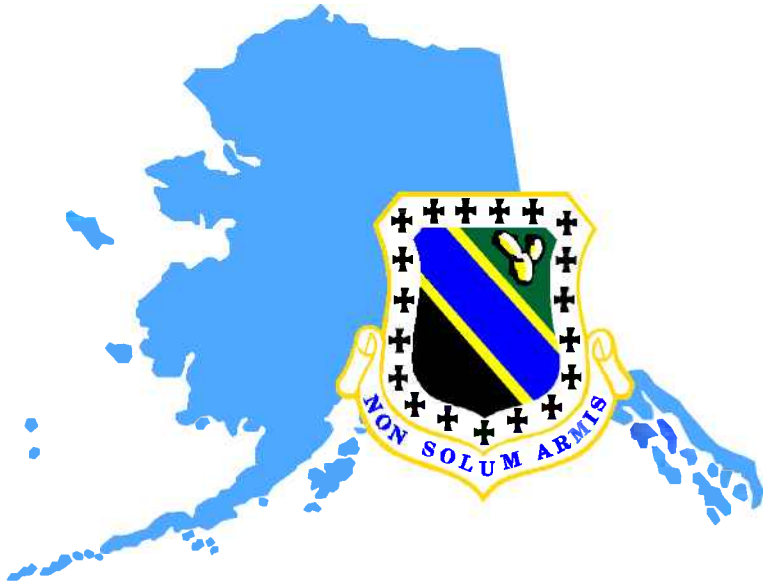

UNITED STATES AIR FORCE
ELMENDORF AIR FORCE BASE, ALASKA

ENVIRONMENTAL RESTORATION PROGRAM

2005 ANNUAL BASEWIDE GROUNDWATER MONITORING FIELD REPORT

ENVIRONMENTAL RESTORATION GROUNDWATER MONITORING PROGRAM

FINAL

MAY 2006

2005 ANNUAL BASEWIDE GROUNDWATER MONITORING FIELD REPORT

ENVIRONMENTAL RESTORATION GROUNDWATER MONITORING PROGRAM

Elmendorf Air Force Base, Alaska

Prepared for
3 Civil Engineer Squadron/Civil Engineer Environmental Restoration

and

Air Force Center for Environmental Excellence

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LIST OF ACRONYMS

AFB	Air Force Base
AFCEE	Air Force Center for Environmental Excellence
bgs	below ground surface
CES	Civil Engineer Squadron
CEVR	Civil Engineer Environmental Restoration
COC	contaminant of concern
EPA	Environmental Protection Agency
GAC	granular activated carbon
GIS	Geographical Information System
GPS	Global Positioning System
IDW	Investigative Derived Waste
mg/Kg	milligrams per kilogram
MNA	Monitored Natural Attenuation
OU	Operable Unit
QA/QC	Quality Assurance/Quality Control
ROD	Record of Decision
RPO	Remedial Process Optimization
TCE	trichloroethene
USAF	United States Air Force
WRS	Wetland Remediation System

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1.0 INTRODUCTION

Under contract agreement with the Air Force Center for Environmental Excellence (AFCEE), this 2005 Annual Basewide Groundwater Monitoring Report was prepared for the United States Air Force (USAF), 3 Civil Engineer Squadron/Civil Engineer Environmental Restoration (CES/CEVR). This report presents a detailed summary of the 2005 field tasks that were performed in support of the goals of the Environmental Restoration Groundwater Monitoring Program for Elmendorf Air Force Base (AFB). This report also provides all data generated through the 2005 field work.

This report does not provide interpretation of analytical data or an assessment of restoration progress made. All interpretation of 2005 data and progress assessment will be included in the 2006 Remedial Process Optimization (RPO) Report.

1.1 2005 GOALS AND OBJECTIVES

Several goals were developed for the Environmental Restoration Groundwater Monitoring Program in order to provide focus for all field work. The goals of the program include the following:

- Monitor contaminants of concern (COCs) and natural attenuation as outlined in Records of Decision (RODs), decision documents, and/or corrective action documents, and evaluate predictions made in these documents. The objectives for this goal are as follows:
    - Ensure the requirements outlined in site-specific RODs and decision documents are fulfilled.
    - Document and track natural attenuation associated with contaminant plumes on Elmendorf AFB.
    - Annually evaluate contaminant degradation to determine progress toward achieving ROD-established cleanup goals for each plume.
    - Provide information needed to enhance natural attenuation rates, if necessary.
- Monitor groundwater quality upgradient from Operable Unit (OU) 5 and provide an early warning of potential contaminant migration that may impact the effectiveness of the OU 5 Wetland Remediation System (WRS) and the Beaver Pond Wetland Area.
- Provide sentry well monitoring for environmental receptors (e.g., Ship Creek and Knik Arm) to ensure protection of these resources, and provide long-term monitoring of selected groundwater seeps, as required by the RODs.

1.2 SCOPE OF FIELD WORK

As part of Phase I RPO data collection efforts, targeted activities were performed during the 2005 field season to achieve the three Environmental Restoration Groundwater Monitoring

Program goals listed in Section 1.1. The activities summarized in the following list are presented in greater detail in subsequent sections of this report.

1. **Contaminant of Concern Monitoring –** Groundwater, seeps, and surface water samples were collected, as required, to evaluate Elmendorf AFB COCs.
2. **Natural Attenuation Monitoring –** Natural attenuation parameters were monitored at various Elmendorf AFB plumes.
3. **Free Product Evaluation –** A free product survey was performed on select Elmendorf AFB monitoring wells.
4. **Well Installation –** One monitoring well was installed in 2005 to replace a well damaged during Elmendorf AFB construction activities.
5. **Well Abandonment –** Thirty-one groundwater monitoring wells were abandoned in 2005.
6. **Well Maintenance –** Maintenance activities were conducted on previously installed groundwater monitoring wells as required.
7. **Missing Well Survey –** Several monitoring wells had poorly documented locations, were previously abandoned, or were destroyed between the early 1990s and 2005. During the 2005 field season, an effort was made to locate all of these wells. Those that were relocated were re-surveyed.
8. **Well Photography –** A total of 246 monitoring wells were photographed in 2005. The photo log from this work has been provided under a separate cover.
9. **Well Flagging –** Stick-up monitoring wells located in areas receiving winter snowplowing and/or snow machine traffic were flagged with orange snow poles.
10. **Gravel Pad Removal and Contractor's Staging Yard Shutdown –** The gravel decontamination pad in the Contractor's staging yard was demolished and removed in 2005.
11. **Investigative Derived Waste (IDW) Management –** Purge water, free product, and sludge from the Contractor's staging yard were generated during the 2005 field season and properly disposed.

1.3 DOCUMENT ORGANIZATION

This report is organized into the following sections:

- Section 1 provides a brief introduction, presents the Groundwater Monitoring Program purpose and goals, and presents the scope of the 2005 field work.
- Section 2 details field activities that were performed during 2005.
- Section 3 provides a list of references cited.
- Appendix A presents the Quality Assurance/Quality Control (QA/QC) Summary Report.

- Appendix B provides the boring log and monitoring well completion log for the monitoring well installed in 2005.
- Appendix C includes a database of all monitoring wells and survey coordinates on Elmendorf AFB.
- Appendix D presents the well abandonment priority list.
- Appendix E is a summary of all Elmendorf wells, including Compliance and Base water wells, that were searched for as part of the Missing Well Survey.
- Appendix F includes all 2005 groundwater analytical results. A compact disk containing all 2005 groundwater analytical results, chains of custody, and laboratory QA/QC data is also included in this report.
- Appendix G provides certificates of disposal for all IDW generated in 2005.
- Appendix H presents the wastewater treatment effluent analytical results.
- Appendix I includes inspection forms and checklists completed during the 2005 field work.
- Plate 1 is a comprehensive well map depicting restoration monitoring well, surface water, sediment, and seep locations on Elmendorf AFB.
- Plate 2 provides current and historical trichloroethene (TCE) concentrations for all wells within the Groundwater Monitoring Program.
- Plate 3 provides current and historical benzene for all wells within the Groundwater Monitoring Program.

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2.0 2005 FIELD TASKS

Eleven categories of field activities were performed during 2005 to achieve the program goals listed in Section 1.1. These activities are detailed in the following sections.

2.1 COC MONITORING

Monitoring activities in 2005 were performed on 68 Groundwater Monitoring Program wells, 4 surface water locations, and 10 seeps. The frequency of sampling at each of these locations is presented in Table 2-1. Field procedures used for development, purging, and sampling are presented in the *Basewide Groundwater Monitoring Plan* (USAF, 2003). All analytical results from the sampling effort are provided in Appendix F of this report. Evaluation of these results will be provided in the 2006 RPO Report.

Table 2-1 2005 Groundwater Monitoring Program Sampling Locations and Frequencies

Program Area	Plume Name	Location ID	Sampling Frequency	2005			
				Round 1			Round 2
				GW	SW	Seep	GW
Zone 1							
DP98	DP98	41755WL-01	Annual	X			
DP98	DP98	41755WL-02	Annual	X			
DP98	DP98	41755WL-05	Annual	X			
DP98	DP98	41755WL-12	Annual	X			
DP98	DP98	41755WL-16	Annual	X			
DP98	DP98	41755WL-17	Annual	X			
DP98	DP98	DP98SW-01	Annual		X		
OU 6	OU6MW-46	OU6MW-46	Annual	X			
State	PL81 South	LF04SP-02DG	Annual			X	
State	PL81 South	OU6MW-63	Annual	X			
State	PL81 South	LF04SP-01	Annual			X	
State	PL81 South	LF04SP-02	Annual			X	
State	ST36/66	56WL-01	5-Year				
State	ST36/66	56WL-04	Annual	X			
State	ST36/66	56WL-05	Annual	X			
State	ST36/66	56WL-06	Annual	X			
State	ST36/66	56WL-08	Annual	X			
State	ST36/66	56WL-09	Annual	X			
OU 2	ST41 North	ST41-10R	Annual	X			
OU 2	ST41 North	ST41SP-01	Annual			X	
OU 2	ST41 North	ST41SW-01	Annual		X		
OU 2	ST41 South	ST41-07	5-Year				
OU 2	ST41 South	ST41-25	5-Year				

Table 2-1 2005 Groundwater Monitoring Program Sampling Locations and Frequencies *(continued)*

Program Area	Plume Name	Location ID	Sampling Frequency	2005			
				Round 1			Round 2
				GW	SW	Seep	GW
Zone 1 *(continued)*							
State	ST61	45WL-02	Biannual				
State	ST61	AP-3567	Biannual				
State	ST61	AP-3606	Biannual				
State	ST69	46WL-01	Biannual				
State	ST69	46WL-02	Biannual				
OU 6	WP14	14MW-120	Annual	X			
OU 6	WP14	14MW-121	Annual	X			
OU 6	WP14	LF04SP-03	Annual			X	
OU 6	WP14	LF04SP-04	Annual			X	
OU 6	WP14	OU6MW-91	Annual	X			
OU 6	Z1 Sentry Seeps	LF04SP-05	Annual			X	
OU 6	Z1 Sentry Seeps	LF04SP-06	Annual			X	
OU 6	Z1 Sentry Seeps	LF04SP-07	Annual			X	
Zone 2							
State	59WL-31	59WL-31	5-Year				
State	59WL-30/36	59WL-30	5-Year				
State	59WL-30/36	59WL-36	5-Year				
OU 4	FTA	FP-56	Annual	X			
OU 4	FTA	OU4W-11	Annual	X			
OU 4	Hangar 10	OU4MW-04	5-Year				
OU 4	Hangar 11	OU4MW-08R	Annual	X			
OU 4	OU4 East	IS6-01	5-Year	X			
OU 6	SD15	OU6MW-17	Annual	X			
OU 6	SD15	OU6MW-18	Annual	X			
OU 6	SD15	OU6MW-90	Annual	X			
State	SS43	SP7/10-04	Annual	X			
State	W4	W-4	Annual	X			
Zone 3							
OU 5	Fairchild Avenue	49WL-01	Annual	X			
OU 5	Fairchild Avenue	OU3MW-11	Annual	X			
OU 5	Fairchild Avenue	OU5MW-37	Annual	X			
OU 5	Fairchild Avenue	OU5MW-38	Annual	X			
OU 5	Fairchild Avenue	OU5MW-39	Annual	X			
OU 5	Fairchild Avenue	OU5MW-40	Annual	X			
OU 5	Fairchild Avenue	OU5MW-34	Annual	X			
OU 5	Fairchild Avenue	OU5MW-43	Annual	X			

Table 2-1 2005 Groundwater Monitoring Program Sampling Locations and Frequencies *(continued)*

Program Area	Plume Name	Location ID	Sampling Frequency	2005			
				Round 1			Round 2
				GW	SW	Seep	GW
Zone 3 *(continued)*							
OU 5	Kenney Avenue	403WL-01	Annual	X			
OU 5	Kenney Avenue	OU5MW-36	Annual	X			
OU 5	Kenney Avenue	OU5MW-42	Annual	X			
OU 5	Kenney Avenue	OU5MW-41	Annual	X			
OU 6	LF02	53WL-05	5-Year				
OU 6	LF02	65WL-04R	5-Year				
OU 6	LF02	LF02SP-01	Annual			X	
OU 6	LF02	OU6MW-49R	5-Year				
OU 1	LF59MW-03	LF59MW-03	Annual	X			
OU 1	LF59MW-03	LF59MW-06R	Annual	X			
OU 5	OU3MW-25	OU3MW-25	5-Year				
OU 5	OU5MW-02	OU3MW-02	Annual	X			
OU 5	OU5MW-02	OU5MW-02	Annual	X			
OU 5	OU5MW-02	OU5MW-44	Annual	X			
OU 5	Slammer Avenue	GW-4A	Annual	X			
OU 5	Slammer Avenue	OU5MW-06	Annual	X			
OU 5	Slammer Avenue	OU5MW-07	Annual	X			
OU 5	Slammer Avenue	OU5MW-08	Annual	X			
OU 5	Slammer Avenue	61WL-07	Annual	X			
OU 5	Slammer Avenue	1836WL-01	Annual	X			
State	ST48 Plume	60WL-04R	Biannual	X			
State	ST48 Plume	ST20-03	Biannual				
State	ST68 Plume	62WL-02	Biannual				
State	ST68 Plume	64WL-01	5-Year				
State	ST68 Plume	62WL-05	5-Year				
State	ST68 Plume	62WL-06	Biannual				
OU 5	SP1-02	SP1-02	Annual	X			
OU 5	Z3 Early Warning Line	SP4/11-03	Semiannual	X			X
OU 5	Z3 Early Warning Line	OU5MW-45	Semiannual	X			
OU 5	Z3 Early Warning Line	76WL-01	Semiannual	X			X
OU 5	Z3 Early Warning Line	OU5MW-05	Semiannual	X			X
OU 5	Z3 Early Warning Line	OU5MW-01	Semiannual	X			X
OU5	Z3 Early Warning Line	OU5MW-11	Semiannual	X			X
OU 5	Z3 Sentry Wells	NS3-02	Semiannual	X			X
OU 5	Z3 Sentry Wells	OU5MW-09	Semiannual	X			X
OU 5	Z3 Sentry Wells	OU5MW-10	Semiannual	X			X

Table 2-1 2005 Groundwater Monitoring Program Sampling Locations and Frequencies *(continued)*

Program Area	Plume Name	Location ID	Sampling Frequency	2005			
				Round 1			Round 2
				GW	SW	Seep	GW
Zone 3 *(continued)*							
OU 5	Z3 Sentry Wells	OU5MW-12	Semiannual	X			X
OU 5	Z3 Sentry Wells	OU5MW-13	Semiannual	X			X
OU 5	Z3 Sentry Wells	OU5MW-14	Semiannual	X			X
OU 5	Z3 Sentry Wells	OU5MW-31	Semiannual	X			X
OU 5	Z3 Sentry Wells	OU5MW-33	Semiannual	X			X
OU 5	Z3 Sentry Wells	401WL-03	Semiannual	X			X
OU 5	Z3 Sentry Wells	401WL-04	Semiannual	X			X
OU 5	Z3 Sentry Wells	SP2/6-05	Semiannual	X			X
OU 5	Ship Creek	SC-1B	Annual		X		
OU 5	Ship Creek	SC-08	Annual		X		

Notes:
GW – groundwater
ID – identity
OU – Operable Unit
SW – surface water

2.2 NATURAL ATTENUATION MONITORING

Monitored natural attenuation (MNA) parameters were collected in 2005 per requirements outlined in RODs, decision documents, and/or corrective action documents. MNA parameters were measured at all monitoring wells sampled (see Table 2-1) except the Zone 3 Early Warning Wells and the Zone 3 Sentry Wells. MNA parameters were not collected from seeps or surface water sample locations. Parameters were either measured in the field or were analyzed in a laboratory. Results of MNA sampling are provided in Appendix F.

2.3 FREE PRODUCT EVALUATION

In 2005, free product was measured during Round 1 groundwater sampling activities at all wells in the Environmental Restoration Groundwater Monitoring Program. There was no measurable free product detected in any of the wells in this program. Free product measurements were also taken at ten wells not in the program that have in the past had a measurable product thickness. Measurable free product was detected in four of these wells during the 2005 field season, as shown in Table 2-2. Product recovery was conducted by hand bailing with a disposable bailer where free product was found in excess of 0.1 feet (only in well 59WL-01). The recovered product was containerized and disposed of through a commercial waste disposal company (certificate of disposal is provided in Appendix G). Table 2-2 provides the list of wells with historical free product and measurements taken during Round 1 of the 2005 free product survey.

Table 2-2 2005 Groundwater Monitoring Program Round 1 Free Product Evaluation

Program Area	Well ID	Associated Site	Plume Name	Distance to Product Surface (Feet)	Distance to Water Surface (Feet)	Amount of Free Product (Feet)	Amount of Water/Product Recovered (Gallons)
Wells with Past Measurable Free Product Thickness							
OU 2	ST41-28	ST41	ST41 North	21.21	21.29	0.08	0
OU 2	ST41-38	ST41	ST41 North	NM	15.8	0	0
OU 2	EW-2	ST41	ST41 North	13.1	13.11	0.01	0
OU 4	OU4MW-08R	ST64	Hangar 11	NM	31	0	0
State	59WL-01	ST32	WRHFF Spill	39.45	39.75	0.3	1.5
State	59WL-18	ST32	Spill Site	NM	31.2	0	0
State	OU6MW-12	PL81	PL81 North	NM	18.6	0	0
State	OU6MW-75	PL81	PL81 North	NM	40.71	0	0
State	OU6MW-77	PL81	PL81 North	27.65	27.7	0.05	0
State	OU6MW-92	PL81	PL81 North	NM	32.14	0	0

Notes:
NM – No measurable free product
OU – Operable Unit

During Round 2 groundwater sampling activities, free product was measured in all three wells that had measurable free product of more than 0.02 feet during Round 1. Product recovery was conducted by hand bailing with a disposable bailer where free product was found in excess of 0.1 feet (wells 59-WL-01 and OU6MW-77). The recovered product was containerized and disposed of through commercial waste disposal company (certificate of disposal is provided in Appendix G). Table 2-3 provides the list of wells and measurements taken during Round 2 of the 2005 free product survey.

Table 2-3 2005 Groundwater Monitoring Program Round 2 Free Product Evaluation.

Program Area	Well ID	Associated Site	Plume Name	Distance to Product Surface (Feet)	Distance to Water Surface (Feet)	Amount of Free Product (Feet)	Amount of Water/Product Recovered (Gallons)
Wells with Measurable Free Product in Round 1							
OU 2	ST41-28	ST41	ST41 North	21.91	21.92	0.01	0.1
State	OU6MW-77	PL81	PL81 North	27.84	29	1.16	2
State	59WL-01	ST32	WRHFF Spill	39.3	39.5	0.2	0.5

2.4 WELL INSTALLATION

During the 2005 field season, one monitoring well was installed on Elmendorf AFB. Well 60WL-04R was installed as a replacement for well 60WL-04, which was damaged during construction activities. It was installed away from potential traffic and snowplow patterns near its former location.

The well was installed with a Geoprobe direct push drill rig. The Geoprobe was used to pound a 2-inch diameter casing to the desired depth of approximately 33 feet below ground surface (bgs). The casing comes in 5-foot intervals and can be screwed onto the drill string as required. Once the desired depth was reached, a 0.75-inch inside diameter PVC well was set as the casing was removed. Ten feet of pre-packed screen were installed, and sand was used to fill the borehole to 2 feet above the top of the screened interval. Bentonite chips were used to fill the borehole to the surface, and the well was completed as a flush mount. No drill cuttings were generated during drilling activities, and the well was subsequently developed using a reduced diameter pump. A boring log is provided in Appendix B.

Soil samples were collected to log the borehole using a Macro-Core Center Rod System. The Macro-Core consists of a standard Macro-Core sample tube, cutting shoe, and a piston point. A 1.25-inch center rod serves as the inner rod system and holds the piston point in place. During Macro-Core operation, the sampler is driven to depth with 1.5-inch probe rods. Once the desired sampling interval is reached, the 1.25-inch center rod system is removed. With the center rod string removed, the sampler can then be driven through the sampling interval to collect the soil sample. The piston point is easily displaced as the sample is collected. This easy displacement helps eliminate sample compression so sample recovery is not compromised. Once the sample is collected, the tool string is removed and the sample retrieved. The tool string is then reassembled, and direct push drilling activities may resume.

2.5 WELL ABANDONMENT

A total of 31 groundwater monitoring wells were abandoned in 2005. These wells are presented in Table 2-4 and were selected based on criteria established in the Well Abandonment Decision Tree (see Figure 2-3, *Basewide Groundwater Monitoring Plan* [USAF, 2003]). Abandonment activities were conducted following procedures outlined in the *Basewide Groundwater Monitoring Plan* (USAF, 2003). The first three wells in Table 2-4 were formerly included in the Groundwater Monitoring Program but were damaged beyond repair. All other wells abandoned in 2005 were not included in the Groundwater Monitoring Program. All wells were abandoned following the technical details in ADEC guidance and ADEC was provided with a summary of the abandonment efforts. In 2006, well abandonment will be performed according to the schedule provided in Appendix D.

Table 2-4 2005 Well Abandonment

2005 Well Atlas Page	Well Name	Zone	Diameter (inches)	Depth (feet)	Status	WGS 84 UTM Zone 6N Meters		
						Northing	Easting	Elevation
9	K301	1	2	146	Abandoned	6794522.029	345689.654	NA
5	K302	1	2	90	Abandoned	6794075.876	345676.866	71.15
5	OU3MW-18	1	2	22	Abandoned	6793296.018	346460.86	45.86
5	ST41ES-4A	2	2	12	Abandoned	6793879.675	346341.931	64.80
9	ST41ES-4B	2	2	21	Abandoned	6793879.202	346343.937	64.82
9	59WL-15	2	2	59	Abandoned	6794686.614	347651.984	92.22
9	59WL-33	2	2	99	Abandoned	6794558.431	347537.581	98.43
11	OU4E-02	2	2	73	Abandoned	6794899.301	351376.42	71.03
10	OU4W-17	2	2	53	Abandoned	6795659.367	349668.279	61.82
9	ST41MW-37A	2	4	27	Abandoned	6793821.867	346409.545	63.94
9	ST41MW-37B	2	4	64	Abandoned	6793820.451	346415.137	63.80
9	ST41ES-7A	2	2	13	Abandoned	6793800.563	346291.346	60.38
9	ST41ES-7B	2	2	23	Abandoned	6793801.909	346289.71	60.47
9	ST41-26	2	2	20	Abandoned	6793856.701	346472.949	65.24
1	OU3MW-04	3	2	44	Abandoned	6791776.861	346341.658	39.68
2	OU5MW-16	3	2	14	Abandoned	6791458.024	347211.504	23.34
2	48WL-01	3	2	29	Abandoned	6792513.947	347216.296	43.47
2	48WL-02	3	2	31	Abandoned	6792446.658	347184.242	44.53
2	48WL-03	3	2	35	Abandoned	6792443.131	347232.684	44.69
3	53WL-03	3	2	15	Abandoned	6791867.411	350535.61	50.09
3	53WL-04	3	2	13	Abandoned	6791898.297	350612.1	49.85
6	62WL-04	3	2	33	Abandoned	6793724.544	349280.525	55.19
6	61WL-05	3	2	32	Abandoned	6793172.521	349818.208	55.22
6	61WL-06	3	2	26	Abandoned	6793241.648	349876.64	55.04
2	OU5MW-04	3	2	45	Abandoned	6792482.783	348350.097	48.23
6	63WL-01	3	2	29	Abandoned	6793451.494	349909.6	NA
3	OU6MW-53	3	2	16	Abandoned	6791855.092	350483.288	NA
3	OU6MW-55	3	2	6	Abandoned	6791911.914	350400.486	46.45
3	OU6MW-57	3	2	28	Abandoned	6792022.492	350066.224	48.35
6	SD25 BV Well	2	0.5	23	Abandoned	SD25 Biovent System Well		
6	ST68 BV Well	2	2	35	Abandoned	ST68 Biovent System Well		

Notes:
NA – Not available

2.6 WELL MAINTENANCE

Maintenance activities were conducted on previously installed groundwater monitoring wells as needed. Monitoring well maintenance actions included tasks such as lock, well lid, or casing cap replacement; trimming of excess PVC casing that prevents proper closure of the well lid; and replacement of rubber gaskets or any other hardware that holds flush mount well lids in place.

Table 2-5 provides a summary of all maintenance activities performed during the 2005 field season.

Table 2-5 2005 Well Maintenance Summary

Well ID	Zone	Maintenance Items Performed	Well ID	Zone	Maintenance Items Performed
41755WL-06	1	Trimmed PVC casing, replaced lock	41755WL-09	1	Corrected or replaced Well ID markings
41755WL-11	1	Corrected or replaced Well ID markings	41755WL-12	1	Corrected or replaced Well ID markings
41755WL-16	1	Corrected or replaced Well ID markings	41755WL-17	1	Corrected or replaced Well ID markings, replaced lock
41755WL-20	1	Corrected or replaced Well ID markings	41755WL-21	1	Corrected or replaced Well ID markings, replaced lock
41755WL-22A	1	Corrected or replaced Well ID markings, replaced lock	41755WL-23	1	Replaced lock
46WL-02	1	Corrected or replaced Well ID markings	46WL-03	1	Corrected or replaced Well ID markings, trimmed PVC
46WL-04	1	Replaced lock	56WL-02	1	Corrected or replaced Well ID markings
56WL-03	1	Corrected or replaced Well ID markings	56WL-04	1	Corrected or replaced Well ID markings
56WL-07	1	Corrected or replaced Well ID markings	56WL-09	1	Corrected or replaced Well ID markings
ST41-10R	1	Trimmed PVC casing, replaced lock	ST41-25	1	Trimmed PVC casing, replaced lock
ST41-30	1	Replaced lock	ST41-34	1	Trimmed PVC
43-1A	2	Corrected or replaced Well ID markings, replaced lock	43-1B	2	Corrected or replaced Well ID markings
43-1C	2	Corrected or replaced Well ID markings	43-3A	2	Corrected or replaced Well ID markings
43-3B	2	Corrected or replaced Well ID markings	43WL-02	2	Corrected or replaced Well ID markings, replaced lock
43WL-06	2	Corrected or replaced Well ID markings, replaced cover	43WL-08	2	Corrected or replaced Well ID markings
43WL-11	2	Corrected or replaced Well ID markings	59BH-200	2	Replaced lock
59BH-201	2	Replaced lock	59WL-02	2	Replaced lock
BV-2B	2	Corrected or replaced Well ID markings	BV-5A	2	Corrected or replaced Well ID markings
BV-5B	2	Corrected or replaced Well ID markings	BV-5C	2	Corrected or replaced Well ID markings
BV-6A	2	Corrected or replaced Well ID markings	BV-01	2	Corrected or replaced Well ID markings
BV-1C	2	Corrected or replaced Well ID markings	IS6-01	2	Well excavated by hand and top casing replaced
OU4MW-08R	2	Corrected or replaced Well ID markings	1836PZ-01	3	Corrected or replaced Well ID markings
1836WL-01	3	Corrected or replaced Well ID markings	49WL-01	3	Corrected or replaced Well ID markings
538BV-01	3	Corrected or replaced Well ID markings	538BV-02	3	Corrected or replaced Well ID markings

Table 2-5 2005 Well Maintenance Summary (*continued*)

Well ID	Zone	Maintenance Items Performed	Well ID	Zone	Maintenance Items Performed
538BV-01	3	Corrected or replaced Well ID markings	538BV-02	3	Corrected or replaced Well ID markings
538BV-03	3	Corrected or replaced Well ID markings	538BV-04	3	Corrected or replaced Well ID markings
60WL-02	3	Corrected or replaced Well ID markings	60WL-03	3	Corrected or replaced Well ID markings
61WL-02	3	Corrected or replaced Well ID markings	61WL-07	3	Corrected or replaced Well ID markings
62WL-02	3	Corrected or replaced Well ID markings	62WL-05	3	Corrected or replaced Well ID markings
62WL-07	3	Corrected or replaced Well ID markings	64WL-01	3	Corrected or replaced Well ID markings
64WL-03	3	Corrected or replaced Well ID markings	OU3MW-09	3	Corrected or replaced Well ID markings
OU3MW-11	3	Corrected or replaced Well ID markings	OU3MW-12	3	Corrected or replaced Well ID markings
OU5MW-06	3	Corrected or replaced Well ID markings	OU5MW-10	3	Corrected or replaced Well ID markings, trimmed PVC
OU5MW-13	3	Corrected or replaced Well ID markings, trimmed PVC, replaced lock	OU5MW-30	3	Corrected or replaced Well ID markings
OU5MW-33	3	Replaced lock	ST20-03	3	Corrected or replaced Well ID markings

Table 2-6 provides as summary of recommended well maintenance actions. A key for the priority codes is provided at the bottom of the table.

Table 2-6 Future Well Maintenance Recommendations

Well ID	Zone	Priority	Recommended Maintenance or Action	ROM Cost	Year
41755WL-01	1	1	Potential mechanical repair, bolt hole threads stripped	$ 1,000	2006
41755WL-03	1	1	Potential mechanical repair, bolt hole threads stripped	$ 1,000	2006
46WL-03	1	1	Potential mechanical repair, bolt hole threads stripped	$ 1,000	2006
56WL-02	1	1	Potential mechanical repair, bolt hole threads stripped	$ 1,000	2006
56WL-03	1	1	Potential mechanical repair, bolt hole threads stripped	$ 1,000	2006
56WL-04	1	1	Potential mechanical repair, bolt hole threads stripped	$ 1,000	2006
AP3567	1	1	Potential mechanical repair, bolt hole threads stripped	$ 1,000	2006
BV36-2A	1	1	Potential mechanical repair, bolt hole threads stripped	$ 1,000	2006
BV36-UK	1	1	Potential mechanical repair, bolt hole threads stripped	$ 1,000	2006
BV66-1C	1	1	Potential mechanical repair, new cover, bolt hole threads stripped	$ 1,000	2006
ST41-38	1	1	Potential mechanical repair, height of inner casing exceeds that of outer casing.	$ 250	2006
41755WL-12	1	2	Potential mechanical repair needed, loose casing	$ 250	2006
41755WL-16	1	2	Need mechanical repair, casing is loose	$ 250	2006
LF04SP-02	1	2	Seep's PVC casing needs to be replaced or re-installed	$ 500	2006
LF04SP-05	1	2	Seep's PVC casing needs to be replaced or re-installed	$ 500	2006

Table 2-6 Future Well Maintenance Recommendations *(continued)*

Well ID	Zone	Priority	Recommended Maintenance or Action	ROM Cost	Year
LF04SP-06	1	2	Seep's PVC casing needs to be replaced or re-installed	$ 500	2006
ST41-07	1	2	Needs mechanical repair, casing base is loose	$ 250	2006
41755WL-14	1	3	Need mechanical repair, casing is loose	$ 250	2006
BV36-1B	1	3	Potential mechanical repair, inner casing needs cap.	$ 100	2006
ST41-27	1	3	Dedicated pump is broken, recommend disposing of pump as it is not used for sampling	$ 250	2006
ST41-34	1	3	Casing has "frost heaved" above steel casing during the winter months, cut or possibly abandon well	$ 250	2006
OU6MW-77	1	3	Concrete pad is raised above ground level, frost heaved	$ 1,000	2008
ST41-20	1	3	Potential mechanical repair needed	$ 1,000	2008
ST61BV-UK01	1	3	Potential mechanical repair needed	$ 1,000	2008
ST61BV-UK02	1	3	Potential mechanical repair needed	$ 1,000	2008
43WL-11	2	1	Potential mechanical repair, bolt hole threads stripped	$ 1,000	2006
59BH-200	2	1	Potential mechanical repair, new cover, bolt hole threads stripped	$ 1,000	2006
59WL-04	2	1	Mechanical repair needed, lid hinge broken	$ 1,000	2007
59WL-30	2	1	Potential mechanical repair, new cover, bolt hole threads stripped	$ 1,000	2007
BV-2A	2	1	Potential mechanical repair, bolt hole threads stripped	$ 1,000	2007
BV-2B	2	1	Potential mechanical repair, trim PVC, fix lid.	$ 250	2007
BV-3A	2	1	Potential mechanical repair, bolt hole threads stripped, new bolts	$ 1,000	2007
BV-3B	2	1	Potential mechanical repair, bolt hole threads stripped, new bolts	$ 1,000	2007
BV-6A	2	1	Potential mechanical repair, needs new bolts, bolt hole threads stripped	$ 1,000	2007
FP-56	2	1	Potential mechanical repair, bolt hole threads stripped	$ 1,000	2007
43WL-08	2	2	Needs mechanical repair, surface cracked	$ 750	2006
59WL-02	2	2	Needs mechanical repair for bioventing system on separate program	$ -	---[1]
OU4W-10	2	3	ID does not match cover, recommend historical research	$ 250	2006
ST41-23	2	3	Potential mechanical repair needed, cover difficult to open	$ 250	2006
43WL-02	2	3	Potential mechanical repair, well has sunk below ground level	$ 2,500	2008
59WL-24	2	3	Recommend abandonment or fix cover, trim PVC, fix loose well casing	$ 1,000	2008
BV-3C	2	3	Potential mechanical repair, bolt hole threads stripped, needs to have special cover ordered	$ 1,500	2008
ST41-24	2	3	Potential mechanical repair, fix lid	$ 1,000	2008
W-3	2	3	Needs repair, concrete pad broken	$ 750	2008
424WL-01	2	3	Well destroyed, needs repair or abandon	$ -	---[2]
OU4E-03	2	3	Well housing has been dug out of pavement and gravel; recommend historical research to re-identify and repair wells or abandonment	$ -	---[2]

Table 2-6 Future Well Maintenance Recommendations *(continued)*

Well ID	Zone	Priority	Recommended Maintenance or Action	ROM Cost	Year
T41709	2	4	Potential mechanical repair, well casing unstable	$ 150	2006
60WL-02	3	1	Potential mechanical repair, sand covering PVC, needs cover	$ 1,000	2007
62WL-02	3	1	Potential mechanical repair, bolt hole threads stripped	$ 1,000	2007
64WL-03	3	1	Potential mechanical repair, bolt hole threads stripped	$ 1,000	2007
OU3MW-16	3	1	Potential mechanical repair, needs cover	$ 1,000	2007
OU3MW-25	3	1	Potential mechanical repair, bolt hole threads stripped, new bolts	$ 1,000	2007
61WL-07	3	2	Potential mechanical repair needed	$ 1,000	2007
GW-4A	3	2	Concrete pad cracked – needs repair	$ 750	2007
ST20-03	3	2	Need to remove topsoil, graduate level in to well, potential mechanical repair of cover and casing. Well is 1 foot below ground surface, and configuration of topsoil surrounding it is not safe for Air Force Personnel using the track	$ 2,500	2008
62WL-06	3	2	Recommend for abandonment or mechanical repair, concrete wellhead is damaged, casing is bent	$ 2,500	2008
60WL-03	3	3	Potential mechanical repair needed	$ 1,000	2008
BV68-2A	3	3	Well destroyed, all that remains is 1" PVC	$ -	---[2]
BV68-2B	3	3	Well housing has been dug out of pavement and gravel. Historical research to re-identify wells is recommended	$ -	---[2]
BV68-3B	3	3	Well destroyed, 1" PVC sticking out. Well has no housing, just PVC, well has been damaged beyond identification (apparently by paving and construction in the area), it is located in the correct place according to the Well Atlas; recommend historical research to re-identify and repair wells, or abandonment	$ -	---[2]
2006 Projected Costs: $16,750					
2007 Projected Costs: $14,000					
2008 Projected Costs: $16,750					
Total Projected Costs: $47,500					

Priority codes:
1 - Wells with possible integrity/security issues
2 - Restoration Wells: Basewide program
3 - Restoration Wells: Non-program
4 - Compliance Wells

Notes:
[1] Conduct under separate project
[2] Well recommended for abandonment

2.7 MISSING WELL SURVEY

During 2004, a survey of all existing monitoring wells on Elmendorf AFB was performed. A total of 134 former monitoring wells were not located during the course of the survey and were considered abandoned. The locations of these wells were verified in the field in 2005 by using all available information (maps, survey coordinates, etc.). Where survey coordinates were available for missing wells, a Trimble Dual Frequency Real-Time Kinematic System 5700/5800 Rover Series Global Positioning System (GPS) with a base station was used to identify their locations. All missing wells that were located in the field were then re-surveyed. Missing wells

that were re-located are included in Appendix C and on the 2005 comprehensive Basewide Groundwater Monitoring Program Map Well Atlas (Plate 1). Where wells could not be re-located with the GPS, a ground search was conducted in a large radius (up to 200 yards) surrounding the suspected location based on all available data. Many of these wells could not be located. Of the wells surveyed in 2005, 47 were located and surveyed and 87 could not be found. All Restoration wells that were searched for in 2005 are presented in Table 2-7 along with whether they were or were not located. A comprehensive list of all wells searched for is included as Appendix E.

Table 2-7 2005 Missing Restoration Well Survey Summary

Well ID	Owner	Located?
14MW-111	Restoration	Yes
43WL-06	Restoration	Yes
50WL-01	Restoration	Yes
56WL-03	Restoration	Yes
56WL-07	Restoration	Yes
57WL-01	Restoration	Yes
57WL-03	Restoration	Yes
59WL-06	Restoration	Yes
59WL-10	Restoration	Yes
59WL-24	Restoration	Yes
61WL-04	Unknown	Yes
62WL-03	Restoration	Yes
ST41-23	Restoration	Yes
ST41-24	Restoration	Yes
ST41-27	Restoration	Yes
ST41-30	Restoration	Yes
ST41-33A	Restoration	Yes
ST41-34	Restoration	Yes
ST41-38	Restoration	Yes
49WL-02	Restoration	No
52WL-01	Restoration	No
52WL-03	Restoration	No
MW-516-01	Restoration	No
MW-532-01	Restoration	No
OU3MW-07	Restoration	No
OU6MW-28	Restoration	No
OU6MW-L04	Restoration	No
OU6MW-L05	Restoration	No
POL-MW-01	Restoration	No
POL-MW-02	Restoration	No

Well ID	Owner	Located?
OU3MW-09	Restoration	Yes
OU3MW-11	Restoration	Yes
OU3MW-12	Restoration	Yes
OU4W-1	Restoration	Yes
OU4W-14	Restoration	Yes
OU5MW-11	Restoration	Yes
OU5MW-30	Restoration	Yes
OU6MW-01	Restoration	Yes
OU6MW-12	Restoration	Yes
OU6MW-15	Restoration	Yes
ST20-03	Restoration	Yes
ST41-08	Restoration	Yes
SP15-02	Restoration	No
ST20-01	Restoration	No
ST20-02	Restoration	No
ST41-22	Restoration	No
T40107	Restoration	No
WGN-01	Unknown	No
41755PZ-02	Restoration	BTBA
41755WL-10	Restoration	BTBA
43WL-04	Restoration	BTBA
51WL-03	Restoration	BTBA
55WL-01	Restoration	BTBA
60WL-04	Restoration	BTBA
OU5MW-35	Restoration	BTBA
OU6MW-51	Restoration	BTBA
OU6MW-L02	Restoration	BTBA
OU6MW-L03	Restoration	BTBA
ST41-ES3	Restoration	BTBA

Notes:
BTBA: Believed to be abandoned

2.8 WELL PHOTOGRAPHY

A digital photograph was taken of 246 monitoring wells (including all program wells) on Elmendorf AFB in 2005. These photos have been provided to GeoBase for inclusion in the Elmendorf AFB Geographical Information System (GIS). The purpose of this task was to graphically document the location of each monitoring well to make them easier to find in the field. Permanent landmarks were included in these photos where possible and the direction the photographer is facing when the photograph was taken was documented in a photo log. A text description is provided with each photograph, where necessary, detailing the distance and the direction to the well. The photo log has been submitted under a separate cover.

2.9 WELL FLAGGING

There are several stick-up wells located on Elmendorf AFB that could pose a risk to snow machines or snow plows. In fall of 2005, all of these wells were marked with snow flags in order to make them more visible. Snow flags will be removed in the spring when breakup arrives and they are no longer required. A list of all wells flagged in 2005 is provided in Table 2-8.

2.10 PAD REMOVAL AND CONTRACTOR'S STAGING YARD SHUTDOWN

The gravel decontamination pad located at the Contractor's staging yard was demolished during the 2005 field season. The pad liner and associated structure were removed and properly discarded. Soil sampling was conducted in order to verify that no contamination was present at the former pad location (further detail is provided in Section 2.11). Finally, the area was backfilled and graded to the surrounding surface elevation.

A second concrete pad located in the restoration yard was inspected for possible repair and sealing of cracks. The concrete pad appeared to be in good repair, and a portable cover was placed on the concrete pad to preserve it during periods when it is not used. Several small shrubs had grown in the area between the concrete pad and the demolished gravel pad. The shrubs were removed and disposed at the Municipality of Anchorage Landfill.

2.11 IDW MANAGEMENT

IDW generated during the 2005 field season included monitoring well purge water, free product from the free product evaluation, and soil and sludge generated during deconstruction of a gravel pad in the Contractor's staging yard. All IDW was stored at the Contractor's staging yard during the interim between generation of the waste and receipt of IDW analytical sample results. IDW soil and sludge generated during pad deconstruction activities in 2005 were contained in drums, labeled, and stored in the Contractor's staging yard drum storage area. All purge water was treated on site; all free product and sludge was disposed of through a commercial environmental waste disposal company; and all soil was sampled and disposed of by the Air Force.

Purge water generated during groundwater sampling was stored in holding tanks at the Contractor's staging yard prior to treatment. Contamination was removed by filtering the water

Table 2-8 Wells Marked with Snow Flags in 2005

Zone 1	Zone 2	Zone 3
14MW-115	43-1B	403WL-01
14MW-120	43WL-09	403WL-03
14-MW-121	59BH-200	403WL-04
14MW-123	59BH-201	49WL-01
14MW-138	59BH-34	62WL-05
41755WL-04	59BH-35	76WL-01
41755WL-13	59BH-68	BV529-01A
41755WL-22A	59BH-69	BV529-01B
46WL-01	59WL-31	GW-4A
45WL-02	BV-2A	BV529-01C
46WL-04	BV-3A	LF59MW-01
56WL-01	BV-3B	LF59MW-02
56WL-05	BV-6C	LF59MW-03
56WL-06	FP-56	LF59MW-06R
56WL-09	OU4E-1	OU3MW-01
56WL-08	GW-5A	NS3-02
K303	OU6MW-18	OU5MW-02
OU6MW-05	OU6MW-71A	OU5MW-06
OU6MW-12	OU6MW-90	OU5MW-08
OU6MW-46	W-15	OU5MW-09
OU6MW-61		OU5MW-10
OU6MW-63		OU5MW-11
OU6MW-67		OU5MW-12
OU6MW-77		OU5MW-13
OU6MW-78		OU5MW-14
OU6MW-91		OU5MW-15
OU6MW-92		OU5MW-31
OU6MW-93		OU5MW-33
ST41-02		OU5MW-36
ST41-07		OU5MW-43
ST41-08		OU6MW-49R
ST41-10R		SP1-02
ST41-15		SP2/6-05
ST41-16		
ST41-20		
ST41-28		
ST41-38		
ST41ES-02		
ST41SP-01		

through a granular activated carbon (GAC) water conditioning system in the Contractor's staging yard beginning on 28 June and ending on 12 October 2005. A total volume of just over 1,025 gallons of water was treated through the GAC system and discharged to the Elmendorf AFB sewer system in accordance with conditions of the Anchorage Water and Wastewater Industrial Pretreatment Program Industrial Wastewater Discharge Permit for Elmendorf AFB. Prior to discharge into the sewer system, the contaminated water was pumped through 1) a 3 gallon-per-minute flow regulator, 2) a 100-mesh (or greater) pre-filter that removed sediment, 3) two 5-micron fabric filters consecutively situated as final filtration for sediments, and 4) a 55-gallon drum packed with GAC. Sediments were removed from the discharge water and no water was discharged with a pH greater than 8 or less than 6. One analytical sample was collected of the effluent on 12 October 2005 and analyzed for total aromatic hydrocarbons by the Environmental Protection Agency (EPA) method 602/624, total aqueous hydrocarbons by EPA 625 SIMS, and volatile organic compounds by method SW8260B. There were no analytes detected in this sample. Analytical results for this sample are provided in Appendix H. Once treatment of all purge water was complete, the GAC unit was removed from the Contractor's staging yard by the vendor and properly disposed.

Small quantities of free product mixed with groundwater were generated during both rounds of the free product evaluation. Less than three gallons of IDW were generated during each round. This material was profiled and disposed of through a commercial environmental waste disposal company. Certificates of disposal for this material are provided in Appendix G.

Analytical surface soil samples were collected within the gravel pad prior to demolition to determine if the soil could be re-used. Laboratory analytical results indicated that fine-grained soil within the gravel pad contained arsenic at a concentration of 19 milligrams per kilogram (mg/Kg) which is slightly in excess of background concentrations (16.2 mg/Kg) found at Elmendorf AFB. Analytical results for this soil are provided in Appendix G. This contaminated soil was properly profiled and disposed of by the Air Force. Coarse grained gravel from the decontamination pad was re-used as fill material within the Contractor's Staging Yard. Approximately 10 gallons of sludge were also removed from a sump in a concrete decontamination pad during the demolition project. This sludge was profiled and disposed through a commercial environmental waste disposal company. The analytical results and certificate of disposal for this material is provided in Appendix G.

Concrete and metal debris from the well abandonment effort was staged in the Contractor's staging yard and disposed at the Municipality of Anchorage Landfill during the Contractor's staging yard closure activities.

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3.0 REFERENCES

USAF, 2003. *Basewide Groundwater Monitoring Plan, Final, Basewide Groundwater Monitoring Program, Elmendorf AFB, AK.* October.

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APPENDIX A – QA/QC SUMMARY REPORT

This appendix contains the Quality Assurance/Quality Control Summary Report for analytical data from Round 1 and Round 2 from the 2005 Basewide Groundwater Monitoring Program.

Attachment A-1 – Round 1 QA/QC Report

This attachment contains the QA/QC Report for analytical data from Round 1 of the 2005 Basewide Groundwater Monitoring Program.

APPENDIX A – Attachment A-1
QA/QC SUMMARY REPORT

A1. INTRODUCTION

This Quality Assurance/Quality Control (QA/QC) Report summarizes the evaluation of analytical data associated with the collection of groundwater, surface water, and seep water. These data have been reviewed to assess ongoing monitoring and optimization activities for the Basewide Groundwater Monitoring Program (hereafter called the Program) at Elmendorf Air Force Base (AFB), Alaska.

Quality acceptance criteria for this project are described in the project-specific Quality Assurance Plan (Weston 2003), developed using the Air Force Center for Environmental Excellence (AFCEE) Quality Assurance Project Plan (QAPP) Version 3.1 (AFCEE, 2001), in Section B1.0 of the Sampling and Analysis Plan (Weston 2003), and in 2005 variances approved for the project and included as an attachment to the project QAPP. Overall, the data have met the quality control acceptance criteria specified for this project. Non-conformances of data are identified, discussed, and qualified in this report. Appendix E provides a complete set of validated laboratory analytical data reports, stored as digital files in portable document format (PDF), on compact disks.

A1.1 Objectives

This report summarizes the results of the QA/QC data associated with the analysis of groundwater, surface water, and seep water samples for organic and inorganic constituents collected during Round 1 of the Program. Any potential bias resulting from the quality issue identified by the data flag is discussed in this QA/QC summary report.

Organic Parameters

- Volatile organic compounds (VOC) by gas chromatography/mass spectrometry (GC/MS), United States Environmental Protection Agency (USEPA) Method SW8260B.
- VOC by gas chromatograph/photoionization detection (GC/PID), USEPA Method SW8021B.
- Polynuclear aromatic hydrocarbons (PAH) by high-performance liquid chromatography/fluorescence detection (HPLC/FD), USEPA Method SW8310A.
- Gasoline-range organic compounds (GRO) by gas chromatography/flame ionization detection (GC/FID), Alaska Department of Environmental Conservation (ADEC) Method AK101.
- Diesel range organic compounds (DRO) by gas chromatography/flame ionization detection (GC/FID), ADEC Methods AK102.
- Methane by gas chromatograph/flame ionization detection (GC/FID), USEPA RSK175-modified.
- Total organic carbon (TOC) and dissolved organic carbon (DOC) by combustion/infrared detection, USEPA Method SW9060-modified.

Inorganic Parameters

- Dissolved iron and manganese by inductively-coupled plasma/atomic emission spectroscopy (ICP/AES), USEPA Method SW6010B.
- Alkalinity by titrimetry, USEPA Method 310.1.
- Nitrate-nitrite nitrogen by cadmium reduction/automated colorimetry, USEPA Method 353.2.
- Sulfide by colorimetry, USEPA Method 376.2
- Chloride and sulfate by ion chromatography/conductivity suppression detection, USEPA Method SW9056.

Two rounds of sampling were conducted during 2005. This report evaluates QA/QC from Round 1 samples collected between June 27 and October 19, 2005. Severn Trent Laboratories, Inc. (STL) of Sacramento, California, and Denver, Colorado, performed all analytical testing.

A summary of groundwater, surface water, and seep water samples submitted for analysis is provided in Table A-1. Samples were analyzed in accordance with USEPA *Test Methods for Evaluating Solid Waste,* SW-846, through update III, (1996), ADEC *Gasoline and Diesel/Residual Range Organic Compounds*, revision 3 (1996), USEPA *Methods for the Chemical Analysis of Waters and Wastes* (1983), USEPA *RSK 175-modified* (D.H. Kampbell, S.A. Vandergrift 1998), and/or laboratory standard operating procedures.

Sample Type	**Basewide Monitoring Program Groundwater June—October 2005** ***(Round 1)***
Ground Water	80
Surface Water	4
Field Duplicate	5
Equipment Blanks	1
Trip Blanks	5
Ambient Blanks	0
TOTAL	95

The data qualification guidance in the AFCEE QAPP, Version 3.1 (AFCEE, 2001) was followed when applying data flags for the Program samples. Data review was performed using an internet-based Automated Data Review (ADR) software tool provided by Synectics, Inc., of Sacramento, California. Output from the ADR was verified and modified as necessary by an AFCEE-experienced quality assurance chemist independent of the project, who also performed full data review on one of the nine laboratory data deliverable packages. Definitions of flags used in this report follow.

A2. DATA QUALIFIERS

The AFCEE QAPP Version 3.1 (2001) generally was followed when determining data qualifiers for the Program samples. Data qualifiers (flags) used to qualify data, listed in order of significance based on AFCEE guidelines, are as follows:

- **R** - The data are unusable due to deficiencies in the ability to analyze the sample and meet QC criteria.
- **M** - A matrix effect was present.
- **J** - The analyte was positively identified; the quantitation is an estimate.
- **F** - The analyte was positively identified; the associated numerical value is below the reporting limit, but above the method detection limit.
- **B** - The analyte was found in the associated blank as well as the sample.

The "R" data qualifier is applied to analytical results that have failed to meet critical AFCEE quality control criteria. These results have a high degree of uncertainty and should not be used for most purposes.

Matrix spike/matrix spike duplicates (MS/MSD) samples were analyzed at a frequency of one MS/MSD pair for every 18 field samples collected, unless adequate sample volume was not available. The "M" data qualifier is applied to sample results when spike recoveries fell outside the specified acceptance range. Exceptions are when the sample spike added is less than 25 percent of the analyte detected in the sample, where the spike recovery is above the specified recovery limit and the analyte is not detected in the sample.

The "F" data qualifier is used to indicate that the associated analyte was positively detected but below the project-specified reporting limit. This data qualifier does not indicate a data quality non conformance.

The "J" data qualifier is used to indicate the sample result is an estimated quantity. The primary situation where this qualifier applies when a laboratory control sample (LCS) or surrogate spike was measured above the specified recovery limit and the associated result was above the reporting limit. The control sample recovery exceedance failure indicated either a possible high or low bias, depending on whether the exceedance was above or below the specified recovery limit.

The "B" data qualifier was used to indicate contamination was present in a blank sample, when the same contaminant was detected in a field sample. This limited application of this flag to results where the potential contamination represented at least ten percent of the analyte found in the sample.

In a few select cases, professional judgment was applied by the reviewer in order to provide maximum utility of the data; all such cases are identified in this QA/QC summary. One example is if an analyte was not detected in the field sample, the associated matrix spike recovery is slightly less than the acceptance criterion, but the internal standards, surrogate spikes, and laboratory control standard met yielded acceptable recoveries. Rather than rejecting the result, it might be flagged as non-detected at the reporting limit rather than at the method detection limit.

The review focuses on criteria for the following QA/QC parameters and their overall effect on the data:

- Sample handling chain of custody (COC);
- Holding-time compliance;

- Field QA/QC (trip blanks, equipment rinse blanks, and field duplicates);
- Initial and continuing calibration verification (ICV and CCV) check sample recoveries;
- Method Reporting Limits (RL);
- Method blank (MB) sample recovery;
- Surrogates spike recoveries;
- Internal standard performance (GC/MS only);
- GC retention time shifts (organic compounds);
- GC retention time windows (organic compounds);
- Organic constituent compound identification;
- Analytical methods;
- Precision and accuracy; and
- Completeness.

A2.1 Sample Handling (Chain-of-Custody) and Receiving

COC forms and laboratory case narratives were reviewed to determine if any sample handling procedures might affect the integrity of the samples and the quality of the resulting data. Copies of the COCs and cooler receipts are included in Appendix E.

Samples were packed with frozen gel packs and shipped to the laboratory by Federal Express air express service. Generally, samples were in route for 12 to 24 hours. COC forms and laboratory narratives were reviewed to determine if any sample handling procedures employed might affect the integrity of the samples and the quality of the resulting data. These included handling issues such as sample temperature upon receipt, holding time violations, and container integrity. All QAPP requirements were met.

A2.2 Holding-Time Compliance

All samples were extracted and/or analyzed within the recommended hold time for the analytical procedures utilized for this project, except as noted in Section A3.

A2.3 Trip Blanks

Trip blanks were shipped with coolers containing samples for VOC (SW8260B, SW8021B, and AK101) analysis. In the event that a trip blank was not included in the cooler, all detected VOC results were flagged "B" to indicate that contamination may have occurred during transport, unless at least one sample yielded non-detected results for all analytes. In this case, the reviewer applied professional judgment to evaluate potential cross-contamination.

