ND	360	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	150	ug/L	SW846 8260A
Ethylbenzene	ND	90	ug/L	SW846 8260A
Hexachlorobutadiene	ND	160	ug/L	SW846 8260A
Isopropylbenzene	ND	75	ug/L	SW846 8260A
m-Xylene & p-Xylene	ND	75	ug/L	SW846 8260A
Methylene chloride	ND	45	ug/L	SW846 8260A
n-Butylbenzene	ND	160	ug/L	SW846 8260A
n-Propylbenzene	ND	60	ug/L	SW846 8260A
Naphthalene	ND	60	ug/L	SW846 8260A
o-Xylene	ND	160	ug/L	SW846 8260A
p-Isopropyltoluene	ND	180	ug/L	SW846 8260A
sec-Butylbenzene	ND	200	ug/L	SW846 8260A
Styrene	ND	60	ug/L	SW846 8260A
Trichloroethene	**1400**	**150**	**ug/L**	**SW846 8260A**
tert-Butylbenzene	ND	210	ug/L	SW846 8260A
Tetrachloroethene	ND	210	ug/L	SW846 8260A
Toluene	ND	160	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	90	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	150	ug/L	SW846 8260A
Trichlorofluoromethane	ND	120	ug/L	SW846 8260A
Vinyl chloride	ND	160	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	101	(75 - 125)
4-Bromofluorobenzene	95	(75 - 125)
1,2-Dichloroethane-d4	102	(62 - 139)
Dibromofluoromethane	96	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: FT09-12CWG

GC/MS Volatiles

Lot-Sample #...: B7G180111-018 **Work Order #...:** CAQDL201 **Matrix.....:** WG
Date Sampled...: 07/14/97 **Date Received..:** 07/17/97
Prep Date.....: 07/24/97 **Analysis Date..:** 07/24/97
Prep Batch #...: 7211184 **Analysis Time..:** 18:37
Dilution Factor: 2.5
Analyst ID.....: 007084 **Instrument ID..:** VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	1.2	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	2.0	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	2.5	ug/L	SW846 8260A
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethene	ND	3.0	ug/L	SW846 8260A
1,1-Dichloropropene	ND	2.5	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	0.75	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	8.0	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	1.0	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	3.2	ug/L	SW846 8260A
1,2-Dichloroethane	ND	1.5	ug/L	SW846 8260A
1,2-Dichlorobenzene	**2.6**	**0.75**	**ug/L**	**SW846 8260A**
1,2-Dibromo-3-chloropropane (DBCP)	ND	6.5	ug/L	SW846 8260A
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	1.5	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	1.2	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	3.0	ug/L	SW846 8260A
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260A
1,4-Dichlorobenzene	**1.4**	**0.75**	**ug/L**	**SW846 8260A**
1-Chlorohexane	ND	1.2	ug/L	SW846 8260A
2,2-Dichloropropane	ND	8.8	ug/L	SW846 8260A
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260A
4-Chlorotoluene	ND	1.5	ug/L	SW846 8260A
Benzene	**3.0**	**1.0**	**ug/L**	**SW846 8260A**
Bromobenzene	ND	0.75	ug/L	SW846 8260A
Bromochloromethane	ND	1.0	ug/L	SW846 8260A
Bromodichloromethane	ND	2.0	ug/L	SW846 8260A
Bromoform	ND	3.0	ug/L	SW846 8260A
Bromomethane	ND	2.8	ug/L	SW846 8260A
Carbon tetrachloride	ND	5.2	ug/L	SW846 8260A
Chlorobenzene	ND	1.0	ug/L	SW846 8260A
Chloroethane	ND	2.5	ug/L	SW846 8260A
Chloroform	ND	0.75	ug/L	SW846 8260A
Chloromethane	ND	3.2	ug/L	SW846 8260A
cis-1,2-Dichloroethene	**43**	**3.0**	**ug/L**	**SW846 8260A**
cis-1,3-Dichloropropene	ND	2.5	ug/L	SW846 8260A

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: FT09-12CWG

GC/MS Volatiles

Lot-Sample #...: B7G180111-018 Work Order #...: CAQDL201 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	1.2	ug/L	SW846 8260A
Dibromomethane	ND	6.0	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	2.5	ug/L	SW846 8260A
Ethylbenzene	ND	1.5	ug/L	SW846 8260A
Hexachlorobutadiene	ND	2.8	ug/L	SW846 8260A
Isopropylbenzene	ND	1.2	ug/L	SW846 8260A
m-Xylene & p-Xylene	ND	1.2	ug/L	SW846 8260A
Methylene chloride	ND	0.75	ug/L	SW846 8260A
n-Butylbenzene	ND	2.8	ug/L	SW846 8260A
n-Propylbenzene	ND	1.0	ug/L	SW846 8260A
Naphthalene	ND	1.0	ug/L	SW846 8260A
o-Xylene	ND	2.8	ug/L	SW846 8260A
p-Isopropyltoluene	ND	3.0	ug/L	SW846 8260A
sec-Butylbenzene	ND	3.2	ug/L	SW846 8260A
Styrene	ND	1.0	ug/L	SW846 8260A
Trichloroethene	**3.3**	**2.5**	**ug/L**	**SW846 8260A**
tert-Butylbenzene	**0.97 F**	**3.5**	**ug/L**	**SW846 8260A**
Tetrachloroethene	ND	3.5	ug/L	SW846 8260A
Toluene	ND	2.8	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	1.5	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	2.5	ug/L	SW846 8260A
Trichlorofluoromethane	ND	2.0	ug/L	SW846 8260A
Vinyl chloride	**6.6**	**2.8**	**ug/L**	**SW846 8260A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	103	(75 - 125)
4-Bromofluorobenzene	101	(75 - 125)
1,2-Dichloroethane-d4	106	(62 - 139)
Dibromofluoromethane	99	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: LF04-10WG

GC/MS Volatiles

Lot-Sample #...: B7G180111-019 **Work Order #...:** CAQDN101 **Matrix.....:** WG
Date Sampled...: 07/14/97 **Date Received..:** 07/17/97
Prep Date.....: 07/23/97 **Analysis Date..:** 07/24/97
Prep Batch #...: 7211177 **Analysis Time..:** 02:37
Dilution Factor: 1
Analyst ID.....: 007084 **Instrument ID..:** VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	0.80	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	0.40	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	0.40	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.2	ug/L	SW846 8260A
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	3.2	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	0.40	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	1.3	ug/L	SW846 8260A
1,2-Dichloroethane	ND	0.60	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.6	ug/L	SW846 8260A
1,2-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	0.60	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	0.50	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	1.2	ug/L	SW846 8260A
1,3-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1-Chlorohexane	ND	0.50	ug/L	SW846 8260A
2,2-Dichloropropane	ND	3.5	ug/L	SW846 8260A
2-Chlorotoluene	ND	0.40	ug/L	SW846 8260A
4-Chlorotoluene	ND	0.60	ug/L	SW846 8260A
Benzene	ND	0.40	ug/L	SW846 8260A
Bromobenzene	ND	0.30	ug/L	SW846 8260A
Bromochloromethane	ND	0.40	ug/L	SW846 8260A
Bromodichloromethane	ND	0.80	ug/L	SW846 8260A
Bromoform	ND	1.2	ug/L	SW846 8260A
Bromomethane	ND	1.1	ug/L	SW846 8260A
Carbon tetrachloride	ND	2.1	ug/L	SW846 8260A
Chlorobenzene	ND	0.40	ug/L	SW846 8260A
Chloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	0.30	ug/L	SW846 8260A
Chloromethane	ND	1.3	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	1.2	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A

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Quanterra
Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: LF04-10WG

GC/MS Volatiles

Lot-Sample #...: B7G180111-019 **Work Order #...:** CAQDN101 **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	0.50	ug/L	SW846 8260A
Dibromomethane	ND	2.4	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	ND	0.60	ug/L	SW846 8260A
Hexachlorobutadiene	ND	1.1	ug/L	SW846 8260A
Isopropylbenzene	ND	0.50	ug/L	SW846 8260A
m-Xylene & p-Xylene	ND	0.50	ug/L	SW846 8260A
Methylene chloride	ND	0.30	ug/L	SW846 8260A
n-Butylbenzene	ND	1.1	ug/L	SW846 8260A
n-Propylbenzene	ND	0.40	ug/L	SW846 8260A
Naphthalene	ND	0.40	ug/L	SW846 8260A
o-Xylene	ND	1.1	ug/L	SW846 8260A
p-Isopropyltoluene	ND	1.2	ug/L	SW846 8260A
sec-Butylbenzene	ND	1.3	ug/L	SW846 8260A
Styrene	ND	0.40	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
tert-Butylbenzene	ND	1.4	ug/L	SW846 8260A
Tetrachloroethene	ND	1.4	ug/L	SW846 8260A
Toluene	ND	1.1	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	0.60	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichlorofluoromethane	ND	0.80	ug/L	SW846 8260A
Vinyl chloride	ND	1.1	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	100	(75 - 125)
4-Bromofluorobenzene	97	(75 - 125)
1,2-Dichloroethane-d4	97	(62 - 139)
Dibromofluoromethane	95	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: LF05-02WG

GC/MS Volatiles

Lot-Sample #...: B7G180111-020 **Work Order #...:** CAQDT101 **Matrix.....:** WG
Date Sampled...: 07/14/97 **Date Received..:** 07/17/97
Prep Date.....: 07/23/97 **Analysis Date..:** 07/24/97
Prep Batch #...: 7211177 **Analysis Time..:** 03:00
Dilution Factor: 50
Analyst ID.....: 007084 **Instrument ID..:** VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	25	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	40	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	20	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	50	ug/L	SW846 8260A
1,1-Dichloroethane	ND	20	ug/L	SW846 8260A
1,1-Dichloroethene	ND	60	ug/L	SW846 8260A
1,1-Dichloropropene	ND	50	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	15	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	160	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	20	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	65	ug/L	SW846 8260A
1,2-Dichloroethane	ND	30	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	15	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	130	ug/L	SW846 8260A
1,2-Dichloropropane	ND	20	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	30	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	25	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	60	ug/L	SW846 8260A
1,3-Dichloropropane	ND	20	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	15	ug/L	SW846 8260A
1-Chlorohexane	ND	25	ug/L	SW846 8260A
2,2-Dichloropropane	ND	180	ug/L	SW846 8260A
2-Chlorotoluene	ND	20	ug/L	SW846 8260A
4-Chlorotoluene	ND	30	ug/L	SW846 8260A
Benzene	ND	20	ug/L	SW846 8260A
Bromobenzene	ND	15	ug/L	SW846 8260A
Bromochloromethane	ND	20	ug/L	SW846 8260A
Bromodichloromethane	ND	40	ug/L	SW846 8260A
Bromoform	ND	60	ug/L	SW846 8260A
Bromomethane	ND	55	ug/L	SW846 8260A
Carbon tetrachloride	ND	100	ug/L	SW846 8260A
Chlorobenzene	ND	20	ug/L	SW846 8260A
Chloroethane	ND	50	ug/L	SW846 8260A
Chloroform	ND	15	ug/L	SW846 8260A
Chloromethane	ND	65	ug/L	SW846 8260A
cis-1,2-Dichloroethene	**370**	**60**	**ug/L**	**SW846 8260A**
cis-1,3-Dichloropropene	ND	50	ug/L	SW846 8260A

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: LF05-02WG

GC/MS Volatiles

Lot-Sample #...: B7G180111-020 Work Order #...: CAQDT101 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	25	ug/L	SW846 8260A
Dibromomethane	ND	120	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	50	ug/L	SW846 8260A
Ethylbenzene	ND	30	ug/L	SW846 8260A
Hexachlorobutadiene	ND	55	ug/L	SW846 8260A
Isopropylbenzene	ND	25	ug/L	SW846 8260A
m-Xylene & p-Xylene	ND	25	ug/L	SW846 8260A
Methylene chloride	ND	15	ug/L	SW846 8260A
n-Butylbenzene	ND	55	ug/L	SW846 8260A
n-Propylbenzene	ND	20	ug/L	SW846 8260A
Naphthalene	ND	20	ug/L	SW846 8260A
o-Xylene	ND	55	ug/L	SW846 8260A
p-Isopropyltoluene	ND	60	ug/L	SW846 8260A
sec-Butylbenzene	ND	65	ug/L	SW846 8260A
Styrene	ND	20	ug/L	SW846 8260A
Trichloroethene	**130**	**50**	**ug/L**	**SW846 8260A**
tert-Butylbenzene	ND	70	ug/L	SW846 8260A
Tetrachloroethene	ND	70	ug/L	SW846 8260A
Toluene	ND	55	ug/L	SW846 8260A
trans-1,2-Dichloroethene	**35**	**30**	**ug/L**	**SW846 8260A**
trans-1,3-Dichloropropene	ND	50	ug/L	SW846 8260A
Trichlorofluoromethane	ND	40	ug/L	SW846 8260A
Vinyl chloride	**16 F**	**55**	**ug/L**	**SW846 8260A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	101	(75 - 125)
4-Bromofluorobenzene	92	(75 - 125)
1,2-Dichloroethane-d4	102	(62 - 139)
Dibromofluoromethane	95	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: LF05-5GWG

GC/MS Volatiles

Lot-Sample #...: B7G180111-021 **Work Order #...:** CAQDW101 **Matrix.....:** WG
Date Sampled...: 07/14/97 **Date Received..:** 07/17/97
Prep Date.....: 07/23/97 **Analysis Date..:** 07/24/97
Prep Batch #...: 7211177 **Analysis Time..:** 04:09
Dilution Factor: 50
Analyst ID.....: 007084 **Instrument ID..:** VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	25	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	40	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	20	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	50	ug/L	SW846 8260A
1,1-Dichloroethane	ND	20	ug/L	SW846 8260A
1,1-Dichloroethene	ND	60	ug/L	SW846 8260A
1,1-Dichloropropene	ND	50	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	15	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	160	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	20	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	65	ug/L	SW846 8260A
1,2-Dichloroethane	ND	30	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	15	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	130	ug/L	SW846 8260A
1,2-Dichloropropane	ND	20	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	30	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	25	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	60	ug/L	SW846 8260A
1,3-Dichloropropane	ND	20	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	15	ug/L	SW846 8260A
1-Chlorohexane	ND	25	ug/L	SW846 8260A
2,2-Dichloropropane	ND	180	ug/L	SW846 8260A
2-Chlorotoluene	ND	20	ug/L	SW846 8260A
4-Chlorotoluene	ND	30	ug/L	SW846 8260A
Benzene	ND	20	ug/L	SW846 8260A
Bromobenzene	ND	15	ug/L	SW846 8260A
Bromochloromethane	ND	20	ug/L	SW846 8260A
Bromodichloromethane	ND	40	ug/L	SW846 8260A
Bromoform	ND	60	ug/L	SW846 8260A
Bromomethane	ND	55	ug/L	SW846 8260A
Carbon tetrachloride	ND	100	ug/L	SW846 8260A
Chlorobenzene	ND	20	ug/L	SW846 8260A
Chloroethane	ND	50	ug/L	SW846 8260A
Chloroform	ND	15	ug/L	SW846 8260A
Chloromethane	ND	65	ug/L	SW846 8260A
cis-1,2-Dichloroethene	**140**	**60**	**ug/L**	**SW846 8260A**
cis-1,3-Dichloropropene	ND	50	ug/L	SW846 8260A

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: LF05-5GWG

GC/MS Volatiles

Lot-Sample #...: B7G180111-021 **Work Order #...:** CAQDW101 **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	25	ug/L	SW846 8260A
Dibromomethane	ND	120	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	50	ug/L	SW846 8260A
Ethylbenzene	ND	30	ug/L	SW846 8260A
Hexachlorobutadiene	ND	55	ug/L	SW846 8260A
Isopropylbenzene	ND	25	ug/L	SW846 8260A
m-Xylene & p-Xylene	ND	25	ug/L	SW846 8260A
Methylene chloride	ND	15	ug/L	SW846 8260A
n-Butylbenzene	ND	55	ug/L	SW846 8260A
n-Propylbenzene	ND	20	ug/L	SW846 8260A
Naphthalene	ND	20	ug/L	SW846 8260A
o-Xylene	ND	55	ug/L	SW846 8260A
p-Isopropyltoluene	ND	60	ug/L	SW846 8260A
sec-Butylbenzene	ND	65	ug/L	SW846 8260A
Styrene	ND	20	ug/L	SW846 8260A
Trichloroethene	**420**	**50**	**ug/L**	**SW846 8260A**
tert-Butylbenzene	ND	70	ug/L	SW846 8260A
Tetrachloroethene	ND	70	ug/L	SW846 8260A
Toluene	ND	55	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	30	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	50	ug/L	SW846 8260A
Trichlorofluoromethane	ND	40	ug/L	SW846 8260A
Vinyl chloride	ND	55	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	99	(75 - 125)
4-Bromofluorobenzene	96	(75 - 125)
1,2-Dichloroethane-d4	114	(62 - 139)
Dibromofluoromethane	105	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

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Quanterra
Environmental Services

Quality Control Summary

Quanterra QC Program Summary

Method Blanks

Laboratory Control Samples

Matrix Spike/Matrix Spike Duplicates

Chain-of-Custody

Quanterra
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Quanterra Quality Control Program Summary

Quanterra Environmental Services considers continuous analytical method performance evaluations to be an integral portion of the data package, and routinely includes the pertinent QA/QC data associated with analytical results. Brief discussions of the various QA/QC procedures utilized to measure acceptable method and matrix performance follow. Further documentation of specific policies and procedures in use are available, upon request, from the Quanterra Quality Control Department.

The program described below provides Quanterra's interpretation of QC requirements described in SW-846, 3rd edition -Final Update II. Additional interpretations specific to other aspects of methods performed, such as instrument calibration and bench procedures, are described in program-specific documents (e.g. US Corps of Engineers, AFCEE, etc.) and associated method standard operating procedures. Where explicit program requirements or project requirements exist, certain elements of the Quanterra QC Program may be superseded by these requirements.

Elements of the Quanterra QC Program

Where other clear regulatory guidance, contract specifications, or client requirements are not available, the Quanterra QC Program provides guidance for Batch QC requirements. The Quality Control Batch is a set of up to 20 field samples of similar matrix, which are processed together under the same conditions, within the same time frame. Included in each Quality Control Batch is a Method Blank, Laboratory Control Sample, and Matrix Spike Duplicate. For methods that require independent sample preparation prior to analysis, the QC Batch is defined at the preparation stage. For methods that do not require independent sample preparation, the QC Batch is defined at the instrument. The QC Batch Number is provided on each result page in association with the parameter(s) presented, and may be used to cross-reference sample results with the associated QC data.

Method Blank Evaluations

Laboratory analytical method blanks are systematically prepared and analyzed in order to continuously evaluate the system interference and background contamination levels associated with each applicable analytical method. Method blanks include all aspects of actual laboratory procedures involving sample preparation and analysis, substituting analyte-free water or solid for the actual sample. Under normal circumstances, the Method Blank should not exhibit analytes of interest above the reported detection limit. Due to the presence of some analytes in a typical laboratory setting, the following common laboratory contaminants are exceptions to this rule, provided they are not present in the method blank at greater than five times the reporting limit.

Volatiles	Semi-Volatiles	Metals
Methylene chloride	Dimethyl phthalate	Calcium
Toluene	Diethyl phthalate	Magnesium
2-Butanone	Di-n-butyl-phthalate	Sodium
Acetone	Butyl benzyl phthalate	
	Bis (2-ethylhexyl) phthalate	

A method blank is performed with each analytical batch. A minimum of 5% of all laboratory analyses are method blanks.

Laboratory Control Sample (LCS) Evaluations

Known concentrations of designated matrix spike (target analyte) compounds are added to a method blank prior to extraction and analysis. Percent recovery determinations of individual target analytes in the LCS demonstrate the laboratory's method performance for the QC Batch relative to these target analytes (or other individual components represented by a subset of control analytes). Percent recovery data is displayed alongside acceptance criteria, that is typically derived from laboratory historical data. Failure of a Laboratory Control Sample to meet established recovery criteria for control analytes is cause for corrective actions to occur, which typically includes re-extraction and re-analysis of all samples associated with the QC Batch. An LCS is performed with each analytical batch. A minimum of 5% of all laboratory analyses are laboratory control samples.

Quanterra Environmental Services

Quanterra Quality Control Program Summary (continued)

Surrogate Spike Recovery Evaluations

For GC and GC/MS analyses, known concentrations of designated surrogate spikes, consisting of a number of similar, non-method compounds or method compound analogues, are added to sample fractions prior to sample extraction and analysis. The percent recovery determinations calculated from the subsequent analysis is one indication of the overall method efficiency for the individual sample. The surrogate spike recovery data is displayed alongside acceptance limits at the bottom of each applicable analytical result report page. Where sufficient laboratory-generated data does not yet exist to determine appropriate control limits, advisory limits may be enacted until sufficient data is collected to allow implementation of control limits.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Evaluations

In conjunction with the analysis of a client-provided field sample, a known concentration of designated matrix spike compounds (target analytes) are added to two aliquots of the actual sample. Percent recovery determinations are calculated from both spiked aliquots, using target analyte concentrations already present in the actual sample as a baseline. The percent recovery determinations indicate the accuracy of the method specific to the target analytes (or other individual components represented by a subset of control analytes) in the individual sample matrix. Comparison of the percent recoveries in the two spiked aliquots yields a relative percent difference (RPD). Percent recovery and relative percent difference data is displayed alongside historical criteria, that may be used to judge individual sample matrix effects for specific analytes. MS/MSD data is evaluated by the laboratory with respect to the individual sample matrix. In cases where MS/MSD data indicate sample method performance outside of historical criteria, the laboratory control sample results are referenced to ensure acceptable method performance by the laboratory for the sample batch. For analyses which are inappropriately suited for matrix spikes (e.g. pH), non-spiked duplicate analyses are performed to generate precision data. Matrix spike duplicates are typically performed on at least one sample within each analytical batch. A minimum of 10% of all laboratory analyses are matrix spikes or duplicates.

Corrective Action Evaluations

The goal of the Quanterra Quality Control Program is to generate data that demonstrates process control, and allows for client usability of data. Where the analytical process is demonstrated to vary from established criteria, or client requirements have not been met, data evaluation resulting in corrective action may be required. Corrective action may include re-preparation and/or reanalysis of field samples and QC samples. Where appropriate or necessary to allow proper interpretation of results presented in the final report, details of corrective actions taken during the laboratory processing of samples are presented as a case narrative at the front of the report. Alternatively, routine corrective action, such as reanalysis, may be footnoted on individual sample result pages.

Analytical Result Qualifier Flags

Where applicable , data qualifiers may be appended to analytical results in order to allow for proper interpretation of the result presented. Typically, the presence of data qualifier flag on an analytical result page is accompanied by a footnote explaining the qualifier.

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Environmental Services

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: B7G180111
MB Lot-Sample #: I7G290000-204

Analysis Date..: 07/24/97
Dilution Factor: 1

Work Order #...: CAXX3101

Prep Date.....: 07/24/97
Prep Batch #...: 7210204

Analyst ID.....: 074741

Matrix.....: WATER

Analysis Time..: 18:24
Instrument ID..: K1A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Methane	0.10 F	0.50	ug/L	EPA-9 RSK-175
Ethane	ND	0.50	ug/L	EPA-9 RSK-175
Ethene	ND	0.50	ug/L	EPA-9 RSK-175

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

F The analyte was identified but the value was below the RL and above the MDL.

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra
Environmental Services

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: B7G180111
MB Lot-Sample #: I7G290000-208
Analysis Date..: 07/25/97
Dilution Factor: 1

Work Order #...: CC008101
Prep Date.....: 07/25/97
Prep Batch #...: 7210208
Analyst ID.....: 014906

Matrix.....: WATER
Analysis Time..: 13:11
Instrument ID..: K1A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Methane	**0.14 F**	**0.50**	**ug/L**	**EPA-9 RSK-175**
Ethane	ND	0.50	ug/L	EPA-9 RSK-175
Ethene	ND	0.50	ug/L	EPA-9 RSK-175

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

F The analyte was identified but the value was below the RL and above the MDL.

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: B7G180111
MB Lot-Sample #: B7G250000-190

Work Order #...: CAWNN101

Matrix.....: WATER

Prep Date.....: 07/24/97
Analysis Date..: 07/24/97
Prep Batch #...: 7206190

Analysis Time..: 14:20
Instrument ID..: V2A

Dilution Factor: 1

Analyst ID.....: 001854

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	2.0	ug/L	SW846 8020A
Ethylbenzene	ND	2.0	ug/L	SW846 8020A
Toluene	ND	2.0	ug/L	SW846 8020A
Xylenes (total)	ND	2.0	ug/L	SW846 8020A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	90	(46 - 136)
Bromofluorobenzene	86	(48 - 138)
Fluorobenzene	93	(44 - 165)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: B7G180111
MB Lot-Sample #: B7G270000-107
Analysis Date..: 07/23/97
Dilution Factor: 1

Work Order #...: CAX4T101
Prep Date.....: 07/23/97
Prep Batch #...: 7208107
Analyst ID.....: 007084

Matrix.....: WATER
Analysis Time..: 10:23
Instrument ID..: VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	0.80	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	0.40	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	0.40	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.2	ug/L	SW846 8260A
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	3.2	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	0.40	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	1.3	ug/L	SW846 8260A
1,2-Dichloroethane	ND	0.60	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.6	ug/L	SW846 8260A
1,2-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	0.60	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	0.50	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	1.2	ug/L	SW846 8260A
1,3-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1-Chlorohexane	ND	0.50	ug/L	SW846 8260A
2,2-Dichloropropane	ND	3.5	ug/L	SW846 8260A
2-Chlorotoluene	ND	0.40	ug/L	SW846 8260A
4-Chlorotoluene	ND	0.60	ug/L	SW846 8260A
Benzene	ND	0.40	ug/L	SW846 8260A
Bromobenzene	ND	0.30	ug/L	SW846 8260A
Bromochloromethane	ND	0.40	ug/L	SW846 8260A
Bromodichloromethane	ND	0.80	ug/L	SW846 8260A
Bromoform	ND	1.2	ug/L	SW846 8260A
Bromomethane	ND	1.1	ug/L	SW846 8260A
Carbon tetrachloride	ND	2.1	ug/L	SW846 8260A
Chlorobenzene	ND	0.40	ug/L	SW846 8260A
Chloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	0.30	ug/L	SW846 8260A
Chloromethane	ND	1.3	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	1.2	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Dibromochloromethane	ND	0.50	ug/L	SW846 8260A
Dibromomethane	ND	2.4	ug/L	SW846 8260A

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Quanterra Environmental Services

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: B7G180111 **Work Order #...:** CAX4T101 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	ND	0.60	ug/L	SW846 8260A
Hexachlorobutadiene	ND	1.1	ug/L	SW846 8260A
Isopropylbenzene	ND	0.50	ug/L	SW846 8260A
m-Xylene & p-Xylene	ND	0.50	ug/L	SW846 8260A
Methylene chloride	ND	0.30	ug/L	SW846 8260A
n-Butylbenzene	ND	1.1	ug/L	SW846 8260A
n-Propylbenzene	ND	0.40	ug/L	SW846 8260A
Naphthalene	ND	0.40	ug/L	SW846 8260A
o-Xylene	ND	1.1	ug/L	SW846 8260A
p-Isopropyltoluene	ND	1.2	ug/L	SW846 8260A
sec-Butylbenzene	ND	1.3	ug/L	SW846 8260A
Styrene	ND	0.40	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
tert-Butylbenzene	ND	1.4	ug/L	SW846 8260A
Tetrachloroethene	ND	1.4	ug/L	SW846 8260A
Toluene	ND	1.1	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	0.60	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichlorofluoromethane	ND	0.80	ug/L	SW846 8260A
Vinyl chloride	ND	1.1	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	102	(75 - 125)
4-Bromofluorobenzene	95	(75 - 125)
1,2-Dichloroethane-d4	95	(62 - 139)
Dibromofluoromethane	93	(75 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: B7G180111
MB Lot-Sample #: B7G300000-177

Work Order #...: CC0QE101

Matrix.....: WATER

Prep Date.....: 07/23/97
Prep Batch #...: 7211177

Analysis Time..: 21:16
Instrument ID..: VO4

Analysis Date..: 07/23/97
Dilution Factor: 1

Analyst ID.....: 007084

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	0.80	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	0.40	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	0.40	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.2	ug/L	SW846 8260A
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	3.2	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	0.40	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	1.3	ug/L	SW846 8260A
1,2-Dichloroethane	ND	0.60	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.6	ug/L	SW846 8260A
1,2-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	0.60	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	0.50	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	1.2	ug/L	SW846 8260A
1,3-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1-Chlorohexane	ND	0.50	ug/L	SW846 8260A
2,2-Dichloropropane	ND	3.5	ug/L	SW846 8260A
2-Chlorotoluene	ND	0.40	ug/L	SW846 8260A
4-Chlorotoluene	ND	0.60	ug/L	SW846 8260A
Benzene	ND	0.40	ug/L	SW846 8260A
Bromobenzene	ND	0.30	ug/L	SW846 8260A
Bromochloromethane	ND	0.40	ug/L	SW846 8260A
Bromodichloromethane	ND	0.80	ug/L	SW846 8260A
Bromoform	ND	1.2	ug/L	SW846 8260A
Bromomethane	ND	1.1	ug/L	SW846 8260A
Carbon tetrachloride	ND	2.1	ug/L	SW846 8260A
Chlorobenzene	ND	0.40	ug/L	SW846 8260A
Chloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	0.30	ug/L	SW846 8260A
Chloromethane	ND	1.3	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	1.2	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Dibromochloromethane	ND	0.50	ug/L	SW846 8260A
Dibromomethane	ND	2.4	ug/L	SW846 8260A

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Quanterra Environmental Services

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: B7G180111 **Work Order #...:** CC0QE101 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	ND	0.60	ug/L	SW846 8260A
Hexachlorobutadiene	ND	1.1	ug/L	SW846 8260A
Isopropylbenzene	ND	0.50	ug/L	SW846 8260A
m-Xylene & p-Xylene	ND	0.50	ug/L	SW846 8260A
Methylene chloride	ND	0.30	ug/L	SW846 8260A
n-Butylbenzene	ND	1.1	ug/L	SW846 8260A
n-Propylbenzene	ND	0.40	ug/L	SW846 8260A
Naphthalene	ND	0.40	ug/L	SW846 8260A
o-Xylene	ND	1.1	ug/L	SW846 8260A
p-Isopropyltoluene	ND	1.2	ug/L	SW846 8260A
sec-Butylbenzene	ND	1.3	ug/L	SW846 8260A
Styrene	ND	0.40	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
tert-Butylbenzene	ND	1.4	ug/L	SW846 8260A
Tetrachloroethene	ND	1.4	ug/L	SW846 8260A
Toluene	ND	1.1	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	0.60	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichlorofluoromethane	ND	0.80	ug/L	SW846 8260A
Vinyl chloride	ND	1.1	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	102	(75 - 125)
4-Bromofluorobenzene	97	(75 - 125)
1,2-Dichloroethane-d4	97	(62 - 139)
Dibromofluoromethane	97	(75 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: B7G180111
MB Lot-Sample #: B7G300000-184
Work Order #...: CC0QX101
Matrix.....: WATER
Prep Date.....: 07/24/97
Analysis Time..: 10:18
Analysis Date..: 07/24/97
Prep Batch #...: 7211184
Instrument ID..: VO4
Dilution Factor: 1
Analyst ID.....: 007084

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	0.80	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	0.40	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	0.40	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.2	ug/L	SW846 8260A
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	3.2	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	0.40	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	1.3	ug/L	SW846 8260A
1,2-Dichloroethane	ND	0.60	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.6	ug/L	SW846 8260A
1,2-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	0.60	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	0.50	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	1.2	ug/L	SW846 8260A
1,3-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1-Chlorohexane	ND	0.50	ug/L	SW846 8260A
2,2-Dichloropropane	ND	3.5	ug/L	SW846 8260A
2-Chlorotoluene	ND	0.40	ug/L	SW846 8260A
4-Chlorotoluene	ND	0.60	ug/L	SW846 8260A
Benzene	ND	0.40	ug/L	SW846 8260A
Bromobenzene	ND	0.30	ug/L	SW846 8260A
Bromochloromethane	ND	0.40	ug/L	SW846 8260A
Bromodichloromethane	ND	0.80	ug/L	SW846 8260A
Bromoform	ND	1.2	ug/L	SW846 8260A
Bromomethane	ND	1.1	ug/L	SW846 8260A
Carbon tetrachloride	ND	2.1	ug/L	SW846 8260A
Chlorobenzene	ND	0.40	ug/L	SW846 8260A
Chloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	0.30	ug/L	SW846 8260A
Chloromethane	ND	1.3	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	1.2	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Dibromochloromethane	ND	0.50	ug/L	SW846 8260A
Dibromomethane	ND	2.4	ug/L	SW846 8260A

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Quanterra Environmental Services

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: B7G180111 **Work Order #...:** CC0QX101 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	ND	0.60	ug/L	SW846 8260A
Hexachlorobutadiene	ND	1.1	ug/L	SW846 8260A
Isopropylbenzene	ND	0.50	ug/L	SW846 8260A
m-Xylene & p-Xylene	ND	0.50	ug/L	SW846 8260A
Methylene chloride	ND	0.30	ug/L	SW846 8260A
n-Butylbenzene	ND	1.1	ug/L	SW846 8260A
n-Propylbenzene	ND	0.40	ug/L	SW846 8260A
Naphthalene	ND	0.40	ug/L	SW846 8260A
o-Xylene	ND	1.1	ug/L	SW846 8260A
p-Isopropyltoluene	ND	1.2	ug/L	SW846 8260A
sec-Butylbenzene	ND	1.3	ug/L	SW846 8260A
Styrene	ND	0.40	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
tert-Butylbenzene	ND	1.4	ug/L	SW846 8260A
Tetrachloroethene	ND	1.4	ug/L	SW846 8260A
Toluene	ND	1.1	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	0.60	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichlorofluoromethane	ND	0.80	ug/L	SW846 8260A
Vinyl chloride	ND	1.1	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	103	(75 - 125)
4-Bromofluorobenzene	97	(75 - 125)
1,2-Dichloroethane-d4	99	(62 - 139)
Dibromofluoromethane	98	(75 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: B7G180111 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: B7G240000-191 **Prep Batch #...:** 7205191						
Mercury	ND	0.0010	mg/L	SW846 7470A	07/24/97	CAW13101
Dilution Factor: 1						
Analysis Time..: 20:51 Analyst ID.....: 001702 Instrument ID..: CV						
MB Lot-Sample #: B7G240000-193 **Prep Batch #...:** 7205193						
Silver	ND	0.00020	mg/L	SW846 7761	07/24-08/11/97	CAW1811J
Dilution Factor: 1						
Analysis Time..: 09:26 Analyst ID.....: 001863 Instrument ID..: F1						
Antimony	ND	0.0050	mg/L	SW846 6010A	07/24-07/31/97	CAW1810C
Dilution Factor: 1						
Analysis Time..: 19:50 Analyst ID.....: 001702 Instrument ID..: P2						
Arsenic	ND	0.0050	mg/L	SW846 6010A	07/24-07/25/97	CAW1810D
Dilution Factor: 1						
Analysis Time..: 12:44 Analyst ID.....: 001863 Instrument ID..: P2						
Lead	ND	0.0050	mg/L	SW846 6010A	07/24-07/25/97	CAW1810E
Dilution Factor: 1						
Analysis Time..: 12:44 Analyst ID.....: 001863 Instrument ID..: P2						
Selenium	ND	0.0050	mg/L	SW846 6010A	07/24-07/25/97	CAW1810F
Dilution Factor: 1						
Analysis Time..: 12:44 Analyst ID.....: 001863 Instrument ID..: P2						
Thallium	ND	0.0020	mg/L	SW846 7841	07/24/97	CAW1810G
Dilution Factor: 1						
Analysis Time..: 17:25 Analyst ID.....: 001702 Instrument ID..: F1						
Aluminum	ND	0.50	mg/L	SW846 6010A	07/24-07/25/97	CAW1810J
Dilution Factor: 1						
Analysis Time..: 12:44 Analyst ID.....: 001863 Instrument ID..: P2						
Barium	ND	0.020	mg/L	SW846 6010A	07/24-07/25/97	CAW1810K
Dilution Factor: 1						
Analysis Time..: 12:44 Analyst ID.....: 001863 Instrument ID..: P2						
Beryllium	ND	0.0030	mg/L	SW846 6010A	07/24-07/25/97	CAW1810L
Dilution Factor: 1						
Analysis Time..: 12:44 Analyst ID.....: 001863 Instrument ID..: P2						

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Quanterra Environmental Services

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: B7G180111 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Calcium	ND	1.0	mg/L	SW846 6010A	07/24-07/25/97	CAW1810M
		Dilution Factor: 1				
		Analysis Time..: 12:44	Analyst ID.....: 001863		Instrument ID..: P2	
Cadmium	ND	0.040	mg/L	SW846 6010A	07/24-07/25/97	CAW1810N
		Dilution Factor: 1				
		Analysis Time..: 12:44	Analyst ID.....: 001863		Instrument ID..: P2	
Cobalt	ND	0.070	mg/L	SW846 6010A	07/24-07/25/97	CAW1810P
		Dilution Factor: 1				
		Analysis Time..: 12:44	Analyst ID.....: 001863		Instrument ID..: P2	
Chromium	ND	0.070	mg/L	SW846 6010A	07/24-07/25/97	CAW1810Q
		Dilution Factor: 1				
		Analysis Time..: 12:44	Analyst ID.....: 001863		Instrument ID..: P2	
Copper	ND	0.060	mg/L	SW846 6010A	07/24-07/25/97	CAW18101
		Dilution Factor: 1				
		Analysis Time..: 12:44	Analyst ID.....: 001863		Instrument ID..: P2	
Iron	ND	0.070	mg/L	SW846 6010A	07/24-07/25/97	CAW1810[illegible]
		Dilution Factor: 1				
		Analysis Time..: 12:44	Analyst ID.....: 001863		Instrument ID..: P2	
Potassium	ND	5.0	mg/L	SW846 6010A	07/24-07/25/97	CAW18103
		Dilution Factor: 1				
		Analysis Time..: 10:23	Analyst ID.....: 001863		Instrument ID..: P1	
Magnesium	**0.053 F**	**1.0**	**mg/L**	**SW846 6010A**	**07/24-07/25/97**	**CAW18104**
		Dilution Factor: 1				
		Analysis Time..: 12:44	Analyst ID.....: 001863		Instrument ID..: P2	
Manganese	ND	0.020	mg/L	SW846 6010A	07/24-07/25/97	CAW18105
		Dilution Factor: 1				
		Analysis Time..: 12:44	Analyst ID.....: 001863		Instrument ID..: P2	
Molybdenum	ND	0.080	mg/L	SW846 6010A	07/24-07/25/97	CAW18106
		Dilution Factor: 1				
		Analysis Time..: 12:44	Analyst ID.....: 001863		Instrument ID..: P2	
Sodium	ND	1.0	mg/L	SW846 6010A	07/24-07/25/97	CAW18107
		Dilution Factor: 1				
		Analysis Time..: 10:23	Analyst ID.....: 001863		Instrument ID..: P1	
Nickel	ND	0.15	mg/L	SW846 6010A	07/24-07/25/97	CAW181[illegible]
		Dilution Factor: 1				
		Analysis Time..: 12:44	Analyst ID.....: 001863		Instrument ID..: P2	

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Quanterra Environmental Services

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: B7G180111 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Vanadium	ND	0.080	mg/L	SW846 6010A	07/24-07/25/97	CAW18109
		Dilution Factor: 1				
		Analysis Time..: 12:44	Analyst ID.....: 001863	Instrument ID..: P2		
Zinc	ND	0.020	mg/L	SW846 6010A	07/24-07/31/97	CAW1810A
		Dilution Factor: 1				
		Analysis Time..: 19:50	Analyst ID.....: 001702	Instrument ID..: P2		

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

METHOD BLANK REPORT

General Chemistry

Client Lot #...: B7G180111 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH		Work Order #: CAXX7101		MB Lot-Sample #:	B7G290000-205	
	ND	10	mg/L	MCAWW 310.1	07/25/97	7210205
		Dilution Factor: 1				
		Analysis Time..: 00:00	Analyst ID.....: 090000	Instrument ID..: NA		
Bromide		Work Order #: CC1CA101		MB Lot-Sample #:	B7G310000-150	
	ND	0.20	mg/L	SW846 9056	07/30/97	7212150
		Dilution Factor: 1				
		Analysis Time..: 11:11	Analyst ID.....: 004003	Instrument ID..: IC		
Bromide		Work Order #: CC2C8101		MB Lot-Sample #:	B7H010000-174	
	ND	0.20	mg/L	SW846 9056	07/31/97	7213174
		Dilution Factor: 1				
		Analysis Time..: 12:12	Analyst ID.....: 004003	Instrument ID..: IC		
Chloride		Work Order #: CC1CN101		MB Lot-Sample #:	B7G310000-154	
	ND	0.20	mg/L	SW846 9056	07/30/97	7212154
		Dilution Factor: 1				
		Analysis Time..: 11:11	Analyst ID.....: 004003	Instrument ID..: IC		
Chloride		Work Order #: CC2C1101		MB Lot-Sample #:	B7H010000-173	
	ND	0.20	mg/L	SW846 9056	07/31/97	7213173
		Dilution Factor: 1				
		Analysis Time..: 12:12	Analyst ID.....: 004003	Instrument ID..: IC		
Sulfate		Work Order #: CC1CV101		MB Lot-Sample #:	B7G310000-157	
	0.49 F	**0.50**	**mg/L**	**SW846 9056**	**07/30/97**	**7212157**
		Dilution Factor: 1				
		Analysis Time..: 11:11	Analyst ID.....: 004003	Instrument ID..: IC		
Sulfate		Work Order #: CC2CC101		MB Lot-Sample #:	B7H010000-175	
	ND	0.50	mg/L	SW846 9056	07/31/97	7213175
		Dilution Factor: 1				
		Analysis Time..: 12:12	Analyst ID.....: 004003	Instrument ID..: IC		
Total Dissolved Solids		Work Order #: CC0RH101		MB Lot-Sample #:	B7G300000-188	
	ND	10	mg/L	MCAWW 160.1	07/29-07/30/97	7211188
		Dilution Factor: 1				
		Analysis Time..: 12:30	Analyst ID.....: 090000	Instrument ID..: NA		
Total Organic Carbon		Work Order #: CC2EG101		MB Lot-Sample #:	B7H010000-184	
	ND	1	mg/L	SW846 9060	07/30/97	7213184
		Dilution Factor: 1				
		Analysis Time..: 19:03	Analyst ID.....: 004003	Instrument ID..: TOC		

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Quanterra Environmental Services

METHOD BLANK REPORT

General Chemistry

Client Lot #...: B7G180111 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon		Work Order #: CC2EA101		MB Lot-Sample #:	B7H010000-183	
	ND	1	mg/L	SW846 9060	07/31/97	7213183

Dilution Factor: 1

Analysis Time..: 14:49 Analyst ID.....: 004003 Instrument ID..: TOC

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: B7G180111 **Work Order #...:** CAXX3102 **Matrix.....:** WATER
LCS Lot-Sample#: I7G290000-204
Prep Date.....: 07/24/97 **Analysis Date..:** 07/24/97
Prep Batch #...: 7210204 **Analysis Time..:** 17:49
Dilution Factor: 1 **Instrument ID..:** K1A
Analyst ID.....: 074741

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Methane	34	30 F	ug/L	88	EPA-9 RSK-175
Ethane	63	57 F	ug/L	91	EPA-9 RSK-175
Ethene	59	54 F	ug/L	92	EPA-9 RSK-175

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra
Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: B7G180111 **Work Order #...:** CAXX3102 **Matrix.....:** WATER
LCS Lot-Sample#: I7G290000-204
Prep Date.....: 07/24/97 **Analysis Date..:** 07/24/97
Prep Batch #...: 7210204 **Analysis Time..:** 17:49
Dilution Factor: 1 **Instrument ID..:** K1A
Analyst ID.....: 074741

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Methane	88 F	(70 - 130)	EPA-9 RSK-175
Ethane	91 F	(70 - 130)	EPA-9 RSK-175
Ethene	92 F	(70 - 130)	EPA-9 RSK-175

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra
Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: B7G180111 **Work Order #...:** CC008102 **Matrix.....:** WATER
LCS Lot-Sample#: I7G290000-208
Prep Date.....: 07/25/97 **Analysis Date..:** 07/25/97
Prep Batch #...: 7210208 **Analysis Time..:** 10:46
Dilution Factor: 1 **Instrument ID..:** K1A
Analyst ID.....: 014906

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Methane	34	31	ug/L	91	EPA-9 RSK-175
Ethane	64	60	ug/L	94	EPA-9 RSK-17[illegible]
Ethene	60	57	ug/L	94	EPA-9 RSK-17[illegible]

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: B7G180111 **Work Order #...:** CC008102 **Matrix.....:** WATER
LCS Lot-Sample#: I7G290000-208
Prep Date.....: 07/25/97 **Analysis Date..:** 07/25/97
Prep Batch #...: 7210208 **Analysis Time..:** 10:46
Dilution Factor: 1 **Instrument ID..:** K1A
Analyst ID.....: 014906

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Methane	91	(70 - 130)	EPA-9 RSK-175
Ethane	94	(70 - 130)	EPA-9 RSK-175
Ethene	94	(70 - 130)	EPA-9 RSK-175

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: B7G180111 **Work Order #...:** CAWNN102 **Matrix.....:** WATER
LCS Lot-Sample#: B7G250000-190
Prep Date.....: 07/24/97 **Analysis Date..:** 07/24/97
Prep Batch #...: 7206190 **Analysis Time..:** 14:46
Dilution Factor: 1 **Instrument ID..:** V2A
Analyst ID.....: 001854

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Benzene	**20**	**18**	**ug/L**	**92**	**SW846 8020A**
Ethylbenzene	**20**	**19**	**ug/L**	**97**	**SW846 8020A**
Toluene	**20**	**19**	**ug/L**	**96**	**SW846 8020A**
Xylenes (total)	**60**	**58**	**ug/L**	**96**	**SW846 8020A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	91	(46 - 136)
Bromofluorobenzene	88	(48 - 138)
Fluorobenzene	99	(44 - 165)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: B7G180111 **Work Order #...:** CAWNN102 **Matrix.....:** WATER
LCS Lot-Sample#: B7G250000-190
Prep Date.....: 07/24/97 **Analysis Date..:** 07/24/97
Prep Batch #...: 7206190 **Analysis Time..:** 14:46
Dilution Factor: 1 **Instrument ID..:** V2A
Analyst ID.....: 001854

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Benzene	**92**	**(75 - 125)**	**SW846 8020A**
Ethylbenzene	**97**	**(71 - 129)**	**SW846 8020A**
Toluene	**96**	**(70 - 125)**	**SW846 8020A**
Xylenes (total)	**96**	**(71 - 133)**	**SW846 8020A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	91	(46 - 136)
Bromofluorobenzene	88	(48 - 138)
Fluorobenzene	99	(44 - 165)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: B7G180111 Work Order #...: CAX4T102 Matrix.....: WATER
LCS Lot-Sample#: B7G270000-107
Prep Date.....: 07/23/97 Analysis Date..: 07/23/97
Prep Batch #...: 7208107 Analysis Time..: 11:22
Dilution Factor: 1 Instrument ID..: VO4
Analyst ID.....: 007084

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
1,1,1,2-Tetrachloroethane	5.0	4.4	ug/L	88	SW846 8260A
1,1,1-Trichloroethane	5.0	4.4	ug/L	89	SW846 8260A
1,1,2,2-Tetrachloroethane	5.0	4.3	ug/L	86	SW846 8260A
1,1,2-Trichloroethane	5.0	4.4	ug/L	88	SW846 8260A
1,1-Dichloroethane	5.0	4.5	ug/L	90	SW846 8260A
1,1-Dichloroethene	5.0	3.8	ug/L	77	SW846 8260A
1,1-Dichloropropene	5.0	4.7	ug/L	94	SW846 8260A
1,2,3-Trichlorobenzene	5.0	4.7	ug/L	94	SW846 8260A
1,2,3-Trichloropropane	5.0	4.7	ug/L	94	SW846 8260A
1,2,4-Trichlorobenzene	5.0	4.5	ug/L	90	SW846 8260A
1,2,4-Trimethylbenzene	5.0	4.9	ug/L	99	SW846 8260A
1,2-Dichloroethane	5.0	4.4	ug/L	89	SW846 8260A
1,2-Dichlorobenzene	5.0	4.8	ug/L	95	SW846 826
1,2-Dibromo-3-chloropropane (DBCP)	5.0	4.7	ug/L	94	SW846 826
1,2-Dichloropropane	5.0	4.3	ug/L	86	SW846 8260A
1,2-Dibromoethane (EDB)	5.0	4.2	ug/L	83	SW846 8260A
1,3,5-Trimethylbenzene	5.0	4.9	ug/L	98	SW846 8260A
1,3-Dichlorobenzene	5.0	4.7	ug/L	94	SW846 8260A
1,3-Dichloropropane	5.0	4.3	ug/L	86	SW846 8260A
1,4-Dichlorobenzene	5.0	4.6	ug/L	92	SW846 8260A
1-Chlorohexane	5.0	5.0	ug/L	101	SW846 8260A
2,2-Dichloropropane	5.0	4.8	ug/L	95	SW846 8260A
2-Chlorotoluene	5.0	4.6	ug/L	93	SW846 8260A
4-Chlorotoluene	5.0	4.9	ug/L	98	SW846 8260A
Benzene	5.0	4.7	ug/L	93	SW846 8260A
Bromobenzene	5.0	4.7	ug/L	94	SW846 8260A
Bromochloromethane	5.0	4.5	ug/L	90	SW846 8260A
Bromodichloromethane	5.0	4.3	ug/L	86	SW846 8260A
Bromoform	5.0	4.5	ug/L	90	SW846 8260A
Bromomethane	5.0	4.1	ug/L	82	SW846 8260A
Carbon tetrachloride	5.0	4.4	ug/L	87	SW846 8260A
Chlorobenzene	5.0	4.5	ug/L	91	SW846 8260A
Chloroethane	5.0	4.4	ug/L	88	SW846 8260A

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Quanterra Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: B7G180111 **Work Order #...:** CAX4T102 **Matrix.....:** WATER
LCS Lot-Sample#: B7G270000-107

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Chloroform	**5.0**	**4.4**	**ug/L**	**88**	**SW846 8260A**
Chloromethane	**5.0**	**4.2**	**ug/L**	**85**	**SW846 8260A**
cis-1,2-Dichloroethene	**5.0**	**4.5**	**ug/L**	**91**	**SW846 8260A**
cis-1,3-Dichloropropene	**5.0**	**3.8**	**ug/L**	**77**	**SW846 8260A**
Dibromochloromethane	**5.0**	**4.3**	**ug/L**	**87**	**SW846 8260A**
Dibromomethane	**5.0**	**4.2**	**ug/L**	**84**	**SW846 8260A**
Dichlorodifluoromethane	**5.0**	**4.0**	**ug/L**	**79**	**SW846 8260A**
Ethylbenzene	**5.0**	**4.9**	**ug/L**	**97**	**SW846 8260A**
Hexachlorobutadiene	**5.0**	**5.5**	**ug/L**	**111**	**SW846 8260A**
Isopropylbenzene	**5.0**	**5.5**	**ug/L**	**110**	**SW846 8260A**
m-Xylene & p-Xylene	**10**	**9.5**	**ug/L**	**95**	**SW846 8260A**
Methylene chloride	**5.0**	**4.2**	**ug/L**	**84**	**SW846 8260A**
n-Butylbenzene	**5.0**	**5.2**	**ug/L**	**103**	**SW846 8260A**
n-Propylbenzene	**5.0**	**5.1**	**ug/L**	**102**	**SW846 8260A**
Naphthalene	**5.0**	**4.0**	**ug/L**	**81**	**SW846 8260A**
o-Xylene	**5.0**	**4.7**	**ug/L**	**94**	**SW846 8260A**
p-Isopropyltoluene	**5.0**	**5.3**	**ug/L**	**105**	**SW846 8260A**
sec-Butylbenzene	**5.0**	**5.2**	**ug/L**	**104**	**SW846 8260A**
Styrene	**5.0**	**4.8**	**ug/L**	**96**	**SW846 8260A**
Trichloroethene	**5.0**	**4.6**	**ug/L**	**91**	**SW846 8260A**
Tetrachloroethene	**5.0**	**5.0**	**ug/L**	**99**	**SW846 8260A**
Toluene	**5.0**	**4.8**	**ug/L**	**95**	**SW846 8260A**
trans-1,2-Dichloroethene	**5.0**	**4.4**	**ug/L**	**89**	**SW846 8260A**
trans-1,3-Dichloropropene	**5.0**	**4.1**	**ug/L**	**81**	**SW846 8260A**
Trichlorofluoromethane	**5.0**	**4.4**	**ug/L**	**87**	**SW846 8260A**
Vinyl chloride	**5.0**	**4.4**	**ug/L**	**88**	**SW846 8260A**
tert-Butylbenzene	**5.0**	**5.0**	**ug/L**	**99**	**SW846 8260A**
Dichloropropene	**10**	**7.8**	**ug/L**	**78**	**SW846 8260A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	105	(75 - 125)
4-Bromofluorobenzene	98	(75 - 125)
1,2-Dichloroethane-d4	91	(62 - 139)
Dibromofluoromethane	93	(75 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: B7G180111 Work Order #...: CAX4T102 Matrix.....: WATER
LCS Lot-Sample#: B7G270000-107
Prep Date.....: 07/23/97 Analysis Date..: 07/23/97
Prep Batch #...: 7208107 Analysis Time..: 11:22
Dilution Factor: 1 Instrument ID..: VO4
Analyst ID.....: 007084

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
1,1,1,2-Tetrachloroethane	88	(72 - 125)	SW846 8260A
1,1,1-Trichloroethane	89	(75 - 125)	SW846 8260A
1,1,2,2-Tetrachloroethane	86	(74 - 125)	SW846 8260A
1,1,2-Trichloroethane	88	(75 - 127)	SW846 8260A
1,1-Dichloroethane	90	(72 - 125)	SW846 8260A
1,1-Dichloroethene	77	(75 - 125)	SW846 8260A
1,1-Dichloropropene	94	(75 - 125)	SW846 8260A
1,2,3-Trichlorobenzene	94	(75 - 137)	SW846 8260A
1,2,3-Trichloropropane	94	(75 - 125)	SW846 8260A
1,2,4-Trichlorobenzene	90	(75 - 135)	SW846 8260A
1,2,4-Trimethylbenzene	99	(75 - 125)	SW846 8260A
1,2-Dichloroethane	89	(68 - 127)	SW846 8260A
1,2-Dichlorobenzene	95	(75 - 125)	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	94	(59 - 125)	SW846 8260A
1,2-Dichloropropane	86	(70 - 125)	SW846 8260A
1,2-Dibromoethane (EDB)	83	(75 - 125)	SW846 8260A
1,3,5-Trimethylbenzene	98	(72 - 112)	SW846 8260A
1,3-Dichlorobenzene	94	(75 - 125)	SW846 8260A
1,3-Dichloropropane	86	(75 - 125)	SW846 8260A
1,4-Dichlorobenzene	92	(75 - 125)	SW846 8260A
1-Chlorohexane	101	(75 - 125)	SW846 8260A
2,2-Dichloropropane	95	(50 - 125)	SW846 8260A
2-Chlorotoluene	93	(73 - 125)	SW846 8260A
4-Chlorotoluene	98	(74 - 125)	SW846 8260A
Benzene	93	(75 - 125)	SW846 8260A
Bromobenzene	94	(75 - 125)	SW846 8260A
Bromochloromethane	90	(73 - 125)	SW846 8260A
Bromodichloromethane	86	(75 - 125)	SW846 8260A
Bromoform	90	(75 - 125)	SW846 8260A
Bromomethane	82	(50 - 125)	SW846 8260A
Carbon tetrachloride	87	(62 - 125)	SW846 8260A
Chlorobenzene	91	(75 - 125)	SW846 8260A
Chloroethane	88	(50 - 125)	SW846 8260A

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Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: B7G180111 **Work Order #...:** CAX4T102 **Matrix.....:** WATER
LCS Lot-Sample#: B7G270000-107

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Chloroform	**88**	**(74 - 125)**	**SW846 8260A**
Chloromethane	**85**	**(50 - 125)**	**SW846 8260A**
cis-1,2-Dichloroethene	**91**	**(75 - 125)**	**SW846 8260A**
cis-1,3-Dichloropropene	**77**	**(74 - 125)**	**SW846 8260A**
Dibromochloromethane	**87**	**(73 - 125)**	**SW846 8260A**
Dibromomethane	**84**	**(69 - 127)**	**SW846 8260A**
Dichlorodifluoromethane	**79**	**(50 - 150)**	**SW846 8260A**
Ethylbenzene	**97**	**(75 - 125)**	**SW846 8260A**
Hexachlorobutadiene	**111**	**(75 - 125)**	**SW846 8260A**
Isopropylbenzene	**110**	**(75 - 125)**	**SW846 8260A**
m-Xylene & p-Xylene	**95**	**(75 - 125)**	**SW846 8260A**
Methylene chloride	**84**	**(75 - 125)**	**SW846 8260A**
n-Butylbenzene	**103**	**(75 - 125)**	**SW846 8260A**
n-Propylbenzene	**102**	**(75 - 125)**	**SW846 8260A**
Naphthalene	**81**	**(75 - 125)**	**SW846 8260A**
o-Xylene	**94**	**(75 - 125)**	**SW846 8260A**
p-Isopropyltoluene	**105**	**(75 - 125)**	**SW846 8260A**
sec-Butylbenzene	**104**	**(75 - 125)**	**SW846 8260A**
Styrene	**96**	**(75 - 125)**	**SW846 8260A**
Trichloroethene	**91**	**(71 - 125)**	**SW846 8260A**
Tetrachloroethene	**99**	**(71 - 125)**	**SW846 8260A**
Toluene	**95**	**(74 - 125)**	**SW846 8260A**
trans-1,2-Dichloroethene	**89**	**(75 - 125)**	**SW846 8260A**
trans-1,3-Dichloropropene	**81**	**(66 - 125)**	**SW846 8260A**
Trichlorofluoromethane	**87**	**(50 - 125)**	**SW846 8260A**
Vinyl chloride	**88**	**(46 - 134)**	**SW846 8260A**
tert-Butylbenzene	**99**	**(75 - 125)**	**SW846 8260A**
Dichloropropene	**78**	**(75 - 125)**	**SW846 8260A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	105	(75 - 125)
4-Bromofluorobenzene	98	(75 - 125)
1,2-Dichloroethane-d4	91	(62 - 139)
Dibromofluoromethane	93	(75 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Quanterra
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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: B7G180111 Work Order #...: CC0QE102 Matrix.....: WATER
LCS Lot-Sample#: B7G300000-177
Prep Date.....: 07/23/97 Analysis Date..: 07/23/97
Prep Batch #...: 7211177 Analysis Time..: 20:53
Dilution Factor: 1 Instrument ID..: VO4
Analyst ID.....: 007084

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
1,1,1,2-Tetrachloroethane	5.0	4.3	ug/L	86	SW846 8260A
1,1,1-Trichloroethane	5.0	4.4	ug/L	89	SW846 8260A
1,1,2,2-Tetrachloroethane	5.0	4.3	ug/L	86	SW846 8260A
1,1,2-Trichloroethane	5.0	4.2	ug/L	84	SW846 8260A
1,1-Dichloroethane	5.0	4.5	ug/L	90	SW846 8260A
1,1-Dichloroethene	5.0	3.9	ug/L	78	SW846 8260A
1,1-Dichloropropene	5.0	4.8	ug/L	96	SW846 8260A
1,2,3-Trichlorobenzene	5.0	5.3	ug/L	107	SW846 8260A
1,2,3-Trichloropropane	5.0	4.1	ug/L	81	SW846 8260A
1,2,4-Trichlorobenzene	5.0	5.2	ug/L	104	SW846 8260A
1,2,4-Trimethylbenzene	5.0	5.2	ug/L	104	SW846 8260A
1,2-Dichloroethane	5.0	4.4	ug/L	88	SW846 8260
1,2-Dichlorobenzene	5.0	4.8	ug/L	97	SW846 8260
1,2-Dibromo-3-chloropropane (DBCP)	5.0	4.9	ug/L	99	SW846 8260A
1,2-Dichloropropane	5.0	4.4	ug/L	87	SW846 8260A
1,2-Dibromoethane (EDB)	5.0	4.1	ug/L	82	SW846 8260A
1,3,5-Trimethylbenzene	5.0	5.2	ug/L	103	SW846 8260A
1,3-Dichlorobenzene	5.0	4.8	ug/L	96	SW846 8260A
1,3-Dichloropropane	5.0	4.0	ug/L	80	SW846 8260A
1,4-Dichlorobenzene	5.0	4.8	ug/L	96	SW846 8260A
1-Chlorohexane	5.0	5.1	ug/L	101	SW846 8260A
2,2-Dichloropropane	5.0	4.3	ug/L	86	SW846 8260A
2-Chlorotoluene	5.0	4.9	ug/L	99	SW846 8260A
4-Chlorotoluene	5.0	5.0	ug/L	100	SW846 8260A
Benzene	5.0	4.7	ug/L	94	SW846 8260A
Bromobenzene	5.0	4.8	ug/L	95	SW846 8260A
Bromochloromethane	5.0	4.5	ug/L	90	SW846 8260A
Bromodichloromethane	5.0	4.2	ug/L	83	SW846 8260A
Bromoform	5.0	4.1	ug/L	82	SW846 8260A
Bromomethane	5.0	4.1	ug/L	82	SW846 8260A
Carbon tetrachloride	5.0	4.4	ug/L	88	SW846 8260A
Chlorobenzene	5.0	4.6	ug/L	91	SW846 8260A
Chloroethane	5.0	4.6	ug/L	91	SW846 8260A

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Quanterra Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: B7G180111 **Work Order #...:** CC0QE102 **Matrix.....:** WATER
LCS Lot-Sample#: B7G300000-177

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Chloroform	**5.0**	**4.4**	**ug/L**	**89**	**SW846 8260A**
Chloromethane	**5.0**	**4.5**	**ug/L**	**90**	**SW846 8260A**
cis-1,2-Dichloroethene	**5.0**	**4.7**	**ug/L**	**95**	**SW846 8260A**
cis-1,3-Dichloropropene	**5.0**	**4.0**	**ug/L**	**80**	**SW846 8260A**
Dibromochloromethane	**5.0**	**3.9**	**ug/L**	**78**	**SW846 8260A**
Dibromomethane	**5.0**	**4.2**	**ug/L**	**83**	**SW846 8260A**
Dichlorodifluoromethane	**5.0**	**4.1**	**ug/L**	**81**	**SW846 8260A**
Ethylbenzene	**5.0**	**4.8**	**ug/L**	**96**	**SW846 8260A**
Hexachlorobutadiene	**5.0**	**5.4**	**ug/L**	**107**	**SW846 8260A**
Isopropylbenzene	**5.0**	**5.6**	**ug/L**	**111**	**SW846 8260A**
m-Xylene & p-Xylene	**10**	**9.5**	**ug/L**	**95**	**SW846 8260A**
Methylene chloride	**5.0**	**4.4**	**ug/L**	**87**	**SW846 8260A**
n-Butylbenzene	**5.0**	**5.5**	**ug/L**	**109**	**SW846 8260A**
n-Propylbenzene	**5.0**	**5.3**	**ug/L**	**106**	**SW846 8260A**
Naphthalene	**5.0**	**5.5**	**ug/L**	**109**	**SW846 8260A**
o-Xylene	**5.0**	**4.7**	**ug/L**	**93**	**SW846 8260A**
p-Isopropyltoluene	**5.0**	**5.5**	**ug/L**	**109**	**SW846 8260A**
sec-Butylbenzene	**5.0**	**5.2**	**ug/L**	**104**	**SW846 8260A**
Styrene	**5.0**	**4.8**	**ug/L**	**96**	**SW846 8260A**
Trichloroethene	**5.0**	**4.5**	**ug/L**	**91**	**SW846 8260A**
Tetrachloroethene	**5.0**	**4.8**	**ug/L**	**95**	**SW846 8260A**
Toluene	**5.0**	**4.7**	**ug/L**	**94**	**SW846 8260A**
trans-1,2-Dichloroethene	**5.0**	**4.4**	**ug/L**	**88**	**SW846 8260A**
trans-1,3-Dichloropropene	**5.0**	**3.7**	**ug/L**	**75**	**SW846 8260A**
Trichlorofluoromethane	**5.0**	**4.4**	**ug/L**	**87**	**SW846 8260A**
Vinyl chloride	**5.0**	**4.6**	**ug/L**	**91**	**SW846 8260A**
tert-Butylbenzene	**5.0**	**5.2**	**ug/L**	**104**	**SW846 8260A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	101	(75 - 125)
4-Bromofluorobenzene	97	(75 - 125)
1,2-Dichloroethane-d4	92	(62 - 139)
Dibromofluoromethane	94	(75 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Quanterra
Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: B7G180111 Work Order #...: CC0QE102 Matrix.....: WATER
LCS Lot-Sample#: B7G300000-177
Prep Date.....: 07/23/97 Analysis Date..: 07/23/97
Prep Batch #...: 7211177 Analysis Time..: 20:53
Dilution Factor: 1 Instrument ID..: VO4
Analyst ID.....: 007084

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
1,1,1,2-Tetrachloroethane	86	(72 - 125)	SW846 8260A
1,1,1-Trichloroethane	89	(75 - 125)	SW846 8260A
1,1,2,2-Tetrachloroethane	86	(74 - 125)	SW846 8260A
1,1,2-Trichloroethane	84	(75 - 127)	SW846 8260A
1,1-Dichloroethane	90	(72 - 125)	SW846 8260A
1,1-Dichloroethene	78	(75 - 125)	SW846 8260A
1,1-Dichloropropene	96	(75 - 125)	SW846 8260A
1,2,3-Trichlorobenzene	107	(75 - 137)	SW846 8260A
1,2,3-Trichloropropane	81	(75 - 125)	SW846 8260A
1,2,4-Trichlorobenzene	104	(75 - 135)	SW846 8260A
1,2,4-Trimethylbenzene	104	(75 - 125)	SW846 8260A
1,2-Dichloroethane	88	(68 - 127)	SW846 8260A
1,2-Dichlorobenzene	97	(75 - 125)	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	99	(59 - 125)	SW846 8260A
1,2-Dichloropropane	87	(70 - 125)	SW846 8260A
1,2-Dibromoethane (EDB)	82	(75 - 125)	SW846 8260A
1,3,5-Trimethylbenzene	103	(72 - 112)	SW846 8260A
1,3-Dichlorobenzene	96	(75 - 125)	SW846 8260A
1,3-Dichloropropane	80	(75 - 125)	SW846 8260A
1,4-Dichlorobenzene	96	(75 - 125)	SW846 8260A
1-Chlorohexane	101	(75 - 125)	SW846 8260A
2,2-Dichloropropane	86	(50 - 125)	SW846 8260A
2-Chlorotoluene	99	(73 - 125)	SW846 8260A
4-Chlorotoluene	100	(74 - 125)	SW846 8260A
Benzene	94	(75 - 125)	SW846 8260A
Bromobenzene	95	(75 - 125)	SW846 8260A
Bromochloromethane	90	(73 - 125)	SW846 8260A
Bromodichloromethane	83	(75 - 125)	SW846 8260A
Bromoform	82	(75 - 125)	SW846 8260A
Bromomethane	82	(50 - 125)	SW846 8260A
Carbon tetrachloride	88	(62 - 125)	SW846 8260A
Chlorobenzene	91	(75 - 125)	SW846 8260A
Chloroethane	91	(50 - 125)	SW846 8260A

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Quanterra
Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: B7G180111 **Work Order #...:** CC0QE102 **Matrix.....:** WATER
LCS Lot-Sample#: B7G300000-177

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Chloroform	**89**	**(74 - 125)**	**SW846 8260A**
Chloromethane	**90**	**(50 - 125)**	**SW846 8260A**
cis-1,2-Dichloroethene	**95**	**(75 - 125)**	**SW846 8260A**
cis-1,3-Dichloropropene	**80**	**(74 - 125)**	**SW846 8260A**
Dibromochloromethane	**78**	**(73 - 125)**	**SW846 8260A**
Dibromomethane	**83**	**(69 - 127)**	**SW846 8260A**
Dichlorodifluoromethane	**81**	**(50 - 150)**	**SW846 8260A**
Ethylbenzene	**96**	**(75 - 125)**	**SW846 8260A**
Hexachlorobutadiene	**107**	**(75 - 125)**	**SW846 8260A**
Isopropylbenzene	**111**	**(75 - 125)**	**SW846 8260A**
m-Xylene & p-Xylene	**95**	**(75 - 125)**	**SW846 8260A**
Methylene chloride	**87**	**(75 - 125)**	**SW846 8260A**
n-Butylbenzene	**109**	**(75 - 125)**	**SW846 8260A**
n-Propylbenzene	**106**	**(75 - 125)**	**SW846 8260A**
Naphthalene	**109**	**(75 - 125)**	**SW846 8260A**
o-Xylene	**93**	**(75 - 125)**	**SW846 8260A**
p-Isopropyltoluene	**109**	**(75 - 125)**	**SW846 8260A**
sec-Butylbenzene	**104**	**(75 - 125)**	**SW846 8260A**
Styrene	**96**	**(75 - 125)**	**SW846 8260A**
Trichloroethene	**91**	**(71 - 125)**	**SW846 8260A**
Tetrachloroethene	**95**	**(71 - 125)**	**SW846 8260A**
Toluene	**94**	**(74 - 125)**	**SW846 8260A**
trans-1,2-Dichloroethene	**88**	**(75 - 125)**	**SW846 8260A**
trans-1,3-Dichloropropene	**75**	**(66 - 125)**	**SW846 8260A**
Trichlorofluoromethane	**87**	**(50 - 125)**	**SW846 8260A**
Vinyl chloride	**91**	**(46 - 134)**	**SW846 8260A**
tert-Butylbenzene	**104**	**(75 - 125)**	**SW846 8260A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	101	(75 - 125)
4-Bromofluorobenzene	97	(75 - 125)
1,2-Dichloroethane-d4	92	(62 - 139)
Dibromofluoromethane	94	(75 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: B7G180111 Work Order #...: CC0QX102 Matrix.....: WATER
LCS Lot-Sample#: B7G300000-184
Prep Date.....: 07/24/97 Analysis Date..: 07/24/97
Prep Batch #...: 7211184 Analysis Time..: 09:53
Dilution Factor: 1 Instrument ID..: VO4
Analyst ID.....: 007084

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
1,1,1,2-Tetrachloroethane	5.0	4.1	ug/L	82	SW846 8260A
1,1,1-Trichloroethane	5.0	4.3	ug/L	86	SW846 8260A
1,1,2,2-Tetrachloroethane	5.0	4.1	ug/L	82	SW846 8260A
1,1,2-Trichloroethane	5.0	4.2	ug/L	84	SW846 8260A
1,1-Dichloroethane	5.0	4.4	ug/L	89	SW846 8260A
1,1-Dichloroethene	5.0	3.8	ug/L	76	SW846 8260A
1,1-Dichloropropene	5.0	4.7	ug/L	93	SW846 8260A
1,2,3-Trichlorobenzene	5.0	4.5	ug/L	89	SW846 8260A
1,2,3-Trichloropropane	5.0	4.0	ug/L	81	SW846 8260A
1,2,4-Trichlorobenzene	5.0	4.6	ug/L	92	SW846 8260A
1,2,4-Trimethylbenzene	5.0	4.9	ug/L	98	SW846 8260A
1,2-Dichloroethane	5.0	4.4	ug/L	88	SW846 8260A
1,2-Dichlorobenzene	5.0	4.6	ug/L	92	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	5.0	4.2	ug/L	84	SW846 8260A
1,2-Dichloropropane	5.0	4.3	ug/L	85	SW846 8260A
1,2-Dibromoethane (EDB)	5.0	4.2	ug/L	83	SW846 8260A
1,3,5-Trimethylbenzene	5.0	4.8	ug/L	97	SW846 8260A
1,3-Dichlorobenzene	5.0	4.6	ug/L	91	SW846 8260A
1,3-Dichloropropane	5.0	4.1	ug/L	83	SW846 8260A
1,4-Dichlorobenzene	5.0	4.5	ug/L	90	SW846 8260A
1-Chlorohexane	5.0	4.8	ug/L	95	SW846 8260A
2,2-Dichloropropane	5.0	4.6	ug/L	91	SW846 8260A
2-Chlorotoluene	5.0	4.6	ug/L	92	SW846 8260A
4-Chlorotoluene	5.0	4.7	ug/L	95	SW846 8260A
Benzene	5.0	4.6	ug/L	92	SW846 8260A
Bromobenzene	5.0	4.6	ug/L	92	SW846 8260A
Bromochloromethane	5.0	4.5	ug/L	90	SW846 8260A
Bromodichloromethane	5.0	4.2	ug/L	83	SW846 8260A
Bromoform	5.0	4.1	ug/L	83	SW846 8260A
Bromomethane	5.0	4.1	ug/L	82	SW846 8260A
Carbon tetrachloride	5.0	4.2	ug/L	85	SW846 8260A
Chlorobenzene	5.0	4.4	ug/L	87	SW846 8260A
Chloroethane	5.0	4.5	ug/L	89	SW846 8260A

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Quanterra
Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: B7G180111 **Work Order #...:** CC0QX102 **Matrix.....:** WATER
LCS Lot-Sample#: B7G300000-184

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Chloroform	**5.0**	**4.3**	**ug/L**	**86**	**SW846 8260A**
Chloromethane	**5.0**	**4.2**	**ug/L**	**84**	**SW846 8260A**
cis-1,2-Dichloroethene	**5.0**	**4.6**	**ug/L**	**92**	**SW846 8260A**
cis-1,3-Dichloropropene	**5.0**	**4.1**	**ug/L**	**82**	**SW846 8260A**
Dibromochloromethane	**5.0**	**3.9**	**ug/L**	**78**	**SW846 8260A**
Dibromomethane	**5.0**	**4.1**	**ug/L**	**83**	**SW846 8260A**
Dichlorodifluoromethane	**5.0**	**4.0**	**ug/L**	**80**	**SW846 8260A**
Ethylbenzene	**5.0**	**4.5**	**ug/L**	**91**	**SW846 8260A**
Hexachlorobutadiene	**5.0**	**5.2**	**ug/L**	**103**	**SW846 8260A**
Isopropylbenzene	**5.0**	**5.4**	**ug/L**	**108**	**SW846 8260A**
m-Xylene & p-Xylene	**10**	**9.0**	**ug/L**	**90**	**SW846 8260A**
Methylene chloride	**5.0**	**4.2**	**ug/L**	**83**	**SW846 8260A**
n-Butylbenzene	**5.0**	**5.0**	**ug/L**	**101**	**SW846 8260A**
n-Propylbenzene	**5.0**	**4.9**	**ug/L**	**98**	**SW846 8260A**
Naphthalene	**5.0**	**4.0**	**ug/L**	**79**	**SW846 8260A**
o-Xylene	**5.0**	**4.6**	**ug/L**	**91**	**SW846 8260A**
p-Isopropyltoluene	**5.0**	**5.1**	**ug/L**	**101**	**SW846 8260A**
sec-Butylbenzene	**5.0**	**4.9**	**ug/L**	**99**	**SW846 8260A**
Styrene	**5.0**	**4.6**	**ug/L**	**92**	**SW846 8260A**
Trichloroethene	**5.0**	**4.5**	**ug/L**	**90**	**SW846 8260A**
Tetrachloroethene	**5.0**	**4.6**	**ug/L**	**91**	**SW846 8260A**
Toluene	**5.0**	**4.6**	**ug/L**	**92**	**SW846 8260A**
trans-1,2-Dichloroethene	**5.0**	**4.3**	**ug/L**	**86**	**SW846 8260A**
trans-1,3-Dichloropropene	**5.0**	**3.8**	**ug/L**	**76**	**SW846 8260A**
Trichlorofluoromethane	**5.0**	**4.4**	**ug/L**	**87**	**SW846 8260A**
Vinyl chloride	**5.0**	**4.4**	**ug/L**	**87**	**SW846 8260A**
tert-Butylbenzene	**5.0**	**5.0**	**ug/L**	**99**	**SW846 8260A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	102	(75 - 125)
4-Bromofluorobenzene	98	(75 - 125)
1,2-Dichloroethane-d4	99	(62 - 139)
Dibromofluoromethane	97	(75 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: B7G180111 Work Order #...: CC0QX102 Matrix.....: WATER
LCS Lot-Sample#: B7G300000-184
Prep Date.....: 07/24/97 Analysis Date..: 07/24/97
Prep Batch #...: 7211184 Analysis Time..: 09:53
Dilution Factor: 1 Instrument ID..: VO4
Analyst ID.....: 007084

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
1,1,1,2-Tetrachloroethane	82	(72 - 125)	SW846 8260A
1,1,1-Trichloroethane	86	(75 - 125)	SW846 8260A
1,1,2,2-Tetrachloroethane	82	(74 - 125)	SW846 8260A
1,1,2-Trichloroethane	84	(75 - 127)	SW846 8260A
1,1-Dichloroethane	89	(72 - 125)	SW846 8260A
1,1-Dichloroethene	76	(75 - 125)	SW846 8260A
1,1-Dichloropropene	93	(75 - 125)	SW846 8260A
1,2,3-Trichlorobenzene	89	(75 - 137)	SW846 8260A
1,2,3-Trichloropropane	81	(75 - 125)	SW846 8260A
1,2,4-Trichlorobenzene	92	(75 - 135)	SW846 8260A
1,2,4-Trimethylbenzene	98	(75 - 125)	SW846 8260A
1,2-Dichloroethane	88	(68 - 127)	SW846 8260A
1,2-Dichlorobenzene	92	(75 - 125)	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	84	(59 - 125)	SW846 8260A
1,2-Dichloropropane	85	(70 - 125)	SW846 8260A
1,2-Dibromoethane (EDB)	83	(75 - 125)	SW846 8260A
1,3,5-Trimethylbenzene	97	(72 - 112)	SW846 8260A
1,3-Dichlorobenzene	91	(75 - 125)	SW846 8260A
1,3-Dichloropropane	83	(75 - 125)	SW846 8260A
1,4-Dichlorobenzene	90	(75 - 125)	SW846 8260A
1-Chlorohexane	95	(75 - 125)	SW846 8260A
2,2-Dichloropropane	91	(50 - 125)	SW846 8260A
2-Chlorotoluene	92	(73 - 125)	SW846 8260A
4-Chlorotoluene	95	(74 - 125)	SW846 8260A
Benzene	92	(75 - 125)	SW846 8260A
Bromobenzene	92	(75 - 125)	SW846 8260A
Bromochloromethane	90	(73 - 125)	SW846 8260A
Bromodichloromethane	83	(75 - 125)	SW846 8260A
Bromoform	83	(75 - 125)	SW846 8260A
Bromomethane	82	(50 - 125)	SW846 8260A
Carbon tetrachloride	85	(62 - 125)	SW846 8260A
Chlorobenzene	87	(75 - 125)	SW846 8260A
Chloroethane	89	(50 - 125)	SW846 8260A

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Quanterra
Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: B7G180111 **Work Order #...:** CC0QX102 **Matrix.....:** WATER
LCS Lot-Sample#: B7G300000-184

