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LETTER TRANSMITTING FINAL LONG TERM MONITORING REPORT FOR AIR FORCE PLANT 4 WITH TRANSMITTAL LETTER NAS FORT WORTH TX
7/12/2001
JACOBS ENGINEERING

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NAVAL AIR STATION FORT WORTH JRB CARSWELL FIELD TEXAS

ADMINISTRATIVE RECORD COVER SHEET

AR File Number 1101

United States Air Force Aeronautical Systems Center

Air Force Plant 4
Fort Worth, Texas

INSTALLATION RESTORATION PROGRAM (IRP)

LONG-TERM MONITORING REPORT

FINAL

JULY 2001

Contract Number F41624-00-D-8031
Task Order 26

601 2

JACOBS ENGINEERING®
Engineers and Constructors

Jacobs Engineering Group Inc
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12 July 2001

Mr. Don Ficklen
AFCEE/ERD
3207 North Road
Brooks Air Force Base, Texas 78235

Subject: **Contract F41624-00-D-8031-0026**
Long Term Monitoring
Air Force Plant 4, Fort Worth, Texas
Transmittal of Documentation

Ref.: (a) **Task Order SOW Paragraphs 4.3.39.1, Analytical Data Package, DI-MISC-80508 and 4.3.45.1, Long-term Monitoring Report, DI-MISC-80508**

Encl.: (1) **Final Long-Term Monitoring Report**

Dear Mr. Ficklen

One (1) hard copy and one (1) electronic copy of enclosure (1) are submitted in accordance with the requirements of Reference (a). This report is for the May 2001 sampling round . Additional copies have been distributed as shown below

Please call me at 303-462-7239 if you have any questions or need additional information.

Yours truly,
JACOBS ENGINEERING GROUP INC

Lynn F. Schuetter

Lynn F. Schuetter
Project Manager

Cc. George Walters, ASC/ENVR - 1 copy, 1 electronic copy
Ruben Moya, USEPA - 1 copy
Luda Voskov, TNRCC - 1 copy
Mike Dodyk, AFCEE - 1 copy
Audrie Medina, Unitec - 1 copy
Fred Novak, LMTAS - 1 copy
Victor Dozzi, IT Corporation - 1 copy
Lynn Morgan, HydroGeoLogic - 1 copy
AFCEE/MSCD - Transmittal letter only
HSW/PKVBC - Transmittal letter only

United States Air Force Aeronautical Systems Center

Air Force Plant 4
Fort Worth, Texas

INSTALLATION RESTORATION PROGRAM (IRP)

LONG-TERM MONITORING REPORT

FINAL

JULY 2001

Prepared by.

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ACRONYMS AND ABBREVIATIONS

AFCEE	Air Force Center for Environmental Excellence
AFP4	Air Force Plant 4
Air Force	U.S. Air Force
CCAL	continuing calibration
D	difference
DCE	dichloroethene
EPL	East Parking Lot
ERPIMS	Environmental Resources Program Information Management System
ICAL	initial calibration
ICP	inductively coupled plasma
Jacobs	Jacobs Engineering Group Inc.
LCS	laboratory control sample
LCSD	laboratory control sample duplicate
LTM	Long-Term Monitoring
MCL	maximum contaminant level
MDL	method detection limit
MS	matrix spike
MSD	matrix spike duplicate
NAS Fort Worth	Naval Air Station Fort Worth Joint Reserve Base
PCB	polychlorinated biphenyl
PQL	practical quantitation limit
QAPP	Quality Assurance Project Plan
QC	quality control
R	recovery
RPD	relative percent difference
SAP	Sampling and Analysis Plan
SDG	sample delivery group
TCE	trichloroethene
USEPA	U.S Environmental Protection Agency
VOC	volatile organic compound
°C	degrees Celsius
µg/L	micrograms per liter
%	percent

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1.0 BACKGROUND

In March 1991, the Environmental Systems Division of Jacobs Engineering Group Inc. (Jacobs) was contracted to perform quarterly groundwater monitoring activities at U.S. Air Force (Air Force) Plant 4 (AFP4), Fort Worth, Texas, under Contract F33615-90-D-4009-0003 with the Air Force Center for Environmental Excellence (AFCEE). This contract was extended in order to provide long-term monitoring of the Terrace Alluvium Aquifer, the Paluxy Aquifer, Lake Worth, and the West Fork of the Trinity River. The long-term monitoring program objectives are to monitor for contaminants in groundwater, surface water, and sediments associated with contaminated sites in order to provide data necessary to recognize if additional remedial actions are necessary to protect public health and the environment.

In February 1998, a Long-Term Monitoring (LTM) Plan detailing the long-term sampling methodology was submitted to the Air Force (Jacobs 1998). In April 2000, an updated LTM Plan was prepared and submitted (Jacobs 2000). The current version of the LTM Plan used to complete this semi-annual sampling was updated in April 2001. The May 2001 sampling was performed under Contract F41624-00-D-8031-D-0026 for AFCEE.

Per contractual requirements, Jacobs submits all acquired data to AFCEE for entry into the Environmental Resources Program Information Management System (ERPIMS) database. Data from the May 2001 sampling will soon be submitted to AFCEE for inclusion in the ERPIMS.

2.0 SUMMARY OF SAMPLING ACTIVITIES

This semi-annual sampling letter report discusses analytical results and sampling activities that occurred for sampling conducted in May 2001. Fifty-one groundwater monitoring wells, three city water production wells, eight surface water sites, and three sediment sites were sampled by Jacobs personnel. Three wells on the Naval Air Station Fort Worth Joint Reserve Base (NAS Fort Worth) were sampled by HydroGeoLogic Inc. personnel. All sampling locations are on AFP4 property, NAS Fort Worth, Carswell Golf Course, and in the community of White Settlement (Plates 1, 2).

Appendix A contains all results reported by the analytical laboratory for the May 2001 round. The analytical laboratory was PDP Analytical Services, located in The Woodlands, Texas. Appendix B contains charts illustrating general trends in groundwater quality at selected locations where trichloroethene (TCE) or its degradation byproducts have been detected

during the quarterly or semi-annual monitoring program. Appendix C contains detailed data validation reports.

All sampling procedures followed for the May 2001 round are described in detail in the February 1998 LTM Plan (Jacobs 1998) and the updated LTM Plan Revision 2 (Jacobs 2001). The May 2001 LTM Plan Revision 2 was in draft form during the May 2001 sampling, and sampling was conducted according to the draft document No significant comments were received on the draft LTM Plan that would impact the data collected during the May 2001 sampling.

Low-flow/low-stress sampling methodology was employed utilizing dedicated bladder pumps. In general the procedure is as follows: prior to pumping, the water level was measured using an electronic water level meter slowly inserted into the well through the access hole in the cap. The pump was driven using an oiless air compressor and controlled with an electronic programmable controller. The purge rate was measured using a graduated cylinder and stop watch, and in general, purge rates did not exceed 1 liter/minute. All effort was made to limit the drawdown within the well to less than 0.3 feet. In a few cases the drawdown exceeded 0.5 feet, even at the lowest possible pump rate. In these cases, samples were collected after three well-casing volumes of water had been purged and water quality parameters had stabilized, or low-flow/low-stress methodology was followed with the higher drawdown at field team discretion.

Purge water was routed directly through an in-line flow cell for measurement of stabilization criteria including temperature, pH, and conductivity. Parameter measurements were taken after each equipment volume was purged, which would occur every three to five minutes depending on flow rates. Equipment volume was calculated as the volume of the pump bladder and drop tubing. Stabilization was achieved after all parameters had stabilized for three successive readings. Stabilization is defined as follows: temperature± 1 degree Celsius (° C), pH ± 0.1 units, and conductivity ± 5 percent. The samples were collected from the discharge tubing before it entered the flow cell by disconnecting the tubing.

The samples were stored at 4° C until they were shipped to the offsite laboratory for analysis.

At the city of White Settlement municipal water supply wells (WS-2, WS-12 and WS-H3), groundwater for the environmental sample and parameters measurement was collected directly from a faucet on the delivery pipe while the production pump was operating. The

faucet was allowed to run for approximately 5 minutes at a rate of one gallon per minute before the sample was collected.

Surface-water samples were collected using a Teflon© pond sampler or a 600-milliliter polypropylene beaker. Sediment samples were collected using a stainless steel spoon.

Table 1 summarizes purge and well information for the May 2001 sampling. Table 2 summarizes the analytical suite performed on samples from each location.

Purge water from the sampling was collected in a 5-gallon plastic container and emptied directly into the East Parking Lot (EPL)/Window Area Groundwater Pump and Treat System Because the purge water was drawn out of the wells under low-flow conditions, no prefiltering of the purge water was necessary. All purge water was disposed of before Jacobs personnel left the AFP4 site.

In March and April 2001, wells MW-IT-01T, LF03-3D and WHGLTA009 were sampled by HydroGeoLogic Inc., and the results were forwarded to Jacobs for inclusion in this report.

3.0 OBSERVATIONS

Water elevations have increased after a downward trend beginning around April 1998 for all lithologic units at AFP4. Water levels in the Terrace Alluvium continue to be erratic with water elevations in some Terrace Alluvium wells closely related to seasonal rainfall and the operation of recovery systems. Terrace Alluvium wells located in the vicinity of the EPL/Window Area Groundwater Pump and Treat System indicate a general downward trend beginning in April 1998 and then a marked increase in beginning April/October 1999 during shutdown of the system for construction.

Concentrations of TCE and related compounds continue to remain within historic values. Many wells located in the vicinity of the EPL exhibit a slight upward trend of concentrations since April 2000. Terrace Alluvium wells located on the west side of the plant near Landfill 3 do not indicate a trend, with HM-50 upgradient from the landfill slightly increasing in concentrations and HM-36 located on the south side of the landfill decreasing radically. Terrace Alluvium wells located in the Window Area east and west of the flightline run stations exhibit fluctuating TCE and related compound concentrations which may be related to water elevations and system operations.

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TABLE 1
Field Parameter Measurements
Long Term Groundwater Monitoring
May 2001
Air Force Plant 4

Location	Sample Date	Water Level (ft. BTOC)	Total Volume Purged (liter)	Field Parameter Measurements				Observations / Comments
				Temp (°C)	Specific Conduct. (µmhos/cm)	pH	Dissolved Oxygen (mg/L)	
Middle Paluxy Wells								
P-6M	3-May-01	87 38	3 0	22 5	550	7 43	1 62	
P-8M	4-May-01	85 43	2 1	22 4	633	7 40	2 15	
P-9M	5-May-01	90 12	4 0	22 1	635	7 49	2 66	
P-11M	3-May-01	82 68	1 6	23 2	581	7 46	2 02	
P-25M	4-May-01	88 11	3 0	21 4	575	7 50	0 61	
P-26M	3-May-01	92 81	3 5	22 2	686	7 45	1 35	
P-30M	6-May-01	89 18	5 8	22 1	622	7 42	0 26	
USGS08PM	7-May-01	49 49	4 0	20 2	532	7 20	0 78	
USGS09PM	4-May-01	48 18	3 0	19 8	609	7 20	0 54	
WJEPM001	9-May-01	79 01	5 0	20 9	778	7 40	0 60	
WITCPM006	5-May-01	65 84	4 0	21 9	657	7 30	0 24	Added well - new pump installation
WS-2	7-May-01	NA	NA	23 7	1236	7 89	2 52	White Settlement water supply well
WS-12	7-May-01	NA	NA	21 1	577	7 23	3 02	White Settlement water supply well
WS-H3	7-May-01	NA	NA	21 5	561	7 15	2 24	White Settlement water supply well
Upper Paluxy Wells								
P-8UN	4-May-01	86 68	3 0	22 6	576	8 00	2 37	
P-11U	3-May-01	82 80	3 3	23 8	584	7 61	4 00	
P-22U	5-May-01	55 55	4 0	21 1	1017	6 83	0 93	
P-27U	3-May-01	84 55	3 4	22 4	1096	7 04	1 16	ORP=135mv
USGS08PU	7-May-01	45 15	4 5	20 6	987	6 90	4 08	Water level from top of protective casing
USGS09PU	4-May-01	43 20	2 1	20 0	1137	5 59	0 81	
WITCPU003	4-May-01	94 37	2 5	22 5	593	7 51	1 82	
WITCPU006	5-May-01	63 01	2 0	22 9	1175	6 84	0 52	Added well - new pump installation
Paluxy Upper Sand Wells								
P-8US	3-May-01	56 45	1 15	24 9	463	10 84	3 90	
P-9US	5-May-01	47 70	2 0	22 1	909	7 16	1 21	
P-18US	9-May-01	69 72	3 0	21 8	643	7 18	1 06	
WITCUS001	9-May-01	67 98	2 0	25 5	738	7 07	3 11	Suction on well, waited 30 min to stabilize
WJEUS002	6-May-01	43 32	1 3	22 1	653	7 21	2 31	
WJEUS008	7-May-01	51 99	2 0	22 3	786	7 10	2 74	
WJEUS013	9-May-01	65 16	1 7	23 2	731	7 15	1 29	
AFP4 Terrace Alluvium Wells								
F-209	7-May-01	13 59	2 5	20 0	715	7 15	0 24	Distinct petroleum odor
F-218	6-May-01	25 68	1 45	23 7	927	7 06	2 49	
HM-31	5-May-01	11 00	1 75	23 1	1547	6 95	2 37	
HM-36	5-May-01	7 07	2 5	19 1	1275	6 88	1 91	
HM-50	6-May-01	4 32	1 45	22 1	1663	6 86	0 80	
HM-65	5-May-01	6 86	2 0	20 9	3190	6 58	1 84	
HM-88	4-May-01	29 03	1 75	23 2	747	7 10	4 48	
HM-93	6-May-01	27 74	26	23 3	2224	7 07	3 59	Dry at 26 liters
HM-95	9-May-01	29 92	5 0	21 0	546	7 10	3 89	
HM-98	9-May-01	26 12	3 0	20 8	725	6 12	2 00	
HM-102	6-May-01	20 08	3 5	19 9	624	6 95	3 80	
HM-112	9-May-01	25 77	3 0	20 9	816	7 08	4 19	

TABLE 1
Field Parameter Measurements
Long Term Groundwater Monitoring
May 2001
Air Force Plant 4

Location	Sample Date	Water Level (ft. BTOC)	Total Volume Purged (liter)	Field Parameter Measurements				Observations / Comments
				Temp. (°C)	Specific Conduct. (µmhos/cm)	pH	Dissolved Oxygen (mg/L)	
HM-119	8-May-01	14 07	5 0	19 3	828	7 00	0 54	
HM-120	8-May-01	5 00	3 0	18 7	1753	6 71	0 54	
HM-127	8-May-01	24 56	3 0	19 9	729	7 02	3 80	
LF03-3D *	27-Mar-01	10 87	4 5	14 8	989	6 98	2 8	
MW-5	3-May-01	15 52	2 0	24 9	2723	7 00	0 74	Exceeded 0 3 feet drawdown
W-135	2-May-01	4 62	11 5	20 6	8456	6 01	2 85	Dry at 11 5 liters
W-149	6-May-01	28 56	1 8	23 2	820	7 02	2 45	
W-157	6-May-01	9 90	1 2	23 4	2687	6 74	0 87	Exceeded 0 3 feet drawdown
NAS Fort Worth Terrace Alluvium Wells								
GMI22-02M	8-May-01	10 77	5 0	19 5	496	7 10	3 60	
GMI22-03M	7-May-01	20 55	7 0	21 1	924	7 04	0 13	
GMI22-05M	8-May-01	-	1 0	20 7	1300	7 05	3 19	Water level below top of pump
LF04-10	8-May-01	32 38	4 0	20 1	919	7 00	5 32	
MW-IT-01T *	2-Apr-01	-	2 4	19 1	679	6 46	2 2	Water level below top of pump
USGS06T	8-May-01	18 06	4 0	20 8	579	7 04	5 38	
WHGLTA009 *	5-Apr-01	23 22	2 1	20 7	563	6 62	0 75	
WHGLTA048	8-May-01	13 22	4 0	18 8	1104	7 00	0 25	Added well - new pump installation, turbid
Surface Water Locations								
C-5	10-May-01	-	-	21 8	604	8 04	3 60	
EGL-2	8-May-01	-	-	22 2	465	6 01	7 45	
LF05-S6	8-May-01	-	-	21 5	382	6 37	6 01	
LK-LW-09	10-May-01	-	-	21 6	129	8 29	3 64	
LK-LW-03	10-May-01	-	-	21 9	0 1	8 23	4 03	
RV-001JETR	10-May-01	-	-	22 3	382	8 46	7 45	
SW-03A	10-May-01	-	-	24 6	524	8 56	7 16	
SW-08	10-May-01	-	-	22 3	0 1	8 13	4 89	

Notes:

ft BTOC = feet below top of casing
mg/L = milligrams per liter
µmhos/cm = micromhos per centimeter
- = not measured
° C = degrees Celsius
* = Well sampled by HydroGeoLogic Inc and results reported to Jacobs

When more than one field parameter measurement was taken (pH, temperature, etc), the final, stabilized measurement is shown in this table

TABLE 2
Analytical Suite
Long Term Groundwater Monitoring
May 2001
Air Force Plant 4

Location	VOCs (SW8260B)	SW6010B As, Cd, Cu, Pb, Zn only	SW6010B Cr Only	SW6010B Ag Only	SW8082 Arochlor-1254 only
Middle Paluxy Wells					
P-6M	X				
P-8M	X				
P-9M	X				
P-11M	X				
P-25M	X				
P-26M	X				
P-30M	X				
USGS08PM	X				
USGS09PM	X				
WITCPM006	X				
WJEPM001	X				
WS-2	X				
WS-12	X				
WS-H3	X				
Upper Paluxy Wells					
P-8UN	X				
P-11U	X				
P-22U	X (+ dup)				
P-27U	X				
USGS08PU	X				
USGS09PU	X				
WITCPU003	X				
WITCPU006	X				
Paluxy Upper Sand Wells					
P-8US	X		X		
P-9US	X		X		
P-18US	X		X		
WITCUS001	X		X		
WJEUS002	X		X		
WJEUS008	X (+ dup)		X		
WJEUS013	X		X		
AFP4 Terrace Alluvium Wells					
F-209	X				
F-218	X		X		
HM-31	X		X		
HM-36	X				
HM-50	X				
HM-65	X				
HM-88	X		X		
HM-93	X (+ dup)		X (+ dup)		
HM-95	X		X		
HM-98	X		X		
HM-102	X				

TABLE 2
Analytical Suite
Long Term Groundwater Monitoring
May 2001
Air Force Plant 4

Location	VOCs (SW8260B)	SW6010B As, Cd, Cu, Pb, Zn only	SW6010B Cr Only	SW6010B Ag Only	SW8082 Arochlor-1254 only
HM-112	X		X		
LF03-3D*	X		X		
MW-5	X		X		
W-135	X				
W-149	X (+ dup)		X (+ dup)		
W-157	X		X		
Carswell (NASFW) Terrace Alluvium Wells					
GMI-22-02M	X				
GMI-22-03M	X				
GMI-22-05M	X				
HM-119	X				
HM-120	X				
HM-127	X (+ dup)				
LF04-10	X				
MW-IT-01T*	X				
USGS06T	X				
WHGLTA009*	X				
WHGLTA048	X				
Surface Water Locations					
C-5	X	X			
EGL-2	X				
LF05-S6	X				
LK-LW-09	X				
LK-LW-03	X (+ dup)				
RV-001JETR	X				
SW-03A	X	X (+ dup)			
SW-08	X	X			
Sediment Locations					
C-5				X	X
LK-LW-03				X (+ dup)	X (+ dup)
SW-08				X	X
TOTALS	64 (+ 6 dup)	3 (+ 1 dup)	17 (+ 2 dup)	3 (+ 1 dup)	3 (+ 1 dup)

Notes:

VOC = Volatile Organic Compound
dup = Duplicate Sample
* Sample collected by HydroGeoLogic Inc

4.0 SUMMARY OF ANALYTICAL RESULTS

The analytical laboratory for the May 2001 sampling was PDP Analytical Services, The Woodlands, Texas. Plates 1 and 2 show concentrations of TCE and related compounds at wells and surface water locations sampled during the May 2001 sampling round.

Tables 3A and 3B summarize the maximum contaminant levels (MCLs), practical quantitation limits (PQLs), and the analytical results reported above the PQLs for all locations sampled during the May 2001 round. Table 3A also includes TCE and TCE-derived compounds that were detected below the PQLs. These results are qualified as estimated (J), but have frequently been observed at similar concentrations during previous rounds. Appendix A includes analytical results for all environmental samples and laboratory data quality results for the May 2001 sampling round.

Method SW8260B was used for analyses for volatile organic compounds (VOCs) for all samples. Analyses for a limited number of metals (Method SW6010B) were performed on selected wells based on their locations relative to potential contaminant sources. The three sediment samples were analyzed for silver (Method SW6010B) and polychlorinated biphenyls (PCBs) (Method SW8082).

4.1 VOLATILE ORGANIC COMPOUNDS

TCE and its degradation products (cis-1,2-dichloroethene[DCE], trans-1,2-DCE, and vinyl chloride), chromium, silver, "landfill" metals (arsenic, cadmium, copper, lead, and zinc) and Arochlor 1254 are the compounds of concern at AFP4. The charts in Appendix B show general trends of concentrations of TCE and its degradation products since Jacobs began sampling at AFP4 in October 1991.

Middle Paluxy Wells

Middle Paluxy long-term monitoring wells in which TCE and related compounds have been detected include P-6M, P-9M, P-11M, P-25M, P-26M, P-30M, and WJEPM001. In well P-6M, concentrations of TCE and combined related compounds indicate an increase from a low of non-detected in April/May 2000 for all compounds to an estimated value of 3.3JB micrograms per liter (µg/L) in May 2001 (Appendix B, B-1). In the April/May 2000 sampling, well P-9M had low levels of TCE and related compounds, although lower than the historic high of 3.59 µg/L in the April 1999 sampling round. Concentrations of TCE

TABLE 3A
Results - Volatile Organic Compounds
Long Term Groundwater Monitoring
May 2001

	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride
SW8260B (µg/L)	**Middle Paluxy Wells**			
PQL	1 0	1 0	1 0	1 0
MCL	5	70	100	2
P-6M	3 3 UB	-	-	-
P-8M	0 88 J	-	-	-
P-9M	1 5 J	0 73 J	-	0 56 J
P-11M	1 3 UB	-	-	-
P-26M	2 1 UB	-	-	-
P-26M	2 6 UB	-	-	-
P-30M	-	-	-	-
USGS08PM	-	-	-	-
USGS09PM	-	-	-	-
WITCPM006	2 6	1 2	-	-
WJEPM001	-	-	-	-
WS-2	-	-	-	-
WS-12	-	-	-	-
WS-H3	-	-	-	-
	Upper Paluxy Wells			
P-8UN	4 3 UB	-	-	-
P-11U	1 2 UB	-	-	-
P-22U	5 7 J	190 J	3 1 J	28 J
P-22U (Duplicate)	5 9 J	190 J	3 1 J	28 J
P-27U	4 1 UB	380	-	21
USGS08PU	-	-	-	-
USGS09PU	-	-	-	-
WITCPU003	3 3 UB	-	-	-
WITCPU006	-	120 J	-	14
	Paluxy Upper Sand Wells			
P-8US	75 J	38 J	4 6 J	-
P-9US	35 J	1 3 J	-	-
P-18US	-	-	-	-
WITCUS001	9700 J	360 J	-	-
WJEUS002	0 71 J	4 0 J	-	-
WJEUS008	3300 J	620 J	-	-
WJEUS008 (duplicate)	3500 J	670 J	-	-
WJEUS013	7200 J	560 J	-	-
	AFP4 Terrace Alluvium Wells			
F-209	-	-	-	-
F-218	22000 J	4400 J	36 J	-
HM-31	140 J	49 J	-	-
HM-36	0 57 J	0 51 J	-	-
HM-60	140 J	1000 J	6 2 J	170 J
HM-65	-	-	-	-
HM-88	6,000	220	-	-
HM-93	-	-	-	-
HM-93 (duplicate)	-	-	-	-
HM-96	1,100	64	-	-
HM-98	-	-	-	-
HM-102	-	-	-	-
HM-112	3800 J	230 J	-	-

TABLE 3A
Results - Volatile Organic Compounds
Long Term Groundwater Monitoring
May 2001

	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride
HM-119	12 J	-	-	-
HM-120	-	-	-	-
LF03-3D *	-	-	-	-
MW-5	920000 J	-	-	-
W-135	3 3 UB	-	-	-
W-149	7500 J	670 J	-	-
W-149 (duplicate)	7400 J	660 J	-	-
W-157	-	-	-	-
NAS Fort Worth Terrace Alluvium Wells				
GMI-22-02M	-	-	-	-
GMI-22-03M	83 J	100 J	33 J	-
GMI-22-05M	-	-	-	-
HM-127	-	-	-	-
HM-127 (duplicate)	-	-	-	-
LF04-10	-	-	-	-
MW-IT-01T *	2 0	0 8	-	-
USGS06T	26 J	4 4 J	-	-
WHGLTA009 *	-	200 J	-	-
WHGLTA048	8 1 J	3 6 J	-	-
Surface Water Locations				
C-5	-	0 56 J	-	-
EGL-2	5 7 J	6 9 J	0 54 J	-
LF05-S6	7 0 J	1 8 J	-	-
LK-LW-03	-	-	-	-
LK-LW-03 (duplicate)	-	-	-	-
LK-LW-09	-	-	-	-
RV-001JETR	-	-	-	-
SW-03A	-	-	-	-
SW-08	-	1 4	-	-

Notes:

J = The analyte was positively identified, but the numerical concentration is approximate due to compromised Quality Control(s) See Data Quality section

UB = Due to trip blank contamination, the reporting limit for these samples was elevated to 15 5 µg/l The value shown is an estimated value below the reporting limit and may represent a non-detect

MCL = Maximum Contaminant Level (EPA 1996)

PQL = Practical Quantitation Limit (Jacobs 1998)

- = Compound was not detected above the PQL

µg/L = Micrograms per liter

* = Well sampled by HydroGeoLogic Inc and results reported to Jacobs

TABLE 3B
Results - Metals and PCBs
Long Term Groundwater Monitoring
May 2001

	Arsenic	Cadmium	Copper	Chromium	Lead	Silver	Zinc	PCBs (Arochlor-1254 only)
SW6010B (µg/L)				**Paluxy Upper Sand Wells**				
PQL	5	1	60	10	5	70	20	1
MCL	50	5	1300 *	100	15 *	100 **	5000 **	5
P-8US				-				
P-9US				-				
P-18US				-				
WITCUS001				71 J				
WJEUS002				-				
WJEUS008				69 J				
WJEUS013				127 J				
				AFP4 Terrace Alluvium Wells				
F-218				-				
HM-31				-				
HM-88				43				
HM-93				-				
HM-93 (duplicate)				-				
HM-95				30 J				
HM-98				-				
HM-112				13 J				
LF03-3D***				-				
MW-5				-				
W-149				469				
W-149 (duplicate)				471				
W-157				-				
				Surface Water Locations				
C-5	-	-	-		-		-	
SW-03A	-	-	-		-		-	
SW-3A (duplicate)	-	-	-		-		-	
SW-08	-	-	-		-		-	
SW6010B (mg/kg) and SW8082 (µg/kg)				**Sediment Locations**				
PQL						7		700
MCL						1000		100
C-5						19 J		-
LW-03						-		-
LW-03 (duplicate)						16 J		-
SW-08						-		-

Notes:

F = The analyte was positively identified at a value above the MDL, but less than the PQL
J = The analyte was positively identified, but the numerical concentration is approximate due to compromised Quality Control(s) See Data Quality section
PQL = Practical Quantitation Limit (Jacobs 1998)
MCL = Maximum Contaminant Level (EPA 1996)
µg/L = Micrograms per liter
- = Compound not detected above the PQL
* = Action level
** = Secondary MCL
*** = Well sampled by HydroGeoLogic Inc and results reported to Jacobs Method SW7191 used
blank cells = Not analyzed
NS = Not sampled

continue to remain below the historic high at P-9M; however an increasing trend is noted since the October1999 sampling. TCE was detected near the historic high of 1.7 µg/L in P-11M at an estimated concentration of 1.3JB µg/L after two successive results of not detected in April 1999 and April 2000.

Both P-25M and P-26M had historic high concentrations of TCE and related compounds in April 1999. P-25M continues a downward trend of concentrations which began in April 1999 with the May 2001 estimated result at 2.1JB µg/L, while P-26M had declined to non-detect in April 2000, and then increased in May 2001 to 2.6JB µg/L (Appendix B, B-2). TCE-related compounds were not detected in well P-30M during the May 2001 sampling round. Well WJEPM001 continues to exhibit concentrations in the non-detectable range. Well WITCPM006, which is located on the west side of the plant near Landfill 3, was added to the sampling program and exhibited 2.6 µg/L TCE and 1.2 µg/L cis-1,2 DCE. Wells USGS08PM, USGS09PM, and P-30M did not have detectable concentrations of TCE or degradation compounds.

The concentrations at P-6M, P-11M, P-25M, and P-26M are estimated (JB) due to trip blank contamination; actual concentrations may be lower or non-detected.

Groundwater levels in all of the Middle Paluxy wells remain low, reflecting an extended drought period in the Fort Worth area. Groundwater levels are increasing with the end of this drought. A distinct correlation between groundwater elevation and concentrations of TCE and related compounds is not apparent.

Upper Paluxy Wells

Upper Paluxy long-term monitoring wells in which TCE and related compounds have been detected include P-8UN, P-11U, P-22U, P-27U, WITCPU003, and USGS08PU. Concentrations in wells P-8UN, P-11U, P-22U, and WITCPU003 may be related to trip blank contamination.

Concentrations of TCE in samples collected from the Upper Paluxy wells located on the west side of the Plant site (P-22U and P-27U) remained consistent with historic results. Concentrations of cis-1,2-DCE and vinyl chloride remained higher than the concentrations of TCE in wells P-22U and P-27U (Appendix B, B-3 and B-4). Well USGS08PU, west of the

Plant along Shoreline Road, had a non-detectable result for TCE for this sampling, and has been non-detected for two sampling events (one year).

Two Upper Paluxy Sand wells were sampled on the west side of the plant, WITCPU003 and a new well WITCPU006. The result for WITCPU003 indicated the presence of TCE at 3.3JB µg/L, which is the first time TCE or any associated compounds have been detected in this well. As stated above, the result for WITCPU003 is estimated and is associated with trip blank contamination and is likely due to that contamination. TCE was not detected in the sample collected from WITCPU006; however cis-1,2 DCE was detected at a concentration of 120 µg/L and vinyl chloride was detected at 15 µg/L.

Two Upper Paluxy wells were sampled on the east side of the plant site, P-8UN and P-11U P-8UN had an estimated concentration near the historic low of TCE at 4.3JB µg/L. Concentrations of TCE have been fluctuating with large value swings since November 1998. The concentrations of TCE and related compounds in well P-11U have fluctuated over the years between 3.9 µg/L and non-detected. The concentration in May 2001 was estimated at 1.2JB µg/L; the historic high concentration was 17 µg/L in October 1995 (Appendix B, B-3).

There does not appear to be a relationship between the groundwater elevation and concentrations of chlorinated compounds in Upper Paluxy wells.

Paluxy Upper Sand Wells

Paluxy Upper Sand long-term monitoring wells in which TCE and related compounds have been detected include P-8US, P-9US, WITCUS001, WJEUS002, WJEUS008, and WJEUS013.

Concentrations of TCE and related compounds in well P-8US continue to decrease and reached new historic lows during the May 2001 sampling round at 75 µg/L, well below the remediation goal of 400 µg/L. The concentrations in well P-9US remained consistent with results from the past several years of sampling (Appendix B, B-5).

TCE and related compound concentrations decreased at wells WJEUS002 and WJEUS008 with concentrations in WJEUS008 several orders of magnitude greater than those in WJEUS002 (Appendix B, B-6). Concentrations of TCE in well WITCUS001 have been

increasing since the April 2000 sampling after decreasing to values comparable with the results from April 1999 after an increase in October 1999. Well WJEUS013 has been exhibiting increasing concentrations of TCE with the May 2001 result at 7,200 µg/L. Concentrations of cis-1,2 DCE in WJEUS013 decreased markedly to 560 µg/L (Appendix B, B-7). The concentrations of TCE and related compounds are similar to the concentrations in WJEUS008.

Groundwater elevation results for all Paluxy Upper Sand wells indicate that the groundwater elevations continue to remain lower than average. A correlation between TCE and degradation product concentrations and the groundwater elevations is not apparent.

AFP4 Terrace Alluvium Wells

AFP4 Terrace Alluvium long-term monitoring wells in which TCE and related compounds have been detected include F-218, F-209, HM-31, HM-36, HM-50, HM-65, HM-88, HM-93, HM-95, HM-98, HM-102, HM-112, HM-119, MW-5, W-135, W-149, and W-157.

Wells F-209, HM-65, HM-98, HM-102, W-135, and W-157 exhibited low concentrations of TCE and related compounds for the first time during the April/May 2000 sampling round These wells had non-detected concentrations of TCE and related compounds since October 2000 and for the May 2001 sampling also, with the exception of W-135. Well W-135 exhibited a concentration of TCE at 3.3JB µg/L. This result is estimated below the PQL due to associated trip blank contamination.

HM-31, HM-36, HM-88, HM-112, HM-119 and W-149 all showed decreases in TCE and related compounds between the October 2000 and May 2001 sampling rounds, while F-218, HM-95, MW-5, and HM-50 showed increases. Wells F-209, HM-65, HM-98, HM-102, W-135, and W-157 all exhibited TCE and related compound concentrations in the non-detected range.

The most dramatic increase was near Landfill 3 in well HM-50. Well HM-50 had an increase in TCE to 140 µg/L, cis-1,2-DCE to 1,000 µg/L, trans-1,2-DCE to 6.2 µg/L, and vinyl chloride to 170 µg/L; a new historic high for TCE concentrations (Appendix B, B-8). The TCE and related compound values in well HM-36 dramatically decreased to a new low for TCE at 0.57J µg/L, cis-1,2 DCE at 0.51J µg/L, and trans-1,2 DCE at non-detected (Appendix B, B-8).

The concentrations of TCE and related compounds in well MW-5 continue to increase since April 2000. MW-5 reached 920,000 µg/L for the May 2001 sampling round (Appendix B, B-10).

Although groundwater levels remain low, there appears to be no general correlation between TCE and degradation product concentrations and the groundwater elevations. However, at HM-112 groundwater elevations appear to be inversely related to TCE concentrations.

TCE concentrations remained below the detection limits for Terrace Alluvium wells HM-120, HM-127 and LF03-3D.

NAS Fort Worth Terrace Alluvium Wells

NAS Fort Worth Terrace Alluvium long-term monitoring wells in which TCE and related compounds have been detected include GMI-22-03M, GMI-22-05M, MW-1T-01T, USGS06T, WHGLTA009, and new well WHGLTA048.

For the May 2001 round, concentrations of TCE-related compounds at Carswell Golf Course well MW-IT-01T continued to decrease to the lowest levels since October 1997 at 2 µg/L (Appendix B, page B-12).

TCE concentrations decreased in well GMI-22-03M since October 2000 with a corresponding decrease in related compounds The concentration of TCE at well GMI-22-05M continues to fluctuate greatly, and was recorded as non-detect for all VOC compounds (Appendix B, page B-11). TCE concentrations in the sample collected from USGS06T have been increasing since April 2000 and were found to be at 26 µg/L for TCE and 4.4 µg/L for cis-1,2 DCE (Appendix B, page B-12). Concentrations in well WHGLTA009 continue to decrease since April 2000 to non-detect for TCE and 200 µg/L for cis-1,2 DCE. The new well, WHGLTA048, is the downgradient sentry well for concentrations of TCE above 5 µg/L. TCE concentration were found to be above this level at 8.1 µg/L with cis-1,2 DCE at 3 6 µg/L.

TCE concentrations remained below the detection limits for Terrace Alluvium wells GMI-22-02M, HM127, and LF04-10.

Air Force Plant 4 and NAS Fort Worth Surface Locations

Surface water was sampled at established locations along Meandering Road Creek, Farmers Branch Creek (Appendix B, pages B-13 and B-14), and along the Trinity River. Based on

visual observation and previous experience, the stream flows appeared normal for the May 2001 sampling event. Concentrations of TCE and related compounds have increased slightly since October 2000 at the Farmers Branch Creek location EGL-2 to 5.7 µg/L TCE, 6 9 µg/L cis-1.2 DCE, and 0.54J µg/L trans-1,2 DCE. At the Farmers Branch Creek location LF05-S6, concentrations of TCE and related compounds increased to 7 µg/L TCE and 1.8 µg/L cis-1,2 DCE.

For the May 2001 sampling round for locations on the west side of the plant, concentrations of TCE-related compounds are non-detected with the exception of 1.4 µg/L of cis-1,2 DCE at SW-08. TCE has decreased at this location to non-detected (Appendix B, B-14). The sample from Meandering Road Creek location C-5 had non-detected concentration of all analyzed compounds. There were no TCE-related compounds detected in samples from surface water location SW-03A, LK-LW-03, LK-LW-09 (both samples in Lake Worth), and RV-001JETR from the Trinity River.

4.2 PCBs

Sediment samples were collected and analyzed for PCB Arochlor-1254. Arochlor-1254 was identified as a potential risk during the Remedial Investigation (Rust Geotech 1995). All sediment samples collected during the May 2001 round were measured as non-detected for Arochlor-1254 (Table 3B).

4.3 METALS

Chromium was detected above the MCL of 100 µg/L in samples from only two wells (WJEUS013 and W-149) during the May 2001 sampling round (Table 3B). Note that MCLs are used in this document as a point of reference only, and that the Terrace Alluvium aquifer in the AFP4 vicinity is not known to be used by any public or private entities as a source of drinking water.

It should also be noted that the metals results in this report and all previous quarterly or semi-annual reports are for total (unfiltered) metals. In samples that are moderately or highly turbid, it can be expected that the nitric acid used as a field preservative will leach metals from the suspended sediment, and that concentrations may be elevated as a result. In highly turbid samples, heavy metals that have attached to iron oxides might also be measurably

higher than in the undisturbed groundwater. Low-flow sampling methodology used in the May 2001 sampling tends to produce very low turbidity samples. Because this low-flow sampling was initiated with the October 1999 sampling round, five rounds of low-flow data have been collected. Review of the metals data to date does not provide conclusive evidence of a decrease in metals concentrations since implementation of low-flow sampling. Some metals, such as copper, lead, and zinc, have decreased while chromium has remained at approximately the same levels.

5.0 DATA QUALITY

The following sections discuss the overall data quality and validation for the May 2001 sampling round.

5.1 DATA USABILITY

Overall, the quality of the groundwater, surface water, and sediment data for this sampling effort was satisfactory. Data quality was adequate for accomplishing the fundamental objectives of the project, specifically: to monitor movement of known contaminant plumes, to monitor any changes in concentration of analytes of interest, and to compare the latest results with established MCLs as defined by the United States Environmental Protection Agency (USEPA)

With the exception of trans-1,2-DCE, all reporting limits and PQLs for all target analytes were achieved. However, the laboratory's 1.0 µg/L reporting limit for trans-1,2-DCE is well below the most stringent applicable regulatory standard of 10 µg/L. Therefore, the use of the data has not been adversely impacted. The only other exceptions to the PQLs occurred when PQLs were raised by required analytical dilutions.

All analytical data were usable. No sample results were rejected for quality control (QC) failure.

The May 2001 sampling round consisted of 102 sample aliquots. Eighty-six environmental samples were taken, of which 83 were water and three were sediment samples. Sixteen QC samples were taken. The QC samples consisted of three trip blank samples, three equipment blank samples, one field duplicate sediment sample, and nine field duplicate water samples.

Jacobs, the prime contractor, performed all data validation. Validation ensures that data were consistent with quality requirements explicitly set forth in the project-specific sampling and analysis plan, incorporated in the Long-Term Monitoring Plan (Jacobs 1998, 2000, 2001). This plan used the Basewide Quality Assurance Project Plan (Basewide QAPP) (HydroGeoLogic 1998) as the quality control document for sample analysis. If laboratory data were not consistent with the project-specific quality control requirements, the errant data were qualified.

5.2 OVERVIEW

Details of the data validation are provided in the individual data validation reports for each sample delivery group (SDG) contained Appendix C. These attached data validation reports contain detailed explanations for issues noted in this summary.

All samples taken during this semi-annual sampling effort were submitted to the offsite laboratory, PDP Analytical Services, located in The Woodlands, Texas. Environmental samples generated during this sampling event were collected from groundwater, sediment, or surface water matrices. The following USEPA SW-846 methods were used to analyze the samples:

- SW6010B (select total metals);
- SW8082 (PCBs); and
- SW8260B (volatile organic compounds).

At the laboratory, samples were grouped into the following SDG work orders/batch numbers: 6822, 6824, and 6836. The SDGs were laboratory assigned based upon the dates that the sample coolers were received at the laboratory.

The balance of this section discusses results of the data validation by method type. Regulatory action levels or risks relative to specific analytes typically drive environmental decisions. This allows reference to a category of analyses that contains the contaminant(s) of interest, rather than having to read several QC summaries to determine an analyte's usability.

Section 5.3 summarizes validation results relative to accuracy, precision, representativeness, comparability, and completeness. Individual qualifications to the data are discussed by analytical category in Sections 5.4 through 5.6.

5.3 GENERAL QC ELEMENTS RELEVANT TO ALL ANALYSES

Each analysis and the total of all analyses were evaluated with respect to the QC parameters' accuracy, precision, representativeness, comparability, and completeness.

5.3.1 Accuracy

Each analysis and the total of all analyses were evaluated with respect to the QC parameters' accuracy.

5.3.1.1 Metals

- Based on the standard calibration records and Analysis Run Logs for the inductively coupled plasma (ICP) analyses, initial and continuing calibrations were performed at satisfactory frequencies.

- Except for sediment matrix silver analyses, matrix spike/matrix spike duplicate (MS/MSD) percent recovery (%R) values were acceptable and within project-specific QAPP control limits. Similar problems were observed during the Round 27, 28, 29, and 30 long-term monitoring events. The sediment matrix silver MS %R value was outside the project-specific QAPP control limit. Note that the silver MSD %R was recovered at an acceptable level. This MS/MSD discrepancy problem may be attributable to sample non-homogeneity.

- Additionally, no chromium MS/MSD samples were reported for the water matrix analytical batch SDG 6836. Therefore, all chromium results within this batch for the water matrix were qualified as estimated.

- Laboratory control sample (LCS) recoveries were acceptable and within project-specific QAPP control limits.

- Performance of interference check samples for all metals analyses was acceptable.

- The ICP serial dilution analysis was acceptable and within project-specific QAPP control limits

- No contaminants were detected above the method detection limit (MDL) in the method blank samples.

5.3.1.2 Polychlorinated Biphenyls

- Initial multi-point and continuing calibration sample analyses %R values were acceptable.

- LCS/LCS duplicate (LCSD) and MS/MSD results were acceptable and within project-specific QAPP QC limits for PCB sample analyses. The laboratory used an LCS and MS solution containing PCB 1254 only, as requested.

- The appropriate two surrogate standards were included in all samples, blanks, LCS, and MS analyses. With the exception of the surrogate recovery for decachlorobiphenyl in samples AF-L224606 and AF-L224704, all surrogate recoveries were within acceptable limits. Both decachlorobiphenyl recoveries exceeded the upper control limit of 133%. Per the Basewide QAPP, since no PCB results were reported above the quantitation limit in either sample, no qualification was necessary.

- Sample specific chromatograms for positive results (i.e., LCS and MS/MSD samples) were reviewed. In the reviewer's opinion, proper PCB quantifications were made.

- The laboratory method blanks were free of contamination. No contaminants were detected above the MDL in the method blank samples. Sample results were not biased by any blank contamination. The equipment rinsate sample was also free of contamination.

5.3.1.3 Volatile Organic Compounds

- Calibrations were performed at the required frequencies and with the required standards. Initial calibrations were established with 6-point curves; daily continuing calibration and second source confirmation standards were properly analyzed.

- Initial calibrations were acceptable based on dates of performance and information provided. Percent difference (%D) between the initial calibration and continuing calibration with respect to calibration check compounds and response factors for system performance check compounds were acceptable.

- Tuning compound analyses were acceptable.

- Some MS/MSD %R results were not acceptable. The %R value for the TCE MS in SDG 6824 was outside the Basewide QAPP control limits. All water matrix TCE results within this SDG were qualified as estimated.

- LCS values were acceptable based on %R values that were within project-specific QAPP QC limits.

- The standard four method SW8260 surrogate standards were included in all sample, blank, LCS, and MS analyses. With the exception of the surrogate recovery for toluene-d8 in sample AF-L225201, all surrogate recoveries and frequencies were acceptable for all organic analyses. The toluene-d8 recovery in sample AF-L225201 exceeded the upper control limit. Therefore, all corresponding VOC results above the quantitation limit in sample AF-L225201 were qualified as estimated.

- No contaminants were detected above the MDL in any method blank samples

- Trichloroethene was detected in the trip blank sample (AF-L225007) at a concentration of 3.1 µg/L. Per the requirements of the Basewide QAPP, all corresponding field results for trichloroethene less than 15.5 µg/L (5x the detected 3.1 µg/L concentration) were qualified as "not detected" (U-B). Otherwise, sample results were not biased by any method blank contamination.

5.3.2 Precision

Precision, measured by calculation of relative percent difference (RPD) for LCS/LCSD, MS/MSD, and environmental sample/field duplicate analytical results, was acceptable for most analyses. However, the MS/MSD and environmental sample/field duplicate precision results for silver in the sediment matrix in SDG 6836 were outside the Basewide QAPP

control limits. Silver results from the impacted sediment samples were qualified as estimated.

5.3.3 Representativeness

All samples for all analytical categories were managed with chain of custody intact throughout the sampling process from onsite sample collection through final analysis at the offsite laboratory. Samples were acquired in accordance with the project-specific sampling and analysis plan. All PCB and metals samples were extracted and analyzed within the required method-specific holding times.

However, the majority of VOC samples were analyzed outside the required 14-day holding time. The VOC holding times reported for these samples exceeded the maximum allowable 14-day holding time by up to a maximum of 13 days (27 days from sample collection). As per the Basewide QAPP, all corresponding VOC results within these samples were qualified as estimated. No sample results were rejected based on holding time exceedences.

5.3.4 Comparability

Based on the well-documented procedures used to collect and analyze samples, primarily USEPA methodologies, and project-specific QC, as well as the quality records produced from the sampling and analysis process, the results of the groundwater, sediment, and surface water analyses are comparable with other similar environmental results.

5.3.5 Completeness

All samples collected, analyzed, and produced usable data without exception. No data were rejected; the total percent completeness for all analyses was 100%. The frequency of QC samples was satisfactory for both field QC samples and laboratory QC samples.

5.4 TOTAL METALS – SW6010B

All positive sediment matrix silver results were qualified as estimated. Affected samples are as follows:

AF-L224603	AF-L224606	AF-L224703	AF-L224704

Select water matrix chromium results were qualified as estimated. Affected samples are as follows:

AF-L225702	AF-L225704	AF-L225803	AF-L225805
AF-L225902	AF-L225905	AF-L225907	

5.5 POLYCHLORINATED BIPHENYLS – SW8082

No data qualifiers were required for any of the PCB analyses.

5.6 VOLATILE ORGANIC COMPOUNDS – SW8260B

Data qualifiers were added to select VOC sample results due to holding time, surrogate, and trip blank issues. However, no sample results were rejected. Affected samples are tabulated below:

AF-L225001	AF-L225002	AF-L225003	AF-L225004
AF-L225005DL1	AF-L225007	AF-L225201	AF0L225202
AF-L225402	AF-L225403	AF-L225501	AF-L225502
AF-L225201DL	AF-L225304	AF-L225305	AF-L225601
AF-L225603	AF-L225605	AF-L225607	AF-L226002
AF-L226003	AF-L226005	AF-L226201	AF-L226202
AF-L226204	AF-L226206	AF-L226301	AF-L226302
AF-L226303	AF-L226304	AF-L226401	AF-L226402
AF-L226403	AF-L226404	AF-L224701	AF-L224702
AF-L224705	AF-L224801	AF-L224802	AF-L224803
AF-L224804	AF-L224805	AF-L224901	AF-L224902
AF-L224903	AF-L224904	AF-L224905	AF-L224906
AF-L225701	AF-L225705	AF-L225801	AF-L225802
AF-L225804	AF-L225901	AF-L225903	AF-L225904
AF-L225906	AF-L226101	AF-L226102	AF-L226103
AF-L226104			

6.0 RECOMMENDATIONS

Jacobs will conduct a long-term monitoring round in October/November 2001. Jacobs is currently conducting the five-year ROD review for Air Force Plant 4. Recommendations will be included in this review. However, as an immediate recommendation, well WHGLTA048 should be watched closely for any sampling performed prior to the scheduled October/November 2001 event. Remediation activities in the area of WHGLTA048 should be reviewed to determine if adverse effects may be occurring. Sentry remediation techniques such as application of hydrogen release compound (HRC®) should be explored as a potential barrier to TCE concentrations exceeding boundary concentrations.

7.0 REFERENCES

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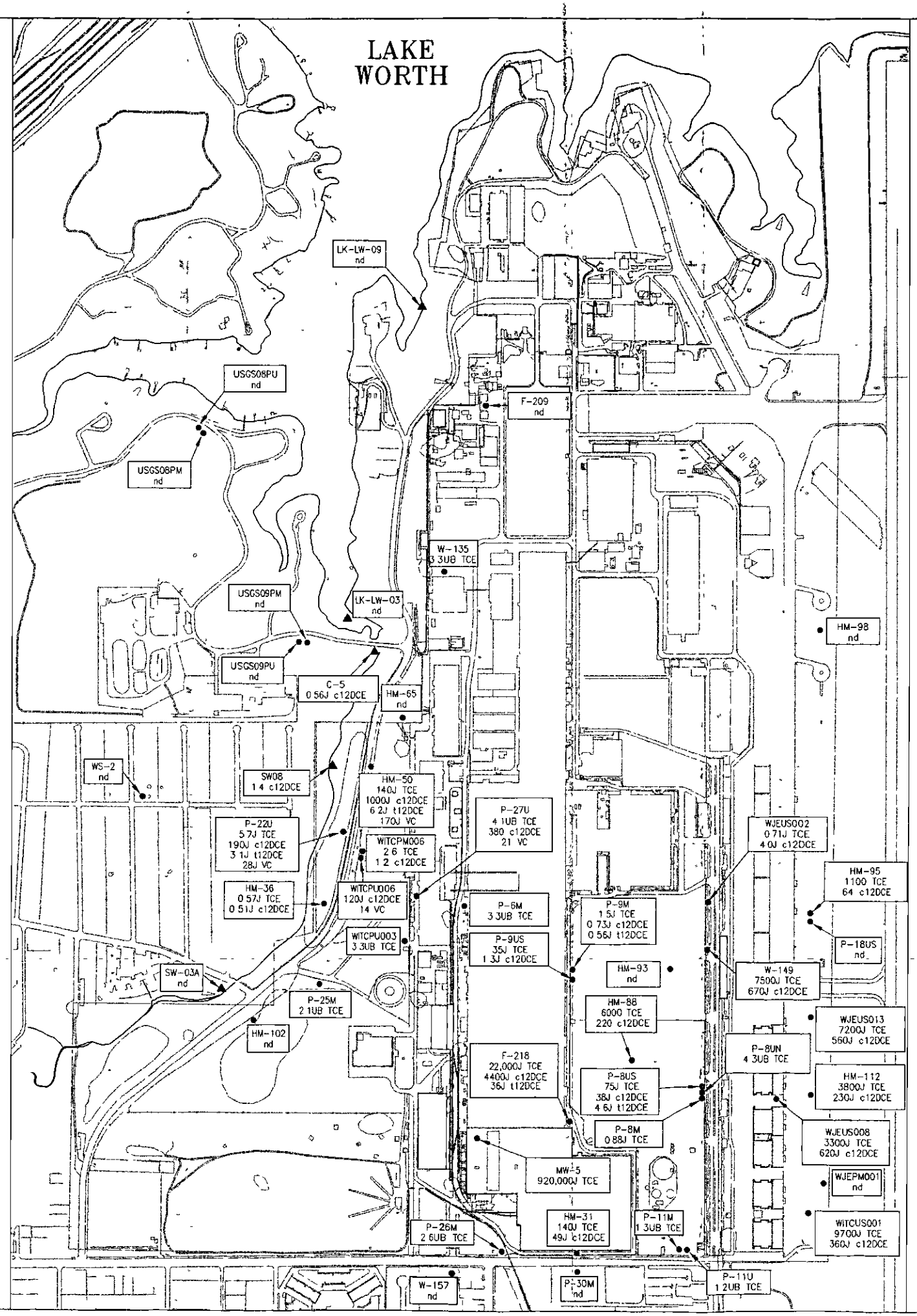

EXPLANATION

- ● WELL LOCATION SAMPLED DURING MAY 2001 SAMPLING ROUND
- ▲ SURFACE WATER LOCATION SAMPLED DURING MAY 2001 SAMPLING ROUND

●HM-95 ——— WELL NAME
2340 TCE
184 c12DCE > CONCENTRATIONS OF TCE-RELATED COMPOUNDS IN µg/L

COMPOUNDS SHOWN ON THIS TABLE

TCE	=	TRICHLOROETHENE
c12DCE	=	cis-1,2-DICHLOROETHENE
t12DCE	=	trans-1,2-DICHLOROETHENE
VC	=	VINYL CHLORIDE
µg/L	=	MICROGRAMS PER LITER
nd	=	THE ANALYTE WAS ANALYZED FOR BUT NOT DETECTED AT A VALUE ABOVE THE METHOD DETECTION LIMIT (MDL)
J	=	THE ANALYTE WAS POSITIVELY IDENTIFIED BUT THE NUMERICAL CONCENTRATION IS APPROXIMATE DUE TO COMPROMISED QUALITY CONTROL(S) SEE DATA QUALITY SECTION
UB	=	DUE TO TRIP BLANK CONTAMINATION THE REPORTING LIMIT FOR THESE SAMPLES WAS ELEVATED TO 155 µg/L THE VALUE SHOWN IS AN ESTIMATED VALUE BELOW THE REPORTING LIMIT AND MAY REPRESENT A NON-DETECT

N

0 500 1000
SCALE IN FEET

AIR FORCE PLANT 4
FORT WORTH, TEXAS

AIR FORCE PLANT 4 LOCATIONS SAMPLED DURING MAY 2001 INCLUDING CONCENTRATIONS OF TCE-RELATED COMPOUNDS

PROJ MGR	ACAD FILE NO	FIGURE NO
L SCHUETTER	R31PLATE1	PLATE 1
DRAWN BY	PROJ NO	DATE
M ALRED	05Z02601	7/10/01

I:\PLANT4\05Z02601\CAD\R31PLATE1.DWG

PLATE 1

LAKE WORTH

HM-120
nd

HM-119
12 0J TCE

GMI-22-02M
nd

GMI-22-05M
nd

GMI-22-03M
83J TCE
100J c12DCE
33J t12DCE

WHGLTA009*
200J c12DCE

USGS06T
26J TCE
4 4J c12DCE

SAMPLE FROM TRINITY RIVER APPROXIMATELY 800 ft EAST

RV-001JETR
nd

EGL-2
5 7J TCE
6 9J c12DCE
0 54J t12DCE

LF05-S6
7 0J TCE
1 8J c12DCE

LF03-3D*
nd

HM-127
nd

MW-1T-01T*
2 0 TCE
0 8 c12DCE

WS-12
nd

LF04-10
nd

WHGLTA048
8 1J TCE
3 6J c12DCE

WS-H3
nd

EXPLANATION

- ● WELL LOCATION SAMPLED DURING THE MAY 2001 SAMPLING ROUND
- ▲ SURFACE WATER LOCATION SAMPLED DURING THE MAY 2001 SAMPLING ROUND

● HM-95 ——— WELL NAME
2340 TCE
184 c12DCE > CONCENTRATIONS OF TCE-RELATED COMPOUNDS IN µg/L

COMPOUNDS SHOWN ON THIS TABLE

TCE	=	TRICHLOROETHENE
c12DCE	=	cis-1,2-DICHLOROETHENE
t12DCE	=	trans-1,2-DICHLOROETHENE
VC	=	VINYL CHLORIDE
µg/L	=	MICROGRAMS PER LITER
nd	=	THE ANALYTE WAS ANALYZED FOR, BUT NOT DETECTED AT A VALUE ABOVE THE METHOD DETECTION LIMIT (MDL)
J	=	THE ANALYTE WAS POSITIVELY IDENTIFIED BUT THE NUMERICAL CONCENTRATION IS APPROXIMATE DUE TO COMPROMISED QUALITY CONTROL(S) SEE DATA QUALITY SECTION
*	=	WELL SAMPLED BY HYDROGEOLOGIC

N

0 500 1000 2000
SCALE IN FEET

AIR FORCE PLANT 4
FORT WORTH, TEXAS

NASFW AND OFF-SITE LOCATIONS SAMPLED DURING MAY 2001 INCLUDING CONCENTRATIONS OF TCE-RELATED COMPOUNDS

PROJ MGR	ACAD FILE NO	FIGURE NO
L SCHUETTER	R31PLATE2	PLATE 2
DRAWN BY	PROJ NO	DATE
M ALRED	05Z02601	07/11/01

I:\PLANT4\05Z02601\CAD\R31PLATE2.DWG

TAB

APPENDIX A

APPENDIX A
Laboratory Analytical Reports
May 2001

Several types of raw data were also provided by the laboratory that have not been included in this appendix, including digestion and extraction logs, raw instrument output, and calibration logs.