A2.4 Initial and Continuing Calibration Verification

ICV and CCV standards are analyzed to monitor instrument performance with respect to the QAPP requirements prior to, during, and following sample analysis. Frequency and acceptable recoveries for each analysis performed for this project are outlined in the project QAPP (Weston 2003), or the cited procedure for those tests not specified in the project QAPP (Weston 2003). All ICV and CCV standards met control criteria for the project.

A2.6 Method Reporting Limits

Method reporting limits are specified in the AFCEE QAPP, Version 3.1, and in the project-specific QAPP for water samples. Methods were evaluated and specified based on the ability of each procedure to measure below regulatory levels and at or below historical data levels at each site. RLs achieved by the laboratory generally met the requirements for this project.

A2.7 Method Blanks

Method blanks are analyzed concurrent with a batch of 20 or fewer samples for each of the analytical procedures performed for this project. These samples are prepared in the laboratory in conjunction with project samples to monitor for contamination during the laboratory analytical procedure. A measured result above the required RL would indicate a laboratory method control problem that could affect data quality. For this project, method blanks were tested at the required frequency. Method blank results that exceeded the RL are discussed in Section A.3.

A2.8 Surrogates

Surrogates are specified for organic chromatographic analytical procedures. Surrogates are compounds similar to those tested and are specified for methods employed for this project. These compounds are added to each sample tested before the extraction step of the procedure; measured recovery indicates overall method performance for each sample. Surrogates that failed to meet recovery criteria are discussed in Section A3.

A3. ANALYTICAL METHODS

The following sections describe QA exceedances and resulting data qualification.

A3.1 VOC - USEPA Method SW8260B and SW8021B

The relative percent difference for second-column confirmation exceeded the 40% acceptance criterion for the following samples and analytes from SDG BW072105. Results for the following samples have been flagged as estimated concentrations "J".

14MW-121-WG-0-051	Benzene
43WL-08-WG-0-051	Benzene, Toluene
OU6MW-63-WG-0-051	Benzene, Toluene, m,p-Xylene, Total Xylenes
OU6MW-91-WG-0-051	Benzene
SP7/10-04-WG-0-051	Benzene, Toluene

The relative percent difference for recoveries of dichlorodifluoromethane from the blank spike and duplicate spike samples from SDG BW072105 exceeded the 20% acceptance criterion. Dichlorodifluoromethane was detected above the RL in the following two samples, and the dichlorodifluoromethane results have been flagged as estimated concentrations "J".

LF59MW-06R-WG-0-051 LF59MW-06R-WG-1-051

The relative percent difference for recoveries of acetone from the matrix spike and duplicate spike samples from SDG BW072105 exceeded the 20% acceptance criterion. Acetone was detected above the RL in the following sample, and the acetone result has been flagged as an estimated concentration "J".

41755WL-17-WG-0-051

The Trip Blank sample from SDG BW080405 was analyzed 1-day outside the technical holding time. The trip blank sample was prepared in the laboratory two weeks in advance of the field sampling effort, and no analytes were detected above the RL when analyzed. In the professional opinion of the reviewer, this exceedance did not negatively affect the data, and no data have been qualified.

A3.2 PAH - USEPA Method SW310A

Recovery of the surrogate 1-methylnaphthalene exceeded the upper control limit in sample ST41-10R-WG-0-051 from SDG BW072805B, and the results for the following detected analytes have been flagged as estimated "J" in this sample.

Acenaphthene	Fluorene	Naphthalene
Phenanthrene		

Recovery of the surrogate 1-methylnaphthalene was below the lower control limit in sample ST41SP-01-WS-0-051 from SDG BW072805B, and the results for the following detected analytes have been flagged as estimated "J" in this sample. Results for all non-detected analytes in this sample were rejected for use.

Fluorene	Naphthalene	Phenanthrene

Recovery of the surrogate 1-methylnaphthalene exceeded the upper control limit in sample ST41-10R-WS-0-051 from SDG BW080405B, and the results for the following detected analytes have been flagged as estimated "J" in this sample.

Acenaphthene	Fluoranthene	Fluorene
Naphthalene	Phenanthrene	Pyrene

The relative percent difference for recoveries of the following compounds from the blank spike and duplicate spike samples from SDG BW080405B exceeded the 20% acceptance criterion. These compounds were either non-detected above the RL in sample ST41-10R-WS-0-051, and their have already been flagged as estimated concentrations "J" due to surrogate compound recovery.

Acenaphthene	Acenaphthylene	Dibenzo(a,h)anthracene
Fluorene	Naphthalene	

Recovery of the surrogate 1-methylnaphthalene exceeded the upper control limit in sample ST41SP-01-Ws-6-051 from SDG BW101905, and the results for the following detected analytes have been flagged as estimated "J" in this sample.

Fluorene Naphthalene Phenanthrene

The relative percent difference for second-column confirmation for the following analytes for sample ST41SP-01-WS-6-051 from SDG BW101905 exceeded the 40% acceptance criterion. Anthracene was detected above the MDL in the sample and has been flagged as an estimated quantity "J"; the other analytes have already been flagged as estimated concentrations "J" due to surrogate compound recovery exceedance.

Anthracene Fluorene Napthalene
Phenanthrene

A3.3 GRO – ADEC Method AK101

No data qualification was required for gasoline range organics analyses for this project.

A3.4 DRO – ADEC Method AK102

The surrogate *o*-terphenyl was not recovered from samples 56WL-04-GW-0-051 and 56WL-05-GW-0-051 due to required extract dilution. No data have been flagged for this event.

Samples from SDG BW072105 were extracted 2 to 4 days outside the required holding time. DRO was detected at significant levels in all samples but one, 56WLl-06-WG0-051. In the professional opinion of the reviewer, the detected data are viable and were not rejected for use. Instead, these data have been flagged as estimated concentrations "J", and may exhibit low bias. The non-detected DRO result for sample 56WL-06-WG-0-051 has been rejected for use due to holding time violation.

A3.5 Methane – RSK-175 Modified

No data qualification was required for methane analyses for this project.

A3.6 TOC and DOC – USEPA Method 9060-modified

No data qualification was required for total organic carbon and dissolved organic carbon analyses for this project.

A3.7 Dissolved Manganese – USEPA Method 6010B

Recoveries from one or more blank sample analyses from SDG BW063005 exceeded the RL for manganese. All associated samples have been flagged as possible blank effect "B".

Recoveries from one or more blank sample analyses from SDG BW0070705 exceeded the RL for manganese. All associated samples have been flagged as possible blank effect "B".

Recovery of manganese from the matrix spike sample 56WL-04-WG-0-051 was above the upper control limit. The results for manganese in all associated samples from SDG BW071405 have been flagged as matrix effect present "M".

Recoveries from one or more blank sample analyses from SDG BW071405 exceeded the RL for manganese. All associated samples have been flagged previously to indicate matrix effect present.

Recoveries from one or more blank sample analyses from SDG BW071405B exceeded the RL for manganese. All associated samples have been flagged as possible blank effect "B".

Recoveries of manganese from the matrix spike and spike duplicate samples 41755WL-01-WG-0-051 were below the lower control limit. The results for manganese in all associated samples from SDG BW072105 have been flagged as matrix effect present "M".

Recoveries from one or more blank sample analyses from SDG BW072105 exceeded the RL for manganese. All associated samples have been flagged previously to indicate matrix effect present.

Recoveries of manganese from the matrix spike and spike duplicate samples 41755WL-05-WG-0-051 were below the lower control limit. The results for manganese in all associated samples from SDG BW072805 have been flagged as matrix effect present "M".

Recoveries from one or more blank sample analyses from SDG BW072805 exceeded the RL for manganese. All associated samples have been flagged previously to indicate matrix effect present.

A3.8 Alkalinity – USEPA Method 310.1

No data qualification was required for alkalinity analyses for this project.

A3.9 Nitrate-Nitrite Nitrogen – USEPA Method 353.2

Recoveries of nitrate/nitrite from the matrix spike and spike duplicate samples 49WL-01-G-0-051 were below the lower control limit. The results for nitrate/nitrite in all associated samples from SDG BW063005 have been flagged as matrix effect present "M".

Recoveries of nitrate/nitrite from the matrix spike and spike duplicate samples 56WL-04-WG-0-051 were below the lower control limit. The results for nitrate/nitrite in all associated samples from SDG BW071405 have been flagged as matrix effect present "M".

Recoveries of nitrate/nitrite from the matrix spike and spike duplicate samples 41755WL-01-WG-0-051 were below the lower control limit. The results for nitrate/nitrite in all associated samples from SDG BW072105 have been flagged as matrix effect present "M".

Recoveries of nitrate/nitrite from the matrix spike and spike duplicate samples 41755WL-05-WG-0-051 were below the lower control limit. The results for nitrate/nitrite in all associated samples from SDG BW072805 have been flagged as matrix effect present "M".

A3.10 Sulfide – USEPA Method 376.1

Sample ST41-10R-WG-0-051 from SDG BW072805 was extracted 1-day outside the technical holding time. Sulfide was detected below the RL in this sample. In the professional opinion of the reviewer, the result is viable and was not rejected for use. Instead, the result has been flagged as estimated concentration "J", and may exhibit low bias.

A3.11 Chloride and Sulfate – USEPA Method 9056

No data qualification was required for chloride or sulfate analyses for this project.

A4. PRECISION AND ACCURACY

Precision criteria monitor analytical reproducibility (relative percent difference), and accuracy criteria monitor agreement of measured result with "true values" as determined by the analytical spike recovery. These data are generated by analyzing a MS/MSD at a frequency of two samples per batch of 18 field samples. QC acceptance criteria are specified in the AFCEE QAPP, Version 3.1, or laboratory standard operating procedures for both precision and accuracy. Precision and accuracy requirements apply when the concentration of analyte added to the MS/MSD sample is equal to or greater than the analyte found in the original sample. MS/MSD recoveries outside the accepted range generally indicate matrix interference, and all project samples of a similar matrix associated with the failure are qualified with an "M" flag.

Method accuracy is also measured by the analysis of a LCS. One LCS sample per analytical batch of 20 or less project samples must be analyzed. Recovery of each analyte tested within the required range is a measure of method control. The laboratory is required to reanalyze samples if LCS failure occurs. For some tests, due to holding time considerations, this is not possible. If the LCS is outside control limits, affected data are qualified as estimates with a "J" flag. If LCS recoveries are low, non-detect data are rejected and qualified with an "R" flag.

Precision and accuracy measurements were measured at the required frequency for this project. Precision and accuracy measurements were measured within the required limits for this project, except as discussed in section A3.

A5. COMPLETENESS

The percentage of valid results is reported as completeness. Completeness is calculated after the QC data have been evaluated and the results applied to the measurement data. In addition to results identified as being outside of the QC limits established for the method, broken or spilled samples, or samples that could not be analyzed for any other reason, are included in the assessment of completeness. Only samples that are rejected are considered invalid for the calculation of completeness.

Completeness is calculated as follows:

$$\frac{T - (I + NC)}{T} x\ 100\% = Completeness$$

Where: T = Total number of expected measurements for a method and matrix;

I = Number of invalidated results for a method and matrix; and
NC = Number of results not collected (e.g., bottles broken, etc.) for a method and a matrix.

AFCEE completeness goals are 95% for water samples collected for this project. All completeness goals were met for the project.

A.6 References

Air Force Center for Environmental Excellence (AFCEE). *Quality Assurance Project Plan, Version 3.1.* August 2001.

Alaska Department of Environmental Conservation (ADEC). *Gasoline and Diesel/Residual Range Organic Compounds, revision 3.* 1996.

United States Environmental Protection Agency (USEPA). *Test Methods for Evaluating Solid Waste, SW-846, update III.* 1996.

USEPA. *Methods for the Chemical Analysis of Waters and Wastes.* Including updates. 1983.

D.H. Kampbell, S.A. Vandergrift. "Analysis of Dissolved Methane, Ethane, and Ethylene in Ground Water by a Standard Gas Chromatographic Technique" *Journal of Chromatographic Science (Vol. 36).* May 1998.

Attachment A-2 – Round 2 QA/QC Report

The QA/QC Report for analytical data from Round 2 of the 2005 Basewide Groundwater Monitoring Program will be included in the final version of the 2005 Annual Basewide Groundwater Monitoring Report.

Appendix A – Attachment A-2
QA/QC SUMMARY REPORT

A1. INTRODUCTION

This Quality Assurance/Quality Control (QA/QC) Report summarizes the evaluation of analytical data associated with the collection of groundwater. These data have been reviewed to assess ongoing monitoring and optimization activities for the Basewide Groundwater Monitoring Program (hereafter called the Program) at Elmendorf Air Force Base (AFB), Alaska.

Quality acceptance criteria for this project are described in the project-specific Quality Assurance Plan (Weston 2003), developed using the Air Force Center for Environmental Excellence (AFCEE) Quality Assurance Project Plan (QAPP) Version 3.1 (AFCEE, 2001), in Section B1.0 of the Sampling and Analysis Plan (Weston 2003), and in 2005 variances approved for the project and included as an attachment to the project QAPP. Overall, the data have met the quality control acceptance criteria specified for this project. Non-conformances of data are identified, discussed, and qualified in this report. Appendix E provides a complete set of validated laboratory analytical data reports, stored as digital files in portable document format (PDF), on compact disks.

A1.1 Objectives

This report summarizes the results of the QA/QC data associated with the analysis of groundwater, for organic constituents. Any potential bias resulting from the quality issue identified by the data flag is discussed in this QA/QC summary report.

Organic Parameters

- Volatile organic compounds (VOC) by gas chromatography/mass spectrometry (GC/MS), United States Environmental Protection Agency (USEPA) Method SW8260B.

Two rounds of sampling were conducted during 2005. This report evaluates QA/QC from Round 2 samples collected between November 30 and December 2, 2005. Severn Trent Laboratories, Inc. (STL) of Sacramento, California performed all analytical testing.

A summary of groundwater samples submitted for analysis is provided in Table A-1. Samples were analyzed in accordance with USEPA *Test Methods for Evaluating Solid Waste,* SW-846, through update III, (1996), and/or laboratory standard operating procedures.

Sample Type	Basewide Monitoring Program Groundwater November-December 2005 *(Round 2)*
Ground Water	20
MS/MSD	3
Field Duplicate	3
Equipment Blanks	0
Trip Blanks	1
Ambient Blanks	0
TOTAL	27

The data qualification guidance in the AFCEE QAPP, Version 3.1 (AFCEE, 2001) was followed when applying data flags for the Program samples. Full data review was performed by an AFCEE-experienced quality assurance chemist. Definitions of flags used in this report follow.

A2. DATA QUALIFIERS

The AFCEE QAPP Version 3.1 (2001) generally was followed when determining data qualifiers for the Program samples. Data qualifiers (flags) used to qualify data, listed in order of significance based on AFCEE guidelines, are as follows:

- **R** - The data are unusable due to deficiencies in the ability to analyze the sample and meet QC criteria.
- **M** - A matrix effect was present.
- **J** - The analyte was positively identified; the quantitation is an estimate.
- **F** - The analyte was positively identified; the associated numerical value is below the reporting limit, but above the method detection limit.
- **B** - The analyte was found in the associated blank as well as the sample.

The "R" data qualifier is applied to analytical results that have failed to meet critical AFCEE quality control criteria. These results have a high degree of uncertainty and should not be used for most purposes.

Matrix spike/matrix spike duplicates (MS/MSD) samples were analyzed at a frequency of one MS/MSD pair for every 18 field samples collected, unless adequate sample volume was not available. The "M" data qualifier is applied to sample results when spike recoveries fell outside the specified acceptance range. Exceptions are when the sample spike added is less than 25 percent of the analyte detected in the

sample, or where the spike recovery is above the specified recovery limit and the analyte is not detected in the sample.

The "F" data qualifier is used to indicate that the associated analyte was positively detected but below the project-specified reporting limit. This data qualifier does not indicate a data quality non conformance.

The "J" data qualifier is used to indicate the sample result is an estimated quantity. The primary situation where this qualifier applies when a laboratory control sample (LCS) or surrogate spike was measured above the specified recovery limit and the associated result was above the reporting limit. The control sample recovery exceedance failure indicated either a possible high or low bias, depending on whether the exceedance was above or below the specified recovery limit.

The "B" data qualifier was used to indicate contamination was present in a blank sample, when the same contaminant was detected in a field sample. This limited application of this flag to results where the potential contamination represented at least ten percent of the analyte found in the sample.

The review focuses on criteria for the following QA/QC parameters and their overall effect on the data:

- Sample handling chain of custody (COC);
- Holding-time compliance;
- Field QA/QC (trip blanks, equipment rinse blanks, and field duplicates);
- Initial and continuing calibration verification (ICV and CCV) check sample recoveries;
- Method Reporting Limits (RL);
- Method blank (MB) sample recovery;
- Surrogates spike recoveries;
- Internal standard performance (GC/MS only);
- GC retention time shifts (organic compounds);
- GC retention time windows (organic compounds);
- Organic constituent compound identification;
- Analytical methods;
- Precision and accuracy; and
- Completeness.

A2.1 Sample Handling (Chain-of-Custody) and Receiving

COC forms and laboratory case narratives were reviewed to determine if any sample handling procedures might affect the integrity of the samples and the quality of the resulting data. Copies of the COCs and cooler receipts are included in Appendix E.

Samples were packed with frozen gel packs and shipped to the laboratory by Federal Express air express service. Samples were en route for 12 to 24 hours. The COC form and laboratory narrative were

reviewed to determine if any sample handling procedures employed might affect the integrity of the samples and the quality of the resulting data. These included handling issues such as sample temperature upon receipt, holding time violations, and container integrity. All QAPP requirements were met.

A2.2 Holding-Time Compliance

All samples were extracted and/or analyzed within the recommended hold time for the analytical procedure utilized for this project.

A2.3 Trip Blanks

A trip blank was shipped with the cooler containing samples for VOC (SW8260B) analysis. No target analytes were detected in this sample. All trip blank requirements were met for the project.

A2.4 Initial and Continuing Calibration Verification

ICV and CCV standards are analyzed to monitor instrument performance with respect to the QAPP requirements prior to, during, and following sample analysis. Frequency and acceptable recoveries for each analysis performed for this project are outlined in the project QAPP (Weston 2003), or the cited procedure for those tests not specified in the project QAPP (Weston 2003). All ICV and CCV standards met control criteria for the project.

A2.6 Method Reporting Limits

Method reporting limits are specified in the AFCEE QAPP, Version 3.1, and in the project-specific QAPP for water samples. Methods were evaluated and specified based on the ability of each procedure to measure below regulatory levels and at or below historical data levels at each site. RLs achieved by the laboratory met the requirements for this project.

A2.7 Method Blanks

Method blanks are analyzed concurrent with a batch of 20 or fewer samples for each of the analytical procedures performed for this project. These samples are prepared in the laboratory in conjunction with project samples to monitor for contamination during the laboratory analytical procedure. A measured result above the required RL would indicate a laboratory method control problem that could affect data quality. For this project, method blanks were tested at the required frequency. No method blank results exceeded the RLs for this project.

A2.8 Surrogates

Surrogates are specified for organic chromatographic analytical procedures. Surrogates are compounds similar to those tested and are specified for methods employed for this project. These compounds are added to each sample tested before the extraction step of the procedure; measured recovery indicates

overall method performance for each sample. No surrogates failed to meet recovery criteria for this project.

A3. ANALYTICAL METHODS

The following section describes QA exceedances and resulting data qualification.

A3.1 VOC - USEPA Method SW8260B

76WL-01-WG-0-052 MS recovery for 1-chlorohexane and MSD recovery for trichlorofluoromethane both exceeded laboratory upper control limits. The relative percent difference for all analytes were within acceptance criteria. Laboratory control sample recoveries for these analytes met acceptance criteria and these analytes were not detected in any associated samples. No sample data were qualified due to these exceedances.

OU5MW-11-WG-0-052 MS recoveries for 1,1,1-trichloroethane, 1,1-dichloroethene, 1,1-dichloropropene, 1,3,5-trimethylbenzene, 1-chlorohexane, carbon tetrachloride, chloroethane, isopropylbenzene, n-propylbenzene, o-xylene, tert-butylbenzene, tetrachloroethene, toluene, trichlorofluoromethane and vinyl chloride exceeded laboratory upper control limits. MSD and LCS recoveries met acceptance criteria for all analytes. The relative percent difference for all analytes were within acceptance criteria. Detectable results for these analytes were qualified with the "M" flag in the associated samples to denote a possible matrix effect.

A4. PRECISION AND ACCURACY

Precision criteria monitor analytical reproducibility (relative percent difference), and accuracy criteria monitor agreement of measured result with "true values" as determined by the analytical spike recovery. These data are generated by analyzing a MS/MSD at a frequency of two samples per batch of 20 field samples. QC acceptance criteria are specified in the AFCEE QAPP, Version 3.1, or laboratory standard operating procedures for both precision and accuracy. Precision and accuracy requirements apply when the concentration of analyte added to the MS/MSD sample is equal to or greater than the analyte found in the original sample. MS/MSD recoveries outside the accepted range generally indicate matrix interference, and all project samples of a similar matrix associated with the failure are qualified with an "M" flag.

Method accuracy is also measured by the analysis of a LCS. One LCS sample per analytical batch of 20 or less project samples must be analyzed. Recovery of each analyte tested within the required range is a measure of method control. The laboratory is required to reanalyze samples if LCS failure occurs. For some tests, due to holding time considerations, this is not possible. If the LCS is outside control limits, affected data are qualified as estimates with a "J" flag. If LCS recoveries are low, non-detect data are rejected and qualified with an "R" flag.

Precision and accuracy measurements were measured at the required frequency for this project. Precision and accuracy measurements were measured within the required limits for this project, except as discussed in section A3.1.

A5. COMPLETENESS

The percentage of valid results is reported as completeness. Completeness is calculated after the QC data have been evaluated and the results applied to the measurement data. In addition to results identified as being outside of the QC limits established for the method, broken or spilled samples, or samples that could not be analyzed for any other reason, are included in the assessment of completeness. Only samples that are rejected are considered invalid for the calculation of completeness.

Completeness is calculated as follows:

$$\frac{T - (I + NC)}{T} \, x\, 100\% = Completeness$$

Where: T = Total number of expected measurements for a method and matrix;
I = Number of invalidated results for a method and matrix; and
NC = Number of results not collected (e.g., bottles broken, etc.) for a method and a matrix.

AFCEE completeness goals are 95% for water samples collected for this project. All completeness goals were met for the project.

A.6 References

Air Force Center for Environmental Excellence (AFCEE). *Quality Assurance Project Plan, Version 3.1.* August 2001.

APPENDIX B – BORING AND MONITORING WELL COMPLETION LOGS

This appendix contains the boring log and monitoring well completion log for replacement well 60WL-04R installed in 2005.

BORING NUMBER 60WL-04R

CLIENT United States Air Force
PROJECT NAME 2005 EAFB GW Well Installation
PROJECT NUMBER 20077.043.067
PROJECT LOCATION Elmendorf AFB, Anchorage
DATE STARTED 10/2/05 **COMPLETED** 10/2/05
GROUND ELEVATION ~180 **HOLE SIZE** 2"
DRILLING CONTRACTOR GeoTek Alaska
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING 25' bgs
LOGGED BY Thor Kallestad **CHECKED BY** Russ Beck
AT END OF DRILLING 24' bgs
NOTES Weather is sunny, calm, and warm. ~60F.
AFTER DRILLING 24' bgs

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION
0	AU		0		SP: Poorly graded sand with gravel. Sand is medium. Gravel subrounded, up to 1". Brown. No odor. Moist.
2.0					
5	SS		0		SW: Well graded sand with gravel. Sand is medium. Gravel subrounded, up to 2". Dark gray. No odor. Moist.
6.5					
10	SS		0		SW: Well graded sand with gravel. Sand is medium. Gravel subrounded, up to 2". Dark gray. No odor. Moist.
11.5					
15	SS		0		SW: Well graded sand with gravel. Sand is medium. Gravel subrounded, up to 2". Dark gray. No odor. Moist.
16.5					
20	SS		0		SW: Well graded sand with gravel. Sand is medium. Gravel subrounded, up to 2". Dark gray. No odor. Moist.
21.5					
25	SS		34		SP: Poorly graded sand. Trace gravel. Sand is fine to medium. Gravel subrounded, up to 0.5". Dark gray. No odor. Moist.
26.5					
30	SS		17		SW: Well graded sand with gravel. Sand is medium. Gravel subrounded, up to 2". Dark gray. No odor. Moist.
31.5					Bottom of hole at 33.0 feet.

WELL DIAGRAM

- Cement completion
- Silica Sand
- Hydrated Bentonite Chips
- 0.75" PVC, Sch. 40
- Groundwater encountered during drilling
- Silica Sand
- 0.75" PVC, Sch. 40. 0.010" Slot

APPENDIX C – WELL DATABASE AND SURVEY COORDINATES

This appendix contains a database report of restoration and compliance wells on Base with survey coordinates. Attachment C-1 presents survey information for wells, piezometers, seeps, sediment, and surface water sampling points in the Base Restoration Program. Attachment C-2 provides the monitoring well survey data for wells in the Base Compliance Program. Attachment C-3 includes survey data for abandoned wells.

Attachment C-1 – Restoration Program Survey Data

This attachment contains the monitoring well survey data for wells, piezometers, seeps, sediment, and surface water sampling points in the Base Restoration Program.

Appendix C
2005 Elmendorf Air Force Base Environmental Restoration Program Monitoring Well Survey Data

Well ID	Zone	Site ID	Plume Name	Well Atlas Page	GW Monit. Program Location	Most Recent Survey	Measuring Point Elevation (ft)	Depth to Water from TOC (ft)	Total Depth from TOC (ft)	TOC Stick Up (ft)	Well Material	WGS84-UTM-6N-Meters	
												Northing (UTM-m)	Easting (UTM-m)
Biovent Wells													
538BV-01	3	TBD	No Plume Association	6	No	2004	182.12	32.11	32.6	2	2" PVC	6792944.699	349744.98
538BV-02	3	TBD	No Plume Association	6	No	2004	182.45	32.78	37.6	2.1	2" PVC	6792961.403	349745.899
538BV-03	3	TBD	No Plume Association	6	No	2004	181.6	32.05	36.6	2.4	2" PVC	6792962.109	349735.636
538BV-04	3	TBD	No Plume Association	6	No	2004	181.6	32.28	37.4	2.4	2" PVC	6792945.109	349734.399
BV-01	2	SS043	SS43	10	No	2004	173.17	---	---	---	---	6794367.409	348370.102
BV-1C	2	FT023	Fire Training Area	10	No	2004	204.63	---	---	---	---	6795358.945	349715.707
BV-2A	2	FT023	Fire Training Area	10	No	2004	199.71	---	---	---	---	6795392.217	349568.085
BV-2B	2	FT023	Fire Training Area	10	No	2004	199.51	---	---	---	---	6795393.642	349555.224
BV36-1B	1	ST036	ST36/66	13	No	2004	190.69	---	---	---	---	6797612.104	348574.469
BV36-2A	1	ST036	ST36/66	13	No	2004	189.77	---	---	---	---	6797609.92	348560.12
BV36-UK	1	ST036	ST36/66	13	No	2004	189.34	---	---	---	---	6797623.325	348581.848
BV-3A	2	FT023	Fire Training Area	10	No	2004	201.88	---	---	---	---	6795424.321	349581.283
BV-3B	2	FT023	Fire Training Area	10	No	2004	202.07	---	---	---	---	6795415.469	349590.052
BV-3C	2	SD025	Hangar 11	10	No	2004	190.98	---	---	---	---	6794887.468	348850.792
BV529-01A	3	ST037	Fairchild Avenue	2	No	2004	142.26	---	---	---	---	6792402.372	347269.423
BV529-01B	3	ST037	Fairchild Avenue	2	No	2004	142.92	---	---	---	---	6792416.241	347266.815
BV529-01C	3	ST037	Fairchild Avenue	2	No	2004	142.89	---	---	---	---	6792416.712	347277.5
BV-5A	2	FT023	Fire Training Area	10	No	2004	202.2	---	---	---	---	6795431.2	349636.086
BV-5B	2	FT023	Fire Training Area	10	No	2004	201.84	---	---	---	---	6795436.895	349637.959
BV-5C	2	FT023	Fire Training Area	10	No	2004	201.88	---	---	---	---	6795424.473	349641.164
BV66-1C	1	ST036	ST36/66	13	No	2004	192.03	---	---	---	---	6797607.066	348580.578
BV68-1A	3	ST068	ST68 Plume	6	No	2004	181.96	---	---	---	---	6793780.819	349545
BV68-1B	3	ST068	ST68 Plume	6	No	2004	181.93	---	---	---	---	6793770.116	349535.234
BV68-1C	3	ST068	ST68 Plume	6	No	2004	182.09	---	---	---	---	6793764.119	349545.291
BV68-2A	3	ST068	ST68 Plume	6	No	2004	181.34	---	---	---	---	6793747.943	349541.537
BV68-2B	3	ST068	ST68 Plume	6	No	2004	182.03	---	---	---	---	6793750.518	349553.846
BV68-3B	3	ST068	ST68 Plume	6	No	2004	182.16	---	---	---	---	6793746.593	349575.317
BV-6A	2	SS010	No Plume Association	11	No	2004	219.1	---	---	---	---	6794466.364	351096.867
BV-6B	2	SS010	No Plume Association	11	No	2004	217.75	---	---	---	---	6794461.529	351091.39
BV-6C	2	SS010	No Plume Association	11	No	2004	216.34	---	---	---	---	6794473.529	351088.686
ST61BV-UK01	1	ST061	ST61	12	No	2004	167.66	---	---	---	---	6796248.323	348111.824
ST61BV-UK02	1	ST061	ST61	12	No	2004	166.9	---	---	---	---	6796253.011	348106.768

2005 Elmendorf Air Force Base Environmental Restoration Program Monitoring Well Survey Data

Well ID	Zone	Site ID	Plume Name	Well Atlas Page	GW Monit. Program Location	Most Recent Survey	Measuring Point Elevation (ft)	Depth to Water from TOC (ft)	Total Depth from TOC (ft)	TOC Stick Up (ft)	Well Material	WGS84-UTM-6N-Meters	
												Northing (UTM-m)	Easting (UTM-m)
Monitoring Wells													
14MW-111	1	WP014	WP14	5	No	2005	170.43	---	---	---	---	6793971.552	345801.223
14MW-115	1	WP014	WP14	5	No	2004	223.72	21.48	31.6	3	2" PVC	6794016.244	345952.999
14MW-120	1	WP014	WP14	5	Yes	2004	219.03	24.07	31.2	2.7	2" PVC	6794006.047	345902.702
14MW-121	1	WP014	WP14	5	Yes	2004	196.27	13.74	22.5	3	2" PVC	6793936.328	345823.533
14MW-123	1	WP014	WP14	5	No	2004	---	25.76	29.4	2.6	2" PVC	6794089.562	345888.043
14MW-138	1	WP014	WP14	5	No	2004	---	26.75	31.6	2.7	2" PVC	6793997.443	345790.301
1836WL-01	3	ST037	Slammer Avenue	6	Yes	2004	177.2	34.04	39.6	-0.5	2" PVC	6792711.971	349669.124
401WL-03	3	ST037	Sentry Wells	2	Yes	2004	141.28	34.37	43.9	3.5	2" PVC	6791991.534	348173.034
401WL-04	3	ST037	Sentry Wells	2	Yes	2004	141.28	32.45	43	3.5	2" PVC	6792026.714	348210.641
403WL-01	3	ST037	Kenney Avenue	2	Yes	2004	150.53	39.84	46.2	3	2" PVC	6792043.726	347928.241
403WL-02	3	ST037	Kenney Avenue	2	No	2004	147.61	31.44	31.7	-0.4	2" PVC	6792108.93	347920.256
403WL-03	3	ST037	Kenney Avenue	2	No	2004	147.51	32.47	32.8	-0.6	2" PVC	6792095.185	347942.007
403WL-04	3	ST037	Kenney Avenue	2	No	2004	147.38	---	32.6	-0.6	2" PVC	6792102.545	347929.722
41755WL-01	1	DP098	DP98	9	Yes	2004	204.11	9.13	16.2	-0.3	2" PVC	6795605.589	347458.244
41755WL-02	1	DP098	DP98	9	Yes	2004	---	11.8	18.6	-0.1	2" PVC	6795643.807	347427.819
41755WL-03	1	DP098	DP98	9	No	2004	200.27	14.4	29.5	-0.3	2" PVC	6795646.358	347443.125
41755WL-04	1	DP098	DP98	9	No	2004	198.07	19.02	33	2.9	2" PVC	6795688.687	347430.838
41755WL-05	1	DP098	DP98	9	Yes	2004	196.79	16.16	26.5	3.2	2" PVC	6795672.273	347393.224
41755WL-06	1	DP098	DP98	9	No	2004	181.73	12.05	18.1	3.4	2" PVC	6795655.139	347333.147
41755WL-07	1	DP098	DP98	9	No	2004	173.99	10.59	17.8	3	2" PVC	6795697.576	347332.99
41755WL-08	1	DP098	DP98	9	No	2004	---	5.63	13.3	3.9	2" PVC	6795753.507	347418.875
41755WL-09	1	DP098	DP98	9	No	2004	170.02	5.78	16.6	3.6	2" PVC	6795722.605	347372.304
41755WL-11	1	DP098	DP98	9	No	2004	203.97	9.07	15.4	-0.4	2" PVC	6795607.574	347457.375
41755WL-12	1	DP098	DP98	9	Yes	2004	166.57	7.7	17.9	3.2	2" PVC	6795794.87	347284.829
41755WL-13	1	DP098	DP98	9	No	2004	198.76	18.02	38	3.2	2" PVC	6795717.62	347542.852
41755WL-14	1	DP098	DP98	9	No	2004	---	7.49	19	2.9	2" PVC	6795769.061	347504.955
41755WL-15	1	DP098	DP98	9	No	2004	166.7	4.15	23.1	2.9	2" PVC	6795786.076	347440.422
41755WL-16	1	DP098	DP98	9	Yes	2004	165.75	4.64	27.7	3	2" PVC	6795793.853	347389.416
41755WL-17	1	DP098	DP98	9	Yes	2004	167.39	5.99	24.6	3	2" PVC	6795755.45	347346.02
41755WL-19	1	DP098	DP98	9	No	2004	196.4	19.06	33.2	3.3	2" PVC	6795600.885	347356.067
41755WL-20	1	DP098	DP98	9	No	2004	210.01	9.51	83.1	-0.4	2" PVC	6795523.284	347510.655
41755WL-21	1	DP098	DP98	9	No	2004	182.03	11.51	56.5	2.7	2" PVC	6795648.839	347341.894
41755WL-22A	1	DP098	DP98	9	No	2004	198.3	28.38	77.9	2.7	2" PVC	6795694.181	347518.182

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												Northing (UTM-m)	Easting (UTM-m)
41755WL-23	1	DP098	DP98	9	No	2004	165.59	4.79	78.8	1.6	2" PVC	6795759.168	347387.931
424WL-01	2	ST064	No Plume Association	10	No	2004	186.88	---	---	---	2" PVC	6794863.331	348876.788
43-1A	2	SS043	SS43	10	No	2004	172.91	---	---	---	0.5" PVC	6794348.116	348338.889
43-1B	2	SS043	SS43	10	No	2004	173.3	---	---	---	0.5" PVC	6794344.994	348332.043
43-1C	2	SS043	SS43	10	No	2004	173.37	---	---	---	0.5" PVC	6794375.863	348340.854
43-3A	2	SS043	SS43	10	No	2004	173.3	---	---	---	0.5" PVC	6794374.847	348370.066
43-3B	2	SS043	SS43	10	No	2004	173	---	---	---	0.5" PVC	6794378.567	348363.502
43WL-02	2	ST507[1]	Airlifter	10	No	2004	177.73	23.1	29.2	-0.1	2" PVC	6794550.441	348586.06
43WL-06	2	SS043	SS43	10	No	2005	147.047	---	---	---	---	6794486.635	348350.259
43WL-07	2	SS043	SS43	10	No	2004	175.53	18.66	22	0	2" PVC	6794497.149	348432.485
43WL-08	2	ST507[1]	Airlifter	10	Yes	2004	178.91	18.27	23.7	-0.2	2" PVC	6794595.47	348486.322
43WL-09	2	ST507[1]	Airlifter	10	No	2004	187.64	17.42	21.1	-0.3	2" PVC	6794698.161	348454.571
43WL-11	2	ST507[1]	Airlifter	10	Yes	2004	182.03	16.63	21	-0.2	2" PVC	6794668.632	348484.612
45WL-02	1	ST061	ST61	12	Yes	2004	154.83	11.55	23	3	2" PVC	6796301.331	348089.057
46WL-01	1	ST069	ST69	5	Yes	2004	181.21	7.5	14.9	2.5	2" PVC	6793656.485	346286.028
46WL-02	1	ST069	ST69	5	Yes	2004	176.09	7.53	12.4	-0.4	2" PVC	6793638.004	346276.621
46WL-03	1	ST069	ST69	5	No	2004	183.67	9.8	15.7	3.3	2" PVC	6793661.136	346310.141
46WL-04	1	ST069	ST69	5	No	2004	179.7	8.42	15.6	2.8	2" PVC	6793647.307	346267.271
49WL-01	3	ST037	Fairchild Avenue	6	Yes	2004	145.81	14.49	25.4	2.4	2" PVC	6792799.248	347343.32
50WL-01	1	ST036	ST36/66	13	No	2005	161.811	---	---	---	---	6797593.886	348576.652
53WL-02	3	LF002	LF02	3	No	2004	167.98	5.8	15.3	3.2	2" PVC	6791881.44	350799.877
53WL-05	3	LF002	LF02	3	Yes	2004	166.41	6.44	14.7	3	2" PVC	6791893.834	350704.121
56WL-01	1	ST036	ST36/66	13	Yes	2004	194.66	70	76.4	2.3	2" PVC	6797603.06	348578.842
56WL-02	1	ST036	ST36/66	13	No	2004	---	39.75	39.8	-0.1	2" PVC	6797591.345	348608.129
56WL-03	1	ST036	ST36/66	13	No	2005	159.28	---	---	---	---	6797618.963	348563.523
56WL-04	1	ST036	ST36/66	13	Yes	2004	189.7	64.92	71.1	-0.5	2" PVC	6797616.348	348572.307
56WL-05	1	ST036	ST36/66	13	Yes	2004	192.56	68	72.9	2.6	2" PVC	6797622.917	348584.456
56WL-06	1	ST036	ST36/66	13	Yes	2004	182.06	58.08	64.1	2.8	2" PVC	6797657.521	348575.714
56WL-07	1	ST036	ST36/66	13	No	2005	134.32	---	---	---	---	6797655.979	348535.821
56WL-08	1	ST036	ST36/66	13	Yes	2004	171.36	46.35	57.2	2.3	2" PVC	6797609.71	348534.964
56WL-09	1	ST036	ST36/66	13	Yes	2004	181.9	57.22	67.6	2.7	2" PVC	6797642.457	348602.053
57WL-01	2	ST072	No Plume Association	10	No	2005	311.57	---	---	---	---	6795171.985	348151.571
57WL-03	2	ST072	No Plume Association	10	No	2005	347.49	---	---	---	---	6795129.724	348150.904
59BH-200	2	ST032	No Plume Association	5	No	2004	246.56	---	---	---	1" PVC	6794171.357	347180.01
59BH-201	2	ST032	No Plume Association	5	No	2004	249.02	---	---	---	1" PVC	6794171.903	347198.196

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												Northing (UTM-m)	Easting (UTM-m)
59BH-202	2	ST032	No Plume Association	5	No	2004	285.96	---	---	---	1" PVC	6794201.647	346617.761
59BH-34	2	ST032	No Plume Association	5	No	2004	289.47	---	---	---	2" PVC	6794171.802	346732.803
59BH-35	2	ST032	No Plume Association	5	No	2004	288.39	---	---	---	2" PVC	6794183.224	346733.996
59BH-68	2	ST032	No Plume Association	9	No	2004	227.17	---	---	---	2" PVC	6794450.912	347732.386
59BH-69	2	ST032	No Plume Association	9	No	2004	223.1	---	---	---	2" PVC	6794440.828	347750.436
59WL-01	2	ST032	WRHFF Spill	5	No	2004	252.07	40.2	46.6	1	2" PVC	6794180.1	347083.756
59WL-02	2	ST032	59WL-31	5	Yes	2004	259.45	---	---	---	2" PVC	6794178.343	347191.733
59WL-06	2	ST032	59WL-31	9	No	2005	255.32	---	---	---	---	6794330.895	346937.253
59WL-10	2	ST032	59-WL-30/36	9	No	2005	264.03	---	---	---	---	6794404.359	347206.356
59WL-20	2	ST032	No Plume Association	9	No	2004	225.96	---	---	---	2" PVC	6794447.628	347738.676
59WL-24	2	ST032	59WL-31	9	No	2005	242.8	---	---	---	---	6794395.431	346952.11
59WL-29	2	ST032	No Plume Association	9	No	2004	---	---	---	---	2" PVC	6794424.22	347666.985
59WL-30	2	ST032	59-WL-30/36	6	Yes	2004	---	---	---	---	2" PVC	6794283.806	347473.067
59WL-31	2	ST032	59WL-31	5	Yes	2004	212.54	23.3	28.3	-0.3	2" PVC	6794037.475	347077.274
59WL-36	2	ST032	59-WL-30/36	6	Yes	2005	173.766	29.38	40.1	-0.2	2" PVC	6794197.724	347636.446
59WL-38	2	ST032	59WL-31	5	No	2004	---	---	---	---	---	6793950.14	347065.053
60WL-02	3	ST048	ST48	6	No	2004	184.91	26.93	30.9	0	2" PVC	6793641.646	349886.721
60WL-03	3	ST048	ST48	6	No	2004	---	27.7	32.5	-0.4	2" PVC	6793693.505	349904.799
60WL-04R	3	ST048	ST48 Plume	6	Yes	2005	153.72	24	32	---	---	6793609.965	349808.489
61WL-07	3	ST037	Slammer Avenue	6	Yes	2004	177.96	29.93	34.6	-0.2	2" PVC	6792905.501	349678.292
62WL-02	3	SP-15	ST68 Plume	6	Yes	2004	182.98	26.74	32.8	-0.1	2" PVC	6793712.25	349495.029
62WL-03	3	ST068	ST68 Plume	6	No	2005	151.43	---	---	---	---	6793731.891	349446.383
62WL-05	3	ST068	ST68 Plume	6	Yes	2004	180.98	26.55	31.4	-0.2	2" PVC	6793613.506	349360.551
62WL-06	3	ST068	ST68 Plume	6	Yes	2004	174.71	24.95	34.5	-0.2	2" PVC	6793399.03	349146.639
62WL-07	3	ST068	ST68 Plume	6	No	2004	179.14	25.8	35.2	-0.2	2" PVC	6793603.876	349279.898
64WL-01	3	ST068	ST68 Plume	6	Yes	2004	182.06	26.73	38	2.8	2" PVC	6793768.033	349545.195
64WL-03	3	ST068	ST68 Plume	6	No	2004	184.78	27.6	32.7	-0.1	2" PVC	6793808.908	349582.392
65WL-04R	3	ST074	LF02	3	Yes	2004	199.84	28.97	37.6	-0.3	2" PVC	6791893.474	351107.924
76WL-01	3	ST037	Early Warning Wells	2	Yes	2004	163.1	40.09	51.9	2.9	2" PVC	6792344.645	348398.463
AP3567	1	ST061	ST61	12	Yes	2004	165.92	16.07	22.8	-0.4	2" PVC	6796254.239	348102.037
AP3606	1	ST061	ST61	12	Yes	2004	167.62	10.38	18.6	0	2" PVC	6796215.82	348135.655
FP-52	2	FT023	Fire Training Area	10	No	2004	204.7	44.2	52	2.7	4" Steel	6795413.244	349629.257
FP-56	2	FT023	Fire Training Area	10	Yes	2004	203.38	43.18	50.4	1.5	4" Steel	6795401.264	349597.807
GW-4A	3	ST037	Slammer Avenue	2	Yes	2004	137.87	5.04	12.3	2.7	2" PVC	6792513.242	349458.976
GW-5A	2	FT023	Fire Training Area	10	No	2004	204.86	44.74	53.8	1.8	2" PVC	6795278.952	349600.661

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												Northing (UTM-m)	Easting (UTM-m)
IS6-01	2	SD029	OU4 East	10	Yes	2005	184.495	---	---	---	2" PVC	6794881.623	350902.095
K303	1	LF004	PL81 South	5	No	2004	144.82	---	36.4	1.9	2" PVC	6793716.933	345622.525
LF59MW-01	3	LF059	OU1 Landfills	7	No	2004	170.9	8.25	16.9	0.8	4" PVC	6792563.538	350784.837
LF59MW-02	3	LF059	OU1 Landfills	7	No	2004	170.02	16.5	26.5	1.6	4" PVC	6792643.989	350329.177
LF59MW-03	3	LF059	LF59MW-03	7	Yes	2004	185.54	29.47	39.4	2.1	4" PVC	6792693.436	350416.342
LF59MW-06R	3	LF059	LF59MW-03	7	Yes	2004	163.29	10.68	28.6	2.6	2" PVC	6792575.775	350309.013
NS3-02	3	ST037	Sentry Wells	2	Yes	2004	120.9	5.01	27.2	2.6	2" PVC	6792269.865	349082.14
OU3MW-01	3	SD031	No Plume Association	6	No	2004	153.75	23	34.4	3	2" PVC	6792786.613	347893.926
OU3MW-02	3	ST037	OU5MW-02	2	Yes	2004	142.66	29.89	39	-0.2	2" PVC	6792264.395	347630.826
OU3MW-05	3	ST037	Fairchild Avenue	6	No	2004	113.82	11.78	17.8	-0.3	2" PVC	6792835.043	347501.584
OU3MW-06	3	ST037	Fairchild Avenue	6	No	2004	145.94	13.09	24.6	2.6	2" PVC	6792879.383	347501.635
OU3MW-09	3	SD052	No Plume Association	5	No	2005	112.986	9.3	22.9	-0.6	2" PVC	6793022.329	347130.66
OU3MW-11	3	ST037	Fairchild Avenue	6	Yes	2005	118.757	---	---	---	---	6793138.294	347518.565
OU3MW-12	3	ST037	Fairchild Avenue	6	No	2005	118.901	---	---	---	---	6793134.184	347518.467
OU3MW-13	3	ST037	Fairchild Avenue	6	No	2004	157.85	14.96	22.4	3	2" PVC	6793293.718	347719.883
OU3MW-14	3	ST037	Fairchild Avenue	6	No	2004	147.05	9.22	15.8	-0.3	2" PVC	6793158.005	347375.055
OU3MW-16	3	ST037	Fairchild Avenue	1	No	2004	136.03	31.2	41.9	-0.1	2" PVC	6792049.13	346915.875
OU3MW-25	3	ST037	OU3MW-25	6	Yes	2004	154.93	15.26	24.8	0.3	2" PVC	6793167.98	348021.8
OU4E-01	2	SS010	No Plume Association	11	No	2004	220.18	54.9	65.8	1.9	2" PVC	6794463.265	351089.936
OU4E-03	2	TBD	No Plume Association	10	No	2004	209.36	46.6	55	2.5	2" PVC	6794828.12	350585.899
OU4MW-04	2	SD024	Hangar 10	10	Yes	2004		23.55	33.3	-0.3	2" PVC	6794355.086	348826.565
OU4MW-08R	2	SD025	Hangar 11	10	Yes	2004	191.93	32.67	43.3	2.2	2" PVC	6794903.117	348838.979
OU4W-1	2	SD024	Hangar 10	6	No	2005	149.551	---	---	---	---	6794196.055	349018.749
OU4W-10	2	SD024	Hangar 10	10	No	2004	185.83	29.5	38.7	2.5	2" PVC	6794366.161	349002.985
OU4W-11	2	FT023	Fire Training Area	10	Yes	2004	208.27	48	57.9	2.5	2" PVC	6795334.228	349720.99
OU4W-14	2	SD026	Fire Training Area	10	No	2005	169.974	---	---	---	---	6794879.383	349750.243
OU4W-3	2	ST079	Hangar 10	10	No	2004	184.22	26.67	36.6	-0.4	2" PVC	6794551.028	348976.057
OU4W-6	2	TBD	No Plume Association	10	No	2004	---	---	---	---	---	6794959.461	349313.176
OU5MW-01	3	ST037	Early Warning Wells	1	Yes	2004	---	37.03	46.3	2.5	2" PVC	6791705.879	347080.984
OU5MW-02	3	ST037	OU5MW-02	2	Yes	2004	142.26	35.32	46.5	1.5	2" PVC	6792002.689	347543.292
OU5MW-03	3	ST037	Kenney Avenue	2	No	2004	148.76	33.65	46.6	1.4	2" PVC	6792197.714	347910.235
OU5MW-05	3	ST037	Early Warning Wells	6	Yes	2004	156.3	23.46	37.5	-0.15	2" PVC	6792697.907	348789.154
OU5MW-06	3	ST037	Slammer Avenue	6	Yes	2004	173.3	34.4	48.4	-0.2	2" PVC	6792743.033	349405.627
OU5MW-07	3	ST037	Slammer Avenue	6	Yes	2004	178.48	32.25	49.2	-0.3	2" PVC	6792795.553	349734.135
OU5MW-08	3	ST037	Slammer Avenue	6	Yes	2004	155.81	16.57	21.8	1.7	2" PVC	6792588.728	349675.549

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												Northing (UTM-m)	Easting (UTM-m)
OU5MW-09	3	ST037	Sentry Wells	2	Yes	2004	116.41	4.19	10.2	1.7	2" PVC	6792251.438	348806.136
OU5MW-10	3	ST037	Sentry Wells	2	Yes	2004	105.98	0.91	5.2	-0.1	2" PVC	6792078.934	348600.064
OU5MW-11	3	ST037	Early Warning Wells	2	Yes	2005	123.927	38	51.7	1.7	2" PVC	6792236.587	348245.363
OU5MW-12	3	ST037	Sentry Wells	2	Yes	2004	97.38	7.6	11.5	1.7	2" PVC	6791817.072	348107.775
OU5MW-13	3	ST037	Sentry Wells	2	Yes	2004	92.98	5	9.7	2.2	2" PVC	6791767.873	347940.007
OU5MW-14	3	ST037	Sentry Wells	2	Yes	2004	86.49	10.47	14.6	1.7	2" PVC	6791627.611	347677.659
OU5MW-15	3	ST037	SP1-02	2	No	2004	82.68	10.81	14.5	1.2	2" PVC	6791540.057	347395.409
OU5MW-30	3	ST037	No Plume Association	2	No	2005	85.22	---	---	---	---	6792324.312	348972.944
OU5MW-31	3	ST037	Sentry Wells	2	Yes	2004	136.98	4.6	9.6	1.4	2" PVC	6792398.911	349315.499
OU5MW-33	3	ST037	Sentry Wells	3	Yes	2004	156.76	12.57	24	2.1	2" PVC	6792572.539	350028.765
OU5MW-34	3	ST037	Fairchild Avenue	2	Yes	2004	141.34	30.16	58	2.6	2" PVC	6792251.451	347187.916
OU5MW-36	3	ST037	Kenney Avenue	2	Yes	2004	150.56	40.75	62.5	3.1	2" PVC	6792033.175	348005.287
OU5MW-37	3	ST037	Fairchild Avenue	1	Yes	2004	135.44	31.55	42.8	-0.2	2" PVC	6791904.864	347031.566
OU5MW-38	3	ST037	Fairchild Avenue	1	Yes	2004	138.36	28.97	59.6	-0.3	2" PVC	6792154.253	347151.237
OU5MW-39	3	ST037	Fairchild Avenue	6	Yes	2004	169.76	11.54	22.8	-0.2	2" PVC	6793340.244	347617.471
OU5MW-40	3	ST037	Fairchild Avenue	2	Yes	2004	139.83	30.91	43.6	1.9	2" PVC	6792067	347253.572
OU5MW-41	3	ST037	Kenney Avenue	2	Yes	2004	150.56	31.61	42.1	-0.2	2" PVC	6792302.982	347999.263
OU5MW-42	3	ST037	Kenney Avenue	2	Yes	2004	149.48	32.36	42.6	-0.2	2" PVC	6792277.269	347957.767
OU5MW-43	3	ST037	Fairchild Avenue	1	Yes	2004	134.19	30.78	40.4	-0.2	2" PVC	6791843.386	347077.953
OU5MW-44	3	ST037	OU5MW-02	2	Yes	2004	138.23	30.66	41.8	-0.2	2" PVC	6791959.283	347456.988
OU5MW-45	3	ST037	Early Warning Wells	2	Yes	2004	135.08	32.22	39.4	-0.3	2" PVC	6791673.507	347365.903
OU6MW-01	3	LF002	LF02	3	No	2005	169.708	---	---	---	---	6791830.619	351146.253
OU6MW-05	1	WP014	WP14	5	No	2004	190.46	70.43	77.8	1.8	2" PVC	6793918.569	345802.622
OU6MW-06	1	WP014	WP14	5	No	2004	210.08	18.52	25.2	3	2" PVC	6793950.269	345889.49
OU6MW-12	1	WP014	WP14	5	No	2005	160.659	17.5	28	2.2	2" PVC	6793911.06	345768.28
OU6MW-13	1	WP014	WP14	5	No	2004	181.11	61.54	68.3	2.9	2" PVC	6793857.42	345712.935
OU6MW-15	2	PL081	OU6MW-46	5	No	pre-2004	---	---	---	---	---	6793811.702	345875.365
OU6MW-17	2	SD015	SD15	14	Yes	2004	272.45	41.7	49.7	-1.7	2" PVC	6796518.018	351015.1
OU6MW-18	2	SD015	SD15	14	Yes	2004	282.98	38.82	50.3	2.7	2" PVC	6796534.274	351060.078
OU6MW-46	1	PL081	OU6MW-46	5	Yes	2004	196.46	7.94	42.4	2.8	2" PVC	6793845.984	345904.229
OU6MW-49R	3	LF002	LF02	3	Yes	2004	169.16	6.07	18.9	2.5	2" PVC	6791869.96	350824.072
OU6MW-60	1	WP014	WP14	5	No	2004	210.96	15.56	25	3.2	2" PVC	6793974.364	345919.671
OU6MW-61	1	LF004	WP14	5	No	2004	161.39	28.82	39.3	3.2	2" PVC	6793809.585	345668.732
OU6MW-63	1	PL081	PL81 South	5	Yes	2004	145.38	44.9	51.8	2.8	2" PVC	6793702.438	345616.519
OU6MW-67	1	LF004	WP14	5	No	2004	221	67.19	87.6	3.7	2" PVC	6794023.562	345684.993