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Chloroform	**86**	**(74 - 125)**	**SW846 8260A**
Chloromethane	**84**	**(50 - 125)**	**SW846 8260A**
cis-1,2-Dichloroethene	**92**	**(75 - 125)**	**SW846 8260A**
cis-1,3-Dichloropropene	**82**	**(74 - 125)**	**SW846 8260A**
Dibromochloromethane	**78**	**(73 - 125)**	**SW846 8260A**
Dibromomethane	**83**	**(69 - 127)**	**SW846 8260A**
Dichlorodifluoromethane	**80**	**(50 - 150)**	**SW846 8260A**
Ethylbenzene	**91**	**(75 - 125)**	**SW846 8260A**
Hexachlorobutadiene	**103**	**(75 - 125)**	**SW846 8260A**
Isopropylbenzene	**108**	**(75 - 125)**	**SW846 8260A**
m-Xylene & p-Xylene	**90**	**(75 - 125)**	**SW846 8260A**
Methylene chloride	**83**	**(75 - 125)**	**SW846 8260A**
n-Butylbenzene	**101**	**(75 - 125)**	**SW846 8260A**
n-Propylbenzene	**98**	**(75 - 125)**	**SW846 8260A**
Naphthalene	**79**	**(75 - 125)**	**SW846 8260A**
o-Xylene	**91**	**(75 - 125)**	**SW846 8260A**
p-Isopropyltoluene	**101**	**(75 - 125)**	**SW846 8260A**
sec-Butylbenzene	**99**	**(75 - 125)**	**SW846 8260A**
Styrene	**92**	**(75 - 125)**	**SW846 8260A**
Trichloroethene	**90**	**(71 - 125)**	**SW846 8260A**
Tetrachloroethene	**91**	**(71 - 125)**	**SW846 8260A**
Toluene	**92**	**(74 - 125)**	**SW846 8260A**
trans-1,2-Dichloroethene	**86**	**(75 - 125)**	**SW846 8260A**
trans-1,3-Dichloropropene	**76**	**(66 - 125)**	**SW846 8260A**
Trichlorofluoromethane	**87**	**(50 - 125)**	**SW846 8260A**
Vinyl chloride	**87**	**(46 - 134)**	**SW846 8260A**
tert-Butylbenzene	**99**	**(75 - 125)**	**SW846 8260A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	102	(75 - 125)
4-Bromofluorobenzene	98	(75 - 125)
1,2-Dichloroethane-d4	99	(62 - 139)
Dibromofluoromethane	97	(75 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: B7G180111 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: B7G240000-191 Prep Batch #...: 7205191							
Mercury	0.0050	0.0051	mg/L	103	SW846 7470A	07/24/97	CAW13102
		Dilution Factor: 1			Instrument ID..: CV	Analyst ID.....: 001702	
		Analysis Time..: 20:54					
LCS Lot-Sample#: B7G240000-193 Prep Batch #...: 7205193							
Copper	1.0	1.0	mg/L	104	SW846 6010A	07/24-07/25/97	CAW1810R
		Dilution Factor: 1			Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50					
Iron	10.0	10.6	mg/L	106	SW846 6010A	07/24-07/25/97	CAW1810T
		Dilution Factor: 1			Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50					
Potassium	10.0	10.2	mg/L	102	SW846 6010A	07/24-07/25/97	CAW1810U
		Dilution Factor: 1			Instrument ID..: P1	Analyst ID.....: 001863	
		Analysis Time..: 10:28					
Magnesium	10.0	10.2	mg/L	102	SW846 6010A	07/24-07/25/97	CAW1810V
		Dilution Factor: 1			Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50					
Manganese	1.0	1.0	mg/L	105	SW846 6010A	07/24-07/25/97	CAW1810W
		Dilution Factor: 1			Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50					
Molybdenum	1.0	1.0	mg/L	101	SW846 6010A	07/24-07/25/97	CAW1810X
		Dilution Factor: 1			Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50					
Aluminum	10.0	10.1	mg/L	101	SW846 6010A	07/24-07/25/97	CAW1811A
		Dilution Factor: 1			Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50					
Barium	1.0	1.0	mg/L	104	SW846 6010A	07/24-07/25/97	CAW1811C
		Dilution Factor: 1			Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50					
Beryllium	1.0	1.0	mg/L	103	SW846 6010A	07/24-07/25/97	CAW1811D
		Dilution Factor: 1			Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50					

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Quanterra Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: B7G180111 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Calcium	10.0	10.3	mg/L	103	SW846 6010A	07/24-07/25/97	CAW1811E
		Dilution Factor: 1		Instrument ID..: P2		Analyst ID.....: 001863	
		Analysis Time..: 12:50					
Cadmium	1.0	1.0	mg/L	103	SW846 6010A	07/24-07/25/97	CAW1811F
		Dilution Factor: 1		Instrument ID..: P2		Analyst ID.....: 001863	
		Analysis Time..: 12:50					
Cobalt	1.0	1.0	mg/L	104	SW846 6010A	07/24-07/25/97	CAW1811G
		Dilution Factor: 1		Instrument ID..: P2		Analyst ID.....: 001863	
		Analysis Time..: 12:50					
Chromium	1.0	1.0	mg/L	102	SW846 6010A	07/24-07/25/97	CAW1811H
		Dilution Factor: 1		Instrument ID..: P2		Analyst ID.....: 001863	
		Analysis Time..: 12:50					
Silver	0.0015	0.0015	mg/L	99	SW846 7761	07/24-08/11/97	CAW1811K
		Dilution Factor: 1		Instrument ID..: F1		Analyst ID.....: 001863	
		Analysis Time..: 09:30					
Sodium	10.0	10.1	mg/L	101	SW846 6010A	07/24-07/25/97	CAW18110
		Dilution Factor: 1		Instrument ID..: P1		Analyst ID.....: 001863	
		Analysis Time..: 10:28					
Nickel	1.0	1.1	mg/L	106	SW846 6010A	07/24-07/25/97	CAW18111
		Dilution Factor: 1		Instrument ID..: P2		Analyst ID.....: 001863	
		Analysis Time..: 12:50					
Vanadium	1.0	1.0	mg/L	104	SW846 6010A	07/24-07/25/97	CAW18112
		Dilution Factor: 1		Instrument ID..: P2		Analyst ID.....: 001863	
		Analysis Time..: 12:50					
Zinc	1.0	1.1	mg/L	109	SW846 6010A	07/24-07/31/97	CAW18113
		Dilution Factor: 1		Instrument ID..: P2		Analyst ID.....: 001702	
		Analysis Time..: 19:55					
Antimony	1.0	1.1	mg/L	106	SW846 6010A	07/24-07/31/97	CAW18114
		Dilution Factor: 1		Instrument ID..: P2		Analyst ID.....: 001702	
		Analysis Time..: 19:55					
Arsenic	1.0	1.0	mg/L	103	SW846 6010A	07/24-07/25/97	CAW18115
		Dilution Factor: 1		Instrument ID..: P2		Analyst ID.....: 001863	
		Analysis Time..: 12:50					

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Quanterra
Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: B7G180111 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Lead	1.0	1.0	mg/L	103	SW846 6010A	07/24-07/25/97	CAW18116
		Dilution Factor: 1		Instrument ID..: P2		Analyst ID.....: 001863	
		Analysis Time..: 12:50					
Selenium	1.0	1.0	mg/L	100	SW846 6010A	07/24-07/25/97	CAW18117
		Dilution Factor: 1		Instrument ID..: P2		Analyst ID.....: 001863	
		Analysis Time..: 12:50					
Thallium	0.030	0.030	mg/L	101	SW846 7841	07/24/97	CAW18118
		Dilution Factor: 1		Instrument ID..: F1		Analyst ID.....: 001702	
		Analysis Time..: 17:30					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: B7G180111 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: B7G240000-191 **Prep Batch #...:** 7205191					
Mercury	103	(77 - 120)	SW846 7470A	07/24/97	CAW13102
		Dilution Factor: 1	Instrument ID..: CV	Analyst ID.....: 001702	
		Analysis Time..: 20:54			
LCS Lot-Sample#: B7G240000-193 **Prep Batch #...:** 7205193					
Copper	104	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW1810R
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Iron	106	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW1810T
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Potassium	102	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW1810U
		Dilution Factor: 1	Instrument ID..: P1	Analyst ID.....: 001863	
		Analysis Time..: 10:28			
Magnesium	102	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW1810V
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Manganese	105	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW1810W
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Molybdenum	101	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW1810X
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Aluminum	101	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW1811A
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Barium	104	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW1811C
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Beryllium	103	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW1811D
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			

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Quanterra Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: B7G180111 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Calcium	103	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW1811E
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Cadmium	103	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW1811F
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Cobalt	104	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW1811G
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Chromium	102	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW1811H
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Silver	99	(80 - 120)	SW846 7761	07/24-08/11/97	CAW1811K
		Dilution Factor: 1	Instrument ID..: F1	Analyst ID.....: 001863	
		Analysis Time..: 09:30			
Sodium	101	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW18110
		Dilution Factor: 1	Instrument ID..: P1	Analyst ID.....: 001863	
		Analysis Time..: 10:28			
Nickel	106	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW18111
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Vanadium	104	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW18112
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Zinc	109	(80 - 120)	SW846 6010A	07/24-07/31/97	CAW18113
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001702	
		Analysis Time..: 19:55			
Antimony	106	(80 - 120)	SW846 6010A	07/24-07/31/97	CAW18114
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001702	
		Analysis Time..: 19:55			
Arsenic	103	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW18115
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			

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Quanterra Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: B7G180111 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Lead	103	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW18116
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Selenium	100	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW18117
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Thallium	101	(78 - 123)	SW846 7841	07/24/97	CAW18118
		Dilution Factor: 1	Instrument ID..: F1	Analyst ID.....: 001702	
		Analysis Time..: 17:30			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Lot-Sample #...: B7G180111 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH WO#:CAXX7102-LCS/CAXX7103-LCSD LCS Lot-Sample#: B7G290000-205								
	100	100	mg/L	100		MCAWW 310.1	07/25/97	7210205
	100	100	mg/L	100	0.0	MCAWW 310.1	07/25/97	7210205
Dilution Factor: 1								
Instrument ID..: NO TCLP Date.....: 090000								
Bromide WO#:CC1CA102-LCS/CC1CA103-LCSD LCS Lot-Sample#: B7G310000-150								
	2.0	2.0	mg/L	101		SW846 9056	07/30/97	7212150
	2.0	2.0	mg/L	101	0.39	SW846 9056	07/30/97	7212150
Dilution Factor: 1								
Instrument ID..: IC TCLP Date.....: 004003								
Bromide WO#:CC2C8102-LCS/CC2C8103-LCSD LCS Lot-Sample#: B7H010000-174								
	2.0	2.0	mg/L	100		SW846 9056	07/31/97	7213174
	2.0	2.0	mg/L	98	1.8	SW846 9056	07/31/97	7213174
Dilution Factor: 1								
Instrument ID..: IC TCLP Date.....: 004003								
Chloride WO#:CC1CN102-LCS/CC1CN103-LCSD LCS Lot-Sample#: B7G310000-154								
	5.0	5.3	mg/L	105		SW846 9056	07/30/97	7212154
	5.0	4.8	mg/L	97	8.7	SW846 9056	07/30/97	7212154
Dilution Factor: 1								
Instrument ID..: IC TCLP Date.....: 004003								
Chloride WO#:CC2C1102-LCS/CC2C1103-LCSD LCS Lot-Sample#: B7H010000-173								
	5.0	4.8	mg/L	95		SW846 9056	07/31/97	7213173
	5.0	4.8	mg/L	96	1.0	SW846 9056	07/31/97	7213173
Dilution Factor: 1								
Instrument ID..: IC TCLP Date.....: 004003								
Sulfate WO#:CC1CV102-LCS/CC1CV103-LCSD LCS Lot-Sample#: B7G310000-157								
	5.0	4.8	mg/L	95		SW846 9056	07/30/97	7212157
	5.0	4.9	mg/L	97	2.1	SW846 9056	07/30/97	7212157
Dilution Factor: 1								
Instrument ID..: IC TCLP Date.....: 004003								
Sulfate WO#:CC2CC102-LCS/CC2CC103-LCSD LCS Lot-Sample#: B7H010000-175								
	5.0	4.9	mg/L	99		SW846 9056	07/31/97	7213175
	5.0	5.0	mg/L	101	1.9	SW846 9056	07/31/97	7213175
Dilution Factor: 1								
Instrument ID..: IC TCLP Date.....: 004003								

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Quanterra Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Lot-Sample #...: B7G180111 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon		WO#:CC2EA102-LCS/CC2EA103-LCSD				LCS	Lot-Sample#: B7H010000-183	
	5	5	mg/L	102		SW846 9060	07/31/97	7213183
	5	5	mg/L	101	0.87	SW846 9060	07/31/97	7213183
		Dilution Factor: 1						
				Instrument ID..: TOC			TCLP Date.....: 004003	
Total Organic Carbon		WO#:CC2EG102-LCS/CC2EG103-LCSD				LCS	Lot-Sample#: B7H010000-184	
	5	5	mg/L	101		SW846 9060	07/30/97	7213184
	5	5	mg/L	100	1.4	SW846 9060	07/30/97	7213184
		Dilution Factor: 1						
				Instrument ID..: TOC			TCLP Date.....: 004003	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Lot-Sample #...: B7G180111 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH WO#:CAXX7102-LCS/CAXX7103-LCSD LCS Lot-Sample#: B7G290000-205							
	100	(90 - 110)			MCAWW 310.1	07/25/97	7210205
	100	(90 - 110)	0.0	(0-17)	MCAWW 310.1	07/25/97	7210205
		Dilution Factor: 1					
					Instrument ID..: NO	TCLP Date.....: 090000	
Bromide WO#:CC1CA102-LCS/CC1CA103-LCSD LCS Lot-Sample#: B7G310000-150							
	101	(86 - 112)			SW846 9056	07/30/97	7212150
	101	(86 - 112)	0.39	(0-20)	SW846 9056	07/30/97	7212150
		Dilution Factor: 1					
					Instrument ID..: IC	TCLP Date.....: 004003	
Bromide WO#:CC2C8102-LCS/CC2C8103-LCSD LCS Lot-Sample#: B7H010000-174							
	100	(86 - 112)			SW846 9056	07/31/97	7213174
	98	(86 - 112)	1.8	(0-20)	SW846 9056	07/31/97	7213174
		Dilution Factor: 1					
					Instrument ID..: IC	TCLP Date.....: 004003	
Chloride WO#:CC1CN102-LCS/CC1CN103-LCSD LCS Lot-Sample#: B7G310000-154							
	105	(91 - 111)			SW846 9056	07/30/97	7212154
	97	(91 - 111)	8.7	(0-20)	SW846 9056	07/30/97	7212154
		Dilution Factor: 1					
					Instrument ID..: IC	TCLP Date.....: 004003	
Chloride WO#:CC2C1102-LCS/CC2C1103-LCSD LCS Lot-Sample#: B7H010000-173							
	95	(91 - 111)			SW846 9056	07/31/97	7213173
	96	(91 - 111)	1.0	(0-20)	SW846 9056	07/31/97	7213173
		Dilution Factor: 1					
					Instrument ID..: IC	TCLP Date.....: 004003	
Sulfate WO#:CC1CV102-LCS/CC1CV103-LCSD LCS Lot-Sample#: B7G310000-157							
	95	(88 - 115)			SW846 9056	07/30/97	7212157
	97	(88 - 115)	2.1	(0-20)	SW846 9056	07/30/97	7212157
		Dilution Factor: 1					
					Instrument ID..: IC	TCLP Date.....: 004003	
Sulfate WO#:CC2CC102-LCS/CC2CC103-LCSD LCS Lot-Sample#: B7H010000-175							
	99	(88 - 115)			SW846 9056	07/31/97	7213175
	101	(88 - 115)	1.9	(0-20)	SW846 9056	07/31/97	7213175
		Dilution Factor: 1					
					Instrument ID..: IC	TCLP Date.....: 004003	

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Quanterra Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Lot-Sample #...: B7G180111 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon		WO#:CC2EA102-LCS/CC2EA103-LCSD				LCS Lot-Sample#: B7H010000-183	
	102	(92 - 117)			SW846 9060	07/31/97	7213183
	101	(92 - 117)	0.87	(0-20)	SW846 9060	07/31/97	7213183
		Dilution Factor: 1					
					Instrument ID..: TOC	TCLP Date.....: 004003	
Total Organic Carbon		WO#:CC2EG102-LCS/CC2EG103-LCSD				LCS Lot-Sample#: B7H010000-184	
	101	(92 - 117)			SW846 9060	07/30/97	7213184
	100	(92 - 117)	1.4	(0-20)	SW846 9060	07/30/97	7213184
		Dilution Factor: 1					
					Instrument ID..: TOC	TCLP Date.....: 004003	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra
Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Client Lot #...: B7G180111 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Dissolved Solids			Work Order #: CC0RH102		LCS Lot-Sample#: B7G300000-188		
	730	760	mg/L	103	MCAWW 160.1	07/29-07/30/97	7211188

Dilution Factor: 1 Instrument ID..: NA Analyst ID.....: 090000
Analysis Time..: 12:30

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: B7G180111 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Dissolved Solids		Work Order #: CC0RH102	LCS Lot-Sample#: B7G300000-188		
	103	(77 - 115)	MCAWW 160.1	07/29-07/30/97	7211188

Dilution Factor: 1 Instrument ID..: NA Analyst ID.....: 090000
Analysis Time..: 12:30

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra Environmental Services

MATRIX SPIKE SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: B7G180111 **Work Order #...:** CAQC110T-MS **Matrix.....:** WG
MS Lot-Sample #: B7G180111-003 CAQC110U-MSD
Date Sampled...: 07/15/97 **Date Received..:** 07/17/97
Prep Date.....: 07/24/97 **Analysis Date..:** 07/24/97
Prep Batch #...: 7210204 **Analysis Time..:** 22:04
Dilution Factor: 1 **Analyst ID.....:** 074741 **Instrument ID..:** K1A

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Methane	0.25	34	30 F	ug/L	87		EPA-9 RSK-175
	0.25	34	31 F	ug/L	91	5.0	EPA-9 RSK-175
Ethane	0.13	63	55 F	ug/L	88		EPA-9 RSK-175
	0.13	63	57 F	ug/L	91	3.4	EPA-9 RSK-175
Ethene	0.14	59	53 F	ug/L	88		EPA-9 RSK-175
	0.14	59	54 F	ug/L	91	3.0	EPA-9 RSK-175

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra
Environmental Services

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...:	B7G180111	**Work Order #...:**	CAQC110T-MS CAQC110U-MSD	**Matrix.....:**	WG
MS Lot-Sample #:	B7G180111-003				
Date Sampled...:	07/15/97	**Date Received..:**	07/17/97		
Prep Date.....:	07/24/97	**Analysis Date..:**	07/24/97		
Prep Batch #...:	7210204	**Analysis Time..:**	22:04		
Dilution Factor:	1	**Analyst ID.....:**	074741	**Instrument ID..:**	K1A

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Methane	87 F	(70 - 130)			EPA-9 RSK-175
	91 F	(70 - 130)	5.0	(0-30)	EPA-9 RSK-175
Ethane	88 F	(70 - 130)			EPA-9 RSK-175
	91 F	(70 - 130)	3.4	(0-30)	EPA-9 RSK-175
Ethene	88 F	(70 - 130)			EPA-9 RSK-175
	91 F	(70 - 130)	3.0	(0-30)	EPA-9 RSK-175

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: B7G180111
MS Lot-Sample #: B7G180111-003
Date Sampled...: 07/15/97
Prep Date.....: 07/23/97
Prep Batch #...: 7208107
Dilution Factor: 1

Work Order #...: CAQC1108-MS
CAQC1109-MSD
Date Received..: 07/17/97
Analysis Date..: 07/23/97
Analysis Time..: 16:16
Analyst ID.....: 007084

Matrix.....: WG
Instrument ID..: VO4

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
1,1,1,2-Tetrachloroethane	ND	5.0	4.2	ug/L	85		SW846 8260A
	ND	5.0	4.4	ug/L	88	3.7	SW846 8260A
1,1,1-Trichloroethane	ND	5.0	4.5	ug/L	91		SW846 8260A
	ND	5.0	4.4	ug/L	89	1.9	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	5.0	5.0	ug/L	99		SW846 8260A
	ND	5.0	4.4	ug/L	89	11	SW846 8260A
1,1,2-Trichloroethane	ND	5.0	4.4	ug/L	88		SW846 8260A
	ND	5.0	4.3	ug/L	87	1.9	SW846 8260A
1,1-Dichloroethane	ND	5.0	4.5	ug/L	90		SW846 8260A
	ND	5.0	4.7	ug/L	93	3.1	SW846 8260A
1,1-Dichloroethene	ND	5.0	4.1	ug/L	81		SW846 8260A
	ND	5.0	4.1	ug/L	83	1.8	SW846 8260A
1,1-Dichloropropene	ND	5.0	4.9	ug/L	98		SW846 8260A
	ND	5.0	4.9	ug/L	98	0.04	SW846 8260A
1,2,3-Trichlorobenzene	ND	5.0	4.8	ug/L	95		SW846 8260A
	ND	5.0	5.2	ug/L	104	9.5	SW846 8260A
1,2,3-Trichloropropane	ND	5.0	4.8	ug/L	96		SW846 8260A
	ND	5.0	4.1	ug/L	83	15	SW846 8260A
1,2,4-Trichlorobenzene	ND	5.0	4.7	ug/L	94		SW846 8260A
	ND	5.0	5.2	ug/L	103	9.5	SW846 8260A
1,2,4-Trimethylbenzene	ND	5.0	5.2	ug/L	105		SW846 8260A
	ND	5.0	5.2	ug/L	104	0.68	SW846 8260A
1,2-Dichloroethane	ND	5.0	3.9	ug/L	78		SW846 8260A
	ND	5.0	4.5	ug/L	89	13	SW846 8260A
1,2-Dichlorobenzene	ND	5.0	4.5	ug/L	91		SW846 8260A
	ND	5.0	4.8	ug/L	95	4.4	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	4.4	ug/L	87		SW846 8260A
	ND	5.0	4.7	ug/L	93	6.3	SW846 8260A
1,2-Dichloropropane	ND	5.0	4.0	ug/L	81		SW846 8260A
	ND	5.0	4.5	ug/L	90	11	SW846 8260A
1,2-Dibromoethane (EDB)	ND	5.0	4.2	ug/L	85		SW846 8260A
	ND	5.0	4.3	ug/L	86	1.5	SW846 8260A
1,3,5-Trimethylbenzene	ND	5.0	5.3	ug/L	105		SW846 8260A
	ND	5.0	5.0	ug/L	100	4.5	SW846 8260A
1,3-Dichlorobenzene	ND	5.0	4.7	ug/L	93		SW846 8260A
	ND	5.0	4.7	ug/L	94	0.38	SW846 8260A
1,3-Dichloropropane	ND	5.0	4.2	ug/L	83		SW846 8260A
	ND	5.0	4.2	ug/L	84	1.2	SW846 8260A

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Quanterra Environmental Services

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: B7G180111 Work Order #...: CAQC1108-MS Matrix.....: WG
MS Lot-Sample #: B7G180111-003 CAQC1109-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
1,4-Dichlorobenzene	ND	5.0	4.4	ug/L	89		SW846 8260A
	ND	5.0	4.5	ug/L	90	1.8	SW846 8260A
1-Chlorohexane	ND	5.0	5.4	ug/L	108		SW846 8260A
	ND	5.0	5.2	ug/L	104	3.6	SW846 8260A
2,2-Dichloropropane	ND	5.0	4.8	ug/L	97		SW846 8260A
	ND	5.0	4.9	ug/L	99	2.2	SW846 8260A
2-Chlorotoluene	ND	5.0	5.0	ug/L	101		SW846 8260A
	ND	5.0	4.7	ug/L	94	6.7	SW846 8260A
4-Chlorotoluene	ND	5.0	5.0	ug/L	100		SW846 8260A
	ND	5.0	4.9	ug/L	99	1.4	SW846 8260A
Benzene	ND	5.0	4.6	ug/L	93		SW846 8260A
	ND	5.0	4.7	ug/L	94	1.4	SW846 8260A
Bromobenzene	ND	5.0	4.6	ug/L	93		SW846 8260A
	ND	5.0	4.7	ug/L	93	0.36	SW846 8260A
Bromochloromethane	ND	5.0	3.9	ug/L	79		SW846 8260A
	ND	5.0	4.6	ug/L	92	16	SW846 8260A
Bromodichloromethane	ND	5.0	3.8	ug/L	77		SW846 8260A
	ND	5.0	4.3	ug/L	86	12	SW846 8260A
Bromoform	ND	5.0	4.4	ug/L	88		SW846 8260A
	ND	5.0	4.1	ug/L	81	7.8	SW846 8260A
Bromomethane	ND	5.0	3.7	ug/L	74		SW846 8260A
	ND	5.0	3.9	ug/L	77	4.2	SW846 8260A
Carbon tetrachloride	ND	5.0	4.3	ug/L	87		SW846 8260A
	ND	5.0	4.3	ug/L	87	0.18	SW846 8260A
Chlorobenzene	ND	5.0	4.5	ug/L	90		SW846 8260A
	ND	5.0	4.6	ug/L	92	2.3	SW846 8260A
Chloroethane	ND	5.0	4.6	ug/L	92		SW846 8260A
	ND	5.0	4.7	ug/L	94	2.4	SW846 8260A
Chloroform	ND	5.0	4.3	ug/L	86		SW846 8260A
	ND	5.0	4.5	ug/L	90	5.1	SW846 8260A
Chloromethane	ND	5.0	5.1	ug/L	101		SW846 8260A
	ND	5.0	5.0	ug/L	100	1.0	SW846 8260A
cis-1,2-Dichloroethene	ND	5.0	4.4	ug/L	89		SW846 8260A
	ND	5.0	4.7	ug/L	94	5.2	SW846 8260A
cis-1,3-Dichloropropene	ND	5.0	3.8	ug/L	75		SW846 8260A
	ND	5.0	4.1	ug/L	83	9.5	SW846 8260A
Dibromochloromethane	ND	5.0	4.3	ug/L	86		SW846 8260A
	ND	5.0	4.2	ug/L	84	2.8	SW846 8260A
Dibromomethane	ND	5.0	3.7	ug/L	74		SW846 8260A
	ND	5.0	4.3	ug/L	85	14	SW846 8260A
Dichlorodifluoromethane	ND	5.0	4.2	ug/L	85		SW846 8260A
	ND	5.0	4.3	ug/L	85	0.49	SW846 8260A
Ethylbenzene	ND	5.0	5.2	ug/L	104		SW846 8260A
	ND	5.0	4.9	ug/L	99	5.5	SW846 8260A

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Quanterra Environmental Services

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: B7G180111 Work Order #...: CAQC1108-MS Matrix.....: WG
MS Lot-Sample #: B7G180111-003 CAQC1109-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Hexachlorobutadiene	ND	5.0	5.6	ug/L	113		SW846 8260A
	ND	5.0	5.7	ug/L	115	1.8	SW846 8260A
Isopropylbenzene	ND	5.0	6.4 a	ug/L	127		SW846 8260A
	ND	5.0	5.8	ug/L	115	9.5	SW846 8260A
m-Xylene & p-Xylene	ND	10	11	ug/L	105		SW846 8260A
	ND	10	9.8	ug/L	98	7.4	SW846 8260A
Methylene chloride	ND	5.0	4.3	ug/L	86		SW846 8260A
	ND	5.0	4.7	ug/L	93	8.4	SW846 8260A
n-Butylbenzene	ND	5.0	5.7	ug/L	115		SW846 8260A
	ND	5.0	5.4	ug/L	108	6.3	SW846 8260A
n-Propylbenzene	ND	5.0	5.5	ug/L	110		SW846 8260A
	ND	5.0	5.2	ug/L	103	6.6	SW846 8260A
Naphthalene	ND	5.0	4.9	ug/L	99		SW846 8260A
	ND	5.0	6.1 p	ug/L	123	22	SW846 8260A
o-Xylene	ND	5.0	5.3	ug/L	107		SW846 8260A
	ND	5.0	4.9	ug/L	98	8.4	SW846 8260A
p-Isopropyltoluene	ND	5.0	5.6	ug/L	113		SW846 8260A
	ND	5.0	5.4	ug/L	108	4.2	SW846 8260A
sec-Butylbenzene	ND	5.0	5.5	ug/L	110		SW846 8260A
	ND	5.0	5.3	ug/L	106	4.0	SW846 8260A
Styrene	ND	5.0	5.2	ug/L	104		SW846 8260A
	ND	5.0	5.0	ug/L	100	3.8	SW846 8260A
Trichloroethene	ND	5.0	4.5	ug/L	90		SW846 8260A
	ND	5.0	4.6	ug/L	93	3.1	SW846 8260A
tert-Butylbenzene	ND	5.0	5.5	ug/L	110		SW846 8260A
	ND	5.0	5.1	ug/L	102	7.0	SW846 8260A
Tetrachloroethene	ND	5.0	5.4	ug/L	108		SW846 8260A
	ND	5.0	5.0	ug/L	99	8.8	SW846 8260A
Toluene	ND	5.0	5.3	ug/L	105		SW846 8260A
	ND	5.0	4.8	ug/L	96	8.6	SW846 8260A
trans-1,2-Dichloroethene	ND	5.0	4.5	ug/L	91		SW846 8260A
	ND	5.0	4.4	ug/L	88	3.7	SW846 8260A
trans-1,3-Dichloropropene	ND	5.0	3.9	ug/L	79		SW846 8260A
	ND	5.0	3.9	ug/L	78	1.1	SW846 8260A
Trichlorofluoromethane	ND	5.0	4.7	ug/L	93		SW846 8260A
	ND	5.0	4.6	ug/L	91	2.2	SW846 8260A
Vinyl chloride	ND	5.0	4.8	ug/L	97		SW846 8260A
	ND	5.0	4.8	ug/L	96	0.97	SW846 8260A
Dichloropropene		10	7.4 a	ug/L	74		SW846 8260A
		10	8.1	ug/L	81	9.4	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	113	(75 - 125)
	103	(75 - 125)

Quanterra Environmental Services

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: B7G180111 **Work Order #...:** CAQC1108-MS **Matrix.....:** WG
MS Lot-Sample #: B7G180111-003 CAQC1109-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	103	(75 - 125)
	99	(75 - 125)
1,2-Dichloroethane-d4	83	(62 - 139)
	95	(62 - 139)
Dibromofluoromethane	87	(75 - 125)
	95	(75 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

p Relative percent difference (RPD) is outside stated control limits.

n Spiked analyte recovery is outside stated control limits.

Quanterra Environmental Services

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: B7G180111
MS Lot-Sample #: B7G180111-003
Date Sampled...: 07/15/97
Prep Date.....: 07/23/97
Prep Batch #...: 7208107
Dilution Factor: 1

Work Order #...: CAQC1108-MS
CAQC1109-MSD
Date Received..: 07/17/97
Analysis Date..: 07/23/97
Analysis Time..: 16:16
Analyst ID.....: 007084

Matrix.....: WG
Instrument ID..: VO4

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1,1,2-Tetrachloroethane	85	(72 - 125)			SW846 8260A
	88	(72 - 125)	3.7	(0-20)	SW846 8260A
1,1,1-Trichloroethane	91	(75 - 125)			SW846 8260A
	89	(75 - 125)	1.9	(0-20)	SW846 8260A
1,1,2,2-Tetrachloroethane	99	(74 - 125)			SW846 8260A
	89	(74 - 125)	11	(0-20)	SW846 8260A
1,1,2-Trichloroethane	88	(75 - 127)			SW846 8260A
	87	(75 - 127)	1.9	(0-20)	SW846 8260A
1,1-Dichloroethane	90	(72 - 125)			SW846 8260A
	93	(72 - 125)	3.1	(0-20)	SW846 8260A
1,1-Dichloroethene	81	(75 - 125)			SW846 8260A
	83	(75 - 125)	1.8	(0-20)	SW846 8260A
1,1-Dichloropropene	98	(75 - 125)			SW846 8260A
	98	(75 - 125)	0.04	(0-20)	SW846 8260A
1,2,3-Trichlorobenzene	95	(75 - 137)			SW846 8260A
	104	(75 - 137)	9.5	(0-20)	SW846 8260A
1,2,3-Trichloropropane	96	(75 - 125)			SW846 8260A
	83	(75 - 125)	15	(0-20)	SW846 8260A
1,2,4-Trichlorobenzene	94	(75 - 135)			SW846 8260A
	103	(75 - 135)	9.5	(0-20)	SW846 8260A
1,2,4-Trimethylbenzene	105	(75 - 125)			SW846 8260A
	104	(75 - 125)	0.68	(0-20)	SW846 8260A
1,2-Dichloroethane	78	(68 - 127)			SW846 8260A
	89	(68 - 127)	13	(0-20)	SW846 8260A
1,2-Dichlorobenzene	91	(75 - 125)			SW846 8260A
	95	(75 - 125)	4.4	(0-20)	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	87	(59 - 125)			SW846 8260A
	93	(59 - 125)	6.3	(0-20)	SW846 8260A
1,2-Dichloropropane	81	(70 - 125)			SW846 8260A
	90	(70 - 125)	11	(0-20)	SW846 8260A
1,2-Dibromoethane (EDB)	85	(75 - 125)			SW846 8260A
	86	(75 - 125)	1.5	(0-20)	SW846 8260A
1,3,5-Trimethylbenzene	105	(72 - 112)			SW846 8260A
	100	(72 - 112)	4.5	(0-20)	SW846 8260A
1,3-Dichlorobenzene	93	(75 - 125)			SW846 8260A
	94	(75 - 125)	0.38	(0-20)	SW846 8260A
1,3-Dichloropropane	83	(75 - 125)			SW846 8260A
	84	(75 - 125)	1.2	(0-20)	SW846 8260A

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Quanterra Environmental Services

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: B7G180111 Work Order #...: CAQC1108-MS Matrix.....: WG
MS Lot-Sample #: B7G180111-003 CAQC1109-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,4-Dichlorobenzene	89	(75 - 125)			SW846 8260A
	90	(75 - 125)	1.8	(0-20)	SW846 8260A
1-Chlorohexane	108	(75 - 125)			SW846 8260A
	104	(75 - 125)	3.6	(0-20)	SW846 8260A
2,2-Dichloropropane	97	(50 - 125)			SW846 8260A
	99	(50 - 125)	2.2	(0-20)	SW846 8260A
2-Chlorotoluene	101	(73 - 125)			SW846 8260A
	94	(73 - 125)	6.7	(0-20)	SW846 8260A
4-Chlorotoluene	100	(74 - 125)			SW846 8260A
	99	(74 - 125)	1.4	(0-20)	SW846 8260A
Benzene	93	(75 - 125)			SW846 8260A
	94	(75 - 125)	1.4	(0-20)	SW846 8260A
Bromobenzene	93	(75 - 125)			SW846 8260A
	93	(75 - 125)	0.36	(0-20)	SW846 8260A
Bromochloromethane	79	(73 - 125)			SW846 8260A
	92	(73 - 125)	16	(0-20)	SW846 8260A
Bromodichloromethane	77	(75 - 125)			SW846 8260A
	86	(75 - 125)	12	(0-20)	SW846 8260A
Bromoform	88	(75 - 125)			SW846 8260A
	81	(75 - 125)	7.8	(0-20)	SW846 8260A
Bromomethane	74	(50 - 125)			SW846 8260A
	77	(50 - 125)	4.2	(0-20)	SW846 8260A
Carbon tetrachloride	87	(62 - 125)			SW846 8260A
	87	(62 - 125)	0.18	(0-20)	SW846 8260A
Chlorobenzene	90	(75 - 125)			SW846 8260A
	92	(75 - 125)	2.3	(0-20)	SW846 8260A
Chloroethane	92	(50 - 125)			SW846 8260A
	94	(50 - 125)	2.4	(0-20)	SW846 8260A
Chloroform	86	(74 - 125)			SW846 8260A
	90	(74 - 125)	5.1	(0-20)	SW846 8260A
Chloromethane	101	(50 - 125)			SW846 8260A
	100	(50 - 125)	1.0	(0-20)	SW846 8260A
cis-1,2-Dichloroethene	89	(75 - 125)			SW846 8260A
	94	(75 - 125)	5.2	(0-20)	SW846 8260A
cis-1,3-Dichloropropene	75	(74 - 125)			SW846 8260A
	83	(74 - 125)	9.5	(0-20)	SW846 8260A
Dibromochloromethane	86	(73 - 125)			SW846 8260A
	84	(73 - 125)	2.8	(0-20)	SW846 8260A
Dibromomethane	74	(69 - 127)			SW846 8260A
	85	(69 - 127)	14	(0-20)	SW846 8260A
Dichlorodifluoromethane	85	(50 - 150)			SW846 8260A
	85	(50 - 150)	0.49	(0-20)	SW846 8260A
Ethylbenzene	104	(75 - 125)			SW846 8260A
	99	(75 - 125)	5.5	(0-20)	SW846 8260A

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Quanterra Environmental Services

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: B7G180111 Work Order #...: CAQC1108-MS Matrix.....: WG
MS Lot-Sample #: B7G180111-003 CAQC1109-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Hexachlorobutadiene	113	(75 - 125)			SW846 8260A
	115	(75 - 125)	1.8	(0-20)	SW846 8260A
Isopropylbenzene	127 a	(75 - 125)			SW846 8260A
	115	(75 - 125)	9.5	(0-20)	SW846 8260A
m-Xylene & p-Xylene	105	(75 - 125)			SW846 8260A
	98	(75 - 125)	7.4	(0-20)	SW846 8260A
Methylene chloride	86	(75 - 125)			SW846 8260A
	93	(75 - 125)	8.4	(0-20)	SW846 8260A
n-Butylbenzene	115	(75 - 125)			SW846 8260A
	108	(75 - 125)	6.3	(0-20)	SW846 8260A
n-Propylbenzene	110	(75 - 125)			SW846 8260A
	103	(75 - 125)	6.6	(0-20)	SW846 8260A
Naphthalene	99	(75 - 125)			SW846 8260A
	123 p	(75 - 125)	22	(0-20)	SW846 8260A
o-Xylene	107	(75 - 125)			SW846 8260A
	98	(75 - 125)	8.4	(0-20)	SW846 8260A
p-Isopropyltoluene	113	(75 - 125)			SW846 8260A
	108	(75 - 125)	4.2	(0-20)	SW846 8260A
sec-Butylbenzene	110	(75 - 125)			SW846 8260A
	106	(75 - 125)	4.0	(0-20)	SW846 8260A
Styrene	104	(75 - 125)			SW846 8260A
	100	(75 - 125)	3.8	(0-20)	SW846 8260A
Trichloroethene	90	(71 - 125)			SW846 8260A
	93	(71 - 125)	3.1	(0-20)	SW846 8260A
tert-Butylbenzene	110	(75 - 125)			SW846 8260A
	102	(75 - 125)	7.0	(0-20)	SW846 8260A
Tetrachloroethene	108	(71 - 125)			SW846 8260A
	99	(71 - 125)	8.8	(0-20)	SW846 8260A
Toluene	105	(74 - 125)			SW846 8260A
	96	(74 - 125)	8.6	(0-20)	SW846 8260A
trans-1,2-Dichloroethene	91	(75 - 125)			SW846 8260A
	88	(75 - 125)	3.7	(0-20)	SW846 8260A
trans-1,3-Dichloropropene	79	(66 - 125)			SW846 8260A
	78	(66 - 125)	1.1	(0-20)	SW846 8260A
Trichlorofluoromethane	93	(50 - 125)			SW846 8260A
	91	(50 - 125)	2.2	(0-20)	SW846 8260A
Vinyl chloride	97	(46 - 134)			SW846 8260A
	96	(46 - 134)	0.97	(0-20)	SW846 8260A
Dichloropropene	74 a	(75 - 125)			SW846 8260A
	81	(75 - 125)	9.4	(0-20)	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	113	(75 - 125)
	103	(75 - 125)

Quanterra
Environmental Services

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: B7G180111 **Work Order #...:** CAQC1108-MS **Matrix.....:** WG
MS Lot-Sample #: B7G180111-003 CAQC1109-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	103	(75 - 125)
	99	(75 - 125)
1,2-Dichloroethane-d4	83	(62 - 139)
	95	(62 - 139)
Dibromofluoromethane	87	(75 - 125)
	95	(75 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

p Relative percent difference (RPD) is outside stated control limits.

s Spiked analyte recovery is outside stated control limits.

Quanterra Environmental Services

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: B7G180111 Work Order #...: CAQDT102-MS Matrix.....: WG
MS Lot-Sample #: B7G180111-020 CAQDT103-MSD
Date Sampled...: 07/14/97 Date Received..: 07/17/97
Prep Date.....: 07/23/97 Analysis Date..: 07/24/97
Prep Batch #...: 7211177 Analysis Time..: 03:23
Dilution Factor: 50 Analyst ID.....: 007084 Instrument ID..: VO4

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
1,1,1,2-Tetrachloroethane	ND	250	220	ug/L	88		SW846 8260A
	ND	250	230	ug/L	90	2.3	SW846 8260A
1,1,1-Trichloroethane	ND	250	230	ug/L	92		SW846 8260A
	ND	250	220	ug/L	88	3.8	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	250	230	ug/L	93		SW846 8260A
	ND	250	230	ug/L	94	0.85	SW846 8260A
1,1,2-Trichloroethane	ND	250	240	ug/L	97		SW846 8260A
	ND	250	230	ug/L	91	6.8	SW846 8260A
1,1-Dichloroethane	ND	250	230	ug/L	94		SW846 8260A
	ND	250	230	ug/L	93	0.71	SW846 8260A
1,1-Dichloroethene	ND	250	210	ug/L	84		SW846 8260A
	ND	250	200	ug/L	79	6.0	SW846 8260A
1,1-Dichloropropene	ND	250	240	ug/L	98		SW846 8260A
	ND	250	230	ug/L	93	5.1	SW846 8260A
1,2,3-Trichlorobenzene	ND	250	230	ug/L	91		SW846 8260A
	ND	250	230	ug/L	93	1.7	SW846 8260A
1,2,3-Trichloropropane	ND	250	230	ug/L	93		SW846 8260A
	ND	250	230	ug/L	90	3.2	SW846 8260A
1,2,4-Trichlorobenzene	ND	250	230	ug/L	92		SW846 8260A
	ND	250	220	ug/L	89	2.9	SW846 8260A
1,2,4-Trimethylbenzene	ND	250	250	ug/L	101		SW846 8260A
	ND	250	250	ug/L	100	1.1	SW846 8260A
1,2-Dichloroethane	ND	250	250	ug/L	99		SW846 8260A
	ND	250	230	ug/L	92	6.5	SW846 8260A
1,2-Dichlorobenzene	ND	250	250	ug/L	99		SW846 8260A
	ND	250	250	ug/L	100	0.99	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	250	220	ug/L	89		SW846 8260A
	ND	250	230	ug/L	93	3.8	SW846 8260A
1,2-Dichloropropane	ND	250	240	ug/L	94		SW846 8260A
	ND	250	230	ug/L	91	3.0	SW846 8260A
1,2-Dibromoethane (EDB)	ND	250	210	ug/L	86		SW846 8260A
	ND	250	230	ug/L	92	6.7	SW846 8260A
1,3,5-Trimethylbenzene	ND	250	250	ug/L	100		SW846 8260A
	ND	250	250	ug/L	98	1.5	SW846 8260A
1,3-Dichlorobenzene	ND	250	240	ug/L	95		SW846 8260A
	ND	250	240	ug/L	95	0.54	SW846 8260A
1,3-Dichloropropane	ND	250	230	ug/L	92		SW846 8260A
	ND	250	220	ug/L	89	3.7	SW846 8260A

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Quanterra Environmental Services

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: B7G180111 **Work Order #...:** CAQDT102-MS **Matrix.....:** WG
MS Lot-Sample #: B7G180111-020 CAQDT103-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
1,4-Dichlorobenzene	ND	250	230	ug/L	94		SW846 8260A
	ND	250	230	ug/L	94	0.08	SW846 8260A
1-Chlorohexane	ND	250	240	ug/L	95		SW846 8260A
	ND	250	240	ug/L	98	2.3	SW846 8260A
2,2-Dichloropropane	ND	250	230	ug/L	93		SW846 8260A
	ND	250	220	ug/L	86	7.5	SW846 8260A
2-Chlorotoluene	ND	250	240	ug/L	94		SW846 8260A
	ND	250	240	ug/L	96	1.7	SW846 8260A
4-Chlorotoluene	ND	250	250	ug/L	98		SW846 8260A
	ND	250	250	ug/L	98	0.22	SW846 8260A
Benzene	ND	250	250	ug/L	98		SW846 8260A
	ND	250	240	ug/L	96	2.6	SW846 8260A
Bromobenzene	ND	250	240	ug/L	96		SW846 8260A
	ND	250	240	ug/L	97	1.0	SW846 8260A
Bromochloromethane	ND	250	250	ug/L	98		SW846 8260A
	ND	250	240	ug/L	97	0.92	SW846 8260A
Bromodichloromethane	ND	250	220	ug/L	89		SW846 8260A
	ND	250	220	ug/L	89	0.65	SW846 8260A
Bromoform	ND	250	210	ug/L	83		SW846 8260A
	ND	250	210	ug/L	85	2.2	SW846 8260A
Bromomethane	ND	250	200	ug/L	80		SW846 8260A
	ND	250	200	ug/L	78	2.6	SW846 8260A
Carbon tetrachloride	ND	250	220	ug/L	89		SW846 8260A
	ND	250	210	ug/L	86	3.2	SW846 8260A
Chlorobenzene	ND	250	240	ug/L	95		SW846 8260A
	ND	250	240	ug/L	96	1.5	SW846 8260A
Chloroethane	ND	250	230	ug/L	93		SW846 8260A
	ND	250	230	ug/L	92	0.92	SW846 8260A
Chloroform	ND	250	240	ug/L	95		SW846 8260A
	ND	250	240	ug/L	95	0.10	SW846 8260A
Chloromethane	ND	250	230	ug/L	91		SW846 8260A
	ND	250	220	ug/L	89	1.2	SW846 8260A
cis-1,2-Dichloroethene	370	250	660	ug/L	114		SW846 8260A
	370	250	650	ug/L	110	1.6	SW846 8260A
cis-1,3-Dichloropropene	ND	250	210	ug/L	85		SW846 8260A
	ND	250	210	ug/L	84	1.1	SW846 8260A
Dibromochloromethane	ND	250	220	ug/L	86		SW846 8260A
	ND	250	220	ug/L	88	2.6	SW846 8260A
Dibromomethane	ND	250	230	ug/L	93		SW846 8260A
	ND	250	220	ug/L	89	3.9	SW846 8260A
Dichlorodifluoromethane	ND	250	210	ug/L	84		SW846 8260A
	ND	250	190	ug/L	78	7.8	SW846 8260A
Ethylbenzene	ND	250	240	ug/L	96		SW846 8260A
	ND	250	250	ug/L	98	3.0	SW846 8260A

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Quanterra Environmental Services

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: B7G180111 Work Order #...: CAQDT102-MS Matrix.....: WG
MS Lot-Sample #: B7G180111-020 CAQDT103-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Hexachlorobutadiene	ND	250	220	ug/L	87		SW846 8260A
	ND	250	230	ug/L	93	6.3	SW846 8260A
Isopropylbenzene	ND	250	280	ug/L	111		SW846 8260A
	ND	250	280	ug/L	110	0.77	SW846 8260A
m-Xylene & p-Xylene	ND	500	480	ug/L	97		SW846 8260A
	ND	500	480	ug/L	96	0.43	SW846 8260A
Methylene chloride	ND	250	240	ug/L	94		SW846 8260A
	ND	250	220	ug/L	88	6.5	SW846 8260A
n-Butylbenzene	ND	250	250	ug/L	98		SW846 8260A
	ND	250	240	ug/L	96	2.8	SW846 8260A
n-Propylbenzene	ND	250	250	ug/L	100		SW846 8260A
	ND	250	250	ug/L	98	2.0	SW846 8260A
Naphthalene	ND	250	200	ug/L	79		SW846 8260A
	ND	250	210	ug/L	83	5.1	SW846 8260A
o-Xylene	ND	250	240	ug/L	96		SW846 8260A
	ND	250	240	ug/L	97	1.6	SW846 8260A
p-Isopropyltoluene	ND	250	260	ug/L	103		SW846 8260A
	ND	250	250	ug/L	101	2.4	SW846 8260A
sec-Butylbenzene	ND	250	240	ug/L	98		SW846 8260A
	ND	250	250	ug/L	99	1.1	SW846 8260A
Styrene	ND	250	250	ug/L	98		SW846 8260A
	ND	250	250	ug/L	100	1.9	SW846 8260A
Trichloroethene	130	250	370	ug/L	98		SW846 8260A
	130	250	360	ug/L	94	2.9	SW846 8260A
tert-Butylbenzene	ND	250	250	ug/L	99		SW846 8260A
	ND	250	280	ug/L	111	11	SW846 8260A
Tetrachloroethene	ND	250	240	ug/L	97		SW846 8260A
	ND	250	230	ug/L	93	4.6	SW846 8260A
Toluene	ND	250	240	ug/L	97		SW846 8260A
	ND	250	250	ug/L	98	1.3	SW846 8260A
trans-1,2-Dichloroethene	35	250	250	ug/L	87		SW846 8260A
	35	250	240	ug/L	84	3.4	SW846 8260A
trans-1,3-Dichloropropene	ND	250	200	ug/L	79		SW846 8260A
	ND	250	200	ug/L	80	0.89	SW846 8260A
Trichlorofluoromethane	ND	250	230	ug/L	91		SW846 8260A
	ND	250	220	ug/L	87	4.4	SW846 8260A
Vinyl chloride	16	250	250	ug/L	92		SW846 8260A
	16	250	250	ug/L	92	0.61	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	102	(75 - 125)
	105	(75 - 125)

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Quanterra
Environmental Services

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: B7G180111 **Work Order #...:** CAQDT102-MS **Matrix.....:** WG
MS Lot-Sample #: B7G180111-020 CAQDT103-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	100	(75 - 125)
	101	(75 - 125)
1,2-Dichloroethane-d4	102	(62 - 139)
	98	(62 - 139)
Dibromofluoromethane	99	(75 - 125)
	97	(75 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Quanterra Environmental Services

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: B7G180111 Work Order #...: CAQDT102-MS Matrix.....: WG
MS Lot-Sample #: B7G180111-020 CAQDT103-MSD
Date Sampled...: 07/14/97 Date Received..: 07/17/97
Prep Date.....: 07/23/97 Analysis Date..: 07/24/97
Prep Batch #...: 7211177 Analysis Time..: 03:23
Dilution Factor: 50 Analyst ID.....: 007084 Instrument ID..: VO4

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1,1,2-Tetrachloroethane	88	(72 - 125)			SW846 8260A
	90	(72 - 125)	2.3	(0-20)	SW846 8260A
1,1,1-Trichloroethane	92	(75 - 125)			SW846 8260A
	88	(75 - 125)	3.8	(0-20)	SW846 8260A
1,1,2,2-Tetrachloroethane	93	(74 - 125)			SW846 8260A
	94	(74 - 125)	0.85	(0-20)	SW846 8260A
1,1,2-Trichloroethane	97	(75 - 127)			SW846 8260A
	91	(75 - 127)	6.8	(0-20)	SW846 8260A
1,1-Dichloroethane	94	(72 - 125)			SW846 8260A
	93	(72 - 125)	0.71	(0-20)	SW846 8260A
1,1-Dichloroethene	84	(75 - 125)			SW846 8260A
	79	(75 - 125)	6.0	(0-20)	SW846 8260A
1,1-Dichloropropene	98	(75 - 125)			SW846 8260A
	93	(75 - 125)	5.1	(0-20)	SW846 8260A
1,2,3-Trichlorobenzene	91	(75 - 137)			SW846 8260A
	93	(75 - 137)	1.7	(0-20)	SW846 8260A
1,2,3-Trichloropropane	93	(75 - 125)			SW846 8260A
	90	(75 - 125)	3.2	(0-20)	SW846 8260A
1,2,4-Trichlorobenzene	92	(75 - 135)			SW846 8260A
	89	(75 - 135)	2.9	(0-20)	SW846 8260A
1,2,4-Trimethylbenzene	101	(75 - 125)			SW846 8260A
	100	(75 - 125)	1.1	(0-20)	SW846 8260A
1,2-Dichloroethane	99	(68 - 127)			SW846 8260A
	92	(68 - 127)	6.5	(0-20)	SW846 8260A
1,2-Dichlorobenzene	99	(75 - 125)			SW846 8260A
	100	(75 - 125)	0.99	(0-20)	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	89	(59 - 125)			SW846 8260A
	93	(59 - 125)	3.8	(0-20)	SW846 8260A
1,2-Dichloropropane	94	(70 - 125)			SW846 8260A
	91	(70 - 125)	3.0	(0-20)	SW846 8260A
1,2-Dibromoethane (EDB)	86	(75 - 125)			SW846 8260A
	92	(75 - 125)	6.7	(0-20)	SW846 8260A
1,3,5-Trimethylbenzene	100	(72 - 112)			SW846 8260A
	98	(72 - 112)	1.5	(0-20)	SW846 8260A
1,3-Dichlorobenzene	95	(75 - 125)			SW846 8260A
	95	(75 - 125)	0.54	(0-20)	SW846 8260A
1,3-Dichloropropane	92	(75 - 125)			SW846 8260A
	89	(75 - 125)	3.7	(0-20)	SW846 8260A

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Quanterra Environmental Services

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: B7G180111 Work Order #...: CAQDT102-MS Matrix.....: WG
MS Lot-Sample #: B7G180111-020 CAQDT103-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,4-Dichlorobenzene	94	(75 - 125)			SW846 8260A
	94	(75 - 125)	0.08	(0-20)	SW846 8260A
1-Chlorohexane	95	(75 - 125)			SW846 8260A
	98	(75 - 125)	2.3	(0-20)	SW846 8260A
2,2-Dichloropropane	93	(50 - 125)			SW846 8260A
	86	(50 - 125)	7.5	(0-20)	SW846 8260A
2-Chlorotoluene	94	(73 - 125)			SW846 8260A
	96	(73 - 125)	1.7	(0-20)	SW846 8260A
4-Chlorotoluene	98	(74 - 125)			SW846 8260A
	98	(74 - 125)	0.22	(0-20)	SW846 8260A
Benzene	98	(75 - 125)			SW846 8260A
	96	(75 - 125)	2.6	(0-20)	SW846 8260A
Bromobenzene	96	(75 - 125)			SW846 8260A
	97	(75 - 125)	1.0	(0-20)	SW846 8260A
Bromochloromethane	98	(73 - 125)			SW846 8260A
	97	(73 - 125)	0.92	(0-20)	SW846 8260A
Bromodichloromethane	89	(75 - 125)			SW846 8260A
	89	(75 - 125)	0.65	(0-20)	SW846 8260A
Bromoform	83	(75 - 125)			SW846 8260A
	85	(75 - 125)	2.2	(0-20)	SW846 8260A
Bromomethane	80	(50 - 125)			SW846 8260A
	78	(50 - 125)	2.6	(0-20)	SW846 8260A
Carbon tetrachloride	89	(62 - 125)			SW846 8260A
	86	(62 - 125)	3.2	(0-20)	SW846 8260A
Chlorobenzene	95	(75 - 125)			SW846 8260A
	96	(75 - 125)	1.5	(0-20)	SW846 8260A
Chloroethane	93	(50 - 125)			SW846 8260A
	92	(50 - 125)	0.92	(0-20)	SW846 8260A
Chloroform	95	(74 - 125)			SW846 8260A
	95	(74 - 125)	0.10	(0-20)	SW846 8260A
Chloromethane	91	(50 - 125)			SW846 8260A
	89	(50 - 125)	1.2	(0-20)	SW846 8260A
cis-1,2-Dichloroethene	114	(75 - 125)			SW846 8260A
	110	(75 - 125)	1.6	(0-20)	SW846 8260A
cis-1,3-Dichloropropene	85	(74 - 125)			SW846 8260A
	84	(74 - 125)	1.1	(0-20)	SW846 8260A
Dibromochloromethane	86	(73 - 125)			SW846 8260A
	88	(73 - 125)	2.6	(0-20)	SW846 8260A
Dibromomethane	93	(69 - 127)			SW846 8260A
	89	(69 - 127)	3.9	(0-20)	SW846 8260A
Dichlorodifluoromethane	84	(50 - 150)			SW846 8260A
	78	(50 - 150)	7.8	(0-20)	SW846 8260A
Ethylbenzene	96	(75 - 125)			SW846 8260A
	98	(75 - 125)	3.0	(0-20)	SW846 8260A

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Quanterra Environmental Services

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: B7G180111 Work Order #...: CAQDT102-MS Matrix.....: WG
MS Lot-Sample #: B7G180111-020 CAQDT103-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Hexachlorobutadiene	87	(75 - 125)			SW846 8260A
	93	(75 - 125)	6.3	(0-20)	SW846 8260A
Isopropylbenzene	111	(75 - 125)			SW846 8260A
	110	(75 - 125)	0.77	(0-20)	SW846 8260A
m-Xylene & p-Xylene	97	(75 - 125)			SW846 8260A
	96	(75 - 125)	0.43	(0-20)	SW846 8260A
Methylene chloride	94	(75 - 125)			SW846 8260A
	88	(75 - 125)	6.5	(0-20)	SW846 8260A
n-Butylbenzene	98	(75 - 125)			SW846 8260A
	96	(75 - 125)	2.8	(0-20)	SW846 8260A
n-Propylbenzene	100	(75 - 125)			SW846 8260A
	98	(75 - 125)	2.0	(0-20)	SW846 8260A
Naphthalene	79	(75 - 125)			SW846 8260A
	83	(75 - 125)	5.1	(0-20)	SW846 8260A
o-Xylene	96	(75 - 125)			SW846 8260A
	97	(75 - 125)	1.6	(0-20)	SW846 8260A
p-Isopropyltoluene	103	(75 - 125)			SW846 8260A
	101	(75 - 125)	2.4	(0-20)	SW846 8260A
sec-Butylbenzene	98	(75 - 125)			SW846 8260A
	99	(75 - 125)	1.1	(0-20)	SW846 8260A
Styrene	98	(75 - 125)			SW846 8260A
	100	(75 - 125)	1.9	(0-20)	SW846 8260A
Trichloroethene	98	(71 - 125)			SW846 8260A
	94	(71 - 125)	2.9	(0-20)	SW846 8260A
tert-Butylbenzene	99	(75 - 125)			SW846 8260A
	111	(75 - 125)	11	(0-20)	SW846 8260A
Tetrachloroethene	97	(71 - 125)			SW846 8260A
	93	(71 - 125)	4.6	(0-20)	SW846 8260A
Toluene	97	(74 - 125)			SW846 8260A
	98	(74 - 125)	1.3	(0-20)	SW846 8260A
trans-1,2-Dichloroethene	87	(75 - 125)			SW846 8260A
	84	(75 - 125)	3.4	(0-20)	SW846 8260A
trans-1,3-Dichloropropene	79	(66 - 125)			SW846 8260A
	80	(66 - 125)	0.89	(0-20)	SW846 8260A
Trichlorofluoromethane	91	(50 - 125)			SW846 8260A
	87	(50 - 125)	4.4	(0-20)	SW846 8260A
Vinyl chloride	92	(46 - 134)			SW846 8260A
	92	(46 - 134)	0.61	(0-20)	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	102	(75 - 125)
	105	(75 - 125)

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Quanterra
Environmental Services

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: B7G180111 **Work Order #...:** CAQDT102-MS **Matrix.....:** WG
MS Lot-Sample #: B7G180111-020 CAQDT103-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	100	(75 - 125)
	101	(75 - 125)
1,2-Dichloroethane-d4	102	(62 - 139)
	98	(62 - 139)
Dibromofluoromethane	99	(75 - 125)
	97	(75 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Quanterra Environmental Services

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: B7G180111 **Matrix.....:** WG
Date Sampled...: 07/17/97 **Date Received..:** 07/18/97

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH			WO#: CAQC1102-MS/CAQC1103-MSD				MS Lot-Sample #: B7G180111-003		
	280	100	390	mg/L	106		MCAWW 310.1	07/25-07/30/97	721020
	280	100	390	mg/L	102	1.0	MCAWW 310.1	07/25-07/30/97	7210205
			Dilution Factor: 1						
			Analysis Time..: 00:00		Instrument ID..: NA		Analyst ID.....: 090000		
Bromide			WO#: CAQC110F-MS/CAQC110G-MSD				MS Lot-Sample #: B7G180111-003		
	ND	2.0	1.9	mg/L	97		SW846 9056	07/30/97	721215
	ND	2.0	2.0	mg/L	100	2.2	SW846 9056	07/30/97	721215
			Dilution Factor: 1						
			Analysis Time..: 11:50		Instrument ID..: IC		Analyst ID.....: 004003		
Chloride			WO#: CAQC110J-MS/CAQC110K-MSD				MS Lot-Sample #: B7G180111-003		
	1.6	5.0	6.2	mg/L	93		SW846 9056	07/30/97	7212154
	1.6	5.0	6.1	mg/L	91	1.6	SW846 9056	07/30/97	721215
			Dilution Factor: 1						
			Analysis Time..: 12:12		Instrument ID..: IC		Analyst ID.....: 004003		
Sulfate			WO#: CAQC110M-MS/CAQC110N-MSD				MS Lot-Sample #: B7G180111-003		
	5.0	5.0	9.6	mg/L	92		SW846 9056	07/30/97	7212157
	5.0	5.0	9.6	mg/L	92	0.19	SW846 9056	07/30/97	7212157
			Dilution Factor: 1						
			Analysis Time..: 12:12		Instrument ID..: IC		Analyst ID.....: 004003		
Total Organic Carbon			WO#: CAQC1105-MS/CAQC1106-MSD				MS Lot-Sample #: B7G180111-003		
	1	5	6	mg/L	102		SW846 9060	07/31/97	721318
	1	5	6	mg/L	100	1.2	SW846 9060	07/31/97	7213183
			Dilution Factor: 1						
			Analysis Time..: 18:45		Instrument ID..: TOC		Analyst ID.....: 004003		

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra Environmental Services

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: B7G180111 **Matrix.....:** WG
Date Sampled...: 07/17/97 **Date Received..:** 07/18/97

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH		WO#: CAQC1102-MS/CAQC1103-MSD				MS Lot-Sample #: B7G180111-003	
	106	(90 - 110)			MCAWW 310.1	07/25-07/30/97	7210205
	102	(90 - 110)	1.0	(0-17)	MCAWW 310.1	07/25-07/30/97	7210205
		Dilution Factor: 1					
		Analysis Time..: 00:00			Instrument ID..: NA	Analyst ID.....: 090000	
Bromide		WO#: CAQC110F-MS/CAQC110G-MSD				MS Lot-Sample #: B7G180111-003	
	97	(86 - 112)			SW846 9056	07/30/97	7212150
	100	(86 - 112)	2.2	(0-20)	SW846 9056	07/30/97	7212150
		Dilution Factor: 1					
		Analysis Time..: 11:50			Instrument ID..: IC	Analyst ID.....: 004003	
Chloride		WO#: CAQC110J-MS/CAQC110K-MSD				MS Lot-Sample #: B7G180111-003	
	93	(91 - 111)			SW846 9056	07/30/97	7212154
	91	(91 - 111)	1.6	(0-20)	SW846 9056	07/30/97	7212154
		Dilution Factor: 1					
		Analysis Time..: 12:12			Instrument ID..: IC	Analyst ID.....: 004003	
Sulfate		WO#: CAQC110M-MS/CAQC110N-MSD				MS Lot-Sample #: B7G180111-003	
	92	(88 - 115)			SW846 9056	07/30/97	7212157
	92	(88 - 115)	0.19	(0-20)	SW846 9056	07/30/97	7212157
		Dilution Factor: 1					
		Analysis Time..: 12:12			Instrument ID..: IC	Analyst ID.....: 004003	
Total Organic Carbon		WO#: CAQC1105-MS/CAQC1106-MSD				MS Lot-Sample #: B7G180111-003	
	102	(92 - 117)			SW846 9060	07/31/97	7213183
	100	(92 - 117)	1.2	(0-20)	SW846 9060	07/31/97	7213183
		Dilution Factor: 1					
		Analysis Time..: 18:45			Instrument ID..: TOC	Analyst ID.....: 004003	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra Environmental Services

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: B7G180111 **Work Order #...:** CAQC1-SMP CAQC1-DUP **Matrix.....:** WATER

Date Sampled...: 07/15/97 **Date Received..:** 07/17/97

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Dissolved Solids						SD Lot-Sample #: B7G180111-003		
	300	310	mg/L	3.2	(0-15)	MCAWW 160.1	07/29-07/30/97	7211188

Dilution Factor: 1

Analysis Time..: 12:30 Analyst ID.....: 090000 Instrument ID..: NA

408 386

Quanterra
Environmental Services

TAMPA LABORATORY
CONDITION UPON RECEIPT FORM

Client: Hydrogeologic **Project Name/Lot #:** NAS Fort Worth
Date Received: 7/17/97 **Received By:** Carol McNulty
CUR Completed By: Carol McNulty

Cooler/Shipping information:
TYPE: Quanterra Cooler X Client Cooler ___ Quanterra Shipper ___ Box ___ Other ___/___

Cooler ID/Track #	573901937O	5739019381	5739019366		
Temp (Celsius)	3°C	* 3°C	3.5°		
Cooler ID/Track #					
Temp (Celsius)					

Any "NO" responses or discrepancies should be explained in the "Comments" section below.

CHECKLIST	YES	NO	NA
1. Were custody seals on shipping container(s) intact? Check "NA" if hand delivered. Circle One: CUSTODY SEAL SAVED ~~UNABLE TO SAVE CUSTODY SEAL~~	✓		
2. Were custody papers properly included with samples?	✓		
3. Were custody papers properly filled out (ink, signed, match labels)?	✓		
4. Did all bottles arrive in good condition (unbroken)?	✓		
5. Were all bottle labels complete (sample #, date, signed, analysis, preservatives)?	✓		
6. Were correct bottles used for the tests indicated?	✓		
7. Were proper sample preservation techniques indicated?	✓		
8. Were samples received within adequate holding times? If "NO", complete 8.a. or 8.b.	✓		
a. Was sample hold time exceeded (NCM required)?			
b. Did the samples arrive with more than half the hold time exceeded (NCM required)?			
9. Were all VOA bottles checked for the presence of air bubbles? If air bubbles were found, indicate in comment section.	✓		
10. Were samples in direct contact with wet ice? If "NO", circle one: NO ICE BLUE ICE	✓		
11. Were the samples received with a temperature blank? NOTE TEMPERATURE ABOVE If "NO", circle one: UNABLE TO DETERMINE TEMP TEMP TAKEN FROM THE COOLER ICE/WATER NEAR SAMPLES	✓	*	
12. Were sample pHs checked and recorded by S.R. (see back for Page 2 - Sample pH)? *TOC and VOA samples are checked by laboratory analysts.*	✓		
13. Were samples accepted into the laboratory?	✓		

Comments:
* No Temp BLK
no TOC rec'd for EB-071597
rec'd. but no COC - for LF05-18W/G01 metals + 8260
+ TB 071597 Bty, 8260 RSK

Project Manager initials/date reviewed: _____

Corrective Action: _____

Corrective Action completed by/date: _____

[redacted]

Chain of Custody Record

2 coolers

Quanterra

QUA-4124

Client	Project Manager	Date	Chain Of Custody Number
HydroGeoLogic	Tim Costello	7/14/97	01323
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page**
1155 Herndon Pkwy #900	703-478-5186 / 703 471 4180		1 of 3
City / State / Zip Code	**Site Contact**		
Herndon / VA / 20170	Mike Rodtang		
Project Name	**Carrier/Waybill Number**		
NAS Ft Worth JRB	5739019366		
Contract/Purchase Order/Quote No.			
∅	use this number for billing purposes - this note - ~~[illegible]~~ different from no's on sample bottles		

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	VOCs (SW8260A)	ANIONS (SW9056)	ALKALINITY (E310.1)	METHANE (RSK175)	TOC (SW9060)	METALS (7470, 7760)
GM1-04-01MWG01	7/14/97	1210	Groundwater	120mL	VOAS	3	HCl		X					
WP07-10CWG01	7/14/97	1025		↓	VOAS	3	HCl		X					
~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~		~~X~~					
ST14-24WG01	7/14/97	1755	Groundwater	120mL	VOAS	3	HCL		X					
ST14-24WG01				~~500mL~~	500mL/Poly	1				X				
ST14-24WG01				↓	" "	1					X			
ST14-24WG01				120mL	VOAS	3	H2SO4					X		
ST14-24WG01				120mL	VOAS	2	H2SO4						X	
				1L	1L Poly	1	HNO3							X
EB-071497	7/14/97	1115	Groundwater	120mL	VOAS	3	HCL		X					
LF04-10WG01	7/14/97	1055	Groundwater	120mL	VOAS	3	HCL		X					
LF05-56WG01	7/14/97	1300	Groundwater	120mL	VOAS	3	HCL		X					
LF05-18WG01	7/14/97	1855	GW	120mL	VOAS	3	HCl		X					
LF-05-18WG01	7/14/97	1855	GW	500mL	Poly	1	HNO3						X	
FT09-12CWG01	7/14/97	1715	GW	120mL	VOAS	3	HCl		X					
LF-05-02[redacted]WG01	7/14/97	1600	GW	120mL	VOAS	3	HCl		X					

Special Instructions

408 387

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Turn Around Time Required: ☒ Normal 8 DAYS ☐ Rush 2 days

QC Level: ☐ I. ☐ II. ☐ III.

Project Specific (Specify):

	Date	Time		Date	Time
1. Relinquished By			1. Received By: Carol McNulty	7/17/97	1000
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

Project Num[illegible] on Sample bottles is 12001-7-5001. For billi[illegible] purposes use AFC001-07GAA

DISTRIBUTION: Wh[illegible] ays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

Chain of Custody Record

Quanterra

QUA-4124

Client: HydroGeoLogic	Project Manager: Jim Costello	Date: 7-15-97	Chain Of Custody Number: 01323 ~~01322~~
Address: 155 Herndon Pkwy #900	Telephone Number (Area Code)/Fax Number: (703) 478-5186 (703) 471-4180	Lab Number	Page 2 of 3
City: Herndon; State: VA; Zip Code: 20170	Site Contact: Mike Rodtang		
Project Name: NAS FT WORTH JRB	Carrier/Waybill Number: 573901 19366		
Contract/Purchase Order/Quote No.	NOTE: USE this number re billing. No's on Samples not to be used.		

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	VOCs (SW8260A)	Anions (SW9056)	Alkalinity (E310.1)	Methane (RSK175)	TOC (SW9060)	Metals (CHAC4 B)	BTEX					
LF05-02WG01MS	7/14/97	1605	Groundwater	120mL	VOAs	3	HCl		X											
LF05-02WG01MD	7/14/97	1610	GW	120mL	VOAs	3	HCl		X											
~~ST14-14WG01~~	~~7/15/97~~	~~915~~	~~GW~~	~~120mL~~	~~VOAs~~	~~3~~	~~HCl~~		~~X~~											
ST14-14WG01	" "	915	GW	500mL	Poly	1	—			X										
ST14-14WG01	" "	915	GW	1 Liter	Poly	1	—				X									
ST14-14WG01	" "	915	GW	120mL	VOAs	3	H_2SO_4					X								
ST14-14WG01	" "	915	GW	80mL	VOAs	2	" "						X							
ST14-14WG01	" "	915	GW	1 Liter	Poly	1	HNO_3							X						
ST14-02WG01	7/15/97	1055	GW	120mL	VOAs	3	HCl		X						X					
ST14-02WG01	" "	1055	GW	500mL	Poly	1	—			X										
ST14-02WG01	" "	1055	GW	500mL	Poly	1	—				X									
ST14-02WG01	" "	1055	GW	120mL	VOAs	3	H_2SO_4					X								
ST14-02WG01	" "	1055	GW	80mL	VOAs	2	" "						X							
ST14-02WG01	" "	1055	GW	1 Liter	1L Poly	1	HNO_3							X						
ST14-W18WG01	" "	1615	GW	120mL	VOAs	3	HCl								X					
~~ST14-W18WG01~~	~~" "~~	~~1615~~	~~GW~~	~~500mL~~	~~Poly~~	~~1~~	~~—~~			X										

Special Instructions: GW = Groundwater

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown		Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months	
Turn Around Time Required: ☒ Normal ☐ Rush 21 DAYS	QC Level: ☐ I. ☐ II. ☐ III.	Project Specific (Specify)	
1. Relinquished By	Date / Time	1. Received By: Carol McNulty	Date: 7/17/97 Time: 1000
2. Relinquished By	Date / Time	2. Received By	Date / Time
3. Relinquished By	Date / Time	3. Received By	Date / Time

Comments: Pr

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

408 388

Chain of Custody Record

Quanterra

QUA-4124

Client	Project Manager	Date	Chain Of Custody Number
Hydro GeoLogic Inc	Jim Castello	15 Jul 97	01323 ~~01330~~
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	Page 3 of 3
1155 Herndon Pkwy Suite 900	703/478-5186		
City / State / Zip Code	**Site Contact**		
Herndon VA 20170	Michael Rattling		
Project Name	**Carrier/Waybill Number**		
NAS Ft Worth JAP 1st Qtrly Sampling	Fed X 5739011936 6		
Contract/Purchase Order/Quote No.			
AFC 001 - 076AA			

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	VOC	~~[illegible]~~	Methane									
TB 071497	14 Jul 97	2000	VOA	80 ml	VOA	2	HCl		X											
					~~VOA~~															
TB 071497	14 Jul 97	2000	VOA	80 ml	VOA	2	H_2SO_4				X									

Special Instructions

Possible Hazard Identification	Sample Disposal
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Turn Around Time Required ☐ Normal ☐ Rush 21 TAT	**QC Level** ☐ I. ☐ II. ☐ III.
Project Specific (Specify)	

	Date	Time		Date	Time
1. Relinquished By [signature]			1. Received By Carol McNulty	7/17/97	1000
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

Billing [illegible] Is as stated above. Project # [illegible] different on sample Bottles, Trip B[illegible] in [illegible]

DISTRIBUTION: [illegible] Sample; CANARY: Returned to Client with Report; PINK: Field Copy

408 389

Chain of Custody Record

2 coolers

Quanterra

QUA-4124

Client: Hydrogeologic	Project Manager: Jim Costello	Date: 7/15/97	Chain Of Custody Number: 01327
Address: 1155 Herndon Pkwy #900	Telephone Number (Area Code)/Fax Number: 703-478-5186 - 703 471 4180	Lab Number	Page 1 of 1
City: Herndon; State: VA; Zip Code: 20170	Site Contact: Mike Rodriguez		
Project Name: NAS Ft Worth JRB	Carrier/Waybill Number		
Contract/Purchase Order/Quote No.: AFCEE1076HH - use this for billing - different proj. # can be billed (12001-7-5001)			

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	Alkalinity (EPA 310.1)	Anions (SW 9056)	VOCs (SW 8260B)	Methane RSK	TOC SW 9060
GM1-22-02MWC01MSD	7/15/97	0950	GW	500mL	Poly	1	none		X	X			
GM1-22-02MWC01	7/15/97	0950	GW	500mL	Poly	1	none		X	X			
GM1-22-02MWC01MS	7/15/97	0950	GW	500mL	Poly	1	none		X	X			
GM1-22-02MWC01MD	7/15/97	0940	GW	120mL	VOAs	3	HCl				X		
GM1-22-02MWC01MS	7/15/97	0930	GW	120mL	VOAs	3	HCl				X		
GM1-22-02MWC01	7/15/97	0930	GW	120mL	VOAs	3	HCl				X		
GM1-22-02MWC01MD	7/15/97	0940	GW	120mL	VOAs	3	H_2SO_4					X	
GM1-22-02MWC01	7/15/97	0930	GW	120mL	VOAs	3	H_2SO_4					X	
GM1-22-02MWC01	7/15/97	0930	GW	120mL	VOAs	3	H_2SO_4						X
GM1-22-02MWC01MS	7/15/97	0935	GW	120mL	VOAs	3	H_2SO_4					X	
GM1-22-02MWC01MS	7/15/97	0935	GW	120mL	VOAs	3	H_2SO_4						X
GM1-22-02MWC01MD	7/15/97	0940	GW	120mL	VOAs	3	H_2SO_4						X
SPOT 35-5WC01	7/15/97	1155	GW	120mL	VOAs	3	HCl				X		
SPOT 35-5WC01	7/15/97	1155	GW	50mL	VOAs	3	H_2SO_4						X
SPOT 35-5WC01	7/15/97	1155	GW	120mL	VOAs	3	H_2SO_4					X	
SPT4-W16WC01	7/15/97	1415	GW	120mL	VOAs	3	H_2SO_4					X	

Special Instructions

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Turn Around Time Required: ☒ Normal ☐ Rush 21 days

QC Level: ☐ I. ☐ II. ☐ III.

Project Specific (Specify)

	Date	Time		Date	Time
1. Relinquished By: [illegible]	7/16/97	1300	1. Received By: Carol McNutty	7/17/97	1000
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

408 390

Chain of Custody Record

Quanterra

OUA-4124

Client	Project Manager	Date	Chain Of Custody Number
HydroGeologic	Jim Castelle	7/15/97	01328
Address	Telephone Number (Area Code)/Fax Number	Lab Number	Page 2 of 4
City / State / Zip Code	Site Contact		
Project Name	Carrier/Waybill Number		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	BTEX 8020A	TOC/SW9060	Methane Ethane Ethylene RSK175	Nitrate/Nitrite E300	Metals SW6010/7470/7471	Anions SW9056
ST14-W16WG01	7/15/97	1415	GW	120mL	VOAs	3	HCl		X					
ST14-W16WG01		1415		80mL	VOAs	2	H_2SO_4			X				
ST14-02WG01		1055		120mL	VOAs	3	H_2SO_4				X			
ST-14-02WG01		1055		80mL	VOAs	2	H_2SO_4			X				
		1055		120mL	↓	3	HCl		X					
				1L	Poly	1	NONE					X		
				500mL	Poly	1	HNO_3						X	
		↓		500mL	Poly	1	NONE							X
ST14-W16WG01		1415		500mL	Poly	1	NONE							X
		1415		1L	Poly	1	NONE					X		
SPCT 35-5WG01		1155		500mL	Poly	1	NONE					X		X
ST14-W18WG01		1615		~~60mL~~	Poly	1	HNO_3						X	
		1615		500mL	Poly	1	None					X		
				500mL	Poly	1	None							X
				120mL	VOAs	3	HCl		X					
				120mL	VOAs	3	H_2SO_4				X			

Special Instructions

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Turn Around Time Required: ☐ Normal ☐ Rush

QC Level: ☐ I. ☐ II. ☐ III.

Project Specific (Specify)

	Date	Time		Date	Time
1. Relinquished By			1. Received By Carol McCutty	7/17/97	1000
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: White - Return with Sample; CANARY - Returned to Client with Report; PINK - First Copy

408 391

Chain of Custody Record

Quanterra

QUA-4124

Client: Hydrogeologic, Inc	Project Manager: Jim Costello	Date:	Chain Of Custody Number: 01327 01329
Address:	Telephone Number (Area Code)/Fax Number:	Lab Number:	Page 3 of 4
City: / State: / Zip Code:	Site Contact:		
Project Name:	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	Methane	VOC	Anions	Alkalinity	Total Metals	TOC
EB-071597	15JUL97	1830	Groundwater	80ml	VOA	2	H_2SO_4		X					
EB-071597	15JUL97	1830		120ml	VOA	3	HCl			X				
EB-071597	15JUL97	1830		500ml	500ml	1	4°C				X			
EB-071597	15JUL97	1830		500ml	500ml	1	4°C					X		
LF05-19WG01	15JUL97	1400		120ml	VOA	3	HCl			X				
LF05-19WG01	15JUL97	1400		500ml	Poly	1	HNO_3						X	
[redacted] DUP01-WG01 LF05-19WG01	15JUL97	1400		120	VOA	3	HCl			X				
DUP01-WG01 LF05-19WG01	15JUL97	1400		500ml	Poly	1	HNO_3						X	
SPOT35-4WG01	15JUL97	1710		120ml	VOA	3	H_2SO_4		X					
SPOT35-4WG01	15JUL97	1710		120ml	VOA	3	HCl			X				
SPOT35-4WG01	15JUL97	1710		500ml	Poly	1	4°C				X			
SPOT35-4WGW01	15JUL97	1710		500ml	Poly	1	4°C					X		
SPOT35-4WGW01	15JUL97	1710		80ml	VOA	2	H_2SO_4						X	

Special Instructions

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Turn Around Time Required: ☐ Normal ☐ Rush

QC Level: ☐ I. ☐ II. ☐ III.

Project Specific (Specify)

	Date	Time		Date	Time
1. Relinquished By			1. Received By: Carol McNulty	7/17/97	1000
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

408 392

Chain of Custody Record

Quanterra

QUA-4124

Client	Project Manager	Date	Chain Of Custody Number
HydroGeoLogic	Jim Costello	7/15/97	01331

Address	Telephone Number (Area Code)/Fax Number	Lab Number	Page 4 of 4

City	State	Zip Code	Site Contact

Project Name	Carrier/Waybill Number

Contract/Purchase Order/Quote No.

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	TX (SW9060)	Anions SW9056	Metals SW6010/7470/7471	Methane RSK175	VOCs SW8260	BTEX 8020A
SJ14W18W001	7/15/97	1615	GW	80mL	VOAs	2	H_2SO_4		X					
SJ14+14W001		0917	GW	1L	poly	1	None			X				
				500mL		1	None			X				
				500mL		1	HNO_3				X			
				40mL	VOAs	3	H_2SO_4					X		
				40mL		2	H_2SO_4		X					
				120mL		3	HCl						X	
TB071597				40mL	VOAs	2	H_2SO_4					X		
				40mL	VOAs	2	HCl							X
				40mL	VOAs	2	HCl						X	
	✓													

Special Instructions

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Turn Around Time Required
☐ Normal ☐ Rush

QC Level
☐ I. ☐ II. ☐ III.

Project Specific (Specify)

	Date	Time		Date	Time
1. Relinquished By			1. Received By Carol McNulty	7/17/97	1000
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Accompany Sample; CANARY - Returned to Client with Report; PINK - Field Copy

408 393

Analytical Report for Wells Sampled July 20-21, 1997

408 395

Quanterra
Environmental Services

Quanterra Incorporated
5910 Breckenridge Parkway, Suite H
Tampa, Florida 33610

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ANALYTICAL REPORT

PROJECT NO. 12001-7-5001

Carswell AFB/NAS FT WORTH JRB

Lot #: B7G220139

Jim Costello

HydroGeoLogic, Inc.

QUANTERRA INCORPORATED

Certification Numbers: E84059,HRS84297
FDEP CompQAP: 870270G

Michele H. Lersch

Michele Lersch
Project Manager

August 13, 1997

Quanterra
Environmental Services

NARRATIVE

HydroGeoLogic

Project: 12001-7-5001/NAS Ft. Worth JRB, 1st Qtr (Carswell AFB)

Quanterra Lot Number: B7G220139
Matrix: Groundwater
Methods: 8260A, 8020A, RSK-175, 6010A, 7470A, 7841, 9060, 9056, 310.1

6010A
The method blank had a quantifiable level of potassium below the RL. No corrective action is required.

9056
The method blank had quantifiable levels of chloride and sulfate below their respective RLs. No corrective action is required.