Contact Jacobs Engineering Group Inc.

if this supplemental information is required.

Air Force Plant 4 Semi-Annual Sampling
May 2001
Sample Cross Reference

Control No.	Location	Sample ID	Test Method	Lab Snum	Lab Batch	QC Type
AF-L224601	C-5	SW-C5-31	SW8260	6836 001	GV21	N1
AF-L224602	C-5	SW-C5-31	SW6010	6836 002	ICPB2017A	N1
AF-L224603	C-5	SE-C5-31	SW6010	6836 003	ICPB2018A	N1
AF-L224603	C-5	SE-C5-31	SW8082	6836 003	PCB755	N1
AF-L224604	SW-08	SW-SW08-31	SW8260	6836 004	GV21	N1
AF-L224605	SW-08	SW-SW08-31	SW6010	6836.005	ICPB2017A	N1
AF-L224606	SW-08	SE-SW08-31	SW6010	6836 006	ICPB2018A	N1
AF-L224606	SW-08	SE-SW08-31	SW8082	6836.006	PCB755	N1
AF-L224701	LW-03	SW-LKLW03-31	SW8260	6836.007	GV23	N1
AF-L224702	LW-03	SW2-LKLW03-31	SW8260	6836 008	GV23	FD1
AF-L224703	LW-03	SE-LKLW03-31	SW6010	6836 009	ICPB2018A	N1
AF-L224703	LW-03	SE-LKLW03-31	SW8082	6836 009	PCB755	N1
AF-L224704	LW-03	SE2-LKLW03-31	SW6010	6836 010	ICPB2018A	FD1
AF-L224704	LW-03	SE2-LKLW03-31	SW8082	6836 010	PCB755	FD1
AF-L224705	FIELDQC	EB010510WS	SW8260	6836 011	GV23	EB1
AF-L224706	FIELDQC	EB010510WS	SW6010	6836 012	ICPB2017A	EB1
AF-L224707	FIELDQC	EB010510SE	SW8082	6836 013	PCB756	EB2
AF-L224801	EGL-2	SW-EGL2-31	SW8260	6836.014	FV26	N1
AF-L224802	RV-001JETR	SW-RV001JETR-31	SW8260	6836.015	FV26	N1
AF-L224803	LF05-S6	SW-LF05S6-31	SW8260	6836 016	FV26	N1
AF-L224804	LK-LW-09	SW-LKLW09-31	SW8260	6836 017	GV23	N1
AF-L224805	SW-03A	SW-SW03A-31	SW8260	6836.018	GV23	N1
AF-L224806	SW-03A	SW-SW03A-31	SW6010	6836.019	ICPB2017A	N1
AF-L224807	SW-03A	SW2-SW03A-31	SW6010	6836.020	ICPB2017A	FD1
AF-L224901	GMI-22-02M	MW-GMI2202M-31	SW8260	6836.021	FV26	N1
AF-L224902	GMI-22-03M	MW-GMI2203M-31	SW8260	6836 022	FV26	N1
AF-L224903	GMI-22-05M	MW-GMI2205M-31	SW8260	6836 023	FV26	N1
AF-L224904	LF04-10	MW-LF0410-31	SW8260	6836.024	FV26	N1
AF-L224905	USGS06T	MW-USGS06T-31	SW8260	6836 025	FV25	N1
AF-L224906	WHGLTA048	MW-WHGLTA048-31	SW8260	6836 026	FV26	N1
AF-L225001	P-6M	MW-P6M-31	SW8260	6822.001	BV46	N1
AF-L225002	P-27U	MW-P27U-31	SW8260	6822.002	BV46	N1
AF-L225002	P-27U	MW-P27U-31	SW8260	6822 002DL1	GV15	N1
AF-L225003	W-135	MW-W135-31	SW8260	6822 003	BV46	N1
AF-L225004	P-26M	MW-P26M-31	SW8260	6822 004	BV46	N1
AF-L225005	MW-5	MW-MW5-31	SW8260	6822 005	GV15	N1
AF-L225005	MW-5	MW-MW5-31	SW8260	6822 005DL1	GV17	N1
AF-L225006	MW-5	MW-MW5-31	SW6010	6822 006	ICPB2007A	N1
AF-L225007	FIELDQC	TB010502	SW8260	6822 007	GV16	TB1
AF-L225101	WITCPM006	MW-WITCPM006-31	SW8260	6824 001	GV16	N1
AF-L225102	WITCPU006	MW-WITCPU006-31	SW8260	6824.002	GV16	N1
AF-L225102	WITCPU006	MW-WITCPU006-31	SW8260	6824.002DL1	GV19	N1
AF-L225103	HM-65	MW-HM65-31	SW8260	6824 003	GV16	N1
AF-L225201	WITCPU003	MW-WITCPU003-31	SW8260	6822 008	GV16	N1

Air Force Plant 4 Semi-Annual Sampling
May 2001
Sample Cross Reference

Control No.	Location	Sample ID	Test Method	Lab Snum	Lab Batch	QC Type
AF-L225202	P-25M	MW-P25M-31	SW8260	6822 009	GV16	N1
AF-L225301	WS-2	MW-WS2-31	SW8260	6824 004	GV16	N1
AF-L225302	WS-12	MW-WS12-31	SW8260	6824.005	GV16	N1
AF-L225303	WS-H3	MW-WSH3-31	SW8260	6824.006	GV17	N1
AF-L225304	P-30M	MW-P30M-31	SW8260	6824 007	GV17	N1
AF-L225305	W-157	MW-W157-31	SW8260	6824 008	GV19	N1
AF-L225306	W-157	MW-W157-31	SW6010	6824 009	ICPB2012	N1
AF-L225401	P-8M	MW-P8M-31	SW8260	6822 010	GV16	N1
AF-L225402	P-8UN	MW-P8UN-31	SW8260	6822.011	GV16	N1
AF-L225403	P-8US	MW-P8US-31	SW8260	6822 012	GV16	N1
AF-L225404	P-8US	MW-P8US-31	SW6010	6822 013	ICPB2007A	N1
AF-L225501	P-11M	MW-P11M-31	SW8260	6822 014	GV16	N1
AF-L225502	P-11U	MW-P11U-31	SW8260	6822 015	GV16	N1
AF-L225503	HM-88	MW-HM88-31	SW8260	6822 016	GV15	N1
AF-L225504	HM-88	MW-HM88-31	SW6010	6822.017	ICPB2007A	N1
AF-L225601	F-218	MW-F218-31	SW8260	6824 010	GV17	N1
AF-L225601	F-218	MW-F218-31	SW8260	6824.010DL1	GV19	N1
AF-L225602	F-218	MW-F218-31	SW6010	6824.011	ICPB2012	N1
AF-L225603	W-149	MW-W149-31	SW8260	6824 012	GV17.	N1
AF-L225603	W-149	MW-W149-31	SW8260	6824 012DL1	GV19	N1
AF-L225604	W-149	MW-W149-31	SW6010	6824 013	ICPB2012	N1
AF-L225605	W-149	MW2-W149-31	SW8260	6824.014	GV17.	FD1
AF-L225605	W-149	MW2-W149-31	SW8260	6824.014DL1	GV19	FD1
AF-L225606	W-149	MW2-W149-31	SW6010	6824.015	ICPB2012	FD1
AF-L225607	WJEUS002	MW-WJEUS002-31	SW8260	6824 016	GV19	N1
AF-L225608	WJEUS002	MW-WJEUS002-31	SW6010	6824 017	ICPB2012	N1
AF-L225701	HM-98	MW-HM98-31	SW8260	6836.027	GV21	N1
AF-L225702	HM-98	MW-HM98-31	SW6010	6836 028	ICPB2017A	N1
AF-L225703	HM-95	MW-HM95-31	SW8260	6836.029	GV20	N1
AF-L225704	HM-95	MW-HM95-31	SW6010	6836 030	ICPB2017A	N1
AF-L225705	FIELDQC	TB010510	SW8260	6836.031	FV26	TB1
AF-L225801	WL-001JEPM	MW-WJEPM001-31	SW8260	6836.032	GV20	N1
AF-L225802	P-18US	MW-P18US-31	SW8260	6836.033	GV20	N1
AF-L225803	P-18US	MW-P18US-31	SW6010	6836 034	ICPB2017A	N1
AF-L225804	WITCUS001	MW-WITCUS001-31	SW8260	6836.035	GV20	N1
AF-L225804	WITCUS001	MW-WITCUS001-31	SW8260	6836 035DL1	GV23	N1
AF-L225805	WITCUS001	MW-WITCUS001-31	SW6010	6836.036	ICPB2017A	N1
AF-L225901	WJEUS008	MW-WJEUS008-31	SW8260	6836.037	FV26	N1
AF-L225902	WJEUS008	MW-WJEUS008-31	SW6010	6836.038	ICPB2017A	N1
AF-L225903	WJEUS008	MW2-WJEUS008-31	SW8260	6836.039	FV26	FD1
AF-L225904	WL-013JEUS	MW-WJEUS013-31	SW8260	6836 040	GV21	N1
AF-L225904	WL-013JEUS	MW-WJEUS013-31	SW8260	6836 040DL1	GV23	N1
AF-L225905	WL-013JEUS	MW-WJEUS013-31	SW6010	6836 041	ICPB2017A	N1
AF-L225906	HM-112	MW-HM112-31	SW8260	6836 042	GV21	N1

Air Force Plant 4 Semi-Annual Sampling
May 2001
Sample Cross Reference

Control No.	Location	Sample ID	Test Method	Lab Snum	Lab Batch	QC Type
AF-L225907	HM-112	MW-HM112-31	SW6010	6836 043	ICPB2017A	N1
AF-L226001	F-209	MW-F209-31	SW8260	6824.018	GV17	N1
AF-L226002	HM-102	MW-HM102-31	SW8260	6824 019	GV17	N1
AF-L226003	HM-31	MW-HM31-31	SW8260	6824 020	GV17	N1
AF-L226004	HM-31	MW-HM31-31	SW6010	6824.021	ICPB2012	N1
AF-L226005	FIELDQC	TB010507	SW8260	6824 022	GV17	TB1
AF-L226101	HM-119	MW-HM119-31	SW8260	6836 044	FV25	N1
AF-L226102	HM-120	MW-HM120-31	SW8260	6836 045	FV27	N1
AF-L226103	HM-127	MW-HM127-31	SW8260	6836 046	FV25	N1
AF-L226104	HM-127	MW2-HM127-31	SW8260	6836 047	FV25	FD1
AF-L226201	P-9M	MW-P9M-31	SW8260	6824.023	GV18	N1
AF-L226202	P-9US	MW-P9US-31	SW8260	6824 024	GV18	N1
AF-L226203	P-9US	MW-P9US-31	SW6010	6824 025	ICPB2012	N1
AF-L226204	HM-93	MW-HM93-31	SW8260	6824 026	GV19	N1
AF-L226205	HM-93	MW-HM93-31	SW6010	6824 027	ICPB2012	N1
AF-L226206	HM-93	MW2-HM93-31	SW8260	6824 028	GV19	FD1
AF-L226207	HM-93	MW2-HM93-31	SW6010	6824 029	ICPB2012	FD1
AF-L226301	HM-50	MW-HM50-31	SW8260	6824 030	GV18	N1
AF-L226301	HM-50	MW-HM50-31	SW8260	6824 030DL1	GV20	N1
AF-L226302	HM-36	MW-HM36-31	SW8260	6824 031	GV18	N1
AF-L226303	P-22U	MW-P22U-31	SW8260	6824 032	GV18	N1
AF-L226303	P-22U	MW-P22U-31	SW8260	6824.032DL1	GV19	N1
AF-L226304	P-22U	MW2-P22U-31	SW8260	6824.033	GV18	FD1
AF-L226304	P-22U	MW2-P22U-31	SW8260	6824.033DL1	GV19	FD1
AF-L226401	USGS08PM	MW-USGS08PM-31	SW8260	6824 034	GV18	N1
AF-L226402	USGS08PU	MW-USGS08PU-31	SW8260	6824 035	GV18	N1
AF-L226403	USGS09PM	MW-USGS09PM-31	SW8260	6824 036	GV18	N1
AF-L226404	USGS09PU	MW-USGS09PU-31	SW8260	6824 037	GV18	N1

PDP
Analytical Services

1680 Lake Front Circle, Suite B
The Woodlands, Texas 77380
Phone (281) 363-2233
Fax (281) 298-5784
e-mail pdp@pdpanalytical com

May 24, 2001

Mr Eric Aamodt
Jacobs Engineering Group
1527 Cole Blvd , Ste 100
Golden, CO 80401

Episode 6822
Project ID. Air Force Plant 4

Dear Mr Aamodt·

Enclosed are the analytical results for the samples received in our laboratory on May 5th, 2001 The samples were analyzed for the parameters indicated on the Chain-of-Custody (COC)

Please be advised that unused portions of your samples, sample extracts and digestates will be stored for 30 days from the date of this report Unless prior arrangements were made, at the end of this period your samples will either be disposed of, or returned to you if your samples were determined to be hazardous

Should you have any questions or need assistance with this report, please feel free to call me, at (281) 363-2233

Sincerely,

Rick Schrynemeeckers
Vice President of Operations

Enclosures

cc· Episode File – 6822

PDP ANALYTICAL SERVICES 1680 Lake Front Circle, Suite B, The Woodlands, TX 77380

SAMPLE LOG-IN CHECKLIST/DISCREPANCY REPORT

FID. SLCDR01 96

EPISODE #: 6822 DATE/ REC'D TIME: 5/5/01 9:00 TEMP & ID: 1) 3°c # cooler 1

CLIENT NAME: Jacobs Eng 2) ____ # ____

PROJECT NAME: Air Force Plant 4 3) ____ # ____

PROJECT NUMBER: 05Z02601 4) ____ # ____

17 AQUEOUS, # — SOIL SAMPLES 5) ____ # ____

COURIER/AIRBILL # Fed 820798651960 6) ____ # ____

SAMPLE CONTAINER SEALS: (present) absent (intact) broken

COOLER CUSTODY SEALS: (present) absent (intact) broken NAME & DATE: D.B. 5/4/01

HOW MANY AND WHERE 1 on front

	YES	NO
Were samples screened for radioactivity?	✓	
Chain-of-custody present?		✓
Custody documents: Sealed in a plastic bag?		✓
Signed and dated by field personnel		✓
Filled out properly in indelable ink?		✓
Signed and dated by log-in personnel?		✓
Container Condition. Each containers sealed in a separate plastic bag?		✓
Labels complete (ID, date, time, signature, preservative, etc.)?		✓
Labels agree with chain-of-custody?		✓
Received without leakage or breakage? If no, list :		✓
Correct quantity indicated on chain-of-custody?		✓
Sample Integrity· Correct containers used for the test indicated? If no, list.		✓
Correct preservatives added to the samples? If no, list		✓
Sufficient sample amount sent for the tests indicated? If no, list		✓
VOA vials filled completely? If no, list:		✓
Aqueous volatiles samples preserved? If no, list:		✓

Descrepancy Report.

Discepancies to be discussed with the client?

Project Manager's recommendations?

Who was notified? By whom? Date:

Client's comments·

Corrective actions carried out?

COMMENTS:

For those short holding time and fast turn-around parameters, has a Rush Notification sheet been issued to the lab? N/A

LOG-IN BY· Rachael Brown DATE: 5/7/01

601 44

JE JACOBS ENGINEERING GROUP INC.
1670 BROADWAY, SUITE 3200, DENVER, COLORADO 80202
TELEPHONE (303) 830-6933 FAX (303) 830-6911

AF-L2250

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: AIR FORCE PLANT 4 (DO 26)	LABORATORY NAME & ADDRESS: PDP ANALYTICAL SERVICES
PROJECT NUMBER: 05202601	1680 Lake Front Circle Suite B
WBS CODE: 320206	SUBCONTRACT / D.O. No. — The Woodlands TX 77380-

CONTROL NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
										6822.
AF-L225001	5/3/01	11:45	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		.001
AF-L225002	5/3/01 BN	08:45	BN TB	3	40 mL VOA	4C HCl p	W	SW8260B short list		.002
AF-L225003	5/2/01	17:00	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		.003
AF-L225004	5/3/01	10:00	BN TB	3	40 mL VOA	4C HCl p	W	SW8260B short list		.004
AF-L225005	5/3/01	11:00	BN TB	3	40 mL VOA	4C HCl p	W	SW8260B elevated DLs short list		.005
AF-L225006	5/3/01	11:00	BN TB	1	1 L Plastic	HNO3 pH	W	SW6010B (Cr-Only)		.006
AF-L 225007	5/2/01	15:30	BN TB	2	40 ml VOA	HCL	WQ	SW8260B short list		.007
								BN 5/4/01		

COMMENTS:

COLLECTED & RELEASED BY: D. Bryan Kelly	DATE: 5/4/01	TIME: 16:05	TURNAROUND TIME		
RECEIVED BY: R. Brown	DATE: 5/7/01	TIME: 11:00	RELINQUISHED BY	DATE: / /	TIME
RECORD RETURNED BY	DATE: / /	TIME			
			SHIPPING NUMBER: 820798651960		

DISTRIBUTION: WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

The chain-of-custody record provides formal documentation of the possession of samples from the time of collection until received at the laboratory. Internal custody procedures must be used to document possession of the samples while they are at the laboratory.

To fill out this form, specify the project name, project number, and appropriate WBS code in the box at the upper left-hand corner of the form. In the box to the immediate right, indicate the proper shipping address of the laboratory that is to perform the analyses Enter the shipping number (e g , FedEx airbill) in the space at the bottom of the form.

After the form is completed, the copies are distributed as follows:

White:	With sample(s) to lab, return to Jacobs project file upon receipt and signature.
Canary:	With sample(s) to lab; lab's receipt
Pink:	To Jacobs Data Management
Goldenrod:	Retain in field

---

1) **CONTROL NUMBER**
   Enter the control number of the sample
2) **COLLECTION**
   Enter the date (mo/day/yr) and the time (military) of sample collection
3) **SAMPLER'S INITIALS**
   Enter the initials of the person(s) who collected the sample.
4) **NUMBER OF CONTAINERS**
   Enter the number of containers that are grouped together as one sample.
5) **CONTAINER SIZE AND TYPE**
   Enter the volume and type of the container(s) (e g "40 mL VOA", "250 mL Steel Sleeve")
6) **PRESERVATIVE**
   Enter the preservative used (if the analyses requested does not require preservative, write "None") All samples are shipped at 4 degrees Celsius
7) **MATRIX CODE**
   Enter the matrix code for the matrix sampled

WG	Groundwater	WS	Surface water
WW	Waste water	WO	Ocean water
SE	Sediment	SL	Sludge
SO	Soil	WL	Leachate

8) **TYPE OF ANALYSIS**
   Enter the analytical method(s) requested These should be consistent with the workplan/sampling analysis plan for this task (e g , "EPA Method 8240", "VOA CLP").
9) **QC**
   The samples for QC analysis performed by the laboratory must be identified Enter the code for the type of QC requested
   - S single spiked sample
   - M matrix spike/matrix spike duplicate
   - D unspiked duplicate
10) **CONDITION ON RECEIPT**
    This section is filled out by the lab to record the condition of each sample upon its receipt
11) **COMMENTS**
    This section is used for any additional information that might be useful to the laboratory (e g , special handling requirements such as accelerated turnaround times, suspected contaminants, additional compounds to be analyzed, high level contaminant, etc)
12) **COLLECTED AND RELEASED BY**
    The person(s) who collected the samples must sign in this area Date and time are as in #2.
13) **CUSTODY BLOCK**
    Whenever custody of samples is transferred, the person receiving the samples must sign here. At that same time, the person releasing the samples must also sign Date and time are as in #2

601 '45

601 46

JACOBS ENGINEERING GROUP INC.
1670 BROADWAY, SUITE 3200, DENVER, COLORADO 80202
TELEPHONE (303) 830-6933 FAX (303) 830-6911

CHAIN OF CUSTODY RECORD

AF-L2252

USE A BALLPOINT PEN. BLACK INK, AND PRESS FIRMLY INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: AIR FORCE PLANT 4 (DO 26)	LABORATORY NAME & ADDRESS PDP ANALYTICAL SERVICES
PROJECT NUMBER 05Z02601	1680 Lake Front Circle Suite B
WBS CODE 320206	SUBCONTRACT / D.O. No. The Woodlands TX 77380-

CONTROL NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
AF-L225201	5/4/01	15:10	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		6822. .008
AF-L225202	5/4/01	14:15	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		.009

BN 5/4/01

COMMENTS:

COLLECTED & RELEASED BY	DATE 5/4/01	TIME 16:05	TURNAROUND TIME		
RECEIVED BY R. Brooks	DATE 5/7/01	TIME 11:00	RELINQUISHED BY	DATE / /	TIME
RECORD RETURNED BY	DATE / /	TIME			
			SHIPPING NUMBER: 820798651960		

DISTRIBUTION WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

0005306

The chain-of-custody record provides formal documentation of the possession of samples from the time of collection until received at the laboratory. Internal custody procedures must be used to document possession of the samples while they are at the laboratory.

To fill out this form, specify the project name, project number, and appropriate WBS code in the box at the upper left-hand corner of the form. In the box to the immediate right, indicate the proper shipping address of the laboratory that is to perform the analyses. Enter the shipping number (e.g , FedEx airbill) in the space at the bottom of the form.

After the form is completed, the copies are distributed as follows:

White:	With sample(s) to lab; return to Jacobs project file upon receipt and signature.
Canary:	With sample(s) to lab; lab's receipt
Pink:	To Jacobs Data Management
Goldenrod:	Retain in field

---

1) **CONTROL NUMBER**
   Enter the control number of the sample.
2) **COLLECTION**
   Enter the date (mo/day/yr) and the time (military) of sample collection
3) **SAMPLER'S INITIALS**
   Enter the initials of the person(s) who collected the sample.
4) **NUMBER OF CONTAINERS**
   Enter the number of containers that are grouped together as one sample
5) **CONTAINER SIZE AND TYPE**
   Enter the volume and type of the container(s) (e.g "40 mL VOA", "250 mL Steel Sleeve")
6) **PRESERVATIVE**
   Enter the preservative used (if the analyses requested does not require preservative, write "None") All samples are shipped at 4 degrees Celsius.
7) **MATRIX CODE**
   Enter the matrix code for the matrix sampled

WG	Groundwater	WS	Surface water
WW	Waste water	WO	Ocean water
SE	Sediment	SL	Sludge
SO	Soil	WL	Leachate

8) **TYPE OF ANALYSIS**
   Enter the analytical method(s) requested These should be consistent with the workplan/sampling analysis plan for this task (e g , "EPA Method 8240", "VOA CLP")
9) **QC**
   The samples for QC analysis performed by the laboratory must be identified Enter the code for the type of QC requested
   - S single spiked sample
   - M matrix spike/matrix spike duplicate
   - D unspiked duplicate
10) **CONDITION ON RECEIPT**
    This section is filled out by the lab to record the condition of each sample upon its receipt
11) **COMMENTS**
    This section is used for any additional information that might be useful to the laboratory (e g , special handling requirements such as accelerated turnaround times, suspected contaminants, additional compounds to be analyzed, high level contaminant, etc)
12) **COLLECTED AND RELEASED BY**
    The person(s) who collected the samples must sign in this area Date and time are as in #2
13) **CUSTODY BLOCK**
    Whenever custody of samples is transferred, the person receiving the samples must sign here At that same time, the person releasing the samples must also sign Date and time are as in #2

601 48

JE JACOBS ENGINEERING GROUP INC.
1670 BROADWAY, SUITE 3200, DENVER, COLORADO 80202
TELEPHONE (303) 830-6933 FAX (303) 830-6911

AF-L22254

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY INSTRUCTIONS ARE ON THE BACK

PROJECT NAME:	AIR FORCE PLANT 4 (DO 26)	LABORATORY NAME & ADDRESS:	PDP ANALYTICAL SERVICES
PROJECT NUMBER	05202601		1680 Lake Front Circle Suite B
WBS CODE	320206	SUBCONTRACT / D.O No.	The Woodlands TX 77380-

CONTRDL NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESER-VATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT 6822
AF-L225401	5/4/01	0900	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		-010
AF-L225402	5/4/01	0820	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		-011
AF-L225403	5/3/01	1750	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B elevated DLs short list		-012
AF-L225404	5/3/01	1750	TB BN	1	1 L Plastic	HNO3 pH	W	SW6010B (Cr-Only)		-013

BN 5/4/01

COMMENTS

COLLECTED & RELEASED BY D. Bryan Kelly	DATE 5/4/01	TIME 16:05	TURNAROUND TIME		
RECEIVED BY R. Brown	DATE 5/7/01	TIME 11:00	RELINQUISHED BY	DATE / /	TIME
RECORD RETURNED BY	DATE / /	TIME			
			SHIPPING NUMBER 820798651960		

DISTRIBUTION WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

The chain-of-custody record provides formal documentation of the possession of samples from the time of collection until received at the laboratory. Internal custody procedures must be used to document possession of the samples while they are at the laboratory.

To fill out this form, specify the project name, project number, and appropriate WBS code in the box at the upper left-hand corner of the form. In the box to the immediate right, indicate the proper shipping address of the laboratory that is to perform the analyses. Enter the shipping number (e.g , FedEx airbill) in the space at the bottom of the form

After the form is completed, the copies are distributed as follows:

White: With sample(s) to lab, return to Jacobs project file upon receipt and signature.
Canary: With sample(s) to lab, lab's receipt
Pink: To Jacobs Data Management
Goldenrod: Retain in field

---

1) **CONTROL NUMBER**
Enter the control number of the sample
2) **COLLECTION**
Enter the date (mo/day/yr) and the time (military) of sample collection
3) **SAMPLER'S INITIALS**
Enter the initials of the person(s) who collected the sample
4) **NUMBER OF CONTAINERS**
Enter the number of containers that are grouped together as one sample.
5) **CONTAINER SIZE AND TYPE**
Enter the volume and type of the container(s) (e g. "40 mL VOA", "250 mL Steel Sleeve")
6) **PRESERVATIVE**
Enter the preservative used (if the analyses requested does not require preservative, write "None"). All samples are shipped at 4 degrees Celsius
7) **MATRIX CODE**
Enter the matrix code for the matrix sampled:

WG	Groundwater	WS	Surface water
WW	Waste water	WO	Ocean water
SE	Sediment	SL	Sludge
SO	Soil	WL	Leachate

8) **TYPE OF ANALYSIS**
Enter the analytical method(s) requested These should be consistent with the workplan/sampling analysis plan for this task (e g , "EPA Method 8240", "VOA CLP")
9) **QC**
The samples for QC analysis performed by the laboratory must be identified Enter the code for the type of QC requested.
   - S single spiked sample
   - M matrix spike/matrix spike duplicate
   - D unspiked duplicate

10) **CONDITION ON RECEIPT**
This section is filled out by the lab to record the condition of each sample upon its receipt
11) **COMMENTS**
This section is used for any additional information that might be useful to the laboratory (e g , special handling requirements such as accelerated turnaround times, suspected contaminants, additional compounds to be analyzed, high level contaminant, etc)
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JACOBS ENGINEERING GROUP INC.
1670 BROADWAY SUITE 3200, DENVER, COLORADO 80202
TELEPHONE (303) 830-6933 FAX (303) 830-6911

CHAIN OF CUSTODY RECORD

AF-L2255

USE A BALLPOINT PEN. BLACK INK, AND PRESS FIRMLY INSTRUCTIONS ARE ON THE BACK.

PROJECT NAME: AIR FORCE PLANT 4 (DO 26)			LABORATORY NAME & ADDRESS: PDP ANALYTICAL SERVICES
PROJECT NUMBER: 05202601			1680 Lake Front Circle Suite B
WBS CODE: 320206	SUBCONTRACT / D.O. No.		The Woodlands TX 77380-

CONTROL NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT 6022
AF-L225501	5/3/01	15:10	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		.014
AF-L225502	5/3/01	13:45	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		.015
AF-L225503	5/4/01	09:45	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B elevated DLs short list		.016
AF-L225504	5/4/01	09:45	TB BN	1	1 L Plastic	HNO3 pH	W	SW6010B (Cr-Only)		.017

BN 5/4/01

COMMENTS:

COLLECTED & RELEASED BY: D. Bryan Kelly	DATE: 5/4/01	TIME: 16:05	TURNAROUND TIME		
RECEIVED BY: R. B.	DATE: 5/7/01	TIME: 11:00	RELINQUISHED BY	DATE: / /	TIME
RECORD RETURNED BY	DATE: / /	TIME: :			
			SHIPPING NUMBER: 820798651960		

DISTRIBUTION WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK DATA MANAGEMENT / GOLDENROD - FIELD

The chain-of-custody record provides formal documentation of the possession of samples from the time of collection until received at the laboratory. Internal custody procedures must be used to document possession of the samples while they are at the laboratory.

To fill out this form, specify the project name, project number, and appropriate WBS code in the box at the upper left-hand corner of the form. In the box to the immediate right, indicate the proper shipping address of the laboratory that is to perform the analyses. Enter the shipping number (e g , FedEx airbill) in the space at the bottom of the form.

After the form is completed, the copies are distributed as follows.

White:	With sample(s) to lab; return to Jacobs project file upon receipt and signature.
Canary:	With sample(s) to lab; lab's receipt
Pink:	To Jacobs Data Management
Goldenrod:	Retain in field

---

1) **CONTROL NUMBER**
   Enter the control number of the sample
2) **COLLECTION**
   Enter the date (mo/day/yr) and the time (military) of sample collection.
3) **SAMPLER'S INITIALS**
   Enter the initials of the person(s) who collected the sample.
4) **NUMBER OF CONTAINERS**
   Enter the number of containers that are grouped together as one sample.
5) **CONTAINER SIZE AND TYPE**
   Enter the volume and type of the container(s) (e.g. "40 mL VOA", "250 mL Steel Sleeve")
6) **PRESERVATIVE**
   Enter the preservative used (if the analyses requested does not require preservative, write "None"). All samples are shipped at 4 degrees Celsius.
7) **MATRIX CODE**
   Enter the matrix code for the matrix sampled

WG	Groundwater	WS	Surface water
WW	Waste water	WO	Ocean water
SE	Sediment	SL	Sludge
SO	Soil	WL	Leachate

8) **TYPE OF ANALYSIS**
   Enter the analytical method(s) requested. These should be consistent with the workplan/sampling analysis plan for this task (e g , "EPA Method 8240", "VOA CLP")
9) **QC**
   The samples for QC analysis performed by the laboratory must be identified. Enter the code for the type of QC requested
   - S single spiked sample
   - M matrix spike/matrix spike duplicate
   - D unspiked duplicate
10) **CONDITION ON RECEIPT**
    This section is filled out by the lab to record the condition of each sample upon its receipt
11) **COMMENTS**
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1680 Lake Front Circle, Suite B, The Woodlands, TX 77380
PDP Analytical Services

LABORATORY REPORT

TOTAL METALS

CLIENT NAME	:	JACOBS ENGINEERING	CLIENT SAMPLE ID	:	AF-L225006
PROJECT NAME	:	AIR FORCE PLANT 4	LAB SAMPLE ID	:	6822.006
PROJECT NUMBER	:	05-K704-00	DATE RECEIVED	:	5/7/01
DATE SAMPLED	:	5/3/01	PRINTED ON	:	5/11/2001 9:30
SAMPLE MATRIX	:	WATER	% MOISTURE	:	

ANALYTE	METHOD	DATE PREPARED	DATE ANALYZED	DILU-TION	MDL	QUANTITATION LIMIT	RESULT	Q	ANA-LYST
Chromium, Total	SW846-6010B	5/8/01	5/8/01	1	0.0005	0.02 MG/L	ND MG/L		HT

QUALITY ASSURANCE/QUALITY CONTROL

QC BATCH IDs

ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID
Chromium, Total	ICPB2007A				

1680 Lake Front Circle, Suite B, The Woodlands, TX 77380
PDP Analytical Services

LABORATORY REPORT

TOTAL METALS

CLIENT NAME	:	JACOBS ENGINEERING	CLIENT SAMPLE ID	:	AF-L225404
PROJECT NAME	:	AIR FORCE PLANT 4	LAB SAMPLE ID	:	6822.013
PROJECT NUMBER	:	05-K704-00	DATE RECEIVED	:	5/7/01
DATE SAMPLED	:	5/3/01	PRINTED ON	:	5/11/2001 9:30
SAMPLE MATRIX	:	WATER	% MOISTURE	:	

ANALYTE	METHOD	DATE PREPARED	DATE ANALYZED	DILU-TION	MDL	QUANTITATION LIMIT	RESULT	Q	ANA-LYST
Chromium, Total	SW846-6010B	5/8/01	5/8/01	1	0.0005	0.02 MG/L	ND MG/L		HT

QUALITY ASSURANCE/QUALITY CONTROL

QC BATCH IDs

ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID
Chromium, Total	ICPB2007A				

1680 Lake Front Circle, Suite B, The Woodlands, TX 77380
PDP Analytical Services

LABORATORY REPORT

TOTAL METALS

CLIENT NAME	:	JACOBS ENGINEERING	CLIENT SAMPLE ID	:	AF-L225504
PROJECT NAME	:	AIR FORCE PLANT 4	LAB SAMPLE ID	:	6822.017
PROJECT NUMBER	:	05-K704-00	DATE RECEIVED	:	5/7/01
DATE SAMPLED	:	5/4/01	PRINTED ON	:	5/11/2001 9:30
SAMPLE MATRIX	:	WATER	% MOISTURE	:	

ANALYTE	METHOD	DATE PREPARED	DATE ANALYZED	DILU-TION	MDL	QUANTITATION LIMIT	RESULT	Q	ANA-LYST
Chromium, Total	SW846-6010B	5/8/01	5/8/01	1	0.0005	0.02 MG/L	0.043 MG/L		HT

QUALITY ASSURANCE/QUALITY CONTROL

QC BATCH IDs

ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID
Chromium, Total	ICPB2007A				

PDP Analytical Services
1680 Lake Front Circle, Suite B, The Woodlands, TX 77380

LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME	: JACOBS ENGINEERING	CLIENT SAMPLE ID	: AF-L225001
PROJECT NAME	: AIR FORCE PLANT 4	LAB SAMPLE ID	: 6822.001
PROJECT NUMBER	: 05-2026-01	METHOD REFERENCE	: SW846-8260B
DATE SAMPLED	: 5/3/01	DATE RECEIVED	: 5/7/01
SAMPLE MATRIX	: WATER	PRINTED ON	: 5/23/2001 8:46

ANALYST	RAO	CONTAINER ID	: A
DATE ANALYZED	5/15/01	DILUTION	: 1
INSTRUMENT FILE	: B1811.D	INSTRUMENT ID	B-HP5971A
PURGE VOLUME	: 20 mL	TIME ANALYZED	: 12:55

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	3.3 UG/L	
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	94
1,2-Dichloroethane-d4	10 UG/L	64 - 130	106
4-Bromofluorobenzene	10 UG/L	72 - 137	101
Dibromofluoromethane	10 UG/L	56 - 153	119

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : BV46 PREP BLANK ID : BVBLK46 LCS ID : BVLCS46

PDP Analytical Services
1680 Lake Front Circle, Suite B, The Woodlands, TX 77380

LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L225002
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6822.002
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/3/01	DATE RECEIVED :	5/7/01
SAMPLE MATRIX :	WATER	PRINTED ON :	5/23/2001 8:46

ANALYST	RAO	CONTAINER ID	A
DATE ANALYZED	5/15/01	DILUTION	1
INSTRUMENT FILE	B1812.D	INSTRUMENT ID	B-HP5971A
PURGE VOLUME	20 mL	TIME ANALYZED	1:28

PARAMETER	QUANTITATION LIMIT	RESULTS		QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	580	UG/L	E
trans-1,2-Dichloroethene	1.0 UG/L	ND	UG/L	
Trichloroethene	1.0 UG/L	4.1	UG/L	
Vinyl chloride	1.0 UG/L	21	UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	97
1,2-Dichloroethane-d4	10 UG/L	64 - 130	109
4-Bromofluorobenzene	10 UG/L	72 - 137	106
Dibromofluoromethane	10 UG/L	56 - 153	123

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : BV46 PREP BLANK ID : BVBLK46 LCS ID : BVLCS46

PDP Analytical Services
1680 Lake Front Circle, Suite B, The Woodlands, TX 77380

LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME	: JACOBS ENGINEERING	CLIENT SAMPLE ID	: AF-L225002DL1
PROJECT NAME	: AIR FORCE PLANT 4	LAB SAMPLE ID	: 6822.002DL1
PROJECT NUMBER	: 05-2026-01	METHOD REFERENCE	: SW846-8260B
DATE SAMPLED	: 5/3/01	DATE RECEIVED	: 5/7/01
SAMPLE MATRIX	: WATER	PRINTED ON	: 5/23/2001 8:46

ANALYST	ESP	CONTAINER ID	B
DATE ANALYZED	: 5/16/01	DILUTION	20
INSTRUMENT FILE	: G3463.D	INSTRUMENT ID	G-HP5973
PURGE VOLUME	: 20 mL	TIME ANALYZED	: 19:32

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
cis-1,2-Dichloroethene	20	UG/L	380	UG/L	
trans-1,2-Dichloroethene	20	UG/L	ND	UG/L	
Trichloroethene	20	UG/L	ND	UG/L	
Vinyl chloride	20	UG/L	ND	UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED		QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	200	UG/L	68 - 124	94
1,2-Dichloroethane-d4	200	UG/L	64 - 130	110
4-Bromofluorobenzene	200	UG/L	72 - 137	94
Dibromofluoromethane	200	UG/L	56 - 153	98

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV15 PREP BLANK ID : GVBLK15 LCS ID : GVLCS15

LCSD ID : GVLCS15D

PDP Analytical Services
1680 Lake Front Circle, Suite B, The Woodlands, TX 77380

LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L225003
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6822.003
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/2/01	DATE RECEIVED :	5/7/01
SAMPLE MATRIX :	WATER	PRINTED ON :	5/23/2001 8:46

ANALYST	RAO	CONTAINER ID	: A
DATE ANALYZED	: 5/15/01	DILUTION	: 1
INSTRUMENT FILE	B1813.D	INSTRUMENT ID	B-HP5971A
PURGE VOLUME	: 20 mL	TIME ANALYZED	2:01

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	3.3 UG/L	
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	98
1,2-Dichloroethane-d4	10 UG/L	64 - 130	114
4-Bromofluorobenzene	10 UG/L	72 - 137	109
Dibromofluoromethane	10 UG/L	56 - 153	125

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : BV46 PREP BLANK ID : BVBLK46 LCS ID : BVLCS46

PDP Analytical Services
1680 Lake Front Circle, Suite B, The Woodlands, TX 77380

LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L225004
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6822.004
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/3/01	DATE RECEIVED :	5/7/01
SAMPLE MATRIX :	WATER	PRINTED ON :	5/23/2001 8:46

ANALYST	RAO	CONTAINER ID	: A
DATE ANALYZED	5/15/01	DILUTION	: 1
INSTRUMENT FILE	B1814.D	INSTRUMENT ID	: B-HP5971A
PURGE VOLUME	: 20 mL	TIME ANALYZED	2:34

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
cis-1,2-Dichloroethene	1.0	UG/L	ND	UG/L	
trans-1,2-Dichloroethene	1.0	UG/L	ND	UG/L	
Trichloroethene	1.0	UG/L	2.6	UG/L	
Vinyl chloride	1.0	UG/L	ND	UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	93
1,2-Dichloroethane-d4	10 UG/L	64 - 130	105
4-Bromofluorobenzene	10 UG/L	72 - 137	101
Dibromofluoromethane	10 UG/L	56 - 153	121

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : BV46 PREP BLANK ID : BVBLK46 LCS ID : BVLCS46

PDP Analytical Services
1680 Lake Front Circle, Suite B, The Woodlands, TX 77380

LABORATORY REPORT
VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L225005
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6822.005
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/3/01	DATE RECEIVED :	5/7/01
SAMPLE MATRIX :	WATER	PRINTED ON :	5/23/2001 8:46

ANALYST	ESP	CONTAINER ID	C
DATE ANALYZED	5/16/01	DILUTION	200
INSTRUMENT FILE	G3459.D	INSTRUMENT ID	G-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	16:56

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	200 UG/L	ND UG/L	
trans-1,2-Dichloroethene	200 UG/L	ND UG/L	
Trichloroethene	200 UG/L	160000 UG/L	E
Vinyl chloride	200 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	2000 UG/L	68 - 124	108
1,2-Dichloroethane-d4	2000 UG/L	64 - 130	110
4-Bromofluorobenzene	2000 UG/L	72 - 137	98
Dibromofluoromethane	2000 UG/L	56 - 153	99

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV15 PREP BLANK ID : GVBLK15 LCS ID : GVLCS15
LCSD ID : GVLCS15D

PDP Analytical Services
1680 Lake Front Circle, Suite B, The Woodlands, TX 77380

LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME	: JACOBS ENGINEERING	CLIENT SAMPLE ID	: AF-L225005DL1
PROJECT NAME	: AIR FORCE PLANT 4	LAB SAMPLE ID	: 6822.005DL1
PROJECT NUMBER	: 05-Z026-01	METHOD REFERENCE	: SW846-8260B
DATE SAMPLED	: 5/3/01	DATE RECEIVED	: 5/7/01
SAMPLE MATRIX	: WATER	PRINTED ON	: 5/23/2001 8:46

ANALYST	ESP	CONTAINER ID	: B
DATE ANALYZED	5/21/01	DILUTION	: 20000
INSTRUMENT FILE	G3506.D	INSTRUMENT ID	: G-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	: 20:33

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
cis-1,2-Dichloroethene	20000	UG/L	ND	UG/L	
trans-1,2-Dichloroethene	20000	UG/L	ND	UG/L	
Trichloroethene	20000	UG/L	920000	UG/L	
Vinyl chloride	20000	UG/L	ND	UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED		QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	200000	UG/L	68 - 124	102
1,2-Dichloroethane-d4	200000	UG/L	64 - 130	108
4-Bromofluorobenzene	200000	UG/L	72 - 137	94
Dibromofluoromethane	200000	UG/L	56 - 153	95

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV17 PREP BLANK ID : GVBLK17 LCS ID : GVLCS17

PDP Analytical Services

1680 Lake Front Circle, Suite B, The Woodlands, TX 77380

LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L225007
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6822.007
PROJECT NUMBER :	05-Z026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/2/01	DATE RECEIVED :	5/7/01
SAMPLE MATRIX :	WATER	PRINTED ON :	5/23/2001 8:46

ANALYST	ESP	CONTAINER ID	: A
DATE ANALYZED	5/18/01	DILUTION	: 1
INSTRUMENT FILE	G3476.D	INSTRUMENT ID	: G-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	12:45

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	3.1 UG/L	
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	100
1,2-Dichloroethane-d4	10 UG/L	64 - 130	97
4-Bromofluorobenzene	10 UG/L	72 - 137	91
Dibromofluoromethane	10 UG/L	56 - 153	93

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV16 PREP BLANK ID : GVBLK16 LCS ID : GVLCS16

601 · 63

PDP Analytical Services

1680 Lake Front Circle, Suite B, The Woodlands, TX 77380

LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L225201
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6822.008
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/4/01	DATE RECEIVED :	5/7/01
SAMPLE MATRIX :	WATER	PRINTED ON :	5/23/2001 8:46

ANALYST	ESP	CONTAINER ID	C
DATE ANALYZED	5/18/01	DILUTION	1
INSTRUMENT FILE	G3477.D	INSTRUMENT ID	G-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	13:24

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
cis-1,2-Dichloroethene	1.0	UG/L	ND	UG/L	
trans-1,2-Dichloroethene	1.0	UG/L	ND	UG/L	
Trichloroethene	1.0	UG/L	3.3	UG/L	
Vinyl chloride	1.0	UG/L	ND	UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	135
1,2-Dichloroethane-d4	10 UG/L	64 - 130	129
4-Bromofluorobenzene	10 UG/L	72 - 137	120
Dibromofluoromethane	10 UG/L	56 - 153	124

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV16 PREP BLANK ID : GVBLK16 LCS ID : GVLCS16

0000079

PDP Analytical Services
1680 Lake Front Circle, Suite B, The Woodlands, TX 77380

LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L225202
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6822.009
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/4/01	DATE RECEIVED :	5/7/01
SAMPLE MATRIX :	WATER	PRINTED ON :	5/23/2001 8:46

ANALYST	ESP	CONTAINER ID	C
DATE ANALYZED	5/18/01	DILUTION	1
INSTRUMENT FILE	G3478.D	INSTRUMENT ID	G-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	14:03

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	2.1 UG/L	
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	108
1,2-Dichloroethane-d4	10 UG/L	64 - 130	106
4-Bromofluorobenzene	10 UG/L	72 - 137	100
Dibromofluoromethane	10 UG/L	56 - 153	101

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV16 PREP BLANK ID : GVBLK16 LCS ID : GVLCS16

PDP Analytical Services
1680 Lake Front Circle, Suite B, The Woodlands, TX 77380

LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L225401
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6822.010
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/4/01	DATE RECEIVED :	5/7/01
SAMPLE MATRIX :	WATER	PRINTED ON :	5/23/2001 8:46

ANALYST	ESP	CONTAINER ID	C
DATE ANALYZED	5/18/01	DILUTION	1
INSTRUMENT FILE	G3479.D	INSTRUMENT ID	G-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	14:42

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	0.88 UG/L	J
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	100
1,2-Dichloroethane-d4	10 UG/L	64 - 130	102
4-Bromofluorobenzene	10 UG/L	72 - 137	92
Dibromofluoromethane	10 UG/L	56 - 153	96

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV16 PREP BLANK ID : GVBLK16 LCS ID : GVLCS16

PDP Analytical Services
1680 Lake Front Circle, Suite B, The Woodlands, TX 77380

LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L225402
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6822.011
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/4/01	DATE RECEIVED :	5/7/01
SAMPLE MATRIX :	WATER	PRINTED ON :	5/23/2001 8:46

ANALYST	ESP	CONTAINER ID	B
DATE ANALYZED	5/18/01	DILUTION	1
INSTRUMENT FILE	G3480.D	INSTRUMENT ID	G-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	15:21

PARAMETER	QUANTITATION LIMIT	RESULTS		QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	ND	UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND	UG/L	
Trichloroethene	1.0 UG/L	4.3	UG/L	
Vinyl chloride	1.0 UG/L	ND	UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	108
1,2-Dichloroethane-d4	10 UG/L	64 - 130	106
4-Bromofluorobenzene	10 UG/L	72 - 137	97
Dibromofluoromethane	10 UG/L	56 - 153	100

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV16 PREP BLANK ID : GVBLK16 LCS ID : GVLCS16

PDP Analytical Services
1680 Lake Front Circle, Suite B, The Woodlands, TX 77380

LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L225403
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6822.012
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/3/01	DATE RECEIVED :	5/7/01
SAMPLE MATRIX :	WATER	PRINTED ON :	5/23/2001 8:46

ANALYST	ESP	CONTAINER ID	C
DATE ANALYZED	5/18/01	DILUTION	5
INSTRUMENT FILE	G3481.D	INSTRUMENT ID	G-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	16:00

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
cis-1,2-Dichloroethene	5.0	UG/L	38	UG/L	
trans-1,2-Dichloroethene	5.0	UG/L	4.6	UG/L	J
Trichloroethene	5.0	UG/L	75	UG/L	
Vinyl chloride	5.0	UG/L	ND	UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	50 UG/L	68 - 124	100
1,2-Dichloroethane-d4	50 UG/L	64 - 130	107
4-Bromofluorobenzene	50 UG/L	72 - 137	92
Dibromofluoromethane	50 UG/L	56 - 153	101

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV16 PREP BLANK ID : GVBLK16 LCS ID : GVLCS16

PDP Analytical Services
1680 Lake Front Circle, Suite B, The Woodlands, TX 77380

LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L225501
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6822.014
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/3/01	DATE RECEIVED :	5/7/01
SAMPLE MATRIX :	WATER	PRINTED ON :	5/23/2001 8:46

ANALYST	ESP	CONTAINER ID	B
DATE ANALYZED	5/18/01	DILUTION	1
INSTRUMENT FILE	G3482.D	INSTRUMENT ID	G-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	16:39

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	1.3 UG/L	
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	104
1,2-Dichloroethane-d4	10 UG/L	64 - 130	103
4-Bromofluorobenzene	10 UG/L	72 - 137	97
Dibromofluoromethane	10 UG/L	56 - 153	98

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV16 PREP BLANK ID : GVBLK16 LCS ID : GVLCS16

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PDP Analytical Services

1680 Lake Front Circle, Suite B, The Woodlands, TX 77380

LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L225502
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6822.015
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/3/01	DATE RECEIVED :	5/7/01
SAMPLE MATRIX :	WATER	PRINTED ON :	5/23/2001 8:46

ANALYST	: ESP	CONTAINER ID	C
DATE ANALYZED	5/18/01	DILUTION	1
INSTRUMENT FILE	G3483.D	INSTRUMENT ID	G-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	: 17:18

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
cis-1,2-Dichloroethene	1.0	UG/L	ND	UG/L	
trans-1,2-Dichloroethene	1.0	UG/L	ND	UG/L	
Trichloroethene	1.0	UG/L	1.2	UG/L	
Vinyl chloride	1.0	UG/L	ND	UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	103
1,2-Dichloroethane-d4	10 UG/L	64 - 130	105
4-Bromofluorobenzene	10 UG/L	72 - 137	96
Dibromofluoromethane	10 UG/L	56 - 153	99

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV16 PREP BLANK ID : GVBLK16 LCS ID : GVLCS16

0000122

PDP Analytical Services
1680 Lake Front Circle, Suite B, The Woodlands, TX 77380

LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L225503
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6822.016
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/4/01	DATE RECEIVED :	5/7/01
SAMPLE MATRIX :	WATER	PRINTED ON :	5/23/2001 8:46

ANALYST	ESP	CONTAINER ID	B
DATE ANALYZED	5/16/01	DILUTION	: 200
INSTRUMENT FILE	. G3468.D	INSTRUMENT ID	: G-HP5973
PURGE VOLUME	: 20 mL	TIME ANALYZED	22:46

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	200 UG/L	220 UG/L	
trans-1,2-Dichloroethene	200 UG/L	ND UG/L	
Trichloroethene	200 UG/L	6000 UG/L	
Vinyl chloride	200 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	2000 UG/L	68 - 124	100
1,2-Dichloroethane-d4	2000 UG/L	64 - 130	110
4-Bromofluorobenzene	2000 UG/L	72 - 137	96
Dibromofluoromethane	2000 UG/L	56 - 153	98

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV15 PREP BLANK ID : GVBLK15 LCS ID : GVLCS15

LCSD ID : GVLCS15D

PDP
Analytical Services

1680 Lake Front Circle, Suite B
The Woodlands, Texas 77380
Phone (281) 363-2233
Fax (281) 298-5784
e-mail pdp@pdpanalytical com

May 24, 2001

Mr. Eric Aamodt
Jacobs Engineering Group
1527 Cole Blvd , Ste 100
Golden, CO 80401

Episode 6824
Project ID Air Force Plant 4

Dear Mr Aamodt

Enclosed are the analytical results for the samples received in our laboratory on May 8th, 2001 The samples were analyzed for the parameters indicated on the Chain-of-Custody (COC)

Please be advised that unused portions of your samples, sample extracts and digestates will be stored for 30 days from the date of this report Unless prior arrangements were made, at the end of this period your samples will either be disposed of, or returned to you if your samples were determined to be hazardous

Should you have any questions or need assistance with this report, please feel free to call me, at (281) 363-2233.