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Well ID	Zone	Site ID	Plume Name	Well Atlas Page	GW Monit. Program Location	Most Recent Survey	Measuring Point Elevation (ft)	Depth to Water from TOC (ft)	Total Depth from TOC (ft)	TOC Stick Up (ft)	Well Material	WGS84-UTM-6N-Meters	
												Northing (UTM-m)	Easting (UTM-m)
OU6MW-70	2	SD015	SD15	14	No	2004	276.61	119.35	131.7	3.2	2" PVC	6796505.835	351086.686
OU6MW-71A	2	SD015	SD15	14	No	2004	274.51	117.09	128.2	2.3	2" PVC	6796604.56	351009.638
OU6MW-75	1	LF004	WP14	5	No	2004	---	41.08	80.6	3.4	2" PVC	6794038.885	345743.432
OU6MW-77	1	LF004	WP14	5	No	2004	196.04	27.84	38.4	3.4	2" PVC	6793954.965	345726.555
OU6MW-78	1	LF004	WP14	5	No	2004	204.66	84.88	102.4	3	2" PVC	6793974.922	345696.863
OU6MW-90	2	SD015	SD15	14	Yes	2004	266.31	35.85	50.6	-1.7	2" PVC	6796494.137	351032.442
OU6MW-91	1	WP014	WP14	5	Yes	2004	194.13	23.93	32.9	2.5	2" PVC	6793921.306	345724.468
OU6MW-92	1	LF004	WP14	5	No	2004	199.58	31.92	39.6	3.1	2" PVC	6793954.07	345706.026
OU6MW-93	1	LF004	WP14	5	No	2004	211.85	57.11	65.2	2.8	2" PVC	6793999.907	345697.388
OU6MW-94	1	LF004	WP14	5	No	2004	186.78	19.94	27.6	2.4	2" PVC	6793917.077	345708.279
SP1-02	3	ST037	SP1-02	2	Yes	2004	136.75	34.94	50	2.9	2" PVC	6791633.216	347427.189
SP2/6-05	3	ST037	Sentry Wells	2	Yes	2004	---	31.75	49.1	2.3	2" PVC	6791947.802	348114.657
SP4/11-03	3	ST037	Early Warning Wells	6	Yes	2004	169.33	36.82	54.2	-0.3	2" PVC	6792604.014	349299.166
SP7/10-04	2	SS043	SS43	10	Yes	2004	174.12	19.15	28.6	-0.1	2" PVC	6794360.782	348361.915
SS-09	2	SD028	No Plume Association	11	No	2004	215.19	---	---	---	---	6794734.663	350952.64
ST20-03	3	ST020	ST48 Plume	6	Yes	2005	150.876	---	---	---	---	6793472.777	349658.843
ST20MW-07	3	ST020	No Plume Association	6	No	2004	180.09	24.57	63.8	-0.1	4" PVC	6793391.263	349682.44
ST20MW-10	3	ST020	No Plume Association	6	No	2004	177.3	23.38	38.8	-0.5	4" PVC	6793389.102	349530.799
ST20MW-11	3	ST020	No Plume Association	6	No	2004	176.35	22.81	33.3	-0.4	4" PVC	6793282.607	349621.773
ST41-02	1	ST041	No Plume Association	5	No	2004	264.57	22.3	37.4	2.3	2" PVC	6794091.86	346327.45
ST41-07	1	ST041	ST41 South	5	Yes	2004	267.46	36.02	54.3	3	2" PVC	6794016.522	346389.412
ST41-08	1	ST041	ST41 North	5	No	2005	218.294	---	---	---	---	6794235.14	346396.025
ST41-10R	1	ST041	ST41 North	5	Yes	2004	238.23	6.64	17.2	3.3	2" PVC	6794223.219	346359.79
ST41-15	1	ST041	ST41 South	5	No	2004	251.12	9.79	22.3	1.4	2" PVC	6793992.838	346338.864
ST41-16	1	ST041	ST41 South	5	No	2004	252.5	16.05	22.4	2.3	2" PVC	6793994.289	346383.878
ST41-20	1	ST041	ST41 North	5	No	2004	216.84	5.95	11.8	2.5	2" PVC	6794228.001	346260.692
ST41-23	2	ST041	ST41 North	5	No	2005	173.474	---	---	---	---	6793927.718	346659.674
ST41-24	2	ST041	ST41 North	5	No	2005	177.661	---	---	---	---	6793928.513	346553.201
ST41-25	1	ST041	ST41 South	5	Yes	2004	219.49	8.8	13.3	2.9	2" PVC	6793929.065	346373.422
ST41-27	1	ST041	ST41 North	5	No	2005	230.797	---	---	---	---	6794187.761	346479.098
ST41-28	1	ST041	ST41 North	5	No	2004	253.25	21.73	26.8	2.3	4" PVC	6794187.484	346388.613
ST41-30	1	ST041	ST41 North	5	No	pre-2004	---	---	---	---	---	6794273.785	346350.613
ST41-33A	1	ST041	ST41 North	5	No	2005	189.531	---	---	---	---	6794229.027	346153.361
ST41-34	1	ST041	ST41 North	5	No	2005	187.493	---	---	---	---	6794275.346	346199.981
ST41-38	1	ST041	ST41 North	5	No	2005	219.062	---	---	---	---	6794142.894	346249.327

2005 Elmendorf Air Force Base Environmental Restoration Program Monitoring Well Survey Data

Well ID	Zone	Site ID	Plume Name	Well Atlas Page	GW Monit. Program Location	Most Recent Survey	Measuring Point Elevation (ft)	Depth to Water from TOC (ft)	Total Depth from TOC (ft)	TOC Stick Up (ft)	Well Material	WGS84-UTM-6N-Meters	
												Northing (UTM-m)	Easting (UTM-m)
ST41ES-02	1	ST041	ST41 South	5	No	2004	222.02	8.2	11.7	3	2" PVC	6793945.121	346315.977
W-15	2	FT023	Fire Training Area	10	No	2004	203.32	43.25	58.6	1.2	2" PVC	6795331.996	349589.437
W-3	2	SS043	SS43	10	No	2004	175.6	21.6	34.7	1	2" PVC	6794392.846	348395.873
W-4	2	ST422[1]	W4	6	Yes	2004	166.41	12.55	29.3	-0.5	2" PVC	6794173.892	348110.517
Piezometers													
1836PZ-01	3	ST037	Slammer Avenue	6	No	2004	177.43	---	---	-0.5	0.5" PVC	6792720.726	349669.632
41755PZ-01	1	DP098	DP98	9	No	2004	203.65	---	---	-0.3	0.5" PVC	6795604.764	347451.975
41755PZ-03	1	DP098	DP98	9	No	2004	---	---	---	-0.2	0.5" PVC	6795633.458	347448.556
420PZ-01	2	SD028	No Plume Association	11	No	2004	---	---	---	-0.2	0.5" PVC	6794746.748	350953.966
420PZ-03	2	SD028	No Plume Association	11	No	2004	---	---	---	-0.2	0.5" PVC	6794758.044	350954.309
Seeps													
LF02SP-01	3	LF002	LF02	3	Yes	2005	---	---	---	---	NC	6792007.1	350280.83
LF04SP-01	1	LF004	PL81 South	5	Yes	2004	---	---	---	---	NC	6793712.056	345548.114
LF04SP-02	1	LF004	PL81 South	5	Yes	2004	---	---	---	---	NC	6793750.454	345578.27
LF04SP-02DG	1	LF004	PL81 South	5	Yes	2004	---	---	---	---	NC	6793767.879	345534.288
LF04SP-03	1	LF004	WP14/PL81 North	5	Yes	2004	---	---	---	---	NC	6794009.603	345608.462
LF04SP-04	1	LF004	WP14/PL81 North	5	Yes	2004	---	---	---	---	NC	6794032.036	345647.598
LF04SP-05	1	LF004	Z1 Sentry Seeps	9	Yes	2004	---	---	---	---	NC	6794408.856	345604.959
LF04SP-06	1	LF004	Z1 Sentry Seeps	5	Yes	2004	---	---	---	---	NC	6794283.155	345575.448
LF04SP-07	1	LF004	Z1 Sentry Seeps	9	Yes	2004	---	---	---	---	NC	6794593.567	345635.361
OU5SP-01	3	ST037	Fairchild Avenue	1	Yes	2004	83.08	---	---	0.5	2" PVC	6791492.459	347123.177
OU5SP-02	3	ST037	Fairchild Avenue	1	Yes	2004	90.56	---	---	2.5	2" PVC	6791518.474	347160.731
OU5SP-03	3	ST037	Kenney Avenue	2	Yes	2004	105.12	---	---	0.5	2" PVC	6791684.386	347642.491
OU5SP-04	3	ST38	Kenney Avenue	2	Yes	2004	105.32	---	---	2.5	2" PVC	6791998.131	348215.869
OU5SP-05	3	ST38	Kenney Avenue	2	Yes	2004	105.35	---	---	2.4	2" PVC	6792017.984	348232.295
OU5SP-06	3	ST38	Kenney Avenue	2	Yes	2004	104.57	---	---	2.5	2" PVC	6791935.048	348126.857
OU5SP-07	3	ST037	Kenney Avenue	2	Yes	2004	116.84	---	---	3	2" PVC	6791736.826	347729.974
OU5SP-08	3	ST037	Kenney Avenue	2	Yes	2004	88.13	---	---	2.5	2" PVC	6791666.638	347620.174
OU5SP-09	3	ST037	Kenney Avenue	2	Yes	2004	99.61	---	---	2.2	2" PVC	6791900.309	347975.036
OU5SP-10	3	ST037	Kenney Avenue	2	Yes	2004	100.89	---	---	2.3	2" PVC	6791900.056	347993.495
OU5SP-11	3	ST037	Kenney Avenue	2	Yes	2004	100.2	---	---	2.7	2" PVC	6791901.013	347998.429
OU5SP-12	3	ST037	Kenney Avenue	2	Yes	2004	101.06	---	---	3.5	2" PVC	6791904.028	348022.218
OU5SP-13	3	ST037	Kenney Avenue	2	Yes	2004	100.14	---	---	2.9	2" PVC	6791907.424	348036.173
OU5SP-14	3	ST037	Kenney Avenue	2	Yes	2004	103.25	---	---	1.5	2" PVC	6791910.324	348057.106

2005 Elmendorf Air Force Base Environmental Restoration Program Monitoring Well Survey Data

Well ID	Zone	Site ID	Plume Name	Well Atlas Page	GW Monit. Program Location	Most Recent Survey	Measuring Point Elevation (ft)	Depth to Water from TOC (ft)	Total Depth from TOC (ft)	TOC Stick Up (ft)	Well Material	WGS84-UTM-6N-Meters	
												Northing (UTM-m)	Easting (UTM-m)
OU5SP-15	3	ST037	SP1-02	2	Yes	2004	74.05	---	---	2	2" PVC	6791610.93	347466.778
OU5SP-17	3	ST037	Kenney Avenue	2	Yes	2004	99.48	---	---	3.5	2" PVC	6791853.784	347782.098
OU5SP-18	3	ST037	Kenney Avenue	2	Yes	2004	101.91	---	---	3.5	2" PVC	6791852.434	347779.736
ST41SP-01	1	ST041	ST41 North	5	Yes	2004	233.08	---	---	2.1	2" PVC	6794229.39	346351.484
Surface Water													
BPSW-01	3	ST037	Slammer Avenue	2	Yes	2004	117.79	---	---	---	NA	6792322.852	348990.621
BPSW-03	3	ST037	Slammer Avenue	6	Yes	2004	129.24	---	---	---	NA	6792545.695	349340.657
BPSW-04	3	ST037	Slammer Avenue	2	Yes	2004	135.04	---	---	---	NA	6792494.409	349406.839
BPSW-05	3	ST037	Slammer Avenue	2	Yes	2004	130.19	---	---	---	NA	6792477.026	349324.606
DP98SW-01	1	DP098	DP98	9	Yes	2005	97.51	---	---	---	NA	6796439.842	347820.555
SC-08	3	OU5	OU5 Bluff Plumes	2	Yes	2004	73.33	---	---	---	NA	6791499.399	348024.935
SC-1B	3	OU5	OU5 Bluff Plumes	7	Yes	2004	211.72	---	---	---	NA	6792928.46	352470.642
ST41SW-01	1	ST041	ST41 North	5	Yes	2005	---	---	---	---	NA	6794236.29	346333.31
WCSW-01	3	ST037	Kenney Avenue	2	Yes	2004	98.14	---	---	---	NA	6791859.521	347870.267
WCSW-02	3	ST037	Kenney Avenue	2	Yes	2004	95.25	---	---	---	NA	6791774.928	347782.923
WCSW-03	3	ST037	Kenney Avenue	2	Yes	2005	94.816	---	---	---	NA	6791906.614	347957.141

Notes:

[1] Compliance Site - Site has been transferred from the Environmental Restoration Program to the Environmental Compliance Program in 2006.

ft = feet

ID = Identity

m = meters

NA = Not Applicable

NC = Not Collected

PVC = Polyvinyl Chloride

TOC = Top of well casing

UTM = Universal Transverse Mercator

WGS84 = World Geodetic System 1984

Attachment C-2 – Compliance Program Survey Data

This attachment contains the monitoring well survey data for wells in the Base Compliance Program.

Appendix C
2005 Elmendorf Air Force Base Compliance Program Monitoring Well Survey Data

Well ID	Zone	Site ID	Status	Well Atlas Page	GW Monit. Program Location	Most Recent Survey	Measuring Point Elevation (ft)	Depth to Water from TOC (ft)	Total Depth from TOC (ft)	TOC Stick Up (ft)	Well Material	WGS84-UTM-6N-Meters	
												Northing (UTM-m)	Easting (UTM-m)
Unknown Well Type													
11160WL-01	3	TBD	Unknown	6	No	2004	179.93	24.65	24.9	---	2" PVC	6793111.517	349822.74
189PZ-01	3	TBD	Unknown	6	No	2004	163.1	NC	NC	---	0.5" PVC	6793467.743	348149.757
189PZ-02	3	TBD	Unknown	6	No	2004	159.32	NC	NC	---	0.5" PVC	6793455.323	348146.18
401PZ-01	3	OT92	Unknown	2	No	2004	146.79	NC	NC	---	0.5" PVC	6792103.134	348165.156
401PZ-05	3	SS42	Unknown	2	No	2004	148.13	NC	NC	---	0.5" PVC	6792136.392	348169.658
401WL-01	3	OT92	Unknown	2	No	2004	144.69	Dry	32.7	---	2" PVC	6792109.672	348177.693
401WL-02	3	SS42	Unknown	2	No	2004	145.87	32.40	34.3	---	2" PVC	6792133.823	348183.358
402PZ-01	3	TBD	Unknown	6	No	2004	155.06	NC	NC	---	0.5" PVC	6793095.456	348062.104
402WL-01	3	TBD	Unknown	6	No	2004	155.09	16.57	16.9	---	2" PVC	6793105.228	348071.688
402WL-02	3	TBD	Unknown	6	No	2004	155.22	17.50	21.7	---	2" PVC	6793115.329	348080.495
403PZ-01	3	ST037	Unknown	2	No	2004	150.56	NC	NC	---	0.5" PVC	6792088.233	347921.867
403PZ-02	3	ST037	Unknown	2	No	2004	150.53	NC	NC	---	0.5" PVC	6792097.83	347910.582
403PZ-03	3	ST037	Unknown	2	No	2004	147.61	NC	NC	---	0.5" PVC	6792080.752	347945.766
403PZ-04	3	ST037	Unknown	2	No	2004	147.48	NC	NC	---	0.5" PVC	6792085.991	347936.297
404PZ-03	3	ST38	Unknown	2	No	2004	143.84	NC	NC	---	0.5 " PVC	6792068.014	348172.97
404PZ-04	3	ST38	Unknown	2	No	2004	140.79	NC	NC	---	0.5 " PVC	6792092.921	348187.082
405PZ-UK	2	ST079	Unknown	10	No	2004	183.24	NC	NC	---	0.5 " PVC	6794594.188	348877.326
409WL-08	---	ST409	Unknown	---	No	pre-2004	---	---	---	---	---	---	---
410PZ-02	3	TBD	Unknown	6	No	2004	179.5	NC	NC	---	0.5 " PVC	6793120.827	349849.992
410WL-01	3	TBD	Unknown	6	No	2004	180.55	25.29	25.5	---	2" PVC	6793136.917	349863.435
414PZ-01	3	TBD	Unknown	6	No	2004	160.04	NC	NC	---	0.5" PVC	6792679.413	348547.511
414PZ-02	3	TBD	Unknown	6	No	2004	161.03	NC	NC	---	0.5" PVC	6792692.504	348524.332
414WL-01	3	TBD	Unknown	6	No	2004	160.18	26.95	27.0	---	2" PVC	6792681.558	348535.656
417PZ-01	2	TBD	Unknown	6	No	2004	202.3	NC	NC	---	0.5 " PVC	6794258.803	347693.259
417PZ-02	2	TBD	Unknown	6	No	2004	202.4	NC	NC	---	0.5 " PVC	6794270.495	347696.784
417WL-01	2	TBD	Unknown	6	No	2004	205.32	Dry	13.8	---	2" PVC	6794278.232	347680.192
419WL-01	2	TBD	Unknown	9	No	2004	215.65	18.81	19.0	---	2" PVC	6794374.917	347616.674

2005 Elmendorf Air Force Base Compliance Program Monitoring Well Survey Data

Well ID	Zone	Site ID	Status	Well Atlas Page	GW Monit. Program Location	Most Recent Survey	Measuring Point Elevation (ft)	Depth to Water from TOC (ft)	Total Depth from TOC (ft)	TOC Stick Up (ft)	Well Material	WGS84-UTM-6N-Meters	
												Northing (UTM-m)	Easting (UTM-m)
424PZ-01	2	SD025	Unknown	10	No	2004	187.37	NC	NC	---	0.5" PVC	6794858.381	348877.254
44785WL-01		ST426	Unknown	---	No	pre-2004	---	---	---	---	---	---	---
44785WL-02		ST426	Unknown	---	No	pre-2004	---	---	---	---	---	---	---
538WL-02	3	TBD	Unknown	6	No	2004	181.6	32.98	37.3	---	2" PVC	6792921.88	349713.295
63325PZ-04	1	TBD	Unknown	14	No	2004	---	NC	NC	---	0.5" PVC	6797839.209	350982.214
63325WL-01	1	TBD	Unknown	14	No	2004	---	43.05	43.4	---	2" PVC	6797816.604	350997.823
700PZ-02	3	ST38	Unknown	2	No	2004	148.04	NC	NC	---	0.5" PVC	6792019.857	348042.878
702WL-01	1	TBD	Unknown	16	No	2004	121.72	16.85	20.1	---	2" PVC	6798515.623	350080.503
702WL-02	1	TBD	Unknown	16	No	2004	118.51	12.55	16.8	---	2" PVC	6798498.09	350081.473
702WL-03	1	TBD	Unknown	16	No	2004	113.39	Dry	10.3	---	2" PVC	6798486.752	350071.129
702WL-04	1	TBD	Unknown	16	No	2005	84.35	9.32	12.7	---	2" PVC	6798495.031	350095.348
702WL-05	1	TBD	Unknown	16	No	2004	112.05	7.15	9.7	---	2" PVC	6798475.19	350064.341
702WL-10	1	TBD	Unknown	16	No	2004	113.16	13.90	17.0	---	2" PVC	6798453.092	350061.89
702WL-11	1	TBD	Unknown	16	No	2004	112.67	13.50	25.1	---	2" PVC	6798484.969	350017.924
702WL-12	1	TBD	Unknown	16	No	2004	113.65	Dry	16.6	---	2" PVC	6798461.408	350027.034
702WL-13	1	TBD	Unknown	16	No	2004	116.02	10.29	14.5	---	2" PVC	6798487.269	350101.594
702WL-14	1	TBD	Unknown	16	No	2004	115.06	9.51	14.2	---	2" PVC	6798479.742	350108.172
703WL-02	1	ST703	Unknown	12	No	2004	103.22	7.01	16.1	---	2" PVC	6797329.496	347973.267
704WL-02	2	TBD	Unknown	6	No	2004	167.85	10.99	12.7	---	2" PVC	6794290.647	348151.109
775PZ-01	2	TBD	Unknown	11	No	2004	252.86	NC	NC	---	0.5" PVC	6795069.703	352230.426
775PZ-02	2	TBD	Unknown	11	No	2004	253.52	NC	NC	---	0.5" PVC	6795080.872	352229.831
775WL-01	2	TBD	Unknown	11	No	2004	253.02	34.90	35.2	---	2" PVC	6795081.631	352245.178
785WL-01	2	TBD	Unknown	11	No	2004	303.45	9.82	14.8	---	2" PVC	6795407.324	352237.941
785WL-02	2	TBD	Unknown	11	No	2004	303.71	11.89	20.2	---	2" PVC	6795410.219	352236.417
785WL-03	2	TBD	Unknown	11	No	2004	303.09	18.30	24.3	---	2" PVC	6795395.201	352219.914
785WL-04	2	TBD	Unknown	11	No	2004	303.68	12.85	24.2	---	2" PVC	6795409.686	352239.081
785WL-05	2	TBD	Unknown	11	No	2004	298	11.54	21.7	---	2" PVC	6795380.057	352185.461
807WL-01	3	TBD	Unknown	7	No	2004	193.48	38.00	42.3	---	2" PVC	6792884.349	350290.838
EODMW-02	1	TBD	Unknown	19	No	2004	Could not access. Existing coordinates were used.					6800009.592	351194.336

2005 Elmendorf Air Force Base Compliance Program Monitoring Well Survey Data

Well ID	Zone	Site ID	Status	Well Atlas Page	GW Monit. Program Location	Most Recent Survey	Measuring Point Elevation (ft)	Depth to Water from TOC (ft)	Total Depth from TOC (ft)	TOC Stick Up (ft)	Well Material	WGS84-UTM-6N-Meters	
												Northing (UTM-m)	Easting (UTM-m)
EODMW-03	1	TBD	Unknown	19	No	2004	Could not access. Existing coordinates were used.					6800027.069	351124.461
ESMW-3A	2	TBD	Unknown	6	No	2004	176.81	22.50	24.8	---	2" PVC	6794158.629	348761.208
ESMW-3B	2	TBD	Unknown	6	No	2004	176.84	22.50	36.6	---	2" PVC	6794157.298	348761.561
ESMW-4A	2	TBD	Unknown	6	No	2004	178.58	22.60	24.7	---	2" PVC	6794177.355	348879.547
ESMW-4B	2	TBD	Unknown	6	No	2004	178.58	22.60	35.7	---	2" PVC	6794175.929	348879.404
SAMW-01	3	South Apron	Unknown	6	No	2004	173.5	22.20	29.4	---	4" PVC	6793846.103	348954.906
SAMW-05	3	South Apron	Unknown	6	No	2004	174.35	22.90	29.0	---	4" PVC	6793833.1	348997.091
SAMW-UK	3	South Apron	Unknown	6	No	2004	173.96	22.70	29.6	---	4" PVC	6793824.455	348967.155
T41820	2	ST032	Unknown	9	No	2004		38.54	40.3	---	2" PVC	6794503.192	347549.34
TWNMW-04	3	Taxiway-N	Unknown	6	No	2004	157.88	11.61	17.0	---	4" PVC	6793630.119	347844.853
TWNMW-06	3	Taxiway-N	Unknown	6	No	2004	156.83	11.90	19.0	---	4" PVC	6793690.345	347840.679
TWNMW-08	3	Taxiway-N	Unknown	6	No	2004	158.08	12.80	18.8	---	4" PVC	6793699.587	347984.111
TWNMW-09	3	Taxiway-N	Unknown	6	No	2004	156.11	11.10	16.5	---	4" PVC	6793689.199	347861.255
TWNMW-10	3	Taxiway-N	Unknown	6	No	2004	156.53	11.80	19.0	---	4" PVC	6793663.623	347848.462
TWNMW-11	3	Taxiway-N	Unknown	6	No	2004	158.99	13.00	18.6	---	4" PVC	6793625.553	347946.238
TWNMW-12	3	Taxiway-N	Unknown	6	No	2004	157.06	11.60	18.1	---	4" PVC	6793711.751	347969.606
TWNMW-13	3	Taxiway-N	Unknown	6	No	2004	155.98	11.00	17.2	---	2" PVC	6793684.632	347874.472
TWNMW-15	3	Taxiway-N	Unknown	6	No	2004	156.63	12.30	17.5	---	4" PVC	6793658.703	347931.176
TWNMW-16	3	Taxiway-N	Unknown	6	No	2004	159.22	13.70	19.2	---	4' PVC	6793716.503	347833.012
TWNMW-19	3	Taxiway-N	Unknown	6	No	2004	158.7	12.64	16.1	---	4" PVC	6793639.469	347945.546
TWNMW-20	3	Taxiway-N	Unknown	6	No	2004	157.62	11.75	16.8	---	4" PVC	6793628.467	347913.025
TWNMW-21	3	Taxiway-N	Unknown	6	No	2004	157.65	11.60	17.6	---	4" PVC	6793629.011	347879.109
TWNMW-22	3	Taxiway-N	Unknown	6	No	2004	156.86	12.20	16.1	---	4" PVC	6793652.411	347909.362
TWNMW-23	3	Taxiway-N	Unknown	6	No	2004	156.63	11.80	17.1	---	4" PVC	6793666.4	347865.841
TWNMW-24	3	Taxiway-N	Unknown	6	No	2004	155.94	11.10	13.9	---	2" PVC	6793702.693	347934.203
TWNMW-26	3	Taxiway-N	Unknown	6	No	2004	158.93	13.10	16.5	---	4" PVC	6793610.843	347949.341
TWNMW-27	3	Taxiway-N	Unknown	6	No	2004	158.96	13.28	15.5	---	4" PVC	6793590.571	347927.31
TWNMW-28	3	Taxiway-N	Unknown	6	No	2004	158.44	12.64	16.7	---	4" PVC	6793605.315	347923.225
TWNMW-29	3	Taxiway-N	Unknown	6	No	2004	159.26	13.50	17.3	---	4" PVC	6793601.215	347938.024

2005 Elmendorf Air Force Base Compliance Program Monitoring Well Survey Data

Well ID	Zone	Site ID	Status	Well Atlas Page	GW Monit. Program Location	Most Recent Survey	Measuring Point Elevation (ft)	Depth to Water from TOC (ft)	Total Depth from TOC (ft)	TOC Stick Up (ft)	Well Material	WGS84-UTM-6N-Meters	
												Northing (UTM-m)	Easting (UTM-m)
TWNMW-30	3	Taxiway-N	Unknown	6	No	2004	158.24	12.50	17.1	---	4" PVC	6793594.265	347912.49
TWNMW-31	3	Taxiway-N	Unknown	6	No	2004	157.75	12.00	17.1	---	4" PVC	6793609.11	347907.668
TWNMW-32	3	Taxiway-N	Unknown	6	No	2004	158.8	13.24	17.4	---	4" PVC	6793583.57	347900.36
TWNMW-35	3	Taxiway-N	Unknown	6	No	2004	158.57	13.05	17.1	---	4" PVC	6793572.543	347889.879
TWNMW-36	3	Taxiway-N	Unknown	6	No	2004	158.57	13.11	15.5	---	4" PVC	6793576.7	347875.376
TWNMW-37	3	Taxiway-N	Unknown	6	No	2004	158.73	13.27	17.0	---	4" PVC	6793587.233	347885.965
TWNMW-38	3	Taxiway-N	Unknown	6	No	2004	157.81	12.12	16.8	---	4" PVC	6793598.865	347898.191
TWNMW-39	3	Taxiway-N	Unknown	6	No	2004	158.99	13.39	17.2	---	4" PVC	6793591.263	347871.248
TWNMW-41	3	Taxiway-N	Unknown	6	No	2004	158.27	12.15	16.5	---	4" PVC	6793644.971	347926.473
TWNMW-42	3	Taxiway-N	Unknown	6	No	2004	158.6	13.10	16.6	---	4" PVC	6793579.352	347915.109
TWNMW-43	3	Taxiway-N	Unknown	6	No	2004	158.47	13.03	16.4	---	4" PVC	6793569.815	347903.633
TWNMW-44	3	Taxiway-N	Unknown	6	No	2004	156.08	11.40	15.1	---	4" PVC	6793658.421	347834.902
TWNMW-45	3	Taxiway-N	Unknown	6	No	2004	158.04	12.75	16.7	---	4" PVC	6793559.156	347893.746
TWNMW-46	3	Taxiway-N	Unknown	6	No	2004	156.86	13.39	16.3	---	4" PVC	6793560.538	347933.857
TWNMW-47	3	Taxiway-N	Unknown	6	No	2004	159.03	13.00	17.5	---	4" PVC	6793624.699	347960.966
TWNMW-48	3	Taxiway-N	Unknown	6	No	2004	158.7	13.30	18.9	---	4" PVC	6793564.815	347919.101
TWNMW-49	3	Taxiway-N	Unknown	6	No	2004	158.77	13.00	17.4	---	4" PVC	6793605.539	347979.014
TWNMW-50	3	Taxiway-N	Unknown	6	No	2004	158.67	12.88	17.8	---	4" PVC	6793609.726	347964.241
TWNMW-51	3	Taxiway-N	Unknown	6	No	2004	158.73	12.70	16.3	---	4" PVC	6793620.633	347975.587
TWNMW-52	3	Taxiway-N	Unknown	6	No	2004	158.7	13.04	17.3	---	4" PVC	6793595.766	347951.803
TWNMW-53	3	Taxiway-N	Unknown	6	No	2004	158.99	11.70	15.0	---	4" PVC	6793635.356	347973.873
TWNMW-54	3	Taxiway-N	Unknown	6	No	2004	156.4	12.02	17.8	---	4" PVC	6793625.824	347814.818
TWNMW-55	3	Taxiway-N	Unknown	6	No	2004	157.72	11.40	17.0	---	4" PVC	6793628.081	347861.877
TWNMW-56	3	Taxiway-N	Unknown	6	No	2004	157.58	11.43	16.5	---	4" PVC	6793626.912	347830.314
TWNMW-57	3	Taxiway-N	Unknown	6	No	2004	157.98	11.82	17.1	---	4" PVC	6793615.891	347840.49
TWNMW-58	3	Taxiway-N	Unknown	6	No	2004	158.01	11.92	16.9	---	4" PVC	6793618.427	347854.629
TWNMW-59	3	Taxiway-N	Unknown	6	No	2004	158.44	12.85	16.4	---	4" PVC	6793594.822	347966.82
TWNMW-61	3	Taxiway-N	Unknown	6	No	2004	158.24	11.95	17.7	---	4" PVC	6793621.407	347799.477
TWNMW-62	3	Taxiway-N	Unknown	6	No	2004	155.88	11.66	16.0	---	4" PVC	6793611.105	347811.143

2005 Elmendorf Air Force Base Compliance Program Monitoring Well Survey Data

Well ID	Zone	Site ID	Status	Well Atlas Page	GW Monit. Program Location	Most Recent Survey	Measuring Point Elevation (ft)	Depth to Water from TOC (ft)	Total Depth from TOC (ft)	TOC Stick Up (ft)	Well Material	WGS84-UTM-6N-Meters	
												Northing (UTM-m)	Easting (UTM-m)
TWNMW-63	3	Taxiway-N	Unknown	6	No	2004	156.04	11.89	16.2	---	4" PVC	6793606.603	347796.202
TWNMW-64	3	Taxiway-N	Unknown	6	No	2004	156.11	11.92	16.6	---	4" PVC	6793653.114	347805.008
TWNMW-65	3	Taxiway-N	Unknown	6	No	2004	156.37	11.60	16.4	---	4" PVC	6793613.528	347825.19
TWNMW-66	3	Taxiway-N	Unknown	6	No	2004	157.19	12.09	17.9	---	4" PVC	6793599.022	347820.63
TWNMW-67	3	Taxiway-N	Unknown	6	No	2004	157.39	12.95	17.2	---	4" PVC	6793596.562	347805.565
TWNMW-68	3	Taxiway-N	Unknown	6	No	2004	157.98	13.20	18.0	---	4" PVC	6793617.133	347785.533
TWNMW-69	3	Taxiway-N	Unknown	6	No	2004	158.4	12.05	17.4	---	4" PVC	6793608.87	347756.154
TWNMW-71	3	Taxiway-N	Unknown	6	No	2004	155.94	12.65	16.7	---	4" PVC	6793516.137	347975.037
TWNMW-74	3	Taxiway-N	Unknown	6	No	2004	157.72	13.30	19.7	---	2" PVC	6793547.467	347883.848
TWNMW-75	3	Taxiway-N	Unknown	6	No	2004	155.48	12.53	20.4	---	4" PVC	6793481.316	347797.178
TWNMW-76	3	Taxiway-N	Unknown	6	No	2004	156.4	11.10	19.5	---	2" PVC	6793654.536	347945.124
TWNMW-77	3	Taxiway-N	Unknown	6	No	2004	157.49	12.10	21.8	---	6" PVC	6793695.131	347954.131
TWNMW-78	3	Taxiway-N	Unknown	6	No	2004	155.09	11.21	19.6	---	2" PVC	6793575.802	347812.633
TWNMW-79	3	Taxiway-N	Unknown	6	No	2004	154.11	11.10	19.2	---	2" PVC	6793514.58	347685.141
TWNMW-81	3	Taxiway-N	Unknown	6	No	2004	155.98	10.70	19.6	---	2" PVC	6793553.793	347841.867
TWNMW-82	3	Taxiway-N	Unknown	6	No	2004	154.8	11.35	19.4	---	2" PVC	6793542.859	347781.403
TWNMW-UK1	3	Taxiway-N	Unknown	6	No	2004	156.83	11.40	23.2	---	6" PVC	6793687.705	347903.536
TWNMW-UK2	3	Taxiway-N	Unknown	6	No	2004	157.88	12.80	30.8	---	6" PVC	6793696.301	347969.81
TWNMW-UK3	3	Taxiway-N	Unknown	6	No	2004	156.63	12.20	21.9	---	6" PVC	6793654.52	347945.029
TWNMW-UK4	3	Taxiway-N	Unknown	6	No	2004	155.71	11.00	20.3	---	6" PVC	6793674.304	347836.311
UK-01	3	TBD	Unknown	6	No	2004	178.78	30.11	34.1	---	2" PVC	6792913.649	349724.338
Monitoring Wells													
54WL-02	3	SS57	Active	6	No	2004	150.37	19.04	23.8	---	2" PVC	6792763.966	348108.547
59WL-05	2	ST032	Active	6	No	2004	295.81	71.40	77.2	---	2" PVC	6794282.424	347243.056
59WL-07	2	ST032	Active	5	No	2004	289.18	39.09	44.0	---	2" PVC	6794195.547	346616.71
59WL-08	2	ST032	Active	5	No	2004	296.43	27.13	45.6	---	2" PVC	6794199.093	346857.164
59WL-09	2	ST032	Active	5	No	2004	287.9	30.95	36.0	---	2" PVC	6794313.146	346834.302
59WL-11	2	ST032	Active	5	No	2004	288.65	25.24	34.6	---	2" PVC	6794175.263	346733.087
59WL-12	2	ST032	Active	9	No	2004	302.83	45.49	45.6	---	2" PVC	6794713.078	347547.415

2005 Elmendorf Air Force Base Compliance Program Monitoring Well Survey Data

Well ID	Zone	Site ID	Status	Well Atlas Page	GW Monit. Program Location	Most Recent Survey	Measuring Point Elevation (ft)	Depth to Water from TOC (ft)	Total Depth from TOC (ft)	TOC Stick Up (ft)	Well Material	WGS84-UTM-6N-Meters	
												Northing (UTM-m)	Easting (UTM-m)
59WL-13	2	ST032	Active	9	No	2004	303.48	61.70	62.6	---	2" PVC	6794630.018	347499.05
59WL-14	2	ST032	Active	9	No	2004	300.3	34.28	48.0	---	2" PVC	6794581.03	347655.86
59WL-16	2	ST032	Active	9	No	2004	305.52	>100	>100	---	2" PVC	6794500.664	347533.068
59WL-17	2	ST032	Active	9	No	2004	Biovent well. Unable to access water.				2" PVC	6794409.482	347548.228
59WL-18	2	ST032	Active	6	No	2004	233.57	31.10	36.2	---	2" PVC	6794190.473	347305.975
59WL-21	2	ST032	Active	9	No	2004	291.64	44.62	49.0	---	2" PVC	6794665.797	347512.903
59WL-22	2	ST032	Active	9	No	2004	297.41	22.79	33.5	---	2" PVC	6794545.329	347438.672
59WL-23	2	ST032	Active	9	No	2004	288.26	35.42	44.4	---	2" PVC	6794396.402	346991.483
59WL-26	2	ST032	Active	9	No	2004	275.6	12.76	31.9	---	2" PVC	6794410.353	347131.792
59WL-27	2	ST032	Active	9	No	2004	291.31	32.40	42.5	---	2" PVC	6794485.729	347385.24
59WL-32	2	ST032	Active	9	No	2004	291.38	33.83	38.5	---	2" PVC	6794430.557	347323.19
59WL-35	2	ST032	Active	6	No	2004	199.32	31.09	38.9	---	2" PVC	6794250.735	347784.54
59WL-37	2	ST032	Active	6	No	2004	204.01	13.78	14.1	---	2" PVC	6794256.26	347673.522
59WL-39	2	ST032	Active	5	No	2004	242.13	7.69	38.4	---	2" PVC	6794268.197	346605.02
59WL-40	2	ST032	Active	5	No	2004	244.72	6.42	40.1	---	2" PVC	6794306.208	346722.23
59WL-41	2	ST032	Active	9	No	2004	242.72	9.50	53.0	---	2" PVC	6794455.768	346944.549
59WL-42	2	ST032	Active	9	No	2004	277.96	25.54	48.0	---	2" PVC	6794468.017	347232.562
59WL-43	2	ST032	Active	9	No	2004	257.75	10.60	31.0	---	2" PVC	6794695.11	347358.178
61WL-01	3	SITE 14	Active	6	No	2004	177.69	26.90	33.0	---	2" PVC	6792971.452	349650.539
61WL-02	3	ST410	Active	6	No	2004	179.11	28.80	32.7	---	2" PVC	6792977.992	349768.689
61WL-04	3	---	Active	6	No	2005	148.03	---	---	---	---	6793029.9	349695.281
702WL-06	1	---	Active	16	No	2005	79.48	---	---	---	---	6798480.595	350078.558
79WL-01	2	ST079	Active	10	No	2004	185.27	26.74	34.8	---	2" PVC	6794574.599	348831.781
BH-03	1	TBD	Active	10	No	2004	317.13	16.90	23.0	---	2" PVC	6796093.257	349561.625
BH-04	2	TBD	Active	9	No	2004	302.3	7.20	19.4	---	2" PVC	6794929.326	347800.581
BH-05	2	TBD	Active	9	No	2004	245.35	10.80	20.0	---	2" PVC	6794668.555	347097.048
BH-06	1	TBD	Active	5	No	2004	141.93	Dry	9.5	---	2" PVC	6793179.94	346593.978
ESMW-7A	2	---	Active	6	No	2005	142.07	---	---	---	---	6794101.778	348742.932
ESMW-7B	2	---	Active	6	No	2005	141.99	---	---	---	---	6794100.349	348741.824

2005 Elmendorf Air Force Base Compliance Program Monitoring Well Survey Data

Well ID	Zone	Site ID	Status	Well Atlas Page	GW Monit. Program Location	Most Recent Survey	Measuring Point Elevation (ft)	Depth to Water from TOC (ft)	Total Depth from TOC (ft)	TOC Stick Up (ft)	Well Material	WGS84-UTM-6N-Meters	
												Northing (UTM-m)	Easting (UTM-m)
GW-7A	3	SS49	Active	6	No	2004	177.37	29.09	36.4	---	2" PVC	6792963.575	349638.026
HS-01	1	---	Active	9	No	2005	92.041	---	---	---	---	6795865.332	346852.487
HS-02A	1	---	Active	9	No	2005	99.075	---	---	---	---	6795957.894	346844.547
HS-02B	1	---	Active	9	No	2005	93.855	---	---	---	---	6795961.517	346847.561
HS-03	1	---	Active	9	No	pre-2004		---	---	---	---	6795955.878	346756.214
HS-04	1	---	Active	9	No	2005	99.882	---	---	---	---	6795996.656	346796.632
HS-05	1	---	Active	9	No	2005	79.708	---	---	---	---	6795986.781	346695.889
IS-2	2	SD025	Active	10	No	2004	186.78	Unable to open. Shot top of well head.			2" PVC	6794953.257	348980.875
LF05GW-1A	2	LF05	Active	7	No	2004	217.1	43.50	52.4	---	2" PVC	6793545.457	351716.1
LF05GW-2A	2	TBD	Active	7	No	2004	220.61	43.86	52.3	---	2" PVC	6793202.187	351975.189
LF05GW-2B	2	LF07	Active	7	No	2004	199.81	34.14	44.1	---	2" PVC	6792816.37	350952.515
LF05MW-02	2	LF07	Active	7	No	2004	202.24	36.61	>100	---	4" PVC	6792840.085	350939.216
LF05MW-03	2	LF07	Active	7	No	2004	204.8	39.06	50.5	---	4" PVC	6792923.098	350936.094
LF05MW-04	3	ST34	Active	7	No	2004	198.04	33.90	45.0	---	4" PVC	6792904.171	350826.455
LF05MW-07	3	LF05	Active	7	No	2004	205.52	39.05	48.0	---	4" PVC	6793518.786	350898.671
LF05MW-10	2	LF13	Active	7	No	2004	208.14	38.92	48.9	---	4" PVC	6793270.819	351222.09
LF05MW-13	2	LF07	Active	7	No	2005	155.807	---	---	---	---	6792757.521	351400.568
LF05MW-14	3	LF07	Active	7	No	2004	202.14	37.62	45.5	---	4" PVC	6793042.928	350868.274
LF05MW-15	2	LF05	Active	7	No	2005	188.898	42.00	53.0	---	2" PVC	6793013.633	351749.759
LF05MW-16	2	LF05	Active	7	No	2005	176.969	35.50	45.0	---	2" PVC	6793065.625	351239.1
LF05MW-17	2	LF05	Active	7	No	2005	179.82	38.50	49.5	---	2" PVC	6793424.405	351249.304
LF05MW-18	2	LF05	Active	7	No	2005	171.243	---	---	---	---	6793051.995	351084.645
LF05W-05	2	LF07	Active	7	No	2004	205.62	33.95	48.0	---	2" PVC	6792808.562	351369.593
LF05W-06	2	LF07	Active	7	No	2004	199.74	33.98	56.5	---	2" PVC	6792718.871	350970.624
LS05-10	2	LF05	Active	7	No	2004	218.02	NC	NC	---	0.5" PVC	6793545.32	351709.984
LS05-11	2	LF05	Active	7	No	2004	221.69	NC	NC	---	0.5" PVC	6793443.174	351794.583
LS05-13	2	TBD	Active	7	No	2004	221.2	NC	NC	---	0.5" PVC	6793204.714	351978.905
MWSS80-01	3	SS80	Active	6	No	2005	119.508	14.06	25.5	---	2" PVC	6792988.272	347657.504

2005 Elmendorf Air Force Base Compliance Program Monitoring Well Survey Data

Well ID	Zone	Site ID	Status	Well Atlas Page	GW Monit. Program Location	Most Recent Survey	Measuring Point Elevation (ft)	Depth to Water from TOC (ft)	Total Depth from TOC (ft)	TOC Stick Up (ft)	Well Material	WGS84-UTM-6N-Meters	
												Northing (UTM-m)	Easting (UTM-m)
SP2/6-04	3	TBD	Active	2	No	2004	141.9	37.02	53.0	---	2" PVC	6792063.594	348254.286
SP7/10-01	2	ST510	Active	6	No	2004	167.98	14.64	33.7	---	2" PVC	6794104.357	348451.829
SP7/10-02	2	SS043	Active	6	No	2004	169.66	16.50	25.2	---	2" PVC	6794118.133	348545.086
T40001	2	ST032	Active	5	No	2004	242.52	27.59	>100	---	2" PVC	6794013.409	346492.316
T40304	2	ST032	Active	6	No	2004	223.99	36.11	69.0	---	2" PVC	6794177.053	347308.359
T40905	2	ST032	Active	5	No	2004	286.78	30.48	39.2	---	2" PVC	6794109.886	346593.637
T41206	2	---	Active	5	No	2005	258.865	---	---	---	---	6794227.874	346837.089
T41709	2	---	Active	9	No	2005	246.083	---	---	---	---	6794418.206	347209.655
T42202	2	ST032	Active	9	No	2004	289.28	65.00	>100	---	2" PVC	6794380.678	347326.606
Water Supply Wells													
BW-40	3	---	Active	6	No	2005	144.87	---	---	---	---	6793223.154	349161.422
BW-50	3	---	Active	3	No	2005	172.03	---	---	---	---	6791867.34	351181.155
BW-52	3	---	Active	2	No	pre-2004	---	---	---	---	---	6792094.229	348697.213

Notes:
ft = feet
ID = Identity
m = meters
NC = Not Collected
PVC = Polyvinyl Chloride
TOC = Top of well casing
UTM = Universal Transverse Mercator
WGS84 = World Geodetic System 1984

Attachment C-3 – Abandoned Well Survey Data

This attachment contains survey data for abandoned wells from both the Base Compliance and Restoration Programs.

Appendix C
2005 Elmendorf Air Force Base, Survey Data for Abandoned Monitoring Wells

Well ID	Zone	Date Abandoned	Well Atlas Page	Measuring Point Elevation (ft)	Depth to Water from TOC (ft)	Total Depth from TOC (ft)	TOC Stick Up (ft)	Well Material	WGS84-UTM-6N-Meters	
									Northing (UTM-m)	Easting (UTM-m)
Compliance Program Wells										
59WL-15	2	01-Oct-05	9	302.56	Dry	58.1	---	2" PVC	6794686.614	347651.984
59WL-33	2	01-Oct-05	9	322.94	Damaged beyond repair.		---	2" PVC	6794558.431	347537.581
61WL-05	3	04-Oct-05	6	181.17	31.80	42.1	---	2" PVC	6793172.521	349818.208
61WL-06	3	04-Oct-05	6	180.58	25.19	28.9	---	2" PVC	6793241.648	349876.64
63WL-01	3	04-Oct-05	6	---	28.40	32.6	---	2" PVC	6793451.494	349909.6
Restoration Program Wells										
48WL-01	3	01-Oct-05	2	142.62	22.30	28.7	---	2" PVC	6792513.947	347216.296
48WL-02	3	01-Oct-05	2	146.1	27.08	30.2	---	2" PVC	6792446.658	347184.242
48WL-03	3	01-Oct-05	2	146.63	27.75	34.4	---	2" PVC	6792443.131	347232.684
53WL-03	3	01-Oct-05	3	164.34	8.15	14.4	---	2" PVC	6791867.411	350535.61
53WL-04	3	01-Oct-05	3	163.56	5.91	13.7	---	2" PVC	6791898.297	350612.1
59WL-19	2	01-Jan-04	6	249.28	19.28	22.6	---	2" PVC	6794269.453	347366.503
60WL-04	3	01-Jan-03	6	---	Obstructed.		---	2" PVC	6793626.301	349809.22
62WL-04	3	01-Oct-05	6	181.07	26.74	32.7	---	2" PVC	6793724.544	349280.525
BV-1A	2	01-Jan-04	6	247.71	Biovent well. Unable to access water.			---	6794266.639	347381.194
BV-UK	2	01-Jan-04	6	248.27	Biovent well. Unable to access water.			---	6794265.158	347378.934
BV-UK1	2	01-Jan-04	6	248.63	Biovent well. Unable to access water.			---	6794267.742	347370.471
K301	1	04-Oct-05	9	---	46.32	145.5	---	2" PVC	6794522.029	345689.654
K302	1	01-Oct-05	5	233.44	70.57	90.2	---	2" PVC	6794075.876	345676.866
LF59-MW06	3	---	---	---	---	27	---	---	---	---
OU3MW-04	3	01-Oct-05	1	130.19	38.87	43.5	---	2" PVC	6791776.861	346341.658
OU3MW-18	1	01-Oct-05	5	150.46	12.45	22.0	---	2" PVC	6793296.018	346460.86
OU4E-02	2	01-Oct-05	11	233.04	67.36	71.3	---	2" PVC	6794899.301	351376.42
OU4W-17	2	04-Oct-05	10	202.83	42.66	53.2	---	2" PVC	6795659.367	349668.279
OU4W-8	2	---		---	---	41.5	---	---	---	---
OU5MW-04	3	01-Oct-05	2	158.24	32.99	44.8	---	2" PVC	6792482.783	348350.097
OU5MW-16	3	01-Jan-02	2	76.58	Damaged beyond repair.		---	2" PVC	6791458.024	347211.504
OU5MW-35	3	21-Jul-04	---	---	---	---	---	---	6792195.683	347973.387
OU6MW-53	3	01-Oct-05	3	---	4.83	14.8	---	2" PVC	6791855.092	350483.288

2005 Elmendorf Air Force Base, Survey Data for Abandoned Monitoring Wells

Well ID	Zone	Date Abandoned	Well Atlas Page	Measuring Point Elevation (ft)	Depth to Water from TOC (ft)	Total Depth from TOC (ft)	TOC Stick Up (ft)	Well Material	WGS84-UTM-6N-Meters	
									Northing (UTM-m)	Easting (UTM-m)
OU6MW-55	3	01-Oct-05	3	152.4	8.63	15.1	---	2" PVC	6791911.914	350400.486
OU6MW-57	3	01-Oct-05	3	158.63	14.32	27.8	---	2" PVC	6792022.492	350066.224
ST41-10	1	01-May-03	5	---	---	15	---	---	---	---
ST41-26	1	01-Oct-05	5	214.05	15.30	19.7	---	2" PVC	6793856.701	346472.949
ST41ES-4A	1	01-Oct-05	5	212.6	10.80	11.5	---	2" PVC	6793879.675	346341.931
ST41ES-4B	1	01-Oct-05	5	212.67	11.45	20.7	---	2" PVC	6793879.202	346343.937
ST41ES-7A	1	01-Oct-05	5	198.13	9.00	12.7	---	2" PVC	6793800.563	346291.346
ST41ES-7B	1	01-Oct-05	5	198.4	9.90	22.7	---	2" PVC	6793801.909	346289.71
ST41MW-37A	1	01-Oct-05	5	209.78	16.20	26.5	---	4" PVC	6793821.867	346409.545
ST41MW-37B	1	01-Oct-05	5	209.32	18.50	65.4	---	4" PVC	6793820.451	346415.137
Unknown Program Ownership										
GW-3A		01-Jul-04		---	TOC					

Notes:

ft = feet

ID = Identity

m = meters

PVC = Polyvinyl Chloride

TOC = Top of well casing

UTM = Universal Transverse Mercator

WGS84 = World Geodetic System 1984

APPENDIX D – WELL ABANDONMENT PRIORITY LIST

This appendix contains a list of all wells recommended for abandonment through the year 2009.