9060
The "TOC Range" footnote on the General Chemistry report page for each sample indicates the lowest and highest concentrations of the quadruplicate analyses, as required by the method. The reported result is the average of the quadruplicate analyses, rounded according to Quanterra protocols.

Quanterra Environmental Services

SAMPLE SUMMARY

B7G220139

WO #	SAMPLE#	CLIENT SAMPLE ID	DATE	TIME
CATFG	001	BSS-AWG01	07/20/97	15:45
CATG2	002	EB072097	07/20/97	15:45
CATG4	003	MW-1WG01	07/21/97	11:10
CATG7	004	EB-072197	07/21/97	11:10
CATG9	005	BSS-BWG01	07/21/97	11:30
CATGF	006	LF01-1BWG01	07/21/97	14:00
CATHK	007	LF01-1DWG01	07/21/97	15:45
CATHN	008	GMI-22-05MWG01	07/21/97	17:45
CATHP	009	MW-11WG01	07/21/97	18:00
CATHT	010	MW-10WG01	07/21/97	14:30
CATHV	011	DUP02-WG01	07/21/97	00:00
CATJD	012	TB072197	07/21/97	19:30

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

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METHODS SUMMARY

B7G220139

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Alkalinity	MCAWW 310.1	MCAWW 310.1
Aromatic Volatile Organics by GC	SW846 8020A	SW846 5030
Bromide	SW846 9056	SW846 9056
Chloride	SW846 9056	SW846 9056
Dissolved Gasses in Water	EPA-9 RSK-175	
Inductively Coupled Plasma (ICP) Metals	SW846 6010A	SW846 3005
Mercury in Liquid Waste (Manual Cold-Vapor)	SW846 7470A	SW846 7470A
Silver (AA, Furnace Technique)	SW846 7761	
Sulfate	SW846 9056	SW846 9056
Thallium (AA, Furnace Technique)	SW846 7841	SW846 3020
Total Organic Carbon	SW846 9060	SW846 9060
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010A	SW846 3005
Volatile Organics by GC/MS	SW846 8260A	SW846 5030/8260

References:

EPA-9 Sample Prep and Calculations for Dissolved Gas Analysis in Water Samples Using a GC Headspace Equilibration Technique, RSKSOP-175, REV. 0, 8/11/94, USEPA Research Lab

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

Quanterra Environmental Services

EXECUTIVE SUMMARY - Detection Highlights

B7G220139

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
BSS-BWG01 07/21/97 11:30 005				
Chloride	78.2	0.40	mg/L	SW846 9056
Sulfate	4.7	1.0	mg/L	SW846 9056
Bromide	1.2	0.40	mg/L	SW846 9056
Alkalinity as CaCO3 to pH 4.5	460	10	mg/L	MCAWW 310.1
LF01-1BWG01 07/21/97 14:00 006				
Aluminum	12.8	0.50	mg/L	SW846 6010A
Barium	0.21	0.020	mg/L	SW846 6010A
Calcium	168	1.0	mg/L	SW846 6010A
Cobalt	0.070	0.070	mg/L	SW846 6010A
Chromium	1.4	0.070	mg/L	SW846 6010A
Copper	0.041 F	0.060	mg/L	SW846 6010A
Iron	18.4	0.070	mg/L	SW846 6010A
Potassium	2.5 F	5.0	mg/L	SW846 6010A
Magnesium	12.2	1.0	mg/L	SW846 6010A
Manganese	2.3	0.020	mg/L	SW846 6010A
Molybdenum	0.25	0.080	mg/L	SW846 6010A
Sodium	22.2	1.0	mg/L	SW846 6010A
Nickel	1.3	0.15	mg/L	SW846 6010A
Vanadium	0.025 F	0.080	mg/L	SW846 6010A
Zinc	0.051	0.020	mg/L	SW846 6010A
Silver	0.0041	0.00080	mg/L	SW846 7761
Antimony	0.0046 F	0.0050	mg/L	SW846 6010A
Lead	0.0081	0.0050	mg/L	SW846 6010A
1,2,4-Trimethylbenzene	0.70 F	1.3	ug/L	SW846 8260A
Ethylbenzene	0.49 F	0.60	ug/L	SW846 8260A
m-Xylene & p-Xylene	2.1	0.50	ug/L	SW846 8260A
o-Xylene	0.86 F	1.1	ug/L	SW846 8260A
Toluene	1.8	1.1	ug/L	SW846 8260A
LF01-1DWG01 07/21/97 15:45 007				
Barium	0.076	0.020	mg/L	SW846 6010A
Calcium	198	1.0	mg/L	SW846 6010A
Cobalt	0.0055 F	0.070	mg/L	SW846 6010A
Copper	0.0043 F	0.060	mg/L	SW846 6010A
Iron	2.9	0.070	mg/L	SW846 6010A
Potassium	2.4 F	5.0	mg/L	SW846 6010A
Magnesium	11.9	1.0	mg/L	SW846 6010A
Manganese	0.49	0.020	mg/L	SW846 6010A
Sodium	23.3	1.0	mg/L	SW846 6010A
Nickel	0.012 F	0.15	mg/L	SW846 6010A

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Quanterra Environmental Services

EXECUTIVE SUMMARY - Detection Highlights

B7G220139

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
LF01-1DWG01 07/21/97 15:45 007				
1,2,4-Trimethylbenzene	0.32 F	1.3	ug/L	SW846 8260A
Ethylbenzene	0.24 F	0.60	ug/L	SW846 8260A
m-Xylene & p-Xylene	0.94	0.50	ug/L	SW846 8260A
o-Xylene	0.36 F	1.1	ug/L	SW846 8260A
Toluene	0.75 F	1.1	ug/L	SW846 8260A
GMI-22-05MWG01 07/21/97 17:45 008				
Aluminum	0.10 F	0.50	mg/L	SW846 6010A
Barium	0.13	0.020	mg/L	SW846 6010A
Calcium	156	1.0	mg/L	SW846 6010A
Cobalt	0.0036 F	0.070	mg/L	SW846 6010A
Copper	0.0070 F	0.060	mg/L	SW846 6010A
Iron	0.28	0.070	mg/L	SW846 6010A
Potassium	4.7 F	5.0	mg/L	SW846 6010A
Magnesium	14.2	1.0	mg/L	SW846 6010A
Manganese	0.17	0.020	mg/L	SW846 6010A
Sodium	56.3	1.0	mg/L	SW846 6010A
Zinc	0.017 F	0.020	mg/L	SW846 6010A
1,2,4-Trimethylbenzene	1.0 F	1.3	ug/L	SW846 8260A
Ethylbenzene	0.70	0.60	ug/L	SW846 8260A
m-Xylene & p-Xylene	3.0	0.50	ug/L	SW846 8260A
Naphthalene	0.38 F	0.40	ug/L	SW846 8260A
o-Xylene	1.3	1.1	ug/L	SW846 8260A
Toluene	1.9	1.1	ug/L	SW846 8260A
MW-11WG01 07/21/97 18:00 009				
Barium	0.17	0.020	mg/L	SW846 6010A
Calcium	189	1.0	mg/L	SW846 6010A
Copper	0.0052 F	0.060	mg/L	SW846 6010A
Iron	0.25	0.070	mg/L	SW846 6010A
Potassium	0.65 F	5.0	mg/L	SW846 6010A
Magnesium	14.7	1.0	mg/L	SW846 6010A
Manganese	0.14	0.020	mg/L	SW846 6010A
Sodium	61.6	1.0	mg/L	SW846 6010A
Zinc	0.012 F	0.020	mg/L	SW846 6010A
1,2,4-Trimethylbenzene	1.2 F	1.3	ug/L	SW846 8260A
Benzene	0.32 F	0.40	ug/L	SW846 8260A
Ethylbenzene	1.7	0.60	ug/L	SW846 8260A
m-Xylene & p-Xylene	3.3	0.50	ug/L	SW846 8260A
Naphthalene	0.49	0.40	ug/L	SW846 8260A
o-Xylene	0.98 F	1.1	ug/L	SW846 8260A

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Quanterra Environmental Services

EXECUTIVE SUMMARY - Detection Highlights

B7G220139

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
MW-11WG01 07/21/97 18:00 009				
Toluene	1.5	1.1	ug/L	SW846 8260A
MW-10WG01 07/21/97 14:30 010				
Barium	0.18	0.020	mg/L	SW846 6010A
Calcium	179	1.0	mg/L	SW846 6010A
Cobalt	0.0050 F	0.070	mg/L	SW846 6010A
Copper	0.0047 F	0.060	mg/L	SW846 6010A
Iron	6.3	0.070	mg/L	SW846 6010A
Magnesium	13.6	1.0	mg/L	SW846 6010A
Manganese	5.9	0.020	mg/L	SW846 6010A
Sodium	54.8	1.0	mg/L	SW846 6010A
Arsenic	0.019	0.0050	mg/L	SW846 6010A
Lead	0.0050	0.0050	mg/L	SW846 6010A
1,2,4-Trimethylbenzene	2600	650	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	650	250	ug/L	SW846 8260A
Benzene	4200	200	ug/L	SW846 8260A
Ethylbenzene	4800	300	ug/L	SW846 8260A
Isopropylbenzene	200 F	250	ug/L	SW846 8260A
m-Xylene & p-Xylene	9400	250	ug/L	SW846 8260A
n-Propylbenzene	400	200	ug/L	SW846 8260A
Naphthalene	770	200	ug/L	SW846 8260A
o-Xylene	3700	550	ug/L	SW846 8260A
Toluene	9000	550	ug/L	SW846 8260A
DUP02-WG01 07/21/97 00:00 011				
Barium	0.14	0.020	mg/L	SW846 6010A
Calcium	157	1.0	mg/L	SW846 6010A
Cobalt	0.0051 F	0.070	mg/L	SW846 6010A
Copper	0.0063 F	0.060	mg/L	SW846 6010A
Iron	0.18	0.070	mg/L	SW846 6010A
Potassium	4.5 F	5.0	mg/L	SW846 6010A
Magnesium	14.6	1.0	mg/L	SW846 6010A
Manganese	0.16	0.020	mg/L	SW846 6010A
Sodium	56.9	1.0	mg/L	SW846 6010A
Zinc	0.025	0.020	mg/L	SW846 6010A
1,2,4-Trimethylbenzene	0.74 F	1.3	ug/L	SW846 8260A
Ethylbenzene	0.45 F	0.60	ug/L	SW846 8260A
m-Xylene & p-Xylene	2.0	0.50	ug/L	SW846 8260A
o-Xylene	0.84 F	1.1	ug/L	SW846 8260A
Toluene	1.2	1.1	ug/L	SW846 8260A

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Quanterra Environmental Services

EXECUTIVE SUMMARY - Detection Highlights

B7G220139

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
TB072197 07/21/97 19:30 012				
Methane	0.57	0.50	ug/L	EPA-9 RSK-175

Quanterra Environmental Services

QC DATA ASSOCIATION SUMMARY

B7G220139

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WG	SW846 9060		7217130	
	WG	SW846 9056		7219172	
	WG	SW846 9056		7219173	
	WG	EPA-9 RSK-175		7216198	7218039
	WG	SW846 9056		7219170	
	WG	SW846 8020A		7206190	7206052
	WG	MCAWW 310.1		7210207	
002	WQ	SW846 9060		7217130	
	WQ	SW846 9056		7219172	
	WQ	SW846 9056		7219173	
	WQ	EPA-9 RSK-175		7216198	7218039
	WQ	SW846 9056		7219170	
	WQ	SW846 8020A		7206190	7206052
	WQ	MCAWW 310.1		7210207	
003	WG	SW846 9060		7218126	
	WG	SW846 9056		7219172	
	WG	SW846 9056		7219173	
	WG	EPA-9 RSK-175		7216198	7218039
	WG	SW846 9056		7219170	
	WG	SW846 8020A		7206190	7206052
	WG	MCAWW 310.1		7210207	
004	WQ	SW846 9060		7217130	
	WQ	SW846 9056		7219172	
	WQ	SW846 9056		7219173	
	WQ	EPA-9 RSK-175		7216198	7218039
	WQ	SW846 9056		7219170	
	WQ	SW846 8020A		7206190	7206052
	WQ	MCAWW 310.1		7210207	
005	WG	SW846 9060		7218126	
	WG	SW846 9056		7219172	
	WG	SW846 9056		7219173	
	WG	EPA-9 RSK-175		7216198	7218039
	WG	SW846 9056		7219170	
	WG	SW846 8020A		7206190	7206052
	WG	MCAWW 310.1		7210207	
006	WG	SW846 6010A		7205268	7205117
	WG	SW846 7761		7205268	7205117
	WG	SW846 8260A		7211184	
	WG	SW846 7470A		7205269	7205118

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Quanterra Environmental Services

QC DATA ASSOCIATION SUMMARY

B7G220139

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
006	WG	SW846 7841		7205268	7205117
007	WG	SW846 6010A		7205268	7205117
	WG	SW846 7761		7205268	7205117
	WG	SW846 8260A		7211184	
	WG	SW846 7470A		7205269	7205118
	WG	SW846 7841		7205268	7205117
008	WG	SW846 6010A		7205268	7205117
	WG	SW846 7761		7205268	7205117
	WG	SW846 8260A		7211184	
	WG	SW846 7470A		7205269	7205118
	WG	SW846 7841		7205268	7205117
009	WG	SW846 6010A		7205268	7205117
	WG	SW846 7761		7205268	7205117
	WG	SW846 8260A		7211184	
	WG	SW846 7470A		7205269	7205118
	WG	SW846 7841		7205268	7205117
010	WG	SW846 6010A		7205268	7205117
	WG	SW846 7761		7205268	7205117
	WG	SW846 8260A		7211184	
	WG	SW846 7470A		7205269	7205118
	WG	SW846 7841		7205268	7205117
011	WG	SW846 6010A		7205268	7205117
	WG	SW846 7761		7205268	7205117
	WG	SW846 8260A		7216155	
	WG	SW846 7470A		7205269	7205118
	WG	SW846 7841		7205268	7205117
012	WQ	EPA-9 RSK-175		7216198	7218039
	WQ	SW846 8260A		7211184	
	WQ	SW846 8020A		7206190	7206052

Quanterra
Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: BSS-AWG01

GC Volatiles

Lot-Sample #...: B7G220139-001 Work Order #...: CATFG104 Matrix.....: WG
Date Sampled...: 07/20/97 Date Received..: 07/22/97
Prep Date.....: 07/28/97 Analysis Date..: 07/28/97
Prep Batch #...: 7216198 Analysis Time..: 11:52
Dilution Factor: 1
Analyst ID.....: 013512 Instrument ID..: K1A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Ethane	ND	0.50	ug/L	EPA-9 RSK-175
Ethene	ND	0.50	ug/L	EPA-9 RSK-175
Methane	0.92	0.50	ug/L	EPA-9 RSK-175

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: BSS-AWG01

GC Volatiles

Lot-Sample #...: B7G220139-001 Work Order #...: CATFG101 Matrix.....: WG
Date Sampled...: 07/20/97 Date Received..: 07/22/97
Prep Date.....: 07/24/97 Analysis Date..: 07/24/97
Prep Batch #...: 7206190 Analysis Time..: 23:49
Dilution Factor: 1
Analyst ID.....: 001854 Instrument ID..: V2A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	2.0	ug/L	SW846 8020A
Ethylbenzene	ND	2.0	ug/L	SW846 8020A
Toluene	ND	2.0	ug/L	SW846 8020A
Xylenes (total)	ND	2.0	ug/L	SW846 8020A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	72	(46 - 136)
Bromofluorobenzene	80	(48 - 138)
Fluorobenzene	96	(44 - 165)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: BSS-AWG01

General Chemistry

Lot-Sample #...: B7G220139-001 Work Order #...: CATFG Matrix.....: WG
Date Sampled...: 07/20/97 Date Received..: 07/22/97

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH 4.5	390	10	mg/L	MCAWW 310.1	07/28/97	7210207
		Dilution Factor: 1				
		Analysis Time..: 00:00		Analyst ID.....: 090000	Instrument ID..: ISE	
Bromide	0.99	0.20	mg/L	SW846 9056	08/05/97	7219170
		Dilution Factor: 1				
		Analysis Time..: 14:03		Analyst ID.....: 004003	Instrument ID..: IC	
Chloride	42.1	0.20	mg/L	SW846 9056	08/05/97	7219172
		Dilution Factor: 1				
		Analysis Time..: 14:03		Analyst ID.....: 004003	Instrument ID..: IC	
Sulfate	49.9	0.50	mg/L	SW846 9056	08/05/97	7219173
		Dilution Factor: 1				
		Analysis Time..: 14:03		Analyst ID.....: 004003	Instrument ID..: IC	
Total Organic Carbon	2	1	mg/L	SW846 9060	08/03/97	7217130
		Dilution Factor: 1				
		Analysis Time..: 21:28		Analyst ID.....: 004003	Instrument ID..: TOC	

Quanterra
Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: EB072097

GC Volatiles

Lot-Sample #...: B7G220139-002 Work Order #...: CATG2104 Matrix.....: WQ
Date Sampled...: 07/20/97 Date Received..: 07/22/97
Prep Date.....: 07/28/97 Analysis Date..: 07/28/97
Prep Batch #...: 7216198 Analysis Time..: 11:55
Dilution Factor: 1
Analyst ID.....: 013512 Instrument ID..: K1A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Ethane	ND	0.50	ug/L	EPA-9 RSK-175
Ethene	ND	0.50	ug/L	EPA-9 RSK-175
Methane	0.14 F	0.50	ug/L	EPA-9 RSK-175

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: EB072097

GC Volatiles

Lot-Sample #...: B7G220139-002 Work Order #...: CATG2101 Matrix.....: WQ
Date Sampled...: 07/20/97 Date Received..: 07/22/97
Prep Date.....: 07/25/97 Analysis Date..: 07/25/97
Prep Batch #...: 7206190 Analysis Time..: 02:30
Dilution Factor: 1
Analyst ID.....: 001854 Instrument ID..: V2A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	2.0	ug/L	SW846 8020A
Ethylbenzene	ND	2.0	ug/L	SW846 8020A
Toluene	0.15 F	2.0	ug/L	SW846 8020A
Xylenes (total)	ND	2.0	ug/L	SW846 8020A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	82	(46 - 136)
Bromofluorobenzene	84	(48 - 138)
Fluorobenzene	96	(44 - 165)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: KB072097

General Chemistry

Lot-Sample #...: B7G220139-002 Work Order #...: CATG2 Matrix.....: WQ
Date Sampled...: 07/20/97 Date Received..: 07/22/97

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH 4.5	ND	10	mg/L	MCAWW 310.1	07/28/97	7210207
		Dilution Factor: 1				
		Analysis Time..: 00:00		Analyst ID.....: 090000	Instrument ID..: ISE	
Bromide	ND	0.20	mg/L	SW846 9056	08/05/97	7219170
		Dilution Factor: 1				
		Analysis Time..: 14:18		Analyst ID.....: 004003	Instrument ID..: IC	
Chloride	ND	0.20	mg/L	SW846 9056	08/05/97	7219172
		Dilution Factor: 1				
		Analysis Time..: 14:18		Analyst ID.....: 004003	Instrument ID..: IC	
Sulfate	0.43 F	0.50	mg/L	SW846 9056	08/05/97	7219173
		Dilution Factor: 1				
		Analysis Time..: 14:18		Analyst ID.....: 004003	Instrument ID..: IC	
Total Organic Carbon	0.2 F	1	mg/L	SW846 9060	08/03/97	7217130
		Dilution Factor: 1				
		Analysis Time..: 22:02		Analyst ID.....: 004003	Instrument ID..: TOC	

NOTE(S):

RL Reporting Limit

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra
Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: MW-1WG01

GC Volatiles

Lot-Sample #...:	B7G220139-003	Work Order #...:	CATG4104	Matrix.....:	WG
Date Sampled...:	07/21/97	Date Received..:	07/22/97		
Prep Date.....:	07/28/97	Analysis Date..:	07/28/97		
Prep Batch #...:	7216198	Analysis Time..:	16:04		
Dilution Factor:	200				
Analyst ID.....:	013512	Instrument ID..:	K1A		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Ethane	ND	100	ug/L	EPA-9 RSK-175
Ethene	ND	100	ug/L	EPA-9 RSK-175
Methane	7500	100	ug/L	EPA-9 RSK-175

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: MW-1WG01

GC Volatiles

Lot-Sample #...: B7G220139-003 Work Order #...: CATG4101 Matrix.....: WG
Date Sampled...: 07/21/97 Date Received..: 07/22/97
Prep Date.....: 07/25/97 Analysis Date..: 07/25/97
Prep Batch #...: 7206190 Analysis Time..: 00:16
Dilution Factor: 50
Analyst ID.....: 001854 Instrument ID..: V2A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	3200	100	ug/L	SW846 8020A
Ethylbenzene	1700	100	ug/L	SW846 8020A
Toluene	240	100	ug/L	SW846 8020A
Xylenes (total)	3100	100	ug/L	SW846 8020A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	81	(46 - 136)
Bromofluorobenzene	85	(48 - 138)
Fluorobenzene	99	(44 - 165)

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: MW-1WG01

General Chemistry

Lot-Sample #...: B7G220139-003 Work Order #...: CATG4 Matrix.....: WG
Date Sampled...: 07/21/97 Date Received..: 07/22/97

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH 4.5	490	10	mg/L	MCAWW 310.1	07/28/97	7210207
	Dilution Factor: 1					
	Analysis Time..: 00:00			Analyst ID.....: 090000	Instrument ID..: ISE	
Bromide	1.4	0.40	mg/L	SW846 9056	08/05/97	7219170
	Dilution Factor: 2					
	Analysis Time..: 14:30			Analyst ID.....: 004003	Instrument ID..: IC	
Chloride	67.8	0.40	mg/L	SW846 9056	08/05/97	7219172
	Dilution Factor: 2					
	Analysis Time..: 14:30			Analyst ID.....: 004003	Instrument ID..: IC	
Sulfate	0.94 F	1.0	mg/L	SW846 9056	08/05/97	7219173
	Dilution Factor: 2					
	Analysis Time..: 14:30			Analyst ID.....: 004003	Instrument ID..: IC	
Total Organic Carbon	14	2.0	mg/L	SW846 9060	08/05/97	7218126
	Dilution Factor: 2					
	Analysis Time..: 16:50			Analyst ID.....: 004003	Instrument ID..: TOC	

NOTE(S):

RL Reporting Limit

F The analyte was identified but the value was below the RL and above the MDL.

TOC range:12-14

Quanterra
Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: EB-072197

GC Volatiles

Lot-Sample #...: B7G220139-004 Work Order #...: CATG7104 Matrix.....: WQ
Date Sampled...: 07/21/97 Date Received..: 07/22/97
Prep Date.....: 07/28/97 Analysis Date..: 07/28/97
Prep Batch #...: 7216198 Analysis Time..: 12:01
Dilution Factor: 1
Analyst ID.....: 013512 Instrument ID..: K1A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Ethane	3.3	0.50	ug/L	EPA-9 RSK-175
Ethene	ND	0.50	ug/L	EPA-9 RSK-175
Methane	3.0	0.50	ug/L	EPA-9 RSK-175

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: EB-072197

GC Volatiles

Lot-Sample #...: B7G220139-004 Work Order #...: CATG7101 Matrix.....: WQ
Date Sampled...: 07/21/97 Date Received..: 07/22/97
Prep Date.....: 07/25/97 Analysis Date..: 07/25/97
Prep Batch #...: 7206190 Analysis Time..: 07:11
Dilution Factor: 1
Analyst ID.....: 001854 Instrument ID..: V2A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	2.0	ug/L	SW846 8020A
Ethylbenzene	ND	2.0	ug/L	SW846 8020A
Toluene	ND	2.0	ug/L	SW846 8020A
Xylenes (total)	ND	2.0	ug/L	SW846 8020A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	72	(46 - 136)
Bromofluorobenzene	79	(48 - 138)
Fluorobenzene	97	(44 - 165)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: EB-072197

General Chemistry

Lot-Sample #...: B7G220139-004 Work Order #...: CATG7 Matrix.....: WQ
Date Sampled...: 07/21/97 Date Received..: 07/22/97

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH 4.5	36	10	mg/L	MCAWW 310.1	07/28/97	7210207
	Dilution Factor: 1					
	Analysis Time..: 00:00			Analyst ID.....: 090000	Instrument ID..: ISE	
Bromide	ND	0.20	mg/L	SW846 9056	08/05/97	7219170
	Dilution Factor: 1					
	Analysis Time..: 14:41			Analyst ID.....: 004003	Instrument ID..: IC	
Chloride	0.13 F	0.20	mg/L	SW846 9056	08/05/97	7219172
	Dilution Factor: 1					
	Analysis Time..: 14:41			Analyst ID.....: 004003	Instrument ID..: IC	
Sulfate	0.41 F	0.50	mg/L	SW846 9056	08/05/97	7219173
	Dilution Factor: 1					
	Analysis Time..: 14:41			Analyst ID.....: 004003	Instrument ID..: IC	
Total Organic Carbon	0.5 F	1	mg/L	SW846 9060	08/03-08/04/97	7217130
	Dilution Factor: 1					
	Analysis Time..: 00:17			Analyst ID.....: 004003	Instrument ID..: TOC	

NOTE(S):

RL Reporting Limit

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra
Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: BSS-BWG01

GC Volatiles

Lot-Sample #...: B7G220139-005 Work Order #...: CATG9104 Matrix.....: WG
Date Sampled...: 07/21/97 Date Received..: 07/22/97
Prep Date.....: 07/28/97 Analysis Date..: 07/28/97
Prep Batch #...: 7216198 Analysis Time..: 15:05
Dilution Factor: 50
Analyst ID.....: 013512 Instrument ID..: K1A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Ethane	ND	25	ug/L	EPA-9 RSK-175
Ethene	ND	25	ug/L	EPA-9 RSK-175
Methane	2100	25	ug/L	EPA-9 RSK-175

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: BSS-BWG01

GC Volatiles

Lot-Sample #...: B7G220139-005 Work Order #...: CATG9101 Matrix.....: WG
Date Sampled...: 07/21/97 Date Received..: 07/22/97
Prep Date.....: 07/25/97 Analysis Date..: 07/25/97
Prep Batch #...: 7206190 Analysis Time..: 00:43
Dilution Factor: 100
Analyst ID.....: 001854 Instrument ID..: V2A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	200	ug/L	SW846 8020A
Ethylbenzene	1600	200	ug/L	SW846 8020A
Toluene	9100	200	ug/L	SW846 8020A
Xylenes (total)	8500	200	ug/L	SW846 8020A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	84	(46 - 136)
Bromofluorobenzene	85	(48 - 138)
Fluorobenzene	95	(44 - 165)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: BSS-BWG01

General Chemistry

Lot-Sample #...: B7G220139-005 Work Order #...: CATG9 Matrix.....: WG
Date Sampled...: 07/21/97 Date Received..: 07/22/97

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH 4.5	460	10	mg/L	MCAWW 310.1	07/28/97	7210207
		Dilution Factor: 1				
		Analysis Time..: 00:00		Analyst ID.....: 090000	Instrument ID..: NA	
Bromide	1.2	0.40	mg/L	SW846 9056	08/05/97	7219170
		Dilution Factor: 2				
		Analysis Time..: 14:52		Analyst ID.....: 004003	Instrument ID..: IC	
Chloride	78.2	0.40	mg/L	SW846 9056	08/05/97	7219172
		Dilution Factor: 2				
		Analysis Time..: 14:52		Analyst ID.....: 004003	Instrument ID..: IC	
Sulfate	4.7	1.0	mg/L	SW846 9056	08/05/97	7219173
		Dilution Factor: 2				
		Analysis Time..: 14:52		Analyst ID.....: 004003	Instrument ID..: IC	
Total Organic Carbon	24	2.0	mg/L	SW846 9060	08/05/97	7218126
		Dilution Factor: 2				
		Analysis Time..: 17:24		Analyst ID.....: 004003	Instrument ID..: TOC	

NOTE(S):

RL Reporting Limit

TOC range:19-26

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: LF01-1BWG01

GC/MS Volatiles

Lot-Sample #...: B7G220139-006 Work Order #...: CATGF10R Matrix.....: WG
Date Sampled...: 07/21/97 Date Received..: 07/22/97
Prep Date.....: 07/24/97 Analysis Date..: 07/24/97
Prep Batch #...: 7211184 Analysis Time..: 16:12
Dilution Factor: 1
Analyst ID.....: 007084 Instrument ID..: VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	0.80	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	0.40	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	0.40	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.2	ug/L	SW846 8260A
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	3.2	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	0.40	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	**0.70 F**	**1.3**	**ug/L**	**SW846 8260A**
1,2-Dichloroethane	ND	0.60	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.6	ug/L	SW846 8260A
1,2-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	0.60	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	0.50	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	1.2	ug/L	SW846 8260A
1,3-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1-Chlorohexane	ND	0.50	ug/L	SW846 8260A
2,2-Dichloropropane	ND	3.5	ug/L	SW846 8260A
2-Chlorotoluene	ND	0.40	ug/L	SW846 8260A
4-Chlorotoluene	ND	0.60	ug/L	SW846 8260A
Benzene	ND	0.40	ug/L	SW846 8260A
Bromobenzene	ND	0.30	ug/L	SW846 8260A
Bromochloromethane	ND	0.40	ug/L	SW846 8260A
Bromodichloromethane	ND	0.80	ug/L	SW846 8260A
Bromoform	ND	1.2	ug/L	SW846 8260A
Bromomethane	ND	1.1	ug/L	SW846 8260A
Carbon tetrachloride	ND	2.1	ug/L	SW846 8260A
Chlorobenzene	ND	0.40	ug/L	SW846 8260A
Chloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	0.30	ug/L	SW846 8260A
Chloromethane	ND	1.3	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	1.2	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: LF01-1BWG01

GC/MS Volatiles

Lot-Sample #...: B7G220139-006 **Work Order #...:** CATGF10R **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	0.50	ug/L	SW846 8260A
Dibromomethane	ND	2.4	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	**0.49 F**	**0.60**	**ug/L**	**SW846 8260A**
Hexachlorobutadiene	ND	1.1	ug/L	SW846 8260A
Isopropylbenzene	ND	0.50	ug/L	SW846 8260A
m-Xylene & p-Xylene	**2.1**	**0.50**	**ug/L**	**SW846 8260A**
Methylene chloride	ND	0.30	ug/L	SW846 8260A
n-Butylbenzene	ND	1.1	ug/L	SW846 8260A
n-Propylbenzene	ND	0.40	ug/L	SW846 8260A
Naphthalene	ND	0.40	ug/L	SW846 8260A
o-Xylene	**0.86 F**	**1.1**	**ug/L**	**SW846 8260A**
p-Isopropyltoluene	ND	1.2	ug/L	SW846 8260A
sec-Butylbenzene	ND	1.3	ug/L	SW846 8260A
Styrene	ND	0.40	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
tert-Butylbenzene	ND	1.4	ug/L	SW846 8260A
Tetrachloroethene	ND	1.4	ug/L	SW846 8260A
Toluene	**1.8**	**1.1**	**ug/L**	**SW846 8260A**
trans-1,2-Dichloroethene	ND	0.60	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichlorofluoromethane	ND	0.80	ug/L	SW846 8260A
Vinyl chloride	ND	1.1	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	105	(75 - 125)
4-Bromofluorobenzene	100	(75 - 125)
1,2-Dichloroethane-d4	100	(62 - 139)
Dibromofluoromethane	97	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: LF01-1BWG01

TOTAL Metals

Lot-Sample #...: B7G220139-006 Matrix.....: WG
Date Sampled...: 07/21/97 Date Received..: 07/22/97

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7205268						
Silver	0.0041	0.00080	mg/L	SW846 7761	07/25-08/11/97	CATGF10U
		Dilution Factor: 4				
		Analysis Time..: 15:38		Analyst ID.....: 001863	Instrument ID..: F1	
Antimony	0.0046 F	0.0050	mg/L	SW846 6010A	07/25-07/31/97	CATGF10M
		Dilution Factor: 1				
		Analysis Time..: 17:31		Analyst ID.....: 001702	Instrument ID..: P2	
Arsenic	ND	0.0050	mg/L	SW846 6010A	07/25/97	CATGF10N
		Dilution Factor: 1				
		Analysis Time..: 15:28		Analyst ID.....: 001863	Instrument ID..: P2	
Lead	0.0081	0.0050	mg/L	SW846 6010A	07/25/97	CATGF10P
		Dilution Factor: 1				
		Analysis Time..: 15:28		Analyst ID.....: 001863	Instrument ID..: P2	
Selenium	ND	0.0050	mg/L	SW846 6010A	07/25/97	CATGF10Q
		Dilution Factor: 1				
		Analysis Time..: 15:28		Analyst ID.....: 001863	Instrument ID..: P2	
Thallium	ND	0.0020	mg/L	SW846 7841	07/25/97	CATGF10T
		Dilution Factor: 1				
		Analysis Time..: 17:18		Analyst ID.....: 001702	Instrument ID..: F1	
Aluminum	12.8	0.50	mg/L	SW846 6010A	07/25/97	CATGF103
		Dilution Factor: 1				
		Analysis Time..: 15:28		Analyst ID.....: 001863	Instrument ID..: P2	
Barium	0.21	0.020	mg/L	SW846 6010A	07/25/97	CATGF104
		Dilution Factor: 1				
		Analysis Time..: 15:28		Analyst ID.....: 001863	Instrument ID..: P2	
Beryllium	ND	0.0030	mg/L	SW846 6010A	07/25/97	CATGF105
		Dilution Factor: 1				
		Analysis Time..: 15:28		Analyst ID.....: 001863	Instrument ID..: P2	
Calcium	168	1.0	mg/L	SW846 6010A	07/25/97	CATGF106
		Dilution Factor: 1				
		Analysis Time..: 15:28		Analyst ID.....: 001863	Instrument ID..: P2	
Cadmium	ND	0.040	mg/L	SW846 6010A	07/25/97	CATGF
		Dilution Factor: 1				
		Analysis Time..: 15:28		Analyst ID.....: 001863	Instrument ID..: P2	

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: LF01-1BWG01

TOTAL Metals

Lot-Sample #...: B7G220139-006 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Cobalt	0.070	0.070	mg/L	SW846 6010A	07/25/97	CATGF108
		Dilution Factor: 1				
		Analysis Time..: 15:28		Analyst ID.....: 001863	Instrument ID..: P2	
Chromium	1.4	0.070	mg/L	SW846 6010A	07/25/97	CATGF109
		Dilution Factor: 1				
		Analysis Time..: 15:28		Analyst ID.....: 001863	Instrument ID..: P2	
Copper	0.041 F	0.060	mg/L	SW846 6010A	07/25/97	CATGF10A
		Dilution Factor: 1				
		Analysis Time..: 15:28		Analyst ID.....: 001863	Instrument ID..: P2	
Iron	18.4	0.070	mg/L	SW846 6010A	07/25/97	CATGF10C
		Dilution Factor: 1				
		Analysis Time..: 15:28		Analyst ID.....: 001863	Instrument ID..: P2	
Potassium	2.5 F	5.0	mg/L	SW846 6010A	07/25/97	CATGF10D
		Dilution Factor: 1				
		Analysis Time..: 13:14		Analyst ID.....: 001863	Instrument ID..: P1	
Magnesium	12.2	1.0	mg/L	SW846 6010A	07/25/97	CATGF10E
		Dilution Factor: 1				
		Analysis Time..: 15:28		Analyst ID.....: 001863	Instrument ID..: P2	
Manganese	2.3	0.020	mg/L	SW846 6010A	07/25/97	CATGF10F
		Dilution Factor: 1				
		Analysis Time..: 15:28		Analyst ID.....: 001863	Instrument ID..: P2	
Molybdenum	0.25	0.080	mg/L	SW846 6010A	07/25/97	CATGF10G
		Dilution Factor: 1				
		Analysis Time..: 15:28		Analyst ID.....: 001863	Instrument ID..: P2	
Sodium	22.2	1.0	mg/L	SW846 6010A	07/25/97	CATGF10H
		Dilution Factor: 1				
		Analysis Time..: 13:14		Analyst ID.....: 001863	Instrument ID..: P1	
Nickel	1.3	0.15	mg/L	SW846 6010A	07/25/97	CATGF10J
		Dilution Factor: 1				
		Analysis Time..: 15:28		Analyst ID.....: 001863	Instrument ID..: P2	
Vanadium	0.025 F	0.080	mg/L	SW846 6010A	07/25/97	CATGF10K
		Dilution Factor: 1				
		Analysis Time..: 15:28		Analyst ID.....: 001863	Instrument ID..: P2	

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: LF01-1BWG01

TOTAL Metals

Lot-Sample #...: B7G220139-006 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Zinc	0.051	0.020	mg/L	SW846 6010A	07/25-07/31/97	CATGF10L

Dilution Factor: 1
Analysis Time..: 17:31 Analyst ID.....: 001702 Instrument ID..: P2

Prep Batch #...: 7205269

Mercury	ND	0.0010	mg/L	SW846 7470A	07/25/97	CATGF101

Dilution Factor: 1
Analysis Time..: 17:05 Analyst ID.....: 001702 Instrument ID..: CV

NOTE(S):

F The analyte was identified but the value was below the RL and above the MDL.

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: LF01-1DWG01

GC/MS Volatiles

Lot-Sample #...: B7G220139-007 Work Order #...: CATHK10R Matrix.....: WG
Date Sampled...: 07/21/97 Date Received..: 07/22/97
Prep Date.....: 07/24/97 Analysis Date..: 07/24/97
Prep Batch #...: 7211184 Analysis Time..: 16:36
Dilution Factor: 1
Analyst ID.....: 007084 Instrument ID..: VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	0.80	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	0.40	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	0.40	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.2	ug/L	SW846 8260A
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	3.2	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	0.40	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	**0.32 F**	**1.3**	**ug/L**	**SW846 8260A**
1,2-Dichloroethane	ND	0.60	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.6	ug/L	SW846 8260A
1,2-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	0.60	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	0.50	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	1.2	ug/L	SW846 8260A
1,3-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1-Chlorohexane	ND	0.50	ug/L	SW846 8260A
2,2-Dichloropropane	ND	3.5	ug/L	SW846 8260A
2-Chlorotoluene	ND	0.40	ug/L	SW846 8260A
4-Chlorotoluene	ND	0.60	ug/L	SW846 8260A
Benzene	ND	0.40	ug/L	SW846 8260A
Bromobenzene	ND	0.30	ug/L	SW846 8260A
Bromochloromethane	ND	0.40	ug/L	SW846 8260A
Bromodichloromethane	ND	0.80	ug/L	SW846 8260A
Bromoform	ND	1.2	ug/L	SW846 8260A
Bromomethane	ND	1.1	ug/L	SW846 8260A
Carbon tetrachloride	ND	2.1	ug/L	SW846 8260A
Chlorobenzene	ND	0.40	ug/L	SW846 8260A
Chloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	0.30	ug/L	SW846 8260A
Chloromethane	ND	1.3	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	1.2	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: LF01-1DWG01

GC/MS Volatiles

Lot-Sample #...: B7G220139-007 **Work Order #...:** CATHK10R **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	0.50	ug/L	SW846 8260A
Dibromomethane	ND	2.4	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	**0.24 F**	**0.60**	**ug/L**	**SW846 8260A**
Hexachlorobutadiene	ND	1.1	ug/L	SW846 8260A
Isopropylbenzene	ND	0.50	ug/L	SW846 8260A
m-Xylene & p-Xylene	**0.94**	**0.50**	**ug/L**	**SW846 8260A**
Methylene chloride	ND	0.30	ug/L	SW846 8260A
n-Butylbenzene	ND	1.1	ug/L	SW846 8260A
n-Propylbenzene	ND	0.40	ug/L	SW846 8260A
Naphthalene	ND	0.40	ug/L	SW846 8260A
o-Xylene	**0.36 F**	**1.1**	**ug/L**	**SW846 8260A**
p-Isopropyltoluene	ND	1.2	ug/L	SW846 8260A
sec-Butylbenzene	ND	1.3	ug/L	SW846 8260A
Styrene	ND	0.40	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
tert-Butylbenzene	ND	1.4	ug/L	SW846 8260A
Tetrachloroethene	ND	1.4	ug/L	SW846 8260A
Toluene	**0.75 F**	**1.1**	**ug/L**	**SW846 8260A**
trans-1,2-Dichloroethene	ND	0.60	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichlorofluoromethane	ND	0.80	ug/L	SW846 8260A
Vinyl chloride	ND	1.1	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	101	(75 - 125)
4-Bromofluorobenzene	99	(75 - 125)
1,2-Dichloroethane-d4	103	(62 - 139)
Dibromofluoromethane	95	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: LF01-1DWG01

TOTAL Metals

Lot-Sample #...: B7G220139-007 Matrix.....: WG
Date Sampled...: 07/21/97 Date Received..: 07/22/97

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7205268						
Silver	ND	0.00020	mg/L	SW846 7761	07/25-08/11/97	CATHK10U
		Dilution Factor: 1				
		Analysis Time..: 12:32		Analyst ID.....: 001863	Instrument ID..: F1	
Antimony	ND	0.0050	mg/L	SW846 6010A	07/25-07/31/97	CATHK10M
		Dilution Factor: 1				
		Analysis Time..: 17:37		Analyst ID.....: 001702	Instrument ID..: P2	
Arsenic	ND	0.0050	mg/L	SW846 6010A	07/25/97	CATHK10N
		Dilution Factor: 1				
		Analysis Time..: 15:34		Analyst ID.....: 001863	Instrument ID..: P2	
Lead	ND	0.0050	mg/L	SW846 6010A	07/25/97	CATHK10P
		Dilution Factor: 1				
		Analysis Time..: 15:34		Analyst ID.....: 001863	Instrument ID..: P2	
Selenium	ND	0.0050	mg/L	SW846 6010A	07/25/97	CATHK1
		Dilution Factor: 1				
		Analysis Time..: 15:34		Analyst ID.....: 001863	Instrument ID..: P2	
Thallium	ND	0.0020	mg/L	SW846 7841	07/25/97	CATHK10T
		Dilution Factor: 1				
		Analysis Time..: 17:23		Analyst ID.....: 001702	Instrument ID..: F1	
Aluminum	ND	0.50	mg/L	SW846 6010A	07/25/97	CATHK103
		Dilution Factor: 1				
		Analysis Time..: 15:34		Analyst ID.....: 001863	Instrument ID..: P2	
Barium	0.076	0.020	mg/L	SW846 6010A	07/25/97	CATHK104
		Dilution Factor: 1				
		Analysis Time..: 15:34		Analyst ID.....: 001863	Instrument ID..: P2	
Beryllium	ND	0.0030	mg/L	SW846 6010A	07/25/97	CATHK105
		Dilution Factor: 1				
		Analysis Time..: 15:34		Analyst ID.....: 001863	Instrument ID..: P2	
Calcium	198	1.0	mg/L	SW846 6010A	07/25/97	CATHK106
		Dilution Factor: 1				
		Analysis Time..: 15:34		Analyst ID.....: 001863	Instrument ID..: P2	
Cadmium	ND	0.040	mg/L	SW846 6010A	07/25/97	CATHK1
		Dilution Factor: 1				
		Analysis Time..: 15:34		Analyst ID.....: 001863	Instrument ID..: P2	

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: LF01-1DWG01

TOTAL Metals

Lot-Sample #...: B7G220139-007 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Cobalt	0.0055 F	0.070	mg/L	SW846 6010A	07/25/97	CATHK108
		Dilution Factor: 1				
		Analysis Time..: 15:34		Analyst ID.....: 001863	Instrument ID..: P2	
Chromium	ND	0.070	mg/L	SW846 6010A	07/25/97	CATHK109
		Dilution Factor: 1				
		Analysis Time..: 15:34		Analyst ID.....: 001863	Instrument ID..: P2	
Copper	0.0043 F	0.060	mg/L	SW846 6010A	07/25/97	CATHK10A
		Dilution Factor: 1				
		Analysis Time..: 15:34		Analyst ID.....: 001863	Instrument ID..: P2	
Iron	2.9	0.070	mg/L	SW846 6010A	07/25/97	CATHK10C
		Dilution Factor: 1				
		Analysis Time..: 15:34		Analyst ID.....: 001863	Instrument ID..: P2	
Potassium	2.4 F	5.0	mg/L	SW846 6010A	07/25/97	CATHK10D
		Dilution Factor: 1				
		Analysis Time..: 13:19		Analyst ID.....: 001863	Instrument ID..: P1	
Magnesium	11.9	1.0	mg/L	SW846 6010A	07/25/97	CATHK10E
		Dilution Factor: 1				
		Analysis Time..: 15:34		Analyst ID.....: 001863	Instrument ID..: P2	
Manganese	0.49	0.020	mg/L	SW846 6010A	07/25/97	CATHK10F
		Dilution Factor: 1				
		Analysis Time..: 15:34		Analyst ID.....: 001863	Instrument ID..: P2	
Molybdenum	ND	0.080	mg/L	SW846 6010A	07/25/97	CATHK10G
		Dilution Factor: 1				
		Analysis Time..: 15:34		Analyst ID.....: 001863	Instrument ID..: P2	
Sodium	23.3	1.0	mg/L	SW846 6010A	07/25/97	CATHK10H
		Dilution Factor: 1				
		Analysis Time..: 13:19		Analyst ID.....: 001863	Instrument ID..: P1	
Nickel	0.012 F	0.15	mg/L	SW846 6010A	07/25/97	CATHK10J
		Dilution Factor: 1				
		Analysis Time..: 15:34		Analyst ID.....: 001863	Instrument ID..: P2	
Vanadium	ND	0.080	mg/L	SW846 6010A	07/25/97	CATHK10K
		Dilution Factor: 1				
		Analysis Time..: 15:34		Analyst ID.....: 001863	Instrument ID..: P2	

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: LF01-1DWG01

TOTAL Metals

Lot-Sample #...: B7G220139-007 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Zinc	ND	0.020	mg/L	SW846 6010A	07/25-07/31/97	CATHK10L

Dilution Factor: 1
Analysis Time..: 17:37 Analyst ID.....: 001702 Instrument ID..: P2

Prep Batch #...: 7205269

Mercury	ND	0.0010	mg/L	SW846 7470A	07/25/97	CATHK101

Dilution Factor: 1
Analysis Time..: 17:07 Analyst ID.....: 001702 Instrument ID..: CV

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: GMI-22-05MWG01

GC/MS Volatiles

Lot-Sample #...: B7G220139-008 Work Order #...: CATHN10R Matrix.....: WG
Date Sampled...: 07/21/97 Date Received..: 07/22/97
Prep Date.....: 07/24/97 Analysis Date..: 07/24/97
Prep Batch #...: 7211184 Analysis Time..: 17:01
Dilution Factor: 1
Analyst ID.....: 007084 Instrument ID..: VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	0.80	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	0.40	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	0.40	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.2	ug/L	SW846 8260A
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	3.2	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	0.40	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	**1.0 F**	**1.3**	**ug/L**	**SW846 8260A**
1,2-Dichloroethane	ND	0.60	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.6	ug/L	SW846 8260A
1,2-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	0.60	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	0.50	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	1.2	ug/L	SW846 8260A
1,3-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1-Chlorohexane	ND	0.50	ug/L	SW846 8260A
2,2-Dichloropropane	ND	3.5	ug/L	SW846 8260A
2-Chlorotoluene	ND	0.40	ug/L	SW846 8260A
4-Chlorotoluene	ND	0.60	ug/L	SW846 8260A
Benzene	ND	0.40	ug/L	SW846 8260A
Bromobenzene	ND	0.30	ug/L	SW846 8260A
Bromochloromethane	ND	0.40	ug/L	SW846 8260A
Bromodichloromethane	ND	0.80	ug/L	SW846 8260A
Bromoform	ND	1.2	ug/L	SW846 8260A
Bromomethane	ND	1.1	ug/L	SW846 8260A
Carbon tetrachloride	ND	2.1	ug/L	SW846 8260A
Chlorobenzene	ND	0.40	ug/L	SW846 8260A
Chloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	0.30	ug/L	SW846 8260A
Chloromethane	ND	1.3	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	1.2	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: GMI-22-05MWG01

GC/MS Volatiles

Lot-Sample #...: B7G220139-008 Work Order #...: CATHN10R Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	0.50	ug/L	SW846 8260A
Dibromomethane	ND	2.4	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	**0.70**	**0.60**	**ug/L**	**SW846 8260A**
Hexachlorobutadiene	ND	1.1	ug/L	SW846 8260A
Isopropylbenzene	ND	0.50	ug/L	SW846 8260A
m-Xylene & p-Xylene	**3.0**	**0.50**	**ug/L**	**SW846 8260A**
Methylene chloride	ND	0.30	ug/L	SW846 8260A
n-Butylbenzene	ND	1.1	ug/L	SW846 8260A
n-Propylbenzene	ND	0.40	ug/L	SW846 8260A
Naphthalene	**0.38 F**	**0.40**	**ug/L**	**SW846 8260A**
o-Xylene	**1.3**	**1.1**	**ug/L**	**SW846 8260A**
p-Isopropyltoluene	ND	1.2	ug/L	SW846 8260A
sec-Butylbenzene	ND	1.3	ug/L	SW846 8260A
Styrene	ND	0.40	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
tert-Butylbenzene	ND	1.4	ug/L	SW846 8260A
Tetrachloroethene	ND	1.4	ug/L	SW846 8260A
Toluene	**1.9**	**1.1**	**ug/L**	**SW846 8260A**
trans-1,2-Dichloroethene	ND	0.60	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichlorofluoromethane	ND	0.80	ug/L	SW846 8260A
Vinyl chloride	ND	1.1	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	105	(75 - 125)
4-Bromofluorobenzene	101	(75 - 125)
1,2-Dichloroethane-d4	101	(62 - 139)
Dibromofluoromethane	95	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: GMI-22-05MWG01

TOTAL Metals

Lot-Sample #...: B7G220139-008 Matrix.....: WG
Date Sampled...: 07/21/97 Date Received..: 07/22/97

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7205268						
Silver	ND	0.00020	mg/L	SW846 7761	07/25-08/11/97	CATHN136
		Dilution Factor: 1				
		Analysis Time..: 12:45		Analyst ID.....: 001863	Instrument ID..: F1	
Antimony	ND	0.0050	mg/L	SW846 6010A	07/25-07/31/97	CATHN10M
		Dilution Factor: 1				
		Analysis Time..: 17:48		Analyst ID.....: 001702	Instrument ID..: P2	
Arsenic	ND	0.0050	mg/L	SW846 6010A	07/25/97	CATHN10N
		Dilution Factor: 1				
		Analysis Time..: 15:45		Analyst ID.....: 001863	Instrument ID..: P2	
Lead	ND	0.0050	mg/L	SW846 6010A	07/25/97	CATHN10P
		Dilution Factor: 1				
		Analysis Time..: 15:45		Analyst ID.....: 001863	Instrument ID..: P2	
Selenium	ND	0.0050	mg/L	SW846 6010A	07/25/97	CATHN10Q
		Dilution Factor: 1				
		Analysis Time..: 15:45		Analyst ID.....: 001863	Instrument ID..: P2	
Thallium	ND	0.0020	mg/L	SW846 7841	07/25/97	CATHN10T
		Dilution Factor: 1				
		Analysis Time..: 17:33		Analyst ID.....: 001702	Instrument ID..: F1	
Aluminum	0.10 F	0.50	mg/L	SW846 6010A	07/25/97	CATHN103
		Dilution Factor: 1				
		Analysis Time..: 15:45		Analyst ID.....: 001863	Instrument ID..: P2	
Barium	0.13	0.020	mg/L	SW846 6010A	07/25/97	CATHN104
		Dilution Factor: 1				
		Analysis Time..: 15:45		Analyst ID.....: 001863	Instrument ID..: P2	
Beryllium	ND	0.0030	mg/L	SW846 6010A	07/25/97	CATHN105
		Dilution Factor: 1				
		Analysis Time..: 15:45		Analyst ID.....: 001863	Instrument ID..: P2	
Calcium	156	1.0	mg/L	SW846 6010A	07/25/97	CATHN106
		Dilution Factor: 1				
		Analysis Time..: 15:45		Analyst ID.....: 001863	Instrument ID..: P2	
Cadmium	ND	0.040	mg/L	SW846 6010A	07/25/97	CATHN107
		Dilution Factor: 1				
		Analysis Time..: 15:45		Analyst ID.....: 001863	Instrument ID..: P2	

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: GMI-22-05MWG01

TOTAL Metals

Lot-Sample #...: B7G220139-008 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Cobalt	0.0036 F	0.070	mg/L	SW846 6010A	07/25/97	CATHN108
		Dilution Factor: 1				
		Analysis Time..: 15:45		Analyst ID.....: 001863	Instrument ID..: P2	
Chromium	ND	0.070	mg/L	SW846 6010A	07/25/97	CATHN109
		Dilution Factor: 1				
		Analysis Time..: 15:45		Analyst ID.....: 001863	Instrument ID..: P2	
Copper	0.0070 F	0.060	mg/L	SW846 6010A	07/25/97	CATHN10A
		Dilution Factor: 1				
		Analysis Time..: 15:45		Analyst ID.....: 001863	Instrument ID..: P2	
Iron	0.28	0.070	mg/L	SW846 6010A	07/25/97	CATHN10C
		Dilution Factor: 1				
		Analysis Time..: 15:45		Analyst ID.....: 001863	Instrument ID..: P2	
Potassium	4.7 F	5.0	mg/L	SW846 6010A	07/25/97	CATHN1
		Dilution Factor: 1				
		Analysis Time..: 13:31		Analyst ID.....: 001863	Instrument ID..: P1	
Magnesium	14.2	1.0	mg/L	SW846 6010A	07/25/97	CATHN10E
		Dilution Factor: 1				
		Analysis Time..: 15:45		Analyst ID.....: 001863	Instrument ID..: P2	
Manganese	0.17	0.020	mg/L	SW846 6010A	07/25/97	CATHN10F
		Dilution Factor: 1				
		Analysis Time..: 15:45		Analyst ID.....: 001863	Instrument ID..: P2	
Molybdenum	ND	0.080	mg/L	SW846 6010A	07/25/97	CATHN10G
		Dilution Factor: 1				
		Analysis Time..: 15:45		Analyst ID.....: 001863	Instrument ID..: P2	
Sodium	56.3	1.0	mg/L	SW846 6010A	07/25/97	CATHN10H
		Dilution Factor: 1				
		Analysis Time..: 13:31		Analyst ID.....: 001863	Instrument ID..: P1	
Nickel	ND	0.15	mg/L	SW846 6010A	07/25/97	CATHN10J
		Dilution Factor: 1				
		Analysis Time..: 15:45		Analyst ID.....: 001863	Instrument ID..: P2	
Vanadium	ND	0.080	mg/L	SW846 6010A	07/25/97	CATHN10K
		Dilution Factor: 1				
		Analysis Time..: 15:45		Analyst ID.....: 001863	Instrument ID..: P2	

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: GMI-22-05MWG01

TOTAL Metals

Lot-Sample #...: B7G220139-008 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Zinc	0.017 F	0.020	mg/L	SW846 6010A	07/25-07/31/97	CATHN10L

Dilution Factor: 1
Analysis Time..: 17:48 Analyst ID.....: 001702 Instrument ID..: P2

Prep Batch #...: 7205269

Mercury	ND	0.0010	mg/L	SW846 7470A	07/25/97	CATHN101

Dilution Factor: 1
Analysis Time..: 17:12 Analyst ID.....: 001702 Instrument ID..: CV

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: MW-11WG01

GC/MS Volatiles

Lot-Sample #...: B7G220139-009 Work Order #...: CATHP10R Matrix.....: WG
Date Sampled...: 07/21/97 Date Received..: 07/22/97
Prep Date.....: 07/24/97 Analysis Date..: 07/24/97
Prep Batch #...: 7211184 Analysis Time..: 17:25
Dilution Factor: 1
Analyst ID.....: 007084 Instrument ID..: VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	0.80	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	0.40	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	0.40	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.2	ug/L	SW846 8260A
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	3.2	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	0.40	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	**1.2 F**	**1.3**	**ug/L**	**SW846 8260A**
1,2-Dichloroethane	ND	0.60	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.6	ug/L	SW846 8260A
1,2-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	0.60	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	0.50	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	1.2	ug/L	SW846 8260A
1,3-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1-Chlorohexane	ND	0.50	ug/L	SW846 8260A
2,2-Dichloropropane	ND	3.5	ug/L	SW846 8260A
2-Chlorotoluene	ND	0.40	ug/L	SW846 8260A
4-Chlorotoluene	ND	0.60	ug/L	SW846 8260A
Benzene	**0.32 F**	**0.40**	**ug/L**	**SW846 8260A**
Bromobenzene	ND	0.30	ug/L	SW846 8260A
Bromochloromethane	ND	0.40	ug/L	SW846 8260A
Bromodichloromethane	ND	0.80	ug/L	SW846 8260A
Bromoform	ND	1.2	ug/L	SW846 8260A
Bromomethane	ND	1.1	ug/L	SW846 8260A
Carbon tetrachloride	ND	2.1	ug/L	SW846 8260A
Chlorobenzene	ND	0.40	ug/L	SW846 8260A
Chloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	0.30	ug/L	SW846 8260A
Chloromethane	ND	1.3	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	1.2	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A

(Continued on next page)

Quanterra
Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: MW-11WG01

GC/MS Volatiles

Lot-Sample #...: B7G220139-009 **Work Order #...:** CATHP10R **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	0.50	ug/L	SW846 8260A
Dibromomethane	ND	2.4	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	**1.7**	**0.60**	**ug/L**	**SW846 8260A**
Hexachlorobutadiene	ND	1.1	ug/L	SW846 8260A
Isopropylbenzene	ND	0.50	ug/L	SW846 8260A
m-Xylene & p-Xylene	**3.3**	**0.50**	**ug/L**	**SW846 8260A**
Methylene chloride	ND	0.30	ug/L	SW846 8260A
n-Butylbenzene	ND	1.1	ug/L	SW846 8260A
n-Propylbenzene	ND	0.40	ug/L	SW846 8260A
Naphthalene	**0.49**	**0.40**	**ug/L**	**SW846 8260A**
o-Xylene	**0.98 F**	**1.1**	**ug/L**	**SW846 8260A**
p-Isopropyltoluene	ND	1.2	ug/L	SW846 8260A
sec-Butylbenzene	ND	1.3	ug/L	SW846 8260A
Styrene	ND	0.40	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
tert-Butylbenzene	ND	1.4	ug/L	SW846 8260A
Tetrachloroethene	ND	1.4	ug/L	SW846 8260A
Toluene	**1.5**	**1.1**	**ug/L**	**SW846 8260A**
trans-1,2-Dichloroethene	ND	0.60	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichlorofluoromethane	ND	0.80	ug/L	SW846 8260A
Vinyl chloride	ND	1.1	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	105	(75 - 125)
4-Bromofluorobenzene	101	(75 - 125)
1,2-Dichloroethane-d4	99	(62 - 139)
Dibromofluoromethane	95	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: MW-11WG01

TOTAL Metals

Lot-Sample #...: B7G220139-009 Matrix.....: WG
Date Sampled...: 07/21/97 Date Received..: 07/22/97

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7205268						
Silver	ND	0.00020	mg/L	SW846 7761	07/25-08/11/97	CATHP11K
		Dilution Factor: 1				
		Analysis Time..: 12:59		Analyst ID.....: 001863	Instrument ID..: F1	
Antimony	ND	0.0050	mg/L	SW846 6010A	07/25-07/31/97	CATHP10M
		Dilution Factor: 1				
		Analysis Time..: 18:24		Analyst ID.....: 001702	Instrument ID..: P2	
Arsenic	ND	0.0050	mg/L	SW846 6010A	07/25/97	CATHP10N
		Dilution Factor: 1				
		Analysis Time..: 16:24		Analyst ID.....: 001863	Instrument ID..: P2	
Lead	ND	0.0050	mg/L	SW846 6010A	07/25/97	CATHP10P
		Dilution Factor: 1				
		Analysis Time..: 16:24		Analyst ID.....: 001863	Instrument ID..: P2	
Selenium	ND	0.0050	mg/L	SW846 6010A	07/25/97	CATHP[illegible]
		Dilution Factor: 1				
		Analysis Time..: 16:24		Analyst ID.....: 001863	Instrument ID..: P2	
Thallium	ND	0.0020	mg/L	SW846 7841	07/25/97	CATHP10T
		Dilution Factor: 1				
		Analysis Time..: 17:53		Analyst ID.....: 001702	Instrument ID..: F1	
Aluminum	ND	0.50	mg/L	SW846 6010A	07/25/97	CATHP103
		Dilution Factor: 1				
		Analysis Time..: 16:24		Analyst ID.....: 001863	Instrument ID..: P2	
Barium	0.17	0.020	mg/L	SW846 6010A	07/25/97	CATHP104
		Dilution Factor: 1				
		Analysis Time..: 16:24		Analyst ID.....: 001863	Instrument ID..: P2	
Beryllium	ND	0.0030	mg/L	SW846 6010A	07/25/97	CATHP105
		Dilution Factor: 1				
		Analysis Time..: 16:24		Analyst ID.....: 001863	Instrument ID..: P2	
Calcium	189	1.0	mg/L	SW846 6010A	07/25/97	CATHP106
		Dilution Factor: 1				
		Analysis Time..: 16:24		Analyst ID.....: 001863	Instrument ID..: P2	
Cadmium	ND	0.040	mg/L	SW846 6010A	07/25/97	CATHP1[illegible]
		Dilution Factor: 1				
		Analysis Time..: 16:24		Analyst ID.....: 001863	Instrument ID..: P2	

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: MW-11WG01

TOTAL Metals

Lot-Sample #...: B7G220139-009 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Cobalt	ND	0.070	mg/L	SW846 6010A	07/25/97	CATHP108
		Dilution Factor: 1				
		Analysis Time..: 16:24		Analyst ID.....: 001863	Instrument ID..: P2	
Chromium	ND	0.070	mg/L	SW846 6010A	07/25/97	CATHP109
		Dilution Factor: 1				
		Analysis Time..: 16:24		Analyst ID.....: 001863	Instrument ID..: P2	
Copper	0.0052 F	0.060	mg/L	SW846 6010A	07/25/97	CATHP10A
		Dilution Factor: 1				
		Analysis Time..: 16:24		Analyst ID.....: 001863	Instrument ID..: P2	
Iron	0.25	0.070	mg/L	SW846 6010A	07/25/97	CATHP10C
		Dilution Factor: 1				
		Analysis Time..: 16:24		Analyst ID.....: 001863	Instrument ID..: P2	
Potassium	0.65 F	5.0	mg/L	SW846 6010A	07/25/97	CATHP10D
		Dilution Factor: 1				
		Analysis Time..: 14:10		Analyst ID.....: 001863	Instrument ID..: P1	
Magnesium	14.7	1.0	mg/L	SW846 6010A	07/25/97	CATHP10E
		Dilution Factor: 1				
		Analysis Time..: 16:24		Analyst ID.....: 001863	Instrument ID..: P2	
Manganese	0.14	0.020	mg/L	SW846 6010A	07/25/97	CATHP10F
		Dilution Factor: 1				
		Analysis Time..: 16:24		Analyst ID.....: 001863	Instrument ID..: P2	
Molybdenum	ND	0.080	mg/L	SW846 6010A	07/25/97	CATHP10G
		Dilution Factor: 1				
		Analysis Time..: 16:24		Analyst ID.....: 001863	Instrument ID..: P2	
Sodium	61.6	1.0	mg/L	SW846 6010A	07/25/97	CATHP10H
		Dilution Factor: 1				
		Analysis Time..: 14:10		Analyst ID.....: 001863	Instrument ID..: P1	
Nickel	ND	0.15	mg/L	SW846 6010A	07/25/97	CATHP10J
		Dilution Factor: 1				
		Analysis Time..: 16:24		Analyst ID.....: 001863	Instrument ID..: P2	
Vanadium	ND	0.080	mg/L	SW846 6010A	07/25/97	CATHP10K
		Dilution Factor: 1				
		Analysis Time..: 16:24		Analyst ID.....: 001863	Instrument ID..: P2	

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: MW-11WG01

TOTAL Metals

#...: B7G220139-009 Matrix.....: WG

RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
0.012 F	0.020	mg/L	SW846 6010A	07/25-07/31/97	CATHP10L

Dilution Factor: 1
Analysis Time..: 18:24 Analyst ID.....: 001702 Instrument ID..: P2

#...: 7205269

ND	0.0010	mg/L	SW846 7470A	07/25/97	CATHP101

Dilution Factor: 1
Analysis Time..: 17:26 Analyst ID.....: 001702 Instrument ID..: CV

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nalyzed for but not detected at or above the MDL.
ified but the value was below the RL and above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: MW-10WG01

GC/MS Volatiles

Lot-Sample #...: B7G220139-010 Work Order #...: CATHT10R Matrix.....: WG
Date Sampled...: 07/21/97 Date Received..: 07/22/97
Prep Date.....: 07/24/97 Analysis Date..: 07/24/97
Prep Batch #...: 7211184 Analysis Time..: 17:49
Dilution Factor: 500
Analyst ID.....: 007084 Instrument ID..: VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	250	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	400	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	200	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	500	ug/L	SW846 8260A
1,1-Dichloroethane	ND	200	ug/L	SW846 8260A
1,1-Dichloroethene	ND	600	ug/L	SW846 8260A
1,1-Dichloropropene	ND	500	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	150	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	1600	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	200	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	**2600**	**650**	**ug/L**	**SW846 8260A**
1,2-Dichloroethane	ND	300	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	150	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	1300	ug/L	SW846 8260A
1,2-Dichloropropane	ND	200	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	300	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	**650**	**250**	**ug/L**	**SW846 8260A**
1,3-Dichlorobenzene	ND	600	ug/L	SW846 8260A
1,3-Dichloropropane	ND	200	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	150	ug/L	SW846 8260A
1-Chlorohexane	ND	250	ug/L	SW846 8260A
2,2-Dichloropropane	ND	1800	ug/L	SW846 8260A
2-Chlorotoluene	ND	200	ug/L	SW846 8260A
4-Chlorotoluene	ND	300	ug/L	SW846 8260A
Benzene	**4200**	**200**	**ug/L**	**SW846 8260A**
Bromobenzene	ND	150	ug/L	SW846 8260A
Bromochloromethane	ND	200	ug/L	SW846 8260A
Bromodichloromethane	ND	400	ug/L	SW846 8260A
Bromoform	ND	600	ug/L	SW846 8260A
Bromomethane	ND	550	ug/L	SW846 8260A
Carbon tetrachloride	ND	1000	ug/L	SW846 8260A
Chlorobenzene	ND	200	ug/L	SW846 8260A
Chloroethane	ND	500	ug/L	SW846 8260A
Chloroform	ND	150	ug/L	SW846 8260A
Chloromethane	ND	650	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	600	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	500	ug/L	SW846 8260A

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Quanterra
Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: MW-10WG01

GC/MS Volatiles

Lot-Sample #...: B7G220139-010 Work Order #...: CATHT10R Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	250	ug/L	SW846 8260A
Dibromomethane	ND	1200	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	500	ug/L	SW846 8260A
Ethylbenzene	**4800**	**300**	**ug/L**	**SW846 8260A**
Hexachlorobutadiene	ND	550	ug/L	SW846 8260A
Isopropylbenzene	**200 F**	**250**	**ug/L**	**SW846 8260A**
m-Xylene & p-Xylene	**9400**	**250**	**ug/L**	**SW846 8260A**
Methylene chloride	ND	150	ug/L	SW846 8260A
n-Butylbenzene	ND	550	ug/L	SW846 8260A
n-Propylbenzene	**400**	**200**	**ug/L**	**SW846 8260A**
Naphthalene	**770**	**200**	**ug/L**	**SW846 8260A**
o-Xylene	**3700**	**550**	**ug/L**	**SW846 8260A**
p-Isopropyltoluene	ND	600	ug/L	SW846 8260A
sec-Butylbenzene	ND	650	ug/L	SW846 8260A
Styrene	ND	200	ug/L	SW846 8260A
Trichloroethene	ND	500	ug/L	SW846 8260A
tert-Butylbenzene	ND	700	ug/L	SW846 8260A
Tetrachloroethene	ND	700	ug/L	SW846 8260A
Toluene	**9000**	**550**	**ug/L**	**SW846 8260A**
trans-1,2-Dichloroethene	ND	300	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	500	ug/L	SW846 8260A
Trichlorofluoromethane	ND	400	ug/L	SW846 8260A
Vinyl chloride	ND	550	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	104	(75 - 125)
4-Bromofluorobenzene	98	(75 - 125)
1,2-Dichloroethane-d4	98	(62 - 139)
Dibromofluoromethane	95	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: MW-10WG01

TOTAL Metals

Lot-Sample #...: B7G220139-010 Matrix.....: WG
Date Sampled...: 07/21/97 Date Received..: 07/22/97

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7205268						
Silver	ND	0.00020	mg/L	SW846 7761	07/25-08/11/97	CATHT10U
		Dilution Factor: 1				
		Analysis Time..: 13:07		Analyst ID.....: 001863	Instrument ID..: F1	
Antimony	ND	0.0050	mg/L	SW846 6010A	07/25-07/31/97	CATHT10M
		Dilution Factor: 1				
		Analysis Time..: 18:29		Analyst ID.....: 001702	Instrument ID..: P2	
Arsenic	0.019	0.0050	mg/L	SW846 6010A	07/25/97	CATHT10N
		Dilution Factor: 1				
		Analysis Time..: 16:29		Analyst ID.....: 001863	Instrument ID..: P2	
Lead	0.0050	0.0050	mg/L	SW846 6010A	07/25/97	CATHT10P
		Dilution Factor: 1				
		Analysis Time..: 16:29		Analyst ID.....: 001863	Instrument ID..: P2	
Selenium	ND	0.0050	mg/L	SW846 6010A	07/25/97	CATHT10Q
		Dilution Factor: 1				
		Analysis Time..: 16:29		Analyst ID.....: 001863	Instrument ID..: P2	
Thallium	ND	0.0020	mg/L	SW846 7841	07/25/97	CATHT10T
		Dilution Factor: 1				
		Analysis Time..: 17:58		Analyst ID.....: 001702	Instrument ID..: F1	
Aluminum	ND	0.50	mg/L	SW846 6010A	07/25/97	CATHT103
		Dilution Factor: 1				
		Analysis Time..: 16:29		Analyst ID.....: 001863	Instrument ID..: P2	
Barium	0.18	0.020	mg/L	SW846 6010A	07/25/97	CATHT104
		Dilution Factor: 1				
		Analysis Time..: 16:29		Analyst ID.....: 001863	Instrument ID..: P2	
Beryllium	ND	0.0030	mg/L	SW846 6010A	07/25/97	CATHT105
		Dilution Factor: 1				
		Analysis Time..: 16:29		Analyst ID.....: 001863	Instrument ID..: P2	
Calcium	179	1.0	mg/L	SW846 6010A	07/25/97	CATHT106
		Dilution Factor: 1				
		Analysis Time..: 16:29		Analyst ID.....: 001863	Instrument ID..: P2	
Cadmium	ND	0.040	mg/L	SW846 6010A	07/25/97	CATHT107
		Dilution Factor: 1				
		Analysis Time..: 16:29		Analyst ID.....: 001863	Instrument ID..: P2	

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: MW-10WG01

TOTAL Metals

Lot-Sample #...: B7G220139-010 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Cobalt	0.0050 F	0.070	mg/L	SW846 6010A	07/25/97	CATHT10B
		Dilution Factor: 1				
		Analysis Time..: 16:29		Analyst ID.....: 001863	Instrument ID..: P2	
Chromium	ND	0.070	mg/L	SW846 6010A	07/25/97	CATHT109
		Dilution Factor: 1				
		Analysis Time..: 16:29		Analyst ID.....: 001863	Instrument ID..: P2	
Copper	0.0047 F	0.060	mg/L	SW846 6010A	07/25/97	CATHT10A
		Dilution Factor: 1				
		Analysis Time..: 16:29		Analyst ID.....: 001863	Instrument ID..: P2	
Iron	6.3	0.070	mg/L	SW846 6010A	07/25/97	CATHT10C
		Dilution Factor: 1				
		Analysis Time..: 16:29		Analyst ID.....: 001863	Instrument ID..: P2	
Potassium	ND	5.0	mg/L	SW846 6010A	07/25/97	CATHT10D
		Dilution Factor: 1				
		Analysis Time..: 14:16		Analyst ID.....: 001863	Instrument ID..: P1	
Magnesium	13.6	1.0	mg/L	SW846 6010A	07/25/97	CATHT10E
		Dilution Factor: 1				
		Analysis Time..: 16:29		Analyst ID.....: 001863	Instrument ID..: P2	
Manganese	5.9	0.020	mg/L	SW846 6010A	07/25/97	CATHT10F
		Dilution Factor: 1				
		Analysis Time..: 16:29		Analyst ID.....: 001863	Instrument ID..: P2	
Molybdenum	ND	0.080	mg/L	SW846 6010A	07/25/97	CATHT10G
		Dilution Factor: 1				
		Analysis Time..: 16:29		Analyst ID.....: 001863	Instrument ID..: P2	
Sodium	54.8	1.0	mg/L	SW846 6010A	07/25/97	CATHT10H
		Dilution Factor: 1				
		Analysis Time..: 14:16		Analyst ID.....: 001863	Instrument ID..: P1	
Nickel	ND	0.15	mg/L	SW846 6010A	07/25/97	CATHT10J
		Dilution Factor: 1				
		Analysis Time..: 16:29		Analyst ID.....: 001863	Instrument ID..: P2	
Vanadium	ND	0.080	mg/L	SW846 6010A	07/25/97	CATHT10K
		Dilution Factor: 1				
		Analysis Time..: 16:29		Analyst ID.....: 001863	Instrument ID..: P2	

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: MW-10WG01

TOTAL Metals

Lot-Sample #...: B7G220139-010 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Zinc	ND	0.020	mg/L	SW846 6010A	07/25-07/31/97	CATHT10L
		Dilution Factor: 1				
		Analysis Time..: 18:29		Analyst ID.....: 001702	Instrument ID..: P2	
Prep Batch #...: 7205269						
Mercury	ND	0.0010	mg/L	SW846 7470A	07/25/97	CATHT101
		Dilution Factor: 1				
		Analysis Time..: 17:28		Analyst ID.....: 001702	Instrument ID..: CV	

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra
Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: DUP02-WG01

GC/MS Volatiles

Lot-Sample #...: B7G220139-011 Work Order #...: CATHV20R Matrix.....: WG
Date Sampled...: 07/21/97 Date Received..: 07/22/97
Prep Date.....: 08/03/97 Analysis Date..: 08/03/97
Prep Batch #...: 7216155 Analysis Time..: 18:19
Dilution Factor: 1
Analyst ID.....: 007084 Instrument ID..: VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	0.80	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	0.40	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	0.40	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.2	ug/L	SW846 8260A
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	3.2	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	0.40	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	**0.74 F**	**1.3**	**ug/L**	**SW846 8260A**
1,2-Dichloroethane	ND	0.60	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.6	ug/L	SW846 8260A
1,2-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	0.60	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	0.50	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	1.2	ug/L	SW846 8260A
1,3-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1-Chlorohexane	ND	0.50	ug/L	SW846 8260A
2,2-Dichloropropane	ND	3.5	ug/L	SW846 8260A
2-Chlorotoluene	ND	0.40	ug/L	SW846 8260A
4-Chlorotoluene	ND	0.60	ug/L	SW846 8260A
Benzene	ND	0.40	ug/L	SW846 8260A
Bromobenzene	ND	0.30	ug/L	SW846 8260A
Bromochloromethane	ND	0.40	ug/L	SW846 8260A
Bromodichloromethane	ND	0.80	ug/L	SW846 8260A
Bromoform	ND	1.2	ug/L	SW846 8260A
Bromomethane	ND	1.1	ug/L	SW846 8260A
Carbon tetrachloride	ND	2.1	ug/L	SW846 8260A
Chlorobenzene	ND	0.40	ug/L	SW846 8260A
Chloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	0.30	ug/L	SW846 8260A
Chloromethane	ND	1.3	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	1.2	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: DUP02-WG01

GC/MS Volatiles

Lot-Sample #...: B7G220139-011 Work Order #...: CATHV20R Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	0.50	ug/L	SW846 8260A
Dibromomethane	ND	2.4	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	**0.45 F**	**0.60**	**ug/L**	**SW846 8260A**
Hexachlorobutadiene	ND	1.1	ug/L	SW846 8260A
Isopropylbenzene	ND	0.50	ug/L	SW846 8260A
m-Xylene & p-Xylene	**2.0**	**0.50**	**ug/L**	**SW846 8260A**
Methylene chloride	ND	0.30	ug/L	SW846 8260A
n-Butylbenzene	ND	1.1	ug/L	SW846 8260A
n-Propylbenzene	ND	0.40	ug/L	SW846 8260A
Naphthalene	ND	0.40	ug/L	SW846 8260A
o-Xylene	**0.84 F**	**1.1**	**ug/L**	**SW846 8260A**
p-Isopropyltoluene	ND	1.2	ug/L	SW846 8260A
sec-Butylbenzene	ND	1.3	ug/L	SW846 8260A
Styrene	ND	0.40	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
tert-Butylbenzene	ND	1.4	ug/L	SW846 8260A
Tetrachloroethene	ND	1.4	ug/L	SW846 8260A
Toluene	**1.2**	**1.1**	**ug/L**	**SW846 8260A**
trans-1,2-Dichloroethene	ND	0.60	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichlorofluoromethane	ND	0.80	ug/L	SW846 8260A
Vinyl chloride	ND	1.1	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	103	(75 - 125)
4-Bromofluorobenzene	100	(75 - 125)
1,2-Dichloroethane-d4	98	(62 - 139)
Dibromofluoromethane	98	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: DUP02-WG01

TOTAL Metals

Lot-Sample #...: B7G220139-011 Matrix.....: WG
Date Sampled...: 07/21/97 Date Received..: 07/22/97

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7205268						
Silver	ND	0.00020	mg/L	SW846 7761	07/25-08/11/97	CATHV10U
		Dilution Factor: 1				
		Analysis Time..: 13:12		Analyst ID.....: 001863	Instrument ID..: F1	
Antimony	ND	0.0050	mg/L	SW846 6010A	07/25-07/31/97	CATHV10M
		Dilution Factor: 1				
		Analysis Time..: 18:34		Analyst ID.....: 001702	Instrument ID..: P2	
Arsenic	ND	0.0050	mg/L	SW846 6010A	07/25/97	CATHV10N
		Dilution Factor: 1				
		Analysis Time..: 16:35		Analyst ID.....: 001863	Instrument ID..: P2	
Lead	ND	0.0050	mg/L	SW846 6010A	07/25/97	CATHV10P
		Dilution Factor: 1				
		Analysis Time..: 16:35		Analyst ID.....: 001863	Instrument ID..: P2	
Selenium	ND	0.0050	mg/L	SW846 6010A	07/25/97	CATHV1[illegible]
		Dilution Factor: 1				
		Analysis Time..: 16:35		Analyst ID.....: 001863	Instrument ID..: P2	
Thallium	ND	0.0020	mg/L	SW846 7841	07/25/97	CATHV10T
		Dilution Factor: 1				
		Analysis Time..: 18:03		Analyst ID.....: 001702	Instrument ID..: F1	
Aluminum	ND	0.50	mg/L	SW846 6010A	07/25/97	CATHV103
		Dilution Factor: 1				
		Analysis Time..: 16:35		Analyst ID.....: 001863	Instrument ID..: P2	
Barium	0.14	0.020	mg/L	SW846 6010A	07/25/97	CATHV104
		Dilution Factor: 1				
		Analysis Time..: 16:35		Analyst ID.....: 001863	Instrument ID..: P2	
Beryllium	ND	0.0030	mg/L	SW846 6010A	07/25/97	CATHV105
		Dilution Factor: 1				
		Analysis Time..: 16:35		Analyst ID.....: 001863	Instrument ID..: P2	
Calcium	157	1.0	mg/L	SW846 6010A	07/25/97	CATHV106
		Dilution Factor: 1				
		Analysis Time..: 16:35		Analyst ID.....: 001863	Instrument ID..: P2	
Cadmium	ND	0.040	mg/L	SW846 6010A	07/25/97	CATHV1
		Dilution Factor: 1				
		Analysis Time..: 16:35		Analyst ID.....: 001863	Instrument ID..: P2	

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: DUP02-WG01

TOTAL Metals

Lot-Sample #...: B7G220139-011 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Cobalt	0.0051 F	0.070	mg/L	SW846 6010A	07/25/97	CATHV108
		Dilution Factor: 1				
		Analysis Time..: 16:35		Analyst ID.....: 001863	Instrument ID..: P2	
Chromium	ND	0.070	mg/L	SW846 6010A	07/25/97	CATHV109
		Dilution Factor: 1				
		Analysis Time..: 16:35		Analyst ID.....: 001863	Instrument ID..: P2	
Copper	0.0063 F	0.060	mg/L	SW846 6010A	07/25/97	CATHV10A
		Dilution Factor: 1				
		Analysis Time..: 16:35		Analyst ID.....: 001863	Instrument ID..: P2	
Iron	0.18	0.070	mg/L	SW846 6010A	07/25/97	CATHV10C
		Dilution Factor: 1				
		Analysis Time..: 16:35		Analyst ID.....: 001863	Instrument ID..: P2	
Potassium	4.5 F	5.0	mg/L	SW846 6010A	07/25/97	CATHV10D
		Dilution Factor: 1				
		Analysis Time..: 14:22		Analyst ID.....: 001863	Instrument ID..: P1	
Magnesium	14.6	1.0	mg/L	SW846 6010A	07/25/97	CATHV10E
		Dilution Factor: 1				
		Analysis Time..: 16:35		Analyst ID.....: 001863	Instrument ID..: P2	
Manganese	0.16	0.020	mg/L	SW846 6010A	07/25/97	CATHV10F
		Dilution Factor: 1				
		Analysis Time..: 16:35		Analyst ID.....: 001863	Instrument ID..: P2	
Molybdenum	ND	0.080	mg/L	SW846 6010A	07/25/97	CATHV10G
		Dilution Factor: 1				
		Analysis Time..: 16:35		Analyst ID.....: 001863	Instrument ID..: P2	
Sodium	56.9	1.0	mg/L	SW846 6010A	07/25/97	CATHV10H
		Dilution Factor: 1				
		Analysis Time..: 14:22		Analyst ID.....: 001863	Instrument ID..: P1	
Nickel	ND	0.15	mg/L	SW846 6010A	07/25/97	CATHV10J
		Dilution Factor: 1				
		Analysis Time..: 16:35		Analyst ID.....: 001863	Instrument ID..: P2	
Vanadium	ND	0.080	mg/L	SW846 6010A	07/25/97	CATHV10K
		Dilution Factor: 1				
		Analysis Time..: 16:35		Analyst ID.....: 001863	Instrument ID..: P2	

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: DUP02-WG01

TOTAL Metals

Lot-Sample #...: B7G220139-011 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Zinc	0.025	0.020	mg/L	SW846 6010A	07/25-07/31/97	CATHV10L

Dilution Factor: 1
Analysis Time..: 18:34 Analyst ID.....: 001702 Instrument ID..: P2

Prep Batch #...: 7205269

Mercury	ND	0.0010	mg/L	SW846 7470A	07/25/97	CATHV101

Dilution Factor: 1
Analysis Time..: 17:30 Analyst ID.....: 001702 Instrument ID..: CV

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: TB072197

GC Volatiles

Lot-Sample #...: B7G220139-012 Work Order #...: CATJ0103 Matrix.....: WQ
Date Sampled...: 07/21/97 Date Received..: 07/22/97
Prep Date.....: 07/28/97 Analysis Date..: 07/28/97
Prep Batch #...: 7216198 Analysis Time..: 13:14
Dilution Factor: 1
Analyst ID.....: 013512 Instrument ID..: K1A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Ethane	ND	0.50	ug/L	EPA-9 RSK-175
Ethene	ND	0.50	ug/L	EPA-9 RSK-175
Methane	0.57	0.50	ug/L	EPA-9 RSK-175

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra
Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: TB072197

GC Volatiles

Lot-Sample #...: B7G220139-012 Work Order #...: CATJ0101 Matrix.....: WQ
Date Sampled...: 07/21/97 Date Received..: 07/22/97
Prep Date.....: 07/25/97 Analysis Date..: 07/25/97
Prep Batch #...: 7206190 Analysis Time..: 07:38
Dilution Factor: 1
Analyst ID.....: 001854 Instrument ID..: V2A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	2.0	ug/L	SW846 8020A
Ethylbenzene	ND	2.0	ug/L	SW846 8020A
Toluene	ND	2.0	ug/L	SW846 8020A
Xylenes (total)	ND	2.0	ug/L	SW846 8020A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	81	(46 - 136)
Bromofluorobenzene	84	(48 - 138)
Fluorobenzene	97	(44 - 165)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: TB072197

GC/MS Volatiles

Lot-Sample #...: B7G220139-012 Work Order #...: CATJ0102 Matrix.....: WQ
Date Sampled...: 07/21/97 Date Received..: 07/22/97
Prep Date.....: 07/24/97 Analysis Date..: 07/24/97
Prep Batch #...: 7211184 Analysis Time..: 13:47
Dilution Factor: 1
Analyst ID.....: 007084 Instrument ID..: VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	0.80	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	0.40	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	0.40	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.2	ug/L	SW846 8260A
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	3.2	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	0.40	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	1.3	ug/L	SW846 8260A
1,2-Dichloroethane	ND	0.60	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.6	ug/L	SW846 8260A
1,2-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	0.60	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	0.50	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	1.2	ug/L	SW846 8260A
1,3-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1-Chlorohexane	ND	0.50	ug/L	SW846 8260A
2,2-Dichloropropane	ND	3.5	ug/L	SW846 8260A
2-Chlorotoluene	ND	0.40	ug/L	SW846 8260A
4-Chlorotoluene	ND	0.60	ug/L	SW846 8260A
Benzene	ND	0.40	ug/L	SW846 8260A
Bromobenzene	ND	0.30	ug/L	SW846 8260A
Bromochloromethane	ND	0.40	ug/L	SW846 8260A
Bromodichloromethane	ND	0.80	ug/L	SW846 8260A
Bromoform	ND	1.2	ug/L	SW846 8260A
Bromomethane	ND	1.1	ug/L	SW846 8260A
Carbon tetrachloride	ND	2.1	ug/L	SW846 8260A
Chlorobenzene	ND	0.40	ug/L	SW846 8260A
Chloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	0.30	ug/L	SW846 8260A
Chloromethane	ND	1.3	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	1.2	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A

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Quanterra
Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: TB072197

GC/MS Volatiles

Lot-Sample #...: B7G220139-012 Work Order #...: CATJ0102 Matrix.....: WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	0.50	ug/L	SW846 8260A
Dibromomethane	ND	2.4	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	ND	0.60	ug/L	SW846 8260A
Hexachlorobutadiene	ND	1.1	ug/L	SW846 8260A
Isopropylbenzene	ND	0.50	ug/L	SW846 8260A
m-Xylene & p-Xylene	ND	0.50	ug/L	SW846 8260A
Methylene chloride	ND	0.30	ug/L	SW846 8260A
n-Butylbenzene	ND	1.1	ug/L	SW846 8260A
n-Propylbenzene	ND	0.40	ug/L	SW846 8260A
Naphthalene	ND	0.40	ug/L	SW846 8260A
o-Xylene	ND	1.1	ug/L	SW846 8260A
p-Isopropyltoluene	ND	1.2	ug/L	SW846 8260A
sec-Butylbenzene	ND	1.3	ug/L	SW846 8260A
Styrene	ND	0.40	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
tert-Butylbenzene	ND	1.4	ug/L	SW846 8260A
Tetrachloroethene	ND	1.4	ug/L	SW846 8260A
Toluene	ND	1.1	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	0.60	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichlorofluoromethane	ND	0.80	ug/L	SW846 8260A
Vinyl chloride	ND	1.1	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	101	(75 - 125)
4-Bromofluorobenzene	97	(75 - 125)
1,2-Dichloroethane-d4	104	(62 - 139)
Dibromofluoromethane	97	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

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Quanterra
Environmental Services

Quality Control Summary

Quanterra QC Program Summary

Method Blanks

Laboratory Control Samples

Matrix Spike/Matrix Spike Duplicates

Chain-of-Custody

Quanterra Environmental Services

Quanterra Quality Control Program Summary

Quanterra Environmental Services considers continuous analytical method performance evaluations to be an integral portion of the data package, and routinely includes the pertinent QA/QC data associated with analytical results. Brief discussions of the various QA/QC procedures utilized to measure acceptable method and matrix performance follow. Further documentation of specific policies and procedures in use are available, upon request, from the Quanterra Quality Control Department.