Sincerely,

Rick Schrynemeeckers
Vice President of Operations

Enclosures

cc Episode File – 6824

PDP ANALYTICAL SERVICES 1680 Lake Front Circle, Suite B, The Woodlands, TX 77380

SAMPLE LOG-IN CHECKLIST/DISCREPANCY REPORT

FID. SLCDR01 96

EPISODE #: 6824 DATE/ REC'D: 5/8/01 9:30 TIME

TEMP & ID: 1) 2°c # cooler 1

CLIENT NAME: Jacobs Eng.

2)____ #____

PROJECT NAME: Air Force Plant 4

3)____ #____

PROJECT NUMBER: 05202601

4)____ #____

37 AQUEOUS, # — SOIL SAMPLES

5)____ #____

COURIER/AIRBILL # Fed 820798651959

6)____ #____

SAMPLE CONTAINER SEALS: present (absent) intact broken

COOLER CUSTODY SEALS: (present) absent (intact) broken NAME & DATE: D.B. 5/7/01

HOW MANY AND WHERE 1 on back

	YES	NO
Were samples screened for radioactivity?	✓	
Chain-of-custody present?	✓	
Custody documents: Sealed in a plastic bag?	✓	
Signed and dated by field personnel	✓	
Filled out properly in indelable ink?	✓	
Signed and dated by log-in personnel?	✓	
Container Condition. Each containers sealed in a separate plastic bag?	✓	
Labels complete (ID, date, time, signature, preservative, etc)?	✓	
Labels agree with chain-of-custody?	✓	
Received without leakage or breakage? If no, list :	✓	
Correct quantity indicated on chain-of-custody?	✓	
Sample Integrity. Correct containers used for the test indicated? If no, list	✓	
Correct preservatives added to the samples? If no, list:	✓	
Sufficient sample amount sent for the tests indicated? If no, list	✓	
VOA vials filled completely? If no, list:	✓	
Aqueous volatiles samples preserved? If no, list:	✓	

Descrepancy Report.

Discepancies to be discussed with the client?

Project Manager's recommendations?

Who was notified? By whom? Date:

Client's comments:

Corrective actions carried out?

COMMENTS:

000012

For those short holding time and fast turn-around parameters, has a Rush Notification sheet been issued to the lab?

LOG IN BY Rachael R Mallow DATE 5/8/01

601 73

JE JACOBS ENGINEERING GROUP INC.
1670 BROADWAY, SUITE 3200, DENVER, COLORADO 80202
TELEPHONE (303) 830-6933 FAX (303) 830-6911

AF-L2251

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY INSTRUCTIONS ARE ON THE BACK

PROJECT NAME. AIR FORCE PLANT 4 (DO 26)	LABORATORY NAME & ADDRESS. PDP ANALYTICAL SERVICES
PROJECT NUMBER. 05Z02601	1680 Lake Front Circle Suite B
WBS CODE 320206	SUBCONTRACT / D.O. No. The Woodlands TX 77380-

CONTROL NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
										6824
AF-L225101	5/1/01	11:30	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		.001
AF-L225102	5/1/01	12:05	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		.002
AF-L225103	5/1/01	10:55	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		.003
								BN 5/7/01		

COMMENTS

COLLECTED & RELEASED BY D. Snyder	DATE 5/7/01	TIME 17:00	TURNAROUND TIME	
RECEIVED BY R. Brown	DATE 5/8/01	TIME 10:00	RELINQUISHED BY	DATE / / TIME
RECORD RETURNED BY R. Brown	DATE 5/8/01	TIME 10:00		
			SHIPPING NUMBER	

DISTRIBUTION WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

The chain-of-custody record provides formal documentation of the possession of samples from the time of collection until received at the laboratory. Internal custody procedures must be used to document possession of the samples while they are at the laboratory.

To fill out this form, specify the project name, project number, and appropriate WBS code in the box at the upper left-hand corner of the form. In the box to the immediate right, indicate the proper shipping address of the laboratory that is to perform the analyses. Enter the shipping number (e.g , FedEx airbill) in the space at the bottom of the form.

After the form is completed, the copies are distributed as follows:

White:	With sample(s) to lab; return to Jacobs project file upon receipt and signature.
Canary:	With sample(s) to lab; lab's receipt
Pink:	To Jacobs Data Management
Goldenrod:	Retain in field

---

1) **CONTROL NUMBER**
   Enter the control number of the sample
2) **COLLECTION**
   Enter the date (mo/day/yr) and the time (military) of sample collection
3) **SAMPLER'S INITIALS**
   Enter the initials of the person(s) who collected the sample.
4) **NUMBER OF CONTAINERS**
   Enter the number of containers that are grouped together as one sample.
5) **CONTAINER SIZE AND TYPE**
   Enter the volume and type of the container(s) (e g "40 mL VOA", "250 mL Steel Sleeve")
6) **PRESERVATIVE**
   Enter the preservative used (if the analyses requested does not require preservative, write "None") All samples are shipped at 4 degrees Celsius.
7) **MATRIX CODE**
   Enter the matrix code for the matrix sampled:

WG	Groundwater	WS	Surface water
WW	Waste water	WO	Ocean water
SE	Sediment	SL	Sludge
SO	Soil	WL	Leachate

8) **TYPE OF ANALYSIS**
   Enter the analytical method(s) requested These should be consistent with the workplan/sampling analysis plan for this task (e g , "EPA Method 8240", "VOA CLP").
9) **QC**
   The samples for QC analysis performed by the laboratory must be identified Enter the code for the type of QC requested
   - S single spiked sample
   - M matrix spike/matrix spike duplicate
   - D unspiked duplicate
10) **CONDITION ON RECEIPT**
    This section is filled out by the lab to record the condition of each sample upon its receipt
11) **COMMENTS**
    This section is used for any additional information that might be useful to the laboratory (e g , special handling requirements such as accelerated turnaround times, suspected contaminants, additional compounds to be analyzed, high level contaminant, etc)
12) **COLLECTED AND RELEASED BY**
    The person(s) who collected the samples must sign in this area Date and time are as in #2
13) **CUSTODY BLOCK**
    Whenever custody of samples is transferred, the person receiving the samples must sign here At that same time, the person releasing the samples must also sign Date and time are as in #2

601 75

JACOBS ENGINEERING GROUP INC.
1670 BROADWAY, SUITE 3200, DENVER, COLORADO 80202
TELEPHONE (303) 830-6933 FAX (303) 830-6911

AF-L2253

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: AIR FORCE PLANT 4 (DO 26)
PROJECT NUMBER: 05Z02601
WBS CODE: 320206
SUBCONTRACT / D O. No:

LABORATORY NAME & ADDRESS: ~~PDP ANALYTICAL SERVICES~~
1680 Lake Front Circle Suite B
The Woodlands TX 77380-

CONTROL NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
AF-L225301	5/7/01	1425	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		004
AF-L225302	5/7/01	1445	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		.005
AF-L225303	5/7/01	1500	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		.006
AF-L225304	5/6/01	1130	TB BN	6	40 mL VOA	4C HCl p	W	SW8260B short list	M	.007
AF-L225305	5/6/01	1230	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B elevated DLs short list		.008
AF-L225306	5/6/01	1230	TB BN	1	1 L Plastic	HNO3 pH	W	SW6010B (Cr-Only)		.009
								BN		
								5/7/01		

COMMENTS:

	DATE	TIME		DATE	TIME
COLLECTED & RELEASED BY: D. Burgess-Lady	5/7/01	17:00	TURNAROUND TIME		
RECEIVED BY: R. Brown	5/8/01	10:00	RELINQUISHED BY	/ /	
RECORD RETURNED BY: R.	/ /	:			
			SHIPPING NUMBER		

DISTRIBUTION WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

The chain-of-custody record provides formal documentation of the possession of samples from the time of collection until received at the laboratory. Internal custody procedures must be used to document possession of the samples while they are at the laboratory.

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After the form is completed, the copies are distributed as follows·

White:	With sample(s) to lab, return to Jacobs project file upon receipt and signature.
Canary:	With sample(s) to lab; lab's receipt
Pink:	To Jacobs Data Management
Goldenrod:	Retain in field

1) **CONTROL NUMBER**
   Enter the control number of the sample
2) **COLLECTION**
   Enter the date (mo/day/yr) and the time (military) of sample collection
3) **SAMPLER'S INITIALS**
   Enter the initials of the person(s) who collected the sample
4) **NUMBER OF CONTAINERS**
   Enter the number of containers that are grouped together as one sample.
5) **CONTAINER SIZE AND TYPE**
   Enter the volume and type of the container(s) (e g "40 mL VOA", "250 mL Steel Sleeve").
6) **PRESERVATIVE**
   Enter the preservative used (if the analyses requested does not require preservative, write "None") All samples are shipped at 4 degrees Celsius
7) **MATRIX CODE**
   Enter the matrix code for the matrix sampled

WG	Groundwater	WS	Surface water
WW	Waste water	WO	Ocean water
SE	Sediment	SL	Sludge
SO	Soil	WL	Leachate

8) **TYPE OF ANALYSIS**
   Enter the analytical method(s) requested These should be consistent with the workplan/sampling analysis plan for this task (e g , "EPA Method 8240", "VOA CLP")
9) **QC**
   The samples for QC analysis performed by the laboratory must be identified. Enter the code for the type of QC requested:
   - S single spiked sample
   - M matrix spike/matrix spike duplicate
   - D unspiked duplicate
10) **CONDITION ON RECEIPT**
    This section is filled out by the lab to record the condition of each sample upon its receipt
11) **COMMENTS**
    This section is used for any additional information that might be useful to the laboratory (e g , special handling requirements such as accelerated turnaround times, suspected contaminants, additional compounds to be analyzed, high level contaminant, etc)
12) **COLLECTED AND RELEASED BY**
    The person(s) who collected the samples must sign in this area Date and time are as in #2
13) **CUSTODY BLOCK**
    Whenever custody of samples is transferred, the person receiving the samples must sign here At that same time, the person releasing the samples must also sign. Date and time are as in #2

601 77

JACOBS ENGINEERING GROUP INC.
1670 BROADWAY, SUITE 3200, DENVER, COLORADO 80202
TELEPHONE (303) 830-6933 FAX (303) 830-6911

CHAIN OF CUSTODY RECORD

AF-L2256

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: AIR FORCE PLANT 4 (DO 26)	LABORATORY NAME & ADDRESS: PDP ANALYTICAL SERVICES
PROJECT NUMBER: 05202601	1680 Lake Front Circle Suite B
WBS CODE 320206 / SUBCONTRACT / D.O. No	The Woodlands TX 77380-

CONTROL NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
AF-L225601	5/6/01	16:50	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B elevated DLs short list		.010
AF-L225602	5/6/01	16:50	TB BN	1	1 L Plastic	HNO3 pH	W	SW6010B (Cr-Only)		.011
AF-L225603	5/6/01	10:50	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B elevated DLs short list		.012
AF-L225604	5/6/01	10:50	TB BN	1	1 L Plastic	HNO3 pH	W	SW6010B (Cr-Only)		.013
AF-L225605	5/6/01	10:55	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B elevated DLs short list		.014
AF-L225606	5/6/01	10:55	TB BN	1	1 L Plastic	HNO3 pH	W	SW6010B (Cr-Only)		.015
AF-L225607	5/6/01	09:45	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B elevated DLs short list		.016
AF-L225608	5/6/01	09:45	TB BN	1	1 L Plastic	HNO3 pH	W	SW6010B (Cr-Only)		.017
								BN 5/7/01		

COMMENTS:

COLLECTED & RELEASED BY D. Bryan Kelly	DATE 5/7/01	TIME 17:00	TURNAROUND TIME		
RECEIVED BY R. Brown	DATE 5/8/01	TIME 10:00	RELINQUISHED BY	DATE / /	TIME :
RECORD RETURNED BY	DATE / /	TIME :			
			SHIPPING NUMBER.		

3000007

DISTRIBUTION WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

The chain-of-custody record provides formal documentation of the possession of samples from the time of collection until received at the laboratory. Internal custody procedures must be used to document possession of the samples while they are at the laboratory.

To fill out this form, specify the project name, project number, and appropriate WBS code in the box at the upper left-hand corner of the form. In the box to the immediate right, indicate the proper shipping address of the laboratory that is to perform the analyses. Enter the shipping number (e g , FedEx airbill) in the space at the bottom of the form.

After the form is completed, the copies are distributed as follows:

White:	With sample(s) to lab; return to Jacobs project file upon receipt and signature
Canary:	With sample(s) to lab; lab's receipt
Pink:	To Jacobs Data Management
Goldenrod:	Retain in field

1) **CONTROL NUMBER**
Enter the control number of the sample
2) **COLLECTION**
Enter the date (mo/day/yr) and the time (military) of sample collection
3) **SAMPLER'S INITIALS**
Enter the initials of the person(s) who collected the sample.
4) **NUMBER OF CONTAINERS**
Enter the number of containers that are grouped together as one sample.
5) **CONTAINER SIZE AND TYPE**
Enter the volume and type of the container(s) (e.g "40 mL VOA", "250 mL Steel Sleeve")
6) **PRESERVATIVE**
Enter the preservative used (if the analyses requested does not require preservative, write "None") All samples are shipped at 4 degrees Celsius.
7) **MATRIX CODE**
Enter the matrix code for the matrix sampled

WG	Groundwater	WS	Surface water
WW	Waste water	WO	Ocean water
SE	Sediment	SL	Sludge
SO	Soil	WL	Leachate

8) **TYPE OF ANALYSIS**
Enter the analytical method(s) requested. These should be consistent with the workplan/sampling analysis plan for this task (e g , "EPA Method 8240", "VOA CLP").
9) **QC**
The samples for QC analysis performed by the laboratory must be identified Enter the code for the type of QC requested.
   - S single spiked sample
   - M matrix spike/matrix spike duplicate
   - D unspiked duplicate

10) **CONDITION ON RECEIPT**
This section is filled out by the lab to record the condition of each sample upon its receipt
11) **COMMENTS**
This section is used for any additional information that might be useful to the laboratory (e g , special handling requirements such as accelerated turnaround times, suspected contaminants, additional compounds to be analyzed, high level contaminant, etc)
12) **COLLECTED AND RELEASED BY**
The person(s) who collected the samples must sign in this area Date and time are as in #2
13) **CUSTODY BLOCK**
Whenever custody of samples is transferred, the person receiving the samples must sign here At that same time, the person releasing the samples must also sign. Date and time are as in #2

601 79

JACOBS ENGINEERING GROUP INC.
1670 BROADWAY, SUITE 3200, DENVER, COLORADO 80202
TELEPHONE (303) 830-6933 FAX (303) 830-6911

CHAIN OF CUSTODY RECORD

AF-L2260

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY INSTRUCTIONS ARE ON THE BACK

PROJECT NAME:	AIR FORCE PLANT 4 (DO 26)	LABORATORY NAME & ADDRESS:	PDP ANALYTICAL SERVICES
PROJECT NUMBER	05Z02601		1680 Lake Front Circle Suite B
WBS CODE	320206	SUBCONTRACT / D.O. No.	The Woodlands TX 77380-

CONTROL NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
AF-L226001	5/1/01	1545	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		.018
AF-L226002	5/1/01	1600	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		.019
AF-L226003	5/1/01	1545	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B elevated DLs short list		.020
AF-L226004	5/1/01	1545	TB BN	2	1 L Plastic	HNO3 pH	W	SW6010B (Cr-Only)	M	.021
AF-L 226005	5/1/01	0700	TB BN	2	40mlVOA	HCL	WQ	SW8260B short list		.022
								BN 5/7/01		

COMMENTS:

COLLECTED & RELEASED BY		DATE 5/7/01	TIME 17:00	TURNAROUND TIME	
RECEIVED BY R. Brown		DATE 5/8/01	TIME 10:00	RELINQUISHED BY	DATE / / TIME
RECORD RETURNED BY		DATE / /	TIME	SHIPPING NUMBER: 820798651959	

DISTRIBUTION WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

The chain-of-custody record provides formal documentation of the possession of samples from the time of collection until received at the laboratory. Internal custody procedures must be used to document possession of the samples while they are at the laboratory.

To fill out this form, specify the project name, project number, and appropriate WBS code in the box at the upper left-hand corner of the form. In the box to the immediate right, indicate the proper shipping address of the laboratory that is to perform the analyses Enter the shipping number (e.g , FedEx airbill) in the space at the bottom of the form.

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Canary:	With sample(s) to lab; lab's receipt
Pink:	To Jacobs Data Management
Goldenrod:	Retain in field

1) **CONTROL NUMBER**
Enter the control number of the sample
2) **COLLECTION**
Enter the date (mo/day/yr) and the time (military) of sample collection
3) **SAMPLER'S INITIALS**
Enter the initials of the person(s) who collected the sample.
4) **NUMBER OF CONTAINERS**
Enter the number of containers that are grouped together as one sample.
5) **CONTAINER SIZE AND TYPE**
Enter the volume and type of the container(s) (e g "40 mL VOA", "250 mL Steel Sleeve").
6) **PRESERVATIVE**
Enter the preservative used (if the analyses requested does not require preservative, write "None"). All samples are shipped at 4 degrees Celsius.
7) **MATRIX CODE**
Enter the matrix code for the matrix sampled.

WG	Groundwater	WS	Surface water
WW	Waste water	WO	Ocean water
SE	Sediment	SL	Sludge
SO	Soil	WL	Leachate

8) **TYPE OF ANALYSIS**
Enter the analytical method(s) requested These should be consistent with the workplan/sampling analysis plan for this task (e g , "EPA Method 8240", "VOA CLP")
9) **QC**
The samples for QC analysis performed by the laboratory must be identified Enter the code for the type of QC requested
   - S single spiked sample
   - M matrix spike/matrix spike duplicate
   - D unspiked duplicate

10) **CONDITION ON RECEIPT**
This section is filled out by the lab to record the condition of each sample upon its receipt
11) **COMMENTS**
This section is used for any additional information that might be useful to the laboratory (e g , special handling requirements such as accelerated turnaround times, suspected contaminants, additional compounds to be analyzed, high level contaminant, etc).
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601 81

JACOBS ENGINEERING GROUP INC.
1670 BROADWAY SUITE 3200, DENVER, COLORADO 80202
TELEPHONE (303) 830-6933 FAX (303) 830-6911

CHAIN OF CUSTODY RECORD

AF-L2262

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: AIR FORCE PLANT 4 (DO 26)			LABORATORY NAME & ADDRESS: PDP ANALYTICAL SERVICES
PROJECT NUMBER: 05Z02601			1680 Lake Front Circle Suite B
WBS CODE: 320206	SUBCONTRACT / D O. No.		The Woodlands TX 77380-

CONTROL NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
AF-L226201	5/5/01	0800	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		.023
AF-L226202	5/5/01	0840	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		.024
AF-L226203	5/5/01	0840	TB BN	1	1 L Plastic	HNO3 pH	W	SW6010B (Cr-Only)		.025
AF-L226204	5/6/01	0810	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B elevated DLs short list		.026
AF-L226205	5/6/01	0810	TB BN	1	1 L Plastic	HNO3 pH	W	SW6010B (Cr-Only)		.027
AF-L226206	5/6/01	0815	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B elevated DLs short list		.028
AF-L226207	5/6/01	0815	TB BN	1	1 L Plastic	HNO3 pH	W	SW6010B (Cr-Only)		.029
								BN 5/7/01		

COMMENTS.

COLLECTED & RELEASED BY	DATE 5/7/01	TIME 17:00	TURNAROUND TIME		
RECEIVED BY R. Brown	DATE 5/8/01	TIME 10:00	RELINQUISHED BY	DATE / /	TIME
RECORD RETURNED BY	DATE / /	TIME			
			SHIPPING NUMBER		

DISTRIBUTION WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

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Canary:	With sample(s) to lab, lab's receipt
Pink:	To Jacobs Data Management
Goldenrod:	Retain in field

1) **CONTROL NUMBER**
   Enter the control number of the sample
2) **COLLECTION**
   Enter the date (mo/day/yr) and the time (military) of sample collection
3) **SAMPLER'S INITIALS**
   Enter the initials of the person(s) who collected the sample.
4) **NUMBER OF CONTAINERS**
   Enter the number of containers that are grouped together as one sample
5) **CONTAINER SIZE AND TYPE**
   Enter the volume and type of the container(s) (e g "40 mL VOA", "250 mL Steel Sleeve").
6) **PRESERVATIVE**
   Enter the preservative used (if the analyses requested does not require preservative, write "None") All samples are shipped at 4 degrees Celsius.
7) **MATRIX CODE**
   Enter the matrix code for the matrix sampled:

WG	Groundwater	WS	Surface water
WW	Waste water	WO	Ocean water
SE	Sediment	SL	Sludge
SO	Soil	WL	Leachate

8) **TYPE OF ANALYSIS**
   Enter the analytical method(s) requested These should be consistent with the workplan/sampling analysis plan for this task (e g , "EPA Method 8240", "VOA CLP")
9) **QC**
   The samples for QC analysis performed by the laboratory must be identified. Enter the code for the type of QC requested
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601 83

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1670 BROADWAY, SUITE 3200, DENVER, COLORADO 80202
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CHAIN OF CUSTODY RECORD

AF-L2263

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY INSTRUCTIONS ARE ON THE BACK

PROJECT NAME:	AIR FORCE PLANT 4 (DO 26)	LABORATORY NAME & ADDRESS.	PDP ANALYTICAL SERVICES
PROJECT NUMBER:	05Z02601		1680 Lake Front Circle Suite B
WBS CODE	320206	SUBCONTRACT / D.O No.	The Woodlands TX 77380-

CONTROL NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
AF-L226301	5/6/01	1430	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		.030
AF-L226302	5/5/01	1420	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		.031
AF-L226303	5/5/01	1400	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		.032
AF-L226304	5/5/01	1405	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		.033
								BN 5/7/01		

COMMENTS:

COLLECTED & RELEASED BY	D. Bryan Kelly	DATE	5/7/01	TIME	17:00	TURNAROUND TIME		
RECEIVED BY	R. Brown	DATE	5/8/01	TIME	10:00	RELINQUISHED BY	DATE	TIME
RECORD RETURNED BY		DATE	/ /	TIME	:			
						SHIPPING NUMBER:		

DISTRIBUTION WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

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1) **CONTROL NUMBER**
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Enter the number of containers that are grouped together as one sample
5) **CONTAINER SIZE AND TYPE**
Enter the volume and type of the container(s) (e g "40 mL VOA", "250 mL Steel Sleeve")
6) **PRESERVATIVE**
Enter the preservative used (if the analyses requested does not require preservative, write "None"). All samples are shipped at 4 degrees Celsius.
7) **MATRIX CODE**
Enter the matrix code for the matrix sampled·

WG	Groundwater	WS	Surface water
WW	Waste water	WO	Ocean water
SE	Sediment	SL	Sludge
SO	Soil	WL	Leachate

8) **TYPE OF ANALYSIS**
Enter the analytical method(s) requested These should be consistent with the workplan/sampling analysis plan for this task (e g , "EPA Method 8240", "VOA CLP").
9) **QC**
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601 85

JACOBS ENGINEERING GROUP INC.
1670 BROADWAY, SUITE 3200, DENVER, COLORADO 80202
TELEPHONE (303) 830-6933 FAX (303) 830-6911

CHAIN OF CUSTODY RECORD

AF-L2264

USE A BALLPOINT PEN. BLACK INK, AND PRESS FIRMLY INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: AIR FORCE PLANT 4 (DO 26)	LABORATORY NAME & ADDRESS PDP ANALYTICAL SERVICES
PROJECT NUMBER: 05Z02601	1680 Lake Front Circle Suite B
WBS CODE 320206 / SUBCONTRACT / D.O No.	The Woodlands TX 77380-

CONTROL NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
AF-L226401	5/7/01	1340	TB BN	6	40 mL VOA	4C HCl p	W	SW8260B short list	M	.034
AF-L226402	5/7/01	1405	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		.035
AF-L226403	5/4/01	1120	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		.036
AF-L226404	5/4/01	1200	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		.037

BN 5/7/01

COMMENTS:

COLLECTED & RELEASED BY	DATE 5/7/01	TIME 17:00	TURNAROUND TIME		
RECEIVED BY R. Brown	DATE 5/8/01	TIME 10:00	RELINQUISHED BY	DATE / /	TIME :
RECORD RETURNED BY	DATE / /	TIME :			
			SHIPPING NUMBER.		

DISTRIBUTION WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

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Pink:	To Jacobs Data Management
Goldenrod:	Retain in field

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1) **CONTROL NUMBER**
   Enter the control number of the sample
2) **COLLECTION**
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3) **SAMPLER'S INITIALS**
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5) **CONTAINER SIZE AND TYPE**
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6) **PRESERVATIVE**
   Enter the preservative used (if the analyses requested does not require preservative, write "None") All samples are shipped at 4 degrees Celsius
7) **MATRIX CODE**
   Enter the matrix code for the matrix sampled

WG	Groundwater	WS	Surface water
WW	Waste water	WO	Ocean water
SE	Sediment	SL	Sludge
SO	Soil	WL	Leachate

8) **TYPE OF ANALYSIS**
   Enter the analytical method(s) requested These should be consistent with the workplan/sampling analysis plan for this task (e g , "EPA Method 8240", "VOA CLP").
9) **QC**
   The samples for QC analysis performed by the laboratory must be identified Enter the code for the type of QC requested.
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1680 Lake Front Circle, Suite B, The Woodlands, TX 77380
PDP Analytical Services

LABORATORY REPORT

TOTAL METALS

CLIENT NAME	:	JACOBS ENGINEERING	CLIENT SAMPLE ID	:	AF-L225306
PROJECT NAME	:	AIR FORCE PLANT 4	LAB SAMPLE ID	:	6824.009
PROJECT NUMBER	:	05-K704-00	DATE RECEIVED	:	5/8/01
DATE SAMPLED	:	5/6/01	PRINTED ON	:	5/11/2001 11:25
SAMPLE MATRIX	:	WATER	% MOISTURE	:	

ANALYTE	METHOD	DATE PREPARED	DATE ANALYZED	DILU-TION	MDL	QUANTITATION LIMIT	RESULT	Q	ANA-LYST
Chromium, Total	SW846-6010B	5/10/01	5/10/01	1	0.0005	0.02 MG/L	ND MG/L		HT

QUALITY ASSURANCE/QUALITY CONTROL

QC BATCH IDs

ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID
Chromium, Total	ICPB2012				

1680 Lake Front Circle, Suite B, The Woodlands, TX 77380
PDP Analytical Services

LABORATORY REPORT

TOTAL METALS

CLIENT NAME	:	JACOBS ENGINEERING	CLIENT SAMPLE ID	:	AF-L225602
PROJECT NAME	:	AIR FORCE PLANT 4	LAB SAMPLE ID	:	6824.011
PROJECT NUMBER	:	05-K704-00	DATE RECEIVED	:	5/8/01
DATE SAMPLED	:	5/6/01	PRINTED ON	:	5/11/2001 11:25
SAMPLE MATRIX	:	WATER	% MOISTURE	:	

ANALYTE	METHOD	DATE PREPARED	DATE ANALYZED	DILU-TION	MDL	QUANTITATION LIMIT	RESULT	Q	ANA-LYST
Chromium, Total	SW846-6010B	5/10/01	5/10/01	1	0.0005	0.02 MG/L	ND MG/L		HT

QUALITY ASSURANCE/QUALITY CONTROL

QC BATCH IDs

ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID
Chromium, Total	ICPB2012				

1680 Lake Front Circle, Suite B, The Woodlands, TX 77380
PDP Analytical Services

LABORATORY REPORT

TOTAL METALS

CLIENT NAME	:	JACOBS ENGINEERING	CLIENT SAMPLE ID	:	AF-L225604
PROJECT NAME	:	AIR FORCE PLANT 4	LAB SAMPLE ID	:	6824.013
PROJECT NUMBER	:	05-K704-00	DATE RECEIVED	:	5/8/01
DATE SAMPLED	:	5/6/01	PRINTED ON	:	5/11/2001 11:25
SAMPLE MATRIX	:	WATER	% MOISTURE	:	

ANALYTE	METHOD	DATE PREPARED	DATE ANALYZED	DILUTION	MDL	QUANTITATION LIMIT	RESULT	Q	ANALYST
Chromium, Total	SW846-6010B	5/10/01	5/10/01	1	0.0005	0.02 MG/L	0.469 MG/L		HT

QUALITY ASSURANCE/QUALITY CONTROL

QC BATCH IDs

ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID
Chromium, Total	ICP82012				

601 90

1680 Lake Front Circle, Suite B, The Woodlands, TX 77380
PDP Analytical Services

LABORATORY REPORT

TOTAL METALS

CLIENT NAME	:	JACOBS ENGINEERING	CLIENT SAMPLE ID	:	AF-L225606
PROJECT NAME	:	AIR FORCE PLANT 4	LAB SAMPLE ID	:	6824.015
PROJECT NUMBER	:	05-K704-00	DATE RECEIVED	:	5/8/01
DATE SAMPLED	:	5/6/01	PRINTED ON	:	5/11/2001 11:25
SAMPLE MATRIX	:	WATER	% MOISTURE	:	

ANALYTE	METHOD	DATE PREPARED	DATE ANALYZED	DILU-TION	MDL	QUANTITATION LIMIT	RESULT	Q	ANA-LYST
Chromium, Total	SW846-6010B	5/10/01	5/10/01	1	0.0005	0.02 MG/L	0.471 MG/L		HT

QUALITY ASSURANCE/QUALITY CONTROL

QC BATCH IDs

ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID
Chromium, Total	ICPB2D12				

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LABORATORY REPORT

TOTAL METALS

CLIENT NAME	:	JACOBS ENGINEERING	CLIENT SAMPLE ID	:	AF-L225608
PROJECT NAME	:	AIR FORCE PLANT 4	LAB SAMPLE ID	:	6824.017
PROJECT NUMBER	:	05-K704-00	DATE RECEIVED	:	5/8/01
DATE SAMPLED	:	5/6/01	PRINTED ON	:	5/11/2001 11:25
SAMPLE MATRIX	:	WATER	% MOISTURE	:	

ANALYTE	METHOD	DATE PREPARED	DATE ANALYZED	DILUTION	MDL	QUANTITATION LIMIT	RESULT	Q	ANALYST
Chromium, Total	SW846-6010B	5/10/01	5/10/01	1	0.0005	0.02 MG/L	ND MG/L		HT

QUALITY ASSURANCE/QUALITY CONTROL

QC BATCH IDs

ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID
Chromium, Total	ICPB2012				

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LABORATORY REPORT

TOTAL METALS

CLIENT NAME	:	JACOBS ENGINEERING	CLIENT SAMPLE ID	:	AF-L226004
PROJECT NAME	:	AIR FORCE PLANT 4	LAB SAMPLE ID	:	6824.021
PROJECT NUMBER	:	05-K704-00	DATE RECEIVED	:	5/8/01
DATE SAMPLED	:	5/5/01	PRINTED ON	:	5/11/2001 11:25
SAMPLE MATRIX	:	WATER	% MOISTURE	:	

ANALYTE	METHOD	DATE PREPARED	DATE ANALYZED	DILU-TION	MDL	QUANTITATION LIMIT	RESULT	Q	ANA-LYST
Chromium, Total	SW846-6010B	5/10/01	5/10/01	1	0.0005	0.02 MG/L	ND MG/L		HT

QUALITY ASSURANCE/QUALITY CONTROL

QC BATCH IDs

ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID
Chromium, Total	ICPB2012				

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LABORATORY REPORT

TOTAL METALS

CLIENT NAME	:	JACOBS ENGINEERING	CLIENT SAMPLE ID	:	AF-L226203
PROJECT NAME	:	AIR FORCE PLANT 4	LAB SAMPLE ID	:	6824.025
PROJECT NUMBER	:	05-K704-00	DATE RECEIVED	:	5/8/01
DATE SAMPLED	:	5/5/01	PRINTED ON	:	5/11/2001 11:25
SAMPLE MATRIX	:	WATER	% MOISTURE	:	

ANALYTE	METHOD	DATE PREPARED	DATE ANALYZED	DILUTION	MDL	QUANTITATION LIMIT	RESULT	Q	ANALYST
Chromium, Total	SW846-6010B	5/10/01	5/10/01	1	0.0005	0.02 MG/L	ND MG/L		HT

QUALITY ASSURANCE/QUALITY CONTROL

QC BATCH IDs

ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID
Chromium, Total	ICPB2012				

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LABORATORY REPORT

TOTAL METALS

CLIENT NAME	:	JACOBS ENGINEERING	CLIENT SAMPLE ID	:	AF-L226205
PROJECT NAME	:	AIR FORCE PLANT 4	LAB SAMPLE ID	:	6824.027
PROJECT NUMBER	:	05-K704-00	DATE RECEIVED	:	5/8/01
DATE SAMPLED	:	5/6/01	PRINTED ON	:	5/11/2001 11:25
SAMPLE MATRIX	:	WATER	% MOISTURE	:	

ANALYTE	METHOD	DATE PREPARED	DATE ANALYZED	DILU-TION	MDL	QUANTITATION LIMIT	RESULT	Q	ANA-LYST
Chromium, Total	SW846-6010B	5/10/01	5/10/01	1	0.0005	0.02 MG/L	ND MG/L		HT

QUALITY ASSURANCE/QUALITY CONTROL

QC BATCH IDs

ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID
Chromium, Total	ICPB2012				

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LABORATORY REPORT

TOTAL METALS

CLIENT NAME	:	JACOBS ENGINEERING	CLIENT SAMPLE ID	:	AF-L226207
PROJECT NAME	:	AIR FORCE PLANT 4	LAB SAMPLE ID	:	6824.029
PROJECT NUMBER	:	05-K704-00	DATE RECEIVED	:	5/8/01
DATE SAMPLED	:	5/6/01	PRINTED ON	:	5/11/2001 11:25
SAMPLE MATRIX	:	WATER	% MOISTURE	:	

ANALYTE	METHOD	DATE PREPARED	DATE ANALYZED	DILU-TION	MDL	QUANTITATION LIMIT	RESULT	Q	ANA-LYST
Chromium, Total	SW846-6010B	5/10/01	5/10/01	1	0.0005	0.02 MG/L	ND MG/L		HT

QUALITY ASSURANCE/QUALITY CONTROL

QC BATCH IDs

ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID
Chromium, Total	ICPB2012				

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L225101
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6824.001
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/5/01	DATE RECEIVED :	5/8/01
SAMPLE MATRIX :	WATER	PRINTED ON :	5/23/2001 16:19

ANALYST	ESP	CONTAINER ID	: B
DATE ANALYZED	5/18/01 17 57	DILUTION	1
INSTRUMENT FILE	: G3484.D	INSTRUMENT ID	: G-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	: 17:57

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
cis-1,2-Dichloroethene	1.0	UG/L	1.2	UG/L	
trans-1,2-Dichloroethene	1.0	UG/L	ND	UG/L	
Trichloroethene	1.0	UG/L	2.6	UG/L	
Vinyl chloride	1.0	UG/L	ND	UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	104
1,2-Dichloroethane-d4	10 UG/L	64 - 130	104
4-Bromofluorobenzene	10 UG/L	72 - 137	96
Dibromofluoromethane	10 UG/L	56 - 153	98

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV16 PREP BLANK ID : GVBLK16 LCS ID : GVLCS16

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L225102
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6824.002
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/5/01	DATE RECEIVED :	5/8/01
SAMPLE MATRIX :	WATER	PRINTED ON :	5/23/2001 16:19

ANALYST	ESP	CONTAINER ID	: B
DATE ANALYZED	5/18/01	DILUTION	: 1
INSTRUMENT FILE	G3485.D	INSTRUMENT ID	: G-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	: 18:36

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
cis-1,2-Dichloroethene	1.0	UG/L	120	UG/L	E
trans-1,2-Dichloroethene	1.0	UG/L	ND	UG/L	
Trichloroethene	1.0	UG/L	ND	UG/L	
Vinyl chloride	1.0	UG/L	14	UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	102
1,2-Dichloroethane-d4	10 UG/L	64 - 130	107
4-Bromofluorobenzene	10 UG/L	72 - 137	96
Dibromofluoromethane	10 UG/L	56 - 153	99

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV16 PREP BLANK ID : GVBLK16 LCS ID : GVLCS16

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L225102DL1
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6824.002DL1
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/5/01	DATE RECEIVED :	5/8/01
SAMPLE MATRIX :	WATER	PRINTED ON :	5/23/2001 16:19

ANALYST	ESP	CONTAINER ID	C
DATE ANALYZED	5/22/01	DILUTION	5
INSTRUMENT FILE	G3535.D	INSTRUMENT ID	G-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	21:15

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	5.0 UG/L	120 UG/L	
trans-1,2-Dichloroethene	5.0 UG/L	ND UG/L	
Trichloroethene	5.0 UG/L	ND UG/L	
Vinyl chloride	5.0 UG/L	15 UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	50 UG/L	68 - 124	90
1,2-Dichloroethane-d4	50 UG/L	64 - 130	112
4-Bromofluorobenzene	50 UG/L	72 - 137	90
Dibromofluoromethane	50 UG/L	56 - 153	104

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV19 PREP BLANK ID : GVBLK19 LCS ID : GVLCS19

LCSD ID : GVLCS19D

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L225103
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6824.003
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/5/01	DATE RECEIVED :	5/8/01
SAMPLE MATRIX :	WATER	PRINTED ON :	5/23/2001 16:19

ANALYST	: ESP	CONTAINER ID	A
DATE ANALYZED	: 5/18/01	DILUTION	: 1
INSTRUMENT FILE	G3486.D	INSTRUMENT ID	G-HP5973
PURGE VOLUME	. 20 mL	TIME ANALYZED	19:15

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	ND UG/L	
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	102
1,2-Dichloroethane-d4	10 UG/L	64 - 130	107
4-Bromofluorobenzene	10 UG/L	72 - 137	93
Dibromofluoromethane	10 UG/L	56 - 153	99

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV16 PREP BLANK ID : GVBLK16 LCS ID : GVLCS16

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L225301
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6824.004
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/7/01	DATE RECEIVED :	5/8/01
SAMPLE MATRIX :	WATER	PRINTED ON :	5/23/2001 16:19

ANALYST	: ESP	CONTAINER ID	: A
DATE ANALYZED	: 5/18/01	DILUTION	: 1
INSTRUMENT FILE	: G3487.D	INSTRUMENT ID	: G-HP5973
PURGE VOLUME	: 20 mL	TIME ANALYZED	: 19:54

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	ND UG/L	
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	105
1,2-Dichloroethane-d4	10 UG/L	64 - 130	106
4-Bromofluorobenzene	10 UG/L	72 - 137	94
Dibromofluoromethane	10 UG/L	56 - 153	101

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV16 PREP BLANK ID : GVBLK16 LCS ID : GVLCS16

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME	: JACOBS ENGINEERING	CLIENT SAMPLE ID	: AF-L225302
PROJECT NAME	: AIR FORCE PLANT 4	LAB SAMPLE ID	: 6824.005
PROJECT NUMBER	: 05-2026-01	METHOD REFERENCE	: SW846-8260B
DATE SAMPLED	: 5/7/01	DATE RECEIVED	: 5/8/01
SAMPLE MATRIX	: WATER	PRINTED ON	: 5/23/2001 16:19

ANALYST	ESP	CONTAINER ID	: A
DATE ANALYZED	5/18/01	DILUTION	: 1
INSTRUMENT FILE	G3488.D	INSTRUMENT ID	G-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	20:33

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	ND UG/L	
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	104
1,2-Dichloroethane-d4	10 UG/L	64 - 130	104
4-Bromofluorobenzene	10 UG/L	72 - 137	96
Dibromofluoromethane	10 UG/L	56 - 153	98

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : Gv16 PREP BLANK ID : GVBLK16 LCS ID : GVLCS16

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME	: JACOBS ENGINEERING	CLIENT SAMPLE ID	:	AF-L225303	
PROJECT NAME	: AIR FORCE PLANT 4	LAB SAMPLE ID	:	6824.006	
PROJECT NUMBER	: 05-2026-01	METHOD REFERENCE	:	SW846-8260B	
DATE SAMPLED	: 5/7/01	DATE RECEIVED	:	5/8/01	
SAMPLE MATRIX	: WATER	PRINTED ON	:	5/23/2001	16:19

ANALYST	: ESP	CONTAINER ID	: A
DATE ANALYZED	: 5/21/01	DILUTION	1
INSTRUMENT FILE	: G3493.D	INSTRUMENT ID	G-HP5973
PURGE VOLUME	: 20 mL	TIME ANALYZED	: 12:06

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
cis-1,2-Dichloroethene	1.0	UG/L	ND	UG/L	
trans-1,2-Dichloroethene	1.0	UG/L	ND	UG/L	
Trichloroethene	1.0	UG/L	ND	UG/L	
Vinyl chloride	1.0	UG/L	ND	UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	103
1,2-Dichloroethane-d4	10 UG/L	64 - 130	95
4-Bromofluorobenzene	10 UG/L	72 - 137	92
Dibromofluoromethane	10 UG/L	56 - 153	96

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV17. PREP BLANK ID : GVBLK17 LCS ID : GVLCS17

MS ID : 6824.007MS MSD ID : 6824.007MSD

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LABORATORY REPORT
VOLATILES BY GC/MS

CLIENT NAME	: JACOBS ENGINEERING	CLIENT SAMPLE ID	: AF-L225304		
PROJECT NAME	: AIR FORCE PLANT 4	LAB SAMPLE ID	: 6824.007		
PROJECT NUMBER	: 05-Z026-01	METHOD REFERENCE	: SW846-8260B		
DATE SAMPLED	: 5/6/01	DATE RECEIVED	: 5/8/01		
SAMPLE MATRIX	: WATER	PRINTED ON	: 5/23/2001	16:19	

ANALYST	ESP	CONTAINER ID	: A
DATE ANALYZED	5/21/01	DILUTION	: 1
INSTRUMENT FILE	G3494.D	INSTRUMENT ID	: G-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	: 12:45

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	ND UG/L	
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	100
1,2-Dichloroethane-d4	10 UG/L	64 - 130	93
4-Bromofluorobenzene	10 UG/L	72 - 137	86
Dibromofluoromethane	10 UG/L	56 - 153	93

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV17. PREP BLANK ID : GVBLK17 LCS ID : GVLCS17

MS ID : 6824.007MS MSD ID : 6824.007MSD

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L225305
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6824.008
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/6/01	DATE RECEIVED :	5/8/01
SAMPLE MATRIX :	WATER	PRINTED ON :	5/23/2001 16:19

ANALYST	: ESP	CONTAINER ID	: B
DATE ANALYZED	: 5/22/01	DILUTION	: 1
INSTRUMENT FILE	: G3536.D	INSTRUMENT ID	: G-HP5973
PURGE VOLUME	: 20 mL	TIME ANALYZED	: 21:54

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	ND UG/L	
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	84
1,2-Dichloroethane-d4	10 UG/L	64 - 130	80
4-Bromofluorobenzene	10 UG/L	72 - 137	75
Dibromofluoromethane	10 UG/L	56 - 153	79

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV19 PREP BLANK ID : GVBLK19 LCS ID : GVLCS19

LCSD ID : GVLCS19D

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L225601
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6824.010
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/6/01	DATE RECEIVED :	5/8/01
SAMPLE MATRIX :	WATER	PRINTED ON :	5/23/2001 16:19

ANALYST	: ESP	CONTAINER ID	: A
DATE ANALYZED	: 5/21/01	DILUTION	: 50
INSTRUMENT FILE	: G3501.D	INSTRUMENT ID	: G-HP5973
PURGE VOLUME	: 20 mL	TIME ANALYZED	: 17:18

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	50 UG/L	4400 UG/L	
trans-1,2-Dichloroethene	50 UG/L	36 UG/L	J
Trichloroethene	50 UG/L	20000 UG/L	E
Vinyl chloride	50 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	500 UG/L	68 - 124	101
1,2-Dichloroethane-d4	500 UG/L	64 - 130	102
4-Bromofluorobenzene	500 UG/L	72 - 137	90
Dibromofluoromethane	500 UG/L	56 - 153	98

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV17. PREP BLANK ID : GVBLK17 LCS ID : GVLCS17

MS ID : 6824.007MS MSD ID : 6824.007MSD

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L225601DL1
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6824.010DL1
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/6/01	DATE RECEIVED :	5/8/01
SAMPLE MATRIX :	WATER	PRINTED ON :	5/23/2001 16:19

ANALYST	: ESP	CONTAINER ID	: B
DATE ANALYZED	: 5/22/01	DILUTION	: 500
INSTRUMENT FILE	G3537.D	INSTRUMENT ID	: G-HP5973
PURGE VOLUME	. 20 mL	TIME ANALYZED	22:33

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	500 UG/L	3300 UG/L	
trans-1,2-Dichloroethene	500 UG/L	ND UG/L	
Trichloroethene	500 UG/L	22000 UG/L	
Vinyl chloride	500 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	5000 UG/L	68 - 124	101
1,2-Dichloroethane-d4	5000 UG/L	64 - 130	101
4-Bromofluorobenzene	5000 UG/L	72 - 137	91
Dibromofluoromethane	5000 UG/L	56 - 153	99

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV19 PREP BLANK ID : GVBLK19 LCS ID : GVLCS19

LCSD ID : GVLCS19D

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L225603
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6824.012
PROJECT NUMBER :	05-Z026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/6/01	DATE RECEIVED :	5/8/01
SAMPLE MATRIX :	WATER	PRINTED ON :	5/23/2001 16:19

ANALYST	ESP	CONTAINER ID	A
DATE ANALYZED	5/21/01	DILUTION	50
INSTRUMENT FILE	G3502.D	INSTRUMENT ID	G-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	17:57

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	50 UG/L	670 UG/L	
trans-1,2-Dichloroethene	50 UG/L	ND UG/L	
Trichloroethene	50 UG/L	7800 UG/L	E
Vinyl chloride	50 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	500 UG/L	68 - 124	98
1,2-Dichloroethane-d4	500 UG/L	64 - 130	101
4-Bromofluorobenzene	500 UG/L	72 - 137	89
Dibromofluoromethane	500 UG/L	56 - 153	96

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV17. PREP BLANK ID : GVBLK17 LCS ID : GVLCS17

MS ID : 6824.007MS MSD ID : 6824.007MSD

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L225603DL1
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6824.012DL1
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/6/01	DATE RECEIVED :	5/8/01
SAMPLE MATRIX :	WATER	PRINTED ON :	5/23/2001 16:19

ANALYST	: ESP	CONTAINER ID	: B
DATE ANALYZED	: 5/22/01	DILUTION	200
INSTRUMENT FILE	: G3538.D	INSTRUMENT ID	: G-HP5973
PURGE VOLUME	: 20 mL	TIME ANALYZED	: 23:12

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
cis-1,2-Dichloroethene	200	UG/L	520	UG/L	
trans-1,2-Dichloroethene	200	UG/L	ND	UG/L	
Trichloroethene	200	UG/L	7500	UG/L	
Vinyl chloride	200	UG/L	ND	UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED		QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	2000	UG/L	68 - 124	106
1,2-Dichloroethane-d4	2000	UG/L	64 - 130	104
4-Bromofluorobenzene	2000	UG/L	72 - 137	94
Dibromofluoromethane	2000	UG/L	56 - 153	101

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV19 PREP BLANK ID : GVBLK19 LCS ID : GVLCS19

LCSD ID : GVLCS19D

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L225605
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6824.014
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/6/01	DATE RECEIVED :	5/8/01
SAMPLE MATRIX :	WATER	PRINTED ON :	5/23/2001 16:19

ANALYST	ESP	CONTAINER ID	A
DATE ANALYZED	5/21/01	DILUTION	50
INSTRUMENT FILE	G3503.D	INSTRUMENT ID	G-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	18:36

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	50 UG/L	660 UG/L	
trans-1,2-Dichloroethene	50 UG/L	ND UG/L	
Trichloroethene	50 UG/L	7500 UG/L	E
Vinyl chloride	50 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	500 UG/L	68 - 124	101
1,2-Dichloroethane-d4	500 UG/L	64 - 130	103
4-Bromofluorobenzene	500 UG/L	72 - 137	93
Dibromofluoromethane	500 UG/L	56 - 153	97

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV17. PREP BLANK ID : GVBLK17 LCS ID : GVLCS17

MS ID : 6824.007MS MSD ID : 6824.007MSD

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L225605DL1
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6824.014DL1
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/6/01	DATE RECEIVED :	5/8/01
SAMPLE MATRIX :	WATER	PRINTED ON :	5/23/2001 16:19

ANALYST	: ESP	CONTAINER ID	: B
DATE ANALYZED	5/22/01	DILUTION	200
INSTRUMENT FILE	G3539.D	INSTRUMENT ID	G-HP5973
PURGE VOLUME	: 20 mL	TIME ANALYZED	: 23:51

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
cis-1,2-Dichloroethene	200	UG/L	510	UG/L	
trans-1,2-Dichloroethene	200	UG/L	ND	UG/L	
Trichloroethene	200	UG/L	7400	UG/L	
Vinyl chloride	200	UG/L	ND	UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED		QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	2000	UG/L	68 - 124	101
1,2-Dichloroethane-d4	2000	UG/L	64 - 130	100
4-Bromofluorobenzene	2000	UG/L	72 - 137	91
Dibromofluoromethane	2000	UG/L	56 - 153	97

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV19 PREP BLANK ID : GVBLK19 LCS ID : GVLCS19

LCSD ID : GVLCS19D

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LABORATORY REPORT
VOLATILES BY GC/MS

CLIENT NAME	: JACOBS ENGINEERING	CLIENT SAMPLE ID	: AF-L225607
PROJECT NAME	: AIR FORCE PLANT 4	LAB SAMPLE ID	: 6824.016
PROJECT NUMBER	: 05-2026-01	METHOD REFERENCE	: SW846-8260B
DATE SAMPLED	: 5/6/01	DATE RECEIVED	: 5/8/01
SAMPLE MATRIX	: WATER	PRINTED ON	: 5/23/2001 16:19

ANALYST	ESP	CONTAINER ID	B
DATE ANALYZED	5/23/01	DILUTION	1
INSTRUMENT FILE	G3540.D	INSTRUMENT ID	G-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	00:30

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	4.0 UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	0.71 UG/L	J
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	104
1,2-Dichloroethane-d4	10 UG/L	64 - 130	96
4-Bromofluorobenzene	10 UG/L	72 - 137	92
Dibromofluoromethane	10 UG/L	56 - 153	95

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV19 PREP BLANK ID : GVBLK19 LCS ID : GVLCS19

LCSD ID : GVLCS19D

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L226001
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6824.018
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/7/01	DATE RECEIVED :	5/8/01
SAMPLE MATRIX :	WATER	PRINTED ON :	5/23/2001 16:19

ANALYST	: ESP	CONTAINER ID	: A
DATE ANALYZED	: 5/21/01	DILUTION	: 1
INSTRUMENT FILE	: G3497.D	INSTRUMENT ID	: G-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	: 14:42

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	ND UG/L	
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	97
1,2-Dichloroethane-d4	10 UG/L	64 - 130	102
4-Bromofluorobenzene	10 UG/L	72 - 137	105
Dibromofluoromethane	10 UG/L	56 - 153	90

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : Gv17. PREP BLANK ID : GVBLK17 LCS ID : GVLCS17

MS ID : 6824.007MS MSD ID : 6824.007MSD

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L226002
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6824.019
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/6/01	DATE RECEIVED :	5/8/01
SAMPLE MATRIX :	WATER	PRINTED ON :	5/23/2001 16:19

ANALYST	: ESP	CONTAINER ID	: A
DATE ANALYZED	: 5/21/01	DILUTION	: 1
INSTRUMENT FILE	: G3498.D	INSTRUMENT ID	: G-HP5973
PURGE VOLUME	: 20 mL	TIME ANALYZED	: 15:21

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
cis-1,2-Dichloroethene	1.0	UG/L	ND	UG/L	
trans-1,2-Dichloroethene	1.0	UG/L	ND	UG/L	
Trichloroethene	1.0	UG/L	ND	UG/L	
Vinyl chloride	1.0	UG/L	ND	UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	98
1,2-Dichloroethane-d4	10 UG/L	64 - 130	77
4-Bromofluorobenzene	10 UG/L	72 - 137	88
Dibromofluoromethane	10 UG/L	56 - 153	84

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV17. PREP BLANK ID : GVBLK17 LCS ID : GVLCS17

MS ID : 6824.007MS MSD ID : 6824.007MSD

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME	: JACOBS ENGINEERING	CLIENT SAMPLE ID	: AF-L226003		
PROJECT NAME	: AIR FORCE PLANT 4	LAB SAMPLE ID	: 6824.020		
PROJECT NUMBER	: 05-Z026-01	METHOD REFERENCE	: SW846-8260B		
DATE SAMPLED	: 5/5/01	DATE RECEIVED	: 5/8/01		
SAMPLE MATRIX	: WATER	PRINTED ON	: 5/23/2001	16:19	

ANALYST	ESP	CONTAINER ID	: A
DATE ANALYZED	5/21/01	DILUTION	: 50
INSTRUMENT FILE	G3505.D	INSTRUMENT ID	: G-HP5973
PURGE VOLUME	: 20 mL	TIME ANALYZED	: 19:54

