IT CORPORATION

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INSTALLATION RESTORATION PROGRAM

Final
Long-Term Groundwater Monitoring Report: April 2001
Volume 2: Appendices

Wright-Patterson Air Force Base Long-Term Monitoring Program

Wright-Patterson Air Force Base
88th Air Base Wing
Office of Environmental Management

STRENGTH THROUGH SUPPORT

PROTECT RESTORE ENHANCE
Environmental Management
Wright-Patterson AFB

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Navigation notes:

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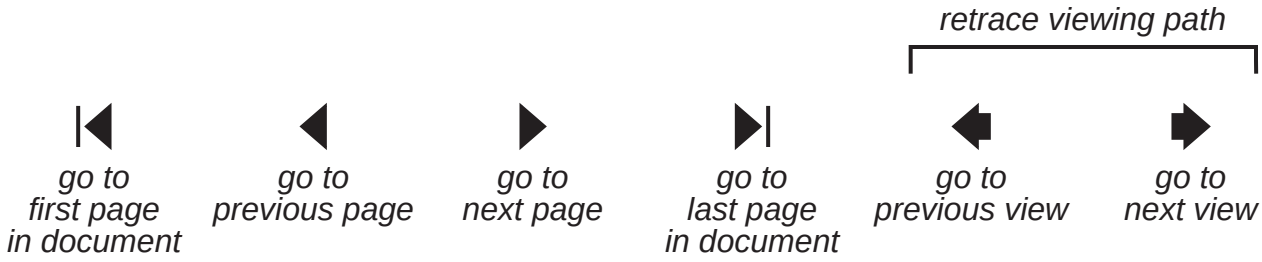

List of Appendices

A Table A-1, BMP LTM Locations (EE/CA)
Table A-2, Basewide LTM Program Monitoring Well Inventory
Table A-3, OU5 Historic Groundwater Sampling Results: VOCs
B OU1 Field Data Forms
B-1 OU1 Sample Collection Forms
B-2 OU1 Water Level Field Forms
B-3 OU1 Explosive Gas Monitoring Field Logs
C OU1 Quarterly Analytical Data and Chain of Custody Records
C-1 OU1 Groundwater Analytical Data
C-2 OU1 Chain of Custody Records
D OU5 Water Level Monitoring Field Logs
E OU4 Soil Gas Monitoring Field Logs
F OU2 Groundwater Purge Logs, Water Level Field Logs and Chain of Custody Records
G OU2 Groundwater and Soil Gas Analytical Data
H Basewide LTM Sample Collection Forms and Bill of Lading
I Basewide LTM Chain of Custody Records
J Basewide LTM Semiannual and Annual VOCs Analytical Data
K Basewide LTM Annual Metals Analytical Data

Appendix A

Table A-1, BMP LTM Locations (EE/CA)
Table A-2, Basewide LTM Program Monitoring Well Inventory
Table A-3, OU5 Historic Groundwater Sampling Results: VOCs

Table A-1
BMP Monitoring Locations
Wright-Patterson AFB, Ohio
Page 1 of 4

Number of Wells	Sample Location	Area	Reason for Monitoring	COPCs > RG	Monitoring Frequency	Sampling Month(s)	Analytical Parameters	Aquifer Layer	Aquifer Type	Comments
	OU1 Annual									
1	LF08-MW02A	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
2	LF08-MW02C	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
3	LF08-MW05B	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
4	LF08-MW08A	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
5	LF08-MW08B	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
6	LF08-MW08C	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
7	LF08-MW09A	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
8	LF08-MW09B	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
9	LF08-MW10A	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
10	LF08-MW10B	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
11	LF08-MW10C	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
12	LF08-MW101	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
13	LF08-MW102	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
14	LF08-MW103	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
15	LF10-MW03A	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
16	LF10-MW05B	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
17	LF10-MW05C	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
18	LF10-MW06A	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
19	LF10-MW06A DUP	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
20	LF10-MW06B	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
21	LF10-MW07A	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
22	LF10-MW07B	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
23	LF10-MW07C	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
24	LF10-MW08A-2	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
25	LF10-MW08B	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
26	LF10-MW09A	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
27	LF10-MW09B	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
28	LF10-MW09C	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
29	LF10-MW10C	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
30	LF10-MW11A	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
31	LF10-MW11B	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
32	LF10-MW102	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
33	LF10-MW103	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
34	LF10-MW104	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
35	LF10-MW105	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
36	02-DM-81S-M	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
37	02-DM-81D-M	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
38	02-DM-82-M	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
39	02-DM-83S-M	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
40	02-DM-83D-M	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
41	02-DM-84-M	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
42	01-DM-102S-M	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
43	01-DM-102D-M	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	
44	01-004-M	OU1	OU1 ROD	NA	Annual	October	OU1 ROD Parameters	1	Hill	

Table A-1
BMP Monitoring Locations
Wright-Patterson AFB, Ohio
Page 2 of 4

Number of Wells	Sample Location	Area	Reason for Monitoring	COPCs > RG	Monitoring Frequency	Sampling Month(s)	Analytical Parameters	Aquifer Layer	Aquifer Type	Comments
	OU1 Semiannual									
1	LF08-MW02C	OU1	VOCs and Metals	NA	Semiannual	April	VOCs and Metals	1	Hill	
2	LF08-MW05B	OU1	VOCs and Metals	NA	Semiannual	April	VOCs and Metals	1	Hill	
3	LF08-MW08B	OU1	VOCs and Metals	NA	Semiannual	April	VOCs and Metals	1	Hill	
4	LF08-MW09A	OU1	VOCs and Metals	NA	Semiannual	April	VOCs and Metals	1	Hill	
5	LF08-MW10B	OU1	VOCs and Metals	NA	Semiannual	April	VOCs and Metals	1	Hill	
6	LF08-MW11B	OU1	VOCs and Metals	NA	Semiannual	April	VOCs and Metals	1	Hill	
7	LF08-MW101	OU1	VOCs and Metals	NA	Semiannual	April	VOCs and Metals	1	Hill	
8	LF08-MW102	OU1	VOCs and Metals	NA	Semiannual	April	VOCs and Metals	1	Hill	
9	LF08-MW103	OU1	VOCs and Metals	NA	Semiannual	April	VOCs and Metals	1	Hill	
10	02-DM-81D-M (LF8)	OU1	VOCs and Metals	NA	Semiannual	April	VOCs and Metals	1	Hill	
11	02-DM-82-M (LF8)	OU1	VOCs and Metals	NA	Semiannual	April	VOCs and Metals	1	Hill	
12	02-DM-83S-M (LF8)	OU1	VOCs and Metals	NA	Semiannual	April	VOCs and Metals	1	Hill	
13	LF10-MW03A	OU1	VOCs and Metals	NA	Semiannual	April	VOCs and Metals	1	Hill	
14	LF10-MW05B	OU1	VOCs and Metals	NA	Semiannual	April	VOCs and Metals	1	Hill	
15	LF10-MW06A	OU1	VOCs and Metals	NA	Semiannual	April	VOCs and Metals	1	Hill	
16	LF10-MW07A	OU1	VOCs and Metals	NA	Semiannual	April	VOCs and Metals	1	Hill	
17	LF10-MW08A-2	OU1	VOCs and Metals	NA	Semiannual	April	VOCs and Metals	1	Hill	
18	LF10-MW09C	OU1	VOCs and Metals	NA	Semiannual	April	VOCs and Metals	1	Hill	
19	LF10-MW10C	OU1	VOCs and Metals	NA	Semiannual	April	VOCs and Metals	1	Hill	
20	LF10-MW102	OU1	VOCs and Metals	NA	Semiannual	April	VOCs and Metals	1	Hill	
21	LF10-MW103	OU1	VOCs and Metals	NA	Semiannual	April	VOCs and Metals	1	Hill	
22	LF10-MW104	OU1	VOCs and Metals	NA	Semiannual	April	VOCs and Metals	1	Hill	
23	LF10-MW105	OU1	VOCs and Metals	NA	Semiannual	April	VOCs and Metals	1	Hill	
24	01-DM-102D-M (LF10)	OU1	VOCs and Metals	NA	Semiannual	April	VOCs and Metals	1	Hill	
25	01-004-M (LF10)	OU1	VOCs and Metals	NA	Semiannual	April	VOCs and Metals	1	Hill	
	LF8/10-LW02 to 04-2001	OU1	City of Fairborn Effluent		Quarterly					
	OU2 Semi-Annual VOCs									
1	04-016-M	OU2	OU2 Draft ROD	Benzene	Semi-Annual	April/Oct.	OU2 ROD Parameters	1	Outwash	
2	04-518-M	OU2	OU2 Draft ROD	Benzene	Semi-Annual	April/Oct.	OU2 ROD Parameters	1	Outwash	
3	OW-1	OU2	OU2 Draft ROD	Benzene	Semi-Annual	April/Oct.	OU2 ROD Parameters	1	Outwash	
4	OW-2	OU2	OU2 Draft ROD	Benzene	Semi-Annual	April/Oct.	OU2 ROD Parameters	1	Outwash	
5	OW-3	OU2	OU2 Draft ROD	Benzene	Semi-Annual	April/Oct.	OU2 ROD Parameters	1	Outwash	
6	OW-4	OU2	OU2 Draft ROD	Benzene	Semi-Annual	April/Oct.	OU2 ROD Parameters	1	Outwash	
7	P18-1	OU2	OU2 Draft ROD	Benzene	Semi-Annual	April/Oct.	OU2 ROD Parameters	1	Outwash	
8	P18-2	OU2	OU2 Draft ROD	Benzene	Semi-Annual	April/Oct.	OU2 ROD Parameters	1	Outwash	
9	WP-NEA-MW20-2S	OU2	OU2 Draft ROD	Benzene	Semi-Annual	April/Oct.	OU2 ROD Parameters	1	Outwash	
10	WP-NEA-MW21-3S	OU2	OU2 Draft ROD	Benzene	Semi-Annual	April/Oct.	OU2 ROD Parameters	1	Outwash	
11	WP-NEA-MW26-3S	OU2	OU2 Draft ROD	Benzene	Semi-Annual	April/Oct.	OU2 ROD Parameters	1	Outwash	Rep. Well for P11-1
12	WP-NEA-MW28-5S	OU2	OU2 Draft ROD	Benzene	Semi-Annual	April/Oct.	OU2 ROD Parameters	1	Outwash	
	OU2 Periodic VOCs									
1	WP-NEA-MW25-1D	OU2	OU2 Draft ROD	NA	Semi-Annual	Periodically	OU2 ROD Parameters	1	Outwash	Added April '01
2	WP-NEA-MW25-2I	OU2	OU2 Draft ROD	NA	Semi-Annual	Periodically	OU2 ROD Parameters	1	Outwash	Added April '01
3	WP-NEA-MW25-3S	OU2	OU2 Draft ROD	NA	Semi-Annual	Periodically	OU2 ROD Parameters	1	Outwash	Added April '00
4	OW-6	OU2	OU2 Draft ROD	NA	Semi-Annual	Periodically	OU2 ROD Parameters	1	Outwash	Added April '00

Table A-1
BMP Monitoring Locations
Wright-Patterson AFB, Ohio

Number of Wells	Sample Location	Area	Reason for Monitoring	COPCs > RG	Monitoring Frequency	Sampling Month(s)	Analytical Parameters	Aquifer Layer	Aquifer Type	Comments
	Basewide Semi-Annual VOCs									
1	BS5 P-1	BS5	BS5 LTM	NA	Semi-Annual	April/Oct.	VOCs	1	Outwash	
2	BS5 P-2	BS5	BS5 LTM	NA	Semi-Annual	April/Oct.	VOCs	1	Outwash	
3	BS5 P-3	BS5	BS5 LTM	NA	Semi-Annual	April/Oct.	VOCs	1	Outwash	
4	BS5 P-4	BS5	BS5 LTM	NA	Semi-Annual	April/Oct.	VOCs	1	Outwash	
5	B59-MW01	Bldg 59	VOCs > MCL	NA	Semi-Annual	April/Oct.	VOCs	1	Hill	Added April '01
6	B59-MW02	Bldg 59	VOCs > MCL	NA	Semi-Annual	April/Oct.	VOCs	1	Hill	Added April '01
7	B59-MW03	Bldg 59	VOCs > MCL	NA	Semi-Annual	April/Oct.	VOCs	1	Hill	Added April '01
8	B59-MW04	Bldg 59	VOCs > MCL	NA	Semi-Annual	April/Oct.	VOCs	1	Hill	Added April '01
9	WP-NEA-MW27-3I	OU2	VOCs > MCL	PCE	Semi-Annual	April/Oct.	VOCs	1	Outwash	
10	WP-NEA-MW34-2S	OU2	VOCs > MCL	TCE	Semi-Annual	April/Oct.	VOCs	1	Outwash	
11	FTA2:MW02C	OU3	VOCs > MCL	Benzene	Semi-Annual	April/Oct.	VOCs	1	Outwash	
12	LF12-MW15A	OU3	VOCs > MCL	TCE	Semi-Annual	April/Oct.	VOCs	1	Outwash	Replacement
13	05-DM-123S	OU3	LF12 LTM	NA	Semi-Annual	April/Oct.	VOCs	1	Outwash	
14	05-DM-123I	OU3	LF12 LTM	NA	Semi-Annual	April/Oct.	VOCs	1	Outwash	
15	05-DM-123D	OU3	LF12 LTM	NA	Semi-Annual	April/Oct.	VOCs	1	Outwash	
16	07-520-M	OU3	HI > 1	NA	Semi-Annual	April/Oct.	VOCs (Metals Ann.)	1	Outwash	Replacement
17	BMP-OU4-01B-60	OU4	OU4 Downgradient Mon.	NA	Semi-Annual	April/Oct.	VOCs	2	Outwash	New Oct. '98
18	BMP-OU4-01C-84	OU4	OU4 Downgradient Mon.	NA	Semi-Annual	April/Oct.	VOCs	3	Outwash	New Oct. '98
19	OU4-MW-02A	OU4	VOCs > MCL	TCE	Semi-Annual	April/Oct.	VOCs	1	Outwash	
20	OU4-MW-02B	OU4	VOCs > MCL	TCE	Semi-Annual	April/Oct.	VOCs	2	Outwash	
21	OU4-MW-03B	OU4	VOCs > MCL	TCE	Semi-Annual	April/Oct.	VOCs	2	Outwash	
22	OU4-MW-03C	OU4	VOCs > MCL	TCE	Semi-Annual	April/Oct.	VOCs	3	Outwash	
23	OU4-MW-04A	OU4	VOCs > MCL	vinyl chloride	Semi-Annual	April/Oct.	VOCs	1	Outwash	
24	OU4-MW-12B	OU4	VOCs > MCL	TCE	Semi-Annual	April/Oct.	VOCs	2	Outwash	
25	CW04-060	OU5	FAA-A Remedial Action	NA	Semi-Annual	April/Oct.	VOCs	2	Outwash	Added April '00
26	CW05-055	OU5	FAA-A Remedial Action	TCE	Semi-Annual	April/Oct.	VOCs	2	Outwash	
27	CW05-085	OU5	FAA-A Remedial Action	TCE	Semi-Annual	April/Oct.	VOCs	2	Outwash	
28	CW07-055	OU5	FAA-A Remedial Action	NA	Semi-Annual	April/Oct.	VOCs	2	Outwash	Added April '01
29	CW10-055	OU5	FAA-A Remedial Action	NA	Semi-Annual	April/Oct.	VOCs	2	Outwash	Added April '01
30	HD-11	OU5	FAA-A Remedial Action	TCE	Semi-Annual	April/Oct.	VOCs	2	Outwash	
31	HD-12M	OU5	FAA-A Remedial Action	NA	Semi-Annual	April/Oct.	VOCs	2	Outwash	
32	HD-12S	OU5	FAA-A Remedial Action	PCE	Semi-Annual	April/Oct.	VOCs	1	Outwash	
33	Mad Mon 127 (HD-13D)	OU5	FAA-A Remedial Action	NA	Semi-Annual	April/Oct.	VOCs	2	Outwash	Added April '00
34	HD-13S	OU5	FAA-A Remedial Action	NA	Semi-Annual	April/Oct.	VOCs	1	Outwash	
35	HSA-4A (MW131M)	OU5	FAA-A Remedial Action	TCE	Semi-Annual	April/Oct.	VOCs	2	Outwash	
36	HSA-4B (MW131S)	OU5	FAA-A Remedial Action	NA	Semi-Annual	April/Oct.	VOCs	1	Outwash	
37	HSA-5 (MW132S)	OU5	FAA-A Remedial Action	PCE, TCE	Semi-Annual	April/Oct.	VOCs	1	Outwash	
38	CW03-77	OU8	VOCs > MCL	TCE	Semi-Annual	April/Oct.	VOCs	3	Outwash	Replacement
39	CHP4-MW01	OU10	VOCs > MCL	PCE, TCE	Semi-Annual	April/Oct.	VOCs	1	Outwash	
40	GR-330	OU10	VOCs > MCL	PCE	Semi-Annual	April/Oct.	VOCs	1	Outwash	
41	GR-333	OU10	VOCs > MCL	TCE	Semi-Annual	April/Oct.	VOCs	1	Outwash	
42	GR-334	OU10	VOCs > MCL	TCE	Semi-Annual	April/Oct.	VOCs	3	Outwash	
43	OU10-MW-03S	OU10	VOCs > MCL	PCE	Semi-Annual	April/Oct.	VOCs (Metals Ann.)	1	Outwash	
44	OU10-MW-06D	OU10	VOCs > MCL	PCE	Semi-Annual	April/Oct.	VOCs	3	Outwash	
45	OU10-MW-06S	OU10	VOCs > MCL	TCE	Semi-Annual	April/Oct.	VOCs (Metals Ann.)	2	Outwash	
46	OU10-MW-11D	OU10	VOCs > MCL	TCE	Semi-Annual	April/Oct.	VOCs	2	Outwash	
47	OU10-MW-11S	OU10	VOCs > MCL	PCE	Semi-Annual	April/Oct.	VOCs	2	Outwash	
48	OU10-MW-19D	OU10	VOCs > MCL	TCE	Semi-Annual	April/Oct.	VOCs	2	Outwash	
49	OU10-MW-21S	OU10	VOCs > MCL	TCE	Semi-Annual	April/Oct.	VOCs	1	Outwash	
50	OU10-MW-25S	OU10	VOCs > MCL	PCE	Semi-Annual	April/Oct.	VOCs	1	Outwash	
51	WP-NEA-MW37-1D	OU10	VOCs > MCL	Benzene	Semi-Annual	April/Oct.	VOCs	2	Outwash	
52	23-578-M	OU10	VOCs > MCL	TCE	Semi-Annual	April/Oct.	VOCs	1	Outwash	Added

Table A-1
BMP Monitoring Locations
Wright-Patterson AFB, Ohio
Page 4 of 4

Number of Wells	Sample Location	Area	Reason for Monitoring	COPCs > RG	Monitoring Frequency	Sampling Month(s)	Analytical Parameters	Aquifer Layer	Aquifer Type	Comments
	Basewide Annual VOCs									
1	BS6 P-1	BS6	BS6 LTM	NA	Annual	April	VOCs	1	Hill	
2	BS6 P-2	BS6	BS6 LTM	NA	Annual	April	VOCs	1	Hill	
3	SP11-MW01	FAA-B	FAA-B Remedial Action	vinyl chloride	Annual	April	VOCs	1	Hill	
4	SP11-MW02	FAA-B	FAA-B Remedial Action	vinyl chloride	Annual	April	VOCs	1	Hill	
5	SP11-MW03	FAA-B	FAA-B Remedial Action	vinyl chloride	Annual	April	VOCs	1	Hill	
6	SP11-MW07	FAA-B	FAA-B Remedial Action	vinyl chloride	Annual	April	VOCs	1	Hill	Added April '01
7	SP11-MW08	FAA-B	FAA-B Remedial Action	vinyl chloride	Annual	April	VOCs	1	Hill	Added April '00
8	SP11-MW09	FAA-B	FAA-B Remedial Action	vinyl chloride	Annual	April	VOCs	1	Hill	Added April '01
9	WP-EFDZ2-MW03	FAA-B	FAA-B Remedial Action	vinyl chloride	Annual	April	VOCs	1	Hill	Added April '00
10	OU8-MW-02S	OU8	VOCs > MCL	vinyl chloride	Annual	April	VOCs	1	Hill	
11	P6-1	OU8	VOCs > MCL	Benzene	Annual	April	VOCs	1	Hill	
12	P6-2	OU8	VOCs > MCL	Benzene	Annual	April	VOCs	1	Hill	
13	EFD04-MW06	OU9	VOCs > MCL	Benzene, 1,2-DCA	Annual	April	VOCs	1	Hill	
14	EFD09-M575	OU9	VOCs > MCL	TCE, vinyl chloride	Annual	April	VOCs	1	Hill	
	Basewide Annual Metals									
1	14-554-M	OU2	Metals > RG	Sb, Cr, Ni	Annual	April	Metals	1	Outwash	
2	WP-NEA-MW01-1S	OU2	Metals > RG	Al, Cr, Co, Mn, Ni, V	Annual	April	Metals	1	Outwash	
3	WP-NEA-MW02-2S	OU2	Metals > RG	Al, Cr, Co, Ni, V	Annual	April	Metals	1	Outwash	
4	WP-NEA-MW20-2S	OU2	Metals > RG	Al, Co, Mn, V	Annual	April	Metals	1	Outwash	
5	WP-NEA-MW23-2S	OU2	Metals > RG	Al, Co, Pb, Ni, Tl, V, Zn	Annual	April	Metals	1	Outwash	
6	WP-NEA-MW24-2S	OU2	Metals > RG	Al, Cr, Co, Mn, Ni, V, Zn	Annual	April	Metals	1	Outwash	
7	WP-NEA-MW31-3S	OU2	Metals > RG	Al, Co, Mn, V, Zn	Annual	April	Metals	1	Outwash	
8	07-520-M	OU3	HI > 1	NA	Annual	April	Metals	1	Outwash	Replacement
9	CW15-055	OU5	Metals > RG	Mn, V, Zn	Annual	April	Metals	2	Outwash	
10	OU8-MW-02D	OU8	Metals > RG	Mn, V, Zn	Annual	April	Metals	2	Hill	
11	OU8-MW-23D	OU8	Metals > RG	Al, Mn, Zn	Annual	April	Metals	2	Hill	
12	P4-2	OU9	Metals > RG	Al, Cr, Co, Ni, V	Annual	April	Metals	1	Hill	
13	WP-EFDZ3-MW02	OU9	Metals > RG	Se, Tl, V	Annual	April	Metals	1	Hill	
14	WP-EFDZ3-MW03	OU9	Metals > RG	Al, Mn, V, Zn	Annual	April	Metals	1	Hill	
15	WP-EFDZ8-MW01	OU9	Metals > RG	Al, Cr, Ni, Zn	Annual	April	Metals	1	Hill	
16	25-582-M	OU10	Metals > RG	Al, Cr, Co, Pb, Mn, Ni, V, Zn,	Annual	April	Metals	1	Outwash	
17	25-583-M	OU10	Metals > RG	Cr, Co, Ni , V	Annual	April	Metals	1	Outwash	
18	25-584-M	OU10	Metals > RG	Cr, Co, Ni	Annual	April	Metals	1	Outwash	
19	OU10-MW-03S	OU10	Metals > RG	Co, Mn, Zn	Annual	April	Metals, VOCs	1	Outwash	
20	OU10-MW-06S	OU10	Metals > RG	Al, Mn, V	Annual	April	Metals, VOCs	2	Outwash	
21	OU10-MW-10I	OU10	NA	NA	Annual	April	Metals	2	Outwash	Rep. Well for 20-566
	Removed Wells									
	OU8-MW-10D	FAA-B	FAA-B Remedial Action	vinyl chloride	Annual	October	VOCs	1	Hill	Abandoned
	20-566-M	OU10	Metals > RG	Cr, Co, Ni	Annual	April	Metals	1	Outwash	Abandonded
	P11-1	OU2	OU2 Draft ROD	Benzene	Semi-Annual	April/Oct.	OU2 ROD Parameters	1	Outwash	Replaced
	CW01-35	OU8	VOCs > MCL	TCE	Semi-Annual	April/Oct.	VOCs	2	Outwash	Replaced
	OU8-MW-12D	OU8	Metals > RG	Al, Mn, V, Zn	Annual	April	Metals	2	Outwash	Abandoned
	CHP05-M581	OU9	Metals > RG	Ba, Mn, Tl	Annual	April	Metals	1	Hill	Damaged

RG = Remediation Goal
NA = Location included for remedial action monitoring

OU2 ROD parameters = BTEX, nitrates, sulfate, DO, ferrous iron
OU1 ROD Parameters = VOCs, SVOCs, dioxin/furans, pest./PCB, metals, CN, ammonia

Table A-2
Basewide LTM Program
Monitoring Well Inventory
Wright-Patterson AFB, Ohio
Page 1 of 2

Sample Location	Area	Analytical Parameters	Sampling Frequency	Existing Pump Type	Wellhead Completion (AG or FL)	Top of Screened Interval (ft, bgs)	Length of Screen (ft)	Bottom of Well (ft, bgs)	Sounded Depth (ft, TOC)	Borehole Depth (ft, TOC)
BS6 P-1	BS6	VOCs	April	GEOGUARD	FL	8	10	18	NA	20
BS6 P-2	BS6	VOCs	April	GEOGUARD	FL	5	10	15	NA	15.5
BS5 P-1	BS5	VOCs	April/Oct.	GEOGUARD	FL	28	10	38	NA	40
BS5 P-2	BS5	VOCs	April/Oct.	GEOGUARD	FL	30	10	40	NA	42
BS5 P-3	BS5	VOCs	April/Oct.	GEOGUARD	FL	33	10	43	NA	45
BS5 P-4	BS5	VOCs	April/Oct.	GEOGUARD	FL	45	5	50	NA	52
SP11-MW01	FAA-B	VOCs	April	GEOGUARD	FL	22	5	27.0	NA	35
SP11-MW02	FAA-B	VOCs	April	GEOGUARD	FL	12	10	22.0	NA	36
SP11-MW03	FAA-B	VOCs	April	GEOGUARD	FL	8	5	13.0	NA	37
SP11-MW07	FAA-B	VOCs	April	GEOGUARD	FL	13	10	23.0	NA	28
SP11-MW08	FAA-B	VOCs	April	GEOGUARD	FL	22	10	32.0	NA	35
SP11-MW09	FAA-B	VOCs	April	GEOGUARD	FL	8	10	18.0	NA	24
WP-EFDZ2-MW03	FAA-B	VOCs	April	GEOGUARD	FL	14.7	10	24.7	NA	27
WP-NEA-MW27-3I	OU2	VOCs	April/Oct.	GEOGUARD	AG	40.8	4.7	45.5	NA	50
WP-NEA-MW34-2S	OU2	VOCs	April/Oct.	GEOGUARD	AG	8.5	9.9	18.4	NA	21
14-554-M	OU2	Metals	April	NONE*	AG	5.9	10	15.9	17.05	20
WP-NEA-MW01-1S	OU2	Metals	April	NONE*	AG	13.4	10	23.4	25.5	19
WP-NEA-MW02-2S	OU2	Metals	April	NONE*	AG	7	10	17.0	19.5	19
WP-NEA-MW20-2S	OU2	Metals	April	GEOGUARD	AG	7.8	9.9	17.7	NA	20
WP-NEA-MW23-2S	OU2	Metals	April	GEOGUARD	AG	8.25	4.7	13.0	NA	15
WP-NEA-MW24-2S	OU2	Metals	April	GEOGUARD	FL	11.9	9.7	21.6	NA	24
WP-NEA-MW31-3S	OU2	Metals	April	GEOGUARD	AG	12.9	9.7	22.6	NA	25
FTA2:MW02C	OU3	VOCs	April/Oct.	Redi-Flo II	AG	9.6	9.59	19.2	NA	20
LF12-MW15A	OU3	VOCs	April/Oct.	GEOGUARD	AG	3.72	9.7	15.4	NA	21
05-DM-123S	OU3	VOCs	April/Oct.	GEOGUARD	AG	5	10	15.0	NA	15
05-DM-123I	OU3	VOCs	April/Oct.	GEOGUARD	AG	19.75	5	24.8	NA	24.75
05-DM-123D	OU3	VOCs	April/Oct.	GEOGUARD	AG	26.8	5	31.8	NA	31.8
07-520-M	OU3	VOCs/ Metals	April/Oct.	GEOGUARD	AG	5.1	10	15.1	NA	15.1
BMP-OU4-01B-60	OU4	VOCs	April/Oct.	GEOGUARD	FL	50	10	60.0	NA	60
BMP-OU4-01C-84	OU4	VOCs	April/Oct.	GEOGUARD	FL	74	10	85.0	NA	85
OU4-MW-02A	OU4	VOCs	April/Oct.	Well Wizard	AG	7	10	17.0	NA	18.5
OU4-MW-02B	OU4	VOCs	April/Oct.	Well Wizard	AG	46.1	10	56.1	NA	58
OU4-MW-03B	OU4	VOCs	April/Oct.	Well Wizard	AG	57	5	62.0	NA	64
OU4-MW-03C	OU4	VOCs	April/Oct.	Well Wizard	AG	73.53	10	83.5	NA	95
OU4-MW-04A	OU4	VOCs	April/Oct.	Well Wizard	AG	9.5	10	19.5	NA	19.5
OU4-MW-12B	OU4	VOCs	April/Oct.	Well Wizard	AG	39.94	10	49.9	NA	105
CW04-060	OU5	VOCs	April/Oct.	GEOGUARD	AG	49.7	10	59.7	NA	60
CW05-055	OU5	VOCs	April/Oct.	GEOGUARD	AG	45	10	57.0	NA	57
CW05-085	OU5	VOCs	April/Oct.	GEOGUARD	AG	75	10	85.0	NA	85
CW07-055	OU5	VOCs	April/Oct.	GEOGUARD	AG	44.5	10	55.5	NA	55
CW10-055	OU5	VOCs	April/Oct.	GEOGUARD	AG	45	10	55.0	NA	95
HD-11	OU5	VOCs	April/Oct.	GEOGUARD	AG	71	10	85.0	NA	85
HD-12M	OU5	VOCs	April/Oct.	GEOGUARD	AG	44	10	76.0	NA	76
HD-12S	OU5	VOCs	April/Oct.	GEOGUARD	AG	14	10	25.0	NA	25
HD-13S	OU5	VOCs	April/Oct.	GEOGUARD	AG	22.5	10	33.0	NA	33
MAD-MON127 (HD-13D)	OU5	VOCs	April/Oct.	GEOGUARD	AG	96	10	106.0	NA	107

Table A-2
Basewide LTM Program
Monitoring Well Inventory
Wright-Patterson AFB, Ohio
Page 2 of 2

Sample Location	Area	Analytical Parameters	Sampling Frequency	Existing Pump Type	Wellhead Completion (AG or FL)	Top of Screened Interval (ft, bgs)	Length of Screen (ft)	Bottom of Well (ft, bgs)	Sounded Depth (ft, TOC)	Borehole Depth (ft, TOC)
MW131M (HSA-4A)	OU5	VOCs	April/Oct.	GEOGUARD	AG	58.3	10	68.3	NA	68.3
MW131S (HSA-4B)	OU5	VOCs	April/Oct.	GEOGUARD	AG	22.3	10	32.3	NA	32.3
MW132S (HAS-5)	OU5	VOCs	April/Oct.	GEOGUARD	AG	38.5	10	48.5	NA	48.5
CW15-055	OU5	Metals	April	GEOGUARD	AG	45	10	55.0	NA	95
CW3-77	OU8	VOCs	April/Oct.	GEOGUARD	AG	66.8	10	76.8	NA	76.8
OU8-MW-02S	OU8	VOCs	April	Well Wizard	FL	19	10	29.0	NA	29.2
P6-1	OU8	VOCs	April	Well Wizard	FL	18.22	9.57	27.8	NA	30.5
P6-2	OU8	VOCs	April	Well Wizard	FL	17.77	9.68	27.5	NA	29
OU8-MW-02D	OU8	Metals	April	Well Wizard	FL	64	10	74.0	NA	79.5
OU8-MW-23D	OU8	Metals	April	Well Wizard	FL	41.7	10	51.7	NA	56
EFD04-MW06	OU9	VOCs	April	GEOGUARD	AG	25	10	35.0	NA	36
EFD09-M575	OU9	VOCs	April	NONE*	AG	5.4	10	15.4	16.03	16
P4-2	OU9	Metals	April	GEOGUARD	AG	5.8	10.2	16.0	NA	18
WP-EFDZ3-MW02	OU9	Metals	April	NONE*	AG	10	10	20.0	24.78	22
WP-EFDZ3-MW03	OU9	Metals	April	NONE*	AG	12	10	22.0	26.25	24
WP-EFDZ8-MW01	OU9	Metals	April	GEOGUARD	AG	30	10	40.0	NA	42
CHP4-MW01	OU10	VOCs	April/Oct.	GEOGUARD	FL	36	10	46.0	NA	36
GR-330	OU10	VOCs	April/Oct.	NONE*	AG	39.5	10	49.5	50.8	50
GR-333	OU10	VOCs	April/Oct.	Redi-Flo II	AG	25.1	10	35.1	NA	36
GR-334	OU10	VOCs	April/Oct.	Redi-Flo II	AG	145	10	155.0	NA	155
OU10-MW-03S	OU10	VOCs, Metals	April/Oct.	GEOGUARD	FL	27.8	10	37.8	NA	38
OU10-MW-06D	OU10	VOCs	April/Oct.	NONE*	FL	140.4	10	150.4	150	151
OU10-MW-06S	OU10	VOCs, Metals	April/Oct.	NONE*	FL	52	10	62.0	60.35	63
OU10-MW-11D	OU10	VOCs	April/Oct.	GEOGUARD	FL	87.9	10	97.9	NA	95
OU10-MW-11S	OU10	VOCs	April/Oct.	GEOGUARD	FL	53.3	10	63.3	NA	63
OU10-MW-19D	OU10	VOCs	April/Oct.	GEOGUARD	FL	72.1	10	82.1	NA	80
OU10-MW-21S	OU10	VOCs	April/Oct.	NONE*	FL	15.5	10	25.5	25.5	25
OU10-MW-25S	OU10	VOCs	April/Oct.	GEOGUARD	FL	36	10	46.0	NA	45
23-578-M	OU10	VOCs	April/Oct.	GEOGUARD	AG	31.5	10	41.5	NA	41.5
WP-NEA-MW37-1D	OU10	VOCs	April/Oct.	GEOGUARD	AG	84.7	9.9	94.6	NA	97
OU10-MW-10I	OU10	Metals	April	GEOGUARD	AG	74.8	10	84.8	NA	82
25-582-M	OU10	Metals	April	NONE*	AG	25.9	10	35.9	36.28	95
25-583-M	OU10	Metals	April	NONE*	AG	13	10	23.0	24.3	23
25-584-M	OU10	Metals	April	NONE*	AG	15.8	10	25.8	27.78	26

AG = Above ground
FL = Flush-mounted
NA = Not avalable, pump in well
* = New Geoguard bladder pump installed

Table A-3
OU5 Historic Groundwater
Sampling Results: VOCs
Wright-Patterson AFB, Ohio

		CHEMICAL COMPOUND*					
WELL ID	**DATE**	**Benzene (ug/L)**	**1,2-DCA (ug/L)**	**Total 1,2-DCE (ug/L)**	**PCE (ug/L)**	**Vinyl Chloride (ug/L)**	**TCE (ug/L)**
	MCL	**5**	**5**	**70**	**5**	**2**	**5**
08-020-M	Sep-90	- -	- -	- -	0.3	- -	0.1
(MW20)	Nov-91	- -	- -	- -	- -	- -	- -
	Mar-92	- -	- -	- -	- -	- -	0.3
	Jun-92	- -	- -	- -	1	- -	0.4
	Sep-92	NA	NA	NA	NA	NA	NA
	Nov-92	- -	- -	0.3	0.2	- -	0.4
	Jan-93	- -	- -	- -	0.3	- -	0.4
	Mar-93	- -	- -	- -	- -	- -	- -
	May-93	- -	- -	- -	0.3	- -	2
	Jul-93	- -	- -	- -	- -	- -	0.2
	Oct-93	- -	- -	- -	- -	- -	- -
	Feb-94	- -	- -	- -	- -	- -	- -
	Apr-94	- -	- -	- -	- -	- -	- -
	Aug-94	- -	- -	- -	- -	- -	- -
	Dec-94	2	- -	- -	- -	- -	- -
	Mar-95	- -	- -	- -	- -	- -	- -
	Jun-95	- -	- -	- -	- -	- -	- -
	Sep-95	- -	- -	- -	- -	- -	- -
	Dec-95	- -	- -	- -	- -	- -	- -
	Mar-96	- -	- -	- -	- -	- -	- -
	Jun-96	- -	- -	- -	- -	- -	- -
	Aug-96	- -	- -	- -	- -	- -	- -
	Dec-96	- -	- -	- -	- -	- -	- -
	Feb-97	- -	- -	- -	- -	- -	0.3
	Apr-97	- -	- -	- -	- -	- -	0.4
	Sep-97	- -	- -	- -	- -	- -	- -
	Jan-98	- -	- -	- -	- -	- -	0.38
	Jul-98	- -	- -	- -	- -	- -	0.36
08-021-M	Sep-90	- -	- -	7	3.3	**12**	**18**
(MW21)	Nov-91	- -	- -	15.5	- -	- -	**80.3**
	Mar-92	0.4	- -	31	1	**32**	**22**
	Jun-92	0.7	- -	65	2	**33**	**24**
	Sep-92	NA	NA	NA	NA	NA	NA
	Nov-92	2	- -	60	2	**48**	**7**
	Jan-93	2	- -	39	1	**19**	4
	Mar-93	- -	- -	12	2	**- -**	**6**
	May-93	0.5	- -	14	2	**3**	**6**
	Jul-93	0.3	- -	25	1	**11**	**6**
	Oct-93	1.3	- -	51	2.1	**31**	3.5
	Feb-94	- -	0.7	33	1.1	**10**	2
	Apr-94	0.5	- -	47	- -	**10**	1
	Aug-94	- -	- -	**94**	- -	- -	2
	Dec-94	4	1	16	- -	2	- -

Table A-3
OU5 Historic Groundwater
Sampling Results: VOCs
Wright-Patterson AFB, Ohio

		CHEMICAL COMPOUND*					
WELL ID	**DATE**	**Benzene (ug/L)**	**1,2-DCA (ug/L)**	**Total 1,2-DCE (ug/L)**	**PCE (ug/L)**	**Vinyl Chloride (ug/L)**	**TCE (ug/L)**
	MCL	**5**	**5**	**70**	**5**	**2**	**5**
08-021-M	Mar-95	- -	- -	**109**	- -	**36**	2
(cont.)	Jun-95	- -	- -	28.2	- -	**6.43**	1.8
	Sep-95	- -	- -	24.2	- -	- -	1.51
	Dec-95	- -	- -	- -	- -	- -	- -
	Mar-96	- -	- -	21.9	- -	- -	- -
	Jun-96	- -	- -	4.01	- -	- -	**12.1**
	Aug-96	- -	- -	8.7	- -	**3.7**	1.6
	Dec-96	- -	- -	7.1	0.6	- -	0.9
	Feb-97	- -	- -	5.9	0.6	- -	0.6
	Apr-97	0.3	- -	15	0.6	**8**	0.8
	Sep-97	- -	- -	11.6	- -	- -	- -
	Jan-98	- -	- -	10	- -	**2.6**	0.56
	Jul-98	0.45	- -	6.98	0.5	**5.3**	0.72
08-022-M	Sep-90	- -	- -	2.1	- -	- -	- -
	Nov-91	- -	- -	- -	- -	- -	- -
	Mar-92	- -	- -	- -	- -	- -	- -
	Jun-92	- -	- -	- -	- -	- -	- -
	Sep-92	NA	NA	NA	NA	NA	NA
	Jan-93	- -	- -	- -	- -	- -	- -
	Mar-93	- -	- -	- -	- -	- -	- -
	May-93	- -	- -	- -	- -	- -	- -
	Jul-93	- -	- -	- -	- -	- -	- -
	Oct-93	- -	- -	1.9	- -	- -	- -
	Feb-94	- -	- -	3.6	- -	- -	- -
	Apr-94	- -	- -	- -	- -	- -	- -
	Aug-94	- -	- -	- -	- -	- -	- -
	Dec-94	- -	- -	- -	- -	- -	- -
	Mar-95	- -	- -	- -	- -	- -	- -
	Jun-95	- -	- -	- -	- -	- -	- -
	Sep-95	- -	- -	- -	- -	- -	- -
	Dec-95	- -	- -	- -	- -	- -	- -
	Mar-96	- -	- -	- -	- -	- -	- -
	Jun-96	- -	- -	- -	- -	- -	- -
	Aug-96	- -	- -	- -	- -	- -	- -
	Dec-96	- -	- -	- -	- -	- -	- -
	Feb-97	- -	- -	- -	- -	- -	- -
08-023-M	Sep-90	- -	- -	- -	- -	- -	- -
	Nov-91	- -	- -	- -	- -	- -	- -
	Mar-92	- -	- -	- -	- -	- -	- -
	Jun-92	- -	- -	- -	- -	- -	- -
	Sep-92	NA	NA	NA	NA	NA	NA
	Jan-93	- -	- -	- -	- -	- -	- -

Table A-3
OU5 Historic Groundwater
Sampling Results: VOCs
Wright-Patterson AFB, Ohio

		CHEMICAL COMPOUND*					
WELL ID	DATE	Benzene (ug/L)	1,2-DCA (ug/L)	Total 1,2-DCE (ug/L)	PCE (ug/L)	Vinyl Chloride (ug/L)	TCE (ug/L)
	MCL	5	5	70	5	2	5
08-023-M (cont.)	Mar-93	- -	- -	- -	- -	- -	- -
	May-93	- -	- -	- -	- -	- -	- -
	Jul-93	- -	- -	- -	- -	- -	- -
	Oct-93	- -	- -	- -	- -	- -	- -
	Feb-94	- -	- -	- -	- -	- -	- -
08-522-M	Oct-93	- -	- -	- -	- -	- -	- -
	Feb-94	- -	- -	- -	- -	- -	- -
08-523-M	Sep-90	- -	- -	- -	- -	- -	- -
	Nov-91	- -	- -	- -	- -	- -	- -
	Mar-92	- -	- -	- -	- -	- -	- -
	Jun-92	- -	- -	- -	- -	- -	- -
	Sep-92	NA	NA	NA	NA	NA	NA
	Jan-93	- -	- -	- -	- -	- -	- -
	Mar-93	- -	- -	- -	- -	- -	- -
	May-93	- -	- -	- -	- -	- -	- -
	Jul-93	- -	- -	- -	- -	- -	- -
	Oct-93	- -	- -	- -	- -	- -	- -
	Feb-94	0.7	- -	- -	- -	- -	- -
08-524-M	Sep-90	- -	- -	- -	- -	- -	- -
	Nov-91	- -	- -	- -	- -	- -	- -
	Mar-92	- -	- -	- -	- -	- -	- -
	Jun-92	- -	- -	- -	- -	- -	- -
	Sep-92	NA	NA	NA	NA	NA	NA
	Jan-93	- -	- -	- -	- -	- -	- -
	Mar-93	- -	- -	- -	- -	- -	- -
	May-93	- -	- -	- -	- -	- -	- -
	Jul-93	- -	- -	- -	- -	- -	- -
	Oct-93	- -	- -	- -	- -	- -	- -
	Feb-94	- -	- -	- -	- -	- -	- -
08-525-M	Sep-90	- -	- -	- -	- -	- -	- -
	Nov-91	- -	- -	- -	- -	- -	- -
	Mar-92	- -	- -	- -	- -	- -	- -
	Jun-92	- -	- -	- -	- -	- -	- -
	Sep-92	NA	NA	NA	NA	NA	NA
	Jan-93	- -	- -	- -	- -	- -	- -
	Mar-93	**11**	- -	- -	- -	- -	- -
	May-93	- -	- -	- -	- -	- -	- -
	Jul-93	NA	NA	NA	NA	NA	NA
	Oct-93	- -	- -	- -	- -	- -	- -
	Feb-94	- -	- -	- -	- -	- -	- -

Table A-3
OU5 Historic Groundwater
Sampling Results: VOCs
Wright-Patterson AFB, Ohio

		CHEMICAL COMPOUND*					
WELL ID	**DATE**	**Benzene (ug/L)**	**1,2-DCA (ug/L)**	**Total 1,2-DCE (ug/L)**	**PCE (ug/L)**	**Vinyl Chloride (ug/L)**	**TCE (ug/L)**
	MCL	**5**	**5**	**70**	**5**	**2**	**5**
08-525-M	Apr-94						
(cont.)	Aug-94	- -	- -	- -	- -	- -	- -
	Dec-94	- -	- -	- -	- -	- -	- -
	Mar-95	- -	- -	- -	- -	- -	- -
	Jun-95	- -	- -	- -	- -	- -	- -
	Sep-95	- -	- -	- -	- -	- -	- -
	Dec-95	- -	- -	- -	- -	- -	- -
	Mar-96	- -	- -	- -	- -	- -	- -
	Jun-96	- -	- -	- -	- -	- -	- -
	Aug-96	- -	- -	- -	- -	- -	- -
	Dec-96	- -	- -	- -	- -	- -	- -
	Feb-97	- -	- -	- -	- -	- -	- -
08-526-M	Oct-93	- -	- -	- -	- -	- -	- -
	Feb-94	- -	- -	- -	- -	- -	- -
08-527-M	Oct-93	- -	- -	- -	- -	- -	- -
	Feb-94	- -	- -	- -	- -	- -	- -
08-528-M	Sep-90	- -	- -	- -	3.3	- -	0.3
	Nov-91	- -	- -	- -	- -	- -	- -
	Mar-92	- -	- -	- -	- -	- -	- -
	Jun-92	- -	- -	- -	- -	- -	- -
	Sep-92	NA	NA	NA	NA	NA	NA
	Jan-93	- -	- -	- -	- -	- -	- -
	Mar-93	- -	- -	- -	- -	- -	- -
	May-93	- -	- -	- -	- -	- -	- -
	Jul-93	- -	- -	- -	- -	- -	- -
	Oct-93	- -	- -	- -	**13**	- -	- -
	Feb-94	- -	- -	- -	**7.6**	- -	- -
CW04-018	Oct-93	- -	- -	- -	- -	- -	- -
	Feb-94	- -	- -	- -	- -	- -	- -
CW04-060	Sep-90	- -	- -	0.3	- -	- -	- -
	Nov-91	- -	- -	- -	- -	- -	- -
	Mar-92	- -	- -	1	- -	- -	- -
	Jun-92	- -	0.6	2	- -	- -	- -
	Sep-92	NA	NA	NA	NA	NA	NA
	Nov-92	- -	4	1	- -	- -	- -
	Jan-93	- -	0.5	0.9	- -	- -	0.3
	Mar-93	- -	--	1	- -	- -	- -
	May-93	- -	- -	2	- -	- -	- -