Elmendorf Air Force Base Monitoring Well Abandonment Schedule

Well ID	Zone	Site	Priority	Well Atlas Page	Measuring Point Elevation (m)	Total Depth from TOC (ft)	TOC Stick Up (ft)	Well Material	WGS84-UTM-6N-Meters	
									Northing	Easting
Wells Abandoned in 2005										
K301	1	LF004	2	9	NC	145.5	2.4	2" PVC	6794533.30	345684.19
K302	1	LF004	3	5	71.15	90.2	2.0	2" PVC	6794087.15	345671.41
OU3MW-18	1	SD052	2	5	45.86	22.0	2.6	2" PVC	6793307.29	346455.40
ST41-26	1	ST041	2	5	65.24	19.7	2.8	2" PVC	6793867.97	346467.49
ST41ES-4A	1	ST041	2	5	64.80	11.5	2.5	2" PVC	6793890.95	346336.47
ST41ES-4B	1	ST041	2	5	64.82	20.7	2.8	2" PVC	6793890.47	346338.48
ST41ES-7A	1	ST041	2	5	60.39	12.7	2.8	2" PVC	6793811.83	346285.89
ST41ES-7B	1	ST041	2	5	60.47	22.7	3.4	2" PVC	6793813.18	346284.25
ST41MW-37A	1	ST041	2	5	63.94	26.5	2.2	4" PVC	6793833.14	346404.09
ST41MW-37B	1	ST041	2	5	63.80	65.4	2.3	4" PVC	6793831.72	346409.68
59WL-15	2	-	1	9	92.22	59.0	NC	2" PVC	6794697.88	347646.52
59WL-33	2	-	1	9	98.43	NC	NC	2" PVC	6794569.70	347532.12
OU4E-02	2	-	2	11	71.03	71.3	2.4	2" PVC	6794910.57	351370.96
OU4W-17	2	-	2	10	61.82	53.2	2.6	2" PVC	6795670.64	349662.82
SD25 BV Well	2	-	1	6	---	23.0	NC	0.5" PVC	---	---
ST68 BV Well	2	-	1	6	---	35.0	NC	2" PVC	---	---
48WL-01	3	ST037	2	2	43.47	28.7	-0.4	2" PVC	6792525.22	347210.84
48WL-02	3	ST037	2	2	44.53	30.2	3.3	2" PVC	6792457.93	347178.78
48WL-03	3	ST037	2	2	44.69	34.4	2.8	2" PVC	6792454.40	347227.22
53WL-03	3	LF002	2	3	50.09	14.4	2.5	2" PVC	6791878.68	350530.15
53WL-04	3	LF002	2	3	49.85	13.7	2.6	2" PVC	6791909.57	350606.64
61WL-05	3	-	1	6	55.22	32.0	NC	2" PVC	6793183.79	349812.75
61WL-06	3	-	1	6	55.04	26.0	NC	2" PVC	6793252.92	349871.18
62WL-04	3	SP-15	2	6	55.19	32.7	-0.1	2" PVC	6793735.81	349275.07
63WL-01	3	-	1	6	NC	29.0	NC	2" PVC	6793462.76	349904.14
OU3MW-04	3	SD040	1	1	39.68	43.5	2.5	2" PVC	6791788.13	346336.20
OU5MW-04	3	-	2	2	48.23	44.8	1.9	2" PVC	6792494.05	348344.64
OU5MW-16	3	ST037	1	2	23.34	NC	NC	2" PVC	6791469.29	347206.04
OU6MW-53	3	LF002	2	3	NC	14.8	2.5	2" PVC	6791866.36	350477.83
OU6MW-55	3	LF002	2	3	46.45	15.1	3.6	2" PVC	6791923.18	350395.03
OU6MW-57	3	LF002	2	3	48.35	27.8	3.1	2" PVC	6792033.76	350060.76
To be Abandoned in 2006										
14MW-115	1	WP014	3	5	68.19	31.6	3.0	2" PVC	6794027.51	345947.54
14MW-123	1	WP014	3	5	NC	29.4	2.6	2" PVC	6794100.83	345882.58

Elmendorf Air Force Base Monitoring Well Abandonment Schedule

Well ID	Zone	Site	Priority	Well Atlas Page	Measuring Point Elevation (m)	Total Depth from TOC (ft)	TOC Stick Up (ft)	Well Material	WGS84-UTM-6N-Meters	
									Northing	Easting
14MW-138	1	WP014	3	5	NC	31.6	2.7	2" PVC	6794008.71	345784.84
K303	1	LF004	2	5	44.14	36.4	1.9	2" PVC	6793728.20	345617.07
59WL-29	2	ST032	2	9	NC	NC	NC	2" PVC	6794435.49	347661.53
OU4W-3	2	ST079	2	10	56.15	36.6	-0.4	2" PVC	6794562.30	348970.60
OU4W-6	2	-	2	10	NC	NC	NC	NC	6794970.73	349307.72
1836PZ-01	3	ST037	3	6	54.08	NC	-0.5	0.5" PVC	6792732.00	349664.17
403PZ-01	3	-	3	2	45.89	NC	-0.3	0.5" PVC	6792099.50	347916.41
403PZ-02	3	-	3	2	45.88	NC	-0.2	0.5" PVC	6792109.10	347905.12
403PZ-03	3	-	3	2	44.99	NC	-0.3	0.5" PVC	6792092.02	347940.31
403PZ-04	3	-	3	2	44.95	NC	-0.3	0.5" PVC	6792097.26	347930.84
403WL-02	3	ST037	3	2	44.99	31.7	-0.4	2" PVC	6792120.20	347914.80
403WL-03	3	ST037	3	2	44.96	32.8	-0.6	2" PVC	6792106.46	347936.55
403WL-04	3	ST037	3	2	44.92	32.6	-0.6	2" PVC	6792113.82	347924.26
53WL-02	3	LF002	2	3	51.20	15.3	3.2	2" PVC	6791892.71	350794.42
60WL-04	3	ST048	1	6	NC	NC	NC	2" PVC	6793637.57	349803.76
OU5MW-15	3	ST037	2	2	25.20	14.5	1.2	2" PVC	6791551.33	347389.95
To be Abandoned in 2007										
46WL-03	1	ST069	3	5	55.98	15.7	3.3	2" PVC	6793672.41	346304.68
46WL-04	1	ST069	3	5	54.77	15.6	2.8	2" PVC	6793658.58	346261.81
56WL-02	1	ST036	3	13	NC	39.8	-0.1	2" PVC	6797602.62	348602.67
424PZ-01	2	-	3	10	57.11	NC	-0.2	0.5" PVC	6794869.65	348871.79
43WL-02	2	ST507	3	10	54.17	29.2	-0.1	2" PVC	6794561.71	348580.60
43WL-07	2	ST507	3	10	53.50	22.0	0.0	2" PVC	6794508.42	348427.03
43WL-09	2	ST507	3	10	57.19	21.1	-0.3	2" PVC	6794709.43	348449.11
To be Abandoned in 2008										
OU6MW-05	1	WP014	3	5	58.05	77.8	1.8	2" PVC	6793929.84	345797.16
OU6MW-06	1	WP014	3	5	64.03	25.2	3.0	2" PVC	6793961.54	345884.03
OU6MW-12	1	WP014	3	5	58.19	28.0	2.2	2" PVC	6793909.35	345761.52
OU6MW-13	1	WP014	3	5	55.20	68.3	2.9	2" PVC	6793868.69	345707.48
OU6MW-60	1	WP014	3	5	64.30	25.0	3.2	2" PVC	6793985.63	345914.21
59WL-01	2	ST032	3	5	76.83	46.6	1.0	2" PVC	6794191.37	347078.30
59WL-02	2	ST032	3	6	79.08	NC	NC	2" PVC	6794189.61	347186.27
FP-52	2	FT023	3	10	62.39	52.0	2.7	4" Steel	6795424.51	349623.80
GW-5A	2	FT023	3	10	62.44	53.8	1.8	2" PVC	6795290.22	349595.20

Elmendorf Air Force Base Monitoring Well Abandonment Schedule

Well ID	Zone	Site	Priority	Well Atlas Page	Measuring Point Elevation (m)	Total Depth from TOC (ft)	TOC Stick Up (ft)	Well Material	WGS84-UTM-6N-Meters	
									Northing	Easting
LF59MW-01	2	LF059	3	7	52.09	16.9	0.8	4" PVC	6792574.81	350779.38
LF59MW-02	2	LF059	3	7	51.82	26.5	1.6	4" PVC	6792655.26	350323.72
OU4E-01	2	SS010	3	11	67.11	65.9	1.9	2" PVC	6794474.54	351084.48
OU4E-03	2	-	3	10	63.81	55.0	2.5	2" PVC	6794839.39	350580.44
OU4W-10	2	SD024	3	10	56.64	38.7	2.5	2" PVC	6794377.43	348997.53
60WL-02	3	ST048	3	6	56.36	30.9	0.0	2" PVC	6793652.92	349881.26
60WL-03	3	ST048	3	6	NC	32.5	-0.4	2" PVC	6793704.78	349899.34
62WL-07	3	ST068	3	6	54.60	35.2	-0.2	2" PVC	6793615.15	349274.44
64WL-03	3	ST068	3	6	56.32	32.7	-0.1	2" PVC	6793820.18	349576.93
OU3MW-01	3	SD031	3	6	46.86	34.4	3.0	2" PVC	6792797.88	347888.47
OU3MW-06	3	ST037	3	6	44.48	24.6	2.6	2" PVC	6792890.65	347496.18
OU3MW-09	3	SD052	3	5	43.61	22.9	-0.6	2" PVC	6793020.68	347123.85
OU3MW-14	3	ST037	3	6	44.82	15.8	-0.3	2" PVC	6793169.28	347369.60
OU3MW-16	3	ST037	3	1	41.46	41.9	-0.1	2" PVC	6792060.40	346910.42
OU5MW-03	3	ST037	3	2	45.34	46.6	1.4	2" PVC	6792208.98	347904.78
To be Abandoned in 2009										
41755PZ-01	1	DP098	3	9	62.07	NC	-0.3	0.5" PVC	6795616.03	347446.52
41755PZ-02	1	DP098	3	9	NC	NC	-0.3	0.5" PVC	6795630.94	347441.66
41755PZ-03	1	DP098	3	9	NC	NC	-0.2	0.5" PVC	6795644.73	347443.10
41755WL-03	1	DP098	3	9	61.04	29.5	-0.3	2" PVC	6795657.63	347437.67
41755WL-04	1	DP098	3	9	60.37	33.0	2.9	2" PVC	6795699.96	347425.38
41755WL-06	1	DP098	3	9	55.39	18.1	3.4	2" PVC	6795666.41	347327.69
41755WL-07	1	DP098	3	9	53.03	17.8	3.0	2" PVC	6795708.85	347327.53
41755WL-08	1	DP098	3	9	NC	13.3	3.9	2" PVC	6795764.78	347413.42
41755WL-09	1	DP098	3	9	51.82	16.6	3.6	2" PVC	6795733.88	347366.84
41755WL-10	1	DP098	3	9	NC	12.7	-0.6	2" PVC	6795626.91	347447.70
41755WL-11	1	DP098	3	9	62.17	15.4	-0.4	2" PVC	6795618.84	347451.92
41755WL-13	1	DP098	3	9	60.58	38.0	3.2	2" PVC	6795728.89	347537.39
41755WL-14	1	DP098	3	9	NC	19.0	2.9	2" PVC	6795780.33	347499.50
41755WL-15	1	DP098	3	9	50.81	23.1	2.9	2" PVC	6795797.35	347434.96
41755WL-19	1	DP098	3	9	59.86	33.2	3.3	2" PVC	6795612.16	347350.61
41755WL-20	1	DP098	3	9	64.01	83.1	-0.4	2" PVC	6795534.55	347505.20
41755WL-21	1	DP098	3	9	55.48	56.5	2.7	2" PVC	6795660.11	347336.43
41755WL-22A	1	DP098	3	9	60.44	77.9	2.7	2" PVC	6795705.45	347512.72
41755WL-23	1	DP098	3	9	50.47	78.8	1.6	2" PVC	6795770.44	347382.47

Elmendorf Air Force Base Monitoring Well Abandonment Schedule

Well ID	Zone	Site	Priority	Well Atlas Page	Measuring Point Elevation (m)	Total Depth from TOC (ft)	TOC Stick Up (ft)	Well Material	WGS84-UTM-6N-Meters	
									Northing	Easting
OU6MW-61	1	LF004	3	5	49.19	39.3	3.2	2" PVC	6793820.86	345663.27
OU6MW-67	1	LF004	3	5	67.36	87.6	3.7	2" PVC	6794034.83	345679.53
OU6MW-75	1	LF004	3	5	NC	80.6	3.4	2" PVC	6794050.16	345737.97
OU6MW-77	1	LF004	3	5	59.75	38.4	3.4	2" PVC	6793966.24	345721.10
OU6MW-78	1	LF004	3	5	62.38	102.4	3.0	2" PVC	6793986.19	345691.40
OU6MW-92	1	LF004	3	5	60.83	39.6	3.1	2" PVC	6793965.34	345700.57
OU6MW-93	1	LF004	3	5	64.57	65.2	2.8	2" PVC	6794011.18	345691.93
OU6MW-94	1	LF004	3	5	56.93	27.6	2.4	2" PVC	6793928.35	345702.82
OU6MW-70	2	SD015	3	14	84.31	131.7	3.2	2" PVC	6796517.11	351081.23
OU6MW-71A	2	SD015	3	14	83.67	128.2	2.3	2" PVC	6796615.83	351004.18
W-15	2	FT023	3	10	61.97	58.6	1.2	2" PVC	6795343.27	349583.98
W-3	2	SS043	3	10	53.52	34.7	1.0	2" PVC	6794404.12	348390.41
ST20MW-07	3	ST020	3	6	54.89	63.8	-0.1	4" PVC	6793402.53	349676.98
ST20MW-10	3	ST020	3	6	54.04	38.8	-0.5	4" PVC	6793400.37	349525.34
ST20MW-11	3	ST020	3	6	53.75	33.3	-0.4	4" PVC	6793293.88	349616.31
Do Not Abandon - Program Wells										
14MW-120	1	WP014	3	5	66.76	31.2	2.7	2" PVC	6794017.32	345897.24
14MW-121	1	WP014	3	5	59.82	22.5	3.0	2" PVC	6793947.60	345818.07
41755WL-01	1	DP098	3	9	62.21	16.2	-0.3	2" PVC	6795616.86	347452.78
41755WL-02	1	DP098	3	9	NC	18.6	-0.1	2" PVC	6795655.08	347422.36
41755WL-05	1	DP098	3	9	59.98	26.5	3.2	2" PVC	6795683.54	347387.76
41755WL-12	1	DP098	3	9	50.77	17.9	3.2	2" PVC	6795806.14	347279.37
41755WL-16	1	DP098	3	9	50.52	27.7	3.0	2" PVC	6795805.12	347383.96
41755WL-17	1	DP098	3	9	51.02	24.6	3.0	2" PVC	6795766.72	347340.56
45WL-02	1	ST061	3	12	47.19	23.0	3.0	2" PVC	6796312.60	348083.60
46WL-01	1	ST069	3	5	55.23	14.9	2.5	2" PVC	6793667.76	346280.57
46WL-02	1	ST069	3	5	53.67	12.4	-0.4	2" PVC	6793649.27	346271.16
56WL-01	1	ST036	3	13	59.33	76.4	2.3	2" PVC	6797614.33	348573.38
56WL-04	1	ST036	3	13	57.82	71.1	-0.5	2" PVC	6797627.62	348566.85
56WL-05	1	ST036	3	13	58.69	72.9	2.6	2" PVC	6797634.19	348579.00
56WL-06	1	ST036	3	13	55.49	64.1	2.8	2" PVC	6797668.79	348570.25
56WL-08	1	ST036	3	13	52.23	57.2	2.3	2" PVC	6797620.98	348529.50
56WL-09	1	ST036	3	13	55.44	67.6	2.7	2" PVC	6797653.73	348596.59
AP3567	1	ST061	3	12	50.57	22.8	-0.4	2" PVC	6796265.51	348096.58
AP3606	1	ST061	3	12	51.09	18.6	0.0	2" PVC	6796227.09	348130.20

Elmendorf Air Force Base Monitoring Well Abandonment Schedule

Well ID	Zone	Site	Priority	Well Atlas Page	Measuring Point Elevation (m)	Total Depth from TOC (ft)	TOC Stick Up (ft)	Well Material	WGS84-UTM-6N-Meters	
									Northing	Easting
OU6MW-46	1	PL081	3	5	59.88	42.4	2.8	2" PVC	6793857.25	345898.77
OU6MW-63	1	PL081	3	5	44.31	51.8	2.8	2" PVC	6793713.71	345611.06
OU6MW-91	1	WP014	3	5	59.17	32.9	2.5	2" PVC	6793932.58	345719.01
ST41-07	1	ST041	3	5	81.52	54.3	3.0	2" PVC	6794027.79	346383.95
ST41-10R	1	ST041	3	5	72.61	17.2	3.3	2" PVC	6794234.49	346354.33
ST41-25	1	ST041	3	5	66.90	13.3	2.9	2" PVC	6793940.34	346367.96
43WL-08	2	ST507	3	10	54.53	23.7	-0.2	2" PVC	6794606.74	348480.86
43WL-11	2	ST507	3	10	55.48	21.0	-0.2	2" PVC	6794679.90	348479.15
53WL-05	2	LF002	3	3	50.72	14.7	3.0	2" PVC	6791905.10	350698.66
59WL-30	2	ST032	3	6	NC	NC	NC	2" PVC	6794295.08	347467.61
59WL-31	2	ST032	3	5	64.78	28.3	-0.3	2" PVC	6794048.75	347071.81
59WL-36	2	ST032	3	6	61.35	40.1	-0.2	2" PVC	6794196.06	347629.67
65WL-04R	2	ST074	3	3	60.91	37.6	-0.3	2" PVC	6791904.74	351102.46
FP-56	2	FT023	3	10	61.99	50.4	1.5	4" Steel	6795412.53	349592.35
IS6-01	2	SD029	1	10	NC	NC	NC	2" PVC	6794880.78	350899.22
OU4MW-04	2	SD024	3	10	NC	33.3	-0.3	2" PVC	6794366.36	348821.11
OU4MW-08R	2	SD025	3	10	58.50	43.3	2.2	2" PVC	6794914.39	348833.52
OU4W-11	2	FT023	3	10	63.48	57.9	2.5	2" PVC	6795345.50	349715.53
OU6MW-17	2	SD015	3	14	83.04	49.7	-1.7	2" PVC	6796529.29	351009.64
OU6MW-18	2	SD015	3	14	86.25	50.3	2.7	2" PVC	6796545.54	351054.62
OU6MW-90	2	SD015	3	14	81.17	50.6	-1.7	2" PVC	6796505.41	351026.98
SP7/10-04	2	SS043	3	10	53.07	28.6	-0.1	2" PVC	6794372.05	348356.46
W-4	2	ST422	3	6	50.72	29.3	-0.5	2" PVC	6794185.16	348105.06
1836WL-01	3	ST037	3	6	54.01	39.6	-0.5	2" PVC	6792723.24	349663.66
401WL-03	3	ST037	3	2	43.06	43.9	3.5	2" PVC	6792002.80	348167.57
401WL-04	3	ST037	3	2	43.06	43.0	3.5	2" PVC	6792037.98	348205.18
403WL-01	3	ST037	3	2	45.88	46.2	3.0	2" PVC	6792055.00	347922.78
49WL-01	3	ST037	3	6	44.44	25.4	2.4	2" PVC	6792810.52	347337.86
61WL-07	3	ST037	3	6	54.24	34.6	-0.2	2" PVC	6792916.77	349672.83
62WL-02	3	SP-15	3	6	55.77	32.8	-0.1	2" PVC	6793723.52	349489.57
62WL-05	3	ST068	3	6	55.16	31.4	-0.2	2" PVC	6793624.78	349355.09
62WL-06	3	ST068	3	6	53.25	34.5	-0.2	2" PVC	6793410.30	349141.18
64WL-01	3	ST068	3	6	55.49	38.0	2.8	2" PVC	6793779.30	349539.74
76WL-01	3	ST037	3	2	49.71	51.9	2.9	2" PVC	6792355.92	348393.00
GW-4A	3	ST037	3	2	42.02	12.3	2.7	2" PVC	6792524.51	349453.52

Elmendorf Air Force Base Monitoring Well Abandonment Schedule

Well ID	Zone	Site	Priority	Well Atlas Page	Measuring Point Elevation (m)	Total Depth from TOC (ft)	TOC Stick Up (ft)	Well Material	WGS84-UTM-6N-Meters	
									Northing	Easting
LF59MW-03	3	LF059	3	7	56.55	39.4	2.1	4" PVC	6792704.71	350410.88
LF59MW-06R	3	LF059	3	7	49.77	28.6	2.6	2" PVC	6792587.05	350303.55
NS3-02	3	ST037	3	2	36.85	27.2	2.6	2" PVC	6792281.14	349076.68
OU3MW-02	3	ST037	3	2	43.48	39.0	-0.2	2" PVC	6792275.67	347625.37
OU3MW-05	3	ST037	3	6	34.69	17.8	-0.3	2" PVC	6792846.31	347496.12
OU3MW-13	3	ST037	3	6	48.11	22.4	3.0	2" PVC	6793304.99	347714.42
OU3MW-25	3	ST037	3	6	47.22	24.8	0.3	2" PVC	6793179.25	348016.34
OU5MW-01	3	ST037	3	1	NC	46.3	2.5	2" PVC	6791717.15	347075.52
OU5MW-02	3	ST037	3	2	43.36	46.5	1.5	2" PVC	6792013.96	347537.83
OU5MW-05	3	ST037	3	6	47.64	37.5	-0.2	2" PVC	6792709.18	348783.69
OU5MW-06	3	ST037	3	6	52.82	48.4	-0.2	2" PVC	6792754.30	349400.17
OU5MW-07	3	ST037	3	6	54.40	49.2	-0.3	2" PVC	6792806.82	349728.68
OU5MW-08	3	ST037	3	6	47.49	21.8	1.7	2" PVC	6792600.00	349670.09
OU5MW-09	3	ST037	3	2	35.48	10.2	1.7	2" PVC	6792262.71	348800.68
OU5MW-10	3	ST037	3	2	32.30	5.2	-0.1	2" PVC	6792090.20	348594.60
OU5MW-11	3	ST037	3	2	NC	51.7	1.7	2" PVC	6792236.04	348242.44
OU5MW-12	3	ST037	3	2	29.68	11.5	1.7	2" PVC	6791828.34	348102.32
OU5MW-13	3	ST037	3	2	28.34	9.7	2.2	2" PVC	6791779.14	347934.55
OU5MW-14	3	ST037	3	2	26.36	14.6	1.7	2" PVC	6791638.88	347672.20
OU5MW-31	3	ST037	3	2	41.75	9.6	1.4	2" PVC	6792410.18	349310.04
OU5MW-33	3	ST037	3	3	47.78	24.0	2.1	2" PVC	6792583.81	350023.31
OU5MW-34	3	ST037	3	2	43.08	58.0	2.6	2" PVC	6792262.72	347182.46
OU5MW-36	3	ST037	3	2	45.89	62.5	3.1	2" PVC	6792044.45	347999.83
OU5MW-37	3	ST037	3	1	41.28	42.8	-0.2	2" PVC	6791916.13	347026.11
OU5MW-38	3	ST037	3	1	42.17	59.6	-0.3	2" PVC	6792165.52	347145.78
OU5MW-39	3	ST037	3	6	51.74	22.8	-0.2	2" PVC	6793351.51	347612.01
OU5MW-40	3	ST037	3	2	42.62	43.6	1.9	2" PVC	6792078.27	347248.11
OU5MW-41	3	ST037	3	2	45.89	42.1	-0.2	2" PVC	6792314.25	347993.80
OU5MW-42	3	ST037	3	2	45.56	42.6	-0.2	2" PVC	6792288.54	347952.31
OU5MW-43	3	ST037	3	1	40.90	40.4	-0.2	2" PVC	6791854.66	347072.49
OU5MW-44	3	ST037	3	2	42.13	41.8	-0.2	2" PVC	6791970.55	347451.53
OU5MW-45	3	ST037	3	2	41.17	39.4	-0.3	2" PVC	6791684.78	347360.44
OU6MW-49R	3	LF002	3	3	51.56	18.9	2.5	2" PVC	6791881.23	350818.61
SP1-02	3	ST037	3	2	41.68	50.0	2.9	2" PVC	6791644.49	347421.73
SP2/6-05	3	ST037	3	2	NC	49.1	2.3	2" PVC	6791959.07	348109.20

Elmendorf Air Force Base Monitoring Well Abandonment Schedule

Well ID	Zone	Site	Priority	Well Atlas Page	Measuring Point Elevation (m)	Total Depth from TOC (ft)	TOC Stick Up (ft)	Well Material	WGS84-UTM-6N-Meters	
									Northing	Easting
SP4/11-03	3	ST037	3	6	51.61	54.2	-0.3	2" PVC	6792615.28	349293.71
ST20-03	3	ST020	3	6	45.99	Could not access.			6793472.77	349658.84
Do Not Abandon - Biovent Wells										
BV36-1B	1	ST036	3	13	58.12	NC	NC	NC	6797623.37	348569.01
BV36-2A	1	ST036	3	13	57.84	NC	NC	NC	6797621.19	348554.66
BV36-UK	1	ST036	3	13	57.71	NC	NC	NC	6797634.60	348576.39
BV66-1C	1	ST036	3	13	58.53	NC	NC	NC	6797618.34	348575.12
ST61BV-UK01	1	ST061	3	12	51.10	NC	NC	NC	6796259.59	348106.36
ST61BV-UK02	1	ST061	3	12	50.87	NC	NC	NC	6796264.28	348101.31
424WL-01	2	ST064	3	10	56.96	NC	NC	2" PVC	6794874.60	348871.33
43-1A	2	SS043	3	10	52.70	NC	NC	0.5" PVC	6794359.39	348333.43
43-1B	2	SS043	3	10	52.82	NC	NC	0.5" PVC	6794356.26	348326.58
43-1C	2	SS043	3	10	52.84	NC	NC	0.5" PVC	6794387.13	348335.39
43-3A	2	SS043	3	10	52.82	NC	NC	0.5" PVC	6794386.12	348364.61
43-3B	2	SS043	3	10	52.73	NC	NC	0.5" PVC	6794389.84	348358.04
59BH-200	2	ST032	3	6	75.15	NC	NC	1" PVC	6794182.63	347174.55
59BH-201	2	ST032	3	6	75.90	NC	NC	1" PVC	6794183.17	347192.74
59BH-202	2	ST032	3	5	87.16	NC	NC	1" PVC	6794212.92	346612.30
59BH-34	2	ST032	3	5	88.23	NC	NC	2" PVC	6794183.07	346727.34
59BH-35	2	ST032	3	5	87.90	NC	NC	2" PVC	6794194.49	346728.54
59BH-68	2	ST032	3	9	69.24	NC	NC	2" PVC	6794462.18	347726.93
59BH-69	2	ST032	3	9	68.00	NC	NC	2" PVC	6794452.10	347744.98
BV-01	2	SS043	3	10	52.78	NC	NC	NC	6794378.68	348364.64
BV-1A	2	ST032	3	6	75.50	NC	NC	NC	6794277.91	347375.73
BV-1C	2	FT023	3	10	62.37	NC	NC	NC	6795370.22	349710.25
BV-2A	2	FT023	3	10	60.87	NC	NC	NC	6795403.49	349562.63
BV-2B	2	FT023	3	10	60.81	NC	NC	NC	6795404.91	349549.76
BV-3A	2	FT023	3	10	61.53	NC	NC	NC	6795435.59	349575.82
BV-3B	2	FT023	3	10	61.59	NC	NC	NC	6795426.74	349584.59
BV-3C	2	SD025	3	10	58.21	NC	NC	NC	6794898.74	348845.33
BV-5A	2	FT023	3	10	61.63	NC	NC	NC	6795442.47	349630.63
BV-5B	2	FT023	3	10	61.52	NC	NC	NC	6795448.17	349632.50
BV-5C	2	FT023	3	10	61.53	NC	NC	NC	6795435.74	349635.70
BV-6A	2	SS010	3	11	66.78	NC	NC	NC	6794477.63	351091.41
BV-6B	2	SS010	3	11	66.37	NC	NC	NC	6794472.80	351085.93

Elmendorf Air Force Base Monitoring Well Abandonment Schedule

Well ID	Zone	Site	Priority	Well Atlas Page	Measuring Point Elevation (m)	Total Depth from TOC (ft)	TOC Stick Up (ft)	Well Material	WGS84-UTM-6N-Meters	
									Northing	Easting
BV-6C	2	SS010	3	11	65.94	NC	NC	NC	6794484.80	351083.23
BV-UK	2	ST032	3	6	75.67	NC	NC	NC	6794276.43	347373.47
BV-UK1	2	ST032	3	6	75.78	NC	NC	NC	6794279.01	347365.01
538BV-01	3	-	3	6	55.51	32.6	2.0	2" PVC	6792955.97	349739.52
538BV-02	3	-	3	6	55.61	37.6	2.1	2" PVC	6792972.67	349740.44
538BV-03	3	-	3	6	55.35	36.6	2.4	2" PVC	6792973.38	349730.18
538BV-04	3	-	3	6	55.35	37.4	2.4	2" PVC	6792956.38	349728.94
BV529-01A	3	ST037	3	2	43.36	NC	NC	NC	6792413.64	347263.96
BV529-01B	3	ST037	3	2	43.56	NC	NC	NC	6792427.51	347261.36
BV529-01C	3	ST037	3	2	43.55	NC	NC	NC	6792427.98	347272.04
BV68-1A	3	ST068	3	6	55.46	NC	NC	NC	6793792.09	349539.54
BV68-1B	3	ST068	3	6	55.45	NC	NC	NC	6793781.39	349529.77
BV68-1C	3	ST068	3	6	55.50	NC	NC	NC	6793775.39	349539.83
BV68-2A	3	ST068	3	6	55.27	NC	NC	NC	6793759.21	349536.08
BV68-2B	3	ST068	3	6	55.48	NC	NC	NC	6793761.79	349548.39
BV68-3B	3	ST068	3	6	55.52	NC	NC	NC	6793757.86	349569.86

Notes:
ft = feet
ID = Identity
NC = Not Collected
PVC = Polyvinyl Chloride
TOC = Top of well casing

APPENDIX E – MISSING WELL SURVEY SUMMARY - COMPREHENSIVE

This appendix contains a list of all wells that were investigated as part of the 2005 Missing Well Survey effort.

Appendix E
Missing Well Survey Summary - Comprehensive
(Basewide 2005)

Well ID	Owner	Located?	Well ID	Owner	Located?	Well ID	Owner	Located?
14MW-111	Restoration	Yes	OU5SL-22	Restoration	No	WGN-01	Unknown	No
41755PZ-02	Restoration	BTBA	OU5SL-23	Restoration	No	BW-02	Base Water Well	No
41755WL-10	Restoration	BTBA	OU5SL-25	Restoration	No	BW-07	Base Water Well	No
43WL-04	Restoration	BTBA	OU6MW-01	Restoration	Yes	BW-08	Base Water Well	No
43WL-06	Restoration	Yes	OU6MW-12	Restoration	Yes	BW-14	Base Water Well	No
49WL-02	Restoration	No	OU6MW-15	Restoration	Yes	BW-16	Base Water Well	No
50WL-01	Restoration	Yes	OU6MW-28	Restoration	No	BW-20	Base Water Well	No
51WL-03	Restoration	BTBA	OU6MW-51	Restoration	BTBA	BW-23	Base Water Well	No
52WL-01	Restoration	No	OU6MW-L02	Restoration	BTBA	BW-24	Base Water Well	No
52WL-03	Restoration	No	OU6MW-L03	Restoration	BTBA	BW-25	Base Water Well	No
55WL-01	Restoration	BTBA	OU6MW-L04	Restoration	No	BW-27	Base Water Well	No
56WL-03	Restoration	Yes	OU6MW-L05	Restoration	No	BW-29	Base Water Well	No
56WL-07	Restoration	Yes	POL-MW-01	Restoration	No	BW-30	Base Water Well	No
57WL-01	Restoration	Yes	POL-MW-02	Restoration	No	BW-31	Base Water Well	No
57WL-03	Restoration	Yes	SP15-02	Restoration	No	BW-34	Base Water Well	No
59WL-06	Restoration	Yes	ST20-01	Restoration	No	BW-35	Base Water Well	No
59WL-10	Restoration	Yes	ST20-02	Restoration	No	BW-36	Base Water Well	No
59WL-24	Restoration	Yes	ST20-03	Restoration	Yes	BW-40	Base Water Well	Yes
60WL-04	Restoration	BTBA	ST41-08	Restoration	Yes	BW-41	Base Water Well	No
62WL-03	Restoration	Yes	ST41-22	Restoration	No	BW-42	Base Water Well	No
MW-516-01	Restoration	No	ST41-23	Restoration	Yes	BW-43	Base Water Well	No
MW-532-01	Restoration	No	ST41-24	Restoration	Yes	BW-44	Base Water Well	No
OU3MW-07	Restoration	No	ST41-27	Restoration	Yes	BW-45	Base Water Well	No
OU3MW-09	Restoration	Yes	ST41-30	Restoration	Yes	BW-46	Base Water Well	No
OU3MW-11	Restoration	Yes	ST41-33A	Restoration	Yes	BW-47	Base Water Well	No
OU3MW-12	Restoration	Yes	ST41-34	Restoration	Yes	BW-48	Base Water Well	No
OU4W-1	Restoration	Yes	ST41-38	Restoration	Yes	BW-49	Base Water Well	No
OU4W-14	Restoration	Yes	ST41-ES3	Restoration	BTBA	BW-50	Base Water Well	Yes
OU5GW-25	Restoration	No	T40107	Restoration	No	BW-51	Base Water Well	No
OU5GW-27	Restoration	No	189-WL-01	Compliance	No	BW-52	Base Water Well	Yes
OU5GW-28	Restoration	No	407-WL-01	Compliance	No	BW-53	Base Water Well	No
OU5GW-29	Restoration	No	409-WL-06	Compliance	No			
OU5GW-34	Restoration	No	418-WL-01	Compliance	No			
OU5GW-40	Restoration	No	702WL-06	Compliance	Yes			
OU5GW-41	Restoration	No	702WL-08	Compliance	No			
OU5GW-42	Restoration	No	703WL-01	Compliance	No			
OU5GW-44	Restoration	No	ESMW-7A	Compliance	Yes			
OU5GW-46	Restoration	No	ESMW-7B	Compliance	Yes			
OU5GW-50	Restoration	No	HB-01	Compliance	No			
OU5GW-51	Restoration	No	HS-01	Compliance	Yes			
OU5GW-55	Restoration	No	HS-02A	Compliance	Yes			
OU5GW-58	Restoration	No	HS-02B	Compliance	Yes			
OU5GW-63	Restoration	No	HS-03	Compliance	Yes			
OU5MW-11	Restoration	Yes	HS-04	Compliance	Yes			
OU5MW-30	Restoration	Yes	HS-05	Compliance	Yes			
OU5MW-35	Restoration	BTBA	LF05MW-13	Compliance	Yes			
OU5SL-07	Restoration	No	MWSS80-01	Compliance	Yes			
OU5SL-10	Restoration	No	T41206	Compliance	Yes			
OU5SL-12	Restoration	No	T41709	Compliance	Yes			
OU5SL-18	Restoration	No	TWN-MW-70	Compliance	No			
OU5SL-20	Restoration	No	61WL-04	Unknown	Yes			

BTBA: Believed to be Abandoned

APPENDIX F – ANALYTICAL REPORTS

This appendix contains the analytical reports for all sample results from Round 1 and Round 2 of the 2005 Basewide Groundwater Monitoring Program. Attachment F-1 contains a summary of Round 1 sample results. Attachment F-2 contains a summary of field parameters from the Round 1 samples. Attachment F-3 contains a summary of Round 2 sample results. Attachment F-4 provides laboratory analytical reports on CD. Commonly used acronyms and abbreviations from the data tables are defined below.

MDL Method Detection Limit is defined as the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero.

RL Reporting Limit is the lowest calibrated level employed during analysis to detect the presence of a particular analyte

Qualifier	Description
J	The analyte was positively identified, the quantitation is an estimation.
U	The analyte was included in the analyses, but was not detected. The associated numerical value is at or below the MDL.
F	The analyte was positively identified but the associated numerical value is below the RL.
R	The data are rejected due to deficiencies in the ability to analyze the sample and meet quality control criteria.
B	The analyte was found in an associated blank, as well as in the sample.
M	A matrix effect was present.
S	To be applied to all field screening data.
T	Tentatively identified compound (using Gas Chromatography/Mass Spectrometry).

Attachment F-1 – Round 1 Analytical Report

This attachment contains a summary of sample results from Round 1 of the 2005 Basewide Groundwater Monitoring Program.

Appendix F, Attachment F-1
All Results of Laboratory Analyses for Groundwater Samples, Zone 1, Round 1 (Basewide 2005)

Analyte	DP98							
	41755WL-01	41755WL-01 (FD)	41755WL-02	41755WL-05	41755WL-12	41755WL-16	41755WL-17	DP98SW-01
VOCs - SW8260 (µg/L)								
1,1,1,2-Tetrachloroethane	2 U	2 U	10 U	10 U	0.1 U	0.1 U	0.1 U	0.1 U
1,1,1-Trichloroethane	8.2 U	8.2 U	41 U	41 U	0.41 U	0.41 U	0.41 U	0.41 U
1,1,2,2-Tetrachloroethane	7.4 U	7.4 U	37 U	37 U	0.37 U	0.37 U	0.37 U	0.37 U
1,1,2-Trichloroethane	6.2 U	6.2 U	31 U	31 U	0.31 U	0.31 U	0.31 U	0.31 U
1,1-Dichloroethane	2 U	2 U	10 U	10 U	0.1 U	0.1 U	0.27 F	0.1 U
1,1-Dichloroethene	7.2 U	7.2 U	36 U	36 U	0.36 U	0.36 U	0.36 U	0.36 U
1,1-Dichloropropene	2.8 U	2.8 U	14 U	14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,2,3-Trichlorobenzene	2.8 U	2.8 U	14 U	14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,2,3-Trichloropropane	6 U	6 U	30 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2,4-Trichlorobenzene	4.6 U	4.6 U	23 U	23 U	0.23 U	0.23 U	0.23 U	0.23 U
1,2,4-Trimethylbenzene	290	350	12 U	100	0.12 U	0.12 U	0.12 U	0.12 U
1,2-Dibromo-3-chloropropane	19 U	19 U	95 U	95 U	0.95 U	0.95 U	0.95 U	0.95 U
1,2-Dibromoethane (EDB)	4.4 U	4.4 U	22 U	22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,2-Dichlorobenzene	2.8 U	2.8 U	14 U	14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,2-Dichloroethane	4.4 U	4.4 U	22 U	22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,2-Dichloropropane	3 U	3 U	15 U	15 U	0.15 U	0.15 U	0.15 U	0.15 U
1,3,5-Trimethylbenzene	100	130	14 U	32 F	0.14 U	0.14 U	0.14 U	0.14 U
1,3-Dichlorobenzene	2.2 U	2.2 U	11 U	11 U	0.11 U	0.11 U	0.11 U	0.11 U
1,3-Dichloropropane	4 U	4 U	20 U	20 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	2.6 U	2.6 U	13 U	13 U	0.13 U	0.13 U	0.13 U	0.13 U
1-ChloroHexane	20 U	20 U	100 U	100 U	1 U	1 U	1 U	1 U
2,2-Dichloropropane	2.6 U	2.6 U	13 U	13 U	0.13 U	0.13 U	0.13 U	0.13 U
2-Butanone (MEK)	20 U	20 U	100 U	100 U	1 U	1 U	3.7 F	1 U
2-Chlorotoluene	5.2 U	5.2 U	26 U	26 U	0.26 U	0.26 U	0.26 U	0.26 U
4-Chlorotoluene	2 U	2 U	10 U	10 U	0.1 U	0.1 U	0.1 U	0.1 U
4-Methyl-2-pentanone (MIBK)	20 U	20 U	100 U	100 U	1 U	1 U	1 U	1 U
Acetone	20 U	20 U	100 U	100 U	1 U	1.5 F	15 J	3 F
Benzene	40	28	13 U	13 U	0.13 U	0.13 U	0.13 U	0.13 U
Bromobenzene	3.6 U	3.6 U	18 U	18 U	0.18 U	0.18 U	0.18 U	0.18 U
Bromochloromethane	6.2 U	6.2 U	31 U	31 U	0.31 U	0.31 U	0.31 U	0.31 U
Bromodichloromethane	2.8 U	2.8 U	14 U	14 U	0.14 U	0.14 U	0.14 U	0.14 U
Bromoform	2 U	2 U	10 U	10 U	0.1 U	0.1 U	0.1 U	0.1 U
Bromomethane	1.6 U	1.7 F	8 U	8 U	0.15 F	0.095 F	0.15 F	0.08 U

Appendix F, Attachment F-1
All Results of Laboratory Analyses for Groundwater Samples, Zone 1, Round 1 (Basewide 2005)

Analyte	DP98							
	41755WL-01	41755WL-01 (FD)	41755WL-02	41755WL-05	41755WL-12	41755WL-16	41755WL-17	DP98SW-01
Carbon Tetrachloride	3 U	3 U	15 U	15 U	0.15 U	0.15 U	0.15 U	0.15 U
Chlorobenzene	2.4 U	2.4 U	12 U	12 U	0.12 U	0.12 U	0.12 U	0.12 U
Chloroethane	6.8 U	6.8 U	34 U	34 U	0.34 U	0.34 U	0.34 U	0.34 U
Chloroform	2.4 U	2.4 U	12 U	12 U	0.12 U	0.12 U	0.12 U	0.12 U
Chloromethane	5 U	5 U	25 U	25 U	0.25 U	0.25 U	0.25 U	0.25 U
cis-1,2-Dichloroethylene	2 U	2 U	2500	4000	0.1 U	0.1 U	0.32 F	0.1 U
cis-1,3-Dichloropropene	4.4 U	4.4 U	22 U	22 U	0.22 U	0.22 U	0.22 U	0.22 U
Dibromochloromethane	8 U	8 U	40 U	40 U	0.4 U	0.4 U	0.4 U	0.4 U
Dibromomethane	4.2 U	4.2 U	21 U	21 U	0.21 U	0.21 U	0.21 U	0.21 U
Dichlorodifluoromethane	3.2 U	3.2 U	16 U	16 U	0.16 U	0.16 U	0.16 U	0.16 U
Ethylbenzene	68	59	27 U	42 F	0.27 U	0.27 U	0.27 U	0.27 U
Hexachlorobutadiene	4.4 U	4.4 U	22 U	22 U	0.22 U	0.22 U	0.22 U	0.22 U
Isopropylbenzene (Cumene)	18 F	18 F	12 U	21 F	0.12 U	0.12 U	0.12 U	0.12 U
m,p-Xylene	230	240	18 U	36 F	0.18 U	0.18 U	0.18 U	0.18 U
Methylene Chloride	7 U	7 U	35 U	35 U	0.35 U	0.35 U	0.35 U	0.35 U
Naphthalene	460	490	15 U	280	0.22 F	0.2 F	0.18 F	0.15 U
n-Butylbenzene	30	45	12 U	18 F	0.12 U	0.12 U	0.12 U	0.12 U
n-Propylbenzene	26	27	15 U	26 F	0.15 U	0.15 U	0.15 U	0.15 U
o-Xylene	170	160	10 U	10 U	0.1 U	0.1 U	0.1 U	0.1 U
p-Cymene (p-Isopropyltoluene)	2.6 U	2.6 U	13 U	25 F	0.13 U	0.13 U	0.13 U	0.13 U
sec-Butylbenzene	11 F	15 F	12 U	16 F	0.12 U	0.12 U	0.12 U	0.12 U
Styrene	3 U	3 U	15 U	15 U	0.15 U	0.15 U	0.15 U	0.15 U
tert-Butyl Methyl Ether (MTBE)	20 U	20 U	100 U	100 U	1 U	1 U	1 U	1 U
tert-Butylbenzene	2.8 U	2.8 U	14 U	14 U	0.14 U	0.14 U	0.14 U	0.14 U
Tetrachloroethene (PCE)	7.6 U	7.6 U	1300	38 U	0.38 U	0.38 U	0.38 U	0.38 U
Toluene	5 U	5 U	25 U	25 U	0.25 U	0.25 U	0.25 U	0.25 U
trans-1,2-Dichloroethene	2.2 U	2.2 U	11 U	42 F	0.11 U	0.11 U	0.11 U	0.11 U
trans-1,3-Dichloropropene	6 U	6 U	30 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U
Trichloroethene (TCE)	6.2 U	6.2 U	1100	31 U	0.31 U	0.31 U	0.31 U	0.31 U
Trichlorofluoromethane	4.6 U	4.6 U	23 U	23 U	0.23 U	0.23 U	0.23 U	0.23 U
Vinyl Chloride	2.4 U	2.4 U	12 U	17 F	0.12 U	0.12 U	0.12 U	0.12 U
GRO - AK101 (µg/L)								
Petroleum Hydrocarbons C6-C10	-	-	-	-	-	-	-	-
DRO - AK102 (µg/L)								
Petroleum Hydrocarbons C10-C28	-	-	-	-	-	-	-	-

Appendix F, Attachment F-1
All Results of Laboratory Analyses for Groundwater Samples, Zone 1, Round 1 (Basewide 2005)

Analyte	DP98							
	41755WL-01	41755WL-01 (FD)	41755WL-02	41755WL-05	41755WL-12	41755WL-16	41755WL-17	DP98SW-01
BTEX - SW8021 (µg/L)								
Benzene	-	-	-	-	-	-	-	-
Ethylbenzene	-	-	-	-	-	-	-	-
m,p-Xylene	-	-	-	-	-	-	-	-
o-Xylene	-	-	-	-	-	-	-	-
Toluene	-	-	-	-	-	-	-	-
Xylenes, Total	-	-	-	-	-	-	-	-
PAHs - SW8310 (µg/L)								
Acenaphthene	-	-	-	-	-	-	-	-
Acenaphthylene	-	-	-	-	-	-	-	-
Anthracene	-	-	-	-	-	-	-	-
Benzo(a)anthracene	-	-	-	-	-	-	-	-
Benzo(a)pyrene	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	-	-	-	-	-	-	-	-
Chrysene	-	-	-	-	-	-	-	-
Dibenz(a,h)anthracene	-	-	-	-	-	-	-	-
Fluoranthene	-	-	-	-	-	-	-	-
Fluorene	-	-	-	-	-	-	-	-
Indeno(1,2,3-c,d)pyrene	-	-	-	-	-	-	-	-
Naphthalene	-	-	-	-	-	-	-	-
Phenanthrene	-	-	-	-	-	-	-	-
Pyrene	-	-	-	-	-	-	-	-
Methane - RSK-175 (µg/L)								
Methane	6700	-	16	3600	0.49 F	2900	2200	-
MNA Parameters (mg/L)								
Alkalinity, Total (as CaCO3)	306	-	173	263	39.5	127	177	-
Nitrate-Nitrite (as N)	0 M	-	0.03 M	0 M	1.1 M	0 M	0.011 M	-
Sulfide, Total	0.025 U	-	0.025 U	0.002 U	0.025 U	-	-	-
Manganese	5 M	-	5.1 M	22.5 M	0.021 M	0.88 M	0.51 M	-
Chloride	883	-	61.1	-	2.7	7.6	22.2	-
Sulfate (as SO4)	0.52 F	-	11.8	0.49 F	5.8	0.52 F	1.8 F	-
Dissolved Organic Carbon	35	-	6.9	39.8	9.6	19	29.8	-
Total Organic Carbon	29.2	-	7.3	40.6	9.3	20.6	31	-

Appendix F, Attachment F-1
All Results of Laboratory Analyses for Groundwater Samples, Zone 1, Round 1 (Basewide 2005)

Analyte	OU6MW-46	PL81 South				ST36/66				
	OU6MW-46	LF04SP-01	LF04SP-02	LF04SP-02DG	OU6MW-63	56WL-04	56WL-05	56WL-06	56WL-08	56WL-09
VOCs - SW8260 (µg/L)										
1,1,1,2-Tetrachloroethane	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	-	-	-	-	-	-	-	-	-	-
1,1-Dichloropropene	-	-	-	-	-	-	-	-	-	-
1,2,3-Trichlorobenzene	-	-	-	-	-	-	-	-	-	-
1,2,3-Trichloropropane	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	-	-	-	-	-	-	-	-	-	-
1,2,4-Trimethylbenzene	-	-	-	-	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane (EDB)	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	-	-	-	-	-	-	-	-	-	-
1,3,5-Trimethylbenzene	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	-	-	-	-	-	-	-	-	-	-
1,3-Dichloropropane	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	-	-	-	-	-	-	-	-	-	-
1-ChloroHexane	-	-	-	-	-	-	-	-	-	-
2,2-Dichloropropane	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	-	-	-	-	-	-	-	-	-	-
2-Chlorotoluene	-	-	-	-	-	-	-	-	-	-
4-Chlorotoluene	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	-	-	-	-	-	-	-	-	-	-
Acetone	-	-	-	-	-	-	-	-	-	-
Benzene	-	-	-	-	-	-	-	-	-	-
Bromobenzene	-	-	-	-	-	-	-	-	-	-
Bromochloromethane	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	-	-	-	-	-	-	-	-	-	-
Bromoform	-	-	-	-	-	-	-	-	-	-
Bromomethane	-	-	-	-	-	-	-	-	-	-

Appendix F, Attachment F-1
All Results of Laboratory Analyses for Groundwater Samples, Zone 1, Round 1 (Basewide 2005)

Analyte	OU6MW-46	PL81 South				ST36/66				
	OU6MW-46	LF04SP-01	LF04SP-02	LF04SP-02DG	OU6MW-63	56WL-04	56WL-05	56WL-06	56WL-08	56WL-09
Carbon Tetrachloride	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	-	-	-	-	-	-	-	-	-	-
Chloroethane	-	-	-	-	-	-	-	-	-	-
Chloroform	-	-	-	-	-	-	-	-	-	-
Chloromethane	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethylene	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	-	-	-	-	-	-	-	-	-	-
Dibromomethane	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene (Cumene)	-	-	-	-	-	-	-	-	-	-
m,p-Xylene	-	-	-	-	-	-	-	-	-	-
Methylene Chloride	-	-	-	-	-	-	-	-	-	-
Naphthalene	-	-	-	-	-	-	-	-	-	-
n-Butylbenzene	-	-	-	-	-	-	-	-	-	-
n-Propylbenzene	-	-	-	-	-	-	-	-	-	-
o-Xylene	-	-	-	-	-	-	-	-	-	-
p-Cymene (p-Isopropyltoluene)	-	-	-	-	-	-	-	-	-	-
sec-Butylbenzene	-	-	-	-	-	-	-	-	-	-
Styrene	-	-	-	-	-	-	-	-	-	-
tert-Butyl Methyl Ether (MTBE)	-	-	-	-	-	-	-	-	-	-
tert-Butylbenzene	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene (PCE)	-	-	-	-	-	-	-	-	-	-
Toluene	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	-	-	-	-	-	-	-	-	-	-
Trichloroethene (TCE)	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	-	-	-	-	-	-	-	-	-	-
Vinyl Chloride	-	-	-	-	-	-	-	-	-	-
GRO - AK101 (µg/L)										
Petroleum Hydrocarbons C6-C10	-	-	-	-	1300	-	-	-	-	-
DRO - AK102 (µg/L)										
Petroleum Hydrocarbons C10-C28	-	-	-	-	910 J	13000	18000	0 R	61 J	55

Appendix F, Attachment F-1
All Results of Laboratory Analyses for Groundwater Samples, Zone 1, Round 1 (Basewide 2005)

Analyte	OU6MW-46	PL81 South				ST36/66				
	OU6MW-46	LF04SP-01	LF04SP-02	LF04SP-02DG	OU6MW-63	56WL-04	56WL-05	56WL-06	56WL-08	56WL-09
BTEX - SW8021 (µg/L)										
Benzene	630	0.18 U	30	0.6	10 J	-	-	-	-	-
Ethylbenzene	810	0.2 U	36	1.2	12	-	-	-	-	-
m,p-Xylene	890	0.37 U	45	1.1 F	5.5 J	-	-	-	-	-
o-Xylene	13	0.18 U	25	0.83 F	0.18 U	-	-	-	-	-
Toluene	190	0.18 U	10	0.18 U	15 J	-	-	-	-	-
Xylenes, Total	910	0.37 U	70	2	5.5 J	-	-	-	-	-
PAHs - SW8310 (µg/L)										
Acenaphthene	-	0.47 U	0.47 U	0.47 U	-	-	-	-	-	-
Acenaphthylene	-	0.066 U	0.066 U	0.066 U	-	-	-	-	-	-
Anthracene	-	0.0022 U	0.0022 U	0.0022 U	-	-	-	-	-	-
Benzo(a)anthracene	-	0.0059 U	0.0059 U	0.0059 U	-	-	-	-	-	-
Benzo(a)pyrene	-	0.0079 U	0.0079 U	0.0079 U	-	-	-	-	-	-
Benzo(b)fluoranthene	-	0.0038 U	0.0038 U	0.0038 U	-	-	-	-	-	-
Benzo(g,h,i)perylene	-	0.01 U	0.01 U	0.01 U	-	-	-	-	-	-
Benzo(k)fluoranthene	-	0.0039 U	0.0039 U	0.0039 U	-	-	-	-	-	-
Chrysene	-	0.0052 U	0.0052 U	0.0052 U	-	-	-	-	-	-
Dibenz(a,h)anthracene	-	0.022 U	0.022 U	0.022 U	-	-	-	-	-	-
Fluoranthene	-	0.014 U	0.014 U	0.014 U	-	-	-	-	-	-
Fluorene	-	0.025 U	0.052 F	0.025 U	-	-	-	-	-	-
Indeno(1,2,3-c,d)pyrene	-	0.01 U	0.01 U	0.01 U	-	-	-	-	-	-
Naphthalene	-	0.058 U	4.3	0.31 F	-	-	-	-	-	-
Phenanthrene	-	0.0047 U	0.0047 U	0.0047 U	-	-	-	-	-	-
Pyrene	-	0.0094 U	0.0094 U	0.0094 U	-	-	-	-	-	-
Methane - RSK-175 (µg/L)										
Methane	140	-	-	-	7.2	200	550	1 F	0.22 U	0.22 U
MNA Parameters (mg/L)										
Alkalinity, Total (as CaCO3)	393	-	-	-	114	225	269	117	149	154
Nitrate-Nitrite (as N)	0 M	-	-	-	0.012 M	0 M	4.2 M	1.6 M	10.8 M	3 M
Sulfide, Total	-	-	-	-	-	0.025 U	0.025 U	0.025 U	-	0.025 U
Manganese	11.6 M	-	-	-	2 M	3.7 M	1.1 M	0.0001 M	0.0013 M	0.044 M
Chloride	-	-	-	-	-	-	-	-	-	-
Sulfate (as SO4)	0.26 F	-	-	-	3.1	17.5	23.2	12.7	17.4	25.4
Dissolved Organic Carbon	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon	-	-	-	-	-	-	-	-	-	-

Appendix F, Attachment F-1
All Results of Laboratory Analyses for Groundwater Samples, Zone 1, Round 1 (Basewide 2005)

Analyte	ST41 North			WP14				
	ST41-10R	ST41SP-01	ST41SW-01	14MW-120	14MW-121	LF04SP-03	LF04SP-04	OU6MW-91
VOCs - SW8260 (µg/L)								
1,1,1,2-Tetrachloroethane	2 U	0.5 U	1 U	-	-	-	-	-
1,1,1-Trichloroethane	8.2 U	2 U	4.1 U	-	-	-	-	-
1,1,2,2-Tetrachloroethane	7.4 U	1.8 U	3.7 U	-	-	-	-	-
1,1,2-Trichloroethane	6.2 U	1.6 U	3.1 U	-	-	-	-	-
1,1-Dichloroethane	2 U	0.5 U	1 U	-	-	-	-	-
1,1-Dichloroethene	7.2 U	1.8 U	3.6 U	-	-	-	-	-
1,1-Dichloropropene	2.8 U	0.7 U	1.4 U	-	-	-	-	-
1,2,3-Trichlorobenzene	2.8 U	0.7 U	1.4 U	-	-	-	-	-
1,2,3-Trichloropropane	6 U	1.5 U	3 U	-	-	-	-	-
1,2,4-Trichlorobenzene	4.6 U	1.2 U	2.3 U	-	-	-	-	-
1,2,4-Trimethylbenzene	350	69	130	-	-	-	-	-
1,2-Dibromo-3-chloropropane	19 U	4.8 U	9.5 U	-	-	-	-	-
1,2-Dibromoethane (EDB)	4.4 U	1.1 U	2.2 U	-	-	-	-	-
1,2-Dichlorobenzene	2.8 U	0.7 U	1.4 U	-	-	-	-	-
1,2-Dichloroethane	4.4 U	1.1 U	2.2 U	-	-	-	-	-
1,2-Dichloropropane	3 U	0.75 U	1.5 U	-	-	-	-	-
1,3,5-Trimethylbenzene	120	14	31	-	-	-	-	-
1,3-Dichlorobenzene	2.2 U	0.55 U	1.1 U	-	-	-	-	-
1,3-Dichloropropane	4 U	1 U	2 U	-	-	-	-	-
1,4-Dichlorobenzene	2.6 U	0.65 U	1.3 U	-	-	-	-	-
1-ChloroHexane	20 U	5 U	10 U	-	-	-	-	-
2,2-Dichloropropane	2.6 U	0.65 U	1.3 U	-	-	-	-	-
2-Butanone (MEK)	20 U	5 U	10 U	-	-	-	-	-
2-Chlorotoluene	5.2 U	1.3 U	2.6 U	-	-	-	-	-
4-Chlorotoluene	2 U	0.5 U	1 U	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	20 U	5 U	10 U	-	-	-	-	-
Acetone	20 U	5.4 F	10 U	-	-	-	-	-
Benzene	41	93	180	-	-	-	-	-
Bromobenzene	3.6 U	0.9 U	1.8 U	-	-	-	-	-
Bromochloromethane	6.2 U	1.6 U	3.1 U	-	-	-	-	-
Bromodichloromethane	2.8 U	0.7 U	1.4 U	-	-	-	-	-
Bromoform	2 U	0.5 U	1 U	-	-	-	-	-
Bromomethane	1.6 U	0.4 U	0.8 U	-	-	-	-	-

Appendix F, Attachment F-1
All Results of Laboratory Analyses for Groundwater Samples, Zone 1, Round 1 (Basewide 2005)