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
cis-1,2-Dichloroethene	50	UG/L	49	UG/L	J
trans-1,2-Dichloroethene	50	UG/L	ND	UG/L	
Trichloroethene	50	UG/L	140	UG/L	
Vinyl chloride	50	UG/L	ND	UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED		QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	500	UG/L	68 - 124	102
1,2-Dichloroethane-d4	500	UG/L	64 - 130	112
4-Bromofluorobenzene	500	UG/L	72 - 137	95
Dibromofluoromethane	500	UG/L	56 - 153	103

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV17.	PREP BLANK ID : GVBLK17	LCS ID : GVLCS17
MS ID : 6824.007MS	MSD ID : 6824.007MSD	

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L226005
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6824.022
PROJECT NUMBER :	05-Z026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/4/01	DATE RECEIVED :	5/8/01
SAMPLE MATRIX :	WATER	PRINTED ON :	5/23/2001 16:19

ANALYST	ESP	CONTAINER ID	A
DATE ANALYZED	5/21/01	DILUTION	1
INSTRUMENT FILE	G3499.D	INSTRUMENT ID	G-HP5973
PURGE VOLUME	: 20 mL	TIME ANALYZED	16:00

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	ND UG/L	
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	103
1,2-Dichloroethane-d4	10 UG/L	64 - 130	81
4-Bromofluorobenzene	10 UG/L	72 - 137	90
Dibromofluoromethane	10 UG/L	56 - 153	86

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV17. PREP BLANK ID : GVBLK17 LCS ID : GVLCS17

MS ID : 6824.007MS MSD ID : 6824.007MSD

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L226201
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6824.023
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/5/01	DATE RECEIVED :	5/8/01
SAMPLE MATRIX :	WATER	PRINTED ON :	5/23/2001 16:19

ANALYST	: ESP	CONTAINER ID	: A
DATE ANALYZED	: 5/22/01	DILUTION	: 1
INSTRUMENT FILE	: G3512.D	INSTRUMENT ID	G-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	: 1:05

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
cis-1,2-Dichloroethene	1.0	UG/L	0.73	UG/L	J
trans-1,2-Dichloroethene	1.0	UG/L	ND	UG/L	
Trichloroethene	1.0	UG/L	1.5	UG/L	
Vinyl chloride	1.0	UG/L	0.56	UG/L	J

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	104
1,2-Dichloroethane-d4	10 UG/L	64 - 130	96
4-Bromofluorobenzene	10 UG/L	72 - 137	91
Dibromofluoromethane	10 UG/L	56 - 153	95

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV18 PREP BLANK ID : GVBLK18 LCS ID : GVLCS18

MS ID : 6824.034MS MSD ID : 6824.034MSD

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L226202
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6824.024
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/5/01	DATE RECEIVED :	5/8/01
SAMPLE MATRIX :	WATER	PRINTED ON :	5/23/2001 16:19

ANALYST	ESP	CONTAINER ID	A
DATE ANALYZED	5/22/01	DILUTION	1
INSTRUMENT FILE	G3513.D	INSTRUMENT ID	G-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	1:44

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
cis-1,2-Dichloroethene	1.0	UG/L	1.3	UG/L	
trans-1,2-Dichloroethene	1.0	UG/L	ND	UG/L	
Trichloroethene	1.0	UG/L	35	UG/L	
Vinyl chloride	1.0	UG/L	ND	UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED		QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10	UG/L	68 - 124	101
1,2-Dichloroethane-d4	10	UG/L	64 - 130	98
4-Bromofluorobenzene	10	UG/L	72 - 137	90
Dibromofluoromethane	10	UG/L	56 - 153	97

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV18 PREP BLANK ID : GVBLK18 LCS ID : GVLCS18

MS ID : 6824.034MS MSD ID : 6824.034MSD

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME	: JACOBS ENGINEERING	CLIENT SAMPLE ID	: AF-L226204		
PROJECT NAME	: AIR FORCE PLANT 4	LAB SAMPLE ID	: 6824.026		
PROJECT NUMBER	: 05-2026-01	METHOD REFERENCE	: SW846-8260B		
DATE SAMPLED	: 5/6/01	DATE RECEIVED	: 5/8/01		
SAMPLE MATRIX	: WATER	PRINTED ON	: 5/23/2001	16:19	

ANALYST	: ESP	CONTAINER ID	: B
DATE ANALYZED	: 5/23/01	DILUTION	: 1
INSTRUMENT FILE	: G3541.D	INSTRUMENT ID	G-HP5973
PURGE VOLUME	: 20 mL	TIME ANALYZED	: 1:09

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
cis-1,2-Dichloroethene	1.0	UG/L	ND	UG/L	
trans-1,2-Dichloroethene	1.0	UG/L	ND	UG/L	
Trichloroethene	1.0	UG/L	ND	UG/L	
Vinyl chloride	1.0	UG/L	ND	UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED		QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10	UG/L	68 - 124	99
1,2-Dichloroethane-d4	10	UG/L	64 - 130	98
4-Bromofluorobenzene	10	UG/L	72 - 137	91
Dibromofluoromethane	10	UG/L	56 - 153	94

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV19 PREP BLANK ID : GVBLK19 LCS ID : GVLCS19

LCSD ID : GVLCS19D

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME	: JACOBS ENGINEERING	CLIENT SAMPLE ID	: AF-L226206
PROJECT NAME	: AIR FORCE PLANT 4	LAB SAMPLE ID	: 6824.028
PROJECT NUMBER	: 05-2026-01	METHOD REFERENCE	: SW846-8260B
DATE SAMPLED	: 5/6/01	DATE RECEIVED	: 5/8/01
SAMPLE MATRIX	: WATER	PRINTED ON	: 5/23/2001 16:19

ANALYST	ESP	CONTAINER ID	B
DATE ANALYZED	5/23/01	DILUTION	1
INSTRUMENT FILE	G3542.D	INSTRUMENT ID	G-HP5973
PURGE VOLUME	: 20 mL	TIME ANALYZED	1:48

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	ND UG/L	
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	101
1,2-Dichloroethane-d4	10 UG/L	64 - 130	96
4-Bromofluorobenzene	10 UG/L	72 - 137	90
Dibromofluoromethane	10 UG/L	56 - 153	91

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV19 PREP BLANK ID : GVBLK19 LCS ID : GVLCS19

LCSD ID : GVLCS19D

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L226301
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6824.030
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/6/01	DATE RECEIVED :	5/8/01
SAMPLE MATRIX :	WATER	PRINTED ON :	5/23/2001 16:19

ANALYST	: ESP	CONTAINER ID	: A
DATE ANALYZED	: 5/22/01	DILUTION	: 1
INSTRUMENT FILE	: G3517.D	INSTRUMENT ID	: G-HP5973
PURGE VOLUME	: 20 mL	TIME ANALYZED	: 4:20

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
cis-1,2-Dichloroethene	1.0	UG/L	550	UG/L	E
trans-1,2-Dichloroethene	1.0	UG/L	6.2	UG/L	
Trichloroethene	1.0	UG/L	170	UG/L	E
Vinyl chloride	1.0	UG/L	160	UG/L	E

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	96
1,2-Dichloroethane-d4	10 UG/L	64 - 130	99
4-Bromofluorobenzene	10 UG/L	72 - 137	94
Dibromofluoromethane	10 UG/L	56 - 153	94

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV18	PREP BLANK ID : GVBLK18	LCS ID : GVLCS18
MS ID : 6824.034MS	MSD ID : 6824.034MSD	

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME	: JACOBS ENGINEERING	CLIENT SAMPLE ID	: AF-L226301DL1
PROJECT NAME	: AIR FORCE PLANT 4	LAB SAMPLE ID	: 6824.030DL1
PROJECT NUMBER	: 05-2026-01	METHOD REFERENCE	: SW846-8260B
DATE SAMPLED	: 5/6/01	DATE RECEIVED	: 5/8/01
SAMPLE MATRIX	: WATER	PRINTED ON	: 5/23/2001 16:19

ANALYST	: ESP	CONTAINER ID	: C
DATE ANALYZED	5/23/01	DILUTION	: 20
INSTRUMENT FILE	G3550.D	INSTRUMENT ID	G-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	11:56

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
cis-1,2-Dichloroethene	20	UG/L	1000	UG/L	
trans-1,2-Dichloroethene	20	UG/L	ND	UG/L	
Trichloroethene	20	UG/L	140	UG/L	
Vinyl chloride	20	UG/L	170	UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED		QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	200	UG/L	68 - 124	101
1,2-Dichloroethane-d4	200	UG/L	64 - 130	101
4-Bromofluorobenzene	200	UG/L	72 - 137	92
Dibromofluoromethane	200	UG/L	56 - 153	99

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV20 PREP BLANK ID : GVBLK20 LCS ID : GVLCS20

LCSD ID : GVLCS200

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1680 Lake Front Circle, Suite B, The Woodlands, TX 77380

LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L226302
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6824.031
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/5/01	DATE RECEIVED :	5/8/01
SAMPLE MATRIX :	WATER	PRINTED ON :	5/23/2001 16:19

ANALYST	: ESP	CONTAINER ID	: A
DATE ANALYZED	5/22/01	DILUTION	1
INSTRUMENT FILE	: G3516.D	INSTRUMENT ID	G-HP5973
PURGE VOLUME	: 20 mL	TIME ANALYZED	: 3:41

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	0.51 UG/L	J
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	0.57 UG/L	J
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	101
1,2-Dichloroethane-d4	10 UG/L	64 - 130	98
4-Bromofluorobenzene	10 UG/L	72 - 137	91
Dibromofluoromethane	10 UG/L	56 - 153	95

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV18	PREP BLANK ID : GVBLK18	LCS ID : GVLCS18
MS ID : 6824.034MS	MSD ID : 6824.034MSD	

PDP Analytical Services
1680 Lake Front Circle, Suite B, The Woodlands, TX 77380

LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L226303
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6824.032
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/5/01	DATE RECEIVED :	5/8/01
SAMPLE MATRIX :	WATER	PRINTED ON :	5/23/2001 16:19

ANALYST	: ESP	CONTAINER ID	A
DATE ANALYZED	: 5/22/01	DILUTION	1
INSTRUMENT FILE	: G3514.D	INSTRUMENT ID	G-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	2:23

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
cis-1,2-Dichloroethene	1.0	UG/L	210	UG/L	E
trans-1,2-Dichloroethene	1.0	UG/L	3.1	UG/L	
Trichloroethene	1.0	UG/L	5.7	UG/L	
Vinyl chloride	1.0	UG/L	28	UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	103
1,2-Dichloroethane-d4	10 UG/L	64 - 130	97
4-Bromofluorobenzene	10 UG/L	72 - 137	90
Dibromofluoromethane	10 UG/L	56 - 153	94

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV18 PREP BLANK ID : GVBLK18 LCS ID : GVLCS18

MS ID : 6824.034MS MSD ID : 6824.034MSD

PDP Analytical Services
1680 Lake Front Circle, Suite B, The Woodlands, TX 77380

LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L226303DL1
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6824.032DL1
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/5/01	DATE RECEIVED :	5/8/01
SAMPLE MATRIX :	WATER	PRINTED ON :	5/23/2001 16:19

ANALYST	ESP	CONTAINER ID	: B
DATE ANALYZED	5/23/01	DILUTION	: 5
INSTRUMENT FILE	: G3543.D	INSTRUMENT ID	: G-HP5973
PURGE VOLUME	: 20 mL	TIME ANALYZED	: 2:27

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
cis-1,2-Dichloroethene	5.0	UG/L	190	UG/L	
trans-1,2-Dichloroethene	5.0	UG/L	3.1	UG/L	J
Trichloroethene	5.0	UG/L	4.6	UG/L	J
Vinyl chloride	5.0	UG/L	27	UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	50 UG/L	68 - 124	96
1,2-Dichloroethane-d4	50 UG/L	64 - 130	106
4-Bromofluorobenzene	50 UG/L	72 - 137	89
Dibromofluoromethane	50 UG/L	56 - 153	102

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV19 PREP BLANK ID : GVBLK19 LCS ID : GVLCS19

LCSD ID : GVLCS19D

PDP Analytical Services
1680 Lake Front Circle, Suite B, The Woodlands, TX 77380

LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME	: JACOBS ENGINEERING	CLIENT SAMPLE ID	: AF-L226304
PROJECT NAME	: AIR FORCE PLANT 4	LAB SAMPLE ID	: 6824.033
PROJECT NUMBER	: 05-2026-01	METHOD REFERENCE	: SW846-8260B
DATE SAMPLED	: 5/5/01	DATE RECEIVED	: 5/8/01
SAMPLE MATRIX	: WATER	PRINTED ON	: 5/23/2001 16:19

ANALYST	: ESP	CONTAINER ID	A
DATE ANALYZED	: 5/22/01	DILUTION	. 1
INSTRUMENT FILE	: G3515.D	INSTRUMENT ID	: G-HP5973
PURGE VOLUME	: 20 mL	TIME ANALYZED	: 3:02

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
cis-1,2-Dichloroethene	1.0	UG/L	210	UG/L	E
trans-1,2-Dichloroethene	1.0	UG/L	3.1	UG/L	
Trichloroethene	1.0	UG/L	5.9	UG/L	
Vinyl chloride	1.0	UG/L	28	UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	101
1,2-Dichloroethane-d4	10 UG/L	64 - 130	98
4-Bromofluorobenzene	10 UG/L	72 - 137	90
Dibromofluoromethane	10 UG/L	56 - 153	97

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV18 PREP BLANK ID : GVBLK18 LCS ID : GVLCS18

MS ID : 6824.034MS MSD ID : 6824.034MSD

PDP Analytical Services
1680 Lake Front Circle, Suite B, The Woodlands, TX 77380

LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME	: JACOBS ENGINEERING	CLIENT SAMPLE ID	: AF-L226304DL1
PROJECT NAME	: AIR FORCE PLANT 4	LAB SAMPLE ID	: 6824.033DL1
PROJECT NUMBER	: 05-2026-01	METHOD REFERENCE	: SW846-8260B
DATE SAMPLED	: 5/5/01	DATE RECEIVED	: 5/8/01
SAMPLE MATRIX	: WATER	PRINTED ON	: 5/23/2001 16:19

ANALYST	: ESP	CONTAINER ID	: B
DATE ANALYZED	: 5/23/01	DILUTION	5
INSTRUMENT FILE	G3544.D	INSTRUMENT ID	: G-HP5973
PURGE VOLUME	. 20 mL	TIME ANALYZED	: 3:06

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	5.0 UG/L	190 UG/L	
trans-1,2-Dichloroethene	5.0 UG/L	3.3 UG/L	J
Trichloroethene	5.0 UG/L	4.6 UG/L	J
Vinyl chloride	5.0 UG/L	26 UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	50 UG/L	68 - 124	94
1,2-Dichloroethane-d4	50 UG/L	64 - 130	110
4-Bromofluorobenzene	50 UG/L	72 - 137	89
Dibromofluoromethane	50 UG/L	56 - 153	104

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV19 PREP BLANK ID : GVBLK19 LCS ID : GVLCS19

LCSD ID : GVLCS19D

PDP Analytical Services
1680 Lake Front Circle, Suite B, The Woodlands, TX 77380

LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME	: JACOBS ENGINEERING		CLIENT SAMPLE ID	: AF-L226401	
PROJECT NAME	: AIR FORCE PLANT 4		LAB SAMPLE ID	: 6824.034	
PROJECT NUMBER	: 05-2026-01		METHOD REFERENCE	: SW846-8260B	
DATE SAMPLED	: 5/7/01 1340		DATE RECEIVED	: 5/8/01	
SAMPLE MATRIX	: WATER		PRINTED ON	: 5/23/2001	16:19

ANALYST	ESP	CONTAINER ID	A
DATE ANALYZED	5/22/01 2116	DILUTION	1
INSTRUMENT FILE	G3520.D	INSTRUMENT ID	G-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	6:16

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	ND UG/L	
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	101
1,2-Dichloroethane-d4	10 UG/L	64 - 130	99
4-Bromofluorobenzene	10 UG/L	72 - 137	90
Dibromofluoromethane	10 UG/L	56 - 153	98

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV18 PREP BLANK ID : GVBLK18 LCS ID : GVLCS18

MS ID : 6824.034MS MSD ID : 6824.034MSD

PDP Analytical Services
1680 Lake Front Circle, Suite B, The Woodlands, TX 77380

LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L226402
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6824.035
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/7/01 1405	DATE RECEIVED :	5/8/01
SAMPLE MATRIX :	WATER	PRINTED ON :	5/23/2001 16:19

ANALYST	ESP	CONTAINER ID	: A
DATE ANALYZED	: 5/22/01 0814	DILUTION	1
INSTRUMENT FILE	G3523.D	INSTRUMENT ID	: G-HP5973
PURGE VOLUME	: 20 mL	TIME ANALYZED	: 8:14

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	ND UG/L	
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	98
1,2-Dichloroethane-d4	10 UG/L	64 - 130	95
4-Bromofluorobenzene	10 UG/L	72 - 137	86
Dibromofluoromethane	10 UG/L	56 - 153	94

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV18 PREP BLANK ID : GVBLK18 LCS ID : GVLCS18

MS ID : 6824.034MS MSD ID : 6824.034MSD

PDP Analytical Services

1680 Lake Front Circle, Suite B, The Woodlands, TX 77380

LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME	:	JACOBS ENGINEERING	CLIENT SAMPLE ID	:	AF-L226403
PROJECT NAME	:	AIR FORCE PLANT 4	LAB SAMPLE ID	:	6824.036
PROJECT NUMBER	:	05-2026-01	METHOD REFERENCE	:	SW846-8260B
DATE SAMPLED	:	5/7/01	DATE RECEIVED	:	5/8/01
SAMPLE MATRIX	:	WATER	PRINTED ON	:	5/23/2001 16:19

ANALYST	ESP	CONTAINER ID	A
DATE ANALYZED	5/22/01	DILUTION	1
INSTRUMENT FILE	G3518.D	INSTRUMENT ID	G-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	4:59

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	ND UG/L	
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	100
1,2-Dichloroethane-d4	10 UG/L	64 - 130	94
4-Bromofluorobenzene	10 UG/L	72 - 137	91
Dibromofluoromethane	10 UG/L	56 - 153	94

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV18 PREP BLANK ID : GVBLK18 LCS ID : GVLCS18

MS ID : 6824.034MS MSD ID : 6824.034MSD

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PDP Analytical Services
1680 Lake Front Circle, Suite B, The Woodlands, TX 77380

LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L226404
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6824.037
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/7/01	DATE RECEIVED :	5/8/01
SAMPLE MATRIX :	WATER	PRINTED ON :	5/23/2001 16:19

ANALYST	: ESP	CONTAINER ID	: A
DATE ANALYZED	: 5/22/01	DILUTION	: 1
INSTRUMENT FILE	: G3519.D	INSTRUMENT ID	: G-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	: 5:38

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	ND UG/L	
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	103
1,2-Dichloroethane-d4	10 UG/L	64 - 130	96
4-Bromofluorobenzene	10 UG/L	72 - 137	91
Dibromofluoromethane	10 UG/L	56 - 153	94

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV18	PREP BLANK ID : GVBLK18	LCS ID : GVLCS18
MS ID : 6824.034MS	MSD ID : 6824.034MSD	

601 131

PDP
Analytical Services

1680 Lake Front Circle, Suite B
The Woodlands, Texas 77380
Phone (281) 363-2233
Fax (281) 298-5784
e-mail pdp@pdpanalytical com

June 8, 2001

Mr. Eric Aamodt
Jacobs Engineering Group
1527 Cole Blvd., Ste 100
Golden, CO 80401

Episode. 6836
Project ID: Air Force Plant 4

Dear Mr. Aamodt:

Enclosed are the analytical results for the samples received in our laboratory on May 11th. 2001 The samples were analyzed for the parameters indicated on the Chain-of-Custody (COC)

Please be advised that unused portions of your samples, sample extracts and digestates will be stored for 30 days from the date of this report Unless prior arrangements were made, at the end of this period your samples will either be disposed of, or returned to you if your samples were determined to be hazardous

Should you have any questions or need assistance with this report, please feel free to call me, at (281) 363-2233.

Sincerely,

Katren Bursnall
Project Manager

Enclosures
Cc: Episode File – 6836

PDP ANALYTICAL SERVICES 1680 Lake Front Circle, Suite B, The Woodlands, TX 77380

SAMPLE LOG-IN CHECKLIST/DISCREPANCY REPORT

FID SLCDR01.96

EPISODE #: 6835 DATE/ REC'D: 5/11/01 TIME 9:30

CLIENT NAME: Jacobs Eng.

PROJECT NAME: Air Force Plant 4

PROJECT NUMBER: 052026001

43 AQUEOUS, # 4 SOIL SAMPLES

COURIER/AIRBILL # Fed Ex 820798651948

TEMP & ID: 1) 3°c # cooler 1

2) 2°c # cooler 2

3)_____ # _____

4)_____ # _____

5)_____ # _____

6)_____ # _____

SAMPLE CONTAINER SEALS: present (absent) intact broken

COOLER CUSTODY SEALS: present (absent) intact broken NAME & DATE: _____

HOW MANY AND WHERE _____

	YES	NO
Were samples screened for radioactivity?	✓	
Chain-of-custody present?	✓	
Custody documents: Sealed in a plastic bag?	✓	
Signed and dated by field personnel	✓	
Filled out properly in indelable ink?	✓	
Signed and dated by log-in personnel?	✓	
Container Condition: Each containers sealed in a separate plastic bag?	✓	
Labels complete (ID, date, time, signature, preservative, etc.)?	✓	
Labels agree with chain-of-custody?	✓	
Received without leakage or breakage? If no, list :	✓	
Correct quantity indicated on chain-of-custody?	✓	
Sample Integrity: Correct containers used for the test indicated? If no, list:	✓	
Correct preservatives added to the samples? If no, list:	✓	
Sufficient sample amount sent for the tests indicated? If no, list	✓	
VOA vials filled completely? If no, list:	✓	
Aqueous volatiles samples preserved? If no, list:	✓	

Descrepancy Report:

Discepancies to be discussed with the client?

Project Manager's recommendations?

Who was notified? By whom? Date:

Client's comments:

Corrective actions carried out?

COMMENTS:

For those short holding time and fast turn-around parameters, has a Rush Notification sheet been issued to the lab? N/A

LOG-IN BY: R. Brown DATE: 5/11/01

601 133

JE JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N, DENVER COLORADO 80202
TELEPHONE (303) 595-8855 FAX (303) 595-8857

AF-L2246

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: AIR FORCE PLANT 4 (DO 26)
PROJECT NUMBER: 05Z02601
WBS CODE: 320206
SUBCONTRACT / D.O No.:

LABORATORY NAME & ADDRESS: PDS ANALYTICAL SERVICES
1680 Lake Front Circle Suite B
The Woodlands TX 77380-

CONTROL NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT 6836
AF-L224601	5/10/01	0859	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list	N	.001
AF-L224602	5/10/01	0859	TB BN	2	1 L Plastic	HNO3 pH	W	SW6010B(As, Cd, Cu, Pb, Zn - Only)		.002
AF-L224603	5/10/01	0905	TB BN	1	4 oz. Jar	4 deg C	S	SW6010B (Ag-Only) SW8081(1254-Only)		-003
AF-L224604	5/10/01	0930	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		.004
AF-L224605	5/10/01	0930	TB BN	1	1 L Plastic	HNO3 pH	W	SW6010B(As, Cd, Cu, Pb, Zn - Only)		.005
AF-L224606	5/10/01	0935	TB BN	1	4 oz. Jar	4 deg C	S	SW6010B (Ag-Only) SW8081 (1254-Only)		.006

5/10/01 BN

COMMENTS.

	DATE	TIME		DATE	TIME
COLLECTED & RELEASED BY: D. Bryan-Kelly	5/10/01	12:06	TURNAROUND TIME		
RECEIVED BY: R. Brown	5/11/01	9:30	RELINQUISHED BY		
RECORD RETURNED BY					
			SHIPPING NUMBER:		

DISTRIBUTION WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

The chain-of-custody record provides formal documentation of the possession of samples from the time of collection until received at the laboratory. Internal custody procedures must be used to document possession of the samples while they are at the laboratory.

To fill out this form, specify the project name, project number, and appropriate WBS code in the box at the upper left-hand corner of the form In the box to the immediate right, indicate the proper shipping address of the laboratory that is to perform the analyses Enter the shipping number (e g , FedEx airbill) in the space at the bottom of the form

After the form is completed, the copies are distributed as follows:

White:	With sample(s) to lab; return to Jacobs project file upon receipt and signature
Canary:	With sample(s) to lab, lab's receipt
Pink.	To Jacobs Data Management
Goldenrod:	Retain in field

1) **CONTROL NUMBER**
Enter the control number of the sample

2) **COLLECTION**
Enter the date (mo/day/yr) and the time (military) of sample collection

3) **SAMPLER'S INITIALS**
Enter the initials of the person(s) who collected the sample

4) **NUMBER OF CONTAINERS**
Enter the number of containers that are grouped together as one sample

5) **CONTAINER SIZE AND TYPE**
Enter the volume and type of the container(s) (e g 40 mL VOA", "250 mL Steel Sleeve")

6) **PRESERVATIVE**
Enter the preservative used (if the analyses requested does not require preservative, write "None") All samples are shipped at 4 degrees Celsius

7) **MATRIX CODE**
Enter the matrix code for the matrix sampled

WG	Groundwater	WS	Surface water
WW	Waste water	WO	Ocean water
SE	Sediment	SL	Sludge
SO	Soil	WL	Leachate

8) **TYPE OF ANALYSIS**
Enter the analytical method(s) requested These should be consistent with the workplan/sampling analysis plan for this task (e g , "EPA Method 8240", "VOA CLP")

9) **QC**
The samples for QC analysis performed by the laboratory must be identified Enter the code for the type of QC requested

S	single spiked sample
M	matrix spike/matrix spike duplicate
D	unspiked duplicate

10) **CONDITION ON RECEIPT**
This section is filled out by the lab to record the condition of each sample upon its receipt.

11) **COMMENTS**
This section is used for any additional information that might be useful to the laboratory (e g , special handling requirements such as accelerated turnaround times, suspected contaminants, additional compounds to be analyzed, high level contaminant, etc)

12) **COLLECTED AND RELEASED BY**
The person(s) who collected the samples must sign in this area Date and time are as in #2

13) **CUSTODY BLOCK**
Whenever custody of samples is transferred, the person receiving the samples must sign here At that same time, the person releasing the samples must also sign Date and time are as in #2

601 135

JACOBS ENGINEERING GROUP INC.
1670 BROADWAY, SUITE 3200, DENVER, COLORADO 80202
TELEPHONE (303) 830-6933 FAX (303) 830-6911

AF-L2247

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN. BLACK INK, AND PRESS FIRMLY INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: AIR FORCE PLANT 4 (DO 26)			LABORATORY NAME & ADDRESS: PDP ANALYTICAL SERVICES
PROJECT NUMBER: 05202601			1680 Lake Front Circle Suite B
WBS CODE: 320206	SUBCONTRACT / D.O. No.		The Woodlands TX 77380-

CONTROL NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
AF-L224701	5/10/01	0840	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		.007
AF-L224702	5/10/01	0845	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		.008
AF-L224703	5/10/01	0845	TB BN	1	4 oz. Jar	4 deg C	S	SW6010B (Ag-Only) SW8081 (1254-Only)		.009
AF-L224704	5/10/01	0845	TB BN	1	4 oz. Jar	4 deg C	S	SW6010B (Ag-Only) SW8081 (1254-Only)		.010
AF-L 224705	5/10/01	1130	TB BN	3	40ml VOA	HCL	WQ	SW8260 short list		.011
AF-L 224706	5/10/01	1130	TB BN	1	1L Plastic	4°C	WQ	SW6010B (As, Ag, Cd, Cu, Pb, Zn only)		.012
AF-L 224707	5/10/01	1130	TB BN	1	1L Amber	4°C	WQ	SW8081 (1254-only)		.013
								BN 5/10/01		

COMMENTS:

COLLECTED & RELEASED BY		DATE 5/10/01	TIME 12:00	TURNAROUND TIME	
RECEIVED BY R. Brown		DATE 5/11/01	TIME 10:00	RELINQUISHED BY	DATE / / TIME :
					0000007
RECORD RETURNED BY		DATE / /	TIME :		
				SHIPPING NUMBER.	

DISTRIBUTION WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

The chain-of-custody record provides formal documentation of the possession of samples from the time of collection until received at the laboratory. Internal custody procedures must be used to document possession of the samples while they are at the laboratory.

To fill out this form, specify the project name, project number, and appropriate WBS code in the box at the upper left-hand corner of the form. In the box to the immediate right, indicate the proper shipping address of the laboratory that is to perform the analyses. Enter the shipping number (e g , FedEx airbill) in the space at the bottom of the form.

After the form is completed, the copies are distributed as follows:

White:	With sample(s) to lab; return to Jacobs project file upon receipt and signature.
Canary:	With sample(s) to lab; lab's receipt
Pink:	To Jacobs Data Management
Goldenrod:	Retain in field

---

1) **CONTROL NUMBER**
   Enter the control number of the sample
2) **COLLECTION**
   Enter the date (mo/day/yr) and the time (military) of sample collection.
3) **SAMPLER'S INITIALS**
   Enter the initials of the person(s) who collected the sample.
4) **NUMBER OF CONTAINERS**
   Enter the number of containers that are grouped together as one sample
5) **CONTAINER SIZE AND TYPE**
   Enter the volume and type of the container(s) (e g "40 mL VOA", "250 mL Steel Sleeve")
6) **PRESERVATIVE**
   Enter the preservative used (if the analyses requested does not require preservative, write "None") All samples are shipped at 4 degrees Celsius.
7) **MATRIX CODE**
   Enter the matrix code for the matrix sampled

WG	Groundwater	WS	Surface water
WW	Waste water	WO	Ocean water
SE	Sediment	SL	Sludge
SO	Soil	WL	Leachate

8) **TYPE OF ANALYSIS**
   Enter the analytical method(s) requested These should be consistent with the workplan/sampling analysis plan for this task (e g , "EPA Method 8240", "VOA CLP").
9) **QC**
   The samples for QC analysis performed by the laboratory must be identified Enter the code for the type of QC requested
   - S single spiked sample
   - M matrix spike/matrix spike duplicate
   - D unspiked duplicate
10) **CONDITION ON RECEIPT**
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11) **COMMENTS**
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12) **COLLECTED AND RELEASED BY**
    The person(s) who collected the samples must sign in this area Date and time are as in #2
13) **CUSTODY BLOCK**
    Whenever custody of samples is transferred, the person receiving the samples must sign here At that same time, the person releasing the samples must also sign. Date and time are as in #2

601 137

JACOBS ENGINEERING GROUP INC.
1670 BROADWAY, SUITE 3200, DENVER, COLORADO 80202
TELEPHONE (303) 830-6933 FAX (303) 830-6911

AF-L2248

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: AIR FORCE PLANT 4 (DO 26)
PROJECT NUMBER: 05Z02601
WBS CODE: 320206
SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: PDP ANALYTICAL SERVICES
1680 Lake Front Circle Suite B
The Woodlands TX 77380-

CONTROL NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
AF-L224801	5/8/01	1025	TB BN	6	40 mL VOA	4C HCl p	W	SW8260B short list	N	.014
AF-L224802	5/8/01	1100	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		.015
AF-L224803	5/8/01	0950	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		.016
AF-L224804	5/10/01	0810	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		017
AF-L224805	5/10/01	1000	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		.018
AF-L224806	5/10/01	1000	TB BN	1	1 L Plastic	HNO3 pH	W	SW6010B(As, Cd, Cu, Pb, Zn Only)		.019
AF-L224807	5/10/01	1005	TB BN	1	1 L Plastic	HNO3 pH	W	SW6010B(As, Cd, Cu, Pb, Zn - Only)		.020
								BN 5/10/01		

COMMENTS:

COLLECTED & RELEASED BY: D. Bryan Kelly	DATE: 5/10/01	TIME: 12:00	TURNAROUND TIME		
RECEIVED BY: R. Brown	DATE: 5/11/01	TIME: 9:30	RELINQUISHED BY	DATE: / /	TIME
RECORD RETURNED BY	DATE: / /	TIME			
			SHIPPING NUMBER: 820798651948		

DISTRIBUTION: WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

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Canary:	With sample(s) to lab, lab's receipt
Pink:	To Jacobs Data Management
Goldenrod:	Retain in field

1) **CONTROL NUMBER**
Enter the control number of the sample

2) **COLLECTION**
Enter the date (mo/day/yr) and the time (military) of sample collection

3) **SAMPLER'S INITIALS**
Enter the initials of the person(s) who collected the sample

4) **NUMBER OF CONTAINERS**
Enter the number of containers that are grouped together as one sample

5) **CONTAINER SIZE AND TYPE**
Enter the volume and type of the container(s) (e g "40 mL VOA", "250 mL Steel Sleeve")

6) **PRESERVATIVE**
Enter the preservative used (if the analyses requested does not require preservative, write "None") All samples are shipped at 4 degrees Celsius

7) **MATRIX CODE**
Enter the matrix code for the matrix sampled

WG	Groundwater	WS	Surface water
WW	Waste water	WO	Ocean water
SE	Sediment	SL	Sludge
SO	Soil	WL	Leachate

8) **TYPE OF ANALYSIS**
Enter the analytical method(s) requested These should be consistent with the workplan/sampling analysis plan for this task (e g , "EPA Method 8240", "VOA CLP")

9) **QC**
The samples for QC analysis performed by the laboratory must be identified Enter the code for the type of QC requested

- S single spiked sample
- M matrix spike/matrix spike duplicate
- D unspiked duplicate

10) **CONDITION ON RECEIPT**
This section is filled out by the lab to record the condition of each sample upon its receipt

11) **COMMENTS**
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601 139

JACOBS ENGINEERING GROUP INC.
1670 BROADWAY SUITE 3200, DENVER, COLORADO 80202
TELEPHONE (303) 830-6933 FAX (303) 830-6911

CHAIN OF CUSTODY RECORD

AF-L2240

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: AIR FORCE PLANT 4 (DO 26)	LABORATORY NAME & ADDRESS: PDP ANALYTICAL SERVICES
PROJECT NUMBER 05Z02601	1630 Lake Front Circle Suite B
WBS CODE 320206	SUBCONTRACT / D.O No. The Woodlands TX 77380-

CONTROL NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
AF-L224901	5/8/01	1345	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		.021
AF-L224902	5/7/01	1035	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		.022
AF-L224903	5/8/01	1150	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		.023
AF-L224904	5/8/01	0909	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		.024
AF-L224905	5/8/01	1655	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		.025
AF-L224906	5/8/01	0810	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		.026
								BN 5/10/01		

COMMENTS.

COLLECTED & RELEASED BY D. Bryan Lee	DATE 5/10/01	TIME 12:00	TURNAROUND TIME		
RECEIVED BY R. Brown	DATE 5/11/01	TIME 9:30	RELINQUISHED BY	DATE / /	TIME
RECORD RETURNED BY	DATE / /	TIME			
			SHIPPING NUMBER		

DISTRIBUTION WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

00003009

The chain-of-custody record provides formal documentation of the possession of samples from the time of collection until received at the laboratory. Internal custody procedures must be used to document possession of the samples while they are at the laboratory.

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Canary:	With sample(s) to lab; lab's receipt
Pink:	To Jacobs Data Management
Goldenrod:	Retain in field

1) **CONTROL NUMBER**
   Enter the control number of the sample
2) **COLLECTION**
   Enter the date (mo/day/yr) and the time (military) of sample collection.
3) **SAMPLER'S INITIALS**
   Enter the initials of the person(s) who collected the sample
4) **NUMBER OF CONTAINERS**
   Enter the number of containers that are grouped together as one sample.
5) **CONTAINER SIZE AND TYPE**
   Enter the volume and type of the container(s) (e.g. "40 mL VOA", "250 mL Steel Sleeve")
6) **PRESERVATIVE**
   Enter the preservative used (if the analyses requested does not require preservative, write "None") All samples are shipped at 4 degrees Celsius
7) **MATRIX CODE**
   Enter the matrix code for the matrix sampled

WG	Groundwater	WS	Surface water
WW	Waste water	WO	Ocean water
SE	Sediment	SL	Sludge
SO	Soil	WL	Leachate

8) **TYPE OF ANALYSIS**
   Enter the analytical method(s) requested These should be consistent with the workplan/sampling analysis plan for this task (e g , "EPA Method 8240", "VOA CLP").
9) **QC**
   The samples for QC analysis performed by the laboratory must be identified Enter the code for the type of QC requested:
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   - M matrix spike/matrix spike duplicate
   - D unspiked duplicate
10) **CONDITION ON RECEIPT**
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601 140

.601 141

JE JACOBS ENGINEERING GROUP INC.
1670 BROADWAY, SUITE 3200, DENVER, COLORADO 80202
TELEPHONE (303) 830-6933 FAX (303) 830-6911

AF-L2257

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: AIR FORCE PLANT 4 (DO 26)	LABORATORY NAME & ADDRESS PDP ANALYTICAL SERVICES
PROJECT NUMBER: 05Z02601	1680 Lake Front Circle Suite B
WBS CODE: 320206	SUBCONTRACT / D.O. No.: The Woodlands TX 77380-

CONTROL NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
AF-L225701	5/9/01	17:15	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B elevated DLs short list		.027
AF-L225702	5/9/01	17:15	TB BN	1	1 L Plastic	HNO3 pH	W	SW6010B (Cr-Only)		.028
AF-L225703	5/9/01	16:30	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B elevated DLs short list		.029
AF-L225704	5/9/01	16:30	TB BN	1	1 L Plastic	HNO3 pH	W	SW6010B (Cr-Only)		.030
AF-L 225705	5/7/01	0700	TB BN	2	40ml VOA	HCL	WQ	SW8260B short list		.031

BN 5/10/01

COMMENTS

	DATE	TIME		DATE	TIME
COLLECTED & RELEASED BY [signature]	5/10/01	12:00	TURNAROUND TIME		
RECEIVED BY R. Brown	5/11/01	9:30	RELINQUISHED BY	/ /	
RECORD RETURNED BY	/ /	:			
			SHIPPING NUMBER		

DISTRIBUTION WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

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Pink:	To Jacobs Data Management
Goldenrod:	Retain in field

---

1) **CONTROL NUMBER**
   Enter the control number of the sample
2) **COLLECTION**
   Enter the date (mo/day/yr) and the time (military) of sample collection.
3) **SAMPLER'S INITIALS**
   Enter the initials of the person(s) who collected the sample.
4) **NUMBER OF CONTAINERS**
   Enter the number of containers that are grouped together as one sample.
5) **CONTAINER SIZE AND TYPE**
   Enter the volume and type of the container(s) (e g. "40 mL VOA", "250 mL Steel Sleeve").
6) **PRESERVATIVE**
   Enter the preservative used (if the analyses requested does not require preservative, write "None") All samples are shipped at 4 degrees Celsius.
7) **MATRIX CODE**
   Enter the matrix code for the matrix sampled.

WG	Groundwater	WS	Surface water
WW	Waste water	WO	Ocean water
SE	Sediment	SL	Sludge
SO	Soil	WL	Leachate

8) **TYPE OF ANALYSIS**
   Enter the analytical method(s) requested These should be consistent with the workplan/sampling analysis plan for this task (e g , "EPA Method 8240", "VOA CLP")
9) **QC**
   The samples for QC analysis performed by the laboratory must be identified Enter the code for the type of QC requested
   - S single spiked sample
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10) **CONDITION ON RECEIPT**
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601 142

601 143

JACOBS ENGINEERING GROUP INC.
1670 BROADWAY, SUITE 3200 DENVER, COLORADO 80202
TELEPHONE (303) 830-6933 FAX (303) 830-6911

CHAIN OF CUSTODY RECORD

AF-L2258

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: AIR FORCE PLANT 4 (DO 26)	LABORATORY NAME & ADDRESS: PDP ANALYTICAL SERVICES
PROJECT NUMBER: 05Z02601	1680 Lake Front Circle Suite B
WBS CODE: 320206	SUBCONTRACT / D.O. No. The Woodlands TX 77380-

CONTROL NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
AF-L225801	5/9/01	0910	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		.032
AF-L225802	5/9/01	1145	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B short list		.033
AF-L225803	5/9/01	1145	TB BN	1	1 L Plastic	HNO3 pH	W	SW6010B (Cr-Only)		.034
AF-L225804	5/9/01	1500	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B elevated DLs short list		.035
AF-L225805	5/9/01	1500	TB BN	1	1 L Plastic	HNO3 pH	W	SW6010B (Cr-Only)		.036
										0
								SN 5/10/01		

COMMENTS.

COLLECTED & RELEASED BY: [signature]	DATE: 5/10/01	TIME: 12:00	TURNAROUND TIME		
RECEIVED BY: R. Brown	DATE: 5/11/01	TIME: 9:30	RELINQUISHED BY	DATE: / /	TIME
RECORD RETURNED BY	DATE: / /	TIME			
			SHIPPING NUMBER		

DISTRIBUTION WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

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Pink:	To Jacobs Data Management
Goldenrod:	Retain in field

1) **CONTROL NUMBER**
Enter the control number of the sample
2) **COLLECTION**
Enter the date (mo/day/yr) and the time (military) of sample collection
3) **SAMPLER'S INITIALS**
Enter the initials of the person(s) who collected the sample.
4) **NUMBER OF CONTAINERS**
Enter the number of containers that are grouped together as one sample.
5) **CONTAINER SIZE AND TYPE**
Enter the volume and type of the container(s) (e g "40 mL VOA", "250 mL Steel Sleeve")
6) **PRESERVATIVE**
Enter the preservative used (if the analyses requested does not require preservative, write "None"). All samples are shipped at 4 degrees Celsius.
7) **MATRIX CODE**
Enter the matrix code for the matrix sampled:

WG	Groundwater	WS	Surface water
WW	Waste water	WO	Ocean water
SE	Sediment	SL	Sludge
SO	Soil	WL	Leachate

8) **TYPE OF ANALYSIS**
Enter the analytical method(s) requested These should be consistent with the workplan/sampling analysis plan for this task (e g , "EPA Method 8240", "VOA CLP")
9) **QC**
The samples for QC analysis performed by the laboratory must be identified. Enter the code for the type of QC requested
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601 145

JE JACOBS ENGINEERING GROUP INC.
1670 BROADWAY SUITE 3200 DENVER, COLORADO 80202
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CHAIN OF CUSTODY RECORD

AF-L2259

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: AIR FORCE PLANT 4 (DO 26)
PROJECT NUMBER: 05202601
WBS CODE: 320206
SUBCONTRACT / D.O. No.:
LABORATORY NAME & ADDRESS: PDP ANALYTICAL SERVICES
1680 Lake Front Circle Suite B
The Woodlands TX 77380-

CONTROL NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
AF-L225901	5/7/01	0830	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B elevated DLs short list		.037
AF-L225902	5/7/01	0830	TB BN	1	1 L Plastic	HNO3 pH	W	SW6010B (Cr-Only)		.038
AF-L225903	5/7/01	0835	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B elevated DLs short list		.039
AF-L225904	5/9/01	1045	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B elevated DLs short list		.040
AF-L225905	5/9/01	1045	TB BN	1	1 L Plastic	HNO3 pH	W	SW6010B (Cr-Only)		.041
AF-L225906	5/9/01	1000	TB BN	3	40 mL VOA	4C HCl p	W	SW8260B elevated DLs short list		.042
AF-L225907	5/9/01	1000	TB BN	1	1 L Plastic	HNO3 pH	W	SW6010B (Cr-Only)		.043
								BN 5/10/01		

COMMENTS.

COLLECTED & RELEASED BY	DATE 5/10/01	TIME 12:00	TURNAROUND TIME	
RECEIVED BY R. Brown	DATE 5/11/01	TIME 9:30	RELINQUISHED BY	DATE / / TIME
RECORD RETURNED BY	DATE / /	TIME		
			SHIPPING NUMBER	

DISTRIBUTION WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK DATA MANAGEMENT / GOLDENROD - FIELD

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1) **CONTROL NUMBER**
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2) **COLLECTION**
Enter the date (mo/day/yr) and the time (military) of sample collection.
3) **SAMPLER'S INITIALS**
Enter the initials of the person(s) who collected the sample.
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Enter the number of containers that are grouped together as one sample.
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Enter the preservative used (if the analyses requested does not require preservative, write "None") All samples are shipped at 4 degrees Celsius.
7) **MATRIX CODE**
Enter the matrix code for the matrix sampled

WG	Groundwater	WS	Surface water
WW	Waste water	WO	Ocean water
SE	Sediment	SL	Sludge
SO	Soil	WL	Leachate

8) **TYPE OF ANALYSIS**
Enter the analytical method(s) requested These should be consistent with the workplan/sampling analysis plan for this task (e g , "EPA Method 8240", "VOA CLP")
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The samples for QC analysis performed by the laboratory must be identified Enter the code for the type of QC requested
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CHAIN OF CUSTODY RECORD

AF-L2261

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: AIR FORCE PLANT 4 (DO 26)			LABORATORY NAME & ADDRESS: PDP ANALYTICAL SERVICES
PROJECT NUMBER: 05Z02601			1680 Lake Front Circle Suite B
WBS CODE: 320206	SUBCONTRACT / D.O. No.		The Woodlands TX 77380-

CONTROL NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
AF-L226101	5/8/01	1540	TB BW	3	40 mL VOA	4C HCl p	W	SW8260B short list		.044
AF-L226102	5/8/01	1450	TB BW	3	40 mL VOA	4C HCl p	W	SW8260B short list		.045
AF-L226103	5/8/01	1625	TB BW	3	40 mL VOA	4C HCl p	W	SW8260B short list		.046
AF-L226104	5/8/01	1630	TB BW	3	40 mL VOA	4C HCl p	W	SW8260B short list		.047
								BW 5/10/01		

COMMENTS:

COLLECTED & RELEASED BY	DATE 5/10/01	TIME 12:00	TURNAROUND TIME		
RECEIVED BY R. B	DATE 5/11/01	TIME 9:30	RELINQUISHED BY	DATE	TIME
RECORD RETURNED BY	DATE	TIME			
			SHIPPING NUMBER		

DISTRIBUTION WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

The chain-of-custody record provides formal documentation of the possession of samples from the time of collection until received at the laboratory. Internal custody procedures must be used to document possession of the samples while they are at the laboratory.

To fill out this form, specify the project name, project number, and appropriate WBS code in the box at the upper left-hand corner of the form. In the box to the immediate right, indicate the proper shipping address of the laboratory that is to perform the analyses. Enter the shipping number (e.g , FedEx airbill) in the space at the bottom of the form.

After the form is completed, the copies are distributed as follows.

White:	With sample(s) to lab, return to Jacobs project file upon receipt and signature.
Canary:	With sample(s) to lab; lab's receipt
Pink:	To Jacobs Data Management
Goldenrod:	Retain in field

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1) **CONTROL NUMBER**
   Enter the control number of the sample
2) **COLLECTION**
   Enter the date (mo/day/yr) and the time (military) of sample collection
3) **SAMPLER'S INITIALS**
   Enter the initials of the person(s) who collected the sample
4) **NUMBER OF CONTAINERS**
   Enter the number of containers that are grouped together as one sample.
5) **CONTAINER SIZE AND TYPE**
   Enter the volume and type of the container(s) (e.g. "40 mL VOA", "250 mL Steel Sleeve")
6) **PRESERVATIVE**
   Enter the preservative used (if the analyses requested does not require preservative, write "None") All samples are shipped at 4 degrees Celsius.
7) **MATRIX CODE**
   Enter the matrix code for the matrix sampled.