The program described below provides Quanterra's interpretation of QC requirements described in SW-846, 3rd edition -Final Update II. Additional interpretations specific to other aspects of methods performed, such as instrument calibration and bench procedures, are described in program-specific documents (e.g. US Corps of Engineers, AFCEE, etc.) and associated method standard operating procedures. Where explicit program requirements or project requirements exist, certain elements of the Quanterra QC Program may be superseded by these requirements.

Elements of the Quanterra QC Program

Where other clear regulatory guidance, contract specifications, or client requirements are not available, the Quanterra QC Program provides guidance for Batch QC requirements. The Quality Control Batch is a set of up to 20 field samples of similar matrix, which are processed together under the same conditions, within the same time frame. Included in each Quality Control Batch is a Method Blank, Laboratory Control Sample, and Matrix Spike Duplicate. For methods that require independent sample preparation prior to analysis, the QC Batch is defined at the preparation stage. For methods that do not require independent sample preparation, the QC Batch is defined at the instrument. The QC Batch Number is provided on each result page in association with the parameter(s) presented, and may be used to cross-reference sample results with the associated QC data.

Method Blank Evaluations

Laboratory analytical method blanks are systematically prepared and analyzed in order to continuously evaluate the system interference and background contamination levels associated with each applicable analytical method. Method blanks include all aspects of actual laboratory procedures involving sample preparation and analysis, substituting analyte-free water or solid for the actual sample. Under normal circumstances, the Method Blank should not exhibit analytes of interest above the reported detection limit. Due to the presence of some analytes in a typical laboratory setting, the following common laboratory contaminants are exceptions to this rule, provided they are not present in the method blank at greater than five times the reporting limit.

Volatiles	Semi-Volatiles	Metals
Methylene chloride	Dimethyl phthalate	Calcium
Toluene	Diethyl phthalate	Magnesium
2-Butanone	Di-n-butyl-phthalate	Sodium
Acetone	Butyl benzyl phthalate	
	Bis (2-ethylhexyl) phthalate	

A method blank is performed with each analytical batch. A minimum of 5% of all laboratory analyses are method blanks.

Laboratory Control Sample (LCS) Evaluations

Known concentrations of designated matrix spike (target analyte) compounds are added to a method blank prior to extraction and analysis. Percent recovery determinations of individual target analytes in the LCS demonstrate the laboratory's method performance for the QC Batch relative to these target analytes (or other individual components represented by a subset of control analytes). Percent recovery data is displayed alongside acceptance criteria, that is typically derived from laboratory historical data. Failure of a Laboratory Control Sample to meet established recovery criteria for control analytes is cause for corrective actions to occur, which typically includes re-extraction and re-analysis of all samples associated with the QC Batch. An LCS is performed with each analytical batch. A minimum of 5% of all laboratory analyses are laboratory control samples.

Quanterra
Environmental Services

Quanterra Quality Control Program Summary (continued)

Surrogate Spike Recovery Evaluations

For GC and GC/MS analyses, known concentrations of designated surrogate spikes, consisting of a number of similar, non-method compounds or method compound analogues, are added to sample fractions prior to sample extraction and analysis. The percent recovery determinations calculated from the subsequent analysis is one indication of the overall method efficiency for the individual sample. The surrogate spike recovery data is displayed alongside acceptance limits at the bottom of each applicable analytical result report page. Where sufficient laboratory-generated data does not yet exist to determine appropriate control limits, advisory limits may be enacted until sufficient data is collected to allow implementation of control limits.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Evaluations

In conjunction with the analysis of a client-provided field sample, a known concentration of designated matrix spike compounds (target analytes) are added to two aliquots of the actual sample. Percent recovery determinations are calculated from both spiked aliquots, using target analyte concentrations already present in the actual sample as a baseline. The percent recovery determinations indicate the accuracy of the method specific to the target analytes (or other individual components represented by a subset of control analytes) in the individual sample matrix. Comparison of the percent recoveries in the two spiked aliquots yields a relative percent difference (RPD). Percent recovery and relative percent difference data is displayed alongside historical criteria, that may be used to judge individual sample matrix effects for specific analytes. MS/MSD data is evaluated by the laboratory with respect to the individual sample matrix. In cases where MS/MSD data indicate sample method performance outside of historical criteria, the laboratory control sample results are referenced to ensure acceptable method performance by the laboratory for the sample batch. For analyses which are inappropriately suited for matrix spikes (e.g. pH), non-spiked duplicate analyses are performed to generate precision data. Matrix spike duplicates are typically performed on at least one sample within each analytical batch. A minimum of 10% of all laboratory analyses are matrix spikes or duplicates.

Corrective Action Evaluations

The goal of the Quanterra Quality Control Program is to generate data that demonstrates process control, and allows for client usability of data. Where the analytical process is demonstrated to vary from established criteria, or client requirements have not been met, data evaluation resulting in corrective action may be required. Corrective action may include re-preparation and/or reanalysis of field samples and QC samples. Where appropriate or necessary to allow proper interpretation of results presented in the final report, details of corrective actions taken during the laboratory processing of samples are presented as a case narrative at the front of the report. Alternatively, routine corrective action, such as reanalysis, may be footnoted on individual sample result pages.

Analytical Result Qualifier Flags

Where applicable, data qualifiers may be appended to analytical results in order to allow for proper interpretation of the result presented. Typically, the presence of data qualifier flag on an analytical result page is accompanied by a footnote explaining the qualifier.

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Quanterra Environmental Services

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: B7G220139
MB Lot-Sample #: I7H040000-198

Work Order #...: CC3GC101

Matrix.....: WATER

Prep Date.....: 07/28/97

Analysis Time..: 09:42

Analysis Date..: 07/28/97

Prep Batch #...: 7216198

Instrument ID..: K1A

Dilution Factor: 1

Analyst ID.....: 013512

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Methane	0.11 F	0.50	ug/L	EPA-9 RSK-175
Ethane	ND	0.50	ug/L	EPA-9 RSK-175
Ethene	ND	0.50	ug/L	EPA-9 RSK-175

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

F The analyte was identified but the value was below the RL and above the MDL.

ND = The analyte was analyzed for but not detected at or above the MDL.

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Quanterra Environmental Services

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: B7G220139
MB Lot-Sample #: B7G250000-190

Work Order #...: CAWNN101
Prep Date.....: 07/24/97
Prep Batch #...: 7206190
Analyst ID.....: 001854

Matrix.....: WATER
Analysis Time..: 14:20
Instrument ID..: V2A

Analysis Date..: 07/24/97
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	2.0	ug/L	SW846 8020A
Ethylbenzene	ND	2.0	ug/L	SW846 8020A
Toluene	ND	2.0	ug/L	SW846 8020A
Xylenes (total)	ND	2.0	ug/L	SW846 8020A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	90	(46 - 136)
Bromofluorobenzene	86	(48 - 138)
Fluorobenzene	93	(44 - 165)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: B7G220139
MB Lot-Sample #: B7G300000-184

Work Order #...: CC0QX101

Matrix.....: WATER

Prep Date.....: 07/24/97
Prep Batch #...: 7211184

Analysis Time..: 10:18
Instrument ID..: VO4

Analysis Date..: 07/24/97
Dilution Factor: 1

Analyst ID.....: 007084

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	0.80	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	0.40	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	0.40	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.2	ug/L	SW846 8260A
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	3.2	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	0.40	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	1.3	ug/L	SW846 8260A
1,2-Dichloroethane	ND	0.60	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.6	ug/L	SW846 8260A
1,2-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	0.60	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	0.50	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	1.2	ug/L	SW846 8260A
1,3-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1-Chlorohexane	ND	0.50	ug/L	SW846 8260A
2,2-Dichloropropane	ND	3.5	ug/L	SW846 8260A
2-Chlorotoluene	ND	0.40	ug/L	SW846 8260A
4-Chlorotoluene	ND	0.60	ug/L	SW846 8260A
Benzene	ND	0.40	ug/L	SW846 8260A
Bromobenzene	ND	0.30	ug/L	SW846 8260A
Bromochloromethane	ND	0.40	ug/L	SW846 8260A
Bromodichloromethane	ND	0.80	ug/L	SW846 8260A
Bromoform	ND	1.2	ug/L	SW846 8260A
Bromomethane	ND	1.1	ug/L	SW846 8260A
Carbon tetrachloride	ND	2.1	ug/L	SW846 8260A
Chlorobenzene	ND	0.40	ug/L	SW846 8260A
Chloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	0.30	ug/L	SW846 8260A
Chloromethane	ND	1.3	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	1.2	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Dibromochloromethane	ND	0.50	ug/L	SW846 8260A
Dibromomethane	ND	2.4	ug/L	SW846 8260A

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Quanterra Environmental Services

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: B7G220139 **Work Order #...:** CC0QX101 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	ND	0.60	ug/L	SW846 8260A
Hexachlorobutadiene	ND	1.1	ug/L	SW846 8260A
Isopropylbenzene	ND	0.50	ug/L	SW846 8260A
m-Xylene & p-Xylene	ND	0.50	ug/L	SW846 8260A
Methylene chloride	ND	0.30	ug/L	SW846 8260A
n-Butylbenzene	ND	1.1	ug/L	SW846 8260A
n-Propylbenzene	ND	0.40	ug/L	SW846 8260A
Naphthalene	ND	0.40	ug/L	SW846 8260A
o-Xylene	ND	1.1	ug/L	SW846 8260A
p-Isopropyltoluene	ND	1.2	ug/L	SW846 8260A
sec-Butylbenzene	ND	1.3	ug/L	SW846 8260A
Styrene	ND	0.40	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
tert-Butylbenzene	ND	1.4	ug/L	SW846 8260A
Tetrachloroethene	ND	1.4	ug/L	SW846 8260A
Toluene	ND	1.1	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	0.60	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichlorofluoromethane	ND	0.80	ug/L	SW846 8260A
Vinyl chloride	ND	1.1	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	103	(75 - 125)
4-Bromofluorobenzene	97	(75 - 125)
1,2-Dichloroethane-d4	99	(62 - 139)
Dibromofluoromethane	98	(75 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: B7G220139
MB Lot-Sample #: B7H040000-155

Work Order #...: CC34R101

Matrix.....: WATER

Prep Date.....: 08/03/97
Prep Batch #...: 7216155

Analysis Time..: 17:54
Instrument ID..: VO4

Analysis Date..: 08/03/97
Dilution Factor: 1

Analyst ID.....: 007084

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	0.80	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	0.40	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	0.40	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.2	ug/L	SW846 8260A
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	3.2	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	0.40	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	1.3	ug/L	SW846 8260A
1,2-Dichloroethane	ND	0.60	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.6	ug/L	SW846 8260A
1,2-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	0.60	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	0.50	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	1.2	ug/L	SW846 8260A
1,3-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1-Chlorohexane	ND	0.50	ug/L	SW846 8260A
2,2-Dichloropropane	ND	3.5	ug/L	SW846 8260A
2-Chlorotoluene	ND	0.40	ug/L	SW846 8260A
4-Chlorotoluene	ND	0.60	ug/L	SW846 8260A
Benzene	ND	0.40	ug/L	SW846 8260A
Bromobenzene	ND	0.30	ug/L	SW846 8260A
Bromochloromethane	ND	0.40	ug/L	SW846 8260A
Bromodichloromethane	ND	0.80	ug/L	SW846 8260A
Bromoform	ND	1.2	ug/L	SW846 8260A
Bromomethane	ND	1.1	ug/L	SW846 8260A
Carbon tetrachloride	ND	2.1	ug/L	SW846 8260A
Chlorobenzene	ND	0.40	ug/L	SW846 8260A
Chloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	0.30	ug/L	SW846 8260A
Chloromethane	ND	1.3	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	1.2	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Dibromochloromethane	ND	0.50	ug/L	SW846 8260A
Dibromomethane	ND	2.4	ug/L	SW846 8260A

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Quanterra Environmental Services

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: B7G220139 **Work Order #...:** CC34R101 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	ND	0.60	ug/L	SW846 8260A
Hexachlorobutadiene	ND	1.1	ug/L	SW846 8260A
Isopropylbenzene	ND	0.50	ug/L	SW846 8260A
m-Xylene & p-Xylene	ND	0.50	ug/L	SW846 8260A
Methylene chloride	ND	0.30	ug/L	SW846 8260A
n-Butylbenzene	ND	1.1	ug/L	SW846 8260A
n-Propylbenzene	ND	0.40	ug/L	SW846 8260A
Naphthalene	ND	0.40	ug/L	SW846 8260A
o-Xylene	ND	1.1	ug/L	SW846 8260A
p-Isopropyltoluene	ND	1.2	ug/L	SW846 8260A
sec-Butylbenzene	ND	1.3	ug/L	SW846 8260A
Styrene	ND	0.40	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
tert-Butylbenzene	ND	1.4	ug/L	SW846 8260A
Tetrachloroethene	ND	1.4	ug/L	SW846 8260A
Toluene	ND	1.1	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	0.60	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichlorofluoromethane	ND	0.80	ug/L	SW846 8260A
Vinyl chloride	ND	1.1	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	102	(75 - 125)
4-Bromofluorobenzene	97	(75 - 125)
1,2-Dichloroethane-d4	100	(62 - 139)
Dibromofluoromethane	98	(75 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: B7G220139 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: B7G240000-268 **Prep Batch #...:** 7205268						
Silver	ND	0.00020	mg/L	SW846 7761	07/25-08/11/97	CAWCX11J
		Dilution Factor: 1				
		Analysis Time..: 12:17		Analyst ID.....: 001863	Instrument ID..: F1	
Antimony	ND	0.0050	mg/L	SW846 6010A	07/25-07/31/97	CAWCX10C
		Dilution Factor: 1				
		Analysis Time..: 17:15		Analyst ID.....: 001702	Instrument ID..: P2	
Arsenic	ND	0.0050	mg/L	SW846 6010A	07/25/97	CAWCX10D
		Dilution Factor: 1				
		Analysis Time..: 15:12		Analyst ID.....: 001863	Instrument ID..: P2	
Lead	ND	0.0050	mg/L	SW846 6010A	07/25/97	CAWCX10E
		Dilution Factor: 1				
		Analysis Time..: 15:12		Analyst ID.....: 001863	Instrument ID..: P2	
Selenium	ND	0.0050	mg/L	SW846 6010A	07/25/97	CAWCX1
		Dilution Factor: 1				
		Analysis Time..: 15:12		Analyst ID.....: 001863	Instrument ID..: P2	
Thallium	ND	0.0020	mg/L	SW846 7841	07/25/97	CAWCX10G
		Dilution Factor: 1				
		Analysis Time..: 17:06		Analyst ID.....: 001702	Instrument ID..: F1	
Aluminum	ND	0.50	mg/L	SW846 6010A	07/25/97	CAWCX10J
		Dilution Factor: 1				
		Analysis Time..: 15:12		Analyst ID.....: 001863	Instrument ID..: P2	
Barium	ND	0.020	mg/L	SW846 6010A	07/25/97	CAWCX10K
		Dilution Factor: 1				
		Analysis Time..: 15:12		Analyst ID.....: 001863	Instrument ID..: P2	
Beryllium	ND	0.0030	mg/L	SW846 6010A	07/25/97	CAWCX10L
		Dilution Factor: 1				
		Analysis Time..: 15:12		Analyst ID.....: 001863	Instrument ID..: P2	
Calcium	ND	1.0	mg/L	SW846 6010A	07/25/97	CAWCX10M
		Dilution Factor: 1				
		Analysis Time..: 15:12		Analyst ID.....: 001863	Instrument ID..: P2	
Cadmium	ND	0.040	mg/L	SW846 6010A	07/25/97	CAWCX10N
		Dilution Factor: 1				
		Analysis Time..: 15:12		Analyst ID.....: 001863	Instrument ID..: P2	

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Quanterra Environmental Services

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: B7G220139 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Cobalt	ND	0.070	mg/L	SW846 6010A	07/25/97	CAWCX10P
		Dilution Factor: 1				
		Analysis Time..: 15:12		Analyst ID.....: 001863	Instrument ID..: P2	
Chromium	ND	0.070	mg/L	SW846 6010A	07/25/97	CAWCX10Q
		Dilution Factor: 1				
		Analysis Time..: 15:12		Analyst ID.....: 001863	Instrument ID..: P2	
Copper	ND	0.060	mg/L	SW846 6010A	07/25/97	CAWCX101
		Dilution Factor: 1				
		Analysis Time..: 15:12		Analyst ID.....: 001863	Instrument ID..: P2	
Iron	ND	0.070	mg/L	SW846 6010A	07/25/97	CAWCX102
		Dilution Factor: 1				
		Analysis Time..: 15:12		Analyst ID.....: 001863	Instrument ID..: P2	
Potassium	0.36 F	5.0	mg/L	SW846 6010A	07/25/97	CAWCX103
		Dilution Factor: 1				
		Analysis Time..: 12:57		Analyst ID.....: 001863	Instrument ID..: P1	
Magnesium	ND	1.0	mg/L	SW846 6010A	07/25/97	CAWCX104
		Dilution Factor: 1				
		Analysis Time..: 15:12		Analyst ID.....: 001863	Instrument ID..: P2	
Manganese	ND	0.020	mg/L	SW846 6010A	07/25/97	CAWCX105
		Dilution Factor: 1				
		Analysis Time..: 15:12		Analyst ID.....: 001863	Instrument ID..: P2	
Molybdenum	ND	0.080	mg/L	SW846 6010A	07/25/97	CAWCX106
		Dilution Factor: 1				
		Analysis Time..: 15:12		Analyst ID.....: 001863	Instrument ID..: P2	
Sodium	ND	1.0	mg/L	SW846 6010A	07/25/97	CAWCX107
		Dilution Factor: 1				
		Analysis Time..: 12:57		Analyst ID.....: 001863	Instrument ID..: P1	
Nickel	ND	0.15	mg/L	SW846 6010A	07/25/97	CAWCX108
		Dilution Factor: 1				
		Analysis Time..: 15:12		Analyst ID.....: 001863	Instrument ID..: P2	
Vanadium	ND	0.080	mg/L	SW846 6010A	07/25/97	CAWCX109
		Dilution Factor: 1				
		Analysis Time..: 15:12		Analyst ID.....: 001863	Instrument ID..: P2	
Zinc	ND	0.020	mg/L	SW846 6010A	07/25-07/31/97	CAWCX10A
		Dilution Factor: 1				
		Analysis Time..: 17:15		Analyst ID.....: 001702	Instrument ID..: P2	

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Quanterra Environmental Services

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: B7G220139 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: B7G240000-269 **Prep Batch #...:** 7205269						
Mercury	ND	0.0010	mg/L	SW846 7470A	07/25/97	CAWD1101

Dilution Factor: 1

Analysis Time..: 16:58 Analyst ID.....: 001702 Instrument ID..: CV

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

METHOD BLANK REPORT

General Chemistry

Client Lot #...: B7G220139 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH		Work Order #: CAXXV101		MB Lot-Sample #:	B7G290000-207	
	ND	10	mg/L	MCAWW 310.1	07/28/97	7210207
		Dilution Factor: 1				
		Analysis Time..: 00:00		Analyst ID.....: 090000	Instrument ID..: ISE	
Bromide		Work Order #: CC4XG101		MB Lot-Sample #:	B7H070000-170	
	ND	0.20	mg/L	SW846 9056	08/05-08/06/97	7219170
		Dilution Factor: 1				
		Analysis Time..: 13:29		Analyst ID.....: 004003	Instrument ID..: IC	
Chloride		Work Order #: CC4XP101		MB Lot-Sample #:	B7H070000-172	
	0.12 F	0.20	mg/L	SW846 9056	08/05-08/06/97	7219172
		Dilution Factor: 1				
		Analysis Time..: 13:29		Analyst ID.....: 004003	Instrument ID..: IC	
Sulfate		Work Order #: CC4XR101		MB Lot-Sample #:	B7H070000-173	
	0.39 F	0.50	mg/L	SW846 9056	08/05-08/06/97	7219173
		Dilution Factor: 1				
		Analysis Time..: 13:29		Analyst ID.....: 004003	Instrument ID..: IC	
Total Organic Carbon		Work Order #: CC3Q8101		MB Lot-Sample #:	B7H050000-130	
	ND	1	mg/L	SW846 9060	08/03/97	7217130
		Dilution Factor: 1				
		Analysis Time..: 15:50		Analyst ID.....: 004003	Instrument ID..: TOC	
Total Organic Carbon		Work Order #: CC481101		MB Lot-Sample #:	B7H060000-126	
	ND	1.0	mg/L	SW846 9060	08/05/97	7218126
		Dilution Factor: 1				
		Analysis Time..: 14:35		Analyst ID.....: 004003	Instrument ID..: TOC	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: B7G220139 Work Order #...: CC3GC102-LCS Matrix.....: WATER
LCS Lot-Sample#: I7H040000-198 CC3GC103-LCSD
Prep Date.....: 07/28/97 Analysis Date..: 07/28/97
Prep Batch #...: 7216198 Analysis Time..: 09:47
Dilution Factor: 1 Instrument ID..: K1A
Analyst ID.....: 013512

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Methane	35	25	ug/L	72		EPA-9 RSK-175
	34	25	ug/L	75	3.2	EPA-9 RSK-175
Ethane	64	48	ug/L	75		EPA-9 RSK-175
	63	49	ug/L	77	2.4	EPA-9 RSK-175
Ethene	60	45	ug/L	75		EPA-9 RSK-175
	60	45	ug/L	76	1.4	EPA-9 RSK-175

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: B7G220139 **Work Order #...:** CC3GC102-LCS **Matrix.....:** WATER
LCS Lot-Sample#: I7H040000-198 CC3GC103-LCSD
Prep Date.....: 07/28/97 **Analysis Date..:** 07/28/97
Prep Batch #...: 7216198 **Analysis Time..:** 09:47
Dilution Factor: 1 **Instrument ID..:** K1A
Analyst ID.....: 013512

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Methane	72	(70 - 130)			EPA-9 RSK-175
	75	(70 - 130)	3.2	(0-30)	EPA-9 RSK-175
Ethane	75	(70 - 130)			EPA-9 RSK-175
	77	(70 - 130)	2.4	(0-30)	EPA-9 RSK-175
Ethene	75	(70 - 130)			EPA-9 RSK-175
	76	(70 - 130)	1.4	(0-30)	EPA-9 RSK-175

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: B7G220139 **Work Order #...:** CAWNN102 **Matrix.....:** WATER
LCS Lot-Sample#: B7G250000-190
Prep Date.....: 07/24/97 **Analysis Date..:** 07/24/97
Prep Batch #...: 7206190 **Analysis Time..:** 14:46
Dilution Factor: 1 **Instrument ID..:** V2A
Analyst ID.....: 001854

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Benzene	20	18	ug/L	92	SW846 8020A
Ethylbenzene	20	19	ug/L	97	SW846 8020A
Toluene	20	19	ug/L	96	SW846 8020A
Xylenes (total)	60	58	ug/L	96	SW846 8020A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	91	(46 - 136)
Bromofluorobenzene	88	(48 - 138)
Fluorobenzene	99	(44 - 165)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: B7G220139 Work Order #...: CAWNN102 Matrix.....: WATER
LCS Lot-Sample#: B7G250000-190
Prep Date.....: 07/24/97 Analysis Date..: 07/24/97
Prep Batch #...: 7206190 Analysis Time..: 14:46
Dilution Factor: 1 Instrument ID..: V2A
Analyst ID.....: 001854

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Benzene	92	(75 - 125)	SW846 8020A
Ethylbenzene	97	(71 - 129)	SW846 8020A
Toluene	96	(70 - 125)	SW846 8020A
Xylenes (total)	96	(71 - 133)	SW846 8020A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	91	(46 - 136)
Bromofluorobenzene	88	(48 - 138)
Fluorobenzene	99	(44 - 165)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Quanterra
Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: B7G220139 Work Order #...: CC0QX102 Matrix.....: WATER
LCS Lot-Sample#: B7G300000-184
Prep Date.....: 07/24/97 Analysis Date..: 07/24/97
Prep Batch #...: 7211184 Analysis Time..: 09:53
Dilution Factor: 1 Instrument ID..: VO4
Analyst ID.....: 007084

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
1,1,1,2-Tetrachloroethane	5.0	4.1	ug/L	82	SW846 8260A
1,1,1-Trichloroethane	5.0	4.3	ug/L	86	SW846 8260A
1,1,2,2-Tetrachloroethane	5.0	4.1	ug/L	82	SW846 8260A
1,1,2-Trichloroethane	5.0	4.2	ug/L	84	SW846 8260A
1,1-Dichloroethane	5.0	4.4	ug/L	89	SW846 8260A
1,1-Dichloroethene	5.0	3.8	ug/L	76	SW846 8260A
1,1-Dichloropropene	5.0	4.7	ug/L	93	SW846 8260A
1,2,3-Trichlorobenzene	5.0	4.5	ug/L	89	SW846 8260A
1,2,3-Trichloropropane	5.0	4.0	ug/L	81	SW846 8260A
1,2,4-Trichlorobenzene	5.0	4.6	ug/L	92	SW846 8260A
1,2,4-Trimethylbenzene	5.0	4.9	ug/L	98	SW846 8260A
1,2-Dichloroethane	5.0	4.4	ug/L	88	SW846 8260A
1,2-Dichlorobenzene	5.0	4.6	ug/L	92	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	5.0	4.2	ug/L	84	SW846 8260A
1,2-Dichloropropane	5.0	4.3	ug/L	85	SW846 8260A
1,2-Dibromoethane (EDB)	5.0	4.2	ug/L	83	SW846 8260A
1,3,5-Trimethylbenzene	5.0	4.8	ug/L	97	SW846 8260A
1,3-Dichlorobenzene	5.0	4.6	ug/L	91	SW846 8260A
1,3-Dichloropropane	5.0	4.1	ug/L	83	SW846 8260A
1,4-Dichlorobenzene	5.0	4.5	ug/L	90	SW846 8260A
1-Chlorohexane	5.0	4.8	ug/L	95	SW846 8260A
2,2-Dichloropropane	5.0	4.6	ug/L	91	SW846 8260A
2-Chlorotoluene	5.0	4.6	ug/L	92	SW846 8260A
4-Chlorotoluene	5.0	4.7	ug/L	95	SW846 8260A
Benzene	5.0	4.6	ug/L	92	SW846 8260A
Bromobenzene	5.0	4.6	ug/L	92	SW846 8260A
Bromochloromethane	5.0	4.5	ug/L	90	SW846 8260A
Bromodichloromethane	5.0	4.2	ug/L	83	SW846 8260A
Bromoform	5.0	4.1	ug/L	83	SW846 8260A
Bromomethane	5.0	4.1	ug/L	82	SW846 8260A
Carbon tetrachloride	5.0	4.2	ug/L	85	SW846 8260A
Chlorobenzene	5.0	4.4	ug/L	87	SW846 8260A
Chloroethane	5.0	4.5	ug/L	89	SW846 8260A

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Quanterra Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: B7G220139 **Work Order #...:** CC0QX102 **Matrix.....:** WATER
LCS Lot-Sample#: B7G300000-184

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Chloroform	5.0	4.3	ug/L	86	SW846 8260A
Chloromethane	5.0	4.2	ug/L	84	SW846 8260A
cis-1,2-Dichloroethene	5.0	4.6	ug/L	92	SW846 8260A
cis-1,3-Dichloropropene	5.0	4.1	ug/L	82	SW846 8260A
Dibromochloromethane	5.0	3.9	ug/L	78	SW846 8260A
Dibromomethane	5.0	4.1	ug/L	83	SW846 8260A
Dichlorodifluoromethane	5.0	4.0	ug/L	80	SW846 8260A
Ethylbenzene	5.0	4.5	ug/L	91	SW846 8260A
Hexachlorobutadiene	5.0	5.2	ug/L	103	SW846 8260A
Isopropylbenzene	5.0	5.4	ug/L	108	SW846 8260A
m-Xylene & p-Xylene	10	9.0	ug/L	90	SW846 8260A
Methylene chloride	5.0	4.2	ug/L	83	SW846 8260A
n-Butylbenzene	5.0	5.0	ug/L	101	SW846 8260A
n-Propylbenzene	5.0	4.9	ug/L	98	SW846 8260A
Naphthalene	5.0	4.0	ug/L	79	SW846 8260A
o-Xylene	5.0	4.6	ug/L	91	SW846 8260A
p-Isopropyltoluene	5.0	5.1	ug/L	101	SW846 8260A
sec-Butylbenzene	5.0	4.9	ug/L	99	SW846 8260A
Styrene	5.0	4.6	ug/L	92	SW846 8260A
Trichloroethene	5.0	4.5	ug/L	90	SW846 8260A
Tetrachloroethene	5.0	4.6	ug/L	91	SW846 8260A
Toluene	5.0	4.6	ug/L	92	SW846 8260A
trans-1,2-Dichloroethene	5.0	4.3	ug/L	86	SW846 8260A
trans-1,3-Dichloropropene	5.0	3.8	ug/L	76	SW846 8260A
Trichlorofluoromethane	5.0	4.4	ug/L	87	SW846 8260A
Vinyl chloride	5.0	4.4	ug/L	87	SW846 8260A
tert-Butylbenzene	5.0	5.0	ug/L	99	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	102	(75 - 125)
4-Bromofluorobenzene	98	(75 - 125)
1,2-Dichloroethane-d4	99	(62 - 139)
Dibromofluoromethane	97	(75 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Quanterra
Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: B7G220139 Work Order #...: CC34R102 Matrix.....: WATER
LCS Lot-Sample#: B7H040000-155
Prep Date.....: 08/03/97 Analysis Date..: 08/03/97
Prep Batch #...: 7216155 Analysis Time..: 17:30
Dilution Factor: 1 Instrument ID..: VO4
Analyst ID.....: 007084

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
1,1,1,2-Tetrachloroethane	5.0	4.8	ug/L	95	SW846 8260A
1,1,1-Trichloroethane	5.0	5.0	ug/L	101	SW846 8260A
1,1,2,2-Tetrachloroethane	5.0	5.0	ug/L	101	SW846 8260A
1,1,2-Trichloroethane	5.0	5.0	ug/L	100	SW846 8260A
1,1-Dichloroethane	5.0	5.1	ug/L	102	SW846 8260A
1,1-Dichloroethene	5.0	4.3	ug/L	87	SW846 8260A
1,1-Dichloropropene	5.0	5.3	ug/L	106	SW846 8260A
1,2,3-Trichlorobenzene	5.0	5.0	ug/L	100	SW846 8260A
1,2,3-Trichloropropane	5.0	4.5	ug/L	89	SW846 8260A
1,2,4-Trichlorobenzene	5.0	4.8	ug/L	96	SW846 8260A
1,2,4-Trimethylbenzene	5.0	5.4	ug/L	107	SW846 8260A
1,2-Dichloroethane	5.0	5.1	ug/L	102	SW846 8260
1,2-Dichlorobenzene	5.0	5.1	ug/L	102	SW846 826C
1,2-Dibromo-3-chloropropane (DBCP)	5.0	5.1	ug/L	102	SW846 8260A
1,2-Dichloropropane	5.0	4.7	ug/L	94	SW846 8260A
1,2-Dibromoethane (EDB)	5.0	4.6	ug/L	92	SW846 8260A
1,3,5-Trimethylbenzene	5.0	5.2	ug/L	105	SW846 8260A
1,3-Dichlorobenzene	5.0	5.0	ug/L	100	SW846 8260A
1,3-Dichloropropane	5.0	4.5	ug/L	91	SW846 8260A
1,4-Dichlorobenzene	5.0	4.8	ug/L	96	SW846 8260A
1-Chlorohexane	5.0	5.3	ug/L	106	SW846 8260A
2,2-Dichloropropane	5.0	5.2	ug/L	103	SW846 8260A
2-Chlorotoluene	5.0	5.0	ug/L	99	SW846 8260A
4-Chlorotoluene	5.0	5.2	ug/L	104	SW846 8260A
Benzene	5.0	5.1	ug/L	103	SW846 8260A
Bromobenzene	5.0	4.9	ug/L	98	SW846 8260A
Bromochloromethane	5.0	5.1	ug/L	102	SW846 8260A
Bromodichloromethane	5.0	5.0	ug/L	101	SW846 8260A
Bromoform	5.0	4.8	ug/L	97	SW846 8260A
Bromomethane	5.0	4.3	ug/L	86	SW846 8260A
Carbon tetrachloride	5.0	5.0	ug/L	99	SW846 8260A
Chlorobenzene	5.0	5.0	ug/L	100	SW846 8260A
Chloroethane	5.0	5.0	ug/L	100	SW846 8260A

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Quanterra Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: B7G220139 **Work Order #...:** CC34R102 **Matrix.....:** WATER
LCS Lot-Sample#: B7H040000-155

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Chloroform	5.0	5.0	ug/L	101	SW846 8260A
Chloromethane	5.0	4.7	ug/L	94	SW846 8260A
cis-1,2-Dichloroethene	5.0	5.2	ug/L	104	SW846 8260A
cis-1,3-Dichloropropene	5.0	4.5	ug/L	91	SW846 8260A
Dibromochloromethane	5.0	4.9	ug/L	97	SW846 8260A
Dibromomethane	5.0	5.0	ug/L	100	SW846 8260A
Dichlorodifluoromethane	5.0	4.2	ug/L	84	SW846 8260A
Ethylbenzene	5.0	5.2	ug/L	104	SW846 8260A
Hexachlorobutadiene	5.0	5.4	ug/L	107	SW846 8260A
Isopropylbenzene	5.0	5.4	ug/L	109	SW846 8260A
m-Xylene & p-Xylene	10	10	ug/L	102	SW846 8260A
Methylene chloride	5.0	5.0	ug/L	99	SW846 8260A
n-Butylbenzene	5.0	5.4	ug/L	107	SW846 8260A
n-Propylbenzene	5.0	5.3	ug/L	106	SW846 8260A
Naphthalene	5.0	4.5	ug/L	90	SW846 8260A
o-Xylene	5.0	5.1	ug/L	102	SW846 8260A
p-Isopropyltoluene	5.0	5.5	ug/L	109	SW846 8260A
sec-Butylbenzene	5.0	5.3	ug/L	105	SW846 8260A
Styrene	5.0	5.4	ug/L	108	SW846 8260A
Trichloroethene	5.0	5.0	ug/L	100	SW846 8260A
Tetrachloroethene	5.0	5.1	ug/L	101	SW846 8260A
Toluene	5.0	5.1	ug/L	101	SW846 8260A
trans-1,2-Dichloroethene	5.0	4.6	ug/L	91	SW846 8260A
trans-1,3-Dichloropropene	5.0	4.4	ug/L	88	SW846 8260A
Trichlorofluoromethane	5.0	5.0	ug/L	99	SW846 8260A
Vinyl chloride	5.0	4.8	ug/L	97	SW846 8260A
tert-Butylbenzene	5.0	6.0	ug/L	119	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	101	(75 - 125)
4-Bromofluorobenzene	94	(75 - 125)
1,2-Dichloroethane-d4	103	(62 - 139)
Dibromofluoromethane	100	(75 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: B7G220139 Work Order #...: CC0QX102 Matrix.....: WATER
LCS Lot-Sample#: B7G300000-184
Prep Date.....: 07/24/97 Analysis Date..: 07/24/97
Prep Batch #...: 7211184 Analysis Time..: 09:53
Dilution Factor: 1 Instrument ID..: VO4
Analyst ID.....: 007084

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
1,1,1,2-Tetrachloroethane	82	(72 - 125)	SW846 8260A
1,1,1-Trichloroethane	86	(75 - 125)	SW846 8260A
1,1,2,2-Tetrachloroethane	82	(74 - 125)	SW846 8260A
1,1,2-Trichloroethane	84	(75 - 127)	SW846 8260A
1,1-Dichloroethane	89	(72 - 125)	SW846 8260A
1,1-Dichloroethene	76	(75 - 125)	SW846 8260A
1,1-Dichloropropene	93	(75 - 125)	SW846 8260A
1,2,3-Trichlorobenzene	89	(75 - 137)	SW846 8260A
1,2,3-Trichloropropane	81	(75 - 125)	SW846 8260A
1,2,4-Trichlorobenzene	92	(75 - 135)	SW846 8260A
1,2,4-Trimethylbenzene	98	(75 - 125)	SW846 8260A
1,2-Dichloroethane	88	(68 - 127)	SW846 8260A
1,2-Dichlorobenzene	92	(75 - 125)	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	84	(59 - 125)	SW846 8260A
1,2-Dichloropropane	85	(70 - 125)	SW846 8260A
1,2-Dibromoethane (EDB)	83	(75 - 125)	SW846 8260A
1,3,5-Trimethylbenzene	97	(72 - 112)	SW846 8260A
1,3-Dichlorobenzene	91	(75 - 125)	SW846 8260A
1,3-Dichloropropane	83	(75 - 125)	SW846 8260A
1,4-Dichlorobenzene	90	(75 - 125)	SW846 8260A
1-Chlorohexane	95	(75 - 125)	SW846 8260A
2,2-Dichloropropane	91	(50 - 125)	SW846 8260A
2-Chlorotoluene	92	(73 - 125)	SW846 8260A
4-Chlorotoluene	95	(74 - 125)	SW846 8260A
Benzene	92	(75 - 125)	SW846 8260A
Bromobenzene	92	(75 - 125)	SW846 8260A
Bromochloromethane	90	(73 - 125)	SW846 8260A
Bromodichloromethane	83	(75 - 125)	SW846 8260A
Bromoform	83	(75 - 125)	SW846 8260A
Bromomethane	82	(50 - 125)	SW846 8260A
Carbon tetrachloride	85	(62 - 125)	SW846 8260A
Chlorobenzene	87	(75 - 125)	SW846 8260A
Chloroethane	89	(50 - 125)	SW846 8260A

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Quanterra Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: B7G220139 **Work Order #...:** CC0QX102 **Matrix.....:** WATER
LCS Lot-Sample#: B7G300000-184

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Chloroform	86	(74 - 125)	SW846 8260A
Chloromethane	84	(50 - 125)	SW846 8260A
cis-1,2-Dichloroethene	92	(75 - 125)	SW846 8260A
cis-1,3-Dichloropropene	82	(74 - 125)	SW846 8260A
Dibromochloromethane	78	(73 - 125)	SW846 8260A
Dibromomethane	83	(69 - 127)	SW846 8260A
Dichlorodifluoromethane	80	(50 - 150)	SW846 8260A
Ethylbenzene	91	(75 - 125)	SW846 8260A
Hexachlorobutadiene	103	(75 - 125)	SW846 8260A
Isopropylbenzene	108	(75 - 125)	SW846 8260A
m-Xylene & p-Xylene	90	(75 - 125)	SW846 8260A
Methylene chloride	83	(75 - 125)	SW846 8260A
n-Butylbenzene	101	(75 - 125)	SW846 8260A
n-Propylbenzene	98	(75 - 125)	SW846 8260A
Naphthalene	79	(75 - 125)	SW846 8260A
o-Xylene	91	(75 - 125)	SW846 8260A
p-Isopropyltoluene	101	(75 - 125)	SW846 8260A
sec-Butylbenzene	99	(75 - 125)	SW846 8260A
Styrene	92	(75 - 125)	SW846 8260A
Trichloroethene	90	(71 - 125)	SW846 8260A
Tetrachloroethene	91	(71 - 125)	SW846 8260A
Toluene	92	(74 - 125)	SW846 8260A
trans-1,2-Dichloroethene	86	(75 - 125)	SW846 8260A
trans-1,3-Dichloropropene	76	(66 - 125)	SW846 8260A
Trichlorofluoromethane	87	(50 - 125)	SW846 8260A
Vinyl chloride	87	(46 - 134)	SW846 8260A
tert-Butylbenzene	99	(75 - 125)	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	102	(75 - 125)
4-Bromofluorobenzene	98	(75 - 125)
1,2-Dichloroethane-d4	99	(62 - 139)
Dibromofluoromethane	97	(75 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: B7G220139 Work Order #...: CC34R102 Matrix.....: WATER
LCS Lot-Sample#: B7H040000-155
Prep Date.....: 08/03/97 Analysis Date..: 08/03/97
Prep Batch #...: 7216155 Analysis Time..: 17:30
Dilution Factor: 1 Instrument ID..: V04
Analyst ID.....: 007084

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
1,1,1,2-Tetrachloroethane	95	(72 - 125)	SW846 8260A
1,1,1-Trichloroethane	101	(75 - 125)	SW846 8260A
1,1,2,2-Tetrachloroethane	101	(74 - 125)	SW846 8260A
1,1,2-Trichloroethane	100	(75 - 127)	SW846 8260A
1,1-Dichloroethane	102	(72 - 125)	SW846 8260A
1,1-Dichloroethene	87	(75 - 125)	SW846 8260A
1,1-Dichloropropene	106	(75 - 125)	SW846 8260A
1,2,3-Trichlorobenzene	100	(75 - 137)	SW846 8260A
1,2,3-Trichloropropane	89	(75 - 125)	SW846 8260A
1,2,4-Trichlorobenzene	96	(75 - 135)	SW846 8260A
1,2,4-Trimethylbenzene	107	(75 - 125)	SW846 8260A
1,2-Dichloroethane	102	(68 - 127)	SW846 8260A
1,2-Dichlorobenzene	102	(75 - 125)	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	102	(59 - 125)	SW846 8260A
1,2-Dichloropropane	94	(70 - 125)	SW846 8260A
1,2-Dibromoethane (EDB)	92	(75 - 125)	SW846 8260A
1,3,5-Trimethylbenzene	105	(72 - 112)	SW846 8260A
1,3-Dichlorobenzene	100	(75 - 125)	SW846 8260A
1,3-Dichloropropane	91	(75 - 125)	SW846 8260A
1,4-Dichlorobenzene	96	(75 - 125)	SW846 8260A
1-Chlorohexane	106	(75 - 125)	SW846 8260A
2,2-Dichloropropane	103	(50 - 125)	SW846 8260A
2-Chlorotoluene	99	(73 - 125)	SW846 8260A
4-Chlorotoluene	104	(74 - 125)	SW846 8260A
Benzene	103	(75 - 125)	SW846 8260A
Bromobenzene	98	(75 - 125)	SW846 8260A
Bromochloromethane	102	(73 - 125)	SW846 8260A
Bromodichloromethane	101	(75 - 125)	SW846 8260A
Bromoform	97	(75 - 125)	SW846 8260A
Bromomethane	86	(50 - 125)	SW846 8260A
Carbon tetrachloride	99	(62 - 125)	SW846 8260A
Chlorobenzene	100	(75 - 125)	SW846 8260A
Chloroethane	100	(50 - 125)	SW846 8260A

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Quanterra Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: B7G220139 **Work Order #...:** CC34R102 **Matrix.....:** WATER
LCS Lot-Sample#: B7H040000-155

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Chloroform	101	(74 - 125)	SW846 8260A
Chloromethane	94	(50 - 125)	SW846 8260A
cis-1,2-Dichloroethene	104	(75 - 125)	SW846 8260A
cis-1,3-Dichloropropene	91	(74 - 125)	SW846 8260A
Dibromochloromethane	97	(73 - 125)	SW846 8260A
Dibromomethane	100	(69 - 127)	SW846 8260A
Dichlorodifluoromethane	84	(50 - 150)	SW846 8260A
Ethylbenzene	104	(75 - 125)	SW846 8260A
Hexachlorobutadiene	107	(75 - 125)	SW846 8260A
Isopropylbenzene	109	(75 - 125)	SW846 8260A
m-Xylene & p-Xylene	102	(75 - 125)	SW846 8260A
Methylene chloride	99	(75 - 125)	SW846 8260A
n-Butylbenzene	107	(75 - 125)	SW846 8260A
n-Propylbenzene	106	(75 - 125)	SW846 8260A
Naphthalene	90	(75 - 125)	SW846 8260A
o-Xylene	102	(75 - 125)	SW846 8260A
p-Isopropyltoluene	109	(75 - 125)	SW846 8260A
sec-Butylbenzene	105	(75 - 125)	SW846 8260A
Styrene	108	(75 - 125)	SW846 8260A
Trichloroethene	100	(71 - 125)	SW846 8260A
Tetrachloroethene	101	(71 - 125)	SW846 8260A
Toluene	101	(74 - 125)	SW846 8260A
trans-1,2-Dichloroethene	91	(75 - 125)	SW846 8260A
trans-1,3-Dichloropropene	88	(66 - 125)	SW846 8260A
Trichlorofluoromethane	99	(50 - 125)	SW846 8260A
Vinyl chloride	97	(46 - 134)	SW846 8260A
tert-Butylbenzene	119	(75 - 125)	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	101	(75 - 125)
4-Bromofluorobenzene	94	(75 - 125)
1,2-Dichloroethane-d4	103	(62 - 139)
Dibromofluoromethane	100	(75 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: B7G220139 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: B7G240000-268 Prep Batch #...: 7205268							
Copper	1.0	1.1	mg/L	107	SW846 6010A	07/25/97	CAWCX10R
			Dilution Factor: 1		Instrument ID..: P2	Analyst ID.....: 001863	
			Analysis Time..: 15:17				
Iron	10.0	10.4	mg/L	104	SW846 6010A	07/25/97	CAWCX10T
			Dilution Factor: 1		Instrument ID..: P2	Analyst ID.....: 001863	
			Analysis Time..: 15:17				
Potassium	10.0	9.6	mg/L	96	SW846 6010A	07/25/97	CAWCX10U
			Dilution Factor: 1		Instrument ID..: P1	Analyst ID.....: 001863	
			Analysis Time..: 13:02				
Magnesium	10.0	10.1	mg/L	101	SW846 6010A	07/25/97	CAWCX10V
			Dilution Factor: 1		Instrument ID..: P2	Analyst ID.....: 001863	
			Analysis Time..: 15:17				
Manganese	1.0	1.0	mg/L	105	SW846 6010A	07/25/97	CAWCX10W
			Dilution Factor: 1		Instrument ID..: P2	Analyst ID.....: 001863	
			Analysis Time..: 15:17				
Molybdenum	1.0	1.0	mg/L	101	SW846 6010A	07/25/97	CAWCX10X
			Dilution Factor: 1		Instrument ID..: P2	Analyst ID.....: 001863	
			Analysis Time..: 15:17				
Aluminum	10.0	10.4	mg/L	104	SW846 6010A	07/25/97	CAWCX11A
			Dilution Factor: 1		Instrument ID..: P2	Analyst ID.....: 001863	
			Analysis Time..: 15:17				
Barium	1.0	1.0	mg/L	104	SW846 6010A	07/25/97	CAWCX11C
			Dilution Factor: 1		Instrument ID..: P2	Analyst ID.....: 001863	
			Analysis Time..: 15:17				
Beryllium	1.0	1.0	mg/L	103	SW846 6010A	07/25/97	CAWCX11D
			Dilution Factor: 1		Instrument ID..: P2	Analyst ID.....: 001863	
			Analysis Time..: 15:17				
Calcium	10.0	10.2	mg/L	102	SW846 6010A	07/25/97	CAWCX11E
			Dilution Factor: 1		Instrument ID..: P2	Analyst ID.....: 001863	
			Analysis Time..: 15:17				

(Continued on next page)

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: B7G220139 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Cadmium	1.0	1.0	mg/L	100	SW846 6010A	07/25/97	CAWCX11F
			Dilution Factor: 1		Instrument ID..: P2	Analyst ID.....: 001863	
			Analysis Time..: 15:17				
Cobalt	1.0	1.0	mg/L	103	SW846 6010A	07/25/97	CAWCX11G
			Dilution Factor: 1		Instrument ID..: P2	Analyst ID.....: 001863	
			Analysis Time..: 15:17				
Chromium	1.0	1.0	mg/L	101	SW846 6010A	07/25/97	CAWCX11H
			Dilution Factor: 1		Instrument ID..: P2	Analyst ID.....: 001863	
			Analysis Time..: 15:17				
Silver	0.0015	0.0014	mg/L	94	SW846 7761	07/25-08/11/97	CAWCX11K
			Dilution Factor: 1		Instrument ID..: F1	Analyst ID.....: 001863	
			Analysis Time..: 12:22				
Sodium	10.0	9.5	mg/L	95	SW846 6010A	07/25/97	CAWCX110
			Dilution Factor: 1		Instrument ID..: P1	Analyst ID.....: 001863	
			Analysis Time..: 13:02				
Nickel	1.0	1.0	mg/L	103	SW846 6010A	07/25/97	CAWCX111
			Dilution Factor: 1		Instrument ID..: P2	Analyst ID.....: 001863	
			Analysis Time..: 15:17				
Vanadium	1.0	1.0	mg/L	104	SW846 6010A	07/25/97	CAWCX112
			Dilution Factor: 1		Instrument ID..: P2	Analyst ID.....: 001863	
			Analysis Time..: 15:17				
Zinc	1.0	1.0	mg/L	100	SW846 6010A	07/25-07/31/97	CAWCX113
			Dilution Factor: 1		Instrument ID..: P2	Analyst ID.....: 001702	
			Analysis Time..: 17:21				
Antimony	1.0	0.96	mg/L	96	SW846 6010A	07/25-07/31/97	CAWCX114
			Dilution Factor: 1		Instrument ID..: P2	Analyst ID.....: 001702	
			Analysis Time..: 17:21				
Arsenic	1.0	1.0	mg/L	102	SW846 6010A	07/25/97	CAWCX115
			Dilution Factor: 1		Instrument ID..: P2	Analyst ID.....: 001863	
			Analysis Time..: 15:17				
Lead	1.0	1.0	mg/L	101	SW846 6010A	07/25/97	CAWCX116
			Dilution Factor: 1		Instrument ID..: P2	Analyst ID.....: 001863	
			Analysis Time..: 15:17				

(Continued on next page)

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: B7G220139 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Selenium	1.0	1.0	mg/L	101	SW846 6010A	07/25/97	CAWCX117
			Dilution Factor: 1		Instrument ID..: P2	Analyst ID.....: 001863	
			Analysis Time..: 15:17				
Thallium	0.030	0.031	mg/L	103	SW846 7841	07/25/97	CAWCX118
			Dilution Factor: 1		Instrument ID..: F1	Analyst ID.....: 001702	
			Analysis Time..: 17:11				

LCS Lot-Sample#: B7G240000-269 **Prep Batch #...:** 7205269

Mercury	0.0050	0.0050	mg/L	99	SW846 7470A	07/25/97	CAWD1102
			Dilution Factor: 1		Instrument ID..: CV	Analyst ID.....: 001702	
			Analysis Time..: 17:00				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: B7G220139 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: B7G240000-268 **Prep Batch #...:** 7205268					
Copper	107	(80 - 120)	SW846 6010A	07/25/97	CAWCX10R
		Dilution Factor: 1	Instrument ID..: P2		Analyst ID.....: 001863
		Analysis Time..: 15:17			
Iron	104	(80 - 120)	SW846 6010A	07/25/97	CAWCX10T
		Dilution Factor: 1	Instrument ID..: P2		Analyst ID.....: 001863
		Analysis Time..: 15:17			
Potassium	96	(80 - 120)	SW846 6010A	07/25/97	CAWCX10U
		Dilution Factor: 1	Instrument ID..: P1		Analyst ID.....: 001863
		Analysis Time..: 13:02			
Magnesium	101	(80 - 120)	SW846 6010A	07/25/97	CAWCX10V
		Dilution Factor: 1	Instrument ID..: P2		Analyst ID.....: 001863
		Analysis Time..: 15:17			
Manganese	105	(80 - 120)	SW846 6010A	07/25/97	CAWCX10W
		Dilution Factor: 1	Instrument ID..: P2		Analyst ID.....: 001863
		Analysis Time..: 15:17			
Molybdenum	101	(80 - 120)	SW846 6010A	07/25/97	CAWCX10X
		Dilution Factor: 1	Instrument ID..: P2		Analyst ID.....: 001863
		Analysis Time..: 15:17			
Aluminum	104	(80 - 120)	SW846 6010A	07/25/97	CAWCX11A
		Dilution Factor: 1	Instrument ID..: P2		Analyst ID.....: 001863
		Analysis Time..: 15:17			
Barium	104	(80 - 120)	SW846 6010A	07/25/97	CAWCX11C
		Dilution Factor: 1	Instrument ID..: P2		Analyst ID.....: 001863
		Analysis Time..: 15:17			
Beryllium	103	(80 - 120)	SW846 6010A	07/25/97	CAWCX11D
		Dilution Factor: 1	Instrument ID..: P2		Analyst ID.....: 001863
		Analysis Time..: 15:17			
Calcium	102	(80 - 120)	SW846 6010A	07/25/97	CAWCX11E
		Dilution Factor: 1	Instrument ID..: P2		Analyst ID.....: 001863
		Analysis Time..: 15:17			

(Continued on next page)

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: B7G220139 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Cadmium	100	(80 - 120)	SW846 6010A	07/25/97	CAWCX11F
		Dilution Factor: 1	Instrument ID..: P2		Analyst ID.....: 001863
		Analysis Time..: 15:17			
Cobalt	103	(80 - 120)	SW846 6010A	07/25/97	CAWCX11G
		Dilution Factor: 1	Instrument ID..: P2		Analyst ID.....: 001863
		Analysis Time..: 15:17			
Chromium	101	(80 - 120)	SW846 6010A	07/25/97	CAWCX11H
		Dilution Factor: 1	Instrument ID..: P2		Analyst ID.....: 001863
		Analysis Time..: 15:17			
Silver	94	(80 - 120)	SW846 7761	07/25-08/11/97	CAWCX11K
		Dilution Factor: 1	Instrument ID..: F1		Analyst ID.....: 001863
		Analysis Time..: 12:22			
Sodium	95	(80 - 120)	SW846 6010A	07/25/97	CAWCX110
		Dilution Factor: 1	Instrument ID..: P1		Analyst ID.....: 001863
		Analysis Time..: 13:02			
Nickel	103	(80 - 120)	SW846 6010A	07/25/97	CAWCX111
		Dilution Factor: 1	Instrument ID..: P2		Analyst ID.....: 001863
		Analysis Time..: 15:17			
Vanadium	104	(80 - 120)	SW846 6010A	07/25/97	CAWCX112
		Dilution Factor: 1	Instrument ID..: P2		Analyst ID.....: 001863
		Analysis Time..: 15:17			
Zinc	100	(80 - 120)	SW846 6010A	07/25-07/31/97	CAWCX113
		Dilution Factor: 1	Instrument ID..: P2		Analyst ID.....: 001702
		Analysis Time..: 17:21			
Antimony	96	(80 - 120)	SW846 6010A	07/25-07/31/97	CAWCX114
		Dilution Factor: 1	Instrument ID..: P2		Analyst ID.....: 001702
		Analysis Time..: 17:21			
Arsenic	102	(80 - 120)	SW846 6010A	07/25/97	CAWCX115
		Dilution Factor: 1	Instrument ID..: P2		Analyst ID.....: 001863
		Analysis Time..: 15:17			
Lead	101	(80 - 120)	SW846 6010A	07/25/97	CAWCX116
		Dilution Factor: 1	Instrument ID..: P2		Analyst ID.....: 001863
		Analysis Time..: 15:17			

(Continued on next page)

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: B7G220139 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Selenium	101	(80 - 120)	SW846 6010A	07/25/97	CAWCX117
		Dilution Factor: 1	Instrument ID..: P2		Analyst ID.....: 001863
		Analysis Time..: 15:17			
Thallium	103	(78 - 123)	SW846 7841	07/25/97	CAWCX118
		Dilution Factor: 1	Instrument ID..: F1		Analyst ID.....: 001702
		Analysis Time..: 17:11			
LCS Lot-Sample#: B7G240000-269 **Prep Batch #...:** 7205269					
Mercury	99	(77 - 120)	SW846 7470A	07/25/97	CAWD1102
		Dilution Factor: 1	Instrument ID..: CV		Analyst ID.....: 001702
		Analysis Time..: 17:00			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Lot-Sample #...: B7G220139 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH			WO#:CAXXV102-LCS/CAXXV103-LCSD				LCS Lot-Sample#: B7G290000-207	
	100	100	mg/L	100		MCAWW 310.1	07/28/97	7210207
	100	100	mg/L	100	0.0	MCAWW 310.1	07/28/97	7210207
			Dilution Factor: 1					
						Instrument ID..: ISE	TCLP Date.....: 090000	
Bromide			WO#:CC4XG102-LCS/CC4XG103-LCSD				LCS Lot-Sample#: B7H070000-170	
	2.0	2.1	mg/L	105		SW846 9056	08/05-08/06/97	7219170
	2.0	1.9	mg/L	97	8.0	SW846 9056	08/05-08/06/97	7219170
			Dilution Factor: 1					
						Instrument ID..: IC	TCLP Date.....: 004003	
Chloride			WO#:CC4XP102-LCS/CC4XP103-LCSD				LCS Lot-Sample#: B7H070000-172	
	5.0	4.8	mg/L	95		SW846 9056	08/05-08/06/97	7219172
	5.0	4.9	mg/L	98	3.0	SW846 9056	08/05-08/06/97	7219172
			Dilution Factor: 1					
						Instrument ID..: IC	TCLP Date.....: 004003	
Sulfate			WO#:CC4XR102-LCS/CC4XR103-LCSD				LCS Lot-Sample#: B7H070000-173	
	5.0	4.8	mg/L	97		SW846 9056	08/05-08/06/97	7219173
	5.0	4.9	mg/L	98	0.67	SW846 9056	08/05-08/06/97	7219173
			Dilution Factor: 1					
						Instrument ID..: IC	TCLP Date.....: 004003	
Total Organic Carbon			WO#:CC3Q8102-LCS/CC3Q8103-LCSD				LCS Lot-Sample#: B7H050000-130	
	5	5	mg/L	101		SW846 9060	08/03/97	7217130
	5	5	mg/L	101	0.85	SW846 9060	08/03/97	7217130
			Dilution Factor: 1					
						Instrument ID..: TOC	TCLP Date.....: 004003	
Total Organic Carbon			WO#:CC481102-LCS/CC481103-LCSD				LCS Lot-Sample#: B7H060000-126	
	5.0	5.0	mg/L	101		SW846 9060	08/05/97	7218126
	5.0	5.0	mg/L	100	0.34	SW846 9060	08/05/97	7218126
			Dilution Factor: 1					
						Instrument ID..: TOC	TCLP Date.....: 004003	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Lot-Sample #...: B7G220139 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH WO#:CAXXV102-LCS/CAXXV103-LCSD LCS Lot-Sample#: B7G290000-207							
	100	(90 - 110)			MCAWW 310.1	07/28/97	7210207
	100	(90 - 110)	0.0	(0-17)	MCAWW 310.1	07/28/97	7210207
		Dilution Factor: 1					
					Instrument ID..: ISE	TCLP Date.....: 090000	
Bromide WO#:CC4XG102-LCS/CC4XG103-LCSD LCS Lot-Sample#: B7H070000-170							
	105	(86 - 112)			SW846 9056	08/05-08/06/97	7219170
	97	(86 - 112)	8.0	(0-20)	SW846 9056	08/05-08/06/97	7219170
		Dilution Factor: 1					
					Instrument ID..: IC	TCLP Date.....: 004003	
Chloride WO#:CC4XP102-LCS/CC4XP103-LCSD LCS Lot-Sample#: B7H070000-172							
	95	(91 - 111)			SW846 9056	08/05-08/06/97	7219172
	98	(91 - 111)	3.0	(0-20)	SW846 9056	08/05-08/06/97	7219172
		Dilution Factor: 1					
					Instrument ID..: IC	TCLP Date.....: 004003	
Sulfate WO#:CC4XR102-LCS/CC4XR103-LCSD LCS Lot-Sample#: B7H070000-173							
	97	(88 - 115)			SW846 9056	08/05-08/06/97	7219173
	98	(88 - 115)	0.67	(0-20)	SW846 9056	08/05-08/06/97	7219173
		Dilution Factor: 1					
					Instrument ID..: IC	TCLP Date.....: 004003	
Total Organic Carbon WO#:CC3Q8102-LCS/CC3Q8103-LCSD LCS Lot-Sample#: B7H050000-130							
	101	(92 - 117)			SW846 9060	08/03/97	7217130
	101	(92 - 117)	0.85	(0-20)	SW846 9060	08/03/97	7217130
		Dilution Factor: 1					
					Instrument ID..: TOC	TCLP Date.....: 004003	
Total Organic Carbon WO#:CC481102-LCS/CC481103-LCSD LCS Lot-Sample#: B7H060000-126							
	101	(92 - 117)			SW846 9060	08/05/97	7218126
	100	(92 - 117)	0.34	(0-20)	SW846 9060	08/05/97	7218126
		Dilution Factor: 1					
					Instrument ID..: TOC	TCLP Date.....: 004003	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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Quanterra Environmental Services

Quanterra Environmental Services

TAMPA LABORATORY
CONDITION UPON RECEIPT FORM

Client: Hydrogeologic **Project Name/Lot #:** B7G220139
Date Received: 072297. **Received By:** A Lynn
CUR Completed By: A Lynn

Cooler/Shipping information:
TYPE: Quanterra Cooler ✓ Client Cooler ___ Quanterra Shipper ___ Box ___ Other ___/___

Cooler ID/Track #					
Temp (Celsius)	40				
Cooler ID/Track #					
Temp (Celsius)					

Any "NO" responses or discrepancies should be explained in the "Comments" section below.

CHECKLIST	YES	NO	NA
1. Were custody seals on shipping container(s) intact? Check "NA" if hand delivered. Circle One: CUSTODY SEAL SAVED UNABLE TO SAVE CUSTODY SEAL		✓	
2. Were custody papers properly included with samples?	✓		
3. Were custody papers properly filled out (ink, signed, match labels)?		✓	
4. Did all bottles arrive in good condition (unbroken)?	✓		
5. Were all bottle labels complete (sample #, date, signed, analysis, preservatives)?	✓		
6. Were correct bottles used for the tests indicated?	✓		
7. Were proper sample preservation techniques indicated?	✓		
8. Were samples received within adequate holding times? If "NO", complete 8.a. or 8.b.	✓		
a. Was sample hold time exceeded (NCM required)?			✓
b. Did the samples arrive with more than half the hold time exceeded (NCM required)?			✓
9. Were all VOA bottles checked for the presence of air bubbles? If air bubbles were found, indicate in comment section.	✓		
10. Were samples in direct contact with wet ice? If "NO", circle one: NO ICE BLUE ICE	✓		
11. Were the samples received with a temperature blank? NOTE TEMPERATURE ABOVE If "NO", circle one: UNABLE TO DETERMINE TEMP TEMP TAKEN FROM THE COOLER ICE/WATER NEAR SAMPLES	✓		
12. Were sample pHs checked and recorded by S.R. (see back for Page 2 - Sample pH)? *TOC and VOA samples are checked by laboratory analysts.*	✓		✓ A 7/22/97
13. Were samples accepted into the laboratory?	✓		

Comments:
(1) COC NOT "Relinquished" (Pages 2, 3) by client in signature block
(2) DUP02-WG01 NOT included on COC 2 VOA + 1-500ml bottle received logged in as per Req. for Analysis Form
(3) GMI 22-05MWG01 listed twice on COC
(4) MW-10WG01 time on COC 1800 / Time on label 1430 / Logged in as per COC
(5) -007 metals pH > 2 / Analyst informed.

Project Manager initials/date reviewed: MZ 7/22/97

Corrective Action: ___

Corrective Action completed by/date: ___

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Quanterra Environmental Services

Quanterra Environmental Services

TAMPA LABORATORY
CONDITION UPON RECEIPT - SAMPLE pH

Date: 7/22/97 **Initials:** [illegible]

Lot # (if not noted on page 1): _____

SAMPLE ID	METALS	DISS METALS	TRPH	AMMONIA	COD	CYANIDE	TOX	HARDNESS	TKN/NITROGEN	O&G	PHENOLS	NO2/NO3	H* ERB/PEST/PCB	SULFIDE	PHOSPHORUS	
Container	(P,G)	(P,G)	(G)	(P,G)	(P,G)	(P,G)	(G)	(P,G)	(P,G)	(G)	(G)	(P,G)	(G)	(P,G)	(P,G)	
Preservative	HNO_3	HNO_3	HCl	H_2SO_4	H_2SO_4	NaOH	H_2SO_4	H_2SO_4/HNO_3	H_2SO_4	H_2SO_4/HCl	H_2SO_4	H_2SO_4	None	Zn Acetate NaOH	H_2SO_4	
Required pH	< 2	< 2	< 2	< 2	< 2	> 12	< 2	< 2	< 2	< 2	< 2	< 2	5 to 9	> 9	< 2	
-006	<2															
-007	>2															
-008	<2															
-009	<2															
-010	<2															
-011	<2															

*Only 1 unpreserved bottle per sample is checked for pH.
NOTE: TOC and VOA pH checks are performed by the analyst, not sample receiveing

D:\CHCKLIST\SAMP_REC\CURPHLOG.DOC

Chain of Custody Record

Quanterra

OUA-4124

Client	Project Manager	Date	Chain Of Custody Number
Hydrologic Inc	Tim Castille	21 Jul 97	01334
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	
1155 Herndon Pkwy Suite 900	703/478-5186		Page 1 of 3
City / State / Zip Code	**Site Contact**		
Herndon / VA / 20170	Michael Rodtang		
Project Name	**Carrier/Waybill Number**		
NAS Fort Worth JRB	Fed Ex		
Contract/Purchase Order/Quote No.			
AFC001-076-NA			

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	BTEX	Methane	TOC	Anion	Alkalinity
BSS-MW601	20Jul97	1545	Groundwater	120ml	VOA	3	HCl		X				
				120ml	VOA	3	H_2SO_4			X			
				80ml	VOA	2	H_2SO_4				X		
				1L	Poly	1	4°C					X	
				1L	Poly	1	4°C						X
EB072097				120ml	VOA	3	HCl		X				
[redacted]				120ml	VOA	3	H_2SO_4			X			
				80ml	VOA	2	H_2SO_4				X		
				500ml	Poly	1	4°C					X	
				500ml	Poly	1	4°C						X
MW-16W601	21Jul97	1110		120ml	VOA	3	HCl		X				
MW-16W601	21Jul97	1110		120ml	VOA	3	H_2SO_4			X			
MW-16W601	21Jul97	1110		80ml	VOA	2	H_2SO_4				X		
MW-16W601	21Jul97	1110		1L	Poly	1	4°C					X	
MW-16W601	21Jul97	1110		1L	Poly	1	4°C						X
EB-072197	21Jul97	1110		120ml	VOA	3	HCl		X				

Special Instructions

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Turn Around Time Required: ☐ Normal ☐ Rush 21 day T.A.T

QC Level: ☐ I. ☐ II. ☐ III.

Project Specific (Specify)

	Date	Time		Date	Time
1. Relinquished By: Michael Rodtang	21Jul97		1. Received By: [signature]	7/22/97	0730
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

408 487

[redacted]

Chain of Custody Record

Quanterra

QUA-4124

Client	Project Manager	Date	Chain Of Custody Number
Hydrogeologic		21Jul97	01334 [redacted]
Address	Telephone Number (Area Code)/Fax Number	Lab Number	Page 3 of 3

City	State	Zip Code	Site Contact

Project Name	Carrier/Waybill Number

Contract/Purchase Order/Quote No.

Analysis

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	BTEX	METHANE	TOC	Anions	Alkalinity	VOC	Metals				
EB-072197	21Jul97	1110	Grab	120ml	VOA	3	H_2SO_4			X									
EB-072197	21Jul97	1110		80ml	VOA	2	H_2SO_4				X								
EB-072197	21Jul97	1110		1L	Poly	1	4°C					X							
EB-072197	21Jul97	1110		1L	Poly	1	4°C						X						
BSS-BW601	21Jul97	1130		120ml	VOA	3	HCl		X										
BSS-BW601	21Jul97	1130		120ml	VOA	3	H_2SO_4			X									
BSS-BW601	21Jul97	1130		80ml	VOA	2	H_2SO_4				X								
BSS-BW601	21Jul97	1130		1L	Poly	1	4°C					X							
BSS-BW601	21Jul97	1130		1L	Poly	1	4°C						X						
LFO1-1BW601	21Jul97	1400		120ml	VOA	3	HCl							X					
LFO1-1BW601	21Jul97	1400		500ml	Poly	1	HNO_3								X				
LFO1-1DW601	21Jul97	1545		120ml	VOA	3	HCl							X					
LFO1-1DW601	21Jul97	1545		500ml	Poly	1	HNO_3								X				
GMI22-05MW601	21Jul97	1745		120ml	VOA	3	HCl							X					
GMI22-05MW601	21Jul97	1745		500ml	Poly	1	HNO_3								X				
GMI22-05MW601	21Jul97	1745	↓	80ml	VOA	2	HCl							X					

Special Instructions

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Turn Around Time Required
☐ Normal ☐ Rush

QC Level
☐ I. ☐ II. ☐ III.

Project Specific (Specify)

	Date	Time		Date	Time
1. Relinquished By			1. Received By [signature]	7/22/97	1030
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

408 490

Chain of Custody Record

Quanterra

QUA-4124

Client	Project Manager	Date	Chain Of Custody Number
Hydrobrologic		21 Jul 97	01234
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 3 of 3**

City	State	Zip Code	Site Contact

Project Name	Carrier/Waybill Number

Contract/Purchase Order/Quote No.

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	Metals	VOC	BTEX	Methane								
GMJ22-05MW601	21Jul97	1745	Groundwater	500ml	Poly	1	HNO3		X											
MW-11W601	21Jul97	1800		120ml	VOA	3	HCl			X										
MW-11W601	21Jul97	1800		500ml	Poly	1	HNO3		X											
MW-10W601	21Jul97	1800		120ml	VOA	3	HCl			X										
MW-10W601	21Jul97	1800		500ml	Poly	1	HNO3		X											
~~#6679~~ TB072197	21Jul97	1930		80ml	VOA	2	HCl			X										
TB072197	21Jul97	1930		80ml	VOA	2	HCl				X									
TB072197	21Jul97	1930		80ml	VOA	2	H2SO4					X								

Special Instructions

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Turn Around Time Required
☐ Normal ☐ Rush

QC Level
☐ I. ☐ II. ☐ III.

Project Specific (Specify)

1. Relinquished By	Date	Time	1. Received By	Date	Time
			[signature]	7/22/97	1030
2. Relinquished By	**Date**	**Time**	**2. Received By**	**Date**	**Time**
3. Relinquished By	**Date**	**Time**	**3. Received By**	**Date**	**Time**

Comments

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

408 491

408 492

Analytical Report for Wells Sampled July 22, 1997

408 493

Quanterra
Environmental Services

Quanterra Incorporated
5910 Breckenridge Parkway, Suite H
Tampa, Florida 33610

813 621-0784 Telephone
813 623-6021 Fax

ANALYTICAL REPORT

PROJECT NO. 12001-7-5001

Carswell AFB/NAS FT WORTH JRB

Lot #: B7G230127

Jim Costello

HydroGeoLogic, Inc.

QUANTERRA INCORPORATED

Certification Numbers: E84059,HRS84297
FDEP CompQAP: 870270G

Michele A. Lersch

Michele Lersch
Project Manager

August 13, 1997

Quanterra
Environmental Services

NARRATIVE

HydroGeoLogic

Project: 12001-7-5001/NAS Ft. Worth JRB, 1st Qtr (Carswell AFB)

Quanterra Lot Number: B7G230127
Matrix: Groundwater
Methods: 8260A, 8020A, RSK-175, 6010A, 7470A, 7841, 9060, 9056, 310.1

6010A
The method blank had a quantifiable level of magnesium below the RL. No corrective action is required.

9056
The method blank had quantifiable levels of chloride and sulfate below their respective RLs. No corrective action is required.

9060
The "TOC Range" footnote on the General Chemistry report page for each sample indicates the lowest and highest concentrations of the quadruplicate analyses, as required by the method. The reported result is the average of the quadruplicate analyses, rounded according to Quanterra protocols.