Analyte	ST41 North			WP14				
	ST41-10R	ST41SP-01	ST41SW-01	14MW-120	14MW-121	LF04SP-03	LF04SP-04	OU6MW-91
Carbon Tetrachloride	3 U	0.75 U	1.5 U	-	-	-	-	-
Chlorobenzene	2.4 U	0.6 U	1.2 U	-	-	-	-	-
Chloroethane	6.8 U	1.7 U	3.4 U	-	-	-	-	-
Chloroform	2.4 U	0.6 U	1.2 U	-	-	-	-	-
Chloromethane	5 U	1.2 U	2.5 U	-	-	-	-	-
cis-1,2-Dichloroethylene	2 U	0.5 U	1 U	-	-	-	-	-
cis-1,3-Dichloropropene	4.4 U	1.1 U	2.2 U	-	-	-	-	-
Dibromochloromethane	8 U	2 U	4 U	-	-	-	-	-
Dibromomethane	4.2 U	1 U	2.1 U	-	-	-	-	-
Dichlorodifluoromethane	3.2 U	0.8 U	1.6 U	-	-	-	-	-
Ethylbenzene	180	49	180	-	-	-	-	-
Hexachlorobutadiene	4.4 U	1.1 U	2.2 U	-	-	-	-	-
Isopropylbenzene (Cumene)	41	21	39	-	-	-	-	-
m,p-Xylene	690	190	430	-	-	-	-	-
Methylene Chloride	7 U	1.8 U	3.5 U	-	-	-	-	-
Naphthalene	26	11	14	-	-	-	-	-
n-Butylbenzene	16 F	1.3 F	3.7 F	-	-	-	-	-
n-Propylbenzene	51	18	35	-	-	-	-	-
o-Xylene	3 F	1.4 F	43	-	-	-	-	-
p-Cymene (p-Isopropyltoluene)	14 F	3.3 F	1.3 U	-	-	-	-	-
sec-Butylbenzene	12 F	3.5 F	6.6 F	-	-	-	-	-
Styrene	3 U	0.75 U	1.5 U	-	-	-	-	-
tert-Butyl Methyl Ether (MTBE)	20 U	5 U	10 U	-	-	-	-	-
tert-Butylbenzene	2.8 U	0.7 U	1.4 U	-	-	-	-	-
Tetrachloroethene (PCE)	7.6 U	1.9 U	3.8 U	-	-	-	-	-
Toluene	5 U	1.2 U	6.5 F	-	-	-	-	-
trans-1,2-Dichloroethene	2.2 U	0.55 U	1.1 U	-	-	-	-	-
trans-1,3-Dichloropropene	6 U	1.5 U	3 U	-	-	-	-	-
Trichloroethene (TCE)	6.2 U	1.6 U	3.1 U	-	-	-	-	-
Trichlorofluoromethane	4.6 U	1.2 U	2.3 U	-	-	-	-	-
Vinyl Chloride	2.4 U	0.6 U	1.2 U	-	-	-	-	-
GRO - AK101 (µg/L)								
Petroleum Hydrocarbons C6-C10	-	-	-	1100	2500	-	-	24000
DRO - AK102 (µg/L)								
Petroleum Hydrocarbons C10-C28	-	-	-	780 J	580 J	-	-	15000

Appendix F, Attachment F-1
All Results of Laboratory Analyses for Groundwater Samples, Zone 1, Round 1 (Basewide 2005)

Analyte	ST41 North			WP14				
	ST41-10R	ST41SP-01	ST41SW-01	14MW-120	14MW-121	LF04SP-03	LF04SP-04	OU6MW-91
BTEX - SW8021 (µg/L)								
Benzene	-	-	-	12	7.9 J	0.18 U	0.18 U	44 J
Ethylbenzene	-	-	-	37	39	0.2 U	0.2 U	860
m,p-Xylene	-	-	-	33	80	0.37 U	0.37 U	3100
o-Xylene	-	-	-	5.6	28	0.18 U	0.18 U	1200
Toluene	-	-	-	51	58	0.18 U	0.18 U	92
Xylenes, Total	-	-	-	39	110	0.37 U	0.37 U	4300
PAHs - SW8310 (µg/L)								
Acenaphthene	12 J	0.47 U	5 J	-	-	0.47 U	0.47 U	-
Acenaphthylene	0.066 U	0.066 U	0.066 U	-	-	0.066 U	0.066 U	-
Anthracene	0.0022 U	0.014 J	0.037 F	-	-	0.0022 U	0.0022 U	-
Benzo(a)anthracene	0.0059 U	0.0059 U	0.0059 U	-	-	0.0059 U	0.0059 U	-
Benzo(a)pyrene	0.0079 U	0.0079 U	0.0079 U	-	-	0.0079 U	0.0079 U	-
Benzo(b)fluoranthene	0.0038 U	0.0038 U	0.0038 U	-	-	0.0038 U	0.0038 U	-
Benzo(g,h,i)perylene	0.01 U	0.01 U	0.01 U	-	-	0.01 U	0.01 U	-
Benzo(k)fluoranthene	0.0039 U	0.0039 U	0.0039 U	-	-	0.0039 U	0.0039 U	-
Chrysene	0.0052 U	0.0052 U	0.015 F	-	-	0.0052 U	0.0052 U	-
Dibenz(a,h)anthracene	0.022 U	0.022 U	0.022 U	-	-	0.022 U	0.022 U	-
Fluoranthene	0.014 U	0.014 U	0.28 J	-	-	0.014 U	0.014 U	-
Fluorene	0.93 J	0.25 J	0.51 J	-	-	0.025 U	0.025 U	-
Indeno(1,2,3-c,d)pyrene	0.01 U	0.01 U	0.01 U	-	-	0.01 U	0.01 U	-
Naphthalene	18 J	5.5 J	18 J	-	-	0.058 U	0.058 U	-
Phenanthrene	0.36 J	0.14 J	0.38 J	-	-	0.0047 U	0.0047 U	-
Pyrene	0.0094 U	0.0094 U	0.32 J	-	-	0.0094 U	0.0094 U	-
Methane - RSK-175 (µg/L)								
Methane	1100	-	-	0.61 F	15	-	-	1300
MNA Parameters (mg/L)								
Alkalinity, Total (as CaCO3)	-	-	-	202	61.3	-	-	84.6
Nitrate-Nitrite (as N)	0.025 M	-	-	2.3 M	0.022 M	-	-	0 M
Sulfide, Total	0.038 J	-	-	-	-	-	-	-
Manganese	4.7 M	-	-	2.7 M	1.7 M	-	-	3.2 M
Chloride	-	-	-	-	-	-	-	-
Sulfate (as SO4)	-	-	-	9.9	4.9	-	-	1.2
Dissolved Organic Carbon	19.9	-	-	-	-	-	-	-
Total Organic Carbon	-	-	-	-	-	-	-	-

Appendix F, Attachment F-1
All Results of Laboratory Analyses for Groundwater Samples, Zone 1, Round 1 (Basewide 2005)

Analyte	Z1 Sentry Seeps		
	LF04SP-05	LF04SP-06	LF04SP-07
VOCs - SW8260 (µg/L)			
1,1,1,2-Tetrachloroethane	-	-	-
1,1,1-Trichloroethane	-	-	-
1,1,2,2-Tetrachloroethane	-	-	-
1,1,2-Trichloroethane	-	-	-
1,1-Dichloroethane	-	-	-
1,1-Dichloroethene	-	-	-
1,1-Dichloropropene	-	-	-
1,2,3-Trichlorobenzene	-	-	-
1,2,3-Trichloropropane	-	-	-
1,2,4-Trichlorobenzene	-	-	-
1,2,4-Trimethylbenzene	-	-	-
1,2-Dibromo-3-chloropropane	-	-	-
1,2-Dibromoethane (EDB)	-	-	-
1,2-Dichlorobenzene	-	-	-
1,2-Dichloroethane	-	-	-
1,2-Dichloropropane	-	-	-
1,3,5-Trimethylbenzene	-	-	-
1,3-Dichlorobenzene	-	-	-
1,3-Dichloropropane	-	-	-
1,4-Dichlorobenzene	-	-	-
1-ChloroHexane	-	-	-
2,2-Dichloropropane	-	-	-
2-Butanone (MEK)	-	-	-
2-Chlorotoluene	-	-	-
4-Chlorotoluene	-	-	-
4-Methyl-2-pentanone (MIBK)	-	-	-
Acetone	-	-	-
Benzene	-	-	-
Bromobenzene	-	-	-
Bromochloromethane	-	-	-
Bromodichloromethane	-	-	-
Bromoform	-	-	-
Bromomethane	-	-	-

Appendix F, Attachment F-1
All Results of Laboratory Analyses for Groundwater Samples, Zone 1, Round 1 (Basewide 2005)

Analyte	Z1 Sentry Seeps		
	LF04SP-05	LF04SP-06	LF04SP-07
Carbon Tetrachloride	-	-	-
Chlorobenzene	-	-	-
Chloroethane	-	-	-
Chloroform	-	-	-
Chloromethane	-	-	-
cis-1,2-Dichloroethylene	-	-	-
cis-1,3-Dichloropropene	-	-	-
Dibromochloromethane	-	-	-
Dibromomethane	-	-	-
Dichlorodifluoromethane	-	-	-
Ethylbenzene	-	-	-
Hexachlorobutadiene	-	-	-
Isopropylbenzene (Cumene)	-	-	-
m,p-Xylene	-	-	-
Methylene Chloride	-	-	-
Naphthalene	-	-	-
n-Butylbenzene	-	-	-
n-Propylbenzene	-	-	-
o-Xylene	-	-	-
p-Cymene (p-Isopropyltoluene)	-	-	-
sec-Butylbenzene	-	-	-
Styrene	-	-	-
tert-Butyl Methyl Ether (MTBE)	-	-	-
tert-Butylbenzene	-	-	-
Tetrachloroethene (PCE)	-	-	-
Toluene	-	-	-
trans-1,2-Dichloroethene	-	-	-
trans-1,3-Dichloropropene	-	-	-
Trichloroethene (TCE)	-	-	-
Trichlorofluoromethane	-	-	-
Vinyl Chloride	-	-	-
GRO - AK101 (µg/L)			
Petroleum Hydrocarbons C6-C10	-	-	-
DRO - AK102 (µg/L)			
Petroleum Hydrocarbons C10-C28	-	-	-

Appendix F, Attachment F-1
All Results of Laboratory Analyses for Groundwater Samples, Zone 1, Round 1 (Basewide 2005)

Analyte	Z1 Sentry Seeps		
	LF04SP-05	LF04SP-06	LF04SP-07
BTEX - SW8021 (µg/L)			
Benzene	0.18 U	0.18 U	0.18 U
Ethylbenzene	0.2 U	0.2 U	0.2 U
m,p-Xylene	0.37 U	0.37 U	0.37 U
o-Xylene	0.18 U	0.18 U	0.18 U
Toluene	0.18 U	0.18 U	0.18 U
Xylenes, Total	0.37 U	0.37 U	0.37 U
PAHs - SW8310 (µg/L)			
Acenaphthene	0.47 U	0.47 U	0.47 U
Acenaphthylene	0.066 U	0.066 U	0.066 U
Anthracene	0.0022 U	0.0022 U	0.0022 U
Benzo(a)anthracene	0.0059 U	0.0059 U	0.0059 U
Benzo(a)pyrene	0.0079 U	0.0079 U	0.0079 U
Benzo(b)fluoranthene	0.0038 U	0.0038 U	0.0038 U
Benzo(g,h,i)perylene	0.01 U	0.01 U	0.01 U
Benzo(k)fluoranthene	0.0039 U	0.0039 U	0.0039 U
Chrysene	0.0052 U	0.0052 U	0.0052 U
Dibenz(a,h)anthracene	0.022 U	0.022 U	0.022 U
Fluoranthene	0.014 U	0.014 U	0.014 U
Fluorene	0.025 U	0.025 U	0.025 U
Indeno(1,2,3-c,d)pyrene	0.01 U	0.01 U	0.01 U
Naphthalene	0.058 U	0.058 U	0.058 U
Phenanthrene	0.0047 U	0.0047 U	0.0047 U
Pyrene	0.0094 U	0.0094 U	0.0094 U
Methane - RSK-175 (µg/L)			
Methane	-	-	-
MNA Parameters (mg/L)			
Alkalinity, Total (as CaCO3)	-	-	-
Nitrate-Nitrite (as N)	-	-	-
Sulfide, Total	-	-	-
Manganese	-	-	-
Chloride	-	-	-
Sulfate (as SO4)	-	-	-
Dissolved Organic Carbon	-	-	-
Total Organic Carbon	-	-	-

Appendix F, Attachment F-1
All Results of Laboratory Analyses for Groundwater Samples, Zone 2, Round 1 (Basewide 2005)

Analyte	Airlifter		FTA			Hangar 11	OU4 East	SD15			SS43	W4
	43WL-08	43WL-11	FP-56	OU4W-11	OU4W-11 (FD)	OU4MW-08R	IS6-01	OU6MW-17	OU6MW-18	OU6MW-90	SP7/10-04	W-4
VOCs - SW8260 (µg/L)												
1,1,1,2-Tetrachloroethane	-	-	0.1 U	1 U	1 U	-	0.1 U	0.5 U	0.1 U	0.1 U	-	-
1,1,1-Trichloroethane	-	-	13	25	25	-	0.41 U	2 U	9.5	0.41 U	-	-
1,1,2,2-Tetrachloroethane	-	-	0.37 U	3.7 U	3.7 U	-	0.37 U	1.8 U	2.1	0.8	-	-
1,1,2-Trichloroethane	-	-	0.31 U	3.1 U	3.1 U	-	0.31 U	1.6 U	0.7 F	0.31 U	-	-
1,1-Dichloroethane	-	-	7.3	6.4 F	6.3 F	-	0.1 U	0.5 U	9.4	0.13 F	-	-
1,1-Dichloroethene	-	-	0.36 U	3.6 U	3.6 U	-	0.36 U	1.8 U	0.36 U	0.36 U	-	-
1,1-Dichloropropene	-	-	0.14 U	1.4 U	1.4 U	-	0.14 U	0.7 U	0.14 U	0.14 U	-	-
1,2,3-Trichlorobenzene	-	-	0.14 U	1.4 U	1.4 U	-	0.14 U	0.7 U	0.14 U	0.14 U	-	-
1,2,3-Trichloropropane	-	-	0.3 U	3 U	3 U	-	0.3 U	1.5 U	0.3 U	0.3 U	-	-
1,2,4-Trichlorobenzene	-	-	0.23 U	2.3 U	2.3 U	-	0.23 U	1.2 U	0.23 U	0.23 U	-	-
1,2,4-Trimethylbenzene	-	-	2.2	190	190	-	0.12 U	0.6 U	0.12 U	0.12 U	-	-
1,2-Dibromo-3-chloropropane	-	-	0.95 U	9.5 U	9.5 U	-	0.95 U	4.8 U	0.95 U	0.95 U	-	-
1,2-Dibromoethane (EDB)	-	-	0.22 U	2.2 U	2.2 U	-	0.22 U	1.1 U	0.22 U	0.22 U	-	-
1,2-Dichlorobenzene	-	-	0.14 U	2.2 F	2 F	-	0.14 U	0.7 U	0.14 U	0.14 U	-	-
1,2-Dichloroethane	-	-	0.86	2.2 U	2.2 U	-	0.22 U	1.1 U	0.22 U	0.22 U	-	-
1,2-Dichloropropane	-	-	0.15 U	2 F	1.5 U	-	0.15 U	0.75 U	0.15 U	0.15 U	-	-
1,3,5-Trimethylbenzene	-	-	0.54 F	53	52	-	0.14 U	0.7 U	0.14 U	0.14 U	-	-
1,3-Dichlorobenzene	-	-	0.11 U	1.1 U	1.1 U	-	0.11 U	0.55 U	0.11 U	0.11 U	-	-
1,3-Dichloropropane	-	-	0.2 U	2 U	2 U	-	0.2 U	1 U	0.2 U	0.2 U	-	-
1,4-Dichlorobenzene	-	-	0.13 U	1.5 F	1.3 F	-	0.13 U	0.65 U	0.13 U	0.13 U	-	-
1-ChloroHexane	-	-	1 U	10 U	10 U	-	1 U	5 U	1 U	1 U	-	-
2,2-Dichloropropane	-	-	0.13 U	1.3 U	1.3 U	-	0.13 U	0.65 U	0.13 U	0.13 U	-	-
2-Butanone (MEK)	-	-	1 U	10 U	10 U	-	1 U	5 U	1 U	1 U	-	-
2-Chlorotoluene	-	-	0.26 U	20	2.6 U	-	0.26 U	1.3 U	0.26 U	0.26 U	-	-
4-Chlorotoluene	-	-	0.1 U	5.3 F	1 U	-	0.1 U	0.5 U	0.1 U	0.1 U	-	-
4-Methyl-2-pentanone (MIBK)	-	-	1 U	10 U	10 U	-	1 U	5 U	1 U	1 U	-	-
Acetone	-	-	1.5 F	17 F	10 U	-	1 U	5.4 F	1 U	1 F	-	-
Benzene	-	-	0.95	2.2 F	2.1 F	-	0.13 U	180	5.9	10	-	-
Bromobenzene	-	-	0.18 U	1.8 U	1.8 U	-	0.18 U	0.9 U	0.18 U	0.18 U	-	-
Bromochloromethane	-	-	0.31 U	3.1 U	3.1 U	-	0.31 U	1.6 U	0.31 U	0.31 U	-	-
Bromodichloromethane	-	-	0.14 U	1.4 U	1.4 U	-	0.14 U	0.7 U	0.14 U	0.14 U	-	-
Bromoform	-	-	0.1 U	1 U	1 U	-	0.1 U	0.5 U	0.1 U	0.1 U	-	-
Bromomethane	-	-	0.11 F	0.8 U	0.8 U	-	0.08 U	0.4 U	0.08 U	0.08 U	-	-
Carbon Tetrachloride	-	-	0.15 U	1.5 U	1.5 U	-	0.15 U	0.75 U	0.15 U	0.15 U	-	-
Chlorobenzene	-	-	0.12 U	1.2 U	1.2 U	-	0.12 U	0.6 U	0.12 U	0.12 U	-	-
Chloroethane	-	-	0.34 U	3.4 U	3.4 U	-	0.34 U	1.7 U	0.34 U	0.34 U	-	-
Chloroform	-	-	0.12 U	1.2 U	1.2 U	-	0.51	0.6 U	1.5	0.63	-	-
Chloromethane	-	-	0.25 U	2.5 U	2.5 U	-	0.25 U	1.2 U	0.25 U	0.25 U	-	-
cis-1,2-Dichloroethylene	-	-	11	210	200	-	0.46 F	17	0.81 F	1.9	-	-
cis-1,3-Dichloropropene	-	-	0.22 U	2.2 U	2.2 U	-	0.22 U	1.1 U	0.22 U	0.22 U	-	-
Dibromochloromethane	-	-	0.4 U	4 U	4 U	-	0.4 U	2 U	0.4 U	0.4 U	-	-
Dibromomethane	-	-	0.21 U	2.1 U	2.1 U	-	0.21 U	1 U	0.21 U	0.21 U	-	-
Dichlorodifluoromethane	-	-	0.16 U	1.6 U	1.6 U	-	0.16 U	0.8 U	0.16 U	0.16 U	-	-

Appendix F, Attachment F-1
All Results of Laboratory Analyses for Groundwater Samples, Zone 2, Round 1 (Basewide 2005)

Analyte	Airlifter		FTA			Hangar 11	OU4 East	SD15			SS43	W4
	43WL-08	43WL-11	FP-56	OU4W-11	OU4W-11 (FD)	OU4MW-08R	IS6-01	OU6MW-17	OU6MW-18	OU6MW-90	SP7/10-04	W-4
Ethylbenzene	-	-	1.3	130	130	-	0.27 U	7.4	0.27 U	0.27 U	-	-
Hexachlorobutadiene	-	-	0.22 U	2.2 U	2.2 U	-	0.22 U	1.1 U	0.22 U	0.22 U	-	-
Isopropylbenzene (Cumene)	-	-	0.46 F	20	20	-	0.12 U	1.3 F	0.12 U	0.12 U	-	-
m,p-Xylene	-	-	1.4 F	330	320	-	0.18 U	6 F	0.18 U	0.18 U	-	-
Methylene Chloride	-	-	0.35 U	3.5 U	3.5 U	-	0.35 U	1.8 U	0.35 U	0.35 U	-	-
Naphthalene	-	-	0.38 F	45	43	-	0.15 U	0.79 F	0.15 U	0.15 U	-	-
n-Butylbenzene	-	-	0.17 F	6.8 F	6.5 F	-	0.12 U	0.6 U	0.12 U	0.12 U	-	-
n-Propylbenzene	-	-	0.54 F	24	24	-	0.15 U	0.75 U	0.15 U	0.15 U	-	-
o-Xylene	-	-	0.1 U	59	57	-	0.1 U	6.7	0.19 F	0.1 U	-	-
p-Cymene (p-Isopropyltoluene)	-	-	0.13 U	4.6 F	1.3 U	-	0.13 U	0.65 U	0.13 U	0.13 U	-	-
sec-Butylbenzene	-	-	0.2 F	4.1 F	4 F	-	0.12 U	0.6 U	0.12 U	0.16 F	-	-
Styrene	-	-	0.15 U	1.5 U	1.5 U	-	0.15 U	0.75 U	0.15 U	0.15 U	-	-
tert-Butyl Methyl Ether (MTBE)	-	-	1 U	10 U	10 U	-	1 U	5 U	1 U	1 U	-	-
tert-Butylbenzene	-	-	0.14 U	26	1.4 U	-	0.14 U	0.7 U	0.14 U	0.14 U	-	-
Tetrachloroethene (PCE)	-	-	1.3	15	16	-	3.8	1.9 U	0.38 U	0.38 U	-	-
Toluene	-	-	0.26 F	9.9 F	9.7 F	-	0.25 U	25	0.25 U	0.25 U	-	-
trans-1,2-Dichloroethene	-	-	0.13 F	1.1 U	1.1 U	-	0.11 U	0.55 U	0.18 F	0.19 F	-	-
trans-1,3-Dichloropropene	-	-	0.3 U	3 U	3 U	-	0.3 U	1.5 U	0.3 U	0.3 U	-	-
Trichloroethene (TCE)	-	-	8.4	13	15	-	5.4	12	18	7.4	-	-
Trichlorofluoromethane	-	-	0.23 U	2.3 U	2.3 U	-	0.23 U	1.2 U	0.23 U	0.23 U	-	-
Vinyl Chloride	-	-	0.12 U	1.2 U	1.2 U	-	0.12 U	0.6 U	0.12 U	0.12 U	-	-
GRO AK101 (µg/L)												
Petroleum Hydrocarbons C6-C10	8800	26000	-	-	-	-	-	-	-	-	8300	11000
DRO AK102 (µg/L)												
Petroleum Hydrocarbons C10-C28	1200 J	8200 J	-	-	-	-	-	-	-	-	2400 J	600
BTEX SW8021 (µg/L)												
Benzene	46	240	-	-	-	4300	-	-	-	-	25 J	40
Ethylbenzene	45	840	-	-	-	1500	-	-	-	-	110	480
m,p-Xylene	1200	2800	-	-	-	4500	-	-	-	-	360	1100
o-Xylene	230	1300	-	-	-	2000	-	-	-	-	28	35
Toluene	15 J	1500	-	-	-	15000	-	-	-	-	17 J	21 J
Xylenes, Total	1400	4100	-	-	-	6400	-	-	-	-	390	1100
Methane RSK175 (µg/L)												
Methane	3600	520	7	340	-	130	1.3 F	21	0.87 F	2.1 F	5300	5200
MNA Parameters (mg/L)												
Alkalinity, Total (as CaCO3)	293	224	410	537	-	256	260	422	317	166	254	357
Nitrate-Nitrite (as N)	0 M	0 M	3.8	1.3	-	0 M	1.1	0.01 U	0.01 U	0.03 F	0.011 M	0 M
Sulfide, Total	-	-	0.025 U	0.025 U	-	0.025 U	0.025 U	0.025 U	-	0.025 U	-	0.002 U
Manganese	4.2 M	2.8 M	2.9 B	3 B	-	12.8 M	0.028	7.4 B	2.6 B	3.1 B	9 M	10.4 M
Chloride	-	-	4	3.1	-	-	17.1	4.2	3	2	-	-
Sulfate (as SO4)	0.14 U	0.35 F	35.2	9.9	-	1	18.7	2.9	10.3	4.8	0.24 F	0.14 U
Dissolved Organic Carbon	-	-	4.4	18	-	-	1.4	11.2	6.5	7.9	-	-
Total Organic Carbon	-	-	4.4	18.3	-	-	1.3	11.6	7.4	7	-	-

Appendix F, Attachment F-1
All Results of Laboratory Analyses for Groundwater Samples, Zone 3, Round 1 (Basewide 2005)

Analyte	Fairchild Avenue							
	49WL-01	OU3MW-11	OU5MW-34	OU5MW-37	OU5MW-38	OU5MW-39	OU5MW-40	OU5MW-43
VOCs - SW8260 (µg/L)								
1,1,1,2-Tetrachloroethane	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
1,1,1-Trichloroethane	0.41 U	0.41 U	0.41 U	2.1	0.64 F	0.41 U	3.1	2.3
1,1,2,2-Tetrachloroethane	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
1,1,2-Trichloroethane	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
1,1-Dichloroethane	0.1 U	0.1 U	0.1 U	0.38 F	0.24 F	0.1 U	1.3	0.98 F
1,1-Dichloroethene	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
1,1-Dichloropropene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,2,3-Trichlorobenzene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,2,3-Trichloropropane	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2,4-Trichlorobenzene	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
1,2,4-Trimethylbenzene	39	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.14 F	0.12 U
1,2-Dibromo-3-chloropropane	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U
1,2-Dibromoethane (EDB)	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,2-Dichlorobenzene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,2-Dichloroethane	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,2-Dichloropropane	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
1,3,5-Trimethylbenzene	20	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,3-Dichlorobenzene	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
1,3-Dichloropropane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1-ChloroHexane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,2-Dichloropropane	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
2-Butanone (MEK)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Chlorotoluene	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
4-Chlorotoluene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4-Methyl-2-pentanone (MIBK)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Acetone	1 U	1 F	1 U	1 U	1 U	1.5 F	1 U	1 U
Benzene	1.2	0.15 F	0.13 U	0.13 U	0.13 U	0.26 F	0.13 U	0.13 U
Bromobenzene	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Bromochloromethane	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Bromodichloromethane	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Bromoform	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Bromomethane	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
Carbon Tetrachloride	0.15 U	0.15 U	0.28 F	0.15 U	0.56 F	0.15 U	0.15 U	0.15 U
Chlorobenzene	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
Chloroethane	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
Chloroform	3	0.12 F	0.82	0.4 F	1.1	0.12 U	0.19 F	0.22 F
Chloromethane	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
cis-1,2-Dichloroethylene	14	1.5	0.74 F	0.1 U	0.1 U	3.6	0.1 U	0.1 U

Appendix F, Attachment F-1
All Results of Laboratory Analyses for Groundwater Samples, Zone 3, Round 1 (Basewide 2005)

Analyte	Fairchild Avenue							
	49WL-01	OU3MW-11	OU5MW-34	OU5MW-37	OU5MW-38	OU5MW-39	OU5MW-40	OU5MW-43
cis-1,3-Dichloropropene	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Dibromochloromethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Dibromomethane	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
Dichlorodifluoromethane	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.47 F	0.16 U
Ethylbenzene	1.9	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Hexachlorobutadiene	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Isopropylbenzene (Cumene)	3.3	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
m,p-Xylene	20	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Methylene Chloride	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
Naphthalene	8.5	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.3 F	0.15 U
n-Butylbenzene	2.3	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
n-Propylbenzene	3.4	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
o-Xylene	15	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
p-Cymene (p-Isopropyltoluene)	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
sec-Butylbenzene	2.3	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
Styrene	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
tert-Butyl Methyl Ether (MTBE)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
tert-Butylbenzene	0.52 F	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Tetrachloroethene (PCE)	0.93 F	6.8	1.2	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
Toluene	0.81 F	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
trans-1,2-Dichloroethene	0.11 U	0.19 F	0.11 U	0.11 U	0.11 U	0.13 F	0.11 U	0.11 U
trans-1,3-Dichloropropene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Trichloroethene (TCE)	18	52	45	0.31 U	11	2.7	0.31 U	0.31 U
Trichlorofluoromethane	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
Vinyl Chloride	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
GRO AK101 (µg/L)								
Petroleum Hydrocarbons C6-C10	-	-	-	-	-	-	-	-
BTEX SW8021 (µg/L)								
Benzene	-	-	-	-	-	-	-	-
Ethylbenzene	-	-	-	-	-	-	-	-
m,p-Xylene	-	-	-	-	-	-	-	-
o-Xylene	-	-	-	-	-	-	-	-
Toluene	-	-	-	-	-	-	-	-
Xylenes, Total	-	-	-	-	-	-	-	-
Methane RSK175 (µg/L)								
Methane	130	4.9 F	0.22 U	0.22 U	0.22 U	4000	0.22 U	0.22 U
MNA Parameters (mg/L)								
Alkalinity, Total (as CaCO3)	174	355	257	153	267	447	157	148
Nitrate-Nitrite (as N)	0.045 M	4.2 M	4.3 M	7 M	4 M	0.019 F	5.7 M	5.3 M
Sulfide, Total	0.025 U	0.002 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
Manganese	1.4 M	3.1 M	0.0021 M	0.0067 M	0.013 M	7.1 B	0.31 M	0.82 M
Chloride	18.1	-	28.4	31.3	22.4	3.7	53.3	60.3
Sulfate (as SO4)	11.8	11.4	20.5	40.3	20.3	1.6	26.5	43.5
Dissolved Organic Carbon	3.1	2.4	2.1	1.6	1.7	4.5	1.5	3.2
Total Organic Carbon	2.6	2.5	1.8	1.5	1.9	4.3	1.2	3.3

Appendix F, Attachment F-1
All Results of Laboratory Analyses for Groundwater Samples, Zone 3, Round 1 (Basewide 2005)

Analyte	Kenney Avenue					LF02	LF59MW-03		
	403WL-01	OU5MW-36	OU5MW-41	OU5MW-42	OU5MW-42 (FD)	LF02SP-01	LF59MW-03	LF59MW-06R	LF59MW-06R (FD)
VOCs - SW8260 (µg/L)									
1,1,1,2-Tetrachloroethane	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
1,1,1-Trichloroethane	0.41 U	1.1	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U
1,1,2,2-Tetrachloroethane	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	12	0.37 U	0.37 U
1,1,2-Trichloroethane	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	1.1	0.31 U	0.31 U
1,1-Dichloroethane	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	1.1	0.35 F	0.36 F
1,1-Dichloroethene	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
1,1-Dichloropropene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,2,3-Trichlorobenzene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,2,3-Trichloropropane	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2,4-Trichlorobenzene	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
1,2,4-Trimethylbenzene	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
1,2-Dibromo-3-chloropropane	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U
1,2-Dibromoethane (EDB)	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,2-Dichlorobenzene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,2-Dichloroethane	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,2-Dichloropropane	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
1,3,5-Trimethylbenzene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,3-Dichlorobenzene	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
1,3-Dichloropropane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1-ChloroHexane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,2-Dichloropropane	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
2-Butanone (MEK)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Chlorotoluene	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
4-Chlorotoluene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4-Methyl-2-pentanone (MIBK)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Acetone	1.5 F	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Benzene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.18 F	0.37 F	0.38 F
Bromobenzene	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Bromochloromethane	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Bromodichloromethane	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Bromoform	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Bromomethane	0.2 F	0.15 F	0.17 F	0.13 F	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
Carbon Tetrachloride	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Chlorobenzene	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
Chloroethane	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.37 F	0.34 U	0.4 F
Chloroform	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
Chloromethane	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
cis-1,2-Dichloroethylene	0.16 F	0.1 U	0.1 U	0.21 F	0.21 F	0.1 U	3	0.86 F	0.82 F

Appendix F, Attachment F-1
All Results of Laboratory Analyses for Groundwater Samples, Zone 3, Round 1 (Basewide 2005)

Analyte	Kenney Avenue					LF02	LF59MW-03		
	403WL-01	OU5MW-36	OU5MW-41	OU5MW-42	OU5MW-42 (FD)	LF02SP-01	LF59MW-03	LF59MW-06R	LF59MW-06R (FD)
cis-1,3-Dichloropropene	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Dibromochloromethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Dibromomethane	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
Dichlorodifluoromethane	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	1.4	1.5 J	1.5 J
Ethylbenzene	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Hexachlorobutadiene	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Isopropylbenzene (Cumene)	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
m,p-Xylene	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Methylene Chloride	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
Naphthalene	0.19 F	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
n-Butylbenzene	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
n-Propylbenzene	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
o-Xylene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
p-Cymene (p-Isopropyltoluene)	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
sec-Butylbenzene	0.12 U	0.12 U	0.12 U	0.67 F	0.66 F	0.12 U	0.12 U	0.12 U	0.12 U
Styrene	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
tert-Butyl Methyl Ether (MTBE)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
tert-Butylbenzene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Tetrachloroethene (PCE)	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
Toluene	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
trans-1,2-Dichloroethene	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
trans-1,3-Dichloropropene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Trichloroethene (TCE)	35	4	0.46 F	0.8 F	0.73 F	0.37 F	8.2	0.37 F	0.37 F
Trichlorofluoromethane	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 F	0.23 U	0.23 U
Vinyl Chloride	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.13 F	0.13 F	0.12 F
GRO_AK101 (µg/L)									
Petroleum Hydrocarbons C6-C10	-	-	-	-	-	-	-	-	-
BTEX_SW8021 (µg/L)									
Benzene	-	-	-	-	-	-	-	-	-
Ethylbenzene	-	-	-	-	-	-	-	-	-
m,p-Xylene	-	-	-	-	-	-	-	-	-
o-Xylene	-	-	-	-	-	-	-	-	-
Toluene	-	-	-	-	-	-	-	-	-
Xylenes, Total	-	-	-	-	-	-	-	-	-
Methane_RSK175 (µg/L)									
Methane	34	0.6 F	3.8 F	55	-	-	270	290	-
MNA Parameters (mg/L)									
Alkalinity, Total (as CaCO3)	303	337	343	336	-	-	122	133	-
Nitrate-Nitrite (as N)	0.27	0.39	0.075	0.03 F	-	-	0.01 U	0.012 M	-
Sulfide, Total	0.026 F	0.025 U	0.025 U	0.025 U	-	-	0.025 U	0.025 U	-
Manganese	3.4 B	5.5 B	4.9 B	6.7 B	-	-	1.3 B	4.9 M	-
Chloride	24	12.6	17.9	21.8	-	-	6.3	5.2	-
Sulfate (as SO4)	10.6	15.9	14.9	12	-	-	19.4	24.6	-
Dissolved Organic Carbon	1.5	1.4	2.1	1.9	-	-	1.3	1.5	-
Total Organic Carbon	1.7	1.7	1.9	2.3	-	-	0.89 F	1.8	-

Appendix F, Attachment F-1
All Results of Laboratory Analyses for Groundwater Samples, Zone 3, Round 1 (Basewide 2005)

Analyte	Ship Creek		OU5MW-02			Slammer Avenue						ST48 Plume
	SC-08	SC-1B	OU3MW-02	OU5MW-02	OU5MW-44	1836WL-01	61WL-07	GW-4A	OU5MW-06	OU5MW-07	OU5MW-08	60WL-04R
VOCs - SW8260 (µg/L)												
1,1,1,2-Tetrachloroethane	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	-
1,1,1-Trichloroethane	0.41 U	0.41 U	0.51 F	0.57 F	0.75 F	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	-
1,1,2,2-Tetrachloroethane	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	3.2	0.37 U	0.37 U	0.37 U	2.5	2.9	-
1,1,2-Trichloroethane	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	-
1,1-Dichloroethane	0.1 U	0.1 U	0.52 F	0.5 F	0.35 F	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	-
1,1-Dichloroethene	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	-
1,1-Dichloropropene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	-
1,2,3-Trichlorobenzene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	-
1,2,3-Trichloropropane	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	-
1,2,4-Trichlorobenzene	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	-
1,2,4-Trimethylbenzene	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.15 F	0.12 U	0.12 U	0.12 U	0.12 U	-
1,2-Dibromo-3-chloropropane	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	-
1,2-Dibromoethane (EDB)	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	-
1,2-Dichlorobenzene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	-
1,2-Dichloroethane	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	-
1,2-Dichloropropane	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	-
1,3,5-Trimethylbenzene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	-
1,3-Dichlorobenzene	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	-
1,3-Dichloropropane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	-
1,4-Dichlorobenzene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	-
1-ChloroHexane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
2,2-Dichloropropane	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	-
2-Butanone (MEK)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
2-Chlorotoluene	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	-
4-Chlorotoluene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	-
4-Methyl-2-pentanone (MIBK)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
Acetone	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
Benzene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.15 F	0.51	0.13 U	0.13 U	0.13 U	-
Bromobenzene	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	-
Bromochloromethane	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	-
Bromodichloromethane	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	-
Bromoform	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	-
Bromomethane	0.11 F	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.19 F	0.08 U	0.12 F	0.08 U	0.08 U	-
Carbon Tetrachloride	0.15 U	0.15 U	0.15 U	0.15 U	0.38 F	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	-
Chlorobenzene	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	-
Chloroethane	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	-
Chloroform	0.12 U	0.12 U	0.26 F	0.46 F	1.7	0.35 F	2.3	0.12 U	1.3	0.29 F	0.16 F	-
Chloromethane	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	-
cis-1,2-Dichloroethylene	0.1 U	0.1 U	6	3.5	2.8	0.1 U	0.1 U	1.4	0.17 F	0.25 F	0.1 U	-

Appendix F, Attachment F-1
All Results of Laboratory Analyses for Groundwater Samples, Zone 3, Round 1 (Basewide 2005)

Analyte	Ship Creek		OU5MW-02			Slammer Avenue						ST48 Plume
	SC-08	SC-1B	OU3MW-02	OU5MW-02	OU5MW-44	1836WL-01	61WL-07	GW-4A	OU5MW-06	OU5MW-07	OU5MW-08	60WL-04R
cis-1,3-Dichloropropene	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	-
Dibromochloromethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	-
Dibromomethane	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	-
Dichlorodifluoromethane	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	-
Ethylbenzene	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	-
Hexachlorobutadiene	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	-
Isopropylbenzene (Cumene)	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.17 F	0.12 U	0.12 U	0.12 U	0.12 U	-
m,p-Xylene	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.26 F	0.18 U	0.18 U	0.18 U	0.18 U	-
Methylene Chloride	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	-
Naphthalene	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	-
n-Butylbenzene	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	-
n-Propylbenzene	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.67 F	0.15 U	0.15 U	0.15 U	0.15 U	-
o-Xylene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	-
p-Cymene (p-Isopropyltoluene)	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	-
sec-Butylbenzene	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	2.2	0.33 F	0.12 U	0.12 U	0.12 U	-
Styrene	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	-
tert-Butyl Methyl Ether (MTBE)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
tert-Butylbenzene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.32 F	0.14 U	0.14 U	0.14 U	-
Tetrachloroethene (PCE)	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	-
Toluene	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	-
trans-1,2-Dichloroethene	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	-
trans-1,3-Dichloropropene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	-
Trichloroethene (TCE)	0.31 U	0.31 U	13	9.8	25	13	0.81 F	4.4	18	16	3.5	-
Trichlorofluoromethane	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	-
Vinyl Chloride	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	-
GRO AK101 (µg/L)												
Petroleum Hydrocarbons C6-C10	-	-	-	-	-	-	-	-	-	-	-	280
BTEX SW8021 (µg/L)												
Benzene	-	-	-	-	-	-	-	-	-	-	-	0.18 U
Ethylbenzene	-	-	-	-	-	-	-	-	-	-	-	0.2 U
m,p-Xylene	-	-	-	-	-	-	-	-	-	-	-	0.37 U
o-Xylene	-	-	-	-	-	-	-	-	-	-	-	0.18 U
Toluene	-	-	-	-	-	-	-	-	-	-	-	0.18 U
Xylenes, Total	-	-	-	-	-	-	-	-	-	-	-	0.37 U
Methane RSK175 (µg/L)												
Methane	-	-	0.22 U	0.22 U	0.22 U	18	0.8 F	89	0.86 F	14	0.22 U	5.2
MNA Parameters (mg/L)												
Alkalinity, Total (as CaCO3)	-	-	225	202	180	145	149	229	158	153	114	245
Nitrate-Nitrite (as N)	-	-	4	5.3 M	3.7	8.7	1.2	0.091	3.1	5.4	11.8	17.1
Sulfide, Total	-	-	0.029 F	0.025 U	0.025 U	0.036 F	0.025 U	0.025 U	0.029 F	0.025 U	0.025 U	0.025 U
Manganese	-	-	0.62 B	0.0003 M	0.015 B	0.077 B	0.19 B	1.5 B	0.085 B	0.071 B	0.014 B	0.6
Chloride	-	-	17.4	31.7	28.9	6.8	5.4	9.5	13.2	3.2	4.6	-
Sulfate (as SO4)	-	-	19	20.3	24.1	26.9	29.3	9.8	28.6	25.3	31.1	26
Dissolved Organic Carbon	-	-	1.3	1.4	1.2	0.9 F	0.86 F	1.9	0.82 F	0.64 F	0.9 F	-
Total Organic Carbon	-	-	1.3	1.2	1	0.71 F	1.3	2.2	0.92 F	0.85 F	0.64 F	-

Appendix F, Attachment F-1
All Results of Laboratory Analyses for Groundwater Samples, Zone 3, Round 1 (Basewide 2005)

Analyte	SP1-02	Z3 Early Warning Line						
	SP1-02	76WL-01	OU5MW-01	OU5MW-01 (FD)	OU5MW-05	OU5MW-11	OU5MW-45	SP4/11-03
VOCs - SW8260 (µg/L)								
1,1,1,2-Tetrachloroethane	0.1 U	z	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
1,1,1-Trichloroethane	0.58 F	0.41 U	3.8	4	0.41 U	0.53 F	1.4	0.41 U
1,1,2,2-Tetrachloroethane	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
1,1,2-Trichloroethane	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
1,1-Dichloroethane	0.55 F	0.1 U	0.96 F	0.98 F	0.1 U	0.1 U	0.19 F	0.1 U
1,1-Dichloroethene	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
1,1-Dichloropropene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,2,3-Trichlorobenzene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,2,3-Trichloropropane	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2,4-Trichlorobenzene	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
1,2,4-Trimethylbenzene	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
1,2-Dibromo-3-chloropropane	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U
1,2-Dibromoethane (EDB)	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,2-Dichlorobenzene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,2-Dichloroethane	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,2-Dichloropropane	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
1,3,5-Trimethylbenzene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,3-Dichlorobenzene	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
1,3-Dichloropropane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1-ChloroHexane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,2-Dichloropropane	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
2-Butanone (MEK)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Chlorotoluene	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
4-Chlorotoluene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4-Methyl-2-pentanone (MIBK)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Acetone	1 U	2.1 F	2.4 F	2.7 F	3.2 F	2.3 F	1 U	1 U
Benzene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
Bromobenzene	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Bromochloromethane	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Bromodichloromethane	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Bromoform	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Bromomethane	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.1 F	0.08 U	0.08 U
Carbon Tetrachloride	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	4	0.15 U
Chlorobenzene	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
Chloroethane	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
Chloroform	0.16 F	6.8	0.28 F	0.28 F	0.12 U	0.12 U	1.3	0.12 U
Chloromethane	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
cis-1,2-Dichloroethylene	0.33 F	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U

Appendix F, Attachment F-1
All Results of Laboratory Analyses for Groundwater Samples, Zone 3, Round 1 (Basewide 2005)

Analyte	SP1-02	Z3 Early Warning Line						
	SP1-02	76WL-01	OU5MW-01	OU5MW-01 (FD)	OU5MW-05	OU5MW-11	OU5MW-45	SP4/11-03
cis-1,3-Dichloropropene	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Dibromochloromethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Dibromomethane	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
Dichlorodifluoromethane	0.48 F	0.22 F	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Ethylbenzene	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Hexachlorobutadiene	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Isopropylbenzene (Cumene)	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
m,p-Xylene	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Methylene Chloride	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
Naphthalene	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
n-Butylbenzene	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
n-Propylbenzene	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
o-Xylene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
p-Cymene (p-Isopropyltoluene)	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
sec-Butylbenzene	0.74 F	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
Styrene	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
tert-Butyl Methyl Ether (MTBE)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
tert-Butylbenzene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Tetrachloroethene (PCE)	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
Toluene	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
trans-1,2-Dichloroethene	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
trans-1,3-Dichloropropene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Trichloroethene (TCE)	33	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 F
Trichlorofluoromethane	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
Vinyl Chloride	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
GRO AK101 (µg/L)								
Petroleum Hydrocarbons C6-C10	-	-	-	-	-	-	-	-
BTEX SW8021 (µg/L)								
Benzene	-	-	-	-	-	-	-	-
Ethylbenzene	-	-	-	-	-	-	-	-
m,p-Xylene	-	-	-	-	-	-	-	-
o-Xylene	-	-	-	-	-	-	-	-
Toluene	-	-	-	-	-	-	-	-
Xylenes, Total	-	-	-	-	-	-	-	-
Methane RSK175 (µg/L)								
Methane	1.7 F	-	-	-	-	-	0.22 U	-
MNA Parameters (mg/L)								
Alkalinity, Total (as CaCO3)	184	-	-	-	-	-	130	-
Nitrate-Nitrite (as N)	2 M	-	-	-	-	-	3.3 M	-
Sulfide, Total	0.025 U	-	-	-	-	-	0.025 U	-
Manganese	0.63 M	-	-	-	-	-	0.0094 M	-
Chloride	17.1	-	-	-	-	-	17.6	-
Sulfate (as SO4)	21.1	-	-	-	-	-	17.8	-
Dissolved Organic Carbon	1.5	-	-	-	-	-	1.1	-
Total Organic Carbon	1.6	-	-	-	-	-	0.86 F	-

Appendix F, Attachment F-1
All Results of Laboratory Analyses for Groundwater Samples, Zone 3, Round 1 (Basewide 2005)

Analyte	Z3 Sentry Wells										
	401WL-03	401WL-04	NS3-02	OU5MW-09	OU5MW-10	OU5MW-12	OU5MW-13	OU5MW-14	OU5MW-31	OU5MW-33	SP2/6-05
VOCs - SW8260 (µg/L)											
1,1,1,2-Tetrachloroethane	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
1,1,1-Trichloroethane	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U
1,1,2,2-Tetrachloroethane	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
1,1,2-Trichloroethane	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
1,1-Dichloroethane	0.1 U	0.1 U	0.1 U	0.1 U	0.2 F	0.1 U	0.14 F	0.32 F	0.1 U	0.1 U	0.1 U
1,1-Dichloroethene	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
1,1-Dichloropropene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,2,3-Trichlorobenzene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,2,3-Trichloropropane	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2,4-Trichlorobenzene	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
1,2,4-Trimethylbenzene	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
1,2-Dibromo-3-chloropropane	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U
1,2-Dibromoethane (EDB)	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,2-Dichlorobenzene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,2-Dichloroethane	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,2-Dichloropropane	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
1,3,5-Trimethylbenzene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,3-Dichlorobenzene	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
1,3-Dichloropropane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1-ChloroHexane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,2-Dichloropropane	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
2-Butanone (MEK)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Chlorotoluene	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
4-Chlorotoluene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4-Methyl-2-pentanone (MIBK)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Acetone	3 F	2.5 F	2.7 F	2.6 F	2.7 F	3.2 F	8.2 F	2.6 F	1.8 F	1 U	1 U
Benzene	0.17 F	0.13 U	0.13 U	1.4	0.13 U	0.13 U	0.98	0.13 U	0.13 U	0.13 U	0.13 U
Bromobenzene	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Bromochloromethane	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Bromodichloromethane	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Bromoform	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Bromomethane	0.08 U	0.2 F	0.08 U	0.08 U	0.08 U	0.24 F	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
Carbon Tetrachloride	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Chlorobenzene	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
Chloroethane	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
Chloroform	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.16 F	0.12 U	0.12 U	0.12 U
Chloromethane	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
cis-1,2-Dichloroethylene	0.1 U	0.1 U	0.21 F	0.1 U	0.1 U	0.1 U	2.3	1.1	0.73 F	0.1 U	0.1 U

Appendix F, Attachment F-1
All Results of Laboratory Analyses for Groundwater Samples, Zone 3, Round 1 (Basewide 2005)

Analyte	Z3 Sentry Wells										
	401WL-03	401WL-04	NS3-02	OU5MW-09	OU5MW-10	OU5MW-12	OU5MW-13	OU5MW-14	OU5MW-31	OU5MW-33	SP2/6-05
cis-1,3-Dichloropropene	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Dibromochloromethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Dibromomethane	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
Dichlorodifluoromethane	0.16 U	0.16 U	0.18 F	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Ethylbenzene	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Hexachlorobutadiene	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Isopropylbenzene (Cumene)	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.16 F	0.12 U	0.12 U	0.12 U	0.12 U
m,p-Xylene	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.24 F	0.18 U	0.32 F	0.18 U	0.18 U	0.18 U
Methylene Chloride	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
Naphthalene	0.39 F	0.16 F	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
n-Butylbenzene	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
n-Propylbenzene	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
o-Xylene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
p-Cymene (p-Isopropyltoluene)	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
sec-Butylbenzene	0.26 F	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
Styrene	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
tert-Butyl Methyl Ether (MTBE)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
tert-Butylbenzene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Tetrachloroethene (PCE)	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
Toluene	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
trans-1,2-Dichloroethene	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.15 F	0.11 U	0.11 U	0.11 U	0.11 U
trans-1,3-Dichloropropene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Trichloroethene (TCE)	0.31 U	0.31 U	3.1	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	2.6	0.44 F	0.31 U
Trichlorofluoromethane	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
Vinyl Chloride	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
GRO AK101 (µg/L)											
Petroleum Hydrocarbons C6-C10	-	-	-	-	-	-	-	-	-	-	-
BTEX SW8021 (µg/L)											
Benzene	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	-	-	-	-	-	-	-	-	-	-	-
m,p-Xylene	-	-	-	-	-	-	-	-	-	-	-
o-Xylene	-	-	-	-	-	-	-	-	-	-	-
Toluene	-	-	-	-	-	-	-	-	-	-	-
Xylenes, Total	-	-	-	-	-	-	-	-	-	-	-
Methane RSK175 (µg/L)											
Methane	-	-	-	-	-	-	-	-	-	-	-
MNA Parameters (mg/L)											
Alkalinity, Total (as CaCO3)	-	-	-	-	-	-	-	-	-	-	-
Nitrate-Nitrite (as N)	-	-	-	-	-	-	-	-	-	-	-
Sulfide, Total	-	-	-	-	-	-	-	-	-	-	-
Manganese	-	-	-	-	-	-	-	-	-	-	-
Chloride	-	-	-	-	-	-	-	-	-	-	-
Sulfate (as SO4)	-	-	-	-	-	-	-	-	-	-	-
Dissolved Organic Carbon	-	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon	-	-	-	-	-	-	-	-	-	-	-

Attachment F-2 – Round 1 Field Parameters

This attachment provides a summary of field parameter results from the Round 1 samples.