Table A-3
OU5 Historic Groundwater
Sampling Results: VOCs
Wright-Patterson AFB, Ohio

		CHEMICAL COMPOUND*					
WELL ID	DATE	Benzene (ug/L)	1,2-DCA (ug/L)	Total 1,2-DCE (ug/L)	PCE (ug/L)	Vinyl Chloride (ug/L)	TCE (ug/L)
	MCL	5	5	70	5	2	5
CW04-060 (cont.)	Jul-93	- -	- -	0.9	- -	- -	- -
	Oct-93	- -	- -	1.5	- -	- -	- -
	Feb-94	- -	- -	0.9	- -	- -	- -
	Apr-94	- -	- -	0.8	- -	- -	0.3
	Aug-94	- -	- -	2	- -	- -	- -
	Dec-94	- -	2	2	- -	- -	- -
	Mar-95	- -	- -	- -	- -	- -	- -
	Jun-95	- -	- -	- -	- -	- -	- -
	Sep-95	- -	- -	1	- -	- -	- -
	Dec-95	- -	- -	1.39	- -	- -	- -
	Mar-96	- -	- -	- -	- -	- -	- -
	Jun-96	- -	- -	- -	- -	- -	- -
	Aug-96	- -	- -	0.62	- -	- -	- -
	Dec-96	- -	- -	1.6	- -	- -	- -
	Feb-97	- -	- -	1.1	- -	- -	- -
	Apr-97	- -	- -	0.9	- -	- -	- -
	Sep-97	- -	- -	1.3	- -	- -	- -
	Jan-98	- -	- -	0.82	- -	- -	- -
	Jul-98	- -	- -	0.66	- -	- -	0.62
CW04-085	Sep-90	- -	- -	8.9	- -	- -	- -
	Nov-91	- -	- -	5.66	- -	- -	- -
	Mar-92	- -	- -	7	- -	- -	- -
	Jun-92	- -	0.4	5	- -	- -	- -
	Sep-92	NA	NA	NA	NA	NA	NA
	Nov-92	- -	- -	2	- -	- -	- -
	Jan-93	- -	0.4	4	- -	- -	- -
	Mar-93	- -	- -	5	- -	- -	- -
	May-93	- -	- -	5	- -	- -	- -
	Jul-93	- -	0.3	5	- -	- -	- -
	Oct-93	- -	- -	3.3	- -	- -	- -
	Feb-94	- -	- -	2.9	- -	- -	- -
	Apr-94	- -	- -	2	- -	- -	0.8
	Aug-94	- -	- -	2	- -	- -	- -
	Dec-94	- -	- -	1	- -	- -	- -
	Mar-95	- -	- -	- -	- -	- -	- -
	Jun-95	- -	- -	- -	- -	- -	- -
	Sep-95	- -	- -	1	- -	- -	- -
	Dec-95	- -	- -	- -	- -	- -	- -
	Mar-96	- -	- -	- -	- -	- -	- -
	Jun-96	- -	- -	- -	- -	- -	- -
	Aug-96	- -	- -	0.6	- -	- -	- -
	Dec-96	- -	- -	1	- -	- -	- -
	Feb-97	0.2	- -	0.7	- -	- -	- -

Table A-3
OU5 Historic Groundwater
Sampling Results: VOCs
Wright-Patterson AFB, Ohio

		CHEMICAL COMPOUND*					
WELL ID	**DATE**	**Benzene (ug/L)**	**1,2-DCA (ug/L)**	**Total 1,2-DCE (ug/L)**	**PCE (ug/L)**	**Vinyl Chloride (ug/L)**	**TCE (ug/L)**
	MCL	**5**	**5**	**70**	**5**	**2**	**5**
CW04-085 (cont.)	Apr-97	- -	- -	- -	- -	- -	- -
	Sep-97	- -	- -	1	- -	- -	- -
	Jan-98	- -	- -	0.99	- -	- -	- -
	Jul-98	- -	- -	1.1	- -	- -	- -
CW05-055	Sep-90	- -	- -	41	- -	1	**550**
	Nov-91	- -	- -	60	- -	- -	**529**
	Mar-92	0.5	- -	16	- -	2	**91**
	Jun-92	- -	- -	15	- -	**6**	**43**
	Sep-92	NA	NA	NA	NA	NA	NA
	Nov-92	0.7	- -	15	- -	**3**	**19**
	Jan-93	0.2	- -	5	- -	- -	**16**
	Mar-93	- -	- -	4	- -	- -	**26**
	May-93	- -	- -	2	- -	- -	**23**
	Jul-93	- -	- -	5	- -	0.6	**11**
	Oct-93	- -	- -	1.7	- -	- -	**8.4**
	Feb-94	- -	- -	29.7	- -	2	**6.8**
	Apr-94	0.6	- -	16	- -	**3**	3
	Aug-94	- -	- -	33	- -	**14**	2
	Dec-94	- -	2	8	- -	**3**	3
	Mar-95	- -	- -	17	- -	1	3
	Jun-95	- -	- -	22.7	- -	**5.3**	2.71
	Sep-95	- -	- -	19.4	- -	**10.6**	1.81
	Dec-95	- -	- -	- -	- -	- -	- -
	Mar-96	- -	- -	2.49	- -	- -	1.19
	Jun-96	- -	- -	6.48	- -	**11.7**	1.84
	Aug-96	- -	- -	8.6	- -	**3.9**	1.8
	Dec-96	- -	- -	8.9	- -	- -	5
	Feb-97	- -	- -	14.3	- -	- -	8
	Apr-97	- -	- -	9	- -	1.6	3.2
	Sep-97	- -	- -	7.4	- -	- -	2.1
	Jan-98	- -	- -	2.2	- -	0.84	2.4
	Jul-98	- -	- -	12.24	- -	**3**	1.4
CW05-085	Sep-90	- -	- -	40	- -	0.5	**770**
	Nov-91	- -	- -	30.2	- -	- -	**346**
	Mar-92	- -	- -	23	- -	- -	**470**
	Jun-92	- -	- -	18	- -	- -	**490**
	Sep-92	NA	NA	NA	NA	NA	NA
	Nov-92	- -	- -	25	- -	- -	**380**
	Jan-93	- -	- -	27	- -	- -	**360**
	Mar-93	- -	- -	25	- -	- -	**310**
	May-93	- -	- -	18	- -	- -	**400**
	Jul-93	- -	- -	23	- -	- -	**300**
	Oct-93	- -	- -	25.6	- -	- -	**316**

Table A-3
OU5 Historic Groundwater
Sampling Results: VOCs
Wright-Patterson AFB, Ohio

		CHEMICAL COMPOUND*					
WELL ID	**DATE**	**Benzene (ug/L)**	**1,2-DCA (ug/L)**	**Total 1,2-DCE (ug/L)**	**PCE (ug/L)**	**Vinyl Chloride (ug/L)**	**TCE (ug/L)**
	MCL	**5**	**5**	**70**	**5**	**2**	**5**
CW05-085 (cont.)	Feb-94	- -	- -	12	- -	- -	**360**
	Apr-94	- -	- -	22	- -	0.3	**200**
	Aug-94	- -	- -	30	- -	- -	**140**
	Dec-94	- -	2	20	- -	- -	**250**
	Mar-95	- -	- -	9	- -	- -	**161**
	Jun-95	- -	- -	5.93	- -	- -	**169**
	Sep-95	- -	- -	- -	- -	- -	**132**
	Dec-95	1.91	- -	15.34	- -	- -	**154**
	Mar-96	- -	- -	23.8	- -	- -	**130**
	Jun-96	- -	- -	39.26	- -	- -	**162**
	Aug-96	- -	- -	13	- -	- -	**160**
	Dec-96	- -	- -	27	- -	- -	**150**
	Feb-97	- -	- -	42.4	- -	- -	**170**
	Apr-97	- -	- -	24	- -	- -	**180**
	Sep-97	- -	- -	20	- -	- -	**130**
	Jan-98	- -	- -	12.7	- -	- -	**140**
	Jul-98	- -	- -	28.2	- -	- -	**130**
CW06-077	Sep-90	- -	- -	1.3	- -	- -	**6.2**
	Nov-91	- -	- -	- -	- -	- -	1.79
	Mar-92	- -	- -	- -	- -	- -	0.6
	Jun-92	- -	- -	- -	- -	- -	0.7
	Sep-92	NA	NA	NA	NA	NA	NA
	Nov-92	- -	- -	- -	- -	- -	0.6
	Jan-93	- -	- -	- -	- -	- -	0.5
	Mar-93	- -	- -	- -	- -	- -	- -
	May-93	- -	- -	- -	- -	- -	0.2
	Jul-93	- -	- -	- -	- -	- -	- -
	Oct-93	- -	- -	- -	- -	- -	- -
	Mar-94	- -	- -	- -	- -	- -	- -
	Apr-94	- -	- -	- -	- -	- -	- -
	Aug-94	- -	- -	- -	- -	- -	2
	Dec-94	- -	1	- -	- -	- -	- -
	Mar-95	- -	- -	- -	- -	- -	- -
	Jun-95	- -	- -	- -	- -	- -	- -
	Sep-95	- -	- -	- -	- -	- -	- -
	Dec-95	- -	- -	- -	- -	- -	- -
	Mar-96	- -	- -	- -	- -	- -	- -
	Jun-96	- -	- -	- -	- -	- -	- -
	Aug-96	- -	- -	- -	- -	- -	- -
	Dec-96	- -	- -	- -	- -	- -	- -
	Feb-97	- -	- -	- -	- -	- -	0.3
	Apr-97	- -	- -	- -	- -	- -	- -
	Sep-97	- -	- -	- -	- -	- -	- -

Table A-3
OU5 Historic Groundwater
Sampling Results: VOCs
Wright-Patterson AFB, Ohio

		CHEMICAL COMPOUND*					
WELL ID	DATE	Benzene (ug/L)	1,2-DCA (ug/L)	Total 1,2-DCE (ug/L)	PCE (ug/L)	Vinyl Chloride (ug/L)	TCE (ug/L)
	MCL	5	5	70	5	2	5
CW06-077	Jan-98	- -	- -	- -	- -	- -	- -
(cont.)	Jul-98	- -	- -	- -	- -	- -	- -
CW07-055	Sep-90	- -	- -	- -	- -	- -	- -
	Nov-91	- -	- -	- -	- -	- -	- -
	Mar-92	- -	- -	- -	- -	- -	1
	Jun-92	- -	- -	- -	- -	- -	- -
	Sep-92	NA	NA	NA	NA	NA	NA
	Jan-93	- -	- -	- -	- -	- -	- -
	Mar-93	- -	- -	- -	- -	- -	- -
	May-93	- -	- -	- -	- -	- -	- -
	Jul-93	- -	- -	- -	- -	- -	- -
	Oct-93	- -	- -	- -	- -	- -	- -
	Mar-94	- -	- -	- -	- -	- -	- -
	Apr-94	- -	- -	- -	- -	- -	- -
	Aug-94	- -	- -	- -	- -	- -	- -
	Dec-94	- -	1	- -	- -	- -	- -
	Mar-95	- -	- -	- -	- -	- -	- -
	Jun-95	- -	- -	- -	- -	- -	- -
	Sep-95	- -	- -	- -	- -	- -	- -
	Dec-95	- -	- -	- -	- -	- -	- -
	Mar-96	- -	- -	- -	- -	- -	- -
	Jun-96	- -	- -	- -	- -	- -	- -
	Aug-96	- -	- -	- -	- -	- -	- -
	Dec-96	- -	- -	- -	- -	- -	- -
	Feb-97	- -	- -	- -	- -	- -	- -
	Apr-98	- -	- -	- -	- -	- -	- -
	Sep-98	- -	- -	- -	- -	- -	- -
	Jan-98	- -	- -	- -	- -	- -	- -
	Jul-98	- -	- -	- -	- -	- -	- -
CW07-100	Sep-90	- -	- -	- -	- -	- -	- -
	Nov-91	- -	- -	- -	- -	- -	- -
	Mar-92	- -	- -	- -	- -	- -	- -
	Jun-92	- -	- -	- -	- -	- -	- -
	Sep-92	NA	NA	NA	NA	NA	NA
	Jan-93	- -	- -	- -	- -	- -	- -
	Mar-93	- -	- -	- -	- -	- -	- -
	May-93	- -	- -	- -	- -	- -	- -
	Jul-93	- -	- -	- -	- -	- -	- -
	Oct-93	- -	- -	- -	- -	- -	- -
	Mar-94	- -	- -	- -	- -	- -	- -
	Apr-94	- -	- -	- -	- -	- -	- -
	Aug-94	- -	- -	- -	- -	- -	- -

Table A-3
OU5 Historic Groundwater
Sampling Results: VOCs
Wright-Patterson AFB, Ohio

		CHEMICAL COMPOUND*					
WELL ID	DATE	Benzene (ug/L)	1,2-DCA (ug/L)	Total 1,2-DCE (ug/L)	PCE (ug/L)	Vinyl Chloride (ug/L)	TCE (ug/L)
	MCL	5	5	70	5	2	5
CW07-100 (cont.)	Dec-94	- -	1	- -	- -	- -	- -
	Mar-95	- -	- -	- -	- -	- -	- -
	Jun-95	- -	- -	- -	- -	- -	- -
	Sep-95	- -	- -	- -	- -	- -	- -
	Dec-95	- -	- -	- -	- -	- -	- -
	Mar-96	- -	- -	- -	- -	- -	- -
	Jun-96	- -	- -	- -	- -	- -	- -
	Aug-96	- -	- -	- -	- -	- -	- -
	Dec-96	- -	- -	- -	- -	- -	- -
	Feb-97	- -	- -	- -	- -	- -	- -
	Apr-97	- -	- -	- -	- -	- -	- -
	Sep-97	- -	- -	- -	- -	- -	- -
	Jan-98	- -	- -	- -	- -	- -	- -
	Jul-98	- -	- -	- -	- -	- -	- -
CW07-148	Sep-90	- -	- -	- -	- -	- -	- -
	Nov-91	- -	- -	- -	- -	- -	- -
	Mar-92	- -	- -	- -	- -	- -	- -
	Jun-92	- -	- -	- -	- -	- -	- -
	Sep-92	NA	NA	NA	NA	NA	NA
	Jan-93	- -	- -	- -	- -	- -	- -
	Mar-93	- -	- -	- -	- -	- -	- -
	May-93	- -	- -	- -	- -	- -	- -
	Jul-93	- -	- -	- -	- -	- -	- -
	Oct-93	- -	- -	- -	- -	- -	- -
	Mar-94	- -	- -	- -	- -	- -	- -
CW07-183	Oct-93	- -	- -	- -	- -	- -	- -
	Feb-94	- -	- -	- -	- -	- -	- -
CW08-017	Sep-90	- -	- -	- -	- -	- -	- -
	Nov-91	- -	- -	- -	- -	- -	- -
	Mar-92	- -	- -	- -	- -	- -	- -
	Jun-92	- -	- -	- -	- -	- -	- -
	Sep-92	NA	NA	NA	NA	NA	NA
	Nov-92	- -	- -	0.4	- -	- -	- -
	Jan-93	- -	- -	- -	- -	- -	- -
	Mar-93	- -	- -	- -	- -	- -	- -
	May-93	- -	- -	- -	- -	- -	- -
	Jul-93	- -	- -	- -	- -	- -	- -
	Oct-93	- -	- -	- -	- -	- -	- -
	Mar-94	- -	- -	- -	- -	- -	- -
	Apr-94	- -	- -	- -	- -	- -	- -
	Aug-94	- -	- -	- -	- -	- -	- -

Table A-3
OU5 Historic Groundwater
Sampling Results: VOCs
Wright-Patterson AFB, Ohio

		CHEMICAL COMPOUND*					
WELL ID	DATE	Benzene (ug/L)	1,2-DCA (ug/L)	Total 1,2-DCE (ug/L)	PCE (ug/L)	Vinyl Chloride (ug/L)	TCE (ug/L)
	MCL	5	5	70	5	2	5
CW08-017 (cont.)	Dec-94	- -	- -	- -	- -	- -	- -
	Mar-95	- -	- -	- -	- -	- -	- -
	Jun-95	- -	- -	- -	- -	- -	- -
	Sep-95	- -	- -	- -	- -	- -	- -
	Dec-95	- -	- -	- -	- -	- -	- -
	Mar-96	- -	- -	- -	- -	- -	- -
	Jun-96	- -	- -	- -	- -	- -	- -
	Aug-96	- -	- -	- -	- -	- -	- -
	Dec-96	- -	- -	- -	- -	- -	- -
	Feb-97	- -	- -	- -	- -	- -	- -
CW08-055	Sep-90	- -	- -	- -	- -	- -	- -
	Nov-91	- -	- -	- -	- -	- -	- -
	Mar-92	- -	- -	- -	- -	- -	- -
	Jun-92	- -	- -	- -	- -	- -	- -
	Sep-92	NA	NA	NA	NA	NA	NA
	Nov-92	- -	- -	- -	- -	- -	- -
	Jan-93	- -	- -	- -	- -	- -	- -
	Mar-93	- -	- -	- -	- -	- -	- -
	May-93	- -	- -	- -	- -	- -	- -
	Jul-93	- -	- -	- -	- -	- -	- -
	Oct-93	- -	- -	- -	- -	- -	- -
	Feb-94	- -	- -	- -	- -	- -	- -
	Apr-94	- -	- -	- -	- -	- -	- -
	Aug-94	- -	- -	- -	- -	- -	- -
	Dec-94	- -	2	- -	- -	- -	- -
	Mar-95	- -	- -	- -	- -	- -	- -
	Jun-95	- -	- -	- -	- -	- -	- -
	Sep-95	- -	- -	- -	- -	- -	- -
	Dec-95	- -	- -	- -	- -	- -	- -
	Mar-96	- -	- -	- -	- -	- -	- -
	Jun-96	- -	- -	- -	- -	- -	- -
	Aug-96	- -	- -	- -	- -	- -	- -
	Dec-96	- -	- -	- -	- -	- -	- -
	Feb-97	- -	- -	- -	- -	- -	- -
	Apr-97	- -	- -	- -	- -	- -	- -
	Sep-97	- -	- -	- -	- -	- -	- -
	Jan-98	- -	- -	- -	- -	- -	- -
	Jul-98	- -	- -	- -	- -	- -	- -
CW08-110	Sep-90	- -	- -	- -	- -	- -	- -
	Nov-91	- -	- -	- -	- -	- -	- -
	Mar-92	- -	- -	- -	- -	- -	- -
	Jun-92	- -	- -	- -	- -	- -	- -

Table A-3
OU5 Historic Groundwater
Sampling Results: VOCs
Wright-Patterson AFB, Ohio

		CHEMICAL COMPOUND*					
WELL ID	**DATE**	**Benzene (ug/L)**	**1,2-DCA (ug/L)**	**Total 1,2-DCE (ug/L)**	**PCE (ug/L)**	**Vinyl Chloride (ug/L)**	**TCE (ug/L)**
	MCL	**5**	**5**	**70**	**5**	**2**	**5**
CW08-110	Sep-92	NA	NA	NA	NA	NA	NA
(cont.)	Jan-93	- -	- -	- -	- -	- -	- -
	Mar-93	- -	- -	- -	- -	- -	- -
	May-93	- -	- -	- -	- -	- -	- -
	Jul-93	- -	- -	- -	- -	- -	- -
	Oct-93	- -	- -	- -	- -	- -	- -
	Feb-94	- -	- -	- -	- -	- -	- -
	Apr-94	- -	- -	- -	- -	- -	- -
	Aug-94	- -	- -	- -	- -	- -	- -
	Dec-94	- -	- -	- -	- -	- -	- -
	Mar-95	- -	- -	- -	- -	- -	- -
	Jun-95	- -	- -	- -	- -	- -	- -
	Sep-95	- -	- -	- -	- -	- -	- -
	Dec-95	- -	- -	- -	- -	- -	- -
	Mar-96	- -	- -	- -	- -	- -	- -
	Jun-96	- -	- -	- -	- -	- -	- -
	Aug-96	- -	- -	- -	- -	- -	- -
	Dec-96	- -	- -	- -	- -	- -	- -
	Feb-97	- -	- -	- -	- -	- -	- -
CW08-150	Oct-93	- -	- -	- -	- -	- -	- -
	Feb-94	- -	- -	- -	- -	- -	- -
CW09-073	Oct-93	- -	- -	- -	- -	- -	- -
	Feb-94	- -	- -	- -	- -	- -	- -
CW09-100	Oct-93	- -	- -	- -	- -	- -	- -
	Feb-94	- -	- -	- -	- -	- -	- -
CW10-055	Oct-93	- -	- -	- -	- -	- -	4.7
	Feb-94	- -	- -	0.9	- -	- -	**6.5**
CW12-085	Nov-93	- -	- -	- -	- -	- -	- -
	Mar-94	- -	- -	- -	- -	- -	- -
CW13-085	Oct-93	- -	- -	- -	- -	- -	- -
	Mar-94	- -	- -	- -	- -	- -	- -
CW14-016	Oct-93	- -	- -	0.5	- -	- -	- -
	Mar-94	- -	- -	- -	- -	- -	- -
CW15-055	Oct-93	- -	- -	- -	- -	- -	- -
	Feb-94	- -	- -	- -	- -	- -	- -

Table A-3
OU5 Historic Groundwater
Sampling Results: VOCs
Wright-Patterson AFB, Ohio

		CHEMICAL COMPOUND*					
WELL ID	**DATE**	**Benzene (ug/L)**	**1,2-DCA (ug/L)**	**Total 1,2-DCE (ug/L)**	**PCE (ug/L)**	**Vinyl Chloride (ug/L)**	**TCE (ug/L)**
	MCL	**5**	**5**	**70**	**5**	**2**	**5**
CW19-017	Oct-93	- -	- -	- -	- -	- -	- -
	Feb-94	- -	- -	- -	- -	- -	- -
CW20-019	Oct-93	- -	- -	- -	- -	- -	- -
	Mar-94	1.8	- -	- -	- -	- -	- -
CW21-018	Oct-93	3.8	- -	- -	- -	- -	- -
	Feb-94	2	- -	- -	- -	- -	- -
CW21-040	Oct-93	- -	- -	- -	- -	- -	- -
	Mar-94	- -	- -	- -	- -	- -	- -
CW22-018	Oct-93	- -	- -	- -	- -	- -	- -
	Mar-94	- -	- -	- -	- -	- -	- -
CW23-024	Oct-93	- -	- -	2.4	- -	- -	- -
	Mar-94	- -	- -	2.1	- -	- -	- -
CW24-009	Oct-93	- -	- -	- -	- -	- -	- -
	Feb-94	- -	- -	- -	- -	- -	- -
GR-050	Sep-90	- -	- -	1.9	- -	- -	1.4
	Nov-91	- -	- -	--	- -	- -	--
	Mar-92	- -	- -	--	- -	- -	--
	Jun-92	- -	- -	20	- -	- -	0.8
	Sep-92	NA	NA	NA	NA	NA	NA
	Nov-92	- -	- -	2.5	- -	- -	1
	Jan-93	- -	- -	2.5	- -	- -	**8**
	Mar-93	- -	- -	17	- -	- -	**11**
	May-93	- -	- -	12	- -	- -	**8**
	Jul-93	- -	- -	1.77	- -	- -	**11**
	Oct-93	- -	- -	1.4	- -	- -	0.97
	Feb-94	- -	- -	0.9	- -	- -	1
	Apr-94	- -	- -	1.1	0.4	0.6	1
	Aug-94	- -	- -	2	- -	- -	2
	Dec-94	- -	- -	- -	- -	- -	- -
	Mar-95	- -	- -	- -	- -	- -	- -
	Jun-95	- -	- -	- -	- -	- -	- -
	Sep-95	- -	- -	- -	- -	- -	- -
	Dec-95	- -	- -	- -	- -	- -	- -
	Mar-96	- -	- -	- -	- -	- -	- -

Table A-3
OU5 Historic Groundwater
Sampling Results: VOCs
Wright-Patterson AFB, Ohio

		CHEMICAL COMPOUND*					
WELL ID	**DATE**	**Benzene (ug/L)**	**1,2-DCA (ug/L)**	**Total 1,2-DCE (ug/L)**	**PCE (ug/L)**	**Vinyl Chloride (ug/L)**	**TCE (ug/L)**
	MCL	**5**	**5**	**70**	**5**	**2**	**5**
GR-050 (cont.)	Jun-96	- -	- -	- -	- -	- -	- -
	Aug-96	- -	- -	- -	- -	- -	- -
	Dec-96	- -	- -	- -	- -	- -	- -
	Feb-97	- -	- -	- -	- -	- -	- -
HD-09S	Sep-90	- -	--	--	--	- -	--
	Nov-91	- -	0.9	--	0.9	- -	4.2
	Mar-92	- -	1	--	1	- -	3.9
	Jun-92	- -	0.9	--	0.9	- -	3.7
	Sep-92	NA	NA	NA	0.8	NA	NA
	Nov-92	- -	0.5	8	0.9	- -	**6**
	Jan-93	- -	- -	13	1	- -	**7**
	Mar-93	- -	- -	14	2	- -	**8**
	May-93	- -	--	11	2	- -	**8**
	Jul-93	- -	- -	7	1	- -	**7**
	Nov-93	- -	- -	6.2	1.6	- -	**6**
	Feb-94	- -	- -	6.8	1.1	- -	4.8
	Apr-94	- -	- -	2	0.6	- -	2
	Aug-94	- -	- -	9	1	- -	**6**
	Dec-94	- -	2	6	- -	- -	**5**
	Mar-95	- -	- -	5			
	Jun-95	- -	- -	3.56	- -	- -	3.39
	Sep-95	- -	- -	1.85	- -	- -	2.81
	Dec-95	- -	- -	2.38	- -	- -	3.36
	Mar-96	- -	- -	1.68	- -	- -	1.99
	Jun-96	- -	- -	- -	- -	- -	1.35
	Aug-96	0.85	- -	1.1	- -	- -	0.87
	Dec-96	- -	- -	1.3	- -	- -	0.9
	Feb-97	- -	- -	1	- -	- -	0.9
	Apr-97	- -	- -	1.2	0.4	- -	1.1
	Sep-97	- -	- -	1	- -	- -	1.1
	Jan-98	- -	- -	0.76	0.41	- -	1.2
	Jul-98	- -	- -	0.52	0.25	- -	0.7
HD-10D	Sep-90	- -	- -	- -	- -	- -	- -
	Nov-91	- -	- -	- -	- -	- -	- -
	Mar-92	- -	- -	- -	- -	- -	- -
	Jun-92	- -	- -	- -	- -	- -	- -
	Sep-92	NA	NA	NA	NA	NA	NA
	Nov-92	- -	- -	- -	- -	- -	0.4
	Jan-93	- -	- -	- -	- -	- -	- -
	Mar-93	- -	- -	- -	- -	- -	- -
	May-93	- -	- -	0.4	- -	- -	- -
	Jul-93	- -	- -	- -	- -	- -	- -

Table A-3
OU5 Historic Groundwater
Sampling Results: VOCs
Wright-Patterson AFB, Ohio

		CHEMICAL COMPOUND*					
WELL ID	**DATE**	**Benzene (ug/L)**	**1,2-DCA (ug/L)**	**Total 1,2-DCE (ug/L)**	**PCE (ug/L)**	**Vinyl Chloride (ug/L)**	**TCE (ug/L)**
	MCL	**5**	**5**	**70**	**5**	**2**	**5**
HD-10D (cont.)	Oct-93	- -	- -	- -	- -	- -	- -
	Feb-94	- -	- -	- -	- -	- -	- -
	Apr-94	- -	- -	0.4	- -	- -	- -
	Aug-94	- -	- -	2	- -	- -	- -
	Dec-94	- -	- -	- -	- -	- -	- -
	Mar-95	- -	- -	- -	- -	- -	- -
	Jun-95	- -	- -	- -	- -	- -	- -
	Sep-95	- -	- -	- -	- -	- -	- -
	Dec-95	- -	- -	- -	- -	- -	- -
	Mar-96	- -	- -	- -	- -	- -	- -
	Jun-96	- -	- -	- -	- -	- -	- -
	Aug-96	- -	- -	- -	- -	- -	- -
	Dec-96	- -	- -	- -	- -	- -	- -
	Feb-97	- -	- -	- -	- -	- -	- -
	Apr-97	- -	- -	0.6	- -	- -	- -
	Sep-97	- -	- -	- -	- -	- -	- -
	Jan-98	- -	- -	- -	- -	- -	- -
	Jul-98	- -	- -	- -	- -	- -	- -
HD-11	Sep-90	- -	**21**	21	- -	- -	**600**
	Nov-91	- -	- -	35.3	- -	- -	**394**
	Mar-92	- -	- -	33	- -	**15**	**410**
	Jun-92	- -	- -	26	- -	**41**	**420**
	Sep-92	NA	NA	NA	NA	NA	**NA**
	Nov-92	- -	- -	24	- -	- -	**310**
	Jan-93	0.3	- -	21	- -	- -	**460**
	Mar-93	- -	- -	14	- -	- -	**350**
	May-93	- -	- -	11	- -	- -	**420**
	Jul-93	- -	- -	11	- -	- -	**390**
	Oct-93	- -	- -	7	- -	- -	**370**
	Feb-94	0.3	0.2	46	- -	0.6	**200**
	Apr-94	0.3	0.2	44	- -	0.5	**160**
	Aug-94	2	- -	44	- -	- -	**160**
	Dec-94	- -	- -	35	- -	- -	**280**
	Mar-95	- -	- -	31	- -	- -	**173**
	Jun-95	- -	- -	28.4	- -	- -	**106**
	Sep-95	- -	- -	23	- -	- -	**108**
	Dec-95	- -	- -	25.9	- -	- -	**183**
	Mar-96	- -	- -	17.9	- -	- -	**119**
	Jun-96	- -	- -	15.1	- -	- -	**66.5**
	Aug-96	- -	- -	22	- -	- -	**51**
	Dec-96	- -	- -	26.3	- -	- -	**39**
	Feb-97	- -	- -	21.9	- -	- -	**27**
	Apr-97	- -	- -	29	- -	- -	**35**

Table A-3
OU5 Historic Groundwater
Sampling Results: VOCs
Wright-Patterson AFB, Ohio

		CHEMICAL COMPOUND*					
WELL ID	**DATE**	**Benzene (ug/L)**	**1,2-DCA (ug/L)**	**Total 1,2-DCE (ug/L)**	**PCE (ug/L)**	**Vinyl Chloride (ug/L)**	**TCE (ug/L)**
	MCL	**5**	**5**	**70**	**5**	**2**	**5**
HD-11	Sep-97	- -	- -	22.6	- -	- -	**49**
(cont.)	Jan-98	- -	- -	15.9	- -	- -	**37**
	Jul-98	- -	- -	14.9	- -	- -	**32**
HD-12M	Sep-90	- -	- -	- -	- -	- -	**9.1**
	Nov-91	- -	- -	- -	- -	- -	4.82
	Mar-92	- -	- -	- -	- -	- -	**6**
	Jun-92	- -	- -	- -	- -	- -	**7**
	Sep-92	NA	NA	NA	NA	NA	NA
	Nov-92	- -	- -	- -	- -	- -	**7**
	Jan-93	- -	- -	- -	- -	- -	**6**
	Mar-93	- -	- -	- -	- -	- -	4
	May-93	0.2	- -	- -	- -	- -	4
	Jul-93	- -	- -	- -	- -	- -	4
	Oct-93	- -	- -	- -	- -	- -	4
	Feb-94	- -	- -	- -	- -	- -	4
	Apr-94	- -	- -	0.3	- -	- -	5
	Aug-94	- -	- -	- -	- -	- -	3
	Dec-94	- -	- -	- -	- -	- -	3
	Mar-95	- -	- -	- -	- -	- -	2
	Jun-95	- -	- -	- -	- -	- -	- -
	Sep-95	- -	- -	- -	- -	- -	2.07
	Dec-95	- -	- -	- -	- -	- -	1.63
	Mar-96	- -	- -	- -	- -	- -	- -
	Jun-96	- -	- -	- -	- -	- -	2.56
	Aug-96	- -	- -	- -	- -	- -	2
	Dec-96	- -	- -	- -	- -	- -	1.5
	Feb-97	- -	- -	- -	- -	- -	1.8
	Apr-97	- -	- -	- -	- -	- -	2.1
	Sep-97	- -	- -	- -	- -	- -	1.5
	Jan-98	- -	- -	- -	- -	- -	1.3
	Jul-98	- -	- -	- -	- -	- -	1.5
HD-12S	Sep-90	- -	- -	- -	**62**	- -	1
	Nov-91	- -	- -	- -	- -	- -	- -
	Mar-92	- -	- -	- -	- -	- -	- -
	Jun-92	- -	- -	- -	- -	- -	- -
	Sep-92	NA	NA	NA	NA	NA	NA
	Jan-93	- -	- -	- -	--	- -	NA
	Mar-93	- -	- -	- -	--	- -	NA
	May-93	- -	- -	- -	**90**	- -	2
	Jul-93	- -	- -	- -	**79**	- -	0.8
	Oct-93	- -	- -	- -	**71**	- -	1
	Feb-94	- -	- -	- -	**140**	- -	1

Table A-3
OU5 Historic Groundwater
Sampling Results: VOCs
Wright-Patterson AFB, Ohio

		CHEMICAL COMPOUND*					
WELL ID	**DATE**	**Benzene (ug/L)**	**1,2-DCA (ug/L)**	**Total 1,2-DCE (ug/L)**	**PCE (ug/L)**	**Vinyl Chloride (ug/L)**	**TCE (ug/L)**
	MCL	**5**	**5**	**70**	**5**	**2**	**5**
HD-12S (cont.)	Apr-94	- -	- -	- -	**73**	- -	1
	Aug-94	- -	- -	- -	**55**	- -	3
	Dec-94	- -	- -	- -	- -	- -	- -
	Mar-95	- -	- -	- -	- -	- -	- -
	Jun-95	- -	- -	- -	**49**	- -	- -
	Sep-95	- -	- -	- -	**69.5**	- -	1.16
	Dec-95	- -	- -	- -	**44**	- -	- -
	Mar-96	- -	- -	- -	**60.4**	- -	- -
	Jun-96	- -	- -	- -	**52**	- -	1.42
	Aug-96	- -	- -	- -	**48**	- -	0.9
	Dec-96	- -	- -	- -	**44**	- -	1.1
	Feb-97	- -	- -	- -	**58**	- -	1.5
	Apr-97	- -	- -	1.8	**69**	- -	- -
	Sep-97	- -	- -	- -	**34**	- -	1.1
	Jan-98	- -	- -	- -	**46**	- -	1
	Jul-98	- -	- -	- -	- -	- -	- -
HD-13S	Sep-90	0.3	- -	63	- -	- -	**35**
	Nov-91	- -	- -	**105**	- -	- -	**32.9**
	Mar-92	- -	- -	20	- -	0.5	**24**
	Jun-92	0.3	- -	11	- -	- -	**18**
	Sep-92	NA	NA	NA	NA	NA	NA
	Nov-92	- -	- -	4	- -	- -	**9**
	Jan-93	- -	- -	9	- -	1	**8**
	Mar-93	0.3	- -	50	- -	**5**	**6**
	May-93	0.4	- -	61	- -	**12**	**9**
	Jul-93	- -	- -	33	- -	**3**	**8**
	Oct-93	- -	- -	12	- -	2	6
	Feb-94	0.2	- -	2	- -	- -	2
	Apr-94	- -	- -	1	- -	- -	2
	Aug-94	- -	- -	1	- -	- -	2
	Dec-94	- -	- -	1	- -	- -	2
	Mar-95	- -	- -	1	- -	- -	- -
	Jun-95	- -	- -	3.55	- -	- -	- -
	Sep-95	- -	- -	5.94	- -	- -	4.66
	Dec-95	- -	- -	1.12	- -	- -	**9.46**
	Mar-96	- -	- -	- -	- -	- -	- -
	Jun-96	- -	- -	- -	- -	- -	- -
	Aug-96	- -	- -	1	- -	- -	1
	Dec-96	- -	- -	1	- -	- -	1.1
	Feb-97	- -	- -	1.1	- -	- -	0.9
	Apr-97	- -	- -	1	- -	- -	0.4

Table A-3
OU5 Historic Groundwater
Sampling Results: VOCs
Wright-Patterson AFB, Ohio

		CHEMICAL COMPOUND*					
WELL ID	**DATE**	**Benzene (ug/L)**	**1,2-DCA (ug/L)**	**Total 1,2-DCE (ug/L)**	**PCE (ug/L)**	**Vinyl Chloride (ug/L)**	**TCE (ug/L)**
	MCL	**5**	**5**	**70**	**5**	**2**	**5**
HD-13S	Sep-97	- -	- -	1.1	- -	- -	- -
(cont.)	Jan-98	- -	- -	0.8	- -	- -	0.39
	Jul-98	0.27	- -	0.53	- -	- -	- -
HD-14S	Sep-90	- -	- -	**73**	- -	**13.8**	- -
	Nov-91	--	--	--	--	--	--
	Mar-92	0.3	2	61	- -	**3**	- -
	Jun-92	0.2	2	50	- -	2	- -
	Sep-92	NA	NA	NA	NA	NA	NA
	Nov-92	- -	**13**	**280**	- -	- -	- -
	Jan-93	0.2	3	64	- -	0.6	- -
	Mar-93	0.2	3	78	- -	- -	0.6
	May-93	- -	4	59	- -	1	0.2
	Jul-93	- -	4	**74**	- -	0.9	1
	Oct-93	- -	4.1	69	- -	- -	- -
	Feb-94	- -	- -	**100**	- -	1.6	0.8
	Apr-94	- -	2	**100**	- -	2	0.5
	Aug-94	- -	2	**82**	- -	2	- -
	Dec-94	- -	6	68	- -	- -	- -
	Mar-95	- -	5	50	- -	- -	- -
	Jun-95	- -	3	39.9	- -	- -	- -
	Sep-95	- -	2.24	28.6	- -	- -	- -
	Dec-95	- -	- -	22.9	- -	- -	- -
	Mar-96	- -	2.44	- -	- -	- -	- -
	Jun-96	- -	- -	16.5	- -	- -	- -
	Aug-96	- -	1.2	21	- -	- -	- -
	Dec-96	- -	1	15	- -	- -	- -
	Feb-97	- -	- -	11.4	- -	- -	- -
	Apr-97	- -	- -	12	- -	- -	- -
	Sep-97	- -	- -	16	- -	- -	- -
	Jan-98	- -	1.7	11.46	- -	- -	- -
	Jul-98	- -	1	10.36	- -	- -	- -
EW-1	Sep-90	NA	NA	NA	NA	NA	NA
	Nov-91	NA	NA	NA	NA	NA	NA
	Mar-92	NA	NA	NA	NA	NA	NA
	Jun-92	- -	- -	47	- -	**3**	**247**
	Sep-92	NA	NA	NA	NA	NA	NA
	Jan-93	- -	- -	40	- -	1	**230**
	Mar-93	- -	- -	28	- -	- -	**130**
	May-93	- -	- -	37	- -	0.9	**160**
	Jul-93	- -	- -	26	- -	0.5	**110**

Table A-3
OU5 Historic Groundwater
Sampling Results: VOCs
Wright-Patterson AFB, Ohio

		CHEMICAL COMPOUND*					
WELL ID	**DATE**	**Benzene (ug/L)**	**1,2-DCA (ug/L)**	**Total 1,2-DCE (ug/L)**	**PCE (ug/L)**	**Vinyl Chloride (ug/L)**	**TCE (ug/L)**
	MCL	**5**	**5**	**70**	**5**	**2**	**5**
MW-131-D (CT-4)	Sep-90	NA	NA	NA	NA	NA	NA
	Nov-91	NA	NA	NA	NA	NA	NA
	Mar-92	NA	NA	NA	NA	NA	NA
	Jun-92	NA	NA	NA	NA	NA	NA
	Sep-92	NA	NA	NA	NA	NA	NA
	Nov-92	- -	- -	3	- -	- -	- -
	Jan-93	- -	0.4	3	- -	- -	- -
	Mar-93	- -	- -	3	- -	- -	1
	May-93	- -	- -	3	- -	0.6	- -
	Jul-93	- -	- -	2	- -	- -	- -
	Oct-93	- -	- -	2.3	- -	- -	- -
	Feb-94	- -	- -	2.9	- -	- -	- -
	Apr-94	- -	- -	2	- -	0.3	- -
	Aug-94	- -	- -	3	- -	- -	- -
	Dec-94	- -	2	3	- -	- -	- -
	Mar-95	- -	- -	2	- -	- -	- -
	Jun-95	- -	- -	- -	- -	- -	- -
	Sep-95	- -	- -	1.51	- -	- -	- -
	Dec-95	- -	- -	1.83	- -	- -	- -
	Mar-96	- -	- -	1.68	- -	- -	1.22
	Jun-96	- -	- -	- -	- -	- -	- -
	Aug-96	- -	- -	1.3	- -	- -	- -
	Dec-96	- -	- -	1.3	- -	- -	- -
	Feb-97	- -	- -	1.4	- -	- -	- -
	Apr-97	- -	- -	2.2	- -	- -	- -
	Sep-97	- -	- -	1.5	- -	- -	- -
	Jan-98	- -	- -	0.97	- -	- -	- -
	Jul-98	0.21	- -	0.94	- -	- -	- -
MW-131-M (HSA-4A)	Sep-90	NA	NA	NA	NA	NA	NA
	Nov-91	NA	NA	NA	NA	NA	NA
	Mar-92	NA	NA	NA	NA	NA	NA
	Jun-92	NA	NA	NA	NA	NA	NA
	Sep-92	NA	NA	NA	NA	NA	NA
	Nov-92	- -	- -	3	- -	- -	**260**
	Jan-93	- -	- -	3	- -	- -	**300**
	Mar-93	- -	- -	3	- -	- -	**260**
	May-93	0.3	- -	5	- -	- -	**260**
	Jul-93	- -	- -	5	- -	- -	**230**
	Oct-93	- -	- -	23	- -	- -	**190**
	Feb-94	- -	0.7	50	- -	- -	**66**
	Apr-94	- -	- -	**97**	- -	1	**58**
	Aug-94	- -	- -	**90**	- -	- -	**53**
	Dec-94	- -	2	**74**	- -	1	**35**

Table A-3
OU5 Historic Groundwater
Sampling Results: VOCs
Wright-Patterson AFB, Ohio

		CHEMICAL COMPOUND*					
WELL ID	**DATE**	**Benzene (ug/L)**	**1,2-DCA (ug/L)**	**Total 1,2-DCE (ug/L)**	**PCE (ug/L)**	**Vinyl Chloride (ug/L)**	**TCE (ug/L)**
	MCL	**5**	**5**	**70**	**5**	**2**	**5**
MW-131-M	Mar-95	- -	- -	64	- -	- -	**40**
(HSA-4A)	Jun-95	- -	- -	67.5	- -	- -	**34.9**
(cont.)	Sep-95	- -	- -	49.2	- -	- -	**39.1**
	Dec-95	- -	- -	48.9	- -	- -	**44.4**
	Mar-96	- -	- -	24.8	- -	- -	**43.8**
	Jun-96	- -	- -	9.27	- -	- -	**36.8**
	Aug-96	- -	- -	25.9	- -	- -	**33**
	Dec-96	- -	- -	36	- -	- -	**27**
	Feb-97	- -	- -	33.6	- -	**4.3**	**25**
	Apr-97	- -	- -	51	- -	**8.1**	**36**
	Sep-97	- -	- -	19	- -	**3.7**	**41**
	Jan-98	- -	- -	12.3	- -	1.3	**33**
	Jul-98	- -	- -	8.09	- -	- -	**30**
MW-131-S	Sep-90	NA	NA	NA	NA	NA	NA
(HSA-4B)	Nov-91	NA	NA	NA	NA	NA	NA
	Mar-92	NA	NA	NA	NA	NA	NA
	Jun-92	NA	NA	NA	NA	NA	NA
	Sep-92	NA	NA	NA	NA	NA	NA
	Nov-92	- -	- -	- -	**10**	- -	**26**
	Jan-93	- -	- -	- -	**10**	- -	**23**
	Mar-93	- -	- -	- -	**9**	- -	**19**
	May-93	- -	- -	- -	**7**	- -	**19**
	Jul-93	- -	- -	- -	**9**	- -	**14**
	Nov-93	- -	- -	- -	**6.7**	- -	**14.5**
	Feb-94	- -	- -	- -	**6.3**	- -	**9.8**
	Apr-94	- -	- -	0.6	**8**	- -	**8**
	Aug-94	- -	- -	1	5	- -	**7**
	Dec-94	- -	2	- -	4	- -	**8**
	Mar-95	- -	- -	- -	4	- -	**10**
	Jun-95	- -	- -	- -	2.95	- -	**5.56**
	Sep-95	- -	- -	- -	4.71	- -	4.16
	Dec-95	- -	- -	- -	3.29	- -	4.22
	Mar-96	- -	- -	- -	3.52	- -	2.88
	Jun-96	- -	- -	- -	4.4	- -	- -
	Aug-96	- -	- -	- -	2.8	- -	2.5
	Dec-96	- -	- -	1.2	1.8	- -	1.8
	Feb-97	0.2	- -	0.9	2.3	- -	1.7
	Apr-97	- -	- -	1.3	3.4	- -	1.7
	Sep-97	- -	- -	0.8	1.5	- -	**31**
	Jan-98	- -	- -	0.75	1.4	- -	2.6
	Jul-98	- -	- -	0.43	3.5	- -	1.4