Quanterra
Environmental Services

SAMPLE SUMMARY

B7G230127

WO #	SAMPLE#	CLIENT SAMPLE ID	DATE	TIME
CAV5V	001	MW-8WG01	07/22/97	11:00
CAV5W	002	MW-9WG01	07/22/97	12:45
CAV61	003	LF01-1EWG01	07/22/97	10:35
CAV62	004	LF01-1CWG01	07/22/97	12:15
CAV63	005	DUP04-WG01	07/22/97	12:15
CAV64	006	MW-12WG01	07/22/97	15:55
CAV65	007	ST14-28	07/22/97	15:00
CAV68	008	SD13-01WG01	07/22/97	17:00
CAV6A	009	MW-5WG01	07/22/97	18:10
CAV6D	010	EB-072297	07/22/97	17:30
CAV6E	011	TB072297	07/22/97	19:30

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Quanterra
Environmental Services

METHODS SUMMARY

B7G230127

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Alkalinity	MCAWW 310.1	MCAWW 310.1
Aromatic Volatile Organics by GC	SW846 8020A	SW846 5030
Bromide	SW846 9056	SW846 9056
Chloride	SW846 9056	SW846 9056
Dissolved Gasses in Water	EPA-9 RSK-175	
Inductively Coupled Plasma (ICP) Metals	SW846 6010A	SW846 3005
Mercury in Liquid Waste (Manual Cold-Vapor)	SW846 7470A	SW846 7470A
Silver (AA, Furnace Technique)	SW846 7761	
Sulfate	SW846 9056	SW846 9056
Thallium (AA, Furnace Technique)	SW846 7841	SW846 3020
Total Organic Carbon	SW846 9060	SW846 9060
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010A	SW846 3005
Volatile Organics by GC/MS	SW846 8260A	SW846 5030/8260

References:

EPA-9 Sample Prep and Calculations for Dissolved Gas Analysis in Water Samples Using a GC Headspace Equilibration Technique, RSKSOP-175, REV. 0, 8/11/94, USEPA Research Lab

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

Quanterra Environmental Services

EXECUTIVE SUMMARY - Detection Highlights

B7G230127

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
MW-8WG01 07/22/97 11:00 001				
Ethane	0.65	0.50	ug/L	EPA-9 RSK-175
Ethene	0.74	0.50	ug/L	EPA-9 RSK-175
Methane	20	0.50	ug/L	EPA-9 RSK-175
Ethylbenzene	0.46 F	2.0	ug/L	SW846 8020A
Toluene	0.40 F	2.0	ug/L	SW846 8020A
Xylenes (total)	1.3 F	2.0	ug/L	SW846 8020A
Total Organic Carbon	3	1	mg/L	SW846 9060
Chloride	42.9	0.20	mg/L	SW846 9056
Sulfate	33.4	0.50	mg/L	SW846 9056
Bromide	0.74	0.20	mg/L	SW846 9056
Alkalinity as CaCO3 to pH 4.5	250	10	mg/L	MCAWW 310.1
MW-9WG01 07/22/97 12:45 002				
Barium	0.14	0.020	mg/L	SW846 6010A
Calcium	180	1.0	mg/L	SW846 6010A
Copper	0.0039 F	0.060	mg/L	SW846 6010A
Iron	3.3	0.070	mg/L	SW846 6010A
Potassium	0.34 F	5.0	mg/L	SW846 6010A
Magnesium	13.5	1.0	mg/L	SW846 6010A
Manganese	3.7	0.020	mg/L	SW846 6010A
Sodium	78.8	1.0	mg/L	SW846 6010A
LF01-1EWG01 07/22/97 10:35 003				
Barium	0.14	0.020	mg/L	SW846 6010A
Calcium	134	1.0	mg/L	SW846 6010A
Copper	0.0041 F	0.060	mg/L	SW846 6010A
Iron	0.26	0.070	mg/L	SW846 6010A
Magnesium	7.9	1.0	mg/L	SW846 6010A
Manganese	3.8	0.020	mg/L	SW846 6010A
Sodium	21.7	1.0	mg/L	SW846 6010A
Chlorobenzene	2.0	0.40	ug/L	SW846 8260A
cis-1,2-Dichloroethene	0.30 F	1.2	ug/L	SW846 8260A
LF01-1CWG01 07/22/97 12:15 004				
Barium	0.18	0.020	mg/L	SW846 6010A
Calcium	193	1.0	mg/L	SW846 6010A
Copper	0.0053 F	0.060	mg/L	SW846 6010A
Iron	11.7	0.070	mg/L	SW846 6010A
Potassium	1.2 F	5.0	mg/L	SW846 6010A
Magnesium	13.3	1.0	mg/L	SW846 6010A

(Continued on next page)

Quanterra Environmental Services

EXECUTIVE SUMMARY - Detection Highlights

B7G230127

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
LF01-1CWG01 07/22/97 12:15 004				
Manganese	1.7	0.020	mg/L	SW846 6010A
Sodium	26.8	1.0	mg/L	SW846 6010A
Arsenic	0.022	0.0050	mg/L	SW846 6010A
Isopropylbenzene	2.0	0.50	ug/L	SW846 8260A
sec-Butylbenzene	5.7	1.3	ug/L	SW846 8260A
tert-Butylbenzene	1.1 F	1.4	ug/L	SW846 8260A
DUP04-WG01 07/22/97 12:15 005				
Barium	0.18	0.020	mg/L	SW846 6010A
Calcium	196	1.0	mg/L	SW846 6010A
Copper	0.0043 F	0.060	mg/L	SW846 6010A
Iron	12.0	0.070	mg/L	SW846 6010A
Potassium	1.0 F	5.0	mg/L	SW846 6010A
Magnesium	13.4	1.0	mg/L	SW846 6010A
Manganese	1.7	0.020	mg/L	SW846 6010A
Molybdenum	0.0071 F	0.080	mg/L	SW846 6010A
Sodium	26.8	1.0	mg/L	SW846 6010A
Arsenic	0.020	0.0050	mg/L	SW846 6010A
Isopropylbenzene	1.8	0.50	ug/L	SW846 8260A
sec-Butylbenzene	5.2	1.3	ug/L	SW846 8260A
tert-Butylbenzene	0.98 F	1.4	ug/L	SW846 8260A
MW-12WG01 07/22/97 15:55 006				
Barium	0.057	0.020	mg/L	SW846 6010A
Calcium	294	1.0	mg/L	SW846 6010A
Copper	0.0051 F	0.060	mg/L	SW846 6010A
Potassium	0.73 F	5.0	mg/L	SW846 6010A
Magnesium	9.2	1.0	mg/L	SW846 6010A
Manganese	0.084	0.020	mg/L	SW846 6010A
Sodium	50.0	1.0	mg/L	SW846 6010A
Zinc	0.019 F	0.020	mg/L	SW846 6010A
Ethylbenzene	0.32 F	0.60	ug/L	SW846 8260A
m-Xylene & p-Xylene	0.56	0.50	ug/L	SW846 8260A
o-Xylene	0.19 F	1.1	ug/L	SW846 8260A
ST14-28 07/22/97 15:00 007				
Ethene	39 F	50	ug/L	EPA-9 RSK-175
Methane	3400	50	ug/L	EPA-9 RSK-175
Benzene	0.48 F	2.0	ug/L	SW846 8020A
Ethylbenzene	0.54 F	2.0	ug/L	SW846 8020A

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Quanterra Environmental Services

EXECUTIVE SUMMARY - Detection Highlights

B7G230127

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
ST14-28 07/22/97 15:00 007				
Xylenes (total)	1.5 F	2.0	ug/L	SW846 8020A
Total Organic Carbon	15	2.0	mg/L	SW846 9060
Chloride	36.6	0.20	mg/L	SW846 9056
Sulfate	0.95	0.50	mg/L	SW846 9056
Bromide	2.0	0.20	mg/L	SW846 9056
Alkalinity as CaCO3 to pH 4.5	460	10	mg/L	MCAWW 310.1
SD13-01WG01 07/22/97 17:00 008				
Methane	4400	50	ug/L	EPA-9 RSK-175
Xylenes (total)	1.8 F	2.0	ug/L	SW846 8020A
Total Organic Carbon	6	1	mg/L	SW846 9060
Chloride	30.5	0.20	mg/L	SW846 9056
Sulfate	0.45 F	0.50	mg/L	SW846 9056
Bromide	0.89	0.20	mg/L	SW846 9056
Alkalinity as CaCO3 to pH 4.5	340	10	mg/L	MCAWW 310.1
MW-5WG01 07/22/97 18:10 009				
Methane	3400	50	ug/L	EPA-9 RSK-175
Benzene	65	10	ug/L	SW846 8020A
Ethylbenzene	360	10	ug/L	SW846 8020A
Toluene	18	10	ug/L	SW846 8020A
Xylenes (total)	22	10	ug/L	SW846 8020A
Total Organic Carbon	13	2.0	mg/L	SW846 9060
Chloride	54.5	0.40	mg/L	SW846 9056
Sulfate	1.2	1.0	mg/L	SW846 9056
Bromide	1.2	0.40	mg/L	SW846 9056
Alkalinity as CaCO3 to pH 4.5	370	10	mg/L	MCAWW 310.1
EB-072297 07/22/97 17:30 010				
Methane	0.62	0.50	ug/L	EPA-9 RSK-175
Calcium	0.43 F	1.0	mg/L	SW846 6010A
Copper	0.0042 F	0.060	mg/L	SW846 6010A
Zinc	0.024	0.020	mg/L	SW846 6010A
Chloroform	2.1	0.30	ug/L	SW846 8260A
Total Organic Carbon	0.3 F	1	mg/L	SW846 9060
Chloride	0.12 F	0.20	mg/L	SW846 9056
Sulfate	0.40 F	0.50	mg/L	SW846 9056
Alkalinity as CaCO3 to pH 4.5	6.0 F	10	mg/L	MCAWW 310.1

(Continued on next page)

Quanterra Environmental Services

EXECUTIVE SUMMARY - Detection Highlights

B7G230127

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
TB072297 07/22/97 19:30 011				
Methane	1.2	0.50	ug/L	EPA-9 RSK-175
Toluene	0.18 F	2.0	ug/L	SW846 8020A

Quanterra Environmental Services

QC DATA ASSOCIATION SUMMARY

B7G230127

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WG	SW846 9060		7217130	
	WG	SW846 9056		7219172	
	WG	SW846 9056		7219173	
	WG	EPA-9 RSK-175		7216198	7218039
	WG	SW846 9056		7219170	
	WG	SW846 8020A		7212147	7212031
	WG	MCAWW 310.1		7210207	
002	WG	SW846 6010A		7205193	7205073
	WG	SW846 7761		7205193	7205073
	WG	SW846 8260A		7211184	
	WG	SW846 7470A		7205191	7205070
	WG	SW846 7841		7205193	7205073
003	WG	SW846 6010A		7205193	7205073
	WG	SW846 7761		7205193	7205073
	WG	SW846 8260A		7211184	
	WG	SW846 7470A		7205191	7205070
	WG	SW846 7841		7205193	7205073
004	WG	SW846 6010A		7205193	7205073
	WG	SW846 7761		7205193	7205073
	WG	SW846 8260A		7211184	
	WG	SW846 7470A		7205191	7205070
	WG	SW846 7841		7205193	7205073
005	WG	SW846 6010A		7205193	7205073
	WG	SW846 7761		7205193	7205073
	WG	SW846 8260A		7211184	
	WG	SW846 7470A		7205191	7205070
	WG	SW846 7841		7205193	7205073
006	WG	SW846 6010A		7205193	7205073
	WG	SW846 7761		7205193	7205073
	WG	SW846 8260A		7211184	
	WG	SW846 7470A		7205191	7205070
	WG	SW846 7841		7205193	7205073
007	WG	SW846 9060		7218126	
	WG	SW846 9056		7219172	
	WG	SW846 9056		7219173	
	WG	EPA-9 RSK-175		7216236	7218037
	WG	SW846 9056		7219170	
	WG	SW846 8020A		7212147	7212031

(Continued on next page)

Quanterra Environmental Services

QC DATA ASSOCIATION SUMMARY

B7G230127

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
007	WG	MCAWW 310.1		7210207	
008	WG	SW846 9060		7217130	
	WG	SW846 9056		7219172	
	WG	SW846 9056		7219173	
	WG	EPA-9 RSK-175		7216236	7218037
	WG	SW846 9056		7219170	
	WG	SW846 8020A		7212147	7212031
	WG	MCAWW 310.1		7210207	
009	WG	SW846 9060		7218126	
	WG	SW846 9056		7219172	
	WG	SW846 9056		7219173	
	WG	EPA-9 RSK-175		7216236	7218037
	WG	SW846 9056		7219170	
	WG	SW846 8020A		7212147	7212031
	WG	MCAWW 310.1		7210207	
010	WQ	SW846 6010A		7205193	7205073
	WQ	SW846 9060		7217130	
	WQ	SW846 9056		7219172	
	WQ	SW846 9056		7219173	
	WQ	SW846 7761		7205193	7205073
	WQ	EPA-9 RSK-175		7216198	7218039
	WQ	SW846 9056		7219170	
	WQ	SW846 8260A		7211184	
	WQ	SW846 8020A		7212147	7212031
	WQ	SW846 7470A		7205191	7205070
	WQ	SW846 7841		7205193	7205073
	WQ	MCAWW 310.1		7210207	
011	WQ	EPA-9 RSK-175		7216198	7218039
	WQ	SW846 8260A		7211184	
	WQ	SW846 8020A		7212147	7212031

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: MW-8WG01

GC Volatiles

Lot-Sample #...: B7G230127-001 Work Order #...: CAV5V101 Matrix.....: WG
Date Sampled...: 07/22/97 Date Received..: 07/23/97
Prep Date.....: 07/29/97 Analysis Date..: 07/29/97
Prep Batch #...: 7212147 Analysis Time..: 23:57
Dilution Factor: 1
Analyst ID.....: 001854 Instrument ID..: V2A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	2.0	ug/L	SW846 8020A
Ethylbenzene	0.46 F	2.0	ug/L	SW846 8020A
Toluene	0.40 F	2.0	ug/L	SW846 8020A
Xylenes (total)	1.3 F	2.0	ug/L	SW846 8020A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	77	(46 - 136)
Bromofluorobenzene	81	(48 - 138)
Fluorobenzene	91	(44 - 165)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: MW-9WG01

GC/MS Volatiles

Lot-Sample #...: B7G230127-002 Work Order #...: CAV5W10T Matrix.....: WG
Date Sampled...: 07/22/97 Date Received..: 07/23/97
Prep Date.....: 07/24/97 Analysis Date..: 07/24/97
Prep Batch #...: 7211184 Analysis Time..: 14:11
Dilution Factor: 1
Analyst ID.....: 007084 Instrument ID..: VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	0.80	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	0.40	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	0.40	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.2	ug/L	SW846 8260A
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	3.2	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	0.40	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	1.3	ug/L	SW846 8260A
1,2-Dichloroethane	ND	0.60	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.6	ug/L	SW846 8260A
1,2-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	0.60	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	0.50	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	1.2	ug/L	SW846 8260A
1,3-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1-Chlorohexane	ND	0.50	ug/L	SW846 8260A
2,2-Dichloropropane	ND	3.5	ug/L	SW846 8260A
2-Chlorotoluene	ND	0.40	ug/L	SW846 8260A
4-Chlorotoluene	ND	0.60	ug/L	SW846 8260A
Benzene	ND	0.40	ug/L	SW846 8260A
Bromobenzene	ND	0.30	ug/L	SW846 8260A
Bromochloromethane	ND	0.40	ug/L	SW846 8260A
Bromodichloromethane	ND	0.80	ug/L	SW846 8260A
Bromoform	ND	1.2	ug/L	SW846 8260A
Bromomethane	ND	1.1	ug/L	SW846 8260A
Carbon tetrachloride	ND	2.1	ug/L	SW846 8260A
Chlorobenzene	ND	0.40	ug/L	SW846 8260A
Chloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	0.30	ug/L	SW846 8260A
Chloromethane	ND	1.3	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	1.2	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A

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408 505

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: TB072297

GC Volatiles

Lot-Sample #...: B7G230127-011 Work Order #...: CAV6E101 Matrix.....: WQ
Date Sampled...: 07/22/97 Date Received..: 07/23/97
Prep Date.....: 07/29/97 Analysis Date..: 07/29/97
Prep Batch #...: 7212147 Analysis Time..: 22:58
Dilution Factor: 1
Analyst ID.....: 001854 Instrument ID..: V2A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	2.0	ug/L	SW846 8020A
Ethylbenzene	ND	2.0	ug/L	SW846 8020A
Toluene	**0.18 F**	**2.0**	**ug/L**	**SW846 8020A**
Xylenes (total)	ND	2.0	ug/L	SW846 8020A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	86	(46 - 136)
Bromofluorobenzene	86	(48 - 138)
Fluorobenzene	96	(44 - 165)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

408 506

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: MW-9WG01

TOTAL Metals

Lot-Sample #...: B7G230127-002 Matrix.....: WG
Date Sampled...: 07/22/97 Date Received..: 07/23/97

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7205191						
Mercury	ND	0.0010	mg/L	SW846 7470A	07/24/97	CAV5W101
		Dilution Factor: 1				
		Analysis Time..: 21:24		Analyst ID.....: 001702	Instrument ID..: CV	
Prep Batch #...: 7205193						
Silver	ND	0.00020	mg/L	SW846 7761	07/24-08/11/97	CAV5W10U
		Dilution Factor: 1				
		Analysis Time..: 10:20		Analyst ID.....: 001863	Instrument ID..: F1	
Antimony	ND	0.0050	mg/L	SW846 6010A	07/24-07/31/97	CAV5W10M
		Dilution Factor: 1				
		Analysis Time..: 21:03		Analyst ID.....: 001702	Instrument ID..: P2	
Arsenic	ND	0.0050	mg/L	SW846 6010A	07/24-07/25/97	CAV5W[illegible]
		Dilution Factor: 1				
		Analysis Time..: 14:07		Analyst ID.....: 001863	Instrument ID..: P2	
Lead	ND	0.0050	mg/L	SW846 6010A	07/24-07/25/97	CAV5W10P
		Dilution Factor: 1				
		Analysis Time..: 14:07		Analyst ID.....: 001863	Instrument ID..: P2	
Selenium	ND	0.0050	mg/L	SW846 6010A	07/24-07/25/97	CAV5W10Q
		Dilution Factor: 1				
		Analysis Time..: 14:07		Analyst ID.....: 001863	Instrument ID..: P2	
Thallium	ND	0.0020	mg/L	SW846 7841	07/24/97	CAV5W10R
		Dilution Factor: 1				
		Analysis Time..: 18:22		Analyst ID.....: 001702	Instrument ID..: F1	
Aluminum	ND	0.50	mg/L	SW846 6010A	07/24-07/25/97	CAV5W103
		Dilution Factor: 1				
		Analysis Time..: 14:07		Analyst ID.....: 001863	Instrument ID..: P2	
Barium	**0.14**	**0.020**	**mg/L**	**SW846 6010A**	**07/24-07/25/97**	**CAV5W104**
		Dilution Factor: 1				
		Analysis Time..: 14:07		Analyst ID.....: 001863	Instrument ID..: P2	
Beryllium	ND	0.0030	mg/L	SW846 6010A	07/24-07/25/97	CAV5W105
		Dilution Factor: 1				
		Analysis Time..: 14:07		Analyst ID.....: 001863	Instrument ID..: P2	
Calcium	**180**	**1.0**	**mg/L**	**SW846 6010A**	**07/24-07/25/97**	**CAV5W106**
		Dilution Factor: 1				
		Analysis Time..: 14:07		Analyst ID.....: 001863	Instrument ID..: P2	

Quanterra
Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: TB072297

GC/MS Volatiles

Lot-Sample #...: B7G230127-011 Work Order #...: CAV6E102 Matrix.....: WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	0.50	ug/L	SW846 8260A
Dibromomethane	ND	2.4	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	ND	0.60	ug/L	SW846 8260A
Hexachlorobutadiene	ND	1.1	ug/L	SW846 8260A
Isopropylbenzene	ND	0.50	ug/L	SW846 8260A
m-Xylene & p-Xylene	ND	0.50	ug/L	SW846 8260A
Methylene chloride	ND	0.30	ug/L	SW846 8260A
n-Butylbenzene	ND	1.1	ug/L	SW846 8260A
n-Propylbenzene	ND	0.40	ug/L	SW846 8260A
Naphthalene	ND	0.40	ug/L	SW846 8260A
o-Xylene	ND	1.1	ug/L	SW846 8260A
p-Isopropyltoluene	ND	1.2	ug/L	SW846 8260A
sec-Butylbenzene	ND	1.3	ug/L	SW846 8260A
Styrene	ND	0.40	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
tert-Butylbenzene	ND	1.4	ug/L	SW846 8260A
Tetrachloroethene	ND	1.4	ug/L	SW846 8260A
Toluene	ND	1.1	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	0.60	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichlorofluoromethane	ND	0.80	ug/L	SW846 8260A
Vinyl chloride	ND	1.1	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	102	(75 - 125)
4-Bromofluorobenzene	97	(75 - 125)
1,2-Dichloroethane-d4	103	(62 - 139)
Dibromofluoromethane	98	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: MW-9WG01

TOTAL Metals

Lot-Sample #...: B7G230127-002 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Vanadium	ND	0.080	mg/L	SW846 6010A	07/24-07/25/97	CAV5W10K
		Dilution Factor: 1				
		Analysis Time..: 14:07		Analyst ID.....: 001863	Instrument ID..: P2	
Zinc	ND	0.020	mg/L	SW846 6010A	07/24-07/31/97	CAV5W10L
		Dilution Factor: 1				
		Analysis Time..: 21:03		Analyst ID.....: 001702	Instrument ID..: P2	

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra
Environmental Services

Quanterra Quality Control Program Summary

Quanterra Environmental Services considers continuous analytical method performance evaluations to be an integral portion of the data package, and routinely includes the pertinent QA/QC data associated with analytical results. Brief discussions of the various QA/QC procedures utilized to measure acceptable method and matrix performance follow. Further documentation of specific policies and procedures in use are available, upon request, from the Quanterra Quality Control Department.

The program described below provides Quanterra's interpretation of QC requirements described in SW-846, 3rd edition -Final Update II. Additional interpretations specific to other aspects of methods performed, such as instrument calibration and bench procedures, are described in program-specific documents (e.g. US Corps of Engineers, AFCEE, etc.) and associated method standard operating procedures. Where explicit program requirements or project requirements exist, certain elements of the Quanterra QC Program may be superseded by these requirements.

Elements of the Quanterra QC Program

Where other clear regulatory guidance, contract specifications, or client requirements are not available, the Quanterra QC Program provides guidance for Batch QC requirements. The Quality Control Batch is a set of up to 20 field samples of similar matrix, which are processed together under the same conditions, within the same time frame. Included in each Quality Control Batch is a Method Blank, Laboratory Control Sample, and Matrix Spike Duplicate. For methods that require independent sample preparation prior to analysis, the QC Batch is defined at the preparation stage. For methods that do not require independent sample preparation, the QC Batch is defined at the instrument. The QC Batch Number is provided on each result page in association with the parameter(s) presented, and may be used to cross-reference sample results with the associated QC data.

Method Blank Evaluations

Laboratory analytical method blanks are systematically prepared and analyzed in order to continuously evaluate the system interference and background contamination levels associated with each applicable analytical method. Method blanks include all aspects of actual laboratory procedures involving sample preparation and analysis, substituting analyte-free water or solid for the actual sample. Under normal circumstances, the Method Blank should not exhibit analytes of interest above the reported detection limit. Due to the presence of some analytes in a typical laboratory setting, the following common laboratory contaminants are exceptions to this rule, provided they are not present in the method blank at greater than five times the reporting limit.

Volatiles	Semi-Volatiles	Metals
Methylene chloride	Dimethyl phthalate	Calcium
Toluene	Diethyl phthalate	Magnesium
2-Butanone	Di-n-butyl-phthalate	Sodium
Acetone	Butyl benzyl phthalate	
	Bis (2-ethylhexyl) phthalate	

A method blank is performed with each analytical batch. A minimum of 5% of all laboratory analyses are method blanks.

Laboratory Control Sample (LCS) Evaluations

Known concentrations of designated matrix spike (target analyte) compounds are added to a method blank prior to extraction and analysis. Percent recovery determinations of individual target analytes in the LCS demonstrate the laboratory's method performance for the QC Batch relative to these target analytes (or other individual components represented by a subset of control analytes). Percent recovery data is displayed alongside acceptance criteria, that is typically derived from laboratory historical data. Failure of a Laboratory Control Sample to meet established recovery criteria for control analytes is cause for corrective actions to occur, which typically includes re-extraction and re-analysis of all samples associated with the QC Batch. An LCS is performed with each analytical batch. A minimum of 5% of all laboratory analyses are laboratory control samples.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: LF01-1EWG01

GC/MS Volatiles

Lot-Sample #...: B7G230127-003 Work Order #...: CAV6110T Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	0.50	ug/L	SW846 8260A
Dibromomethane	ND	2.4	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	ND	0.60	ug/L	SW846 8260A
Hexachlorobutadiene	ND	1.1	ug/L	SW846 8260A
Isopropylbenzene	ND	0.50	ug/L	SW846 8260A
m-Xylene & p-Xylene	ND	0.50	ug/L	SW846 8260A
Methylene chloride	ND	0.30	ug/L	SW846 8260A
n-Butylbenzene	ND	1.1	ug/L	SW846 8260A
n-Propylbenzene	ND	0.40	ug/L	SW846 8260A
Naphthalene	ND	0.40	ug/L	SW846 8260A
o-Xylene	ND	1.1	ug/L	SW846 8260A
p-Isopropyltoluene	ND	1.2	ug/L	SW846 8260A
sec-Butylbenzene	ND	1.3	ug/L	SW846 8260A
Styrene	ND	0.40	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
tert-Butylbenzene	ND	1.4	ug/L	SW846 8260A
Tetrachloroethene	ND	1.4	ug/L	SW846 8260A
Toluene	ND	1.1	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	0.60	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichlorofluoromethane	ND	0.80	ug/L	SW846 8260A
Vinyl chloride	ND	1.1	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	101	(75 - 125)
4-Bromofluorobenzene	97	(75 - 125)
1,2-Dichloroethane-d4	105	(62 - 139)
Dibromofluoromethane	100	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra
Environmental Services

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: B7G230127
MB Lot-Sample #: I7H040000-198

Work Order #...: CC3GC101
Prep Date.....: 07/28/97
Prep Batch #...: 7216198
Analyst ID.....: 013512

Matrix.....: WATER
Analysis Time..: 09:42
Instrument ID..: K1A

Analysis Date..: 07/28/97
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Methane	0.11 F	0.50	ug/L	EPA-9 RSK-175
Ethane	ND	0.50	ug/L	EPA-9 RSK-175
Ethene	ND	0.50	ug/L	EPA-9 RSK-175

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

F The analyte was identified but the value was below the RL and above the MDL.

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: LF01-1EWG01

TOTAL Metals

Lot-Sample #...: B7G230127-003 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Cadmium	ND	0.040	mg/L	SW846 6010A	07/24-07/25/97	CAV61107
		Dilution Factor: 1				
		Analysis Time..: 14:13	Analyst ID.....: 001863	Instrument ID..: P2		
Cobalt	ND	0.070	mg/L	SW846 6010A	07/24-07/25/97	CAV61108
		Dilution Factor: 1				
		Analysis Time..: 14:13	Analyst ID.....: 001863	Instrument ID..: P2		
Chromium	ND	0.070	mg/L	SW846 6010A	07/24-07/25/97	CAV61109
		Dilution Factor: 1				
		Analysis Time..: 14:13	Analyst ID.....: 001863	Instrument ID..: P2		
Copper	**0.0041 F**	**0.060**	**mg/L**	**SW846 6010A**	**07/24-07/25/97**	**CAV6110A**
		Dilution Factor: 1				
		Analysis Time..: 14:13	Analyst ID.....: 001863	Instrument ID..: P2		
Iron	**0.26**	**0.070**	**mg/L**	**SW846 6010A**	**07/24-07/25/97**	**CAV61J**
		Dilution Factor: 1				
		Analysis Time..: 14:13	Analyst ID.....: 001863	Instrument ID..: P2		
Potassium	ND	5.0	mg/L	SW846 6010A	07/24-07/25/97	CAV6110D
		Dilution Factor: 1				
		Analysis Time..: 11:54	Analyst ID.....: 001863	Instrument ID..: P1		
Magnesium	**7.9**	**1.0**	**mg/L**	**SW846 6010A**	**07/24-07/25/97**	**CAV6110E**
		Dilution Factor: 1				
		Analysis Time..: 14:13	Analyst ID.....: 001863	Instrument ID..: P2		
Manganese	**3.8**	**0.020**	**mg/L**	**SW846 6010A**	**07/24-07/25/97**	**CAV6110F**
		Dilution Factor: 1				
		Analysis Time..: 14:13	Analyst ID.....: 001863	Instrument ID..: P2		
Molybdenum	ND	0.080	mg/L	SW846 6010A	07/24-07/25/97	CAV6110G
		Dilution Factor: 1				
		Analysis Time..: 14:13	Analyst ID.....: 001863	Instrument ID..: P2		
Sodium	**21.7**	**1.0**	**mg/L**	**SW846 6010A**	**07/24-07/25/97**	**CAV6110H**
		Dilution Factor: 1				
		Analysis Time..: 11:54	Analyst ID.....: 001863	Instrument ID..: P1		
Nickel	ND	0.15	mg/L	SW846 6010A	07/24-07/25/97	CAV6110J
		Dilution Factor: 1				
		Analysis Time..: 14:13	Analyst ID.....: 001863	Instrument ID..: P2		

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Quanterra Environmental Services

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: B7G230127
MB Lot-Sample #: B7G310000-147
Work Order #...: CC1AM101
Matrix.....: WATER
Prep Date.....: 07/29/97
Analysis Time..: 15:48
Analysis Date..: 07/29/97
Prep Batch #...: 7212147
Instrument ID..: V2A
Dilution Factor: 1
Analyst ID.....: 001854

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	2.0	ug/L	SW846 8020A
Ethylbenzene	ND	2.0	ug/L	SW846 8020A
Toluene	ND	2.0	ug/L	SW846 8020A
Xylenes (total)	ND	2.0	ug/L	SW846 8020A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	103	(46 - 136)
Bromofluorobenzene	87	(48 - 138)
Fluorobenzene	93	(44 - 165)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: LF01-1CWG01

GC/MS Volatiles

Lot-Sample #...: B7G230127-004 Work Order #...: CAV6210T Matrix.....: WG
Date Sampled...: 07/22/97 Date Received..: 07/23/97
Prep Date.....: 07/24/97 Analysis Date..: 07/24/97
Prep Batch #...: 7211184 Analysis Time..: 15:00
Dilution Factor: 1
Analyst ID.....: 007084 Instrument ID..: VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	0.80	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	0.40	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	0.40	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.2	ug/L	SW846 8260A
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	3.2	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	0.40	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	1.3	ug/L	SW846 8260A
1,2-Dichloroethane	ND	0.60	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.6	ug/L	SW846 8260A
1,2-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	0.60	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	0.50	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	1.2	ug/L	SW846 8260A
1,3-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1-Chlorohexane	ND	0.50	ug/L	SW846 8260A
2,2-Dichloropropane	ND	3.5	ug/L	SW846 8260A
2-Chlorotoluene	ND	0.40	ug/L	SW846 8260A
4-Chlorotoluene	ND	0.60	ug/L	SW846 8260A
Benzene	ND	0.40	ug/L	SW846 8260A
Bromobenzene	ND	0.30	ug/L	SW846 8260A
Bromochloromethane	ND	0.40	ug/L	SW846 8260A
Bromodichloromethane	ND	0.80	ug/L	SW846 8260A
Bromoform	ND	1.2	ug/L	SW846 8260A
Bromomethane	ND	1.1	ug/L	SW846 8260A
Carbon tetrachloride	ND	2.1	ug/L	SW846 8260A
Chlorobenzene	ND	0.40	ug/L	SW846 8260A
Chloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	0.30	ug/L	SW846 8260A
Chloromethane	ND	1.3	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	1.2	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A

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Quanterra Environmental Services

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: B7G230127 **Work Order #...:** CC0QX101 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	ND	0.60	ug/L	SW846 8260A
Hexachlorobutadiene	ND	1.1	ug/L	SW846 8260A
Isopropylbenzene	ND	0.50	ug/L	SW846 8260A
m-Xylene & p-Xylene	ND	0.50	ug/L	SW846 8260A
Methylene chloride	ND	0.30	ug/L	SW846 8260A
n-Butylbenzene	ND	1.1	ug/L	SW846 8260A
n-Propylbenzene	ND	0.40	ug/L	SW846 8260A
Naphthalene	ND	0.40	ug/L	SW846 8260A
o-Xylene	ND	1.1	ug/L	SW846 8260A
p-Isopropyltoluene	ND	1.2	ug/L	SW846 8260A
sec-Butylbenzene	ND	1.3	ug/L	SW846 8260A
Styrene	ND	0.40	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
tert-Butylbenzene	ND	1.4	ug/L	SW846 8260A
Tetrachloroethene	ND	1.4	ug/L	SW846 8260A
Toluene	ND	1.1	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	0.60	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichlorofluoromethane	ND	0.80	ug/L	SW846 8260A
Vinyl chloride	ND	1.1	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	103	(75 - 125)
4-Bromofluorobenzene	97	(75 - 125)
1,2-Dichloroethane-d4	99	(62 - 139)
Dibromofluoromethane	98	(75 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: LF01-1CWG01

TOTAL Metals

Lot-Sample #...: B7G230127-004 Matrix.....: WG
Date Sampled...: 07/22/97 Date Received..: 07/23/97

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7205191						
Mercury	ND	0.0010	mg/L	SW846 7470A	07/24/97	CAV62101
		Dilution Factor: 1				
		Analysis Time..: 21:29		Analyst ID.....: 001702	Instrument ID..: CV	
Prep Batch #...: 7205193						
Silver	ND	0.00020	mg/L	SW846 7761	07/24-08/11/97	CAV6210U
		Dilution Factor: 1				
		Analysis Time..: 10:29		Analyst ID.....: 001863	Instrument ID..: F1	
Antimony	ND	0.0050	mg/L	SW846 6010A	07/24-07/31/97	CAV6210M
		Dilution Factor: 1				
		Analysis Time..: 21:14		Analyst ID.....: 001702	Instrument ID..: P2	
Arsenic	**0.022**	**0.0050**	**mg/L**	**SW846 6010A**	**07/24-07/25/97**	**CAV621**
		Dilution Factor: 1				
		Analysis Time..: 14:18		Analyst ID.....: 001863	Instrument ID..: P2	
Lead	ND	0.0050	mg/L	SW846 6010A	07/24-07/25/97	CAV6210P
		Dilution Factor: 1				
		Analysis Time..: 14:18		Analyst ID.....: 001863	Instrument ID..: P2	
Selenium	ND	0.0050	mg/L	SW846 6010A	07/24-07/25/97	CAV6210Q
		Dilution Factor: 1				
		Analysis Time..: 14:18		Analyst ID.....: 001863	Instrument ID..: P2	
Thallium	ND	0.0020	mg/L	SW846 7841	07/24/97	CAV6210R
		Dilution Factor: 1				
		Analysis Time..: 18:37		Analyst ID.....: 001702	Instrument ID..: F1	
Aluminum	ND	0.50	mg/L	SW846 6010A	07/24-07/25/97	CAV62103
		Dilution Factor: 1				
		Analysis Time..: 14:18		Analyst ID.....: 001863	Instrument ID..: P2	
Barium	**0.18**	**0.020**	**mg/L**	**SW846 6010A**	**07/24-07/25/97**	**CAV62104**
		Dilution Factor: 1				
		Analysis Time..: 14:18		Analyst ID.....: 001863	Instrument ID..: P2	
Beryllium	ND	0.0030	mg/L	SW846 6010A	07/24-07/25/97	CAV62105
		Dilution Factor: 1				
		Analysis Time..: 14:18		Analyst ID.....: 001863	Instrument ID..: P2	
Calcium	**193**	**1.0**	**mg/L**	**SW846 6010A**	**07/24-07/25/97**	**CAV62106**
		Dilution Factor: 1				
		Analysis Time..: 14:18		Analyst ID.....: 001863	Instrument ID..: P2	

Quanterra Environmental Services

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: B7G230127 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Calcium	ND	1.0	mg/L	SW846 6010A	07/24-07/25/97	CAW1810M
		Dilution Factor: 1				
		Analysis Time..: 12:44	Analyst ID.....: 001863		Instrument ID..: P2	
Cadmium	ND	0.040	mg/L	SW846 6010A	07/24-07/25/97	CAW1810N
		Dilution Factor: 1				
		Analysis Time..: 12:44	Analyst ID.....: 001863		Instrument ID..: P2	
Cobalt	ND	0.070	mg/L	SW846 6010A	07/24-07/25/97	CAW1810P
		Dilution Factor: 1				
		Analysis Time..: 12:44	Analyst ID.....: 001863		Instrument ID..: P2	
Chromium	ND	0.070	mg/L	SW846 6010A	07/24-07/25/97	CAW1810Q
		Dilution Factor: 1				
		Analysis Time..: 12:44	Analyst ID.....: 001863		Instrument ID..: P2	
Copper	ND	0.060	mg/L	SW846 6010A	07/24-07/25/97	CAW18101
		Dilution Factor: 1				
		Analysis Time..: 12:44	Analyst ID.....: 001863		Instrument ID..: P2	
Iron	ND	0.070	mg/L	SW846 6010A	07/24-07/25/97	CAW18102
		Dilution Factor: 1				
		Analysis Time..: 12:44	Analyst ID.....: 001863		Instrument ID..: P2	
Potassium	ND	5.0	mg/L	SW846 6010A	07/24-07/25/97	CAW18103
		Dilution Factor: 1				
		Analysis Time..: 10:23	Analyst ID.....: 001863		Instrument ID..: P1	
Magnesium	0.053 F	1.0	mg/L	SW846 6010A	07/24-07/25/97	CAW18104
		Dilution Factor: 1				
		Analysis Time..: 12:44	Analyst ID.....: 001863		Instrument ID..: P2	
Manganese	ND	0.020	mg/L	SW846 6010A	07/24-07/25/97	CAW18105
		Dilution Factor: 1				
		Analysis Time..: 12:44	Analyst ID.....: 001863		Instrument ID..: P2	
Molybdenum	ND	0.080	mg/L	SW846 6010A	07/24-07/25/97	CAW18106
		Dilution Factor: 1				
		Analysis Time..: 12:44	Analyst ID.....: 001863		Instrument ID..: P2	
Sodium	ND	1.0	mg/L	SW846 6010A	07/24-07/25/97	CAW18107
		Dilution Factor: 1				
		Analysis Time..: 10:23	Analyst ID.....: 001863		Instrument ID..: P1	
Nickel	ND	0.15	mg/L	SW846 6010A	07/24-07/25/97	CAW18108
		Dilution Factor: 1				
		Analysis Time..: 12:44	Analyst ID.....: 001863		Instrument ID..: P2	

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: LF01-1CWG01

TOTAL Metals

Lot-Sample #...: B7G230127-004 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Vanadium	ND	0.080	mg/L	SW846 6010A	07/24-07/25/97	CAV6210K
		Dilution Factor: 1				
		Analysis Time..: 14:18		Analyst ID.....: 001863	Instrument ID..: P2	
Zinc	ND	0.020	mg/L	SW846 6010A	07/24-07/31/97	CAV6210L
		Dilution Factor: 1				
		Analysis Time..: 21:14		Analyst ID.....: 001702	Instrument ID..: P2	

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

METHOD BLANK REPORT

General Chemistry

Client Lot #...: B7G230127 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH		Work Order #: CAXXV101		MB Lot-Sample #:	B7G290000-207	
	ND	10	mg/L	MCAWW 310.1	07/28/97	7210207
		Dilution Factor: 1				
		Analysis Time..: 00:00	Analyst ID.....: 090000	Instrument ID..: ISE		
Bromide		Work Order #: CC4XG101		MB Lot-Sample #:	B7H070000-170	
	ND	0.20	mg/L	SW846 9056	08/05-08/06/97	7219170
		Dilution Factor: 1				
		Analysis Time..: 13:29	Analyst ID.....: 004003	Instrument ID..: IC		
Chloride		Work Order #: CC4XP101		MB Lot-Sample #:	B7H070000-172	
	0.12 F	**0.20**	**mg/L**	**SW846 9056**	**08/05-08/06/97**	**7219172**
		Dilution Factor: 1				
		Analysis Time..: 13:29	Analyst ID.....: 004003	Instrument ID..: IC		
Sulfate		Work Order #: CC4XR101		MB Lot-Sample #:	B7H070000-173	
	0.39 F	**0.50**	**mg/L**	**SW846 9056**	**08/05-08/06/97**	**7219173**
		Dilution Factor: 1				
		Analysis Time..: 13:29	Analyst ID.....: 004003	Instrument ID..: IC		
Total Organic Carbon		Work Order #: CC3Q8101		MB Lot-Sample #:	B7H050000-130	
	ND	1	mg/L	SW846 9060	08/03/97	7217130
		Dilution Factor: 1				
		Analysis Time..: 15:50	Analyst ID.....: 004003	Instrument ID..: TOC		
Total Organic Carbon		Work Order #: CC481101		MB Lot-Sample #:	B7H060000-126	
	ND	1.0	mg/L	SW846 9060	08/05/97	7218126
		Dilution Factor: 1				
		Analysis Time..: 14:35	Analyst ID.....: 004003	Instrument ID..: TOC		

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: DUP04-WG01

GC/MS Volatiles

Lot-Sample #...: B7G230127-005 **Work Order #...:** CAV6310T **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	0.50	ug/L	SW846 8260A
Dibromomethane	ND	2.4	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	ND	0.60	ug/L	SW846 8260A
Hexachlorobutadiene	ND	1.1	ug/L	SW846 8260A
Isopropylbenzene	**1.8**	**0.50**	**ug/L**	**SW846 8260A**
m-Xylene & p-Xylene	ND	0.50	ug/L	SW846 8260A
Methylene chloride	ND	0.30	ug/L	SW846 8260A
n-Butylbenzene	ND	1.1	ug/L	SW846 8260A
n-Propylbenzene	ND	0.40	ug/L	SW846 8260A
Naphthalene	ND	0.40	ug/L	SW846 8260A
o-Xylene	ND	1.1	ug/L	SW846 8260A
p-Isopropyltoluene	ND	1.2	ug/L	SW846 8260A
sec-Butylbenzene	**5.2**	**1.3**	**ug/L**	**SW846 8260A**
Styrene	ND	0.40	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
tert-Butylbenzene	**0.98 F**	**1.4**	**ug/L**	**SW846 8260A**
Tetrachloroethene	ND	1.4	ug/L	SW846 8260A
Toluene	ND	1.1	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	0.60	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichlorofluoromethane	ND	0.80	ug/L	SW846 8260A
Vinyl chloride	ND	1.1	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	103	(75 - 125)
4-Bromofluorobenzene	103	(75 - 125)
1,2-Dichloroethane-d4	104	(62 - 139)
Dibromofluoromethane	98	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra
Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: B7G230127 **Work Order #...:** CC3GC102-LCS **Matrix.....:** WATER
LCS Lot-Sample#: I7H040000-198 CC3GC103-LCSD
Prep Date.....: 07/28/97 **Analysis Date..:** 07/28/97
Prep Batch #...: 7216198 **Analysis Time..:** 09:47
Dilution Factor: 1 **Instrument ID..:** K1A
Analyst ID.....: 013512

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Methane	72	(70 - 130)			EPA-9 RSK-175
	75	(70 - 130)	3.2	(0-30)	EPA-9 RSK-175
Ethane	75	(70 - 130)			EPA-9 RSK-175
	77	(70 - 130)	2.4	(0-30)	EPA-9 RSK-175
Ethene	75	(70 - 130)			EPA-9 RSK-175
	76	(70 - 130)	1.4	(0-30)	EPA-9 RSK-175

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: DUP04-WG01

TOTAL Metals

Lot-Sample #...: B7G230127-005 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Cadmium	ND	0.040	mg/L	SW846 6010A	07/24-07/25/97	CAV63107
		Dilution Factor: 1				
		Analysis Time..: 14:24	Analyst ID.....: 001863	Instrument ID..: P2		
Cobalt	ND	0.070	mg/L	SW846 6010A	07/24-07/25/97	CAV63108
		Dilution Factor: 1				
		Analysis Time..: 14:24	Analyst ID.....: 001863	Instrument ID..: P2		
Chromium	ND	0.070	mg/L	SW846 6010A	07/24-07/25/97	CAV63109
		Dilution Factor: 1				
		Analysis Time..: 14:24	Analyst ID.....: 001863	Instrument ID..: P2		
Copper	0.0043 F	0.060	mg/L	SW846 6010A	07/24-07/25/97	CAV6310A
		Dilution Factor: 1				
		Analysis Time..: 14:24	Analyst ID.....: 001863	Instrument ID..: P2		
Iron	12.0	0.070	mg/L	SW846 6010A	07/24-07/25/97	CAV631
		Dilution Factor: 1				
		Analysis Time..: 14:24	Analyst ID.....: 001863	Instrument ID..: P2		
Potassium	1.0 F	5.0	mg/L	SW846 6010A	07/24-07/25/97	CAV6310D
		Dilution Factor: 1				
		Analysis Time..: 12:05	Analyst ID.....: 001863	Instrument ID..: P1		
Magnesium	13.4	1.0	mg/L	SW846 6010A	07/24-07/25/97	CAV6310E
		Dilution Factor: 1				
		Analysis Time..: 14:24	Analyst ID.....: 001863	Instrument ID..: P2		
Manganese	1.7	0.020	mg/L	SW846 6010A	07/24-07/25/97	CAV6310F
		Dilution Factor: 1				
		Analysis Time..: 14:24	Analyst ID.....: 001863	Instrument ID..: P2		
Molybdenum	0.0071 F	0.080	mg/L	SW846 6010A	07/24-07/25/97	CAV6310G
		Dilution Factor: 1				
		Analysis Time..: 14:24	Analyst ID.....: 001863	Instrument ID..: P2		
Sodium	26.8	1.0	mg/L	SW846 6010A	07/24-07/25/97	CAV6310H
		Dilution Factor: 1				
		Analysis Time..: 12:05	Analyst ID.....: 001863	Instrument ID..: P1		
Nickel	ND	0.15	mg/L	SW846 6010A	07/24-07/25/97	CAV6310J
		Dilution Factor: 1				
		Analysis Time..: 14:24	Analyst ID.....: 001863	Instrument ID..: P2		

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Quanterra
Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: B7G230127 **Work Order #...:** CC3NG102-LCS **Matrix.....:** WATER
LCS Lot-Sample#: I7H040000-236 CC3NG103-LCSD
Prep Date.....: 08/01/97 **Analysis Date..:** 08/01/97
Prep Batch #...: 7216236 **Analysis Time..:** 11:10
Dilution Factor: 1 **Instrument ID..:** K1A
Analyst ID.....: 013512

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Methane	89	(70 - 130)			EPA-9 RSK-175
	93	(70 - 130)	3.6	(0-30)	EPA-9 RSK-175
Ethane	90	(70 - 130)			EPA-9 RSK-175
	93	(70 - 130)	4.0	(0-30)	EPA-9 RSK-175
Ethene	87	(70 - 130)			EPA-9 RSK-175
	91	(70 - 130)	4.8	(0-30)	EPA-9 RSK-175

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: MW-12WG01

GC/MS Volatiles

Lot-Sample #...: B7G230127-006 Work Order #...: CAV6410T Matrix.....: WG
Date Sampled...: 07/22/97 Date Received..: 07/23/97
Prep Date.....: 07/24/97 Analysis Date..: 07/24/97
Prep Batch #...: 7211184 Analysis Time..: 15:48
Dilution Factor: 1
Analyst ID.....: 007084 Instrument ID..: VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	0.80	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	0.40	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	0.40	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.2	ug/L	SW846 8260A
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	3.2	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	0.40	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	1.3	ug/L	SW846 8260A
1,2-Dichloroethane	ND	0.60	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.6	ug/L	SW846 8260A
1,2-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	0.60	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	0.50	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	1.2	ug/L	SW846 8260A
1,3-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1-Chlorohexane	ND	0.50	ug/L	SW846 8260A
2,2-Dichloropropane	ND	3.5	ug/L	SW846 8260A
2-Chlorotoluene	ND	0.40	ug/L	SW846 8260A
4-Chlorotoluene	ND	0.60	ug/L	SW846 8260A
Benzene	ND	0.40	ug/L	SW846 8260A
Bromobenzene	ND	0.30	ug/L	SW846 8260A
Bromochloromethane	ND	0.40	ug/L	SW846 8260A
Bromodichloromethane	ND	0.80	ug/L	SW846 8260A
Bromoform	ND	1.2	ug/L	SW846 8260A
Bromomethane	ND	1.1	ug/L	SW846 8260A
Carbon tetrachloride	ND	2.1	ug/L	SW846 8260A
Chlorobenzene	ND	0.40	ug/L	SW846 8260A
Chloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	0.30	ug/L	SW846 8260A
Chloromethane	ND	1.3	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	1.2	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A

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Quanterra
Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: B7G230127 **Work Order #...:** CC1AM102 **Matrix.....:** WATER
LCS Lot-Sample#: B7G310000-147
Prep Date.....: 07/29/97 **Analysis Date..:** 07/29/97
Prep Batch #...: 7212147 **Analysis Time..:** 16:13
Dilution Factor: 1 **Instrument ID..:** V2A
Analyst ID.....: 001854

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Benzene	**90**	**(75 - 125)**	**SW846 8020A**
Ethylbenzene	**92**	**(71 - 129)**	**SW846 8020A**
Toluene	**93**	**(70 - 125)**	**SW846 8020A**
Xylenes (total)	**94**	**(71 - 133)**	**SW846 8020A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	89	(46 - 136)
Bromofluorobenzene	87	(48 - 138)
Fluorobenzene	96	(44 - 165)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: MW-12WG01

TOTAL Metals

Lot-Sample #...: B7G230127-006 Matrix.....: WG
Date Sampled...: 07/22/97 Date Received..: 07/23/97

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7205191						
Mercury	ND	0.0010	mg/L	SW846 7470A	07/24/97	CAV64101
		Dilution Factor: 1				
		Analysis Time..: 21:33		Analyst ID.....: 001702	Instrument ID..: CV	
Prep Batch #...: 7205193						
Silver	ND	0.00020	mg/L	SW846 7761	07/24-08/11/97	CAV6410U
		Dilution Factor: 1				
		Analysis Time..: 10:43		Analyst ID.....: 001863	Instrument ID..: F1	
Antimony	ND	0.0050	mg/L	SW846 6010A	07/24-07/31/97	CAV6410M
		Dilution Factor: 1				
		Analysis Time..: 21:24		Analyst ID.....: 001702	Instrument ID..: P2	
Arsenic	ND	0.0050	mg/L	SW846 6010A	07/24-07/25/97	CAV641
		Dilution Factor: 1				
		Analysis Time..: 14:29		Analyst ID.....: 001863	Instrument ID..: P2	
Lead	ND	0.0050	mg/L	SW846 6010A	07/24-07/25/97	CAV6410P
		Dilution Factor: 1				
		Analysis Time..: 14:29		Analyst ID.....: 001863	Instrument ID..: P2	
Selenium	ND	0.0050	mg/L	SW846 6010A	07/24-07/25/97	CAV6410Q
		Dilution Factor: 1				
		Analysis Time..: 14:29		Analyst ID.....: 001863	Instrument ID..: P2	
Thallium	ND	0.0020	mg/L	SW846 7841	07/24/97	CAV6410R
		Dilution Factor: 1				
		Analysis Time..: 18:55		Analyst ID.....: 001702	Instrument ID..: F1	
Aluminum	ND	0.50	mg/L	SW846 6010A	07/24-07/25/97	CAV64103
		Dilution Factor: 1				
		Analysis Time..: 14:29		Analyst ID.....: 001863	Instrument ID..: P2	
Barium	**0.057**	**0.020**	**mg/L**	**SW846 6010A**	**07/24-07/25/97**	**CAV64104**
		Dilution Factor: 1				
		Analysis Time..: 14:29		Analyst ID.....: 001863	Instrument ID..: P2	
Beryllium	ND	0.0030	mg/L	SW846 6010A	07/24-07/25/97	CAV64105
		Dilution Factor: 1				
		Analysis Time..: 14:29		Analyst ID.....: 001863	Instrument ID..: P2	
Calcium	**294**	**1.0**	**mg/L**	**SW846 6010A**	**07/24-07/25/97**	**CAV64106**
		Dilution Factor: 1				
		Analysis Time..: 14:29		Analyst ID.....: 001863	Instrument ID..: P2	

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: B7G230127 **Work Order #...:** CC0QX102 **Matrix.....:** WATER
LCS Lot-Sample#: B7G300000-184

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Chloroform	5.0	4.3	ug/L	86	SW846 8260A
Chloromethane	5.0	4.2	ug/L	84	SW846 8260A
cis-1,2-Dichloroethene	5.0	4.6	ug/L	92	SW846 8260A
cis-1,3-Dichloropropene	5.0	4.1	ug/L	82	SW846 8260A
Dibromochloromethane	5.0	3.9	ug/L	78	SW846 8260A
Dibromomethane	5.0	4.1	ug/L	83	SW846 8260A
Dichlorodifluoromethane	5.0	4.0	ug/L	80	SW846 8260A
Ethylbenzene	5.0	4.5	ug/L	91	SW846 8260A
Hexachlorobutadiene	5.0	5.2	ug/L	103	SW846 8260A
Isopropylbenzene	5.0	5.4	ug/L	108	SW846 8260A
m-Xylene & p-Xylene	10	9.0	ug/L	90	SW846 8260A
Methylene chloride	5.0	4.2	ug/L	83	SW846 8260A
n-Butylbenzene	5.0	5.0	ug/L	101	SW846 8260A
n-Propylbenzene	5.0	4.9	ug/L	98	SW846 8260A
Naphthalene	5.0	4.0	ug/L	79	SW846 8260A
o-Xylene	5.0	4.6	ug/L	91	SW846 8260A
p-Isopropyltoluene	5.0	5.1	ug/L	101	SW846 8260A
sec-Butylbenzene	5.0	4.9	ug/L	99	SW846 8260A
Styrene	5.0	4.6	ug/L	92	SW846 8260A
Trichloroethene	5.0	4.5	ug/L	90	SW846 8260A
Tetrachloroethene	5.0	4.6	ug/L	91	SW846 8260A
Toluene	5.0	4.6	ug/L	92	SW846 8260A
trans-1,2-Dichloroethene	5.0	4.3	ug/L	86	SW846 8260A
trans-1,3-Dichloropropene	5.0	3.8	ug/L	76	SW846 8260A
Trichlorofluoromethane	5.0	4.4	ug/L	87	SW846 8260A
Vinyl chloride	5.0	4.4	ug/L	87	SW846 8260A
tert-Butylbenzene	5.0	5.0	ug/L	99	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	102	(75 - 125)
4-Bromofluorobenzene	98	(75 - 125)
1,2-Dichloroethane-d4	99	(62 - 139)
Dibromofluoromethane	97	(75 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

408 523

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: MW-12WG01

TOTAL Metals

Lot-Sample #...: B7G230127-006 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Vanadium	ND	0.080	mg/L	SW846 6010A	07/24-07/25/97	CAV6410K
		Dilution Factor: 1				
		Analysis Time..: 14:29	Analyst ID.....: 001863	Instrument ID..: P2		
Zinc	0.019 F	0.020	mg/L	SW846 6010A	07/24-07/31/97	CAV6410L
		Dilution Factor: 1				
		Analysis Time..: 21:24	Analyst ID.....: 001702	Instrument ID..: P2		

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra
Environmental Services

408 529

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: B7G230127 **Work Order #...:** CC0QX102 **Matrix.....:** WATER
LCS Lot-Sample#: B7G300000-184

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Chloroform	**86**	**(74 - 125)**	**SW846 8260A**
Chloromethane	**84**	**(50 - 125)**	**SW846 8260A**
cis-1,2-Dichloroethene	**92**	**(75 - 125)**	**SW846 8260A**
cis-1,3-Dichloropropene	**82**	**(74 - 125)**	**SW846 8260A**
Dibromochloromethane	**78**	**(73 - 125)**	**SW846 8260A**
Dibromomethane	**83**	**(69 - 127)**	**SW846 8260A**
Dichlorodifluoromethane	**80**	**(50 - 150)**	**SW846 8260A**
Ethylbenzene	**91**	**(75 - 125)**	**SW846 8260A**
Hexachlorobutadiene	**103**	**(75 - 125)**	**SW846 8260A**
Isopropylbenzene	**108**	**(75 - 125)**	**SW846 8260A**
m-Xylene & p-Xylene	**90**	**(75 - 125)**	**SW846 8260A**
Methylene chloride	**83**	**(75 - 125)**	**SW846 8260A**
n-Butylbenzene	**101**	**(75 - 125)**	**SW846 8260A**
n-Propylbenzene	**98**	**(75 - 125)**	**SW846 8260A**
Naphthalene	**79**	**(75 - 125)**	**SW846 8260A**
o-Xylene	**91**	**(75 - 125)**	**SW846 8260A**
p-Isopropyltoluene	**101**	**(75 - 125)**	**SW846 8260A**
sec-Butylbenzene	**99**	**(75 - 125)**	**SW846 8260A**
Styrene	**92**	**(75 - 125)**	**SW846 8260A**
Trichloroethene	**90**	**(71 - 125)**	**SW846 8260A**
Tetrachloroethene	**91**	**(71 - 125)**	**SW846 8260A**
Toluene	**92**	**(74 - 125)**	**SW846 8260A**
trans-1,2-Dichloroethene	**86**	**(75 - 125)**	**SW846 8260A**
trans-1,3-Dichloropropene	**76**	**(66 - 125)**	**SW846 8260A**
Trichlorofluoromethane	**87**	**(50 - 125)**	**SW846 8260A**
Vinyl chloride	**87**	**(46 - 134)**	**SW846 8260A**
tert-Butylbenzene	**99**	**(75 - 125)**	**SW846 8260A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	102	(75 - 125)
4-Bromofluorobenzene	98	(75 - 125)
1,2-Dichloroethane-d4	99	(62 - 139)
Dibromofluoromethane	97	(75 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

408 530

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-28

GC Volatiles

Lot-Sample #...:	B7G230127-007	Work Order #...:	CAV65101	Matrix.....:	WG
Date Sampled...:	07/22/97	Date Received..:	07/23/97		
Prep Date.....:	07/30/97	Analysis Date..:	07/30/97		
Prep Batch #...:	7212147	Analysis Time..:	13:02		
Dilution Factor:	1				
Analyst ID.....:	001854	Instrument ID..:	V2A		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	0.48 F	2.0	ug/L	SW846 8020A
Ethylbenzene	0.54 F	2.0	ug/L	SW846 8020A
Toluene	ND	2.0	ug/L	SW846 8020A
Xylenes (total)	1.5 F	2.0	ug/L	SW846 8020A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	91	(46 - 136)
Bromofluorobenzene	126	(48 - 138)
Fluorobenzene	89	(44 - 165)

NOTE(S):

F The analyte was identified but the value was below the RL and above the MDL.

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: B7G230127 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Calcium	10.0	10.3	mg/L	103	SW846 6010A	07/24-07/25/97	CAW1811E
		Dilution Factor: 1		Instrument ID..: P2		Analyst ID.....: 001863	
		Analysis Time..: 12:50					
Cadmium	1.0	1.0	mg/L	103	SW846 6010A	07/24-07/25/97	CAW1811F
		Dilution Factor: 1		Instrument ID..: P2		Analyst ID.....: 001863	
		Analysis Time..: 12:50					
Cobalt	1.0	1.0	mg/L	104	SW846 6010A	07/24-07/25/97	CAW1811G
		Dilution Factor: 1		Instrument ID..: P2		Analyst ID.....: 001863	
		Analysis Time..: 12:50					
Chromium	1.0	1.0	mg/L	102	SW846 6010A	07/24-07/25/97	CAW1811H
		Dilution Factor: 1		Instrument ID..: P2		Analyst ID.....: 001863	
		Analysis Time..: 12:50					
Silver	0.0015	0.0015	mg/L	99	SW846 7761	07/24-08/11/97	CAW1811K
		Dilution Factor: 1		Instrument ID..: F1		Analyst ID.....: 001863	
		Analysis Time..: 09:30					
Sodium	10.0	10.1	mg/L	101	SW846 6010A	07/24-07/25/97	CAW18110
		Dilution Factor: 1		Instrument ID..: P1		Analyst ID.....: 001863	
		Analysis Time..: 10:28					
Nickel	1.0	1.1	mg/L	106	SW846 6010A	07/24-07/25/97	CAW18111
		Dilution Factor: 1		Instrument ID..: P2		Analyst ID.....: 001863	
		Analysis Time..: 12:50					
Vanadium	1.0	1.0	mg/L	104	SW846 6010A	07/24-07/25/97	CAW18112
		Dilution Factor: 1		Instrument ID..: P2		Analyst ID.....: 001863	
		Analysis Time..: 12:50					
Zinc	1.0	1.1	mg/L	109	SW846 6010A	07/24-07/31/97	CAW18113
		Dilution Factor: 1		Instrument ID..: P2		Analyst ID.....: 001702	
		Analysis Time..: 19:55					
Antimony	1.0	1.1	mg/L	106	SW846 6010A	07/24-07/31/97	CAW18114
		Dilution Factor: 1		Instrument ID..: P2		Analyst ID.....: 001702	
		Analysis Time..: 19:55					
Arsenic	1.0	1.0	mg/L	103	SW846 6010A	07/24-07/25/97	CAW18115
		Dilution Factor: 1		Instrument ID..: P2		Analyst ID.....: 001863	
		Analysis Time..: 12:50					

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: SD13-01WG01

GC Volatiles

Lot-Sample #...: B7G230127-008 Work Order #...: CAV6810W Matrix.....: WG
Date Sampled...: 07/22/97 Date Received..: 07/23/97
Prep Date.....: 08/01/97 Analysis Date..: 08/01/97
Prep Batch #...: 7216236 Analysis Time..: 16:12
Dilution Factor: 100
Analyst ID.....: 013512 Instrument ID..: K1A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Ethane	ND	50	ug/L	EPA-9 RSK-175
Ethene	ND	50	ug/L	EPA-9 RSK-175
Methane	4400	50	ug/L	EPA-9 RSK-175

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: B7G230127 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: B7G240000-191 **Prep Batch #...:** 7205191					
Mercury	103	(77 - 120)	SW846 7470A	07/24/97	CAW13102
		Dilution Factor: 1	Instrument ID..: CV	Analyst ID.....: 001702	
		Analysis Time..: 20:54			
LCS Lot-Sample#: B7G240000-193 **Prep Batch #...:** 7205193					
Copper	104	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW1810R
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Iron	106	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW1810T
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Potassium	102	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW1810U
		Dilution Factor: 1	Instrument ID..: P1	Analyst ID.....: 001863	
		Analysis Time..: 10:28			
Magnesium	102	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW1810V
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Manganese	105	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW1810W
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Molybdenum	101	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW1810X
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Aluminum	101	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW1811A
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Barium	104	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW1811C
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Beryllium	103	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW1811D
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			

(Continued on next page)

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: SD13-01WG01

General Chemistry

Lot-Sample #...: B7G230127-008 Work Order #...: CAV68 Matrix.....: WG
Date Sampled...: 07/22/97 Date Received..: 07/23/97

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH 4.5	340	10	mg/L	MCAWW 310.1	07/28/97	7210207
	Dilution Factor: 1					
	Analysis Time..: 00:00		Analyst ID.....: 090000		Instrument ID..: ISE	
Bromide	0.89	0.20	mg/L	SW846 9056	08/05/97	7219170
	Dilution Factor: 1					
	Analysis Time..: 15:27		Analyst ID.....: 004003		Instrument ID..: IC	
Chloride	30.5	0.20	mg/L	SW846 9056	08/05/97	7219172
	Dilution Factor: 1					
	Analysis Time..: 15:27		Analyst ID.....: 004003		Instrument ID..: IC	
Sulfate	0.45 F	0.50	mg/L	SW846 9056	08/05/97	7219173
	Dilution Factor: 1					
	Analysis Time..: 15:27		Analyst ID.....: 004003		Instrument ID..: IC	
Total Organic Carbon	6	1	mg/L	SW846 9060	08/03-08/04/97	7217130
	Dilution Factor: 1					
	Analysis Time..: 12:15		Analyst ID.....: 004003		Instrument ID..: TOC	

NOTE(S):

RL Reporting Limit

F The analyte was identified but the value was below the RL and above the MDL.

408 535

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: B7G230127 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Lead	103	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW18116
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Selenium	100	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW18117
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Thallium	101	(78 - 123)	SW846 7841	07/24/97	CAW18118
		Dilution Factor: 1	Instrument ID..: F1	Analyst ID.....: 001702	
		Analysis Time..: 17:30			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

408 536

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: MW-5WG01

GC Volatiles

Lot-Sample #...: B7G230127-009 Work Order #...: CAV6A101 Matrix.....: WG
Date Sampled...: 07/22/97 Date Received..: 07/23/97
Prep Date.....: 07/30/97 Analysis Date..: 07/30/97
Prep Batch #...: 7212147 Analysis Time..: 01:13
Dilution Factor: 5
Analyst ID.....: 001854 Instrument ID..: V2A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	65	10	ug/L	SW846 8020A
Ethylbenzene	360	10	ug/L	SW846 8020A
Toluene	18	10	ug/L	SW846 8020A
Xylenes (total)	22	10	ug/L	SW846 8020A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	85	(46 - 136)
Bromofluorobenzene	88	(48 - 138)
Fluorobenzene	96	(44 - 165)

Quanterra Environmental Services

408 537

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Lot-Sample #...: B7G230127 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH WO#:CAXXV102-LCS/CAXXV103-LCSD LCS Lot-Sample#: B7G290000-207							
	100	(90 - 110)			MCAWW 310.1	07/28/97	7210207
	100	(90 - 110)	0.0	(0-17)	MCAWW 310.1	07/28/97	7210207
		Dilution Factor: 1					
					Instrument ID..: ISE	TCLP Date.....: 090000	
Bromide WO#:CC4XG102-LCS/CC4XG103-LCSD LCS Lot-Sample#: B7H070000-170							
	105	(86 - 112)			SW846 9056	08/05-08/06/97	7219170
	97	(86 - 112)	8.0	(0-20)	SW846 9056	08/05-08/06/97	7219170
		Dilution Factor: 1					
					Instrument ID..: IC	TCLP Date.....: 004003	
Chloride WO#:CC4XP102-LCS/CC4XP103-LCSD LCS Lot-Sample#: B7H070000-172							
	95	(91 - 111)			SW846 9056	08/05-08/06/97	7219172
	98	(91 - 111)	3.0	(0-20)	SW846 9056	08/05-08/06/97	7219172
		Dilution Factor: 1					
					Instrument ID..: IC	TCLP Date.....: 004003	
Sulfate WO#:CC4XR102-LCS/CC4XR103-LCSD LCS Lot-Sample#: B7H070000-173							
	97	(88 - 115)			SW846 9056	08/05-08/06/97	7219173
	98	(88 - 115)	0.67	(0-20)	SW846 9056	08/05-08/06/97	7219173
		Dilution Factor: 1					
					Instrument ID..: IC	TCLP Date.....: 004003	
Total Organic Carbon WO#:CC3Q8102-LCS/CC3Q8103-LCSD LCS Lot-Sample#: B7H050000-130							
	101	(92 - 117)			SW846 9060	08/03/97	7217130
	101	(92 - 117)	0.85	(0-20)	SW846 9060	08/03/97	7217130
		Dilution Factor: 1					
					Instrument ID..: TOC	TCLP Date.....: 004003	
Total Organic Carbon WO#:CC481102-LCS/CC481103-LCSD LCS Lot-Sample#: B7H060000-126							
	101	(92 - 117)			SW846 9060	08/05/97	7218126
	100	(92 - 117)	0.34	(0-20)	SW846 9060	08/05/97	7218126
		Dilution Factor: 1					
					Instrument ID..: TOC	TCLP Date.....: 004003	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

408 538

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: EB-072297

GC Volatiles

Lot-Sample #...: B7G230127-010 Work Order #...: CAV6D10W Matrix.....: WQ
Date Sampled...: 07/22/97 Date Received..: 07/23/97
Prep Date.....: 07/28/97 Analysis Date..: 07/28/97
Prep Batch #...: 7216198 Analysis Time..: 15:18
Dilution Factor: 1
Analyst ID.....: 013512 Instrument ID..: K1A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Ethane	ND	0.50	ug/L	EPA-9 RSK-175
Ethene	ND	0.50	ug/L	EPA-9 RSK-175
Methane	0.62	0.50	ug/L	EPA-9 RSK-175

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

408 530

Quanterra Environmental Services

Quanterra Environmental Services

TAMPA LABORATORY
CONDITION UPON RECEIPT - SAMPLE pH

Date: 7/23/97 **Initials:** AC

Lot # (if not noted on page 1): _____

SAMPLE ID	METALS	DISS METALS	TRPH	AMMONIA	COD	CYANIDE	TOX	HARDNESS	TKN/NITROGEN	O&G	PHENOLS	NO2/NO3	H* ERB/PEST/PCB	SULFIDE	PHOSPHORUS	
Container	(P,G)	(P,G)	(G)	(P,G)	(P,G)	(P,G)	(G)	(P,G)	(P,G)	(G)	(G)	(P,G)	(G)	(P,G)	(P,G)	
Preservative	HNO_3	HNO_3	HCl	H_2SO_4	H_2SO_4	NaOH	H_2SO_4	H_2SO_4/HNO_3	H_2SO_4	H_2SO_4/HCl	H_2SO_4	H_2SO_4	None	Zn Acetate NaOH	H_2SO_4	
Required pH	< 2	< 2	< 2	< 2	< 2	> 12	< 2	< 2	< 2	< 2	< 2	< 2	5 to 9	> 9	< 2	
-002	12															
-003	1															
-004	1															
-005	1															
-006	1															
-010	✓															

*Only 1 unpreserved bottle per sample is checked for pH.
NOTE: TOC and VOA pH checks are performed by the analyst, not sample receiveing

D:\CHCKLIST\SAMP_REC\CURRFILE.DOC

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: EB-072297

GC/MS Volatiles

Lot-Sample #...: B7G230127-010 Work Order #...: CAV6D11U Matrix.....: WQ
Date Sampled...: 07/22/97 Date Received..: 07/23/97
Prep Date.....: 07/24/97 Analysis Date..: 07/24/97
Prep Batch #...: 7211184 Analysis Time..: 12:58
Dilution Factor: 1
Analyst ID.....: 007084 Instrument ID..: VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	0.80	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	0.40	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	0.40	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.2	ug/L	SW846 8260A
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	3.2	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	0.40	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	1.3	ug/L	SW846 8260A
1,2-Dichloroethane	ND	0.60	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.6	ug/L	SW846 8260A
1,2-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	0.60	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	0.50	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	1.2	ug/L	SW846 8260A
1,3-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1-Chlorohexane	ND	0.50	ug/L	SW846 8260A
2,2-Dichloropropane	ND	3.5	ug/L	SW846 8260A
2-Chlorotoluene	ND	0.40	ug/L	SW846 8260A
4-Chlorotoluene	ND	0.60	ug/L	SW846 8260A
Benzene	ND	0.40	ug/L	SW846 8260A
Bromobenzene	ND	0.30	ug/L	SW846 8260A
Bromochloromethane	ND	0.40	ug/L	SW846 8260A
Bromodichloromethane	ND	0.80	ug/L	SW846 8260A
Bromoform	ND	1.2	ug/L	SW846 8260A
Bromomethane	ND	1.1	ug/L	SW846 8260A
Carbon tetrachloride	ND	2.1	ug/L	SW846 8260A
Chlorobenzene	ND	0.40	ug/L	SW846 8260A
Chloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	**2.1**	**0.30**	**ug/L**	**SW846 8260A**
Chloromethane	ND	1.3	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	1.2	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A

(Continued on next page)

Chain of Custody Record

Quanterra

QUA-4124

Client	Project Manager	Date	Chain Of Custody Number
Hydro GeoLogic		22Jul97	01344
Address	Telephone Number (Area Code)/Fax Number	Lab Number	Page 2 of 3
City / State / Zip Code	Site Contact		
Project Name	Carrier/Waybill Number		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	BTEX	Methane	TOC	Alkalinity	Anions
ST14-28	22Jul97	1500	Groundwater	120ml	40ml	3	HCl		X				
				120ml	40ml	3	H_2SO_4			X			
				80ml	40ml	2	H_2SO_4				X		
				1L	poly	1	4°C					X	
				1L	poly	1	4°C						X
SD13-01WG01		1700		120ml	40ml	3	HCl		X				
				120ml	40ml	3	H_2SO_4			X			
				80ml	40ml	2	H_2SO_4				X		
				500ml	poly	1	4°C					X	
				500ml	poly	1	4°C						X
MW-5WG01		1810		120ml	40ml	3	HCl		X				
				80ml	40ml	2	H_2SO_4			X			
				80ml	40ml	2	H_2SO_4				X		
												X	
													X

Special Instructions

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Turn Around Time Required: ☐ Normal ☐ Rush

QC Level: ☐ I. ☐ II. ☐ III.

Project Specific (Specify)

	Date	Time		Date	Time
1. Relinquished By			1. Received By [signature]	7/23/97	0915
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

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408 542

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: EB-072297

TOTAL Metals

Lot-Sample #...: B7G230127-010 Matrix.....: WQ
Date Sampled...: 07/22/97 Date Received..: 07/23/97

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7205191						
Mercury	ND	0.0010	mg/L	SW846 7470A	07/24/97	CAV6D104
		Dilution Factor: 1				
		Analysis Time..: 21:35		Analyst ID.....: 001702	Instrument ID..: CV	
Prep Batch #...: 7205193						
Silver	ND	0.00020	mg/L	SW846 7761	07/24-08/11/97	CAV6D112
		Dilution Factor: 1				
		Analysis Time..: 10:54		Analyst ID.....: 001863	Instrument ID..: F1	
Antimony	ND	0.0050	mg/L	SW846 6010A	07/24-07/31/97	CAV6D10Q
		Dilution Factor: 1				
		Analysis Time..: 21:30		Analyst ID.....: 001702	Instrument ID..: P2	
Arsenic	ND	0.0050	mg/L	SW846 6010A	07/24-07/25/97	CAV6D1
		Dilution Factor: 1				
		Analysis Time..: 14:35		Analyst ID.....: 001863	Instrument ID..: P2	
Lead	ND	0.0050	mg/L	SW846 6010A	07/24-07/25/97	CAV6D10T
		Dilution Factor: 1				
		Analysis Time..: 14:35		Analyst ID.....: 001863	Instrument ID..: P2	
Selenium	ND	0.0050	mg/L	SW846 6010A	07/24-07/25/97	CAV6D10U
		Dilution Factor: 1				
		Analysis Time..: 14:35		Analyst ID.....: 001863	Instrument ID..: P2	
Thallium	ND	0.0020	mg/L	SW846 7841	07/24/97	CAV6D10V
		Dilution Factor: 1				
		Analysis Time..: 19:00		Analyst ID.....: 001702	Instrument ID..: F1	
Aluminum	ND	0.50	mg/L	SW846 6010A	07/24-07/25/97	CAV6D106
		Dilution Factor: 1				
		Analysis Time..: 14:35		Analyst ID.....: 001863	Instrument ID..: P2	
Barium	ND	0.020	mg/L	SW846 6010A	07/24-07/25/97	CAV6D107
		Dilution Factor: 1				
		Analysis Time..: 14:35		Analyst ID.....: 001863	Instrument ID..: P2	
Beryllium	ND	0.0030	mg/L	SW846 6010A	07/24-07/25/97	CAV6D108
		Dilution Factor: 1				
		Analysis Time..: 14:35		Analyst ID.....: 001863	Instrument ID..: P2	
Calcium	0.43 F	1.0	mg/L	SW846 6010A	07/24-07/25/97	CAV6D109
		Dilution Factor: 1				
		Analysis Time..: 14:35		Analyst ID.....: 001863	Instrument ID..: P2	

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: KB-072297

TOTAL Metals

Lot-Sample #...: B7G230127-010 Matrix.....: WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Cadmium	ND	0.040	mg/L	SW846 6010A	07/24-07/25/97	CAV6D10A
		Dilution Factor: 1				
		Analysis Time..: 14:35	Analyst ID.....: 001863	Instrument ID..: P2		
Cobalt	ND	0.070	mg/L	SW846 6010A	07/24-07/25/97	CAV6D10C
		Dilution Factor: 1				
		Analysis Time..: 14:35	Analyst ID.....: 001863	Instrument ID..: P2		
Chromium	ND	0.070	mg/L	SW846 6010A	07/24-07/25/97	CAV6D10D
		Dilution Factor: 1				
		Analysis Time..: 14:35	Analyst ID.....: 001863	Instrument ID..: P2		
Copper	0.0042 F	0.060	mg/L	SW846 6010A	07/24-07/25/97	CAV6D10E
		Dilution Factor: 1				
		Analysis Time..: 14:35	Analyst ID.....: 001863	Instrument ID..: P2		
Iron	ND	0.070	mg/L	SW846 6010A	07/24-07/25/97	CAV6D10F
		Dilution Factor: 1				
		Analysis Time..: 14:35	Analyst ID.....: 001863	Instrument ID..: P2		
Potassium	ND	5.0	mg/L	SW846 6010A	07/24-07/25/97	CAV6D10G
		Dilution Factor: 1				
		Analysis Time..: 12:16	Analyst ID.....: 001863	Instrument ID..: P1		
Magnesium	ND	1.0	mg/L	SW846 6010A	07/24-07/25/97	CAV6D10H
		Dilution Factor: 1				
		Analysis Time..: 14:35	Analyst ID.....: 001863	Instrument ID..: P2		
Manganese	ND	0.020	mg/L	SW846 6010A	07/24-07/25/97	CAV6D10J
		Dilution Factor: 1				
		Analysis Time..: 14:35	Analyst ID.....: 001863	Instrument ID..: P2		
Molybdenum	ND	0.080	mg/L	SW846 6010A	07/24-07/25/97	CAV6D10K
		Dilution Factor: 1				
		Analysis Time..: 14:35	Analyst ID.....: 001863	Instrument ID..: P2		
Sodium	ND	1.0	mg/L	SW846 6010A	07/24-07/25/97	CAV6D10L
		Dilution Factor: 1				
		Analysis Time..: 12:16	Analyst ID.....: 001863	Instrument ID..: P1		
Nickel	ND	0.15	mg/L	SW846 6010A	07/24-07/25/97	CAV6D10M
		Dilution Factor: 1				
		Analysis Time..: 14:35	Analyst ID.....: 001863	Instrument ID..: P2		

(Continued on next page)

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: EB-072297

TOTAL Metals

Lot-Sample #...: B7G230127-010 Matrix.....: WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Vanadium	ND	0.080	mg/L	SW846 6010A	07/24-07/25/97	CAV6D10N
		Dilution Factor: 1				
		Analysis Time..: 14:35		Analyst ID.....: 001863	Instrument ID..: P2	
Zinc	0.024	0.020	mg/L	SW846 6010A	07/24-07/31/97	CAV6D10P
		Dilution Factor: 1				
		Analysis Time..: 21:30		Analyst ID.....: 001702	Instrument ID..: P2	

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: RB-072297

General Chemistry

Lot-Sample #...: B7G230127-010 Work Order #...: CAV6D Matrix.....: WQ
Date Sampled...: 07/22/97 Date Received..: 07/23/97

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH 4.5	6.0 F	10	mg/L	MCAWW 310.1	07/28/97	7210207
	Dilution Factor: 1					
	Analysis Time..: 00:00	Analyst ID.....: 090000		Instrument ID..: ISE		
Bromide	ND	0.20	mg/L	SW846 9056	08/05/97	7219170
	Dilution Factor: 1					
	Analysis Time..: 16:12	Analyst ID.....: 004003		Instrument ID..: IC		
Chloride	0.12 F	0.20	mg/L	SW846 9056	08/05/97	7219172
	Dilution Factor: 1					
	Analysis Time..: 16:12	Analyst ID.....: 004003		Instrument ID..: IC		
Sulfate	0.40 F	0.50	mg/L	SW846 9056	08/05/97	7219173
	Dilution Factor: 1					
	Analysis Time..: 16:12	Analyst ID.....: 004003		Instrument ID..: IC		
Total Organic Carbon	0.3 F	1	mg/L	SW846 9060	08/03-08/04/97	7217130
	Dilution Factor: 1					
	Analysis Time..: 13:23	Analyst ID.....: 004003		Instrument ID..: TOC		

NOTE(S):

RL Reporting Limit

F The analyte was identified but the value was below the RL and above the MDL.

ND = The analyte was analyzed for but not detected at or above the MDL.

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: TB072297

GC Volatiles

Lot-Sample #...: B7G230127-011 Work Order #...: CAV6E103 Matrix.....: WQ
Date Sampled...: 07/22/97 Date Received..: 07/23/97
Prep Date.....: 07/28/97 Analysis Date..: 07/28/97
Prep Batch #...: 7216198 Analysis Time..: 15:46
Dilution Factor: 1
Analyst ID.....: 013512 Instrument ID..: K1A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Ethane	ND	0.50	ug/L	EPA-9 RSK-175
Ethene	ND	0.50	ug/L	EPA-9 RSK-175
Methane	1.2	0.50	ug/L	EPA-9 RSK-175

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: TB072297

GC Volatiles

Lot-Sample #...: B7G230127-011 Work Order #...: CAV6E101 Matrix.....: WQ
Date Sampled...: 07/22/97 Date Received..: 07/23/97
Prep Date.....: 07/29/97 Analysis Date..: 07/29/97
Prep Batch #...: 7212147 Analysis Time..: 22:58
Dilution Factor: 1
Analyst ID.....: 001854 Instrument ID..: V2A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	2.0	ug/L	SW846 8020A
Ethylbenzene	ND	2.0	ug/L	SW846 8020A
Toluene	**0.18 F**	**2.0**	**ug/L**	**SW846 8020A**
Xylenes (total)	ND	2.0	ug/L	SW846 8020A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	86	(46 - 136)
Bromofluorobenzene	86	(48 - 138)
Fluorobenzene	96	(44 - 165)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: TB072297

GC/MS Volatiles

Lot-Sample #...: B7G230127-011 Work Order #...: CAV6E102 Matrix.....: WQ
Date Sampled...: 07/22/97 Date Received..: 07/23/97
Prep Date.....: 07/24/97 Analysis Date..: 07/24/97
Prep Batch #...: 7211184 Analysis Time..: 13:23
Dilution Factor: 1
Analyst ID.....: 007084 Instrument ID..: VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	0.80	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	0.40	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	0.40	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.2	ug/L	SW846 8260A
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	3.2	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	0.40	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	1.3	ug/L	SW846 8260A
1,2-Dichloroethane	ND	0.60	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.6	ug/L	SW846 8260A
1,2-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	0.60	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	0.50	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	1.2	ug/L	SW846 8260A
1,3-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1-Chlorohexane	ND	0.50	ug/L	SW846 8260A
2,2-Dichloropropane	ND	3.5	ug/L	SW846 8260A
2-Chlorotoluene	ND	0.40	ug/L	SW846 8260A
4-Chlorotoluene	ND	0.60	ug/L	SW846 8260A
Benzene	ND	0.40	ug/L	SW846 8260A
Bromobenzene	ND	0.30	ug/L	SW846 8260A
Bromochloromethane	ND	0.40	ug/L	SW846 8260A
Bromodichloromethane	ND	0.80	ug/L	SW846 8260A
Bromoform	ND	1.2	ug/L	SW846 8260A
Bromomethane	ND	1.1	ug/L	SW846 8260A
Carbon tetrachloride	ND	2.1	ug/L	SW846 8260A
Chlorobenzene	ND	0.40	ug/L	SW846 8260A
Chloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	0.30	ug/L	SW846 8260A
Chloromethane	ND	1.3	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	1.2	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: TB072297

GC/MS Volatiles

Lot-Sample #...: B7G230127-011 Work Order #...: CAV6E102 Matrix.....: WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	0.50	ug/L	SW846 8260A
Dibromomethane	ND	2.4	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	ND	0.60	ug/L	SW846 8260A
Hexachlorobutadiene	ND	1.1	ug/L	SW846 8260A
Isopropylbenzene	ND	0.50	ug/L	SW846 8260A
m-Xylene & p-Xylene	ND	0.50	ug/L	SW846 8260A
Methylene chloride	ND	0.30	ug/L	SW846 8260A
n-Butylbenzene	ND	1.1	ug/L	SW846 8260A
n-Propylbenzene	ND	0.40	ug/L	SW846 8260A
Naphthalene	ND	0.40	ug/L	SW846 8260A
o-Xylene	ND	1.1	ug/L	SW846 8260A
p-Isopropyltoluene	ND	1.2	ug/L	SW846 8260A
sec-Butylbenzene	ND	1.3	ug/L	SW846 8260A
Styrene	ND	0.40	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
tert-Butylbenzene	ND	1.4	ug/L	SW846 8260A
Tetrachloroethene	ND	1.4	ug/L	SW846 8260A
Toluene	ND	1.1	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	0.60	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichlorofluoromethane	ND	0.80	ug/L	SW846 8260A
Vinyl chloride	ND	1.1	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	102	(75 - 125)
4-Bromofluorobenzene	97	(75 - 125)
1,2-Dichloroethane-d4	103	(62 - 139)
Dibromofluoromethane	98	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

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Quanterra
Environmental Services

Quality Control Summary

Quanterra QC Program Summary

Method Blanks

Laboratory Control Samples

Matrix Spike/Matrix Spike Duplicates

Chain-of-Custody

Quanterra Environmental Services

Quanterra Quality Control Program Summary

Quanterra Environmental Services considers continuous analytical method performance evaluations to be an integral portion of the data package, and routinely includes the pertinent QA/QC data associated with analytical results. Brief discussions of the various QA/QC procedures utilized to measure acceptable method and matrix performance follow. Further documentation of specific policies and procedures in use are available, upon request, from the Quanterra Quality Control Department.