Appendix F, Attachment F-2
All Field Parameter Results for Groundwater Samples, Zone 1, Round 1 (Basewide 2005)

Parameter	14MW-120	14MW-121	41755WL-01	41755WL-02	41755WL-05	41755WL-12	41755WL-16	41755WL-17
CO2	55 (mg/L)	40 (mg/L)	> 100 (mg/L)	95 (mg/L)	> 100 (mg/L)	> 100 (mg/L)	> 100 (mg/L)	> 100 (mg/L)
Conductivity	0.282 (mS/cm)	0.13 (mS/cm)	2.541 (mS/cm)	0.394 (mS/cm)	1236 (mS/cm)	9.075 (mS/cm)	0.169 (mS/cm)	0.274 (mS/cm)
DO	1.28 (mg/L)	1.74 (mg/L)	1.31 (mg/L)	0.45 (mg/L)	3.4 (mg/L)	4.74 (mg/L)	2.9 (mg/L)	1.08 (mg/L)
ORP	10 (mV)	-22.8 (mV)	-63.8 (mV)	63.6 (mV)	-83.2 (mV)	124.8 (mV)	19.4 (mV)	-1.3 (mV)
pH	6.48	6.37	6.38	6.23	6.71	5.66	6.25	6.67
PurgeVol	4 (gal)	4 (gal)	4.5 (gal)	5 (gal)	4.5 (gal)	6 (gal)	6 (gal)	7.5 (gal)
Soluble Fe	1.6 (mg/L)	4 (mg/L)	1.8 (mg/L)	1 (mg/L)	1.6 (mg/L)	0 (mg/L)	1.6 (mg/L)	1.8 (mg/L)
Temperature	6.32 (Deg. C.)	6.33 (Deg. C.)	13.13 (Deg. C.)	9.44 (Deg. C.)	7.37 (Deg. C.)	6.91 (Deg. C.)	6 (Deg. C.)	
Turbidity	16.2 (NTUs)	5.55 (NTUs)	273 (NTUs)	379 (NTUs)	5.47 (NTUs)	65 (NTUs)	458 (NTUs)	> 1000 (NTUs)

Parameter	56WL-04	56WL-05	56WL-08	56WL-09	OU6MW-46	OU6MW-63	OU6MW-91	ST41-10R
CO2	30 (mg/L)	25 (mg/L)	15 (mg/L)	15 (mg/L)	> 100 (mg/L)	> 100 (mg/L)	65 (mg/L)	> 100 (mg/L)
Conductivity	0.396 (mS/cm)	0.428 (mS/cm)	0.278 (mS/cm)	0.306 (mS/cm)	0.466 (mS/cm)	0.327 (mS/cm)	0.126 (mS/cm)	704 (mS/cm)
DO	0.31 (mg/L)	0.74 (mg/L)	9.68 (mg/L)	1.03 (mg/L)	0.25 (mg/L)	0.37 (mg/L)	10.17 (mg/L)	19.1 (mg/L)
ORP	-122.3 (mV)	-5.7 (mV)	16.3 (mV)	-21.1 (mV)	-117.1 (mV)	-89.2 (mV)	5.3 (mV)	-24.5 (mV)
pH	7.2	7.27	7.36	7.64	6.8	6.63	6.1	5.41
PurgeVol	5 (gal)	1.5 (gal)	6 (gal)	13 (gal)	17 (gal)	4 (gal)	6 (gal)	10 (gal)
Soluble Fe	1.8 (mg/L)	0 (mg/L)	0 (mg/L)	0 (mg/L)	3 (mg/L)	1 (mg/L)	0.6 (mg/L)	1.8 (mg/L)
Temperature	8.83 (Deg. C.)	8.54 (Deg. C.)	5.56 (Deg. C.)	6.95 (Deg. C.)	5.22 (Deg. C.)	5.85 (Deg. C.)	5.76 (Deg. C.)	8.5 (Deg. C.)
Turbidity	6.15 (NTUs)	6.83 (NTUs)	35.3 (NTUs)	198 (NTUs)	8.7 (NTUs)	20 (NTUs)	43.3 (NTUs)	152 (NTUs)

Appendix F, Attachment F-2
All Field Parameter Results for Groundwater Samples, Zone 2, Round 1 (Basewide 2005)

Parameter	43WL-08	43WL-11	FP-56	OU4MW-08R	OU4W-11	OU6MW-17	OU6MW-18
CO2	100 (mg/L)	100 (mg/L)		160 (mg/L)	200 (mg/L)	90 (mg/L)	35 (mg/L)
Conductivity	0.471 (mS/cm)	0.427 (mS/cm)	0.531 (mS/cm)	0.394 (mS/cm)	0.68 (mS/cm)	0.481 (mS/cm)	0.378 (mS/cm)
DO	0.47 (mg/L)	0.42 (mg/L)	0.28 (mg/L)	0.31 (mg/L)	0.35 (mg/L)	2.42 (mg/L)	1.8 (mg/L)
ORP	0.2 (mV)	-57 (mV)	-107.2 (mV)	-90.4 (mV)	-97.2 (mV)	-104.2 (mV)	11.5 (mV)
pH	6.52	6.3	6.97	6.58	6.75	7.02	7.08
PurgeVol	3 (gal)	3.5 (gal)	15 (gal)	9 (gal)	7 (gal)	6 (gal)	8.5 (gal)
Soluble Fe	3.2 (mg/L)	2.6 (mg/L)		4.2 (mg/L)	4.4 (mg/L)	5.6 (mg/L)	0.4 (mg/L)
Temperature	8.35 (Deg. C.)	7.25 (Deg. C.)	8.5 (Deg. C.)	7.37 (Deg. C.)	7.94 (Deg. C.)	5.22 (Deg. C.)	7.26 (Deg. C.)
Turbidity	9.52 (NTUs)	11.6 (NTUs)	4.65 (NTUs)	24.3 (NTUs)	6.35 (NTUs)	972 (NTUs)	7.3 (NTUs)

Parameter	OU6MW-90	SP7/10-04	W-4
CO2	50 (mg/L)	95 (mg/L)	15 (mg/L)
Conductivity	0.202 (mS/cm)	0.359 (mS/cm)	737 (mS/cm)
DO	3.89 (mg/L)	0.4 (mg/L)	3.1 (mg/L)
ORP	61.1 (mV)	-55 (mV)	69.4 (mV)
pH	6.68	6.58	6.38
PurgeVol	10.5 (gal)	4.5 (gal)	9 (gal)
Soluble Fe	0.2 (mg/L)	3.6 (mg/L)	> 100 (mg/L)
Temperature	4.26 (Deg. C.)	7.4 (Deg. C.)	6.85 (Deg. C.)
Turbidity	69.9 (NTUs)	13 (NTUs)	873 (NTUs)

Appendix F, Attachment F-2
All Field Parameter Results for Groundwater Samples, Zone 3, Round 1 (Basewide 2005)

Parameter	1836WL-01	403WL-01	49WL-01	61WL-07	GW-4A	LF59MW-03	LF59MW-06R	OU3MW-02	OU3MW-11
CO2	25 (mg/L)	40 (mg/L)	45 (mg/L)	35 (mg/L)	40 (mg/L)	35 (mg/L)	15 (mg/L)	50 (mg/L)	> 100 (mg/L)
Conductivity	0.276 (mS/cm)	662 (mS/cm)	0.296 (mS/cm)	0.255 (mS/cm)	0.305 (mS/cm)	0.186 (mS/cm)	0.209 (mS/cm)	0.424 (mS/cm)	810 (mS/cm)
DO	2.06 (mg/L)	3.18 (mg/L)	0.1 (mg/L)	1.48 (mg/L)	1.83 (mg/L)	0.69 (mg/L)	5.65 (mg/L)	0.43 (mg/L)	2.9 (mg/L)
ORP	30.3 (mV)	89.9 (mV)	-74.3 (mV)	-40.8 (mV)	-47.6 (mV)	43.8 (mV)	25.6 (mV)	-4.2 (mV)	53.6 (mV)
pH	6.71	7.2	7.02	7.68	6.69	6.19	6.07	7.43	6.6
PurgeVol	4 (gal)	5 (gal)	6.5 (gal)	4 (gal)	4 (gal)	21 (gal)	11 (gal)	6 (gal)	6 (gal)
Soluble Fe	0.2 (mg/L)	0 (mg/L)	3.4 (mg/L)	0.6 (mg/L)	1 (mg/L)	0 (mg/L)	1.8 (mg/L)	0 (mg/L)	0.6 (mg/L)
Temperature	7.61 (Deg. C.)	8.5 (Deg. C.)	9.97 (Deg. C.)	7.08 (Deg. C.)	7.59 (Deg. C.)	6.01 (Deg. C.)	5.98 (Deg. C.)	12.13 (Deg. C.)	6.86 (Deg. C.)
Turbidity	30.9 (NTUs)	7.08 (NTUs)	2.15 (NTUs)	5.44 (NTUs)	63.5 (NTUs)	35.1 (NTUs)	8.94 (NTUs)	8.49 (NTUs)	6.45 (NTUs)

Parameter	OU5MW-02	OU5MW-06	OU5MW-07	OU5MW-08	OU5MW-34	OU5MW-36	OU5MW-37	OU5MW-38	OU5MW-39
CO2	25 (mg/L)	30 (mg/L)	25 (mg/L)	35 (mg/L)	40 (mg/L)	40 (mg/L)	35 (mg/L)	9 (mg/L)	150 (mg/L)
Conductivity	0.413 (mS/cm)	0.307 (mS/cm)	0.256 (mS/cm)	0.263 (mS/cm)	0.432 (mS/cm)	701 (mS/cm)	0.398 (mS/cm)	0.441 (mS/cm)	0.573 (mS/cm)
DO	1.72 (mg/L)	2.84 (mg/L)	0.57 (mg/L)	4.48 (mg/L)	2.04 (mg/L)	0.34 (mg/L)	1.17 (mg/L)	1.98 (mg/L)	0.34 (mg/L)
ORP	30.1 (mV)	101.4 (mV)	21.7 (mV)	79.2 (mV)	23.1 (mV)	8 (mV)	33.3 (mV)	3.4 (mV)	-95.2 (mV)
pH	7	6.65	6.87	6.57	6.92	7.46	6.9	6.76	7.26
PurgeVol	9 (gal)	10 (gal)	10 (gal)	4 (gal)	10.2 (gal)	12 (gal)	7.5 (gal)	15 (gal)	8 (gal)
Soluble Fe	0 (mg/L)	0 (mg/L)	0 (mg/L)	0 (mg/L)	0 (mg/L)	0 (mg/L)	0 (mg/L)	0.2 (mg/L)	4.6 (mg/L)
Temperature	11.51 (Deg. C.)	9.4 (Deg. C.)	6.91 (Deg. C.)	8.17 (Deg. C.)	8.44 (Deg. C.)	7.95 (Deg. C.)	12.09 (Deg. C.)	10.31 (Deg. C.)	7.19 (Deg. C.)
Turbidity	5.49 (NTUs)	0.64 (NTUs)	0.73 (NTUs)	1.62 (NTUs)	24.2 (NTUs)	14.9 (NTUs)	50.1 (NTUs)	3.43 (NTUs)	23.9 (NTUs)

Parameter	OU5MW-40	OU5MW-41	OU5MW-42	OU5MW-43	OU5MW-44	OU5MW-45	SP1-02
CO2	40 (mg/L)	60 (mg/L)	75 (mg/L)	50 (mg/L)	30 (mg/L)	15 (mg/L)	30 (mg/L)
Conductivity	0.412 (mS/cm)	730 (mS/cm)	719 (mS/cm)	0.442 (mS/cm)	0.394 (mS/cm)	0.251 (mS/cm)	0.32 (mS/cm)
DO	0.34 (mg/L)	0.2 (mg/L)	0.17 (mg/L)	0.21 (mg/L)	3.26 (mg/L)	2.99 (mg/L)	0.15 (mg/L)
ORP	92.8 (mV)	5.4 (mV)	-73.6 (mV)	17.2 (mV)	33.9 (mV)	28.6 (mV)	9 (mV)
pH	6.9	7.38	7.03	6.9	7.22	7.15	7.01
PurgeVol	12 (gal)	8 (gal)	8 (gal)	9 (gal)	8 (gal)	6.5 (gal)	7 (gal)
Soluble Fe	0 (mg/L)	0 (mg/L)	2.2 (mg/L)	0 (mg/L)	0 (mg/L)	0 (mg/L)	0 (mg/L)
Temperature	10.49 (Deg. C.)	8.62 (Deg. C.)	8.85 (Deg. C.)	11.06 (Deg. C.)	11.72 (Deg. C.)	8.99 (Deg. C.)	8.99 (Deg. C.)
Turbidity	15.2 (NTUs)	49.6 (NTUs)	19.4 (NTUs)	22.1 (NTUs)	79.2 (NTUs)	46.8 (NTUs)	1.07 (NTUs)

Attachment F-3 – Round 2 Analytical Report

This attachment provides a summary of sample results from Round 2 of the 2005 Basewide Groundwater Monitoring Program.

Appendix F, Attachment F-3
All Results of Laboratory Analyses for Groundwater Samples, Zone 3, Round 2 (Basewide 2005)

Analyte	Z3 Early Warning Line					
	76WL-01	OU5MW-01	OU5MW-01 (FD)	OU5MW-05	OU5MW-11	SP4/11-03
VOCs - SW8260 (µg/L)						
1,1,1,2-Tetrachloroethane	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
1,1,1-Trichloroethane	0.72 M	3 M	3.4 M	0.41 U	0.75 M	0.41 U
1,1,2,2-Tetrachloroethane	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
1,1,2-Trichloroethane	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
1,1-Dichloroethane	0.1 U	0.63 F	0.75 F	0.1 U	0.1 U	0.1 U
1,1-Dichloroethene	0.36 U	0.73 M	0.81 M	0.36 U	0.36 U	0.36 U
1,1-Dichloropropene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,2,3-Trichlorobenzene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,2,3-Trichloropropane	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2,4-Trichlorobenzene	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
1,2,4-Trimethylbenzene	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
1,2-Dibromo-3-chloropropane	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U
1,2-Dibromoethane	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,2-Dichlorobenzene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,2-Dichloroethane	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,2-Dichloropropane	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
1,3,5-Trimethylbenzene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,3-Dichlorobenzene	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
1,3-Dichloropropane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1-Chlorohexane	1 U	1 U	1 U	1 U	1 U	1 U
2,2-Dichloropropane	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
2-Butanone	1 U	1 U	1 U	1 U	1 U	1 U
2-Chlorotoluene	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
4-Chlorotoluene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4-Isopropyltoluene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
4-Methyl-2-pentanone	1 U	1 U	1 U	1 U	1 U	1 U
Acetone	1 U	1 U	1 U	1 U	1 U	1 U
Benzene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
Bromobenzene	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Bromochloromethane	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Bromodichloromethane	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Bromoform	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Bromomethane	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U

Appendix F, Attachment F-3
All Results of Laboratory Analyses for Groundwater Samples, Zone 3, Round 2 (Basewide 2005)

Analyte	Z3 Early Warning Line					
	76WL-01	OU5MW-01	OU5MW-01 (FD)	OU5MW-05	OU5MW-11	SP4/11-03
Carbon tetrachloride	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Chlorobenzene	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
Chloroethane	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
Chloroform	3.8	0.42 F	0.44 F	0.12 U	0.12 U	0.12 U
Chloromethane	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
cis-1,2-Dichloroethene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
cis-1,3-Dichloropropene	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Dibromochloromethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Dibromomethane	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
Dichlorodifluoromethane	0.21 F	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Ethylbenzene	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Hexachlorobutadiene	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Isopropylbenzene	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
m,p-Xylene	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Methyl tert-butyl ether	1 U	1 U	1 U	1 U	1 U	1 U
Methylene chloride	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
Naphthalene	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
n-Butylbenzene	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
n-Propylbenzene	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
o-Xylene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
sec-Butylbenzene	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
Styrene	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
tert-Butylbenzene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Tetrachloroethene	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
Toluene	0.25 U	0.25 U	0.25 U	0.29 M	0.25 U	0.25 U
trans-1,2-Dichloroethene	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
trans-1,3-Dichloropropene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Trichloroethene	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.33 F
Trichlorofluoromethane	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
Vinyl chloride	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U

Appendix F, Attachment F-3
All Results of Laboratory Analyses for Groundwater Samples, Zone 3, Round 2 (Basewide 2005)

Analyte	Z3 Sentry Wells								
	401WL-03	401WL-04	NS3-02	OU5MW-09	OU5MW-10	OU5MW-10 (FD)	OU5MW-12	OU5MW-13	OU5MW-13 (FD)
VOCs - SW8260 (µg/L)									
1,1,1,2-Tetrachloroethane	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
1,1,1-Trichloroethane	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U
1,1,2,2-Tetrachloroethane	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
1,1,2-Trichloroethane	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
1,1-Dichloroethane	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.16 F	0.14 F
1,1-Dichloroethene	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
1,1-Dichloropropene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,2,3-Trichlorobenzene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,2,3-Trichloropropane	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2,4-Trichlorobenzene	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
1,2,4-Trimethylbenzene	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
1,2-Dibromo-3-chloropropane	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U
1,2-Dibromoethane	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,2-Dichlorobenzene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,2-Dichloroethane	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,2-Dichloropropane	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
1,3,5-Trimethylbenzene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,3-Dichlorobenzene	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
1,3-Dichloropropane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1-Chlorohexane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,2-Dichloropropane	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
2-Butanone	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Chlorotoluene	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
4-Chlorotoluene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4-Isopropyltoluene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
4-Methyl-2-pentanone	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Acetone	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Benzene	0.19 F	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.73	0.76
Bromobenzene	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Bromochloromethane	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Bromodichloromethane	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Bromoform	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Bromomethane	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U

Appendix F, Attachment F-3
All Results of Laboratory Analyses for Groundwater Samples, Zone 3, Round 2 (Basewide 2005)

Analyte	Z3 Sentry Wells								
	401WL-03	401WL-04	NS3-02	OU5MW-09	OU5MW-10	OU5MW-10 (FD)	OU5MW-12	OU5MW-13	OU5MW-13 (FD)
Carbon tetrachloride	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Chlorobenzene	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
Chloroethane	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
Chloroform	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
Chloromethane	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
cis-1,2-Dichloroethene	0.1 U	0.1 U	0.39 F	0.1 U	0.1 U	0.1 U	0.1 U	2.7	2.7
cis-1,3-Dichloropropene	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Dibromochloromethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Dibromomethane	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
Dichlorodifluoromethane	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Ethylbenzene	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Hexachlorobutadiene	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Isopropylbenzene	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
m,p-Xylene	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Methyl tert-butyl ether	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methylene chloride	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
Naphthalene	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
n-Butylbenzene	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
n-Propylbenzene	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
o-Xylene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
sec-Butylbenzene	0.13 F	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
Styrene	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
tert-Butylbenzene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Tetrachloroethene	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
Toluene	0.25 U	0.25 U	0.25 U	0.25 U	0.41 M	0.36 M	0.25 U	0.25 U	0.25 U
trans-1,2-Dichloroethene	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.14 F	0.15 F
trans-1,3-Dichloropropene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Trichloroethene	0.31 U	0.31 U	3.9	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Trichlorofluoromethane	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
Vinyl chloride	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U

Appendix F, Attachment F-3
All Results of Laboratory Analyses for Groundwater Samples, Zone 3, Round 2 (Basewide 2005)

Analyte	Z3 Sentry Wells (cont.)			
	OU5MW-14	OU5MW-31	OU5MW-33	SP2/6-05
VOCs - SW8260 (µg/L)				
1,1,1,2-Tetrachloroethane	0.1 U	0.1 U	0.1 U	0.1 U
1,1,1-Trichloroethane	0.41 U	0.41 U	0.41 U	0.41 U
1,1,2,2-Tetrachloroethane	0.37 U	0.37 U	0.37 U	0.37 U
1,1,2-Trichloroethane	0.31 U	0.31 U	0.31 U	0.31 U
1,1-Dichloroethane	0.35 F	0.1 U	0.26 F	0.1 U
1,1-Dichloroethene	0.36 U	0.36 U	0.36 U	0.36 U
1,1-Dichloropropene	0.14 U	0.14 U	0.14 U	0.14 U
1,2,3-Trichlorobenzene	0.14 U	0.14 U	0.14 U	0.14 U
1,2,3-Trichloropropane	0.3 U	0.3 U	0.3 U	0.3 U
1,2,4-Trichlorobenzene	0.23 U	0.23 U	0.23 U	0.23 U
1,2,4-Trimethylbenzene	0.12 U	0.12 U	0.12 U	0.12 U
1,2-Dibromo-3-chloropropane	0.95 U	0.95 U	0.95 U	0.95 U
1,2-Dibromoethane	0.22 U	0.22 U	0.22 U	0.22 U
1,2-Dichlorobenzene	0.14 U	0.14 U	0.14 U	0.14 U
1,2-Dichloroethane	0.22 U	0.22 U	0.22 U	0.22 U
1,2-Dichloropropane	0.15 U	0.15 U	0.15 U	0.15 U
1,3,5-Trimethylbenzene	0.14 U	0.14 U	0.14 U	0.14 U
1,3-Dichlorobenzene	0.11 U	0.11 U	0.11 U	0.11 U
1,3-Dichloropropane	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	0.13 U	0.13 U	0.13 U	0.13 U
1-Chlorohexane	1 U	1 U	1 U	1 U
2,2-Dichloropropane	0.13 U	0.13 U	0.13 U	0.13 U
2-Butanone	1 U	1 U	1 U	1 U
2-Chlorotoluene	0.26 U	0.26 U	0.26 U	0.26 U
4-Chlorotoluene	0.1 U	0.1 U	0.1 U	0.1 U
4-Isopropyltoluene	0.13 U	0.13 U	0.13 U	0.13 U
4-Methyl-2-pentanone	1 U	1 U	1 U	1 U
Acetone	1 U	1 U	1 U	1 U
Benzene	0.13 U	0.13 U	0.13 U	0.13 U
Bromobenzene	0.18 U	0.18 U	0.18 U	0.18 U
Bromochloromethane	0.31 U	0.31 U	0.31 U	0.31 U
Bromodichloromethane	0.14 U	0.14 U	0.14 U	0.14 U
Bromoform	0.1 U	0.1 U	0.1 U	0.1 U
Bromomethane	0.08 U	0.08 U	0.08 U	0.08 U

Appendix F, Attachment F-3
All Results of Laboratory Analyses for Groundwater Samples, Zone 3, Round 2 (Basewide 2005)

Analyte	Z3 Sentry Wells (cont.)			
	OU5MW-14	OU5MW-31	OU5MW-33	SP2/6-05
Carbon tetrachloride	0.15 U	0.15 U	0.15 U	0.15 U
Chlorobenzene	0.12 U	0.12 U	0.12 U	0.12 U
Chloroethane	0.34 U	0.34 U	0.34 U	0.34 U
Chloroform	0.17 F	0.12 U	0.12 U	0.12 U
Chloromethane	0.25 U	0.25 U	0.25 U	0.25 U
cis-1,2-Dichloroethene	1.1	0.85 F	0.1 U	0.1 U
cis-1,3-Dichloropropene	0.22 U	0.22 U	0.22 U	0.22 U
Dibromochloromethane	0.4 U	0.4 U	0.4 U	0.4 U
Dibromomethane	0.21 U	0.21 U	0.21 U	0.21 U
Dichlorodifluoromethane	0.16 U	0.16 U	0.16 U	0.16 U
Ethylbenzene	0.27 U	0.27 U	0.27 U	0.27 U
Hexachlorobutadiene	0.22 U	0.22 U	0.22 U	0.22 U
Isopropylbenzene	0.12 U	0.12 U	0.12 U	0.12 U
m,p-Xylene	0.18 U	0.18 U	0.18 U	0.18 U
Methyl tert-butyl ether	1 U	1 U	1 U	1 U
Methylene chloride	0.35 U	0.35 U	0.35 U	0.35 U
Naphthalene	0.15 U	0.15 U	0.15 U	0.15 U
n-Butylbenzene	0.12 U	0.12 U	0.12 U	0.12 U
n-Propylbenzene	0.15 U	0.15 U	0.15 U	0.15 U
o-Xylene	0.1 U	0.1 U	0.1 U	0.1 U
sec-Butylbenzene	0.12 U	0.12 U	0.12 U	0.12 U
Styrene	0.15 U	0.15 U	0.15 U	0.15 U
tert-Butylbenzene	0.14 U	0.14 U	0.14 U	0.14 U
Tetrachloroethene	0.38 U	0.38 U	0.38 U	0.38 U
Toluene	0.25 U	0.64 M	0.25 U	0.25 U
trans-1,2-Dichloroethene	0.11 U	0.11 U	0.11 U	0.11 U
trans-1,3-Dichloropropene	0.3 U	0.3 U	0.3 U	0.3 U
Trichloroethene	0.31 U	1.1	0.46 F	0.31 U
Trichlorofluoromethane	0.23 U	0.23 U	0.23 U	0.23 U
Vinyl chloride	0.12 U	0.12 U	0.12 U	0.12 U

Attachment F-4 – Laboratory Analytical Reports

This attachment provides a CD containing laboratory analytical reports for Round 1 and Round 2 of the 2005 Basewide Groundwater Monitoring Program.

APPENDIX G – CERTIFICATES OF DISPOSAL

This appendix contains the certificates of disposal for all investigation derived waste generated during the 2005 Basewide Groundwater Monitoring Program. Attachment G-1 contains the certificate of disposal for purge water generated during Round 1 of the Free Product Evaluation. Attachment G-2 contains the certificate of disposal for purge water generated during Round 2 of the Free Product Evaluation. Attachment G-3 contains analytical results and the certificate of disposal for sludge contained within a concrete decontamination pad at the Contractor's staging yard.

Attachment G-1 – Round 1 Free Product Evaluation Certificate of Disposal

This attachment contains the certificate of disposal for investigation derived waste generated during Round 1 of the Free Product Evaluation conducted during the 2005 Basewide Groundwater Monitoring Program.

EMERALD ALASKA INC
www.emeraldnw.com

102405

Invoice Number: 6115

EMERALD ALASKA, INC.
9010 E MARGINAL WAY S
SUITE 200
SEATTLE, WA 98108
Tel. (907) 258-1558 Fax No. (907) 258-3049
Federal ID No. 26-0025054

Customer ID: ROY1050

Invoice Date: 10/19/05

Page: 1

Bill-to Address:
WESTON SOLUTIONS, INC.
425 "G" STREET
SUITE 300
ANCHORAGE, AK 99501-3450

Site Address:
ELMENDORF AIR FORCE BASE
ALASKA

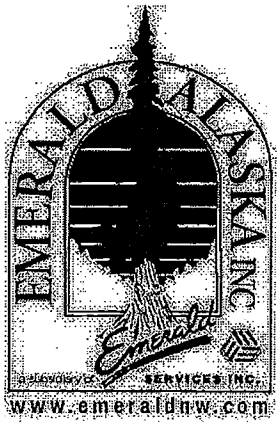
Delivery Order No. AK03665

P.O. Number LAURA WILSON
Payment Term: NET30

Shipment Date	Manifest (Line) No.	Description	Quantity	Unit	Unit Price	Total Price
09/28/05	03665	BENZENE WATER	1	DRUM 0	144.25	144.25
09/28/05		FUEL SURCHARGE - 4.3%	1	EACH	6.2	6.20

200077.043.067.0003 ok to pay
Sharon T. Sullivan
IDW Profile Sampling/Disposal

Amount Subject to Sales Tax	Amount Exempt from Sales Tax		
0.00	150.45	Subtotal:	150.45
		Sales Tax:	0.00
		Total:	150.45



Emerald Alaska Inc
800 East Ship Creek
Anchorage, AK 99501
(907) 258-1558 fax (907) 258-3049

Certificate of Disposal / Recycle

Generator: UNITED STATES AIR FORCE
6326 ARCTIC WARRIOR DRIVE
ELMENDORF AIR FORCE BASE, AK 99506+

WESTON SOLUTIONS
425 G STREET, SUITE 300
ANCHORAGE, AK 99501-3450

Document: Manifest: 03665

Date of Disposal / Recycle: SEPTEMBER 30, 2005

Line Item	Description	Profile Number	Quantity
1a	Waste Environmentally Hazardous Substances, Liquid, N.O.S. (Benzene) 9 UN3082 PGIII (Benzene Contaminated Water for Treatment)	AK08000	2 gallons

Roxanne Pedersen, Facility Operator October 17, 2005

Attachment G-2 – Round 2 Free Product Evaluation Certificate of Disposal

This attachment contains the certificate of disposal for investigation derived waste generated during Round 2 of the Free Product Evaluation conducted during the 2005 Basewide Groundwater Monitoring Program.

EMERALD ALASKA, INC.
9010 E MARGINAL WAY S
SUITE 200
SEATTLE, WA 98108
Tel. (907) 258-1558 Fax No. (907) 258-3049
Federal ID No. 26-0025054

Invoice Number: 6430

Customer ID: ROY1050

Invoice Date: 12/27/05

Page: 1

Bill-to Address:
WESTON SOLUTIONS, INC.
425 "G" STREET
SUITE 300
ANCHORAGE, AK 99501-3450

Site Address:
WESTON SOLUTIONS, INC.
CUSTOMER DROP OFF
2020 VIKING DR
ANCHORAGE, AK 995[illegible]

REC'D DEC 29 2005

Delivery Order No. AK03898

P.O. Number
Payment Term: NET30

Shipment Date	Manifest (Line) No.	Description	Quantity	Unit	Unit Price	Total Price
12/05/05	03898	BENZENE WATER	1	DRUM 0	114.25	114.25

ok to pay Sharon J. Sullivan 2/1/06
Charge to 20077.043.067.0003
Disposal Fees

Amount Subject to Sales Tax	Amount Exempt from Sales Tax		
0.00	114.25	Subtotal:	114.25
		Sales Tax:	0.00
		Total:	114.25

*** IN CASE OF EMERGENCY CALL 1-800-424-9300 *** 95-914-AK03898 (RP)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039.

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. AK8570028649038 98 — Manifest Document No.
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

GENERATOR

3. Generator's Name and Mailing Address
ELMENDORF AFB
6326 ARCTIC WARRIOR DRIVE
ELMENDORF, AFB, AK 99506

4. Generator's Phone (907) 552-5249

A. State Manifest Document Number
B. State Generator's ID

5. Transporter 1 Company Name: EMERALD SERVICES, INC.
6. US EPA ID Number: WAD058364647
C. State Transporter's ID
D. Transporter's Phone (206) 832-3000

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
EMERALD ALASKA, INC.
2020 VIKING DRIVE
ANCHORAGE, AK 99501
10. US EPA ID Number: AKR000004184
G. State Facility's ID
H. Facility's Phone (907) 258-1558

	11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	RQ, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (BENZENE), 9, UN3082, PG-III, RQ=10, ERG#171	X	1	DF	3	G	D018
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
a) AK08000 WATER CONTAMINATED WITH BENZENE [H082]

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; **OR**, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: Laura M. Wilson — Signature — Month Day Year: 12 05 05

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Bryan Hoffmann — Signature — Month Day Year: 12 05 05

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Bryan Hoffmann — Signature — Month Day Year: 12 05 05

Style CF 17 LABELMASTER® (800) 621-5808 www.labelmaster.com

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

PRINTED ON RECYCLED PAPER USING SOYBEAN INK — PRINTED WITH SOY INK

ORIGINAL-RETURN TO GENERATOR

Emerald Alaska, Inc. RCRA Land Disposal Restriction Notification Form EZ

(This form is applicable to characteristic (D codes), listed waste (F, K, U and P codes), Contaminated Soil and Hazardous Debris)

Generator: ELMENDORF AIR FORCE BASE
e #: AK08000

US EPA ID #: AK8 570 028 649
Manifest #: 03898

The wastes identified in this form are subject to the land disposal restrictions of 40CFR Part 268. The wastes do not meet the treatment standards specified in Part 268 , Subpart D or do not meet the applicable prohibition levels specified in 268.32 or RCRA Section 3004(d). Pursuant to 40CFR 256.7(a), the required information applicable to each waste is identified below (check all boxes that apply):

Treatability Group: ☐ Wastewater ☑ Non-Wastewater

(Wastewaters containing less than 1% filterable solids and less than 1% Total Organic Carbon)

- ☐ **D001 Ignitable (except for high TOC) managed in non-CWA/non-CWA equivalent non-Class I SDWA systems** (Complete Form U.C. Underlying hazardous constituents need not be addressed if the waste is to be combusted or recovered.)
- ☐ D001 Ignitable (except for high TOC) managed in CWA/CWA-equivalent /Class I SDWA systems
- ☐ D001 High TOC Ignitable (Greater than 10% organic carbon)
- ☐ **D002 Corrosive managed in non-CWA/non-CWA-equivalent/non Class I SDWA systems (Complete Form U.C.)**
- ☐ D002 Corrosive managed in CWA/CWA-equivalent /Class I systems
- ☐ D003 Reactive Sulfides based on 261.23(a)(5)
- ☐ D003 Reactive Cyanides based on 261.23(a)(5)
- ☐ **D003 Water Reactives based on 261.23(a)(2), (3), and (4) managed in non-CWA/non-CWA-equivalent/non-Class I SDWA systems (Complete Form U.C.)**
- ☐ D003 Water Reactives based on 261.23(a)(2), (3) and (4) managed in CWA/CWA-equivalent /Class I SDWA systems
- ☐ D003 Other Reactives based on 261.23(a)(1)

If D004 – D043 boxes are checked, complete and attach Form U.C. to address underlying hazardous constituents (unless these wastes are to be managed in a CWA/CWA-equivalent/Class I SDWA system):

- ☐ D004 Arsenic
- ☐ D005 Barium
- ☐ D006 Cadmium
- ☐ D007 Chromium
- ☐ D008 Lead
- ☐ D009 Mercury
- ☐ D010 Selenium
- ☐ D011 Silver
- ☐ D012 Endrin
- ☐ D013 Lindane
- ☐ D014 Methoxychlor
- ☐ D015 Toxaphene
- ☐ D016 2,4-D
- ☐ D017 2,4,5-TP (Silvex)
- ☑ D018 Benzene
- ☐ D019 Carbon Tetrachloride
- ☐ D020 Chlordane
- ☐ D021 Chlorobenzene
- ☐ D022 Chloroform
- ☐ D023 *o*-Cresol
- ☐ D024 *m*-Cresol
- ☐ D025 *p*-Cresol
- ☐ D026 Cresols (Total)
- ☐ D027 *p*-Dichlorobenzene
- ☐ D028 1,2-Dichloroethane
- ☐ D029 1,1-Dichloroethylene
- ☐ D030 2,4-Dinitrotoluene
- ☐ D031 Heptachlor
- ☐ D032 Hexachlorobenzene
- ☐ D033 Hexachlorobutadiene
- ☐ D034 Hexachloroethane
- ☐ D035 Methyl Ethyl Ketone
- ☐ D036 Nitrobenzene
- ☐ D037 Pentachlorophenol
- ☐ D038 Pyridine
- ☐ D039 Tetrachloroethylene
- ☐ D040 Trichloroethylene
- ☐ D041 2,4,5-Trichlorophenol
- ☐ D042 2,4,6-Trichlorophenol
- ☐ D043 Vinyl Chloride

In addition, the following wastes are included in this shipment:

- ☐ F001 – F005 Spent Solvents. (If this box is checked, complete F001-F005 section on the back of this form. Check the hazardous number(s) that apply and identify the constituents likely to be present in the waste.)
- ☐ **F039 Multisource Leachate. If this box is checked, complete and attach Form U.C. to identify the individual constituents.**
- ☐ Contaminated Soil that meets the LDR standard found in 268 Subpart D (If this box is checked, complete the Contaminated Soil section on the back of this form.)
- ☐ Hazardous Debris (If this box is checked, complete the Hazardous Debris section on the back of this form.)

If this shipment carries additional waste codes that are not addressed above, identify them here:

EPA Waste Code	Subcategory (if any)	EPA Waste Code	Subcategory (if any)	EPA Waste Code	Subcategory (if any)

F001 – F005 Spent Solvents
Check the box (es) that apply. Identify the individual constituents likely to be present.

Hazardous Waste Description	Regulated Hazardous Constituents	
☐ F001 Spent Halogenated Solvents used in Degreasing	☐ Carbon Tetrachloride ☐ Tetrachloroethylene ☐ Trichloroethylene ☐ Trichloromonofluoromethane	☐ Methylene Chloride ☐ 1,1,1-Trichloroethane ☐ 1,1,2-Trichloro-1,2,2-trifluoroethane
☐ F002 Spent Halogenated Solvents	☐ Carbon Tetrachloride ☐ Tetrachloroethylene ☐ Trichloroethylene ☐ Trichloromonofluoromethane	☐ Methylene Chloride ☐ 1,1,1-Trichloroethane ☐ 1,1,2-Trichloro-1,2,2-trifluoroethane
☐ F003 Spent Non-Halogenated Solvents	☐ Acetone ☐ Cyclohexanone * ☐ Ethyl Benzene ☐ Methanol * ☐ Xylenes (Total)	☐ *n*-Butyl Alcohol ☐ Ethyl Acetate ☐ Ethyl Ether ☐ Methyl Isobutyl Ketone
☐ F004 Spent Non-Halogenated Solvents	☐ *m*-Cresol ☐ *p*-Cresol ☐ Nitrobenzene	☐ *o*-Cresol ☐ Cresol Mixed Isomers (Cresylic Acid)
☐ F005 Spent Non-Halogenated Solvents	☐ Benzene ☐ 2-Ethoxyethanol ☐ Methyl Ethyl Ketone ☐ Pyridine	☐ Carbon Disulfide * ☐ Isobutyl Alcohol ☐ 2-Nitropropane ☐ Toluene

** Treatment standards for carbon disulfide, cyclohexanone and methanol non-wastewaters are based on the TCLP and apply to spent solvent non-wastewaters containing only one, two or all three of these constituents. The treatment standards for these three constituents do no apply when any of the other F001-F005 constituents are present in the waste.*

Contaminated Soil Waste

- ☐ This shipment contain contaminated soil with listed hazardous waste and does not exhibit a characteristic of hazardous waste and is subject to the soil treatment standards as provided by 268.49(c) of the universal treatment standards.
- ☐ This shipment contains contaminated soil which does not contain hazardous waste and does not exhibit a characteristic of hazardous waste and complies with the soil treatment standards as provided by 268.49(c) of the universal treatment standards.

Hazardous Debris

The definition of "debris" and "hazardous debris" are in 40CFR 268.2. Per 268.45, hazardous debris must be treated for each "contaminant subject to treatment." To determine these, look up the waste code in 268.40 and list the regulated hazardous constituents for each code. Check the box that applies.

- ☐ This shipment contains hazardous debris that will be treated to comply with the alternative treatment standards of 268.45 (e.g. macroencapsulation or abrasive blasting).
- ☐ This shipment contains hazardous debris that will be treated to meet the 258.40 treatment standards for the waste(s) contaminating the debris.

The contaminants subject to treatment for this debris are identified below:

EPA Waste Code	Subcategory (if any)	Contaminants Subject to Treatment

Emerald Alaska, Inc. RCRA Land Disposal Restriction Notification Form UC

Generator: ELMENDORF AIR FORCE BASE
Profile #: AK08000

US EPA ID #: AK8 570 028 649
Manifest #: 03898

In accordance with 40CFR 268.7(a), the underlying hazardous constituents must be addressed in the waste Per 268.2(l), "underlying hazardous constituents means any constituent listed in 268.48, Table UTS Universal Treatment Standards, except zinc, which can reasonably be expected to be present at the point of generation of the hazardous waste, at a concentration above the constituent-specific UTS treatment standard." Refer to Form EZ (attached) for the waste code(s), Treatability group, and Subcategory applicable to this waste. This form may also be used to identify F039 constituents.

Please check the appropriate box:

☐ This waste includes F039 multisource leachate. The individual constituents likely to be present are identified below:

_____ _____
_____ _____
_____ _____

☑ This shipment includes D001[other than (1) High TOC ignitables or (2) other ignitables that will be combusted or recovered], D002, D003 [other than (1) Reactive Sulfides or (2) Reactive Cyanides or (3) Other Reactives] and/or D004-D043 Characteristic Wastes. The wastes will not be managed in CWA/CWA-equivalent/Class I SDWA Systems. The underlying hazardous constituents must be addressed for this waste.

☐ I have reviewed the UTS list of 268.48 and 268.7(a), and I have determined that there are no underlying hazardous constituents reasonably expected to be present in this waste.

☑ I have reviewed the UTS list of 268.48 and 268.7(a), and I have determined that underlying hazardous constituents are present in this waste. The underlying hazardous constituents are identified below:

TOLUENE
ETHYLBENZENE
XYLENE

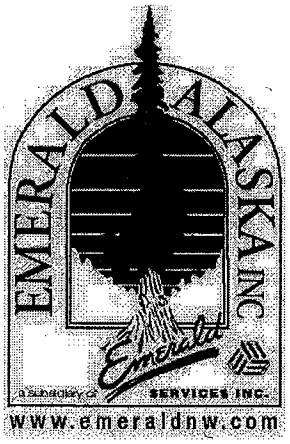
The determination of underlying hazardous constituents was based on:

☑ Generators Knowledge of the waste
☐ Analysis

Generator's Certification:

I certify that I have personally examined and am familiar with the waste through analysis and testing, or through knowledge of the waste to support this certification. I certify that as an authorized representative of the generator named above, all the information submitted in this notification is true and correct to the best of my knowledge.

Printed Name Laura M. Wilson
Const. Foreman III
Signature Laura M. Wilson Date 12/5/05



Emerald Alaska Inc
800 East Ship Creek
Anchorage, AK 99501
(907) 258-1558 fax (907) 258-3049

Certificate of Disposal / Recycle

Generator: UNITED STATES AIR FORCE
6326 ARCTIC WARRIOR DRIVE
ELMENDORF AIR FORCE BASE, ALASKA 99506

WESTON SOLUTIONS, INC.
425 'G' STREET, SUITE 300
ANCHORAGE, AK 99501-3450

EPA ID: AK8 570 028 649

Document: Manifest: 03898

Date of Disposal / Recycle: DECEMBER 5, 2005

Line Item	Description	Profile Number	Quantity
1a	Waste Environmentally Hazardous Substances, Liquid, N.O.S. (Benzene) 9 UN3082 PGIII (Benzene Contaminated Water for Treatment)	AK08000	1 DM 3 gallons

Roxanne Pedersen

Roxanne Pedersen, Facility Operator

December 15, 2005

Attachment G-3 – Concrete Pad Sludge Certificate of Disposal

This attachment contains analytical results and the certificate of disposal for investigation derived waste sludge generated during maintenance of a concrete decontamination pad at the Contractor's staging yard.

Laboratory Analysis Report

SGS ENVIRONMENTAL SERVICES--ALASKA
WESTERN SOLUTIONS
SGS Laboratory Delivery Group Number: TA5-I0-P538 Page 1

DATE: 10/04/05 COC: 039693

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in an attached case narrative. Release of the data contained in the hard copy data package has been authorized by the Laboratory Manager or designee, as verified by the following signature.

A case narrative is not required.

Reference	Sample Description	Sampled	Laboratory Number
1056331	BGW05-01SS	09/26/2005	TA5-I0-P538-001
1056331	GRAB LEACHATE	09/26/2005	TA5-I0-P538-002
1056331	GRAB LEACHATE MATRIX SPIKE	09/26/2005	TA5-I0-P538-003
1056331	BGW05-01WS	09/26/2005	TA5-I0-P538-004
BGW05-01WS	GRAB LEACHATE	09/26/2005	TA5-I0-P538-005
BGW05-01WS	GRAB LEACHATE MATRIX SPIKE	09/26/2005	TA5-I0-P538-006
TRIP BLANK	GRAB	09/26/2005	TA5-I0-P538-007

Submitted by,

Barbara Hensley

Barbara Hensley
Project Manager

This report includes a total of 16 pages.

SGS Environmental Services Inc.
Laboratory Division: Charleston Laboratory

Bryan Arnold
SGS ENVIRONMENTAL SERVICES--ALASKA

Laboratory Number TA5-I0-P538-001 Page 1

1056331
BGW05-01SS

COC 039693
Date Sampled 09/26/05 12:00
Date Received 09/27/05 09:25

Type F Matrix SOIL
Sampled by CLIENT

% Solids 82

100405 1707 Ver. 4.0.198

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S	Method	Date/Time/Anl	DilF
DIESEL	68334-30-5	32		24	mg/Kg	Y	AK102/10	10/04/05 15:03 tea	10
SURROGATE RESULTS									
5a ANDROSTANE		1.6		4.9	mg/Kg	Y	AK102/10	10/04/05 15:03 tea	10
5a ANDROSTANE		67			% REC	Y	AK102/10	10/04/05 15:03 tea	10
ARSENIC	7440-38-2	19		0.92	mg/Kg	Y	SW6010B	09/29/05 13:32 JWJ	1.0
BARIUM	7440-39-3	190		0.18	mg/Kg	Y	SW6010B	09/29/05 13:32 JWJ	1.0
CADMIUM	7440-43-9	0.59		0.18	mg/Kg	Y	SW6010B	09/29/05 13:32 JWJ	1.0
CHROMIUM	7440-47-3	68		0.92	mg/Kg	Y	SW6010B	09/29/05 13:32 JWJ	1.0
LEAD	7439-92-1	160		0.92	mg/Kg	Y	SW6010B	09/29/05 13:32 JWJ	1.0
SELENIUM	7782-49-2	2.5		0.92	mg/Kg	Y	SW6010B	09/29/05 13:32 JWJ	1.0
SILVER	7440-22-4	ND	U	0.92	mg/Kg	Y	SW6010B	09/29/05 13:32 JWJ	1.0
MERCURY, TOTAL	7439-97-6	ND	U	0.12	mg/kg	Y	SW7471A	10/04/05 17:12 RSS	1.0
BENZENE	71-43-2	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
TOLUENE	108-88-3	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
ETHYLBENZENE	100-41-4	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
XYLENES (TOTAL)	1330-20-7	ND	U	12	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
METHYLENE CHLORIDE	75-09-2	15		6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
ACETONE	67-64-1	ND	U	12	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
CARBON DISULFIDE	75-15-0	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
1,1-DICHLOROETHENE	75-35-4	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
1,1-DICHLOROETHANE	75-34-3	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
1,2-DICHLOROETHENE	540-59-0	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
CHLOROFORM	67-66-3	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
1,2-DICHLOROETHANE	107-06-2	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
2-BUTANONE	78-93-3	ND	U	12	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
1,1,1-TRICHLOROETHANE	71-55-6	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
CARBON TETRACHLORIDE	56-23-5	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
BROMODICHLOROMETHANE	75-27-4	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
1,2-DICHLOROPROPANE	78-87-5	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
CIS-1,3-DICHLOROPROPENE	10061-01-5	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
TRICHLOROETHENE	79-01-6	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
DIBROMOCHLOROMETHANE	124-48-1	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0

Bryan Arnold
SGS ENVIRONMENTAL SERVICES--ALASKA

Laboratory Number TA5-I0-P538-001

1056331
BGW05-01SS

COC 039693
Date Sampled 09/26/05 12:00
Date Received 09/27/05 09:25

Type F Matrix SOIL
Sampled by CLIENT

% Solids 82

100405 1707 Ver. 4.0.198

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S	Method	Date/Time/Anl	DilF
1,1,2-TRICHLOROETHANE	79-00-5	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
METHYL T-BUTYL ETHER	1634-04-4	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
TRANS-1,3-DICHLOROPROPENE	10061-02-6	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
BROMOFORM	75-25-2	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
4-METHYL-2-PENTANONE	108-10-1	ND	U	12	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
2-HEXANONE	591-78-6	ND	U	12	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
TETRACHLOROETHENE	127-18-4	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
1,1,2,2-TETRACHLOROETHANE	79-34-5	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
CHLOROBENZENE	108-90-7	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
STYRENE	100-42-5	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
1,1,1,2-TETRACHLOROETHANE	630-20-6	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
1,2,3-TRICHLOROPROPANE	96-18-4	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	ND	U	610	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
1,2-DIBROMOETHANE	106-93-4	ND	U	610	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
1,4-DIOXANE	123-91-1	ND	U	240	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
2-CHLORO-1,3-BUTADIENE	126-99-8	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
2-CHLOROETHYL VINYL ETHER	110-75-8	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
3-CHLOROPROPENE	107-05-1	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
ACETONITRILE	75-05-8	ND	U	120	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
ACROLEIN	107-02-8	ND	U	120	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
ACRYLONITRILE	107-13-1	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
DICHLORODIFLUOROMETHANE	75-71-8	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
DIBROMOMETHANE	74-95-3	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
ETHYL METHACRYLATE	97-63-2	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
IODOMETHANE	74-88-4	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
ISOBUTANOL	78-83-1	ND	U	120	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
METHACRYLONITRILE	126-98-7	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
METHYL METHACRYLATE	80-62-6	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
PROPIONITRILE	107-12-0	ND	U	12	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
TRANS-1,2-DICHLOROETHENE	156-60-5	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
TRANS-1,4-DICHLORO-2-BUTENE	110-57-6	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
TRICHLOROFLUOROMETHANE	75-69-4	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
VINYL ACETATE	108-05-4	ND	U	12	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
VINYL CHLORIDE	75-01-4	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
CHLOROMETHANE	74-87-3	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0

Bryan Arnold
SGS ENVIRONMENTAL SERVICES--ALASKA

Laboratory Number TA5-I0-P538-001 Page 3

1056331
BGW05-01SS

COC 039693
Date Sampled 09/26/05 12:00
Date Received 09/27/05 09:25

Type F Matrix SOIL
Sampled by CLIENT

% Solids 82

100405 1707 Ver. 4.0.198

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S	Method	Date/Time/Anl	DilF
BROMOMETHANE	74-83-9	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
CHLOROETHANE	75-00-3	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
1,2,2-TRICHLOROTRIFLUOROETHANE	76-13-1	ND	U	12	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
1,2,3-TRICHLOROBENZENE	87-61-6	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
1,2,4-TRICHLOROBENZENE	120-82-1	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
1,2,4-TRIMETHYLBENZENE	95-63-6	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
1,2-DICHLOROBENZENE	95-50-1	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
1,3,5-TRIMETHYLBENZENE	108-67-8	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
1,3-DICHLOROBENZENE	541-73-1	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
1,3-DICHLOROPROPANE	142-28-9	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
1,4-DICHLOROBENZENE	106-46-7	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
1,4-DIFLUOROBENZENE	540-36-3	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
2,2-DICHLOROPROPANE	594-20-7	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
CHLOROPRENE	126-99-8	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
2-CHLOROTOLUENE	95-49-8	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
2-NITROPROPANE	79-46-9	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
4-CHLOROTOLUENE	106-43-4	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
ACETALDEHYDE	75-07-0	ND	U	240	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
BROMOBENZENE	108-86-1	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
BIS(CHLOROMETHYL)ETHER	542-88-1	ND	U	12	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
BROMOCHLOROMETHANE	74-97-5	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
CYCLOHEXANONE	108-94-1	ND	U	63	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
ETHYL ETHER	60-29-7	ND	U	12	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
ETHANOL	64-17-5	1500		63	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
HEXACHLOROBUTADIENE	87-68-3	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
ISOPROPANOL	67-63-0	ND	U	16	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
ISOPROPYLBENZENE	98-82-8	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
NAPHTHALENE	91-20-3	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
PENTACHLOROETHANE	76-01-7	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
CIS-1,2-DICHLOROETHENE	156-59-2	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
N-BUTANOL	71-36-3	ND	U	240	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
N-BUTYLBENZENE	104-51-8	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
N-PROPYLBENZENE	103-65-1	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
P-ISOPROPYLTOLUENE	99-87-6	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
SEC-BUTYLBENZENE	135-98-8	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0

Bryan Arnold
SGS ENVIRONMENTAL SERVICES--ALASKA

Laboratory Number TA5-I0-P538-001 Page 4

1056331
BGW05-01SS

COC 039693
Date Sampled 09/26/05 12:00
Date Received 09/27/05 09:25

Type F Matrix SOIL
Sampled by CLIENT

% Solids 82

100405 1707 Ver. 4.0.198

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S	Method	Date/Time/Anl	DilF
TERT-BUTYLBENZENE	98-06-6	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
ETHYL ACETATE	141-78-6	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
PROPYL ACETATE	109-60-4	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
ISOPROPYL ACETATE	108-21-4	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
METHYL ACETATE	79-20-9	ND	U	12	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
CYCLOHEXANE	110-82-7	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
METHYLCYCLOHEXANE	108-87-2	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
1,1-DICHLOROPROPENE	563-58-6	ND	U	6.1	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
TERT-BUTANOL	75-65-00	ND	U	240	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
SURROGATE RESULTS									
TOLUENE-D8	2037-26-5	370		1.6	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
TOLUENE-D8	2037-26-5	94			% REC	Y	SW8260B	09/28/05 16:46 jac	1.0
4-BROMOFLUOROBENZENE	460-00-4	1200		1.6	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
4-BROMOFLUOROBENZENE	460-00-4	103			% REC	Y	SW8260B	09/28/05 16:46 jac	1.0
1,2-DICHLOROETHANE-D4	17060-07-0	470		1.6	ug/Kg	Y	SW8260B	09/28/05 16:46 jac	1.0
1,2-DICHLOROETHANE-D4	17060-07-0	118			% REC	Y	SW8260B	09/28/05 16:46 jac	1.0

TCLP Leachate Procedure for Volatiles

SGS Environmental Services Inc.
Laboratory Division: Charleston Laboratory

Bryan Arnold
SGS ENVIRONMENTAL SERVICES--ALASKA

Laboratory Number TA5-I0-P538-002 Page 1

1056331
GRAB LEACHATE

COC 039693
Date Sampled 09/26/05 12:00
Date Received 09/27/05 09:25

Type L Matrix LEACHATE
Sampled by CLIENT

% Solids 82

100405 1707 Ver. 4.0.198

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
BENZENE, TCLP	71-43-2	ND	U	0.10	mg/L	SW8260B	09/28/05 17:32 jac	100
CARBON TETRACHLORIDE, TCLP	56-23-5	ND	U	0.10	mg/L	SW8260B	09/28/05 17:32 jac	100
CHLOROBENZENE, TCLP	108-90-7	ND	U	0.10	mg/L	SW8260B	09/28/05 17:32 jac	100
CHLOROFORM, TCLP	67-66-3	ND	U	0.10	mg/L	SW8260B	09/28/05 17:32 jac	100
1,2-DICHLOROETHANE, TCLP	107-06-2	ND	U	0.10	mg/L	SW8260B	09/28/05 17:32 jac	100
1,1-DICHLOROETHENE, TCLP	75-35-4	ND	U	0.10	mg/L	SW8260B	09/28/05 17:32 jac	100
2-BUTANONE, TCLP	78-93-3	ND	U	0.20	mg/L	SW8260B	09/28/05 17:32 jac	100
TETRACHLOROETHENE, TCLP	127-18-4	ND	U	0.10	mg/L	SW8260B	09/28/05 17:32 jac	100
TRICHLOROETHENE, TCLP	79-01-6	ND	U	0.10	mg/L	SW8260B	09/28/05 17:32 jac	100
VINYL CHLORIDE, TCLP	75-01-4	ND	U	0.10	mg/L	SW8260B	09/28/05 17:32 jac	100

SGS Environmental Services Inc.
Laboratory Division: Charleston Laboratory

Bryan Arnold — Laboratory Number TA5-I0-P538-003 — Page 1
SGS ENVIRONMENTAL SERVICES--ALASKA

1056331 — COC 039693
GRAB LEACHATE MATRIX SPIKE — Date Sampled 09/26/05 12:00
Date Received 09/27/05 09:25

Type LMS Matrix LEACHATE
Sampled by CLIENT — % Solids 82 — 100405 1707 Ver. 4.0.198

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
BENZENE, TCLP	71-43-2	1.4		0.10	mg/L	SW8260B	09/28/05 17:55 jac	100
BENZENE, TCLP	71-43-2	95			% REC	SW8260B	09/28/05 17:55 jac	100
CARBON TETRACHLORIDE, TCLP	56-23-5	1.8		0.10	mg/L	SW8260B	09/28/05 17:55 jac	100
CARBON TETRACHLORIDE, TCLP	56-23-5	119			% REC	SW8260B	09/28/05 17:55 jac	100
CHLOROBENZENE, TCLP	108-90-7	1.5		0.10	mg/L	SW8260B	09/28/05 17:55 jac	100
CHLOROBENZENE, TCLP	108-90-7	98			% REC	SW8260B	09/28/05 17:55 jac	100
CHLOROFORM, TCLP	67-66-3	1.6		0.10	mg/L	SW8260B	09/28/05 17:55 jac	100
CHLOROFORM, TCLP	67-66-3	106			% REC	SW8260B	09/28/05 17:55 jac	100
1,2-DICHLOROETHANE, TCLP	107-06-2	1.7		0.10	mg/L	SW8260B	09/28/05 17:55 jac	100
1,2-DICHLOROETHANE, TCLP	107-06-2	113			% REC	SW8260B	09/28/05 17:55 jac	100
1,1-DICHLOROETHENE, TCLP	75-35-4	1.6		0.10	mg/L	SW8260B	09/28/05 17:55 jac	100
1,1-DICHLOROETHENE, TCLP	75-35-4	107			% REC	SW8260B	09/28/05 17:55 jac	100
2-BUTANONE, TCLP	78-93-3	1.4		0.20	mg/L	SW8260B	09/28/05 17:55 jac	100
2-BUTANONE, TCLP	78-93-3	90			% REC	SW8260B	09/28/05 17:55 jac	100
TETRACHLOROETHENE, TCLP	127-18-4	1.2		0.10	mg/L	SW8260B	09/28/05 17:55 jac	100
TETRACHLOROETHENE, TCLP	127-18-4	82			% REC	SW8260B	09/28/05 17:55 jac	100
TRICHLOROETHENE, TCLP	79-01-6	1.6		0.10	mg/L	SW8260B	09/28/05 17:55 jac	100
TRICHLOROETHENE, TCLP	79-01-6	108			% REC	SW8260B	09/28/05 17:55 jac	100
VINYL CHLORIDE, TCLP	75-01-4	1.4		0.10	mg/L	SW8260B	09/28/05 17:55 jac	100
VINYL CHLORIDE, TCLP	75-01-4	91			% REC	SW8260B	09/28/05 17:55 jac	100

SGS Environmental Services Inc.
Laboratory Division: Charleston Laboratory

Bryan Arnold
SGS ENVIRONMENTAL SERVICES--ALASKA

Laboratory Number TA5-I0-P538-004

1056331
BGW05-01WS

COC 039693
Date Sampled 09/26/05 12:00
Date Received 09/27/05 09:25

Type F Matrix WATER
Sampled by CLIENT

100405 1707 Ver. 4.0.198

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
ARSENIC, TOTAL	7440-38-2	ND	U	0.0050	mg/L	SW6010B	09/30/05 18:48 JWJ	1.0
BARIUM, TOTAL	7440-39-3	0.12		0.0010	mg/L	SW6010B	09/30/05 18:48 JWJ	1.0
CADMIUM, TOTAL	7440-43-9	0.0029		0.0010	mg/L	SW6010B	09/30/05 18:48 JWJ	1.0
CHROMIUM, TOTAL	7440-47-3	0.024		0.0050	mg/L	SW6010B	09/30/05 18:48 JWJ	1.0
LEAD, TOTAL	7439-92-1	0.037		0.0050	mg/L	SW6010B	09/30/05 18:48 JWJ	1.0
SELENIUM, TOTAL	7782-49-2	0.0064		0.0050	mg/L	SW6010B	09/30/05 18:48 JWJ	1.0
SILVER, TOTAL	7440-22-4	ND	U	0.0050	mg/L	SW6010B	09/30/05 18:48 JWJ	1.0
MERCURY, TOTAL	7439-97-6	ND	U	0.00020	mg/L	SW7470A	09/29/05 17:18 RLW	1.0
TCLP Leachate Procedure for Volatiles								
BENZENE	71-43-2	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
TOLUENE	108-88-3	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
ETHYLBENZENE	100-41-4	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
XYLENES (TOTAL)	1330-20-7	ND	U	1.0	ug/L	SW8260B	09/28/05 17:09 jac	1.0
METHYLENE CHLORIDE	75-09-2	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
ACETONE	67-64-1	ND	U	5.0	ug/L	SW8260B	09/28/05 17:09 jac	1.0
CARBON DISULFIDE	75-15-0	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
1,1-DICHLOROETHENE	75-35-4	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
1,1-DICHLOROETHANE	75-34-3	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
1,2-DICHLOROETHENE	540-59-0	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
CHLOROFORM	67-66-3	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
1,2-DICHLOROETHANE	107-06-2	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
2-BUTANONE	78-93-3	ND	U	1.0	ug/L	SW8260B	09/28/05 17:09 jac	1.0
1,1,1-TRICHLOROETHANE	71-55-6	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
CARBON TETRACHLORIDE	56-23-5	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
BROMODICHLOROMETHANE	75-27-4	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
1,2-DICHLOROPROPANE	78-87-5	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
CIS-1,3-DICHLOROPROPENE	10061-01-5	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
TRICHLOROETHENE	79-01-6	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
DIBROMOCHLOROMETHANE	124-48-1	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
1,1,2-TRICHLOROETHANE	79-00-5	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
METHYL T-BUTYL ETHER	1634-04-4	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
TRANS-1,3-DICHLOROPROPENE	10061-02-6	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0