WG	Groundwater	WS	Surface water
WW	Waste water	WO	Ocean water
SE	Sediment	SL	Sludge
SO	Soil	WL	Leachate

8) **TYPE OF ANALYSIS**
   Enter the analytical method(s) requested These should be consistent with the workplan/sampling analysis plan for this task (e g , "EPA Method 8240", "VOA CLP")
9) **QC**
   The samples for QC analysis performed by the laboratory must be identified Enter the code for the type of QC requested.
   - S single spiked sample
   - M matrix spike/matrix spike duplicate
   - D unspiked duplicate
10) **CONDITION ON RECEIPT**
    This section is filled out by the lab to record the condition of each sample upon its receipt
11) **COMMENTS**
    This section is used for any additional information that might be useful to the laboratory (e g , special handling requirements such as accelerated turnaround times, suspected contaminants, additional compounds to be analyzed, high level contaminant, etc)
12) **COLLECTED AND RELEASED BY**
    The person(s) who collected the samples must sign in this area Date and time are as in #2.
13) **CUSTODY BLOCK**
    Whenever custody of samples is transferred, the person receiving the samples must sign here At that same time, the person releasing the samples must also sign Date and time are as in #2

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PDP Analytical Services

LABORATORY REPORT

TOTAL METALS

CLIENT NAME	:	JACOBS ENGINEERING	CLIENT SAMPLE ID	:	AF-L224602
PROJECT NAME	:	AIR FORCE PLANT 4	LAB SAMPLE ID	:	6836.002
PROJECT NUMBER	:	05-2026-01	DATE RECEIVED	:	5/11/01
DATE SAMPLED	:	5/10/01	PRINTED ON	:	5/18/2001 15:41
SAMPLE MATRIX	:	WATER	% MOISTURE	:	

ANALYTE	METHOD	DATE PREPARED	DATE ANALYZED	DILUTION	MDL	QUANTITATION LIMIT	RESULT	Q	ANALYST
Arsenic, Total	SW846-6010B	5/15/01	5/16/01	1	0.0044	0.005 MG/L	ND MG/L		HT
Cadmium, Total	SW846-6010B	5/15/01	5/16/01	1	0.0003	0.001 MG/L	ND MG/L		HT
Copper, Total	SW846-6010B	5/15/01	5/16/01	1	0.01	0.01 MG/L	ND MG/L		HT
Lead, Total	SW846-6010B	5/15/01	5/16/01	1	0.002	0.01 MG/L	ND MG/L		HT
Zinc, Total	SW846-6010B	5/15/01	5/16/01	1	0.009	0.02 MG/L	ND MG/L		HT

QUALITY ASSURANCE/QUALITY CONTROL

QC BATCH IDs

ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID
Arsenic, Total	ICPB2017A	Cadmium, Total	ICPB2017A	Copper, Total	ICPB2017A
Lead, Total	ICPB2017A	Zinc, Total	ICPB2017A		

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LABORATORY REPORT

TOTAL METALS

CLIENT NAME	:	JACOBS ENGINEERING	CLIENT SAMPLE ID	:	AF-L224603
PROJECT NAME	:	AIR FORCE PLANT 4	LAB SAMPLE ID	:	6836.003
PROJECT NUMBER	:	05-2026-01	DATE RECEIVED	:	5/11/01
DATE SAMPLED	:	5/10/01	PRINTED ON	:	5/18/2001 15:54
SAMPLE MATRIX	:	SOIL	% MOISTURE	:	16.39

ANALYTE	METHOD	DATE PREPARED	DATE ANALYZED	DILUTION	MDL	QUANTITATION LIMIT	RESULT	Q	ANALYST
Silver, Total	SW846-6010B	5/15/01	5/15/01	1	0.0009	0.79 MG/KG	1.9 MG/KG		HT

QUALITY ASSURANCE/QUALITY CONTROL

QC BATCH IDs

ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID
Silver, Total	ICPB2018A				

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LABORATORY REPORT

TOTAL METALS

CLIENT NAME	:	JACOBS ENGINEERING	CLIENT SAMPLE ID	:	AF-L224605
PROJECT NAME	:	AIR FORCE PLANT 4	LAB SAMPLE ID	:	6836.005
PROJECT NUMBER	:	05-2026-01	DATE RECEIVED	:	5/11/01
DATE SAMPLED	:	5/10/01	PRINTED ON	:	5/18/2001 15:41
SAMPLE MATRIX	:	WATER	% MOISTURE	:	

ANALYTE	METHOD	DATE PREPARED	DATE ANALYZED	DILU-TION	MDL	QUANTITATION LIMIT	RESULT	Q	ANA-LYST
Arsenic, Total	SW846-6010B	5/15/01	5/16/01	1	0.0044	0.005 MG/L	ND MG/L		HT
Cadmium, Total	SW846-6010B	5/15/01	5/16/01	1	0.0003	0.001 MG/L	ND MG/L		HT
Copper, Total	SW846-6010B	5/15/01	5/16/01	1	0.01	0.01 MG/L	ND MG/L		HT
Lead, Total	SW846-6010B	5/15/01	5/16/01	1	0.002	0.01 MG/L	ND MG/L		HT
Zinc, Total	SW846-6010B	5/15/01	5/16/01	1	0.009	0.02 MG/L	ND MG/L		HT

QUALITY ASSURANCE/QUALITY CONTROL

QC BATCH IDs

ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID
Arsenic, Total	ICPB2017A	Cadmium, Total	ICPB2017A	Copper, Total	ICPB2017A
Lead, Total	ICPB2017A	Zinc, Total	ICPB2017A		

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LABORATORY REPORT

TOTAL METALS

CLIENT NAME	:	JACOBS ENGINEERING	CLIENT SAMPLE ID	:	AF-L224606
PROJECT NAME	:	AIR FORCE PLANT 4	LAB SAMPLE ID	:	6836.006
PROJECT NUMBER	:	05-2026-01	DATE RECEIVED	:	5/11/01
DATE SAMPLED	:	5/10/01	PRINTED ON	:	5/18/2001 15:54
SAMPLE MATRIX	:	SOIL	% MOISTURE	:	32.84

ANALYTE	METHOD	DATE PREPARED	DATE ANALYZED	DILUTION	MDL	QUANTITATION LIMIT	RESULT	Q	ANALYST
Silver, Total	SW846-6010B	5/15/01	5/15/01	1	0.0009	0.99 MG/KG	ND MG/KG		HT

QUALITY ASSURANCE/QUALITY CONTROL

QC BATCH IDs

ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID
Silver, Total	ICPB2018A				

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LABORATORY REPORT

TOTAL METALS

CLIENT NAME	: JACOBS ENGINEERING		CLIENT SAMPLE ID	: AF-L224703	
PROJECT NAME	: AIR FORCE PLANT 4		LAB SAMPLE ID	: 6836.009	
PROJECT NUMBER	: 05-2026-01		DATE RECEIVED	: 5/11/01	
DATE SAMPLED	: 5/10/01		PRINTED ON	: 5/18/2001	15:54
SAMPLE MATRIX	: SOIL		% MOISTURE	: 19.79	

ANALYTE	METHOD	DATE PREPARED	DATE ANALYZED	DILU-TION	MDL	QUANTITATION LIMIT	RESULT	Q	ANA-LYST
Silver, Total	SW846-6010B	5/15/01	5/15/01	1	0.0009	0.82 MG/KG	ND MG/KG		HT

QUALITY ASSURANCE/QUALITY CONTROL

QC BATCH IDs

ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID
Silver, Total	ICP82018A				

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LABORATORY REPORT

TOTAL METALS

CLIENT NAME	:	JACOBS ENGINEERING	CLIENT SAMPLE ID	:	AF-L224704
PROJECT NAME	:	AIR FORCE PLANT 4	LAB SAMPLE ID	:	6836.010
PROJECT NUMBER	:	05-2026-01	DATE RECEIVED	:	5/11/01
DATE SAMPLED	:	5/10/01	PRINTED ON	:	5/18/2001 15:54
SAMPLE MATRIX	:	SOIL	% MOISTURE	:	23.3

ANALYTE	METHOD	DATE PREPARED	DATE ANALYZED	DILU-TION	MDL	QUANTITATION LIMIT	RESULT	Q	ANA-LYST
Silver, Total	SW846-6010B	5/15/01	5/15/01	1	0.0009	0.86 MG/KG	1.6 MG/KG		HT

QUALITY ASSURANCE/QUALITY CONTROL

QC BATCH IDs

ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID
Silver, Total	ICPB2018A				

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LABORATORY REPORT

TOTAL METALS

CLIENT NAME	:	JACOBS ENGINEERING	CLIENT SAMPLE ID	:	AF-L224706
PROJECT NAME	:	AIR FORCE PLANT 4	LAB SAMPLE ID	:	6836.012
PROJECT NUMBER	:	05-Z026-01	DATE RECEIVED	:	5/11/01
DATE SAMPLED	:	5/10/01	PRINTED ON	:	5/18/2001 15:41
SAMPLE MATRIX	:	WATER	% MOISTURE	:	

ANALYTE	METHOD	DATE PREPARED	DATE ANALYZED	DILUTION	MDL	QUANTITATION LIMIT	RESULT	Q	ANALYST
Arsenic, Total	SW846-6010B	5/15/01	5/16/01	1	0.0044	0.005 MG/L	ND MG/L		HT
Cadmium, Total	SW846-6010B	5/15/01	5/16/01	1	0.0003	0.001 MG/L	ND MG/L		HT
Copper, Total	SW846-6010B	5/15/01	5/16/01	1	0.01	0.01 MG/L	ND MG/L		HT
Lead, Total	SW846-6010B	5/15/01	5/16/01	1	0.002	0.01 MG/L	ND MG/L		HT
Silver, Total	SW846-6010B	5/15/01	5/16/01	1	0.0009	0.002 MG/L	ND MG/L		HT
Zinc, Total	SW846-6010B	5/15/01	5/16/01	1	0.009	0.02 MG/L	ND MG/L		HT

QUALITY ASSURANCE/QUALITY CONTROL

QC BATCH IDs

ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID
Arsenic, Total	ICPB2017A	Cadmium, Total	ICPB2017A	Copper, Total	ICPB2017A
Lead, Total	ICPB2017A	Silver, Total	ICPB2017A	Zinc, Total	ICPB2017A

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LABORATORY REPORT

TOTAL METALS

CLIENT NAME	:	JACOBS ENGINEERING	CLIENT SAMPLE ID	:	AF-L224806
PROJECT NAME	:	AIR FORCE PLANT 4	LAB SAMPLE ID	:	6836.019
PROJECT NUMBER	:	05-2026-01	DATE RECEIVED	:	5/11/01
DATE SAMPLED	:	5/10/01	PRINTED ON	:	5/18/2001 15:41
SAMPLE MATRIX	:	WATER	% MOISTURE	:	

ANALYTE	METHOD	DATE PREPARED	DATE ANALYZED	DILUTION	MDL	QUANTITATION LIMIT	RESULT	Q	ANALYST
Arsenic, Total	SW846-6010B	5/15/01	5/16/01	1	0.0044	0.005 MG/L	ND MG/L		HT
Cadmium, Total	SW846-6010B	5/15/01	5/16/01	1	0.0003	0.001 MG/L	ND MG/L		HT
Copper, Total	SW846-6010B	5/15/01	5/16/01	1	0.01	0.01 MG/L	ND MG/L		HT
Lead, Total	SW846-6010B	5/15/01	5/16/01	1	0.002	0.01 MG/L	ND MG/L		HT
Zinc, Total	SW846-6010B	5/15/01	5/16/01	1	0.009	0.02 MG/L	ND MG/L		HT

QUALITY ASSURANCE/QUALITY CONTROL

QC BATCH IDs

ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID
Arsenic, Total	ICPB2017A	Cadmium, Total	ICPB2017A	Copper, Total	ICPB2017A
Lead, Total	ICPB2017A	Zinc, Total	ICPB2017A		

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LABORATORY REPORT

TOTAL METALS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L224807
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6836.020
PROJECT NUMBER :	05-Z026-01	DATE RECEIVED :	5/11/01
DATE SAMPLED :	5/10/01	PRINTED ON :	5/18/2001 15:41
SAMPLE MATRIX :	WATER	% MOISTURE :	

ANALYTE	METHOD	DATE PREPARED	DATE ANALYZED	DILU-TION	MDL	QUANTITATION LIMIT	RESULT	Q	ANA-LYST
Arsenic, Total	SW846-6010B	5/15/01	5/16/01	1	0.0044	0.005 MG/L	ND MG/L		HT
Cadmium, Total	SW846-6010B	5/15/01	5/16/01	1	0.0003	0.001 MG/L	ND MG/L		HT
Copper, Total	SW846-6010B	5/15/01	5/16/01	1	0.01	0.01 MG/L	ND MG/L		HT
Lead, Total	SW846-6010B	5/15/01	5/16/01	1	0.002	0.01 MG/L	ND MG/L		HT
Zinc, Total	SW846-6010B	5/15/01	5/16/01	1	0.009	0.02 MG/L	ND MG/L		HT

QUALITY ASSURANCE/QUALITY CONTROL

QC BATCH IDs

ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID
Arsenic, Total	ICPB2017A	Cadmium, Total	ICPB2017A	Copper, Total	ICPB2017A
Lead, Total	ICPB2017A	Zinc, Total	ICPB2017A		

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LABORATORY REPORT

TOTAL METALS

CLIENT NAME	:	JACOBS ENGINEERING	CLIENT SAMPLE ID	:	AF-L225702
PROJECT NAME	:	AIR FORCE PLANT 4	LAB SAMPLE ID	:	6836.028
PROJECT NUMBER	:	05-2026-01	DATE RECEIVED	:	5/11/01
DATE SAMPLED	:	5/9/01	PRINTED ON	:	5/18/2001 15:41
SAMPLE MATRIX	:	WATER	% MOISTURE	:	

ANALYTE	METHOD	DATE PREPARED	DATE ANALYZED	DILUTION	MDL	QUANTITATION LIMIT	RESULT	Q	ANALYST
Chromium, Total	SW846-6010B	5/15/01	5/16/01	1	0.0005	0.01 MG/L	ND MG/L		HT

QUALITY ASSURANCE/QUALITY CONTROL

QC BATCH IDs

ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID
Chromium, Total	ICPB2017A				

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LABORATORY REPORT

TOTAL METALS

CLIENT NAME	:	JACOBS ENGINEERING	CLIENT SAMPLE ID	:	AF-L225704
PROJECT NAME	:	AIR FORCE PLANT 4	LAB SAMPLE ID	:	6836.030
PROJECT NUMBER	:	05-Z026-01	DATE RECEIVED	:	5/11/01
DATE SAMPLED	:	5/9/01	PRINTED ON	:	5/18/2001 15:41
SAMPLE MATRIX	:	WATER	% MOISTURE	:	

ANALYTE	METHOD	DATE PREPARED	DATE ANALYZED	DILUTION	MDL	QUANTITATION LIMIT	RESULT	Q	ANALYST
Chromium, Total	SW846-6010B	5/15/01	5/16/01	1	0.0005	0.01 MG/L	0.030 MG/L		HT

QUALITY ASSURANCE/QUALITY CONTROL

QC BATCH IDs

ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID
Chromium, Total	ICPB2017A				

601 160

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LABORATORY REPORT

TOTAL METALS

CLIENT NAME	:	JACOBS ENGINEERING	CLIENT SAMPLE ID	:	AF-L225803
PROJECT NAME	:	AIR FORCE PLANT 4	LAB SAMPLE ID	:	6836.034
PROJECT NUMBER	:	05-2026-01	DATE RECEIVED	:	5/11/01
DATE SAMPLED	:	5/9/01	PRINTED ON	:	5/18/2001 15:41
SAMPLE MATRIX	:	WATER	% MOISTURE	:	

ANALYTE	METHOD	DATE PREPARED	DATE ANALYZED	DILUTION	MDL	QUANTITATION LIMIT	RESULT	Q	ANALYST
Chromium, Total	SW846-6010B	5/15/01	5/16/01	1	0.0005	0.01 MG/L	ND MG/L		HT

QUALITY ASSURANCE/QUALITY CONTROL

QC BATCH IDs

ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID
Chromium, Total	ICPB2017A				

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LABORATORY REPORT

TOTAL METALS

CLIENT NAME	: JACOBS ENGINEERING		CLIENT SAMPLE ID	: AF-L225805	
PROJECT NAME	: AIR FORCE PLANT 4		LAB SAMPLE ID	: 6836.036	
PROJECT NUMBER	: 05-2026-01		DATE RECEIVED	: 5/11/01	
DATE SAMPLED	: 5/9/01		PRINTED ON	: 5/18/2001	15:41
SAMPLE MATRIX	: WATER		% MOISTURE	:	

ANALYTE	METHOD	DATE PREPARED	DATE ANALYZED	DILUTION	MDL	QUANTITATION LIMIT	RESULT	Q	ANALYST
Chromium, Total	SW846-6010B	5/15/01	5/16/01	1	0.0005	0.01 MG/L	0.071 MG/L		HT

QUALITY ASSURANCE/QUALITY CONTROL

QC BATCH IDs

ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID
Chromium, Total	ICPB2017A				

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LABORATORY REPORT

TOTAL METALS

CLIENT NAME	:	JACOBS ENGINEERING	CLIENT SAMPLE ID	:	AF-L225902
PROJECT NAME	:	AIR FORCE PLANT 4	LAB SAMPLE ID	:	6836.038
PROJECT NUMBER	:	05-2026-01	DATE RECEIVED	:	5/11/01
DATE SAMPLED	:	5/7/01	PRINTED ON	:	5/18/2001 15:41
SAMPLE MATRIX	:	WATER	% MOISTURE	:	

ANALYTE	METHOD	DATE PREPARED	DATE ANALYZED	DILU-TION	MDL	QUANTITATION LIMIT	RESULT	Q	ANA-LYST
Chromium, Total	SW846-6010B	5/15/01	5/16/01	1	0.0005	0.01 MG/L	0.069 MG/L		HT

QUALITY ASSURANCE/QUALITY CONTROL

QC BATCH IDs

ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID
Chromium, Total	ICPB2017A				

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LABORATORY REPORT

TOTAL METALS

CLIENT NAME	:	JACOBS ENGINEERING	CLIENT SAMPLE ID	:	AF-L225905
PROJECT NAME	:	AIR FORCE PLANT 4	LAB SAMPLE ID	:	6836.041
PROJECT NUMBER	:	05-Z026-01	DATE RECEIVED	:	5/11/01
DATE SAMPLED	:	5/9/01	PRINTED ON	:	5/18/2001 15:41
SAMPLE MATRIX	:	WATER	% MOISTURE	:	

ANALYTE	METHOD	DATE PREPARED	DATE ANALYZED	DILUTION	MDL	QUANTITATION LIMIT	RESULT	Q	ANALYST
Chromium, Total	SW846-6010B	5/15/01	5/16/01	1	0.0005	0.01 MG/L	0.127 MG/L		HT

QUALITY ASSURANCE/QUALITY CONTROL

QC BATCH IDs

ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID
Chromium, Total	ICPB2017A				

PDP Analytical Services
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LABORATORY REPORT

POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD

CLIENT NAME	: JACOBS ENGINEERING	CLIENT SAMPLE ID	: AF-L224603
PROJECT NAME	: AIR FORCE PLANT 4	LAB SAMPLE ID	: 6836.003
PROJECT NUMBER	: 05-2026-01	METHOD REFERENCE	: SW846-8082
DATE SAMPLED	: 5/10/01	DATE RECEIVED	: 5/11/01
SAMPLE MATRIX	: SOIL	PRINTED ON	: 5/16/2001 8:20

% MOISTURE	16.39	ANALYST	SVS
CONTAINER ID	A	DATE ANALYZED	05/14/01
DATE EXTRACTED	05/14/01	DILUTION	1
EXTRACT VOLUME	10 mL	INSTRUMENT FILE	A09797.D
INSTRUMENT ID	A-HP5890A	SAMPLE WEIGHT	30.02 g
TIME ANALYZED	23:58		

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
Aroclor 1016	40 UG/KG	ND UG/KG	
Aroclor 1221	40 UG/KG	ND UG/KG	
Aroclor 1232	40 UG/KG	ND UG/KG	
Aroclor 1242	40 UG/KG	ND UG/KG	
Aroclor 1248	40 UG/KG	ND UG/KG	
Aroclor 1254	40 UG/KG	ND UG/KG	
Aroclor 1260	40 UG/KG	ND UG/KG	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Decachlorobiphenyl	7.97 UG/KG	30 - 150	77
Tetrachloro-m-xylene	7.97 UG/KG	30 - 150	83

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : PCB755	PREP BLANK ID : PCBB755	LCS ID : PCBL626
MS ID : 6836.003MS	MSD ID : 6836.003MSD	

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LABORATORY REPORT

TOTAL METALS

CLIENT NAME	:	JACOBS ENGINEERING	CLIENT SAMPLE ID	:	AF-L225907
PROJECT NAME	:	AIR FORCE PLANT 4	LAB SAMPLE ID	:	6836.043
PROJECT NUMBER	:	05-2026-01	DATE RECEIVED	:	5/11/01
DATE SAMPLED	:	5/9/01	PRINTED ON	:	5/18/2001 15:41
SAMPLE MATRIX	:	WATER	% MOISTURE	:	

ANALYTE	METHOD	DATE PREPARED	DATE ANALYZED	DILUTION	MDL	QUANTITATION LIMIT	RESULT	Q	ANALYST
Chromium, Total	SW846-6D10B	5/15/01	5/16/01	1	0.0005	0.01 MG/L	0.013 MG/L		HT

QUALITY ASSURANCE/QUALITY CONTROL

QC BATCH IDs

ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID	ANALYTE	QC BATCH ID
Chromium, Total	ICPB2017A				

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LABORATORY REPORT

POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD

CLIENT NAME	: JACOBS ENGINEERING	CLIENT SAMPLE ID	: AF-L224606
PROJECT NAME	: AIR FORCE PLANT 4	LAB SAMPLE ID	: 6836.006
PROJECT NUMBER	: 05-2026-01	METHOD REFERENCE	: SW846-8082
DATE SAMPLED	: 5/10/01	DATE RECEIVED	: 5/11/01
SAMPLE MATRIX	: SOIL	PRINTED ON	: 5/16/2001 8:20

% MOISTURE	32.84	ANALYST	SVS
CONTAINER ID	: A	DATE ANALYZED	: 05/15/01
DATE EXTRACTED	: 05/14/01	DILUTION	: 1
EXTRACT VOLUME	10 mL	INSTRUMENT FILE	: A09800.D
INSTRUMENT ID	: A-HP5890A	SAMPLE WEIGHT	: 30.01 g
TIME ANALYZED	: 01:40		

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
Aroclor 1016	50 UG/KG	ND UG/KG	
Aroclor 1221	50 UG/KG	ND UG/KG	
Aroclor 1232	50 UG/KG	ND UG/KG	
Aroclor 1242	50 UG/KG	ND UG/KG	
Aroclor 1248	50 UG/KG	ND UG/KG	
Aroclor 1254	50 UG/KG	ND UG/KG	
Aroclor 1260	50 UG/KG	ND UG/KG	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Decachlorobiphenyl	9.92 UG/KG	30 - 150	273
Tetrachloro-m-xylene	9.92 UG/KG	30 - 150	90

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : PCB755 PREP BLANK ID : PCBB755 LCS ID : PCBL626

MS ID : 6836.003MS MSD ID : 6836.003MSD

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LABORATORY REPORT

POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD

CLIENT NAME	: JACOBS ENGINEERING	CLIENT SAMPLE ID	: AF-L224703
PROJECT NAME	: AIR FORCE PLANT 4	LAB SAMPLE ID	: 6836.009
PROJECT NUMBER	: 05-2026-01	METHOD REFERENCE	: SW846-8082
DATE SAMPLED	: 5/10/01	DATE RECEIVED	: 5/11/01
SAMPLE MATRIX	: SOIL	PRINTED ON	: 5/16/2001 8:20

% MOISTURE	19.79	ANALYST	: SVS
CONTAINER ID	A	DATE ANALYZED	: 05/15/01
DATE EXTRACTED	05/14/01	DILUTION	: 1
EXTRACT VOLUME	: 10 mL	INSTRUMENT FILE	: A09801.D
INSTRUMENT ID	: A-HP5890A	SAMPLE WEIGHT	: 30.01 g
TIME ANALYZED	: 02:14		

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
Aroclor 1016	42 UG/KG	ND UG/KG	
Aroclor 1221	42 UG/KG	ND UG/KG	
Aroclor 1232	42 UG/KG	ND UG/KG	
Aroclor 1242	42 UG/KG	ND UG/KG	
Aroclor 1248	42 UG/KG	ND UG/KG	
Aroclor 1254	42 UG/KG	ND UG/KG	
Aroclor 1260	42 UG/KG	ND UG/KG	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Decachlorobiphenyl	8.31 UG/KG	30 - 150	78
Tetrachloro-m-xylene	8.31 UG/KG	30 - 150	89

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : PCB755 PREP BLANK ID : PCBB755 LCS ID : PCBL626

MS ID : 6836.003MS MSD ID : 6836.003MSD

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LABORATORY REPORT

POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD

CLIENT NAME	: JACOBS ENGINEERING	CLIENT SAMPLE ID	: AF-L224704
PROJECT NAME	: AIR FORCE PLANT 4	LAB SAMPLE ID	: 6836.010
PROJECT NUMBER	: 05-2026-01	METHOD REFERENCE	: SW846-8082
DATE SAMPLED	: 5/10/01	DATE RECEIVED	: 5/11/01
SAMPLE MATRIX	: SOIL	PRINTED ON	: 5/16/2001 8:20

% MOISTURE	23.3	ANALYST	: SVS
CONTAINER ID	A	DATE ANALYZED	05/15/01
DATE EXTRACTED	: 05/14/01	DILUTION	1
EXTRACT VOLUME	: 10 mL	INSTRUMENT FILE	A09802.D
INSTRUMENT ID	: A-HP5890A	SAMPLE WEIGHT	: 30.01 g
TIME ANALYZED	02:48		

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
Aroclor 1016	43 UG/KG	ND UG/KG	
Aroclor 1221	43 UG/KG	ND UG/KG	
Aroclor 1232	43 UG/KG	ND UG/KG	
Aroclor 1242	43 UG/KG	ND UG/KG	
Aroclor 1248	43 UG/KG	ND UG/KG	
Aroclor 1254	43 UG/KG	ND UG/KG	
Aroclor 1260	43 UG/KG	ND UG/KG	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Decachlorobiphenyl	8.69 UG/KG	30 - 150	203
Tetrachloro-m-xylene	8.69 UG/KG	30 - 150	57

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : PCB755	PREP BLANK ID : PCBB755	LCS ID : PCBL626
MS ID : 6836.003MS	MSD ID : 6836.003MSD	

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L224601
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6836.001
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/10/01	DATE RECEIVED :	5/11/01
SAMPLE MATRIX :	WATER	PRINTED ON :	6/6/2001 8:42

ANALYST	ESP	CONTAINER ID	A
DATE ANALYZED	5/23/01	DILUTION	1
INSTRUMENT FILE	G3566.D	INSTRUMENT ID	G-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	21:46

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	0.56 UG/L	J
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	ND UG/L	
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	99
1,2-Dichloroethane-d4	10 UG/L	64 - 130	95
4-Bromofluorobenzene	10 UG/L	72 - 137	88
Dibromofluoromethane	10 UG/L	56 - 153	94

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV21 PREP BLANK ID : GVBLK21 LCS ID : GVLCS21

LCSD ID : GVLCS21D

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LABORATORY REPORT

POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L224707
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6836.013
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8082
DATE SAMPLED :	5/10/01	DATE RECEIVED :	5/11/01
SAMPLE MATRIX :	WATER	PRINTED ON :	5/16/2001 8:20

ANALYST	: SVS	CONTAINER ID	: A
DATE ANALYZED	: 05/14/01	DATE EXTRACTED	: 05/14/01
DILUTION	1	EXTRACT VOLUME	: 10 mL
INSTRUMENT FILE	A09793.D	INSTRUMENT ID	: A-HP5890A
SAMPLE VOLUME	: 1000 mL	TIME ANALYZED	21:41

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
Aroclor 1016	1.0 UG/L	ND UG/L	
Aroclor 1221	1.0 UG/L	ND UG/L	
Aroclor 1232	1.0 UG/L	ND UG/L	
Aroclor 1242	1.0 UG/L	ND UG/L	
Aroclor 1248	1.0 UG/L	ND UG/L	
Aroclor 1254	1.0 UG/L	ND UG/L	
Aroclor 1260	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Decachlorobiphenyl	0.2 UG/L	30 - 150	62
Tetrachloro-m-xylene	0.2 UG/L	30 - 150	60

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : PCB756 PREP BLANK ID : PCBB756 LCS ID : PCBL627

LCSD ID : PCBL627D

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME	: JACOBS ENGINEERING	CLIENT SAMPLE ID	: AF-L224604
PROJECT NAME	: AIR FORCE PLANT 4	LAB SAMPLE ID	: 6836.004
PROJECT NUMBER	: 05-2026-01	METHOD REFERENCE	: SW846-8260B
DATE SAMPLED	: 5/10/01	DATE RECEIVED	: 5/11/01
SAMPLE MATRIX	: WATER	PRINTED ON	: 6/6/2001 8:42

ANALYST	: ESP	CONTAINER ID	: A
DATE ANALYZED	: 5/23/01	DILUTION	: 1
INSTRUMENT FILE	: G3567.D	INSTRUMENT ID	: G-HP5973
PURGE VOLUME	: 20 mL	TIME ANALYZED	: 22:24

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	1.4 UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	ND UG/L	
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	90
1,2-Dichloroethane-d4	10 UG/L	64 - 130	86
4-Bromofluorobenzene	10 UG/L	72 - 137	81
Dibromofluoromethane	10 UG/L	56 - 153	85

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV21 PREP BLANK ID : GVBLK21 LCS ID : GVLCS21

LCSD ID : GVLCS21D

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME	: JACOBS ENGINEERING		CLIENT SAMPLE ID	: AF-L224701	
PROJECT NAME	: AIR FORCE PLANT 4		LAB SAMPLE ID	: 6836.007	
PROJECT NUMBER	: 05-2026-01		METHOD REFERENCE	: SW846-8260B	
DATE SAMPLED	: 5/10/01		DATE RECEIVED	: 5/11/01	
SAMPLE MATRIX	: WATER		PRINTED ON	: 6/6/2001	8:42

ANALYST	: ESP	CONTAINER ID	: A
DATE ANALYZED	: 5/24/01	DILUTION	: 1
INSTRUMENT FILE	: G3595.D	INSTRUMENT ID	: G-HP5973
PURGE VOLUME	: 20 mL	TIME ANALYZED	: 21:47

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	ND UG/L	
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	103
1,2-Dichloroethane-d4	10 UG/L	64 - 130	123
4-Bromofluorobenzene	10 UG/L	72 - 137	89
Dibromofluoromethane	10 UG/L	56 - 153	113

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV23 PREP BLANK ID : GVBLK23 LCS ID : GVLCS23

LCSD ID : GVLCS23D

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L224702
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6836.008
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/10/01	DATE RECEIVED :	5/11/01
SAMPLE MATRIX :	WATER	PRINTED ON :	6/6/2001 8:42

ANALYST	ESP	CONTAINER ID	A
DATE ANALYZED	5/24/01	DILUTION	1
INSTRUMENT FILE	G3596.D	INSTRUMENT ID	G-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	22:26

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	ND UG/L	
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	102
1,2-Dichloroethane-d4	10 UG/L	64 - 130	127
4-Bromofluorobenzene	10 UG/L	72 - 137	90
Dibromofluoromethane	10 UG/L	56 - 153	115

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV23 PREP BLANK ID : GVBLK23 LCS ID : GVLCS23

LCSD ID : GVLCS23D

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME	: JACOBS ENGINEERING	CLIENT SAMPLE ID	: AF-L224705
PROJECT NAME	: AIR FORCE PLANT 4	LAB SAMPLE ID	: 6836.011
PROJECT NUMBER	: 05-2026-01	METHOD REFERENCE	: SW846-8260B
DATE SAMPLED	: 5/10/01	DATE RECEIVED	: 5/11/01
SAMPLE MATRIX	: WATER	PRINTED ON	: 6/6/2001 8:42

ANALYST	ESP	CONTAINER ID	A
DATE ANALYZED	: 5/24/01	DILUTION	1
INSTRUMENT FILE	: G3597.D	INSTRUMENT ID	: G-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	: 23:05

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	ND UG/L	
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	105
1,2-Dichloroethane-d4	10 UG/L	64 - 130	123
4-Bromofluorobenzene	10 UG/L	72 - 137	94
Dibromofluoromethane	10 UG/L	56 - 153	114

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV23 PREP BLANK ID : GVBLK23 LCS ID : GVLCS23

LCSD ID : GVLCS23D

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L224801
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6836.014
PROJECT NUMBER :	05-Z026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/8/01	DATE RECEIVED :	5/11/01
SAMPLE MATRIX :	WATER	PRINTED ON :	6/6/2001 8:42

ANALYST	ESP	CONTAINER ID	D
DATE ANALYZED	6/2/01	DILUTION	1
INSTRUMENT FILE	F7129.D	INSTRUMENT ID	F-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	18:37

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	6.9 UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	0.54 UG/L	J
Trichloroethene	1.0 UG/L	5.7 UG/L	
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	107
1,2-Dichloroethane-d4	10 UG/L	64 - 130	106
4-Bromofluorobenzene	10 UG/L	72 - 137	103
Dibromofluoromethane	10 UG/L	56 - 153	110

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : FV26 PREP BLANK ID : FVBLK26 LCS ID : FVLCS26

LCSD ID : FVLCS26D

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L224802
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6836.015
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/8/01	DATE RECEIVED :	5/11/01
SAMPLE MATRIX :	WATER	PRINTED ON :	6/6/2001 8:42

ANALYST	ESP	CONTAINER ID	B
DATE ANALYZED	6/3/01	DILUTION	: 1
INSTRUMENT FILE	F7139.D	INSTRUMENT ID	F-HP5973
PURGE VOLUME	: 20 mL	TIME ANALYZED	: 00:47

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	ND UG/L	
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	101
1,2-Dichloroethane-d4	10 UG/L	64 - 130	102
4-Bromofluorobenzene	10 UG/L	72 - 137	95
Dibromofluoromethane	10 UG/L	56 - 153	106

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : FV26 PREP BLANK ID : FVBLK26 LCS ID : FVLCS26

LCSD ID : FVLCS26D

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME	: JACOBS ENGINEERING	CLIENT SAMPLE ID	: AF-L224803
PROJECT NAME	: AIR FORCE PLANT 4	LAB SAMPLE ID	: 6836.016
PROJECT NUMBER	: 05-2026-01	METHOD REFERENCE	: SW846-8260B
DATE SAMPLED	: 5/8/01	DATE RECEIVED	: 5/11/01
SAMPLE MATRIX	: WATER	PRINTED ON	: 6/6/2001 8:42

ANALYST	ESP	CONTAINER ID	B
DATE ANALYZED	6/2/01	DILUTION	: 1
INSTRUMENT FILE	. F7132.D	INSTRUMENT ID	F-HP5973
PURGE VOLUME	: 20 mL	TIME ANALYZED	. 20:28

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	1.8 UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	7.0 UG/L	
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	97
1,2-Dichloroethane-d4	10 UG/L	64 - 130	97
4-Bromofluorobenzene	10 UG/L	72 - 137	93
Dibromofluoromethane	10 UG/L	56 - 153	102

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : FV26 PREP BLANK ID : FVBLK26 LCS ID : FVLCS26

LCSD ID : FVLCS26D

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L224804
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6836.017
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/10/01	DATE RECEIVED :	5/11/01
SAMPLE MATRIX :	WATER	PRINTED ON :	6/6/2001 8:42

ANALYST	: ESP	CONTAINER ID	: A
DATE ANALYZED	: 5/24/01	DILUTION	: 1
INSTRUMENT FILE	: G3598.D	INSTRUMENT ID	: G-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	: 23:44

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	ND UG/L	
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	102
1,2-Dichloroethane-d4	10 UG/L	64 - 130	125
4-Bromofluorobenzene	10 UG/L	72 - 137	92
Dibromofluoromethane	10 UG/L	56 - 153	112

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV23 PREP BLANK ID : GVBLK23 LCS ID : GVLCS23

LCSD ID : GVLCS23D

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L224805
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6836.018
PROJECT NUMBER :	05-Z026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/10/01	DATE RECEIVED :	5/11/01
SAMPLE MATRIX :	WATER	PRINTED ON :	6/6/2001 8:42

ANALYST	ESP	CONTAINER ID	A
DATE ANALYZED	5/25/01	DILUTION	1
INSTRUMENT FILE	G3599.D	INSTRUMENT ID	G-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	00:23

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	ND UG/L	
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	107
1,2-Dichloroethane-d4	10 UG/L	64 - 130	127
4-Bromofluorobenzene	10 UG/L	72 - 137	91
Dibromofluoromethane	10 UG/L	56 - 153	116

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV23 PREP BLANK ID : GVBLK23 LCS ID : GVLCS23

LCSD ID : GVLCS23D

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L224901
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6836.021
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/8/01	DATE RECEIVED :	5/11/01
SAMPLE MATRIX :	WATER	PRINTED ON :	6/6/2001 8:42

ANALYST	: ESP	CONTAINER ID	B
DATE ANALYZED	: 6/3/01	DILUTION	: 1
INSTRUMENT FILE	F7140.D	INSTRUMENT ID	: F-HP5973
PURGE VOLUME	: 20 mL	TIME ANALYZED	: 1:24

PARAMETER	QUANTITATION LIMIT	RESULTS		QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	ND	UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND	UG/L	
Trichloroethene	1.0 UG/L	ND	UG/L	
Vinyl chloride	1.0 UG/L	ND	UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	98
1,2-Dichloroethane-d4	10 UG/L	64 - 130	101
4-Bromofluorobenzene	10 UG/L	72 - 137	92
Dibromofluoromethane	10 UG/L	56 - 153	101

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : FV26 PREP BLANK ID : FVBLK26 LCS ID : FVLCS26

LCSD ID : FVLCS26D

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L224902
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6836.022
PROJECT NUMBER :	05-Z026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/7/01	DATE RECEIVED :	5/11/01
SAMPLE MATRIX :	WATER	PRINTED ON :	6/6/2001 8:42

ANALYST	: ESP	CONTAINER ID	: B
DATE ANALYZED	: 6/2/01	DILUTION	: 2
INSTRUMENT FILE	: F7136.D	INSTRUMENT ID	: F-HP5973
PURGE VOLUME	: 20 mL	TIME ANALYZED	: 22:56

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	2.0 UG/L	100 UG/L	
trans-1,2-Dichloroethene	2.0 UG/L	33 UG/L	
Trichloroethene	2.0 UG/L	83 UG/L	
Vinyl chloride	2.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	20 UG/L	68 - 124	104
1,2-Dichloroethane-d4	20 UG/L	64 - 130	114
4-Bromofluorobenzene	20 UG/L	72 - 137	100
Dibromofluoromethane	20 UG/L	56 - 153	114

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : FV26 PREP BLANK ID : FVBLK26 LCS ID : FVLCS26

LCSD ID : FVLCS26D

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME	: JACOBS ENGINEERING		CLIENT SAMPLE ID	: AF-L224903	
PROJECT NAME	: AIR FORCE PLANT 4		LAB SAMPLE ID	: 6836.023	
PROJECT NUMBER	: 05-2026-01		METHOD REFERENCE	: SW846-8260B	
DATE SAMPLED	: 5/8/01		DATE RECEIVED	: 5/11/01	
SAMPLE MATRIX	: WATER		PRINTED ON	: 6/6/2001	8:43

ANALYST	: ESP	CONTAINER ID	: B
DATE ANALYZED	: 6/3/01	DILUTION	: 1
INSTRUMENT FILE	: F7141.D	INSTRUMENT ID	F-HP5973
PURGE VOLUME	: 20 mL	TIME ANALYZED	: 2:00

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	ND UG/L	
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	100
1,2-Dichloroethane-d4	10 UG/L	64 - 130	103
4-Bromofluorobenzene	10 UG/L	72 - 137	94
Dibromofluoromethane	10 UG/L	56 - 153	104

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : FV26 PREP BLANK ID : FVBLK26 LCS ID : FVLCS26

LCSD ID : FVLCS26D

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME	: JACOBS ENGINEERING	CLIENT SAMPLE ID	: AF-L224904
PROJECT NAME	: AIR FORCE PLANT 4	LAB SAMPLE ID	: 6836.024
PROJECT NUMBER	: 05-2026-01	METHOD REFERENCE	: SW846-8260B
DATE SAMPLED	: 5/8/01	DATE RECEIVED	: 5/11/01
SAMPLE MATRIX	: WATER	PRINTED ON	: 6/6/2001 8:43

ANALYST	: ESP	CONTAINER ID	: B
DATE ANALYZED	: 6/2/01	DILUTION	: 1
INSTRUMENT FILE	: F7133.D	INSTRUMENT ID	: F-HP5973
PURGE VOLUME	: 20 mL	TIME ANALYZED	: 21:05

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	ND UG/L	
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	101
1,2-Dichloroethane-d4	10 UG/L	64 - 130	99
4-Bromofluorobenzene	10 UG/L	72 - 137	95
Dibromofluoromethane	10 UG/L	56 - 153	103

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : FV26 PREP BLANK ID : FVBLK26 LCS ID : FVLCS26

LCSD ID : FVLCS26D

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME	: JACOBS ENGINEERING	CLIENT SAMPLE ID	: AF-L224905
PROJECT NAME	: AIR FORCE PLANT 4	LAB SAMPLE ID	: 6836.025
PROJECT NUMBER	: 05-2026-01	METHOD REFERENCE	: SW846-8260B
DATE SAMPLED	: 5/8/01	DATE RECEIVED	: 5/11/01
SAMPLE MATRIX	: WATER	PRINTED ON	: 6/6/2001 8:43

ANALYST	: ESP	CONTAINER ID	A
DATE ANALYZED	: 6/2/01	DILUTION	1
INSTRUMENT FILE	: F7118.D	INSTRUMENT ID	F-HP5973
PURGE VOLUME	: 20 mL	TIME ANALYZED	4:38

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	4.4 UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	26 UG/L	
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	103
1,2-Dichloroethane-d4	10 UG/L	64 - 130	95
4-Bromofluorobenzene	10 UG/L	72 - 137	99
Dibromofluoromethane	10 UG/L	56 - 153	108

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : FV25 PREP BLANK ID : FVBLK25 LCS ID : FVLCS25

LCSD ID : FVLCS25D

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME	: JACOBS ENGINEERING	CLIENT SAMPLE ID	: AF-L224906
PROJECT NAME	: AIR FORCE PLANT 4	LAB SAMPLE ID	: 6836.026
PROJECT NUMBER	: 05-2026-01	METHOD REFERENCE	: SW846-8260B
DATE SAMPLED	: 5/8/01	DATE RECEIVED	: 5/11/01
SAMPLE MATRIX	: WATER	PRINTED ON	: 6/6/2001 8:43

ANALYST	: ESP	CONTAINER ID	: B
DATE ANALYZED	: 6/2/01	DILUTION	: 1
INSTRUMENT FILE	: F7134.D	INSTRUMENT ID	: F-HP5973
PURGE VOLUME	: 20 mL	TIME ANALYZED	: 21:42

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	3.6 UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	8.1 UG/L	
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	100
1,2-Dichloroethane-d4	10 UG/L	64 - 130	98
4-Bromofluorobenzene	10 UG/L	72 - 137	93
Dibromofluoromethane	10 UG/L	56 - 153	103

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : FV26 PREP BLANK ID : FVBLK26 LCS ID : FVLCS26

LCSD ID : FVLCS26D

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME	: JACOBS ENGINEERING	CLIENT SAMPLE ID	: AF-L225701
PROJECT NAME	: AIR FORCE PLANT 4	LAB SAMPLE ID	: 6836.027
PROJECT NUMBER	: 05-Z026-01	METHOD REFERENCE	: SW846-8260B
DATE SAMPLED	: 5/9/01	DATE RECEIVED	: 5/11/01
SAMPLE MATRIX	: WATER	PRINTED ON	: 6/6/2001 8:43

ANALYST	ESP	CONTAINER ID	B
DATE ANALYZED	5/23/01	DILUTION	1
INSTRUMENT FILE	: G3565.D	INSTRUMENT ID	: G-HP5973
PURGE VOLUME	: 20 mL	TIME ANALYZED	: 21:07

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	ND UG/L	
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	100
1,2-Dichloroethane-d4	10 UG/L	64 - 130	100
4-Bromofluorobenzene	10 UG/L	72 - 137	91
Dibromofluoromethane	10 UG/L	56 - 153	97

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV21 PREP BLANK ID : GVBLK21 LCS ID : GVLCS21
LCSD ID : GVLCS21D

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L225703
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6836.029
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/9/01	DATE RECEIVED :	5/11/01
SAMPLE MATRIX :	WATER	PRINTED ON :	6/6/2001 8:43

ANALYST	ESP	CONTAINER ID	A
DATE ANALYZED	5/23/01	DILUTION	50
INSTRUMENT FILE	G3554.D	INSTRUMENT ID	G-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	14:32

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	50 UG/L	64 UG/L	
trans-1,2-Dichloroethene	50 UG/L	ND UG/L	
Trichloroethene	50 UG/L	1100 UG/L	
Vinyl chloride	50 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	500 UG/L	68 - 124	100
1,2-Dichloroethane-d4	500 UG/L	64 - 130	101
4-Bromofluorobenzene	500 UG/L	72 - 137	93
Dibromofluoromethane	500 UG/L	56 - 153	97

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV20 PREP BLANK ID : GVBLK20 LCS ID : GVLCS20

LCSD ID : GVLCS20D

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L225705
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6836.031
PRDJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/7/01	DATE RECEIVED :	5/11/01
SAMPLE MATRIX :	WATER	PRINTED ON :	6/6/2001 8:43

ANALYST	ESP	CONTAINER ID	B
DATE ANALYZED	6/2/01	DILUTION	1
INSTRUMENT FILE	F7127.D	INSTRUMENT ID	F-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	: 17:23

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	ND UG/L	
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	90
1,2-Dichloroethane-d4	10 UG/L	64 - 130	87
4-Bromofluorobenzene	10 UG/L	72 - 137	86
Dibromofluoromethane	10 UG/L	56 - 153	92

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : FV26 PREP BLANK ID : FVBLK26 LCS ID : FVLCS26
LCSD ID : FVLCS26D

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L225801
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6836.032
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/9/01	DATE RECEIVED :	5/11/01
SAMPLE MATRIX :	WATER	PRINTED ON :	6/6/2001 8:43

ANALYST	ESP	CONTAINER ID	A
DATE ANALYZED	5/23/01	DILUTION	1
INSTRUMENT FILE	G3555.D	INSTRUMENT ID	G-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	15:11

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	ND UG/L	
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	101
1,2-Dichloroethane-d4	10 UG/L	64 - 130	99
4-Bromofluorobenzene	10 UG/L	72 - 137	93
Dibromofluoromethane	10 UG/L	56 - 153	96

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV20 PREP BLANK ID : GVBLK20 LCS ID : GVLCS20

LCSD ID : GVLCS20D

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L225802
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6836.033
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/9/01	DATE RECEIVED :	5/11/01
SAMPLE MATRIX :	WATER	PRINTED ON :	6/6/2001 8:43

ANALYST	ESP	CONTAINER ID	A
DATE ANALYZED	5/23/01	DILUTION	1
INSTRUMENT FILE	: G3556.D	INSTRUMENT ID	G-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	15:50

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	ND UG/L	
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	100
1,2-Dichloroethane-d4	10 UG/L	64 - 130	97
4-Bromofluorobenzene	10 UG/L	72 - 137	90
Dibromofluoromethane	10 UG/L	56 - 153	95

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV20 PREP BLANK ID : GVBLK20 LCS ID : GVLCS20

LCSD ID : GVLCS20D

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L225804
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6836.035
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/9/01	DATE RECEIVED :	5/11/01
SAMPLE MATRIX :	WATER	PRINTED ON :	6/6/2001 8:43

ANALYST	ESP	CONTAINER ID	A
DATE ANALYZED	5/23/01	DILUTION	50
INSTRUMENT FILE	G3557.D	INSTRUMENT ID	G-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	16:29

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	50 UG/L	360 UG/L	
trans-1,2-Dichloroethene	50 UG/L	ND UG/L	
Trichloroethene	50 UG/L	8900 UG/L	E
Vinyl chloride	50 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	500 UG/L	68 - 124	95
1,2-Dichloroethane-d4	500 UG/L	64 - 130	99
4-Bromofluorobenzene	500 UG/L	72 - 137	88
Dibromofluoromethane	500 UG/L	56 - 153	95

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV20 PREP BLANK ID : GVBLK20 LCS ID : GVLCS20

LCSD ID : GVLCS20D

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L225804DL1
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6836.035DL1
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/9/01	DATE RECEIVED :	5/11/01
SAMPLE MATRIX :	WATER	PRINTED ON :	6/6/2001 8:43

ANALYST	ESP	CONTAINER ID	B
DATE ANALYZED	5/25/01	DILUTION	200
INSTRUMENT FILE	G3600.D	INSTRUMENT ID	G-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	1:02

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	200 UG/L	300 UG/L	
trans-1,2-Dichloroethene	200 UG/L	ND UG/L	
Trichloroethene	200 UG/L	9700 UG/L	
Vinyl chloride	200 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	2000 UG/L	68 - 124	107
1,2-Dichloroethane-d4	2000 UG/L	64 - 130	130
4-Bromofluorobenzene	2000 UG/L	72 - 137	93
Dibromofluoromethane	2000 UG/L	56 - 153	118

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV23 PREP BLANK ID : GVBLK23 LCS ID : GVLCS23

LCSD ID : GVLCS23D

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME	: JACOBS ENGINEERING	CLIENT SAMPLE ID	: AF-L225901
PROJECT NAME	: AIR FORCE PLANT 4	LAB SAMPLE ID	: 6836.037
PROJECT NUMBER	: 05-2026-01	METHOD REFERENCE	: SW846-8260B
DATE SAMPLED	: 5/7/01	DATE RECEIVED	: 5/11/01
SAMPLE MATRIX	: WATER	PRINTED ON	: 6/6/2001 8:43

ANALYST	ESP	CONTAINER ID	B
DATE ANALYZED	6/2/01	DILUTION	50
INSTRUMENT FILE	F7137.D	INSTRUMENT ID	F-HP5973
PURGE VOLUME	: 20 mL	TIME ANALYZED	23:33

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	50 UG/L	620 UG/L	
trans-1,2-Dichloroethene	50 UG/L	ND UG/L	
Trichloroethene	50 UG/L	3300 UG/L	
Vinyl chloride	50 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-dB	500 UG/L	68 - 124	99
1,2-Dichloroethane-d4	500 UG/L	64 - 130	107
4-Bromofluorobenzene	500 UG/L	72 - 137	97
Dibromofluoromethane	500 UG/L	56 - 153	110

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : FV26 PREP BLANK ID : FVBLK26 LCS ID : FVLCS26

LCSD ID : FVLCS26D

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L225903
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6836.039
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/7/01	DATE RECEIVED :	5/11/01
SAMPLE MATRIX :	WATER	PRINTED ON :	6/6/2001 8:43

ANALYST	ESP	CONTAINER ID	B
DATE ANALYZED	6/3/01	DILUTION	50
INSTRUMENT FILE	F7138.D	INSTRUMENT ID	F-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	00:10

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	50 UG/L	670 UG/L	
trans-1,2-Dichloroethene	50 UG/L	ND UG/L	
Trichloroethene	50 UG/L	3500 UG/L	
Vinyl chloride	50 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	500 UG/L	68 - 124	104
1,2-Dichloroethane-d4	500 UG/L	64 - 130	112
4-Bromofluorobenzene	500 UG/L	72 - 137	100
Dibromofluoromethane	500 UG/L	56 - 153	113

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : FV26 PREP BLANK ID : FVBLK26 LCS ID : FVLCS26
LCSD ID : FVLCS26D

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L225904
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6836.040
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/9/01	DATE RECEIVED :	5/11/01
SAMPLE MATRIX :	WATER	PRINTED ON :	6/6/2001 8:43

ANALYST	ESP	CONTAINER ID	A
DATE ANALYZED	5/23/01	DILUTION	50
INSTRUMENT FILE	G3563.D	INSTRUMENT ID	G-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	19:49

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	50 UG/L	560 UG/L	
trans-1,2-Dichloroethene	50 UG/L	ND UG/L	
Trichloroethene	50 UG/L	5900 UG/L	E
Vinyl chloride	50 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	500 UG/L	68 - 124	95
1,2-Dichloroethane-d4	500 UG/L	64 - 130	100
4-Bromofluorobenzene	500 UG/L	72 - 137	88
Dibromofluoromethane	500 UG/L	56 - 153	96

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV21 PREP BLANK ID : GVBLK21 LCS ID : GVLCS21

LCSD ID : GVLCS21D

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L225904DL1
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6836.040DL1
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/9/01	DATE RECEIVED :	5/11/01
SAMPLE MATRIX :	WATER	PRINTED ON :	6/6/2001 8:43

ANALYST	ESP	CONTAINER ID	B
DATE ANALYZED	5/25/01	DILUTION	100
INSTRUMENT FILE	G3601.D	INSTRUMENT ID	G-HP5973
PURGE VOLUME	20 mL	TIME ANALYZED	1:40

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
cis-1,2-Dichloroethene	100	UG/L	470	UG/L	
trans-1,2-Dichloroethene	100	UG/L	ND	UG/L	
Trichloroethene	100	UG/L	7200	UG/L	
Vinyl chloride	100	UG/L	ND	UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED		QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	1000	UG/L	68 - 124	102
1,2-Dichloroethane-d4	1000	UG/L	64 - 130	130
4-Bromofluorobenzene	1000	UG/L	72 - 137	91
Dibromofluoromethane	1000	UG/L	56 - 153	120

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV23 PREP BLANK ID : GVBLK23 LCS ID : GVLCS23

LCSD ID : GVLCS23D

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME	: JACOBS ENGINEERING	CLIENT SAMPLE ID	: AF-L225906
PROJECT NAME	: AIR FORCE PLANT 4	LAB SAMPLE ID	: 6836.042
PROJECT NUMBER	: 05-2026-01	METHOD REFERENCE	: SW846-8260B
DATE SAMPLED	: 5/9/01	DATE RECEIVED	: 5/11/01
SAMPLE MATRIX	: WATER	PRINTED ON	: 6/6/2001 8:43

ANALYST	: ESP	CONTAINER ID	A
DATE ANALYZED	: 5/23/01	DILUTION	50
INSTRUMENT FILE	G3564.D	INSTRUMENT ID	G-HP5973
PURGE VOLUME	: 20 mL	TIME ANALYZED	: 20:28

PARAMETER	QUANTITATION LIMIT		RESULTS		QUALIFIER
cis-1,2-Dichloroethene	50	UG/L	230	UG/L	
trans-1,2-Dichloroethene	50	UG/L	ND	UG/L	
Trichloroethene	50	UG/L	3800	UG/L	
Vinyl chloride	50	UG/L	ND	UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED		QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	500	UG/L	68 - 124	100
1,2-Dichloroethane-d4	500	UG/L	64 - 130	105
4-Bromofluorobenzene	500	UG/L	72 - 137	92
Dibromofluoromethane	500	UG/L	56 - 153	99

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : GV21 PREP BLANK ID : GVBLK21 LCS ID : GVLCS21

LCSD ID : GVLCS21D

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME :	JACOBS ENGINEERING	CLIENT SAMPLE ID :	AF-L226101
PROJECT NAME :	AIR FORCE PLANT 4	LAB SAMPLE ID :	6836.044
PROJECT NUMBER :	05-2026-01	METHOD REFERENCE :	SW846-8260B
DATE SAMPLED :	5/8/01	DATE RECEIVED :	5/11/01
SAMPLE MATRIX :	WATER	PRINTED ON :	6/6/2001 8:43

ANALYST	ESP	CONTAINER ID	A
DATE ANALYZED	6/2/01	DILUTION	: 1
INSTRUMENT FILE	: F7119.D	INSTRUMENT ID	: F-HP5973
PURGE VOLUME	: 20 mL	TIME ANALYZED	: 5:15

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	12 UG/L	
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	102
1,2-Dichloroethane-d4	10 UG/L	64 - 130	90
4-Bromofluorobenzene	10 UG/L	72 - 137	97
Dibromofluoromethane	10 UG/L	56 - 153	103

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : FV25 PREP BLANK ID : FVBLK25 LCS ID : FVLCS25

LCSD ID : FVLCS25D

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME	: JACOBS ENGINEERING	CLIENT SAMPLE ID	: AF-L226102
PROJECT NAME	: AIR FORCE PLANT 4	LAB SAMPLE ID	: 6836.045
PROJECT NUMBER	: 05-Z026-01	METHOD REFERENCE	: SW846-8260B
DATE SAMPLED	: 5/8/01	DATE RECEIVED	: 5/11/01
SAMPLE MATRIX	: WATER	PRINTED ON	: 6/6/2001 8:43

ANALYST	: ESP	CONTAINER ID	: C
DATE ANALYZED	: 6/4/01	DILUTION	: 1
INSTRUMENT FILE	: F7148.D	INSTRUMENT ID	: F-HP5973
PURGE VOLUME	: 20 mL	TIME ANALYZED	: 16:03

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	ND UG/L	
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	99
1,2-Dichloroethane-d4	10 UG/L	64 - 130	102
4-Bromofluorobenzene	10 UG/L	72 - 137	96
Dibromofluoromethane	10 UG/L	56 - 153	103

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : FV27 PREP BLANK ID : FVBLK27 LCS ID : FVLCS27

LCSD ID : FVLCS27D

601 200

PDP Analytical Services
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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME	: JACOBS ENGINEERING		CLIENT SAMPLE ID	: AF-L226103	
PROJECT NAME	: AIR FORCE PLANT 4		LAB SAMPLE ID	: 6836.046	
PROJECT NUMBER	: 05-2026-01		METHOD REFERENCE	: SW846-8260B	
DATE SAMPLED	: 5/8/01		DATE RECEIVED	: 5/11/01	
SAMPLE MATRIX	: WATER		PRINTED ON	: 6/6/2001	8:43

ANALYST	: ESP	CONTAINER ID	: A
DATE ANALYZED	: 6/2/01	DILUTION	: 1
INSTRUMENT FILE	: F7120.D	INSTRUMENT ID	F-HP5973
PURGE VOLUME	: 20 mL	TIME ANALYZED	5:52

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	ND UG/L	
Trichloroethene	1.0 UG/L	ND UG/L	
Vinyl chloride	1.0 UG/L	ND UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	103
1,2-Dichloroethane-d4	10 UG/L	64 - 130	92
4-Bromofluorobenzene	10 UG/L	72 - 137	98
Dibromofluoromethane	10 UG/L	56 - 153	104

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : FV25 PREP BLANK ID : FVBLK25 LCS ID : FVLCS25

LCSD ID : FVLCS25D

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LABORATORY REPORT

VOLATILES BY GC/MS

CLIENT NAME	: JACOBS ENGINEERING	CLIENT SAMPLE ID	: AF-L226104
PROJECT NAME	: AIR FORCE PLANT 4	LAB SAMPLE ID	: 6836.047
PROJECT NUMBER	: 05-2026-01	METHOD REFERENCE	: SW846-8260B
DATE SAMPLED	: 5/8/01	DATE RECEIVED	: 5/11/01
SAMPLE MATRIX	: WATER	PRINTED ON	: 6/6/2001 8:43

ANALYST	ESP	CONTAINER ID	: A
DATE ANALYZED	: 6/2/01	DILUTION	1
INSTRUMENT FILE	F7121.D	INSTRUMENT ID	F-HP5973
PURGE VOLUME	: 20 mL	TIME ANALYZED	6:29

PARAMETER	QUANTITATION LIMIT	RESULTS	QUALIFIER
cis-1,2-Dichloroethene	1.0 UG/L	NO UG/L	
trans-1,2-Dichloroethene	1.0 UG/L	NO UG/L	
Trichloroethene	1.0 UG/L	ND UG/L	
Vinyl chloride	1.0 UG/L	NO UG/L	

QUALITY CONTROL DATA

SURROGATE COMPOUND	SPIKE ADDED	QC RECOVERY LIMITS	%RECOVERY
Toluene-d8	10 UG/L	68 - 124	102
1,2-Dichloroethane-d4	10 UG/L	64 - 130	97
4-Bromofluorobenzene	10 UG/L	72 - 137	98
Dibromofluoromethane	10 UG/L	56 - 153	105

BATCH QUALITY CONTROL SAMPLE IDs

QC BATCH ID : FV25 PREP BLANK ID : FVBLK25 LCS ID : FVLCS25

LCSD ID : FVLCS25D

TAB

APPENDIX B

APPENDIX B

Historical Results for TCE and Degradation Products Relative to Groundwater Elevations

May 2001

APPENDIX B - NOTES

The charts in this appendix depict changes in concentration of TCE and TCE degradation products for representative locations that:

- were sampled during the May 2001 sampling round; and
- had measurable concentrations of TCE, cis-1,2-DCE, trans-1,2-DCE, or vinyl chloride during any of the last 31 sampling rounds.