Table A-3
OU5 Historic Groundwater
Sampling Results: VOCs
Wright-Patterson AFB, Ohio

		CHEMICAL COMPOUND*					
WELL ID	**DATE**	**Benzene (ug/L)**	**1,2-DCA (ug/L)**	**Total 1,2-DCE (ug/L)**	**PCE (ug/L)**	**Vinyl Chloride (ug/L)**	**TCE (ug/L)**
	MCL	**5**	**5**	**70**	**5**	**2**	**5**
MW-132-15	Sep-90	NA	NA	NA	NA	NA	NA
	Nov-91	NA	NA	NA	NA	NA	NA
	Mar-92	NA	NA	NA	NA	NA	NA
	Jun-92	NA	NA	NA	NA	NA	NA
	Sep-92	NA	NA	NA	NA	NA	NA
	Jan-93	- -	- -	- -	- -	- -	- -
	Mar-93	- -	- -	- -	- -	- -	- -
	May-93	- -	- -	- -	- -	- -	- -
	Jul-93	- -	- -	- -	- -	- -	- -
	Oct-93	- -	- -	- -	3	- -	- -
	Feb-94	- -	- -	- -	3.2	- -	- -
MW-132-D (CT-5)	Sep-90	NA	NA	NA	NA	NA	NA
	Nov-91	NA	NA	NA	NA	NA	NA
	Mar-92	NA	NA	NA	NA	NA	NA
	Jun-92	NA	NA	NA	NA	NA	NA
	Sep-92	NA	NA	NA	NA	NA	NA
	Jan-93	- -	- -	- -	- -	- -	- -
	Mar-93	- -	- -	- -	- -	- -	- -
	May-93	- -	- -	- -	- -	- -	- -
	Jul-93	- -	- -	- -	- -	- -	- -
	Nov-93	- -	- -	- -	- -	- -	- -
	Feb-94	- -	- -	- -	- -	- -	- -
	Mar-95	- -	- -	- -	- -	- -	- -
	Jan-95	- -	- -	- -	- -	- -	- -
	Sep-95	- -	- -	- -	- -	- -	- -
	Dec-95	- -	- -	- -	- -	- -	- -
	Mar-96	- -	- -	- -	- -	- -	- -
	Jun-96	- -	- -	- -	- -	- -	- -
	Aug-96	- -	- -	- -	- -	- -	- -
	Dec-96	- -	- -	- -	- -	- -	- -
	Feb-97	- -	- -	- -	- -	- -	- -
	Apr-97	- -	- -	- -	- -	- -	- -
	Sep-97	- -	- -	- -	- -	- -	- -
	Jan-98	- -	- -	- -	- -	- -	- -
	Jul-98	- -	- -	- -	- -	- -	- -
MW-132-S (HSA-5)	Sep-90	NA	NA	NA	NA	NA	NA
	Nov-91	NA	NA	NA	NA	NA	NA
	Mar-92	NA	NA	NA	NA	NA	NA
	Jun-92	NA	NA	NA	NA	NA	NA
	Sep-92	NA	NA	NA	NA	NA	NA
	Nov-92	- -	- -	0.7	**14**	- -	**31**
	Jan-93	- -	- -	0.7	**13**	- -	**29**

Table A-3
OU5 Historic Groundwater
Sampling Results: VOCs
Wright-Patterson AFB, Ohio

		CHEMICAL COMPOUND*					
WELL ID	**DATE**	**Benzene (ug/L)**	**1,2-DCA (ug/L)**	**Total 1,2-DCE (ug/L)**	**PCE (ug/L)**	**Vinyl Chloride (ug/L)**	**TCE (ug/L)**
	MCL	**5**	**5**	**70**	**5**	**2**	**5**
MW-132-S	Mar-93	- -	- -	0.6	**15**	- -	**32**
(HSA-5)	May-93	- -	- -	0.4	**16**	- -	**33**
(cont.)	Jul-93	- -	- -	- -	**13**	- -	**28**
	Nov-93	- -	- -	- -	**12.1**	- -	**20.6**
	Feb-94	- -	- -	1.2	**10.5**	- -	**25**
	Apr-94	- -	- -	4	**11**	- -	**25**
	Aug-94	- -	- -	3	**9**	- -	**27**
	Dec-94	- -	- -	2	**9**	- -	**35**
	Mar-95	- -	- -	2	**9**	- -	- -
	Jun-95	- -	- -	- -	**5.08**	- -	**28.4**
	Sep-95	- -	- -	1.06	**8.68**	- -	**34.5**
	Dec-95	- -	- -	- -	**6.2**	- -	**31.3**
	Mar-96	- -	- -	2.55	- -	- -	**30.6**
	Jun-96	- -	- -	3.51	**5.49**	- -	**31.9**
	Aug-96	- -	- -	1.9	**6**	- -	**30**
	Dec-96	- -	- -	2.7	**5.7**	- -	**28**
	Feb-97	0.2	- -	2.1	**6.8**	- -	**31**
	Apr-97	- -	- -	2.4	**8**	- -	**40**
	Sep-97	- -	- -	1.5	**6.5**	- -	**33**
	Jan-98	- -	- -	1.1	**6.5**	- -	**31**
	Jul-98	- -	- -	0.64	**6.3**	- -	**32**
MW-133-D	Sep-90	NA	NA	NA	NA	NA	NA
(CT-6)	Nov-91	NA	NA	NA	NA	NA	NA
	Mar-92	NA	NA	NA	NA	NA	NA
	Jun-92	NA	NA	NA	NA	NA	NA
	Sep-92	NA	NA	NA	NA	NA	NA
	Jan-93	- -	- -	- -	- -	- -	- -
	Mar-93	- -	- -	- -	- -	- -	- -
	May-93	- -	- -	- -	- -	- -	- -
	Jul-93	- -	- -	- -	- -	- -	- -
	Nov-93	- -	- -	- -	- -	- -	- -
	Feb-94	0.7	- -	- -	- -	- -	- -
	Apr-94	- -	- -	- -	- -	- -	- -
	Aug-94	- -	- -	- -	- -	- -	- -
	Dec-94	- -	3	- -	- -	- -	- -
	Mar-95	- -	- -	- -	- -	- -	- -
	Jun-95	- -	- -	- -	- -	- -	- -
	Sep-95	- -	- -	- -	- -	- -	- -
	Dec-95	- -	- -	- -	- -	- -	- -
	Mar-96	- -	- -	- -	- -	- -	- -
	Jun-96	- -	- -	- -	- -	- -	- -
	Aug-96	- -	- -	- -	- -	- -	- -
	Dec-96	- -	- -	- -	- -	- -	- -

Table A-3
OU5 Historic Groundwater
Sampling Results: VOCs
Wright-Patterson AFB, Ohio

		CHEMICAL COMPOUND*					
WELL ID	**DATE**	**Benzene (ug/L)**	**1,2-DCA (ug/L)**	**Total 1,2-DCE (ug/L)**	**PCE (ug/L)**	**Vinyl Chloride (ug/L)**	**TCE (ug/L)**
	MCL	**5**	**5**	**70**	**5**	**2**	**5**
MW-133-D	Feb-97	- -	- -	- -	- -	- -	- -
(CT-6)	Apr-97	- -	- -	- -	- -	- -	- -
(cont.)	Sep-97	- -	- -	- -	- -	- -	- -
	Jan-98	- -	- -	- -	- -	- -	- -
	Jul-98	- -	- -	- -	- -	- -	- -
MW-133-S	Sep-90	NA	NA	NA	NA	NA	NA
(HSA-6)	Nov-91	NA	NA	NA	NA	NA	NA
	Mar-92	NA	NA	NA	NA	NA	NA
	Jun-92	NA	NA	NA	NA	NA	NA
	Sep-92	NA	NA	NA	NA	NA	NA
	Jan-93	- -	- -	- -	- -	- -	- -
	Mar-93	- -	- -	- -	- -	- -	- -
	May-93	- -	- -	- -	- -	- -	- -
	Jul-93	- -	- -	- -	- -	- -	- -
	Nov-93	- -	- -	- -	- -	- -	- -
	Feb-94	- -	- -	- -	- -	- -	- -
	Apr-94	- -	- -	- -	0.6	- -	1
	Aug-94	- -	- -	- -	0.6	- -	1
	Dec-94	- -	- -	- -	- -	- -	- -
	Mar-95	- -	- -	- -	- -	- -	- -
	Jun-95	- -	- -	- -	- -	- -	- -
	Sep-95	- -	- -	3	- -	- -	- -
	Dec-95	1.02	- -	- -	- -	**3.18**	- -
	Mar-96	- -	- -	- -	- -	- -	- -
	Jun-96	- -	- -	- -	- -	- -	- -
	Aug-96	- -	- -	- -	- -	- -	- -
	Dec-96	- -	- -	- -	- -	- -	- -
	Feb-97	- -	- -	- -	- -	- -	- -
	Apr-97	- -	- -	- -	- -	- -	0.3
	Sep-97	- -	- -	- -	- -	- -	- -
	Jan-98	- -	- -	- -	- -	- -	- -
	Jul-98	- -	- -	- -	- -	- -	- -

* = Data Sources: 1995 Remedial Investigation (RI) Report
1998 Removal Action System Performance Report (RASPR) #27
- - = Non Detect
NA = Not Available
Bold = Concentration exceeds MCL.

Appendix B

OU1 Field Data Forms

B-1 OU1 Sample Collection Forms – April
B-2 OU1 Water Level Field Forms – January and April
B-3 OU1 Explosive Gas Monitoring Field Logs – January and May

B-1

OU1 Sample Collection Forms: April 2001

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU1 **Well #:** LF08-MW02C **Sample Number:** LF08-MW02C-0401

Purging Method/Equipment: bladder pump **Samplers** M. Smith / K. Havens **Well Secure (Y/N)** Y

Well Casing Diameter: _____ in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** _____ gal

Sounding (Depth to Well Bottom): 27.23 **Static Water Level** (Depth to Water): 13.72

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/23/01	1233		14.12	initial	13.4	7.18	0.780	0	-76.8	1.55	reddish, cloudy
04/23/01	1238		14.18	1.0	13.2	7.01	0.700	141 NTU	-95.0	2.26	"
04/23/01	1243		14.26	1.6	13.9	7.22	0.706	460 NTU	-90.5	2.65	"
04/23/01	1248		14.12	1.8	13.9	7.25	0.710	34	-90.1	2.91	clearing
04/23/01	1253		13.94	1.9	15.2	7.26	0.718	15	-88.8	2.85	
04/23/01	1258		14.48	2.3	13.0	7.26	0.768	3	-91.4	3.27	
04/23/01	1303		14.46	2.7	13.4	7.21	0.793	0	-92.9	3.13	
04/23/01	1308		14.42	3.2	13.7	7.20	0.828	0	-94.7	2.93	
04/23/01	1313		14.42	3.5	14.0	7.20	0.858	0	-97.4	2.73	
04/23/01	1317		Sampled								
04/23/01	1324		final		15.1	7.15	0.932	0	-102.4	2.71	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** 1

Sample Collection Date: 04/23/01 **Sample Collection Time:** 1317

Prepared by: M. Smith

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU1 LF8 **Well #:** LF8-MW05B **Sample Number:** LF8-MW05B-0101

Purging Method/Equipment: Bladder **Samplers** J. Weese/M. Chiller **Well Secure (Y/N)** Y

Well Casing Diameter: _____ in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** 0 gal

Sounding (Depth to Well Bottom): _____ **Static Water Level** (Depth to Water): 19.68

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4-23-01	1035	Start	Pumping								
	1040		24.38	0.4	13.6	7.21	834	0	-170.8	0.66	Clear
	1045		23.84	0.5	14.4	7.30	832	0	-168.9	0.91	
	1050		22.94	0.8	15.3	7.29	828	0	-165.0	1.49	
	1055		22.12	0.9	16.1	7.26	828	0	-160.2	1.60	
	1100		21.68	0.95	17.3	7.28	827	0	-151.1	1.67	
	1105		21.58	1.0	17.0	7.27	825	0	-146.4	2.51	
	1110		21.53	1.1	16.7	7.27	819	0	-144.6	2.21	
	1115		21.54	1.2	16.4	7.27	818	0	-143.7	2.25	
	1120		21.52	1.3	16.5	7.28	816	0	-140.9	2.01	
	1125		21.47	1.4	16.7	7.27	815	0	-140.4	1.91	
	1130		21.53	1.5	16.6	7.26	814	0	-139.6	1.93	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: -0451 - ~~0101~~ **MS/MSD:** _____ / _____

Sample Collection Date: 4-23-01 **Sample Collection Time:** 1212

Prepared by: M. Chiller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

Page 2 of ___

SITE ID: OU1 (LF8) Well #: LF8-MW05B Sample Number: LF8-MW05B-0401

Purging Method/Equipment: Bladder Samplers: J.Neese/M.Chiller Well Secure (Y/N): Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: 2 gal

Sounding (Depth to Well Bottom): 52.75 Static Water Level (Depth to Water): 19.68

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4-23-01	1135		21.52	1.6	16.2	7.25	817	0	-138.8	1.72	
	1140		21.60	1.7	16.4	7.23	819	0	-139.7	1.69	
	1145		21.42	1.8	16.5	7.22	822	0	-140.5	1.65	
	1150		21.47	1.9	16.8	7.20	826	0	-138.1	1.55	
	1155		21.84	2.1	16.1	7.18	831	0	-140.6	1.36	
	1200		21.83	2.2	16.2	7.16	837	0	-142.1	1.37	
	1205		21.87	2.3	16.3	7.15	840	0	-142.3	1.14	
	1210		21.87	2.4	16.3	7.13	845	0	-142.4	1.12	
	1212	SAMPLE									
	1224		23.25	POST	14.1	7.09	853	0	-128.4	1.52	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH) BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: ~~5401~~ 0451 MS/MSD: _____ / _____

Sample Collection Date: 4-23-01 Sample Collection Time: 1212

Prepared by: M. Chiller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU1 (LF8) **Well #:** LF8-MW08B **Sample Number:** LF8-MW08B-0401

Purging Method/Equipment: Bladder **Samplers** J. Neese/M. Chiller **Well Secure (Y/N)** (in) Y

Well Casing Diameter: _____ in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** 2 gal

Sounding (Depth to Well Bottom): 26.61 **Static Water Level** (Depth to Water): 2.38

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4-24-07	1338	Start	purging								
	1343		2.98	0.4	11.9	7.01	609	10	-119.8	0.87	orange suspended solids
	1347		3.03	0.8	12.0	7.01	612	35	-131.7	0.66	
	1352		3.10	1.2	12.0	6.99	613	109	-155.2	1.25	
	1357		3.08	1.4	12.2	7.03	614	61	-183.0	0.78	
	1402		3.03	1.5	12.8	7.03	612	12	-198.0	0.72	
	1407		3.07	1.6	13.3	6.96	609	14	-198.1	0.54	
	1413		3.08	1.9	12.7	6.98	616	3	-201.0	0.47	
	1418		3.06	2.2	12.4	6.98	615	1	-201.8	0.51	
	1423		3.18	2.4	12.3	6.99	616	3	-205.5	0.40	
	1428		3.19	2.6	12.5	6.98	615	5	-207.2	0.39	
	1437		3.44	POST	12.1	7.02	618	113	-187.5	2.07	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4-24-07 **Sample Collection Time:** 1430

Prepared by: M. Chiller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU1 (LF8) Well #: LF8-MW09A Sample Number: MC ~~LTM~~ LF8-MW09A-0401

Purging Method/Equipment: Bladder Samplers J. Neese/M. Chiller Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: 2 gal

Sounding (Depth to Well Bottom): 35.10 Static Water Level (Depth to Water): 15.48

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4-24-01	0935	Start	Purging				MC 698				
	0940		18.48	0.5	11.2	6.88	698	0	-109.0	1.30	
	0945		19.58	0.5	11.0	6.95	698	0	-113.3	2.06	
	0950		20.57	0.8	11.0	7.02	694	0	-115.5	3.03	
	0955		20.09	1.0	10.9	7.06	692	0	-118.1	3.85	
	1000		21.35	1.05	11.0	7.06	691	0	-121.8	3.28	
	1005		21.15	1.1	11.0	7.06	690	0	-122.5	3.71	
	1008		21.14	1.1	10.9	7.07	689	0	-121.1	4.36	
	1013		21.45	1.2	10.8	7.08	689	0	-120.7	4.92	
	1018		21.81	1.3	10.8	7.10	687	0	-121.4	4.99	
	1028		21.82	1.4	10.8	7.10	687	0	-122.1	4.96	
	1034		21.95	1.45	10.8	7.11	686	0	-122.3	4.91	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: _____ MS/MSD: _____ / _____

Sample Collection Date: _____ Sample Collection Time: 1145

Prepared by: M. Chiller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU1 (LF8) Well #: LF8-MW09A Sample Number: LF8 MW09A-0407

Purging Method/Equipment: Bladder Samplers J. Noose / M. Chiller Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: 2 gal

Sounding (Depth to Well Bottom): 35.10 Static Water Level (Depth to Water): 15.48

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4-24-07	1039		22.08	1.5	10.8	7.12	685	0	-122.1	4.98	
	1045		22.24	1.55	10.9	7.12	685	0	-122.3	5.03	
	1050		22.28	1.6	10.9	7.14	684	0	-123.0	4.56	
	1055		22.24	1.65	10.9	7.14	684	0	-123.1	4.94	
	1100		22.08	1.7	10.9	7.14	684	0	-122.9	5.19	
	1105		22.21	1.75	10.9	7.15	684	0	-122.8	5.33	
	1110		22.13	1.8	11.0	7.15	681	0	-122.7	5.22	
	1117		22.10	1.85	11.1	7.16	679	0	-124.5	5.21	
	1122		22.12	1.9	11.1	7.16	678	0	-124.4	5.16	
	1127		22.22	1.95	11.2	7.17	679	0	-124.7	5.10	
	1133		22.28	2.0	11.2	7.16	678	0	-124.5	5.29	
	1137		22.32	2.05	11.3	7.17	677	0	-124.7	5.10	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: _____ MS/MSD: _____ / _____

Sample Collection Date: 4-24-07 Sample Collection Time: 1145

Prepared by: M. Chiller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU1 (LF8) Well #: LF8-MW09A Sample Number: LF8-MW09A-0401

Purging Method/Equipment: Bladder Samplers J.Wise/M.Chuller Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: 2 gal

Sounding (Depth to Well Bottom): 35.10 **Static Water Level** (Depth to Water): 15.48

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4-24-07	1143		22.35	2.1	11.3	7.17	677	0	125.0	5.36	
	1145	SAMPLE									
	1200		28.34	POST	11.5	7.44	671	0	55	29.75	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: _____ MS/MSD: _____ / _____

Sample Collection Date: 4-24-07 **Sample Collection Time:** 1145

Prepared by: M. Chuller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU1 (LF8) **Well #:** LF8-MW10B **Sample Number:** LF8-MW10B-0401

Purging Method/Equipment: Bladder **Samplers** J.Nrose/M Chiller **Well Secure (Y/N)** Y

Well Casing Diameter: _____ in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** 2 gal

Sounding (Depth to Well Bottom): 40.65 **Static Water Level** (Depth to Water): 20.60

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4-24-01	1505	Start Purging									
	1510		22.06	0.1	13.5	6.57	1520	0	-188.6	2.35	bucket in sun
	1515		21.95	0.6	13.8	6.59	1540	0	-176.7	1.88	clear
	1520		21.95	0.9	14.0	6.58	1540	0	-173.1	2.03	
	1525		22.03	1.2	13.9	6.57	1560	0	-166.5	2.20	
	1530		22.04	1.5	14.0	6.55	1560	0	-167.0	1.60	
	1535		22.06	1.7	14.0	6.53	1570	0	-159.8	1.50	
	1540		22.05	2.0	14.0	6.52	1580	0	-159.4	1.13	
	1545		22.05	2.2	14.2	6.51	1580	0	-159.3	1.00	
	1550		22.02	2.4	14.2	6.51	1580	0	-160.0	0.86	
	1553	SAMPLE									
	1604		23.33	POST	13.9	6.53	1570	0	-159.6	3.13	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4-24-01 **Sample Collection Time:** 1553

Prepared by: M. Chiller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU1 (LF8) Well #: LF8 MW11B Sample Number: LF8-MW11B-02107

Purging Method/Equipment: Bailer Samplers M.Chiller/J.Mease Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: 2 gal

Sounding (Depth to Well Bottom): 13.68 Static Water Level (Depth to Water): 9.92

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4-24-01	0850	Start	Bailing								
	0854		10.35	1.0	11.1	6.68	708	0	-88.9	7.67	
	0857		10.51	2.0	11.5	8.32	679	0	-117.9	7.43	
	0859		10.50	2.5	11.6	8.47	675	0	-134.7	7.75	
	0901		10.51	3.0	11.7	8.45	674	0	-146.2	7.47	
	0903		10.53	3.5	11.8	8.48	681	0	-152.7	7.07	
	0905	SAMPLE									
	0910		10.23	POT	11.8	7.45	832	0	-145.3	4.60	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: _____ MS/MSD: _____ / _____

Sample Collection Date: 4-24-01 Sample Collection Time: 0905

Prepared by: M.Chiller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU1 **Well #:** LF3-MW101 **Sample Number:** LF8-MW101-0401

Purging Method/Equipment: bladder pump **Samplers** M. Smith / D. Martin **Well Secure (Y/N)** Y

Well Casing Diameter: _____ in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** _____ gal

Sounding (Depth to Well Bottom): 68.85 **Static Water Level** (Depth to Water): 30.58

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/24/01	0851		33.02	initial	11.3	6.88	0.279	0	141.6	5.01	
04/24/01	0856	33.02	~~34.20~~	0.2	12.1	6.93	0.421	0	-104.7	1.40	
04/24/01	0901		33.55	0.6	11.7	7.38	0.476	0	-125.2	1.23	
04/24/01	0906		33.51	0.7	11.1	7.54	0.487	0	-133.3	1.90	
04/24/01	0911		33.48	0.8	10.7	7.56	0.493	0	-137.0	1.36	
04/24/01	0916		33.48	0.9	10.6	7.52	0.494	0	-137.9	1.18	
04/24/01	0921		33.48	0.95	10.9	7.54	0.489	0	-139.5	0.99	
04/24/01	0926		33.48	1.0	11.0	7.56	0.489	0	-140.5	1.15	
04/24/01	0936		33.20	1.05	11.1	7.63	0.500	0	-142.2	0.95	
04/24/01	0946		33.15	1.1	11.1	7.61	0.527	0	-144.0	0.99	
04/24/01	0951		33.15	1.2	11.0	7.59	0.539	0	-144.6	1.02	
04/24/01	0956		33.15	1.3	11.0	7.58	0.546	0	-145.6	1.06	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 04/24/01 **Sample Collection Time:** 1000

Prepared by: M. Smith

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU1 Well #: LF03-MW101 Sample Number: LF03-MW101-0401

Purging Method/Equipment: bladder pump Samplers MS/DM Well Secure (Y/N) Y

Well Casing Diameter : _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): _____ **Static Water Level** (Depth to Water): _____

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/24/01	1000	sampled									
04/24/01	1018	final			11.8	7.44	0.602	~~25~~ 3	-145.9	1.95	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: _____ **Sample Collection Time:** _____

Prepared by: _____

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU1 **Well #:** LF03-MW102 **Sample Number:** LF03-MW102-0401

Purging Method/Equipment: bladder pump **Samplers** MSmith/D. Martin **Well Secure (Y/N)** Y

Well Casing Diameter: _____ in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** _____ gal

Sounding (Depth to Well Bottom): 70.04 **Static Water Level** (Depth to Water): 35.86

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/24/01	1046		37.80	initial	11.3	7.66	0.443	0	-96.3	5.60	
04/24/01	1051		38.10	0.1	11.4	7.64	0.447	0	-93.2	10.86	
04/24/01	~~1056~~ 1106		38.75	0.2	11.6	7.44	0.569	0	-80.2	3.82	
04/24/01	1116		38.78	0.43	11.6	7.50	0.562	0	-70.7	2.93	
04/24/01	1126		39.20	0.4	11.7	7.48	0.532	0	-58.2	2.96	
04/24/01	1136		39.39	0.5	11.8	7.49	0.510	0	-41.6	3.01	
04/24/01	1146		39.50	~~0.6~~ 0.55	11.8	7.44	0.504	0	-35.0	3.17	
04/24/01	1151		39.54	0.6	11.9	7.45	0.502	0	-29.9	3.06	
04/24/01	1156		39.45	0.65 ~~0.5~~ Gals	12.0	7.45	0.498	0	-23.3	3.20	
04/24/01	1200	sampled									
04/24/01	1218		final		12.8	7.37	0.560	0	-8.4	4.27	

Test Parameters: (Tmetals (HNO_3)) Fmetals (VOC (HCl)) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): (None) **Duplicate/Split:** _____ **MS/MSD:** _____

Sample Collection Date: 04/24/01 **Sample Collection Time:** 1200

Prepared by: M.Smith

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU1 **Well #:** LF08-MW103 **Sample Number :** LF08-MW103-0401

Purging Method/Equipment: bladder pump **Samplers** M.Smith / D.Martin **Well Secure (Y/N)** Y

Well Casing Diameter : _____ in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** _____ gal

Sounding (Depth to Well Bottom): 64.32 **Static Water Level** (Depth to Water): 35.00

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/24/01	1345		36.89	initial	13.7	7.88	0.473	0	-91.5	3.40	
04/24/01	1350		38.00	0.8	14.4	7.51	0.566	0	-132.1	1.27	
04/24/01	1355		38.90	0.9	14.4	7.48	0.564	0	-139.6	1.17	
04/24/01	1400		39.25	1.0	14.8	7.51	0.494	0	-131.9	1.25	
04/24/01	1405		39.25	1.1	14.8	7.54	0.465	0	-127.1	1.36	
04/24/01	1410		39.28	1.2	15.3	7.56	0.417	0	-123.2	1.25	
4/24/01	1415		39.28	1.3	15.2	7.57	0.390	0	-116.0	1.66	
04/24/01	1420		39.28	1.4	16.2	7.57	0.354	0	-113.4	1.66	
04/24/01	1425		39.28	1.5	16.4	7.58	0.353	0	-110.4	1.58	
04/24/01	1435		39.28	1.7	16.9	7.59	0.354	0	-106.3	1.63	
04/24/01	1445		39.28	1.9	18.5	7.60	0.357	0	-102.1	1.77	
04/24/01	1450		39.28	2.0	18.7	7.60	0.359	0	-100.9	1.90	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 04/24/01 **Sample Collection Time:** 1457

Prepared by: M.Smith

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU1 **Well #:** LF08-MW103 **Sample Number :** LF08-MW103-0401

Purging Method/Equipment: bladder pump **Samplers** M. Smith / D. Martin **Well Secure (Y/N)** Y

Well Casing Diameter : _____ in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** _____ gal

Sounding (Depth to Well Bottom): 64.32 **Static Water Level** (Depth to Water): 35.00

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/24/01	1455		39.28	2.1	19.4	7.61	0.365	0	-95.7	1.79	
04/24/01	1457	Sampled				MS ~~7.59~~	~~0.368~~				
04/24/01	1515		final		20.9	7.59	0.368	0	-77.4	2.22	

Test Parameters: ~~Tmetals (HNO3)~~ Fmetals ~~VOC (HCl)~~ SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 04/24/01 **Sample Collection Time:** 1457

Prepared by: M. Smith

TERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

Page 2 of ___

SITE ID: ~~Bladd~~ OU1 (LF8) Well #: 02-DM-81D-M Sample Number: 02-DM-81D-M-0407

Purging Method/Equipment: Bladder Samplers: S.Neese / M.Chiller Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: 2 gal

Sounding (Depth to Well Bottom): 57.20 Static Water Level (Depth to Water): 27.63

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4-23-01	0937		28.25	1.8	15.0	6.90	943	0	-132.2	1.98	
	0942		28.25	1.9	15.1	6.90	942	0	-131.7	1.83	
	0947		28.25	2.0	15.4	6.90	941	0	-133.6	1.67	
	0952		28.23	2.1	15.6	6.91	940	0	-134.4	1.64	
	0957		28.24	2.2	15.6	6.91	941	0	-134.9	1.59	
	0959	SAMPLE									
	1010		28.62	POST	14.1	6.90	938	0	-142.8	2.36	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4-23-01 **Sample Collection Time:** 0959

Prepared by: M.Chiller

TERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

Page 1 of ___

SITE ID: OU1 (LF8) **Well #:** 02-DM-81-D **Sample Number :** 02-DM-81D-M-0401

Purging Method/Equipment: _____ **Samplers** J. Nelson / M. Chiller **Well Secure (Y/N)** Y

Well Casing Diameter : _____ in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** 2 gal

Sounding (Depth to Well Bottom): _____ **Static Water Level** (Depth to Water): 27.63

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4-23-01	0838	Start Purging									
	0843		28.18	0.2	13.6	6.64	900	0	-100.2	3.80	clear
	0847		28.31	0.4	13.4	6.72	926	0	-112.3	2.91	
	0852		28.40	0.7	13.4	6.74	940	0	-120.2	2.24	
	0857		28.36	1.0	13.9	6.76	944	0	-123.6	1.74	
	0902		28.34	1.1	14.2	6.79	944	0	-123.3	1.77	
	0907		28.22	1.15	14.9	6.83	942	0	-125.1	1.77	
	0912		28.22	1.2	15.5	6.83	942	0	-129.0	2.27	
	0917		28.24	1.35	14.9	6.87	943	0	-129.0	2.28	
	0922		28.24	1.5	14.8	6.89	942	0	-128.5	2.08	
	0927		28.22	1.6	15.2	6.89	941	0	-130.1	2.00	
	0932		28.23	1.7	15.3	6.87	942	0	-129.2	2.03	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4-23-01 **Sample Collection Time:** 0959

Prepared by: M. Chiller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: ~~LF8~~ NS 0U1 Well #: 02-DM-82M Sample Number: 02-DM-82-M-0401

Purging Method/Equipment: bladder pump Samplers M.Smith/K.Givens Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): 39.91 Static Water Level (Depth to Water): 10.22

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/23/01	1006		10.30	initial	12.3	7.38	0.618	0	-67.4	2.31	
04/23/01	1011		10.30	0.75	12.8	7.31	0.607	0	-66.9	1.90	
04/23/01	1016		10.30	1.0	13.3	7.37	0.614	0	-52.6	2.78	
04/23/01	1021		10.30	1.25	13.5	7.44	0.618	0	-40.9	2.53	
04/23/01	1026		10.30	1.50	13.7	7.48	0.618	0	-32.5	2.49	
04/23/01	1031		10.30	1.6	12.2	7.50	0.615	0	-29.4	2.18	
04/23/01	1036		10.30	1.7	13.5	7.48	0.618	0	-22.8	2.33	
04/23/01	1041		10.30	1.9	14.0	7.47	0.618	0	-13.7	2.38	
04/23/01	1046		10.30	2.0	14.3	7.47	0.620	0	-5.5	2.30	
04/23/01	1051		10.30	2.1	14.6	7.43	0.621	0	0.6	2.09	
04/23/01	1056		10.30	2.2	15.0	7.45	0.622	0	1.0	2.03	
04/23/01	1107		final		13.6	7.46	0.614	0	10.6	1.68	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: _____ MS/MSD: _____ / _____

Sample Collection Date: 04/23/01 Sample Collection Time: 1058

Prepared by: M.Smith

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU1 Well #: 02-DM-83S-M Sample Number: 02-DM-83S-M-0401

Purging Method/Equipment: bailer Samplers M.Smith/D.Martin Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): 20.55 **Static Water Level** (Depth to Water): 16.75

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/25/01	0843		16.75	initial	10.6	6.45	1.30	461	209.9	1.99	brown, cloudy
04/25/01	0846			1.5	10.6	6.70	1.28	364	207.2	3.01	
04/25/01	0856			3.0	10.6	6.67	1.30	336	204.6	2.86	
04/25/01	0855			4.5	10.6	6.72	1.34	446	203.5	2.30	
04/25/01	0859			6.5	10.8	6.76	1.36	715	199.5	2.66	
04/25/01	0903			8.0	10.8	6.86	1.36	>999	193.6	4.60	
04/25/01	0905		dry	10.0							
04/25/01	0914	Sampled									
04/25/01	0916			final	10.8	6.86	1.39	126	163.4	3.38	Clear, slightly cloudy

Test Parameters: (Tmetals (HNO_3)) Fmetals (VOC (HCl)) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): (None) **Duplicate/Split:** _____ **MS/MSD:** 1

Sample Collection Date: 04/25/01 **Sample Collection Time:** 0914

Prepared by: M. Smith

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: QU1 Well #: ~~MW~~ MS LF10-MW03A Sample Number: LF10-MW03A-0401

Purging Method/Equipment: bailer Samplers M.Smith / D.Martin Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): 93.75 **Static Water Level** (Depth to Water): 89.38

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/26/01	1111			initial	13.0 MS	7.7	0.77	340	142.2	1.9	
04/26/01	1118			1.0	13	7.4	0.78	440	120.3	2.5	
04/26/01	1124	well dry									
04/26/01	1141	sampled									
04/26/01	no	final	readings – insufficient water								

Test Parameters: Tmetals (HNO3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 04/26/01 **Sample Collection Time:** 1141

Prepared by: M.Smith

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

Page 1 of ___

SITE ID: ~~Bladder~~ MC OU1 Well #: LFO-MW05B Sample Number: LFO-MW05B-0407

Purging Method/Equipment: Bladder Samplers J.Neese/M. Chiller Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: 2 gal

Sounding (Depth to Well Bottom): 39.30 **Static Water Level** (Depth to Water): 20.83

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4-23-01	1610	Start purging									
	1615		21.98	0.3	13.5	6.92	726	0	-21.6	0.65	clear
	1620		22.30	0.5	12.8	6.85	714	0	-37.5	0.39	
	1625		22.20	1.0	12.9	6.88	709	0	-49.0	0.41	
	1630		22.21	1.3	12.9	6.87	709	0	-64.2	0.45	
	1635		22.19	1.5	13.1	6.86	708	0	-75.0	0.46	
	1640		22.21	2.0	13.3	6.86	708	0	-81.6	0.51	
	1645		22.23	2.2	13.2	6.86	709	0	-82.7	0.43	
	1650		22.22	2.5	13.2	6.85	708	0	-83.8	0.45	
	1653	SAMPLE								~~0.7~~	
	1659		22.32	POST	12.3	6.85	698	0	-70.5	0.76	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4-23-01 **Sample Collection Time:** 1653

Prepared by: M. Chiller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU1 Well #: LF10-MW06A Sample Number: LF10-MW06A-0401

Purging Method/Equipment: bladder pump Samplers M.Smith / D.Martin Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): 89.41 Static Water Level (Depth to Water): ~~73.54~~ 72.54

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/25/01	1605		73.30	initial	15.8	7.63	0.488	58	49.6	4.65	
04/25/01	1610		73.34	0.2	15.8	7.39	0.529	3	55.6	7.53	
04/25/01	1615		73.82	0.3	14.3	7.15	0.576	0	42.2	3.79	
04/25/01	1620		73.56	0.5	14.8	7.13	0.585	1	33.7	3.53	
04/25/01	1625		73.65	0.7	14.3	7.14	0.589	0	32.1	3.32	
04/25/01	1630		73.72	0.9	13.9	7.10	0.592	0	31.3	3.12	
04/25/01	1635		74.20	1.1	13.9	7.11	0.591	0	32.5	3.05	
04/25/01	1640		74.21	1.4	13.7	7.11	0.592	0	32.9	4.12	
04/25/01	1645		74.20	1.7	13.5	7.15	0.592	0	38.7	5.42	
04/25/01	1650		74.20	2.0	13.4	7.22	0.592	0	44.9	6.22	
04/25/01	1655		74.20	2.2	13.5	7.24	0.592	0	48.4	6.28	
04/25/01	1700		74.21	2.4	13.4	7.27	0.592	0	52.5	6.38	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: _____ MS/MSD: _____ / _____

Sample Collection Date: 04/25/01 Sample Collection Time: _____

Prepared by: M.Smith

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: 801 **Well #:** LF10-MW06A **Sample Number :** _____

Purging Method/Equipment: _____ **Samplers** _____ **Well Secure (Y/N)** _____

Well Casing Diameter : _____ in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** _____ gal

Sounding (Depth to Well Bottom): _____ **Static Water Level** (Depth to Water): _____

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/25/01	1702	Sampled									
04/25/01	1710		final	/	13.5	7.29	0.595	0	65.8	8.29	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): **None** **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: _____ **Sample Collection Time:** _____

Prepared by: _____

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU1 (LF10) **Well #:** LF10-MW07A **Sample Number:** LF10-MW07A-0401

Purging Method/Equipment: Bladder **Samplers** J. Neese/M. Chiller **Well Secure (Y/N)** Y

Well Casing Diameter: _____ in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** 2 gal

Sounding (Depth to Well Bottom): 73.40 **Static Water Level** (Depth to Water): 53.24

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
	1430	Start Purging									
	1435		53.24	0.2	14.7	7.13	796	0	-140.4	2.16	clear
	1440		53.23	0.5	14.7	7.08	813	0	-143.3	1.02	
	1445		53.23	1.0	14.7	7.07	820	0	-147.6	0.80	
	1450		53.23	1.4	14.8	7.07	820	0	-151.6	0.65	
	1455		53.23	1.6	14.9	7.06	823	0	-153.5	0.61	
	1500		53.24	2.0	14.9	7.07	821	0	-155.5	0.62	
	1505		53.25	2.3	14.5	7.06	822	0	-155.9	0.57	
	1510		53.24	2.7	14.4	7.07	823	0	-158.7	0.53	
	1515	SAMPLE									
	1525		53.24	POST	13.9	7.04	826	0	-142.3	0.81	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: -0451 **MS/MSD:** /

Sample Collection Date: 4-23-01 **Sample Collection Time:** 1515

Prepared by: M. Chiller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU1 Well #: ~~MW0~~ MS LF10-MW08A-2 Sample Number: LF10-MW08A-2-0401

Purging Method/Equipment: bladder pump Samplers M.Smith/D.Martin Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): 98.02 **Static Water Level** (Depth to Water): 65.52

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/25/01	1337		66.50	initial	13.9	8.17	0.540	21	74.4	9.22	
04/25/01	1342		68.40	0.5	14.4	7.29	0.695	16	~~4.88~~ MS 4.88		-90.7
04/25/01	1347		68.40	0.55	15.2	7.14	0.739	15	-97.9	3.22	
04/25/01	1352		68.40	0.6	15.9	7.11	0.769	9	-98.9	2.41	
04/25/01	1357		68.42	0.65	16.3	7.10	0.781	9	-98.0	1.96	
04/25/01	1402		68.42	0.70	16.7	7.09	0.791	8	-99.6	1.90	
04/25/01	1407		68.42	0.75	17.1	7.09	0.792	6	-94.2	1.94	
04/25/01	1417		68.42	0.80	17.7	7.08	0.796	10	-99.6	2.06	
04/25/01	1430		68.42	1.00	18.1	7.09	0.801	9	-93.7	1.92	
04/25/01	1440		68.42	1.25	17.0	7.11	0.800	7	-91.4	1.57	
04/25/01	1445		68.42	1.35	16.3	7.11	0.797	6	-90.5	1.44	
04/25/01	1450		68.42	1.4	16.1	7.10	0.799	6	-90.7	1.40	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: LF10-MW08A-2-0451 **MS/MSD:** 1

Sample Collection Date: 04/25/01 **Sample Collection Time:** 1452

Prepared by: M.Smith

ERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU1 Well #: LF10-MW08A-2 Sample Number: LF10-MW08A-2-0401

Purging Method/Equipment: bladder pump Samplers MS/DM Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): _____ **Static Water Level** (Depth to Water): 65.52

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/25/01	1452	Sampled									
04/25/01	1526		Final		19.5	7.11	0.835	3	-97.2	5.40	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: -0451 MS/MSD: 1

Sample Collection Date: 04/25/01 **Sample Collection Time:** 1452

Prepared by: M. Smith

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: LF-10 Well #: MW 09 C Sample Number: LF10-MW09-0401

Purging Method/Equipment: Bladder Samplers DW/KH Well Secure (Y/N) _____

Well Casing Diameter: 2 in. Unit Casing Volume (UC): N/A gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): _____ **Static Water Level** (Depth to Water): 32.57

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft) 31.25	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/25/01	0920	Begin	~~37.51~~	.25	11.9	6.76	.925	10	35.1	7.13	
	0925	.05	31.85	.50	11.9	6.77	.888	17	37.3	1.35	
	0930	.05	31.85	.75	11.8	6.78	.796	16	-39.0	1.94	
	0935	.05	31.85	1.0	11.9	6.82	.729	26	-35.9	4.69	
	0940	.05	31.85	1.25	12.0	7.02	.712	52	-35.6	7.65	
	0945	.05	31.85	1.50	12.0	7.03	.712	52	-36.9	7.77	
	0950	.05	31.85	1.75	11.9	7.09	.704	44	0.8	8.31	
	0955	.05	31.85	2.0	12.1	7.11	.707	43	0.9	8.55	
	1000	.05	31.85	2.25	12.2	7.12	.711	40	-5.1	8.91	
	1005	.05	31.85	2.50	12.2	7.13	.715	25	-22.7	8.59	
	1010	.05	31.85	2.75	12.2	7.12	.716	21	-23.9	8.43	
	1015	SAMPLED									

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** 1

Sample Collection Date: 4/25/01 **Sample Collection Time:** 1015

Prepared by: D. Warner

N:\COMMON3\PLAMONDO\LTM\FORMS\GWPRGLOG

1025 POST 31.85 POST 12.4 7.11 .718 17 -45.6 8.93

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU1 Well #: ~~M~~ MS LF10-MW10C Sample Number: LF10-MW10C-0401

Purging Method/Equipment: bladder pump Samplers M.Smith/D.Martin Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): 68.09 Static Water Level (Depth to Water): 46.71

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/26/01	0837		47.28	initial	~~9.6~~ 10.4	6.53	0.~~7~~553	0	209.9	6.22	
04/26/01	0842		47.25	0.7	11.6	7.04	0.779	0	201.9	2.48	
04/26/01	0847		47.21	1.1	11.9	7.05	0.802	0	193.5	1.28	
04/26/01	0852		47.18	1.5	12.1	7.05	0.804	0	179.6	0.65	
04/26/01	0857		47.18	1.8	12.2	7.03	0.803	0	176.0	0.64	
04/26/01	0902		47.18	2.0	12.3	7.06	0.802	0	166.9	0.66	
04/26/01	0907		47.18	2.3	12.3	7.06	0.804	0	161.0	0.50	
04/26/01	0912		47.18	2.6	12.4	7.06	0.802	0	155.6	0.56	
04/26/01	0914	Sampled									
04/26/01	0921		final		12.6	7.01	0.806	0	144.2	2.0	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH) BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: _____ MS/MSD: _____ / _____

Sample Collection Date: 04/26/01 Sample Collection Time: 0914

Prepared by: M. Smith

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU1 Well #: LF10-MW102 Sample Number : _____

Purging Method/Equipment: _____ Samplers _____ Well Secure (Y/N) Y

Well Casing Diameter : _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): _____ **Static Water Level** (Depth to Water): DRY

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description

DRY

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)

BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: _____ **Sample Collection Time:** _____

Prepared by: _____

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU1 Well #: LF10-MW103 Sample Number: LF10-MW103-0401

Purging Method/Equipment: bladder pump Samplers M.Smith/D.Martin Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): 43.78 **Static Water Level** (Depth to Water): 32.70 ft

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/25/01	1005		34.50	initial	11.1	7.48	0.920	27	177.4	7.92	clear
04/25/01	1015		36.00	0.2	11.9	6.54	1.34	16	-58.5	2.72	cloudy
04/25/01	1025		37.28	0.4	12.3	6.48	1.45	15	-64.4	1.02	
04/25/01	1035		37.66	0.5	12.3	6.48	1.45	21	-63.3	1.09	
04/25/01	1105		38.00	0.7	12.3	6.57	1.39	380	-55.2	3.36	
04/25/01	1110		38.02	0.7	12.5	6.58	1.38	378	-52.4	2.32	
04/25/01	1115		38.07	0.75	12.5	6.58	1.38	361	-52.2	2.47	
04/25/01	1118	sampled									
04/25/01	1148		final		12.6	6.65	1.09	591	-64.9	2.42	

Test Parameters: ~~Tmetals (HNO3)~~ Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** 1

Sample Collection Date: 04/25/01 **Sample Collection Time:** 1118

Prepared by: M.Smith

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU1 Well #: LF10-MW104 Sample Number : _____

Purging Method/Equipment: _____ Samplers _____ Well Secure (Y/N) Y

Well Casing Diameter : _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): _____ **Static Water Level** (Depth to Water): DRY

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description

DRY

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: _____ **Sample Collection Time:** _____

Prepared by: _____

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: LF10 **Well #:** LF10-MW105 **Sample Number:** LF10-MW105-0401

Purging Method/Equipment: Bladder **Samplers** DW/KH **Well Secure (Y/N)** Y

Well Casing Diameter: 2" in. **Unit Casing Volume (UC):** N/A gal. **Target Purge Volume:** N/A gal

Sounding (Depth to Well Bottom): _____ **Static Water Level** (Depth to Water): 46.14

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/25/01	1050	—	47.10	.10	11.0	7.59	.451	0	-31.4	10.20	
	1055	.005	47.90	.20	11.7	7.43	.477	0	-61.3	6.43	
	1100	.005	48.26	.30	12.0	7.40	.478	0	-82.5	5.07	
	1105	.005	48.51	.40	12.1	7.35	.492	0	-94.3	4.45	
	1110	.005	48.71	.50	12.2	7.31	.496	0	-101.5	4.00	
	1120	.005	49.50	.70	12.1	7.31	.500	0	-112.0	3.68	
	1130	.005	49.65	.90	12.3	7.27	.507	0	-112.7	3.87	
	1140	.005	50.61	1.10	12.1	7.25	.512	2	-116.6	3.14	
	1145	.005	50.85	1.30	12.2	7.25	.513	1	-116.8	2.86	
	1150	SAMPLED									
	1200	POST	51.00	1.50	12.5	7.18	.514	3	-110.9	1.22	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** 1