Bryan Arnold
SGS ENVIRONMENTAL SERVICES--ALASKA

Laboratory Number TA5-I0-P538-004

1056331
BGW05-01WS

COC 039693
Date Sampled 09/26/05 12:00
Date Received 09/27/05 09:25

Type F Matrix WATER
Sampled by CLIENT

100405 1707 Ver. 4.0.198

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
BROMOFORM	75-25-2	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
4-METHYL-2-PENTANONE	108-10-1	ND	U	1.0	ug/L	SW8260B	09/28/05 17:09 jac	1.0
2-HEXANONE	591-78-6	ND	U	1.0	ug/L	SW8260B	09/28/05 17:09 jac	1.0
TETRACHLOROETHENE	127-18-4	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
1,1,2,2-TETRACHLOROETHANE	79-34-5	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
CHLOROBENZENE	108-90-7	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
STYRENE	100-42-5	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
1,1,1,2-TETRACHLOROETHANE	630-20-6	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
1,2,3-TRICHLOROPROPANE	96-18-4	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
1,2-DIBROMOETHANE	106-93-4	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
1,4-DIOXANE	123-91-1	ND	U	20	ug/L	SW8260B	09/28/05 17:09 jac	1.0
2-CHLORO-1,3-BUTADIENE	126-99-8	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
2-CHLOROETHYL VINYL ETHER	110-75-8	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
3-CHLOROPROPENE	107-05-1	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
ACETONITRILE	75-05-8	ND	U	10	ug/L	SW8260B	09/28/05 17:09 jac	1.0
ACROLEIN	107-02-8	ND	U	20	ug/L	SW8260B	09/28/05 17:09 jac	1.0
ACRYLONITRILE	107-13-1	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
DICHLORODIFLUOROMETHANE	75-71-8	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
DIBROMOMETHANE	74-95-3	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
ETHYL METHACRYLATE	97-63-2	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
IODOMETHANE	74-88-4	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
ISOBUTANOL	78-83-1	ND	U	20	ug/L	SW8260B	09/28/05 17:09 jac	1.0
METHACRYLONITRILE	126-98-7	ND	U	1.0	ug/L	SW8260B	09/28/05 17:09 jac	1.0
METHYL METHACRYLATE	80-62-6	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
PROPIONITRILE	107-12-0	ND	U	1.0	ug/L	SW8260B	09/28/05 17:09 jac	1.0
TRANS-1,2-DICHLOROETHENE	156-60-5	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
TRANS-1,4-DICHLORO-2-BUTENE	110-57-6	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
TRICHLOROFLUOROMETHANE	75-69-4	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
VINYL ACETATE	108-05-4	ND	U	1.0	ug/L	SW8260B	09/28/05 17:09 jac	1.0
VINYL CHLORIDE	75-01-4	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
CHLOROMETHANE	74-87-3	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
BROMOMETHANE	74-83-9	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
CHLOROETHANE	75-00-3	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
1,1-DICHLOROPROPENE	563-58-6	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0

Bryan Arnold
SGS ENVIRONMENTAL SERVICES--ALASKA

Laboratory Number TA5-I0-P538-004

1056331
BGW05-01WS

COC 039693
Date Sampled 09/26/05 12:00
Date Received 09/27/05 09:25

Type F Matrix WATER
Sampled by CLIENT

100405 1707 Ver. 4.0.198

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
1,2,2-TRICHLOROTRIFLUOROETHANE	76-13-1	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
1,2,3-TRICHLOROBENZENE	87-61-6	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
1,2,4-TRICHLOROBENZENE	120-82-1	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
1,2,4-TRIMETHYLBENZENE	95-63-6	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
1,2-DICHLOROBENZENE	95-50-1	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
1,3,5-TRIMETHYLBENZENE	108-67-8	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
1,3-DICHLOROBENZENE	541-73-1	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
1,3-DICHLOROPROPANE	142-28-9	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
1,4-DICHLOROBENZENE	106-46-7	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
1,4-DIFLUOROBENZENE	540-36-3	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
2,2-DICHLOROPROPANE	594-20-7	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
CHLOROPRENE	126-99-8	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
2-CHLOROTOLUENE	95-49-8	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
2-NITROPROPANE	79-46-9	ND	U	5.0	ug/L	SW8260B	09/28/05 17:09 jac	1.0
4-CHLOROTOLUENE	106-43-4	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
ALLYL CHLORIDE	107-05-1	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
ACETALDEHYDE	75-07-0	ND	U	8.0	ug/L	SW8260B	09/28/05 17:09 jac	1.0
BROMOBENZENE	108-86-1	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
BIS(CHLOROMETHYL)ETHER	542-88-1	ND	U	0.40	ug/L	SW8260B	09/28/05 17:09 jac	1.0
BROMOCHLOROMETHANE	74-97-5	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
CYCLOHEXANONE	108-94-1	ND	U	4.0	ug/L	SW8260B	09/28/05 17:09 jac	1.0
ETHYL ETHER	60-29-7	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
ETHANOL	64-17-5	ND	U	20	ug/L	SW8260B	09/28/05 17:09 jac	1.0
HEXACHLOROBUTADIENE	87-68-3	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
ISOPROPANOL	67-63-0	ND	U	2.0	ug/L	SW8260B	09/28/05 17:09 jac	1.0
ISOPROPYLBENZENE	98-82-8	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
NAPHTHALENE	91-20-3	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
PENTACHLOROETHANE	76-01-7	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
CIS-1,2-DICHLOROETHENE	156-59-2	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
M,P-XYLENE	136777612	ND	U	1.0	ug/L	SW8260B	09/28/05 17:09 jac	1.0
N-BUTANOL	71-36-3	ND	U	20	ug/L	SW8260B	09/28/05 17:09 jac	1.0
N-BUTYLBENZENE	104-51-8	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
N-PROPYLBENZENE	103-65-1	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
O-XYLENE	95-47-6	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
P-ISOPROPYLTOLUENE	99-87-6	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0

Bryan Arnold
SGS ENVIRONMENTAL SERVICES--ALASKA

Laboratory Number TA5-I0-P538-004

1056331
BGW05-01WS

COC 039693
Date Sampled 09/26/05 12:00
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Type F Matrix WATER
Sampled by CLIENT

100405 1707 Ver. 4.0.198

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
SEC-BUTYLBENZENE	135-98-8	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
TERT-BUTYLBENZENE	98-06-6	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
ETHYL ACETATE	141-78-6	ND	U	0.50	ug/L	SW8260B	09/28/05 17:09 jac	1.0
PROPYL ACETATE	109-60-4	ND	U	5.0	ug/L	SW8260B	09/28/05 17:09 jac	1.0
ISOPROPYL ACETATE	108-21-4	ND	U	5.0	ug/L	SW8260B	09/28/05 17:09 jac	1.0
TERT-BUTANOL	75-65-00	ND	U	20	ug/L	SW8260B	09/28/05 17:09 jac	1.0
SURROGATE RESULTS								
TOLUENE-D8	2037-26-5	24		1.0	ug/L	SW8260B	09/28/05 17:09 jac	1.0
TOLUENE-D8	2037-26-5	97			% REC	SW8260B	09/28/05 17:09 jac	1.0
4-BROMOFLUOROBENZENE	460-00-4	25		1.0	ug/L	SW8260B	09/28/05 17:09 jac	1.0
4-BROMOFLUOROBENZENE	460-00-4	101			% REC	SW8260B	09/28/05 17:09 jac	1.0
1,2-DICHLOROETHANE-D4	17060-07-0	28		1.0	ug/L	SW8260B	09/28/05 17:09 jac	1.0
1,2-DICHLOROETHANE-D4	17060-07-0	114			% REC	SW8260B	09/28/05 17:09 jac	1.0

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Laboratory Number TA5-I0-P538-005

BGW05-01WS
GRAB LEACHATE

COC 039693
Date Sampled 09/26/05 12:00
Date Received 09/27/05 09:25

Type L Matrix LEACHATE
Sampled by CLIENT

100405 1707 Ver. 4.0.198

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
BENZENE, TCLP	71-43-2	ND	U	0.10	mg/L	SW8260B	09/28/05 18:17 jac	100
CARBON TETRACHLORIDE, TCLP	56-23-5	ND	U	0.10	mg/L	SW8260B	09/28/05 18:17 jac	100
CHLOROBENZENE, TCLP	108-90-7	ND	U	0.10	mg/L	SW8260B	09/28/05 18:17 jac	100
CHLOROFORM, TCLP	67-66-3	ND	U	0.10	mg/L	SW8260B	09/28/05 18:17 jac	100
1,2-DICHLOROETHANE, TCLP	107-06-2	ND	U	0.10	mg/L	SW8260B	09/28/05 18:17 jac	100
1,1-DICHLOROETHENE, TCLP	75-35-4	ND	U	0.10	mg/L	SW8260B	09/28/05 18:17 jac	100
2-BUTANONE, TCLP	78-93-3	ND	U	0.20	mg/L	SW8260B	09/28/05 18:17 jac	100
TETRACHLOROETHENE, TCLP	127-18-4	ND	U	0.10	mg/L	SW8260B	09/28/05 18:17 jac	100
TRICHLOROETHENE, TCLP	79-01-6	ND	U	0.10	mg/L	SW8260B	09/28/05 18:17 jac	100
VINYL CHLORIDE, TCLP	75-01-4	ND	U	0.10	mg/L	SW8260B	09/28/05 18:17 jac	100

SGS Environmental Services Inc.
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Laboratory Number TA5-I0-P538-006 Page 1

BGW05-01WS
GRAB LEACHATE MATRIX SPIKE

COC 039693
Date Sampled 09/26/05 12:00
Date Received 09/27/05 09:25

Type LMS Matrix LEACHATE
Sampled by CLIENT

100405 1707 Ver. 4.0.198

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
BENZENE, TCLP	71-43-2	1.4		0.10	mg/L	SW8260B	09/28/05 18:40 jac	100
BENZENE, TCLP	71-43-2	93			% REC	SW8260B	09/28/05 18:40 jac	100
CARBON TETRACHLORIDE, TCLP	56-23-5	1.7		0.10	mg/L	SW8260B	09/28/05 18:40 jac	100
CARBON TETRACHLORIDE, TCLP	56-23-5	115			% REC	SW8260B	09/28/05 18:40 jac	100
CHLOROBENZENE, TCLP	108-90-7	1.4		0.10	mg/L	SW8260B	09/28/05 18:40 jac	100
CHLOROBENZENE, TCLP	108-90-7	95			% REC	SW8260B	09/28/05 18:40 jac	100
CHLOROFORM, TCLP	67-66-3	1.6		0.10	mg/L	SW8260B	09/28/05 18:40 jac	100
CHLOROFORM, TCLP	67-66-3	108			% REC	SW8260B	09/28/05 18:40 jac	100
1,2-DICHLOROETHANE, TCLP	107-06-2	1.7		0.10	mg/L	SW8260B	09/28/05 18:40 jac	100
1,2-DICHLOROETHANE, TCLP	107-06-2	111			% REC	SW8260B	09/28/05 18:40 jac	100
1,1-DICHLOROETHENE, TCLP	75-35-4	1.6		0.10	mg/L	SW8260B	09/28/05 18:40 jac	100
1,1-DICHLOROETHENE, TCLP	75-35-4	108			% REC	SW8260B	09/28/05 18:40 jac	100
2-BUTANONE, TCLP	78-93-3	1.1		0.20	mg/L	SW8260B	09/28/05 18:40 jac	100
2-BUTANONE, TCLP	78-93-3	76			% REC	SW8260B	09/28/05 18:40 jac	100
TETRACHLOROETHENE, TCLP	127-18-4	1.2		0.10	mg/L	SW8260B	09/28/05 18:40 jac	100
TETRACHLOROETHENE, TCLP	127-18-4	81			% REC	SW8260B	09/28/05 18:40 jac	100
TRICHLOROETHENE, TCLP	79-01-6	1.5		0.10	mg/L	SW8260B	09/28/05 18:40 jac	100
TRICHLOROETHENE, TCLP	79-01-6	97			% REC	SW8260B	09/28/05 18:40 jac	100
VINYL CHLORIDE, TCLP	75-01-4	1.4		0.10	mg/L	SW8260B	09/28/05 18:40 jac	100
VINYL CHLORIDE, TCLP	75-01-4	92			% REC	SW8260B	09/28/05 18:40 jac	100

SGS Environmental Services Inc.
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Laboratory Number TA5-I0-P538-007

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COC 039693
Date Sampled 09/26/05 12:00
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Type TB Matrix SOIL
Sampled by CLIENT

100405 1707 Ver. 4.0.198

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
BENZENE	71-43-2	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
TOLUENE	108-88-3	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
ETHYLBENZENE	100-41-4	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
XYLENES (TOTAL)	1330-20-7	ND	U	10	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
METHYLENE CHLORIDE	75-09-2	7.6		5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
ACETONE	67-64-1	ND	U	10	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
CARBON DISULFIDE	75-15-0	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
1,1-DICHLOROETHENE	75-35-4	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
1,1-DICHLOROETHANE	75-34-3	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
1,2-DICHLOROETHENE	540-59-0	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
CHLOROFORM	67-66-3	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
1,2-DICHLOROETHANE	107-06-2	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
2-BUTANONE	78-93-3	ND	U	10	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
1,1,1-TRICHLOROETHANE	71-55-6	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
CARBON TETRACHLORIDE	56-23-5	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
BROMODICHLOROMETHANE	75-27-4	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
1,2-DICHLOROPROPANE	78-87-5	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
CIS-1,3-DICHLOROPROPENE	10061-01-5	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
TRICHLOROETHENE	79-01-6	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
DIBROMOCHLOROMETHANE	124-48-1	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
1,1,2-TRICHLOROETHANE	79-00-5	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
METHYL T-BUTYL ETHER	1634-04-4	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
TRANS-1,3-DICHLOROPROPENE	10061-02-6	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
BROMOFORM	75-25-2	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
4-METHYL-2-PENTANONE	108-10-1	ND	U	10	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
2-HEXANONE	591-78-6	ND	U	10	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
TETRACHLOROETHENE	127-18-4	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
1,1,2,2-TETRACHLOROETHANE	79-34-5	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
CHLOROBENZENE	108-90-7	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
STYRENE	100-42-5	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
1,1,1,2-TETRACHLOROETHANE	630-20-6	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
1,2,3-TRICHLOROPROPANE	96-18-4	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	ND	U	500	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
1,2-DIBROMOETHANE	106-93-4	ND	U	500	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
1,4-DIOXANE	123-91-1	ND	U	200	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0

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Laboratory Number TA5-I0-P538-007

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COC 039693
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Date Received 09/27/05 09:25

Type TB Matrix SOIL
Sampled by CLIENT

100405 1707 Ver. 4.0.198

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
2-CHLORO-1,3-BUTADIENE	126-99-8	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
2-CHLOROETHYL VINYL ETHER	110-75-8	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
3-CHLOROPROPENE	107-05-1	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
ACETONITRILE	75-05-8	ND	U	100	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
ACROLEIN	107-02-8	ND	U	100	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
ACRYLONITRILE	107-13-1	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
DICHLORODIFLUOROMETHANE	75-71-8	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
DIBROMOMETHANE	74-95-3	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
ETHYL METHACRYLATE	97-63-2	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
IODOMETHANE	74-88-4	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
ISOBUTANOL	78-83-1	ND	U	100	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
METHACRYLONITRILE	126-98-7	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
METHYL METHACRYLATE	80-62-6	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
PROPIONITRILE	107-12-0	ND	U	10	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
TRANS-1,2-DICHLOROETHENE	156-60-5	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
TRANS-1,4-DICHLORO-2-BUTENE	110-57-6	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
TRICHLOROFLUOROMETHANE	75-69-4	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
VINYL ACETATE	108-05-4	ND	U	10	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
VINYL CHLORIDE	75-01-4	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
CHLOROMETHANE	74-87-3	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
BROMOMETHANE	74-83-9	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
CHLOROETHANE	75-00-3	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
1,2,2-TRICHLOROTRIFLUOROETHANE	76-13-1	ND	U	10	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
1,2,3-TRICHLOROBENZENE	87-61-6	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
1,2,4-TRICHLOROBENZENE	120-82-1	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
1,2,4-TRIMETHYLBENZENE	95-63-6	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
1,2-DICHLOROBENZENE	95-50-1	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
1,3,5-TRIMETHYLBENZENE	108-67-8	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
1,3-DICHLOROBENZENE	541-73-1	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
1,3-DICHLOROPROPANE	142-28-9	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
1,4-DICHLOROBENZENE	106-46-7	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
1,4-DIFLUOROBENZENE	540-36-3	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
2,2-DICHLOROPROPANE	594-20-7	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
CHLOROPRENE	126-99-8	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
2-CHLOROTOLUENE	95-49-8	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0

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SGS ENVIRONMENTAL SERVICES--ALASKA

Laboratory Number TA5-I0-P538-007

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COC 039693
Date Sampled 09/26/05 12:00
Date Received 09/27/05 09:25

Type TB Matrix SOIL
Sampled by CLIENT

100405 1707 Ver. 4.0.198

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
2-NITROPROPANE	79-46-9	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
4-CHLOROTOLUENE	106-43-4	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
ACETALDEHYDE	75-07-0	ND	U	200	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
BROMOBENZENE	108-86-1	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
BIS(CHLOROMETHYL)ETHER	542-88-1	ND	U	10	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
BROMOCHLOROMETHANE	74-97-5	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
CYCLOHEXANONE	108-94-1	ND	U	36	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
ETHYL ETHER	60-29-7	ND	U	10	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
ETHANOL	64-17-5	630		36	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
HEXACHLOROBUTADIENE	87-68-3	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
ISOPROPANOL	67-63-0	ND	U	9.1	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
ISOPROPYLBENZENE	98-82-8	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
NAPHTHALENE	91-20-3	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
PENTACHLOROETHANE	76-01-7	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
CIS-1,2-DICHLOROETHENE	156-59-2	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
N-BUTANOL	71-36-3	ND	U	200	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
N-BUTYLBENZENE	104-51-8	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
N-PROPYLBENZENE	103-65-1	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
P-ISOPROPYLTOLUENE	99-87-6	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
SEC-BUTYLBENZENE	135-98-8	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
TERT-BUTYLBENZENE	98-06-6	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
ETHYL ACETATE	141-78-6	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
PROPYL ACETATE	109-60-4	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
ISOPROPYL ACETATE	108-21-4	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
METHYL ACETATE	79-20-9	ND	U	10	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
CYCLOHEXANE	110-82-7	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
METHYLCYCLOHEXANE	108-87-2	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
1,1-DICHLOROPROPENE	563-58-6	ND	U	5.0	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
TERT-BUTANOL	75-65-00	ND	U	200	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
SURROGATE RESULTS								
TOLUENE-D8	2037-26-5	210		0.91	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
TOLUENE-D8	2037-26-5	92			% REC	SW8260B	09/28/05 16:24 jac	1.0
4-BROMOFLUOROBENZENE	460-00-4	800		0.91	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0
4-BROMOFLUOROBENZENE	460-00-4	116			% REC	SW8260B	09/28/05 16:24 jac	1.0
1,2-DICHLOROETHANE-D4	17060-07-0	270		0.91	ug/Kg	SW8260B	09/28/05 16:24 jac	1.0

SGS Environmental Services Inc.
Laboratory Division: Charleston Laboratory

Bryan Arnold
SGS ENVIRONMENTAL SERVICES--ALASKA

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Sampled by CLIENT

100405 1707 Ver. 4.0.198

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S	Method	Date/Time/Anl	DilF
1,2-DICHLOROETHANE-D4	17060-07-0	120			% REC		SW8260B	09/28/05 16:24 jac	1.0

SGS

CHAIN OF CUSTODY RECORD
SGS Environmental Services Inc.

1056331

039693

West Virginia
New Jersey

(1)

CLIENT: Weston Solutions

CONTACT: Thor Kallestad PHONE NO:(907) 276 6610

PROJECT: Basewide SITE/PWSID# :

REPORTS TO:

FAX NO.:( )

INVOICE TO: QUOTE #

P.O. NUMBER

SGS Reference: TA5-IO-P538-1/7

PAGE 1 OF 1

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE (C=COMP G=GRAB)	Preservatives Used	Analysis Required (3) TCLP Metals	TCLP VOCs	VOC	AK 102 DRO	REMARKS
1/3 (1) A-D	BGW05-0155	9/26/05	12:00	Soil	4	G		X	X	X	X	DRO broken called client possible re-sample
4/6 (2) A-F	BGW05-01WS	9/26/05	12:00	Water	6	G		X	X	X	X	
7 (3) A	Trip Blank	9/26/05	1200	Soil	1	-				✓		Allied B 9/26/05

(5)

	Date	Time	Received By:
Collected/Relinquished By:(1) Laura Nelson	9/26/05	13:00	
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	9/26/05	1300	Received By:

(4)

Shipping Carrier: UPS

Shipping Ticket No:

Samples Received Cold? (Circle) YES NO

Temperature °C: 5.7°C . TB=N/A

Special Deliverable Requirements:

Chain of Custody Seal: (Circle)

INTACT BROKEN ABSENT

Requested Turnaround Time and Special Instructions:

RUSH ASAP

Rel. By SGS Anch 9/26/05 1315

200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-5301

1258 Greenbrier Street

12 3005

EMERALD ALASKA, INC.
9010 E MARGINAL WAY S
SUITE 200
SEATTLE, WA 98108
Tel. (907) 258-1558 Fax No. (907) 258-3049
Federal ID No. 26-0025054

www.emeraldnw.com

Invoice Number: 6445

Invoice Date: 12/28/05

Page: 1

Customer ID: ROY1050

Bill-to Address:
WESTON SOLUTIONS, INC.
425 "G" STREET
SUITE 300
ANCHORAGE, AK 99501-3450

Site Address:
ELMENDORF AIR FORCE BASE
CUSTOMER DROP OFF
ALASKA

P.O. Number
Payment Term: NET30

Delivery Order No. AK03925

Shipment Date	Manifest (Line) No.	Description	Quantity	Unit	Unit Price	Total Price
12/07/05	03925	CONTAMINATED WATER	2	DRUM 0	62	124.00

Amount Subject to Sales Tax
0.00

Amount Exempt from Sales Tax
124.00

Subtotal: 124.(

Sales Tax: 0.(

Total: 124.(

*** IN CASE OF EMERGENCY CALL 1-800-424-9300 *** 95-914-AK03925 (RP)

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. AK8570028649

Manifest Document No. 03925

2. Page 1 of 1

3. Generator's Name and Mailing Address
ELMENDORF AFB
6326 ARCTIC WARRIOR DRIVE
ELMENDORF, AFB, AK 99506

4. Generator's Phone (907) 552-5249

5. Transporter 1 Company Name

6. US EPA ID Number

A. State Transporter's ID

B. Transporter 1 Phone

7. Transporter 2 Company Name

8. US EPA ID Number

C. State Transporter's ID

D. Transporter 2 Phone

9. Designated Facility Name and Site Address
LD ALASKA, INC.
VIKING DRIVE
RAGE, AK 99501

10. US EPA ID Number
AKR000004184

E. State Facility's ID

F. Facility's Phone (907) 258-1558

RIPTION	12. Containers No.	Type	13. Total Quantity	14. Unit Wt./Vol.
NOT REGULATED BY D.O.T.	2	DM	10	G

iptions for Materials Listed Above

a) AK02906 GROUNDWATER / IDW WATER

H. Handling Codes for Wastes Listed Above

a) H135

15. Special Handling Instructions and Additional Information
I hereby certify that to the best of my knowldege that this contaminated water has not been mixed with any hazardous waste regulated under 40CFRPart261 or 40CFRPart761 or 40CFRPart279.

NON-HAZARDOUS W

16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

ON BEHALF of Weston Solutions

Printed/Typed Name: M.L. HERFINDAHL

Signature

Date: Month 12 Day 07 Year 05

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Date: Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Date: Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed/Typed Name: M.L. HERFINDAHL

Signature

Date: Month 12 Day 07 Year 05

Emerald Alaska Inc
800 East Ship Creek
Anchorage, AK 99501
(907) 258-1558 fax (907) 258-3049

Certificate of Disposal / Recycle

Generator: ELMENDORF AIR FORCE BASE
6326 ARCTIC WARRIOR DRIVE
ELMENDORF AFB, AK 99506

Document: Manifest: 03925

Date of Disposal / Recycle: DECEMBER 7, 2005

Line Item	Description	Profile Number	Quantity
1a	Material Not Regulated by D.O.T. (Groundwater / IDW Water)	AK02906	2 DM 10 Gallons

Roxanne Pedersen

Roxanne Pedersen, Facility Operator

December 28, 2005

APPENDIX H – WASTEWATER TREATMENT ANALYTICAL RESULTS

This appendix contains the analytical results of the wastewater treatment unit effluent collected during the 2005 Basewide Groundwater Monitoring Program.

REC'D NOV 03 2005

SGS Environmental Services Inc.
Alaska Division
Level 2 Laboratory Data Report

Project: Basewide Groundwater

Client: Weston Solutions

SGS Work Order: 1056819

Released by: (Signature) _____

(Printed Name) V. Bayly

(Title) Project Manager

(Date) 10/27/05

Contents:

Note:

Unless otherwise noted, all quality assurance/quality control criteria is in compliance with the standards set forth by the proper regulatory authority, the SGS Quality Assurance Program Plan, and the National Environmental Accreditation Conference.

This report contains a total number of 40 pages.

SGS Environmental Services Inc.

Case Narrative

Customer: WESTONR **Weston Solutions**

Project: 1056819 **Basewide Groundwater**

664539 LCS

625 SIM - LCS recovery for naphthalene is biased low and does not meet QC recovery criteria. This analyte does meet QC goals in the MS and MSD. Results are not significantly affected.

665221 LCSD

8260 - LCSD recovery and RPD for acetone is biased high and does not meet laboratory QC criteria. This analyte is not detected above the PQL in any of the associated samples.

665241 LCSD

8260 (AFCEE) - LCSD recovery and RPD for acetone is biased high and does not meet laboratory QC criteria. This analyte is not detected above the PQL in any of the associated samples.

SGS

CHAIN OF CUSTODY RECORD
SGS Environmental Services Inc.

1056819

Virginia
Jersey

037540

(1)

CLIENT: Weston Solutions

CONTACT: Thor Hallestad PHONE NO:(907) 276 6610

PROJECT: Beaverside Groundwater SITE/PWSID#

REPORTS TO: Thor Hallestad EDD

FAX NO.:( )

INVOICE TO: QUOTE #

P.O. NUMBER

SGS Reference:

PAGE 1 OF 1

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE (C=COMP G=GRAB)	Preservatives Used	Analysis Required (3)	REMARKS
1A-H	GAC-05-01WA	10/12/05	4:30	H_2O	8	G	X	TAH TAH VOC 8260	
2A-F	Trip Blank	10/12/05	4:30		6		X	~~TAH~~ BTEX	

RUSH

(5)

Collected/Relinquished By:(1)	Date	Time	Received By:
	10/13/05	09:05	
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date 10/13/05	Time 0908	Received By:

(4)

Shipping Carrier:

Shipping Ticket No:

Samples Received Cold? (Circle) YES NO

Temperature °C: TB=6.2

Special Deliverable Requirements:

Chain of Custody Seal: (Circle)

INTACT BROKEN ABSENT

Requested Turnaround Time and Special Instructions:

ASAP 3-Day if Possible

1056819

SGS

SAMPLE RECEIPT FORM

SGS WO#:

Yes	No	NA		
✓			Are samples **RUSH**, priority, or *w/n 72 hrs.* of **hold time**?	**Due Date:** 10-17-05
✓			If yes have you done *e-mail notification*?	**Received Date:** 10-13-05
	✓		Are samples *within 24 hrs.* of **hold time** or **due date**?	**Received Time:** 0908
		✓	If yes, have you *spoken with* Supervisor?	Is **date/time conversion** necessary? N
		✓	Archiving bottles– if req., are they properly marked?	# of hours to AK Local Time:
	✓		Are there any **problems**? PM Notified?	**Thermometer ID:** 50
✓			Were samples preserved correctly and ~~pH verified~~? SGT	

Cooler ID	Temp Blank	Cooler Temp
1	6.2 °C	— °C
	°C	°C
	°C	°C
	°C	°C
	°C	°C

*Temperature readings include thermometer correction factors

	✓	If this is for PWS, provide **PWSID.**
	✓	Will courier charges apply?
		Method of payment?
	✓	Data package required? (Level: 1 / 2 / 3 / 4)
		Notes:
	✓	Is this a DoD project? (USACE, Navy, AFCEE)

Delivery method (circle all that apply): Client / Alert Courier / UPS / FedEx / USPS / AA Goldstreak / NAC / ERA / PenAir / Carlile Lynden / SGS / Other:

Airbill #

Additional Sample Remarks: *(√if applicable)*

_____ Extra Sample Volume?
_____ Limited Sample Volume?
_____ Field preserved for volatiles?
_____ Field-filtered for dissolved? _____
_____ Lab-filtered for dissolved? _____
_____ Ref Lab required? _____
_____ Foreign Soil?

This section must be filled out for DoD projects (USACE, Navy, AFCEE)

Yes	No	
		Is received temperature 4 ± 2°C?
		Exceptions: Samples/Analyses Affected:
		Rad Screen performed? Result:
		Was there an airbill? *(Note # above in the right hand column)*
		Was cooler sealed with custody seals?
		# / where:
		Were seal(s) intact upon arrival?
		Was there a COC with cooler?
		Was COC sealed in plastic bag & taped inside lid of cooler?
		Was the COC filled out properly?
		Did the COC indicate COE / AFCEE / Navy project?
		Did the COC and samples correspond?
		Were all sample packed to prevent breakage?
		Packing material:
		Were all samples unbroken and clearly labeled?
		Were all samples sealed in separate plastic bags?
		Were all VOCs free of headspace and/or MeOH preserved?
		Were correct container / sample sizes submitted?
		Is sample condition good?
		Was copy of CoC, SRF, and custody seals given to PM to fax?

This section must be filled if problems are found

Yes	No	
		Was client notified of problems?

Individual contacted:
Via: Phone / Fax / Email *(circle one)*
Date/Time:
Reason for contact:

Change Order Required?
SGS Contact:

Notes:

Completed by (sign): _____ **(print):** Tamara Johnson

Login proof (check one) ✓ waived _____ required _____ performed by: _____

1056819

SGS

SAMPLE RECEIPT FORM (page 2)

SGS WO#:

						Container Volume									Container Type								Preservative							
#	Container ID	Matrix	Test	QC	TB	1 L	500 mL	250 mL	125 mL	60 mL	40 mL	8oz (250 mL)	4oz (125 mL)	Other	AG	CG	HDPE	Nalgene	Cubie	Coli	Septa	Other	None	HCl	HNO_3	H_2SO_4	MeOH	$Na_2S_2O_3$	NaOH	Other
1	A-C	1	602 TAH								3				X						X			X						
	D-F		VOC 8260								3				X						X			X						
	G-H		TAH ~~AH8270SIM~~ 8270SIM 10/13/05			2									X								X							
2	A-C	1	602 TAH		X						3				X						X			X						
	D-F		VOC 8260		X						3				X						X			X						

Bottle Totals	1 L	500 mL	250 mL	125 mL	60 mL	40 mL	8oz (250 mL)	4oz (125 mL)	Other
	2					12			

Completed by: [signature] Date: 10-13-05

\\usesinas01\ANK_GroupData\Public\DOCUMENT\FORMS\approved\SRF_F004r15.doc

SGS

Laboratory Analytical Report

Client: **Weston Solutions**
425 G Street #300
Anchorage, AK 99501

Attn: **Skip Koch**
T: (907)276-6610 F:(907)276-6694

Project: **Basewide Groundwater**

Workorder No.: **1056819**

Certification:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, other than the conditions noted on the sample data sheet(s) and/or the case narrative. This certification applies only to the tested parameters and the specific sample(s) received at the laboratory.

Released by: SGS Victoria Bayly 2005.10.20 11:55:13 -08'00'

Alaska Division Project Manager

Victoria Bayly
Victoria_Bayly@sgs.com
Project Manager

Report Date

Total number of pages in report : _____

SGS

Print Date: 10/20/2005

Enclosed are the analytical results associated with this workorder.

As required by the state of Alaska and the USEPA, a formal Quality Assurance/Quality Control Program is maintained by SGS. A copy of our Quality Control Manual that outlines this program is available at your request. The laboratory ADEC certification numbers are AK08-03 (DW), UST-005 (CS) and AK00971 (Micro).

The laboratory NELAC certification number is 001327.

Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS Quality Assurance Program Plan and the National Environmental Laboratory Accreditation Program.

The following descriptors may be found on your report which will serve to further qualify the data.

MDL	Method Detection Limit
PQL	Practical Quantitation Limit (reporting limit).
CL	Control Limit
U	Indicates the analyte was analyzed for but not detected.
F	Indicates value that is greater than or equal to the MDL.
J	The quantitation is an estimation.
ND	Indicates the analyte is not detected
B	Indicates the analyte is found in a blank associated with the sample.
*	The analyte has exceeded allowable regulatory or control limits.
GT	Greater Than
LT	Less Than
Q	QC parameter out of acceptance range.
M	A matrix effect was present.
E	The analyte result is above the calibrated range.
DF	Analytical Dilution Factor
JL	The analyte was positively identified, but the quantitation is a low estimation.
<Surr>	Surrogate QC spiked standard

Note: Soil samples are reported on a dry weight basis unless otherwise specified

SGS

SAMPLE SUMMARY

Print Date: 10/20/2005

Client Name: Weston Solutions
Project Name: Basewide Groundwater
Workorder No.: 1056819

Analytical Methods

Method Description	Analytical Method
602 Aromatics by 624 (W)	EPA 602/624
625 Modified Semi-Volatiles GC/MS	EPA 625M SIMS
AFCEE 3.1 8260 (W)	SW8260B

Sample ID Cross Reference

Lab Sample ID	Client Sample ID
1056819001	GAC-05-01WA
1056819002	Trip Blank

SGS

Weston Solutions Print Date: 10/20/2005

Client Sample ID: **GAC-05-01WA**
SGS Ref. #: 1056819001
Project ID: Basewide Groundwater
Matrix: Water (Surface, Eff., Ground)

All Dates/Times are Alaska Local Time
Collection Date/Time: 10/12/05 16:30
Receipt Date/Time: 10/13/05 09:08

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Benzene	0.400 U	0.400	0.120	ug/L	1	VMS7954	VXX14549	
Toluene	1.00 U	1.00	0.310	ug/L	1	VMS7954	VXX14549	
Chlorobenzene	0.500 U	0.500	0.150	ug/L	1	VMS7954	VXX14549	
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1	VMS7954	VXX14549	
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1	VMS7954	VXX14549	
o-Xylene	1.00 U	1.00	0.310	ug/L	1	VMS7954	VXX14549	
1,3-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1	VMS7954	VXX14549	
1,4-Dichlorobenzene	0.500 U	0.500	0.150	ug/L	1	VMS7954	VXX14549	
1,2-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1	VMS7954	VXX14549	
1,2-Dichloroethane-D4 <surr>	107	72-119		%	1	VMS7954	VXX14549	
Toluene-d8 <surr>	96.1	85-120		%	1	VMS7954	VXX14549	
4-Bromofluorobenzene <surr>	101	76-119		%	1	VMS7954	VXX14549	

Batch Information

Analytical Batch: VMS7954
Analytical Method: EPA 602/624
Analysis Date/Time: 10/13/05 22:03
Dilution Factor: 1

Prep Batch: VXX14549
Prep Method: SW5030B
Prep Date/Time: 10/13/05 09:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1056819001-A
Analyst: MCM

Client Sample ID: **GAC-05-01WA**
SGS Ref. #: 1056819001
Project ID: Basewide Groundwater
Matrix: Water (Surface, Eff., Ground)

All Dates/Times are Alaska Local Time
Collection Date/Time: 10/12/05 16:30
Receipt Date/Time: 10/13/05 09:08

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Dichlorodifluoromethane	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
Chloromethane	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
Vinyl chloride	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
Bromomethane	3.00 U	3.00	0.940	ug/L	1	VMS7956	VXX14552	
Chloroethane	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
Trichlorofluoromethane	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
1,1-Dichloroethene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
Methylene chloride	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
Acetone	10.0 U	10.0	3.10	ug/L	1	VMS7956	VXX14552	
trans-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
1,1-Dichloroethane	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
2,2-Dichloropropane	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
cis-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
2-Butanone (MEK)	10.0 U	10.0	3.10	ug/L	1	VMS7956	VXX14552	
Bromochloromethane	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
Chloroform	0.400 U	0.400	0.0940	ug/L	1	VMS7956	VXX14552	
1,1,1-Trichloroethane	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
Carbon tetrachloride	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
1,1-Dichloropropene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
Benzene	0.400 U	0.400	0.120	ug/L	1	VMS7956	VXX14552	
1,2-Dichloroethane	0.500 U	0.500	0.150	ug/L	1	VMS7956	VXX14552	
Trichloroethene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
1,2-Dichloropropane	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
Dibromomethane	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
Bromodichloromethane	0.500 U	0.500	0.150	ug/L	1	VMS7956	VXX14552	
2-Chloroethyl Vinyl Ether	10.0 U	10.0	3.10	ug/L	1	VMS7956	VXX14552	
cis-1,3-Dichloropropene	0.500 U	0.500	0.150	ug/L	1	VMS7956	VXX14552	
Toluene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
trans-1,3-Dichloropropene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
1,1,2-Trichloroethane	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
Tetrachloroethene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
1,3-Dichloropropane	0.400 U	0.400	0.120	ug/L	1	VMS7956	VXX14552	
Dibromochloromethane	0.500 U	0.500	0.150	ug/L	1	VMS7956	VXX14552	
1,2-Dibromoethane	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
Chlorobenzene	0.500 U	0.500	0.150	ug/L	1	VMS7956	VXX14552	
1,1,1,2-Tetrachloroethane	0.500 U	0.500	0.150	ug/L	1	VMS7956	VXX14552	
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	

SGS

Weston Solutions Print Date: 10/20/2005

Client Sample ID: **GAC-05-01WA**
SGS Ref. #: 1056819001
Project ID: Basewide Groundwater
Matrix: Water (Surface, Eff., Ground)

All Dates/Times are Alaska Local Time
Collection Date/Time: 10/12/05 16:30
Receipt Date/Time: 10/13/05 09:08

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1	VMS7956	VXX14552	
o-Xylene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
Styrene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
Bromoform	1.00 U	1.00	0.500	ug/L	1	VMS7956	VXX14552	
Isopropylbenzene (Cumene)	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
Bromobenzene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
1,1,2,2-Tetrachloroethane	1.00 U	1.00	0.150	ug/L	1	VMS7956	VXX14552	
1,2,3-Trichloropropane	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
n-Propylbenzene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
2-Chlorotoluene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
4-Chlorotoluene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
1,3,5-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
tert-Butylbenzene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
1,2,4-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
sec-Butylbenzene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
1,3-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
4-Isopropyltoluene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
1,4-Dichlorobenzene	0.500 U	0.500	0.150	ug/L	1	VMS7956	VXX14552	
1,2-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
n-Butylbenzene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
1,2-Dibromo-3-chloropropane	2.00 U	2.00	0.620	ug/L	1	VMS7956	VXX14552	
1,2,4-Trichlorobenzene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
Hexachlorobutadiene	1.00 U	1.00	0.180	ug/L	1	VMS7956	VXX14552	
Naphthalene	1.00 U	1.00	0.620	ug/L	1	VMS7956	VXX14552	
Methyl-t-butyl ether	5.00 U	5.00	1.50	ug/L	1	VMS7956	VXX14552	
1,2,3-Trichlorobenzene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
4-Methyl-2-pentanone (MIBK)	10.0 U	10.0	3.10	ug/L	1	VMS7956	VXX14552	
1-Chlorohexane	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
Dibromofluoromethane <surr>	106	85-115		%	1	VMS7956	VXX14552	
1,2-Dichloroethane-D4 <surr>	107	72-119		%	1	VMS7956	VXX14552	
Toluene-d8 <surr>	96.1	85-120		%	1	VMS7956	VXX14552	
4-Bromofluorobenzene <surr>	101	76-119		%	1	VMS7956	VXX14552	

Batch Information

Analytical Batch: VMS7956
Analytical Method: SW8260B
Analysis Date/Time: 10/13/05 22:03
Dilution Factor: 1

Prep Batch: VXX14552
Prep Method: SW5030B
Prep Date/Time: 10/13/05 09:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1056819001-D
Analyst: MCM

SGS

Weston Solutions Print Date: 10/20/2005

Client Sample ID: **GAC-05-01WA**
SGS Ref. #: 1056819001
Project ID: Basewide Groundwater
Matrix: Water (Surface, Eff., Ground)

All Dates/Times are Alaska Local Time
Collection Date/Time: 10/12/05 16:30
Receipt Date/Time: 10/13/05 09:08

Polynuclear Aromatics GC/MS

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Acenaphthylene	0.0500 U	0.0500	0.0150	ug/L	1	XMS3459	XXX16006	
Acenaphthene	0.0500 U	0.0500	0.0150	ug/L	1	XMS3459	XXX16006	
Fluorene	0.0500 U	0.0500	0.0150	ug/L	1	XMS3459	XXX16006	
Phenanthrene	0.0500 U	0.0500	0.0150	ug/L	1	XMS3459	XXX16006	
Anthracene	0.0500 U	0.0500	0.0150	ug/L	1	XMS3459	XXX16006	
Fluoranthene	0.0500 U	0.0500	0.0150	ug/L	1	XMS3459	XXX16006	
Pyrene	0.0500 U	0.0500	0.0150	ug/L	1	XMS3459	XXX16006	
Benzo(a)Anthracene	0.0500 U	0.0500	0.0150	ug/L	1	XMS3459	XXX16006	
Chrysene	0.0500 U	0.0500	0.0150	ug/L	1	XMS3459	XXX16006	
Benzo[b]Fluoranthene	0.0500 U	0.0500	0.0150	ug/L	1	XMS3459	XXX16006	
Benzo[a]pyrene	0.0500 U	0.0500	0.0150	ug/L	1	XMS3459	XXX16006	
Indeno[1,2,3-c,d] pyrene	0.0500 U	0.0500	0.0150	ug/L	1	XMS3459	XXX16006	
Dibenzo[a,h]anthracene	0.0500 U	0.0500	0.0100	ug/L	1	XMS3459	XXX16006	
Benzo[g,h,i]perylene	0.0500 U	0.0500	0.0150	ug/L	1	XMS3459	XXX16006	
Naphthalene	0.100 U	0.100	0.0310	ug/L	1	XMS3459	XXX16006	
Benzo[k]fluoranthene	0.0500 U	0.0500	0.0150	ug/L	1	XMS3459	XXX16006	
Terphenyl-d14 <surr>	93.5	50-120		%	1	XMS3459	XXX16006	

Batch Information

Analytical Batch: XMS3459
Analytical Method: EPA 625M SIMS
Analysis Date/Time: 10/17/05 21:46
Dilution Factor: 1

Prep Batch: XXX16006
Prep Method: SW3510C
Prep Date/Time: 10/14/05 00:00

Initial Prep Wt./Vol.: 1000 mL
Prep Extract Vol.: 1 mL
Container ID:1056819001-G
Analyst: SPM

SGS

Weston Solutions Print Date: 10/20/2005

Client Sample ID: **Trip Blank**
SGS Ref. #: 1056819002
Project ID: Basewide Groundwater
Matrix: Water (Surface, Eff., Ground)

All Dates/Times are Alaska Local Time
Collection Date/Time: 10/12/05 16:30
Receipt Date/Time: 10/13/05 09:08

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Benzene	0.400 U	0.400	0.120	ug/L	1	VMS7954	VXX14549	
Toluene	1.00 U	1.00	0.310	ug/L	1	VMS7954	VXX14549	
Chlorobenzene	0.500 U	0.500	0.150	ug/L	1	VMS7954	VXX14549	
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1	VMS7954	VXX14549	
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1	VMS7954	VXX14549	
o-Xylene	1.00 U	1.00	0.310	ug/L	1	VMS7954	VXX14549	
1,3-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1	VMS7954	VXX14549	
1,4-Dichlorobenzene	0.500 U	0.500	0.150	ug/L	1	VMS7954	VXX14549	
1,2-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1	VMS7954	VXX14549	
1,2-Dichloroethane-D4 <surr>	107	72-119		%	1	VMS7954	VXX14549	
Toluene-d8 <surr>	98	85-120		%	1	VMS7954	VXX14549	
4-Bromofluorobenzene <surr>	97.2	76-119		%	1	VMS7954	VXX14549	

Batch Information

Analytical Batch: VMS7954
Analytical Method: EPA 602/624
Analysis Date/Time: 10/13/05 21:31
Dilution Factor: 1

Prep Batch: VXX14549
Prep Method: SW5030B
Prep Date/Time: 10/13/05 09:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1056819002-A
Analyst: MCM

Client Sample ID: **Trip Blank**
SGS Ref. #: 1056819002
Project ID: Basewide Groundwater
Matrix: Water (Surface, Eff., Ground)

All Dates/Times are Alaska Local Time
Collection Date/Time: 10/12/05 16:30
Receipt Date/Time: 10/13/05 09:08

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Dichlorodifluoromethane	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
Chloromethane	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
Vinyl chloride	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
Bromomethane	3.00 U	3.00	0.940	ug/L	1	VMS7956	VXX14552	
Chloroethane	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
Trichlorofluoromethane	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
1,1-Dichloroethene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
Methylene chloride	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
Acetone	10.0 U	10.0	3.10	ug/L	1	VMS7956	VXX14552	
trans-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
1,1-Dichloroethane	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
2,2-Dichloropropane	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
cis-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
2-Butanone (MEK)	10.0 U	10.0	3.10	ug/L	1	VMS7956	VXX14552	
Bromochloromethane	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
Chloroform	0.400 U	0.400	0.0940	ug/L	1	VMS7956	VXX14552	
1,1,1-Trichloroethane	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
Carbon tetrachloride	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
1,1-Dichloropropene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
Benzene	0.400 U	0.400	0.120	ug/L	1	VMS7956	VXX14552	
1,2-Dichloroethane	0.500 U	0.500	0.150	ug/L	1	VMS7956	VXX14552	
Trichloroethene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
1,2-Dichloropropane	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
Dibromomethane	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
Bromodichloromethane	0.500 U	0.500	0.150	ug/L	1	VMS7956	VXX14552	
2-Chloroethyl Vinyl Ether	10.0 U	10.0	3.10	ug/L	1	VMS7956	VXX14552	
cis-1,3-Dichloropropene	0.500 U	0.500	0.150	ug/L	1	VMS7956	VXX14552	
Toluene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
trans-1,3-Dichloropropene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
1,1,2-Trichloroethane	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
Tetrachloroethene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
1,3-Dichloropropane	0.400 U	0.400	0.120	ug/L	1	VMS7956	VXX14552	
Dibromochloromethane	0.500 U	0.500	0.150	ug/L	1	VMS7956	VXX14552	
1,2-Dibromoethane	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
Chlorobenzene	0.500 U	0.500	0.150	ug/L	1	VMS7956	VXX14552	
1,1,1,2-Tetrachloroethane	0.500 U	0.500	0.150	ug/L	1	VMS7956	VXX14552	
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	

SGS

Weston Solutions Print Date: 10/20/2005

Client Sample ID: **Trip Blank**
SGS Ref. #: 1056819002
Project ID: Basewide Groundwater
Matrix: Water (Surface, Eff., Ground)

All Dates/Times are Alaska Local Time
Collection Date/Time: 10/12/05 16:30
Receipt Date/Time: 10/13/05 09:08

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1	VMS7956	VXX14552	
o-Xylene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
Styrene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
Bromoform	1.00 U	1.00	0.500	ug/L	1	VMS7956	VXX14552	
Isopropylbenzene (Cumene)	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
Bromobenzene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
1,1,2,2-Tetrachloroethane	1.00 U	1.00	0.150	ug/L	1	VMS7956	VXX14552	
1,2,3-Trichloropropane	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
n-Propylbenzene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
2-Chlorotoluene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
4-Chlorotoluene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
1,3,5-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
tert-Butylbenzene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
1,2,4-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
sec-Butylbenzene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
1,3-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
4-Isopropyltoluene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
1,4-Dichlorobenzene	0.500 U	0.500	0.150	ug/L	1	VMS7956	VXX14552	
1,2-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
n-Butylbenzene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
1,2-Dibromo-3-chloropropane	2.00 U	2.00	0.620	ug/L	1	VMS7956	VXX14552	
1,2,4-Trichlorobenzene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
Hexachlorobutadiene	1.00 U	1.00	0.180	ug/L	1	VMS7956	VXX14552	
Naphthalene	1.00 U	1.00	0.620	ug/L	1	VMS7956	VXX14552	
Methyl-t-butyl ether	5.00 U	5.00	1.50	ug/L	1	VMS7956	VXX14552	
1,2,3-Trichlorobenzene	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
4-Methyl-2-pentanone (MIBK)	10.0 U	10.0	3.10	ug/L	1	VMS7956	VXX14552	
1-Chlorohexane	1.00 U	1.00	0.310	ug/L	1	VMS7956	VXX14552	
Dibromofluoromethane <surr>	102	85-115		%	1	VMS7956	VXX14552	
1,2-Dichloroethane-D4 <surr>	107	72-119		%	1	VMS7956	VXX14552	
Toluene-d8 <surr>	98	85-120		%	1	VMS7956	VXX14552	
4-Bromofluorobenzene <surr>	97.2	76-119		%	1	VMS7956	VXX14552	

Batch Information

Analytical Batch: VMS7956
Analytical Method: SW8260B
Analysis Date/Time: 10/13/05 21:31
Dilution Factor: 1

Prep Batch: VXX14552
Prep Method: SW5030B
Prep Date/Time: 10/13/05 09:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1056819002-D
Analyst: MCM

SGS

CT&E Ref.#	665216	Method Blank	**Printed Date/Time**		10/25/2005 7:56
Client Name	Weston Solutions		**Prep**	**Batch**	VXX14549
Project Name/#	Basewide Groundwater			**Method**	SW5030B
Matrix	Water (Surface, Eff., Ground)			**Date**	10/13/2005

QC results affect the following production samples:

1056819001, 1056819002

Sample Remarks:

Parameter	Results	Reporting/Control Limit	Units	Analysis Date

Volatile Gas Chromatography/Mass Spectroscopy

SGS

CT&E Ref.#	665216 Method Blank	**Printed Date/Time**	10/25/2005 7:56
Client Name	Weston Solutions	**Prep Batch**	VXX14549
Project Name/#	Basewide Groundwater	**Method**	SW5030B
Matrix	Water (Surface, Eff., Ground)	**Date**	10/13/2005

Parameter	Results	Reporting/Control Limit	Units	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy				
Dichlorodifluoromethane	1.00 U	1.00	ug/L	10/13/05
Chloromethane	1.00 U	1.00	ug/L	10/13/05
Vinyl chloride	1.00 U	1.00	ug/L	10/13/05
Bromomethane	3.00 U	3.00	ug/L	10/13/05
Chloroethane	1.00 U	1.00	ug/L	10/13/05
1,1-Dichloroethene	1.00 U	1.00	ug/L	10/13/05
Trichlorofluoromethane	1.00 U	1.00	ug/L	10/13/05
Methylene chloride	5.00 U	5.00	ug/L	10/13/05
Carbon disulfide	2.00 U	2.00	ug/L	10/13/05
Acetone	10.0 U	10.0	ug/L	10/13/05
trans-1,2-Dichloroethene	1.00 U	1.00	ug/L	10/13/05
1,1-Dichloroethane	1.00 U	1.00	ug/L	10/13/05
2,2-Dichloropropane	1.00 U	1.00	ug/L	10/13/05
cis-1,2-Dichloroethene	1.00 U	1.00	ug/L	10/13/05
2-Butanone (MEK)	10.0 U	10.0	ug/L	10/13/05
Bromochloromethane	1.00 U	1.00	ug/L	10/13/05
Chloroform	1.00 U	1.00	ug/L	10/13/05
1,1,1-Trichloroethane	1.00 U	1.00	ug/L	10/13/05
Carbon tetrachloride	1.00 U	1.00	ug/L	10/13/05
1,1-Dichloropropene	1.00 U	1.00	ug/L	10/13/05
Benzene	0.400 U	0.400	ug/L	10/13/05
Trichloroethene	1.00 U	1.00	ug/L	10/13/05
1,2-Dichloropropane	1.00 U	1.00	ug/L	10/13/05
Dibromomethane	1.00 U	1.00	ug/L	10/13/05
Bromodichloromethane	0.500 U	0.500	ug/L	10/13/05
2-Chloroethyl Vinyl Ether	10.0 U	10.0	ug/L	10/13/05
cis-1,3-Dichloropropene	0.500 U	0.500	ug/L	10/13/05
Toluene	1.00 U	1.00	ug/L	10/13/05
trans-1,3-Dichloropropene	1.00 U	1.00	ug/L	10/13/05
1,1,2-Trichloroethane	1.00 U	1.00	ug/L	10/13/05
Tetrachloroethene	1.00 U	1.00	ug/L	10/13/05
1,3-Dichloropropane	0.400 U	0.400	ug/L	10/13/05
Dibromochloromethane	0.500 U	0.500	ug/L	10/13/05
1,2-Dibromoethane	1.00 U	1.00	ug/L	10/13/05
Chlorobenzene	0.500 U	0.500	ug/L	10/13/05
1,1,1,2-Tetrachloroethane	0.500 U	0.500	ug/L	10/13/05
Ethylbenzene	1.00 U	1.00	ug/L	10/13/05
P & M -Xylene	2.00 U	2.00	ug/L	10/13/05
Styrene	1.00 U	1.00	ug/L	10/13/05

SGS

CT&E Ref.#	665216	Method Blank	**Printed Date/Time**		10/25/2005 7:56
Client Name	Weston Solutions		**Prep**	**Batch**	VXX14549
Project Name/#	Basewide Groundwater			**Method**	SW5030B
Matrix	Water (Surface, Eff., Ground)			**Date**	10/13/2005

Parameter	Results	Reporting/Control Limit	Units	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy				
Bromoform	1.00 U	1.00	ug/L	10/13/05
Isopropylbenzene (Cumene)	1.00 U	1.00	ug/L	10/13/05
Bromobenzene	1.00 U	1.00	ug/L	10/13/05
o-Xylene	1.00 U	1.00	ug/L	10/13/05
1,1,2,2-Tetrachloroethane	0.500 U	0.500	ug/L	10/13/05
1,2,3-Trichloropropane	1.00 U	1.00	ug/L	10/13/05
n-Propylbenzene	1.00 U	1.00	ug/L	10/13/05
2-Chlorotoluene	1.00 U	1.00	ug/L	10/13/05
4-Chlorotoluene	1.00 U	1.00	ug/L	10/13/05
1,3,5-Trimethylbenzene	1.00 U	1.00	ug/L	10/13/05
tert-Butylbenzene	1.00 U	1.00	ug/L	10/13/05
1,2,4-Trimethylbenzene	1.00 U	1.00	ug/L	10/13/05
sec-Butylbenzene	1.00 U	1.00	ug/L	10/13/05
4-Isopropyltoluene	1.00 U	1.00	ug/L	10/13/05
1,4-Dichlorobenzene	0.500 U	0.500	ug/L	10/13/05
1,2-Dichlorobenzene	1.00 U	1.00	ug/L	10/13/05
1,3-Dichlorobenzene	1.00 U	1.00	ug/L	10/13/05
n-Butylbenzene	1.00 U	1.00	ug/L	10/13/05
1,2-Dibromo-3-chloropropane	2.00 U	2.00	ug/L	10/13/05
1,2,4-Trichlorobenzene	1.00 U	1.00	ug/L	10/13/05
Hexachlorobutadiene	1.00 U	1.00	ug/L	10/13/05
Naphthalene	2.00 U	2.00	ug/L	10/13/05
1,2,3-Trichlorobenzene	1.00 U	1.00	ug/L	10/13/05
4-Methyl-2-pentanone (MIBK)	10.0 U	10.0	ug/L	10/13/05
2-Hexanone	10.0 U	10.0	ug/L	10/13/05
Methyl-t-butyl ether	5.00 U	5.00	ug/L	10/13/05
1,2-Dichloroethane	0.500 U	0.500	ug/L	10/13/05
Surrogates				
Dibromofluoromethane <surr>	99.8	85-115	%	10/13/05
1,2-Dichloroethane-D4 <surr>	104	72-119	%	10/13/05
Toluene-d8 <surr>	97.1	85-120	%	10/13/05
4-Bromofluorobenzene <surr>	98.8	76-119	%	10/13/05

Batch VMS7954
Method SW8260B
Instrument HP 5890 Series II MS3 VNA

SGS

SGS Ref.#	665217	Lab Control Sample	**Printed Date/Time**	10/25/2005	7:56
	665221	Lab Control Sample Duplicate	**Prep Batch**	VXX14549	
Client Name	Weston Solutions		**Method**	SW5030B	
Project Name/#	Basewide Groundwater		**Date**	10/13/2005	
Matrix	Water (Surface, Eff., Ground)				

QC results affect the following production samples:

1056819001, 1056819002

Sample Remarks:

LCS

LCSD 8260 - LCSD recovery for acetone is biased high and does not meet laboratory QC goals. This analyte is not detected above the PQL in any of the associated samples.
8260 - LCSD RPD for acetone does not meet laboratory QC goals. This analyte is not detected above the PQL in any of the associated samples.