Not all locations have been included.

DATA

The data for these graphics were extracted directly from quarterly reports which, prior to the April/May 1995 round, were not validated until *after* the quarterly letter reports had been produced. The purpose of this appendix is to illustrate general concentration trends over time.

When available, data acquired between April 1988 and Spring 1991 by previous contractors at AFP4 were included to show longer-term trends. These data are connected to the more recent Jacobs data by a dashed line, indicating a degree of uncertainty when comparing two such data sets One previous analytical method, for example, did not detect cis-1,2-DCE. The sources of previous data were the following four documents:

Hargis+Associates, Inc. 1989a (April). Water Quality Data, May 1987 Through January 1989. Volume I, Appendix A.

Hargis+Associates, Inc. 1989b (July) Summary of Interim Remedial Investigations, January 1987 to April 1989 Volume III, Appendix G.

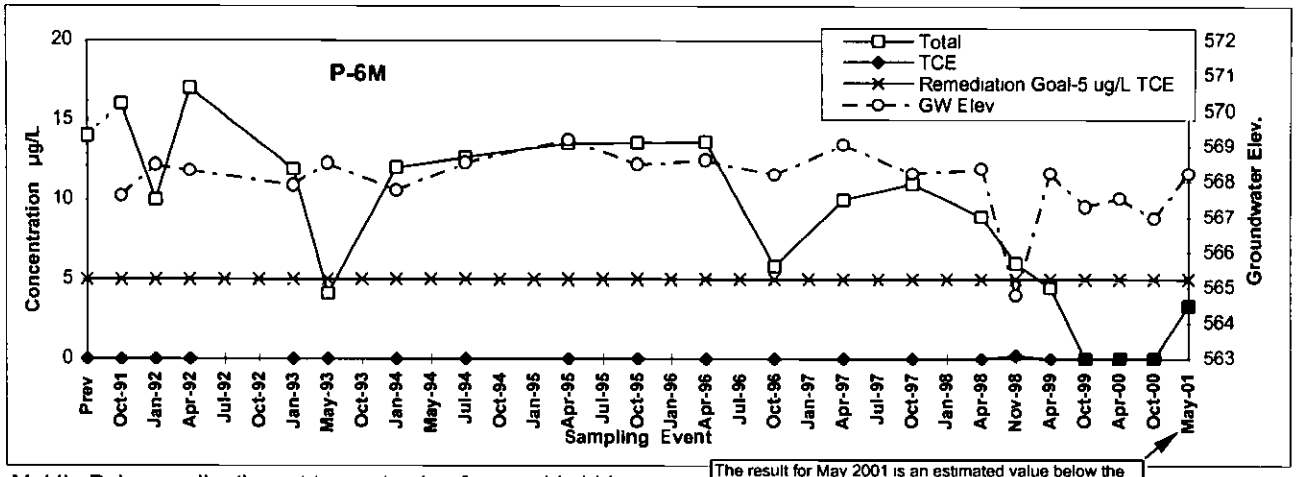
Radian Corporation. 1991 (October) Remedial Investigation Report for the Flightline Area - Final. Various tables and figures.

U.S. Department of Energy. 1992 (December) Draft Final Preliminary Assessment/Site Inspection and Remedial Investigation Report. Various tables, figures.

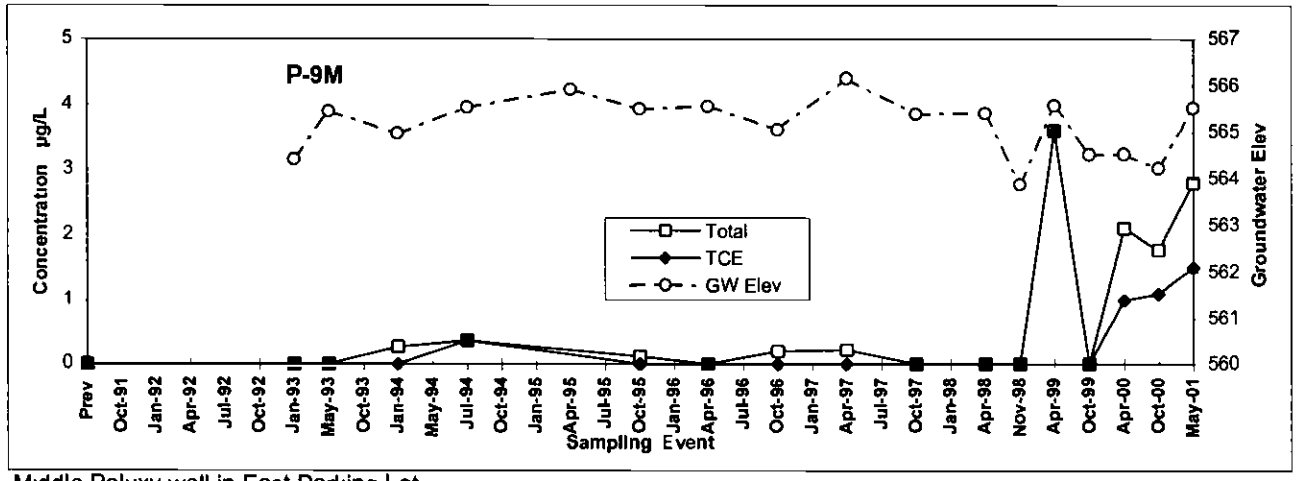
CHARTS

Concentrations are in micrograms per liter. "Total" concentration is the total of TCE plus its degradation products, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride If TCE alone is plotted on a chart, it indicates that none of its degradation products were ever detected at that location.

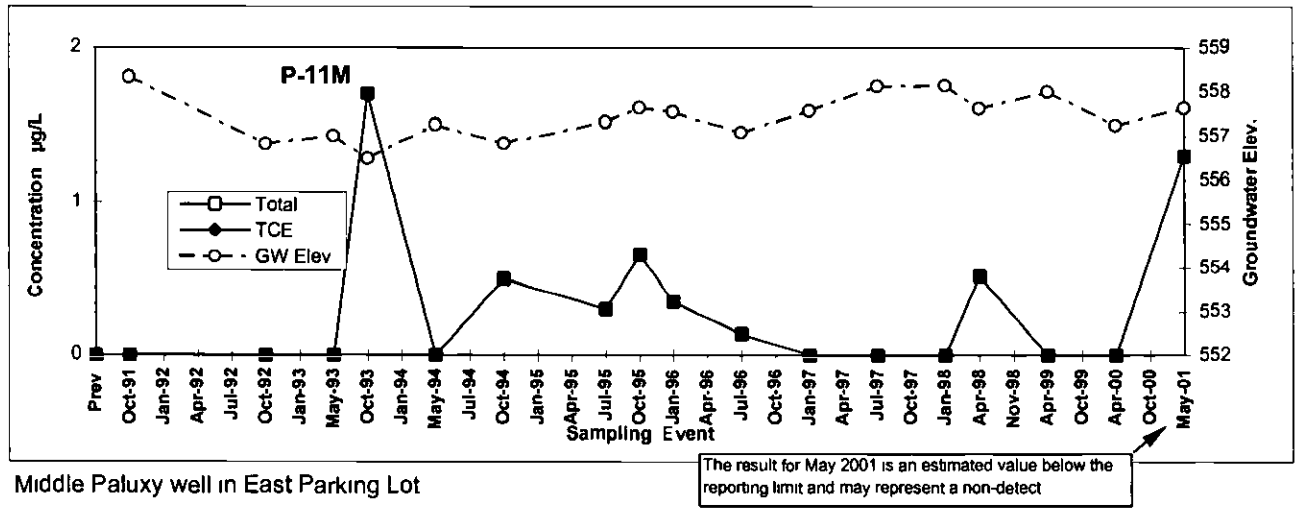
The data in this appendix are plotted at different scales. When there have been large changes in concentration over time, a portion of a chart may be plotted a second time at a different scale to show more detail for a particular time frame



Middle Paluxy well adjacent to west side of assembly bldg.

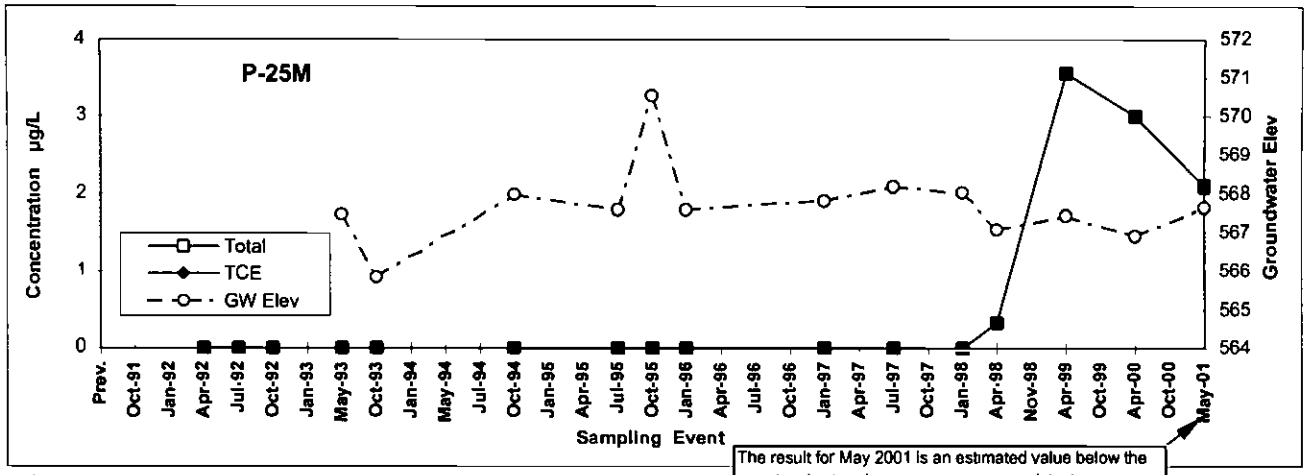


Middle Paluxy well in East Parking Lot

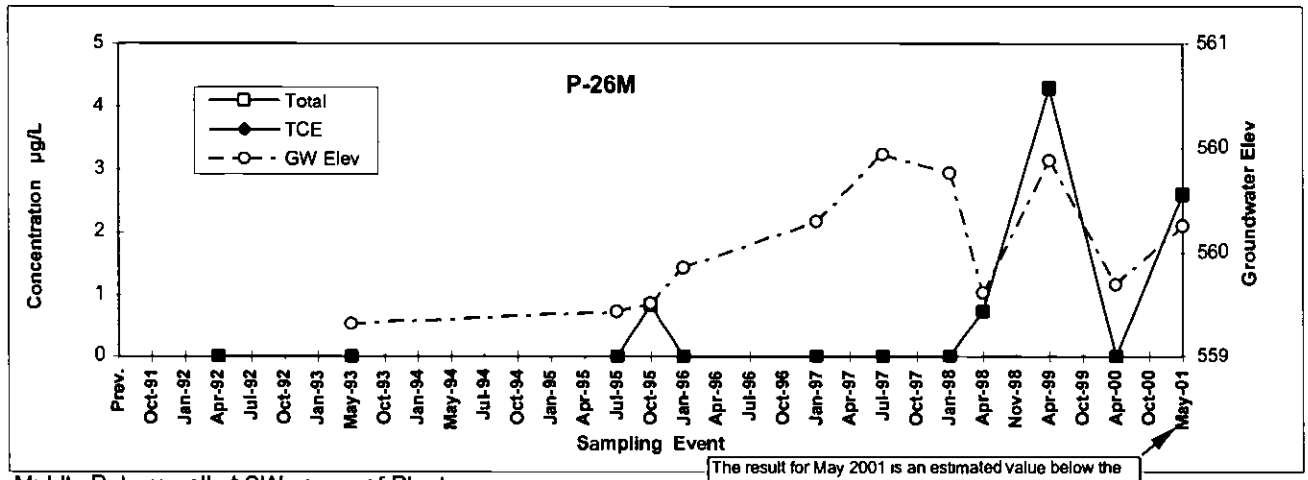


Middle Paluxy well in East Parking Lot

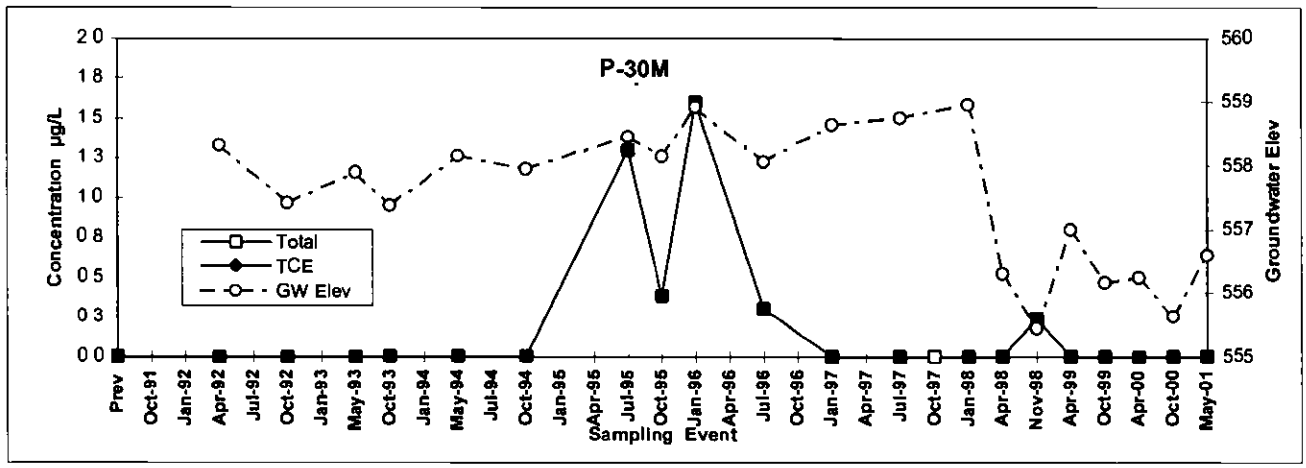
Prev data were acquired prior to Oct 1991 See Appendix B Notes
Total concentration = TCE plus its degradation products See Appendix B Notes



Middle Paluxy well west of Plant

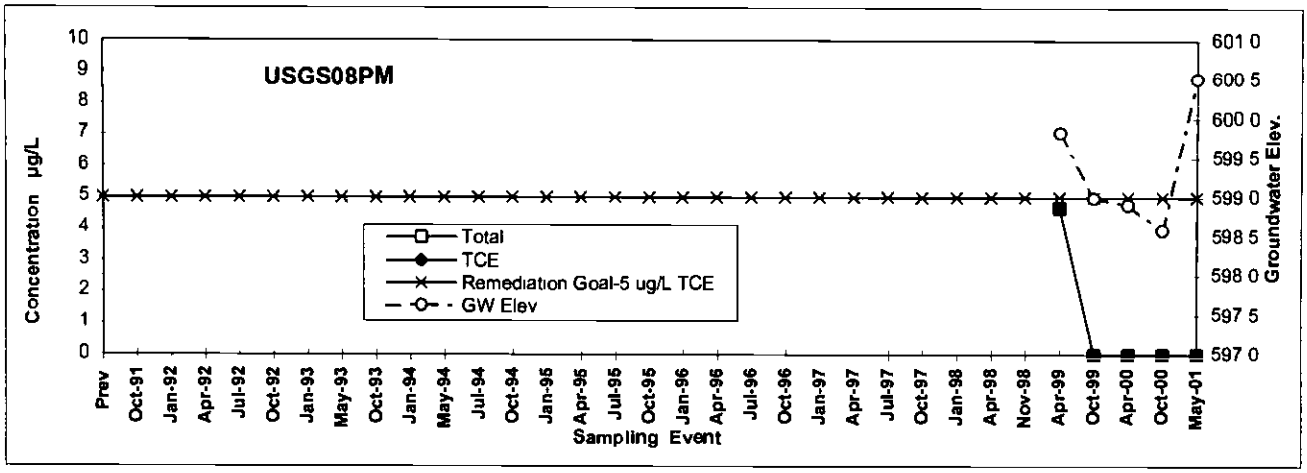


Middle Paluxy well at SW corner of Plant

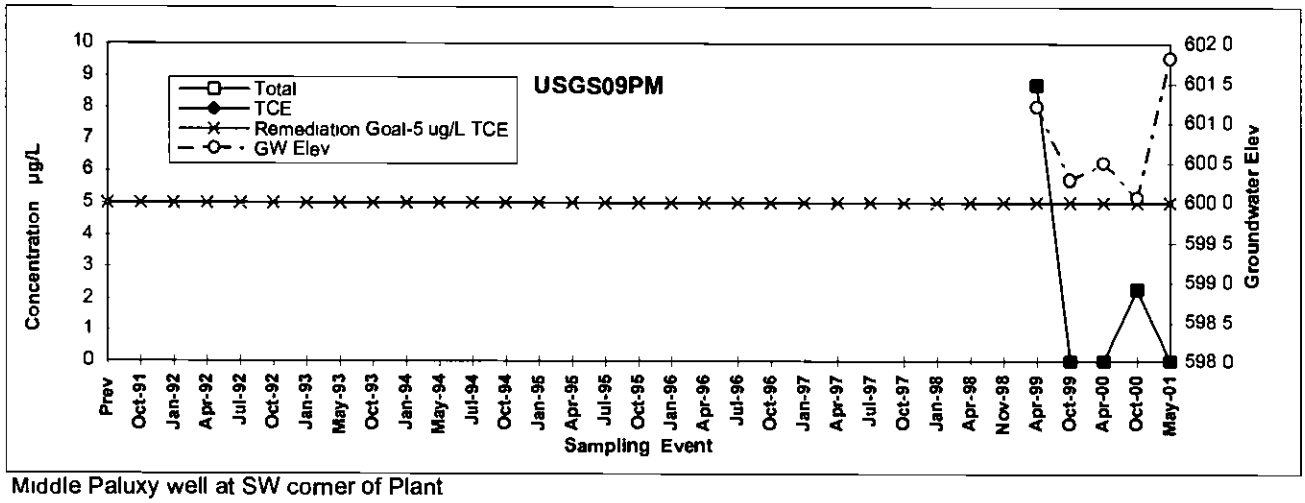


Middle Paluxy well across Clifford Ave. from AFP4

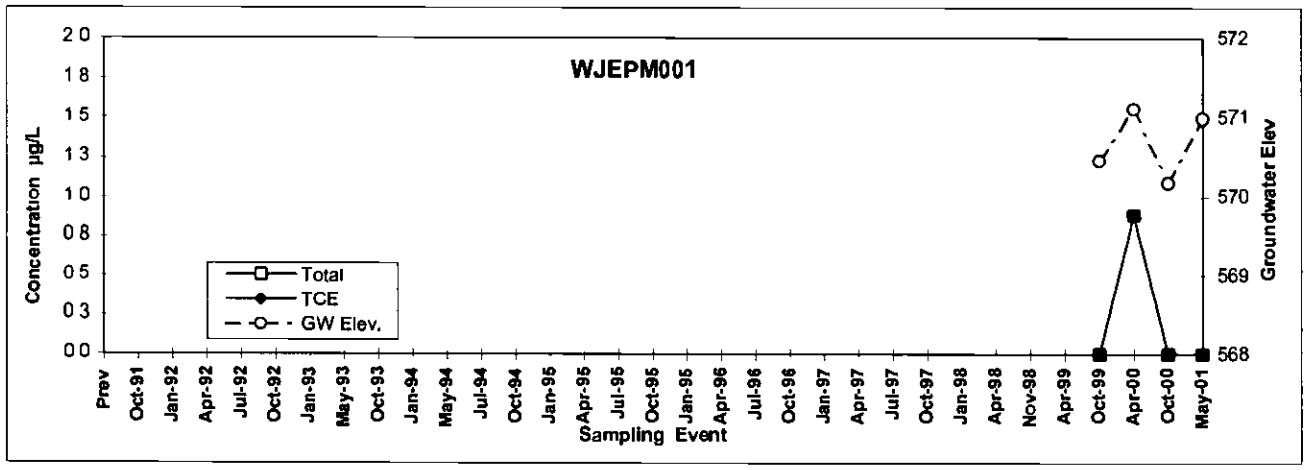
Prev data were acquired prior to Oct 1991 See Appendix B Notes
Total concentration = TCE plus its degradation products See Appendix B Notes



Middle Paluxy well west of Plant

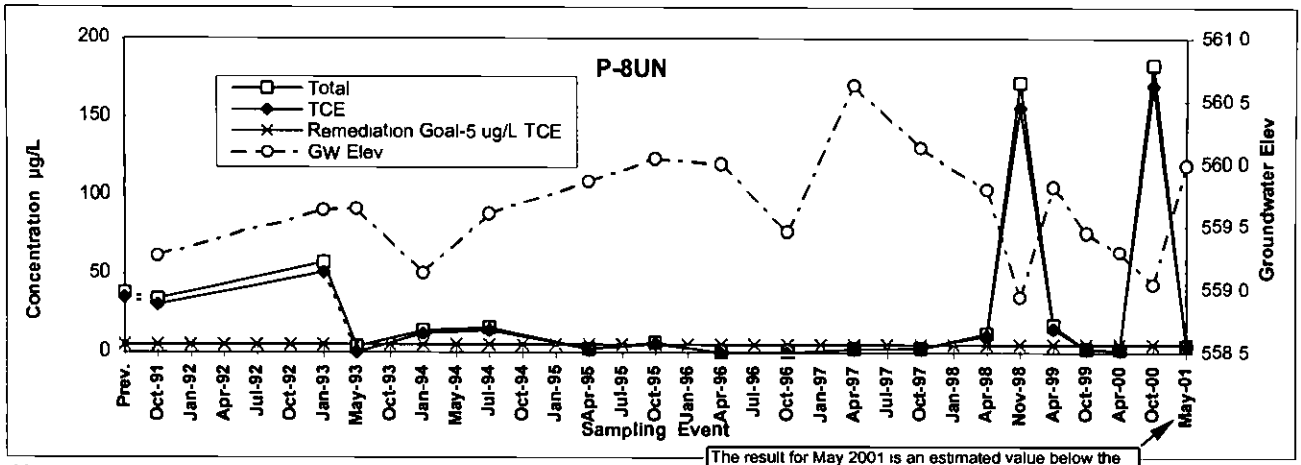


Middle Paluxy well at SW corner of Plant

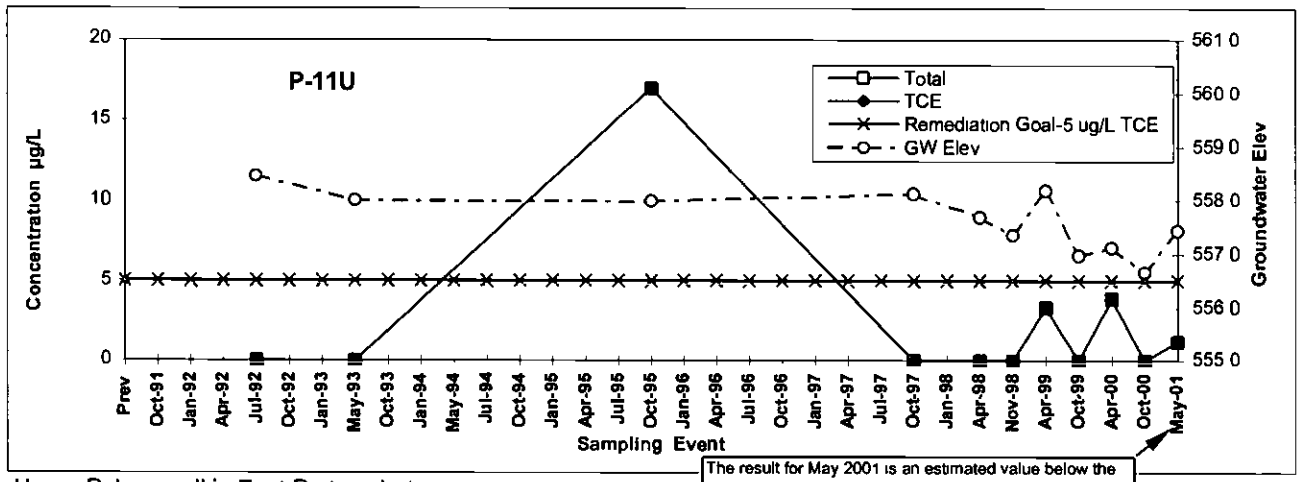


Middle Paluxy well East of Run Station 5

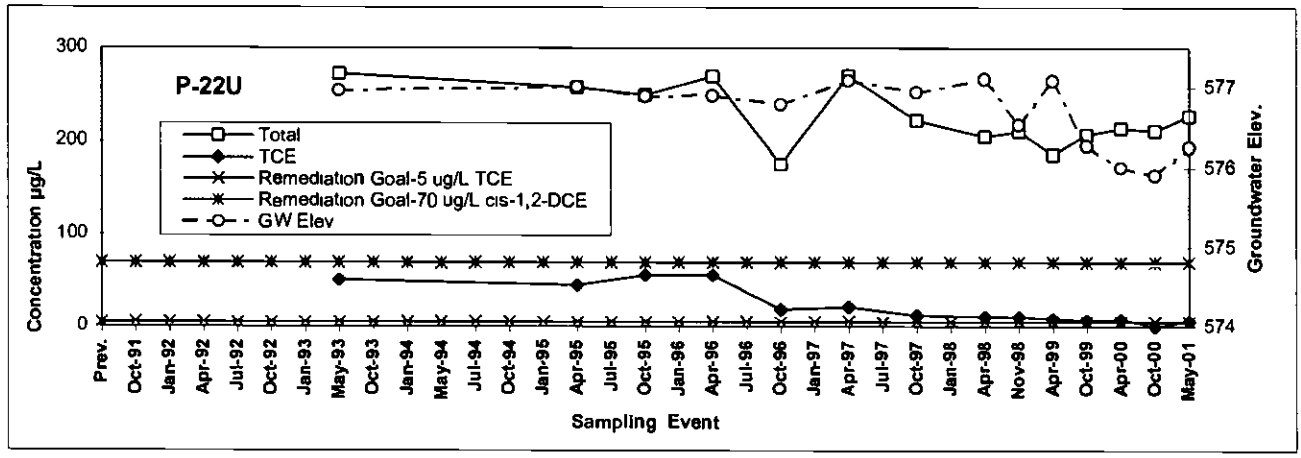
Prev data were acquired prior to Oct 1991 See Appendix B Notes
Total concentration = TCE plus its degradation products See Appendix B Notes



Upper Paluxy well along Lockheed-Martin Blvd.



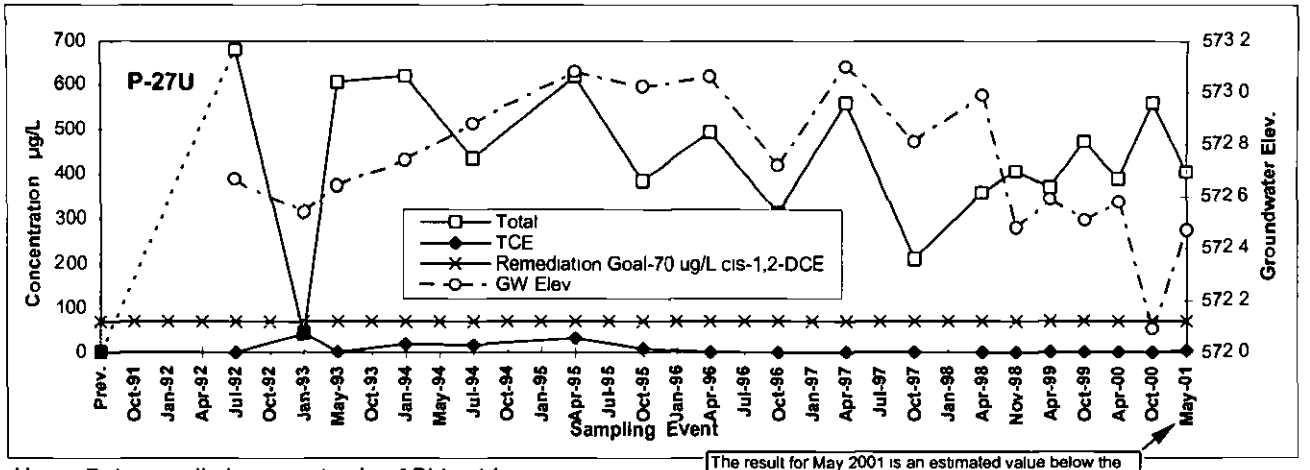
Upper Paluxy well in East Parking Lot



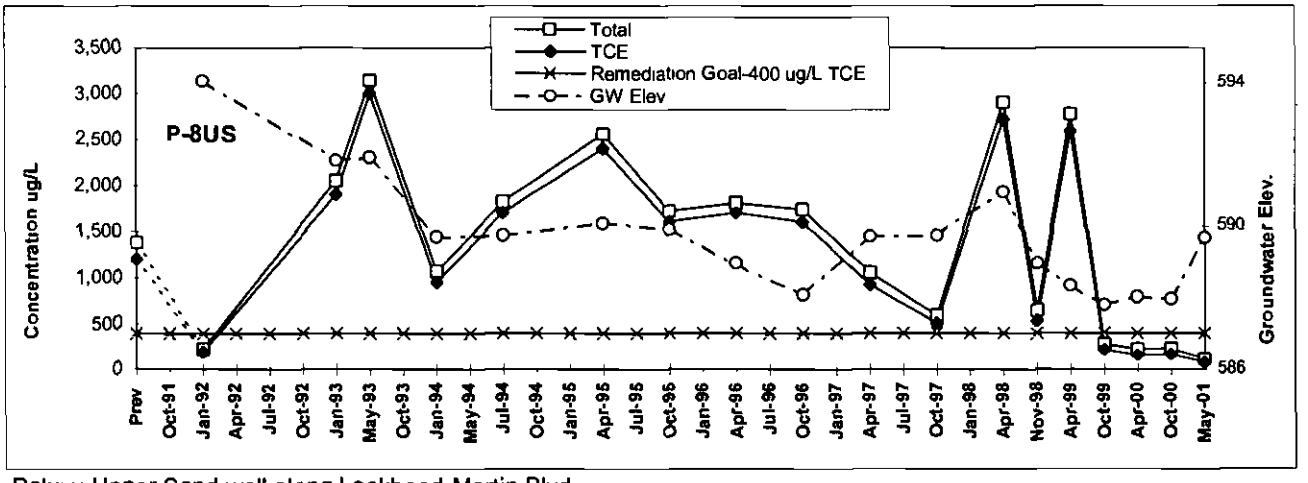
Upper Paluxy well in AFP4 Landfill 3

Prev data were acquired prior to Oct 1991 See Appendix B Notes

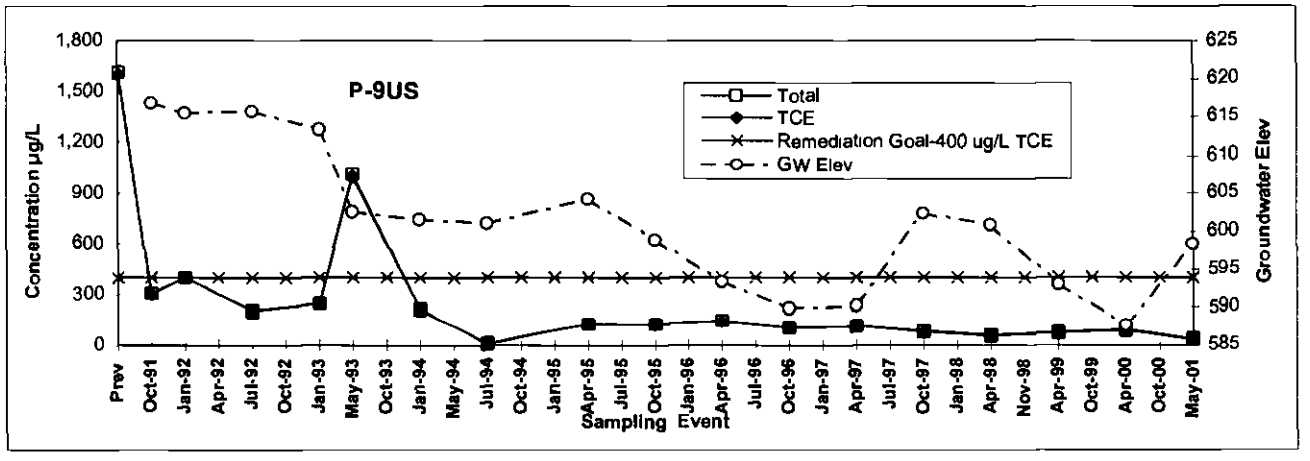
Total concentration = TCE plus its degradation products See Appendix B Notes



Upper Paluxy well along west side of Bldg. 14



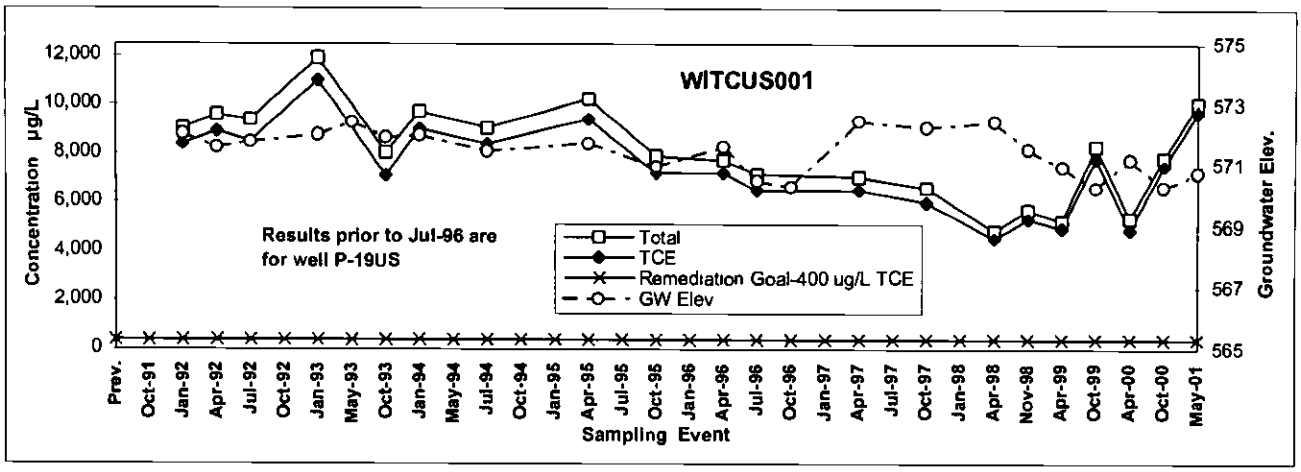
Paluxy Upper Sand well along Lockheed-Martin Blvd



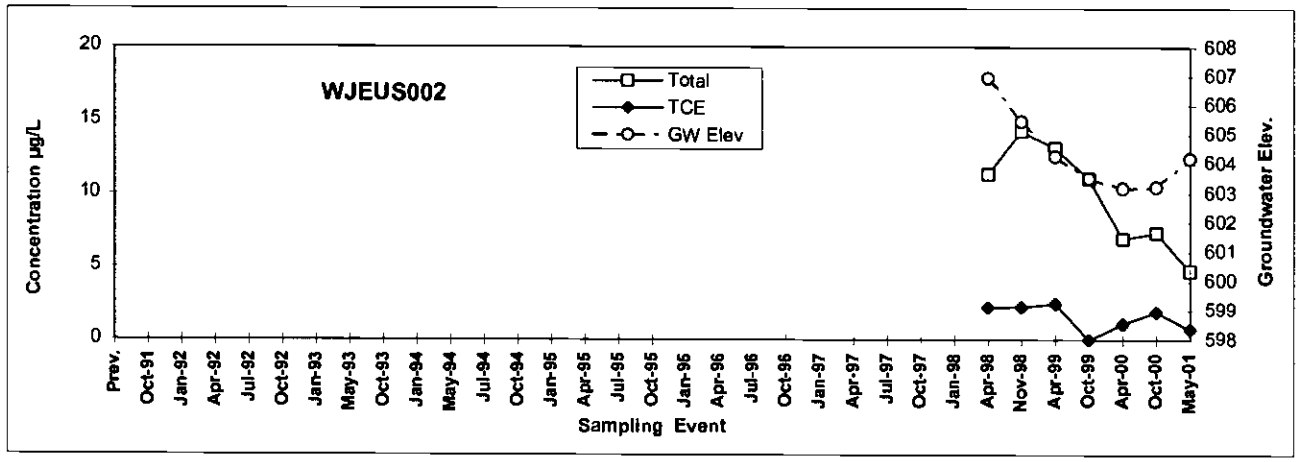
Paluxy Upper Sand well in East Parking Lot

Prev data were acquired prior to Oct 1991 See Appendix B Notes

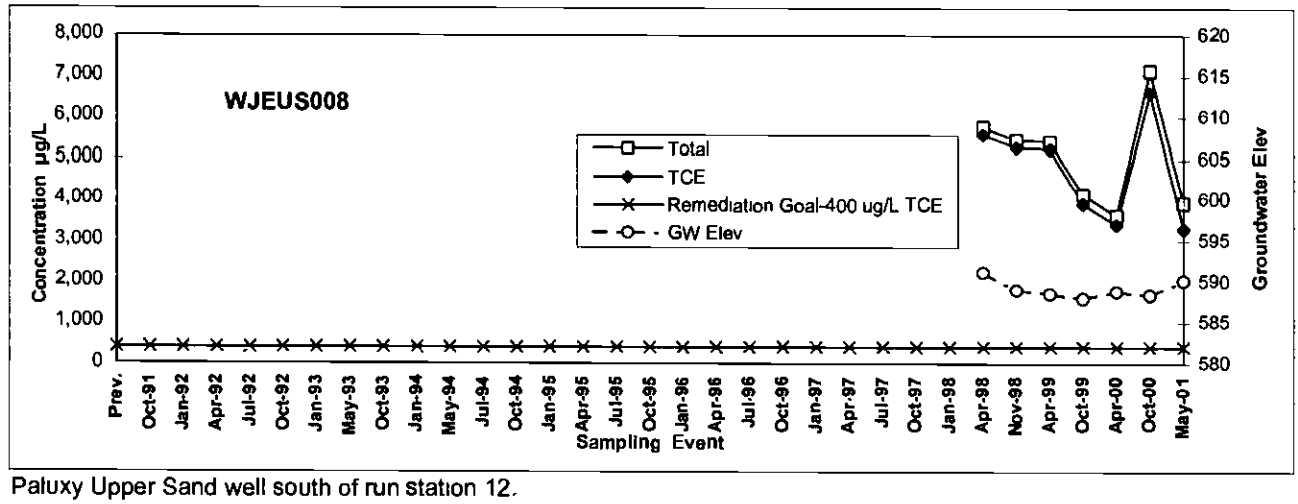
Total concentration = TCE plus its degradation products See Appendix B Notes



Paluxy Upper Sand well at south end of AFP4 flightline



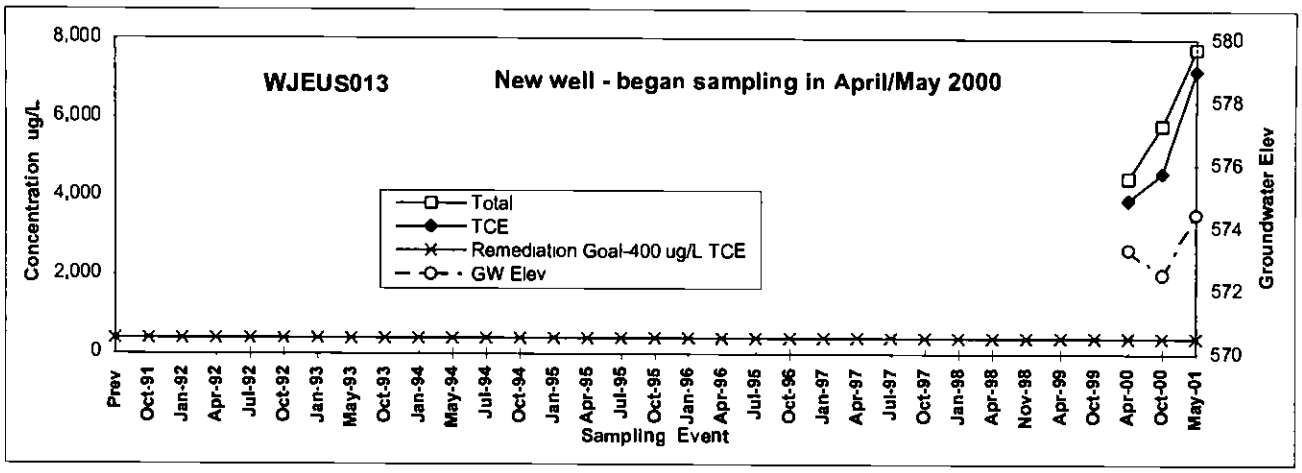
Paluxy Upper Sand well along Lockheed Boulevard.



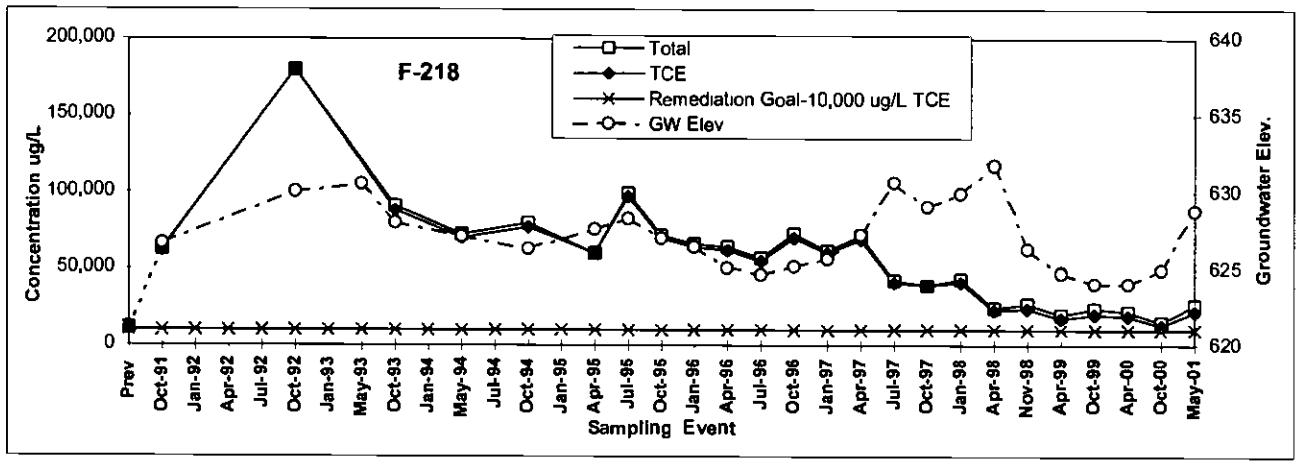
Paluxy Upper Sand well south of run station 12.

Prev data were acquired prior to Oct 1991 See Appendix B Notes

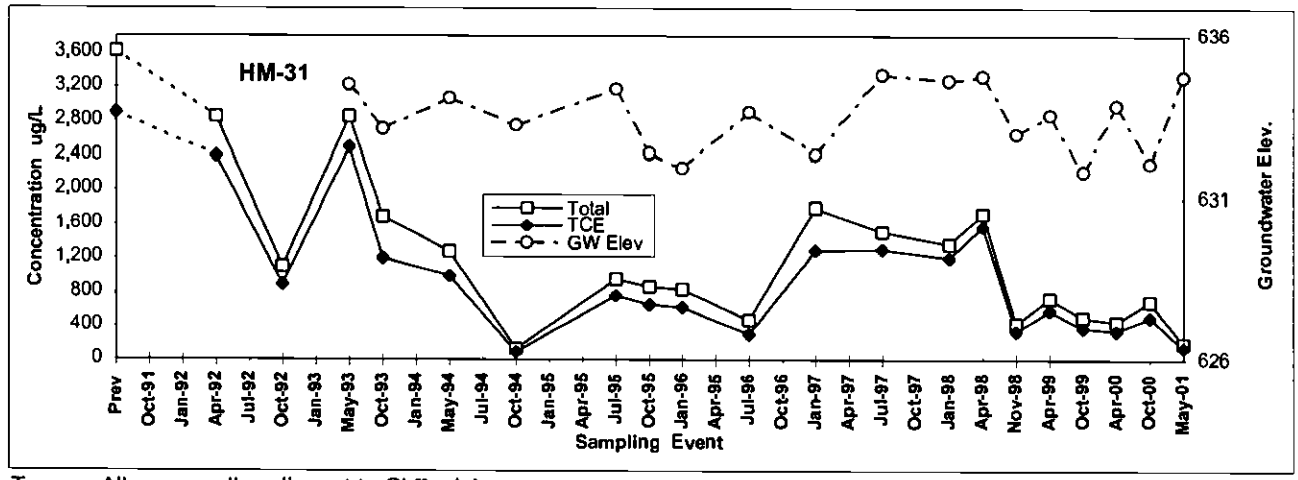
Total concentration = TCE plus its degradation products See Appendix B Notes



Paluxy Upper Sand well - AFP4 flightline



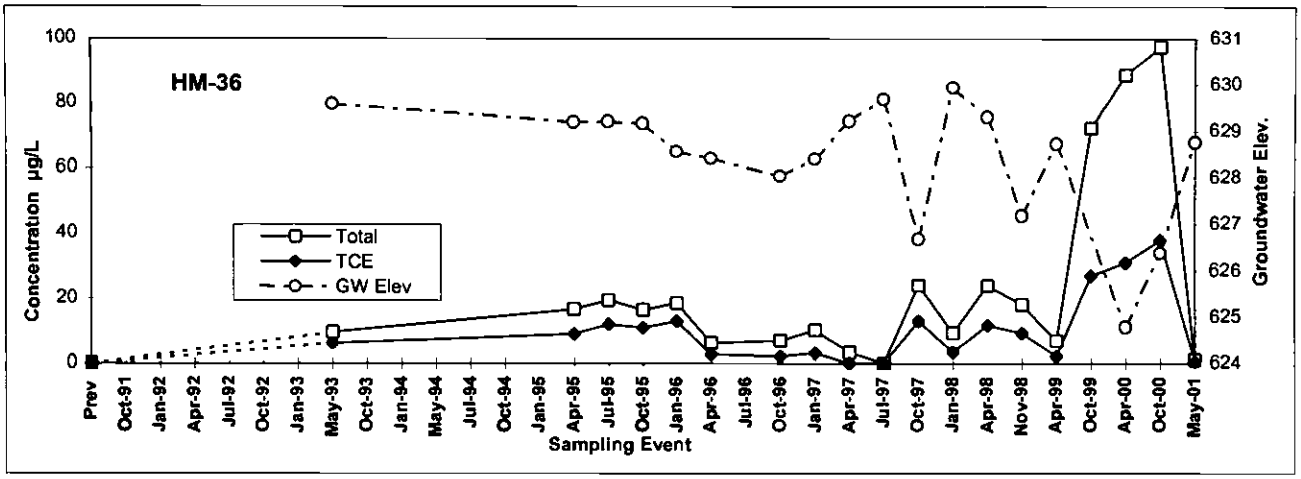
Terrace Alluvium well - East Parking Lot



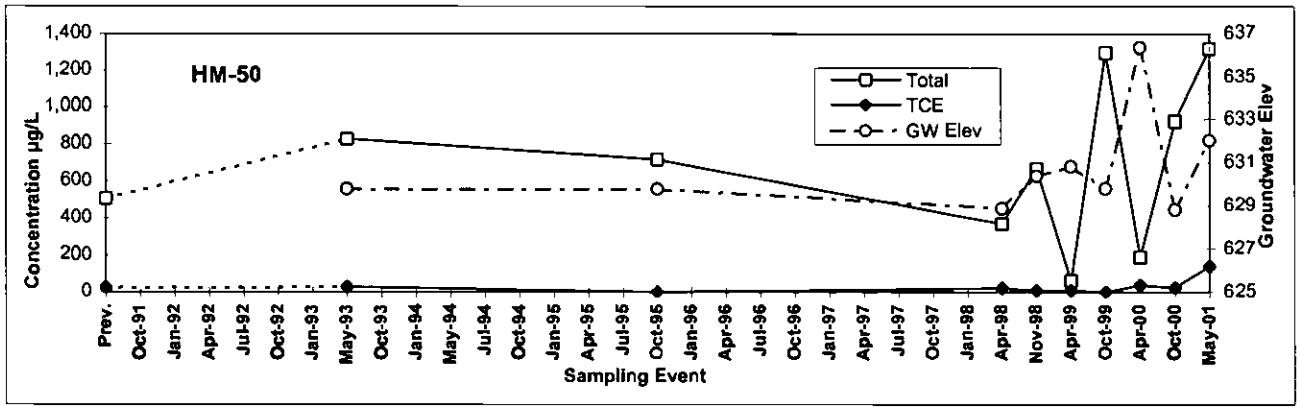
Terrace Alluvium well - adjacent to Clifford Ave

Prev data were acquired pnor to Oct 1991 See Appendix B Notes

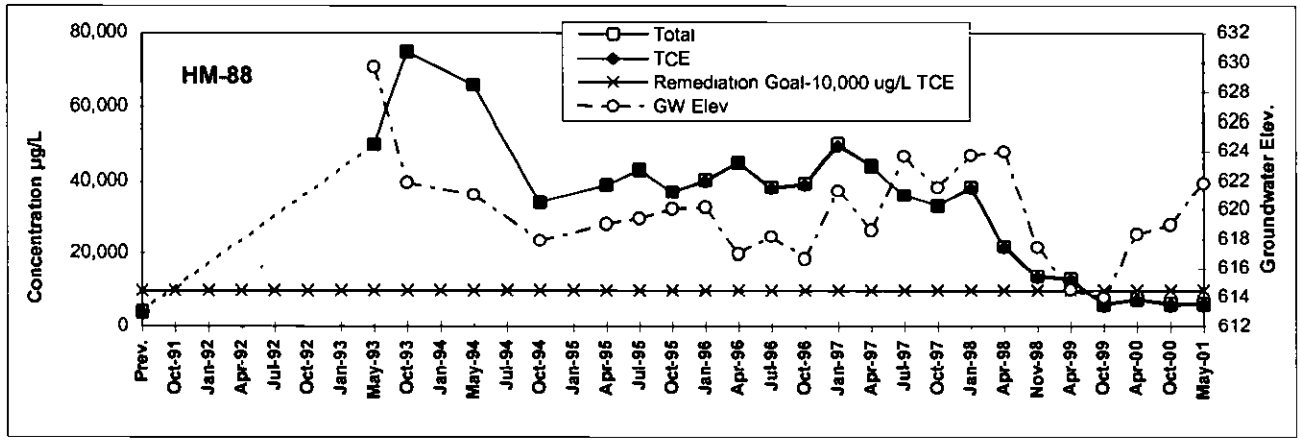
Total concentration = TCE plus its degradation products See Appendix B Notes



Terrace Alluvium well - AFP4 Landfill 3



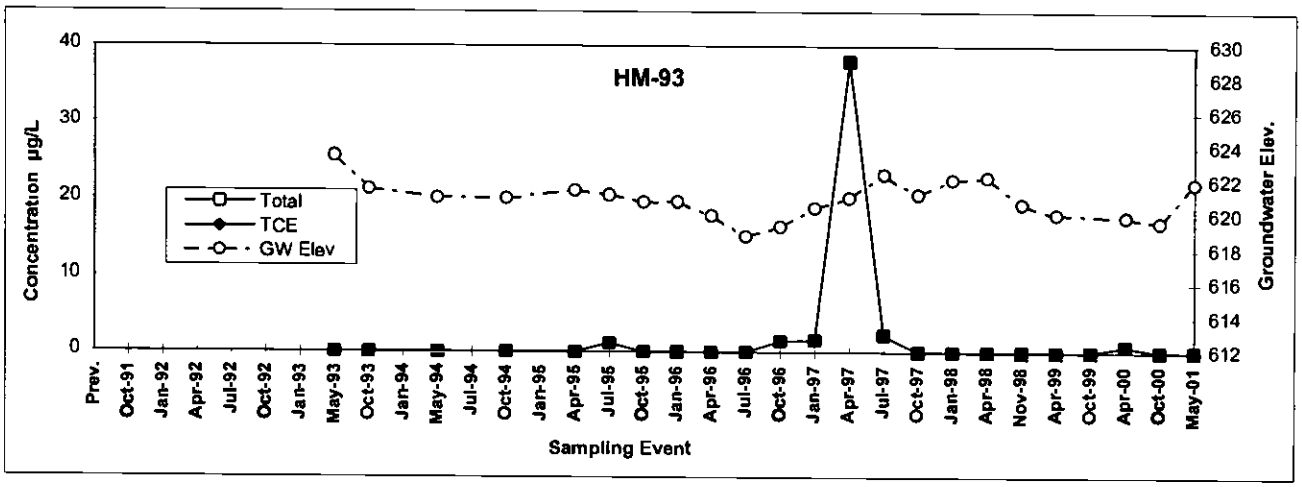
Terrace Alluvium well - west parking lot