Sample Collection Date: 4/25/01 **Sample Collection Time:** 1150

Prepared by: DW

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU1 Well #: 01-004M Sample Number: 01-004-M-0401

Purging Method/Equipment: bladder pump Samplers: M. Smith / K. Havens Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): 59.8 Static Water Level (Depth to Water): 48.33

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/23/01	1424		49.20	initial	15.0	7.03	0.821	687	66.7	5.83	red - like V8 juice
04/23/01	1429		49.76	0.8	14.4	6.94	0.825	596	66.3	5.17	clearing
04/23/01	1434		50.15	1.0	14.7	6.99	0.827	355	68.9	4.82	
04/23/01	1439		50.66	1.3	15.1	7.03	0.827	158	71.3	4.62	
04/23/01	1444		50.73	1.5	15.6	7.06	0.833	73	73.6	4.92	
04/23/01	1449		50.73	1.6	17.1	7.12	0.829	0	75.4	4.93	
04/23/01	1454		50.73	1.65	18.1	7.10	0.828	0	76.9	4.91	
04/23/01	1459		50.75	1.70	19.3	7.08	0.832	0	78.2	4.80	
04/23/01	~~1424~~ US 1504		50.75	1.80	21.1	7.08	0.839	0	79.8	4.59	
04/23/01	1509		50.87	1.85	21.2	7.07	0.838	0	81.9	4.45	
04/23/01	1514 US		50.88	1.90	20.9	7.08	0.834	0	84.7	4.71	
04/23/01	1519 US		50.98	1.95	20.4	7.07	0.834	0	86.9	4.78	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 04/23/01 **Sample Collection Time:** 1602

Prepared by: M. Smith

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU1 Well #: 01-DM-102D-M Sample Number: 01-DM-102D-M-0401

Purging Method/Equipment: Bladder Samplers D.Warner / G.Plamondon Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: 2 gal

Sounding (Depth to Well Bottom): _____ **Static Water Level** (Depth to Water): 46.51

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/25/01	1322	start Purging									
	1330		47.15	1/4	13.4	10.63	1.18	5	-109.6	6.81	
	1350		46.97	1.0	13.2	11.24	1.12	3	-170.4	5.58	
	1355		46.90	1 1/4	13.1	11.30	1.11	2	-173.3	5.92	
	1400		47.01	1 1/2	13.0	11.28	0.990	2	-177.4	5.41	
	1410		47.11	2.0	13.0	11.23	0.860	3	-180.9	4.85	
	1419		47.12	2 1/2	13.0	11.11	.694	23	-184.2	4.62	
	1428		47.20	3.0	13.0	10.61	.400	39	-182.3	3.21	
	1435		47.10	3 1/2	13.1	9.81	.368	30	-183.3	2.52	
	1440		47.10	3 3/4	131	8.76	.433	17	-163.2	2.99	
	1450		47.00	4 1/4	13.0	8.62	.440	14	-173.3	1.33	
	1500		46.80	POST	13.4	8.18	.495	10	-154.1	4.17	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4-25-01 **Sample Collection Time:** 1450

Prepared by: M. Chiller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU1 **Well #:** 01-004-M **Sample Number :** 01-004-M-0401

Purging Method/Equipment: bladder pump **Samplers** MS/KH **Well Secure (Y/N)** Y

Well Casing Diameter : _____ in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** _____ gal

Sounding (Depth to Well Bottom): 59.8 **Static Water Level** (Depth to Water): 48.33

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/23/01	1524 MS		51.12	1.95	20.1	7.05 MS	0.834	0	90.9	4.60	
04/23/01	1529		51.17	2.0	20.1	7.06	0.834	0	93.0	4.50	
04/23/01	1534		51.24	2.05	20.0	7.07	0.831	0	94.6	4.55	
04/23/01	1539		51.50	2.2	17.1	7.08	0.820	0	98.2	5.13	
04/23/01	1544		52.21	2.3	16.6	7.02	0.824	0	99.5	5.10	
04/23/01	1549		52.78	2.5	17.0	7.02	0.825	0	101.2	4.86	
04/23/01	1554		52.87	2.6	17.0	7.05	0.829	0	102.3	4.81	
04/23/01	1559		53.20	2.7	17.1	7.05	0.830	0	104.1	4.78 MS	
04/23/01	1602	Sampled									
04/23/01	1620		final		17.3	7.10	0.830	21 MS	108.6	4.99	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: _____ **Sample Collection Time:** _____

Prepared by: _____

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU1 Well #: LF8/10-LW02 Sample Number: LF8/10-LW02-2001

Purging Method/Equipment: NA Samplers G. Plamondon/ K. Havens Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: NA gal

Sounding (Depth to Well Bottom): NA **Static Water Level** (Depth to Water): NA

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4-26-01	0908		N/A	N/A	11.7	6.54	2.05	0	142.4	8.08	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4-26-01 **Sample Collection Time:** 0905

Prepared by: M. Chiller

B-2

OU1 Water Level Field Logs: January and April 2001

Sample Team: _____

Landfills 8 and 10 Groundwater Level Log
WPAFB

Date: 1/25/07
Logbook #: _____

Well No.	Log Time	PID Reading (ppm)	LEL (%)	TOC Elevation (ft)	Static Depth to Water TOC (ft)	Static Depth to Water TOPC (ft)	Screended Interval (ft)	TWD (ft)	Remarks
LF8 Extraction Wells									
EW-0801	1047	1.3	0	937.59	34.39			55.5	QED 243939
EW-0803	1037	1.2	0	936.73	52.82		5.0-55.5	55.5	QED 92980
EW-0805	1035	1.3	0	938.54	52.33			55.5	QED 95224
EW-0807	1025	1.2	0	934.69	44.31		5.0-51.5	51.5	QED 097935
EW-0810	1015	1.3	0	930.69	46.35			55.0	QED 899779
EW-0812	1009	1.2	0	926.88	25.45		5.0-50.0	50.0	
EW-0816	1004	1.4	0	932.99	28.71		5.0-55.0	55.0	
Landfill 10									
LF10-MW01A				918.50				106.0	
LF10-MW01B				918.52				40.0	
LF10-MW03A				907.49				NA	
LF10-MW04B				898.86			113.65-123.65	126.0	
LF10-MW05B	1328	1.8	NT	858.44	22.85	23.40	27.00-34.20	37.0	
LF10-MW05C	1325	1.5	NT	859.06	10.97	11.25	3.42-8.42	11.0	
LF10-MW06A				894.62			74.80-84.80	87.1	
LF10-MW06A DUP				897.78				66.0	
LF10-MW06B				894.09			37.15-42.50	44.0	
LF10-MW07A				897.54				82.0	
LF10-MW07B				897.01				36.0	
LF10-MW07C				897.72				18.0	
LF10-MW08A-2				863.35			79.9-89.9	92.2	

LF8

Landfills 8 and 10 Groundwater Level Log
WPAFB

Sample Team: Kathy, Terry

Date: 1/~~26~~ 25/01
Logbook #:

Well No.	Log Time	PID Reading (ppm)	LEL (%)	TOC Elevation (ft)	Static Depth to Water TOC (ft)	Static Depth to Water TOPC (ft)	Screended Interval (ft)	TWD (ft)	Remarks
Landfill 8									
LF08-MW01A	1320	1.9	NT	905.69	9.27	9.92		42.2	
LF08-MW01C	1318	1.8	↓	905.92	7.24	7.91		17.0	
LF08-MW02A	1127	1.3	NT	894.07	7.20	7.60		56.0	
LF08-MW02C	1130	1.2	NT	895.61	14.[illegible]	15.42		24.0	
LF08-MW04A	1112	2.1	NT	913.45	32.99	33.52		68.0	
LF08-MW04B	1111	1.4	NT	912.76	29.07	29.49		39.0	
LF08-MW04C	1110	1.3	NT	914.02	Below Top of Pump			28.0	
LF08-MW05A	1101	1.2	NT	949.38	33.57	34.14		88.0	
LF08-MW05B	1100	1.3	NT	949.17	~~23.42~~ 23.76	~~24.50~~ 24.65		53.8	
LF08-MW05C	1102	1.3	NT	949.30	23.42	24.50		30.0	
LF08-MW06A	1142	1.4	NT	891.30	30.03	30.40	53.5-73.8	80.0	
LF08-MW06B	1140	1.4	NT	890.63	14.03	14.66	32.75-42.75	45.0	
LF08-MW06C	1137	1.2	NT	891.72	DRY	@13.6	7.0-12.0	14.0	
LF08-MW07A	0957	1.4	NT	952.62	25.31	25.74		64.0	
LF08-MW07B	0955	1.3	NT	952.56	24.22	26.46		40.0	
LF08-MW07C	1011	1.2	NT	952.79	26.20	26.50		31.0	
LF08-MW08A	1308	2.4	NT	878.70	6.20	6.45		36.0	
LF08-MW08B	1306	1.5	NT	878.63	9.15	9.97		24.0	
LF08-MW08C	1305	1.4	NT	877.72	9.35	9.90		14.0	
LF08-MW09A	1325	1.7	NT	855.38	17.71	18.16	25.2-30.2	32.5	
LF08-MW09B	1340	1.9	NT	856.01	16.75	16.87	13.67-18.67	20.5	
LF08-MW10A	0919	1.3	NT	911.86	27.67	28.25	53.7-63.8	66.0	
LF08-MW10B	0917	1.2	NT	912.27	24.30	24.56	29.8-34.8	39.0	
LF08-MW3A		1.2	NT		21.25	21.51			
LF08-MW3C		1.3	↓		16.21	16.31			

Sample Team:

Landfills 8 and 10 Groundwater Level Log
WPAFB

Date: 1/25/07
Logbook #:

Well No.	Log Time	PID Reading (ppm)	LEL (%)	TOC Elevation (ft)	Static Depth to Water TOC (ft)	Static Depth to Water TOPC (ft)	Screended Interval (ft)	TWD (ft)	Remarks
LF08-MW10C	0922	1.3	NT	911.83	23.5	construction	17.5-22.5	25.0	No Lid
LF08-MW11A	0949	1.2		934.37	14.60	14.94		57.0	
LF08-MW11B	0947	1.2		934.95	13.80	14.23		44.3	
LF08-MW11C	0945	1.3		935.18	13.19	13.61		23.9	
LF08-MW12B	0942	1.2		936.03	13.86	14.12		35.8	
LF08-MW12C	0944	1.3		936.16	13.68	14.05		13.5	
LF08-MW13A	0930	1.2	NT	934.01	16.16	16.55		88.5	~~No Lid~~ KM
LF08-MW13B	0935	1.4		933.22	12.08	12.58		30.9	
LF08-MW13C	0933	1.4		933.48	12.57	12.88		19.7	
LF08-MW14B	1345	1.9	NT	942.45	14.38	15.07		38.0	
LF08-MW14C	1348	1.7	NT	941.75	13.08	13.56		21.2	
LF08-MW101	1435	2.1	NT	925.72	34.55	35.20		68.0	
LF08-MW102	1430	1.4	NT	933.69	39.10	39.65		73.0	
LF08-MW103	1420	1.8	NT	937.16	37.15	37.80		68.0	
02-DM-81S-M	1050	1.4	NT	849.75	29.28	29.71		36.3	
02-DM-81D-M	1052	1.3	NT	949.67	31.77	32.15		94.4	
02-DM-82S-M	1440	1.8	NT	893.37	13.75	14.10		893.4	
~~frozen lid~~ KM 02-DM-83S-M	0912	1.3	NT	913.32	19.74	19.98		17.0	w.l. deeper than sounding ??
02-DM-83D-M	0910	1.2	NT	912.56	17.03	17.35		72.7	
02-DM-84-M	1115	1.4	NT	914.49	22.28	22.70			
02-003-M	1135	1.5	NT	850.24	6.07	6.25			
02-DM-85M	1125	1.2	NT		6.75	7.19			

Sample Team: _____

Landfills 8 and 10 Groundwater Level Log
WPAFB

Date: 1/25/01
Logbook #: #1

Well No.	Log Time	PID Reading (ppm)	LEL (%)	TOC Elevation (ft)	Static Depth to Water TOC (ft)	Static Depth to Water TOPC (ft)	Screended Interval (ft)	TWD (ft)	Remarks
LF10 Extraction Wells									
EW-1001	1054	~~3~~ N/A	3	908.28	23.70	N/A	3.0-53.0	53.0	Pump pulled 21% O2
EW-1002	1045	↓	0	921.78	44.24	N/A		53.0	QED 000084 uplocked + airline disconnected 20.9%
EW-1003	1103 1057	↓	2 final 15 initial	915.81	19.65	N/A	6.0-66.0	66.0	QED 753391 20.9% O2
EW-1004	1031	Not taken	3 final 11 initial	923.08	Well dry			63.0	QED 008885 21% O2 initial
EW-1006	1036	Not taken	1 final 13 initial	916.36	30.55	N/A		38.0	QED 007169 21.0% O2
Allowed to vent EW-1008	1058 1041	Not taken	0 final 18 initial	911.05	Well dry		6.0-36.0	36.0	QED 000807 21%
EW-1011	1436 1432	↓	0 final 19 initial	909.31	67.41	N/A		66.0	QED 000041 21.0%
EW-1012	1427	↓	0	891.43	32.95	↓	4.0-31.0	31.0	QED 019291 21.1% O2
EW-1013	1424	↓	0	886.21	31.80	↓		30.0	QED 004170 21.1% O2
EW-1014	1421	↓	0	884.90	Well dry	↓		30.0	QED 000043 21.0% O2
EW-1015	1330	↓	2	907.94	46.50	↓	6.0-62.0	62.0	QED 001067 21.1% O2
EW-1016	1334	↓	0	907.88	25.73	↓		50.5	QED 022044 20.9% O2
EW-1017	1337	↓	0	901.79	Well dry	↓		48.0	QED 001531 21.0% O2
EW-1018	1417	↓	0	901.77	31.75	↓		37.0	QED 008627 21.0% O2
EW-1019	1411	↓	0	884.74	36.98	↓	2.0-52.0	52.0	QED 877171 21.0% O2
EW-1020	1359	↓	0	868.18	33.27	↓	4.0-35.0	35.0	QED 007545 21.1% O2
EW-1022	1355	↓	0	871.32	81.52	↓		65.0	QED 111955 21.1% O2
Allowed to vent EW-1024	1345 1340	↓	0 final 13 init.	891.25	39.60	↓	5.0-41.0	41.0	QED 019573 21.1% O2
EW-1025	1348	↓	0	877.61	37.85	↓	3.0-43.0	43.0	QED 000092 wk ~~20.~~ + 21.1% O2
EW-1026	1352	↓	0	861.26	86.60	↓		85.0	QED 018150 21.1%

TOC = Top of Casing
TOPC = Top of Protective Casing
TWD = Total Well Depth

Sample Team: _____

Landfills 8 and 10 Groundwater Level Log
WPAFB

Date: 1/25/01
Logbook #: #1

Well No.	Log Time	PID Reading (ppm)	LEL (%)	TOC Elevation (ft)	Static Depth to Water TOC (ft)	Static Depth to Water TOPC (ft)	Screended Interval (ft)	TWD (ft)	Remarks
LF8 Extraction Wells									
EW-0801				937.59				55.5	
EW-0803				936.73			5.0-55.5	55.5	
EW-0805				938.54				55.5	
EW-0807				934.69			5.0-51.5	51.5	
EW-0810				930.69				55.0	
EW-0812				926.88			5.0-50.0	50.0	
EW-0816				932.99			5.0-55.0	55.0	
Landfill 10									
LF10-MW01A	1131	0.7 ppm	0	918.50	75.46	75.80		106.0	21% O_2
LF10-MW01B	1134	0.7 ppm	0	918.52	26.81	27.15		40.0	needs new lock 21% O_2
LF10-MW03A	1326	0.7 ppm	0	907.49	89.97	90.31		NA	21% O_2
LF10-MW04B	0953	0.7 ppm	0	898.86	99.20	99.58	113.65-123.65	126.0	21.0% O_2
LF10-MW05B	1120	0.7 ppm	0	858.44	20.89	21.37	27.00-34.20	37.0	added lock (well unlocked) 21% O.
LF10-MW05C	1122	0.7 ppm	0	859.06	9.05	9.30	3.42-8.42	11.0	21% O_2
LF10-MW06A	1006	0.7 ppm	0	894.62	71.90	72.50	74.80-84.80	87.1	21.0% O_2
LF10-MW06A DUP	1004	0.7 ppm	0	897.78	67.05	67.45		66.0	21.0% O_2
LF10-MW06B	1003	0.7 ppm	0	894.09	35.04	35.49	37.15-42.50	44.0	21.0% O_2
LF10-MW07A	1014	0.7 ppm	0	897.54	53.75	54.11		82.0	21.0% O_2
LF10-MW07B	1016	0.7 ppm	0	897.01	Well	dry		36.0	well case still damaged 21.0% O_2
LF10-MW07C	1013	0.7 ppm	0	897.72	Well	dry		18.0	21.0% O_2
LF10-MW08A-2	0946	0.7 ppm	0	863.35	67.20	67.68	79.9-89.9	92.2	21.0% O_2

Sample Team: _____

Landfills 8 and 10 Groundwater Level Log
WPAFB

Date: 1/25/01
Logbook #: #1

Well No.	Log Time	PID Reading (ppm)	LEL (%)	TOC Elevation (ft)	Static Depth to Water TOC (ft)	Static Depth to Water TOPC (ft)	Screended Interval (ft)	TWD (ft)	Remarks
LF10-MW08B	0948	0.7 ppm	0	865.09	9.42	9.42	11.5-16.5	18.66	21.02% O_2
LF10-MW09A	1316	0.7 ppm	0	877.98	51.65	52.20	77-87	88.0	21% O_2
LF10-MW09B	1318	0.7 ppm	0	878.21	51.30	51.84	46.4-57	60.2	21% O_2
LF10-MW09C	1315	0.7 ppm	0	878.17	36.34	36.92	31.05-41.10	44.17	21% O_2
+Nu 0.7 ppm → LF10-MW10B	0919	21.01% O_2 →	0	844.40	Well dry			26.0	
LF10-MW10C	0921	0.7 ppm	0	844.19	48.22	48.57		68.0	21.02% O_2
LF10-MW11A	0939	0.7 ppm	0	854.20	30.38	30.87	61.7-71.7	74.0	21.02% O_2
LF10-MW11B	0941	0.7 ppm	0	854.52	29.70	30.45	30.2-40.2	43.0	21.02% O_2
LF10-MW13A	0931	0.7 ppm	0	845.53	WC 21.82 ~~21.28~~	22.10		52.0	21.02% O_2
LF10-MW13C	0933	0.7 ppm	0	845.64	21.32	21.65		40.0	21.02% O_2
LF10-MW102	0958	0.7 ppm	0	891.25	Well dry			65.0	21.02% O_2
LF10-MW103	1024	0.7 ppm	0	909.65	32.46	32.87		42.0	21.02% O_2
LF10-MW104	1113	0.6	0	909.40	Well dry			82.0	21% O_2
LF10-MW105	1405	0.6	0	873.02	46.43	46.75		65.0	21% O_2
01-004-M	1019	0.7 ppm	0	883.23	48.83	49.13		63.0	lid damaged 21.02% O_2
01-005-M	1311	0.7 ppm	0	840.01	9.91	10.12		46.0	21% O_2
01-DM101S-M	1108	0.6	0	914.95	37.50	37.80		51.8	21%
01-DM101D-M	1107	0.6	0	914.54	Well dry			85.0	21% O_2
01-DM102S-M	0928 0.7 ppm →		0	844.88	26.0	26.35		98.0	21.02% O_2 Switched cap w/ "102D-M"
01-DM102D-M	0926 0.7 ppm →		0	844.27	48.44	48.69		98.0	21.02% O_2 Switched cap w/ "102S-M"

Sample Team: _____

Landfills 8 and 10 Groundwater Level Log
WPAFB

Date: 4/18/07
Logbook #: _____

Well No.	Log Time	PID Reading (ppm)	LEL (%)	TOC Elevation (ft)	Static Depth to Water TOC (ft)	Static Depth to Water TOPC (ft)	Screended Interval (ft)	TWD (ft)	Remarks
LF08-MW10A	1349	0	0	911.86	23.78		53.7-63.8	66.0	
LF08-MW10B	1352	0	0	912.27	21.68		29.8-34.8	39.0	
LF08-MW10C	1355	0	0	911.83	20.02		17.5-22.5	25.0	
LF08-MW11A	1413	0	0	934.37	11.40			57.0	
LF08-MW11B	1415	0	0	934.95	9.99			44.3	
LF08-MW11C	1412	0	0	935.18	9.10			23.9	
LF08-MW12B	1358	0	0	936.03	9.68			35.8	
LF08-MW12C	1400	0	0	936.16	9.38			13.5	
LF08-MW13A	1405	0	0	934.01	13.21			88.5	
LF08-MW13B	1407	0	0	933.22	7.85			30.9	
LF08-MW13C	1403	0	0	933.48	8.34			19.7	
LF08-MW14B	1411	0	0	942.45	9.71			38.0	
LF08-MW14C	1409	0	0	941.75	8.04			21.2	
LF08-MW101	1535	0	0	925.72	30.73			68.0	water in vault & ants in well
LF08-MW102	1523	0	0	933.69	35.88			73.0	water in vault
LF08-MW103	1459	0	0	937.16	34.22			68.0	water in vault
02-DM-81S-M	1447	0	0	849.75	24.51			36.3	
02-DM-81D-M	1450	0	0	949.67	27.91			94.4	
02-DM-82S-M	1624 ~~1445~~	~~0~~	~~0~~	893.37	~~24.51~~	9.83		893.4	
02-DM-83S-M	1343	0	0	913.32	17.03			17.0	
02-DM-83D-M	1345	0	0	912.56	13.93			72.7	
02-DM-84-M	1548	0	0	914.49	15.56			57.8	
02-DM-85-M	1602	0	0	894.81	3.65			52.5	
02-003-M	1618	0	0	850.24	2.43				

Sample Team: _____

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Landfills 8 and 10 Groundwater Level Log
WPAFB

Date: 4/18/07
Logbook #: _____

Well No.	Log Time	PID Reading (ppm)	LEL (%)	TOC Elevation (ft)	Static Depth to Water TOC (ft)	Static Depth to Water TOPC (ft)	Screended Interval (ft)	TWD (ft)	Remarks
LF8 Extraction Wells									QED:
EW-0801	1454	0	0	937.59	32.18			55.5	243949
EW-0803	1457	0	0	936.73	42.17		5.0-55.5	55.5	105912
EW-0805	1508	0	0	938.54	38.27			55.5	101129
EW-0807	1515	0	0	934.69	29.15		5.0-51.5	51.5	105137
EW-0810	1522	0	0	930.69	26.81			55.0	971883
EW-0812	1532	0	0	926.88	23.60		5.0-50.0	50.0	765014
EW-0816	1543	0	0	932.99	27.03		5.0-55.0	55.0	585707
Landfill 10									
LF10-MW01A				918.50				106.0	
LF10-MW01B				918.52				40.0	
LF10-MW01C				918.57				14.0	
LF10-MW03A				907.49				NA	
LF10-MW04B				898.86			113.65-123.65	126.0	
LF10-MW05B				858.44			27.00-34.20	37.0	
LF10-MW05C				859.06			3.42-8.42	11.0	
LF10-MW06A				894.62			74.80-84.80	87.1	
LF10-MW06A DUP				897.78				66.0	
LF10-MW06B				894.09			37.15-42.50	44.0	
LF10-MW07A				897.54				82.0	
LF10-MW07B				897.01				36.0	
LF10-MW07C				897.72				18.0	

Sample Team: Marie Chiller
Jerry Reese

Landfills 8 and 10 Groundwater Level Log
WPAFB

Date: 4-18-01
Logbook #: 1

Well No.	Log Time	PID Reading (ppm)	LEL (%)	TOC Elevation (ft)	Static Depth to Water TOC (ft)	Static Depth to Water TOPC (ft)	Screended Interval (ft)	TWD (ft)	Remarks
Landfill 8									
LF08-MW01A	1631	0	0	905.69	4.59			42.2	
LF08-MW01C	1629	0	0	905.92	6.87			17.0	
LF08-MW02A	1605	0	0	894.07	4.65			56.0	
LF08-MW02C	1558	0	0	895.61	12.24			24.0	
LF08-MW03 C	1337	0	0	888.38	12.36			30.0	
LF08-MW03 A (MC)	1339	0	0	888.08	17.31			14.0	
LF08-MW04A	1554	0	0	913.45	29.18			68.0	
LF08-MW04B	1555	0	0	912.76	20.84			39.0	
LF08-MW04C	1552	0	0	914.02	16.00			28.0	
LF08-MW05A	1440	0	0	949.38	30.34			88.0	ants in well
LF08-MW05B	1435	0	0	949.17	19.84			53.8	
LF08-MW05C	1437	0	0	949.30	18.52			30.0	
LF08-MW06A	1609	0	0	891.30	27.55		53.5-73.8	80.0	
LF08-MW06B	1611	0	0	890.63	10.24		32.75-42.75	45.0	
LF08-MW06C	1607	0	0	891.72	10.38		7.0-12.0	14.0	
LF08-MW07A	1425	0	0	952.62	21.48			64.0	
LF08-MW07B	1421	0	0	952.56	22.31			40.0	
LF08-MW07C	1423	0	0	952.79	22.20			31.0	
LF08-MW08A	1623	0	0	878.70	2.56			36.0	
LF08-MW08B	1621	0	0	878.63	2.52			24.0	
LF08-MW08C	1620	0	0	877.72	6.67			14.0	
LF08-MW09A	1642	0	0	855.38	15.40		25.2-30.2	32.5	
LF08-MW09B	1640	0	0	856.01	13.71		13.67-18.67	20.5	

Landfills 8 and 10 Groundwater Level Log
WPAFB

Sample Team:
M. Smith
D. Rasor

Date: 04/12/01
Logbook #: 3

Well No.	Log Time	PID Reading (ppm)	LEL (%)	TOC Elevation (ft)	Static Depth to Water TOC (ft)	Static Depth to Water TOPC (ft)	Screended Interval (ft)	TWD (ft)	Remarks
			NS ~~18~~						
LF10 Extraction Wells									
EW-1001	1519	0+0	NA	908.28	17.88	18.74	3.0-53.0	53.0	
EW-1002	1509	0+0	2	921.78	43.02	43.64		53.0	
EW-1003	1516	0+0	100 NA ~~2400~~ NS	915.81	17.50	18.43	6.0-66.0	66.0	LEL meter bad
EW-1004	1430	0+0	1	923.08	55.00	56.02		63.0	
EW-1006	1434	0+2 ~~2.9~~ NS	18	916.36	25.62	26.30		38.0	
EW-1008	1505	0+0	32	911.05	dry		6.0-36.0	36.0	
EW-1011	0928	0+0	NA	909.31	56.78			66.0	
EW-1012	0918	0+0	NA	891.43	23.98		4.0-31.0	31.0	
EW-1013 ~~EW-1013~~ NS	0913	0+0	NA	886.21	dry			NS ~~30.0~~	
EW-1013 ~~EW-1014~~	0915	0+0	NA	884.90	22.00			30.0	
EW-1015	0844	0+0	NA	907.94	46.28		6.0-62.0	62.0	
EW-1016	0847	0+0	NA	907.88	49.02			50.5	
EW-1017	0849	0+0	NA	901.79	46.56			48.0	
EW-1018	0926	0+0	NA	901.77	32.10			37.0	
EW-1019	0905	0+0	NA	884.74	36.08		2.0-52.0	52.0	
EW-1020	0902	0+0	NA	868.18	30.12		4.0-35.0	35.0	
EW-1022	0900	0+0	NA	871.32	50.76			65.0	
EW-1024	0851	0+0	NA	891.25	35.80		5.0-41.0	41.0	
EW-1025	0853	0+0	NA	877.61	28.03		3.0-43.0	43.0	
EW-1026	0856	0+0	NA	861.26	61.40			85.0	

TOC = Top of Casing
TOPC = Top of Protective Casing
TWD = Total Well Depth

Sample Team: _____

_____

Landfills 8 and 10 Groundwater Level Log
WPAFB

Date: 4/18/01
Logbook #: _____

Well No.	Log Time	PID Reading (ppm)	LEL (%)	TOC Elevation (ft)	Static Depth to Water TOC (ft)	Static Depth to Water TOPC (ft)	Screended Interval (ft)	TWD (ft)	Remarks
LF8 Extraction Wells									
EW-0801				937.59				55.5	
EW-0803				936.73			5.0-55.5	55.5	
EW-0805				938.54				55.5	
EW-0807				934.69			5.0-51.5	51.5	
EW-0810				930.69				55.0	
EW-0812				926.88			5.0-50.0	50.0	
EW-0816				932.99			5.0-55.0	55.0	
Landfill 10									
LF10-MW01A				918.50				106.0	
LF10-MW01B				918.52				40.0	
LF10-MW01C				918.57				14.0	
LF10-MW03A	1507	0	0	907.49	89.86			NA	
LF10-MW04B				898.86	98.10		113.65-123.65	126.0	
LF10-MW05B				858.44			27.00-34.20	37.0	
LF10-MW05C				859.06			3.42-8.42	11.0	
LF10-MW06A	1457	0	0	894.62	72.0		74.80-84.80	87.1	
LF10-MW06A DUP	1456	0	0	897.78	66.98			66.0	
LF10-MW06B	?			894.09			37.15-42.50	44.0	COULDNT OPEN *
LF10-MW07A	1532	0	0	897.54	53.28			82.0	
LF10-MW07B	1534	—	—	897.01	DRY 29.36			36.0	DRY
LF10-MW07C	1527	0	0	897.72	4.08			18.0	

Sample Team: _____

Landfills 8 and 10 Groundwater Level Log
WPAFB

Date: 4/18/07
Logbook #: _____

Well No.	Log Time	PID Reading (ppm)	LEL (%)	TOC Elevation (ft)	Static Depth to Water TOC (ft)	Static Depth to Water TOPC (ft)	Screended Interval (ft)	TWD (ft)	Remarks
LF8 Extraction Wells									
EW-0801				937.59				55.5	
EW-0803				936.73			5.0-55.5	55.5	
EW-0805				938.54				55.5	
EW-0807				934.69			5.0-51.5	51.5	
EW-0810				930.69				55.0	
EW-0812				926.88			5.0-50.0	50.0	
EW-0816				932.99			5.0-55.0	55.0	
Landfill 10									
LF10-MW01A	1549	0-0	NA	918.50	74.45	74.81		106.0	
LF10-MW01B	1547	0-0	NA	918.52	24.18	24.54		40.0	
LF10-MW01C	1551	0-0	NA	918.57	12.52	13.00		14.0	
LF10-MW03A				907.49				NA	
LF10-MW04B				898.86			113.65-123.65	126.0	
LF10-MW05B	1602	0-0	NA	858.44	20 ~~19~~.69 MS	21.19	27.00-34.20	37.0	
LF10-MW05C	1603	0-0	NA	859.06	7.81	8.09	3.42-8.42	11.0	
LF10-MW06A				894.62			74.80-84.80	87.1	
LF10-MW06A DUP				897.78				66.0	
LF10-MW06B				894.09			37.15-42.50	44.0	lock won't turn
LF10-MW07A				897.54				82.0	
LF10-MW07B				897.01				36.0	
LF10-MW07C				897.72				18.0	

Sample Team: _____

Landfills 8 and 10 Groundwater Level Log
WPAFB

Date: 4/18/01
Logbook #: _____

Well No.	Log Time	PID Reading (ppm)	LEL (%)	TOC Elevation (ft)	Static Depth to Water TOC (ft)	Static Depth to Water TOPC (ft)	Screended Interval (ft)	TWD (ft)	Remarks
LF10-MW08A-2	1445	0	0	863.35	65.22		79.9-89.9	92.2	
LF10-MW08B	1451	0	0	865.09	3.62		11.5-16.5	18.66	
LF10-MW09A	1441	0	0	877.98	51.04		77-87	88.0	
LF10-MW09B	1438	0	0	878.21	50.91		46.4-57	60.2	
LF10-MW09C	1439	0	0	878.17	32.28		31.05-41.10	44.17	
LF10-MW10B	1415	0	0	844.40	DRY			26.0	
LF10-MW10C	1415	~~[illegible]~~	~~[illegible]~~	844.19	~~DRY~~ ?			68.0	COULDN'T OPEN *
LF10-MW11A	1434	0	0	854.20	30.72		61.7-71.7	74.0	
LF10-MW11B	1432	0	0	854.52	20.22		30.2-40.2	43.0	
LF10-MW13A	1427	0	0	845.53	21.14			52.0	
LF10-MW13C	1426	0	0	845.64	30.52			40.0	
LF10-MW14A	1545	0	0	948.58	73.60			101.0	
LF10-MW102				891.25				65.0	
LF10-MW103				909.65				42.0	
LF10-MW104				909.40				82.0	
LF10-MW105				873.02				65.0	
01-004-M	1540	0	0	883.23	48.18			63.0	
01-005-M				840.01				46.0	
01-DM101S-M	1430	0	0	914.95	36.75			51.8	
01-DM101D-M	1430	0	0	914.54	DRY 06.4			85.0	DRY
01-DM102S-M	1421	0	0	844.88	25.95			98.0	
01-DM102D-M	1424	0	0	844.27	4[illegible].15			98.0	

Landfills 8 and 10 Groundwater Level Log
WPAFB

Sample Team: _____

Date: 4/18/07
Logbook #: _____

Well No.	Log Time	PID Reading (ppm)	LEL (%)	TOC Elevation (ft)	Static Depth to Water TOC (ft)	Static Depth to Water TOPC (ft)	Screended Interval (ft)	TWD (ft)	Remarks
LF10-MW08A-2				863.35			79.9-89.9	92.2	
LF10-MW08B				865.09			11.5-16.5	18.66	
LF10-MW09A				877.98			77-87	88.0	
LF10-MW09B				878.21			46.4-57	60.2	
LF10-MW09C				878.17			31.05-41.10	44.17	
LF10-MW10B				844.40				26.0	
LF10-MW10C				844.19				68.0	
LF10-MW11A				854.20			61.7-71.7	74.0	
LF10-MW11B				854.52			30.2-40.2	43.0	
LF10-MW13A				845.53				52.0	
LF10-MW13C				845.64				40.0	
LF10-MW14A				948.58				101.0	
LF10-MW102	0957	0+0	NA	891.25	dry			60.80 65.0	
LF10-MW103	0945	0+0	NA	909.65	dry 39.65	water	below	top 42.0	of pump - dry
LF10-MW104	0951	0+0	NA	909.40	Mud	at	70 ft	82.0	
LF10-MW105	0909	0+0	NA	873.02	46.06			65.0	
01-004-M				883.23				63.0	
01-005-M	0836	0+0	NA	840.01	9.30			46.0	
01-DM101S-M				914.95				51.8	
01-DM101D-M				914.54				85.0	
01-DM102S-M				844.88				98.0	
01-DM102D-M				844.27				98.0	

B-3

OU1 Explosive Gas Monitoring Field Logs: January and May 2001

1/30/01

OU1
LANDFILL 8
LANDFILL GAS MONITORING
Date:

Location	Purge Start Time	Time Purged	Methane %	O2 %	LEL %	CO2 %	Pressure (H_2O)	Comments
LF08-MP001	0815	30sec	14.9	1.5	31.8	6.50	28.5	
sustained *	0845	30sec.	3.4	1.5	7.6	6.5	28.3	
LF08-MP002	0825	30sec.	0.0	3.5	0.0	3.5	28.5	
sustained								
LF08-MP003	0835	30sec.	0.0	18.9	0.0	0.0	28.3	Started pumping water
sustained								
LF08-MP004	0840	30sec.	0.0	18.9	0.0	0.2	28.3	standing water in vault
sustained								
LF08-MP005	NO	LONGER	THERE!				No Readings taken!	
sustained								
LF08-MP006	0805	30sec.	0.0	5.0	0.0	3.1	28.5	Missing vault bolt - needs gasket replaced.
sustained								
LF08-MP007	1020	30sec.	0.0	6.7	0.0	10.1	28.6	
sustained								
LF08-MP008	1010	30sec.	0.0	7.8	0.0	9.6	28.6	
sustained								
LF08-MP009	0950	30 sec.	0.0	~~7.8~~ 16	0.0	7.8	29.9	
sustained								
LF08-MP010	0930	30sec.	37.1	0.5	744	11.0	28.7	standing water in vault
sustained	1000	30 sec.	0.0	18.7	0.0	1.8	28.5	
LF08-MP011	0920	30sec.	0.0	7.1	0.0	4.4	28.4	standing water in vault
sustained								
LF08-MP012	0910	30sec.	0.7	0.5	14	6.4	28.6	
sustained	0940	30sec.	0.0	18.8	0.0	1.8	28.5	
LF08-MP013	0900	30sec.	0.0	5.5	0.0	5.9	28.9	
sustained								
LF08-PT003	0810	30sec.	0.0	17.1	0.0	0.2	28.5	Area has been paved over - moved punchbar location to east side of pavement
sustained								
LF08-PT10A	1030	30sec	0.0	19.3	0.0	0.0	28.4	
sustained								
LF08-PT10B	1040	30sec.	0.0	19.0	0.0	0.0	28.4	
sustained								
LF08-PT10C	NO	LOCATION	ON	MAP				
sustained								

* Sustained readings taken 30 minutes after removing monitoring probe fittings.

common3/Plamondo/Ltm/Forms/Field.xls/LF08

Calibration of land tech GA - 90 1/30/01

30sec. purge 0800 CH_4 - 14.7

CO_2 - 14.7

O_2 - 0.1%

" " 20.9

1/30/01 [illegible]

OU1
LANDFILL 10
LANDFILL GAS MONITORING
Date:

Location	Purge Start Time	Time Purged	Methane %	O2 %	LEL %	CO2 %	Pressure (H_2O)	Comments
LF10-MP014	1230	30 sec.	0.0	12.0	0.0	1.7	28.8	
sustained *								
LF10-MP016	1200	30 sec.	0.0	7.0	0.0	2.1	28.6	Vault filled with water, completely
sustained								
LF10-MP018	GONE - CANT LOCATE!							NO READINGS TAKEN
sustained								
LF10-MP019	1210	30 sec.	0.0	19.1	0.0	0.0	28.4	
sustained								
LF10-MP020	1220	30 sec.	0.0	19.1	0.0	0.1	28.4	
sustained								
LF10-MP021	1150	30 sec.	0.0	19.3	0.0	0.1	28.4	Water in vault.
sustained								
LF10-MP023	1145	30 sec.	0.0	19.3	0.0	0.0	28.4	Water in vault
sustained								
LF10-MP026	1155	30 sec.	0.0	19.2	0.0	0.1	28.4	Water in vault
sustained								
LF10-PT030	1255	30 sec.	0.0	19.2	0.0	0.0	28.5	
sustained								
LF10-PT031	1300	30 sec.	0.0	19.3	0.0	0.0	28.5	
sustained								
LF10-PT035	1245	30 sec.	0.0	19.3	0.0	0.0	28.4	
sustained								
LF10-PT036	1250	30 sec.	0.0	19.2	0.0	0.2	28.4	
sustained								
LF10-PT060	1135	30 sec.	0.0	19.3	0.0	0.0	28.4	
sustained								
LF10-PT065	1140	30 sec.	0.0	19.2	0.0	0.0	28.4	
sustained								
LF10-PT078	1130	30 sec.	0.0	19.3	0.0	0.0	28.4	
sustained								
LF10-PT085	1115	30 sec.	0.0	19.2	0.0	0.0	28.4	
sustained								
LF10-PT088	1110	30 sec.	0.0	19.3	0.0	0.0	28.4	
sustained								
LF10-PT090	1100	30 sec.	0.0	19.1	0.0	0.0	28.4	
sustained								
LF10-PT091	1105	30 sec.	0.0	19.1	0.0	0.0	28.4	
sustained								
LF10-PT093	1320	30 sec.	0.0	19.2	0.0	0.0	28.4	
sustained								
LF10-PT095	1330	30 sec.	0.0	19.3	0.0	0.0	28.4	
sustained								
LF10-PT100	1055	30 sec.	0.0	19.2	0.0	0.0	28.4	
sustained								
LF10-GBTOS	1240	30 sec.	19.9	7.0	396	17.8	28.4	
sustained	1310	30 sec.	0.0	18.8	0.0	5.6	28.4	
LF10-GBTON	1120	30 sec.	0.0	5.6	0.0	5.6	29.0	
sustained								

* Sustained readings taken 30 minutes after removing monitoring probe fittings.

OU1
LANDFILL 8
LANDFILL GAS MONITORING
Date: 5/2/01

Location	Purge Start Time	Time Purged	Methane %	O2 %	LEL %	CO2 %	Pressure (H_2O)	Comments
LF08-MP001	1100	1120	8.3	0.1	7.2	7.4	28.9	
sustained *								
LF08-MP002	1052	1054	0	14.2	0	0	29.9	
sustained								
LF08-MP003	1047	1049	0.0	20.3	0	0.0	28.9	
sustained								
LF08-MP004	1041	1042	0.0	19.2	0	7	28.9	
sustained								
LF08-MP005	—	—	—	—	—	—	—	GONE
sustained								
LF08-MP006	1005	1007	0	20.2	0	0	28.9	NO VALUE
sustained								
LF08-MP007	0940	0942	0.0	20.1	0	0.1	28.9	
sustained								
LF08-MP008	0933	0935	0.0	20.1	0	.2	29.0	UNDER WATER
sustained								
LF08-MP009	0928	0930	0.0	20.5	0	0.0	29.0	BAD VALUE ?
sustained								
LF08-MP010	0923	0925	0.0	19.6	0	.3	29.0	BAD VALUE ?
sustained								
LF08-MP011	—	—	—	—	—	—	—	BAD VALUE
sustained								
LF08-MP012	—	—	—	—	—	—	—	BAD VALUE ?
sustained								
LF08-MP013	0911	0914	00.0	05.9	0	058	29.0	
sustained								
LF08-PT003	1009	1011	0.0	19.8	0	0.7	29.0	
sustained								
LF08-PT10A	0950	0951	0.0	20.4	0	0.0	29.0	
sustained								
LF08-PT10B	0953	0955	0.0	20.3	0	0.0	28.9	
sustained								
LF08-PT10C	0956	0958	0.0	20.1	0	0	29.0	
sustained								

* Sustained readings taken 30 minutes after removing monitoring probe fittings.

OU1
LANDFILL 10
LANDFILL GAS MONITORING
Date: 5/2/01

Location	Purge Start Time	Time Purged	Methane %	O2 %	LEL %	CO2 %	Pressure (H_2O)	Comments
LF10-MP014 sustained *	1300	1305	4.9	4.8	4.0	4.2	29.9	92 %
LF10-MP016 sustained	1407	1409	0.7	16.1	0.7	1.4	28.9	14%
LF10-MP019 sustained	1359	1401	0.0	19.6	0.1	0.0	28.9	2 %
LF10-MP020 sustained	1320	1322	0.1	19.9	0.1	0	28.9	2 %
LF10-MP021 sustained	1315	1317	0.0	20.0	0	0.0	28.9	
LF10-MP023 sustained	1309	1311	0.0	19.9	0	0.0	28.9	
LF10-MP026 sustained	1304	1306	0.0	20.9	0	0	28.9	
LF10-PT030 sustained	1340	1342	0.0	19.4	0	0.0	29.0	
LF10-PT031 sustained	1336	1337	0.0	19.4	0	0.0	29.0	
LF10-PT035 sustained	1230	12.33	0.0	19.6	0	0.0	29.0	
LF10-PT036 sustained	1323	1325	0.0	19.7	0	0.0	29.0	
LF10-PT060 sustained	1320	1322	0.0	19.8	0	0.0	29.0	
LF10-PT065 sustained	1317	1319	0.0	19.7	0	0.0	29.0	
LF10-PT078 sustained	1314	1316	0.0	19.9	0	0.0	29.0	
LF10-PT085 sustained	1305	1309	0.0	20.0	0	0.0	29.0	
LF10-PT088 sustained	1310	1312	0.0	20.0	0	0.0	29.0	
LF10-PT090 sustained	1255	1257	1.0	19.9	22	0	29.0	
LF10-PT091 sustained	1250	1252	0.0	20.0	0	0.0	29.0	
LF10-PT093 sustained	1334	1336	0.0	19.2	0	0.0	29.0	
LF10-PT095 sustained	1228	1230	0.0	19.6	0	0.2	29.0	
LF10-PT100 sustained	1245	1249	20.0	19.8	0	0.0	29.0	
LF10-GBTOS sustained	1419	1421	0.7	17	0.7	1.3	28.9	14%
LF10-GBTON sustained	1345	1347	0.1	20.0	0.2	0.1	29.9	

* Sustained readings taken 30 minutes after removing monitoring probe fittings.

Appendix C

OU1 Quarterly Analytical Data and Chain of Custody Records

C-1 OU1 Groundwater Analytical Data – January and April
C-2 OU1 Chain of Custody Records – January and April

C-1

OU1 Groundwater Analytical Data: January and April 2001

CASE NARRATIVE

A1A300196

Revised

The following report contains the analytical results for two water samples submitted to STL North Canton by The IT Corporation – Cincinnati from the WPAFB Site, project number 777097. The samples were received January 30, 2001, according to documented sample acceptance procedures.

STL North Canton utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the Analytical Methods Summary page in accordance with the methods indicated. A summary of QC data for these analyses is included in this report. Preliminary results were provided to Greg Plamondon on February 8, 2001.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

On February 20, 2001, Molybdenum was requested by Greg Plamondon of IT Corporation and is included in this report.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 1.1° C. . The samples were received in wet ice.

Sample LW01 was further preserved in sample receiving to meet the recommended pH level for the metal analysis.

METALS

Sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged. Refer to the sample report pages for the affected analyte(s).

GENERAL CHEMISTRY

An LCS/LCSD was provided where there was insufficient sample volume to perform an MS/MSD.