The program described below provides Quanterra's interpretation of QC requirements described in SW-846, 3rd edition -Final Update II. Additional interpretations specific to other aspects of methods performed, such as instrument calibration and bench procedures, are described in program-specific documents (e.g. US Corps of Engineers, AFCEE, etc.) and associated method standard operating procedures. Where explicit program requirements or project requirements exist, certain elements of the Quanterra QC Program may be superseded by these requirements.

Elements of the Quanterra QC Program

Where other clear regulatory guidance, contract specifications, or client requirements are not available, the Quanterra QC Program provides guidance for Batch QC requirements. The Quality Control Batch is a set of up to 20 field samples of similar matrix, which are processed together under the same conditions, within the same time frame. Included in each Quality Control Batch is a Method Blank, Laboratory Control Sample, and Matrix Spike Duplicate. For methods that require independent sample preparation prior to analysis, the QC Batch is defined at the preparation stage. For methods that do not require independent sample preparation, the QC Batch is defined at the instrument. The QC Batch Number is provided on each result page in association with the parameter(s) presented, and may be used to cross-reference sample results with the associated QC data.

Method Blank Evaluations

Laboratory analytical method blanks are systematically prepared and analyzed in order to continuously evaluate the system interference and background contamination levels associated with each applicable analytical method. Method blanks include all aspects of actual laboratory procedures involving sample preparation and analysis, substituting analyte-free water or solid for the actual sample. Under normal circumstances, the Method Blank should not exhibit analytes of interest above the reported detection limit. Due to the presence of some analytes in a typical laboratory setting, the following common laboratory contaminants are exceptions to this rule, provided they are not present in the method blank at greater than five times the reporting limit.

Volatiles	Semi-Volatiles	Metals
Methylene chloride	Dimethyl phthalate	Calcium
Toluene	Diethyl phthalate	Magnesium
2-Butanone	Di-n-butyl-phthalate	Sodium
Acetone	Butyl benzyl phthalate	
	Bis (2-ethylhexyl) phthalate	

A method blank is performed with each analytical batch. A minimum of 5% of all laboratory analyses are method blanks.

Laboratory Control Sample (LCS) Evaluations

Known concentrations of designated matrix spike (target analyte) compounds are added to a method blank prior to extraction and analysis. Percent recovery determinations of individual target analytes in the LCS demonstrate the laboratory's method performance for the QC Batch relative to these target analytes (or other individual components represented by a subset of control analytes). Percent recovery data is displayed alongside acceptance criteria, that is typically derived from laboratory historical data. Failure of a Laboratory Control Sample to meet established recovery criteria for control analytes is cause for corrective actions to occur, which typically includes re-extraction and re-analysis of all samples associated with the QC Batch. An LCS is performed with each analytical batch. A minimum of 5% of all laboratory analyses are laboratory control samples.

Quanterra Environmental Services

Quanterra Quality Control Program Summary (continued)

Surrogate Spike Recovery Evaluations

For GC and GC/MS analyses, known concentrations of designated surrogate spikes, consisting of a number of similar, non-method compounds or method compound analogues, are added to sample fractions prior to sample extraction and analysis. The percent recovery determinations calculated from the subsequent analysis is one indication of the overall method efficiency for the individual sample. The surrogate spike recovery data is displayed alongside acceptance limits at the bottom of each applicable analytical result report page. Where sufficient laboratory-generated data does not yet exist to determine appropriate control limits, advisory limits may be enacted until sufficient data is collected to allow implementation of control limits.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Evaluations

In conjunction with the analysis of a client-provided field sample, a known concentration of designated matrix spike compounds (target analytes) are added to two aliquots of the actual sample. Percent recovery determinations are calculated from both spiked aliquots, using target analyte concentrations already present in the actual sample as a baseline. The percent recovery determinations indicate the accuracy of the method specific to the target analytes (or other individual components represented by a subset of control analytes) in the individual sample matrix. Comparison of the percent recoveries in the two spiked aliquots yields a relative percent difference (RPD). Percent recovery and relative percent difference data is displayed alongside historical criteria, that may be used to judge individual sample matrix effects for specific analytes. MS/MSD data is evaluated by the laboratory with respect to the individual sample matrix. In cases where MS/MSD data indicate sample method performance outside of historical criteria, the laboratory control sample results are referenced to ensure acceptable method performance by the laboratory for the sample batch. For analyses which are inappropriately suited for matrix spikes (e.g. pH), non-spiked duplicate analyses are performed to generate precision data. Matrix spike duplicates are typically performed on at least one sample within each analytical batch. A minimum of 10% of all laboratory analyses are matrix spikes or duplicates.

Corrective Action Evaluations

The goal of the Quanterra Quality Control Program is to generate data that demonstrates process control, and allows for client usability of data. Where the analytical process is demonstrated to vary from established criteria, or client requirements have not been met, data evaluation resulting in corrective action may be required. Corrective action may include re-preparation and/or reanalysis of field samples and QC samples. Where appropriate or necessary to allow proper interpretation of results presented in the final report, details of corrective actions taken during the laboratory processing of samples are presented as a case narrative at the front of the report. Alternatively, routine corrective action, such as reanalysis, may be footnoted on individual sample result pages.

Analytical Result Qualifier Flags

Where applicable , data qualifiers may be appended to analytical results in order to allow for proper interpretation of the result presented. Typically, the presence of data qualifier flag on an analytical result page is accompanied by a footnote explaining the qualifier.

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Quanterra Environmental Services

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: B7G230127
MB Lot-Sample #: I7H040000-198

Work Order #...: CC3GC101

Matrix.....: WATER

Prep Date.....: 07/28/97

Analysis Time..: 09:42

Analysis Date..: 07/28/97

Prep Batch #...: 7216198

Instrument ID..: K1A

Dilution Factor: 1

Analyst ID.....: 013512

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Methane	0.11 F	0.50	ug/L	EPA-9 RSK-175
Ethane	ND	0.50	ug/L	EPA-9 RSK-175
Ethene	ND	0.50	ug/L	EPA-9 RSK-175

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

F The analyte was identified but the value was below the RL and above the MDL.

ND = The analyte was analyzed for but not detected at or above the MDL.

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Quanterra
Environmental Services

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: B7G230127
MB Lot-Sample #: I7H040000-236
Analysis Date..: 08/01/97
Dilution Factor: 1

Work Order #...: CC3NG101
Prep Date.....: 08/01/97
Prep Batch #...: 7216236
Analyst ID.....: 013512

Matrix.....: WATER
Analysis Time..: 11:06
Instrument ID..: K1A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Methane	ND	0.50	ug/L	EPA-9 RSK-175
Ethane	ND	0.50	ug/L	EPA-9 RSK-175
Ethene	ND	0.50	ug/L	EPA-9 RSK-175

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

ND = The analyte was analyzed for but not detected at or above the MDL.

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Quanterra Environmental Services

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: B7G230127
MB Lot-Sample #: B7G310000-147

Work Order #...: CC1AM101

Matrix.....: WATER

Prep Date.....: 07/29/97
Prep Batch #...: 7212147

Analysis Time..: 15:48
Instrument ID..: V2A

Analysis Date..: 07/29/97
Dilution Factor: 1

Analyst ID.....: 001854

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	2.0	ug/L	SW846 8020A
Ethylbenzene	ND	2.0	ug/L	SW846 8020A
Toluene	ND	2.0	ug/L	SW846 8020A
Xylenes (total)	ND	2.0	ug/L	SW846 8020A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	103	(46 - 136)
Bromofluorobenzene	87	(48 - 138)
Fluorobenzene	93	(44 - 165)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra
Environmental Services

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: B7G230127
MB Lot-Sample #: B7G300000-184
Work Order #...: CC0QX101
Matrix.....: WATER
Prep Date.....: 07/24/97
Analysis Time..: 10:18
Analysis Date..: 07/24/97
Prep Batch #...: 7211184
Instrument ID..: VO4
Dilution Factor: 1
Analyst ID.....: 007084

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	0.80	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	0.40	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	0.40	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.2	ug/L	SW846 8260A
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	3.2	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	0.40	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	1.3	ug/L	SW846 8260A
1,2-Dichloroethane	ND	0.60	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.6	ug/L	SW846 8260A
1,2-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	0.60	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	0.50	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	1.2	ug/L	SW846 8260A
1,3-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1-Chlorohexane	ND	0.50	ug/L	SW846 8260A
2,2-Dichloropropane	ND	3.5	ug/L	SW846 8260A
2-Chlorotoluene	ND	0.40	ug/L	SW846 8260A
4-Chlorotoluene	ND	0.60	ug/L	SW846 8260A
Benzene	ND	0.40	ug/L	SW846 8260A
Bromobenzene	ND	0.30	ug/L	SW846 8260A
Bromochloromethane	ND	0.40	ug/L	SW846 8260A
Bromodichloromethane	ND	0.80	ug/L	SW846 8260A
Bromoform	ND	1.2	ug/L	SW846 8260A
Bromomethane	ND	1.1	ug/L	SW846 8260A
Carbon tetrachloride	ND	2.1	ug/L	SW846 8260A
Chlorobenzene	ND	0.40	ug/L	SW846 8260A
Chloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	0.30	ug/L	SW846 8260A
Chloromethane	ND	1.3	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	1.2	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Dibromochloromethane	ND	0.50	ug/L	SW846 8260A
Dibromomethane	ND	2.4	ug/L	SW846 8260A

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Quanterra Environmental Services

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: B7G230127 **Work Order #...:** CC0QX101 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	ND	0.60	ug/L	SW846 8260A
Hexachlorobutadiene	ND	1.1	ug/L	SW846 8260A
Isopropylbenzene	ND	0.50	ug/L	SW846 8260A
m-Xylene & p-Xylene	ND	0.50	ug/L	SW846 8260A
Methylene chloride	ND	0.30	ug/L	SW846 8260A
n-Butylbenzene	ND	1.1	ug/L	SW846 8260A
n-Propylbenzene	ND	0.40	ug/L	SW846 8260A
Naphthalene	ND	0.40	ug/L	SW846 8260A
o-Xylene	ND	1.1	ug/L	SW846 8260A
p-Isopropyltoluene	ND	1.2	ug/L	SW846 8260A
sec-Butylbenzene	ND	1.3	ug/L	SW846 8260A
Styrene	ND	0.40	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
tert-Butylbenzene	ND	1.4	ug/L	SW846 8260A
Tetrachloroethene	ND	1.4	ug/L	SW846 8260A
Toluene	ND	1.1	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	0.60	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichlorofluoromethane	ND	0.80	ug/L	SW846 8260A
Vinyl chloride	ND	1.1	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	103	(75 - 125)
4-Bromofluorobenzene	97	(75 - 125)
1,2-Dichloroethane-d4	99	(62 - 139)
Dibromofluoromethane	98	(75 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: B7G230127 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: B7G240000-191 **Prep Batch #...:** 7205191						
Mercury	ND	0.0010	mg/L	SW846 7470A	07/24/97	CAW13101
		Dilution Factor: 1				
		Analysis Time..: 20:51		Analyst ID.....: 001702	Instrument ID..: CV	
MB Lot-Sample #: B7G240000-193 **Prep Batch #...:** 7205193						
Silver	ND	0.00020	mg/L	SW846 7761	07/24-08/11/97	CAW1811J
		Dilution Factor: 1				
		Analysis Time..: 09:26		Analyst ID.....: 001863	Instrument ID..: F1	
Antimony	ND	0.0050	mg/L	SW846 6010A	07/24-07/31/97	CAW1810C
		Dilution Factor: 1				
		Analysis Time..: 19:50		Analyst ID.....: 001702	Instrument ID..: P2	
Arsenic	ND	0.0050	mg/L	SW846 6010A	07/24-07/25/97	CAW1810D
		Dilution Factor: 1				
		Analysis Time..: 12:44		Analyst ID.....: 001863	Instrument ID..: P2	
Lead	ND	0.0050	mg/L	SW846 6010A	07/24-07/25/97	CAW1810E
		Dilution Factor: 1				
		Analysis Time..: 12:44		Analyst ID.....: 001863	Instrument ID..: P2	
Selenium	ND	0.0050	mg/L	SW846 6010A	07/24-07/25/97	CAW1810F
		Dilution Factor: 1				
		Analysis Time..: 12:44		Analyst ID.....: 001863	Instrument ID..: P2	
Thallium	ND	0.0020	mg/L	SW846 7841	07/24/97	CAW1810G
		Dilution Factor: 1				
		Analysis Time..: 17:25		Analyst ID.....: 001702	Instrument ID..: F1	
Aluminum	ND	0.50	mg/L	SW846 6010A	07/24-07/25/97	CAW1810J
		Dilution Factor: 1				
		Analysis Time..: 12:44		Analyst ID.....: 001863	Instrument ID..: P2	
Barium	ND	0.020	mg/L	SW846 6010A	07/24-07/25/97	CAW1810K
		Dilution Factor: 1				
		Analysis Time..: 12:44		Analyst ID.....: 001863	Instrument ID..: P2	
Beryllium	ND	0.0030	mg/L	SW846 6010A	07/24-07/25/97	CAW1810L
		Dilution Factor: 1				
		Analysis Time..: 12:44		Analyst ID.....: 001863	Instrument ID..: P2	

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Quanterra Environmental Services

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: B7G230127 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Calcium	ND	1.0	mg/L	SW846 6010A	07/24-07/25/97	CAW1810M
		Dilution Factor: 1				
		Analysis Time..: 12:44	Analyst ID.....: 001863		Instrument ID..: P2	
Cadmium	ND	0.040	mg/L	SW846 6010A	07/24-07/25/97	CAW1810N
		Dilution Factor: 1				
		Analysis Time..: 12:44	Analyst ID.....: 001863		Instrument ID..: P2	
Cobalt	ND	0.070	mg/L	SW846 6010A	07/24-07/25/97	CAW1810P
		Dilution Factor: 1				
		Analysis Time..: 12:44	Analyst ID.....: 001863		Instrument ID..: P2	
Chromium	ND	0.070	mg/L	SW846 6010A	07/24-07/25/97	CAW1810Q
		Dilution Factor: 1				
		Analysis Time..: 12:44	Analyst ID.....: 001863		Instrument ID..: P2	
Copper	ND	0.060	mg/L	SW846 6010A	07/24-07/25/97	CAW18101
		Dilution Factor: 1				
		Analysis Time..: 12:44	Analyst ID.....: 001863		Instrument ID..: P2	
Iron	ND	0.070	mg/L	SW846 6010A	07/24-07/25/97	CAW18102
		Dilution Factor: 1				
		Analysis Time..: 12:44	Analyst ID.....: 001863		Instrument ID..: P2	
Potassium	ND	5.0	mg/L	SW846 6010A	07/24-07/25/97	CAW18103
		Dilution Factor: 1				
		Analysis Time..: 10:23	Analyst ID.....: 001863		Instrument ID..: P1	
Magnesium	**0.053 F**	**1.0**	**mg/L**	**SW846 6010A**	**07/24-07/25/97**	**CAW18104**
		Dilution Factor: 1				
		Analysis Time..: 12:44	Analyst ID.....: 001863		Instrument ID..: P2	
Manganese	ND	0.020	mg/L	SW846 6010A	07/24-07/25/97	CAW18105
		Dilution Factor: 1				
		Analysis Time..: 12:44	Analyst ID.....: 001863		Instrument ID..: P2	
Molybdenum	ND	0.080	mg/L	SW846 6010A	07/24-07/25/97	CAW18106
		Dilution Factor: 1				
		Analysis Time..: 12:44	Analyst ID.....: 001863		Instrument ID..: P2	
Sodium	ND	1.0	mg/L	SW846 6010A	07/24-07/25/97	CAW18107
		Dilution Factor: 1				
		Analysis Time..: 10:23	Analyst ID.....: 001863		Instrument ID..: P1	
Nickel	ND	0.15	mg/L	SW846 6010A	07/24-07/25/97	CAW18108
		Dilution Factor: 1				
		Analysis Time..: 12:44	Analyst ID.....: 001863		Instrument ID..: P2	

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Quanterra Environmental Services

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: B7G230127 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Vanadium	ND	0.080	mg/L	SW846 6010A	07/24-07/25/97	CAW18109
		Dilution Factor: 1				
		Analysis Time..: 12:44	Analyst ID.....: 001863	Instrument ID..: P2		
Zinc	ND	0.020	mg/L	SW846 6010A	07/24-07/31/97	CAW1810A
		Dilution Factor: 1				
		Analysis Time..: 19:50	Analyst ID.....: 001702	Instrument ID..: P2		

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

METHOD BLANK REPORT

General Chemistry

Client Lot #...: B7G230127 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH		Work Order #: CAXXV101		MB Lot-Sample #:	B7G290000-207	
	ND	10	mg/L	MCAWW 310.1	07/28/97	7210207
		Dilution Factor: 1				
		Analysis Time..: 00:00	Analyst ID.....: 090000	Instrument ID..: ISE		
Bromide		Work Order #: CC4XG101		MB Lot-Sample #:	B7H070000-170	
	ND	0.20	mg/L	SW846 9056	08/05-08/06/97	7219170
		Dilution Factor: 1				
		Analysis Time..: 13:29	Analyst ID.....: 004003	Instrument ID..: IC		
Chloride		Work Order #: CC4XP101		MB Lot-Sample #:	B7H070000-172	
	0.12 F	**0.20**	**mg/L**	**SW846 9056**	**08/05-08/06/97**	**7219172**
		Dilution Factor: 1				
		Analysis Time..: 13:29	Analyst ID.....: 004003	Instrument ID..: IC		
Sulfate		Work Order #: CC4XR101		MB Lot-Sample #:	B7H070000-173	
	0.39 F	**0.50**	**mg/L**	**SW846 9056**	**08/05-08/06/97**	**7219173**
		Dilution Factor: 1				
		Analysis Time..: 13:29	Analyst ID.....: 004003	Instrument ID..: IC		
Total Organic Carbon		Work Order #: CC3Q8101		MB Lot-Sample #:	B7H050000-130	
	ND	1	mg/L	SW846 9060	08/03/97	7217130
		Dilution Factor: 1				
		Analysis Time..: 15:50	Analyst ID.....: 004003	Instrument ID..: TOC		
Total Organic Carbon		Work Order #: CC481101		MB Lot-Sample #:	B7H060000-126	
	ND	1.0	mg/L	SW846 9060	08/05/97	7218126
		Dilution Factor: 1				
		Analysis Time..: 14:35	Analyst ID.....: 004003	Instrument ID..: TOC		

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra
Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: B7G230127 **Work Order #...:** CC3GC102-LCS **Matrix.....:** WATER
LCS Lot-Sample#: I7H040000-198 CC3GC103-LCSD
Prep Date.....: 07/28/97 **Analysis Date..:** 07/28/97
Prep Batch #...: 7216198 **Analysis Time..:** 09:47
Dilution Factor: 1 **Instrument ID..:** K1A
Analyst ID.....: 013512

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Methane	35	25	ug/L	72		EPA-9 RSK-175
	34	25	ug/L	75	3.2	EPA-9 RSK-175
Ethane	64	48	ug/L	75		EPA-9 RSK-175
	63	49	ug/L	77	2.4	EPA-9 RSK-175
Ethene	60	45	ug/L	75		EPA-9 RSK-175
	60	45	ug/L	76	1.4	EPA-9 RSK-175

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: B7G230127 **Work Order #...:** CC3GC102-LCS **Matrix.....:** WATER
LCS Lot-Sample#: I7H040000-198 CC3GC103-LCSD
Prep Date.....: 07/28/97 **Analysis Date..:** 07/28/97
Prep Batch #...: 7216198 **Analysis Time..:** 09:47
Dilution Factor: 1 **Instrument ID..:** K1A
Analyst ID.....: 013512

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Methane	72	(70 - 130)			EPA-9 RSK-175
	75	(70 - 130)	3.2	(0-30)	EPA-9 RSK-175
Ethane	75	(70 - 130)			EPA-9 RSK-175
	77	(70 - 130)	2.4	(0-30)	EPA-9 RSK-175
Ethene	75	(70 - 130)			EPA-9 RSK-175
	76	(70 - 130)	1.4	(0-30)	EPA-9 RSK-175

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra
Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: B7G230127 **Work Order #...:** CC3NG102-LCS **Matrix.....:** WATER
LCS Lot-Sample#: I7H040000-236 CC3NG103-LCSD
Prep Date.....: 08/01/97 **Analysis Date..:** 08/01/97
Prep Batch #...: 7216236 **Analysis Time..:** 11:10
Dilution Factor: 1 **Instrument ID..:** K1A
Analyst ID.....: 013512

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Methane	34	30	ug/L	89		EPA-9 RSK-175
	34	32	ug/L	93	3.6	EPA-9 RSK-175
Ethane	63	56	ug/L	90		EPA-9 RSK-175
	63	59	ug/L	93	4.0	EPA-9 RSK-175
Ethene	59	51	ug/L	87		EPA-9 RSK-175
	59	54	ug/L	91	4.8	EPA-9 RSK-175

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: B7G230127 **Work Order #...:** CC3NG102-LCS **Matrix.....:** WATER
LCS Lot-Sample#: I7H040000-236 CC3NG103-LCSD
Prep Date.....: 08/01/97 **Analysis Date..:** 08/01/97
Prep Batch #...: 7216236 **Analysis Time..:** 11:10
Dilution Factor: 1 **Instrument ID..:** K1A
Analyst ID.....: 013512

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Methane	89	(70 - 130)			EPA-9 RSK-175
	93	(70 - 130)	3.6	(0-30)	EPA-9 RSK-175
Ethane	90	(70 - 130)			EPA-9 RSK-175
	93	(70 - 130)	4.0	(0-30)	EPA-9 RSK-175
Ethene	87	(70 - 130)			EPA-9 RSK-175
	91	(70 - 130)	4.8	(0-30)	EPA-9 RSK-175

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra
Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: B7G230127 **Work Order #...:** CC1AM102 **Matrix.....:** WATER
LCS Lot-Sample#: B7G310000-147
Prep Date.....: 07/29/97 **Analysis Date..:** 07/29/97
Prep Batch #...: 7212147 **Analysis Time..:** 16:13
Dilution Factor: 1 **Instrument ID..:** V2A
Analyst ID.....: 001854

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Benzene	**20**	**18**	**ug/L**	**90**	**SW846 8020A**
Ethylbenzene	**20**	**18**	**ug/L**	**92**	**SW846 8020A**
Toluene	**20**	**19**	**ug/L**	**93**	**SW846 8020A**
Xylenes (total)	**60**	**56**	**ug/L**	**94**	**SW846 8020A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	89	(46 - 136)
Bromofluorobenzene	87	(48 - 138)
Fluorobenzene	96	(44 - 165)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: B7G230127 **Work Order #...:** CC1AM102 **Matrix.....:** WATER
LCS Lot-Sample#: B7G310000-147
Prep Date.....: 07/29/97 **Analysis Date..:** 07/29/97
Prep Batch #...: 7212147 **Analysis Time..:** 16:13
Dilution Factor: 1 **Instrument ID..:** V2A
Analyst ID.....: 001854

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Benzene	**90**	**(75 - 125)**	**SW846 8020A**
Ethylbenzene	**92**	**(71 - 129)**	**SW846 8020A**
Toluene	**93**	**(70 - 125)**	**SW846 8020A**
Xylenes (total)	**94**	**(71 - 133)**	**SW846 8020A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	89	(46 - 136)
Bromofluorobenzene	87	(48 - 138)
Fluorobenzene	96	(44 - 165)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: B7G230127 Work Order #...: CC0QX102 Matrix.....: WATER
LCS Lot-Sample#: B7G300000-184
Prep Date.....: 07/24/97 Analysis Date..: 07/24/97
Prep Batch #...: 7211184 Analysis Time..: 09:53
Dilution Factor: 1 Instrument ID..: VO4
Analyst ID.....: 007084

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
1,1,1,2-Tetrachloroethane	5.0	4.1	ug/L	82	SW846 8260A
1,1,1-Trichloroethane	5.0	4.3	ug/L	86	SW846 8260A
1,1,2,2-Tetrachloroethane	5.0	4.1	ug/L	82	SW846 8260A
1,1,2-Trichloroethane	5.0	4.2	ug/L	84	SW846 8260A
1,1-Dichloroethane	5.0	4.4	ug/L	89	SW846 8260A
1,1-Dichloroethene	5.0	3.8	ug/L	76	SW846 8260A
1,1-Dichloropropene	5.0	4.7	ug/L	93	SW846 8260A
1,2,3-Trichlorobenzene	5.0	4.5	ug/L	89	SW846 8260A
1,2,3-Trichloropropane	5.0	4.0	ug/L	81	SW846 8260A
1,2,4-Trichlorobenzene	5.0	4.6	ug/L	92	SW846 8260A
1,2,4-Trimethylbenzene	5.0	4.9	ug/L	98	SW846 8260A
1,2-Dichloroethane	5.0	4.4	ug/L	88	SW846 8260
1,2-Dichlorobenzene	5.0	4.6	ug/L	92	SW846 826
1,2-Dibromo-3-chloropropane (DBCP)	5.0	4.2	ug/L	84	SW846 8260A
1,2-Dichloropropane	5.0	4.3	ug/L	85	SW846 8260A
1,2-Dibromoethane (EDB)	5.0	4.2	ug/L	83	SW846 8260A
1,3,5-Trimethylbenzene	5.0	4.8	ug/L	97	SW846 8260A
1,3-Dichlorobenzene	5.0	4.6	ug/L	91	SW846 8260A
1,3-Dichloropropane	5.0	4.1	ug/L	83	SW846 8260A
1,4-Dichlorobenzene	5.0	4.5	ug/L	90	SW846 8260A
1-Chlorohexane	5.0	4.8	ug/L	95	SW846 8260A
2,2-Dichloropropane	5.0	4.6	ug/L	91	SW846 8260A
2-Chlorotoluene	5.0	4.6	ug/L	92	SW846 8260A
4-Chlorotoluene	5.0	4.7	ug/L	95	SW846 8260A
Benzene	5.0	4.6	ug/L	92	SW846 8260A
Bromobenzene	5.0	4.6	ug/L	92	SW846 8260A
Bromochloromethane	5.0	4.5	ug/L	90	SW846 8260A
Bromodichloromethane	5.0	4.2	ug/L	83	SW846 8260A
Bromoform	5.0	4.1	ug/L	83	SW846 8260A
Bromomethane	5.0	4.1	ug/L	82	SW846 8260A
Carbon tetrachloride	5.0	4.2	ug/L	85	SW846 8260A
Chlorobenzene	5.0	4.4	ug/L	87	SW846 8260A
Chloroethane	5.0	4.5	ug/L	89	SW846 8260A

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Quanterra Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: B7G230127 **Work Order #...:** CC0QX102 **Matrix.....:** WATER
LCS Lot-Sample#: B7G300000-184

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Chloroform	5.0	4.3	ug/L	86	SW846 8260A
Chloromethane	5.0	4.2	ug/L	84	SW846 8260A
cis-1,2-Dichloroethene	5.0	4.6	ug/L	92	SW846 8260A
cis-1,3-Dichloropropene	5.0	4.1	ug/L	82	SW846 8260A
Dibromochloromethane	5.0	3.9	ug/L	78	SW846 8260A
Dibromomethane	5.0	4.1	ug/L	83	SW846 8260A
Dichlorodifluoromethane	5.0	4.0	ug/L	80	SW846 8260A
Ethylbenzene	5.0	4.5	ug/L	91	SW846 8260A
Hexachlorobutadiene	5.0	5.2	ug/L	103	SW846 8260A
Isopropylbenzene	5.0	5.4	ug/L	108	SW846 8260A
m-Xylene & p-Xylene	10	9.0	ug/L	90	SW846 8260A
Methylene chloride	5.0	4.2	ug/L	83	SW846 8260A
n-Butylbenzene	5.0	5.0	ug/L	101	SW846 8260A
n-Propylbenzene	5.0	4.9	ug/L	98	SW846 8260A
Naphthalene	5.0	4.0	ug/L	79	SW846 8260A
o-Xylene	5.0	4.6	ug/L	91	SW846 8260A
p-Isopropyltoluene	5.0	5.1	ug/L	101	SW846 8260A
sec-Butylbenzene	5.0	4.9	ug/L	99	SW846 8260A
Styrene	5.0	4.6	ug/L	92	SW846 8260A
Trichloroethene	5.0	4.5	ug/L	90	SW846 8260A
Tetrachloroethene	5.0	4.6	ug/L	91	SW846 8260A
Toluene	5.0	4.6	ug/L	92	SW846 8260A
trans-1,2-Dichloroethene	5.0	4.3	ug/L	86	SW846 8260A
trans-1,3-Dichloropropene	5.0	3.8	ug/L	76	SW846 8260A
Trichlorofluoromethane	5.0	4.4	ug/L	87	SW846 8260A
Vinyl chloride	5.0	4.4	ug/L	87	SW846 8260A
tert-Butylbenzene	5.0	5.0	ug/L	99	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	102	(75 - 125)
4-Bromofluorobenzene	98	(75 - 125)
1,2-Dichloroethane-d4	99	(62 - 139)
Dibromofluoromethane	97	(75 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: B7G230127 Work Order #...: CC0QX102 Matrix.....: WATER
LCS Lot-Sample#: B7G300000-184
Prep Date.....: 07/24/97 Analysis Date..: 07/24/97
Prep Batch #...: 7211184 Analysis Time..: 09:53
Dilution Factor: 1 Instrument ID..: VO4
Analyst ID.....: 007084

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
1,1,1,2-Tetrachloroethane	82	(72 - 125)	SW846 8260A
1,1,1-Trichloroethane	86	(75 - 125)	SW846 8260A
1,1,2,2-Tetrachloroethane	82	(74 - 125)	SW846 8260A
1,1,2-Trichloroethane	84	(75 - 127)	SW846 8260A
1,1-Dichloroethane	89	(72 - 125)	SW846 8260A
1,1-Dichloroethene	76	(75 - 125)	SW846 8260A
1,1-Dichloropropene	93	(75 - 125)	SW846 8260A
1,2,3-Trichlorobenzene	89	(75 - 137)	SW846 8260A
1,2,3-Trichloropropane	81	(75 - 125)	SW846 8260A
1,2,4-Trichlorobenzene	92	(75 - 135)	SW846 8260A
1,2,4-Trimethylbenzene	98	(75 - 125)	SW846 8260A
1,2-Dichloroethane	88	(68 - 127)	SW846 8260A
1,2-Dichlorobenzene	92	(75 - 125)	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	84	(59 - 125)	SW846 8260A
1,2-Dichloropropane	85	(70 - 125)	SW846 8260A
1,2-Dibromoethane (EDB)	83	(75 - 125)	SW846 8260A
1,3,5-Trimethylbenzene	97	(72 - 112)	SW846 8260A
1,3-Dichlorobenzene	91	(75 - 125)	SW846 8260A
1,3-Dichloropropane	83	(75 - 125)	SW846 8260A
1,4-Dichlorobenzene	90	(75 - 125)	SW846 8260A
1-Chlorohexane	95	(75 - 125)	SW846 8260A
2,2-Dichloropropane	91	(50 - 125)	SW846 8260A
2-Chlorotoluene	92	(73 - 125)	SW846 8260A
4-Chlorotoluene	95	(74 - 125)	SW846 8260A
Benzene	92	(75 - 125)	SW846 8260A
Bromobenzene	92	(75 - 125)	SW846 8260A
Bromochloromethane	90	(73 - 125)	SW846 8260A
Bromodichloromethane	83	(75 - 125)	SW846 8260A
Bromoform	83	(75 - 125)	SW846 8260A
Bromomethane	82	(50 - 125)	SW846 8260A
Carbon tetrachloride	85	(62 - 125)	SW846 8260A
Chlorobenzene	87	(75 - 125)	SW846 8260A
Chloroethane	89	(50 - 125)	SW846 8260A

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Quanterra Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: B7G230127 **Work Order #...:** CC0QX102 **Matrix.....:** WATER
LCS Lot-Sample#: B7G300000-184

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Chloroform	**86**	**(74 - 125)**	**SW846 8260A**
Chloromethane	**84**	**(50 - 125)**	**SW846 8260A**
cis-1,2-Dichloroethene	**92**	**(75 - 125)**	**SW846 8260A**
cis-1,3-Dichloropropene	**82**	**(74 - 125)**	**SW846 8260A**
Dibromochloromethane	**78**	**(73 - 125)**	**SW846 8260A**
Dibromomethane	**83**	**(69 - 127)**	**SW846 8260A**
Dichlorodifluoromethane	**80**	**(50 - 150)**	**SW846 8260A**
Ethylbenzene	**91**	**(75 - 125)**	**SW846 8260A**
Hexachlorobutadiene	**103**	**(75 - 125)**	**SW846 8260A**
Isopropylbenzene	**108**	**(75 - 125)**	**SW846 8260A**
m-Xylene & p-Xylene	**90**	**(75 - 125)**	**SW846 8260A**
Methylene chloride	**83**	**(75 - 125)**	**SW846 8260A**
n-Butylbenzene	**101**	**(75 - 125)**	**SW846 8260A**
n-Propylbenzene	**98**	**(75 - 125)**	**SW846 8260A**
Naphthalene	**79**	**(75 - 125)**	**SW846 8260A**
o-Xylene	**91**	**(75 - 125)**	**SW846 8260A**
p-Isopropyltoluene	**101**	**(75 - 125)**	**SW846 8260A**
sec-Butylbenzene	**99**	**(75 - 125)**	**SW846 8260A**
Styrene	**92**	**(75 - 125)**	**SW846 8260A**
Trichloroethene	**90**	**(71 - 125)**	**SW846 8260A**
Tetrachloroethene	**91**	**(71 - 125)**	**SW846 8260A**
Toluene	**92**	**(74 - 125)**	**SW846 8260A**
trans-1,2-Dichloroethene	**86**	**(75 - 125)**	**SW846 8260A**
trans-1,3-Dichloropropene	**76**	**(66 - 125)**	**SW846 8260A**
Trichlorofluoromethane	**87**	**(50 - 125)**	**SW846 8260A**
Vinyl chloride	**87**	**(46 - 134)**	**SW846 8260A**
tert-Butylbenzene	**99**	**(75 - 125)**	**SW846 8260A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	102	(75 - 125)
4-Bromofluorobenzene	98	(75 - 125)
1,2-Dichloroethane-d4	99	(62 - 139)
Dibromofluoromethane	97	(75 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: B7G230127 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: B7G240000-191 Prep Batch #...: 7205191							
Mercury	0.0050	0.0051	mg/L	103	SW846 7470A	07/24/97	CAW13102
		Dilution Factor: 1			Instrument ID..: CV	Analyst ID.....: 001702	
		Analysis Time..: 20:54					
LCS Lot-Sample#: B7G240000-193 Prep Batch #...: 7205193							
Copper	1.0	1.0	mg/L	104	SW846 6010A	07/24-07/25/97	CAW1810R
		Dilution Factor: 1			Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50					
Iron	10.0	10.6	mg/L	106	SW846 6010A	07/24-07/25/97	CAW1810T
		Dilution Factor: 1			Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50					
Potassium	10.0	10.2	mg/L	102	SW846 6010A	07/24-07/25/97	CAW1810U
		Dilution Factor: 1			Instrument ID..: P1	Analyst ID.....: 001863	
		Analysis Time..: 10:28					
Magnesium	10.0	10.2	mg/L	102	SW846 6010A	07/24-07/25/97	CAW1810V
		Dilution Factor: 1			Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50					
Manganese	1.0	1.0	mg/L	105	SW846 6010A	07/24-07/25/97	CAW1810W
		Dilution Factor: 1			Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50					
Molybdenum	1.0	1.0	mg/L	101	SW846 6010A	07/24-07/25/97	CAW1810X
		Dilution Factor: 1			Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50					
Aluminum	10.0	10.1	mg/L	101	SW846 6010A	07/24-07/25/97	CAW1811A
		Dilution Factor: 1			Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50					
Barium	1.0	1.0	mg/L	104	SW846 6010A	07/24-07/25/97	CAW1811C
		Dilution Factor: 1			Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50					
Beryllium	1.0	1.0	mg/L	103	SW846 6010A	07/24-07/25/97	CAW1811D
		Dilution Factor: 1			Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50					

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Quanterra Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: B7G230127 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Calcium	10.0	10.3	mg/L	103	SW846 6010A	07/24-07/25/97	CAW1811E
		Dilution Factor: 1		Instrument ID..: P2		Analyst ID.....: 001863	
		Analysis Time..: 12:50					
Cadmium	1.0	1.0	mg/L	103	SW846 6010A	07/24-07/25/97	CAW1811F
		Dilution Factor: 1		Instrument ID..: P2		Analyst ID.....: 001863	
		Analysis Time..: 12:50					
Cobalt	1.0	1.0	mg/L	104	SW846 6010A	07/24-07/25/97	CAW1811G
		Dilution Factor: 1		Instrument ID..: P2		Analyst ID.....: 001863	
		Analysis Time..: 12:50					
Chromium	1.0	1.0	mg/L	102	SW846 6010A	07/24-07/25/97	CAW1811H
		Dilution Factor: 1		Instrument ID..: P2		Analyst ID.....: 001863	
		Analysis Time..: 12:50					
Silver	0.0015	0.0015	mg/L	99	SW846 7761	07/24-08/11/97	CAW1811K
		Dilution Factor: 1		Instrument ID..: F1		Analyst ID.....: 001863	
		Analysis Time..: 09:30					
Sodium	10.0	10.1	mg/L	101	SW846 6010A	07/24-07/25/97	CAW18110
		Dilution Factor: 1		Instrument ID..: P1		Analyst ID.....: 001863	
		Analysis Time..: 10:28					
Nickel	1.0	1.1	mg/L	106	SW846 6010A	07/24-07/25/97	CAW18111
		Dilution Factor: 1		Instrument ID..: P2		Analyst ID.....: 001863	
		Analysis Time..: 12:50					
Vanadium	1.0	1.0	mg/L	104	SW846 6010A	07/24-07/25/97	CAW18112
		Dilution Factor: 1		Instrument ID..: P2		Analyst ID.....: 001863	
		Analysis Time..: 12:50					
Zinc	1.0	1.1	mg/L	109	SW846 6010A	07/24-07/31/97	CAW18113
		Dilution Factor: 1		Instrument ID..: P2		Analyst ID.....: 001702	
		Analysis Time..: 19:55					
Antimony	1.0	1.1	mg/L	106	SW846 6010A	07/24-07/31/97	CAW18114
		Dilution Factor: 1		Instrument ID..: P2		Analyst ID.....: 001702	
		Analysis Time..: 19:55					
Arsenic	1.0	1.0	mg/L	103	SW846 6010A	07/24-07/25/97	CAW18115
		Dilution Factor: 1		Instrument ID..: P2		Analyst ID.....: 001863	
		Analysis Time..: 12:50					

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Quanterra Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: B7G230127 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Lead	1.0	1.0	mg/L	103	SW846 6010A	07/24-07/25/97	CAW18116
		Dilution Factor: 1		Instrument ID..: P2		Analyst ID.....: 001863	
		Analysis Time..: 12:50					
Selenium	1.0	1.0	mg/L	100	SW846 6010A	07/24-07/25/97	CAW18117
		Dilution Factor: 1		Instrument ID..: P2		Analyst ID.....: 001863	
		Analysis Time..: 12:50					
Thallium	0.030	0.030	mg/L	101	SW846 7841	07/24/97	CAW18118
		Dilution Factor: 1		Instrument ID..: F1		Analyst ID.....: 001702	
		Analysis Time..: 17:30					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: B7G230127 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: B7G240000-191 **Prep Batch #...:** 7205191					
Mercury	103	(77 - 120)	SW846 7470A	07/24/97	CAW13102
		Dilution Factor: 1	Instrument ID..: CV	Analyst ID.....: 001702	
		Analysis Time..: 20:54			
LCS Lot-Sample#: B7G240000-193 **Prep Batch #...:** 7205193					
Copper	104	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW1810R
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Iron	106	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW1810T
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Potassium	102	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW1810U
		Dilution Factor: 1	Instrument ID..: P1	Analyst ID.....: 001863	
		Analysis Time..: 10:28			
Magnesium	102	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW1810V
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Manganese	105	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW1810W
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Molybdenum	101	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW1810X
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Aluminum	101	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW1811A
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Barium	104	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW1811C
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Beryllium	103	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW1811D
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			

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Quanterra Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: B7G230127 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Calcium	103	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW1811E
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Cadmium	103	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW1811F
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Cobalt	104	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW1811G
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Chromium	102	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW1811H
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Silver	99	(80 - 120)	SW846 7761	07/24-08/11/97	CAW1811K
		Dilution Factor: 1	Instrument ID..: F1	Analyst ID.....: 001863	
		Analysis Time..: 09:30			
Sodium	101	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW18110
		Dilution Factor: 1	Instrument ID..: P1	Analyst ID.....: 001863	
		Analysis Time..: 10:28			
Nickel	106	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW18111
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Vanadium	104	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW18112
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Zinc	109	(80 - 120)	SW846 6010A	07/24-07/31/97	CAW18113
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001702	
		Analysis Time..: 19:55			
Antimony	106	(80 - 120)	SW846 6010A	07/24-07/31/97	CAW18114
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001702	
		Analysis Time..: 19:55			
Arsenic	103	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW18115
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			

(Continued on next page)

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Quanterra Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: B7G230127 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Lead	103	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW18116
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Selenium	100	(80 - 120)	SW846 6010A	07/24-07/25/97	CAW18117
		Dilution Factor: 1	Instrument ID..: P2	Analyst ID.....: 001863	
		Analysis Time..: 12:50			
Thallium	101	(78 - 123)	SW846 7841	07/24/97	CAW18118
		Dilution Factor: 1	Instrument ID..: F1	Analyst ID.....: 001702	
		Analysis Time..: 17:30			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

408 578

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Lot-Sample #...: B7G230127 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH			WO#:CAXXV102-LCS/CAXXV103-LCSD			LCS Lot-Sample#: B7G290000-207		
	100	100	mg/L	100		MCAWW 310.1	07/28/97	7210207
	100	100	mg/L	100	0.0	MCAWW 310.1	07/28/97	7210207
			Dilution Factor: 1					
						Instrument ID..: ISE	TCLP Date.....: 090000	
Bromide			WO#:CC4XG102-LCS/CC4XG103-LCSD			LCS Lot-Sample#: B7H070000-170		
	2.0	2.1	mg/L	105		SW846 9056	08/05-08/06/97	7219170
	2.0	1.9	mg/L	97	8.0	SW846 9056	08/05-08/06/97	7219170
			Dilution Factor: 1					
						Instrument ID..: IC	TCLP Date.....: 004003	
Chloride			WO#:CC4XP102-LCS/CC4XP103-LCSD			LCS Lot-Sample#: B7H070000-172		
	5.0	4.8	mg/L	95		SW846 9056	08/05-08/06/97	7219172
	5.0	4.9	mg/L	98	3.0	SW846 9056	08/05-08/06/97	7219172
			Dilution Factor: 1					
						Instrument ID..: IC	TCLP Date.....: 004003	
Sulfate			WO#:CC4XR102-LCS/CC4XR103-LCSD			LCS Lot-Sample#: B7H070000-173		
	5.0	4.8	mg/L	97		SW846 9056	08/05-08/06/97	7219173
	5.0	4.9	mg/L	98	0.67	SW846 9056	08/05-08/06/97	7219173
			Dilution Factor: 1					
						Instrument ID..: IC	TCLP Date.....: 004003	
Total Organic Carbon			WO#:CC3Q8102-LCS/CC3Q8103-LCSD			LCS Lot-Sample#: B7H050000-130		
	5	5	mg/L	101		SW846 9060	08/03/97	7217130
	5	5	mg/L	101	0.85	SW846 9060	08/03/97	7217130
			Dilution Factor: 1					
						Instrument ID..: TOC	TCLP Date.....: 004003	
Total Organic Carbon			WO#:CC481102-LCS/CC481103-LCSD			LCS Lot-Sample#: B7H060000-126		
	5.0	5.0	mg/L	101		SW846 9060	08/05/97	7218126
	5.0	5.0	mg/L	100	0.34	SW846 9060	08/05/97	7218126
			Dilution Factor: 1					
						Instrument ID..: TOC	TCLP Date.....: 004003	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Lot-Sample #...: B7G230127 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH WO#:CAXXV102-LCS/CAXXV103-LCSD LCS Lot-Sample#: B7G290000-207							
	100	(90 - 110)			MCAWW 310.1	07/28/97	7210207
	100	(90 - 110)	0.0	(0-17)	MCAWW 310.1	07/28/97	7210207
		Dilution Factor: 1					
					Instrument ID..: ISE	TCLP Date.....: 090000	
Bromide WO#:CC4XG102-LCS/CC4XG103-LCSD LCS Lot-Sample#: B7H070000-170							
	105	(86 - 112)			SW846 9056	08/05-08/06/97	7219170
	97	(86 - 112)	8.0	(0-20)	SW846 9056	08/05-08/06/97	7219170
		Dilution Factor: 1					
					Instrument ID..: IC	TCLP Date.....: 004003	
Chloride WO#:CC4XP102-LCS/CC4XP103-LCSD LCS Lot-Sample#: B7H070000-172							
	95	(91 - 111)			SW846 9056	08/05-08/06/97	7219172
	98	(91 - 111)	3.0	(0-20)	SW846 9056	08/05-08/06/97	7219172
		Dilution Factor: 1					
					Instrument ID..: IC	TCLP Date.....: 004003	
Sulfate WO#:CC4XR102-LCS/CC4XR103-LCSD LCS Lot-Sample#: B7H070000-173							
	97	(88 - 115)			SW846 9056	08/05-08/06/97	7219173
	98	(88 - 115)	0.67	(0-20)	SW846 9056	08/05-08/06/97	7219173
		Dilution Factor: 1					
					Instrument ID..: IC	TCLP Date.....: 004003	
Total Organic Carbon WO#:CC3Q8102-LCS/CC3Q8103-LCSD LCS Lot-Sample#: B7H050000-130							
	101	(92 - 117)			SW846 9060	08/03/97	7217130
	101	(92 - 117)	0.85	(0-20)	SW846 9060	08/03/97	7217130
		Dilution Factor: 1					
					Instrument ID..: TOC	TCLP Date.....: 004003	
Total Organic Carbon WO#:CC481102-LCS/CC481103-LCSD LCS Lot-Sample#: B7H060000-126							
	101	(92 - 117)			SW846 9060	08/05/97	7218126
	100	(92 - 117)	0.34	(0-20)	SW846 9060	08/05/97	7218126
		Dilution Factor: 1					
					Instrument ID..: TOC	TCLP Date.....: 004003	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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Quanterra Environmental Services

Quanterra Environmental Services

TAMPA LABORATORY
CONDITION UPON RECEIPT FORM

Client: Hydrogeologic **Project Name/Lot #:** B7G230127
Date Received: 7/23/97 **Received By:** ALyna
CUR Completed By: ALyna

Cooler/Shipping information:
TYPE: Quanterra Cooler ✓ Client Cooler ____ Quanterra Shipper ____ Box ____ Other ____ / ____

Cooler ID/Track #	573901943 6	573901944 0			
Temp (Celsius)	15°C	11°C			
Cooler ID/Track #					
Temp (Celsius)					

Any "NO" responses or discrepancies should be explained in the "Comments" section below.

CHECKLIST	YES	NO	NA
1. Were custody seals on shipping container(s) intact? Check "NA" if hand delivered. Circle One: CUSTODY SEAL SAVED UNABLE TO SAVE CUSTODY SEAL	✓		
2. Were custody papers properly included with samples?	✓		
3. Were custody papers properly filled out (ink, signed, match labels)?		✓	
4. Did all bottles arrive in good condition (unbroken)?	✓		
5. Were all bottle labels complete (sample #, date, signed, analysis, preservatives)?	✓		
6. Were correct bottles used for the tests indicated?	✓		
7. Were proper sample preservation techniques indicated?	✓		
8. Were samples received within adequate holding times? If "NO", complete 8.a. or 8.b.	✓		
a. Was sample hold time exceeded (NCM required)?			✓
b. Did the samples arrive with more than half the hold time exceeded (NCM required)?			✓
9. Were all VOA bottles checked for the presence of air bubbles? If air bubbles were found, indicate in comment section.	✓		
10. Were samples in direct contact with wet ice? If "NO", circle one: NO ICE BLUE ICE	✓		
11. Were the samples received with a temperature blank? NOTE TEMPERATURE ABOVE If "NO", circle one: UNABLE TO DETERMINE TEMP TEMP TAKEN FROM THE COOLER ICE/WATER NEAR SAMPLES	✓		
12. Were sample pHs checked and recorded by S.R. (see back for Page 2 - Sample pH)? *TOC and VOA samples are checked by laboratory analysts.*	✓		
13. Were samples accepted into the laboratory?	✓		

Comments:
See attached for samples associated with coolers
COCs 2 + 3 of 3 were not signed by client

Project Manager initials/date reviewed: MX 7/23/97

Corrective Action: client notified of temp 7/23/97 via fax

Corrective Action completed by/date: MX 7/23/97

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Quanterra Environmental Services

Quanterra Environmental Services

TAMPA LABORATORY

CONDITION UPON RECEIPT - SAMPLE pH

Date: 7/23/97 **Initials:** [illegible]

Lot # (if not noted on page 1): _____

SAMPLE ID	METALS	DISS METALS	TRPH	AMMONIA	COD	CYANIDE	TOX	HARDNESS	TKN/NITROGEN	O&G	PHENOLS	NO2/NO3	H* ERB/PEST/PCB	SULFIDE	PHOSPHORUS	
Container	(P,G)	(P,G)	(G)	(P,G)	(P,G)	(P,G)	(G)	(P,G)	(P,G)	(G)	(G)	(P,G)	(G)	(P,G)	(P,G)	
Preservative	HNO_3	HNO_3	HCl	H_2SO_4	H_2SO_4	NaOH	H_2SO_4	H_2SO_4/HNO_3	H_2SO_4	H_2SO_4/HCl	H_2SO_4	H_2SO_4	None	Zn Acetate NaOH	H_2SO_4	
Required pH	< 2	< 2	< 2	< 2	< 2	> 12	< 2	< 2	< 2	< 2	< 2	< 2	5 to 9	> 9	< 2	
-007	✓															
-003	|															
-004	|															
-005	|															
-006	|															
-010	✓															

*Only 1 unpreserved bottle per sample is checked for pH.
NOTE: TOC and VOA pH checks are performed by the analyst, not sample receiveing

D:\CHCKLIST\SAMP_REC\CURPHLOG.DOC

Chain of Custody Record

Quanterra

QUA-4124

Client	Project Manager	Date	Chain Of Custody Number
Hydro Geologic, Inc	Jim Castello	22 Jul 97	01341
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	
1155 Herndon Pkwy, Suite 900	703/478-5186		Page 1 of 3
City / State / Zip Code	**Site Contact**		
Herndon / VA / 20170	Michael Rattenger		
Project Name	**Carrier/Waybill Number**		
NAS Ft. Worth JRB	Fed Ex 573901 9436		
Contract/Purchase Order/Quote No.			
DFC001-07GAA			

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	BTEX	Methane	VOC	TOC	Anions	Alkalinity	Metals
MW-8WG01	22Jul97	1100	Grab	120ml	VOA	3	HCl		X						
↓	↓	↓	↓	120ml	VOA	3	H_2SO_4			X					
↓	↓	↓	↓	50ml	VOA	2	H_2SO_4					X			
↓	↓	↓	↓	1L	poly	1	4°C						X		
↓	↓	↓	↓	1L	poly	1	4°C							X	
MW-9WG01	↓	1215	↓	120ml	VOA	3	HCl				X				
↓	↓	↓	↓	500ml	poly	1	HNO_3								X
LF01-1EWG01	↓	1035	↓	120ml	VOA	3	HCl				X				
↓	↓	↓	↓	500ml	poly	1	HNO_3								X
LF01-1CWG01	↓	1215	↓	120ml	VOA	3	HCl				X				
↓	↓	↓	↓	500ml	poly	1	HNO_3								X
DUP04-WG01	↓	1215	↓	120ml	VOA	3	HCl				X				
↓	↓	↓	↓	500ml	poly	1	HNO_3								X
MW-12WG01	↓	1555	↓	120ml	VOA	3	HCl				X				
↓	↓	↓	↓	500ml	poly	1	HNO_3								X

Special Instructions

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Turn Around Time Required: ☐ Normal ☐ Rush 21 Day T

QC Level: ☐ I. ☐ II. ☐ III.

Project Specific (Specify)

	Date	Time		Date	Time
1. Relinquished By	22 Jul 97	1800	1. Received By	7/23/97	0915
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: Ship with Sample: CANARY Returned to Client with Report: PINK Field Copy

408 582

Chain of Custody Record

Quanterra

OUA-4124

Client	Project Manager	Date	Chain Of Custody Number
Hydro Geo Logic		22Jul97	01344
Address	Telephone Number (Area Code)/Fax Number	Lab Number	Page 2 of 3
City / State / Zip Code	Site Contact		
Project Name	Carrier/Waybill Number		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	BTEX	Methane	TOC	Alkalinity	Anions							
ST14-28	22Jul97	1500	Groundwater	120ml	40ml	3	HCl		X											
				120ml	40ml	3	H_2SO_4			X										
				80ml	40ml	2	H_2SO_4				X									
				1L	Poly	1	4°C					X								
				1L	Poly	1	4°C						X							
SD13-01WG01		1700		120ml	40ml	3	HCl		X											
				120ml	40ml	3	H_2SO_4			X										
				80ml	40ml	2	H_2SO_4				X									
				500ml	Poly	1	4°C					X								
				500ml	Poly	1	4°C						X							
MW-5WG01		1810		120ml	40ml	3	HCl		X											
				80ml	40ml	2	H_2SO_4			X										
				80ml	40ml	2	H_2SO_4				X									
												X								
													X							
—	—	—	—	—	—	—	—													

Special Instructions

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Turn Around Time Required: ☐ Normal ☐ Rush

QC Level: ☐ I. ☐ II. ☐ III.

Project Specific (Specify)

	Date	Time		Date	Time
1. Relinquished By			1. Received By [signature]	7/23/97	0915
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

408 583

Chain of Custody Record

Quanterra

QUA-4124

Client	Project Manager	Date	Chain Of Custody Number
Hydro Geologic		2/22/97	01342
Address	Telephone Number (Area Code)/Fax Number	Lab Number	Page 3 of 3

City	State	Zip Code	Site Contact

Project Name

Carrier/Waybill Number

Contract/Purchase Order/Quote No.

Analysis

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	VOC	BTEX	Methane	TOC	Anions	Alkalinity	Metals				
EB-072297	2/22/97	1736	Groundwater	120ml	40ml	3	HCl		X										
				120ml	40ml	3	HCl			X									
				80ml	40ml	2	H_2SO_4				X								
				80ml	40ml	2	H_2SO_4					X							
				1L	poly	1	4°C						X						
				1L	poly	1	4°C							X					
				500ml	poly	1	HNO_3								X				
TB072297		1730		120ml	40ml	3	HCl		X										
				120ml	40ml	3	~~H_2SO_4~~, HCl			X									
				120ml	40ml	3	H_2SO_4				X								

Special Instructions

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Turn Around Time Required
☐ Normal ☐ Rush

QC Level
☐ I. ☐ II. ☐ III.

Project Specific (Specify)

	Date	Time		Date	Time
1. Relinquished By			1. Received By	1/23/97	2115
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: Stays with Sample: CANARY; Returned to Client with Report: PINK; Field Copy

408 584

Analytical Report for Wells Sampled July 23, 1997

408 586

Quanterra
Environmental Services

Quanterra Incorporated
5910 Breckenridge Parkway, Suite H
Tampa, Florida 33610

813 621-0784 Telephone
813 623-6021 Fax

ANALYTICAL REPORT

PROJECT NO. 12001-7-5001

Carswell AFB/NAS FT WORTH JRB

Lot #: B7G240171

Jim Costello

HydroGeoLogic, Inc.

QUANTERRA INCORPORATED

Certification Numbers: E84059,HRS84297
FDEP CompQAP: 870270G

Michele H. Lersch

Michele Lersch
Project Manager

August 13, 1997

Quanterra
Environmental Services

NARRATIVE

HydroGeoLogic

Project: 12001-7-5001/NAS Ft. Worth JRB, 1st Qtr (Carswell AFB)

Quanterra Lot Number: B7G240171
Matrix: Groundwater
Methods: 8260A, 8020A, RSK-175, 6010A, 7470A, 7841, 9060, 9056, 310.1

6010A
The method blank had a quantifiable level of potassium below the RL. No corrective action is required.

9056
The method blank had quantifiable levels of chloride and sulfate below their respective RLs. No corrective action is required.

9060
The "TOC Range" footnote on the General Chemistry report page for each sample indicates the lowest and highest concentrations of the quadruplicate analyses, as required by the method. The reported result is the average of the quadruplicate analyses, rounded according to Quanterra protocols.

Quanterra Environmental Services

SAMPLE SUMMARY

B7G240171

WO #	SAMPLE#	CLIENT SAMPLE ID	DATE	TIME
CAWCA	001	SD13-06WG01	07/23/97	11:00
CAWCC	002	OT-15CWG01	07/23/97	12:20
CAWCD	003	USGA04-WG01	07/23/97	16:50
CAWCE	004	EB072397	07/23/97	18:00
CAWCF	005	SD13-04WG01	07/23/97	09:30
CAWCJ	006	SD13-02WG01	07/23/97	11:10
CAWCK	007	ST14-03WG01	07/23/97	13:00
CAWCL	008	DUP05WG01	07/23/97	16:45
CAWCM	009	ST14-26WG01	07/23/97	16:45
CAWCN	010	TB-072397	07/23/97	18:30

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Quanterra
Environmental Services

METHODS SUMMARY

B7G240171

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Alkalinity	MCAWW 310.1	MCAWW 310.1
Aromatic Volatile Organics by GC	SW846 8020A	SW846 5030
Bromide	SW846 9056	SW846 9056
Chloride	SW846 9056	SW846 9056
Dissolved Gasses in Water	EPA-9 RSK-175	
Inductively Coupled Plasma (ICP) Metals	SW846 6010A	SW846 3005
Mercury in Liquid Waste (Manual Cold-Vapor)	SW846 7470A	SW846 7470A
Silver (AA, Furnace Technique)	SW846 7761	
Sulfate	SW846 9056	SW846 9056
Thallium (AA, Furnace Technique)	SW846 7841	SW846 3020
Total Organic Carbon	SW846 9060	SW846 9060
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010A	SW846 3005
Volatile Organics by GC/MS	SW846 8260A	SW846 5030/8260

References:

EPA-9 Sample Prep and Calculations for Dissolved Gas Analysis in Water Samples Using a GC Headspace Equilibration Technique, RSKSOP-175, REV. 0, 8/11/94, USEPA Research Lab

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

Quanterra Environmental Services

EXECUTIVE SUMMARY - Detection Highlights

B7G240171

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
SD13-06WG01 07/23/97 11:00 001				
Barium	0.25	0.020	mg/L	SW846 6010A
Calcium	203	1.0	mg/L	SW846 6010A
Copper	0.024 F	0.060	mg/L	SW846 6010A
Iron	1.6	0.070	mg/L	SW846 6010A
Potassium	0.40 F	5.0	mg/L	SW846 6010A
Magnesium	11.7	1.0	mg/L	SW846 6010A
Manganese	0.12	0.020	mg/L	SW846 6010A
Sodium	31.0	1.0	mg/L	SW846 6010A
Zinc	0.076	0.020	mg/L	SW846 6010A
Ethylbenzene	0.60	0.60	ug/L	SW846 8260A
m-Xylene & p-Xylene	0.94	0.50	ug/L	SW846 8260A
o-Xylene	0.29 F	1.1	ug/L	SW846 8260A
Toluene	0.40 F	1.1	ug/L	SW846 8260A
OT-15CWG01 07/23/97 12:20 002				
Barium	0.18	0.020	mg/L	SW846 6010A
Calcium	142	1.0	mg/L	SW846 6010A
Copper	0.0052 F	0.060	mg/L	SW846 6010A
Potassium	2.4 F	5.0	mg/L	SW846 6010A
Magnesium	4.5	1.0	mg/L	SW846 6010A
Manganese	0.046	0.020	mg/L	SW846 6010A
Sodium	21.1	1.0	mg/L	SW846 6010A
Zinc	0.026	0.020	mg/L	SW846 6010A
Chloroform	0.36	0.30	ug/L	SW846 8260A
Ethylbenzene	0.49 F	0.60	ug/L	SW846 8260A
m-Xylene & p-Xylene	0.79	0.50	ug/L	SW846 8260A
o-Xylene	0.22 F	1.1	ug/L	SW846 8260A
Tetrachloroethene	1.2 F	1.4	ug/L	SW846 8260A
USGA04-WG01 07/23/97 16:50 003				
Barium	0.032	0.020	mg/L	SW846 6010A
Calcium	110	1.0	mg/L	SW846 6010A
Copper	0.0053 F	0.060	mg/L	SW846 6010A
Iron	0.61	0.070	mg/L	SW846 6010A
Potassium	4.9 F	5.0	mg/L	SW846 6010A
Magnesium	14.7	1.0	mg/L	SW846 6010A
Manganese	0.25	0.020	mg/L	SW846 6010A
Sodium	35.3	1.0	mg/L	SW846 6010A
Ethylbenzene	0.23 F	0.60	ug/L	SW846 8260A
m-Xylene & p-Xylene	0.37 F	0.50	ug/L	SW846 8260A
o-Xylene	0.40 F	1.1	ug/L	SW846 8260A

(Continued on next page)

Quanterra Environmental Services

EXECUTIVE SUMMARY - Detection Highlights

B7G240171

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
EB072397 07/23/97 18:00 004				
Calcium	0.099 F	1.0	mg/L	SW846 6010A
Copper	0.0032 F	0.060	mg/L	SW846 6010A
Potassium	0.40 F	5.0	mg/L	SW846 6010A
Chloroform	1.7	0.30	ug/L	SW846 8260A
SD13-04WG01 07/23/97 09:30 005				
Methane	820	25	ug/L	EPA-9 RSK-175
Ethylbenzene	0.43 F	2.0	ug/L	SW846 8020A
Toluene	1.3 F	2.0	ug/L	SW846 8020A
Xylenes (total)	3.4	2.0	ug/L	SW846 8020A
Total Organic Carbon	11	1	mg/L	SW846 9060
Chloride	27.0	0.20	mg/L	SW846 9056
Sulfate	2.2	0.50	mg/L	SW846 9056
Bromide	0.93	0.20	mg/L	SW846 9056
Alkalinity as CaCO3 to pH 4.5	410	10	mg/L	MCAWW 310.1
SD13-02WG01 07/23/97 11:10 006				
Methane	380	5.0	ug/L	EPA-9 RSK-175
Total Organic Carbon	4	1	mg/L	SW846 9060
Chloride	21.3	0.20	mg/L	SW846 9056
Sulfate	3.6	0.50	mg/L	SW846 9056
Bromide	0.90	0.20	mg/L	SW846 9056
Alkalinity as CaCO3 to pH 4.5	360	10	mg/L	MCAWW 310.1
ST14-03WG01 07/23/97 13:00 007				
Methane	160	2.5	ug/L	EPA-9 RSK-175
Toluene	0.14 F	2.0	ug/L	SW846 8020A
Total Organic Carbon	2	1	mg/L	SW846 9060
Chloride	30.0	0.20	mg/L	SW846 9056
Sulfate	31.5	0.50	mg/L	SW846 9056
Bromide	0.76	0.20	mg/L	SW846 9056
Alkalinity as CaCO3 to pH 4.5	290	10	mg/L	MCAWW 310.1
DUP05WG01 07/23/97 16:45 008				
Methane	0.28 F	0.50	ug/L	EPA-9 RSK-175
Barium	0.12	0.020	mg/L	SW846 6010A
Calcium	134	1.0	mg/L	SW846 6010A
Copper	0.0038 F	0.060	mg/L	SW846 6010A
Iron	0.043 F	0.070	mg/L	SW846 6010A

(Continued on next page)

Quanterra Environmental Services

EXECUTIVE SUMMARY - Detection Highlights

B7G240171

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
DUP05WG01 07/23/97 16:45 008				
Potassium	0.60 F	5.0	mg/L	SW846 6010A
Magnesium	7.1	1.0	mg/L	SW846 6010A
Manganese	0.054	0.020	mg/L	SW846 6010A
Sodium	18.9	1.0	mg/L	SW846 6010A
Vanadium	0.011 F	0.080	mg/L	SW846 6010A
Total Organic Carbon	2	1	mg/L	SW846 9060
Chloride	22.7	0.20	mg/L	SW846 9056
Sulfate	24.7	0.50	mg/L	SW846 9056
Bromide	0.84	0.20	mg/L	SW846 9056
Alkalinity as CaCO3 to pH 4.5	350	10	mg/L	MCAWW 310.1
ST14-26WG01 07/23/97 16:45 009				
Methane	0.40 F	0.50	ug/L	EPA-9 RSK-175
Barium	0.13	0.020	mg/L	SW846 6010A
Calcium	141	1.0	mg/L	SW846 6010A
Copper	0.0033 F	0.060	mg/L	SW846 6010A
Iron	0.057 F	0.070	mg/L	SW846 6010A
Potassium	0.72 F	5.0	mg/L	SW846 6010A
Magnesium	7.3	1.0	mg/L	SW846 6010A
Manganese	0.055	0.020	mg/L	SW846 6010A
Sodium	19.4	1.0	mg/L	SW846 6010A
Vanadium	0.011 F	0.080	mg/L	SW846 6010A
Total Organic Carbon	2	1	mg/L	SW846 9060
Chloride	22.5	0.20	mg/L	SW846 9056
Sulfate	24.7	0.50	mg/L	SW846 9056
Bromide	0.79	0.20	mg/L	SW846 9056
Alkalinity as CaCO3 to pH 4.5	360	10	mg/L	MCAWW 310.1
TB-072397 07/23/97 18:30 010				
Ethene	0.14 F	0.50	ug/L	EPA-9 RSK-175
Methane	0.24 F	0.50	ug/L	EPA-9 RSK-175
Toluene	0.15 F	2.0	ug/L	SW846 8020A

Quanterra Environmental Services

QC DATA ASSOCIATION SUMMARY

B7G240171

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WG	SW846 6010A		7205268	7205117
	WG	SW846 7761		7205268	7205117
	WG	SW846 8260A		7216155	
	WG	SW846 7470A		7205269	7205118
	WG	SW846 7841		7205268	7205117
002	WG	SW846 6010A		7205268	7205117
	WG	SW846 7761		7205268	7205117
	WG	SW846 8260A		7216155	
	WG	SW846 7470A		7205269	7205118
	WG	SW846 7841		7205268	7205117
003	WG	SW846 6010A		7205268	7205117
	WG	SW846 7761		7205268	7205117
	WG	SW846 8260A		7216155	
	WG	SW846 7470A		7205269	7205118
	WG	SW846 7841		7205268	7205117
004	WQ	SW846 6010A		7205268	7205117
	WQ	SW846 7761		7205268	7205117
	WQ	SW846 8260A		7216155	
	WQ	SW846 7470A		7205269	7205118
	WQ	SW846 7841		7205268	7205117
005	WG	SW846 9060		7217132	
	WG	SW846 9056		7219172	
	WG	SW846 9056		7219173	
	WG	EPA-9 RSK-175		7216236	7218037
	WG	SW846 9056		7219170	
	WG	SW846 8020A		7212147	7212031
	WG	MCAWW 310.1		7217127	
006	WG	SW846 9060		7217132	
	WG	SW846 9056		7219172	
	WG	SW846 9056		7219173	
	WG	EPA-9 RSK-175		7216236	7218037
	WG	SW846 9056		7219170	
	WG	SW846 8020A		7212147	7212031
	WG	MCAWW 310.1		7217127	
007	WG	SW846 9060		7217132	
	WG	SW846 9056		7219172	
	WG	SW846 9056		7219173	
	WG	EPA-9 RSK-175		7216236	7218037

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Quanterra Environmental Services

QC DATA ASSOCIATION SUMMARY

B7G240171

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
007	WG	SW846 9056		7219170	
	WG	SW846 8020A		7212147	7212031
	WG	MCAWW 310.1		7217127	
008	WG	SW846 6010A		7205268	7205117
	WG	SW846 9060		7217132	
	WG	SW846 9056		7219172	
	WG	SW846 9056		7219173	
	WG	SW846 7761		7205268	7205117
	WG	EPA-9 RSK-175		7216236	7218037
	WG	SW846 9056		7219170	
	WG	SW846 8260A		7216155	
	WG	SW846 7470A		7205269	7205118
	WG	SW846 7841		7205268	7205117
	WG	MCAWW 310.1		7217127	
009	WG	SW846 6010A		7205268	7205117
	WG	SW846 9060		7217132	
	WG	SW846 9056		7219172	
	WG	SW846 9056		7219173	
	WG	SW846 7761		7205268	7205117
	WG	EPA-9 RSK-175		7216236	7218037
	WG	SW846 9056		7219170	
	WG	SW846 8260A		7216155	
	WG	SW846 7470A		7205269	7205118
	WG	SW846 7841		7205268	7205117
	WG	MCAWW 310.1		7217127	
010	WQ	EPA-9 RSK-175		7216236	7218037
	WQ	SW846 8260A		7216155	
	WQ	SW846 8020A		7212147	7212031

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: SD13-06WG01

GC/MS Volatiles

Lot-Sample #...: B7G240171-001 Work Order #...: CAWCA10T Matrix.....: WG
Date Sampled...: 07/23/97 Date Received..: 07/24/97
Prep Date.....: 08/03/97 Analysis Date..: 08/03/97
Prep Batch #...: 7216155 Analysis Time..: 18:43
Dilution Factor: 1
Analyst ID.....: 007084 Instrument ID..: VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	0.80	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	0.40	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	0.40	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.2	ug/L	SW846 8260A
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	3.2	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	0.40	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	1.3	ug/L	SW846 8260A
1,2-Dichloroethane	ND	0.60	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.6	ug/L	SW846 8260A
1,2-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	0.60	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	0.50	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	1.2	ug/L	SW846 8260A
1,3-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1-Chlorohexane	ND	0.50	ug/L	SW846 8260A
2,2-Dichloropropane	ND	3.5	ug/L	SW846 8260A
2-Chlorotoluene	ND	0.40	ug/L	SW846 8260A
4-Chlorotoluene	ND	0.60	ug/L	SW846 8260A
Benzene	ND	0.40	ug/L	SW846 8260A
Bromobenzene	ND	0.30	ug/L	SW846 8260A
Bromochloromethane	ND	0.40	ug/L	SW846 8260A
Bromodichloromethane	ND	0.80	ug/L	SW846 8260A
Bromoform	ND	1.2	ug/L	SW846 8260A
Bromomethane	ND	1.1	ug/L	SW846 8260A
Carbon tetrachloride	ND	2.1	ug/L	SW846 8260A
Chlorobenzene	ND	0.40	ug/L	SW846 8260A
Chloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	0.30	ug/L	SW846 8260A
Chloromethane	ND	1.3	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	1.2	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: SD13-06WG01

GC/MS Volatiles

Lot-Sample #...: B7G240171-001 **Work Order #...:** CAWCA10T **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	0.50	ug/L	SW846 8260A
Dibromomethane	ND	2.4	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	**0.60**	**0.60**	**ug/L**	**SW846 8260A**
Hexachlorobutadiene	ND	1.1	ug/L	SW846 8260A
Isopropylbenzene	ND	0.50	ug/L	SW846 8260A
m-Xylene & p-Xylene	**0.94**	**0.50**	**ug/L**	**SW846 8260A**
Methylene chloride	ND	0.30	ug/L	SW846 8260A
n-Butylbenzene	ND	1.1	ug/L	SW846 8260A
n-Propylbenzene	ND	0.40	ug/L	SW846 8260A
Naphthalene	ND	0.40	ug/L	SW846 8260A
o-Xylene	**0.29 F**	**1.1**	**ug/L**	**SW846 8260A**
p-Isopropyltoluene	ND	1.2	ug/L	SW846 8260A
sec-Butylbenzene	ND	1.3	ug/L	SW846 8260A
Styrene	ND	0.40	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
tert-Butylbenzene	ND	1.4	ug/L	SW846 8260A
Tetrachloroethene	ND	1.4	ug/L	SW846 8260A
Toluene	**0.40 F**	**1.1**	**ug/L**	**SW846 8260A**
trans-1,2-Dichloroethene	ND	0.60	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichlorofluoromethane	ND	0.80	ug/L	SW846 8260A
Vinyl chloride	ND	1.1	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	100	(75 - 125)
4-Bromofluorobenzene	98	(75 - 125)
1,2-Dichloroethane-d4	99	(62 - 139)
Dibromofluoromethane	95	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: SD13-06WG01

TOTAL Metals

Lot-Sample #...: B7G240171-001 Matrix.....: WG
Date Sampled...: 07/23/97 Date Received..: 07/24/97

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7205268						
Silver	ND	0.00020	mg/L	SW846 7761	07/25-08/11/97	CAWCA10W
		Dilution Factor: 1				
		Analysis Time..: 13:16		Analyst ID.....: 001863	Instrument ID..: F1	
Antimony	ND	0.0050	mg/L	SW846 6010A	07/25-07/31/97	CAWCA10M
		Dilution Factor: 1				
		Analysis Time..: 18:40		Analyst ID.....: 001702	Instrument ID..: P2	
Arsenic	ND	0.0050	mg/L	SW846 6010A	07/25/97	CAWCA10N
		Dilution Factor: 1				
		Analysis Time..: 16:40		Analyst ID.....: 001863	Instrument ID..: P2	
Lead	ND	0.0050	mg/L	SW846 6010A	07/25/97	CAWCA10P
		Dilution Factor: 1				
		Analysis Time..: 16:40		Analyst ID.....: 001863	Instrument ID..: P2	
Selenium	ND	0.0050	mg/L	SW846 6010A	07/25/97	CAWCA10Q
		Dilution Factor: 1				
		Analysis Time..: 16:40		Analyst ID.....: 001863	Instrument ID..: P2	
Thallium	ND	0.0020	mg/L	SW846 7841	07/25/97	CAWCA10R
		Dilution Factor: 1				
		Analysis Time..: 18:08		Analyst ID.....: 001702	Instrument ID..: F1	
Aluminum	ND	0.50	mg/L	SW846 6010A	07/25/97	CAWCA103
		Dilution Factor: 1				
		Analysis Time..: 16:40		Analyst ID.....: 001863	Instrument ID..: P2	
Barium	**0.25**	**0.020**	**mg/L**	**SW846 6010A**	**07/25/97**	**CAWCA104**
		Dilution Factor: 1				
		Analysis Time..: 16:40		Analyst ID.....: 001863	Instrument ID..: P2	
Beryllium	ND	0.0030	mg/L	SW846 6010A	07/25/97	CAWCA105
		Dilution Factor: 1				
		Analysis Time..: 16:40		Analyst ID.....: 001863	Instrument ID..: P2	
Calcium	**203**	**1.0**	**mg/L**	**SW846 6010A**	**07/25/97**	**CAWCA106**
		Dilution Factor: 1				
		Analysis Time..: 16:40		Analyst ID.....: 001863	Instrument ID..: P2	
Cadmium	ND	0.040	mg/L	SW846 6010A	07/25/97	CAWCA1
		Dilution Factor: 1				
		Analysis Time..: 16:40		Analyst ID.....: 001863	Instrument ID..: P2	

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: SD13-06WG01

TOTAL Metals

Lot-Sample #...: B7G240171-001 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Cobalt	ND	0.070	mg/L	SW846 6010A	07/25/97	CAWCA108
		Dilution Factor: 1				
		Analysis Time..: 16:40		Analyst ID.....: 001863	Instrument ID..: P2	
Chromium	ND	0.070	mg/L	SW846 6010A	07/25/97	CAWCA109
		Dilution Factor: 1				
		Analysis Time..: 16:40		Analyst ID.....: 001863	Instrument ID..: P2	
Copper	0.024 F	0.060	mg/L	SW846 6010A	07/25/97	CAWCA10A
		Dilution Factor: 1				
		Analysis Time..: 16:40		Analyst ID.....: 001863	Instrument ID..: P2	
Iron	1.6	0.070	mg/L	SW846 6010A	07/25/97	CAWCA10C
		Dilution Factor: 1				
		Analysis Time..: 16:40		Analyst ID.....: 001863	Instrument ID..: P2	
Potassium	0.40 F	5.0	mg/L	SW846 6010A	07/25/97	CAWCA10D
		Dilution Factor: 1				
		Analysis Time..: 14:27		Analyst ID.....: 001863	Instrument ID..: P1	
Magnesium	11.7	1.0	mg/L	SW846 6010A	07/25/97	CAWCA10E
		Dilution Factor: 1				
		Analysis Time..: 16:40		Analyst ID.....: 001863	Instrument ID..: P2	
Manganese	0.12	0.020	mg/L	SW846 6010A	07/25/97	CAWCA10F
		Dilution Factor: 1				
		Analysis Time..: 16:40		Analyst ID.....: 001863	Instrument ID..: P2	
Molybdenum	ND	0.080	mg/L	SW846 6010A	07/25/97	CAWCA10G
		Dilution Factor: 1				
		Analysis Time..: 16:40		Analyst ID.....: 001863	Instrument ID..: P2	
Sodium	31.0	1.0	mg/L	SW846 6010A	07/25/97	CAWCA10H
		Dilution Factor: 1				
		Analysis Time..: 14:27		Analyst ID.....: 001863	Instrument ID..: P1	
Nickel	ND	0.15	mg/L	SW846 6010A	07/25/97	CAWCA10J
		Dilution Factor: 1				
		Analysis Time..: 16:40		Analyst ID.....: 001863	Instrument ID..: P2	
Vanadium	ND	0.080	mg/L	SW846 6010A	07/25/97	CAWCA10K
		Dilution Factor: 1				
		Analysis Time..: 16:40		Analyst ID.....: 001863	Instrument ID..: P2	

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: SD13-06WG01

TOTAL Metals

Lot-Sample #...: B7G240171-001 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Zinc	0.076	0.020	mg/L	SW846 6010A	07/25-07/31/97	CAWCA10L

Dilution Factor: 1
Analysis Time..: 18:40 Analyst ID.....: 001702 Instrument ID..: P2

Prep Batch #...: 7205269

Mercury	ND	0.0010	mg/L	SW846 7470A	07/25/97	CAWCA101

Dilution Factor: 1
Analysis Time..: 17:33 Analyst ID.....: 001702 Instrument ID..: CV

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: OT-15CWG01

GC/MS Volatiles

Lot-Sample #...: B7G240171-002 Work Order #...: CAWCC10T Matrix.....: WG
Date Sampled...: 07/23/97 Date Received..: 07/24/97
Prep Date.....: 08/03/97 Analysis Date..: 08/03/97
Prep Batch #...: 7216155 Analysis Time..: 19:07
Dilution Factor: 1
Analyst ID.....: 007084 Instrument ID..: VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	0.80	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	0.40	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	0.40	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.2	ug/L	SW846 8260A
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	3.2	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	0.40	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	1.3	ug/L	SW846 8260A
1,2-Dichloroethane	ND	0.60	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.6	ug/L	SW846 8260A
1,2-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	0.60	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	0.50	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	1.2	ug/L	SW846 8260A
1,3-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1-Chlorohexane	ND	0.50	ug/L	SW846 8260A
2,2-Dichloropropane	ND	3.5	ug/L	SW846 8260A
2-Chlorotoluene	ND	0.40	ug/L	SW846 8260A
4-Chlorotoluene	ND	0.60	ug/L	SW846 8260A
Benzene	ND	0.40	ug/L	SW846 8260A
Bromobenzene	ND	0.30	ug/L	SW846 8260A
Bromochloromethane	ND	0.40	ug/L	SW846 8260A
Bromodichloromethane	ND	0.80	ug/L	SW846 8260A
Bromoform	ND	1.2	ug/L	SW846 8260A
Bromomethane	ND	1.1	ug/L	SW846 8260A
Carbon tetrachloride	ND	2.1	ug/L	SW846 8260A
Chlorobenzene	ND	0.40	ug/L	SW846 8260A
Chloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	**0.36**	**0.30**	**ug/L**	**SW846 8260A**
Chloromethane	ND	1.3	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	1.2	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A