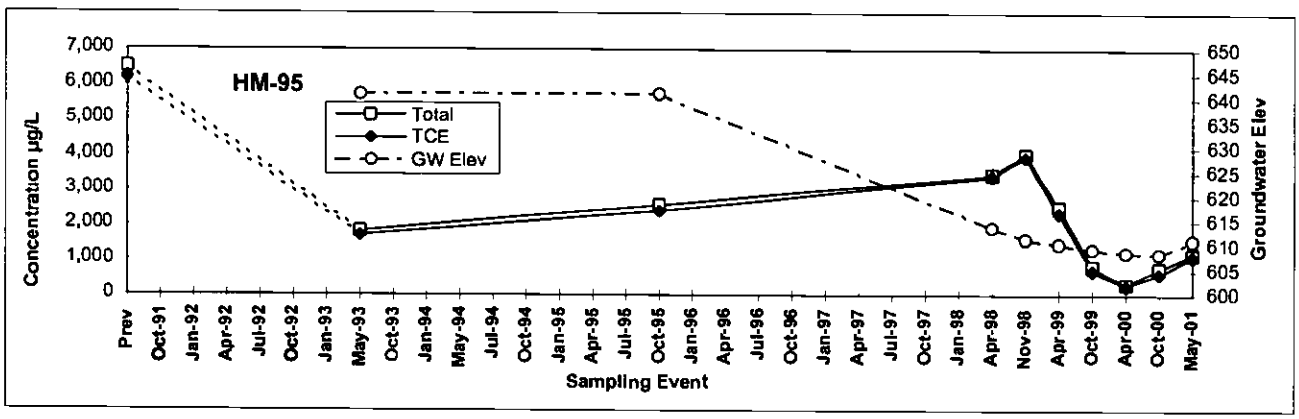
Terrace Alluvium well - East Parking Lot

Prev data were acquired prior to Oct 1991 See Appendix B Notes

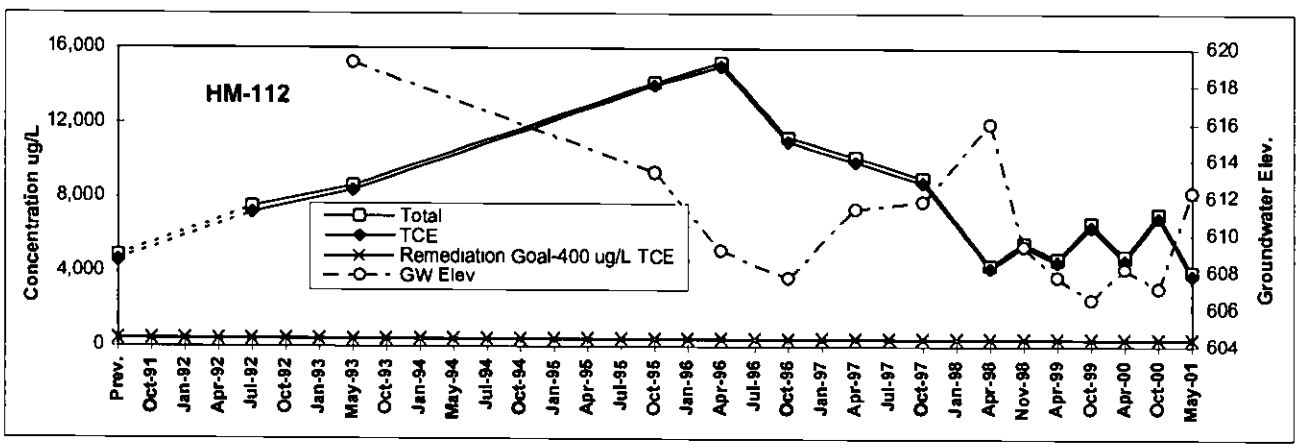
Total concentration = TCE plus its degradation products See Appendix B Notes



Terrace Alluvium well - East Parking Lot



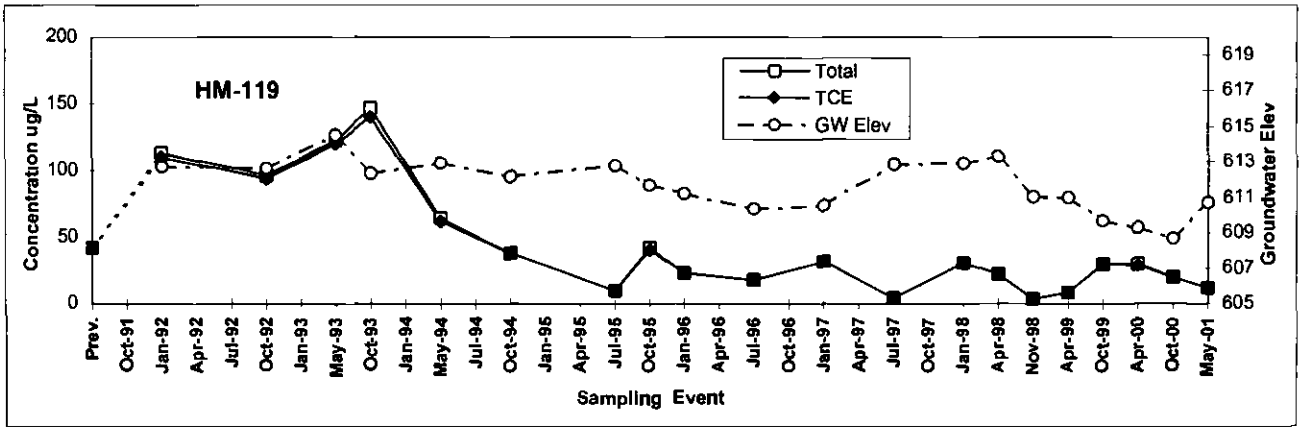
Terrace Alluvium well - AFP4 flightline



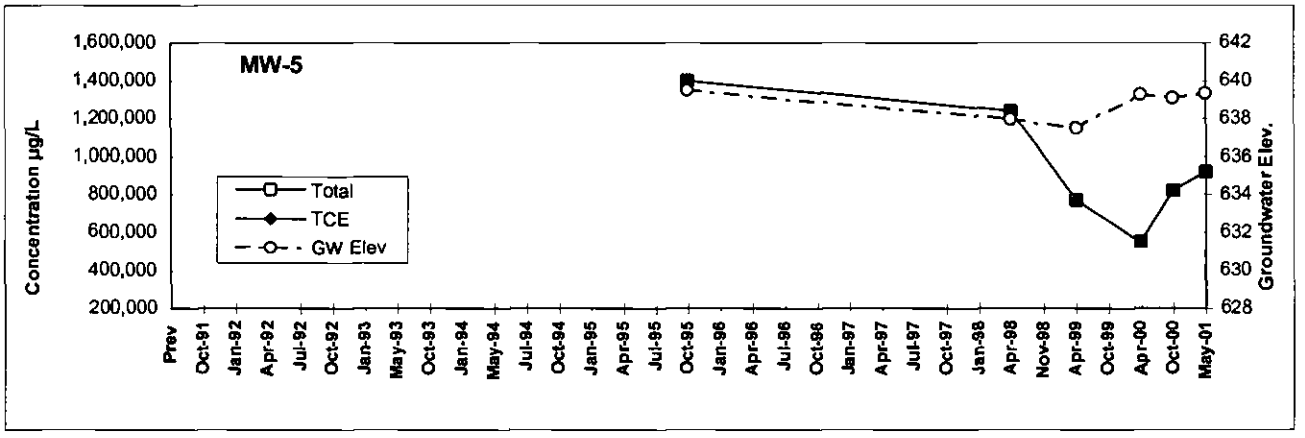
Terrace Alluvium well - AFP4 flightline

Prev data were acquired prior to Oct 1991 See Appendix B Notes

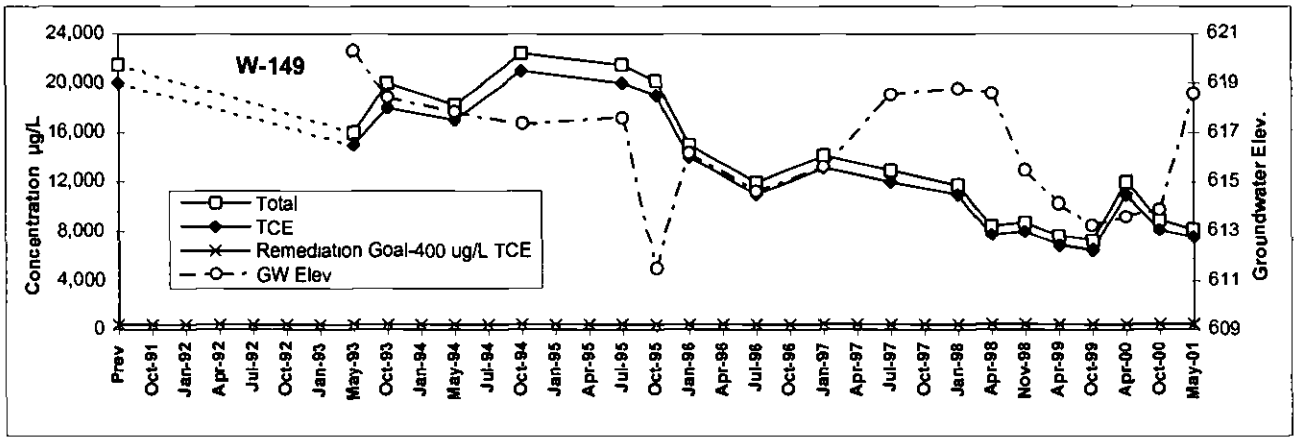
Total concentration = TCE plus its degradation products See Appendix B Notes



Terrace Alluvium well - NAS Fort Worth flightline



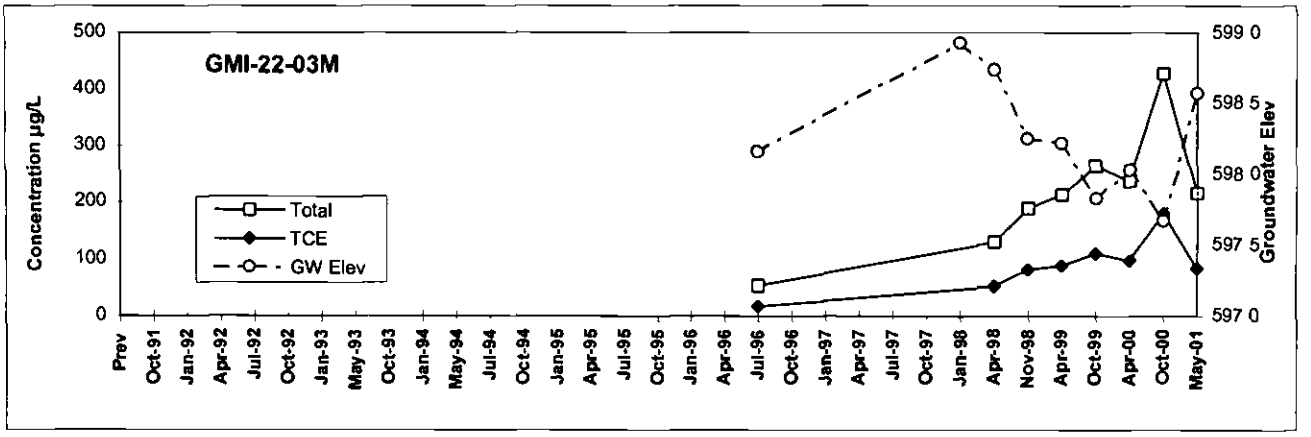
Terrace Alluvium well inside Building 181



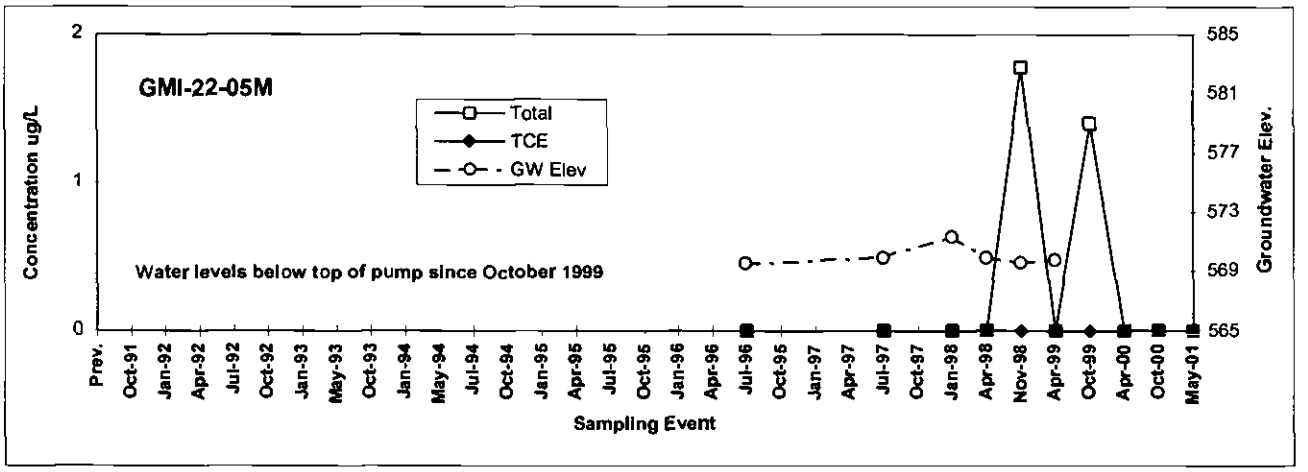
Terrace Alluvium well - East Parking Lot

Prev data were acquired prior to Oct 1991 See Appendix B Notes

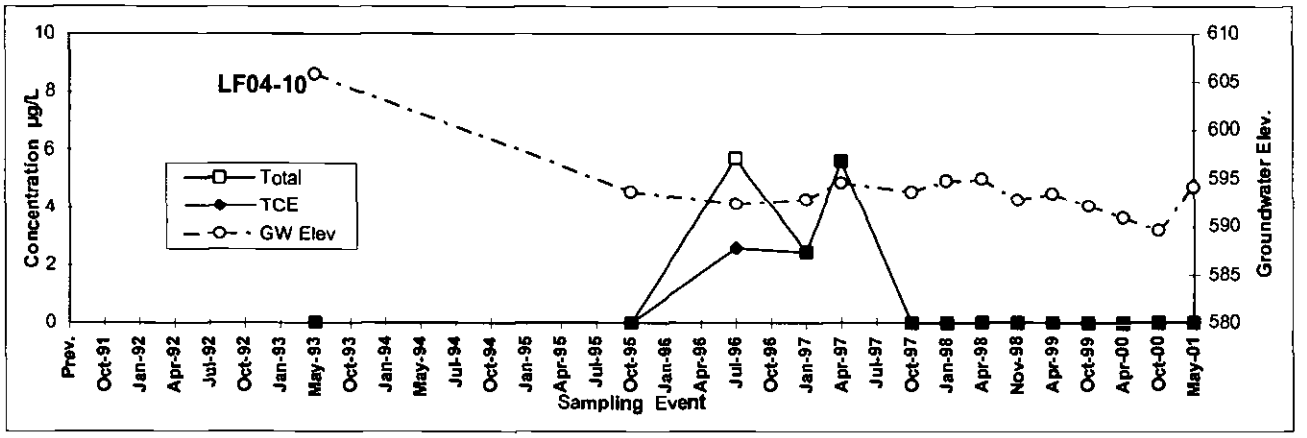
Total concentration = TCE plus its degradation products See Appendix B Notes



Terrace Alluvium well - NAS Fort Worth Base



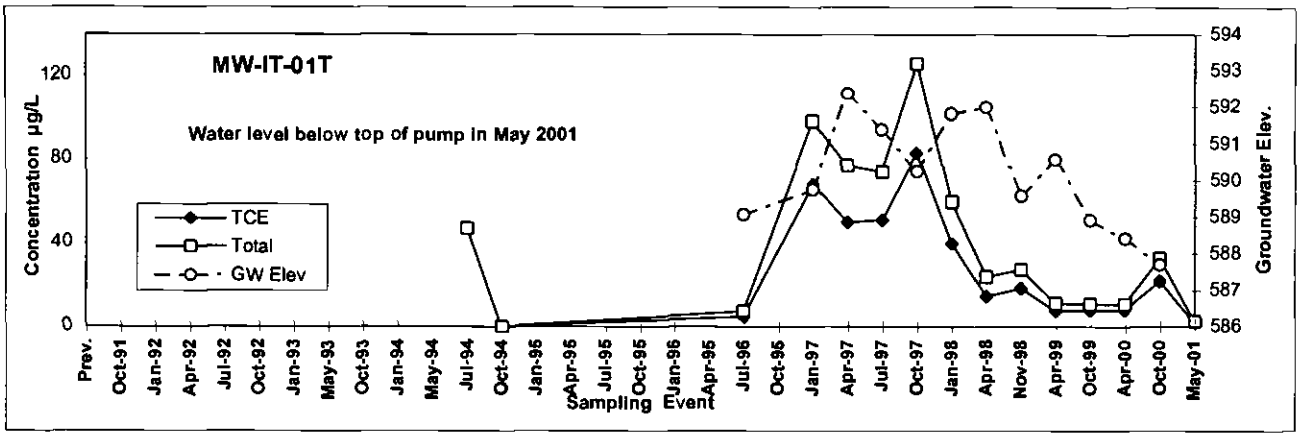
Terrace Alluvium well - NAS Fort Worth Base



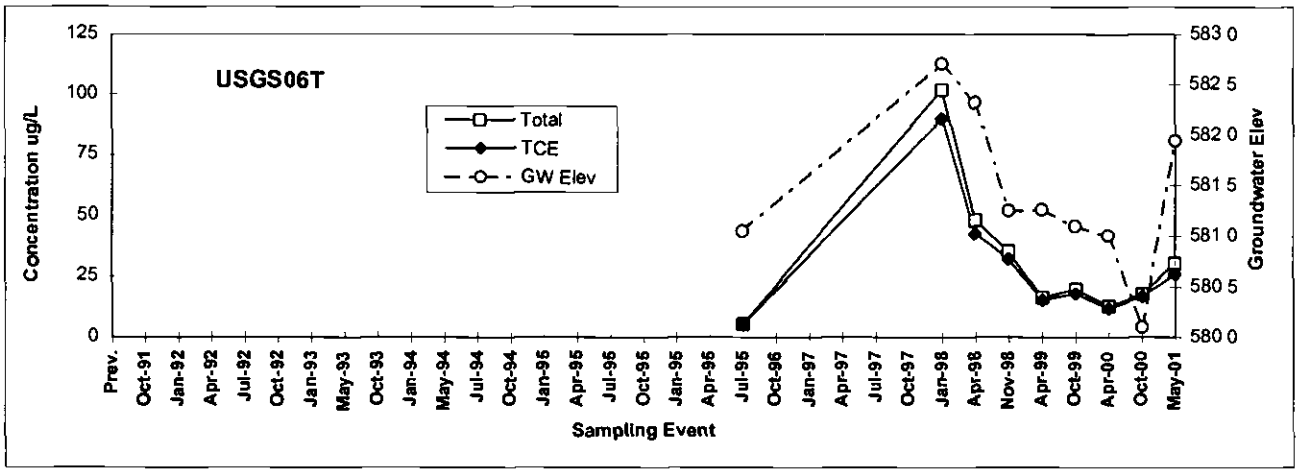
Terrace Alluvium well - NAS Fort Worth Landfill 4

Prev data were acquired pnor to Oct 1991 See Appendix B Notes

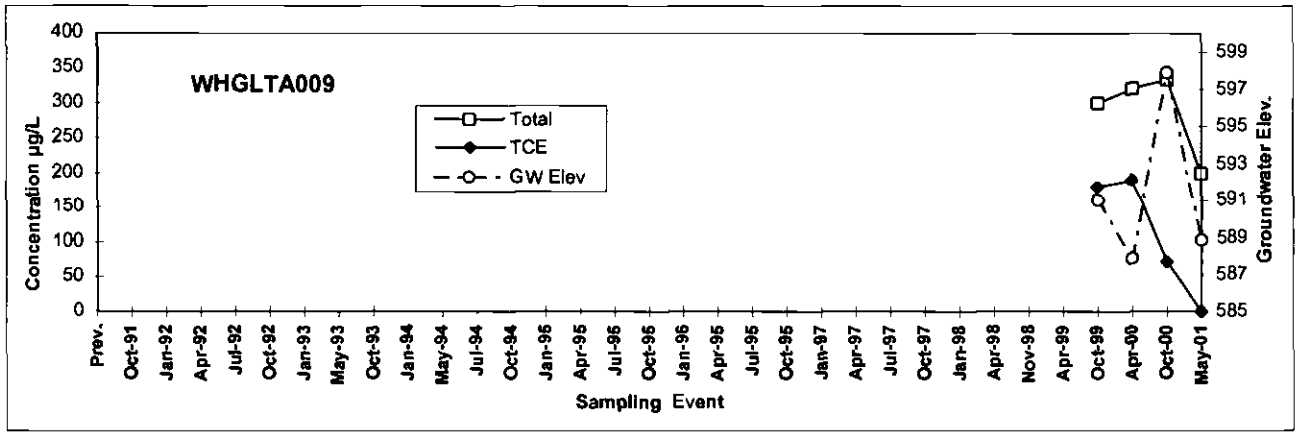
Total concentration = TCE plus its degradation products See Appendix B Notes



Terrace Alluvium well - NAS Fort Worth golf course



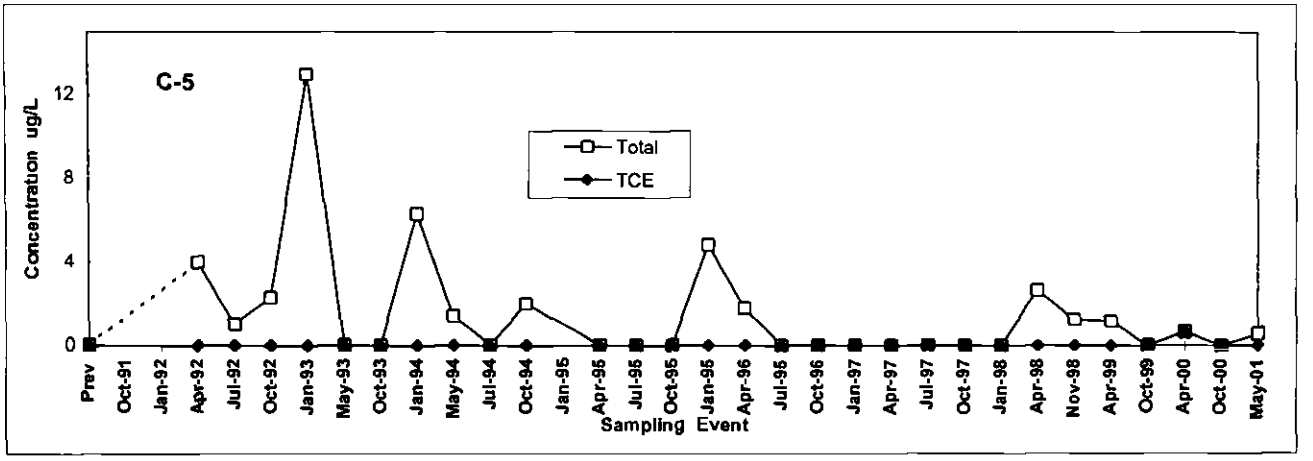
Terrace Alluvium well - NAS Fort Worth Base



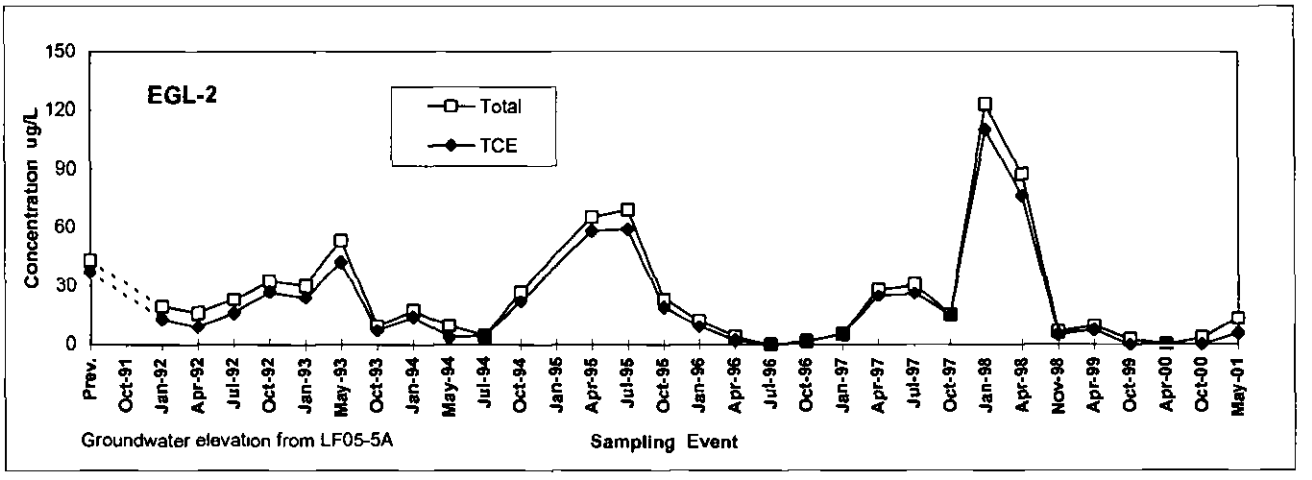
Terrace Alluvium well - NAS Fort Worth Base

Prev data were acquired prior to Oct 1991 See Appendix B Notes

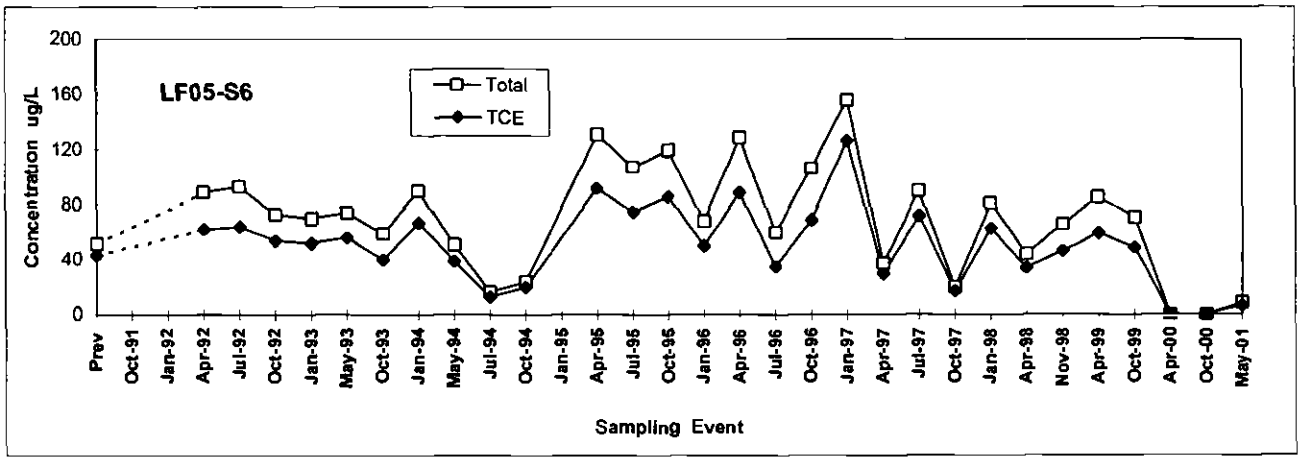
Total concentration = TCE plus its degradation products See Appendix B Notes



Surface location - Meandenng Road Creek

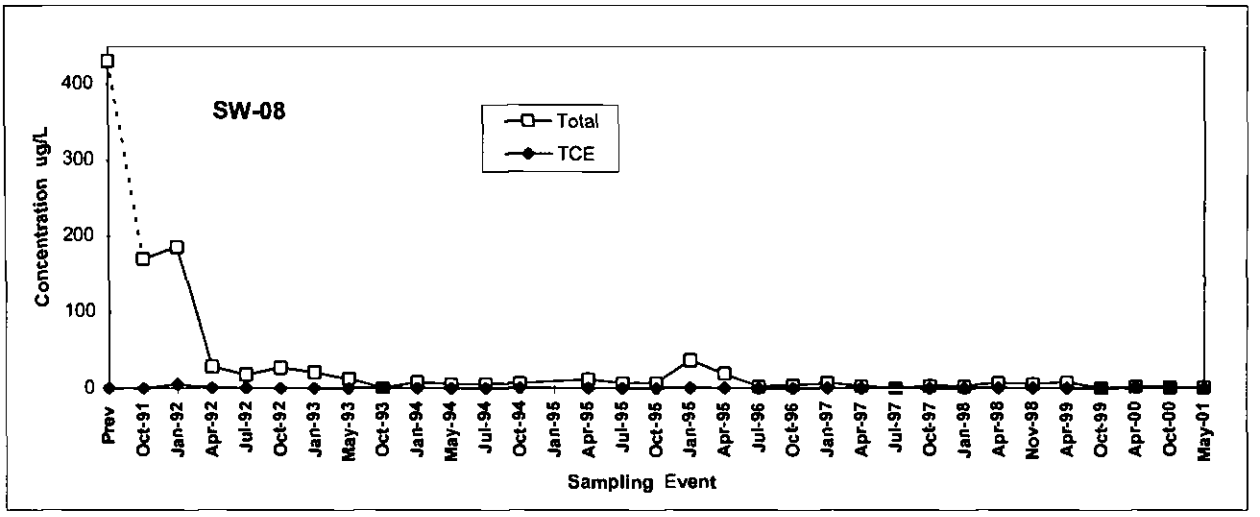


Surface location - Farmers Branch aqueduct outlet

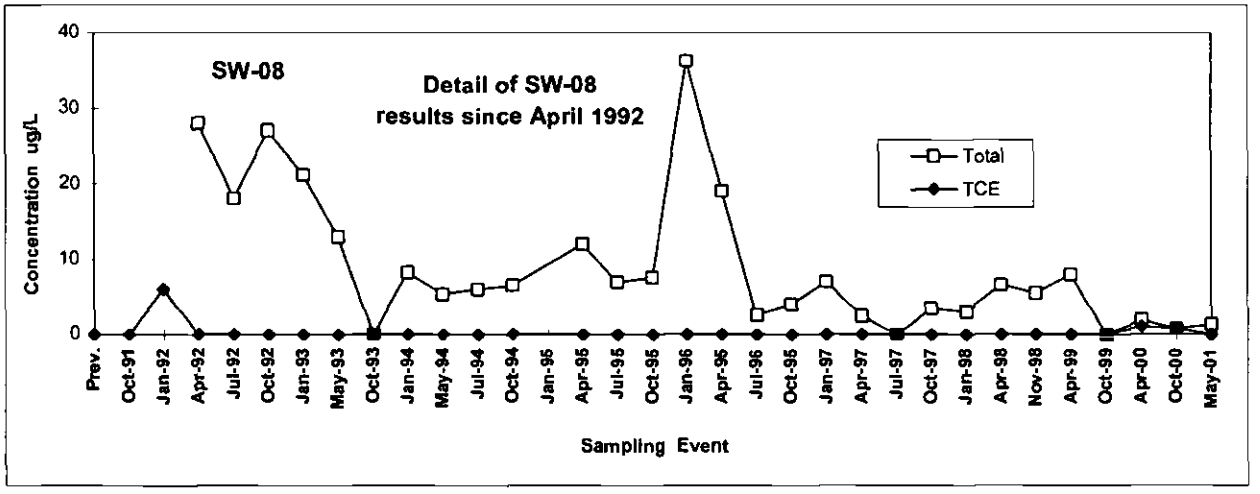


Surface location - Farmers Branch, NAS Fort Worth, downstream from confluence with unnamed tnbutary

Prev data were acquired pnor to Oct 1991 See Appendix B Notes
Total concentration = TCE plus its degradation products See Appendix B Notes



Surface location - Meandenng Road Creek



Surface location - Meandenng Road Creek

Prev data were acquired pnor to Oct 1991 See Appendix B Notes
Total concentration = TCE plus its degradation products See Appendix B Notes

TAB

APPENDIX C

APPENDIX C

Data Validation Reports by Sample Delivery Group

From PDP Analytical Services, The Woodlands, Texas

SDG 6822

SDG 6824

SDG 6836

(intentionally blank)

DATA VALIDATION REPORT
PDP SDG 6822

1.0 SUMMARY

This data validation report addresses PDP sample delivery group (SDG) 6822, consisting of 17 water samples collected from Air Force Plant 4, Fort Worth, Texas. Of the 17 water samples analyzed, 16 were normal environmental samples and one was a quality control (QC) sample The one QC sample contained within the SDG was a trip blank sample. No field duplicate or equipment blank samples were contained within SDG 6822. The samples were collected at the Air Force Plant 4 Site on 2 May through 4 May 2001, and shipped on 4 May 2001 to PDP Analytical Services in The Woodlands, Texas Sample aliquots were subjected to the following analyses· total chromium (SW6010B) and selected volatile organic compounds (SW8260B).

The data have been verified with respect to completeness of the data packages (hardcopy and electronic data deliverables) and validated with respect to *Final Basewide Quality Assurance Project Plan*, NAS Fort Worth JRB, Texas (HydroGeoLogic, 1998), referred to as the Basewide QAPP, as specified by the project-specific data quality objectives. Selected summary tables, filtered from the electronic data, are included to provide detail and backup for this report.

1.1 DATA QUALIFIERS ADDED/COMMENTS

- No data qualifiers were required for any of the chromium analyses.
- Data qualifiers were added to select volatile organic compounds (VOC) samples due to holding time, surrogate, and trip blank issues. However, no sample results were rejected. Affected samples are tabulated below. Specific details regarding these issues are discussed in the following text.

AF-L225001	AF-L225002	AF-L225003	AF-L225004
AF-L225005DL1	AF-L225007	AF-L225201	AF0L225202
AF-L225402	AF-L225403	AF-L225501	AF-L225502

1.2 DATA QUALIFIER DEFINITION

The qualifiers used to flag data in the referenced data package are defined as follows:

- "U" - The analyte was analyzed for, but not detected at a value above the method detection limit (MDL).
- "UJ" - The analyte was analyzed for, but not detected at a value above the MDL. The numerical detection limit value is approximate due to compromised quality control(s)
- "F" - The analyte was positively identified at a value above the MDL, but less than the practical quantitation limit (PQL).
- "B" - The analyte was found in an associated blank, as well as in the sample at a comparable level.
- "J" - The analyte was positively identified, but the numerical concentration value is approximate due to compromised quality control(s).
- "M" - The numerical concentration value is approximate due to the possible presence of a matrix effect.
- "R" - The data was rejected due to deficiencies in the ability to analyze the sample and meet QC criteria. The value reported is meaningless. Reanalysis and possibly resampling and reanalysis are required to ascertain the correct concentration.
- "S" - The analyte was positively identified, but the numerical concentration is approximate due to out of control surrogate recovery.

2.0 TOTAL CHROMIUM (SW6010B)

Total chromium was determined using a spectroscopic method described in USEPA *Test Methods For Evaluating Solid Waste*. A total of three normal environmental water samples were analyzed for chromium using Method SW6010B inductively-coupled plasma (ICP) spectroscopy (USEPA 1996).

2.1 ACCURACY

- Based on the standard calibration records and "Analysis Run Logs" for the ICP, initial and continuing calibrations were performed at satisfactory frequencies.

- The matrix spike/matrix spike duplicate (MS/MSD) percent recovery (%R) and relative percent difference (RPD) values were acceptable per the Basewide QAPP

- A second source PQL standard was analyzed. Second source standard results were acceptable and within Basewide QAPP established control limits.

- Laboratory control sample (LCS) %R and RPD values were acceptable and within Basewide QAPP established control limits.

- The ICP serial dilution analyses were acceptable and within Basewide QAPP established control limits.

- The laboratory preparation blank sample and all calibration verification blank samples were free of contamination. No contaminants were detected above the MDL in any blank samples. Sample results were not biased by any blank contamination. There were no equipment rinsate blank samples included with this SDG

2.2 PRECISION

Analytical precision was acceptable for the metals analyses based on field duplicate/environmental, LCS/LCSD, and MS/MSD RPDs.

2.3 REPRESENTATIVENESS

Chain-of-custody was maintained for all samples, including satisfactory sample preservation (HNO3) and analysis within the required holding time (180 days from sample collection). Samples were acquired in accordance with the project-specific sampling and analysis plan (SAP)

2.4 COMPLETENESS

All samples were collected, shipped for analysis, analyzed for the requested method, and reported with usable quality control results. No sample result was unacceptable; thus completeness was 100%.

2.5 COMPARABILITY

Comparability for this data is acceptable based on the use of a standard USEPA method and project consistent documentation.

2.6 SENSITIVITY

Reporting limits were at or below the required PQL listed in the Basewide QAPP.

3.0 VOLATILE ORGANIC COMPOUNDS (SW8260B)

Volatile organic compounds (VOCs) were determined using a gas chromatography/mass spectrometer detector method described in USEPA *Test Methods For Evaluating Solid Waste* (USEPA 1996) A subset of four-selected target compounds was evaluated (cis-1,2-dichloroethene, trans-1,2-dichloroethene, trichloroethene, and vinyl chloride). A total of 14 water samples were analyzed for VOCs using Method SW8260B.

3.1 ACCURACY

- Calibrations were performed at the required frequencies and with the required standards. Initial calibrations (ICAL) were established with 6-point curves; daily continuing calibration (CCAL) and second source confirmation standards were properly analyzed.

- ICALs were acceptable based on dates of performance and information provided. Percent difference between the ICAL and CCAL with respect to calibration check compounds and response factors for system performance check compounds were acceptable.

- Tuning compound analyses were acceptable.

- LCS values were acceptable based on %R values that were within Basewide QAPP QC limits.

- The standard four method SW8260 surrogate standards were included in all samples, blanks, LCS, and MS analyses With the exception of the surrogate recovery for toluene-d8 (135%) in sample AF-L225201, all surrogate recoveries were within acceptable limits. The toluene-d8 recovery exceeds the upper control limit of 125%. All corresponding VOC results above the quantitation limit in sample AF-L225201 were qualified as "estimated" (J-S). A total of one VOC sample result in AF-L225201 (trichloroethene) was affected.

- No contaminants were detected above the MDL in any of the method or analysis blank samples. However, trichloroethene was detected in the trip blank sample (AF-L225007) at a concentration of 3.1 ug/L. Per the requirements of the Basewide QAPP, all corresponding field results for trichloroethene less than 15.5 ug/L (5x the detected 3.1 ug/L concentration) were qualified as "not detected" (U-B). The affected VOC samples are as follows: AF-L225001; AF-L225002; AF-L225003; AF-L225004; AF-L225007; AF-L225201; AF-L225202; AF-L225402; AF-L225501; and AF-L225502.

3.2 PRECISION

Precision results were acceptable. RPD value calculated from environmental/field duplicate, LCS/LCSD, and MS/MSD samples were within Basewide QAPP control limits.

3.3 REPRESENTATIVENESS

Chain of custody was maintained for all samples and all samples were appropriately preserved. Samples were acquired in accordance with the project-specific SAP.

Analytical holding times were exceeded for five samples within the SDG. The VOC holding times reported for these five samples exceeded the maximum allowable 14-day holding time by up to 4.4 days (18.4 days from sample collection). Per the Basewide QAPP, all corresponding VOC results within these five samples were qualified as "estimated" with either a "UJ-H" or a "J-H" qualifier assigned The affected VOC samples are as follows: AF-L225005DL1 (TCE only), AF-L225007; AF-L225403; AF-L225501; and AF-L225502.

3.4 COMPLETENESS

All samples were collected, shipped for analysis, analyzed for the requested method, and reported with satisfactory quality control. No sample result was unacceptable; thus completeness was 100%.

3.5 COMPARABILITY

Comparability for this data was acceptable based on the use of a standard USEPA method and project consistent documentation.

3.6 SENSITIVITY

With the exception of trans-1,2-dichloroethene, all reporting limits were at or below the required PQL listed in the Basewide QAPP. The reporting limit for trans-1,2-dichloroethene given in the Basewide QAPP is 0.6 ug/L However, the laboratory's 1.0 ug/L reporting limit for trans-1,2-dichloroethene is well below the most stringent applicable regulatory standard of 100 ug/L. Therefore, the use of the data has not been adversely impacted

4.0 REFERENCES

HydroGeoLogic February 1998. Final *Base-Wide Quality Assurance Project Plan, NAS Fort Worth JRB,* Fort Worth, TX.

United States Environmental Protection Agency (USEPA). December 1996. *Test Methods For Evaluating Solid Waste*. EPA - SW-846. 3rd edition. Final Update III. Washington D.C.: U.S. Government Printing Office.

USEPA. February 1994a. *National Functional Guidelines for Organic Data Review.* EPA 540/R-94-012. USEPA Office of Emergency and Remedial Response. Washington D.C.: U.S. Government Printing Office.

USEPA. February 1994b. *National Functional Guidelines for Inorganic Data Review.* EPA 540/R-94-013. USEPA Office of Emergency and Remedial Response. Washington D.C U.S. Government Printing Office.

DATA VALIDATION REPORT
PDPW SDG 6824

1.0 SUMMARY

This data validation report addresses PDP sample delivery group (SDG) 6824, consisting of 37 water samples from Air Force Plant 4, Fort Worth, Texas. Of the 37 water samples analyzed, 31 were normal environmental samples and six were quality control (QC) samples. Five of the water QC samples were field duplicate samples and the other QC sample was a trip blank. No equipment blank samples were contained within SDG 6824. The samples were collected at the Air Force Plant 4 Site between 04 May and 07 May 2001, and shipped on 07 May 2001 to PDP Analytical Services in The Woodlands, Texas. Sample aliquots were subjected to the following analyses: total chromium (SW6010B) and selected volatile organic compounds (SW8260B).

The data have been verified with respect to completeness of the data packages (hardcopy and electronic data deliverables) were validated with respect to *Final Basewide Quality Assurance Project Plan*, NAS Fort Worth JRB, Texas (HydroGeoLogic, 1998) as specified by the project-specific data quality objectives. Selected summary tables, filtered from the electronic data, are included to provide detail and backup for this report.

1.1 DATA QUALIFIERS ADDED/COMMENTS

- No data qualifiers were required for any of the chromium analyses.
- Data qualifiers were added to select volatile organic compounds (VOC) samples due to holding time issues. However, no sample results were rejected Affected samples are tabulated below. Specific details regarding these issues are discussed in the following text.

AF-L225201DL	AF-L225304	AF-L225305	AF-L225601
AF-L225603	AF-L225605	AF-L225607	AF-L226002
AF-L226003	AF-L226005	AF-L226201	AF-L226202
AF-L226204	AF-L226206	AF-L226301	AF-L226302
AF-L226303	AF-L226304	AF-L226401	AF-L226402

AF-L226403	AF-L226404		

1.2 DATA QUALIFIER DEFINITION

The qualifiers used to flag data in the referenced data package are defined as follows:

- "U" - The analyte was analyzed for, but not detected at a value above the method detection limit (MDL).
- "UJ" - The analyte was analyzed for, but not detected at a value above the MDL. The numerical detection limit value is approximate due to compromised quality control(s).
- "F" - The analyte was positively identified at a value above the MDL, but less than the practical quantitation limit (PQL).
- "B" - The analyte was found in an associated blank, as well as in the sample at a comparable level.
- "J" - The analyte was positively identified, but the numerical concentration value is approximate due to compromised quality control(s).
- "M" - The numerical concentration value is approximate due to the possible presence of a matrix effect.
- "R" - The data was rejected due to deficiencies in the ability to analyze the sample and meet QC criteria. The value reported is meaningless. Reanalysis and possibly resampling and reanalysis are required to ascertain the correct concentration.

2.0 TOTAL METALS (SW6010B)

Total chromium was determined using a spectroscopic method described in USEPA *Test Methods For Evaluating Solid Waste*. A total of nine water samples were analyzed for chromium using Method SW6010B inductively-coupled plasma (ICP) spectroscopy (USEPA 1996).

2.1 ACCURACY

- Based on the standard calibration records and "Analysis Run Logs" for the ICP, initial and continuing calibrations were performed at satisfactory frequencies.

- The matrix spike/matrix spike duplicate (MS/MSD) percent recovery (%R) and relative percent difference (RPD) values were acceptable per the Basewide QAPP.

- Second source PQL standards were analyzed. All second source standard results were acceptable and within Basewide QAPP established control limits.

- Laboratory control sample (LCS) %R and RPD values were acceptable and within Basewide QAPP established control limits.

- The ICP serial dilution analyses were acceptable and within Basewide QAPP established control limits.

- The laboratory preparation blank sample and all calibration verification blank samples were free of contamination. No contaminants were detected above the MDL in any blank samples. Sample results were not biased by any blank contamination. There were no equipment rinsate blank samples included with this SDG.

2.2 PRECISION

Analytical precision was acceptable for the metals analyses based on field duplicate/environmental, LCS/LCSD, and MS/MSD RPDs.

2.3 REPRESENTATIVENESS

Chain-of-custody was maintained for all samples, including satisfactory sample preservation (HNO3) and analysis within the required holding time (180 days from sample collection). Samples were acquired in accordance with the project-specific sampling and analysis plan (SAP).

2.4 COMPLETENESS

All samples were collected, shipped for analysis, analyzed for the requested method, and reported with usable quality control results. No sample result was unacceptable; thus completeness was 100%.

2.5 COMPARABILITY

Comparability for this data is acceptable based on the use of a standard USEPA method and project consistent documentation.

2.6 SENSITIVITY

Reporting limits were at or below the required PQL listed in the Basewide QAPP.

3.0 VOLATILE ORGANIC COMPOUNDS (SW8260B)

Volatile organic compounds (VOC) were determined using a gas chromatography/mass spectrometer detector method described in USEPA *Test Methods For Evaluating Solid Waste* (USEPA 1996). A subset of four-selected target compounds was evaluated (cis-1,2-dichloroethene, trans-1,2-dichloroethene, trichloroethene, and vinyl chloride) A total of 28 water samples were analyzed for VOCs using Method SW8260B.

3.1 ACCURACY

- Calibrations were performed at the required frequencies and with the required standards. Initial calibrations (ICAL) were established with 6-point curves; daily continuing calibration (CCAL) and second source confirmation standards were properly analyzed.

- ICALs were acceptable based on dates of performance and information provided. Percent difference between the ICAL and CCAL with respect to calibration check compounds and response factors for system performance check compounds were acceptable.

- Tuning compound analyses were acceptable.

- MS/MSD %R results were not acceptable for water matrix TCE analyses. All water matrix TCE analyses were qualified as estimated (J-M).

- LCS values were acceptable based on %R values that were within Basewide QAPP QC limits.

- The standard four method SW8260 surrogate standards were included in all samples, blanks, LCS, and MS analyses. All surrogate recoveries were within acceptable limits

- No contaminants were detected above the MDL in the method blank or equipment rinsate blank samples. Sample results were not biased by any blank measured contamination.

3.2 PRECISION

Precision results were acceptable. RPD value calculated from field duplicate/environmental and MS/MSD samples were within Basewide QAPP control limits.

3.3 REPRESENTATIVENESS

Analytical holding times were exceeded for 22 samples within the SDG. The VOC holding times reported for these samples exceed the maximum allowable 14-day holding time by up to 3.74 days (17.74 days from sample collection). As per the Basewide QAPP, all corresponding VOC results within these 22 samples were qualified as "estimated" with either a UJ-H or a J-H qualifier assigned. The affected VOC samples are as follows. AF-L225102DL (cis-1,2-DCE only); AF-L225304, AF-L225305; AF-L225601; AF-L225603; AF-L225605; AF-L225607; AF-L226002; AF-L226003; AF-L226005, AF-L226201; AF-L226202; AF-L226204; AF-L226206; AF-L226301; AF-L226302; AF-L226303; AF-L226304; AF-L226401; AF-L226402; AF-L226403; and AF-L226404.

3.4 COMPLETENESS

All samples were collected, shipped for analysis, analyzed for the requested method, and reported with satisfactory quality control. No sample result was unacceptable; thus completeness was 100%.

3.5 COMPARABILITY

Comparability for this data was acceptable based on the use of a standard USEPA method and project consistent documentation.

3.6 SENSITIVITY

With the exception of trans-1,2-dichloroethene, all reporting limits were at or below the required PQL listed in the Basewide QAPP. The reporting limit for trans-1,2-dichloroethene given in the Basewide QAPP is 0.6 ug/L. However, the laboratory's 1.0 ug/L reporting limit for trans-1,2-

dichloroethene is well below the most stringent applicable regulatory standard of 100 ug/L. Therefore, the use of the data has not been adversely impacted.

4.0 REFERENCES

HydroGeoLogic February 1998. Final *Base-Wide Quality Assurance Project Plan, NAS Fort Worth JRB,* Fort Worth, TX.

United States Environmental Protection Agency (USEPA). December 1996. *Test Methods For Evaluating Solid Waste.* EPA - SW-846. 3rd edition. Final Update III. Washington D.C.: U.S. Government Printing Office.

USEPA.. February 1994a. *National Functional Guidelines for Organic Data Review.* EPA 540/R-94-012. USEPA Office of Emergency and Remedial Response. Washington D.C.: U.S. Government Printing Office.

USEPA. February 1994b. *National Functional Guidelines for Inorganic Data Review.* EPA 540/R-94-013. USEPA Office of Emergency and Remedial Response. Washington D.C.: U.S. Government Printing Office.

DATA VALIDATION REPORT
PDPW SDG 6836

1.0 SUMMARY

This data validation report addresses PDP sample delivery group (SDG) 6836, consisting of 43 water sample and four sediment sample aliquots collected from Air Force Plant 4, Fort Worth, Texas. Of the 43 water samples analyzed, 35 were normal environmental samples and eight were quality control samples. Of the four sediment samples analyzed, three were normal environmental samples and one was a quality control sample. The nine quality control samples consisted of one sediment and four water field duplicate samples, three equipment rinsate blank samples, and one trip blank. The samples were collected at the Air Force Plant 4 Site from 7 May through 10 May 2001, and shipped on 10 May 2001 to PDP Analytical Services in The Woodlands, Texas. Sample aliquots were subjected to the following analyses: selected total metals (SW6010B), selected polychlorinated biphenyls (PCBs) (SW8082), and selected volatile organic compounds (SW8260B).

The data have been verified with respect to completeness of the data packages (hardcopy and electronic data deliverables) and validated with respect to *Final Basewide Quality Assurance Project Plan*, NAS Fort Worth JRB, Texas (HydroGeoLogic, 1998), referred to as the Basewide QAPP, as specified by the project-specific data quality objectives. Selected summary tables, filtered from the electronic data, are included to provide detail and backup for this report.

1.1 DATA QUALIFIERS ADDED/COMMENTS

- Data qualifiers were added to the sediment matrix silver results due to matrix spike and field duplicate issues. However, no sample results were rejected. Affected samples are tabulated below. Specific details regarding these issues are discussed in the following text.

AF-L224603	AF-L224606	AF-L224703	AF-L224704

- Data qualifiers were added to the water matrix chromium results due to matrix spike issues. However, no sample results were rejected. Affected samples are tabulated below. Specific details regarding these issues are discussed in the following text.

AF-L225702	AF-L225704	AF-L225803	AF-L225805
AF-L225902	AF-L225905	AF-L225907	

- Data qualifiers were added to select volatile organic compounds (VOC) samples due to holding time issues. However, no sample results were rejected. Affected samples are tabulated below. Specific details regarding these issues are discussed in the following text.

AF-L224701	AF-L224702	AF-L224705	AF-L224801
AF-L224802	AF-L224803	AF-L224804	AF-L224805
AF-L224901	AF-L224902	AF-L224903	AF-L224904
AF-L224905	AF-L224906	AF-L225701	AF-L225705
AF-L225801	AF-L225802	AF-L225804	AF-L225901
AF-L225903	AF-L225904	AF-L225906	AF-L226101
AF-L226102	AF-L226103	AF-L226104	

- No data qualifiers were required for any of the polychlorinated biphenyls (PCB) analyses.

1.2 DATA QUALIFIER DEFINITION

The qualifiers used to flag data in the referenced data package are defined as follows:

- "U" - The analyte was analyzed for, but not detected at a value above the method detection limit (MDL).
- "UJ" - The analyte was analyzed for, but not detected at a value above the MDL. The numerical detection limit value is approximate due to compromised quality control(s).
- "F" - The analyte was positively identified at a value above the MDL, but less than the practical quantitation limit (PQL).

- "B" - The analyte was found in an associated blank, as well as in the sample at a comparable level
- "D" - The numerical concentration is approximate due to out of control duplicate results.
- "M" – The numerical concentration value is approximate due to the possible presence of a matrix effect.
- "J" - The analyte was positively identified, but the numerical concentration value is approximate due to compromised quality control(s).
- "R" - The data was rejected due to deficiencies in the ability to analyze the sample and meet QC criteria. The value reported is meaningless. Reanalysis and possibly resampling and reanalysis are required to ascertain the correct concentration.

2.0 SELECTED TOTAL METALS (SW6010B)

Selected total metals (arsenic, cadmium, chromium, copper, lead, silver, and/or zinc) were determined using a spectroscopic method described in USEPA *Test Methods For Evaluating Solid Waste*. A total of 12 water and four sediment samples were analyzed for one or more of the above metals using Method SW6010B inductively coupled plasma (ICP) spectroscopy (USEPA 1996).

2.1 ACCURACY

- Based on the standard calibration records and "Analysis Run Logs" for the ICP, initial and continuing calibrations were performed at satisfactory frequencies.

- Most matrix spike/matrix spike duplicate (MS/MSD) percent recovery (%R) values were acceptable per the Basewide QAPP. The exception was silver in the sediment matrix, which exhibited an unacceptable %R of 69 %. This value exceeds the lower control limit of 80 %R. Silver results from impacted samples were qualified as estimated; either with a "J-M" or an "UJ-M" Note that the silver MSD %R was recovered at an acceptable level This MS/MSD discrepancy problem may be attributable to sample non-homogeneity. The affected samples are as follows: AF-L224603; AF-L224606; AF-L224703; and AF-L224704.

- Additionally, no MS/MSD samples were reported for the water matrix analytical batch for chromium. Therefore, all chromium results for the water matrix were qualified as estimated, either with a "J-M" or an "UJ-M". The affected samples are as follows: AF-

L225702; AF-L225704; AF-L225803; AF-L225805; AF-L225902; AF-L225905; and AF-L225907.

- A second source PQL standard was analyzed. Second source standard results were acceptable and within Basewide QAPP established control limits.

- Laboratory control sample (LCS) recoveries were acceptable and within Basewide QAPP established control limits.