ANALYTICAL METHODS SUMMARY

A1A300196

PARAMETER	ANALYTICAL METHOD
pH (Electrometric)	MCAWW 150.1
Chemical Oxygen Demand	MCAWW 410.4
Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Mercury (Manual Cold Vapor Technique)	MCAWW 245.1
Non-Filterable Residue (TSS)	MCAWW 160.2
Oil & Grease (Gravimetric)	MCAWW 413.1
Trace Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Volatile Organics by GC/MS	SW846 8260B

References:

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

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

SAMPLE SUMMARY

A1A300196

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
DVCFC	001	WPAFB-LF8/10-LW01-2001	01/29/01	10:45
DVCFT	002	WPAFB-LF8/10-TB-2001	01/29/01	10:50

NOTE(S):

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

Analytical Legend

AMB – Ambient
B (or MBB, MBD, MBE) - Method blank contamination present
D - Diluted sample analytical results
DUP - Duplicate
EW – Extraction Well
E - Estimated result. Concentration exceeds the calibration range
I - Quantification suspect due to matrix interference
IW – Insufficient Water
J – Estimated Result. Result less than Reporting Limit
L – Serial dilution of a digestate in the analytical batch indicates that physical and chemical interferences are present.
LCS – Laboratory Control Sample
LF – Landfill
LW – Line Water
mg/L – milligrams/Liter
µg/L – micrograms/Liter
MW – Monitoring Well
N – Spiked analyte recovery is outside stated control limits
NA - Not Applicable
ND – Not Detected
NR – Not Reported
pg/L – picograms/Liter
Q - Estimated maximum possible concentration
RB – Rinsate Blank
R2 – Indicates second re-extraction analysis run was required due to surrogate recoveries outside of acceptance criteria on the initial sample run or that analytical results presented are for a diluted sample due to high target analytes.
T or TB – Trip Blank

-- – Not Analyzed
= – Confirmed detection
( ) – Result exceeds MCL value
[ ] – Result exceeds background value

Wright-Patterson AFB
January 2001 - OU1 Data - GROUND WATER
The IT Group, Project 777097

Sample Number	LF8/10-LW01-2001
Sample Date	01/29/01

E150.1			
pH (liquid)	(No Units	8.0	=
E160.2			
Total Suspended Solids	(mg/L)	700	=
E410.4			
Chemical Oxygen Demand (COD)	(mg/L)	110	=
MERCURY			
Mercury	(mg/L)	0.00026	=
METAL			
Aluminum	(mg/L)	0.78	=
Arsenic	(mg/L)	0.12	=
Barium	(mg/L)	2.7	=
Calcium	(mg/L)	317	=
Copper	(mg/L)	0.051	=
Iron	(mg/L)	176	MBB
Lead	(mg/L)	0.0056	=
Magnesium	(mg/L)	79.9	=
Manganese	(mg/L)	2.8	=
Molybdenum	(mg/L)	0.019	=
Nickel	(mg/L)	0.073	=
Potassium	(mg/L)	6.7	=
Sodium	(mg/L)	150	=
Zinc	(mg/L)	0.23	=

-- = Not Applicable, ND = Not Detected

Wright-Patterson AFB
January 2001 - OU1 Data - GROUND WATER
The IT Group, Project 777097

Sample Number	LF8/10-LW01-2001
Sample Date	01/29/01

E150.1			
pH (liquid)	(No Units	8.0	=
E160.2			
Total Suspended Solids	(mg/L)	700	=
E410.4			
Chemical Oxygen Demand (COD)	(mg/L)	110	=
E413.1			
Oil and Grease (Gravimetric)	(mg/L)	5.0	ND
MERCURY			
Mercury	(mg/L)	0.00026	=
METAL			
Aluminum	(mg/L)	0.78	=
Antimony	(mg/L)	0.060	ND
Arsenic	(mg/L)	0.12	=
Barium	(mg/L)	2.7	=
Beryllium	(mg/L)	0.0040	ND
Cadmium	(mg/L)	0.0050	ND
Calcium	(mg/L)	317	=
Chromium	(mg/L)	0.010	ND
Cobalt	(mg/L)	0.050	ND
Copper	(mg/L)	0.051	=
Iron	(mg/L)	176	MBB
Lead	(mg/L)	0.0056	=
Magnesium	(mg/L)	79.9	=
Manganese	(mg/L)	2.8	=
Molybdenum	(mg/L)	0.019	=
Nickel	(mg/L)	0.073	=
Potassium	(mg/L)	6.7	=
Selenium	(mg/L)	0.0050	ND
Silver	(mg/L)	0.010	ND
Sodium	(mg/L)	150	=
Thallium	(mg/L)	0.010	ND
Vanadium	(mg/L)	0.050	ND
Zinc	(mg/L)	0.23	=
VOC			
1,1,1-Trichloroethane	(ug/L)	1.0	ND
1,1,2,2-Tetrachloroethane	(ug/L)	1.0	ND
1,1,2-Trichloroethane	(ug/L)	1.0	ND
1,1-Dichloroethane	(ug/L)	1.0	ND
1,1-Dichloroethene	(ug/L)	1.0	ND
1,2-Dichloroethane	(ug/L)	1.0	ND
1,2-Dichloropropane	(ug/L)	1.0	ND
2-Butanone	(ug/L)	10	ND
2-Hexanone	(ug/L)	10	ND
4-Methyl-2-pentanone	(ug/L)	10	ND
Acetone	(ug/L)	10	ND
Benzene	(ug/L)	1.0	ND
Bromodichloromethane	(ug/L)	1.0	ND
Bromoform	(ug/L)	1.0	ND

Wright-Patterson AFB
January 2001 - OU1 Data - GROUND WATER
The IT Group, Project 777097

Sample Number		LF8/10-LW01-2001
Sample Date		01/29/01
VOC		
Bromomethane	(ug/L)	2.0 ND
Carbon disulfide	(ug/L)	1.0 ND
Carbon tetrachloride	(ug/L)	1.0 ND
Chlorobenzene	(ug/L)	1.0 ND
Chloroethane	(ug/L)	2.0 ND
Chloroform	(ug/L)	1.0 ND
Chloromethane	(ug/L)	2.0 ND
Dibromochloromethane	(ug/L)	1.0 ND
Ethylbenzene	(ug/L)	1.0 ND
Methyl tert-butyl ether	(ug/L)	5.0 ND
Methylene chloride	(ug/L)	1.0 ND
Styrene	(ug/L)	1.0 ND
Tetrachloroethene	(ug/L)	1.0 ND
Toluene	(ug/L)	1.0 ND
Trichloroethene	(ug/L)	2.0 ND
Vinyl chloride	(ug/L)	1.0 ND
Xylenes (total)	(ug/L)	1.0 ND
cis-1,2-Dichloroethene	(ug/L)	0.50 ND
cis-1,3-Dichloropropene	(ug/L)	1.0 ND
trans-1,2-Dichloroethene	(ug/L)	0.50 ND
trans-1,3-Dichloropropene	(ug/L)	1.0 ND

-- = Not Applicable, ND = Not Detected

CASE NARRATIVE
A1D240180

The following report contains the analytical results for twelve water samples submitted to STL North Canton by IT Corporation – Cincinnati from the WPAFB, Ohio Site. The samples were received April 24, 2001, according to documented sample acceptance procedures.

STL North Canton utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the Analytical Methods Summary page in accordance with the methods indicated. A summary of QC data for these analyses is included in this report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 1.9° C. . The samples were received in wet ice.

GC/MS VOLATILES

Sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

An LCS/LCSD was provided for batch 1120523 since there was insufficient sample volume to perform an MS/MSD.

Sample(s) that contain results between the MDL and the RL were flagged with "J". There is the possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

** for analyses run on TJA Trace ICP or GFAA only*

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample are spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If the surrogate recoveries are outside criteria for environmental or MS/MSD samples, the batch is acceptable if the Method Blank, LCS, and LCSD surrogate recoveries are within acceptance criteria. The only exception is if the surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank and the associated sample(s) are ND, the batch is acceptable. If the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide/PCB, PAH, and Herbicide methods, the surrogate criteria is that one of two surrogate compounds meet acceptance criteria.

ANALYTICAL METHODS SUMMARY

A1D240180

PARAMETER	ANALYTICAL METHOD
Dissolved ICP Metals	MCAWW 200.7
Dissolved Mercury (CVAA)	MCAWW 245.1
Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Mercury (Manual Cold Vapor Technique)	MCAWW 245.1
Trace Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Volatile Organics by GC/MS	SW846 8260B

References:

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

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

SAMPLE SUMMARY

A1D240180

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
EA9J3	001	02-DM-81D-M-0401	04/23/01	09:59
EA9J9	002	LF8-MW05B-0401	04/23/01	12:12
EA9KF	003	LF8-MW05B-0451	04/23/01	12:12
EA9KL	004	LTM-SP11-MW07-0401	04/23/01	13:57
EA9KX	005	LF10-MW07A-0401	04/23/01	15:15
EA9K2	006	LF10-MW07A-0451	04/23/01	15:15
EA9K5	007	LF10-MW05B-0401	04/23/01	16:50
EA9K7	008	TB042301	04/23/01	09:00
EA9LA	009	LTM-07-520-M-0401	04/23/01	09:03
EA9LJ	010	02-DM-82M-0401	04/23/01	10:58
EA9LL	011	LF8-MW02C-0401	04/23/01	13:17
EA9LM	012	01-004-M-0401	04/23/01	16:02

NOTE(S):

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

CASE NARRATIVE
A1D260337

The following report contains the analytical results for three water samples submitted to STL North Canton by IT Corporation – Cincinnati from the WPAFB, Ohio Site. The samples were received April 25, 2001, according to documented sample acceptance procedures.

STL North Canton utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the Analytical Methods Summary page in accordance with the methods indicated. A summary of QC data for these analyses is included in this report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 1.0° C. . The samples were received in wet ice.

GC/MS VOLATILES

An LCS/LCSD was provided for batch 1122480 since there was insufficient sample volume to perform an MS/MSD.

Sample(s) that contain results between the MDL and the RL were flagged with "J". There is the possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

** for analyses run on TJA Trace ICP or GFAA only*

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample are spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If the surrogate recoveries are outside criteria for environmental or MS/MSD samples, the batch is acceptable if the Method Blank, LCS, and LCSD surrogate recoveries are within acceptance criteria. The only exception is if the surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank and the associated sample(s) are ND, the batch is acceptable. If the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide/PCB, PAH, and Herbicide methods, the surrogate criteria is that one of two surrogate compounds meet acceptance criteria.

ANALYTICAL METHODS SUMMARY

A1D260337

PARAMETER	ANALYTICAL METHOD
Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Mercury (Manual Cold Vapor Technique)	MCAWW 245.1
Trace Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Volatile Organics by GC/MS	SW846 8260B

References:

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

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

SAMPLE SUMMARY

A1D260337

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
ECFNQ	001	LF08-MW101-0401	04/24/01	10:00
ECFNR	002	LF08-MW102-0401	04/24/01	12:00
ECFNT	003	LF08-MW103-0401	04/24/01	14:57

NOTE(S):

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

CASE NARRATIVE
A1D260335

The following report contains the analytical results for five water samples submitted to STL North Canton by IT Corporation – Cincinnati from the WPAFB, Ohio Site. The samples were received April 25, 2001, according to documented sample acceptance procedures.

STL North Canton utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the Analytical Methods Summary page in accordance with the methods indicated. A summary of QC data for these analyses is included in this report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 1.0° C. . The samples were received in wet ice.

GC/MS VOLATILES

Sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

Sample(s) that contain results between the MDL and the RL were flagged with "J". There is the possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

** for analyses run on TJA Trace ICP or GFAA only*

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample are spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If the surrogate recoveries are outside criteria for environmental or MS/MSD samples, the batch is acceptable if the Method Blank, LCS, and LCSD surrogate recoveries are within acceptance criteria. The only exception is if the surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank and the associated sample(s) are ND, the batch is acceptable. If the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide/PCB, PAH, and Herbicide methods, the surrogate criteria is that one of two surrogate compounds meet acceptance criteria.

ANALYTICAL METHODS SUMMARY

A1D260335

PARAMETER	ANALYTICAL METHOD
Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Mercury (Manual Cold Vapor Technique)	MCAWW 245.1
Trace Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Volatile Organics by GC/MS	SW846 8260B

References:

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

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

SAMPLE SUMMARY

A1D260335

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
ECFNE	001	LF8-MW11B-0401	04/24/01	09:05
ECFNH	002	LF8-MW09A-0401	04/24/01	11:45
ECFNJ	003	LF8-MW08B-0401	04/24/01	14:30
ECFNN	004	LF8-MW10B-0401	04/24/01	15:53
ECFNP	005	TB-042401	04/24/01	08:30

NOTE(S):

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

CASE NARRATIVE
AA1D270107

The following report contains the analytical results for nine water samples submitted to STL North Canton by IT Corporation – Cincinnati from the WPAFB, Ohio Site. The samples were received April 26, 2001, according to documented sample acceptance procedures.

STL North Canton utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the Analytical Methods Summary page in accordance with the methods indicated. A summary of QC data for these analyses is included in this report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 0.4° C. . The samples were received in wet ice.

GC/MS VOLATILES

Sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

Sample(s) that contain results between the MDL and the RL were flagged with "J". There is the possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

** for analyses run on TJA Trace ICP or GFAA only*

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample are spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If the surrogate recoveries are outside criteria for environmental or MS/MSD samples, the batch is acceptable if the Method Blank, LCS, and LCSD surrogate recoveries are within acceptance criteria. The only exception is if the surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank and the associated sample(s) are ND, the batch is acceptable. If the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide/PCB, PAH, and Herbicide methods, the surrogate criteria is that one of two surrogate compounds meet acceptance criteria.

ANALYTICAL METHODS SUMMARY

A1D270107

PARAMETER	ANALYTICAL METHOD
Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Mercury (Manual Cold Vapor Technique)	MCAWW 245.1
Trace Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Volatile Organics by GC/MS	SW846 8260B

References:

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

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

SAMPLE SUMMARY

A1D270107

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
ECF4E	001	01-DM-102D-M-0401	04/25/01	14:50
ECF4G	002	LF10-MW09C-0401	04/25/01	10:15
ECF4K	003	LF10-MW105-0401	04/25/01	11:50
ECF4M	004	LTM-042501-TB01	04/25/01	08:21
ECF4P	005	02-DM-83S-M-0401	04/25/01	09:14
ECF4Q	006	LF10-MW103-0401	04/25/01	11:18
ECF4R	007	LF10-MW08A-0401	04/25/01	14:52
ECF4V	008	LF10-MW08A-0451	04/25/01	14:52
ECF4X	009	LF10-MW06A-0401	04/25/01	17:02

NOTE(S):

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

CASE NARRATIVE
A1D270171

The following report contains the analytical results for five water samples submitted to STL North Canton by IT Corporation – Cincinnati from the WPAFB, OH Site. The samples were received April 27, 2001, according to documented sample acceptance procedures.

STL North Canton utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the Analytical Methods Summary page in accordance with the methods indicated. A summary of QC data for these analyses is included in this report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 3.0° C. . The samples were received in wet ice.

See STL's Cooler Receipt Form for additional information.

GC/MS VOLATILES

Sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

Sample(s) that contain results between the MDL and the RL were flagged with "J". There is the possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

GENERAL CHEMISTRY

The sample/sample duplicate is outside of control limits. The result is less than five times the reporting limit; therefore, no corrective action is required.

STL Cooler Receipt Form/Narrative
North Canton Facility

Client: IT CORP Project: _____ Quote#: 40950
Cooler Received on: 4-27-01 Opened on: 4-27-01 by: Doug Herren (Signature)

Fedx ☑ Client Drop Off ☐ UPS ☐ Airborne ☐
Other: _____

Cooler ☐ Safe ☐ Foam Box ☐ Client Cooler ☐ Other: _____
STL Shipper No#: J350

1. Were custody seals on the outside of the cooler and intact? Yes ☑ No ☐
   If YES, Quantity 1 Location over closure
   Were the custody seals signed and dated? Yes ☑ No ☐ NA ☐
2. Shipper's packing slip attached to this form? Yes ☑ No ☐
3. Were custody papers included inside the cooler and relinquished? Yes ☑ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☑ No ☐
5. Packing material used:
Peanuts ☐ Bubble Wrap ☑ Vermiculite ☑ Foam ☐ None ☐ Other: _____
6. Cooler temperature upon receipt 3.0 °C (see back of form for multiple coolers/temp)
METHOD: Temperature Vial ☑ Between Coolant & Sample Container ☐ Against Bottles ☐
COOLANT: Wet Ice ☑ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐
7. Were all the bottles sealed in separate plastic bags? Yes ☑ No ☐
8. Did all bottles arrive in good condition (Unbroken)? Yes ☑ No ☐
9. Did all bottle labels and tags agree with the custody papers? Yes ☑ No ☐
10. Were samples at the correct pH? Yes ☑ No ☐ NA ☐
11. Were correct bottles used for the tests indicated? Yes ☑ No ☐
12. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☑ NA ☐
13. Was a sufficient amount of sample sent in each bottle? Yes ☑ No ☐
Contacted PM DJP Date: 4/27/01 by: TB via Voice Mail ☐ Verbal ☑ Other ☐
Concerning: PH

√	MACRO	MACRO
	1. CHAIN OF CUSTODY	
	SR1A	Samples were received under proper custody procedures and without discrepancies.
	SR1B	The chain of custody and sample bottles did not agree. The following discrepancies occurred _____
	2. SAMPLE CONDITION	
	SR2A	Sample(s) _____ were received or requested after the recommended holding time had expired.
	SR2B	Sample(s) _____ were received with insufficient volume
	SR2C	Sample(s) _____ were received in a broken container.
	3. SAMPLE PRESERVATION	
	SR3A	Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s).
	SR3B	Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)
	4. NCM	
	SR4A	NCM has been generated. Refer to Clouseau for details
	5. Other Anomalies (see below or back)	LF8/10 - LW02-2001 TSS bottle has PH listed as a test on it - will log PH - DJP aware - TB 4/27/01. WP-042601-TB01 ~~[illegible]~~ ID on label = WP-042601-TB01 - will log per label. OK TB 4/27/01. (date on COC = 4/26/01, date on label = 4/25/01 - logged per label)

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials
LF10-MW10C-0401 AMB01	<2<2	4-27-01	DMH
LF10-MW10C-0401	<2<2		
LF10-MW03A-0401	<2<2		
LF8/10-LW02-2001	<2<2<2		

Cooler	Temp	Method	Comments

Discrepancies Cont.

Macro Name:

Macro Name:

Macro Name:

Macro Name:

Other Anomalies:

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

** for analyses run on TJA Trace ICP or GFAA only*

QUALITY CONTROL ELEMENTS OF SW-846 METHODS
(Continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample are spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If the surrogate recoveries are outside criteria for environmental or MS/MSD samples, the batch is acceptable if the Method Blank, LCS, and LCSD surrogate recoveries are within acceptance criteria. The only exception is if the surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank and the associated sample(s) are ND, the batch is acceptable. If the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide/PCB, PAH, and Herbicide methods, the surrogate criteria is that one of two surrogate compounds meet acceptance criteria.

ANALYTICAL METHODS SUMMARY

A1D270171

PARAMETER	ANALYTICAL METHOD
pH (Electrometric)	MCAWW 150.1
Chemical Oxygen Demand	MCAWW 410.4
Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Mercury (Manual Cold Vapor Technique)	MCAWW 245.1
Non-Filterable Residue (TSS)	MCAWW 160.2
Oil & Grease (Gravimetric)	MCAWW 413.1
Trace Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Volatile Organics by GC/MS	SW846 8260B

References:

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

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

SAMPLE SUMMARY

A1D270171

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
ECGPV	001	LF10-MW10C-0401 AMB01	04/26/01	08:48
ECGP9	002	LF10-MW10C-0401	04/26/01	09:14
ECGQE	003	LF10-MW03A-0401	04/26/01	11:41
ECGQG	004	LF8/10-LW02-2001	04/26/01	09:05
ECGQP	005	WP-042501-TB01	04/25/01	09:00

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Analytical Legend

AMB – Ambient
B (or MBB, MBD, MBE) - Method blank contamination present
D - Diluted sample analytical results
DUP - Duplicate
EW – Extraction Well
E - Estimated result. Concentration exceeds the calibration range
I - Quantification suspect due to matrix interference
IW – Insufficient Water
J – Estimated Result. Result less than Reporting Limit
L – Serial dilution of a digestate in the analytical batch indicates that physical and chemical interferences are present.
LCS – Laboratory Control Sample
LF – Landfill
LW – Line Water
mg/L – milligrams/Liter
µg/L – micrograms/Liter
MW – Monitoring Well
N – Spiked analyte recovery is outside stated control limits
NA - Not Applicable
ND – Not Detected
NR – Not Reported
pg/L – picograms/Liter
Q - Estimated maximum possible concentration
RB – Rinsate Blank
R2 – Indicates second re-extraction analysis run was required due to surrogate recoveries outside of acceptance criteria on the initial sample run or that analytical results presented are for a diluted sample due to high target analytes.
T or TB – Trip Blank

-- – Not Analyzed
= – Confirmed detection
( ) – Result exceeds MCL value
[ ] – Result exceeds background value

Wright-Patterson AFB
April 2001 - OU1 Data - Ground Water
The IT Group, Project 777097

Sample Number		01-004-M-0401		01-DM-102D-M-0401		02-DM-81D-M-0401		02-DM-82M-0401		02-DM-83S-M-0401	
Sample Date		04/23/01		04/25/01		04/23/01		04/23/01		04/25/01	
METAL											
Aluminum	(mg/L)	ND		0.27	=	ND		ND		1.6	=
Arsenic	(mg/L)	0.046	=	ND		0.016	=	ND		ND	
Barium	(mg/L)	0.34	=	0.28	=	ND		0.38	=	0.27	=
Calcium	(mg/L)	119	=	56.0	=	116	=	79.5	=	154	=
Chromium	(mg/L)	ND		ND		ND		ND		ND	
Copper	(mg/L)	ND		ND		ND		ND		ND	
Iron	(mg/L)	18.7	=	0.33	=	3.5	=	ND		1.9	=
Lead	(mg/L)	ND		ND		ND		ND		ND	
Magnesium	(mg/L)	48.7	=	19.4	=	62.0	=	39.1	=	76.7	=
Manganese	(mg/L)	0.21	=	0.052	=	0.050	=	0.042	=	1.3	=
Potassium	(mg/L)	ND		8.5	=	ND		ND		ND	
Sodium	(mg/L)	9.9	=	33.8	=	12.9	=	9.8	=	76.1	=
Zinc	(mg/L)	ND		ND		ND		ND		ND	
VOC											
1,1,1-Trichloroethane	(ug/L)	ND		ND		ND		ND		36	=
1,1-Dichloroethane	(ug/L)	ND		ND		ND		ND		64	=
1,1-Dichloroethene	(ug/L)	ND		ND		ND		ND		3.6	=
1,2-Dichloroethane	(ug/L)	ND		ND		ND		ND		ND	
2-Butanone	(ug/L)	ND		ND		ND		ND		ND	
Acetone	(ug/L)	ND		ND		ND		ND		ND	
Benzene	(ug/L)	ND		ND		ND		ND		ND	
Bromodichloromethane	(ug/L)	ND		ND		ND		ND		ND	
Chlorobenzene	(ug/L)	ND		ND		ND		ND		ND	
Chloroform	(ug/L)	ND		ND		ND		ND		ND	
Dibromochloromethane	(ug/L)	ND		ND		ND		ND		ND	
Methylene chloride	(ug/L)	ND		0.34	J,B	ND		ND		ND	
Toluene	(ug/L)	ND		ND		ND		ND		ND	
Vinyl chloride	(ug/L)	ND		ND		ND		ND		6.1	=
Xylenes (total)	(ug/L)	ND		ND		ND		ND		ND	
cis-1,2-Dichloroethene	(ug/L)	ND		ND		ND		ND		2.9	=

Wright-Patterson AFB
April 2001 - OU1 Data - Ground Water
The IT Group, Project 777097

Sample Number		LF08-MW101-0401		LF08-MW102-0401		LF08-MW103-0401		LF10-MW03A-0401		LF10-MW05B-0401	
Sample Date		04/24/01		04/24/01		04/24/01		04/26/01		04/23/01	
METAL											
Aluminum	(mg/L)	0.35	=	ND		ND		6.8	=	ND	
Arsenic	(mg/L)	ND		ND		ND		ND		ND	
Barium	(mg/L)	0.20	=	0.20	=	0.34	=	ND		0.54	=
Calcium	(mg/L)	82.5	=	81.5	=	59.6	=	77.9	=	72.8	=
Chromium	(mg/L)	ND		ND		ND		0.024	=	ND	
Copper	(mg/L)	ND		ND		ND		ND		ND	
Iron	(mg/L)	3.4	=	0.20	=	0.73	=	7.0	=	0.24	=
Lead	(mg/L)	ND		ND		ND		0.0030	=	ND	
Magnesium	(mg/L)	36.6	=	28.7	=	19.1	=	40.0	=	32.9	=
Manganese	(mg/L)	0.062	=	0.030	=	ND		0.10	=	ND	
Potassium	(mg/L)	ND		ND		5.2	=	13.6	=	8.6	=
Sodium	(mg/L)	13.6	=	12.5	=	12.5	=	41.4	=	36.9	=
Zinc	(mg/L)	ND		0.061	=	0.088	=	0.072	=	ND	
VOC											
1,1,1-Trichloroethane	(ug/L)	ND		ND		ND		ND		ND	
1,1-Dichloroethane	(ug/L)	ND		ND		ND		ND		ND	
1,1-Dichloroethene	(ug/L)	ND		ND		ND		ND		ND	
1,2-Dichloroethane	(ug/L)	ND		ND		ND		ND		ND	
2-Butanone	(ug/L)	ND		ND		ND		ND		ND	
Acetone	(ug/L)	ND		ND		ND		ND		ND	
Benzene	(ug/L)	ND		ND		ND		ND		ND	
Bromodichloromethane	(ug/L)	ND		ND		ND		ND		ND	
Chlorobenzene	(ug/L)	ND		ND		ND		ND		ND	
Chloroform	(ug/L)	ND		ND		ND		ND		ND	
Dibromochloromethane	(ug/L)	ND		ND		ND		ND		ND	
Methylene chloride	(ug/L)	ND		ND		ND		ND		0.36	J,B
Toluene	(ug/L)	ND		ND		ND		ND		ND	
Vinyl chloride	(ug/L)	ND		ND		ND		ND		ND	
Xylenes (total)	(ug/L)	ND		ND		ND		ND		ND	
cis-1,2-Dichloroethene	(ug/L)	ND		ND		ND		ND		ND	

Wright-Patterson AFB
April 2001 - OU1 Data - Ground Water
The IT Group, Project 777097

Sample Number		LF10-MW06A-0401		LF10-MW07A-0401		LF10-MW07A-0451		LF10-MW08A-2-0401		LF10-MW08A-2-0451	
Sample Date		04/25/01		04/23/01		04/23/01		04/25/01		04/25/01	
METAL											
Aluminum	(mg/L)	ND		ND		ND		ND		ND	
Arsenic	(mg/L)	ND		ND		ND		ND		ND	
Barium	(mg/L)	ND		0.34	=	0.33	=	ND		0.20	=
Calcium	(mg/L)	72.7	=	101	=	100	=	93.6	=	102	=
Chromium	(mg/L)	ND		ND		ND		ND		ND	
Copper	(mg/L)	ND		ND		ND		ND		ND	
Iron	(mg/L)	ND		3.5	=	3.4	=	1.4	=	1.5	=
Lead	(mg/L)	ND		ND		ND		ND		ND	
Magnesium	(mg/L)	35.4	=	49.7	=	48.6	=	41.7	=	45.8	=
Manganese	(mg/L)	ND		0.065	=	0.066	=	0.13	=	0.14	=
Potassium	(mg/L)	12.4	=	ND		ND		ND		ND	
Sodium	(mg/L)	7.2	=	12.7	=	12.4	=	12.2	=	13.8	=
Zinc	(mg/L)	ND		ND		ND		ND		ND	
VOC											
1,1,1-Trichloroethane	(ug/L)	ND		ND		ND		ND		ND	
1,1-Dichloroethane	(ug/L)	ND		ND		ND		ND		ND	
1,1-Dichloroethene	(ug/L)	ND		ND		ND		ND		ND	
1,2-Dichloroethane	(ug/L)	ND		ND		ND		ND		ND	
2-Butanone	(ug/L)	ND		ND		ND		ND		ND	
Acetone	(ug/L)	ND		ND		ND		ND		ND	
Benzene	(ug/L)	ND		ND		ND		ND		ND	
Bromodichloromethane	(ug/L)	ND		ND		ND		ND		ND	
Chlorobenzene	(ug/L)	ND		ND		ND		ND		ND	
Chloroform	(ug/L)	ND		ND		ND		ND		ND	
Dibromochloromethane	(ug/L)	ND		ND		ND		ND		ND	
Methylene chloride	(ug/L)	ND		ND		ND		ND		ND	
Toluene	(ug/L)	ND		ND		ND		0.33	J	ND	
Vinyl chloride	(ug/L)	ND		ND		ND		ND		ND	
Xylenes (total)	(ug/L)	ND		ND		ND		0.56	J	ND	
cis-1,2-Dichloroethene	(ug/L)	ND		ND		ND		ND		ND	

Wright-Patterson AFB
April 2001 - OU1 Data - Ground Water
The IT Group, Project 777097

Sample Number		LF10-MW09C-0401		LF10-MW103-0401		LF10-MW105-0401		LF10-MW10C-0401		LF10-MW10C-0401 AMB01	
Sample Date		04/25/01		04/25/01		04/25/01		04/26/01		04/26/01	
METAL											
Aluminum	(mg/L)	0.26	=	8.0	=	ND		ND		ND	
Arsenic	(mg/L)	ND		0.067	=	ND		ND		ND	
Barium	(mg/L)	ND		0.65	=	0.70	=	ND		ND	
Calcium	(mg/L)	112	=	137	=	58.5	=	97.4	=	6.8	=
Chromium	(mg/L)	ND		0.021	=	ND		ND		ND	
Copper	(mg/L)	ND		0.036	=	ND		ND		ND	
Iron	(mg/L)	0.96	=	22.1	=	0.15	=	0.37	=	ND	
Lead	(mg/L)	ND		0.0034	=	ND		ND		ND	
Magnesium	(mg/L)	41.3	=	66.3	=	37.2	=	44.1	=	ND	
Manganese	(mg/L)	ND		0.21	=	ND		0.035	=	ND	
Potassium	(mg/L)	ND		12.2	=	11.4	=	ND		ND	
Sodium	(mg/L)	7.6	=	53.1	=	6.8	=	10.6	=	ND	
Zinc	(mg/L)	ND		0.30	=	ND		ND		0.22	=
VOC											
1,1,1-Trichloroethane	(ug/L)	ND		ND		ND		ND		ND	
1,1-Dichloroethane	(ug/L)	ND		ND		ND		ND		ND	
1,1-Dichloroethene	(ug/L)	ND		ND		ND		ND		ND	
1,2-Dichloroethane	(ug/L)	ND		ND		ND		ND		ND	
2-Butanone	(ug/L)	ND		ND		ND		ND		6.3	J
Acetone	(ug/L)	ND		3.7	J	ND		ND		67	=
Benzene	(ug/L)	ND		1.2	=	ND		ND		ND	
Bromodichloromethane	(ug/L)	ND		ND		ND		ND		3.9	=
Chlorobenzene	(ug/L)	ND		2.0	=	ND		ND		ND	
Chloroform	(ug/L)	ND		ND		ND		ND		13	=
Dibromochloromethane	(ug/L)	ND		ND		ND		ND		0.77	J
Methylene chloride	(ug/L)	ND		0.48	J,B	ND		ND		0.39	J,B
Toluene	(ug/L)	ND		ND		ND		ND		ND	
Vinyl chloride	(ug/L)	ND		ND		ND		ND		ND	
Xylenes (total)	(ug/L)	ND		ND		ND		ND		ND	
cis-1,2-Dichloroethene	(ug/L)	ND		ND		ND		ND		ND	

Wright-Patterson AFB
April 2001 - OU1 Data - Ground Water
The IT Group, Project 777097

Sample Number		LF8-MW02C-0401		LF8-MW05B-0401		LF8-MW05B-0451		LF8-MW08B-0401		LF8-MW09A-0401	
Sample Date		04/23/01		04/23/01		04/23/01		04/24/01		04/24/01	
METAL											
Aluminum	(mg/L)	ND		ND		ND		0.28	=	ND	
Arsenic	(mg/L)	0.033	=	ND		ND		0.033	=	ND	
Barium	(mg/L)	0.88	=	0.35	=	0.36	=	0.54	=	0.20	=
Calcium	(mg/L)	109	=	92.4	=	94.3	=	87.0	=	86.3	=
Chromium	(mg/L)	ND		ND		ND		ND		ND	
Copper	(mg/L)	ND		ND		ND		ND		ND	
Iron	(mg/L)	6.3	=	1.5	=	1.7	=	4.1	=	ND	
Lead	(mg/L)	ND		ND		ND		ND		ND	
Magnesium	(mg/L)	52.2	=	58.0	=	57.7	=	41.0	=	38.2	=
Manganese	(mg/L)	0.042	=	0.077	=	0.080	=	0.17	=	ND	
Potassium	(mg/L)	ND		ND		ND		ND		7.4	=
Sodium	(mg/L)	25.0	=	19.5	=	19.6	=	11.5	=	41.8	=
Zinc	(mg/L)	ND		ND		ND		ND		ND	
VOC											
1,1,1-Trichloroethane	(ug/L)	ND		ND		ND		ND		ND	
1,1-Dichloroethane	(ug/L)	ND		ND		ND		ND		ND	
1,1-Dichloroethene	(ug/L)	ND		ND		ND		ND		ND	
1,2-Dichloroethane	(ug/L)	ND		ND		ND		ND		ND	
2-Butanone	(ug/L)	ND		ND		ND		ND		ND	
Acetone	(ug/L)	ND		ND		ND		3.3	J	ND	
Benzene	(ug/L)	ND		ND		ND		ND		ND	
Bromodichloromethane	(ug/L)	ND		ND		ND		ND		ND	
Chlorobenzene	(ug/L)	ND		ND		ND		ND		ND	
Chloroform	(ug/L)	ND		ND		ND		ND		ND	
Dibromochloromethane	(ug/L)	ND		ND		ND		ND		ND	
Methylene chloride	(ug/L)	ND		ND		ND		ND		0.35	J,B
Toluene	(ug/L)	ND		ND		ND		ND		ND	
Vinyl chloride	(ug/L)	ND		ND		ND		ND		ND	
Xylenes (total)	(ug/L)	ND		ND		ND		ND		ND	
cis-1,2-Dichloroethene	(ug/L)	ND		0.30	J	0.29	J	ND		ND	

Wright-Patterson AFB
April 2001 - OU1 Data - Ground Water
The IT Group, Project 777097

Sample Number		LF8-MW10B-0401		LF8-MW11B-0401	
Sample Date		04/24/01		04/24/01	
METAL					
Aluminum	(mg/L)	ND		ND	
Arsenic	(mg/L)	ND		ND	
Barium	(mg/L)	0.24	=	ND	
Calcium	(mg/L)	187	=	34.7	=
Chromium	(mg/L)	ND		ND	
Copper	(mg/L)	ND		ND	
Iron	(mg/L)	1.4	=	1.3	=
Lead	(mg/L)	ND		ND	
Magnesium	(mg/L)	91.2	=	52.0	=
Manganese	(mg/L)	0.30	=	ND	
Potassium	(mg/L)	ND		24.2	=
Sodium	(mg/L)	100	=	82.1	=
Zinc	(mg/L)	ND		ND	
VOC					
1,1,1-Trichloroethane	(ug/L)	ND		ND	
1,1-Dichloroethane	(ug/L)	10	=	ND	
1,1-Dichloroethene	(ug/L)	ND		ND	
1,2-Dichloroethane	(ug/L)	0.45	J	ND	
2-Butanone	(ug/L)	ND		ND	
Acetone	(ug/L)	ND		ND	
Benzene	(ug/L)	ND		ND	
Bromodichloromethane	(ug/L)	ND		ND	
Chlorobenzene	(ug/L)	ND		ND	
Chloroform	(ug/L)	ND		ND	
Dibromochloromethane	(ug/L)	ND		ND	
Methylene chloride	(ug/L)	ND		0.34	J,B
Toluene	(ug/L)	ND		ND	
Vinyl chloride	(ug/L)	7.4	=	ND	
Xylenes (total)	(ug/L)	ND		ND	
cis-1,2-Dichloroethene	(ug/L)	1.1	=	ND	

-- = Not Applicable, ND = Not Detected

Wright-Patterson AFB
April 2001 - OU1-MISC Data - Ground Water
The IT Group, Project 777097

Sample Number	LF8/10-LW02-2001
Sample Date	04/26/01

E150.1			
pH (liquid)	(No Units	7.3	=
E160.2			
Total Suspended Solids	(mg/L)	7.0	=
E410.4			
Chemical Oxygen Demand (COD)	(mg/L)	41	=
METAL			
Aluminum	(mg/L)	0.24	=
Barium	(mg/L)	0.67	=
Calcium	(mg/L)	176	=
Copper	(mg/L)	0.025	=
Iron	(mg/L)	1.9	=
Magnesium	(mg/L)	87.3	=
Manganese	(mg/L)	0.51	=
Nickel	(mg/L)	0.049	=
Potassium	(mg/L)	6.5	=
Sodium	(mg/L)	181	=
VOC			
Benzene	(ug/L)	0.59	J
Chlorobenzene	(ug/L)	5.1	=
Vinyl chloride	(ug/L)	1.1	=
cis-1,2-Dichloroethene	(ug/L)	14	=
trans-1,2-Dichloroethene	(ug/L)	0.19	J

-- = Not Applicable, ND = Not Detected

Wright-Patterson AFB
April 2001 - OU1 Data - Ground Water
The IT Group, Project 777097

Sample Number		01-004-M-0401		01-DM-102D-M-0401		02-DM-81D-M-0401		02-DM-82M-0401		02-DM-83S-M-0401	
Sample Date		04/23/01		04/25/01		04/23/01		04/23/01		04/25/01	
MERCURY											
Mercury	(mg/L)	0.00020	ND	0.00020	ND	0.00020	ND	0.00020	ND	0.00020	ND
METAL											
Aluminum	(mg/L)	0.20	ND	0.27	=	0.20	ND	0.20	ND	1.6	=
Antimony	(mg/L)	0.060	ND	0.060	ND	0.060	ND	0.060	ND	0.060	ND
Arsenic	(mg/L)	0.046	=	0.010	ND	0.016	=	0.010	ND	0.010	ND
Barium	(mg/L)	0.34	=	0.28	=	0.20	ND	0.38	=	0.27	=
Beryllium	(mg/L)	0.0040	ND	0.0040	ND	0.0040	ND	0.0040	ND	0.0040	ND
Cadmium	(mg/L)	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND
Calcium	(mg/L)	119	=	56.0	=	116	=	79.5	=	154	=
Chromium	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Cobalt	(mg/L)	0.050	ND	0.050	ND	0.050	ND	0.050	ND	0.050	ND
Copper	(mg/L)	0.025	ND	0.025	ND	0.025	ND	0.025	ND	0.025	ND
Iron	(mg/L)	18.7	=	0.33	=	3.5	=	0.10	ND	1.9	=
Lead	(mg/L)	0.0030	ND	0.0030	ND	0.0030	ND	0.0030	ND	0.0030	ND
Magnesium	(mg/L)	48.7	=	19.4	=	62.0	=	39.1	=	76.7	=
Manganese	(mg/L)	0.21	=	0.052	=	0.050	=	0.042	=	1.3	=
Nickel	(mg/L)	0.040	ND	0.040	ND	0.040	ND	0.040	ND	0.040	ND
Potassium	(mg/L)	5.0	ND	8.5	=	5.0	ND	5.0	ND	5.0	ND
Selenium	(mg/L)	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND
Silver	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Sodium	(mg/L)	9.9	=	33.8	=	12.9	=	9.8	=	76.1	=
Thallium	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Vanadium	(mg/L)	0.050	ND	0.050	ND	0.050	ND	0.050	ND	0.050	ND
Zinc	(mg/L)	0.050	ND	0.050	ND	0.050	ND	0.050	ND	0.050	ND
VOC											
1,1,1-Trichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	36	=
1,1,2,2-Tetrachloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	2.5	ND
1,1,2-Trichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	2.5	ND
1,1-Dichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	64	=
1,1-Dichloroethene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	3.6	=
1,2-Dichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	2.5	ND
1,2-Dichloropropane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	2.5	ND
2-Butanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	25	ND
2-Hexanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	25	ND
4-Methyl-2-pentanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	25	ND
Acetone	(ug/L)	10	ND	10	ND	10	ND	10	ND	25	ND
Benzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	2.5	ND
Bromodichloromethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	2.5	ND
Bromoform	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	2.5	ND
Bromomethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	5.0	ND
Carbon disulfide	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	2.5	ND
Carbon tetrachloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	2.5	ND
Chlorobenzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	2.5	ND
Chloroethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	5.0	ND

Wright-Patterson AFB
April 2001 - OU1 Data - Ground Water
The IT Group, Project 777097

Sample Number		01-004-M-0401		01-DM-102D-M-0401		02-DM-81D-M-0401		02-DM-82M-0401		02-DM-83S-M-0401	
Sample Date		04/23/01		04/25/01		04/23/01		04/23/01		04/25/01	
VOC											
Chloroform	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	2.5	ND
Chloromethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	5.0	ND
Dibromochloromethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	2.5	ND
Ethylbenzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	2.5	ND
Methyl tert-butyl ether	(ug/L)	5.0	ND	5.0	ND	5.0	ND	5.0	ND	12	ND
Methylene chloride	(ug/L)	1.0	ND	0.34	J,B	1.0	ND	1.0	ND	2.5	ND
Styrene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	2.5	ND
Tetrachloroethene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	2.5	ND
Toluene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	2.5	ND
Trichloroethene	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	5.0	ND
Vinyl chloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	6.1	=
Xylenes (total)	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	2.5	ND
cis-1,2-Dichloroethene	(ug/L)	0.50	ND	0.50	ND	0.50	ND	0.50	ND	2.9	=
cis-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	2.5	ND
trans-1,2-Dichloroethene	(ug/L)	0.50	ND	0.50	ND	0.50	ND	0.50	ND	1.2	ND
trans-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	2.5	ND

Wright-Patterson AFB
April 2001 - OU1 Data - Ground Water
The IT Group, Project 777097

Sample Number		LF08-MW101-0401		LF08-MW102-0401		LF08-MW103-0401		LF10-MW03A-0401		LF10-MW05B-0401	
Sample Date		04/24/01		04/24/01		04/24/01		04/26/01		04/23/01	
MERCURY											
Mercury	(mg/L)	0.00020	ND	0.00020	ND	0.00020	ND	0.00020	ND	0.00020	ND
METAL											
Aluminum	(mg/L)	0.35	=	0.20	ND	0.20	ND	6.8	=	0.20	ND
Antimony	(mg/L)	0.060	ND	0.060	ND	0.060	ND	0.060	ND	0.060	ND
Arsenic	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Barium	(mg/L)	0.20	=	0.20	=	0.34	=	0.20	ND	0.54	=
Beryllium	(mg/L)	0.0040	ND	0.0040	ND	0.0040	ND	0.0040	ND	0.0040	ND
Cadmium	(mg/L)	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND
Calcium	(mg/L)	82.5	=	81.5	=	59.6	=	77.9	=	72.8	=
Chromium	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.024	=	0.010	ND
Cobalt	(mg/L)	0.050	ND	0.050	ND	0.050	ND	0.050	ND	0.050	ND
Copper	(mg/L)	0.025	ND	0.025	ND	0.025	ND	0.025	ND	0.025	ND
Iron	(mg/L)	3.4	=	0.20	=	0.73	=	7.0	=	0.24	=
Lead	(mg/L)	0.0030	ND	0.0030	ND	0.0030	ND	0.0030	=	0.0030	ND
Magnesium	(mg/L)	36.6	=	28.7	=	19.1	=	40.0	=	32.9	=
Manganese	(mg/L)	0.062	=	0.030	=	0.015	ND	0.10	=	0.015	ND
Nickel	(mg/L)	0.040	ND	0.040	ND	0.040	ND	0.040	ND	0.040	ND
Potassium	(mg/L)	5.0	ND	5.0	ND	5.2	=	13.6	=	8.6	=
Selenium	(mg/L)	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND
Silver	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Sodium	(mg/L)	13.6	=	12.5	=	12.5	=	41.4	=	36.9	=
Thallium	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Vanadium	(mg/L)	0.050	ND	0.050	ND	0.050	ND	0.050	ND	0.050	ND
Zinc	(mg/L)	0.050	ND	0.061	=	0.088	=	0.072	=	0.050	ND
VOC											
1,1,1-Trichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1,2,2-Tetrachloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1,2-Trichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1-Dichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1-Dichloroethene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,2-Dichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,2-Dichloropropane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
2-Butanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
2-Hexanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
4-Methyl-2-pentanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
Acetone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
Benzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromodichloromethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromoform	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromomethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Carbon disulfide	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Carbon tetrachloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Chlorobenzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Chloroethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND

Wright-Patterson AFB
April 2001 - OU1 Data - Ground Water
The IT Group, Project 777097

Sample Number		LF08-MW101-0401		LF08-MW102-0401		LF08-MW103-0401		LF10-MW03A-0401		LF10-MW05B-0401	
Sample Date		04/24/01		04/24/01		04/24/01		04/26/01		04/23/01	
VOC											
Chloroform	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Chloromethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Dibromochloromethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Ethylbenzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Methyl tert-butyl ether	(ug/L)	5.0	ND	5.0	ND	5.0	ND	5.0	ND	5.0	ND
Methylene chloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	0.36	J,B
Styrene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Tetrachloroethene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Toluene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Trichloroethene	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Vinyl chloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Xylenes (total)	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
cis-1,2-Dichloroethene	(ug/L)	0.50	ND	0.50	ND	0.50	ND	0.50	ND	0.50	ND
cis-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
trans-1,2-Dichloroethene	(ug/L)	0.50	ND	0.50	ND	0.50	ND	0.50	ND	0.50	ND
trans-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND