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408 601

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: OT-15CWG01

GC/MS Volatiles

Lot-Sample #...: B7G240171-002 **Work Order #...:** CAWCC10T **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	0.50	ug/L	SW846 8260A
Dibromomethane	ND	2.4	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	**0.49 F**	**0.60**	**ug/L**	**SW846 8260A**
Hexachlorobutadiene	ND	1.1	ug/L	SW846 8260A
Isopropylbenzene	ND	0.50	ug/L	SW846 8260A
m-Xylene & p-Xylene	**0.79**	**0.50**	**ug/L**	**SW846 8260A**
Methylene chloride	ND	0.30	ug/L	SW846 8260A
n-Butylbenzene	ND	1.1	ug/L	SW846 8260A
n-Propylbenzene	ND	0.40	ug/L	SW846 8260A
Naphthalene	ND	0.40	ug/L	SW846 8260A
o-Xylene	**0.22 F**	**1.1**	**ug/L**	**SW846 8260A**
p-Isopropyltoluene	ND	1.2	ug/L	SW846 8260A
sec-Butylbenzene	ND	1.3	ug/L	SW846 8260A
Styrene	ND	0.40	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
tert-Butylbenzene	ND	1.4	ug/L	SW846 8260A
Tetrachloroethene	**1.2 F**	**1.4**	**ug/L**	**SW846 8260A**
Toluene	ND	1.1	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	0.60	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichlorofluoromethane	ND	0.80	ug/L	SW846 8260A
Vinyl chloride	ND	1.1	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	100	(75 - 125)
4-Bromofluorobenzene	95	(75 - 125)
1,2-Dichloroethane-d4	102	(62 - 139)
Dibromofluoromethane	96	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

408 602

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: OT-15CWG01

TOTAL Metals

Lot-Sample #...: B7G240171-002 Matrix.....: WG
Date Sampled...: 07/23/97 Date Received..: 07/24/97

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7205268						
Silver	ND	0.00020	mg/L	SW846 7761	07/25-08/11/97	CAWCC10U
		Dilution Factor: 1				
		Analysis Time..: 13:20		Analyst ID.....: 001863	Instrument ID..: F1	
Antimony	ND	0.0050	mg/L	SW846 6010A	07/25-07/31/97	CAWCC10M
		Dilution Factor: 1				
		Analysis Time..: 18:45		Analyst ID.....: 001702	Instrument ID..: P2	
Arsenic	ND	0.0050	mg/L	SW846 6010A	07/25/97	CAWCC10N
		Dilution Factor: 1				
		Analysis Time..: 16:46		Analyst ID.....: 001863	Instrument ID..: P2	
Lead	ND	0.0050	mg/L	SW846 6010A	07/25/97	CAWCC10P
		Dilution Factor: 1				
		Analysis Time..: 16:46		Analyst ID.....: 001863	Instrument ID..: P2	
Selenium	ND	0.0050	mg/L	SW846 6010A	07/25/97	CAWCC10Q
		Dilution Factor: 1				
		Analysis Time..: 16:46		Analyst ID.....: 001863	Instrument ID..: P2	
Thallium	ND	0.0020	mg/L	SW846 7841	07/25/97	CAWCC10R
		Dilution Factor: 1				
		Analysis Time..: 18:18		Analyst ID.....: 001702	Instrument ID..: F1	
Aluminum	ND	0.50	mg/L	SW846 6010A	07/25/97	CAWCC103
		Dilution Factor: 1				
		Analysis Time..: 16:46		Analyst ID.....: 001863	Instrument ID..: P2	
Barium	**0.18**	**0.020**	**mg/L**	**SW846 6010A**	**07/25/97**	**CAWCC104**
		Dilution Factor: 1				
		Analysis Time..: 16:46		Analyst ID.....: 001863	Instrument ID..: P2	
Beryllium	ND	0.0030	mg/L	SW846 6010A	07/25/97	CAWCC105
		Dilution Factor: 1				
		Analysis Time..: 16:46		Analyst ID.....: 001863	Instrument ID..: P2	
Calcium	**142**	**1.0**	**mg/L**	**SW846 6010A**	**07/25/97**	**CAWCC106**
		Dilution Factor: 1				
		Analysis Time..: 16:46		Analyst ID.....: 001863	Instrument ID..: P2	
Cadmium	ND	0.040	mg/L	SW846 6010A	07/25/97	CAWCC107
		Dilution Factor: 1				
		Analysis Time..: 16:46		Analyst ID.....: 001863	Instrument ID..: P2	

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: OT-15CWG01

TOTAL Metals

Lot-Sample #...: B7G240171-002 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Cobalt	ND	0.070	mg/L	SW846 6010A	07/25/97	CAWCC108
		Dilution Factor: 1				
		Analysis Time..: 16:46		Analyst ID.....: 001863	Instrument ID..: P2	
Chromium	ND	0.070	mg/L	SW846 6010A	07/25/97	CAWCC109
		Dilution Factor: 1				
		Analysis Time..: 16:46		Analyst ID.....: 001863	Instrument ID..: P2	
Copper	0.0052 F	0.060	mg/L	SW846 6010A	07/25/97	CAWCC10A
		Dilution Factor: 1				
		Analysis Time..: 16:46		Analyst ID.....: 001863	Instrument ID..: P2	
Iron	ND	0.070	mg/L	SW846 6010A	07/25/97	CAWCC10C
		Dilution Factor: 1				
		Analysis Time..: 16:46		Analyst ID.....: 001863	Instrument ID..: P2	
Potassium	2.4 F	5.0	mg/L	SW846 6010A	07/25/97	CAWCC1[illegible]
		Dilution Factor: 1				
		Analysis Time..: 14:33		Analyst ID.....: 001863	Instrument ID..: P1	
Magnesium	4.5	1.0	mg/L	SW846 6010A	07/25/97	CAWCC10E
		Dilution Factor: 1				
		Analysis Time..: 16:46		Analyst ID.....: 001863	Instrument ID..: P2	
Manganese	0.046	0.020	mg/L	SW846 6010A	07/25/97	CAWCC10F
		Dilution Factor: 1				
		Analysis Time..: 16:46		Analyst ID.....: 001863	Instrument ID..: P2	
Molybdenum	ND	0.080	mg/L	SW846 6010A	07/25/97	CAWCC10G
		Dilution Factor: 1				
		Analysis Time..: 16:46		Analyst ID.....: 001863	Instrument ID..: P2	
Sodium	21.1	1.0	mg/L	SW846 6010A	07/25/97	CAWCC10H
		Dilution Factor: 1				
		Analysis Time..: 14:33		Analyst ID.....: 001863	Instrument ID..: P1	
Nickel	ND	0.15	mg/L	SW846 6010A	07/25/97	CAWCC10J
		Dilution Factor: 1				
		Analysis Time..: 16:46		Analyst ID.....: 001863	Instrument ID..: P2	
Vanadium	ND	0.080	mg/L	SW846 6010A	07/25/97	CAWCC10K
		Dilution Factor: 1				
		Analysis Time..: 16:46		Analyst ID.....: 001863	Instrument ID..: P2	

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: OT-15CWG01

TOTAL Metals

Lot-Sample #...: B7G240171-002 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Zinc	0.026	0.020	mg/L	SW846 6010A	07/25-07/31/97	CAWCC10L
		Dilution Factor: 1				
		Analysis Time..: 18:45		Analyst ID.....: 001702	Instrument ID..: P2	

Prep Batch #...: 7205269

Mercury	ND	0.0010	mg/L	SW846 7470A	07/25/97	CAWCC101
		Dilution Factor: 1				
		Analysis Time..: 17:35		Analyst ID.....: 001702	Instrument ID..: CV	

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: USGA04-WG01

GC/MS Volatiles

Lot-Sample #...: B7G240171-003 Work Order #...: CAWCD10T Matrix.....: WG
Date Sampled...: 07/23/97 Date Received..: 07/24/97
Prep Date.....: 08/03/97 Analysis Date..: 08/03/97
Prep Batch #...: 7216155 Analysis Time..: 19:31
Dilution Factor: 1
Analyst ID.....: 007084 Instrument ID..: VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	0.80	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	0.40	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	0.40	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.2	ug/L	SW846 8260A
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	3.2	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	0.40	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	1.3	ug/L	SW846 8260A
1,2-Dichloroethane	ND	0.60	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.6	ug/L	SW846 8260A
1,2-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	0.60	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	0.50	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	1.2	ug/L	SW846 8260A
1,3-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1-Chlorohexane	ND	0.50	ug/L	SW846 8260A
2,2-Dichloropropane	ND	3.5	ug/L	SW846 8260A
2-Chlorotoluene	ND	0.40	ug/L	SW846 8260A
4-Chlorotoluene	ND	0.60	ug/L	SW846 8260A
Benzene	ND	0.40	ug/L	SW846 8260A
Bromobenzene	ND	0.30	ug/L	SW846 8260A
Bromochloromethane	ND	0.40	ug/L	SW846 8260A
Bromodichloromethane	ND	0.80	ug/L	SW846 8260A
Bromoform	ND	1.2	ug/L	SW846 8260A
Bromomethane	ND	1.1	ug/L	SW846 8260A
Carbon tetrachloride	ND	2.1	ug/L	SW846 8260A
Chlorobenzene	ND	0.40	ug/L	SW846 8260A
Chloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	0.30	ug/L	SW846 8260A
Chloromethane	ND	1.3	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	1.2	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A

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408 606

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: USGA04-WG01

GC/MS Volatiles

Lot-Sample #...: B7G240171-003 Work Order #...: CAWCD10T Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	0.50	ug/L	SW846 8260A
Dibromomethane	ND	2.4	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	**0.23 F**	**0.60**	**ug/L**	**SW846 8260A**
Hexachlorobutadiene	ND	1.1	ug/L	SW846 8260A
Isopropylbenzene	ND	0.50	ug/L	SW846 8260A
m-Xylene & p-Xylene	**0.37 F**	**0.50**	**ug/L**	**SW846 8260A**
Methylene chloride	ND	0.30	ug/L	SW846 8260A
n-Butylbenzene	ND	1.1	ug/L	SW846 8260A
n-Propylbenzene	ND	0.40	ug/L	SW846 8260A
Naphthalene	ND	0.40	ug/L	SW846 8260A
o-Xylene	**0.40 F**	**1.1**	**ug/L**	**SW846 8260A**
p-Isopropyltoluene	ND	1.2	ug/L	SW846 8260A
sec-Butylbenzene	ND	1.3	ug/L	SW846 8260A
Styrene	ND	0.40	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
tert-Butylbenzene	ND	1.4	ug/L	SW846 8260A
Tetrachloroethene	ND	1.4	ug/L	SW846 8260A
Toluene	ND	1.1	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	0.60	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichlorofluoromethane	ND	0.80	ug/L	SW846 8260A
Vinyl chloride	ND	1.1	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	104	(75 - 125)
4-Bromofluorobenzene	97	(75 - 125)
1,2-Dichloroethane-d4	104	(62 - 139)
Dibromofluoromethane	96	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

408 607

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: USGA04-WG01

TOTAL Metals

Lot-Sample #...: B7G240171-003 Matrix.....: WG
Date Sampled...: 07/23/97 Date Received..: 07/24/97

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7205268						
Silver	ND	0.00020	mg/L	SW846 7761	07/25-08/11/97	CAWCD10U
		Dilution Factor: 1				
		Analysis Time..: 13:24		Analyst ID.....: 001863	Instrument ID..: F1	
Antimony	ND	0.0050	mg/L	SW846 6010A	07/25-07/31/97	CAWCD10M
		Dilution Factor: 1				
		Analysis Time..: 18:51		Analyst ID.....: 001702	Instrument ID..: P2	
Arsenic	ND	0.0050	mg/L	SW846 6010A	07/25/97	CAWCD10N
		Dilution Factor: 1				
		Analysis Time..: 16:51		Analyst ID.....: 001863	Instrument ID..: P2	
Lead	ND	0.0050	mg/L	SW846 6010A	07/25/97	CAWCD10P
		Dilution Factor: 1				
		Analysis Time..: 16:51		Analyst ID.....: 001863	Instrument ID..: P2	
Selenium	ND	0.0050	mg/L	SW846 6010A	07/25/97	CAWCD10Q
		Dilution Factor: 1				
		Analysis Time..: 16:51		Analyst ID.....: 001863	Instrument ID..: P2	
Thallium	ND	0.0020	mg/L	SW846 7841	07/25/97	CAWCD10R
		Dilution Factor: 1				
		Analysis Time..: 18:23		Analyst ID.....: 001702	Instrument ID..: F1	
Aluminum	ND	0.50	mg/L	SW846 6010A	07/25/97	CAWCD103
		Dilution Factor: 1				
		Analysis Time..: 16:51		Analyst ID.....: 001863	Instrument ID..: P2	
Barium	**0.032**	**0.020**	**mg/L**	**SW846 6010A**	**07/25/97**	**CAWCD104**
		Dilution Factor: 1				
		Analysis Time..: 16:51		Analyst ID.....: 001863	Instrument ID..: P2	
Beryllium	ND	0.0030	mg/L	SW846 6010A	07/25/97	CAWCD105
		Dilution Factor: 1				
		Analysis Time..: 16:51		Analyst ID.....: 001863	Instrument ID..: P2	
Calcium	**110**	**1.0**	**mg/L**	**SW846 6010A**	**07/25/97**	**CAWCD106**
		Dilution Factor: 1				
		Analysis Time..: 16:51		Analyst ID.....: 001863	Instrument ID..: P2	
Cadmium	ND	0.040	mg/L	SW846 6010A	07/25/97	CAWCD1
		Dilution Factor: 1				
		Analysis Time..: 16:51		Analyst ID.....: 001863	Instrument ID..: P2	

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: USGA04-WG01

TOTAL Metals

Lot-Sample #...: B7G240171-003 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Cobalt	ND	0.070	mg/L	SW846 6010A	07/25/97	CAWCD108
		Dilution Factor: 1				
		Analysis Time..: 16:51		Analyst ID.....: 001863	Instrument ID..: P2	
Chromium	ND	0.070	mg/L	SW846 6010A	07/25/97	CAWCD109
		Dilution Factor: 1				
		Analysis Time..: 16:51		Analyst ID.....: 001863	Instrument ID..: P2	
Copper	0.0053 F	0.060	mg/L	SW846 6010A	07/25/97	CAWCD10A
		Dilution Factor: 1				
		Analysis Time..: 16:51		Analyst ID.....: 001863	Instrument ID..: P2	
Iron	0.61	0.070	mg/L	SW846 6010A	07/25/97	CAWCD10C
		Dilution Factor: 1				
		Analysis Time..: 16:51		Analyst ID.....: 001863	Instrument ID..: P2	
Potassium	4.9 F	5.0	mg/L	SW846 6010A	07/25/97	CAWCD10D
		Dilution Factor: 1				
		Analysis Time..: 14:39		Analyst ID.....: 001863	Instrument ID..: P1	
Magnesium	14.7	1.0	mg/L	SW846 6010A	07/25/97	CAWCD10E
		Dilution Factor: 1				
		Analysis Time..: 16:51		Analyst ID.....: 001863	Instrument ID..: P2	
Manganese	0.25	0.020	mg/L	SW846 6010A	07/25/97	CAWCD10F
		Dilution Factor: 1				
		Analysis Time..: 16:51		Analyst ID.....: 001863	Instrument ID..: P2	
Molybdenum	ND	0.080	mg/L	SW846 6010A	07/25/97	CAWCD10G
		Dilution Factor: 1				
		Analysis Time..: 16:51		Analyst ID.....: 001863	Instrument ID..: P2	
Sodium	35.3	1.0	mg/L	SW846 6010A	07/25/97	CAWCD10H
		Dilution Factor: 1				
		Analysis Time..: 14:39		Analyst ID.....: 001863	Instrument ID..: P1	
Nickel	ND	0.15	mg/L	SW846 6010A	07/25/97	CAWCD10J
		Dilution Factor: 1				
		Analysis Time..: 16:51		Analyst ID.....: 001863	Instrument ID..: P2	
Vanadium	ND	0.080	mg/L	SW846 6010A	07/25/97	CAWCD10K
		Dilution Factor: 1				
		Analysis Time..: 16:51		Analyst ID.....: 001863	Instrument ID..: P2	

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: USGA04-WG01

TOTAL Metals

Lot-Sample #...: B7G240171-003 **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Zinc	ND	0.020	mg/L	SW846 6010A	07/25-07/31/97	CAWCD10L
		Dilution Factor: 1				
		Analysis Time..: 18:51		Analyst ID.....: 001702	Instrument ID..: P2	

Prep Batch #...: 7205269

Mercury	ND	0.0010	mg/L	SW846 7470A	07/25/97	CAWCD101
		Dilution Factor: 1				
		Analysis Time..: 17:37		Analyst ID.....: 001702	Instrument ID..: CV	

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: EB072397

GC/MS Volatiles

Lot-Sample #...: B7G240171-004 **Work Order #...:** CAWCE10T **Matrix.....:** WQ
Date Sampled...: 07/23/97 **Date Received..:** 07/24/97
Prep Date.....: 08/03/97 **Analysis Date..:** 08/03/97
Prep Batch #...: 7216155 **Analysis Time..:** 19:55
Dilution Factor: 1
Analyst ID.....: 007084 **Instrument ID..:** VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	0.80	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	0.40	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	0.40	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.2	ug/L	SW846 8260A
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	3.2	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	0.40	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	1.3	ug/L	SW846 8260A
1,2-Dichloroethane	ND	0.60	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.6	ug/L	SW846 8260A
1,2-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	0.60	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	0.50	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	1.2	ug/L	SW846 8260A
1,3-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1-Chlorohexane	ND	0.50	ug/L	SW846 8260A
2,2-Dichloropropane	ND	3.5	ug/L	SW846 8260A
2-Chlorotoluene	ND	0.40	ug/L	SW846 8260A
4-Chlorotoluene	ND	0.60	ug/L	SW846 8260A
Benzene	ND	0.40	ug/L	SW846 8260A
Bromobenzene	ND	0.30	ug/L	SW846 8260A
Bromochloromethane	ND	0.40	ug/L	SW846 8260A
Bromodichloromethane	ND	0.80	ug/L	SW846 8260A
Bromoform	ND	1.2	ug/L	SW846 8260A
Bromomethane	ND	1.1	ug/L	SW846 8260A
Carbon tetrachloride	ND	2.1	ug/L	SW846 8260A
Chlorobenzene	ND	0.40	ug/L	SW846 8260A
Chloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	**1.7**	**0.30**	**ug/L**	**SW846 8260A**
Chloromethane	ND	1.3	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	1.2	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A

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408 611

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: EB072397

GC/MS Volatiles

Lot-Sample #...: B7G240171-004 Work Order #...: CAWCE10T Matrix.....: WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	0.50	ug/L	SW846 8260A
Dibromomethane	ND	2.4	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	ND	0.60	ug/L	SW846 8260A
Hexachlorobutadiene	ND	1.1	ug/L	SW846 8260A
Isopropylbenzene	ND	0.50	ug/L	SW846 8260A
m-Xylene & p-Xylene	ND	0.50	ug/L	SW846 8260A
Methylene chloride	ND	0.30	ug/L	SW846 8260A
n-Butylbenzene	ND	1.1	ug/L	SW846 8260A
n-Propylbenzene	ND	0.40	ug/L	SW846 8260A
Naphthalene	ND	0.40	ug/L	SW846 8260A
o-Xylene	ND	1.1	ug/L	SW846 8260A
p-Isopropyltoluene	ND	1.2	ug/L	SW846 8260A
sec-Butylbenzene	ND	1.3	ug/L	SW846 8260A
Styrene	ND	0.40	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
tert-Butylbenzene	ND	1.4	ug/L	SW846 8260A
Tetrachloroethene	ND	1.4	ug/L	SW846 8260A
Toluene	ND	1.1	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	0.60	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichlorofluoromethane	ND	0.80	ug/L	SW846 8260A
Vinyl chloride	ND	1.1	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	101	(75 - 125)
4-Bromofluorobenzene	93	(75 - 125)
1,2-Dichloroethane-d4	105	(62 - 139)
Dibromofluoromethane	99	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: EB072397

TOTAL Metals

Lot-Sample #...: B7G240171-004 Matrix.....: WQ
Date Sampled...: 07/23/97 Date Received..: 07/24/97

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7205268						
Silver	ND	0.00020	mg/L	SW846 7761	07/25-08/11/97	CAWCE10U
		Dilution Factor: 1				
		Analysis Time..: 13:33		Analyst ID.....: 001863	Instrument ID..: F1	
Antimony	ND	0.0050	mg/L	SW846 6010A	07/25-07/31/97	CAWCE10M
		Dilution Factor: 1				
		Analysis Time..: 18:56		Analyst ID.....: 001702	Instrument ID..: P2	
Arsenic	ND	0.0050	mg/L	SW846 6010A	07/25/97	CAWCE10N
		Dilution Factor: 1				
		Analysis Time..: 16:57		Analyst ID.....: 001863	Instrument ID..: P2	
Lead	ND	0.0050	mg/L	SW846 6010A	07/25/97	CAWCE10P
		Dilution Factor: 1				
		Analysis Time..: 16:57		Analyst ID.....: 001863	Instrument ID..: P2	
Selenium	ND	0.0050	mg/L	SW846 6010A	07/25/97	CAWCE10Q
		Dilution Factor: 1				
		Analysis Time..: 16:57		Analyst ID.....: 001863	Instrument ID..: P2	
Thallium	ND	0.0020	mg/L	SW846 7841	07/25/97	CAWCE10R
		Dilution Factor: 1				
		Analysis Time..: 18:32		Analyst ID.....: 001702	Instrument ID..: F1	
Aluminum	ND	0.50	mg/L	SW846 6010A	07/25/97	CAWCE103
		Dilution Factor: 1				
		Analysis Time..: 16:57		Analyst ID.....: 001863	Instrument ID..: P2	
Barium	ND	0.020	mg/L	SW846 6010A	07/25/97	CAWCE104
		Dilution Factor: 1				
		Analysis Time..: 16:57		Analyst ID.....: 001863	Instrument ID..: P2	
Beryllium	ND	0.0030	mg/L	SW846 6010A	07/25/97	CAWCE105
		Dilution Factor: 1				
		Analysis Time..: 16:57		Analyst ID.....: 001863	Instrument ID..: P2	
Calcium	**0.099 F**	**1.0**	**mg/L**	**SW846 6010A**	**07/25/97**	**CAWCE106**
		Dilution Factor: 1				
		Analysis Time..: 16:57		Analyst ID.....: 001863	Instrument ID..: P2	
Cadmium	ND	0.040	mg/L	SW846 6010A	07/25/97	CAWCE107
		Dilution Factor: 1				
		Analysis Time..: 16:57		Analyst ID.....: 001863	Instrument ID..: P2	

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: EB072397

TOTAL Metals

Lot-Sample #...: B7G240171-004 Matrix.....: WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Cobalt	ND	0.070	mg/L	SW846 6010A	07/25/97	CAWCE108
		Dilution Factor: 1				
		Analysis Time..: 16:57		Analyst ID.....: 001863	Instrument ID..: P2	
Chromium	ND	0.070	mg/L	SW846 6010A	07/25/97	CAWCE109
		Dilution Factor: 1				
		Analysis Time..: 16:57		Analyst ID.....: 001863	Instrument ID..: P2	
Copper	**0.0032 F**	**0.060**	**mg/L**	**SW846 6010A**	**07/25/97**	**CAWCE10A**
		Dilution Factor: 1				
		Analysis Time..: 16:57		Analyst ID.....: 001863	Instrument ID..: P2	
Iron	ND	0.070	mg/L	SW846 6010A	07/25/97	CAWCE10C
		Dilution Factor: 1				
		Analysis Time..: 16:57		Analyst ID.....: 001863	Instrument ID..: P2	
Potassium	**0.40 F**	**5.0**	**mg/L**	**SW846 6010A**	**07/25/97**	**CAWCE1[illegible]**
		Dilution Factor: 1				
		Analysis Time..: 14:45		Analyst ID.....: 001863	Instrument ID..: P1	
Magnesium	ND	1.0	mg/L	SW846 6010A	07/25/97	CAWCE10E
		Dilution Factor: 1				
		Analysis Time..: 16:57		Analyst ID.....: 001863	Instrument ID..: P2	
Manganese	ND	0.020	mg/L	SW846 6010A	07/25/97	CAWCE10F
		Dilution Factor: 1				
		Analysis Time..: 16:57		Analyst ID.....: 001863	Instrument ID..: P2	
Molybdenum	ND	0.080	mg/L	SW846 6010A	07/25/97	CAWCE10G
		Dilution Factor: 1				
		Analysis Time..: 16:57		Analyst ID.....: 001863	Instrument ID..: P2	
Sodium	ND	1.0	mg/L	SW846 6010A	07/25/97	CAWCE10H
		Dilution Factor: 1				
		Analysis Time..: 14:45		Analyst ID.....: 001863	Instrument ID..: P1	
Nickel	ND	0.15	mg/L	SW846 6010A	07/25/97	CAWCE10J
		Dilution Factor: 1				
		Analysis Time..: 16:57		Analyst ID.....: 001863	Instrument ID..: P2	
Vanadium	ND	0.080	mg/L	SW846 6010A	07/25/97	CAWCE10K
		Dilution Factor: 1				
		Analysis Time..: 16:57		Analyst ID.....: 001863	Instrument ID..: P2	

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408 614

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: EB072397

TOTAL Metals

Lot-Sample #...: B7G240171-004 Matrix.....: WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Zinc	ND	0.020	mg/L	SW846 6010A	07/25-07/31/97	CAWCE10L

Dilution Factor: 1
Analysis Time..: 18:56 Analyst ID.....: 001702 Instrument ID..: P2

Prep Batch #...: 7205269

Mercury	ND	0.0010	mg/L	SW846 7470A	07/25/97	CAWCE101

Dilution Factor: 1
Analysis Time..: 17:39 Analyst ID.....: 001702 Instrument ID..: CV

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

408 615

Quanterra
Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: SD13-04WG01

GC Volatiles

Lot-Sample #...: B7G240171-005 Work Order #...: CAWCF10A Matrix.....: WG
Date Sampled...: 07/23/97 Date Received..: 07/24/97
Prep Date.....: 08/01/97 Analysis Date..: 08/01/97
Prep Batch #...: 7216236 Analysis Time..: 16:23
Dilution Factor: 50
Analyst ID.....: 013512 Instrument ID..: K1A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Ethane	ND	25	ug/L	EPA-9 RSK-175
Ethene	ND	25	ug/L	EPA-9 RSK-175
Methane	820	25	ug/L	EPA-9 RSK-175

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

408 616

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: SD13-04WG01

GC Volatiles

Lot-Sample #...: B7G240171-005 Work Order #...: CAWCF108 Matrix.....: WG
Date Sampled...: 07/23/97 Date Received..: 07/24/97
Prep Date.....: 07/30/97 Analysis Date..: 07/30/97
Prep Batch #...: 7212147 Analysis Time..: 01:38
Dilution Factor: 1
Analyst ID.....: 001854 Instrument ID..: V2A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	2.0	ug/L	SW846 8020A
Ethylbenzene	0.43 F	2.0	ug/L	SW846 8020A
Toluene	1.3 F	2.0	ug/L	SW846 8020A
Xylenes (total)	3.4	2.0	ug/L	SW846 8020A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	65	(46 - 136)
Bromofluorobenzene	76	(48 - 138)
Fluorobenzene	61	(44 - 165)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

408 617

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: SD13-04WG01

General Chemistry

Lot-Sample #...: B7G240171-005 Work Order #...: CAWCF Matrix.....: WG
Date Sampled...: 07/23/97 Date Received..: 07/24/97

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH 4.5	410	10	mg/L	MCAWW 310.1	08/04/97	7217127
		Dilution Factor: 1				
		Analysis Time..: 10:51		Analyst ID.....: 090000	Instrument ID..: ISE	
Bromide	0.93	0.20	mg/L	SW846 9056	08/05/97	7219170
		Dilution Factor: 1				
		Analysis Time..: 16:23		Analyst ID.....: 004003	Instrument ID..: IC	
Chloride	27.0	0.20	mg/L	SW846 9056	08/05/97	7219172
		Dilution Factor: 1				
		Analysis Time..: 16:23		Analyst ID.....: 004003	Instrument ID..: IC	
Sulfate	2.2	0.50	mg/L	SW846 9056	08/05/97	7219173
		Dilution Factor: 1				
		Analysis Time..: 16:23		Analyst ID.....: 004003	Instrument ID..: IC	
Total Organic Carbon	11	1	mg/L	SW846 9060	08/04/97	7217132
		Dilution Factor: 1				
		Analysis Time..: 17:20		Analyst ID.....: 004003	Instrument ID..: TOC	

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: SD13-02WG01

GC Volatiles

Lot-Sample #...: B7G240171-006 Work Order #...: CAWCJ104 Matrix.....: WG
Date Sampled...: 07/23/97 Date Received..: 07/24/97
Prep Date.....: 08/01/97 Analysis Date..: 08/01/97
Prep Batch #...: 7216236 Analysis Time..: 16:32
Dilution Factor: 10
Analyst ID.....: 013512 Instrument ID..: K1A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Ethane	ND	5.0	ug/L	EPA-9 RSK-175
Ethene	ND	5.0	ug/L	EPA-9 RSK-175
Methane	380	5.0	ug/L	EPA-9 RSK-175

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

408 619

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: SD13-02WG01

GC Volatiles

Lot-Sample #...: B7G240171-006 Work Order #...: CAWCJ101 Matrix.....: WG
Date Sampled...: 07/23/97 Date Received..: 07/24/97
Prep Date.....: 07/29/97 Analysis Date..: 07/29/97
Prep Batch #...: 7212147 Analysis Time..: 19:55
Dilution Factor: 1
Analyst ID.....: 001854 Instrument ID..: V2A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	2.0	ug/L	SW846 8020A
Ethylbenzene	ND	2.0	ug/L	SW846 8020A
Toluene	ND	2.0	ug/L	SW846 8020A
Xylenes (total)	ND	2.0	ug/L	SW846 8020A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	89	(46 - 136)
Bromofluorobenzene	87	(48 - 138)
Fluorobenzene	95	(44 - 165)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

408 620

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: SD13-02WG01

General Chemistry

Lot-Sample #...: B7G240171-006 Work Order #...: CAWCJ Matrix.....: WG
Date Sampled...: 07/23/97 Date Received..: 07/24/97

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH 4.5	360	10	mg/L	MCAWW 310.1	08/04/97	7217127
		Dilution Factor: 1				
		Analysis Time..: 10:51		Analyst ID.....: 090000	Instrument ID..: ISE	
Bromide	0.90	0.20	mg/L	SW846 9056	08/05/97	7219170
		Dilution Factor: 1				
		Analysis Time..: 16:35		Analyst ID.....: 004003	Instrument ID..: IC	
Chloride	21.3	0.20	mg/L	SW846 9056	08/05/97	7219172
		Dilution Factor: 1				
		Analysis Time..: 16:35		Analyst ID.....: 004003	Instrument ID..: IC	
Sulfate	3.6	0.50	mg/L	SW846 9056	08/05/97	7219173
		Dilution Factor: 1				
		Analysis Time..: 16:35		Analyst ID.....: 004003	Instrument ID..: IC	
Total Organic Carbon	4	1	mg/L	SW846 9060	08/04/97	7217132
		Dilution Factor: 1				
		Analysis Time..: 17:53		Analyst ID.....: 004003	Instrument ID..: TOC	

Quanterra
Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-03WG01

GC Volatiles

Lot-Sample #...: B7G240171-007 Work Order #...: CAWCK104 Matrix.....: WG
Date Sampled...: 07/23/97 Date Received..: 07/24/97
Prep Date.....: 08/01/97 Analysis Date..: 08/01/97
Prep Batch #...: 7216236 Analysis Time..: 15:59
Dilution Factor: 5
Analyst ID.....: 013512 Instrument ID..: K1A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Ethane	ND	2.5	ug/L	EPA-9 RSK-175
Ethene	ND	2.5	ug/L	EPA-9 RSK-175
Methane	160	2.5	ug/L	EPA-9 RSK-175

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

408 622

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-03WG01

GC Volatiles

Lot-Sample #...: B7G240171-007 Work Order #...: CAWCK101 Matrix.....: WG
Date Sampled...: 07/23/97 Date Received..: 07/24/97
Prep Date.....: 07/29/97 Analysis Date..: 07/29/97
Prep Batch #...: 7212147 Analysis Time..: 21:42
Dilution Factor: 1
Analyst ID.....: 001854 Instrument ID..: V2A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	2.0	ug/L	SW846 8020A
Ethylbenzene	ND	2.0	ug/L	SW846 8020A
Toluene	**0.14 F**	**2.0**	**ug/L**	**SW846 8020A**
Xylenes (total)	ND	2.0	ug/L	SW846 8020A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	82	(46 - 136)
Bromofluorobenzene	86	(48 - 138)
Fluorobenzene	96	(44 - 165)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

408 623

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-03WG01

General Chemistry

Lot-Sample #...: B7G240171-007 Work Order #...: CAWCK Matrix.....: WG
Date Sampled...: 07/23/97 Date Received..: 07/24/97

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH 4.5	290	10	mg/L	MCAWW 310.1	08/04/97	7217127
	Dilution Factor: 1					
	Analysis Time..: 10:51			Analyst ID.....: 090000	Instrument ID..: ISE	
Bromide	0.76	0.20	mg/L	SW846 9056	08/05/97	7219170
	Dilution Factor: 1					
	Analysis Time..: 16:46			Analyst ID.....: 004003	Instrument ID..: IC	
Chloride	30.0	0.20	mg/L	SW846 9056	08/05/97	7219172
	Dilution Factor: 1					
	Analysis Time..: 16:46			Analyst ID.....: 004003	Instrument ID..: IC	
Sulfate	31.5	0.50	mg/L	SW846 9056	08/05/97	7219173
	Dilution Factor: 1					
	Analysis Time..: 16:46			Analyst ID.....: 004003	Instrument ID..: IC	
Total Organic Carbon	2	1	mg/L	SW846 9060	08/04/97	7217132
	Dilution Factor: 1					
	Analysis Time..: 18:27			Analyst ID.....: 004003	Instrument ID..: TOC	

408 624

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: DUP05WG01

GC Volatiles

Lot-Sample #...: B7G240171-008 Work Order #...: CAWCL10W Matrix.....: WG
Date Sampled...: 07/23/97 Date Received..: 07/24/97
Prep Date.....: 08/01/97 Analysis Date..: 08/01/97
Prep Batch #...: 7216236 Analysis Time..: 15:04
Dilution Factor: 1
Analyst ID.....: 013512 Instrument ID..: K1A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Ethane	ND	0.50	ug/L	EPA-9 RSK-175
Ethene	ND	0.50	ug/L	EPA-9 RSK-175
Methane	0.28 F	0.50	ug/L	EPA-9 RSK-175

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: DUP05WG01

GC/MS Volatiles

Lot-Sample #...: B7G240171-008 **Work Order #...:** CAWCL10V **Matrix.....:** WG
Date Sampled...: 07/23/97 **Date Received..:** 07/24/97
Prep Date.....: 08/03/97 **Analysis Date..:** 08/03/97
Prep Batch #...: 7216155 **Analysis Time..:** 20:20
Dilution Factor: 1
Analyst ID.....: 007084 **Instrument ID..:** VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	0.80	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	0.40	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	0.40	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.2	ug/L	SW846 8260A
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	3.2	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	0.40	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	1.3	ug/L	SW846 8260A
1,2-Dichloroethane	ND	0.60	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.6	ug/L	SW846 8260A
1,2-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	0.60	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	0.50	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	1.2	ug/L	SW846 8260A
1,3-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1-Chlorohexane	ND	0.50	ug/L	SW846 8260A
2,2-Dichloropropane	ND	3.5	ug/L	SW846 8260A
2-Chlorotoluene	ND	0.40	ug/L	SW846 8260A
4-Chlorotoluene	ND	0.60	ug/L	SW846 8260A
Benzene	ND	0.40	ug/L	SW846 8260A
Bromobenzene	ND	0.30	ug/L	SW846 8260A
Bromochloromethane	ND	0.40	ug/L	SW846 8260A
Bromodichloromethane	ND	0.80	ug/L	SW846 8260A
Bromoform	ND	1.2	ug/L	SW846 8260A
Bromomethane	ND	1.1	ug/L	SW846 8260A
Carbon tetrachloride	ND	2.1	ug/L	SW846 8260A
Chlorobenzene	ND	0.40	ug/L	SW846 8260A
Chloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	0.30	ug/L	SW846 8260A
Chloromethane	ND	1.3	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	1.2	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: DUP05WG01

GC/MS Volatiles

Lot-Sample #...: B7G240171-008 **Work Order #...:** CAWCL10V **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	0.50	ug/L	SW846 8260A
Dibromomethane	ND	2.4	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	ND	0.60	ug/L	SW846 8260A
Hexachlorobutadiene	ND	1.1	ug/L	SW846 8260A
Isopropylbenzene	ND	0.50	ug/L	SW846 8260A
m-Xylene & p-Xylene	ND	0.50	ug/L	SW846 8260A
Methylene chloride	ND	0.30	ug/L	SW846 8260A
n-Butylbenzene	ND	1.1	ug/L	SW846 8260A
n-Propylbenzene	ND	0.40	ug/L	SW846 8260A
Naphthalene	ND	0.40	ug/L	SW846 8260A
o-Xylene	ND	1.1	ug/L	SW846 8260A
p-Isopropyltoluene	ND	1.2	ug/L	SW846 8260A
sec-Butylbenzene	ND	1.3	ug/L	SW846 8260A
Styrene	ND	0.40	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
tert-Butylbenzene	ND	1.4	ug/L	SW846 8260A
Tetrachloroethene	ND	1.4	ug/L	SW846 8260A
Toluene	ND	1.1	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	0.60	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichlorofluoromethane	ND	0.80	ug/L	SW846 8260A
Vinyl chloride	ND	1.1	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	105	(75 - 125)
4-Bromofluorobenzene	96	(75 - 125)
1,2-Dichloroethane-d4	107	(62 - 139)
Dibromofluoromethane	100	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: DUP05WG01

TOTAL Metals

Lot-Sample #...: B7G240171-008 Matrix.....: WG
Date Sampled...: 07/23/97 Date Received..: 07/24/97

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7205268						
Silver	ND	0.00020	mg/L	SW846 7761	07/25-08/11/97	CAWCL112
		Dilution Factor: 1				
		Analysis Time..: 13:50		Analyst ID.....: 001863	Instrument ID..: F1	
Antimony	ND	0.0050	mg/L	SW846 6010A	07/25-07/31/97	CAWCL10P
		Dilution Factor: 1				
		Analysis Time..: 19:02		Analyst ID.....: 001702	Instrument ID..: P2	
Arsenic	ND	0.0050	mg/L	SW846 6010A	07/25/97	CAWCL10Q
		Dilution Factor: 1				
		Analysis Time..: 17:22		Analyst ID.....: 001863	Instrument ID..: P2	
Lead	ND	0.0050	mg/L	SW846 6010A	07/25/97	CAWCL10R
		Dilution Factor: 1				
		Analysis Time..: 17:22		Analyst ID.....: 001863	Instrument ID..: P2	
Selenium	ND	0.0050	mg/L	SW846 6010A	07/25/97	CAWCL10T
		Dilution Factor: 1				
		Analysis Time..: 17:22		Analyst ID.....: 001863	Instrument ID..: P2	
Thallium	ND	0.0020	mg/L	SW846 7841	07/25/97	CAWCL10U
		Dilution Factor: 1				
		Analysis Time..: 18:37		Analyst ID.....: 001702	Instrument ID..: F1	
Aluminum	ND	0.50	mg/L	SW846 6010A	07/25/97	CAWCL105
		Dilution Factor: 1				
		Analysis Time..: 17:22		Analyst ID.....: 001863	Instrument ID..: P2	
Barium	**0.12**	**0.020**	**mg/L**	**SW846 6010A**	**07/25/97**	**CAWCL10C**
		Dilution Factor: 1				
		Analysis Time..: 17:22		Analyst ID.....: 001863	Instrument ID..: P2	
Beryllium	ND	0.0030	mg/L	SW846 6010A	07/25/97	CAWCL107
		Dilution Factor: 1				
		Analysis Time..: 17:22		Analyst ID.....: 001863	Instrument ID..: P2	
Calcium	**134**	**1.0**	**mg/L**	**SW846 6010A**	**07/25/97**	**CAWCL108**
		Dilution Factor: 1				
		Analysis Time..: 17:22		Analyst ID.....: 001863	Instrument ID..: P2	
Cadmium	ND	0.040	mg/L	SW846 6010A	07/25/97	CAWCL1
		Dilution Factor: 1				
		Analysis Time..: 17:22		Analyst ID.....: 001863	Instrument ID..: P2	

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: DUP05WG01

TOTAL Metals

Lot-Sample #...: B7G240171-008 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Cobalt	ND	0.070	mg/L	SW846 6010A	07/25/97	CAWCL10A
		Dilution Factor: 1				
		Analysis Time..: 17:22		Analyst ID.....: 001863	Instrument ID..: P2	
Chromium	ND	0.070	mg/L	SW846 6010A	07/25/97	CAWCL10C
		Dilution Factor: 1				
		Analysis Time..: 17:22		Analyst ID.....: 001863	Instrument ID..: P2	
Copper	0.0038 F	0.060	mg/L	SW846 6010A	07/25/97	CAWCL10D
		Dilution Factor: 1				
		Analysis Time..: 17:22		Analyst ID.....: 001863	Instrument ID..: P2	
Iron	0.043 F	0.070	mg/L	SW846 6010A	07/25/97	CAWCL10E
		Dilution Factor: 1				
		Analysis Time..: 17:22		Analyst ID.....: 001863	Instrument ID..: P2	
Potassium	0.60 F	5.0	mg/L	SW846 6010A	07/25/97	CAWCL10F
		Dilution Factor: 1				
		Analysis Time..: 15:11		Analyst ID.....: 001863	Instrument ID..: P1	
Magnesium	7.1	1.0	mg/L	SW846 6010A	07/25/97	CAWCL10G
		Dilution Factor: 1				
		Analysis Time..: 17:22		Analyst ID.....: 001863	Instrument ID..: P2	
Manganese	0.054	0.020	mg/L	SW846 6010A	07/25/97	CAWCL10H
		Dilution Factor: 1				
		Analysis Time..: 17:22		Analyst ID.....: 001863	Instrument ID..: P2	
Molybdenum	ND	0.080	mg/L	SW846 6010A	07/25/97	CAWCL10J
		Dilution Factor: 1				
		Analysis Time..: 17:22		Analyst ID.....: 001863	Instrument ID..: P2	
Sodium	18.9	1.0	mg/L	SW846 6010A	07/25/97	CAWCL10K
		Dilution Factor: 1				
		Analysis Time..: 15:11		Analyst ID.....: 001863	Instrument ID..: P1	
Nickel	ND	0.15	mg/L	SW846 6010A	07/25/97	CAWCL10L
		Dilution Factor: 1				
		Analysis Time..: 17:22		Analyst ID.....: 001863	Instrument ID..: P2	
Vanadium	0.011 F	0.080	mg/L	SW846 6010A	07/25/97	CAWCL10M
		Dilution Factor: 1				
		Analysis Time..: 17:22		Analyst ID.....: 001863	Instrument ID..: P2	

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: DUP05WG01

TOTAL Metals

Lot-Sample #...: B7G240171-008 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Zinc	ND	0.020	mg/L	SW846 6010A	07/25-07/31/97	CAWCL10N

Dilution Factor: 1
Analysis Time..: 19:02 Analyst ID.....: 001702 Instrument ID..: P2

Prep Batch #...: 7205269

Mercury	ND	0.0010	mg/L	SW846 7470A	07/25/97	CAWCL103

Dilution Factor: 1
Analysis Time..: 17:42 Analyst ID.....: 001702 Instrument ID..: CV

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: DUP05WG01

General Chemistry

Lot-Sample #...: B7G240171-008 Work Order #...: CAWCL Matrix.....: WG
Date Sampled...: 07/23/97 Date Received..: 07/24/97

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH 4.5	350	10	mg/L	MCAWW 310.1	08/04/97	7217127
		Dilution Factor: 1				
		Analysis Time..: 10:51		Analyst ID.....: 090000	Instrument ID..: ISE	
Bromide	0.84	0.20	mg/L	SW846 9056	08/05-08/06/97	7219170
		Dilution Factor: 1				
		Analysis Time..: 08:16		Analyst ID.....: 004003	Instrument ID..: IC	
Chloride	22.7	0.20	mg/L	SW846 9056	08/05-08/06/97	7219172
		Dilution Factor: 1				
		Analysis Time..: 08:16		Analyst ID.....: 004003	Instrument ID..: IC	
Sulfate	24.7	0.50	mg/L	SW846 9056	08/05-08/06/97	7219173
		Dilution Factor: 1				
		Analysis Time..: 08:16		Analyst ID.....: 004003	Instrument ID..: IC	
Total Organic Carbon	2	1	mg/L	SW846 9060	08/04/97	7217132
		Dilution Factor: 1				
		Analysis Time..: 19:01		Analyst ID.....: 004003	Instrument ID..: TOC	

Quanterra
Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-26WG01

GC Volatiles

Lot-Sample #...: B7G240171-009 Work Order #...: CAWCM10W Matrix.....: WG
Date Sampled...: 07/23/97 Date Received..: 07/24/97
Prep Date.....: 08/01/97 Analysis Date..: 08/01/97
Prep Batch #...: 7216236 Analysis Time..: 15:07
Dilution Factor: 1
Analyst ID.....: 013512 Instrument ID..: K1A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Ethane	ND	0.50	ug/L	EPA-9 RSK-175
Ethene	ND	0.50	ug/L	EPA-9 RSK-175
Methane	0.40 F	0.50	ug/L	EPA-9 RSK-175

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-26WG01

GC/MS Volatiles

Lot-Sample #...: B7G240171-009 Work Order #...: CAWCM10V Matrix.....: WG
Date Sampled...: 07/23/97 Date Received..: 07/24/97
Prep Date.....: 08/03/97 Analysis Date..: 08/03/97
Prep Batch #...: 7216155 Analysis Time..: 20:44
Dilution Factor: 1
Analyst ID.....: 007084 Instrument ID..: VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	0.80	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	0.40	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	0.40	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.2	ug/L	SW846 8260A
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	3.2	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	0.40	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	1.3	ug/L	SW846 8260A
1,2-Dichloroethane	ND	0.60	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.6	ug/L	SW846 8260A
1,2-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	0.60	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	0.50	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	1.2	ug/L	SW846 8260A
1,3-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1-Chlorohexane	ND	0.50	ug/L	SW846 8260A
2,2-Dichloropropane	ND	3.5	ug/L	SW846 8260A
2-Chlorotoluene	ND	0.40	ug/L	SW846 8260A
4-Chlorotoluene	ND	0.60	ug/L	SW846 8260A
Benzene	ND	0.40	ug/L	SW846 8260A
Bromobenzene	ND	0.30	ug/L	SW846 8260A
Bromochloromethane	ND	0.40	ug/L	SW846 8260A
Bromodichloromethane	ND	0.80	ug/L	SW846 8260A
Bromoform	ND	1.2	ug/L	SW846 8260A
Bromomethane	ND	1.1	ug/L	SW846 8260A
Carbon tetrachloride	ND	2.1	ug/L	SW846 8260A
Chlorobenzene	ND	0.40	ug/L	SW846 8260A
Chloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	0.30	ug/L	SW846 8260A
Chloromethane	ND	1.3	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	1.2	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-26WG01

GC/MS Volatiles

Lot-Sample #...: B7G240171-009 Work Order #...: CAWCM10V Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	0.50	ug/L	SW846 8260A
Dibromomethane	ND	2.4	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	ND	0.60	ug/L	SW846 8260A
Hexachlorobutadiene	ND	1.1	ug/L	SW846 8260A
Isopropylbenzene	ND	0.50	ug/L	SW846 8260A
m-Xylene & p-Xylene	ND	0.50	ug/L	SW846 8260A
Methylene chloride	ND	0.30	ug/L	SW846 8260A
n-Butylbenzene	ND	1.1	ug/L	SW846 8260A
n-Propylbenzene	ND	0.40	ug/L	SW846 8260A
Naphthalene	ND	0.40	ug/L	SW846 8260A
o-Xylene	ND	1.1	ug/L	SW846 8260A
p-Isopropyltoluene	ND	1.2	ug/L	SW846 8260A
sec-Butylbenzene	ND	1.3	ug/L	SW846 8260A
Styrene	ND	0.40	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
tert-Butylbenzene	ND	1.4	ug/L	SW846 8260A
Tetrachloroethene	ND	1.4	ug/L	SW846 8260A
Toluene	ND	1.1	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	0.60	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichlorofluoromethane	ND	0.80	ug/L	SW846 8260A
Vinyl chloride	ND	1.1	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	103	(75 - 125)
4-Bromofluorobenzene	95	(75 - 125)
1,2-Dichloroethane-d4	106	(62 - 139)
Dibromofluoromethane	100	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-26WG01

TOTAL Metals

Lot-Sample #...: B7G240171-009 Matrix.....: WG
Date Sampled...: 07/23/97 Date Received..: 07/24/97

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7205268						
Silver	ND	0.00020	mg/L	SW846 7761	07/25-08/11/97	CAWCM112
		Dilution Factor: 1				
		Analysis Time..: 13:54		Analyst ID.....: 001863	Instrument ID..: F1	
Antimony	ND	0.0050	mg/L	SW846 6010A	07/25-07/31/97	CAWCM10P
		Dilution Factor: 1				
		Analysis Time..: 19:07		Analyst ID.....: 001702	Instrument ID..: P2	
Arsenic	ND	0.0050	mg/L	SW846 6010A	07/25/97	CAWCM10Q
		Dilution Factor: 1				
		Analysis Time..: 17:28		Analyst ID.....: 001863	Instrument ID..: P2	
Lead	ND	0.0050	mg/L	SW846 6010A	07/25/97	CAWCM10R
		Dilution Factor: 1				
		Analysis Time..: 17:28		Analyst ID.....: 001863	Instrument ID..: P2	
Selenium	ND	0.0050	mg/L	SW846 6010A	07/25/97	CAWCM10T
		Dilution Factor: 1				
		Analysis Time..: 17:28		Analyst ID.....: 001863	Instrument ID..: P2	
Thallium	ND	0.0020	mg/L	SW846 7841	07/25/97	CAWCM10U
		Dilution Factor: 1				
		Analysis Time..: 18:42		Analyst ID.....: 001702	Instrument ID..: F1	
Aluminum	ND	0.50	mg/L	SW846 6010A	07/25/97	CAWCM105
		Dilution Factor: 1				
		Analysis Time..: 17:28		Analyst ID.....: 001863	Instrument ID..: P2	
Barium	**0.13**	**0.020**	**mg/L**	**SW846 6010A**	**07/25/97**	**CAWCM106**
		Dilution Factor: 1				
		Analysis Time..: 17:28		Analyst ID.....: 001863	Instrument ID..: P2	
Beryllium	ND	0.0030	mg/L	SW846 6010A	07/25/97	CAWCM107
		Dilution Factor: 1				
		Analysis Time..: 17:28		Analyst ID.....: 001863	Instrument ID..: P2	
Calcium	**141**	**1.0**	**mg/L**	**SW846 6010A**	**07/25/97**	**CAWCM108**
		Dilution Factor: 1				
		Analysis Time..: 17:28		Analyst ID.....: 001863	Instrument ID..: P2	
Cadmium	ND	0.040	mg/L	SW846 6010A	07/25/97	CAWCM109
		Dilution Factor: 1				
		Analysis Time..: 17:28		Analyst ID.....: 001863	Instrument ID..: P2	

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-26WG01

TOTAL Metals

Lot-Sample #...: B7G240171-009 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Cobalt	ND	0.070	mg/L	SW846 6010A	07/25/97	CAWCM10A
		Dilution Factor: 1				
		Analysis Time..: 17:28		Analyst ID.....: 001863	Instrument ID..: P2	
Chromium	ND	0.070	mg/L	SW846 6010A	07/25/97	CAWCM10C
		Dilution Factor: 1				
		Analysis Time..: 17:28		Analyst ID.....: 001863	Instrument ID..: P2	
Copper	0.0033 F	0.060	mg/L	SW846 6010A	07/25/97	CAWCM10D
		Dilution Factor: 1				
		Analysis Time..: 17:28		Analyst ID.....: 001863	Instrument ID..: P2	
Iron	0.057 F	0.070	mg/L	SW846 6010A	07/25/97	CAWCM10E
		Dilution Factor: 1				
		Analysis Time..: 17:28		Analyst ID.....: 001863	Instrument ID..: P2	
Potassium	0.72 F	5.0	mg/L	SW846 6010A	07/25/97	CAWCM10F
		Dilution Factor: 1				
		Analysis Time..: 15:16		Analyst ID.....: 001863	Instrument ID..: P1	
Magnesium	7.3	1.0	mg/L	SW846 6010A	07/25/97	CAWCM10G
		Dilution Factor: 1				
		Analysis Time..: 17:28		Analyst ID.....: 001863	Instrument ID..: P2	
Manganese	0.055	0.020	mg/L	SW846 6010A	07/25/97	CAWCM10H
		Dilution Factor: 1				
		Analysis Time..: 17:28		Analyst ID.....: 001863	Instrument ID..: P2	
Molybdenum	ND	0.080	mg/L	SW846 6010A	07/25/97	CAWCM10J
		Dilution Factor: 1				
		Analysis Time..: 17:28		Analyst ID.....: 001863	Instrument ID..: P2	
Sodium	19.4	1.0	mg/L	SW846 6010A	07/25/97	CAWCM10K
		Dilution Factor: 1				
		Analysis Time..: 15:16		Analyst ID.....: 001863	Instrument ID..: P1	
Nickel	ND	0.15	mg/L	SW846 6010A	07/25/97	CAWCM10L
		Dilution Factor: 1				
		Analysis Time..: 17:28		Analyst ID.....: 001863	Instrument ID..: P2	
Vanadium	0.011 F	0.080	mg/L	SW846 6010A	07/25/97	CAWCM10M
		Dilution Factor: 1				
		Analysis Time..: 17:28		Analyst ID.....: 001863	Instrument ID..: P2	

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-26WG01

TOTAL Metals

Lot-Sample #...: B7G240171-009 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Zinc	ND	0.020	mg/L	SW846 6010A	07/25-07/31/97	CAWCM10N
		Dilution Factor: 1				
		Analysis Time..: 19:07		Analyst ID.....: 001702	Instrument ID..: P2	

Prep Batch #...: 7205269

Mercury	ND	0.0010	mg/L	SW846 7470A	07/25/97	CAWCM103
		Dilution Factor: 1				
		Analysis Time..: 17:44		Analyst ID.....: 001702	Instrument ID..: CV	

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

408 637

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-26WG01

General Chemistry

Lot-Sample #...: B7G240171-009 Work Order #...: CAWCM Matrix.....: WG
Date Sampled...: 07/23/97 Date Received..: 07/24/97

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH 4.5	360	10	mg/L	MCAWW 310.1	08/04/97	7217127
		Dilution Factor: 1				
		Analysis Time..: 10:51		Analyst ID.....: 090000	Instrument ID..: ISE	
Bromide	0.79	0.20	mg/L	SW846 9056	08/05-08/06/97	7219170
		Dilution Factor: 1				
		Analysis Time..: 08:28		Analyst ID.....: 004003	Instrument ID..: IC	
Chloride	22.5	0.20	mg/L	SW846 9056	08/05-08/06/97	7219172
		Dilution Factor: 1				
		Analysis Time..: 08:28		Analyst ID.....: 004003	Instrument ID..: IC	
Sulfate	24.7	0.50	mg/L	SW846 9056	08/05-08/06/97	7219173
		Dilution Factor: 1				
		Analysis Time..: 08:28		Analyst ID.....: 004003	Instrument ID..: IC	
Total Organic Carbon	2	1	mg/L	SW846 9060	08/04/97	7217132
		Dilution Factor: 1				
		Analysis Time..: 19:35		Analyst ID.....: 004003	Instrument ID..: TOC	

408 638

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: TB-072397

GC Volatiles

Lot-Sample #...: B7G240171-010 Work Order #...: CAWCN103 Matrix.....: WQ
Date Sampled...: 07/23/97 Date Received..: 07/24/97
Prep Date.....: 08/01/97 Analysis Date..: 08/01/97
Prep Batch #...: 7216236 Analysis Time..: 14:57
Dilution Factor: 1
Analyst ID.....: 013512 Instrument ID..: K1A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Ethane	ND	0.50	ug/L	EPA-9 RSK-175
Ethene	0.14 F	0.50	ug/L	EPA-9 RSK-175
Methane	0.24 F	0.50	ug/L	EPA-9 RSK-175

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

408 639

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: TB-072397

GC Volatiles

Lot-Sample #...: B7G240171-010 Work Order #...: CAWCN101 Matrix.....: WQ
Date Sampled...: 07/23/97 Date Received..: 07/24/97
Prep Date.....: 07/29/97 Analysis Date..: 07/29/97
Prep Batch #...: 7212147 Analysis Time..: 22:07
Dilution Factor: 1
Analyst ID.....: 001854 Instrument ID..: V2A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	2.0	ug/L	SW846 8020A
Ethylbenzene	ND	2.0	ug/L	SW846 8020A
Toluene	0.15 F	2.0	ug/L	SW846 8020A
Xylenes (total)	ND	2.0	ug/L	SW846 8020A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	83	(46 - 136)
Bromofluorobenzene	85	(48 - 138)
Fluorobenzene	96	(44 - 165)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: TB-072397

GC/MS Volatiles

Lot-Sample #...: B7G240171-010 Work Order #...: CAWCN102 Matrix.....: WQ
Date Sampled...: 07/23/97 Date Received..: 07/24/97
Prep Date.....: 08/03/97 Analysis Date..: 08/03/97
Prep Batch #...: 7216155 Analysis Time..: 21:08
Dilution Factor: 1
Analyst ID.....: 007084 Instrument ID..: VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	0.80	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	0.40	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	0.40	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.2	ug/L	SW846 8260A
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	3.2	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	0.40	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	1.3	ug/L	SW846 8260A
1,2-Dichloroethane	ND	0.60	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.6	ug/L	SW846 8260A
1,2-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	0.60	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	0.50	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	1.2	ug/L	SW846 8260A
1,3-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1-Chlorohexane	ND	0.50	ug/L	SW846 8260A
2,2-Dichloropropane	ND	3.5	ug/L	SW846 8260A
2-Chlorotoluene	ND	0.40	ug/L	SW846 8260A
4-Chlorotoluene	ND	0.60	ug/L	SW846 8260A
Benzene	ND	0.40	ug/L	SW846 8260A
Bromobenzene	ND	0.30	ug/L	SW846 8260A
Bromochloromethane	ND	0.40	ug/L	SW846 8260A
Bromodichloromethane	ND	0.80	ug/L	SW846 8260A
Bromoform	ND	1.2	ug/L	SW846 8260A
Bromomethane	ND	1.1	ug/L	SW846 8260A
Carbon tetrachloride	ND	2.1	ug/L	SW846 8260A
Chlorobenzene	ND	0.40	ug/L	SW846 8260A
Chloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	0.30	ug/L	SW846 8260A
Chloromethane	ND	1.3	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	1.2	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A

(Continued on next page)

408 641

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: TB-072397

GC/MS Volatiles

Lot-Sample #...: B7G240171-010 **Work Order #...:** CAWCN102 **Matrix.....:** WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibromochloromethane	ND	0.50	ug/L	SW846 8260A
Dibromomethane	ND	2.4	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	ND	0.60	ug/L	SW846 8260A
Hexachlorobutadiene	ND	1.1	ug/L	SW846 8260A
Isopropylbenzene	ND	0.50	ug/L	SW846 8260A
m-Xylene & p-Xylene	ND	0.50	ug/L	SW846 8260A
Methylene chloride	ND	0.30	ug/L	SW846 8260A
n-Butylbenzene	ND	1.1	ug/L	SW846 8260A
n-Propylbenzene	ND	0.40	ug/L	SW846 8260A
Naphthalene	ND	0.40	ug/L	SW846 8260A
o-Xylene	ND	1.1	ug/L	SW846 8260A
p-Isopropyltoluene	ND	1.2	ug/L	SW846 8260A
sec-Butylbenzene	ND	1.3	ug/L	SW846 8260A
Styrene	ND	0.40	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
tert-Butylbenzene	ND	1.4	ug/L	SW846 8260A
Tetrachloroethene	ND	1.4	ug/L	SW846 8260A
Toluene	ND	1.1	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	0.60	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichlorofluoromethane	ND	0.80	ug/L	SW846 8260A
Vinyl chloride	ND	1.1	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	100	(75 - 125)
4-Bromofluorobenzene	94	(75 - 125)
1,2-Dichloroethane-d4	101	(62 - 139)
Dibromofluoromethane	99	(75 - 125)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

408 642

Quanterra
Environmental Services

Quality Control Summary

Quanterra QC Program Summary

Method Blanks

Laboratory Control Samples

Matrix Spike/Matrix Spike Duplicates

Chain-of-Custody

Quanterra Environmental Services

Quanterra Quality Control Program Summary

Quanterra Environmental Services considers continuous analytical method performance evaluations to be an integral portion of the data package, and routinely includes the pertinent QA/QC data associated with analytical results. Brief discussions of the various QA/QC procedures utilized to measure acceptable method and matrix performance follow. Further documentation of specific policies and procedures in use are available, upon request, from the Quanterra Quality Control Department.

The program described below provides Quanterra's interpretation of QC requirements described in SW-846, 3rd edition -Final Update II. Additional interpretations specific to other aspects of methods performed, such as instrument calibration and bench procedures, are described in program-specific documents (e.g. US Corps of Engineers, AFCEE, etc.) and associated method standard operating procedures. Where explicit program requirements or project requirements exist, certain elements of the Quanterra QC Program may be superseded by these requirements.

Elements of the Quanterra QC Program

Where other clear regulatory guidance, contract specifications, or client requirements are not available, the Quanterra QC Program provides guidance for Batch QC requirements. The Quality Control Batch is a set of up to 20 field samples of similar matrix, which are processed together under the same conditions, within the same time frame. Included in each Quality Control Batch is a Method Blank, Laboratory Control Sample, and Matrix Spike Duplicate. For methods that require independent sample preparation prior to analysis, the QC Batch is defined at the preparation stage. For methods that do not require independent sample preparation, the QC Batch is defined at the instrument. The QC Batch Number is provided on each result page in association with the parameter(s) presented, and may be used to cross-reference sample results with the associated QC data.

Method Blank Evaluations

Laboratory analytical method blanks are systematically prepared and analyzed in order to continuously evaluate the system interference and background contamination levels associated with each applicable analytical method. Method blanks include all aspects of actual laboratory procedures involving sample preparation and analysis, substituting analyte-free water or solid for the actual sample. Under normal circumstances, the Method Blank should not exhibit analytes of interest above the reported detection limit. Due to the presence of some analytes in a typical laboratory setting, the following common laboratory contaminants are exceptions to this rule, provided they are not present in the method blank at greater than five times the reporting limit.

Volatiles	Semi-Volatiles	Metals
Methylene chloride	Dimethyl phthalate	Calcium
Toluene	Diethyl phthalate	Magnesium
2-Butanone	Di-n-butyl-phthalate	Sodium
Acetone	Butyl benzyl phthalate	
	Bis (2-ethylhexyl) phthalate	

A method blank is performed with each analytical batch. A minimum of 5% of all laboratory analyses are method blanks.

Laboratory Control Sample (LCS) Evaluations

Known concentrations of designated matrix spike (target analyte) compounds are added to a method blank prior to extraction and analysis. Percent recovery determinations of individual target analytes in the LCS demonstrate the laboratory's method performance for the QC Batch relative to these target analytes (or other individual components represented by a subset of control analytes). Percent recovery data is displayed alongside acceptance criteria, that is typically derived from laboratory historical data. Failure of a Laboratory Control Sample to meet established recovery criteria for control analytes is cause for corrective actions to occur, which typically includes re-extraction and re-analysis of all samples associated with the QC Batch. An LCS is performed with each analytical batch. A minimum of 5% of all laboratory analyses are laboratory control samples.

Quanterra Environmental Services

Quanterra Quality Control Program Summary (continued)

Surrogate Spike Recovery Evaluations

For GC and GC/MS analyses, known concentrations of designated surrogate spikes, consisting of a number of similar, non-method compounds or method compound analogues, are added to sample fractions prior to sample extraction and analysis. The percent recovery determinations calculated from the subsequent analysis is one indication of the overall method efficiency for the individual sample. The surrogate spike recovery data is displayed alongside acceptance limits at the bottom of each applicable analytical result report page. Where sufficient laboratory-generated data does not yet exist to determine appropriate control limits, advisory limits may be enacted until sufficient data is collected to allow implementation of control limits.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Evaluations

In conjunction with the analysis of a client-provided field sample, a known concentration of designated matrix spike compounds (target analytes) are added to two aliquots of the actual sample. Percent recovery determinations are calculated from both spiked aliquots, using target analyte concentrations already present in the actual sample as a baseline. The percent recovery determinations indicate the accuracy of the method specific to the target analytes (or other individual components represented by a subset of control analytes) in the individual sample matrix. Comparison of the percent recoveries in the two spiked aliquots yields a relative percent difference (RPD). Percent recovery and relative percent difference data is displayed alongside historical criteria, that may be used to judge individual sample matrix effects for specific analytes. MS/MSD data is evaluated by the laboratory with respect to the individual sample matrix. In cases where MS/MSD data indicate sample method performance outside of historical criteria, the laboratory control sample results are referenced to ensure acceptable method performance by the laboratory for the sample batch. For analyses which are inappropriately suited for matrix spikes (e.g. pH), non-spiked duplicate analyses are performed to generate precision data. Matrix spike duplicates are typically performed on at least one sample within each analytical batch. A minimum of 10% of all laboratory analyses are matrix spikes or duplicates.

Corrective Action Evaluations

The goal of the Quanterra Quality Control Program is to generate data that demonstrates process control, and allows for client usability of data. Where the analytical process is demonstrated to vary from established criteria, or client requirements have not been met, data evaluation resulting in corrective action may be required. Corrective action may include re-preparation and/or reanalysis of field samples and QC samples. Where appropriate or necessary to allow proper interpretation of results presented in the final report, details of corrective actions taken during the laboratory processing of samples are presented as a case narrative at the front of the report. Alternatively, routine corrective action, such as reanalysis, may be footnoted on individual sample result pages.

Analytical Result Qualifier Flags

Where applicable , data qualifiers may be appended to analytical results in order to allow for proper interpretation of the result presented. Typically, the presence of data qualifier flag on an analytical result page is accompanied by a footnote explaining the qualifier.

408 645

Quanterra Environmental Services

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: B7G240171
MB Lot-Sample #: I7H040000-236
Analysis Date..: 08/01/97
Dilution Factor: 1

Work Order #...: CC3NG101
Prep Date.....: 08/01/97
Prep Batch #...: 7216236
Analyst ID.....: 013512

Matrix.....: WATER
Analysis Time..: 11:06
Instrument ID..: K1A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Methane	ND	0.50	ug/L	EPA-9 RSK-175
Ethane	ND	0.50	ug/L	EPA-9 RSK-175
Ethene	ND	0.50	ug/L	EPA-9 RSK-175

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

ND = The analyte was analyzed for but not detected at or above the MDL.

408 646

Quanterra Environmental Services

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: B7G240171
MB Lot-Sample #: B7G310000-147

Work Order #...: CC1AM101
Prep Date.....: 07/29/97
Prep Batch #...: 7212147
Analyst ID.....: 001854

Matrix.....: WATER
Analysis Time..: 15:48
Instrument ID..: V2A

Analysis Date..: 07/29/97
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	2.0	ug/L	SW846 8020A
Ethylbenzene	ND	2.0	ug/L	SW846 8020A
Toluene	ND	2.0	ug/L	SW846 8020A
Xylenes (total)	ND	2.0	ug/L	SW846 8020A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	103	(46 - 136)
Bromofluorobenzene	87	(48 - 138)
Fluorobenzene	93	(44 - 165)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: B7G240171
MB Lot-Sample #: B7H040000-155

Analysis Date..: 08/03/97
Dilution Factor: 1

Work Order #...: CC34R101

Prep Date.....: 08/03/97
Prep Batch #...: 7216155

Analyst ID.....: 007084

Matrix.....: WATER

Analysis Time..: 17:54
Instrument ID..: VO4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	0.80	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	0.40	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	0.40	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.2	ug/L	SW846 8260A
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260A
1,2,3-Trichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	3.2	ug/L	SW846 8260A
1,2,4-Trichlorobenzene	ND	0.40	ug/L	SW846 8260A
1,2,4-Trimethylbenzene	ND	1.3	ug/L	SW846 8260A
1,2-Dichloroethane	ND	0.60	ug/L	SW846 8260A
1,2-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.6	ug/L	SW846 8260A
1,2-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	0.60	ug/L	SW846 8260A
1,3,5-Trimethylbenzene	ND	0.50	ug/L	SW846 8260A
1,3-Dichlorobenzene	ND	1.2	ug/L	SW846 8260A
1,3-Dichloropropane	ND	0.40	ug/L	SW846 8260A
1,4-Dichlorobenzene	ND	0.30	ug/L	SW846 8260A
1-Chlorohexane	ND	0.50	ug/L	SW846 8260A
2,2-Dichloropropane	ND	3.5	ug/L	SW846 8260A
2-Chlorotoluene	ND	0.40	ug/L	SW846 8260A
4-Chlorotoluene	ND	0.60	ug/L	SW846 8260A
Benzene	ND	0.40	ug/L	SW846 8260A
Bromobenzene	ND	0.30	ug/L	SW846 8260A
Bromochloromethane	ND	0.40	ug/L	SW846 8260A
Bromodichloromethane	ND	0.80	ug/L	SW846 8260A
Bromoform	ND	1.2	ug/L	SW846 8260A
Bromomethane	ND	1.1	ug/L	SW846 8260A
Carbon tetrachloride	ND	2.1	ug/L	SW846 8260A
Chlorobenzene	ND	0.40	ug/L	SW846 8260A
Chloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	0.30	ug/L	SW846 8260A
Chloromethane	ND	1.3	ug/L	SW846 8260A
cis-1,2-Dichloroethene	ND	1.2	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Dibromochloromethane	ND	0.50	ug/L	SW846 8260A
Dibromomethane	ND	2.4	ug/L	SW846 8260A

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Quanterra Environmental Services

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: B7G240171 **Work Order #...:** CC34R101 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	ND	0.60	ug/L	SW846 8260A
Hexachlorobutadiene	ND	1.1	ug/L	SW846 8260A
Isopropylbenzene	ND	0.50	ug/L	SW846 8260A
m-Xylene & p-Xylene	ND	0.50	ug/L	SW846 8260A
Methylene chloride	ND	0.30	ug/L	SW846 8260A
n-Butylbenzene	ND	1.1	ug/L	SW846 8260A
n-Propylbenzene	ND	0.40	ug/L	SW846 8260A
Naphthalene	ND	0.40	ug/L	SW846 8260A
o-Xylene	ND	1.1	ug/L	SW846 8260A
p-Isopropyltoluene	ND	1.2	ug/L	SW846 8260A
sec-Butylbenzene	ND	1.3	ug/L	SW846 8260A
Styrene	ND	0.40	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
tert-Butylbenzene	ND	1.4	ug/L	SW846 8260A
Tetrachloroethene	ND	1.4	ug/L	SW846 8260A
Toluene	ND	1.1	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	0.60	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichlorofluoromethane	ND	0.80	ug/L	SW846 8260A
Vinyl chloride	ND	1.1	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	102	(75 - 125)
4-Bromofluorobenzene	97	(75 - 125)
1,2-Dichloroethane-d4	100	(62 - 139)
Dibromofluoromethane	98	(75 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: B7G240171 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: B7G240000-268 **Prep Batch #...:** 7205268						
Silver	ND	0.00020	mg/L	SW846 7761	07/25-08/11/97	CAWCX11J
		Dilution Factor: 1				
		Analysis Time..: 12:17		Analyst ID.....: 001863	Instrument ID..: F1	
Antimony	ND	0.0050	mg/L	SW846 6010A	07/25-07/31/97	CAWCX10C
		Dilution Factor: 1				
		Analysis Time..: 17:15		Analyst ID.....: 001702	Instrument ID..: P2	
Arsenic	ND	0.0050	mg/L	SW846 6010A	07/25/97	CAWCX10D
		Dilution Factor: 1				
		Analysis Time..: 15:12		Analyst ID.....: 001863	Instrument ID..: P2	
Lead	ND	0.0050	mg/L	SW846 6010A	07/25/97	CAWCX10E
		Dilution Factor: 1				
		Analysis Time..: 15:12		Analyst ID.....: 001863	Instrument ID..: P2	
Selenium	ND	0.0050	mg/L	SW846 6010A	07/25/97	CAWCX1[illegible]
		Dilution Factor: 1				
		Analysis Time..: 15:12		Analyst ID.....: 001863	Instrument ID..: P2	
Thallium	ND	0.0020	mg/L	SW846 7841	07/25/97	CAWCX10G
		Dilution Factor: 1				
		Analysis Time..: 17:06		Analyst ID.....: 001702	Instrument ID..: F1	
Aluminum	ND	0.50	mg/L	SW846 6010A	07/25/97	CAWCX10J
		Dilution Factor: 1				
		Analysis Time..: 15:12		Analyst ID.....: 001863	Instrument ID..: P2	
Barium	ND	0.020	mg/L	SW846 6010A	07/25/97	CAWCX10K
		Dilution Factor: 1				
		Analysis Time..: 15:12		Analyst ID.....: 001863	Instrument ID..: P2	
Beryllium	ND	0.0030	mg/L	SW846 6010A	07/25/97	CAWCX10L
		Dilution Factor: 1				
		Analysis Time..: 15:12		Analyst ID.....: 001863	Instrument ID..: P2	
Calcium	ND	1.0	mg/L	SW846 6010A	07/25/97	CAWCX10M
		Dilution Factor: 1				
		Analysis Time..: 15:12		Analyst ID.....: 001863	Instrument ID..: P2	
Cadmium	ND	0.040	mg/L	SW846 6010A	07/25/97	CAWCX10N
		Dilution Factor: 1				
		Analysis Time..: 15:12		Analyst ID.....: 001863	Instrument ID..: P2	

(Continued on next page)

Quanterra Environmental Services

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: B7G240171 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Cobalt	ND	0.070	mg/L	SW846 6010A	07/25/97	CAWCX10P
		Dilution Factor: 1				
		Analysis Time..: 15:12		Analyst ID.....: 001863	Instrument ID..: P2	
Chromium	ND	0.070	mg/L	SW846 6010A	07/25/97	CAWCX10Q
		Dilution Factor: 1				
		Analysis Time..: 15:12		Analyst ID.....: 001863	Instrument ID..: P2	
Copper	ND	0.060	mg/L	SW846 6010A	07/25/97	CAWCX101
		Dilution Factor: 1				
		Analysis Time..: 15:12		Analyst ID.....: 001863	Instrument ID..: P2	
Iron	ND	0.070	mg/L	SW846 6010A	07/25/97	CAWCX102
		Dilution Factor: 1				
		Analysis Time..: 15:12		Analyst ID.....: 001863	Instrument ID..: P2	
Potassium	**0.36 F**	**5.0**	**mg/L**	**SW846 6010A**	**07/25/97**	**CAWCX103**
		Dilution Factor: 1				
		Analysis Time..: 12:57		Analyst ID.....: 001863	Instrument ID..: P1	
Magnesium	ND	1.0	mg/L	SW846 6010A	07/25/97	CAWCX104
		Dilution Factor: 1				
		Analysis Time..: 15:12		Analyst ID.....: 001863	Instrument ID..: P2	
Manganese	ND	0.020	mg/L	SW846 6010A	07/25/97	CAWCX105
		Dilution Factor: 1				
		Analysis Time..: 15:12		Analyst ID.....: 001863	Instrument ID..: P2	
Molybdenum	ND	0.080	mg/L	SW846 6010A	07/25/97	CAWCX106
		Dilution Factor: 1				
		Analysis Time..: 15:12		Analyst ID.....: 001863	Instrument ID..: P2	
Sodium	ND	1.0	mg/L	SW846 6010A	07/25/97	CAWCX107
		Dilution Factor: 1				
		Analysis Time..: 12:57		Analyst ID.....: 001863	Instrument ID..: P1	
Nickel	ND	0.15	mg/L	SW846 6010A	07/25/97	CAWCX108
		Dilution Factor: 1				
		Analysis Time..: 15:12		Analyst ID.....: 001863	Instrument ID..: P2	
Vanadium	ND	0.080	mg/L	SW846 6010A	07/25/97	CAWCX109
		Dilution Factor: 1				
		Analysis Time..: 15:12		Analyst ID.....: 001863	Instrument ID..: P2	
Zinc	ND	0.020	mg/L	SW846 6010A	07/25-07/31/97	CAWCX10A
		Dilution Factor: 1				
		Analysis Time..: 17:15		Analyst ID.....: 001702	Instrument ID..: P2	

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Quanterra Environmental Services

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: B7G240171 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: B7G240000-269 **Prep Batch #...:** 7205269						
Mercury	ND	0.0010	mg/L	SW846 7470A	07/25/97	CAWD1101

Dilution Factor: 1

Analysis Time..: 16:58 Analyst ID.....: 001702 Instrument ID..: CV

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

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Quanterra Environmental Services

METHOD BLANK REPORT

General Chemistry

Client Lot #...: B7G240171 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH		Work Order #: CC3Q4101		MB Lot-Sample #:	B7H050000-127	
	ND	10	mg/L	MCAWW 310.1	08/04/97	7217127
		Dilution Factor: 1				
		Analysis Time..: 10:51		Analyst ID.....: 090000	Instrument ID..: ISE	
Bromide		Work Order #: CC4XG101		MB Lot-Sample #:	B7H070000-170	
	ND	0.20	mg/L	SW846 9056	08/05-08/06/97	7219170
		Dilution Factor: 1				
		Analysis Time..: 13:29		Analyst ID.....: 004003	Instrument ID..: IC	
Chloride		Work Order #: CC4XP101		MB Lot-Sample #:	B7H070000-172	
	0.12 F	**0.20**	**mg/L**	**SW846 9056**	**08/05-08/06/97**	**7219172**
		Dilution Factor: 1				
		Analysis Time..: 13:29		Analyst ID.....: 004003	Instrument ID..: IC	
Sulfate		Work Order #: CC4XR101		MB Lot-Sample #:	B7H070000-173	
	0.39 F	**0.50**	**mg/L**	**SW846 9056**	**08/05-08/06/97**	**7219173**
		Dilution Factor: 1				
		Analysis Time..: 13:29		Analyst ID.....: 004003	Instrument ID..: IC	
Total Organic Carbon		Work Order #: CC3Q9101		MB Lot-Sample #:	B7H050000-132	
	ND	1	mg/L	SW846 9060	08/04/97	7217132
		Dilution Factor: 1				
		Analysis Time..: 15:38		Analyst ID.....: 004003	Instrument ID..: TOC	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra
Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: B7G240171 **Work Order #...:** CC3NG102-LCS **Matrix.....:** WATER
LCS Lot-Sample#: I7H040000-236 CC3NG103-LCSD
Prep Date.....: 08/01/97 **Analysis Date..:** 08/01/97
Prep Batch #...: 7216236 **Analysis Time..:** 11:10
Dilution Factor: 1 **Instrument ID..:** K1A
Analyst ID.....: 013512

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Methane	34	30	ug/L	89		EPA-9 RSK-175
	34	32	ug/L	93	3.6	EPA-9 RSK-175
Ethane	63	56	ug/L	90		EPA-9 RSK-175
	63	59	ug/L	93	4.0	EPA-9 RSK-175
Ethene	59	51	ug/L	87		EPA-9 RSK-175
	59	54	ug/L	91	4.8	EPA-9 RSK-175

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra
Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: B7G240171 **Work Order #...:** CC3NG102-LCS **Matrix.....:** WATER
LCS Lot-Sample#: I7H040000-236 CC3NG103-LCSD
Prep Date.....: 08/01/97 **Analysis Date..:** 08/01/97
Prep Batch #...: 7216236 **Analysis Time..:** 11:10
Dilution Factor: 1 **Instrument ID..:** K1A
Analyst ID.....: 013512

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Methane	89	(70 - 130)			EPA-9 RSK-175
	93	(70 - 130)	3.6	(0-30)	EPA-9 RSK-175
Ethane	90	(70 - 130)			EPA-9 RSK-175
	93	(70 - 130)	4.0	(0-30)	EPA-9 RSK-175
Ethene	87	(70 - 130)			EPA-9 RSK-175
	91	(70 - 130)	4.8	(0-30)	EPA-9 RSK-175