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date

Volatile Gas Chromatography/Mass Spectroscopy

SGS

SGS Ref.#	665217	Lab Control Sample	**Printed Date/Time**	10/25/2005	7:56
	665221	Lab Control Sample Duplicate	**Prep Batch**	VXX14549	
Client Name	Weston Solutions		**Method**	SW5030B	
Project Name/#	Basewide Groundwater		**Date**	10/13/2005	
Matrix	Water (Surface, Eff., Ground)				

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy								
Dichlorodifluoromethane	LCS	27.9	93	(54-131)			30 ug/L	10/13/2005
	LCSD	27.5	92		1	(< 20)	30 ug/L	10/13/2005
Chloromethane	LCS	28.3	94	(56-125)			30 ug/L	10/13/2005
	LCSD	28.2	94		1	(< 20)	30 ug/L	10/13/2005
Vinyl chloride	LCS	30.7	102	(50-134)			30 ug/L	10/13/2005
	LCSD	29.9	100		3	(< 20)	30 ug/L	10/13/2005
Bromomethane	LCS	31.6	105	(57-141)			30 ug/L	10/13/2005
	LCSD	30.2	101		4	(< 20)	30 ug/L	10/13/2005
Chloroethane	LCS	29.8	99	(60-133)			30 ug/L	10/13/2005
	LCSD	30.1	100		1	(< 20)	30 ug/L	10/13/2005
Trichlorofluoromethane	LCS	28.5	95	(72-129)			30 ug/L	10/13/2005
	LCSD	28.7	96		1	(< 20)	30 ug/L	10/13/2005
1,1-Dichloroethene	LCS	30.3	101	(70-130)			30 ug/L	10/13/2005
	LCSD	30.5	102		1	(< 20)	30 ug/L	10/13/2005
Methylene chloride	LCS	28.5	95	(72-120)			30 ug/L	10/13/2005
	LCSD	28.8	96		1	(< 20)	30 ug/L	10/13/2005
Carbon disulfide	LCS	47.7	106	(37-146)			45 ug/L	10/13/2005
	LCSD	48.3	107		1	(< 20)	45 ug/L	10/13/2005
Acetone	LCS	99.5	111	(51-135)			90 ug/L	10/13/2005
	LCSD	129	143 *		26 *	(< 20)	90 ug/L	10/13/2005
trans-1,2-Dichloroethene	LCS	30.4	101	(71-127)			30 ug/L	10/13/2005
	LCSD	30.6	102		0	(< 20)	30 ug/L	10/13/2005
1,1-Dichloroethane	LCS	29.4	98	(81-120)			30 ug/L	10/13/2005
	LCSD	30.8	103		5	(< 20)	30 ug/L	10/13/2005
2,2-Dichloropropane	LCS	29.8	99	(77-135)			30 ug/L	10/13/2005
	LCSD	31.4	105		6	(< 20)	30 ug/L	10/13/2005
cis-1,2-Dichloroethene	LCS	30.4	101	(79-120)			30 ug/L	10/13/2005
	LCSD	30.3	101		0	(< 20)	30 ug/L	10/13/2005

SGS

SGS Ref.#	665217	Lab Control Sample	**Printed Date/Time**	10/25/2005	7:56
	665221	Lab Control Sample Duplicate	**Prep Batch**	VXX14549	
Client Name	Weston Solutions		**Method**	SW5030B	
Project Name/#	Basewide Groundwater		**Date**	10/13/2005	
Matrix	Water (Surface, Eff., Ground)				

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy								
2-Butanone (MEK)	LCS	101	113	(67-136)			90 ug/L	10/13/2005
	LCSD	118	131		15	(< 20)	90 ug/L	10/13/2005
Bromochloromethane	LCS	28.9	96	(76-126)			30 ug/L	10/13/2005
	LCSD	29.0	97		0	(< 20)	30 ug/L	10/13/2005
Chloroform	LCS	29.9	100	(86-115)			30 ug/L	10/13/2005
	LCSD	30.3	101		1	(< 20)	30 ug/L	10/13/2005
1,1,1-Trichloroethane	LCS	30.1	100	(82-120)			30 ug/L	10/13/2005
	LCSD	30.3	101		1	(< 20)	30 ug/L	10/13/2005
Carbon tetrachloride	LCS	31.4	105	(79-132)			30 ug/L	10/13/2005
	LCSD	32.0	107		2	(< 20)	30 ug/L	10/13/2005
1,1-Dichloropropene	LCS	30.7	102	(80-121)			30 ug/L	10/13/2005
	LCSD	31.0	103		1	(< 20)	30 ug/L	10/13/2005
Benzene	LCS	29.8	99	(84-115)			30 ug/L	10/13/2005
	LCSD	29.7	99		0	(< 20)	30 ug/L	10/13/2005
Trichloroethene	LCS	32.1	107	(82-118)			30 ug/L	10/13/2005
	LCSD	32.1	107		0	(< 20)	30 ug/L	10/13/2005
1,2-Dichloropropane	LCS	31.0	103	(88-115)			30 ug/L	10/13/2005
	LCSD	30.9	103		0	(< 20)	30 ug/L	10/13/2005
Dibromomethane	LCS	30.2	101	(86-119)			30 ug/L	10/13/2005
	LCSD	29.8	99		1	(< 20)	30 ug/L	10/13/2005
Bromodichloromethane	LCS	30.5	102	(81-120)			30 ug/L	10/13/2005
	LCSD	30.1	100		2	(< 20)	30 ug/L	10/13/2005
2-Chloroethyl Vinyl Ether	LCS	50.0	111	(63-148)			45 ug/L	10/13/2005
	LCSD	54.2	120		8	(< 20)	45 ug/L	10/13/2005
cis-1,3-Dichloropropene	LCS	33.3	111	(90-126)			30 ug/L	10/13/2005
	LCSD	33.1	110		1	(< 20)	30 ug/L	10/13/2005
Toluene	LCS	30.1	100	(81-115)			30 ug/L	10/13/2005

SGS

SGS Ref.#	665217	Lab Control Sample	**Printed Date/Time**	10/25/2005	7:56
	665221	Lab Control Sample Duplicate	**Prep Batch**	VXX14549	
Client Name	Weston Solutions		**Method**	SW5030B	
Project Name/#	Basewide Groundwater		**Date**	10/13/2005	
Matrix	Water (Surface, Eff., Ground)				

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy								
	LCSD	30.1	100		0	(< 20)	30 ug/L	10/13/2005
trans-1,3-Dichloropropene	LCS	31.5	105	(89-125)			30 ug/L	10/13/2005
	LCSD	31.1	104		1	(< 20)	30 ug/L	10/13/2005
1,1,2-Trichloroethane	LCS	32.1	107	(86-116)			30 ug/L	10/13/2005
	LCSD	30.5	102		5	(< 20)	30 ug/L	10/13/2005
Tetrachloroethene	LCS	30.3	101	(79-117)			30 ug/L	10/13/2005
	LCSD	29.6	99		2	(< 20)	30 ug/L	10/13/2005
1,3-Dichloropropane	LCS	32.0	107	(86-118)			30 ug/L	10/13/2005
	LCSD	31.0	103		3	(< 20)	30 ug/L	10/13/2005
Dibromochloromethane	LCS	31.4	105	(88-116)			30 ug/L	10/13/2005
	LCSD	30.8	103		2	(< 20)	30 ug/L	10/13/2005
1,2-Dibromoethane	LCS	30.7	102	(86-119)			30 ug/L	10/13/2005
	LCSD	30.5	102		1	(< 20)	30 ug/L	10/13/2005
Chlorobenzene	LCS	30.7	102	(88-115)			30 ug/L	10/13/2005
	LCSD	30.2	101		2	(< 20)	30 ug/L	10/13/2005
1,1,1,2-Tetrachloroethane	LCS	30.0	100	(81-120)			30 ug/L	10/13/2005
	LCSD	29.0	97		4	(< 20)	30 ug/L	10/13/2005
Ethylbenzene	LCS	31.8	106	(85-120)			30 ug/L	10/13/2005
	LCSD	31.1	104		2	(< 20)	30 ug/L	10/13/2005
P & M -Xylene	LCS	63.0	105	(80-120)			60 ug/L	10/13/2005
	LCSD	61.6	103		2	(< 20)	60 ug/L	10/13/2005
Styrene	LCS	33.3	111	(84-129)			30 ug/L	10/13/2005
	LCSD	32.6	109		2	(< 20)	30 ug/L	10/13/2005
Bromoform	LCS	33.4	111	(85-126)			30 ug/L	10/13/2005
	LCSD	33.0	110		1	(< 20)	30 ug/L	10/13/2005
Isopropylbenzene (Cumene)	LCS	31.6	105	(80-120)			30 ug/L	10/13/2005
	LCSD	30.7	102		3	(< 20)	30 ug/L	10/13/2005

SGS

SGS Ref.#	665217	Lab Control Sample	**Printed Date/Time**	10/25/2005	7:56
	665221	Lab Control Sample Duplicate	**Prep Batch**	VXX14549	
Client Name	Weston Solutions		**Method**	SW5030B	
Project Name/#	Basewide Groundwater		**Date**	10/13/2005	
Matrix	Water (Surface, Eff., Ground)				

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy								
Bromobenzene	LCS	30.0	100	(87-115)			30 ug/L	10/13/2005
	LCSD	28.7	96		5	(< 20)	30 ug/L	10/13/2005
o-Xylene	LCS	32.3	108	(80-120)			30 ug/L	10/13/2005
	LCSD	31.6	105		2	(< 20)	30 ug/L	10/13/2005
1,2,3-Trichloropropane	LCS	31.3	104	(86-118)			30 ug/L	10/13/2005
	LCSD	30.3	101		3	(< 20)	30 ug/L	10/13/2005
n-Propylbenzene	LCS	31.9	106	(87-123)			30 ug/L	10/13/2005
	LCSD	29.8	99		7	(< 20)	30 ug/L	10/13/2005
2-Chlorotoluene	LCS	32.2	107	(85-121)			30 ug/L	10/13/2005
	LCSD	29.0	97		10	(< 20)	30 ug/L	10/13/2005
4-Chlorotoluene	LCS	31.6	105	(81-126)			30 ug/L	10/13/2005
	LCSD	29.8	100		6	(< 20)	30 ug/L	10/13/2005
1,1,2,2-Tetrachloroethane	LCS	29.1	97	(80-123)			30 ug/L	10/13/2005
	LCSD	27.9	93		4	(< 20)	30 ug/L	10/13/2005
1,3,5-Trimethylbenzene	LCS	31.8	106	(87-118)			30 ug/L	10/13/2005
	LCSD	29.7	99		7	(< 20)	30 ug/L	10/13/2005
tert-Butylbenzene	LCS	32.4	108	(86-121)			30 ug/L	10/13/2005
	LCSD	30.8	103		5	(< 20)	30 ug/L	10/13/2005
1,2,4-Trimethylbenzene	LCS	32.7	109	(87-117)			30 ug/L	10/13/2005
	LCSD	30.8	103		6	(< 20)	30 ug/L	10/13/2005
sec-Butylbenzene	LCS	34.4	115	(88-125)			30 ug/L	10/13/2005
	LCSD	32.6	109		5	(< 20)	30 ug/L	10/13/2005
4-Isopropyltoluene	LCS	32.6	109	(83-119)			30 ug/L	10/13/2005
	LCSD	30.8	103		6	(< 20)	30 ug/L	10/13/2005
1,4-Dichlorobenzene	LCS	31.4	105	(82-121)			30 ug/L	10/13/2005
	LCSD	30.0	100		5	(< 20)	30 ug/L	10/13/2005
1,2-Dichlorobenzene	LCS	30.0	100	(86-114)			30 ug/L	10/13/2005
	LCSD	28.9	96		4	(< 20)	30 ug/L	10/13/2005

SGS

SGS Ref.#	665217	Lab Control Sample	**Printed Date/Time**	10/25/2005	7:56
	665221	Lab Control Sample Duplicate	**Prep Batch**	VXX14549	
Client Name	Weston Solutions		**Method**	SW5030B	
Project Name/#	Basewide Groundwater		**Date**	10/13/2005	
Matrix	Water (Surface, Eff., Ground)				

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy								
n-Butylbenzene	LCS	32.8	109	(83-130)			30 ug/L	10/13/2005
	LCSD	31.2	104		5	(< 20)	30 ug/L	10/13/2005
1,3-Dichlorobenzene	LCS	31.2	104	(83-118)			30 ug/L	10/13/2005
	LCSD	29.3	98		6	(< 20)	30 ug/L	10/13/2005
1,2-Dibromo-3-chloropropane	LCS	29.4	98	(80-122)			30 ug/L	10/13/2005
	LCSD	27.6	92		6	(< 20)	30 ug/L	10/13/2005
1,2,4-Trichlorobenzene	LCS	30.7	102	(85-120)			30 ug/L	10/13/2005
	LCSD	29.1	97		5	(< 20)	30 ug/L	10/13/2005
Hexachlorobutadiene	LCS	29.7	99	(81-126)			30 ug/L	10/13/2005
	LCSD	28.1	94		6	(< 20)	30 ug/L	10/13/2005
Naphthalene	LCS	32.1	107	(82-126)			30 ug/L	10/13/2005
	LCSD	30.3	101		6	(< 20)	30 ug/L	10/13/2005
1,2,3-Trichlorobenzene	LCS	29.6	99	(86-124)			30 ug/L	10/13/2005
	LCSD	28.5	95		4	(< 20)	30 ug/L	10/13/2005
4-Methyl-2-pentanone (MIBK)	LCS	96.5	107	(73-134)			90 ug/L	10/13/2005
	LCSD	99.9	111		3	(< 20)	90 ug/L	10/13/2005
2-Hexanone	LCS	101	112	(76-130)			90 ug/L	10/13/2005
	LCSD	105	117		4	(< 20)	90 ug/L	10/13/2005
Methyl-t-butyl ether	LCS	46.4	103	(83-119)			45 ug/L	10/13/2005
	LCSD	47.3	105		2	(< 20)	45 ug/L	10/13/2005
1,2-Dichloroethane	LCS	31.0	103	(82-119)			30 ug/L	10/13/2005
	LCSD	31.4	105		1	(< 20)	30 ug/L	10/13/2005
Surrogates								
Dibromofluoromethane <surr>	LCS		98	(85-115)			30 ug/L	10/13/2005
	LCSD		100		1		30 ug/L	10/13/2005
1,2-Dichloroethane-D4 <surr>	LCS		100	(72-119)			30 ug/L	10/13/2005
	LCSD		98		1		30 ug/L	10/13/2005

SGS

SGS Ref.#	665217	Lab Control Sample	**Printed Date/Time**	10/25/2005	7:56
	665221	Lab Control Sample Duplicate	**Prep Batch**	VXX14549	
Client Name	Weston Solutions		**Method**	SW5030B	
Project Name/#	Basewide Groundwater		**Date**	10/13/2005	
Matrix	Water (Surface, Eff., Ground)				

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy							
Toluene-d8 <surr>	LCS	100	(85-120)			30 ug/L	10/13/2005
	LCSD	99		1		30 ug/L	10/13/2005
4-Bromofluorobenzene <surr>	LCS	100	(76-119)			30 ug/L	10/13/2005
	LCSD	95		5		30 ug/L	10/13/2005

Batch VMS7954
Method SW8260B
Instrument HP 5890 Series II MS3 VNA

SGS

CT&E Ref.#	665239 Method Blank		**Printed Date/Time**	10/25/2005	7:56
Client Name	Weston Solutions		**Prep Batch**	VXX14552	
Project Name/#	Basewide Groundwater		**Method**	SW5030B	
Matrix	Water (Surface, Eff., Ground)		**Date**	10/13/2005	

QC results affect the following production samples:

1056819001, 1056819002

Sample Remarks:

Parameter	Results	Reporting/Control Limit	Units	Analysis Date

Volatile Gas Chromatography/Mass Spectroscopy

SGS

CT&E Ref.#	665239 Method Blank	**Printed Date/Time**	10/25/2005 7:56
Client Name	Weston Solutions	**Prep Batch**	VXX14552
Project Name/#	Basewide Groundwater	**Method**	SW5030B
Matrix	Water (Surface, Eff., Ground)	**Date**	10/13/2005

Parameter	Results	Reporting/Control Limit	Units	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy				
Dichlorodifluoromethane	1.00 U	1.00	ug/L	10/13/05
Chloromethane	1.00 U	1.00	ug/L	10/13/05
Vinyl chloride	1.00 U	1.00	ug/L	10/13/05
Bromomethane	3.00 U	3.00	ug/L	10/13/05
Chloroethane	1.00 U	1.00	ug/L	10/13/05
Trichlorofluoromethane	1.00 U	1.00	ug/L	10/13/05
1,1-Dichloroethene	1.00 U	1.00	ug/L	10/13/05
Methylene chloride	1.00 U	1.00	ug/L	10/13/05
Acetone	10.0 U	10.0	ug/L	10/13/05
trans-1,2-Dichloroethene	1.00 U	1.00	ug/L	10/13/05
1,1-Dichloroethane	1.00 U	1.00	ug/L	10/13/05
2,2-Dichloropropane	1.00 U	1.00	ug/L	10/13/05
cis-1,2-Dichloroethene	1.00 U	1.00	ug/L	10/13/05
2-Butanone (MEK)	10.0 U	10.0	ug/L	10/13/05
Bromochloromethane	1.00 U	1.00	ug/L	10/13/05
Chloroform	0.400 U	0.400	ug/L	10/13/05
1,1,1-Trichloroethane	1.00 U	1.00	ug/L	10/13/05
Carbon tetrachloride	1.00 U	1.00	ug/L	10/13/05
1,1-Dichloropropene	1.00 U	1.00	ug/L	10/13/05
Benzene	0.400 U	0.400	ug/L	10/13/05
1,2-Dichloroethane	0.500 U	0.500	ug/L	10/13/05
Trichloroethene	1.00 U	1.00	ug/L	10/13/05
1,2-Dichloropropane	1.00 U	1.00	ug/L	10/13/05
Dibromomethane	1.00 U	1.00	ug/L	10/13/05
Bromodichloromethane	0.500 U	0.500	ug/L	10/13/05
2-Chloroethyl Vinyl Ether	10.0 U	10.0	ug/L	10/13/05
cis-1,3-Dichloropropene	0.500 U	0.500	ug/L	10/13/05
Toluene	1.00 U	1.00	ug/L	10/13/05
trans-1,3-Dichloropropene	1.00 U	1.00	ug/L	10/13/05
1,1,2-Trichloroethane	1.00 U	1.00	ug/L	10/13/05
Tetrachloroethene	1.00 U	1.00	ug/L	10/13/05
1,3-Dichloropropane	0.400 U	0.400	ug/L	10/13/05
Dibromochloromethane	0.500 U	0.500	ug/L	10/13/05
1,2-Dibromoethane	1.00 U	1.00	ug/L	10/13/05
Chlorobenzene	0.500 U	0.500	ug/L	10/13/05
1,1,1,2-Tetrachloroethane	0.500 U	0.500	ug/L	10/13/05
Ethylbenzene	1.00 U	1.00	ug/L	10/13/05
P & M -Xylene	2.00 U	2.00	ug/L	10/13/05
o-Xylene	1.00 U	1.00	ug/L	10/13/05

SGS

CT&E Ref.#	665239 Method Blank		**Printed Date/Time**		10/25/2005 7:56
Client Name	Weston Solutions		**Prep**	**Batch**	VXX14552
Project Name/#	Basewide Groundwater			**Method**	SW5030B
Matrix	Water (Surface, Eff., Ground)			**Date**	10/13/2005

Parameter	Results	Reporting/Control Limit	Units	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy				
Styrene	1.00 U	1.00	ug/L	10/13/05
Bromoform	1.00 U	1.00	ug/L	10/13/05
Isopropylbenzene (Cumene)	1.00 U	1.00	ug/L	10/13/05
Bromobenzene	1.00 U	1.00	ug/L	10/13/05
1,1,2,2-Tetrachloroethane	1.00 U	1.00	ug/L	10/13/05
1,2,3-Trichloropropane	1.00 U	1.00	ug/L	10/13/05
n-Propylbenzene	1.00 U	1.00	ug/L	10/13/05
2-Chlorotoluene	1.00 U	1.00	ug/L	10/13/05
4-Chlorotoluene	1.00 U	1.00	ug/L	10/13/05
1,3,5-Trimethylbenzene	1.00 U	1.00	ug/L	10/13/05
tert-Butylbenzene	1.00 U	1.00	ug/L	10/13/05
1,2,4-Trimethylbenzene	1.00 U	1.00	ug/L	10/13/05
sec-Butylbenzene	1.00 U	1.00	ug/L	10/13/05
1,3-Dichlorobenzene	1.00 U	1.00	ug/L	10/13/05
4-Isopropyltoluene	1.00 U	1.00	ug/L	10/13/05
1,4-Dichlorobenzene	0.500 U	0.500	ug/L	10/13/05
1,2-Dichlorobenzene	1.00 U	1.00	ug/L	10/13/05
n-Butylbenzene	1.00 U	1.00	ug/L	10/13/05
1,2-Dibromo-3-chloropropane	2.00 U	2.00	ug/L	10/13/05
1,2,4-Trichlorobenzene	1.00 U	1.00	ug/L	10/13/05
Hexachlorobutadiene	1.00 U	1.00	ug/L	10/13/05
Naphthalene	1.00 U	1.00	ug/L	10/13/05
Methyl-t-butyl ether	5.00 U	5.00	ug/L	10/13/05
1,2,3-Trichlorobenzene	1.00 U	1.00	ug/L	10/13/05
4-Methyl-2-pentanone (MIBK)	10.0 U	10.0	ug/L	10/13/05
1-Chlorohexane	1.00 U	1.00	ug/L	10/13/05
Surrogates				
Dibromofluoromethane <surr>	99.8	85-115	%	10/13/05
1,2-Dichloroethane-D4 <surr>	104	72-119	%	10/13/05
Toluene-d8 <surr>	97.1	85-120	%	10/13/05
4-Bromofluorobenzene <surr>	98.8	76-119	%	10/13/05

Batch VMS7956
Method SW8260B
Instrument HP 5890 Series II MS3 VNA

SGS

SGS Ref.#	665240	Lab Control Sample	**Printed Date/Time**		10/25/2005	7:56
	665241	Lab Control Sample Duplicate	**Prep**	**Batch**	VXX14552	
Client Name	Weston Solutions			**Method**	SW5030B	
Project Name/#	Basewide Groundwater			**Date**	10/13/2005	
Matrix	Water (Surface, Eff., Ground)					

QC results affect the following production samples:

1056819001, 1056819002

Sample Remarks:

LCS

LCSD 8260(AFCEE) - LCSD recovery for acetone is biased high and does not meet laboratory QC goals. This analyte is not detected above the PQL in any of the associated samples.
8260(AFCEE) - LCSD RPD for acetone does not meet laboratory QC goals. This analyte is not detected above the PQL in any of the associated samples.

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date

Volatile Gas Chromatography/Mass Spectroscopy

SGS

SGS Ref.#	665240	Lab Control Sample	**Printed Date/Time**	10/25/2005	7:56
	665241	Lab Control Sample Duplicate	**Prep Batch**	VXX14552	
Client Name	Weston Solutions		**Method**	SW5030B	
Project Name/#	Basewide Groundwater		**Date**	10/13/2005	
Matrix	Water (Surface, Eff., Ground)				

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy								
Dichlorodifluoromethane	LCS	27.9	93	(54-131)			30 ug/L	10/13/2005
	LCSD	27.5	92		1	(< 20)	30 ug/L	10/13/2005
Chloromethane	LCS	28.3	94	(56-125)			30 ug/L	10/13/2005
	LCSD	28.2	94		1	(< 20)	30 ug/L	10/13/2005
Vinyl chloride	LCS	30.7	102	(50-134)			30 ug/L	10/13/2005
	LCSD	29.9	100		3	(< 20)	30 ug/L	10/13/2005
Bromomethane	LCS	31.6	105	(57-141)			30 ug/L	10/13/2005
	LCSD	30.2	101		4	(< 20)	30 ug/L	10/13/2005
Chloroethane	LCS	29.8	99	(60-133)			30 ug/L	10/13/2005
	LCSD	30.1	100		1	(< 20)	30 ug/L	10/13/2005
Trichlorofluoromethane	LCS	28.5	95	(72-129)			30 ug/L	10/13/2005
	LCSD	28.7	96		1	(< 20)	30 ug/L	10/13/2005
1,1-Dichloroethene	LCS	30.3	101	(70-130)			30 ug/L	10/13/2005
	LCSD	30.5	102		1	(< 20)	30 ug/L	10/13/2005
Methylene chloride	LCS	28.5	95	(72-120)			30 ug/L	10/13/2005
	LCSD	28.8	96		1	(< 20)	30 ug/L	10/13/2005
Acetone	LCS	99.5	111	(51-135)			90 ug/L	10/13/2005
	LCSD	129	143 *		26 *	(< 20)	90 ug/L	10/13/2005
trans-1,2-Dichloroethene	LCS	30.4	101	(71-127)			30 ug/L	10/13/2005
	LCSD	30.6	102		0	(< 20)	30 ug/L	10/13/2005
1,1-Dichloroethane	LCS	29.4	98	(81-120)			30 ug/L	10/13/2005
	LCSD	30.8	103		5	(< 20)	30 ug/L	10/13/2005
2,2-Dichloropropane	LCS	29.8	99	(77-135)			30 ug/L	10/13/2005
	LCSD	31.4	105		6	(< 20)	30 ug/L	10/13/2005
cis-1,2-Dichloroethene	LCS	30.4	101	(79-120)			30 ug/L	10/13/2005
	LCSD	30.3	101		0	(< 20)	30 ug/L	10/13/2005
2-Butanone (MEK)	LCS	101	113	(67-136)			90 ug/L	10/13/2005
	LCSD	118	131		15	(< 20)	90 ug/L	10/13/2005

SGS

SGS Ref.#	665240	Lab Control Sample	**Printed Date/Time**	10/25/2005	7:56
	665241	Lab Control Sample Duplicate	**Prep Batch**	VXX14552	
Client Name	Weston Solutions		**Method**	SW5030B	
Project Name/#	Basewide Groundwater		**Date**	10/13/2005	
Matrix	Water (Surface, Eff., Ground)				

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy								
Bromochloromethane	LCS	28.9	96	(76-126)			30 ug/L	10/13/2005
	LCSD	29.0	97		0	(< 20)	30 ug/L	10/13/2005
Chloroform	LCS	29.9	100	(86-115)			30 ug/L	10/13/2005
	LCSD	30.3	101		1	(< 20)	30 ug/L	10/13/2005
1,1,1-Trichloroethane	LCS	30.1	100	(82-120)			30 ug/L	10/13/2005
	LCSD	30.3	101		1	(< 20)	30 ug/L	10/13/2005
Carbon tetrachloride	LCS	31.4	105	(79-132)			30 ug/L	10/13/2005
	LCSD	32.0	107		2	(< 20)	30 ug/L	10/13/2005
1,1-Dichloropropene	LCS	30.7	102	(80-121)			30 ug/L	10/13/2005
	LCSD	31.0	103		1	(< 20)	30 ug/L	10/13/2005
Benzene	LCS	29.8	99	(84-115)			30 ug/L	10/13/2005
	LCSD	29.7	99		0	(< 20)	30 ug/L	10/13/2005
1,2-Dichloroethane	LCS	31.0	103	(82-119)			30 ug/L	10/13/2005
	LCSD	31.4	105		1	(< 20)	30 ug/L	10/13/2005
Trichloroethene	LCS	32.1	107	(82-118)			30 ug/L	10/13/2005
	LCSD	32.1	107		0	(< 20)	30 ug/L	10/13/2005
1,2-Dichloropropane	LCS	31.0	103	(88-115)			30 ug/L	10/13/2005
	LCSD	30.9	103		0	(< 20)	30 ug/L	10/13/2005
Dibromomethane	LCS	30.2	101	(86-119)			30 ug/L	10/13/2005
	LCSD	29.8	99		1	(< 20)	30 ug/L	10/13/2005
Bromodichloromethane	LCS	30.5	102	(81-120)			30 ug/L	10/13/2005
	LCSD	30.1	100		2	(< 20)	30 ug/L	10/13/2005
2-Chloroethyl Vinyl Ether	LCS	50.0	111	(63-148)			45 ug/L	10/13/2005
	LCSD	54.2	120		8	(< 20)	45 ug/L	10/13/2005
cis-1,3-Dichloropropene	LCS	33.3	111	(90-126)			30 ug/L	10/13/2005
	LCSD	33.1	110		1	(< 20)	30 ug/L	10/13/2005
Toluene	LCS	30.1	100	(81-115)			30 ug/L	10/13/2005

SGS

SGS Ref.#	665240	Lab Control Sample	**Printed Date/Time**	10/25/2005	7:56
	665241	Lab Control Sample Duplicate	**Prep Batch**	VXX14552	
Client Name	Weston Solutions		**Method**	SW5030B	
Project Name/#	Basewide Groundwater		**Date**	10/13/2005	
Matrix	Water (Surface, Eff., Ground)				

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy								
	LCSD	30.1	100		0	(< 20)	30 ug/L	10/13/2005
trans-1,3-Dichloropropene	LCS	31.5	105	(89-125)			30 ug/L	10/13/2005
	LCSD	31.1	104		1	(< 20)	30 ug/L	10/13/2005
1,1,2-Trichloroethane	LCS	32.1	107	(86-116)			30 ug/L	10/13/2005
	LCSD	30.5	102		5	(< 20)	30 ug/L	10/13/2005
Tetrachloroethene	LCS	30.3	101	(79-117)			30 ug/L	10/13/2005
	LCSD	29.6	99		2	(< 20)	30 ug/L	10/13/2005
1,3-Dichloropropane	LCS	32.0	107	(86-118)			30 ug/L	10/13/2005
	LCSD	31.0	103		3	(< 20)	30 ug/L	10/13/2005
Dibromochloromethane	LCS	31.4	105	(88-116)			30 ug/L	10/13/2005
	LCSD	30.8	103		2	(< 20)	30 ug/L	10/13/2005
1,2-Dibromoethane	LCS	30.7	102	(86-119)			30 ug/L	10/13/2005
	LCSD	30.5	102		1	(< 20)	30 ug/L	10/13/2005
Chlorobenzene	LCS	30.7	102	(88-115)			30 ug/L	10/13/2005
	LCSD	30.2	101		2	(< 20)	30 ug/L	10/13/2005
1,1,1,2-Tetrachloroethane	LCS	30.0	100	(81-120)			30 ug/L	10/13/2005
	LCSD	29.0	97		4	(< 20)	30 ug/L	10/13/2005
Ethylbenzene	LCS	31.8	106	(85-120)			30 ug/L	10/13/2005
	LCSD	31.1	104		2	(< 20)	30 ug/L	10/13/2005
P & M -Xylene	LCS	63.0	105	(80-120)			60 ug/L	10/13/2005
	LCSD	61.6	103		2	(< 20)	60 ug/L	10/13/2005
o-Xylene	LCS	32.3	108	(80-120)			30 ug/L	10/13/2005
	LCSD	31.6	105		2	(< 20)	30 ug/L	10/13/2005
Styrene	LCS	33.3	111	(84-129)			30 ug/L	10/13/2005
	LCSD	32.6	109		2	(< 20)	30 ug/L	10/13/2005
Bromoform	LCS	33.4	111	(85-126)			30 ug/L	10/13/2005
	LCSD	33.0	110		1	(< 20)	30 ug/L	10/13/2005

SGS

SGS Ref.#	665240	Lab Control Sample	**Printed Date/Time**	10/25/2005	7:56
	665241	Lab Control Sample Duplicate	**Prep Batch**	VXX14552	
Client Name	Weston Solutions		**Method**	SW5030B	
Project Name/#	Basewide Groundwater		**Date**	10/13/2005	
Matrix	Water (Surface, Eff., Ground)				

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy								
Isopropylbenzene (Cumene)	LCS	31.6	105	(80-120)			30 ug/L	10/13/2005
	LCSD	30.7	102		3	(< 20)	30 ug/L	10/13/2005
Bromobenzene	LCS	30.0	100	(87-115)			30 ug/L	10/13/2005
	LCSD	28.7	96		5	(< 20)	30 ug/L	10/13/2005
1,1,2,2-Tetrachloroethane	LCS	29.1	97	(80-123)			30 ug/L	10/13/2005
	LCSD	27.9	93		4	(< 20)	30 ug/L	10/13/2005
1,2,3-Trichloropropane	LCS	31.3	104	(86-118)			30 ug/L	10/13/2005
	LCSD	30.3	101		3	(< 20)	30 ug/L	10/13/2005
n-Propylbenzene	LCS	31.9	106	(87-123)			30 ug/L	10/13/2005
	LCSD	29.8	99		7	(< 20)	30 ug/L	10/13/2005
2-Chlorotoluene	LCS	32.2	107	(85-121)			30 ug/L	10/13/2005
	LCSD	29.0	97		10	(< 20)	30 ug/L	10/13/2005
4-Chlorotoluene	LCS	31.6	105	(81-126)			30 ug/L	10/13/2005
	LCSD	29.8	100		6	(< 20)	30 ug/L	10/13/2005
1,3,5-Trimethylbenzene	LCS	31.8	106	(87-118)			30 ug/L	10/13/2005
	LCSD	29.7	99		7	(< 20)	30 ug/L	10/13/2005
tert-Butylbenzene	LCS	32.4	108	(86-121)			30 ug/L	10/13/2005
	LCSD	30.8	103		5	(< 20)	30 ug/L	10/13/2005
1,2,4-Trimethylbenzene	LCS	32.7	109	(87-117)			30 ug/L	10/13/2005
	LCSD	30.8	103		6	(< 20)	30 ug/L	10/13/2005
sec-Butylbenzene	LCS	34.4	115	(88-125)			30 ug/L	10/13/2005
	LCSD	32.6	109		5	(< 20)	30 ug/L	10/13/2005
1,3-Dichlorobenzene	LCS	31.2	104	(83-118)			30 ug/L	10/13/2005
	LCSD	29.3	98		6	(< 20)	30 ug/L	10/13/2005
4-Isopropyltoluene	LCS	32.6	109	(83-119)			30 ug/L	10/13/2005
	LCSD	30.8	103		6	(< 20)	30 ug/L	10/13/2005
1,4-Dichlorobenzene	LCS	31.4	105	(82-121)			30 ug/L	10/13/2005
	LCSD	30.0	100		5	(< 20)	30 ug/L	10/13/2005

SGS

SGS Ref.#	665240	Lab Control Sample	**Printed Date/Time**	10/25/2005	7:56
	665241	Lab Control Sample Duplicate	**Prep Batch**	VXX14552	
Client Name	Weston Solutions		**Method**	SW5030B	
Project Name/#	Basewide Groundwater		**Date**	10/13/2005	
Matrix	Water (Surface, Eff., Ground)				

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy								
1,2-Dichlorobenzene	LCS	30.0	100	(86-114)			30 ug/L	10/13/2005
	LCSD	28.9	96		4	(< 20)	30 ug/L	10/13/2005
n-Butylbenzene	LCS	32.8	109	(83-130)			30 ug/L	10/13/2005
	LCSD	31.2	104		5	(< 20)	30 ug/L	10/13/2005
1,2-Dibromo-3-chloropropane	LCS	29.4	98	(80-122)			30 ug/L	10/13/2005
	LCSD	27.6	92		6	(< 20)	30 ug/L	10/13/2005
1,2,4-Trichlorobenzene	LCS	30.7	102	(85-120)			30 ug/L	10/13/2005
	LCSD	29.1	97		5	(< 20)	30 ug/L	10/13/2005
Hexachlorobutadiene	LCS	29.7	99	(81-126)			30 ug/L	10/13/2005
	LCSD	28.1	94		6	(< 20)	30 ug/L	10/13/2005
Naphthalene	LCS	32.1	107	(82-126)			30 ug/L	10/13/2005
	LCSD	30.3	101		6	(< 20)	30 ug/L	10/13/2005
Methyl-t-butyl ether	LCS	46.4	103	(83-119)			45 ug/L	10/13/2005
	LCSD	47.3	105		2	(< 20)	45 ug/L	10/13/2005
1,2,3-Trichlorobenzene	LCS	29.6	99	(86-124)			30 ug/L	10/13/2005
	LCSD	28.5	95		4	(< 20)	30 ug/L	10/13/2005
4-Methyl-2-pentanone (MIBK)	LCS	96.5	107	(73-134)			90 ug/L	10/13/2005
	LCSD	99.9	111		3	(< 20)	90 ug/L	10/13/2005
1-Chlorohexane	LCS	49.7	110	(75-125)			45 ug/L	10/13/2005
	LCSD	48.2	107		3	(< 20)	45 ug/L	10/13/2005
Surrogates								
Dibromofluoromethane <surr>	LCS		98	(85-115)			30 ug/L	10/13/2005
	LCSD		100		1		30 ug/L	10/13/2005
1,2-Dichloroethane-D4 <surr>	LCS		100	(72-119)			30 ug/L	10/13/2005
	LCSD		98		1		30 ug/L	10/13/2005
Toluene-d8 <surr>	LCS		100	(85-120)			30 ug/L	10/13/2005
	LCSD		99		1		30 ug/L	10/13/2005

SGS

SGS Ref.#	665240	Lab Control Sample	**Printed Date/Time**	10/25/2005	7:56
	665241	Lab Control Sample Duplicate	**Prep Batch**	VXX14552	
Client Name	Weston Solutions		**Method**	SW5030B	
Project Name/#	Basewide Groundwater		**Date**	10/13/2005	
Matrix	Water (Surface, Eff., Ground)				

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy								
4-Bromofluorobenzene <surr>	LCS		100	(76-119)			30 ug/L	10/13/2005
	LCSD		95		5		30 ug/L	10/13/2005

Batch	VMS7956
Method	SW8260B
Instrument	HP 5890 Series II MS3 VNA

SGS

CT&E Ref.#	664538 Method Blank		**Printed Date/Time**		10/25/2005 7:56
Client Name	Weston Solutions		**Prep**	**Batch**	XXX16006
Project Name/#	Basewide Groundwater			**Method**	SW3510C
Matrix	Water (Surface, Eff., Ground)			**Date**	10/14/2005

QC results affect the following production samples:

1056819001

Sample Remarks:

Parameter	Results	Reporting/Control Limit	Units	Analysis Date
Polynuclear Aromatics GC/MS				
Acenaphthylene	0.0500 U	0.0500	ug/L	10/17/05
Acenaphthene	0.0500 U	0.0500	ug/L	10/17/05
Fluorene	0.0500 U	0.0500	ug/L	10/17/05
Phenanthrene	0.0500 U	0.0500	ug/L	10/17/05
Anthracene	0.0500 U	0.0500	ug/L	10/17/05
Fluoranthene	0.0500 U	0.0500	ug/L	10/17/05
Pyrene	0.0500 U	0.0500	ug/L	10/17/05
Benzo(a)Anthracene	0.0500 U	0.0500	ug/L	10/17/05
Chrysene	0.0500 U	0.0500	ug/L	10/17/05
Benzo[b]Fluoranthene	0.0500 U	0.0500	ug/L	10/17/05
Benzo[a]pyrene	0.0500 U	0.0500	ug/L	10/17/05
Indeno[1,2,3-c,d] pyrene	0.0500 U	0.0500	ug/L	10/17/05
Dibenzo[a,h]anthracene	0.0500 U	0.0500	ug/L	10/17/05
Benzo[g,h,i]perylene	0.0500 U	0.0500	ug/L	10/17/05
Naphthalene	0.100 U	0.100	ug/L	10/17/05
Benzo[k]fluoranthene	0.0500 U	0.0500	ug/L	10/17/05
Surrogates				
Terphenyl-d14 <surr>	91.3	50-120	%	10/17/05

Batch XMS3459
Method EPA 625M SIMS
Instrument HP 6890/5973 MS SVOA

SGS

SGS Ref.#	664539 Lab Control Sample	**Printed Date/Time**		10/25/2005	7:56
		Prep	**Batch**	XXX16006	
Client Name	Weston Solutions		**Method**	SW3510C	
Project Name/#	Basewide Groundwater		**Date**	10/14/2005	
Matrix	Water (Surface, Eff., Ground)				

QC results affect the following production samples:

1056819001

Sample Remarks:

LCS 625 SIM - LCS recovery for naphthalene is biased low and does not meet QC recovery goals. This analyte does meet QC goals in the MS and MSD. Results are not significantly affected.

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date

Polynuclear Aromatics GC/MS

SGS

SGS Ref.#	664539 Lab Control Sample	**Printed Date/Time**	10/25/2005 7:56
		Prep Batch	XXX16006
Client Name	Weston Solutions	**Method**	SW3510C
Project Name/#	Basewide Groundwater	**Date**	10/14/2005
Matrix	Water (Surface, Eff., Ground)		

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Polynuclear Aromatics GC/MS								
Acenaphthylene	LCS	0.254	51	(43-92)			0.5 ug/L	10/17/2005
Acenaphthene	LCS	0.224	45 *	(45-87)			0.5 ug/L	10/17/2005
Fluorene	LCS	0.281	56	(40-90)			0.5 ug/L	10/17/2005
Phenanthrene	LCS	0.362	72	(50-95)			0.5 ug/L	10/17/2005
Anthracene	LCS	0.389	78	(30-97)			0.5 ug/L	10/17/2005
Fluoranthene	LCS	0.408	82	(55-105)			0.5 ug/L	10/17/2005
Pyrene	LCS	0.408	82	(50-105)			0.5 ug/L	10/17/2005
Benzo(a)Anthracene	LCS	0.544	109	(58-136)			0.5 ug/L	10/17/2005
Chrysene	LCS	0.436	87	(55-110)			0.5 ug/L	10/17/2005
Benzo[b]Fluoranthene	LCS	0.508	102	(45-120)			0.5 ug/L	10/17/2005
Benzo[a]pyrene	LCS	0.511	102	(31-128)			0.5 ug/L	10/17/2005
Indeno[1,2,3-c,d] pyrene	LCS	0.496	99	(45-122)			0.5 ug/L	10/17/2005
Dibenzo[a,h]anthracene	LCS	0.512	102	(40-120)			0.5 ug/L	10/17/2005
Benzo[g,h,i]perylene	LCS	0.463	93	(40-117)			0.5 ug/L	10/17/2005
Naphthalene	LCS	0.187	37 *	(40-96)			0.5 ug/L	10/17/2005
Benzo[k]fluoranthene	LCS	0.460	92	(49-121)			0.5 ug/L	10/17/2005
Surrogates								
Terphenyl-d14 <surr>	LCS		80	(50-120)			0.5 ug/L	10/17/2005

Batch	XMS3459
Method	EPA 625M SIMS
Instrument	HP 6890/5973 MS SVOA

SGS

SGS Ref.#	664543	Matrix Spike	**Printed Date/Time**		10/25/2005 7:56
	664544	Matrix Spike Duplicate	**Prep**	**Batch**	XXX16006
				Method	Liquid/Water Extraction for 625
				Date	10/14/2005
Original	664542				
Matrix	Water (Surface, Eff., Ground)				

QC results affect the following production samples:

1056819001

Sample Remarks:

MS

MSD

Parameter	Qualifiers	Original Result	QC Result	Pct Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date

Polynuclear Aromatics GC/MS

SGS

SGS Ref.#	664543	Matrix Spike	**Printed Date/Time**	10/25/2005 7:56
	664544	Matrix Spike Duplicate	**Prep Batch**	XXX16006
			Method	Liquid/Water Extraction for 625
			Date	10/14/2005
Original	664542			
Matrix	Water (Surface, Eff., Ground)			

Parameter	Qualifiers	Original Result	QC Result	Pct Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Polynuclear Aromatics GC/MS									
Acenaphthylene	MS	0.0505 U	0.325	64	(43-92)			0.505	ug/L 10/17/2005
	MSD		0.363	72		11	(< 30)	0.505	ug/L 10/17/2005
Acenaphthene	MS	0.0505 U	0.286	57	(45-87)			0.505	ug/L 10/17/2005
	MSD		0.323	64		12	(< 30)	0.505	ug/L 10/17/2005
Fluorene	MS	0.0505 U	0.364	72	(40-90)			0.505	ug/L 10/17/2005
	MSD		0.38	75		4	(< 30)	0.505	ug/L 10/17/2005
Phenanthrene	MS	0.0505 U	0.429	85	(50-95)			0.505	ug/L 10/17/2005
	MSD		0.445	88		4	(< 30)	0.505	ug/L 10/17/2005
Anthracene	MS	0.0505 U	0.465	92	(30-97)			0.505	ug/L 10/17/2005
	MSD		0.48	95		3	(< 30)	0.505	ug/L 10/17/2005
Fluoranthene	MS	0.0505 U	0.491	97	(55-105)			0.505	ug/L 10/17/2005
	MSD		0.508	101		3	(< 30)	0.505	ug/L 10/17/2005
Pyrene	MS	0.0505 U	0.492	98	(50-105)			0.505	ug/L 10/17/2005
	MSD		0.516	102		5	(< 30)	0.505	ug/L 10/17/2005
Benzo(a)Anthracene	MS	0.0505 U	0.547	108	(58-136)			0.505	ug/L 10/17/2005
	MSD		0.591	117		8	(< 30)	0.505	ug/L 10/17/2005
Chrysene	MS	0.0505 U	0.455	90	(55-110)			0.505	ug/L 10/17/2005
	MSD		0.504	100		10	(< 30)	0.505	ug/L 10/17/2005
Benzo[b]Fluoranthene	MS	0.0505 U	0.485	96	(45-120)			0.505	ug/L 10/17/2005
	MSD		0.539	107		10	(< 30)	0.505	ug/L 10/17/2005
Benzo[a]pyrene	MS	0.0505 U	0.5	99	(31-128)			0.505	ug/L 10/17/2005
	MSD		0.535	106		7	(< 30)	0.505	ug/L 10/17/2005
Indeno[1,2,3-c,d] pyrene	MS	0.0505 U	0.463	92	(45-122)			0.505	ug/L 10/17/2005
	MSD		0.497	98		7	(< 30)	0.505	ug/L 10/17/2005
Dibenzo[a,h]anthracene	MS	0.0505 U	0.459	91	(40-120)			0.505	ug/L 10/17/2005
	MSD		0.494	98		7	(< 30)	0.505	ug/L 10/17/2005
Benzo[g,h,i]perylene	MS	0.0505 U	0.448	89	(40-117)			0.505	ug/L 10/17/2005
	MSD		0.478	95		6	(< 30)	0.505	ug/L 10/17/2005
Naphthalene	MS	0.101 U	0.216	43	(40-96)			0.505	ug/L 10/17/2005
	MSD		0.283	56		27	(< 30)	0.505	ug/L 10/17/2005
Benzo[k]fluoranthene	MS	0.0505 U	0.48	95	(49-121)			0.505	ug/L 10/17/2005
	MSD		0.519	103		8	(< 30)	0.505	ug/L 10/17/2005
Surrogates									
Terphenyl-d14 <surr>	MS		0.422	84	(50-120)			0.505	ug/L 10/17/2005
	MSD		0.463	92		9		0.505	ug/L 10/17/2005

Batch	XMS3459
Method	EPA 625M SIMS
Instrument	HP 6890/5973 MS SVOA

APPENDIX I – FIELD INSPECTION FORMS AND CHECKLISTS

This appendix contains inspection forms and checklists generated in the field during the 2005 Basewide Groundwater Monitoring Program.

ELMENDORF AFB, ALASKA

RESTORATION STAGING AREA

WATER CONDITIONING SYSTEM - EFFLUENT SAMPLING LOG SHEET

NOTE: Samples shall be collected from each water conditioning system per every 5,000 gallons of water treated.

CONTRACTOR: WESTON SOLUTIONS

SHEET: ___1___ OF ___1___

				ANALYTES					
SAMPLE ID	**DATE SAMPLED**	**TIME SAMPLED**	**CANISTER NUMBER**	**HALOGENATED VOLATILES (Method 8260)**	**BTEX (Method 8021)**	**TPH (Method 418.1)**	**DATE SENT TO LAB**	**COC NUMBER**	**LAB ID**
GAC-05-01WA	10/12/2005	1630	1	X	X	X	10/13/2005	37540	1056819001

ELMENDORF AFB, ALASKA
RESTORATION STAGING AREA

WATER CONDITIONING SYSTEM - CARBON CANISTER TRACKING SHEET

CONTRACTOR:___ Weston Solutions

SHEET: ___1___ OF ____1___

CANISTER NUMBER	DATE ACTIVATED	DATE DEACTIVATED	TOTAL VOLUME TREATED	OPERATOR	INTERIM STORAGE AREA	FINAL DISPOSITION
1	6/28/2005	9/1/2005	1027	JW/LW/JG	Contractor's staging Yard	Carbon canister was removed from the Contractor's staging yard by the supplier and disposed

SOLIDS DRUM STORAGE AREA INSPECTION

The inspector should complete as much of the applicable checklist as possible in the facility office prior to visual inspection of the facility. The inspector should leave blank those sections of the checklist which cannot be answered without visual inspection. During the visual inspection, the inspector should complete the checklist. Completing the checklist is not the sole purpose of the visual inspection. Inspectors should be aware of, and investigate all relevant waste generation, and be alert to what is happening around them. If inspectors conduct visual inspections in ways which allow them to understand how wastes were generated, transported, and managed at the facility, they should be able to complete the applicable checklists easily during the inspection.

DRUM CHECKLIST

Date of inspection: 26 September 2005
Inspector's Name/Company: Russ Beck / Weston Solutions

Are drums clean and in good condition? Yes

Is drum made of a material that will not react with the waste stored in it? Yes

Is drum always closed while holding hazardous wastes? Yes

Is drum handled in a manner which will not cause it to leak or rupture? Yes

Are drums stored in a secondary containment area? Yes

Are drums that contain ignitable and reactive waste located at least 15 meters away from facility utility lines, and are flammable wastes (flashpoint <200 degrees F) stored in flammable lockers? Yes

Are the quantities of hazardous materials in the area within amounts specified on Air Force form 3952? Yes

Are incompatible hazardous wastes separated from one another by a berm, dike, wall, or other device? Yes

Are drums stored in a fenced and labeled area? Yes

Initial when completed: DRB

LIQUIDS DRUM STORAGE AREA INSPECTION

The inspector should complete as much of the applicable checklist as possible in the facility office prior to visual inspection of the facility. The inspector should leave blank those sections of the checklist which cannot be answered without visual inspection. During the visual inspection, the inspector should complete the checklist. Completing the checklist is not the sole purpose of the visual inspection. Inspectors should be aware of, and investigate all relevant waste generation, and be alert to what is happening around them. If inspectors conduct visual inspections in ways which allow them to understand how wastes were generated, transported, and managed at the facility, they should be able to complete the applicable checklists easily during the inspection.

DRUM CHECKLIST

Date of inspection: 26 September 2005
Inspector's Name/Company: Russ Beck / Weston

Are drums clean and in good condition? Yes

Is drum made of a material that will not react with the waste stored in it? Yes

Is drum always closed while holding hazardous wastes? Yes

Is drum handled in a manner which will not cause it to leak or rupture? Yes

Are drums stored in a secondary containment area? Yes

Are drums that contain ignitable and reactive waste located at least 15 meters away from facility utility lines, and are flammable wastes (flashpoint <200 degrees F) stored in flammable lockers? Yes

Are the quantities of hazardous materials in the area within amounts specified on Air Force form 3952? Yes

Are incompatible hazardous wastes separated from one another by a berm, dike, wall, or other device? Yes

Are drums stored in a fenced and labeled area? Yes

Initial when completed: DRB