Wright-Patterson AFB
April 2001 - OU1 Data - Ground Water
The IT Group, Project 777097

Sample Number		LF10-MW06A-0401		LF10-MW07A-0401		LF10-MW07A-0451		LF10-MW08A-2-0401		LF10-MW08A-2-0451	
Sample Date		04/25/01		04/23/01		04/23/01		04/25/01		04/25/01	
MERCURY											
Mercury	(mg/L)	0.00020	ND	0.00020	ND	0.00020	ND	0.00020	ND	0.00020	ND
METAL											
Aluminum	(mg/L)	0.20	ND	0.20	ND	0.20	ND	0.20	ND	0.20	ND
Antimony	(mg/L)	0.060	ND	0.060	ND	0.060	ND	0.060	ND	0.060	ND
Arsenic	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Barium	(mg/L)	0.20	ND	0.34	=	0.33	=	0.20	ND	0.20	=
Beryllium	(mg/L)	0.0040	ND	0.0040	ND	0.0040	ND	0.0040	ND	0.0040	ND
Cadmium	(mg/L)	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND
Calcium	(mg/L)	72.7	=	101	=	100	=	93.6	=	102	=
Chromium	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Cobalt	(mg/L)	0.050	ND	0.050	ND	0.050	ND	0.050	ND	0.050	ND
Copper	(mg/L)	0.025	ND	0.025	ND	0.025	ND	0.025	ND	0.025	ND
Iron	(mg/L)	0.10	ND	3.5	=	3.4	=	1.4	=	1.5	=
Lead	(mg/L)	0.0030	ND	0.0030	ND	0.0030	ND	0.0030	ND	0.0030	ND
Magnesium	(mg/L)	35.4	=	49.7	=	48.6	=	41.7	=	45.8	=
Manganese	(mg/L)	0.015	ND	0.065	=	0.066	=	0.13	=	0.14	=
Nickel	(mg/L)	0.040	ND	0.040	ND	0.040	ND	0.040	ND	0.040	ND
Potassium	(mg/L)	12.4	=	5.0	ND	5.0	ND	5.0	ND	5.0	ND
Selenium	(mg/L)	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND
Silver	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Sodium	(mg/L)	7.2	=	12.7	=	12.4	=	12.2	=	13.8	=
Thallium	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Vanadium	(mg/L)	0.050	ND	0.050	ND	0.050	ND	0.050	ND	0.050	ND
Zinc	(mg/L)	0.050	ND	0.050	ND	0.050	ND	0.050	ND	0.050	ND
VOC											
1,1,1-Trichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1,2,2-Tetrachloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1,2-Trichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1-Dichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1-Dichloroethene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,2-Dichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,2-Dichloropropane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
2-Butanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
2-Hexanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
4-Methyl-2-pentanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
Acetone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
Benzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromodichloromethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromoform	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromomethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Carbon disulfide	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Carbon tetrachloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Chlorobenzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Chloroethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND

Wright-Patterson AFB
April 2001 - OU1 Data - Ground Water
The IT Group, Project 777097

Sample Number		LF10-MW06A-0401		LF10-MW07A-0401		LF10-MW07A-0451		LF10-MW08A-2-0401		LF10-MW08A-2-0451	
Sample Date		04/25/01		04/23/01		04/23/01		04/25/01		04/25/01	
VOC											
Chloroform	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Chloromethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Dibromochloromethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Ethylbenzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Methyl tert-butyl ether	(ug/L)	5.0	ND	5.0	ND	5.0	ND	5.0	ND	5.0	ND
Methylene chloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Styrene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Tetrachloroethene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Toluene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	0.33	J	1.0	ND
Trichloroethene	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Vinyl chloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Xylenes (total)	(ug/L)	1.0	ND	1.0	ND	1.0	ND	0.56	J	1.0	ND
cis-1,2-Dichloroethene	(ug/L)	0.50	ND	0.50	ND	0.50	ND	0.50	ND	0.50	ND
cis-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
trans-1,2-Dichloroethene	(ug/L)	0.50	ND	0.50	ND	0.50	ND	0.50	ND	0.50	ND
trans-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND

Wright-Patterson AFB
April 2001 - OU1 Data - Ground Water
The IT Group, Project 777097

Sample Number		LF10-MW09C-0401		LF10-MW103-0401		LF10-MW105-0401		LF10-MW10C-0401		LF10-MW10C-0401 AMB01	
Sample Date		04/25/01		04/25/01		04/25/01		04/26/01		04/26/01	
MERCURY											
Mercury	(mg/L)	0.00020	ND	0.00020	ND	0.00020	ND	0.00020	ND	0.00020	ND
METAL											
Aluminum	(mg/L)	0.26	=	8.0	=	0.20	ND	0.20	ND	0.20	ND
Antimony	(mg/L)	0.060	ND	0.060	ND	0.060	ND	0.060	ND	0.060	ND
Arsenic	(mg/L)	0.010	ND	0.067	=	0.010	ND	0.010	ND	0.010	ND
Barium	(mg/L)	0.20	ND	0.65	=	0.70	=	0.20	ND	0.20	ND
Beryllium	(mg/L)	0.0040	ND	0.0040	ND	0.0040	ND	0.0040	ND	0.0040	ND
Cadmium	(mg/L)	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND
Calcium	(mg/L)	112	=	137	=	58.5	=	97.4	=	6.8	=
Chromium	(mg/L)	0.010	ND	0.021	=	0.010	ND	0.010	ND	0.010	ND
Cobalt	(mg/L)	0.050	ND	0.050	ND	0.050	ND	0.050	ND	0.050	ND
Copper	(mg/L)	0.025	ND	0.036	=	0.025	ND	0.025	ND	0.025	ND
Iron	(mg/L)	0.96	=	22.1	=	0.15	=	0.37	=	0.10	ND
Lead	(mg/L)	0.0030	ND	0.0034	=	0.0030	ND	0.0030	ND	0.0030	ND
Magnesium	(mg/L)	41.3	=	66.3	=	37.2	=	44.1	=	5.0	ND
Manganese	(mg/L)	0.015	ND	0.21	=	0.015	ND	0.035	=	0.015	ND
Nickel	(mg/L)	0.040	ND	0.040	ND	0.040	ND	0.040	ND	0.040	ND
Potassium	(mg/L)	5.0	ND	12.2	=	11.4	=	5.0	ND	5.0	ND
Selenium	(mg/L)	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND
Silver	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Sodium	(mg/L)	7.6	=	53.1	=	6.8	=	10.6	=	5.0	ND
Thallium	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Vanadium	(mg/L)	0.050	ND	0.050	ND	0.050	ND	0.050	ND	0.050	ND
Zinc	(mg/L)	0.050	ND	0.30	=	0.050	ND	0.050	ND	0.22	=
VOC											
1,1,1-Trichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1,2,2-Tetrachloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1,2-Trichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1-Dichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1-Dichloroethene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,2-Dichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,2-Dichloropropane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
2-Butanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	6.3	J
2-Hexanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
4-Methyl-2-pentanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
Acetone	(ug/L)	10	ND	3.7	J	10	ND	10	ND	67	=
Benzene	(ug/L)	1.0	ND	1.2	=	1.0	ND	1.0	ND	1.0	ND
Bromodichloromethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	3.9	=
Bromoform	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromomethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Carbon disulfide	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Carbon tetrachloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Chlorobenzene	(ug/L)	1.0	ND	2.0	=	1.0	ND	1.0	ND	1.0	ND
Chloroethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND

Wright-Patterson AFB
April 2001 - OU1 Data - Ground Water
The IT Group, Project 777097

Sample Number		LF10-MW09C-0401		LF10-MW103-0401		LF10-MW105-0401		LF10-MW10C-0401		LF10-MW10C-0401 AMB01	
Sample Date		04/25/01		04/25/01		04/25/01		04/26/01		04/26/01	
VOC											
Chloroform	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	13	=
Chloromethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Dibromochloromethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	0.77	J
Ethylbenzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Methyl tert-butyl ether	(ug/L)	5.0	ND	5.0	ND	5.0	ND	5.0	ND	5.0	ND
Methylene chloride	(ug/L)	1.0	ND	0.48	J,B	1.0	ND	1.0	ND	0.39	J,B
Styrene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Tetrachloroethene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Toluene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Trichloroethene	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Vinyl chloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Xylenes (total)	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
cis-1,2-Dichloroethene	(ug/L)	0.50	ND	0.50	ND	0.50	ND	0.50	ND	0.50	ND
cis-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
trans-1,2-Dichloroethene	(ug/L)	0.50	ND	0.50	ND	0.50	ND	0.50	ND	0.50	ND
trans-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND

Wright-Patterson AFB
April 2001 - OU1 Data - Ground Water
The IT Group, Project 777097

Sample Number		LF8-MW02C-0401		LF8-MW05B-0401		LF8-MW05B-0451		LF8-MW08B-0401		LF8-MW09A-0401	
Sample Date		04/23/01		04/23/01		04/23/01		04/24/01		04/24/01	
MERCURY											
Mercury	(mg/L)	0.00020	ND	0.00020	ND	0.00020	ND	0.00020	ND	0.00020	ND
METAL											
Aluminum	(mg/L)	0.20	ND	0.20	ND	0.20	ND	0.28	=	0.20	ND
Antimony	(mg/L)	0.060	ND	0.060	ND	0.060	ND	0.060	ND	0.060	ND
Arsenic	(mg/L)	0.033	=	0.010	ND	0.010	ND	0.033	=	0.010	ND
Barium	(mg/L)	0.88	=	0.35	=	0.36	=	0.54	=	0.20	=
Beryllium	(mg/L)	0.0040	ND	0.0040	ND	0.0040	ND	0.0040	ND	0.0040	ND
Cadmium	(mg/L)	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND
Calcium	(mg/L)	109	=	92.4	=	94.3	=	87.0	=	86.3	=
Chromium	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Cobalt	(mg/L)	0.050	ND	0.050	ND	0.050	ND	0.050	ND	0.050	ND
Copper	(mg/L)	0.025	ND	0.025	ND	0.025	ND	0.025	ND	0.025	ND
Iron	(mg/L)	6.3	=	1.5	=	1.7	=	4.1	=	0.10	ND
Lead	(mg/L)	0.0030	ND	0.0030	ND	0.0030	ND	0.0030	ND	0.0030	ND
Magnesium	(mg/L)	52.2	=	58.0	=	57.7	=	41.0	=	38.2	=
Manganese	(mg/L)	0.042	=	0.077	=	0.080	=	0.17	=	0.015	ND
Nickel	(mg/L)	0.040	ND	0.040	ND	0.040	ND	0.040	ND	0.040	ND
Potassium	(mg/L)	5.0	ND	5.0	ND	5.0	ND	5.0	ND	7.4	=
Selenium	(mg/L)	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND
Silver	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Sodium	(mg/L)	25.0	=	19.5	=	19.6	=	11.5	=	41.8	=
Thallium	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Vanadium	(mg/L)	0.050	ND	0.050	ND	0.050	ND	0.050	ND	0.050	ND
Zinc	(mg/L)	0.050	ND	0.050	ND	0.050	ND	0.050	ND	0.050	ND
VOC											
1,1,1-Trichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1,2,2-Tetrachloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1,2-Trichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1-Dichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1-Dichloroethene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,2-Dichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,2-Dichloropropane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
2-Butanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
2-Hexanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
4-Methyl-2-pentanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
Acetone	(ug/L)	10	ND	10	ND	10	ND	3.3	J	10	ND
Benzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromodichloromethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromoform	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromomethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Carbon disulfide	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Carbon tetrachloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Chlorobenzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Chloroethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND

Wright-Patterson AFB
April 2001 - OU1 Data - Ground Water
The IT Group, Project 777097

Sample Number		LF8-MW02C-0401		LF8-MW05B-0401		LF8-MW05B-0451		LF8-MW08B-0401		LF8-MW09A-0401	
Sample Date		04/23/01		04/23/01		04/23/01		04/24/01		04/24/01	
VOC											
Chloroform	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Chloromethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Dibromochloromethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Ethylbenzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Methyl tert-butyl ether	(ug/L)	5.0	ND	5.0	ND	5.0	ND	5.0	ND	5.0	ND
Methylene chloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	0.35	J,B
Styrene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Tetrachloroethene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Toluene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Trichloroethene	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Vinyl chloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Xylenes (total)	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
cis-1,2-Dichloroethene	(ug/L)	0.50	ND	0.30	J	0.29	J	0.50	ND	0.50	ND
cis-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
trans-1,2-Dichloroethene	(ug/L)	0.50	ND	0.50	ND	0.50	ND	0.50	ND	0.50	ND
trans-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND

Wright-Patterson AFB
April 2001 - OU1 Data - Ground Water
The IT Group, Project 777097

Sample Number		LF8-MW10B-0401		LF8-MW11B-0401	
Sample Date		04/24/01		04/24/01	
MERCURY					
Mercury	(mg/L)	0.00020	ND	0.00020	ND
METAL					
Aluminum	(mg/L)	0.20	ND	0.20	ND
Antimony	(mg/L)	0.060	ND	0.060	ND
Arsenic	(mg/L)	0.010	ND	0.010	ND
Barium	(mg/L)	0.24	=	0.20	ND
Beryllium	(mg/L)	0.0040	ND	0.0040	ND
Cadmium	(mg/L)	0.0050	ND	0.0050	ND
Calcium	(mg/L)	187	=	34.7	=
Chromium	(mg/L)	0.010	ND	0.010	ND
Cobalt	(mg/L)	0.050	ND	0.050	ND
Copper	(mg/L)	0.025	ND	0.025	ND
Iron	(mg/L)	1.4	=	1.3	=
Lead	(mg/L)	0.0030	ND	0.0030	ND
Magnesium	(mg/L)	91.2	=	52.0	=
Manganese	(mg/L)	0.30	=	0.015	ND
Nickel	(mg/L)	0.040	ND	0.040	ND
Potassium	(mg/L)	5.0	ND	24.2	=
Selenium	(mg/L)	0.0050	ND	0.0050	ND
Silver	(mg/L)	0.010	ND	0.010	ND
Sodium	(mg/L)	100	=	82.1	=
Thallium	(mg/L)	0.010	ND	0.010	ND
Vanadium	(mg/L)	0.050	ND	0.050	ND
Zinc	(mg/L)	0.050	ND	0.050	ND
VOC					
1,1,1-Trichloroethane	(ug/L)	1.0	ND	1.0	ND
1,1,2,2-Tetrachloroethane	(ug/L)	1.0	ND	1.0	ND
1,1,2-Trichloroethane	(ug/L)	1.0	ND	1.0	ND
1,1-Dichloroethane	(ug/L)	10	=	1.0	ND
1,1-Dichloroethene	(ug/L)	1.0	ND	1.0	ND
1,2-Dichloroethane	(ug/L)	0.45	J	1.0	ND
1,2-Dichloropropane	(ug/L)	1.0	ND	1.0	ND
2-Butanone	(ug/L)	10	ND	10	ND
2-Hexanone	(ug/L)	10	ND	10	ND
4-Methyl-2-pentanone	(ug/L)	10	ND	10	ND
Acetone	(ug/L)	10	ND	10	ND
Benzene	(ug/L)	1.0	ND	1.0	ND
Bromodichloromethane	(ug/L)	1.0	ND	1.0	ND
Bromoform	(ug/L)	1.0	ND	1.0	ND
Bromomethane	(ug/L)	2.0	ND	2.0	ND
Carbon disulfide	(ug/L)	1.0	ND	1.0	ND
Carbon tetrachloride	(ug/L)	1.0	ND	1.0	ND
Chlorobenzene	(ug/L)	1.0	ND	1.0	ND
Chloroethane	(ug/L)	2.0	ND	2.0	ND

Wright-Patterson AFB
April 2001 - OU1 Data - Ground Water
The IT Group, Project 777097

Sample Number		LF8-MW10B-0401		LF8-MW11B-0401	
Sample Date		04/24/01		04/24/01	
VOC					
Chloroform	(ug/L)	1.0	ND	1.0	ND
Chloromethane	(ug/L)	2.0	ND	2.0	ND
Dibromochloromethane	(ug/L)	1.0	ND	1.0	ND
Ethylbenzene	(ug/L)	1.0	ND	1.0	ND
Methyl tert-butyl ether	(ug/L)	5.0	ND	5.0	ND
Methylene chloride	(ug/L)	1.0	ND	0.34	J,B
Styrene	(ug/L)	1.0	ND	1.0	ND
Tetrachloroethene	(ug/L)	1.0	ND	1.0	ND
Toluene	(ug/L)	1.0	ND	1.0	ND
Trichloroethene	(ug/L)	2.0	ND	2.0	ND
Vinyl chloride	(ug/L)	7.4	=	1.0	ND
Xylenes (total)	(ug/L)	1.0	ND	1.0	ND
cis-1,2-Dichloroethene	(ug/L)	1.1	=	0.50	ND
cis-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND
trans-1,2-Dichloroethene	(ug/L)	0.50	ND	0.50	ND
trans-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND

-- = Not Applicable, ND = Not Detected

Wright-Patterson AFB
April 2001 - OU1-MISC Data - Ground Water
The IT Group, Project 777097

Sample Number		LF8/10-LW02-2001
Sample Date		04/26/01

E150.1			
pH (liquid)	(No Units	7.3	=
E160.2			
Total Suspended Solids	(mg/L)	7.0	=
E410.4			
Chemical Oxygen Demand (COD)	(mg/L)	41	=
E413.1			
Oil and Grease (Gravimetric)	(mg/L)	5.0	ND
MERCURY			
Mercury	(mg/L)	0.00020	ND
METAL			
Aluminum	(mg/L)	0.24	=
Antimony	(mg/L)	0.060	ND
Arsenic	(mg/L)	0.010	ND
Barium	(mg/L)	0.67	=
Beryllium	(mg/L)	0.0040	ND
Cadmium	(mg/L)	0.0050	ND
Calcium	(mg/L)	176	=
Chromium	(mg/L)	0.010	ND
Cobalt	(mg/L)	0.050	ND
Copper	(mg/L)	0.025	=
Iron	(mg/L)	1.9	=
Lead	(mg/L)	0.0030	ND
Magnesium	(mg/L)	87.3	=
Manganese	(mg/L)	0.51	=
Molybdenum	(mg/L)	0.010	ND
Nickel	(mg/L)	0.049	=
Potassium	(mg/L)	6.5	=
Selenium	(mg/L)	0.0050	ND
Silver	(mg/L)	0.010	ND
Sodium	(mg/L)	181	=
Thallium	(mg/L)	0.010	ND
Vanadium	(mg/L)	0.050	ND
Zinc	(mg/L)	0.050	ND
VOC			
1,1,1-Trichloroethane	(ug/L)	1.0	ND
1,1,2,2-Tetrachloroethane	(ug/L)	1.0	ND
1,1,2-Trichloroethane	(ug/L)	1.0	ND
1,1-Dichloroethane	(ug/L)	1.0	ND
1,1-Dichloroethene	(ug/L)	1.0	ND
1,2-Dichloroethane	(ug/L)	1.0	ND
1,2-Dichloropropane	(ug/L)	1.0	ND
2-Butanone	(ug/L)	10	ND
2-Hexanone	(ug/L)	10	ND
4-Methyl-2-pentanone	(ug/L)	10	ND
Acetone	(ug/L)	10	ND
Benzene	(ug/L)	0.59	J
Bromodichloromethane	(ug/L)	1.0	ND
Bromoform	(ug/L)	1.0	ND

Wright-Patterson AFB
April 2001 - OU1-MISC Data - Ground Water
The IT Group, Project 777097

Sample Number	LF8/10-LW02-2001
Sample Date	04/26/01

VOC			
Bromomethane	(ug/L)	2.0	ND
Carbon disulfide	(ug/L)	1.0	ND
Carbon tetrachloride	(ug/L)	1.0	ND
Chlorobenzene	(ug/L)	5.1	=
Chloroethane	(ug/L)	2.0	ND
Chloroform	(ug/L)	1.0	ND
Chloromethane	(ug/L)	2.0	ND
Dibromochloromethane	(ug/L)	1.0	ND
Ethylbenzene	(ug/L)	1.0	ND
Methyl tert-butyl ether	(ug/L)	5.0	ND
Methylene chloride	(ug/L)	1.0	ND
Styrene	(ug/L)	1.0	ND
Tetrachloroethene	(ug/L)	1.0	ND
Toluene	(ug/L)	1.0	ND
Trichloroethene	(ug/L)	2.0	ND
Vinyl chloride	(ug/L)	1.1	=
Xylenes (total)	(ug/L)	1.0	ND
cis-1,2-Dichloroethene	(ug/L)	14	=
cis-1,3-Dichloropropene	(ug/L)	1.0	ND
trans-1,2-Dichloroethene	(ug/L)	0.19	J
trans-1,3-Dichloropropene	(ug/L)	1.0	ND

-- = Not Applicable, ND = Not Detected

C-2

OU1 Chain of Custody Records: January and April 2001

Chain of Custody Record

Quanterra

QUA-4124

Client	Project Manager	Date	Chain Of Custody Number
IT Corporation	Joe Tyburski	1/29/01	12960
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
11499 Chester Rd.	513 782-4700 513 782-4749	(330) 966-9789	

City	State	Zip Code	Site Contact
Cincy	OH	45246	Greg Plamondon

Project Name	Carrier/Waybill Number
WPAFB #777097	FEDEX #

Contract/Purchase Order/Quote No.

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	VOC's	Metals	Oil + Grease	COD	TSS	pH						
WPAFB-LFB/10-4W01-2001	1/29/01	1045	Effluent Water	120ml	VOA	3	HCl		X											
				1000ml	Poly	1	HNO_3			X										
				1000ml	Glass	1	H_2SO_4				X									
				250ml	Poly	1	H_2SO_4					X								
				250ml	Poly	1	Cool 4°C						X	X						
WPAFB-LFB/10-TB-2001	1/29/01	1050	Trip Blank	80ml	VOA	2	—		X											
~~TEMP BLANK~~																				

Special Instructions

Possible Hazard Identification	Sample Disposal
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown	☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Turn Around Time Required	QC Level	Project Specific (Specify)
☒ Normal ☐ Rush	☐ I. ☐ II. ☐ III.	

	Date	Time		Date	Time
1. Relinquished By: Darryn M. Warner	1/29/01	1430	1. Received By		
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

Chain of Custody Record

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

STL-4124 (0700)

Client: IT Group	Project Manager: Joe Tybulski	Date: 4/23/01	Chain of Custody Number: 029412
Address: 11499 Chester Rd	Telephone Number (Area Code)/Fax Number: (513) 782 4700 / (513) 782-4749	Lab Number: (330)966-9739	Page 1 of 1
City: Cincinnati; State: OH; Zip Code: 45246	Site Contact: G. Plamondon	Lab Contact: Denise Pohl	
Project Name and Location (State): WPAFB, Ohio	Carrier/Waybill Number: fedex 816215056517		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	HNO3	Analysis (Attach list if more space is needed): VOCs w/MTBE	TAL metals	filtered metals	Special Instructions/ Conditions of Receipt
02-DM-81D-M-0401	4-23-01	0959		X						3			1	X	X		
LF8-MW05B-0401	4-23-01	1212		X						3			1	X	X		
LF8-MW05B-0451		1212		X						3			1	X	X		
LTM-SP11-MW07-0401		1357		X						3				X			
LF10-MW07A-0401		1515		X						3			1	X	X		
LF10-MW07A-0451		1515		X						3			1	X	X		
LF10-MW05B-0401		1650		X						3			1	X	X		
TB042301	4-23-01	0900		X						2				X			
LTM-07-520-M-0401	4/23/01	0903		X						3			2	X	X	X	
02-DM-82M-0401	4/23/01	1058		X						3			1	X	X		
LF8-MW02C-0401	4/23/01	1317		X						3			1	X	X		
01-004-M-0401	4/23/01	1602		X						3			1	X	X		

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

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Normal

QC Requirements (Specify):

1. Relinquished By: [signature]	Date: 4/23/01	Time: 1745	1. Received By: FedEx / Kinkos	Date: 4/23/01	Time: 1745
2. Relinquished By	Date	Time	2. Received By	Date	Time
3. Relinquished By	Date	Time	3. Received By	Date	Time

Comments

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

Chain of Custody Record

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

STL-4124 (0700)

Client: IT Group	Project Manager: Joe Tybulski	Date: 04/24/01	Chain of Custody Number: 029403
Address: 11499 Chester Rd	Telephone Number (Area Code)/Fax Number: (513) 782-4700 / (513) 782-4749	Lab Number: (330) 966-9789	Page 1 of 1
City: Cincinnati; State: OH; Zip Code: 45246	Site Contact: G. Plamondon	Lab Contact: Denise Pohl	
Project Name and Location (State): WPAFB, Ohio	Carrier/Waybill Number: FedEx 816215056403		
Contract/Purchase Order/Quote No.: MC/JN			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	HNO3	Analysis (Attach list if more space is needed): VOCs w/MTBE	TAL metals	Special Instructions/ Conditions of Receipt
LF8-MW11B-0401	4-24-01	0905		X							3			1	X	X	
LF8-MW09A-0401		1145		X							3			1	X	X	
LF8-MW09A-0401 MS				X							3			1	X	X	
LF8-MW09A-0401 MSD				X							3			1	X	X	
LF8-MW08B-0401		1430		X							3			1	X	X	
LF8-MW10B-0401		1553		X							3			1	X	X	
TB-042401		0830		X							2				X		

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

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Normal

QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By: [signature]	4/24/01	1715	1. Received By: FedEx/Kinkos	4/24/01	1715
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments:

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

[redacted]

Chain of Custody Record

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

STL-4124 (0700)

Client: IT Group	Project Manager: Joe Tylutski	Date: 04/24/01	Chain of Custody Number: 029410
Address: 11499 Chester Rd	Telephone Number (Area Code)/Fax Number: (513) 782-4700 / (513) 782-4749	Lab Number: (330) 966-9789	Page 1 of 1
City: Cincinnati; State: OH; Zip Code: 45246	Site Contact: G. Plamondon	Lab Contact: Denise Pohl	
Project Name and Location (State): WPAFB, OHIO	Carrier/Waybill Number: FedEx 816215056403		
Contract/Purchase Order/Quote No.: MS/DM			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil		Unpres.	H2SO4	HNOS	HCl	NaOH	ZnAc/NaOH	HNO3	TAL Metals	VOCs w/ MTBE	filtered metals									Special Instructions/ Conditions of Receipt
[redacted]	[redacted]										[redacted]			[redacted]												
LF08-MW101-0401	~~[illegible]~~ 04/24/01	1000		X							3			1	X	X										
LF08-MW102-0401	~~[illegible]~~ 04/24/01	1200		X							3			1	X	X										
LF08-MW103-0401	04/24/01	1457		X							3			1	X	X										

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

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Normal

QC Requirements (Specify):

1. Relinquished By: [signature]	Date: 4/24/01	Time: 1715	1. Received By: FedEx / Kinko	Date: 4/24/01	Time: 1715
2. Relinquished By:	Date:	Time:	2. Received By:	Date:	Time:
3. Relinquished By:	Date:	Time:	3. Received By:	Date:	Time:

Comments:

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

Chain of Custody Record

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

STL-4124 (0700)

Client: IT Corp	Project Manager: Joe Tyburski	Date: 04/25/01	Chain of Custody Number: 029450
Address: 11499 Chester Rd	Telephone Number (Area Code)/Fax Number: (513) 772-	Lab Number:	Page 1 of 1
City: Cincinnati; State: OH; Zip Code: 45246	Site Contact: Greg Plamondon	Lab Contact: Denise Pohl	
Project Name and Location (State): WPAFB, OH	Carrier/Waybill Number: FedEx 816215056414		
Contract/Purchase Order/Quote No.: DM/MS			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNOS	HCl	NaOH	ZnAc/NaOH	HNO3	VOC w MTBE	TAL & Cat's	Special Instructions/ Conditions of Receipt
LTM-042501-TB01	04/25/01	0821		X						2				X		
02-DM-83S-M-0401	04/25/01	0914		X						3			1	X	X	
LF10-MW103-0401	04/25/01	1118		X						3			1	X	X	
LF10-MW08A-2-0401	04/25/01	1452		X						3			1	X	X	
LF10-MW08A-2-0451	04/25/01	1452		X						3			1	X	X	
LF10-MW06A-0401	04/25/01	1702		X						3			1	X	X	

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

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Normal

QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By: Greg Plamondon	4/25/01	1800	1. Received By: FedEx / Kinka	4/25/01	1800
2. Relinquished By:			2. Received By:		
3. Relinquished By:			3. Received By:		

Comments:

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

Chain of Custody Record

STL-4124 (0700)

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

Client: The IT Group	Project Manager: Joe Tyburski	Date: 4/25/01	Chain of Custody Number: 031999
Address: 11499 Chester Rd	Telephone Number (Area Code)/Fax Number: 513/782-4700 / -4749	Lab Number:	Page 1 of 1
City: Cincinnati; State: OH; Zip Code: 45246	Site Contact: G. Plamondon	Lab Contact:	
Project Name and Location (State): LTM, WPAFB, OH	Carrier/Waybill Number: FedEx: 816215056414		
Contract/Purchase Order/Quote No.: GP/KH			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil		Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH		VOC w/ MTBE	Total TAL Metals										Special Instructions/ Conditions of Receipt
01-DM-102D-M-0401	4/25/01	1450								1	3				✓	✓										
LF10-MW09C-0401	↓	1015								1	3				✓	✓										
" " -0401MS	↓	↓								1	3				✓	✓										
" " -0401MSD	↓	↓								1	3				✓	✓										
LF10-MW105-0401	↓	1150								1	3				✓	✓										

Analysis (Attach list if more space is needed)

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

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Normal

QC Requirements (Specify):

1. Relinquished By: [signature]	Date: 4/25/01	Time: 1800	1. Received By: FedEx / Kinkos	Date: 4/25/01	Time: 1800
2. Relinquished By	Date	Time	2. Received By	Date	Time
3. Relinquished By	Date	Time	3. Received By	Date	Time

Comments

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

Chain of Custody Record

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

STL-4124 (0700)

Client: IT Corporation	Project Manager: Joe Tyburski	Date: 04/26/01	Chain of Custody Number: 031998
Address: 11499 Chester Rd	Telephone Number (Area Code)/Fax Number: (513) 782-4700 / (513) 782-4749	Lab Number: (330) 166-9789	Page 1 of 1
City: Cincinnati; State: OH; Zip Code: 45069	Site Contact: Greg Plamondon	Lab Contact: Denise Pohl	
Project Name and Location (State): WPAFB, OH	Carrier/Waybill Number: Fedex / 816215056425		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil		Unpres.	H2SO4	HNOS	HCl	NaOH	ZnAc/NaOH	HNO3	TAL Metals	VOC w/MTBE	Oil & Grease	Total SS	COD								Special Instructions/ Conditions of Receipt
LF10-MW10C-0401 AMB01	04/26/01	0848		X							3			2	X	X											
LF10-MW10C-0401	04/26/01	0914		X							3			2	X	X											
LF10-MW03A-0401	04/26/01	1191		X							3			2	X	X											
LF8/10-LW02-2001	04/26/01	0905		X				1	2		3			1	X	X	X	X	X								Label date wrong *
WP-042601-TB01	04/26/01	0900		X							2					X											

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

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Normal

QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By: Greg Plamondon	4/26/01	1700	1. Received By: FedEx / Kinkos		
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments: LF8/10-LW02-2001 - Sample date 04/26/01

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

Appendix D

OU5 Water Level Monitoring Field Logs

IT Personnel: G. Plamondon
M. Chiller

OU5 Monthly Water Levels for the LTM Program
Wright-Patterson AFB, Ohio

Date: 11/15/00

	Well No.	Location	Owner	TOC Elevation (ft, MSL)	Screened Interval (ft)	Log Time (xxxx)	Well Secure (Y/N)	LEL Reading (%)	PID Reading (ppm)	Static Depth to Water TOC (ft)	Static Depth to Water TOPC (ft)	Comments
1	08-020-M	WPAFB	WPAFB	791.10	11.0 - 21.0	0953	Y			18.88	19.17	
2	08-021-M	WPAFB	WPAFB	790.69	13.0 - 23.0	1156	Y			19.33	19.37	
3	08-022-M	WPAFB	WPAFB	796.00	26.0 - 36.0	0918	Y			22.39	22.55	
4	08-023-M	WPAFB	WPAFB	791.74	24.0 - 34.0	0923	Y			8.86	9.07	
5	08-523-M	WPAFB	WPAFB	790.61	5.5 - 15.5	0928	Y			DRY	—	
6	08-524-M	WPAFB	WPAFB	789.78	5.4 - 15.4	0932	Y			9.93	10.40	
7	08-525-M	WPAFB	WPAFB	791.84	6.0 - 16.5	0937	Y			14.40	14.75	
8	08-526-M	MCD	WPAFB	791.03	6.4 16.4	1120	Y			DRY	—	
9	08-527-M	MCD	WPAFB	789.13	6.0 - 16.0	1118	Y			DRY	—	
10	08-528-M	MCD	WPAFB	790.25	7.5 - 17.5	1115	Y			DRY	—	
11	CW04-060	WPAFB	WPAFB	792.08	49.7 - 59.7	1150	Y			20.67	20.92	
12	CW04-085	WPAFB	WPAFB	790.07	74.0 - 84.0	1152	Y			18.58	19.12	
13	CW05-055	WPAFB	WPAFB	793.58	45.0 - 55.0	1157	Y			22.53	23.04	
14	CW05-085	WPAFB	WPAFB	793.86	75.0 - 85.0	1159	Y			22.93	23.33	
15	CW06-077	WPAFB	WPAFB	793.34	67.0 - 77.0	0955	Y			20.94	21.49	
16	CW07-055	WPAFB	WPAFB	791.89	44.5 - 54.5	0942	Y			17.41	17.77	
17	CW07-100	WPAFB	WPAFB	791.76	90.0 - 100.0	0939	Y			13.25	14.53	
18	CW08-017	WPAFB	WPAFB	792.79	7.3 - 17.3	0951	Y			14.91	15.14	
19	CW08-055	WPAFB	WPAFB	792.86	44.7 - 54.7	0949	Y			12.87	13.25	
20	CW08-110	WPAFB	WPAFB	791.39	00.0 - 110.0	0947	Y			11.95	12.10	
21	CW09-073	MCD	WPAFB	791.32	63 - 73	1111	Y			20.62	20.87	
22	CW12-085	WPAFB	WPAFB	789.98	75 - 85	0926	Y			8.56	9.20	
23	CW13-085	WPAFB	WPAFB	791.63	75 - 85	0921	Y			8.14	8.58	
24	CW15-055	MCD	WPAFB	792.09	45.0 - 55.0	1107	Y			21.44	21.75	River
25	CW21-040	WPAFB	WPAFB	795.31	30.0 - 40.0	0915	Y			15.79	16.01	
26	MW130S	MCD	Dayton	792.49	29 - 39	1040	Y			19.33	--	
27	MW131M	MCD	Dayton	787.31	58.3 - 68.3	1046	Y			16.03	--	
28	MW131D	MCD	Dayton	788.32	05.4 - 115.4	1048	Y			16.84	--	
29	MW132S	MCD	Dayton	789.78	38.5 - 48.5	1035	Y			20.22	--	
30	MW133S	MCD	Dayton	789.66	43.4 - 53.4	1058	Y			19.38	--	
31	MW133D	MCD	Dayton	789.03	59.5 - 69.5	1056	Y			18.79	--	
32	HD-10D	MCD	Dayton	792.99	59.0 - 69.0	1013	Y			22.02	~~22.02~~	mw
33	HD-11D	MCD	Dayton	791.61	71.0 - 81.0	1020	Y			21.62	--	
34	HD-12S	MCD	Dayton	791.31	14.0 - 24.0	1027	Y			BTP	--	
35	HD-12M	MCD	Dayton	792.21	44.0 - 54.0	1025	Y			20.37	--	
36	HD-13D	MCD	Dayton	790.09	96.0-106.0	--	—	—	—	--	—	Mad Mon. 127
37	HD-13S	MCD	Dayton	789.30	22.5 - 32.5	1016	Y			18.29	--	
38	HD-14S	MCD	Dayton	790.69	22.5 - 32.5	1031	Y			21.37	--	
39	EW-1	WPAFB	WPAFB	810.42	9.5 - 73.5	1203	Y			31.87	--	Must climb tower — bottom foot has rust slime deposit

TOC = Top of casing
TOPC = Top of protective casing
MCD = Miami Conservancy Distsrict

IT Personnel: G. Plamondon
M. Chiller

OU5 Monthly Water Levels for the LTM Program
Wright-Patterson AFB, Ohio

Date: 11/15/00

	Well No.	Location	Owner	Cap Elevation (ft, MSL)	Screened Interval (ft)	Log Time (xxxx)	Well Secure (Y/N)	LEL Reading (%)	PID Reading (ppm)	Static Depth to Water TOC (ft)	Static Depth to Water TOPC (ft)	Comments
1	TTW-01	WPAFB	WPAFB	791.46		1206	Y			20.67	--	
2	TTW-02S	MCD	WPAFB	790.19		1131	Y			19.26	--	
3	TTW-02D	MCD	WPAFB	790.65		1130	Y			19.87	--	
4	TTW-03S	MCD	WPAFB	791.07		1136	Y			20.20	--	
5	TTW-03D	MCD	WPAFB	791.3		1135	Y			20.48	--	
6	TTW-04S	MCD	WPAFB	791.21		1139	Y			20.28	--	
7	TTW-04D	MCD	WPAFB	791.23		1138	Y			20.40	--	
8	TTW-05S	MCD	WPAFB	790.96		1134	Y			20.07	--	
9	TTW-05D	MCD	WPAFB	791.16		1133	Y			20.41	--	

IT Personnel: M.Smith
G.Plamondon

Date: 12/20/00

OU5 Monthly Water Levels for the LTM Program
Wright-Patterson AFB, Ohio

	Well No.	Location	Owner	TOC Elevation (ft, MSL)	Screened interval (ft)	Log Time (xxxx)	Well Secure (Y/N)	LEL Reading (%)	PID Reading (ppm)	Static Depth to Water TOC (ft)	TOPC (ft)	Comments
1	08-020-M	WPAFB	WPAFB	791.10	11.0 - 21.0	1221	Y			19.03		
2	08-021-M	WPAFB	WPAFB	790.69	13.0 - 23.0	1234	Y			19.58		
3	08-022-M	WPAFB	WPAFB	796.00	26.0 - 36.0	1151	Y			22.43		
4	08-023-M	WPAFB	WPAFB	791.74	24.0 - 34.0	1155				8.42		Bad lid
5	08-523-M	WPAFB	WPAFB	790.61	5.5 - 15.5	~~1155~~ 1220	Y			~~8.72~~ NS		~~Bad lid~~ NS Dry
6	08-524-M	WPAFB	WPAFB	789.78	5.4 - 15.4	1205	Y			9.39		
7	08-525-M	WPAFB	WPAFB	791.84	6.0 - 16.5	1207	Y			14.06		
8	08-526-M	MCD	WPAFB	791.03	6.4 16.4							Assumed Dry
9	08-527-M	MCD	WPAFB	789.13	6.0 - 16.0	1034	Y			—		DRY
10	08-528-M	MCD	WPAFB	790.25	7.5 - 17.5	1031	Y			—		DRY
11	CW04-060	WPAFB	WPAFB	792.08	49.7 - 59.7	1245	Y			20.91		
12	CW04-085	WPAFB	WPAFB	790.07	74.0 - 84.0	1247	Y			18.80		
13	CW05-055	WPAFB	WPAFB	793.58	45.0 - 55.0	1232	Y			22.71		
14	CW05-085	WPAFB	WPAFB	793.86	75.0 - 85.0	1230	Y			23.14		
15	CW06-077	WPAFB	WPAFB	793.34	67.0 - 77.0	1223	Y			21.[illegible]		
16	CW07-055	WPAFB	WPAFB	791.89	44.5 - 54.5	1210	Y			17.15		
17	CW07-100	WPAFB	WPAFB	791.76	90.0 - 100.0	1209	Y			12.98		
18	CW08-017	WPAFB	WPAFB	792.79	7.3 - 17.3	1218	Y			14.40		
19	CW08-055	WPAFB	WPAFB	792.86	44.7 - 54.7	1216	Y			12.60		
20	CW08-110	WPAFB	WPAFB	791.39	00.0 - 110.0	1215	Y			11.71		
21	CW09-073	MCD	WPAFB	791.32	63 - 73	1028	Y			21.08		
22	CW12-085	WPAFB	WPAFB	789.98	75 - 85	1201	Y			9.21		
23	CW13-085	WPAFB	WPAFB	791.63	75 - 85	1104	Y			7.72		
24	CW15-055	MCD	WPAFB	792.09	45.0 - 55.0	1039	Y			21.46		River
25	CW21-040	WPAFB	WPAFB	795.31	30.0 - 40.0	1148	Y			15.53		
26	MW130S	MCD	Dayton	792.49	29 - 39	0952	Y			19.79		
27	MW131M	MCD	Dayton	787.31	58.3 - 68.3	0953	Y			16.30		
28	MW131D	MCD	Dayton	788.32	05.4 - 115.4	0959	Y			17.13		
29	MW132S	MCD	Dayton	789.78	38.5 - 48.5	0949	Y			20.49		
30	MW133S	MCD	Dayton	789.66	43.4 - 53.4	1004	Y			19.80		
31	MW133D	MCD	Dayton	789.03	59.5 - 69.5	1007	Y			19.19		
32	HD-10D	MCD	Dayton	792.99	59.0 - 69.0	0922	Y			21.32	21.32	
33	HD-11D	MCD	Dayton	791.61	71.0 - 81.0	0936	Y			20.84		
34	HD-12S	MCD	Dayton	791.31	14.0 - 24.0	~~0929~~ NS 0942				~~18.53~~ NS	N	below top of pump
35	HD-12M	MCD	Dayton	792.21	44.0 - 54.0	0939	Y			20.52		
36	HD-13D	MCD	Dayton	790.09	96.0-106.0	0929	Y			19.36		Mad Mon. 127
37	HD-13S	MCD	Dayton	789.30	22.5 - 32.5	0927	Y			18.53		
38	HD-14S	MCD	Dayton	790.69	22.5 - 32.5	0946	Y			21.81		
39	EW-1	WPAFB	WPAFB	810.42	9.5 - 73.5	1233	Y			[illegible]		Must climb tower

TOC = Top of casing
TOPC = Top of protective casing
MCD = Miami Conservancy Distsrict

CW10-55 MCD 1045 Y 23.97

Common3\plamondo\LTM\forms\OU5ElevLg.xls

IT Personnel: G. Plamondon
M. Smith

OU5 Monthly Water Levels for the LTM Program
Wright-Patterson AFB, Ohio

Date: 12/2/06

	Well No.	Location	Owner	Cap Elevation (ft, MSL)	Screened Interval (ft)	Log Time (xxxx)	Well Secure (Y/N)	LEL Reading (%)	PID Reading (ppm)	Static Depth to Water TOC (ft)	Static Depth to Water TOPC (ft)	Comments
1	TTW-01	WPAFB	WPAFB	791.46		1230	Y			20.89		
2	TTW-02S	MCD	WPAFB	790.19								
3	TTW-02D	MCD	WPAFB	790.65								
4	TTW-03S	MCD	WPAFB	791.07								
5	TTW-03D	MCD	WPAFB	791.3								
6	TTW-04S	MCD	WPAFB	791.21								
7	TTW-04D	MCD	WPAFB	791.23								
8	TTW-05S	MCD	WPAFB	790.96								
9	TTW-05D	MCD	WPAFB	791.16								

D 20.10 1020 S 20.42 1021

HD41

D 20.09 1015 S 19.47 1016

D 20.63 1018 S 20.30 1019

D 20.61 1022 S 20.48 1023

MCD

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IT Personnel: G. Plamondon
D. Warner