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra
Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: B7G240171 **Work Order #...:** CC1AM102 **Matrix.....:** WATER
LCS Lot-Sample#: B7G310000-147
Prep Date.....: 07/29/97 **Analysis Date..:** 07/29/97
Prep Batch #...: 7212147 **Analysis Time..:** 16:13
Dilution Factor: 1 **Instrument ID..:** V2A
Analyst ID.....: 001854

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Benzene	**20**	**18**	**ug/L**	**90**	**SW846 8020A**
Ethylbenzene	**20**	**18**	**ug/L**	**92**	**SW846 8020A**
Toluene	**20**	**19**	**ug/L**	**93**	**SW846 8020A**
Xylenes (total)	**60**	**56**	**ug/L**	**94**	**SW846 8020A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	89	(46 - 136)
Bromofluorobenzene	87	(48 - 138)
Fluorobenzene	96	(44 - 165)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Quanterra
Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: B7G240171 Work Order #...: CC1AM102 Matrix.....: WATER
LCS Lot-Sample#: B7G310000-147
Prep Date.....: 07/29/97 Analysis Date..: 07/29/97
Prep Batch #...: 7212147 Analysis Time..: 16:13
Dilution Factor: 1 Instrument ID..: V2A
Analyst ID.....: 001854

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Benzene	**90**	**(75 - 125)**	**SW846 8020A**
Ethylbenzene	**92**	**(71 - 129)**	**SW846 8020A**
Toluene	**93**	**(70 - 125)**	**SW846 8020A**
Xylenes (total)	**94**	**(71 - 133)**	**SW846 8020A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	89	(46 - 136)
Bromofluorobenzene	87	(48 - 138)
Fluorobenzene	96	(44 - 165)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: B7G240171 Work Order #...: CC34R102 Matrix.....: WATER
LCS Lot-Sample#: B7H040000-155
Prep Date.....: 08/03/97 Analysis Date..: 08/03/97
Prep Batch #...: 7216155 Analysis Time..: 17:30
Dilution Factor: 1 Instrument ID..: VO4
Analyst ID.....: 007084

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
1,1,1,2-Tetrachloroethane	5.0	4.8	ug/L	95	SW846 8260A
1,1,1-Trichloroethane	5.0	5.0	ug/L	101	SW846 8260A
1,1,2,2-Tetrachloroethane	5.0	5.0	ug/L	101	SW846 8260A
1,1,2-Trichloroethane	5.0	5.0	ug/L	100	SW846 8260A
1,1-Dichloroethane	5.0	5.1	ug/L	102	SW846 8260A
1,1-Dichloroethene	5.0	4.3	ug/L	87	SW846 8260A
1,1-Dichloropropene	5.0	5.3	ug/L	106	SW846 8260A
1,2,3-Trichlorobenzene	5.0	5.0	ug/L	100	SW846 8260A
1,2,3-Trichloropropane	5.0	4.5	ug/L	89	SW846 8260A
1,2,4-Trichlorobenzene	5.0	4.8	ug/L	96	SW846 8260A
1,2,4-Trimethylbenzene	5.0	5.4	ug/L	107	SW846 8260A
1,2-Dichloroethane	5.0	5.1	ug/L	102	SW846 8260A
1,2-Dichlorobenzene	5.0	5.1	ug/L	102	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	5.0	5.1	ug/L	102	SW846 8260A
1,2-Dichloropropane	5.0	4.7	ug/L	94	SW846 8260A
1,2-Dibromoethane (EDB)	5.0	4.6	ug/L	92	SW846 8260A
1,3,5-Trimethylbenzene	5.0	5.2	ug/L	105	SW846 8260A
1,3-Dichlorobenzene	5.0	5.0	ug/L	100	SW846 8260A
1,3-Dichloropropane	5.0	4.5	ug/L	91	SW846 8260A
1,4-Dichlorobenzene	5.0	4.8	ug/L	96	SW846 8260A
1-Chlorohexane	5.0	5.3	ug/L	106	SW846 8260A
2,2-Dichloropropane	5.0	5.2	ug/L	103	SW846 8260A
2-Chlorotoluene	5.0	5.0	ug/L	99	SW846 8260A
4-Chlorotoluene	5.0	5.2	ug/L	104	SW846 8260A
Benzene	5.0	5.1	ug/L	103	SW846 8260A
Bromobenzene	5.0	4.9	ug/L	98	SW846 8260A
Bromochloromethane	5.0	5.1	ug/L	102	SW846 8260A
Bromodichloromethane	5.0	5.0	ug/L	101	SW846 8260A
Bromoform	5.0	4.8	ug/L	97	SW846 8260A
Bromomethane	5.0	4.3	ug/L	86	SW846 8260A
Carbon tetrachloride	5.0	5.0	ug/L	99	SW846 8260A
Chlorobenzene	5.0	5.0	ug/L	100	SW846 8260A
Chloroethane	5.0	5.0	ug/L	100	SW846 8260A

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Quanterra Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: B7G240171 **Work Order #...:** CC34R102 **Matrix.....:** WATER
LCS Lot-Sample#: B7H040000-155

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Chloroform	5.0	5.0	ug/L	101	SW846 8260A
Chloromethane	5.0	4.7	ug/L	94	SW846 8260A
cis-1,2-Dichloroethene	5.0	5.2	ug/L	104	SW846 8260A
cis-1,3-Dichloropropene	5.0	4.5	ug/L	91	SW846 8260A
Dibromochloromethane	5.0	4.9	ug/L	97	SW846 8260A
Dibromomethane	5.0	5.0	ug/L	100	SW846 8260A
Dichlorodifluoromethane	5.0	4.2	ug/L	84	SW846 8260A
Ethylbenzene	5.0	5.2	ug/L	104	SW846 8260A
Hexachlorobutadiene	5.0	5.4	ug/L	107	SW846 8260A
Isopropylbenzene	5.0	5.4	ug/L	109	SW846 8260A
m-Xylene & p-Xylene	10	10	ug/L	102	SW846 8260A
Methylene chloride	5.0	5.0	ug/L	99	SW846 8260A
n-Butylbenzene	5.0	5.4	ug/L	107	SW846 8260A
n-Propylbenzene	5.0	5.3	ug/L	106	SW846 8260A
Naphthalene	5.0	4.5	ug/L	90	SW846 8260A
o-Xylene	5.0	5.1	ug/L	102	SW846 8260A
p-Isopropyltoluene	5.0	5.5	ug/L	109	SW846 8260A
sec-Butylbenzene	5.0	5.3	ug/L	105	SW846 8260A
Styrene	5.0	5.4	ug/L	108	SW846 8260A
Trichloroethene	5.0	5.0	ug/L	100	SW846 8260A
Tetrachloroethene	5.0	5.1	ug/L	101	SW846 8260A
Toluene	5.0	5.1	ug/L	101	SW846 8260A
trans-1,2-Dichloroethene	5.0	4.6	ug/L	91	SW846 8260A
trans-1,3-Dichloropropene	5.0	4.4	ug/L	88	SW846 8260A
Trichlorofluoromethane	5.0	5.0	ug/L	99	SW846 8260A
Vinyl chloride	5.0	4.8	ug/L	97	SW846 8260A
tert-Butylbenzene	5.0	6.0	ug/L	119	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	101	(75 - 125)
4-Bromofluorobenzene	94	(75 - 125)
1,2-Dichloroethane-d4	103	(62 - 139)
Dibromofluoromethane	100	(75 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Quanterra Environmental Services

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: B7G240171 Work Order #...: CC34R102 Matrix.....: WATER
LCS Lot-Sample#: B7H040000-155
Prep Date.....: 08/03/97 Analysis Date..: 08/03/97
Prep Batch #...: 7216155 Analysis Time..: 17:30
Dilution Factor: 1 Instrument ID..: VO4
Analyst ID.....: 007084

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
1,1,1,2-Tetrachloroethane	95	(72 - 125)	SW846 8260A
1,1,1-Trichloroethane	101	(75 - 125)	SW846 8260A
1,1,2,2-Tetrachloroethane	101	(74 - 125)	SW846 8260A
1,1,2-Trichloroethane	100	(75 - 127)	SW846 8260A
1,1-Dichloroethane	102	(72 - 125)	SW846 8260A
1,1-Dichloroethene	87	(75 - 125)	SW846 8260A
1,1-Dichloropropene	106	(75 - 125)	SW846 8260A
1,2,3-Trichlorobenzene	100	(75 - 137)	SW846 8260A
1,2,3-Trichloropropane	89	(75 - 125)	SW846 8260A
1,2,4-Trichlorobenzene	96	(75 - 135)	SW846 8260A
1,2,4-Trimethylbenzene	107	(75 - 125)	SW846 8260A
1,2-Dichloroethane	102	(68 - 127)	SW846 8260A
1,2-Dichlorobenzene	102	(75 - 125)	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	102	(59 - 125)	SW846 8260A
1,2-Dichloropropane	94	(70 - 125)	SW846 8260A
1,2-Dibromoethane (EDB)	92	(75 - 125)	SW846 8260A
1,3,5-Trimethylbenzene	105	(72 - 112)	SW846 8260A
1,3-Dichlorobenzene	100	(75 - 125)	SW846 8260A
1,3-Dichloropropane	91	(75 - 125)	SW846 8260A
1,4-Dichlorobenzene	96	(75 - 125)	SW846 8260A
1-Chlorohexane	106	(75 - 125)	SW846 8260A
2,2-Dichloropropane	103	(50 - 125)	SW846 8260A
2-Chlorotoluene	99	(73 - 125)	SW846 8260A
4-Chlorotoluene	104	(74 - 125)	SW846 8260A
Benzene	103	(75 - 125)	SW846 8260A
Bromobenzene	98	(75 - 125)	SW846 8260A
Bromochloromethane	102	(73 - 125)	SW846 8260A
Bromodichloromethane	101	(75 - 125)	SW846 8260A
Bromoform	97	(75 - 125)	SW846 8260A
Bromomethane	86	(50 - 125)	SW846 8260A
Carbon tetrachloride	99	(62 - 125)	SW846 8260A
Chlorobenzene	100	(75 - 125)	SW846 8260A
Chloroethane	100	(50 - 125)	SW846 8260A

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Quanterra
Environmental Services

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: B7G240171 **Work Order #...:** CC34R102 **Matrix.....:** WATER
LCS Lot-Sample#: B7H040000-155

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Chloroform	101	(74 - 125)	SW846 8260A
Chloromethane	94	(50 - 125)	SW846 8260A
cis-1,2-Dichloroethene	104	(75 - 125)	SW846 8260A
cis-1,3-Dichloropropene	91	(74 - 125)	SW846 8260A
Dibromochloromethane	97	(73 - 125)	SW846 8260A
Dibromomethane	100	(69 - 127)	SW846 8260A
Dichlorodifluoromethane	84	(50 - 150)	SW846 8260A
Ethylbenzene	104	(75 - 125)	SW846 8260A
Hexachlorobutadiene	107	(75 - 125)	SW846 8260A
Isopropylbenzene	109	(75 - 125)	SW846 8260A
m-Xylene & p-Xylene	102	(75 - 125)	SW846 8260A
Methylene chloride	99	(75 - 125)	SW846 8260A
n-Butylbenzene	107	(75 - 125)	SW846 8260A
n-Propylbenzene	106	(75 - 125)	SW846 8260A
Naphthalene	90	(75 - 125)	SW846 8260A
o-Xylene	102	(75 - 125)	SW846 8260A
p-Isopropyltoluene	109	(75 - 125)	SW846 8260A
sec-Butylbenzene	105	(75 - 125)	SW846 8260A
Styrene	108	(75 - 125)	SW846 8260A
Trichloroethene	100	(71 - 125)	SW846 8260A
Tetrachloroethene	101	(71 - 125)	SW846 8260A
Toluene	101	(74 - 125)	SW846 8260A
trans-1,2-Dichloroethene	91	(75 - 125)	SW846 8260A
trans-1,3-Dichloropropene	88	(66 - 125)	SW846 8260A
Trichlorofluoromethane	99	(50 - 125)	SW846 8260A
Vinyl chloride	97	(46 - 134)	SW846 8260A
tert-Butylbenzene	119	(75 - 125)	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	101	(75 - 125)
4-Bromofluorobenzene	94	(75 - 125)
1,2-Dichloroethane-d4	103	(62 - 139)
Dibromofluoromethane	100	(75 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: B7G240171 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: B7G240000-268 **Prep Batch #...:** 7205268							
Copper	1.0	1.1	mg/L	107	SW846 6010A	07/25/97	CAWCX10R
			Dilution Factor: 1		Instrument ID..: P2	Analyst ID.....: 001863	
			Analysis Time..: 15:17				
Iron	10.0	10.4	mg/L	104	SW846 6010A	07/25/97	CAWCX10T
			Dilution Factor: 1		Instrument ID..: P2	Analyst ID.....: 001863	
			Analysis Time..: 15:17				
Potassium	10.0	9.6	mg/L	96	SW846 6010A	07/25/97	CAWCX10U
			Dilution Factor: 1		Instrument ID..: P1	Analyst ID.....: 001863	
			Analysis Time..: 13:02				
Magnesium	10.0	10.1	mg/L	101	SW846 6010A	07/25/97	CAWCX10V
			Dilution Factor: 1		Instrument ID..: P2	Analyst ID.....: 001863	
			Analysis Time..: 15:17				
Manganese	1.0	1.0	mg/L	105	SW846 6010A	07/25/97	CAWCX10W
			Dilution Factor: 1		Instrument ID..: P2	Analyst ID.....: 001863	
			Analysis Time..: 15:17				
Molybdenum	1.0	1.0	mg/L	101	SW846 6010A	07/25/97	CAWCX10X
			Dilution Factor: 1		Instrument ID..: P2	Analyst ID.....: 001863	
			Analysis Time..: 15:17				
Aluminum	10.0	10.4	mg/L	104	SW846 6010A	07/25/97	CAWCX11A
			Dilution Factor: 1		Instrument ID..: P2	Analyst ID.....: 001863	
			Analysis Time..: 15:17				
Barium	1.0	1.0	mg/L	104	SW846 6010A	07/25/97	CAWCX11C
			Dilution Factor: 1		Instrument ID..: P2	Analyst ID.....: 001863	
			Analysis Time..: 15:17				
Beryllium	1.0	1.0	mg/L	103	SW846 6010A	07/25/97	CAWCX11D
			Dilution Factor: 1		Instrument ID..: P2	Analyst ID.....: 001863	
			Analysis Time..: 15:17				
Calcium	10.0	10.2	mg/L	102	SW846 6010A	07/25/97	CAWCX11E
			Dilution Factor: 1		Instrument ID..: P2	Analyst ID.....: 001863	
			Analysis Time..: 15:17				

(Continued on next page)

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: B7G240171 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Cadmium	1.0	1.0	mg/L	100	SW846 6010A	07/25/97	CAWCX11F
			Dilution Factor: 1		Instrument ID..: P2	Analyst ID.....: 001863	
			Analysis Time..: 15:17				
Cobalt	1.0	1.0	mg/L	103	SW846 6010A	07/25/97	CAWCX11G
			Dilution Factor: 1		Instrument ID..: P2	Analyst ID.....: 001863	
			Analysis Time..: 15:17				
Chromium	1.0	1.0	mg/L	101	SW846 6010A	07/25/97	CAWCX11H
			Dilution Factor: 1		Instrument ID..: P2	Analyst ID.....: 001863	
			Analysis Time..: 15:17				
Silver	0.0015	0.0014	mg/L	94	SW846 7761	07/25-08/11/97	CAWCX11K
			Dilution Factor: 1		Instrument ID..: F1	Analyst ID.....: 001863	
			Analysis Time..: 12:22				
Sodium	10.0	9.5	mg/L	95	SW846 6010A	07/25/97	CAWCX110
			Dilution Factor: 1		Instrument ID..: P1	Analyst ID.....: 001863	
			Analysis Time..: 13:02				
Nickel	1.0	1.0	mg/L	103	SW846 6010A	07/25/97	CAWCX111
			Dilution Factor: 1		Instrument ID..: P2	Analyst ID.....: 001863	
			Analysis Time..: 15:17				
Vanadium	1.0	1.0	mg/L	104	SW846 6010A	07/25/97	CAWCX112
			Dilution Factor: 1		Instrument ID..: P2	Analyst ID.....: 001863	
			Analysis Time..: 15:17				
Zinc	1.0	1.0	mg/L	100	SW846 6010A	07/25-07/31/97	CAWCX113
			Dilution Factor: 1		Instrument ID..: P2	Analyst ID.....: 001702	
			Analysis Time..: 17:21				
Antimony	1.0	0.96	mg/L	96	SW846 6010A	07/25-07/31/97	CAWCX114
			Dilution Factor: 1		Instrument ID..: P2	Analyst ID.....: 001702	
			Analysis Time..: 17:21				
Arsenic	1.0	1.0	mg/L	102	SW846 6010A	07/25/97	CAWCX115
			Dilution Factor: 1		Instrument ID..: P2	Analyst ID.....: 001863	
			Analysis Time..: 15:17				
Lead	1.0	1.0	mg/L	101	SW846 6010A	07/25/97	CAWCX116
			Dilution Factor: 1		Instrument ID..: P2	Analyst ID.....: 001863	
			Analysis Time..: 15:17				

(Continued on next page)

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: B7G240171 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Selenium	1.0	1.0	mg/L	101	SW846 6010A	07/25/97	CAWCX117
			Dilution Factor: 1		Instrument ID..: P2	Analyst ID.....: 001863	
			Analysis Time..: 15:17				
Thallium	0.030	0.031	mg/L	103	SW846 7841	07/25/97	CAWCX118
			Dilution Factor: 1		Instrument ID..: F1	Analyst ID.....: 001702	
			Analysis Time..: 17:11				

LCS Lot-Sample#: B7G240000-269 **Prep Batch #...:** 7205269

Mercury	0.0050	0.0050	mg/L	99	SW846 7470A	07/25/97	CAWD1102
			Dilution Factor: 1		Instrument ID..: CV	Analyst ID.....: 001702	
			Analysis Time..: 17:00				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: B7G240171 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: B7G240000-268 **Prep Batch #...:** 7205268					
Copper	107	(80 - 120)	SW846 6010A	07/25/97	CAWCX10R
		Dilution Factor: 1	Instrument ID..: P2		Analyst ID.....: 001863
		Analysis Time..: 15:17			
Iron	104	(80 - 120)	SW846 6010A	07/25/97	CAWCX10T
		Dilution Factor: 1	Instrument ID..: P2		Analyst ID.....: 001863
		Analysis Time..: 15:17			
Potassium	96	(80 - 120)	SW846 6010A	07/25/97	CAWCX10U
		Dilution Factor: 1	Instrument ID..: P1		Analyst ID.....: 001863
		Analysis Time..: 13:02			
Magnesium	101	(80 - 120)	SW846 6010A	07/25/97	CAWCX10V
		Dilution Factor: 1	Instrument ID..: P2		Analyst ID.....: 001863
		Analysis Time..: 15:17			
Manganese	105	(80 - 120)	SW846 6010A	07/25/97	CAWCX10W
		Dilution Factor: 1	Instrument ID..: P2		Analyst ID.....: 001863
		Analysis Time..: 15:17			
Molybdenum	101	(80 - 120)	SW846 6010A	07/25/97	CAWCX10X
		Dilution Factor: 1	Instrument ID..: P2		Analyst ID.....: 001863
		Analysis Time..: 15:17			
Aluminum	104	(80 - 120)	SW846 6010A	07/25/97	CAWCX11A
		Dilution Factor: 1	Instrument ID..: P2		Analyst ID.....: 001863
		Analysis Time..: 15:17			
Barium	104	(80 - 120)	SW846 6010A	07/25/97	CAWCX11C
		Dilution Factor: 1	Instrument ID..: P2		Analyst ID.....: 001863
		Analysis Time..: 15:17			
Beryllium	103	(80 - 120)	SW846 6010A	07/25/97	CAWCX11D
		Dilution Factor: 1	Instrument ID..: P2		Analyst ID.....: 001863
		Analysis Time..: 15:17			
Calcium	102	(80 - 120)	SW846 6010A	07/25/97	CAWCX11E
		Dilution Factor: 1	Instrument ID..: P2		Analyst ID.....: 001863
		Analysis Time..: 15:17			

(Continued on next page)

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: B7G240171 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Cadmium	100	(80 - 120)	SW846 6010A	07/25/97	CAWCX11F
		Dilution Factor: 1	Instrument ID..: P2		Analyst ID.....: 001863
		Analysis Time..: 15:17			
Cobalt	103	(80 - 120)	SW846 6010A	07/25/97	CAWCX11G
		Dilution Factor: 1	Instrument ID..: P2		Analyst ID.....: 001863
		Analysis Time..: 15:17			
Chromium	101	(80 - 120)	SW846 6010A	07/25/97	CAWCX11H
		Dilution Factor: 1	Instrument ID..: P2		Analyst ID.....: 001863
		Analysis Time..: 15:17			
Silver	94	(80 - 120)	SW846 7761	07/25-08/11/97	CAWCX11K
		Dilution Factor: 1	Instrument ID..: F1		Analyst ID.....: 001863
		Analysis Time..: 12:22			
Sodium	95	(80 - 120)	SW846 6010A	07/25/97	CAWCX110
		Dilution Factor: 1	Instrument ID..: P1		Analyst ID.....: 001863
		Analysis Time..: 13:02			
Nickel	103	(80 - 120)	SW846 6010A	07/25/97	CAWCX111
		Dilution Factor: 1	Instrument ID..: P2		Analyst ID.....: 001863
		Analysis Time..: 15:17			
Vanadium	104	(80 - 120)	SW846 6010A	07/25/97	CAWCX112
		Dilution Factor: 1	Instrument ID..: P2		Analyst ID.....: 001863
		Analysis Time..: 15:17			
Zinc	100	(80 - 120)	SW846 6010A	07/25-07/31/97	CAWCX113
		Dilution Factor: 1	Instrument ID..: P2		Analyst ID.....: 001702
		Analysis Time..: 17:21			
Antimony	96	(80 - 120)	SW846 6010A	07/25-07/31/97	CAWCX114
		Dilution Factor: 1	Instrument ID..: P2		Analyst ID.....: 001702
		Analysis Time..: 17:21			
Arsenic	102	(80 - 120)	SW846 6010A	07/25/97	CAWCX115
		Dilution Factor: 1	Instrument ID..: P2		Analyst ID.....: 001863
		Analysis Time..: 15:17			
Lead	101	(80 - 120)	SW846 6010A	07/25/97	CAWCX116
		Dilution Factor: 1	Instrument ID..: P2		Analyst ID.....: 001863
		Analysis Time..: 15:17			

(Continued on next page)

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: B7G240171 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Selenium	101	(80 - 120)	SW846 6010A	07/25/97	CAWCX117
		Dilution Factor: 1	Instrument ID..: P2		Analyst ID.....: 001863
		Analysis Time..: 15:17			
Thallium	103	(78 - 123)	SW846 7841	07/25/97	CAWCX118
		Dilution Factor: 1	Instrument ID..: F1		Analyst ID.....: 001702
		Analysis Time..: 17:11			

LCS Lot-Sample#: B7G240000-269 **Prep Batch #...:** 7205269

Mercury	99	(77 - 120)	SW846 7470A	07/25/97	CAWD1102
		Dilution Factor: 1	Instrument ID..: CV		Analyst ID.....: 001702
		Analysis Time..: 17:00			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Lot-Sample #...: B7G240171 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH			WO#:CC3Q4102-LCS/CC3Q4103-LCSD				LCS Lot-Sample#: B7H050000-127	
	100	100	mg/L	100		MCAWW 310.1	08/04/97	7217127
	100	100	mg/L	100	0.0	MCAWW 310.1	08/04/97	7217127
			Dilution Factor: 1					
						Instrument ID..: ISE	TCLP Date.....: 090000	
Bromide			WO#:CC4XG102-LCS/CC4XG103-LCSD				LCS Lot-Sample#: B7H070000-170	
	2.0	2.1	mg/L	105		SW846 9056	08/05-08/06/97	7219170
	2.0	1.9	mg/L	97	8.0	SW846 9056	08/05-08/06/97	7219170
			Dilution Factor: 1					
						Instrument ID..: IC	TCLP Date.....: 004003	
Chloride			WO#:CC4XP102-LCS/CC4XP103-LCSD				LCS Lot-Sample#: B7H070000-172	
	5.0	4.8	mg/L	95		SW846 9056	08/05-08/06/97	7219172
	5.0	4.9	mg/L	98	3.0	SW846 9056	08/05-08/06/97	7219172
			Dilution Factor: 1					
						Instrument ID..: IC	TCLP Date.....: 004003	
Sulfate			WO#:CC4XR102-LCS/CC4XR103-LCSD				LCS Lot-Sample#: B7H070000-173	
	5.0	4.8	mg/L	97		SW846 9056	08/05-08/06/97	7219173
	5.0	4.9	mg/L	98	0.67	SW846 9056	08/05-08/06/97	7219173
			Dilution Factor: 1					
						Instrument ID..: IC	TCLP Date.....: 004003	
Total Organic Carbon			WO#:CC3Q9102-LCS/CC3Q9103-LCSD				LCS Lot-Sample#: B7H050000-132	
	5.0	4.9	mg/L	99		SW846 9060	08/04/97	7217132
	5.0	4.9	mg/L	98	0.72	SW846 9060	08/04/97	7217132
			Dilution Factor: 1					
						Instrument ID..: TOC	TCLP Date.....: 004003	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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Quanterra Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Lot-Sample #...: B7G240171 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH WO#:CC3Q4102-LCS/CC3Q4103-LCSD LCS Lot-Sample#: B7H050000-127							
	100	(90 - 110)			MCAWW 310.1	08/04/97	7217127
	100	(90 - 110)	0.0	(0-17)	MCAWW 310.1	08/04/97	7217127
		Dilution Factor: 1					
					Instrument ID..: ISE	TCLP Date.....: 090000	
Bromide WO#:CC4XG102-LCS/CC4XG103-LCSD LCS Lot-Sample#: B7H070000-170							
	105	(86 - 112)			SW846 9056	08/05-08/06/97	7219170
	97	(86 - 112)	8.0	(0-20)	SW846 9056	08/05-08/06/97	7219170
		Dilution Factor: 1					
					Instrument ID..: IC	TCLP Date.....: 004003	
Chloride WO#:CC4XP102-LCS/CC4XP103-LCSD LCS Lot-Sample#: B7H070000-172							
	95	(91 - 111)			SW846 9056	08/05-08/06/97	7219172
	98	(91 - 111)	3.0	(0-20)	SW846 9056	08/05-08/06/97	7219172
		Dilution Factor: 1					
					Instrument ID..: IC	TCLP Date.....: 004003	
Sulfate WO#:CC4XR102-LCS/CC4XR103-LCSD LCS Lot-Sample#: B7H070000-173							
	97	(88 - 115)			SW846 9056	08/05-08/06/97	7219173
	98	(88 - 115)	0.67	(0-20)	SW846 9056	08/05-08/06/97	7219173
		Dilution Factor: 1					
					Instrument ID..: IC	TCLP Date.....: 004003	
Total Organic Carbon WO#:CC3Q9102-LCS/CC3Q9103-LCSD LCS Lot-Sample#: B7H050000-132							
	99	(92 - 117)			SW846 9060	08/04/97	7217132
	98	(92 - 117)	0.72	(0-20)	SW846 9060	08/04/97	7217132
		Dilution Factor: 1					
					Instrument ID..: TOC	TCLP Date.....: 004003	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

408 660

Quanterra Environmental Services

TAMPA LABORATORY
CONDITION UPON RECEIPT FORM

PO# B7G240171

Client: Hydrogeologic **Project Name/Lot #:** AFC001-07GAA
Date Received: 7/24/97 **Received By:** 7/24/97
CUR Completed By: A Gunn

Cooler/Shipping information:
TYPE: Quanterra Cooler ____ Client Cooler ____ Quanterra Shipper ____ Box ____ Other ____/____

Cooler ID/Track #					
Temp (Celsius)	* 10°				
Cooler ID/Track #					
Temp (Celsius)					

* Poorly iced

Any "NO" responses or discrepancies should be explained in the "Comments" section below.

CHECKLIST	YES	NO	NA
1. Were custody seals on shipping container(s) intact? Check "NA" if hand delivered. Circle One: CUSTODY SEAL SAVED UNABLE TO SAVE CUSTODY SEAL	✓		
2. Were custody papers properly included with samples?	✓		
3. Were custody papers properly filled out (ink, signed, match labels)?		✓	
4. Did all bottles arrive in good condition (unbroken)?	✓		
5. Were all bottle labels complete (sample #, date, signed, analysis, preservatives)?	✓		
6. Were correct bottles used for the tests indicated?	✓		
7. Were proper sample preservation techniques indicated?	✓		
8. Were samples received within adequate holding times? If "NO", complete 8.a. or 8.b.	✓		
a. Was sample hold time exceeded (NCM required)?			—
b. Did the samples arrive with more than half the hold time exceeded (NCM required)?			—
9. Were all VOA bottles checked for the presence of air bubbles? If air bubbles were found, indicate in comment section.	✓		
10. Were samples in direct contact with wet ice? If "NO", circle one: NO ICE BLUE ICE	✓		
11. Were the samples received with a temperature blank? NOTE TEMPERATURE ABOVE If "NO", circle one: UNABLE TO DETERMINE TEMP TEMP TAKEN FROM THE COOLER ICE/WATER NEAR SAMPLES	✓		
12. Were sample pHs checked and recorded by S.R. (see back for Page 2 - Sample pH)? *TOC and VOA samples are checked by laboratory analysts.*	✓		
13. Were samples accepted into the laboratory?	✓		

Comments:
Label shows USGA4TW601 - Logged in as per COC USGS4TW601
2 of 3 on COC are not "relinquished" by client
~~Missing the following bottles for sample SD13 04TW601 SGW/906 of Rec Tampa~~ 7/24/97

Project Manager initials/date reviewed: MX 9/25/97

Corrective Action: ____

Corrective Action completed by/date: ____

Chain of Custody Record

Quanterra

QUA-4124

Client	~~[illegible]~~/HydroGeologic
Address	1155 Herndon Parkway, Ste 900
City	Herndon
State	VA
Zip Code	20170
Project Manager	Jim Costello
Telephone Number (Area Code)/Fax Number	703-478-5186
Site Contact	Mike Rodtong
Carrier/Waybill Number	Fed Ex 5739019495
Project Name	NAS Fort Worth JRB - 1st Qtr Sample
Contract/Purchase Order/Quote No.	AFC001 07GAA
Date	7/23/97
Lab Number	
Chain Of Custody Number	01343
Page	1 of 3

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	VOC	Metals	BTEX	Amins	Alkalinity	Methane	TOC
SD13-06W601	23 Jul 97	1100	Groundwater	120 ml	40 ml vial	3	HCl		X						
↓	↓	↓	↓	500 ml	poly	1	HNO_3			X					
OT-15CW601		1220		120 ml	40 ml vial	3	HCl		X						
↓		↓		500 ml	poly	1	HNO_3			X					
USGS4TW601		1650		120 ml	40 ml vial	3	HCl		X						
↓		↓		500 ml	poly	1	HNO_3			X					
EB072397		1800		120 ml	40 ml vial	3	HCl		X						
↓		↓		500 ml	poly	1	HNO_3			X					
SD13-04W601		0930		80 ml	VOA vial	2	HCl				X				
↓		↓		500 ml	poly	1	4°C					X	X		
				120 ml	40 ml vial	3	H_2SO_4							X	
				80 ml	40 ml vial	2	H_2SO_4								X
SD13-02W601		1110		120 ml	40 ml vial	3	HCl				X				
↓		↓		500 ml	poly	1	4°C					X	X		
				120 ml	40 ml vial	3	H_2SO_4							X	
				80 ml	40 ml vial	2	H_2SO_4								X

Special Instructions

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Turn Around Time Required: ☐ Normal ☐ Rush 21 Day TAT

QC Level: ☐ I. ☐ II. ☐ III.

Project Specific (Specify):

	Date	Time		Date	Time
1. Relinquished By	23 Jul 97	2000	1. Received By	7/24/97	1030
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

Billing Number is AFC001-07GAA. Not what is printed on bottle labels

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

408 670

Chain of Custody Record

Quanterra

QUA-4124

Client	Project Manager	Date	Chain Of Custody Number
Hydrogeologic, Inc.		23 Jul 97	00601
Address	Telephone Number (Area Code)/Fax Number	Lab Number	Page 2 of 3

City	State	Zip Code	Site Contact

Project Name

Carrier/Waybill Number: Fed X 5739019195

Contract/Purchase Order/Quote No.

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	BTEX	Methane	TOC	Anions	Alkalinity	VOC	Metals				
STM-036W601	23 Jul 97	1300	Grab water	120 ml	40 ml vial	3	HCl		X										
				120 ml	40 ml vial	3	H_2SO_4			X									
				80 ml	40 ml vial	2	H_2SO_4				X								
				500 ml	poly	1	4°C					X	X						
DUP05W601		1645		120 ml	40 ml vial	3	HCl							X					
				500 ml	poly	1	4°C					X	X						
				120 ml	40 ml vial	3	H_2SO_4			X									
				80 ml	40 ml vial	2	H_2SO_4				X								
				500 ml	poly	1	HNO3								X				
STM-26W601		1615		120 ml	40 ml vial	3	HCl							X					
				120 ml	40 ml vial	3	H_2SO_4			X									
				80 ml	40 ml vial	2	H_2SO_4				X								
				500 ml	poly	1	4°C					X	X						
				500 ml	poly	1	HNO3								X				

Special Instructions

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Turn Around Time Required: ☐ Normal ☐ Rush

QC Level: ☐ I. ☐ II. ☐ III.

Project Specific (Specify)

	Date	Time		Date	Time
1. Relinquished By			1. Received By [signature]	7/24/97	1030
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: Stays with Sample; CANARY, Returned to Client with Report; PINK, Field Copy

408 671

Chain of Custody Record

Quanterra

QUA-4124

Client: Hydro Geologic	Project Manager	Date	Chain Of Custody Number: 00602
Address	Telephone Number (Area Code)/Fax Number	Lab Number	Page 3 of 3
City / State / Zip Code	Site Contact		
Project Name	Carrier/Waybill Number: FedEx 5739019495		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	VOC	BTEX	Methane									
TB-072397	23 Jul 97	1830	Trip Blank	120 ml	1/2 pint VOA	3	HCl		X											
↓	↓	↓	↓	120 ml	1/2 pint VOA	3	HCl			X										
				120 ml	1/2 pint VOA	3	H_2SO_4				X									

Special Instructions

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown		Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months	
Turn Around Time Required: ☐ Normal ☐ Rush	QC Level: ☐ I. ☐ II. ☐ III.	Project Specific (Specify)	
1. Relinquished By	Date / Time	1. Received By: [signature]	Date: 7/24/97 Time: 1030
2. Relinquished By	Date / Time	2. Received By	Date / Time
3. Relinquished By	Date / Time	3. Received By	Date / Time

Comments

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

408 672

408 673

Analytical Report for Wells Sampled July 24, 1997

408 674

Quanterra
Environmental Services

Quanterra Incorporated
5910 Breckenridge Parkway, Suite H
Tampa, Florida 33610

813 621-0784 Telephone
813 623-6021 Fax

ANALYTICAL REPORT

PROJECT NO. 12001-7-5001

NAS Ft. Worth JRB, 1st Qtr

Lot #: B7G250127

Jim Costello

HydroGeoLogic, Inc.

QUANTERRA INCORPORATED

Certification Numbers: E84059,HRS84297
FDEP CompQAP: 870270G

Michele H Lersch

Michele Lersch
Project Manager

August 11, 1997

Quanterra
Environmental Services

NARRATIVE

HydroGeoLogic

Project: 12001-7-5001/NAS Ft. Worth JRB, 1st Qtr (Carswell AFB)

Quanterra Lot Number: B7G250127
Matrix: Groundwater
Methods: 8020A, RSK-175, 9060, 9056, 310.1

9056
The method blank had quantifiable levels of chloride and sulfate below their respective RLs. No corrective action is required.

Chloride and sulfate were not recovered from the matrix spike and matrix spike duplicate within control limits because the added spike levels were insufficient to be recovered. The native concentrations of the analytes in the sample were in excess of four times the added spike concentrations.

9060
The "TOC Range" footnote on the General Chemistry report page for each sample indicates the lowest and highest concentrations of the quadruplicate analyses, as required by the method. The reported result is the average of the quadruplicate analyses, rounded according to Quanterra protocols.

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SAMPLE SUMMARY

B7G250127

WO #	SAMPLE#	CLIENT SAMPLE ID	DATE	TIME
CAWNV	001	MW-3WG01	07/24/97	11:15
CAWP3	002	ST14-W31WG01	07/24/97	09:30
CAWP6	003	EB072497	07/24/97	12:10
CAWPC	004	TB072497	07/24/97	18:00

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Quanterra Environmental Services

METHODS SUMMARY

B7G250127

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Alkalinity	MCAWW 310.1	MCAWW 310.1
Aromatic Volatile Organics by GC	SW846 8020A	SW846 5030
Bromide	SW846 9056	SW846 9056
Chloride	SW846 9056	SW846 9056
Dissolved Gasses in Water	EPA-9 RSK-175	
Sulfate	SW846 9056	SW846 9056
Total Organic Carbon	SW846 9060	SW846 9060

References:

EPA-9 Sample Prep and Calculations for Dissolved Gas Analysis in Water Samples Using a GC Headspace Equilibration Technique, RSKSOP-175, REV. 0, 8/11/94, USEPA Research Lab

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

Quanterra Environmental Services

EXECUTIVE SUMMARY - Detection Highlights

B7G250127

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
MW-3WG01 07/24/97 11:15 001				
Methane	0.24 F	0.50	ug/L	EPA-9 RSK-175
Benzene	0.24 F	2.0	ug/L	SW846 8020A
Toluene	0.24 F	2.0	ug/L	SW846 8020A
Xylenes (total)	0.90 F	2.0	ug/L	SW846 8020A
Total Organic Carbon	2	1	mg/L	SW846 9060
Chloride	40.2	0.20	mg/L	SW846 9056
Sulfate	43.2	0.50	mg/L	SW846 9056
Bromide	0.92	0.20	mg/L	SW846 9056
Alkalinity as CaCO3 to pH 4.5	370	10	mg/L	MCAWW 310.1
ST14-W31WG01 07/24/97 09:30 002				
Methane	0.11 F	0.50	ug/L	EPA-9 RSK-175
Toluene	0.23 F	2.0	ug/L	SW846 8020A
Xylenes (total)	0.85 F	2.0	ug/L	SW846 8020A
Total Organic Carbon	1	1	mg/L	SW846 9060
Chloride	29.4	0.20	mg/L	SW846 9056
Sulfate	28.1	0.50	mg/L	SW846 9056
Bromide	0.77	0.20	mg/L	SW846 9056
Alkalinity as CaCO3 to pH 4.5	320	10	mg/L	MCAWW 310.1
EB072497 07/24/97 12:10 003				
Methane	0.16 F	0.50	ug/L	EPA-9 RSK-175
TB072497 07/24/97 18:00 004				
Methane	0.095 F	0.50	ug/L	EPA-9 RSK-175

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QC DATA ASSOCIATION SUMMARY

B7G250127

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WG	SW846 9060		7217132	7217018
	WG	SW846 9056		7219172	7219041
	WG	SW846 9056		7219173	7219042
	WG	EPA-9 RSK-175		7216236	7218037
	WG	SW846 9056		7219170	7219040
	WG	SW846 8020A		7212147	7212031
	WG	MCAWW 310.1		7217127	7217015
002	WG	SW846 9060		7217132	7217018
	WG	SW846 9056		7219172	7219041
	WG	SW846 9056		7219173	7219042
	WG	EPA-9 RSK-175		7216236	7218037
	WG	SW846 9056		7219170	7219040
	WG	SW846 8020A		7212147	7212031
	WG	MCAWW 310.1		7217127	
003	WQ	SW846 9060		7217132	7217018
	WQ	SW846 9056		7219172	7219041
	WQ	SW846 9056		7219173	7219042
	WQ	EPA-9 RSK-175		7216236	7218037
	WQ	SW846 9056		7219170	7219040
	WQ	SW846 8020A		7212147	7212031
	WQ	MCAWW 310.1		7217127	
004	WQ	EPA-9 RSK-175		7216236	7218037
	WQ	SW846 8020A		7212147	7212031

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: MW-3WG01

GC Volatiles

Lot-Sample #...: B7G250127-001 Work Order #...: CAWNV10A Matrix.....: WG
Date Sampled...: 07/24/97 Date Received..: 07/25/97
Prep Date.....: 08/01/97 Analysis Date..: 08/01/97
Prep Batch #...: 7216236
Dilution Factor: 1
Analyst ID.....: 013512 Instrument ID..: K1A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Ethane	ND	0.50	ug/L	EPA-9 RSK-175
Ethene	ND	0.50	ug/L	EPA-9 RSK-175
Methane	0.24 F	0.50	ug/L	EPA-9 RSK-175

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: MW-3WG01

GC Volatiles

Lot-Sample #...: B7G250127-001 Work Order #...: CAWNV101 Matrix.....: WG
Date Sampled...: 07/24/97 Date Received..: 07/25/97
Prep Date.....: 07/29/97 Analysis Date..: 07/29/97
Prep Batch #...: 7212147
Dilution Factor: 1
Analyst ID.....: 001854 Instrument ID..: V2A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	0.24 F	2.0	ug/L	SW846 8020A
Ethylbenzene	ND	2.0	ug/L	SW846 8020A
Toluene	0.24 F	2.0	ug/L	SW846 8020A
Xylenes (total)	0.90 F	2.0	ug/L	SW846 8020A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	90	(46 - 136)
Bromofluorobenzene	88	(48 - 138)
Fluorobenzene	95	(44 - 165)

NOTE(S):

F The analyte was identified but the value was below the RL and above the MDL.

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra
Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-W31WG01

GC Volatiles

Lot-Sample #...: B7G250127-002 Work Order #...: CAWP3104 Matrix.....: WG
Date Sampled...: 07/24/97 Date Received..: 07/25/97
Prep Date.....: 08/01/97 Analysis Date..: 08/01/97
Prep Batch #...: 7216236
Dilution Factor: 1
Analyst ID.....: 013512 Instrument ID..: K1A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Ethane	ND	0.50	ug/L	EPA-9 RSK-175
Ethene	ND	0.50	ug/L	EPA-9 RSK-175
Methane	0.11 F	0.50	ug/L	EPA-9 RSK-175

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-W31WG01

GC Volatiles

Lot-Sample #...: B7G250127-002 Work Order #...: CAWP3101 Matrix.....: WG
Date Sampled...: 07/24/97 Date Received..: 07/25/97
Prep Date.....: 07/29/97 Analysis Date..: 07/29/97
Prep Batch #...: 7212147
Dilution Factor: 1
Analyst ID.....: 001854 Instrument ID..: V2A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	2.0	ug/L	SW846 8020A
Ethylbenzene	ND	2.0	ug/L	SW846 8020A
Toluene	0.23 F	2.0	ug/L	SW846 8020A
Xylenes (total)	0.85 F	2.0	ug/L	SW846 8020A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	92	(46 - 136)
Bromofluorobenzene	87	(48 - 138)
Fluorobenzene	95	(44 - 165)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: ST14-W31WG01

General Chemistry

Lot-Sample #...: B7G250127-002 Work Order #...: CAWP3 Matrix.....: WG
Date Sampled...: 07/24/97 Date Received..: 07/25/97

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH 4.5	320	10	mg/L	MCAWW 310.1	08/04/97	7217127
	Dilution Factor: 1					
	Analysis Time..: 10:51		Analyst ID.....: 090000		Instrument ID..: ISE	
Bromide	0.77	0.20	mg/L	SW846 9056	08/05-08/06/97	7219170
	Dilution Factor: 1					
	Analysis Time..: 10:07		Analyst ID.....: 004003		Instrument ID..: IC	
Chloride	29.4	0.20	mg/L	SW846 9056	08/05-08/06/97	7219172
	Dilution Factor: 1					
	Analysis Time..: 10:07		Analyst ID.....: 004003		Instrument ID..: IC	
Sulfate	28.1	0.50	mg/L	SW846 9056	08/05-08/06/97	7219173
	Dilution Factor: 1					
	Analysis Time..: 10:07		Analyst ID.....: 004003		Instrument ID..: IC	
Total Organic Carbon	1	1	mg/L	SW846 9060	08/04/97	7217132
	Dilution Factor: 1					
	Analysis Time..: 22:58		Analyst ID.....: 004003		Instrument ID..: TOC	

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: KB072497

GC Volatiles

Lot-Sample #...: B7G250127-003 Work Order #...: CAWP6104 Matrix.....: WQ
Date Sampled...: 07/24/97 Date Received..: 07/25/97
Prep Date.....: 08/01/97 Analysis Date..: 08/01/97
Prep Batch #...: 7216236
Dilution Factor: 1
Analyst ID.....: 013512 Instrument ID..: K1A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Ethane	ND	0.50	ug/L	EPA-9 RSK-175
Ethene	ND	0.50	ug/L	EPA-9 RSK-175
Methane	0.16 F	0.50	ug/L	EPA-9 RSK-175

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: EB072497

GC Volatiles

Lot-Sample #...: B7G250127-003 Work Order #...: CAWP6101 Matrix.....: WQ
Date Sampled...: 07/24/97 Date Received..: 07/25/97
Prep Date.....: 07/29/97 Analysis Date..: 07/29/97
Prep Batch #...: 7212147
Dilution Factor: 1
Analyst ID.....: 001854 Instrument ID..: V2A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	2.0	ug/L	SW846 8020A
Ethylbenzene	ND	2.0	ug/L	SW846 8020A
Toluene	ND	2.0	ug/L	SW846 8020A
Xylenes (total)	ND	2.0	ug/L	SW846 8020A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	88	(46 - 136)
Bromofluorobenzene	86	(48 - 138)
Fluorobenzene	96	(44 - 165)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

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Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: EB072497

General Chemistry

Lot-Sample #...: B7G250127-003 Work Order #...: CAWP6 Matrix.....: WQ
Date Sampled...: 07/24/97 Date Received..: 07/25/97

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH 4.5	ND	10	mg/L	MCAWW 310.1	08/04/97	7217127
	Dilution Factor: 1					
	Analysis Time..: 10:51		Analyst ID.....: 090000		Instrument ID..: ISE	
Bromide	ND	0.20	mg/L	SW846 9056	08/05-08/06/97	7219170
	Dilution Factor: 1					
	Analysis Time..: 10:18		Analyst ID.....: 004003		Instrument ID..: IC	
Chloride	ND	0.20	mg/L	SW846 9056	08/05-08/06/97	7219172
	Dilution Factor: 1					
	Analysis Time..: 10:18		Analyst ID.....: 004003		Instrument ID..: IC	
Sulfate	ND	0.50	mg/L	SW846 9056	08/05-08/06/97	7219173
	Dilution Factor: 1					
	Analysis Time..: 10:18		Analyst ID.....: 004003		Instrument ID..: IC	
Total Organic Carbon	ND	1	mg/L	SW846 9060	08/04/97	7217132
	Dilution Factor: 1					
	Analysis Time..: 23:32		Analyst ID.....: 004003		Instrument ID..: TOC	

NOTE(S):

RL Reporting Limit

ND = The analyte was analyzed for but not detected at or above the MDL.

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Quanterra
Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: TB072497

GC Volatiles

Lot-Sample #...: B7G250127-004 Work Order #...: CAWPC104 Matrix.....: WQ
Date Sampled...: 07/24/97 Date Received..: 07/25/97
Prep Date.....: 08/01/97 Analysis Date..: 08/01/97
Prep Batch #...: 7216236
Dilution Factor: 1
Analyst ID.....: 013512 Instrument ID..: K1A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Ethane	ND	0.50	ug/L	EPA-9 RSK-175
Ethene	ND	0.50	ug/L	EPA-9 RSK-175
Methane	0.095 F	0.50	ug/L	EPA-9 RSK-175

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

HYDROGEOLOGIC, INC.

Client Sample ID: TB072497

GC Volatiles

Lot-Sample #...: B7G250127-004 Work Order #...: CAWPC101 Matrix.....: WQ
Date Sampled...: 07/24/97 Date Received..: 07/25/97
Prep Date.....: 07/29/97 Analysis Date..: 07/29/97
Prep Batch #...: 7212147
Dilution Factor: 1
Analyst ID.....: 001854 Instrument ID..: V2A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	2.0	ug/L	SW846 8020A
Ethylbenzene	ND	2.0	ug/L	SW846 8020A
Toluene	ND	2.0	ug/L	SW846 8020A
Xylenes (total)	ND	2.0	ug/L	SW846 8020A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	88	(46 - 136)
Bromofluorobenzene	87	(48 - 138)
Fluorobenzene	96	(44 - 165)

NOTE(S):

ND = The analyte was analyzed for but not detected at or above the MDL.

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Quanterra
Environmental Services

Quality Control Summary

Quanterra QC Program Summary

Method Blanks

Laboratory Control Samples

Matrix Spike/Matrix Spike Duplicates

Chain-of-Custody

Quanterra
Environmental Services

Quanterra Quality Control Program Summary

Quanterra Environmental Services considers continuous analytical method performance evaluations to be an integral portion of the data package, and routinely includes the pertinent QA/QC data associated with analytical results. Brief discussions of the various QA/QC procedures utilized to measure acceptable method and matrix performance follow. Further documentation of specific policies and procedures in use are available, upon request, from the Quanterra Quality Control Department.

The program described below provides Quanterra's interpretation of QC requirements described in SW-846, 3rd edition -Final Update II. Additional interpretations specific to other aspects of methods performed, such as instrument calibration and bench procedures, are described in program-specific documents (e.g. US Corps of Engineers, AFCEE, etc.) and associated method standard operating procedures. Where explicit program requirements or project requirements exist, certain elements of the Quanterra QC Program may be superseded by these requirements.

Elements of the Quanterra QC Program

Where other clear regulatory guidance, contract specifications, or client requirements are not available, the Quanterra QC Program provides guidance for Batch QC requirements. The Quality Control Batch is a set of up to 20 field samples of similar matrix, which are processed together under the same conditions, within the same time frame. Included in each Quality Control Batch is a Method Blank, Laboratory Control Sample, and Matrix Spike Duplicate. For methods that require independent sample preparation prior to analysis, the QC Batch is defined at the preparation stage. For methods that do not require independent sample preparation, the QC Batch is defined at the instrument. The QC Batch Number is provided on each result page in association with the parameter(s) presented, and may be used to cross-reference sample results with the associated QC data.

Method Blank Evaluations

Laboratory analytical method blanks are systematically prepared and analyzed in order to continuously evaluate the system interference and background contamination levels associated with each applicable analytical method. Method blanks include all aspects of actual laboratory procedures involving sample preparation and analysis, substituting analyte-free water or solid for the actual sample. Under normal circumstances, the Method Blank should not exhibit analytes of interest above the reported detection limit. Due to the presence of some analytes in a typical laboratory setting, the following common laboratory contaminants are exceptions to this rule, provided they are not present in the method blank at greater than five times the reporting limit.

Volatiles	Semi-Volatiles	Metals
Methylene chloride	Dimethyl phthalate	Calcium
Toluene	Diethyl phthalate	Magnesium
2-Butanone	Di-n-butyl-phthalate	Sodium
Acetone	Butyl benzyl phthalate	
	Bis (2-ethylhexyl) phthalate	

A method blank is performed with each analytical batch. A minimum of 5% of all laboratory analyses are method blanks.

Laboratory Control Sample (LCS) Evaluations

Known concentrations of designated matrix spike (target analyte) compounds are added to a method blank prior to extraction and analysis. Percent recovery determinations of individual target analytes in the LCS demonstrate the laboratory's method performance for the QC Batch relative to these target analytes (or other individual components represented by a subset of control analytes). Percent recovery data is displayed alongside acceptance criteria, that is typically derived from laboratory historical data. Failure of a Laboratory Control Sample to meet established recovery criteria for control analytes is cause for corrective actions to occur, which typically includes re-extraction and re-analysis of all samples associated with the QC Batch. An LCS is performed with each analytical batch. A minimum of 5% of all laboratory analyses are laboratory control samples.

Quanterra Environmental Services

Quanterra Quality Control Program Summary (continued)

Surrogate Spike Recovery Evaluations

For GC and GC/MS analyses, known concentrations of designated surrogate spikes, consisting of a number of similar, non-method compounds or method compound analogues, are added to sample fractions prior to sample extraction and analysis. The percent recovery determinations calculated from the subsequent analysis is one indication of the overall method efficiency for the individual sample. The surrogate spike recovery data is displayed alongside acceptance limits at the bottom of each applicable analytical result report page. Where sufficient laboratory-generated data does not yet exist to determine appropriate control limits, advisory limits may be enacted until sufficient data is collected to allow implementation of control limits.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Evaluations

In conjunction with the analysis of a client-provided field sample, a known concentration of designated matrix spike compounds (target analytes) are added to two aliquots of the actual sample. Percent recovery determinations are calculated from both spiked aliquots, using target analyte concentrations already present in the actual sample as a baseline. The percent recovery determinations indicate the accuracy of the method specific to the target analytes (or other individual components represented by a subset of control analytes) in the individual sample matrix. Comparison of the percent recoveries in the two spiked aliquots yields a relative percent difference (RPD). Percent recovery and relative percent difference data is displayed alongside historical criteria, that may be used to judge individual sample matrix effects for specific analytes. MS/MSD data is evaluated by the laboratory with respect to the individual sample matrix. In cases where MS/MSD data indicate sample method performance outside of historical criteria, the laboratory control sample results are referenced to ensure acceptable method performance by the laboratory for the sample batch. For analyses which are inappropriately suited for matrix spikes (e.g. pH), non-spiked duplicate analyses are performed to generate precision data. Matrix spike duplicates are typically performed on at least one sample within each analytical batch. A minimum of 10% of all laboratory analyses are matrix spikes or duplicates.

Corrective Action Evaluations

The goal of the Quanterra Quality Control Program is to generate data that demonstrates process control, and allows for client usability of data. Where the analytical process is demonstrated to vary from established criteria, or client requirements have not been met, data evaluation resulting in corrective action may be required. Corrective action may include re-preparation and/or reanalysis of field samples and QC samples. Where appropriate or necessary to allow proper interpretation of results presented in the final report, details of corrective actions taken during the laboratory processing of samples are presented as a case narrative at the front of the report. Alternatively, routine corrective action, such as reanalysis, may be footnoted on individual sample result pages.

Analytical Result Qualifier Flags

Where applicable , data qualifiers may be appended to analytical results in order to allow for proper interpretation of the result presented. Typically, the presence of data qualifier flag on an analytical result page is accompanied by a footnote explaining the qualifier.

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METHOD BLANK REPORT

GC Volatiles

Client Lot #...: B7G250127
MB Lot-Sample #: I7H040000-236
Analysis Date..: 08/01/97
Dilution Factor: 1

Work Order #...: CC3NG101
Prep Date.....: 08/01/97
Prep Batch #...: 7216236
Analyst ID.....: 013512

Matrix.....: WATER
Instrument ID..: K1A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Methane	ND	0.50	ug/L	EPA-9 RSK-175
Ethane	ND	0.50	ug/L	EPA-9 RSK-175
Ethene	ND	0.50	ug/L	EPA-9 RSK-175

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

ND = The analyte was analyzed for but not detected at or above the MDL.

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Quanterra Environmental Services

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: B7G250127
MB Lot-Sample #: B7G310000-147

Analysis Date..: 07/29/97
Dilution Factor: 1

Work Order #...: CC1AM101

Prep Date.....: 07/29/97
Prep Batch #...: 7212147

Analyst ID.....: 001854

Matrix.....: WATER

Instrument ID..: V2A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	2.0	ug/L	SW846 8020A
Ethylbenzene	ND	2.0	ug/L	SW846 8020A
Toluene	ND	2.0	ug/L	SW846 8020A
Xylenes (total)	ND	2.0	ug/L	SW846 8020A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	103	(46 - 136)
Bromofluorobenzene	87	(48 - 138)
Fluorobenzene	93	(44 - 165)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

ND = The analyte was analyzed for but not detected at or above the MDL.

Quanterra Environmental Services

METHOD BLANK REPORT

General Chemistry

Client Lot #...: B7G250127 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH		Work Order #: CC3Q4101		MB Lot-Sample #:	B7H050000-127	
	ND	10	mg/L	MCAWW 310.1	08/04/97	7217127
		Dilution Factor: 1				
				Analyst ID.....: 090000	Instrument ID..: ISE	
Bromide		Work Order #: CC4XG101		MB Lot-Sample #:	B7H070000-170	
	ND	0.20	mg/L	SW846 9056	08/05-08/06/97	7219170
		Dilution Factor: 1				
				Analyst ID.....: 004003	Instrument ID..: IC	
Chloride		Work Order #: CC4XP101		MB Lot-Sample #:	B7H070000-172	
	0.12 F	0.20	mg/L	SW846 9056	08/05-08/06/97	7219172
		Dilution Factor: 1				
				Analyst ID.....: 004003	Instrument ID..: IC	
Sulfate		Work Order #: CC4XR101		MB Lot-Sample #:	B7H070000-173	
	0.39 F	0.50	mg/L	SW846 9056	08/05-08/06/97	7219173
		Dilution Factor: 1				
				Analyst ID.....: 004003	Instrument ID..: IC	
Total Organic Carbon		Work Order #: CC3Q9101		MB Lot-Sample #:	B7H050000-132	
	ND	1	mg/L	SW846 9060	08/04/97	7217132
		Dilution Factor: 1				
				Analyst ID.....: 004003	Instrument ID..: TOC	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

ND = The analyte was analyzed for but not detected at or above the MDL.

F The analyte was identified but the value was below the RL and above the MDL.

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: B7G250127 **Work Order #...:** CC3NG102-LCS **Matrix.....:** WATER
LCS Lot-Sample#: I7H040000-236 CC3NG103-LCSD
Prep Date.....: 08/01/97 **Analysis Date..:** 08/01/97
Prep Batch #...: 7216236
Dilution Factor: 1 **Instrument ID..:** K1A
Analyst ID.....: 013512

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Methane	34	30	ug/L	89		EPA-9 RSK-175
	34	32	ug/L	93	3.6	EPA-9 RSK-175
Ethane	63	56	ug/L	90		EPA-9 RSK-175
	63	59	ug/L	93	4.0	EPA-9 RSK-175
Ethene	59	51	ug/L	87		EPA-9 RSK-175
	59	54	ug/L	91	4.8	EPA-9 RSK-175

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra
Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: B7G250127 **Work Order #...:** CC3NG102-LCS **Matrix.....:** WATER
LCS Lot-Sample#: I7H040000-236 CC3NG103-LCSD
Prep Date.....: 08/01/97 **Analysis Date..:** 08/01/97
Prep Batch #...: 7216236
Dilution Factor: 1 **Instrument ID..:** K1A
Analyst ID.....: 013512

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Methane	89	(70 - 130)			EPA-9 RSK-175
	93	(70 - 130)	3.6	(0-30)	EPA-9 RSK-175
Ethane	90	(70 - 130)			EPA-9 RSK-175
	93	(70 - 130)	4.0	(0-30)	EPA-9 RSK-175
Ethene	87	(70 - 130)			EPA-9 RSK-175
	91	(70 - 130)	4.8	(0-30)	EPA-9 RSK-175

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: B7G250127 **Work Order #...:** CC1AM102 **Matrix.....:** WATER
LCS Lot-Sample#: B7G310000-147
Prep Date.....: 07/29/97 **Analysis Date..:** 07/29/97
Prep Batch #...: 7212147
Dilution Factor: 1 **Instrument ID..:** V2A
Analyst ID.....: 001854

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Benzene	**20**	**18**	**ug/L**	**90**	**SW846 8020A**
Ethylbenzene	**20**	**18**	**ug/L**	**92**	**SW846 8020A**
Toluene	**20**	**19**	**ug/L**	**93**	**SW846 8020A**
Xylenes (total)	**60**	**56**	**ug/L**	**94**	**SW846 8020A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	89	(46 - 136)
Bromofluorobenzene	87	(48 - 138)
Fluorobenzene	96	(44 - 165)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Quanterra
Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: B7G250127 **Work Order #...:** CC1AM102 **Matrix.....:** WATER
LCS Lot-Sample#: B7G310000-147
Prep Date.....: 07/29/97 **Analysis Date..:** 07/29/97
Prep Batch #...: 7212147
Dilution Factor: 1 **Instrument ID..:** V2A
Analyst ID.....: 001854

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Benzene	**90**	**(75 - 125)**	**SW846 8020A**
Ethylbenzene	**92**	**(71 - 129)**	**SW846 8020A**
Toluene	**93**	**(70 - 125)**	**SW846 8020A**
Xylenes (total)	**94**	**(71 - 133)**	**SW846 8020A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	89	(46 - 136)
Bromofluorobenzene	87	(48 - 138)
Fluorobenzene	96	(44 - 165)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Lot-Sample #...: B7G250127 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH WO#:CC3Q4102-LCS/CC3Q4103-LCSD LCS Lot-Sample#: B7H050000-127								
	100	100	mg/L	100		MCAWW 310.1	08/04/97	7217127
	100	100	mg/L	100	0.0	MCAWW 310.1	08/04/97	7217127
Dilution Factor: 1								
Instrument ID..: ISE TCLP Date.....: 090000								
Bromide WO#:CC4XG102-LCS/CC4XG103-LCSD LCS Lot-Sample#: B7H070000-170								
	2.0	2.1	mg/L	105		SW846 9056	08/05-08/06/97	7219170
	2.0	1.9	mg/L	97	8.0	SW846 9056	08/05-08/06/97	7219170
Dilution Factor: 1								
Instrument ID..: IC TCLP Date.....: 004003								
Chloride WO#:CC4XP102-LCS/CC4XP103-LCSD LCS Lot-Sample#: B7H070000-172								
	5.0	4.8	mg/L	95		SW846 9056	08/05-08/06/97	7219172
	5.0	4.9	mg/L	98	3.0	SW846 9056	08/05-08/06/97	7219172
Dilution Factor: 1								
Instrument ID..: IC TCLP Date.....: 004003								
Sulfate WO#:CC4XR102-LCS/CC4XR103-LCSD LCS Lot-Sample#: B7H070000-173								
	5.0	4.8	mg/L	97		SW846 9056	08/05-08/06/97	7219173
	5.0	4.9	mg/L	98	0.67	SW846 9056	08/05-08/06/97	7219173
Dilution Factor: 1								
Instrument ID..: IC TCLP Date.....: 004003								
Total Organic Carbon WO#:CC3Q9102-LCS/CC3Q9103-LCSD LCS Lot-Sample#: B7H050000-132								
	5.0	4.9	mg/L	99		SW846 9060	08/04/97	7217132
	5.0	4.9	mg/L	98	0.72	SW846 9060	08/04/97	7217132
Dilution Factor: 1								
Instrument ID..: TOC TCLP Date.....: 004003								

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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Quanterra Environmental Services

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Lot-Sample #...: B7G250127 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH WO#:CC3Q4102-LCS/CC3Q4103-LCSD LCS Lot-Sample#: B7H050000-127							
	100	(90 - 110)			MCAWW 310.1	08/04/97	7217127
	100	(90 - 110)	0.0	(0-17)	MCAWW 310.1	08/04/97	7217127
		Dilution Factor: 1					
					Instrument ID..: ISE	TCLP Date.....: 090000	
Bromide WO#:CC4XG102-LCS/CC4XG103-LCSD LCS Lot-Sample#: B7H070000-170							
	105	(86 - 112)			SW846 9056	08/05-08/06/97	7219170
	97	(86 - 112)	8.0	(0-20)	SW846 9056	08/05-08/06/97	7219170
		Dilution Factor: 1					
					Instrument ID..: IC	TCLP Date.....: 004003	
Chloride WO#:CC4XP102-LCS/CC4XP103-LCSD LCS Lot-Sample#: B7H070000-172							
	95	(91 - 111)			SW846 9056	08/05-08/06/97	7219172
	98	(91 - 111)	3.0	(0-20)	SW846 9056	08/05-08/06/97	7219172
		Dilution Factor: 1					
					Instrument ID..: IC	TCLP Date.....: 004003	
Sulfate WO#:CC4XR102-LCS/CC4XR103-LCSD LCS Lot-Sample#: B7H070000-173							
	97	(88 - 115)			SW846 9056	08/05-08/06/97	7219173
	98	(88 - 115)	0.67	(0-20)	SW846 9056	08/05-08/06/97	7219173
		Dilution Factor: 1					
					Instrument ID..: IC	TCLP Date.....: 004003	
Total Organic Carbon WO#:CC3Q9102-LCS/CC3Q9103-LCSD LCS Lot-Sample#: B7H050000-132							
	99	(92 - 117)			SW846 9060	08/04/97	7217132
	98	(92 - 117)	0.72	(0-20)	SW846 9060	08/04/97	7217132
		Dilution Factor: 1					
					Instrument ID..: TOC	TCLP Date.....: 004003	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra Environmental Services

MATRIX SPIKE SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: B7G250127 **Work Order #...:** CAWNV10C-MS CAWNV10D-MSD **Matrix.....:** WG
MS Lot-Sample #: B7G250127-001
Date Sampled...: 07/24/97 **Date Received..:** 07/25/97
Prep Date.....: 08/01/97 **Analysis Date..:** 08/01/97
Prep Batch #...: 7216236
Dilution Factor: 1 **Analyst ID.....:** 013512 **Instrument ID..:** K1A

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Methane	0.24	34	28	ug/L	82		EPA-9 RSK-175
	0.24	34	27	ug/L	81	0.92	EPA-9 RSK-175
Ethane	ND	63	51	ug/L	81		EPA-9 RSK-175
	ND	63	51	ug/L	81	0.09	EPA-9 RSK-175
Ethene	ND	59	47	ug/L	80		EPA-9 RSK-175
	ND	58	47	ug/L	80	0.19	EPA-9 RSK-175

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra
Environmental Services

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: B7G250127 **Work Order #...:** CAWNV10C-MS **Matrix.....:** WG
MS Lot-Sample #: B7G250127-001 CAWNV10D-MSD
Date Sampled...: 07/24/97 **Date Received..:** 07/25/97
Prep Date.....: 08/01/97 **Analysis Date..:** 08/01/97
Prep Batch #...: 7216236
Dilution Factor: 1 **Analyst ID.....:** 013512 **Instrument ID..:** K1A

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Methane	82	(70 - 130)			EPA-9 RSK-175
	81	(70 - 130)	0.92	(0-30)	EPA-9 RSK-175
Ethane	81	(70 - 130)			EPA-9 RSK-175
	81	(70 - 130)	0.09	(0-30)	EPA-9 RSK-175
Ethene	80	(70 - 130)			EPA-9 RSK-175
	80	(70 - 130)	0.19	(0-30)	EPA-9 RSK-175

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra Environmental Services

408 704

MATRIX SPIKE SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: B7G250127 **Work Order #...:** CAWNV102-MS **Matrix.....:** WG
MS Lot-Sample #: B7G250127-001 CAWNV103-MSD
Date Sampled...: 07/24/97 **Date Received..:** 07/25/97
Prep Date.....: 07/29/97 **Analysis Date..:** 07/29/97
Prep Batch #...: 7212147
Dilution Factor: 1 **Analyst ID.....:** 001854 **Instrument ID..:** V2A

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	**0.24**	**20**	**18**	**ug/L**	**89**		**SW846 8020A**
	0.24	**20**	**18**	**ug/L**	**89**	**0.11**	**SW846 8020A**
Ethylbenzene	**ND**	**20**	**19**	**ug/L**	**93**		**SW846 8020A**
	ND	**20**	**18**	**ug/L**	**92**	**0.16**	**SW846 8020A**
Toluene	**0.24**	**20**	**19**	**ug/L**	**92**		**SW846 8020A**
	0.24	**20**	**19**	**ug/L**	**93**	**0.67**	**SW846 8020A**
Xylenes (total)	**0.90**	**60**	**57**	**ug/L**	**93**		**SW846 8020A**
	0.90	**60**	**57**	**ug/L**	**93**	**0.66**	**SW846 8020A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	88	(46 - 136)
	90	(46 - 136)
Bromofluorobenzene	87	(48 - 138)
	88	(48 - 138)
Fluorobenzene	96	(44 - 165)
	96	(44 - 165)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Quanterra Environmental Services

408 705

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: B7G250127 **Work Order #...:** CAWNV102-MS **Matrix.....:** WG
MS Lot-Sample #: B7G250127-001 CAWNV103-MSD
Date Sampled...: 07/24/97 **Date Received..:** 07/25/97
Prep Date.....: 07/29/97 **Analysis Date..:** 07/29/97
Prep Batch #...: 7212147
Dilution Factor: 1 **Analyst ID.....:** 001854 **Instrument ID..:** V2A

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**89**	**(75 - 125)**			**SW846 8020A**
	89	**(75 - 125)**	**0.11**	**(0-20)**	**SW846 8020A**
Ethylbenzene	**93**	**(71 - 129)**			**SW846 8020A**
	92	**(71 - 129)**	**0.16**	**(0-20)**	**SW846 8020A**
Toluene	**92**	**(70 - 125)**			**SW846 8020A**
	93	**(70 - 125)**	**0.67**	**(0-20)**	**SW846 8020A**
Xylenes (total)	**93**	**(71 - 133)**			**SW846 8020A**
	93	**(71 - 133)**	**0.66**	**(0-20)**	**SW846 8020A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromochlorobenzene	88	(46 - 136)
	90	(46 - 136)
Bromofluorobenzene	87	(48 - 138)
	88	(48 - 138)
Fluorobenzene	96	(44 - 165)
	96	(44 - 165)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

408 706

Quanterra Environmental Services

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: B7G250127 **Matrix.....:** WG
Date Sampled...: 07/24/97 **Date Received..:** 07/25/97

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH			WO#: CAWNV105-MS/CAWNV106-MSD				MS Lot-Sample #: B7G250127-001		
	370	100	470	mg/L	104		MCAWW 310.1	08/04/97	7217127
	370	100	470	mg/L	102	0.42	MCAWW 310.1	08/04/97	7217127
			Dilution Factor: 1						
					Instrument ID..: ISE		Analyst ID.....: 090000		
Bromide			WO#: CAWNV10F-MS/CAWNV10G-MSD				MS Lot-Sample #: B7G250127-001		
	0.92	2.0	2.6	mg/L	86		SW846 9056	08/05-08/06/97	7219170
	0.92	2.0	2.7	mg/L	88	1.6	SW846 9056	08/05-08/06/97	7219170
			Dilution Factor: 1						
					Instrument ID..: IC		Analyst ID.....: 004003		
Chloride			WO#: CAWNV10J-MS/CAWNV10K-MSD				MS Lot-Sample #: B7G250127-001		
	40.2	5.0	43.3 N	mg/L	61		SW846 9056	08/05-08/06/97	7219172
	40.2	5.0	43.2 N	mg/L	61	0.04	SW846 9056	08/05-08/06/97	7219172
			Dilution Factor: 1						
					Instrument ID..: IC		Analyst ID.....: 004003		
Sulfate			WO#: CAWNV10M-MS/CAWNV10N-MSD				MS Lot-Sample #: B7G250127-001		
	43.2	5.0	47.1 N	mg/L	79		SW846 9056	08/05-08/06/97	7219173
	43.2	5.0	47.2 N	mg/L	81	0.24	SW846 9056	08/05-08/06/97	7219173
			Dilution Factor: 1						
					Instrument ID..: IC		Analyst ID.....: 004003		
Total Organic Carbon			WO#: CAWNV108-MS/CAWNV109-MSD				MS Lot-Sample #: B7G250127-001		
	2	5	7	mg/L	99		SW846 9060	08/04/97	7217132
	2	5	7	mg/L	99	0.23	SW846 9060	08/04/97	7217132
			Dilution Factor: 1						
					Instrument ID..: TOC		Analyst ID.....: 004003		

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

Chloride spike: MSC % recovery in LCS is within control limits.

Sulfate spike: MSC % recovery in LCS is within control limits

Quanterra Environmental Services

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: B7G250127 **Matrix.....:** WG
Date Sampled...: 07/24/97 **Date Received..:** 07/25/97

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Alkalinity as CaCO3 to pH	WO#: CAWNV105-MS/CAWNV106-MSD					MS Lot-Sample #: B7G250127-001	
	104	(90 - 110)			MCAWW 310.1	08/04/97	7217127
	102	(90 - 110)	0.42	(0-17)	MCAWW 310.1	08/04/97	7217127
	Dilution Factor: 1						
					Instrument ID..: ISE	Analyst ID.....: 090000	
Bromide	WO#: CAWNV10F-MS/CAWNV10G-MSD					MS Lot-Sample #: B7G250127-001	
	86	(86 - 112)			SW846 9056	08/05-08/06/97	7219170
	88	(86 - 112)	1.6	(0-20)	SW846 9056	08/05-08/06/97	7219170
	Dilution Factor: 1						
					Instrument ID..: IC	Analyst ID.....: 004003	
Chloride	WO#: CAWNV10J-MS/CAWNV10K-MSD					MS Lot-Sample #: B7G250127-001	
	61 N	(91 - 111)			SW846 9056	08/05-08/06/97	7219172
	61 N	(91 - 111)	0.04	(0-20)	SW846 9056	08/05-08/06/97	7219172
	Dilution Factor: 1						
					Instrument ID..: IC	Analyst ID.....: 004003	
Sulfate	WO#: CAWNV10M-MS/CAWNV10N-MSD					MS Lot-Sample #: B7G250127-001	
	79 N	(88 - 115)			SW846 9056	08/05-08/06/97	7219173
	81 N	(88 - 115)	0.24	(0-20)	SW846 9056	08/05-08/06/97	7219173
	Dilution Factor: 1						
					Instrument ID..: IC	Analyst ID.....: 004003	
Total Organic Carbon	WO#: CAWNV108-MS/CAWNV109-MSD					MS Lot-Sample #: B7G250127-001	
	99	(92 - 117)			SW846 9060	08/04/97	7217132
	99	(92 - 117)	0.23	(0-20)	SW846 9060	08/04/97	7217132
	Dilution Factor: 1						
					Instrument ID..: TOC	Analyst ID.....: 004003	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

Chloride spike: MSC % recovery in LCS is within control limits.

Sulfate spike: MSC % recovery in LCS is within control limits

Quanterra Environmental Services

408 708

TAMPA LABORATORY
CONDITION UPON RECEIPT FORM

Client: Hydrogeologic **Project Name/Lot #:** B7G250127
Date Received: 7/25/97 **Received By:** ALynn
CUR Completed By: A Lynn

Cooler/Shipping information:
TYPE: Quanterra Cooler ____ Client Cooler ____ Quanterra Shipper ____ Box ____ Other ____/____

Cooler ID/Track #					
Temp (Celsius)	4°				
Cooler ID/Track #					
Temp (Celsius)					

Any "NO" responses or discrepancies should be explained in the "Comments" section below.

CHECKLIST	YES	NO	NA
1. Were custody seals on shipping container(s) intact? Check "NA" if hand delivered. Circle One: CUSTODY SEAL SAVED UNABLE TO SAVE CUSTODY SEAL	✓		
2. Were custody papers properly included with samples?	✓		
3. Were custody papers properly filled out (ink, signed, match labels)?	✓		
4. Did all bottles arrive in good condition (unbroken)?	✓		
Were all bottle labels complete (sample #, date, signed, analysis, preservatives)?	✓		
6. Were correct bottles used for the tests indicated?	✓		
7. Were proper sample preservation techniques indicated?	✓		
8. Were samples received within adequate holding times? If "NO", complete 8.a. or 8.b.	✓		
a. Was sample hold time exceeded (NCM required)?			✓
b. Did the samples arrive with more than half the hold time exceeded (NCM required)?			✓
9. Were all VOA bottles checked for the presence of air bubbles? If air bubbles were found, indicate in comment section.	✓		
10. Were samples in direct contact with wet ice? If "NO", circle one: NO ICE BLUE ICE	✓		
11. Were the samples received with a temperature blank? NOTE TEMPERATURE ABOVE If "NO", circle one: UNABLE TO DETERMINE TEMP TEMP TAKEN FROM THE COOLER ICE/WATER NEAR SAMPLES	✓		
12. Were sample pHs checked and recorded by S.R. (see back for Page 2 - Sample pH)? *TOC and VOA samples are checked by laboratory analysts.*			✓
13. Were samples accepted into the laboratory?	✓		

Comments:

Project Manager initials/date reviewed: MK 7/27/97

Corrective Action:

Corrective Action completed by/date:

408 709

Quanterra Environmental Services

TAMPA LABORATORY
CONDITION UPON RECEIPT - SAMPLE pH

Date: _____ **Initials:** _____

Lot # (if not noted on page 1): _____

SAMPLE ID	METALS	DISS METALS	TRPH	AMMONIA	COD	CYANIDE	TOX	HARDNESS	TKN/NITROGEN	O&G	PHENOLS	NO2/NO3	H* ERB/PEST/PCB	SULFIDE	PHOSPHORUS	
Container	(P,G)	(P,G)	(G)	(P,G)	(P,G)	(P,G)	(G)	(P,G)	(P,G)	(G)	(G)	(P,G)	(G)	(P,G)	(P,G)	
Preservative	HNO_3	HNO_3	HCl	H_2SO_4	H_2SO_4	NaOH	H_2SO_4	H_2SO_4/HNO_3	H_2SO_4	H_2SO_4/HCl	H_2SO_4	H_2SO_4	None	Zn Acetate NaOH	H_2SO_4	
Required pH	< 2	< 2	< 2	< 2	< 2	> 12	< 2	< 2	< 2	< 2	< 2	< 2	5 to 9	> 9	< 2	

*Only 1 unpreserved bottle per sample is checked for pH.
NOTE: TOC and VOA pH checks are performed by the analyst, not sample receiveing

D:\CHCKLIST\SAMP_REC\CURPHLOG.DOC

Chain of Custody Record

Quanterra

QUA-4124

Client	Project Manager	Date	Chain Of Custody Number
Hydrogeologic, Inc		24 Jul 97	00606
Address	Telephone Number (Area Code)/Fax Number	Lab Number	Page 2 of 2

City	State	Zip Code	Site Contact

Project Name

Carrier/Waybill Number

Contract/Purchase Order/Quote No.

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	BTEX	Methane	TOC	Alkalinity	Anions							
ST14-W31W601	24 Jul 97	0930	Groundwater	120ml	40ml vial	3	HCl		X											
				120ml	40ml vial	3	H_2SO_4			X										
				80ml	40ml vial	2	H_2SO_4				X									
				1L	poly	1	40%					X	X							
EB 072497		1210	Trip Blank	120ml	40ml vial	3	HCl		X											
				120ml	40ml vial	3	H_2SO_4			X										
				80ml	40ml vial	2	H_2SO_4				X									
				500ml	poly	1	40%					X	X							
TB072497		1800		120ml	40ml vial	3	HCl		X											
				120ml	40ml vial	3	H_2SO_4			X										

Special Instructions

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Turn Around Time Required
☐ Normal ☐ Rush 21 Day TAT

QC Level
☐ I. ☐ II. ☐ III.

Project Specific (Specify)

	Date	Time		Date	Time
1. Relinquished By	24 Jul 97	1800	1. Received By	7/25/97	1000
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

408 710

Chain of Custody Record

Quanterra

QUA-4124

Client	Project Manager	Date	Chain Of Custody Number
HydroGeologic, Inc	Jim Costello	24 Jul 97	00603
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	
1155 Herndon Pkwy Suite 900	703/478-5786		Page 1 of 2
City / State / Zip Code	**Site Contact**		
Herndon VA 20170	Michael Rattany		
Project Name	**Carrier/Waybill Number**		
~~RE~~ NAS Fort Worth JRB 1st Qtr Sampling	Fed X ~~5739019512~~ 5739019812 [redacted]		
Contract/Purchase Order/Quote No.			
MEL 001-076MA			

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	BTEX	Methane	TOC	Anions	Alkalinity
MW-3W601	24 Jul 97	1115	Groundwater	120ml	40ml vial	3	HCl		X				
				120ml		3	H_2SO_4			X			
				50ml		2	H_2SO_4				X		
				1L	poly	1	4°C					X	
				500ml	poly	1	4°C						X
MW-3W601MS		1115		120ml	40ml vial	3	HCl		X				
				120ml		3	H_2SO_4			X			
				50ml		2	H_2SO_4				X		
				1L	poly	1	4°C					X	
				1L	poly	1	4°C						X
MW-3W601MD		1115		120ml	40ml vial	3	HCl		X				
				120ml		3	H_2SO_4			X			
				50ml		2	H_2SO_4				X		
				1L	poly	1	4°C					X	
				1L	poly	1	4°C						X

Special Instructions

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Turn Around Time Required: ☐ Normal ☐ Rush 21 Day TAT

QC Level: ☐ I. ☐ II. ☐ III.

Project Specific (Specify)

	Date	Time		Date	Time
1. Relinquished By: Michael Rattany	24 Jul 97	1800	1. Received By: [signature]	7/25/97	1000
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

Bill to: MEL 001-076MA. This Number differs from what is printed on sample bottle

DISTRIBUTION: Stays with Sample: CANARY - Returned to Client with Report; PINK - Field Copy

408 711

FINAL PAGE

ADMINISTRATIVE RECORD

FINAL PAGE

FINAL PAGE

ADMINISTRATIVE RECORD

FINAL PAGE