- The ICP serial dilution analyses were acceptable and within Basewide QAPP established control limits.

- The laboratory preparation blank sample and all calibration verification blank samples were free of contamination No contaminants were detected above the RL in any blank samples. Sample results were not biased by any blank contamination

2.2 PRECISION

With the exception of silver in the sediment matrix, analytical precision was acceptable for the metals analyses based on field duplicate/environmental, LCS/LCSD, and MS/MSDRPDs. Silver in the sediment matrix exhibited an unacceptable MS/MSD RPD value of 50 %. This value exceeds the control limit of 15 %. Silver results from impacted samples were qualified as estimated; either with a "J-M" or an "UJ-M". The affected samples are as follows: AF-L224603, AF-L224606; AF-L224703, and AF-L224704.

Silver in the sediment matrix also exhibited a field duplicate/environmental RPD value of 200 % This value exceeds the control limit of 15 %. Silver results from impacted samples were qualified as estimated; either with a "J-D" or an "UJ-D". The affected samples are as follows: AF-L224703 and AF-L224704.

2.3 REPRESENTATIVENESS

Chain-of-custody was maintained for all samples, including satisfactory preservation and analysis within required holding times. Samples were acquired in accordance with the project-specific sampling and analysis plan (SAP).

2.4 COMPLETENESS

All samples were collected, shipped for analysis, analyzed for the requested method, and reported with usable quality control results No sample result was unacceptable; thus completeness was 100%.

2.5 COMPARABILITY

Comparability for this data is acceptable based on the use of a standard USEPA method and project consistent documentation.

2.6 SENSITIVITY

Reporting limits were at or below the required PQL listed in the Basewide QAPP

3.0 POLYCHLORINATED BIPHENYLS (SW8082)

Polychlorinated biphenyls (PCBs) were determined using a gas chromatography/electron capture detector method described in USEPA *Test Methods For Evaluating Solid Waste* (USEPA 1996). A total of one water and four sediment samples were analyzed for PCBs using Method SW8082.

3.1 ACCURACY

- Initial multi-point and continuing calibration sample analyses %R values were acceptable.

- LCS/LCS duplicate (LCSD) values were acceptable based on the Basewide QAPP QC limits specified for the PCB.

- The standard two method SW8082 surrogate standards were included in all samples, blanks, LCS, and MS analyses. With the exception of the surrogate recovery for decachlorobiphenyl in samples AF-L224606 (273 %) and AF-L224704 (203 %), all surrogate recoveries were within acceptable limits. Both decachlorobiphenyl recoveries exceed the upper control limit of 133%. Per the Basewide QAPP, since no PCB results were reported above the quantitation limit in either sample AF-L224606 or AF-L224704, no qualification was necessary.

- The laboratory method blanks were free of contamination. No contaminants were detected above the MDL in the method blank samples. Sample results were not biased by any blank contamination. The water sample analyzed was an equipment rinsate sample.

3.2 PRECISION

Precision results were within control limits based on the RPD values from the environmental/field duplicate, LCS/LCSD, and MS/MSD samples.

3.3 REPRESENTATIVENESS

Chain-of-custody was maintained for all samples, including satisfactory preservation and analysis within required holding times. Samples were acquired in accordance with the project-specific SAP.

3.4 COMPLETENESS

All samples were collected, shipped for analysis, analyzed for the requested method, and reported with usable quality control results. No sample result was unacceptable; thus completeness was 100%.

3.5 COMPARABILITY

Comparability for this data is acceptable based on the use of a standard USEPA method and project consistent documentation.

3.6 SENSITIVITY

Reporting limits were at or below the required PQL listed in the Basewide QAPP.

4.0 VOLATILE ORGANIC COMPOUNDS (SW8260B)

Volatile organic compounds (VOC) were determined using a gas chromatography/mass spectrometer detector method described in USEPA *Test Methods For Evaluating Solid Waste* (USEPA 1996). A subset of four-selected target compounds was evaluated (cis-1,2-

dichloroethene, trans-1,2-dichloroethene, trichloroethene, and vinyl chloride). A total of 30 water samples were analyzed for VOCs using Method SW8260B.

4.1 ACCURACY

- Calibrations were performed at the required frequencies and with the required standards. Initial calibrations (ICAL) were established with 6-point curves; daily continuing calibration (CCAL) and second source confirmation standards were properly analyzed

- ICALs were acceptable based on dates of performance and information provided. Percent difference between the ICAL and CCAL with respect to calibration check compounds and response factors for system performance check compounds were acceptable.

- Tuning compound analyses were acceptable.

- MS/MSD values were acceptable based on %R values that were within Basewide QAPP QC limits

- LCS/LCSD values were acceptable based on %R values that were within Basewide QAPP QC limits.

- The standard four method SW8260 surrogate standards were included in all samples, blanks, LCS, and MS analyses. All surrogate recoveries were within acceptable limits.

- No contaminants were detected above the MDL in the method blank, trip blank, or equipment rinsate blank samples. Sample results were not biased by any blank measured contamination.

4.2 PRECISION

Precision results were acceptable. RPD value calculated from field duplicate/environmental and MS/MSD samples were within Basewide QAPP control limits.

4.3 REPRESENTATIVENESS

Analytical holding times were exceeded for 27 samples within the SDG. The VOC holding times reported for these samples exceed the maximum allowable 14-day holding time by up to 13 days (27 days from sample collection). As per the Basewide QAPP, all corresponding VOC results within these 27 samples were qualified as "estimated" with either a "UJ-H" or a "J-H" qualifier assigned. The affected VOC samples are as follows: AF-L224701; AF-L224702, AF-L224705; AF-L224801; AF-L224802; AF-L224803; AF-L224804; AF-L224805; AF-L224901; AF-L224902; AF-L224903; AF-L224904; AF-L224905; AF-L224906; AF-L225701; AF-L225705; AF-L225801; AF-L225802; AF-L225804; AF-L225901; AF-L225903; AF-L225904; AF-L225906; AF-L226101; AF-L226102; AF-L226103; and AF-L226104.

4.4 COMPLETENESS

All samples were collected, shipped for analysis, analyzed for the requested method, and reported with satisfactory quality control. No sample result was unacceptable; thus completeness was 100%.

4.5 COMPARABILITY

Comparability for this data was acceptable based on the use of a standard USEPA method and project consistent documentation.

4.6 SENSITIVITY

With the exception of trans-1,2-dichloroethene, all reporting limits were at or below the required PQL listed in the Basewide QAPP. The reporting limit for trans-1,2-dichloroethene given in the Basewide QAPP is 0.6 ug/L. However, the laboratory's 1.0 ug/L reporting limit for trans-1,2-dichloroethene is well below the most stringent applicable regulatory standard of 100 ug/L. Therefore, the use of the data has not been adversely impacted.

5.0 REFERENCES

HydroGeoLogic February 1998. Final *Base-Wide Quality Assurance Project Plan, NAS Fort Worth JRB,* Fort Worth, TX.

United States Environmental Protection Agency (USEPA). December 1996. *Test Methods For Evaluating Solid Waste*. EPA - SW-846. 3rd edition. Final Update III. Washington D.C.: U.S. Government Printing Office.

USEPA February 1994a. *National Functional Guidelines for Organic Data Review*. EPA 540/R-94-012. USEPA Office of Emergency and Remedial Response. Washington D.C.: U.S. Government Printing Office.

USEPA. February 1994b. *National Functional Guidelines for Inorganic Data Review*. EPA 540/R-94-013. USEPA Office of Emergency and Remedial Response. Washington D.C.: U.S Government Printing Office.

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Summary Data Table
Long-Term Groundwater Monitoring
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Control No.	Sample ID	Matrix	Method	Name	Result	Units	MDL	AFCEE RL	Dilution	Type	PARVQ	Lab Qual	Val Qual	SDG
AF-L224601	SW-C5-31	WS	SW8260	cis-1,2-DICHLOROETHYLENE	0 56	µg/L	0 112	1	1	N1	TR	J		6836
AF-L224601	SW-C5-31	WS	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U		6836
AF-L224601	SW-C5-31	WS	SW8260	TRICHLOROETHYLENE (TCE)	0	µg/L	0 096	1	1	N1	ND	U		6836
AF-L224601	SW-C5-31	WS	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U		6836
AF-L224602	SW-C5-31	WS	SW6010	ARSENIC	0	mg/L	0 0044	0 005	1	N1	ND	U		6836
AF-L224602	SW-C5-31	WS	SW6010	CADMIUM	0	mg/L	0 0003	0 001	1	N1	ND	U		6836
AF-L224602	SW-C5-31	WS	SW6010	COPPER	0	mg/L	0 01	0 01	1	N1	ND	U		6836
AF-L224602	SW-C5-31	WS	SW6010	LEAD	0	mg/L	0 002	0 01	1	N1	ND	U		6836
AF-L224602	SW-C5-31	WS	SW6010	ZINC	0	mg/L	0 009	0 02	1	N1	ND	U		6836
AF-L224603	SE-C5-31	SE	SW6010	SILVER	1 9	mg/kg	0 059	0 79	1	N1	=		J	6836
AF-L224603	SE-C5-31	SE	SW8082	PCB-1016 (AROCHLOR 1016)	0	µg/kg	3 28	40	1	N1	ND	U		6836
AF-L224603	SE-C5-31	SE	SW8082	PCB-1221 (AROCHLOR 1221)	0	µg/kg	4 5	40	1	N1	ND	U		6836
AF-L224603	SE-C5-31	SE	SW8082	PCB-1232 (AROCHLOR 1232)	0	µg/kg	4 28	40	1	N1	ND	U		6836
AF-L224603	SE-C5-31	SE	SW8082	PCB-1242 (AROCHLOR 1242)	0	µg/kg	8 22	40	1	N1	ND	U		6836
AF-L224603	SE-C5-31	SE	SW8082	PCB-1248 (AROCHLOR 1248)	0	µg/kg	7 49	40	1	N1	ND	U		6836
AF-L224603	SE-C5-31	SE	SW8082	PCB-1254 (AROCHLOR 1254)	0	µg/kg	11 6	40	1	N1	ND	U		6836
AF-L224603	SE-C5-31	SE	SW8082	PCB-1260 (AROCHLOR 1260)	0	µg/kg	5 36	40	1	N1	ND	U		6836
AF-L224604	SW-SW08-31	WS	SW8260	cis-1,2-DICHLOROETHYLENE	1 4	µg/L	0 112	1	1	N1	=			6836
AF-L224604	SW-SW08-31	WS	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U		6836
AF-L224604	SW-SW08-31	WS	SW8260	TRICHLOROETHYLENE (TCE)	0	µg/L	0 096	1	1	N1	ND	U		6836
AF-L224604	SW-SW08-31	WS	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U		6836
AF-L224605	SW-SW08-31	WS	SW6010	ARSENIC	0	mg/L	0 0044	0 005	1	N1	ND	U		6836
AF-L224605	SW-SW08-31	WS	SW6010	CADMIUM	0	mg/L	0 0003	0 001	1	N1	ND	U		6836
AF-L224605	SW-SW08-31	WS	SW6010	COPPER	0	mg/L	0 01	0 01	1	N1	ND	U		6836
AF-L224605	SW-SW08-31	WS	SW6010	LEAD	0	mg/L	0 002	0 01	1	N1	ND	U		6836
AF-L224605	SW-SW08-31	WS	SW6010	ZINC	0	mg/L	0 009	0 02	1	N1	ND	U		6836
AF-L224606	SE-SW08-31	SE	SW6010	SILVER	0	mg/kg	0 06	0 99	1	N1	ND	U	UJ	6836
AF-L224606	SE-SW08-31	SE	SW8082	PCB-1016 (AROCHLOR 1016)	0	µg/kg	4 08	50	1	N1	ND	U		6836
AF-L224606	SE-SW08-31	SE	SW8082	PCB-1221 (AROCHLOR 1221)	0	µg/kg	5 6	50	1	N1	ND	U		6836
AF-L224606	SE-SW08-31	SE	SW8082	PCB-1232 (AROCHLOR 1232)	0	µg/kg	5 33	50	1	N1	ND	U		6836
AF-L224606	SE-SW08-31	SE	SW8082	PCB-1242 (AROCHLOR 1242)	0	µg/kg	10 2	50	1	N1	ND	U		6836
AF-L224606	SE-SW08-31	SE	SW8082	PCB-1248 (AROCHLOR 1248)	0	µg/kg	9 33	50	1	N1	ND	U		6836
AF-L224606	SE-SW08-31	SE	SW8082	PCB-1254 (AROCHLOR 1254)	0	µg/kg	14 4	50	1	N1	ND	U		6836
AF-L224606	SE-SW08-31	SE	SW8082	PCB-1260 (AROCHLOR 1260)	0	µg/kg	6 67	50	1	N1	ND	U		6836
AF-L224701	SW-LKLW03-31	WS	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	N1	ND	U	UJ	6836
AF-L224701	SW-LKLW03-31	WS	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U	UJ	6836
AF-L224701	SW-LKLW03-31	WS	SW8260	TRICHLOROETHYLENE (TCE)	0	µg/L	0 096	1	1	N1	ND	U	UJ	6836

Summary Data Table
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Control No.	Sample ID	Matrix	Method	Name	Result	Units	MDL	AFCEE RL	Dilution	Type	PARVQ	Lab Qual	Val Qual	SDG
AF-L224701	SW-LKLW03-31	WS	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U	UJ	6836
AF-L224702	SW2-LKLW03-31	WS	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	FD1	ND	U	UJ	6836
AF-L224702	SW2-LKLW03-31	WS	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	FD1	ND	U	UJ	6836
AF-L224702	SW2-LKLW03-31	WS	SW8260	TRICHLOROETHYLENE (TCE)	0	µg/L	0 096	1	1	FD1	ND	U	UJ	6836
AF-L224702	SW2-LKLW03-31	WS	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	FD1	ND	U	UJ	6836
AF-L224703	SE-LKLW03-31	SE	SW6010	SILVER	0	mg/kg	0 059	0 82	1	N1	ND	U	UJ	6836
AF-L224703	SE-LKLW03-31	SE	SW8082	PCB-1016 (AROCHLOR 1016)	0	µg/kg	3 42	42	1	N1	ND	U		6836
AF-L224703	SE-LKLW03-31	SE	SW8082	PCB-1221 (AROCHLOR 1221)	0	µg/kg	4 69	42	1	N1	ND	U		6836
AF-L224703	SE-LKLW03-31	SE	SW8082	PCB-1232 (AROCHLOR 1232)	0	µg/kg	4 46	42	1	N1	ND	U		6836
AF-L224703	SE-LKLW03-31	SE	SW8082	PCB-1242 (AROCHLOR 1242)	0	µg/kg	8 57	42	1	N1	ND	U		6836
AF-L224703	SE-LKLW03-31	SE	SW8082	PCB-1248 (AROCHLOR 1248)	0	µg/kg	7 81	42	1	N1	ND	U		6836
AF-L224703	SE-LKLW03-31	SE	SW8082	PCB-1254 (AROCHLOR 1254)	0	µg/kg	12 1	42	1	N1	ND	U		6836
AF-L224703	SE-LKLW03-31	SE	SW8082	PCB-1260 (AROCHLOR 1260)	0	µg/kg	5 59	42	1	N1	ND	U		6836
AF-L224704	SE2-LKLW03-31	SE	SW6010	SILVER	1 6	mg/kg	0 06	0 86	1	FD1	=		J	6836
AF-L224704	SE2-LKLW03-31	SE	SW8082	PCB-1016 (AROCHLOR 1016)	0	µg/kg	3 57	43	1	FD1	ND	U		6836
AF-L224704	SE2-LKLW03-31	SE	SW8082	PCB-1221 (AROCHLOR 1221)	0	µg/kg	4 91	43	1	FD1	ND	U		6836
AF-L224704	SE2-LKLW03-31	SE	SW8082	PCB-1232 (AROCHLOR 1232)	0	µg/kg	4 67	43	1	FD1	ND	U		6836
AF-L224704	SE2-LKLW03-31	SE	SW8082	PCB-1242 (AROCHLOR 1242)	0	µg/kg	8 96	43	1	FD1	ND	U		6836
AF-L224704	SE2-LKLW03-31	SE	SW8082	PCB-1248 (AROCHLOR 1248)	0	µg/kg	8 17	43	1	FD1	ND	U		6836
AF-L224704	SE2-LKLW03-31	SE	SW8082	PCB-1254 (AROCHLOR 1254)	0	µg/kg	12 6	43	1	FD1	ND	U		6836
AF-L224704	SE2-LKLW03-31	SE	SW8082	PCB-1260 (AROCHLOR 1260)	0	µg/kg	5 84	43	1	FD1	ND	U		6836
AF-L224705	EB010510WS	WQ	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	EB1	ND	U	UJ	6836
AF-L224705	EB010510WS	WQ	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	EB1	ND	U	UJ	6836
AF-L224705	EB010510WS	WQ	SW8260	TRICHLOROETHYLENE (TCE)	0	µg/L	0 096	1	1	EB1	ND	U	UJ	6836
AF-L224705	EB010510WS	WQ	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	EB1	ND	U	UJ	6836
AF-L224706	EB010510WS	WQ	SW6010	ARSENIC	0	mg/L	0 0044	0 005	1	EB1	ND	U		6836
AF-L224706	EB010510WS	WQ	SW6010	CADMIUM	0	mg/L	0 0003	0 001	1	EB1	ND	U		6836
AF-L224706	EB010510WS	WQ	SW6010	COPPER	0	mg/L	0 01	0 01	1	EB1	ND	U		6836
AF-L224706	EB010510WS	WQ	SW6010	LEAD	0	mg/L	0 002	0 01	1	EB1	ND	U		6836
AF-L224706	EB010510WS	WQ	SW6010	SILVER	0	mg/L	0 0009	0 002	1	EB1	ND	U		6836
AF-L224706	EB010510WS	WQ	SW6010	ZINC	0	mg/L	0 009	0 02	1	EB1	ND	U		6836
AF-L224707	EB010510SE	WQ	SW8082	PCB-1016 (AROCHLOR 1016)	0	µg/L	1	1	1	EB2	ND	U		6836
AF-L224707	EB010510SE	WQ	SW8082	PCB-1221 (AROCHLOR 1221)	0	µg/L	1	1	1	EB2	ND	U		6836
AF-L224707	EB010510SE	WQ	SW8082	PCB-1232 (AROCHLOR 1232)	0	µg/L	1	1	1	EB2	ND	U		6836
AF-L224707	EB010510SE	WQ	SW8082	PCB-1242 (AROCHLOR 1242)	0	µg/L	1	1	1	EB2	ND	U		6836
AF-L224707	EB010510SE	WQ	SW8082	PCB-1248 (AROCHLOR 1248)	0	µg/L	1	1	1	EB2	ND	U		6836
AF-L224707	EB010510SE	WQ	SW8082	PCB-1254 (AROCHLOR 1254)	0	µg/L	1	1	1	EB2	ND	U		6836

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Control No.	Sample ID	Matrix	Method	Name	Result	Units	MDL	AFCEE RL	Dilution	Type	PARVQ	Lab Qual	Val Qual	SDG
AF-L224707	EB010510SE	WQ	SW8082	PCB-1260 (AROCHLOR 1260)	0	µg/L	1	1	1	EB2	ND	U		6836
AF-L224801	SW-EGL2-31	WS	SW8260	cis-1,2-DICHLOROETHYLENE	6 9	µg/L	0 112	1	1	N1	=		J	6836
AF-L224801	SW-EGL2-31	WS	SW8260	trans-1,2-DICHLOROETHENE	0 54	µg/L	0 114	1	1	N1	TR	J	FJ	6836
AF-L224801	SW-EGL2-31	WS	SW8260	TRICHLOROETHYLENE (TCE)	5 7	µg/L	0 096	1	1	N1	=		J	6836
AF-L224801	SW-EGL2-31	WS	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U	UJ	6836
AF-L224802	SW-RV001JETR-31	WS	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	N1	ND	U	UJ	6836
AF-L224802	SW-RV001JETR-31	WS	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U	UJ	6836
AF-L224802	SW-RV001JETR-31	WS	SW8260	TRICHLOROETHYLENE (TCE)	0	µg/L	0 096	1	1	N1	ND	U	UJ	6836
AF-L224802	SW-RV001JETR-31	WS	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U	UJ	6836
AF-L224803	SW-LF05S6-31	WS	SW8260	cis-1,2-DICHLOROETHYLENE	1 8	µg/L	0 112	1	1	N1	=		J	6836
AF-L224803	SW-LF05S6-31	WS	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U	UJ	6836
AF-L224803	SW-LF05S6-31	WS	SW8260	TRICHLOROETHYLENE (TCE)	7	µg/L	0 096	1	1	N1	=		J	6836
AF-L224803	SW-LF05S6-31	WS	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U	UJ	6836
AF-L224804	SW-LKLW09-31	WS	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	N1	ND	U	UJ	6836
AF-L224804	SW-LKLW09-31	WS	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U	UJ	6836
AF-L224804	SW-LKLW09-31	WS	SW8260	TRICHLOROETHYLENE (TCE)	0	µg/L	0 096	1	1	N1	ND	U	UJ	6836
AF-L224804	SW-LKLW09-31	WS	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U	UJ	6836
AF-L224805	SW-SW03A-31	WS	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	N1	ND	U	UJ	6836
AF-L224805	SW-SW03A-31	WS	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U	UJ	6836
AF-L224805	SW-SW03A-31	WS	SW8260	TRICHLOROETHYLENE (TCE)	0	µg/L	0 096	1	1	N1	ND	U	UJ	6836
AF-L224805	SW-SW03A-31	WS	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U	UJ	6836
AF-L224806	SW-SW03A-31	WS	SW6010	ARSENIC	0	mg/L	0 0044	0 005	1	N1	ND	U		6836
AF-L224806	SW-SW03A-31	WS	SW6010	CADMIUM	0	mg/L	0 0003	0 001	1	N1	ND	U		6836
AF-L224806	SW-SW03A-31	WS	SW6010	COPPER	0	mg/L	0 01	0 01	1	N1	ND	U		6836
AF-L224806	SW-SW03A-31	WS	SW6010	LEAD	0	mg/L	0 002	0 01	1	N1	ND	U		6836
AF-L224806	SW-SW03A-31	WS	SW6010	ZINC	0	mg/L	0 009	0 02	1	N1	ND	U		6836
AF-L224807	SW2-SW03A-31	WS	SW6010	ARSENIC	0	mg/L	0 0044	0 005	1	FD1	ND	U		6836
AF-L224807	SW2-SW03A-31	WS	SW6010	CADMIUM	0	mg/L	0 0003	0 001	1	FD1	ND	U		6836
AF-L224807	SW2-SW03A-31	WS	SW6010	COPPER	0	mg/L	0 01	0 01	1	FD1	ND	U		6836
AF-L224807	SW2-SW03A-31	WS	SW6010	LEAD	0	mg/L	0 002	0 01	1	FD1	ND	U		6836
AF-L224807	SW2-SW03A-31	WS	SW6010	ZINC	0	mg/L	0 009	0 02	1	FD1	ND	U		6836
AF-L224901	MW-GMI2202M-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	N1	ND	U	UJ	6836
AF-L224901	MW-GMI2202M-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U	UJ	6836
AF-L224901	MW-GMI2202M-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	0	µg/L	0 096	1	1	N1	ND	U	UJ	6836
AF-L224901	MW-GMI2202M-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U	UJ	6836
AF-L224902	MW-GMI2203M-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	100	µg/L	0 112	2	2	N1	=		J	6836
AF-L224902	MW-GMI2203M-31	WG	SW8260	trans-1,2-DICHLOROETHENE	33	µg/L	0 114	2	2	N1	=		J	6836

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Control No.	Sample ID	Matrix	Method	Name	Result	Units	MDL	AFCEE RL	Dilution	Type	PARVQ	Lab Qual	Val Qual	SDG
AF-L224902	MW-GMI2203M-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	83	µg/L	0 096	2	2	N1	=		J	6836
AF-L224902	MW-GMI2203M-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	2	2	N1	ND	U	UJ	6836
AF-L224903	MW-GMI2205M-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	N1	ND	U	UJ	6836
AF-L224903	MW-GMI2205M-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U	UJ	6836
AF-L224903	MW-GMI2205M-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	0	µg/L	0 096	1	1	N1	ND	U	UJ	6836
AF-L224903	MW-GMI2205M-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U	UJ	6836
AF-L224904	MW-LF0410-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	N1	ND	U	UJ	6836
AF-L224904	MW-LF0410-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U	UJ	6836
AF-L224904	MW-LF0410-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	0	µg/L	0 096	1	1	N1	ND	U	UJ	6836
AF-L224904	MW-LF0410-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U	UJ	6836
AF-L224905	MW-USGS06T-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	4 4	µg/L	0 112	1	1	N1	=		J	6836
AF-L224905	MW-USGS06T-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U	UJ	6836
AF-L224905	MW-USGS06T-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	26	µg/L	0 096	1	1	N1	=		J	6836
AF-L224905	MW-USGS06T-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U	UJ	6836
AF-L224906	MW-WHGLTA048-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	3 6	µg/L	0 112	1	1	N1	=		J	6836
AF-L224906	MW-WHGLTA048-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U	UJ	6836
AF-L224906	MW-WHGLTA048-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	8 1	µg/L	0 096	1	1	N1	=		J	6836
AF-L224906	MW-WHGLTA048-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U	UJ	6836
AF-L225001	MW-P6M-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	N1	ND	U		6822
AF-L225001	MW-P6M-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U		6822
AF-L225001	MW-P6M-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	3 3	µg/L	0 096	15 5	1	N1	=		U	6822
AF-L225001	MW-P6M-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U		6822
AF-L225002	MW-P27U-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	580	µg/L	0 112	1	1	N1	=	E		6822
AF-L225002	MW-P27U-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	380	µg/L	0 112	20	20	N1	=			6822
AF-L225002	MW-P27U-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U		6822
AF-L225002	MW-P27U-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	20	20	N1	ND	U		6822
AF-L225002	MW-P27U-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	4 1	µg/L	0 096	15 5	1	N1	=		U	6822
AF-L225002	MW-P27U-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	0	µg/L	0 096	20	20	N1	ND	U		6822
AF-L225002	MW-P27U-31	WG	SW8260	VINYL CHLORIDE	21	µg/L	0 102	1	1	N1	=			6822
AF-L225002	MW-P27U-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	20	20	N1	ND	U		6822
AF-L225003	MW-W135-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	N1	ND	U		6822
AF-L225003	MW-W135-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U		6822
AF-L225003	MW-W135-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	3 3	µg/L	0 096	15 5	1	N1	=		U	6822
AF-L225003	MW-W135-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U		6822
AF-L225004	MW-P26M-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	N1	ND	U		6822
AF-L225004	MW-P26M-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U		6822
AF-L225004	MW-P26M-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	2 6	µg/L	0 096	15 5	1	N1	=		U	6822

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Control No.	Sample ID	Matrix	Method	Name	Result	Units	MDL	AFCEE RL	Dilution	Type	PARVQ	Lab Qual	Val Qual	SDG
AF-L225004	MW-P26M-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U		6822
AF-L225005	MW-MW5-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	200	200	N1	ND	U		6822
AF-L225005	MW-MW5-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	20000	20000	N1	ND	U	UJ	6822
AF-L225005	MW-MW5-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	200	200	N1	ND	U		6822
AF-L225005	MW-MW5-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	20000	20000	N1	ND	U	UJ	6822
AF-L225005	MW-MW5-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	160000	µg/L	0 096	200	200	N1	=	E		6822
AF-L225005	MW-MW5-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	920000	µg/L	0 096	20000	20000	N1	=		J	6822
AF-L225005	MW-MW5-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	200	200	N1	ND	U		6822
AF-L225005	MW-MW5-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	20000	20000	N1	ND	U	UJ	6822
AF-L225006	MW-MW5-31	WG	SW6010	CHROMIUM, TOTAL	0	mg/L	0 0005	0 01	1	N1	ND	U		6822
AF-L225007	TB010502	WQ	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	TB1	ND	U	UJ	6822
AF-L225007	TB010502	WQ	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	TB1	ND	U	UJ	6822
AF-L225007	TB010502	WQ	SW8260	TRICHLOROETHYLENE (TCE)	3 1	µg/L	0 096	15 5	1	TB1	=		UJ	6822
AF-L225007	TB010502	WQ	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	TB1	ND	U	UJ	6822
AF-L225101	MW-WITCPM006-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	1 2	µg/L	0 112	1	1	N1	=			6824
AF-L225101	MW-WITCPM006-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U		6824
AF-L225101	MW-WITCPM006-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	2 6	µg/L	0 096	1	1	N1	=			6824
AF-L225101	MW-WITCPM006-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U		6824
AF-L225102	MW-WITCPU006-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	120	µg/L	0 112	1	1	N1	=	E		6824
AF-L225102	MW-WITCPU006-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	120	µg/L	0 112	5	5	N1	=		J	6824
AF-L225102	MW-WITCPU006-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U		6824
AF-L225102	MW-WITCPU006-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	5	5	N1	ND	U	UJ	6824
AF-L225102	MW-WITCPU006-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	0	µg/L	0 096	1	1	N1	ND	U		6824
AF-L225102	MW-WITCPU006-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	0	µg/L	0 096	5	5	N1	ND	U	UJ	6824
AF-L225102	MW-WITCPU006-31	WG	SW8260	VINYL CHLORIDE	14	µg/L	0 102	1	1	N1	=			6824
AF-L225102	MW-WITCPU006-31	WG	SW8260	VINYL CHLORIDE	15	µg/L	0 102	5	5	N1	=		J	6824
AF-L225103	MW-HM65-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	N1	ND	U		6824
AF-L225103	MW-HM65-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U		6824
AF-L225103	MW-HM65-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	0	µg/L	0 096	1	1	N1	ND	U		6824
AF-L225103	MW-HM65-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U		6824
AF-L225201	MW-WITCPU003-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	N1	ND	U		6822
AF-L225201	MW-WITCPU003-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U		6822
AF-L225201	MW-WITCPU003-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	3 3	µg/L	0 096	15 5	1	N1	=		UJ	6822
AF-L225201	MW-WITCPU003-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U		6822
AF-L225202	MW-P25M-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	N1	ND	U		6822
AF-L225202	MW-P25M-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U		6822
AF-L225202	MW-P25M-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	2 1	µg/L	0 096	15 5	1	N1	=		U	6822

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Control No.	Sample ID	Matrix	Method	Name	Result	Units	MDL	AFCEE RL	Dilution	Type	PARVQ	Lab Qual	Val Qual	SDG
AF-L225202	MW-P25M-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U		6822
AF-L225301	MW-WS2-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	N1	ND	U		6824
AF-L225301	MW-WS2-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U		6824
AF-L225301	MW-WS2-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	0	µg/L	0 096	1	1	N1	ND	U		6824
AF-L225301	MW-WS2-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U		6824
AF-L225302	MW-WS12-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	N1	ND	U		6824
AF-L225302	MW-WS12-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U		6824
AF-L225302	MW-WS12-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	0	µg/L	0 096	1	1	N1	ND	U		6824
AF-L225302	MW-WS12-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U		6824
AF-L225303	MW-WSH3-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	N1	ND	U		6824
AF-L225303	MW-WSH3-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U		6824
AF-L225303	MW-WSH3-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	0	µg/L	0 096	1	1	N1	ND	U		6824
AF-L225303	MW-WSH3-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U		6824
AF-L225304	MW-P30M-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	N1	ND	U	UJ	6824
AF-L225304	MW-P30M-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U	UJ	6824
AF-L225304	MW-P30M-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	0	µg/L	0 096	1	1	N1	ND	U	UJ	6824
AF-L225304	MW-P30M-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U	UJ	6824
AF-L225305	MW-W157-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	N1	ND	U	UJ	6824
AF-L225305	MW-W157-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U	UJ	6824
AF-L225305	MW-W157-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	0	µg/L	0 096	1	1	N1	ND	U	UJ	6824
AF-L225305	MW-W157-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U	UJ	6824
AF-L225306	MW-W157-31	WG	SW6010	CHROMIUM, TOTAL	0	mg/L	0 0005	0 01	1	N1	ND	U		6824
AF-L225401	MW-P8M-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	N1	ND	U		6822
AF-L225401	MW-P8M-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U		6822
AF-L225401	MW-P8M-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	0 88	µg/L	0 096	1	1	N1	TR	J	F	6822
AF-L225401	MW-P8M-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U		6822
AF-L225402	MW-P8UN-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	N1	ND	U		6822
AF-L225402	MW-P8UN-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U		6822
AF-L225402	MW-P8UN-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	4 3	µg/L	0 096	15 5	1	N1	=		U	6822
AF-L225402	MW-P8UN-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U		6822
AF-L225403	MW-P8US-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	38	µg/L	0 112	5	5	N1	=		J	6822
AF-L225403	MW-P8US-31	WG	SW8260	trans-1,2-DICHLOROETHENE	4 6	µg/L	0 114	5	5	N1	TR	J	FJ	6822
AF-L225403	MW-P8US-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	75	µg/L	0 096	5	5	N1	=		J	6822
AF-L225403	MW-P8US-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	5	5	N1	ND	U	UJ	6822
AF-L225404	MW-P8US-31	WG	SW6010	CHROMIUM, TOTAL	0	mg/L	0 0005	0 01	1	N1	ND	U		6822
AF-L225501	MW-P11M-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	N1	ND	U	UJ	6822
AF-L225501	MW-P11M-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U	UJ	6822

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Control No.	Sample ID	Matrix	Method	Name	Result	Units	MDL	AFCEE RL	Dilution	Type	PARVQ	Lab Qual	Val Qual	SDG
AF-L225501	MW-P11M-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	1 3	µg/L	0 096	15 5	1	N1	=		UJ	6822
AF-L225501	MW-P11M-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U	UJ	6822
AF-L225502	MW-P11U-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	N1	ND	U	UJ	6822
AF-L225502	MW-P11U-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U	UJ	6822
AF-L225502	MW-P11U-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	1 2	µg/L	0 096	15 5	1	N1	=		UJ	6822
AF-L225502	MW-P11U-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U	UJ	6822
AF-L225503	MW-HM88-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	220	µg/L	0 112	200	200	N1	=			6822
AF-L225503	MW-HM88-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	200	200	N1	ND	U		6822
AF-L225503	MW-HM88-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	6000	µg/L	0 096	200	200	N1	=			6822
AF-L225503	MW-HM88-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	200	200	N1	ND	U		6822
AF-L225504	MW-HM88-31	WG	SW6010	CHROMIUM, TOTAL	0 043	mg/L	0 0005	0 01	1	N1	=			6822
AF-L225601	MW-F218-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	4400	µg/L	0 112	50	50	N1	=		J	6824
AF-L225601	MW-F218-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	3300	µg/L	0 112	500	500	N1	=		J	6824
AF-L225601	MW-F218-31	WG	SW8260	trans-1,2-DICHLOROETHENE	36	µg/L	0 114	50	50	N1	TR	J	FJ	6824
AF-L225601	MW-F218-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	500	500	N1	ND	U	UJ	6824
AF-L225601	MW-F218-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	20000	µg/L	0 096	50	50	N1	=	E	J	6824
AF-L225601	MW-F218-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	22000	µg/L	0 096	500	500	N1	=		J	6824
AF-L225601	MW-F218-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	50	50	N1	ND	U	UJ	6824
AF-L225601	MW-F218-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	500	500	N1	ND	U	UJ	6824
AF-L225602	MW-F218-31	WG	SW6010	CHROMIUM, TOTAL	0	mg/L	0 0005	0 01	1	N1	ND	U		6824
AF-L225603	MW-W149-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	670	µg/L	0 112	50	50	N1	=		J	6824
AF-L225603	MW-W149-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	520	µg/L	0 112	200	200	N1	=		J	6824
AF-L225603	MW-W149-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	50	50	N1	ND	U	UJ	6824
AF-L225603	MW-W149-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	200	200	N1	ND	U	UJ	6824
AF-L225603	MW-W149-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	7800	µg/L	0 096	50	50	N1	=	E	J	6824
AF-L225603	MW-W149-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	7500	µg/L	0 096	200	200	N1	=		J	6824
AF-L225603	MW-W149-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	50	50	N1	ND	U	UJ	6824
AF-L225603	MW-W149-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	200	200	N1	ND	U	UJ	6824
AF-L225604	MW-W149-31	WG	SW6010	CHROMIUM, TOTAL	0 469	mg/L	0 0005	0 01	1	N1	=			6824
AF-L225605	MW2-W149-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	660	µg/L	0 112	50	50	FD1	=		J	6824
AF-L225605	MW2-W149-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	510	µg/L	0 112	200	200	FD1	=		J	6824
AF-L225605	MW2-W149-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	50	50	FD1	ND	U	UJ	6824
AF-L225605	MW2-W149-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	200	200	FD1	ND	U	UJ	6824
AF-L225605	MW2-W149-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	7500	µg/L	0 096	50	50	FD1	=	E	J	6824
AF-L225605	MW2-W149-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	7400	µg/L	0 096	200	200	FD1	=		J	6824
AF-L225605	MW2-W149-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	50	50	FD1	ND	U	UJ	6824
AF-L225605	MW2-W149-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	200	200	FD1	ND	U	UJ	6824

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Control No.	Sample ID	Matrix	Method	Name	Result	Units	MDL	AFCEE RL	Dilution	Type	PARVQ	Lab Qual	Val Qual	SDG
AF-L225606	MW2-W149-31	WG	SW6010	CHROMIUM, TOTAL	0 471	mg/L	0 0005	0 01	1	FD1	=			6824
AF-L225607	MW-WJEUS002-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	4	µg/L	0 112	1	1	N1	=		J	6824
AF-L225607	MW-WJEUS002-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U	UJ	6824
AF-L225607	MW-WJEUS002-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	0 71	µg/L	0 096	1	1	N1	TR	J	FJ	6824
AF-L225607	MW-WJEUS002-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U	UJ	6824
AF-L225608	MW-WJEUS002-31	WG	SW6010	CHROMIUM, TOTAL	0	mg/L	0 0005	0 01	1	N1	ND	U		6824
AF-L225701	MW-HM98-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	N1	ND	U	UJ	6836
AF-L225701	MW-HM98-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U	UJ	6836
AF-L225701	MW-HM98-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	0	µg/L	0 096	1	1	N1	ND	U	UJ	6836
AF-L225701	MW-HM98-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U	UJ	6836
AF-L225702	MW-HM98-31	WG	SW6010	CHROMIUM, TOTAL	0	mg/L	0 0005	0 01	1	N1	ND	U	UJ	6836
AF-L225703	MW-HM95-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	64	µg/L	0 112	50	50	N1	=			6836
AF-L225703	MW-HM95-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	50	50	N1	ND	U		6836
AF-L225703	MW-HM95-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	1100	µg/L	0 096	50	50	N1	=			6836
AF-L225703	MW-HM95-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	50	50	N1	ND	U		6836
AF-L225704	MW-HM95-31	WG	SW6010	CHROMIUM, TOTAL	0 03	mg/L	0 0005	0 01	1	N1	=		J	6836
AF-L225705	TB010510	WQ	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	TB1	ND	U	UJ	6836
AF-L225705	TB010510	WQ	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	TB1	ND	U	UJ	6836
AF-L225705	TB010510	WQ	SW8260	TRICHLOROETHYLENE (TCE)	0	µg/L	0 096	1	1	TB1	ND	U	UJ	6836
AF-L225705	TB010510	WQ	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	TB1	ND	U	UJ	6836
AF-L225801	MW-WJEPM001-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	N1	ND	U	UJ	6836
AF-L225801	MW-WJEPM001-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U	UJ	6836
AF-L225801	MW-WJEPM001-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	0	µg/L	0 096	1	1	N1	ND	U	UJ	6836
AF-L225801	MW-WJEPM001-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U	UJ	6836
AF-L225802	MW-P18US-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	N1	ND	U	UJ	6836
AF-L225802	MW-P18US-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U	UJ	6836
AF-L225802	MW-P18US-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	0	µg/L	0 096	1	1	N1	ND	U	UJ	6836
AF-L225802	MW-P18US-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U	UJ	6836
AF-L225803	MW-P18US-31	WG	SW6010	CHROMIUM, TOTAL	0	mg/L	0 0005	0 01	1	N1	ND	U	UJ	6836
AF-L225804	MW-WITCUS001-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	360	µg/L	0 112	50	50	N1	=		J	6836
AF-L225804	MW-WITCUS001-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	300	µg/L	0 112	200	200	N1	=		J	6836
AF-L225804	MW-WITCUS001-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	50	50	N1	ND	U	UJ	6836
AF-L225804	MW-WITCUS001-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	200	200	N1	ND	U	UJ	6836
AF-L225804	MW-WITCUS001-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	8900	µg/L	0 096	50	50	N1	=	E	J	6836
AF-L225804	MW-WITCUS001-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	9700	µg/L	0 096	200	200	N1	=		J	6836
AF-L225804	MW-WITCUS001-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	50	50	N1	ND	U	UJ	6836
AF-L225804	MW-WITCUS001-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	200	200	N1	ND	U	UJ	6836

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Control No.	Sample ID	Matrix	Method	Name	Result	Units	MDL	AFCEE RL	Dilution	Type	PARVQ	Lab Qual	Val Qual	SDG
AF-L225805	MW-WITCUS001-31	WG	SW6010	CHROMIUM, TOTAL	0 071	mg/L	0 0005	0 01	1	N1	=		J	6836
AF-L225901	MW-WJEUS008-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	620	µg/L	0 112	50	50	N1	=		J	6836
AF-L225901	MW-WJEUS008-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	50	50	N1	ND	U	UJ	6836
AF-L225901	MW-WJEUS008-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	3300	µg/L	0 096	50	50	N1	=		J	6836
AF-L225901	MW-WJEUS008-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	50	50	N1	ND	U	UJ	6836
AF-L225902	MW-WJEUS008-31	WG	SW6010	CHROMIUM, TOTAL	0 069	mg/L	0 0005	0 01	1	N1	=		J	6836
AF-L225903	MW2-WJEUS008-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	670	µg/L	0 112	50	50	FD1	=		J	6836
AF-L225903	MW2-WJEUS008-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	50	50	FD1	ND	U	UJ	6836
AF-L225903	MW2-WJEUS008-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	3500	µg/L	0 096	50	50	FD1	=		J	6836
AF-L225903	MW2-WJEUS008-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	50	50	FD1	ND	U	UJ	6836
AF-L225904	MW-WJEUS013-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	560	µg/L	0 112	50	50	N1	=		J	6836
AF-L225904	MW-WJEUS013-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	470	µg/L	0 112	100	100	N1	=		J	6836
AF-L225904	MW-WJEUS013-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	50	50	N1	ND	U	UJ	6836
AF-L225904	MW-WJEUS013-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	100	100	N1	ND	U	UJ	6836
AF-L225904	MW-WJEUS013-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	5900	µg/L	0 096	50	50	N1	=	E	J	6836
AF-L225904	MW-WJEUS013-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	7200	µg/L	0 096	100	100	N1	=		J	6836
AF-L225904	MW-WJEUS013-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	50	50	N1	ND	U	UJ	6836
AF-L225904	MW-WJEUS013-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	100	100	N1	ND	U	UJ	6836
AF-L225905	MW-WJEUS013-31	WG	SW6010	CHROMIUM, TOTAL	0 127	mg/L	0 0005	0 01	1	N1	=		J	6836
AF-L225906	MW-HM112-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	230	µg/L	0 112	50	50	N1	=		J	6836
AF-L225906	MW-HM112-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	50	50	N1	ND	U	UJ	6836
AF-L225906	MW-HM112-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	3800	µg/L	0 096	50	50	N1	=		J	6836
AF-L225906	MW-HM112-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	50	50	N1	ND	U	UJ	6836
AF-L225907	MW-HM112-31	WG	SW6010	CHROMIUM, TOTAL	0 013	mg/L	0 0005	0 01	1	N1	=		J	6836
AF-L226001	MW-F209-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	N1	ND	U		6824
AF-L226001	MW-F209-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U		6824
AF-L226001	MW-F209-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	0	µg/L	0 096	1	1	N1	ND	U		6824
AF-L226001	MW-F209-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U		6824
AF-L226002	MW-HM102-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	N1	ND	U	UJ	6824
AF-L226002	MW-HM102-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U	UJ	6824
AF-L226002	MW-HM102-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	0	µg/L	0 096	1	1	N1	ND	U	UJ	6824
AF-L226002	MW-HM102-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U	UJ	6824
AF-L226003	MW-HM31-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	49	µg/L	0 112	50	50	N1	TR	J	FJ	6824
AF-L226003	MW-HM31-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	50	50	N1	ND	U	UJ	6824
AF-L226003	MW-HM31-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	140	µg/L	0 096	50	50	N1	=		J	6824
AF-L226003	MW-HM31-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	50	50	N1	ND	U	UJ	6824
AF-L226004	MW-HM31-31	WG	SW6010	CHROMIUM, TOTAL	0	mg/L	0 0005	0 01	1	N1	ND	U		6824

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Control No.	Sample ID	Matrix	Method	Name	Result	Units	MDL	AFCEE RL	Dilution	Type	PARVQ	Lab Qual	Val Qual	SDG
AF-L226005	TB010507	WQ	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	TB1	ND	U	UJ	6824
AF-L226005	TB010507	WQ	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	TB1	ND	U	UJ	6824
AF-L226005	TB010507	WQ	SW8260	TRICHLOROETHYLENE (TCE)	0	µg/L	0 096	1	1	TB1	ND	U	UJ	6824
AF-L226005	TB010507	WQ	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	TB1	ND	U	UJ	6824
AF-L226101	MW-HM119-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	N1	ND	U	UJ	6836
AF-L226101	MW-HM119-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U	UJ	6836
AF-L226101	MW-HM119-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	12	µg/L	0 096	1	1	N1	=		J	6836
AF-L226101	MW-HM119-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U	UJ	6836
AF-L226102	MW-HM120-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	N1	ND	U	UJ	6836
AF-L226102	MW-HM120-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U	UJ	6836
AF-L226102	MW-HM120-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	0	µg/L	0 096	1	1	N1	ND	U	UJ	6836
AF-L226102	MW-HM120-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U	UJ	6836
AF-L226103	MW-HM127-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	N1	ND	U	UJ	6836
AF-L226103	MW-HM127-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U	UJ	6836
AF-L226103	MW-HM127-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	0	µg/L	0 096	1	1	N1	ND	U	UJ	6836
AF-L226103	MW-HM127-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U	UJ	6836
AF-L226104	MW2-HM127-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	FD1	ND	U	UJ	6836
AF-L226104	MW2-HM127-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	FD1	ND	U	UJ	6836
AF-L226104	MW2-HM127-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	0	µg/L	0 096	1	1	FD1	ND	U	UJ	6836
AF-L226104	MW2-HM127-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	FD1	ND	U	UJ	6836
AF-L226201	MW-P9M-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	0 73	µg/L	0 112	1	1	N1	TR	J	FJ	6824
AF-L226201	MW-P9M-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U	UJ	6824
AF-L226201	MW-P9M-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	1 5	µg/L	0 096	1	1	N1	=		J	6824
AF-L226201	MW-P9M-31	WG	SW8260	VINYL CHLORIDE	0 56	µg/L	0 102	1	1	N1	TR	J	FJ	6824
AF-L226202	MW-P9US-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	1 3	µg/L	0 112	1	1	N1	=		J	6824
AF-L226202	MW-P9US-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U	UJ	6824
AF-L226202	MW-P9US-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	35	µg/L	0 096	1	1	N1	=		J	6824
AF-L226202	MW-P9US-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U	UJ	6824
AF-L226203	MW-P9US-31	WG	SW6010	CHROMIUM, TOTAL	0	mg/L	0 0005	0 01	1	N1	ND	U		6824
AF-L226204	MW-HM93-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	N1	ND	U	UJ	6824
AF-L226204	MW-HM93-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U	UJ	6824
AF-L226204	MW-HM93-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	0	µg/L	0 096	1	1	N1	ND	U	UJ	6824
AF-L226204	MW-HM93-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U	UJ	6824
AF-L226205	MW-HM93-31	WG	SW6010	CHROMIUM, TOTAL	0	mg/L	0 0005	0 01	1	N1	ND	U		6824
AF-L226206	MW2-HM93-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	FD1	ND	U	UJ	6824
AF-L226206	MW2-HM93-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	FD1	ND	U	UJ	6824
AF-L226206	MW2-HM93-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	0	µg/L	0 096	1	1	FD1	ND	U	UJ	6824

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Control No.	Sample ID	Matrix	Method	Name	Result	Units	MDL	AFCEE RL	Dilution	Type	PARVQ	Lab Qual	Val Qual	SDG
AF-L226206	MW2-HM93-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	FD1	ND	U	UJ	6824
AF-L226207	MW2-HM93-31	WG	SW6010	CHROMIUM, TOTAL	0	mg/L	0 0005	0 01	1	FD1	ND	U		6824
AF-L226301	MW-HM50-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	550	µg/L	0 112	1	1	N1	=	E	J	6824
AF-L226301	MW-HM50-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	1000	µg/L	0 112	20	20	N1	=		J	6824
AF-L226301	MW-HM50-31	WG	SW8260	trans-1,2-DICHLOROETHENE	6 2	µg/L	0 114	1	1	N1	=		J	6824
AF-L226301	MW-HM50-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	20	20	N1	ND	U	UJ	6824
AF-L226301	MW-HM50-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	170	µg/L	0 096	1	1	N1	=	E	J	6824
AF-L226301	MW-HM50-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	140	µg/L	0 096	20	20	N1	=		J	6824
AF-L226301	MW-HM50-31	WG	SW8260	VINYL CHLORIDE	160	µg/L	0 102	1	1	N1	=	E	J	6824
AF-L226301	MW-HM50-31	WG	SW8260	VINYL CHLORIDE	170	µg/L	0 102	20	20	N1	=		J	6824
AF-L226302	MW-HM36-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	0 51	µg/L	0 112	1	1	N1	TR	J	FJ	6824
AF-L226302	MW-HM36-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U	UJ	6824
AF-L226302	MW-HM36-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	0 57	µg/L	0 096	1	1	N1	TR	J	FJ	6824
AF-L226302	MW-HM36-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U	UJ	6824
AF-L226303	MW-P22U-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	210	µg/L	0 112	1	1	N1	=	E	J	6824
AF-L226303	MW-P22U-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	190	µg/L	0 112	5	5	N1	=		J	6824
AF-L226303	MW-P22U-31	WG	SW8260	trans-1,2-DICHLOROETHENE	3 1	µg/L	0 114	1	1	N1	=		J	6824
AF-L226303	MW-P22U-31	WG	SW8260	trans-1,2-DICHLOROETHENE	3 1	µg/L	0 114	5	5	N1	TR	J	FJ	6824
AF-L226303	MW-P22U-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	5 7	µg/L	0 096	1	1	N1	=		J	6824
AF-L226303	MW-P22U-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	4 6	µg/L	0 096	5	5	N1	TR	J	FJ	6824
AF-L226303	MW-P22U-31	WG	SW8260	VINYL CHLORIDE	28	µg/L	0 102	1	1	N1	=		J	6824
AF-L226303	MW-P22U-31	WG	SW8260	VINYL CHLORIDE	27	µg/L	0 102	5	5	N1	=		J	6824
AF-L226304	MW2-P22U-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	210	µg/L	0 112	1	1	FD1	=	E	J	6824
AF-L226304	MW2-P22U-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	190	µg/L	0 112	5	5	FD1	=		J	6824
AF-L226304	MW2-P22U-31	WG	SW8260	trans-1,2-DICHLOROETHENE	3 1	µg/L	0 114	1	1	FD1	=		J	6824
AF-L226304	MW2-P22U-31	WG	SW8260	trans-1,2-DICHLOROETHENE	3 3	µg/L	0 114	5	5	FD1	TR	J	FJ	6824
AF-L226304	MW2-P22U-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	5 9	µg/L	0 096	1	1	FD1	=		J	6824
AF-L226304	MW2-P22U-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	4 6	µg/L	0 096	5	5	FD1	TR	J	FJ	6824
AF-L226304	MW2-P22U-31	WG	SW8260	VINYL CHLORIDE	28	µg/L	0 102	1	1	FD1	=		J	6824
AF-L226304	MW2-P22U-31	WG	SW8260	VINYL CHLORIDE	26	µg/L	0 102	5	5	FD1	=		J	6824
AF-L226401	MW-USGS08PM-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	N1	ND	U	UJ	6824
AF-L226401	MW-USGS08PM-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U	UJ	6824
AF-L226401	MW-USGS08PM-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	0	µg/L	0 096	1	1	N1	ND	U	UJ	6824
AF-L226401	MW-USGS08PM-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U	UJ	6824
AF-L226402	MW-USGS08PU-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	N1	ND	U	UJ	6824
AF-L226402	MW-USGS08PU-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U	UJ	6824
AF-L226402	MW-USGS08PU-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	0	µg/L	0 096	1	1	N1	ND	U	UJ	6824

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Control No.	Sample ID	Matrix	Method	Name	Result	Units	MDL	AFCEE RL	Dilution	Type	PARVQ	Lab Qual	Val Qual	SDG
AF-L226402	MW-USGS08PU-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U	UJ	6824
AF-L226403	MW-USGS09PM-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	N1	ND	U	UJ	6824
AF-L226403	MW-USGS09PM-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U	UJ	6824
AF-L226403	MW-USGS09PM-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	0	µg/L	0 096	1	1	N1	ND	U	UJ	6824
AF-L226403	MW-USGS09PM-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U	UJ	6824
AF-L226404	MW-USGS09PU-31	WG	SW8260	cis-1,2-DICHLOROETHYLENE	0	µg/L	0 112	1	1	N1	ND	U	UJ	6824
AF-L226404	MW-USGS09PU-31	WG	SW8260	trans-1,2-DICHLOROETHENE	0	µg/L	0 114	1	1	N1	ND	U	UJ	6824
AF-L226404	MW-USGS09PU-31	WG	SW8260	TRICHLOROETHYLENE (TCE)	0	µg/L	0 096	1	1	N1	ND	U	UJ	6824
AF-L226404	MW-USGS09PU-31	WG	SW8260	VINYL CHLORIDE	0	µg/L	0 102	1	1	N1	ND	U	UJ	6824

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