OU5 Monthly Water Levels for the LTM Program
Wright-Patterson AFB, Ohio

Date: 1/26/01

	Well No.	Location	Owner	TOC Elevation (ft, MSL)	Screened Interval (ft)	Log Time (xxxx)	Well Secure (Y/N)	LEL Reading (%)	PID Reading (ppm)	Static Depth to Water TOC (ft)	Static Depth to Water TOPC (ft)	Comments
1	08-020-M	WPAFB	WPAFB	791.10	11.0 - 21.0		Y			21.50	21.78	
2	08-021-M	WPAFB	WPAFB	790.69	13.0 - 23.0		Y			22.25	22.75	
3	08-022-M	WPAFB	WPAFB	796.00	26.0 - 36.0		Y			24.78	24.97	
4	08-023-M	WPAFB	WPAFB	791.74	24.0 - 34.0		Y			9.31	9.52	
5	08-523-M	WPAFB	WPAFB	790.61	5.5 - 15.5		Y			Dry		
6	08-524-M	WPAFB	WPAFB	789.78	5.4 - 15.4		Y			10.37	10.94	
7	08-525-M	WPAFB	WPAFB	791.84	6.0 - 16.5		Y			15.34	15.70	
8	08-526-M	MCD	WPAFB	791.03	6.4 16.4		Y			Dry		
9	08-527-M	MCD	WPAFB	789.13	6.0 - 16.0		Y			Dry		
10	08-528-M	MCD	WPAFB	790.25	7.5 - 17.5		Y			Dry		BTP
11	CW04-060	WPAFB	WPAFB	792.08	49.7 - 59.7	1118	Y			23.51	23.77	
12	CW04-085	WPAFB	WPAFB	790.07	74.0 - 84.0	1121	Y			21.37	21.90	
13	CW05-055	WPAFB	WPAFB	793.58	45.0 - 55.0		Y			25.26	25.75	
14	CW05-085	WPAFB	WPAFB	793.86	75.0 - 85.0	1148	Y			25.67	26.10	
15	CW06-077	WPAFB	WPAFB	793.34	67.0 - 77.0		Y			23.48	24.03	
16	CW07-055	WPAFB	WPAFB	791.89	44.5 - 54.5		Y			18.45	18.81	Gopher hole
17	CW07-100	WPAFB	WPAFB	791.76	90.0 - 100.0		Y			13.70	13.98	
18	CW08-017	WPAFB	WPAFB	792.79	7.3 - 17.3					14.70	14.92	
19	CW08-055	WPAFB	WPAFB	792.86	44.7 - 54.7		Y			13.44	13.82	
20	CW08-110	WPAFB	WPAFB	791.39	00.0 - 110.0					12.35	12.50	
21	CW09-073	MCD	WPAFB	791.32	63 - 73		Y			23.75	24.00	
22	CW12-085	WPAFB	WPAFB	789.98	75 - 85		Y			9.09	9.74	
23	CW13-085	WPAFB	WPAFB	791.63	75 - 85		Y			8.60	9.50	
24	CW15-055	MCD	WPAFB	792.09	45.0 - 55.0		Y			24.55	24.90	River
25	CW21-040	WPAFB	WPAFB	795.31	30.0 - 40.0		Y			16.77	16.99	
26	MW130S	MCD	Dayton	792.49	29 - 39	1040	Y			22.52	22.71	
27	MW131M	MCD	Dayton	787.31	58.3 - 68.3		Y			18.95	19.10	
28	MW131D	MCD	Dayton	788.32	05.4 - 115.4	1105	Y			19.76	20.01	
29	MW132S	MCD	Dayton	789.78	38.5 - 48.5		Y			23.11	23.25	
30	MW133S	MCD	Dayton	789.66	43.4 - 53.4		Y			22.45	22.50	
31	MW133D	MCD	Dayton	789.03	59.5 - 69.5	1115	Y			21.85	—	
32	HD-10D	MCD	Dayton	792.99	59.0 - 69.0	1015	Y			24.97	—	
33	HD-11D	MCD	Dayton	791.61	71.0 - 81.0	1023	Y			23.42	—	
34	HD-12S	MCD	Dayton	791.31	14.0 - 24.0	1027	Y			BTP	—	
35	HD-12M	MCD	Dayton	792.21	44.0 - 54.0	1030	Y			23.05	23.10	
36	HD-13D	MCD	Dayton	790.09	96.0-106.0	1020	Y			21.98	—	Mad Mon. 127
37	HD-13S	MCD	Dayton	789.30	22.5 - 32.5	1018	Y			21.16	21.21	
38	HD-14S	MCD	Dayton	790.69	22.5 - 32.5	1035	Y			24.40	—	
39	EW-1	WPAFB	WPAFB	810.42	9.5 - 73.5	1158	Y			42.83		Must climb tower
	CW10-55						Y			26.42	26.88	

TOC = Top of casing
TOPC = Top of protective casing
MCD = Miami Conservancy Distsrict

IT Personnel: G. Plamondon
B. Mitchell

OU5 Monthly Water Levels for the LTM Program
Wright-Patterson AFB, Ohio

Date: 2/16/01

	Well No.	Location	Owner	TOC Elevation (ft, MSL)	Screened interval (ft)	Log Time (xxxx)	Well Secure (Y/N)	LEL Reading (%)	PID Reading (ppm)	Static Depth to Water TOC (ft)	Static Depth to Water TOPC (ft)	Comments
1	08-020-M	WPAFB	WPAFB	791.10	11.0 - 21.0					17.55	17.82	
2	08-021-M	WPAFB	WPAFB	790.69	13.0 - 23.0	0959				18.04	18.55	
3	08-022-M	WPAFB	WPAFB	796.00	26.0 - 36.0					21.17	21.35	Needs rad
4	08-023-M	WPAFB	WPAFB	791.74	24.0 - 34.0	0945				~~Dry~~ 8.22	8.43	~~TD: 8.75~~
5	08-523-M	WPAFB	WPAFB	790.61	5.5 - 15.5	0923				Dry		TD: 8.75
6	08-524-M	WPAFB	WPAFB	789.78	5.4 - 15.4	0920				9.29	9.66	
7	08-525-M	WPAFB	WPAFB	791.84	6.0 - 16.5	0900				13.40	13.75	
8	08-526-M	MCD	WPAFB	791.03	6.4 16.4	10				17.62	17.23	
9	08-527-M	MCD	WPAFB	789.13	6.0 - 16.0		Y			15.85	16.32	
10	08-528-M	MCD	WPAFB	790.25	7.5 - 17.5		Y			17.65	18.21	
11	CW04-060	WPAFB	WPAFB	792.08	49.7 - 59.7		Y			19.25	19.51	
10-55 12	CW~~04-085~~	WPAFB	WPAFB	790.07	74.0 - 84.0					21.46	21.89	River
13	CW05-055	WPAFB	WPAFB	793.58	45.0 - 55.0	1005	Y			21.18	21.66	
14	CW05-085	WPAFB	WPAFB	793.86	75.0 - 85.0	1010	Y			21.64	22.05	
15	CW06-077	WPAFB	WPAFB	793.34	67.0 - 77.0	1008	Y			19.56	20.12	
16	CW07-055	WPAFB	WPAFB	791.89	44.5 - 54.5	0915	Y	–	–	18.31	18.67	
17	CW07-100	WPAFB	WPAFB	791.76	90.0 - 100.0	0910	Y			11.95	12.23	
18	CW08-017	WPAFB	WPAFB	792.79	7.3 - 17.3	0848				14.08	14.30	
19	CW08-055	WPAFB	WPAFB	792.86	44.7 - 54.7	0842				11.65	12.03	
20	CW08-110	WPAFB	WPAFB	791.39	00.0 - 110.0	0840				10.57	10.72	
21	CW09-073	MCD	WPAFB	791.32	63 - 73					18.91	—	
22	CW12-085	WPAFB	WPAFB	789.98	75 - 85	0925				7.67	8.30	
23	CW13-085	WPAFB	WPAFB	791.63	75 - 85	0930				7.53	7.99	
24	CW15-055	MCD	WPAFB	792.09	45.0 - 55.0					19.59	19.92	River
25	CW21-040	WPAFB	WPAFB	795.31	30.0 - 40.0	0951	Y			15.12	15.34	
26	MW130S	MCD	Dayton	792.49	29 - 39					17.68	17.86	
27	MW131M	MCD	Dayton	787.31	58.3 - 68.3		Y			14.50	14.67	
28	MW131D	MCD	Dayton	788.32	05.4 - 115.4		Y			15.30	15.56	
29	MW132S	MCD	Dayton	789.78	38.5 - 48.5		Y		–	18.28	18.42	
30	MW133S	MCD	Dayton	789.66	43.4 - 53.4					17.80	17.85	
31	MW133D	MCD	Dayton	789.03	59.5 - 69.5					17.28	—	
32	HD-10D	MCD	Dayton	792.99	59.0 - 69.0		Y			20.61	—	
33	HD-11D	MCD	Dayton	791.61	71.0 - 81.0					19.26	—	
34	HD-12S	MCD	Dayton	791.31	14.0 - 24.0		Y			Top of	Pump	17.47 -
35	HD-12M	MCD	Dayton	792.21	44.0 - 54.0		Y			18.98	—	
36	HD-13D	MCD	Dayton	790.09	96.0-106.0		Y			17.69	—	Mad Mon. 127
37	HD-13S	MCD	Dayton	789.30	22.5 - 32.5		Y			16.90	16.96	
38	HD-14S	MCD	Dayton	790.69	22.5 - 32.5					19.60	—	
39	EW-1	WPAFB	WPAFB	810.42	9.5 - 73.5					38.75	—	Must climb tower

TOC = Top of casing
TOPC = Top of protective casing
MCD = Miami Conservancy Distsrict

Common3\plamondo\LTM\forms\OU5ElevLg.xls

Water Meter -1'

Personnel: Plamondon
D. Mitchell

OU5 Monthly Water Levels for the LTM Program
Wright-Patterson A. F., Ohio

Date: 2/16

	Well No.	Location	Owner	Cap Elevation (ft, MSL)	Screened Interval (ft)	Log Time (xxxx)	Well Secure (Y/N)	LEL Reading (%)	PID Reading (ppm)	Static Depth to Water TOC (ft)	Static Depth to Water TOPC (ft)	Comments
1	TTW-01	WPAFB	WPAFB	791.46		1028	Y			19.32		
2	TTW-02S	MCD	WPAFB	790.19								
3	TTW-02D	MCD	WPAFB	790.65								
4	TTW-03S	MCD	WPAFB	791.07								
5	TTW-03D	MCD	WPAFB	791.3								
6	TTW-04S	MCD	WPAFB	791.21								
7	TTW-04D	MCD	WPAFB	791.23								
8	TTW-05S	MCD	WPAFB	790.96								
9	TTW-05D	MCD	WPAFB	791.16								

IT Personnel: G. Plamondon
M. Chiller

OU5 Monthly Water Levels for the LTM Program
Wright-Patterson AFB, Ohio

Date: 3/21/07

	Well No.	Location	Owner	TOC Elevation (ft, MSL)	Screened Interval (ft)	Log Time (xxxx)	Well Secure (Y/N)	LEL Reading (%)	PID Reading (ppm)	Static Depth to Water TOC (ft)	Static Depth to Water TOPC (ft)	Comments
1	08-020-M	WPAFB	WPAFB	791.10	11.0 - 21.0	1420	Y			18.18		
2	08-021-M	WPAFB	WPAFB	790.69	13.0 - 23.0	1340	Y			18.58		
3	08-022-M	WPAFB	WPAFB	796.00	26.0 - 36.0	1155	Y			21.73		
4	08-023-M	WPAFB	WPAFB	791.74	24.0 - 34.0	1145	Y			8.13		
5	08-523-M	WPAFB	WPAFB	790.61	5.5 - 15.5	1150	Y			DRY		Delete in future
6	~~08-524-M~~ 25	WPAFB	WPAFB	789.78	5.4 - 15.4	1419	Y			14.24		08-525-M
7	~~08-525-M~~ 24	WPAFB	WPAFB	791.84	6.0 - 16.5	1409	Y			10.09		08-524-M
8	08-526-M	MCD	WPAFB	791.03	6.4 16.4	1106	Y			BTP		
9	08-527-M	MCD	WPAFB	789.13	6.0 - 16.0	1104	Y			16.67		
10	08-528-M	MCD	WPAFB	790.25	7.5 - 17.5	1100	Y			18.33		
11	CW04-060	WPAFB	WPAFB	792.08	49.7 - 59.7	1200	Y			20.87		
12	~~CW04-085~~	~~WPAFB~~	~~WPAFB~~	~~790.07~~	~~74.0 - 84.0~~							~~Deleted~~
13	CW05-055	WPAFB	WPAFB	793.58	45.0 - 55.0	1342	Y			21.74		
14	CW05-085	WPAFB	WPAFB	793.86	75.0 - 85.0	1344	Y			22.20		
15	CW06-077	WPAFB	WPAFB	793.34	67.0 - 77.0	1421	Y			20.24		
16	CW07-055	WPAFB	WPAFB	791.89	44.5 - 54.5	1412	Y			17.20		
17	CW07-100	WPAFB	WPAFB	791.76	90.0 - 100.0	1411	Y			12.98		
18	CW08-017	WPAFB	WPAFB	792.79	7.3 - 17.3	1417	Y			14.91		
19	CW08-055	WPAFB	WPAFB	792.86	44.7 - 54.7	1416	Y			12.69		
20	CW08-110	WPAFB	WPAFB	791.39	00.0 - 110.0	1415	Y			11.76		
21	CW09-073	MCD	WPAFB	791.32	63 - 73	0955	Y			20.01		
22	CW12-085	WPAFB	WPAFB	789.98	75 - 85	1152	Y			8.65		
23	CW13-085	WPAFB	WPAFB	791.63	75 - 85	1143	Y			8.48		
24	CW15-055	MCD	WPAFB	792.09	45.0 - 55.0	1114	Y			20.68		River
25	CW21-040	WPAFB	WPAFB	795.31	30.0 - 40.0	1140	Y			15.95		
26	MW130S	MCD	Dayton	792.49	29 - 39	0800	Y			18.56		* reading from D. Day
27	MW131M	MCD	Dayton	787.31	58.3 - 68.3	0937	Y			15.30		
28	MW131D	MCD	Dayton	788.32	05.4 - 115.4	0939	Y			16.15		
29	MW132S	MCD	Dayton	789.78	38.5 - 48.5	0932	Y			19.24		
30	MW133S	MCD	Dayton	789.66	43.4 - 53.4	0945	Y			18.62		
31	MW133D	MCD	Dayton	789.03	59.5 - 69.5	0947	Y			18.05		
32	HD-10D	MCD	Dayton	792.99	59.0 - 69.0	0916	Y			~~21.25~~ BTP	21.25	
33	HD-~~11D~~12S	MCD	Dayton	791.61	71.0 - 81.0	0923	Y					HD12S
34	HD-~~12S~~11D	MCD	Dayton	791.31	14.0 - 24.0	0921	Y			19.86		HD11D
35	HD-12M	MCD	Dayton	792.21	44.0 - 54.0	0923	Y			19.65		
36	HD-13D	MCD	Dayton	790.09	96.0-106.0	0919	Y			18.33		Mad Mon. 127
37	HD-13S	MCD	Dayton	789.30	22.5 - 32.5	0918	Y			17.47		
38	HD-14S	MCD	Dayton	790.69	22.5 - 32.5	0929	Y			20.45		
39	EW-1	WPAFB	WPAFB	810.42	9.5 - 73.5	1347	Y			39.20		Must climb tower
	CW10-55	MCD	Dayton			1116	Y			22.51		

TOC = Top of casing
TOPC = Top of protective casing
MCD = Miami Conservancy Distsrict

All readings taken today by IT crew are off by 1.0 ft. - 1.0 ft needs to be subtracted from the TOC measurements
*reading from D. Day (MW130S) is correct as written

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T Personnel: _____

_____

OU5 Monthly Water Levels for the LTM Program
Wright-Patterson AFB, Ohio

Date: 3/6/01

	Well No.	Location	Owner	Cap Elevation (ft, MSL)	Screened Interval (ft)	Log Time (xxxx)	Well Secure (Y/N)	LEL Reading (%)	PID Reading (ppm)	Static Depth to Water TOC (ft)	Static Depth to Water TOPC (ft)	Comments
1	TTW-01	WPAFB	WPAFB	791.46		1352	Y			19.91		
2	TTW-02S	MCD	WPAFB	790.19								
3	TTW-02D	MCD	WPAFB	790.65								
4	TTW-03S	MCD	WPAFB	791.07								
5	TTW-03D	MCD	WPAFB	791.3								
6	TTW-04S	MCD	WPAFB	791.21								
7	TTW-04D	MCD	WPAFB	791.23								
8	TTW-05S	MCD	WPAFB	790.96								
9	TTW-05D	MCD	WPAFB	791.16								

IT Personnel: B. Mattingly
W. Coates

Date: 4/30/01

OU5 Monthly Water Levels for the LTM Program
Wright-Patterson AFB, Ohio

Linda

	Well No.	Location	Owner	TOC Elevation (ft, MSL)	Screened interval (ft)	Log Time (xxxx)	Well Secure (Y/N)	LEL Reading (%)	PID Reading (ppm)	Static Depth to Water TOC (ft)	Static Depth to Water TOPC (ft)	Comments
1	08-020-M	WPAFB	WPAFB	791.10	11.0 - 21.0	1010	Y			16.51		
2	08-021-M	WPAFB	WPAFB	790.69	13.0 - 23.0	0957	Y			16.86		
3	08-022-M	WPAFB	WPAFB	796.00	26.0 - 36.0	0924	Y			20.28		
4	08-023-M	WPAFB	WPAFB	791.74	24.0 - 34.0	0934	Y			7.65		
5	08-523-M	WPAFB	WPAFB	790.61	5.5 - 15.5	0936	Y			8.02		
6	08-524-M	WPAFB	WPAFB	789.78	5.4 - 15.4	0945	Y			8.48		
7	08-525-M	WPAFB	WPAFB	791.84	6.0 - 16.5	0948	Y			12.5		
8	08-526-M	MCD	WPAFB	791.03	6.4 16.4	1323	Y			16.25		
9	08-527-M	MCD	WPAFB	789.13	6.0 - 16.0	1326	Y			15.0		
10	08-528-M	MCD	WPAFB	790.25	7.5 - 17.5	1339	Y			16.58		
11	CW04-060	WPAFB	WPAFB	792.08	49.7 - 59.7	0918	Y			18.28		
~~12~~	~~GW04-085~~	~~WPAFB~~	~~WPAFB~~	~~790.07~~	~~74.0 - 84.0~~	~~0919~~	~~Y~~			~~16.15~~		
13	CW05-055	WPAFB	WPAFB	793.58	45.0 - 55.0	0958	Y			19.39		
14	CW05-085	WPAFB	WPAFB	793.86	75.0 - 85.0	1000	Y			19.64		
15	CW06-077	WPAFB	WPAFB	793.34	67.0 - 77.0	1002	Y			18.51		
16	CW07-055	WPAFB	WPAFB	791.89	44.5 - 54.5	0951	Y			13.49		
17	CW07-100	WPAFB	WPAFB	791.76	90.0 - 100.0	0950	Y			11.34		
18	CW08-017	WPAFB	WPAFB	792.79	7.3 - 17.3	1017	Y			13.12		
19	CW08-055	WPAFB	WPAFB	792.86	44.7 - 54.7	1016	Y			11.02		
20	CW08-110	WPAFB	WPAFB	791.39	00.0 - 110.0	1015	Y			9.95		
21	CW09-073	MCD	WPAFB	791.32	63 - 73	1306	Y			18.26		
22	CW12-085	WPAFB	WPAFB	789.98	75 - 85	0938	Y			~~7.1~~ 7.15		
23	CW13-085	WPAFB	WPAFB	791.63	75 - 85	0932	Y			7.03		
24	CW15-055	MCD	WPAFB	792.09	45.0 - 55.0	1253	Y			18.9		River
25	CW21-040	WPAFB	WPAFB	795.31	30.0 - 40.0	0929	Y			14.4		
26	MW130S	MCD	Dayton	792.49	29 - 39	1137	Y			17.54		
27	MW131M	MCD	Dayton	787.31	58.3 - 68.3	1144	Y			13.52		
28	MW131D	MCD	Dayton	788.32	05.4 - 115.4	1146	Y			14.39		
29	MW132S	MCD	Dayton	789.78	38.5 - 48.5	1130	Y			17.48		
30	MW133S	MCD	Dayton	789.66	43.4 - 53.4	1151	Y			16.88		
31	MW133D	MCD	Dayton	789.03	59.5 - 69.5	1153	Y			16.35		
32	HD-10D	MCD	Dayton	792.99	59.0 - 69.0	1108	Y			19.62		
33	HD-11D	MCD	Dayton	791.61	71.0 - 81.0	1117	Y			17.75		
34	HD-12S	MCD	Dayton	791.31	14.0 - 24.0	1120	Y			17.18		
35	HD-12M	MCD	Dayton	792.21	44.0 - 54.0	1121	Y			17.95		
36	HD-13D	MCD	Dayton	790.09	96.0-106.0	1114	Y			16.58		Mad Mon. 127
37	HD-13S	MCD	Dayton	789.30	22.5 - 32.5	1112	Y			15.78		
38	HD-14S	MCD	Dayton	790.69	22.5 - 32.5	1126	Y			18.7		
39	EW-1	WPAFB	WPAFB	810.42	9.5 - 73.5	1003	—			35.85		Must climb tower

Dayton says Shallow

TOC = Top of casing
TOPC = Top of protective casing
MCD = Miami Conservancy Distsrict

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725 gallons purge water

Date: 4/30/01

,r Personnel: _____

_____

OU5 Monthly Water Levels for the LTM Program
Wright-Patterson AFB, Ohio

	Well No.	Location	Owner	Cap Elevation (ft, MSL)	Screened Interval (ft)	Log Time (xxxx)	Well Secure (Y/N)	LEL Reading (%)	PID Reading (ppm)	Static Depth to Water TOC (ft)	Static Depth to Water TOPC (ft)	Comments
1	TTW-01	WPAFB	WPAFB	791.46		1008	Y			17.72		
2	TTW-02S	MCD	WPAFB	790.19		1320	Y			16.44		
3	TTW-02D	MCD	WPAFB	790.65		1321	Y			16.89		
4	TTW-03S	MCD	WPAFB	791.07		1325	Y			17.46		
5	TTW-03D	MCD	WPAFB	791.3		1326	Y			17.62		
6	TTW-04S	MCD	WPAFB	791.21		1328	Y			17.54		
7	TTW-04D	MCD	WPAFB	791.23		1329	Y			17.50		
8	TTW-05S	MCD	WPAFB	790.96		1323	Y			17.25		
9	TTW-05D	MCD	WPAFB	791.16		1324	Y			17.42		

Appendix E

OU4 Soil Gas Monitoring Field Logs

Attachment 2

OU4 - Landfill 6 and 7 Soil Gas Monitoring Log

Date: 4/26/01 Temp: 72 °F

Meter Model: GA-90

Atmospheric Pressure: 29.1" Hg

Cal.Gas Type: methane CO_2 Nitrogen, Exp. Date:

Samplers: Greg Plamondon
Kyle Havens

Gas Conc.:
Methane: 15 Meter Reading:
CO_2: _____ Meter Reading:
N_2: _____ Meter Reading:
NA

Location	Purge Start Time	Sample Time	CO_2%	O_2%	CH_4%	LEL%	Comments
LG-1	1 min	1540	2.6	16.3	0	0	
LG-2	1 min	1610	5.2	8.9	0	0	
LG-3	1 min	1616	3.0	5.9	0	0	
LG-6	1 min	1625	2.3	14.2	0	0	Batt. washed
LG-7	1 min	1603	0.7	19.1	0	0	
LG-8	1 min	1503	1.6	17.4	0	0	
LG-9	1 min	1521	1.5	15.2	0	0	
LG-10	2 min	1530	7.8 ~~8.5~~	0.0 ~~0.5~~	2.5 ~~0.7~~	50.0%	
Bldg 878A SE	1 min	1524	0	20.5	0	0	Inside bldg.
Bldg 878A NW	1 min	1527	0	20.5	0	0	Inside bldg.

Notes:
1. Calibration gas required: Methane, CO_2, and N_2 mixture
2. Regulator required: 0.5 L per minute
3. Tubing type: Tygon
4. For access to Buildings 877 and 878 check in at west end of Building 876.

Attachment 2

OU4 - Landfill 6 and 7 Soil Gas Monitoring Log

Date: 1/29/01 Temp: 32°F

Meter Model: LANDTECH GA-90

Atmospheric Pressure: 29.1" Hg

Cal.Gas Type: HAZCO, ~~Exp.~~ MFG Date: 9/98

Samplers: D. Warner
J. Parks

Gas Conc.: LOT NO. 54005

Methane: 15.0% Meter Reading: 14.8

CO_2: 15.0% Meter Reading: 14.8

N_2: BALANCE Meter Reading: O_2 - .7%

NA

Location	Purge Start Time	Sample Time	CO_2%	O_2%	CH_4%	LEL%	Comments
LG-1	0840	30 se.	3.0	17.5	0.0	0.0	" Hg - 29.1
LG-2	0900	30sec.	5.7	11.1	0.0	0.0	"Hg - 29.1
LG-3	0855	30 sec.	2.3	16.6	0.0	0.0	" Hg - 29.1
LG-6	0850	30 sec	2.1%	16.1%	0.0	0.0	" Hg - 29.1
LG-7	0845	30 sec.	0.6	19.1	0.0	0.0	" Hg - 29.1
LG-8	0820	30sec.	1.8	17.4	0.0	0.0	" Hg - 29.1
LG-9	0905	30sec.	1.6	16.0	0.0	0.0	" Hg - 29.1
LG-10	0825	30 sec.	0.0	19.6	0.0	0.0	" Hg - 29.0
Bldg 878A SE	0830	30sec.	0.0	19.8	0.0	0.0	Inside bldg. "Hg - 29.1
Bldg 878A NW	0835	30sec.	0.0	20.0	0.0	0.0	Inside bldg. "Hg - 29.1

Notes:

1. Calibration gas required: Methane, CO_2, and N_2 mixture
2. Regulator required: 0.5 L per minute
3. Tubing type: Tygon
4. For access to Buildings 877 and 878 check in at west end of Building 876.

Appendix F

OU2 Groundwater Purge Logs
OU2 Water Level Field Logs
OU2 Chain of Custody Records

ERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU2 Well #: 04-016-M Sample Number: BMP-04-016-M-0401

Purging Method/Equipment: Bladder Samplers J. Neese/M. Chiller Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: 2 gal

Sounding (Depth to Well Bottom): 27.20 **Static Water Level** (Depth to Water): 8.85

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4-17-01	1328	Start Purging									
	1335		8.88	0.5	12.5	6.89	685	3	-139.3	0.41	clear
	1340		8.88	1.0	12.5	6.91	672	3	-147.7	0.30	
	1345		8.88	1.5	12.4	6.91	671	2	-155.2	0.27	
	1350		8.87	2.0	12.4	6.90	674	3	-158.9	0.27	
	1355		8.87	2.5	12.3	6.89	681	2	-159.8	0.27	
	1400		8.86	3.0	12.1	6.87	691	2	-161.2	0.31	
	1405	SAMPLE									
	1424		8.93	POST	12.7	6.77	728	2	-148.3	0.92	
											fe = 5.10 mg/L

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4-17-01 **Sample Collection Time:** 1405

Prepared by: M. Chiller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: CU2 Well #: 04-518-M Sample Number: BMP-04-518-M-0401

Purging Method/Equipment: bladder Samplers BM/KM Well Secure (Y/N) Y

Well Casing Diameter: 2 in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): _____ Static Water Level (Depth to Water): 11.95 Fe = 5.08 mg/l

Date 2001	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/18	1505		12.96	0.3	10.0	6.72	1.78	0	-18.9	3.63	
	1510		12.96	1.0	9.7	6.60	1.81	0	-41.3	0.25	
	1515		12.96	2.0	9.7	6.63	1.81	0	-49.3	0.08	
	1520		12.96	3.5	9.7	6.65	1.77	0	-60.1	0.06	
	1525		12.96	5.0	9.7	6.65	1.77	0	-54.2	0.01	
	1530		Collect	Sample		6.68	1.76	0	-54.6	0.03	KM
	1537		12.96	Post	9.9	6.68	1.76	0	-54.6	0.03	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: _____ MS/MSD: _____ / _____

Sample Collection Date: 4/18/01 Sample Collection Time: 1530

Prepared by: K. Mercurio

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU2 Well #: OW-1 Sample Number: BMP-OW-1-0401

Purging Method/Equipment: bladder Samplers BM/KM Well Secure (Y/N) Y

Well Casing Diameter: 2 in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): 23.56 **Static Water Level** (Depth to Water): 9.11 Fe = 3.30 mg/l

Date 2001	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/16	1415		9.13	1.0	11.9	6.92	0.645	7	109.4	7.40	
	1420		9.13	2.0	11.9	6.93	0.644	4	107.7	8.26	
	1425		9.13	3.5	11.8	6.94	0.643	9	106.9	7.15	
	1430		9.13	5.0	11.8	6.95	0.644	6	116.8	7.37	
	1435		Collect	Sample							
	1445		9.13	Post	11.8	6.95	0.644	11	101.2	8.35	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene ~~(no preserv)~~ TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: BMP-OW-1-5401 **MS/MSD:** /

Sample Collection Date: 4/16/01 **Sample Collection Time:** 1435

Prepared by: K. Mercurio

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU2 Well #: OU-2 Sample Number: BMP-OU-2-0401

Purging Method/Equipment: Bladder Samplers J Neese/M Chiller Well Secure (Y/N) Y

Well Casing Diameter : _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: 2 gal

Sounding (Depth to Well Bottom): 24.67 Static Water Level (Depth to Water): 10.97

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4-17-01	1000	start purging									
	1005		10.98	0.8	12.3	6.36	832	0	-102.0	0.54	clear
	1010		10.98	1.2	12.6	6.45	825	0	-111.0	0.31	
	1015		10.98	1.4	12.8	6.47	824	0	-114.0	0.31	
	1020		10.98	1.8	12.7	6.51	826	0	-117.4	0.28	
	1025		10.98	2.3	12.6	6.55	825	0	-121.3	0.26	
	1030		10.98	2.9	12.7	6.57	823	0	-122.9	0.25	
	1035		10.98	3.2	12.9	6.56	821	0	-128.9	0.31	
	1040	SAMPLE									
	1046		10.98	Post	12.7	6.61	820	0	-126.1	0.42	Fe = 5.1 mg/L

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: _____ MS/MSD: _____ / _____

Sample Collection Date: 4-17-01 Sample Collection Time: 1040

Prepared by: M Chiller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU2 **Well #:** OW-3 **Sample Number :** BMP-OW-3-0401

Purging Method/Equipment: bladder **Samplers** BM/KM **Well Secure (Y/N)** Y

Well Casing Diameter : 2 in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** _____ gal

Sounding (Depth to Well Bottom): 24.92 **Static Water Level** (Depth to Water): 13.02

Fe = 5.10

Date 2001	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/17	1320		13.02	1.5	11.6	6.80	0.462	100	733.8	0.51	
	1325		13.02	2.0	11.6	6.81	0.660	24	502.1	1.46	
	1330		13.02	4.0	11.7	6.81	0.666	13	333.4	2.18	
	1335		13.02	6.5	11.7	6.81	0.666	4	289.1	6.45	
	1340		Collect	Sample							
	1346		13.02	Post	11.6	6.82	0.666	2	144.2	9.31	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4/17/01 **Sample Collection Time:** 1340

Prepared by: K. Mercurio

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU2 Well #: OW-4 Sample Number: BMP-OW-4-0401

Purging Method/Equipment: bladder Samplers BM/KM Well Secure (Y/N) Y

Well Casing Diameter: 4 in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): 24.27 Static Water Level (Depth to Water): ~~11.02~~ KM 12.44

Fe = 5.10 mg/l

Date 2001	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/17	1030		12.44	initial	12.2	6.72	0.686	42	61.5	0.70	
	1035		12.44	2.0	12.6	6.76	0.685	33	97.6	0.14	
	1040		12.44	4.0	12.5	6.78	0.686	25	-8.3	0.11	
	1045		12.44	7.0	12.5	6.81	0.686	20	141.1	0.05	
	1050		12.44	8.5	12.7	6.82	0.685	12	108.9	0.22	
	1055		Collect Sample								
	1110		12.44	Post	12.7	6.83	0.685	10	90.8	0.02	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: _____ MS/MSD: _____ / _____

Sample Collection Date: 4/17/01 Sample Collection Time: 1055

Prepared by: K. Mercurio

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU2 **Well #:** P18-1 **Sample Number :** BMP-P18-1-0401

Purging Method/Equipment: bladder **Samplers** BM/KM **Well Secure (Y/N)** √

Well Casing Diameter : 2 in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** _____ gal

Sounding (Depth to Well Bottom): 12.74 **Static Water Level** (Depth to Water): BTP Fe = 5.16 mg/l

Date 2001	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/17	0935		BTP	initial	8.3	6.41	0.742	26	129.9	4.17	
	0940			0.5	9.7	6.41	0.742	67	111.2	3.61	
	0945			1.0	9.7	6.42	0.740	46	131.6	2.17	
	0950			1.5	9.8	6.43	0.734	22	102.7	2.04	
	0955			2.0	9.7	6.44	0.734	19	99.9	1.83	
	1000			2.5	9.9	6.44	0.732	18	149.0	1.99	
	1005			Collect	Sample						
	1015			Post	10.5	6.45	0.741	15	56.4	1.24	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4/17/01 **Sample Collection Time:** 1005

Prepared by: K. Mercurio

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU2 Well #: P18-2 Sample Number: BMP-P18-2-0401

Purging Method/Equipment: bailer Samplers BM/KM Well Secure (Y/N) Y

Well Casing Diameter: 2 in. Unit Casing Volume (UC): .03 gal. Target Purge Volume: ___ gal

Sounding (Depth to Well Bottom): 13.7 **Static Water Level** (Depth to Water): 12.1

Fe = 5.09 mg/l

Date 2001	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/17	1130			2.5	10.4	6.40	1.34	00	408.7	11.19	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** ___ **MS/MSD:** /

Sample Collection Date: 4/17/01 **Sample Collection Time:** 1130

Prepared by: K. Mercurio

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU2 Well #: NEA-MW20-2S Sample Number: BMP-NEA-MW20-2S-0401

Purging Method/Equipment: bladder pump Samplers M. Smith/K. Havens Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): _____ Static Water Level (Depth to Water): 10.21

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/19/01	1101		10.35	initial	12.9	6.59	0.982	~~0~~ 10	-76.6	0.80	
04/19/01	1106		10.35	2.0	12.2	6.54	0.963	0	-111.5	0.17	
04/19/01	1111		10.35	3.5	12.2	6.72	0.952	0	~~0.05~~ -120.2	0.05	
04/19/01	1116		10.35	5.5	12.2	6.82	0.948	0	-123.2	0.05	
04/19/01	1121		10.35	7.0	12.2	6.89	0.946	0	-125.0	0.04	
04/19/01	1126		10.35	8.5	12.2	6.90	0.943	0	-124.8	0.06	
04/19/01	1129		Sampled								
04/19/01	1151		final		12.7	6.91	0.91	0	-123.7	0.57	
	Fe = 1.77	mg/L									

Test Parameters: Tmetals (HNO_3) (dupontly) Fmetals (dupontly) VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH) BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: BMP-NEA-MW20-2S-0401 MS/MSD: /

Sample Collection Date: 04/19/01 Sample Collection Time: 1129

Prepared by: M. Smith

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: 112 Well #: MW21-35 Sample Number: BMP

Purging Method/Equipment: bladder Samplers BM/KM Well Secure (Y/N) Y

Well Casing Diameter: 2 in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): _____ **Static Water Level** (Depth to Water): 12.83

Fe = 2.68 mg/l

Date 2001	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/18	1010		12.83	0.3	11.2	6.80	1.12	0	316.6	5.0	SKETT
	1020		12.83	1.0	11.4	6.76	1.11	0	80.9	1.84	"
	1025		12.83	2.0	11.4	6.76	1.11	0	80.2	1.27	"
	1030		12.83	4.0	11.3	6.76	1.11	0	78.1	0.83	
	1035		12.83	5.5	11.3	6.76	1.11	0	77.5	1.0	
	1040		Collect Sample								
	1047		12.83	Dist	11.4	6.78	1.11	0	101.2	2.53	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4/18/01 **Sample Collection Time:** 1040

Prepared by: K. Mercuno

TERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU2 **Well #:** NEA-MW26-3S **Sample Number:** BMP-NEA-MW26-3S-01/01

Purging Method/Equipment: Bladder **Samplers** J. Neese / M. Chiller **Well Secure (Y/N):** Y

Well Casing Diameter: _____ in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** 2 gal

Sounding (Depth to Well Bottom): 23.20 **Static Water Level** (Depth to Water): 13.59

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4-17-01	1505	Start	Purging								
	1510		13.61	0.2	11.5	6.48	1.05	20	1.2	2.05	clear
	1515		13.62	0.4	11.3	6.48	1.10	12	6.0	1.12	orange suspended solids
	1520		13.61	0.8	11.1	6.50	1.10	13	46.6	1.01	
	1525		13.63	1.2	11.4	6.49	1.08	2	-119.5	0.57	clear
	1530		13.63	1.8	11.1	6.51	1.04	1	-158.0	0.51	
	1535		13.63	2.4	11.0	6.55	1.00	0	-185.6	0.44	
	1540		13.62	3.0	10.9	6.57	0.97	0	-203.1	0.59	
	1545		13.62	3.6	10.9	6.58	0.96	0	-224.8	~~0.96~~ mc	0.40
	1550	SAMPLE									
	1558		13.63	POST	11.4	6.62	0.94	0	-276.1	0.50	fe = 0.70

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC ~~Pest/PCB~~ Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: April 17, 01 **Sample Collection Time:** 1550

Prepared by: M. Chiller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT. 777097

SITE ID: OU2 ROD Well #: NEA-MW28-5S Sample Number: LTM-MW28-5S

Purging Method/Equipment: Micro/Bladder Samplers BM/DR Well Secure (Y/N) Y

Well Casing Diameter: 2 in. Unit Casing Volume (UC): NA gal. Target Purge Volume: NA gal

Sounding (Depth to Well Bottom): — **Static Water Level** (Depth to Water): 11.95

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/17/01	1100		11.64	initial	11.6	6.90	1.64	38	76.3	0.87	
	1103		11.64	1	12.1	7.08	1.24	37	105.8	0.86	
	1105		11.64	2	12.1	7.14	1.15	25	108.1	0.97	
	1107		11.64	3	12.2	7.18	1.04	20	109.1	0.98	
	1110		11.60	4	12.2	7.19	1.03	20	114.9	0.97	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): Amb None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4/17/01 **Sample Collection Time:** 1115

Prepared by: K. Mercurio

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU2

Well #: NEA-MW25-~~21~~ MS 1D

Sample Number: BMP-NEA-MW25-~~21~~ 1D MS-0401

Purging Method/Equipment: Hoddler pump

Samplers M. Smith / D. Rosor

Well Secure (Y/N) Y

Well Casing Diameter: _____ in.

Unit Casing Volume (UC): _____ gal.

Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): 61.68

Static Water Level (Depth to Water): 11.20

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/16/01	1011		11.30	initial	10.6	7.21	0.617	8	108.5	5.25	
04/16/01	1016		11.30	0.25	11.1	7.33	0.718	5	-115.5	2.49	
04/16/01	1021		11.30	0.50	11.5	7.09	0.788	5	-109.5	1.17	
04/16/01	1026		11.30	1.25	12.2	6.99	0.816	1	-107.6	0.32	
04/16/01	1031		11.30	2.0	12.4	7.03	0.814	2	-108.3	0.19	
04/16/01	1036		11.30	3.0	12.5	7.03	0.811	2	-109.6	0.17	
04/16/01	1041		11.30	4.0	12.4	7.04	0.809	1	-108.3	0.18	
04/16/01	1046		11.30	5.0	12.3	7.06	0.807	2	-103.8	0.17	
04/16/01	1048		Sampled	~~—~~	~~12.3~~	~~7.02~~	~~0.802~~	~~7~~	~~—~~	~~0.42~~	
04/16/01	1106			final	12.3	7.02	0.802	7	-102.3	0.42	
											Fe 1.16 mg/L

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** 1

Sample Collection Date: 04/16/01 **Sample Collection Time:** 1048

Prepared by: M. Smith

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: 002 **Well #:** NEA-MW25-2I **Sample Number :** RMP-NEA-MW25-2I-0401

Purging Method/Equipment: ~~inertia pump~~ teflon bailer **Samplers** N. Smith / O. Reser **Well Secure (Y/N)** Y

Well Casing Diameter : _____ in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** _____ gal

Sounding (Depth to Well Bottom): 41.66 **Static Water Level** (Depth to Water): 11.38

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/16/01	1130		11.38	initial	11.6	7.78	0.601	31	-177.0	3.42	
04/16/01	1135		11.38	2.0	11.2	8.38	0.574	39	-87.9	4.61	
04/16/01	1140		11.38	3.5	11.6	7.84	0.606	41	-150.4	5.12	
04/16/01	1145		11.38	4.5	12.2	7.02	0.779	35	-123.6	4.33	
04/16/01	~~1149~~ AS 1150		11.38	6.0	12.2	6.86	0.824	29	-121.0	1.28	
04/16/01	1155		11.38	8.0	12.4	6.92	0.834	10	-121.9	0.87	
04/16/01	1200		11.38	9.0	12.3	6.93	0.837	8	-123.0	0.97	
04/16/01	1203	sampled									
04/16/01	1210		final		12.4	6.98	0.833	10	-121.0	0.99	
											Fe 1.75 mg/L

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** 1

Sample Collection Date: 04/16/01 **Sample Collection Time:** 1203

Prepared by: N. Smith

IT Personnel: K. Mercurio / B. Mitchell

OU2 Water Levels for the LTM Program
Wright-Patterson AFB, Ohio

Date: 4/12/01

Well No.	TOC Elevation (ft, MSL)	Log Time	Well Secure (Y/N)	LEL Reading (%)	PID Reading (ppm)	Static Depth to Water TOC (ft)	Static Depth to Water TOPC (ft)	Comments
04-016-M	818.33							on the flight line
04-517-M ~~wrong key~~	821.96	1330	Y	0	0.7	12.20	12.35	
04-~~516-M~~ 517M	820.41	1410	Y	0	0.7	7.41	8.16	
OW-1	817.20	1304	Y	0	~~0.2~~ 600ppm	8.32	8.54	
OW-2	817.64							on the flight line
OW-3	819.04							on the flight line
OW-4	817.20							on the flight line
OW-6	816.40							on the flight line
P11-1	819.98	1316	Y	0	0.1	*BTP		
P16-1	816.50							on the flight line
P18-1	816.72							on the flight line
P18-2	817.91							on the flight line
WP-NEA-PZ32	821.60	1350	Y	0	0.2	~~10~~ 9.66	10.03	
WP-NEA-MW20-2S	821.49	1340	Y	0	0.1	10.01	10.24	Hornet nest
WP-NEA-MW21-3S	820.85	1420	Y	Ø NT	NT	product = 11.97	water = 12.87	
WP-NEA-MW22-3S	817.87							on the flight line
WP-NEA-MW23-2S	816.50							on the flight line
WP-NEA-MW24-2S	818.68	1255	Y	0	0.5	11.11	11.46	
WP-NEA-MW25-3S	815.20							on the flight line
WP-NEA-MW26-3S	819.23	1247	Y	0	0.1	13.59		
WP-NEA-MW28-5S	818.5*	1310	Y	0	~~0.2~~ 600	11.95	12.15	flush mount
WP-NEA-MW29-2S	816.23							on the flight line
WP-NEA-MW35-2S	814.99							on the flight line

TOC = Top of casing

TOPC = Top of protective casing

(*) - NEA-MW28-5S flush mounted in November 2000.

3500

New 01/31/01

Common3\777097\LTM\fieldforms\Ou2elvlg

Bkgnd PID 0.5ppm *BTP Below top of pump

IT Personnel: MS/DB

OU2 Water Levels for the LTM Program
Wright-Patterson AFB, Ohio

Date: 04/12/01

Well No.	TOC Elevation (ft, MSL)	Log Time	Well Secure (Y/N)	LEL Reading (%)	PID Reading (ppm)	Static Depth to Water TOC (ft)	Static Depth to Water TOPC (ft)	Comments
04-016-M	818.33	1458	Y		0-0	~~7.54~~ 8.74	9.08	on the flight line
04-517-M	821.96							
04-518-M	820.41							
OW-1	817.20							
OW-2	817.64	1404	Y		0-0	11.14	11.58	on the flight line
OW-3	819.04	1400	Y		0-0	13.1~~4~~7	13.34	on the flight line
OW-4	817.20	1415	Y		0-0	11.28	11.80	on the flight line
OW-6	816.40	1431	Y		0-0	11.42	11.79	on the flight line
P11-1	819.98							
~~P16-1~~ P18-1	~~816.50~~	1427	Y		0-4	NA-water below pump		on the flight line
~~P18-1~~ P16-1	~~816.72~~	~~1426~~ 1454	Y		0-0	4.90	~~4~~ 5.40	on the flight line
P18-2	817.91	1356	Y		0-0	NA-water below pump		on the flight line
WP-NEA-PZ32	821.60							
WP-NEA-MW20-2S	821.49							
WP-NEA-MW21-3S	820.85							
WP-NEA-MW22-3S	817.87	1304	Y		0-0	7.54	7.92	on the flight line
WP-NEA-MW23-2S	816.50	1314	Y		0-1	~~7.84~~ 7.54	7.84	on the flight line
WP-NEA-MW24-2S	818.68							
WP-NEA-MW25-3S	815.20	1349	Y		0-0	11.36	11.66	on the flight line
WP-NEA-MW~~26-3S~~ 34-2S	~~819.23~~	1327	Y		0-0	9.94	10.08	on the flight line
WP-NEA-MW28-5S	818.5*							flush mount
WP-NEA-MW29-2S	816.23	1337	Y		0-0	11.45	11.78	on the flight line
WP-NEA-MW35-2S	814.99	1445	Y		0-0	12.32	12.90	on the flight line

TOC = Top of casing
TOPC = Top of protective casing

(*) - NEA-MW28-5S flush mounted in November 2000.

New 01/31/01

Common3\777097\LTM\fieldforms\Ou2elvlg

Chain of Custody Record

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

STL-4124 (0700)

Client: AFCEE WPAFB / IT Corp	Project Manager: Joe Tybulski	Date: 4-16-01	Chain of Custody Number: 029426
Address: 11499 Chester Rd	Telephone Number (Area Code)/Fax Number: (513) 782-4970 / (513) 782-	Lab Number: (330) 966-9687	Page 1 of 1
City: Cincinnati; State: OH; Zip Code: 45246	Site Contact: G. Plamondon	Lab Contact: Denise Poni	
Project Name and Location (State): WPAFB, OH	Carrier/Waybill Number: Fedex 816215056388		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil		Unpres.	H2SO4	HNOS	HCl	NaOH	ZnAc/NaOH		TOC, Nitrate	Nitrates	Sulfate	Methane, ethane, ethylene								Special Instructions/ Conditions of Receipt
LTM-OU4-MW-03B-0401	4/16/01	0935		X							3				X											
LTM-WP-NEA-MW27-3I-0401	4/16/01	1030		X							3				X											
LTM-LF12-MW15A-0401	4/16/01	1125		X							3				X											
LTM-US-DM-1235-0401	4/16/01	1200		X							3				X											
BMP-OW-1-0401		1435		X				1	1		6				X	X	X	X								
BMP-OW-1-5401		1435		X				1	1		6				X	X	X	X								
LAST ENTRY																										
TB04160 1		0600									3				X											
LAST ENTRY																										

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

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Normal

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: [signature]	4/16/01	1600	1. Received By: [signature]	4/17/01	945/A
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

STL North Canton

31

Chain of Custody Record

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

STL-4124 (0700)

Client	IT Group
Address	11499 Chester Rd
City	Cincinnati
State	OH
Zip Code	45246
Project Name and Location (State)	WPAFB, OH
Contract/Purchase Order/Quote No.	
Project Manager	Joe Tyburski
Telephone Number (Area Code)/Fax Number	(513) 782-4700 / (513) 782-4749
Site Contact	Greg Plamondon
Lab Contact	Denise Pohl
Carrier/Waybill Number	Fedex 816215056388
Date	04/16/01
Lab Number	(330) 966-9729
Chain of Custody Number	029428
Page	1 of 1

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis (Attach list if more space is needed): VOC w/MTBE	Sulfate	Nitrate	Methane/Ethane/Ethene	Special Instructions/ Conditions of Receipt
BMP-NEA-MW25-1D-0401	04/16/01	1048					4	1		3			X	X	X	X	
BMP-NEA-MW25-2I-0401	04/16/01	1203					4	1		3			X	X	X	X	
LTM-OU10-MW-115-0401	04/16/01	1428								3			X				
LTM-OU10-MW-11D-0401	04/16/01	1522								3			X				
— LAST ENTRY —																	

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

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Normal

QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By	4/16/01	1600	1. Received By	4/17/01	945/A
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with the Sample. CANARY - Returned to Client with Report. PINK - Field Copy

STL North Canton

33

Chain Custody Record

SEVERN TRENT SERVICES — Severn Trent Laboratories, Inc.

STL-4124 (0700)

Client	IT Corp
Project Manager	Joe Tyburski
Date	4-17-01
Chain of Custody Number	029425
Address	11499 Chester Rd
Telephone Number (Area Code)/Fax Number	(513) 782-4700 / (513) 782-4749
Lab Number	(330) 966-9687
Page ____ of ____	
City	Cincinnati
State	OH
Zip Code	45246
Site Contact	G. Plamondon
Lab Contact	Denise Pohl
Project Name and Location (State)	WPAFB, Ohio
Carrier/Waybill Number	fedex 816215056480
Contract/Purchase Order/Quote No.	

Analysis (Attach list if more space is needed)

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil		Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	HNO3	VOCs w/MTBE	methylethyl	Nitrates	Sulfates	TAL metals	TAL metals (filtered)							Special Instructions/ Conditions of Receipt
BMP-OW-24-0401	4-17-01	1040		X				1	1		6				X	X	X	X									
LTM-WP-NEA-MW23-2S-0401		1145		X										2					X	X							
BMP-04-016-M-0401		1405		X				1	1		3				X	X	X	X									
BMP-04-016-M-0401 MS				X				1	1		3				X	X	X	X									
BMP-04-016-M-0401 MSD				X				1	1		3				X	X	X	X									
BMP-NEA-MW26-3S-0401		1550		X				1	1		3				X	X	X	X									
TB-041701		0900		X							2				X												
LTM-NEA-MW28-5S-0401		1115		X				1	1		6				X	X	X	X									
BMP-NEA-MW20-2S-0401		1615		X										4					X	X							
LTM-NEA-MW28-5S-AMBER		1115		X				1	1		6				X	X	X	X									
— LAST ENTRY —																											

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

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Normal

QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By	4/17/01	1630	1. Received By: fedex / kinkos		
2. Relinquished By			2. Received By: Jennifer Miller	4-18-01	9:00am
3. Relinquished By			3. Received By		

Comments:

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

STL North Canton

35

[redacted]

Chain of Custody Record

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

STL-4124 (0700)

Client	Project Manager	Date	Chain of Custody Number
WPAFB / IT Corporation	Joe Tylawski	4-17-01	032089
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page ____ of ____**
11499 Chester Rd	(513) 782-4970 (513) 782-4749	(330) 966-9687	
City / State / Zip Code	**Site Contact**	**Lab Contact**	
Cinti / OH / 45246	G. Phimondon	Denise Pohl	
Project Name and Location (State)	**Carrier/Waybill Number**		
WPAFB, OH	fedex 816215056480		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	HNO3	VOC w MTBE	Methanol, ethanol	Silicate	Nitrates	Metals (total)	Metals (filtered)							Special Instructions/ Conditions of Receipt
BMP-PIB-1-0401	4/17/01	1105		X			1	1		6				X	X	X	X									
BMP-OW-4-0401	4/17/01	1055		X			1	1		6				X	X	X	X									
BMP-PIB-2-0401	4/17/01	1130		X			1	1		6				X	X	X	X									
BMP-OW-3-0401	4/17/01	1340		X			1	1		6				X	X	X	X									
LTM-WP-NEA-MW34-2S-0401	4/17/01	1635		X						3				X												
LTM-WP-NEA-MW34-2S-0401	4/17/01	1535		X									2					X	X							
LAST ENTRY																										

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

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Normal

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	4/17/01	1630	1. Received By: Fedex / Kinko's		
2. Relinquished By			2. Received By: Jennifer Miller	4/18/01	9:00
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

STL North Canton

36

[redacted]

Chain of Custody Record

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

55

STL-4124 (0700)

Client: IT Group	Project Manager: Joe Tyburski	Date:	Chain of Custody Number: 029409
Address: 11499 Chester Rd	Telephone Number (Area Code)/Fax Number: (513) 782-4700/(513) 782-4749	Lab Number: (330) 966-9787	Page ____ of ____
City: Cincinnati; State: OH; Zip Code: 45246	Site Contact: G. Plamondon; Lab Contact: Denise Pohl		
Project Name and Location (State): WPAFB, Ohio	Carrier/Waybill Number: Fedex		
Contract/Purchase Order/Quote No.			

Analysis (Attach list if more space is needed)

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	HNO3	VOCs w/ MTBE	TAL Metals	Metals (filtered)	NH4/alpha/ethyl	Nitrates	Sulfate	Special Instructions/ Conditions of Receipt
LTM-WP-NEA-MW31-3S-0401	4/18/01	0945		X									2		X	X				
BMP-NEA-MW21-3S-0401		1040		X			1	1		6				X			X	X	X	
LTM-OU10-MW-21S-0401		1135		X						3				X						
LTM-OU10-MW-21S-0401MS				X						3				X						
LTM-OU10-MW-21S-0401MSD				X						3				X						
LTM-NEA-MW37-1D-0401		1445		X						3				X						
BMP-04-518-M-0401		1530		X			1	1		6				X	X		X	X	X	

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

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other ____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: [signature]	4/18/01	1700	1. Received By		
2. Relinquished By			2. Received By: Scott Irwin	4-19-01	9:50 AM
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

STL North Canton

Chain Custody Record

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

STL-4124 (0700)

52

Client	IT Group
Address	11499 Chester Rd
City	Cincinnati
State	OH
Zip Code	45246
Project Name and Location (State)	WPAFB, OHIO
Contract/Purchase Order/Quote No.	
Project Manager	Joe Tyburski
Telephone Number (Area Code)/Fax Number	(513) 782-4700 / (513) 782-4749
Site Contact	Greg Plamondon
Lab Contact	Denise Pohl
Carrier/Waybill Number	FedEx 816215056506
Date	04/19/01
Chain of Custody Number	029401
Lab Number	(330) 966-9789
Page	1 of 1

Analysis (Attach list if more space is needed)

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	HNO3	VOCs w/ MTBE	TPH Metals	Methane/Ethane/Ethene	Sulfate	Nitrate	Special Instructions/ Conditions of Receipt
BMP-NEA-MW20-25-0401				X			4	1	~~1~~	3			1	X	X	X	X	X	
BMP-NEA-MW20-25-5401				X			4	1	~~1~~	3			1	X	X	X	X	X	
LTM-BS5-P-2-0401				X						3				X	X	X			
LTM-P4-2-0401				X					2						X				
LAST ENTRY																			

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

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Normal

QC Requirements (Specify)

	Date	Time
1. Relinquished By	4/19/01	1800
2. Relinquished By		
3. Relinquished By		

	Date	Time
1. Received By (FedEx / Kinkos)	4/19/01	1800
2. Received By	4/20/01	9:00
3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

STL North Canton

Chain of Custody Record

SEVERN TRENT SERVICES

AIE030254

Severn Trent Laboratories, Inc.

STL-4124 (0700)

Client: IT Corp.	Project Manager: Greg Plamondon	Date: 05/02/01	Chain of Custody Number: 025347
Address: 11499 Chester Rd	Telephone Number (Area Code)/Fax Number: 513 782 4823	Lab Number: 330 966 9789	Page 1 of 2
City: Cinti O; State: Ohio; Zip Code: 45246	Site Contact: G. Plamondon; Lab Contact: Denise Pohl		
Project Name and Location (State): GIPAFB-002	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.:			

Analysis (Attach list if more space is needed): BTEX, TPH, Methane, Ethane, Ethene

Special Instructions/ Conditions of Receipt

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	BTEX	TPH	Methane	Ethane	Ethene
ROD-002-SV12-050101	05/02/01	1220	✓										✓	✓	✓	✓	✓
ROD-002-SV13-050101		1315															
ROD-002-SV11-050101		1505															
ROD-002-SV08-050101		1525															
ROD-002-SV01-050101		1545															
ROD-002-SV04-050101		1600															
ROD-002-SV03-050101		1625															
ROD-002-SV03-050151		1625															
ROD-002-SV06-050101		1650															
ROD-002-SV14-050201	05/02/01	0935															
ROD-002-SV15-050201		0950															
ROD-002-SV09-050201		1000															

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

Sample Disposal: ☐ Return To Client ☑ Disposal By Lab ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other ____

QC Requirements (Specify): As Per Contract

	Date	Time		Date	Time
1. Relinquished By: [signature]	05/02/01	1500	1. Received By: [signature]	5/3/01	1030
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

STL North Canton

[redacted]

Chain of Custody Record

SEVERN TRENT SERVICES

A1E030254

Severn Trent Laboratories, Inc.

STL-4124 (0700)

Client: IT Corp	Project Manager: Greg Plamondon	Date: 05/02/01	Chain of Custody Number: 025348
Address: 11299 Chester Rd	Telephone Number (Area Code)/Fax Number: (513) 782-4823	Lab Number: 330 966 9789	Page 2 of 2
City: Cinti. State: Oh Zip Code: 45246	Site Contact: G Plamondon Lab Contact: Denise Pohl		
Project Name and Location (State): WPAFB -02	Carrier/Waybill Number: 8230 0747 2372		
Contract/Purchase Order/Quote No.			

Analysis (Attach list if more space is needed)

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	BTEX	TPH	Methane	Ethane	Ethane	Special Instructions/ Conditions of Receipt
ROD-OU2-SV10-050201	05/02/01	1010	✓										✓	✓	✓	✓	✓	
ROD-OU2-SV07-050201	↓	1025	↓										↓	↓	↓	↓	↓	
ROD-OU2-SV02-050201	↓	1038	↓										↓	↓	↓	↓	↓	
ROD-OU2-SV02-RB01	↓	1042	↓										↓	↓	↓	↓	↓	

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

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other_____

QC Requirements (Specify): As Per Contract

	Date	Time		Date	Time
1. Relinquished By: Darren Martz	05/02/01	1500	1. Received By: [signature]	5/3/01	1030
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

64

STL North Canton

Appendix G

OU2 Groundwater Analytical Data
OU2 Soil Gas Analytical Data

CASE NARRATIVE
A1D170215

The following report contains the analytical results for four water samples submitted to STL North Canton by IT Corporation from the WPAFB, OH Site. The samples were received April 17, 2001, 2001, according to documented sample acceptance procedures.

Dissolved Gas analyses were performed at STL's Austin, Texas facility.

STL North Canton utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the Analytical Methods Summary page in accordance with the methods indicated. A summary of QC data for these analyses is included at the rear of the report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The samples were received at the North Canton laboratory at a temperature of 2.6° C.

See STL's Cooler Receipt Form for additional information.

GC/MS VOLATILES

The client's program requirements state that corrective action must be performed for surrogate recoveries outside criteria. The re-preparation and reanalysis for sample BMP-OW-1-0401 also had surrogate recoveries outside criteria confirming probable matrix interference. Both sets of data are contained in the report.

Sample(s) that contain results between the MDL and the RL were flagged with "J". There is the possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

Samples BMP-OW-1-0401 and BMP-OW-1-5401 had elevated reporting limits due to matrix interferences, TICs, or dilution.

STL Cooler Receipt Form/Narrative

North Canton Facility

Client: IT Corp Project: ____ Quote#: 38700

Cooler Received on: 4/17/01 Opened on: 4/17/01 by: Terry Burns (Signature)

Fedx ☒ Client Drop Off ☐ UPS ☐ Airborne ☐ Other: ____

Cooler ☒ Safe ☐ Foam Box ☐ Client Cooler ☐ Other: ____

STL Shipper No#: H161

1. Were custody seals on the outside of the cooler and intact? Yes ☒ No ☐
   If YES, Quantity 2 Location over lid
   Were the custody seals signed and dated? Yes ☒ No ☐ NA ☐
2. Shipper's packing slip attached to this form? Yes ☒ No ☐
3. Were custody papers included inside the cooler and relinquished? Yes ☒ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☒ No ☐
5. Packing material used:
   Peanuts ☐ Bubble Wrap ☒ Vermiculite ☐ Foam ☐ None ☐ Other: ____
6. Cooler temperature upon receipt 2.6 °C (see back of form for multiple coolers/temp)
   METHOD: Temperature Vial ☒ Between Coolant & Sample Container ☐ Against Bottles ☐
   COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐
7. Were all the bottles sealed in separate plastic bags? Yes ☒ No ☐
8. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
9. Did all bottle labels and tags agree with the custody papers? ~~Yes~~ ☒ No ☒
10. Were samples at the correct pH? Yes ☒ No ☐ NA ☐
11. Were correct bottles used for the tests indicated? Yes ☒ No ☐
12. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☒ NA ☐
13. Was a sufficient amount of sample sent in each bottle? Yes ☒ No ☐

Contacted PM DJP Date: 4/17/01 by: TB via Voice Mail ☒ Verbal ☐ Other ☐

Concerning: anomaly

√	MACRO	MACRO
1. CHAIN OF CUSTODY		
	SR1A	Samples were received under proper custody procedures and without discrepancies.
✓	SR1B	The chain of custody and sample bottles did not agree. The following discrepancies occurred LTM-SP11-MW07-0401 (ID on COC) LTM-SP11-MW08-0401 (ID on bottles) - date & time match will log per bottle label (preprinted label) -
2. SAMPLE CONDITION DJP aware - TB 4/17/01		
	SR2A	Sample(s) ____ were received or requested after the recommended holding time had expired.
	SR2B	Sample(s) ____ were received with insufficient volume
	SR2C	Sample(s) ____ were received in a broken container.
3. SAMPLE PRESERVATION		
	SR3A	Sample(s) ____ were further preserved in sample receiving to meet recommended pH level(s).
	SR3B	Sample(s) ____ were received with bubble > 6 mm in diameter (cc: PM)
4. NCM		
	SR4A	NCM has been generated. Refer to Clouseau for details

5. Other Anomalies (see below or back) logged NO_3-IC + NO_2/NO_3 combo per DJP. TB 4/17/01

Revision 14 January 15, 2001
SOP: NC-SC-0005 Sample Receiving
n:\qa\narrative\cooler_stl_rev011501.doc

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials
BMP-NEA-MW25-1D-0401	<2	4/17/01	YR
2J	<2		
BMP-OW-1-0401	<2		
5401	<2		

Cooler	Temp	Method	Comments

Discrepancies Cont.

Macro Name:

Macro Name:

Macro Name:

Macro Name:

Other Anomalies:

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

** for analyses run on TJA Trace ICP or GFAA only*

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample are spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If the surrogate recoveries are outside criteria for environmental or MS/MSD samples, the batch is acceptable if the Method Blank, LCS, and LCSD surrogate recoveries are within acceptance criteria. The only exception is if the surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank and the associated sample(s) are ND, the batch is acceptable. If the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide/PCB, PAH, and Herbicide methods, the surrogate criteria is that one of two surrogate compounds meet acceptance criteria.

ANALYTICAL METHODS SUMMARY

A1D170215

PARAMETER	ANALYTICAL METHOD
Dissolved Gases in Water	RSK SOP-175
Nitrate as N	MCAWW 300.0A
Sulfate	MCAWW 300.0A
Volatile Organics by GC/MS	SW846 8260B

References:

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

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

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

SAMPLE SUMMARY

A1D170215

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAM TIM
EAXP4	001	BMP-NEA-MW25-1D-0401	04/16/01	10:4
EAXQG	002	BMP-NEA-MW25-2I-0401	04/16/01	12:0
EAXQK	003	BMP-OW-1-0401	04/16/01	14:3
EAXQT	004	BMP-OW-1-5401	04/16/01	14:3

NOTE(S):

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

CASE NARRATIVE
A1D190104

The following report contains the analytical results for eleven water samples submitted to STL North Canton by IT Corporation – Cincinnati from the WPAFB, Ohio Site. The samples were received April 18, 2001, according to documented sample acceptance procedures.

The remaining samples listed on the chain-of-custody are reported under separate cover.

The Dissolved Gases analyses were performed at the STL Austin laboratory. A copy of their data is presented in this report.

STL North Canton utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the Analytical Methods Summary page in accordance with the methods indicated. A summary of QC data for these analyses is included in this report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 3.1° C. . The samples were received in wet ice.

See STL's Cooler Receipt Form for additional information.

The samples were further preserved at the laboratory for some analyses per phone conversation with Brian Mattingly on April 18, 2001.

GC/MS VOLATILES

Sample(s) that contain results between the MDL and the RL were flagged with "J". There is the possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

The sample(s) had elevated reporting limits due to TICs.

STL Cooler Receipt Form/Narrative
North Canton Facility

Client: IT Corp. Project: WPAFB Quote#: 38700
Cooler Received on: 4-18-01 Opened on: 4-18-01 by: Jenny Stiller (Signature)

Fedx [X] Client Drop Off [ ] UPS [ ] Airborne [ ]
Other: _____

Cooler [X] Safe [ ] Foam Box [ ] Client Cooler [ ] Other: _____
STL Shipper No#: J799

1. Were custody seals on the outside of the cooler and intact? Yes [X] No [ ]
   If YES, Quantity 2 Location overlid
   Were the custody seals signed and dated? Yes [X] No [ ] NA [ ]
2. Shipper's packing slip attached to this form? Yes [X] No [ ]
3. Were custody papers included inside the cooler and relinquished? Yes [X] No [ ]
4. Did you sign the custody papers in the appropriate place? Yes [X] No [ ]
5. Packing material used:
   Peanuts [ ] Bubble Wrap [X] Vermiculite [ ] Foam [ ] None [ ] Other: _____
6. Cooler temperature upon receipt 3.1 °C (see back of form for multiple coolers/temp)
   METHOD: Temperature Vial [X] Between Coolant & Sample Container [ ] Against Bottles [ ]
   COOLANT: Wet Ice [X] Blue Ice [ ] Dry Ice [ ] Water [ ] None [ ]
7. Were all the bottles sealed in separate plastic bags? Yes [ ] No [X]
8. Did all bottles arrive in good condition (Unbroken)? Yes [X] No [ ]
9. Did all bottle labels and tags agree with the custody papers? Yes [X] No [X]
10. Were samples at the correct pH? Yes [ ] No [ ] NA [ ]
11. Were correct bottles used for the tests indicated? Yes [X] No [ ]
12. Were air bubbles >6 mm in any VOA vials? Yes [ ] No [X] NA [ ]
13. Was a sufficient amount of sample sent in each bottle? Yes [X] No [ ]

Contacted PM DJP Date: 4-19-01 by: [illegible] via Voice Mail [ ] Verbal [X] Other [ ]
Concerning: discrepancy

√	MACRO	MACRO
1. CHAIN OF CUSTODY		
	SR1A	Samples were received under proper custody procedures and without discrepancies.
√	SR1B	The chain of custody and sample bottles did not agree. The following discrepancies occurred First sample on COC # 29425 is BMP-OW-4-0401 at 10:40. Labels read BMP-OW-2-0401. Log per label. see back.
2. SAMPLE CONDITION		
	SR2A	Sample(s) _____ were received or requested after the recommended holding time had expired.
	SR2B	Sample(s) _____ were received with insufficient volume
	SR2C	Sample(s) _____ were received in a broken container.
3. SAMPLE PRESERVATION		
√	SR3A	Sample(s) see back. were further preserved in sample receiving to meet recommended pH level(s).
	SR3B	Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)
4. NCM		
	SR4A	NCM has been generated. Refer to Clouseau for details
5. Other Anomalies (see below or back)		

Revision 14, January 15, 2001
SOP: NC-SC-0005, Sample Receiving
n:\qaqc\narrativ\stl\cooler_stl_rev011501.doc

STL North Canton

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials
BMP-OW-2-0401	<2	4-18-01	gaf
LTM-WP-NEA-MW23-25-0401	<2 <2		
BMP-04-016-M-0401	<2, <2, <2		
BMP-NEA-MW26-35-0401	<2		
BMP-NEA-MW20-25-0401	<2, <2 <2, <2		
BMP-P18-1-0401	<2		
BMP-OW-4-0401	<2		
BMP-P18-2-0401	<2		
BMP-OW-3-0401	<2		
LTM-WP-NEA-MW24-25-0401	<2, <2		
BMP-NEA-MW28-55-0401	<2	4-19-01	gaf
BMP-NEA-MW28-53-AMB01	<2		

Cooler	Temp	Method	Comments

Discrepancies Cont.

Macro Name: SR1B - Samples LTM-NEA-MW28-55-0401
LTM-NEA-MW28-55-AMB01 on COC
ID's start w/ BMP on bottles. Log per bottles per DJP.

Macro Name: gaf 4-19-01

Macro Name: SR3A - BMP-NEA-MW28-55-0401 1x500 added sulfuric
BMP-NEA-MW28-55-AMB01 1x1L added sulfuric

Macro Name: - see Email

Other Anomalies:

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

** for analyses run on TJA Trace ICP or GFAA only*

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample are spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If the surrogate recoveries are outside criteria for environmental or MS/MSD samples, the batch is acceptable if the Method Blank, LCS, and LCSD surrogate recoveries are within acceptance criteria. The only exception is if the surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank and the associated sample(s) are ND, the batch is acceptable. If the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide/PCB, PAH, and Herbicide methods, the surrogate criteria is that one of two surrogate compounds meet acceptance criteria.

ANALYTICAL METHODS SUMMARY

A1D190104

PARAMETER	ANALYTICAL METHOD
Dissolved Gases in Water	RSK SOP-175
Dissolved ICP Metals	MCAWW 200.7
Dissolved Mercury (CVAA)	MCAWW 245.1
Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Mercury (Manual Cold Vapor Technique)	MCAWW 245.1
Nitrate as N	MCAWW 300.0A
Sulfate	MCAWW 300.0A
Trace Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Volatile Organics by GC/MS	SW846 8260B

References:

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

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

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

SAMPLE SUMMARY

A1D190104

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
EA2M0	001	BMP-OW-2-0401	04/17/01	10:40
EA2M6	002	BMP-04-016-M-0401	04/17/01	14:05
EA2M8	003	BMP-NEA-MW26-3S-0401	04/17/01	15:50
EA2ND	004	TB-041701	04/17/01	09:00
EA2NE	005	BMP-NEA-MW28-5S-0401	04/17/01	11:15
EA2NG	006	BMP-NEA-MW20-2S-0401	04/17/01	16:15
EA2NM	007	BMP-NEA-MW28-5S-AMB01	04/17/01	11:15
EA2NN	008	BMP-P18-1-0401	04/17/01	10:05
EA2NP	009	BMP-OW-4-0401	04/17/01	10:55
EA2NQ	010	BMP-P18-2-0401	04/17/01	11:30
EA2NR	011	BMP-OW-3-0401	04/17/01	13:40

NOTE(S):

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

CASE NARRATIVE
A1D190216

The following report contains the analytical results for two water samples and one quality control sample submitted to STL North Canton by IT Corporation from the WPAFB, Ohio Site. The samples were received April 19, 2001, 2001, according to documented sample acceptance procedures.

Samples listed on the chain-of-custody but not included in this report will be provided under separate cover.

Dissolved Gas analyses were performed at STL's Austin, Texas facility.

STL North Canton utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the Analytical Methods Summary page in accordance with the methods indicated. A summary of QC data for these analyses is included at the rear of the report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The samples were received at the North Canton laboratory at a temperature of 3.2° C.

Sample BMP-04-518-M-0401 was further preserved in sample receiving to meet recommended pH level.

GC/MS VOLATILES

Sample(s) that contain results between the MDL and the RL were flagged with "J". There is the possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

The sample(s) had elevated reporting limits due to TICs.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

** for analyses run on TJA Trace ICP or GFAA only*

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample are spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If the surrogate recoveries are outside criteria for environmental or MS/MSD samples, the batch is acceptable if the Method Blank, LCS, and LCSD surrogate recoveries are within acceptance criteria. The only exception is if the surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank and the associated sample(s) are ND, the batch is acceptable. If the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide/PCB, PAH, and Herbicide methods, the surrogate criteria is that one of two surrogate compounds meet acceptance criteria.

ANALYTICAL METHODS SUMMARY

A1D190216

PARAMETER	ANALYTICAL METHOD
Dissolved Gases in Water	RSK SOP-175
Nitrate as N	MCAWW 300.0A
Sulfate	MCAWW 300.0A
Volatile Organics by GC/MS	SW846 8260B

References:

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

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

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

SAMPLE SUMMARY

A1D190216

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
EA3Q9	001	BMP-NEA-MW21-3S-0401	04/18/01	10:40
EA3RC	002	BMP-04-518-M-0401	04/18/01	15:30
EA3RD	003	TB041801	04/18/01	08:00

NOTE(S):

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

CASE NARRATIVE
A1D200239

The following report contains the analytical results for two water samples submitted to STL North Canton by IT Corporation – Cincinnati from the WPAFB, Ohio Site. The samples were received April 20, 2001, according to documented sample acceptance procedures.

The remaining samples listed on the chain-of-custody are reported under separate cover.

The Dissolved Gases analyses were performed at the STL Austin laboratory. A copy of their data is presented in this report.

STL North Canton utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the Analytical Methods Summary page in accordance with the methods indicated. A summary of QC data for these analyses is included in this report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 2.7° C. . The samples were received in wet ice.

See STL's Cooler Receipt Form for additional information.

GC/MS VOLATILES

The sample(s) had elevated reporting limits due to TICs.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

** for analyses run on TJA Trace ICP or GFAA only*

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample are spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If the surrogate recoveries are outside criteria for environmental or MS/MSD samples, the batch is acceptable if the Method Blank, LCS, and LCSD surrogate recoveries are within acceptance criteria. The only exception is if the surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank and the associated sample(s) are ND, the batch is acceptable. If the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide/PCB, PAH, and Herbicide methods, the surrogate criteria is that one of two surrogate compounds meet acceptance criteria.

STL Cooler Receipt Form/Narrative
North Canton Facility

Client: IT Corp Project: 4/20/01 Quote: T
Cooler Received on: 4/20/01 Opened on: 4/20/01 by: [signature] (Signature)

Fedex ☒ Client Drop Off ☐ UPS ☐ Airborne ☐
Other: _____

Cooler ☒ Safe ☐ Foam Box ☐ Client Cooler ☐ Other: _____
STL Shipper No#: K57

1. Were custody seals on the outside of the cooler and intact? Yes ☒ No ☐
   If YES, Quantity 2 Location Below opening
   Were the custody seals signed and dated? Yes ☒ No ☐ NA ☐
2. Shipper's packing slip attached to this form? Yes ☒ No ☐
3. Were custody papers included inside the cooler and relinquished? Yes ☒ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☒ No ☐
5. Packing material used:
   Peanuts ☐ Bubble Wrap ☒ Vermiculite ☐ Foam ☐ None ☐ Other: _____
6. Cooler temperature upon receipt 2.7 °C (see back of form for multiple coolers/temp)
   METHOD: Temperature Vial ☒ Between Coolant & Sample Container ☐ Against Bottles ☐
   COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐
7. Were all the bottles sealed in separate plastic bags? Yes ☒ No ☐
8. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
9. Did all bottle labels and tags agree with the custody papers? Yes ☒ No ☐
10. Were samples at the correct pH? Yes ☒ No ☐ NA ☐
11. Were correct bottles used for the tests indicated? Yes ☒ No ☐
12. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☒ NA ☐
13. Was a sufficient amount of sample sent in each bottle? Yes ☒ No ☐

Contacted PM DJP Date: 4/20/01 by: TB via Voice Mail ☐ Verbal ☒ Other ☐
Concerning: anomalies

√	MACRO	MACRO
1. CHAIN OF CUSTODY		
	SR1A	Samples were received under proper custody procedures and without discrepancies.
	SR1B	The chain of custody and sample bottles did not agree. The following discrepancies occurred _____
2. SAMPLE CONDITION		
	SR2A	Sample(s) _____ were received or requested after the recommended holding time had expired.
	SR2B	Sample(s) _____ were received with insufficient volume
	SR2C	Sample(s) _____ were received in a broken container.
3. SAMPLE PRESERVATION		
	SR3A	Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s).
	SR3B	Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)
4. NCM		
	SR4A	NCM has been generated. Refer to Clouseau for details

5. Other Anomalies (see below or back) client says disposes unpres but vials + COC = preserved. TB 4/20/01 logged NO3-IC + NO2/NO3 combo per DJB. TB 4/20/01.

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials
LTM-P4-2-0401	<2 <2	4/20/01	ESM/TB
BMP-NEA-MW20-25-5401	<2		
BMP-NEA-MW20-25-5401	<2		
LTM-EFDZ3-MW03-0401	<2 <2		
LTM-EFDZ8-MW01-0401	<2 <2		

Cooler	Temp	Method	Comments

Discrepancies Cont.

Macro Name:

Macro Name:

Macro Name:

Macro Name:

Other Anomalies:

ANALYTICAL METHODS SUMMARY

A1D200239

PARAMETER	ANALYTICAL METHOD
Dissolved Gases in Water	RSK SOP-175
Dissolved ICP Metals	MCAWW 200.7
Dissolved Mercury (CVAA)	MCAWW 245.1
Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Mercury (Manual Cold Vapor Technique)	MCAWW 245.1
Nitrate as N	MCAWW 300.0A
Sulfate	MCAWW 300.0A
Trace Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Volatile Organics by GC/MS	SW846 8260B

References:

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

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

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

SAMPLE SUMMARY

A1D200239

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
EA6CD	001	BMP-NEA-MW20-2S-0401	04/19/01	11:29
EA6CX	002	BMP-NEA-MW20-2S-5401	04/19/01	11:29

NOTE(S):

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- Results noted as "ND" were not detected at or above the stated limit.
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Analytical Legend

AMB – Ambient
B (or MBB, MBD, MBE) - Method blank contamination present
D - Diluted sample analytical results
DUP - Duplicate
EW – Extraction Well
E - Estimated result. Concentration exceeds the calibration range
I - Quantification suspect due to matrix interference
IW – Insufficient Water
J – Estimated Result. Result less than Reporting Limit
L – Serial dilution of a digestate in the analytical batch indicates that physical and chemical interferences are present.
LCS – Laboratory Control Sample
LF – Landfill
LW – Line Water
mg/L – milligrams/Liter
µg/L – micrograms/Liter
MW – Monitoring Well
N – Spiked analyte recovery is outside stated control limits
NA - Not Applicable
ND – Not Detected
NR – Not Reported
pg/L – picograms/Liter
Q - Estimated maximum possible concentration
RB – Rinsate Blank
R2 – Indicates second re-extraction analysis run was required due to surrogate recoveries outside of acceptance criteria on the initial sample run or that analytical results presented are for a diluted sample due to high target analytes.
T or TB – Trip Blank

-- – Not Analyzed
= – Confirmed detection
( ) – Result exceeds MCL value
[ ] – Result exceeds background value

Wright-Patterson AFB
April 2001 - OU2 Data - Ground Water
The IT Group, Project 777097

Sample Number		BMP-04-016-M-0401		BMP-04-016-M-0401 R2		BMP-04-518-M-0401		BMP-04-518-M-0401 R2		BMP-NEA-MW20-2S-0401	
Sample Date		04/17/01		04/17/01		04/18/01		04/18/01		04/19/01	
M2720C											
Ethane	(ug/L)	1.1	=	ND		ND		ND		ND	
Ethene	(ug/L)	ND		ND		ND		ND		ND	
Methane	(ug/L)	710	E,B	4100	D,B	710	E,B	5000	D,B	1100	E,B
SULFATE/NI											
Nitrate	(mg/L)	ND		--		ND		--		ND	
Sulfate	(mg/L)	5.2	=	--		ND		--		ND	
VOC											
2-Butanone	(ug/L)	ND		--		ND		--		ND	
Acetone	(ug/L)	ND		--		ND		--		ND	
Benzene	(ug/L)	3.8	=	--		23	=	--		35	=
Bromodichloromethane	(ug/L)	ND		--		ND		--		ND	
Chlorobenzene	(ug/L)	20	=	--		ND		--		ND	
Chloroform	(ug/L)	ND		--		ND		--		ND	
Ethylbenzene	(ug/L)	1.4	=	--		5.3	J	--		ND	
Methylene chloride	(ug/L)	ND		--		ND		--		ND	
Toluene	(ug/L)	0.68	J	--		ND		--		ND	
Xylenes (total)	(ug/L)	3.9	=	--		ND		--		ND	

Wright-Patterson AFB
April 2001 - OU2 Data - Ground Water
The IT Group, Project 777097

Sample Number		BMP-NEA-MW20-2S-0401 R2		BMP-NEA-MW20-2S-5401		BMP-NEA-MW20-2S-5401 R2		BMP-NEA-MW21-3S-0401		BMP-NEA-MW21-3S-0401 R2	
Sample Date		04/19/01		04/19/01		04/19/01		04/18/01		04/18/01	
M2720C											
Ethane	(ug/L)	ND		ND		ND		0.92	=	ND	
Ethene	(ug/L)	ND		ND		ND		ND		ND	
Methane	(ug/L)	6800	D,B	1100	E,B	5600	D,B	750	E,B	6400	D,B
SULFATE/NI											
Nitrate	(mg/L)	--		ND		--		ND		--	
Sulfate	(mg/L)	--		ND		--		ND		--	
VOC											
2-Butanone	(ug/L)	--		ND		--		ND		--	
Acetone	(ug/L)	--		ND		--		ND		--	
Benzene	(ug/L)	--		38	=	--		49	=	--	
Bromodichloromethane	(ug/L)	--		ND		--		ND		--	
Chlorobenzene	(ug/L)	--		ND		--		ND		--	
Chloroform	(ug/L)	--		ND		--		ND		--	
Ethylbenzene	(ug/L)	--		ND		--		32	=	--	
Methylene chloride	(ug/L)	--		ND		--		ND		--	
Toluene	(ug/L)	--		ND		--		ND		--	
Xylenes (total)	(ug/L)	--		ND		--		28	=	--	

Wright-Patterson AFB
April 2001 - OU2 Data - Ground Water
The IT Group, Project 777097

Sample Number		BMP-NEA-MW25-1D-0401		BMP-NEA-MW25-2I-0401		BMP-NEA-MW25-2I-0401 R2		BMP-NEA-MW26-3S-0401		BMP-NEA-MW28-5S-0401	
Sample Date		04/16/01		04/16/01		04/16/01		04/17/01		04/17/01	
M2720C											
Ethane	(ug/L)	ND		0.48	J	ND		ND		0.27	J
Ethene	(ug/L)	ND		ND		ND		ND		ND	
Methane	(ug/L)	0.47	J,B	1000	E,B	8900	D,B	38	B	740	E,B
SULFATE/NI											
Nitrate	(mg/L)	ND		ND		--		ND		ND	
Sulfate	(mg/L)	74.2	=	ND		--		57.5	=	1.7	=
VOC											
2-Butanone	(ug/L)	ND		ND		--		ND		ND	
Acetone	(ug/L)	ND		ND		--		ND		ND	
Benzene	(ug/L)	ND		ND		--		ND		ND	
Bromodichloromethane	(ug/L)	ND		ND		--		ND		ND	
Chlorobenzene	(ug/L)	ND		4.4	=	--		ND		ND	
Chloroform	(ug/L)	ND		ND		--		ND		ND	
Ethylbenzene	(ug/L)	ND		ND		--		ND		ND	
Methylene chloride	(ug/L)	0.34	J	ND		--		ND		ND	
Toluene	(ug/L)	ND		ND		--		ND		ND	
Xylenes (total)	(ug/L)	ND		ND		--		ND		ND	

Wright-Patterson AFB
April 2001 - OU2 Data - Ground Water
The IT Group, Project 777097

Sample Number		BMP-NEA-MW28-5S-0401 R2		BMP-NEA-MW28-5S-AMB01		BMP-OW-1-0401		BMP-OW-1-0401 R2		BMP-OW-1-5401	
Sample Date		04/17/01		04/17/01		04/16/01		04/16/01		04/16/01	
M2720C											
Ethane	(ug/L)	ND		ND		0.49	J	ND		0.51	=
Ethene	(ug/L)	ND		0.54	=	ND		ND		ND	
Methane	(ug/L)	4000	D	0.44	J,B	790	E,B	5600	D,B	770	E,B
SULFATE/NI											
Nitrate	(mg/L)	--		ND		ND		--		ND	
Sulfate	(mg/L)	--		ND		1.3	=	--		1.2	=
VOC											
2-Butanone	(ug/L)	--		3.9	J	ND		--		ND	
Acetone	(ug/L)	--		32	=	ND		--		ND	
Benzene	(ug/L)	--		ND		0.84	J	--		0.85	J
Bromodichloromethane	(ug/L)	--		0.34	J	ND		--		ND	
Chlorobenzene	(ug/L)	--		ND		ND		--		ND	
Chloroform	(ug/L)	--		1.6	=	ND		--		ND	
Ethylbenzene	(ug/L)	--		ND		ND		--		ND	
Methylene chloride	(ug/L)	--		ND		ND		--		ND	
Toluene	(ug/L)	--		ND		ND		--		ND	
Xylenes (total)	(ug/L)	--		ND		ND		--		ND	

Wright-Patterson AFB
April 2001 - OU2 Data - Ground Water
The IT Group, Project 777097

Sample Number		BMP-OW-1-5401 R2		BMP-OW-2-0401		BMP-OW-2-0401 R2		BMP-OW-3-0401		BMP-OW-3-0401 R2	
Sample Date		04/16/01		04/17/01		04/17/01		04/17/01		04/17/01	
M2720C											
Ethane	(ug/L)	ND		0.48	J	ND		0.70	=	ND	
Ethene	(ug/L)	ND		ND		ND		ND		ND	
Methane	(ug/L)	5600	D,B	860	E,B	6900	D,B	720	E,B	3900	D
SULFATE/NI											
Nitrate	(mg/L)	--		ND		--		ND		--	
Sulfate	(mg/L)	--		ND		--		1.0	=	--	
VOC											
2-Butanone	(ug/L)	--		ND		--		ND		--	
Acetone	(ug/L)	--		ND		--		ND		--	
Benzene	(ug/L)	--		ND		--		ND		--	
Bromodichloromethane	(ug/L)	--		ND		--		ND		--	
Chlorobenzene	(ug/L)	--		ND		--		ND		--	
Chloroform	(ug/L)	--		ND		--		ND		--	
Ethylbenzene	(ug/L)	--		ND		--		ND		--	
Methylene chloride	(ug/L)	--		ND		--		ND		--	
Toluene	(ug/L)	--		ND		--		ND		--	
Xylenes (total)	(ug/L)	--		ND		--		ND		--	

Wright-Patterson AFB
April 2001 - OU2 Data - Ground Water
The IT Group, Project 777097

Sample Number		BMP-OW-4-0401		BMP-OW-4-0401 R2		BMP-P18-1-0401		BMP-P18-1-0401 R2		BMP-P18-2-0401	
Sample Date		04/17/01		04/17/01		04/17/01		04/17/01		04/17/01	
M2720C											
Ethane	(ug/L)	0.32	J	ND		ND		ND		ND	
Ethene	(ug/L)	ND		ND		ND		ND		ND	
Methane	(ug/L)	730	E,B	3400	D	780	E,B	3600	D	620	E,B
SULFATE/NI											
Nitrate	(mg/L)	ND		--		ND		--		1.1	=
Sulfate	(mg/L)	2.0	=	--		1.1	=	--		191	=
VOC											
2-Butanone	(ug/L)	ND		--		ND		--		ND	
Acetone	(ug/L)	ND		--		ND		--		ND	
Benzene	(ug/L)	ND		--		ND		--		1.0	J
Bromodichloromethane	(ug/L)	ND		--		ND		--		ND	
Chlorobenzene	(ug/L)	ND		--		ND		--		ND	
Chloroform	(ug/L)	ND		--		ND		--		ND	
Ethylbenzene	(ug/L)	ND		--		ND		--		ND	
Methylene chloride	(ug/L)	ND		--		ND		--		ND	
Toluene	(ug/L)	ND		--		ND		--		ND	
Xylenes (total)	(ug/L)	ND		--		ND		--		ND	

Wright-Patterson AFB
April 2001 - OU2 Data - Ground Water
The IT Group, Project 777097

Sample Number		BMP-P18-2-0401 R2	
Sample Date		04/17/01	
M2720C			
Ethane	(ug/L)	ND	
Ethene	(ug/L)	ND	
Methane	(ug/L)	1900	D
SULFATE/NI			
Nitrate	(mg/L)	--	
Sulfate	(mg/L)	--	
VOC			
2-Butanone	(ug/L)	--	
Acetone	(ug/L)	--	
Benzene	(ug/L)	--	
Bromodichloromethane	(ug/L)	--	
Chlorobenzene	(ug/L)	--	
Chloroform	(ug/L)	--	
Ethylbenzene	(ug/L)	--	
Methylene chloride	(ug/L)	--	
Toluene	(ug/L)	--	
Xylenes (total)	(ug/L)	--	

-- = Not Applicable, ND = Not Detected

Wright-Patterson AFB
April 2001 - OU2 Data - Ground Water
The IT Group, Project 777097

Sample Number		BMP-04-016-M-0401		BMP-04-016-M-0401 R2		BMP-04-518-M-0401		BMP-04-518-M-0401 R2		BMP-NEA-MW20-2S-0401	
Sample Date		04/17/01		04/17/01		04/18/01		04/18/01		04/19/01	
M2720C											
Ethane	(ug/L)	1.1	=	50	ND	0.50	ND	100	ND	0.50	ND
Ethene	(ug/L)	0.50	ND	50	ND	0.50	ND	100	ND	0.50	ND
Methane	(ug/L)	710	E,B	4100	D,B	710	E,B	5000	D,B	1100	E,B
SULFATE/NI											
Nitrate	(mg/L)	0.50	ND	--		0.50	ND	--		0.50	ND
Sulfate	(mg/L)	5.2	=	--		1.0	ND	--		1.0	ND
VOC											
1,1,1-Trichloroethane	(ug/L)	1.0	ND	--		10	ND	--		3.3	ND
1,1,2,2-Tetrachloroethane	(ug/L)	1.0	ND	--		10	ND	--		3.3	ND
1,1,2-Trichloroethane	(ug/L)	1.0	ND	--		10	ND	--		3.3	ND
1,1-Dichloroethane	(ug/L)	1.0	ND	--		10	ND	--		3.3	ND
1,1-Dichloroethene	(ug/L)	1.0	ND	--		10	ND	--		3.3	ND
1,2-Dichloroethane	(ug/L)	1.0	ND	--		10	ND	--		3.3	ND
1,2-Dichloropropane	(ug/L)	1.0	ND	--		10	ND	--		3.3	ND
2-Butanone	(ug/L)	10	ND	--		100	ND	--		33	ND
2-Hexanone	(ug/L)	10	ND	--		100	ND	--		33	ND
4-Methyl-2-pentanone	(ug/L)	10	ND	--		100	ND	--		33	ND
Acetone	(ug/L)	10	ND	--		100	ND	--		33	ND
Benzene	(ug/L)	3.8	=	--		23	=	--		35	=
Bromodichloromethane	(ug/L)	1.0	ND	--		10	ND	--		3.3	ND
Bromoform	(ug/L)	1.0	ND	--		10	ND	--		3.3	ND
Bromomethane	(ug/L)	2.0	ND	--		20	ND	--		6.7	ND
Carbon disulfide	(ug/L)	1.0	ND	--		10	ND	--		3.3	ND
Carbon tetrachloride	(ug/L)	1.0	ND	--		10	ND	--		3.3	ND
Chlorobenzene	(ug/L)	20	=	--		10	ND	--		3.3	ND
Chloroethane	(ug/L)	2.0	ND	--		20	ND	--		6.7	ND
Chloroform	(ug/L)	1.0	ND	--		10	ND	--		3.3	ND
Chloromethane	(ug/L)	2.0	ND	--		20	ND	--		6.7	ND
Dibromochloromethane	(ug/L)	1.0	ND	--		10	ND	--		3.3	ND
Ethylbenzene	(ug/L)	1.4	=	--		5.3	J	--		3.3	ND
Methyl tert-butyl ether	(ug/L)	5.0	ND	--		50	ND	--		17	ND
Methylene chloride	(ug/L)	1.0	ND	--		10	ND	--		3.3	ND
Styrene	(ug/L)	1.0	ND	--		10	ND	--		3.3	ND
Tetrachloroethene	(ug/L)	1.0	ND	--		10	ND	--		3.3	ND
Toluene	(ug/L)	0.68	J	--		10	ND	--		3.3	ND
Trichloroethene	(ug/L)	2.0	ND	--		20	ND	--		6.7	ND
Vinyl chloride	(ug/L)	1.0	ND	--		10	ND	--		3.3	ND
Xylenes (total)	(ug/L)	3.9	=	--		10	ND	--		3.3	ND
cis-1,2-Dichloroethene	(ug/L)	0.50	ND	--		5.0	ND	--		1.7	ND
cis-1,3-Dichloropropene	(ug/L)	1.0	ND	--		10	ND	--		3.3	ND
trans-1,2-Dichloroethene	(ug/L)	0.50	ND	--		5.0	ND	--		1.7	ND
trans-1,3-Dichloropropene	(ug/L)	1.0	ND	--		10	ND	--		3.3	ND

Wright-Patterson AFB
April 2001 - OU2 Data - Ground Water
The IT Group, Project 777097

Sample Number		BMP-NEA-MW20-2S-0401 R2		BMP-NEA-MW20-2S-5401		BMP-NEA-MW20-2S-5401 R2		BMP-NEA-MW21-3S-0401		BMP-NEA-MW21-3S-0401 R2	
Sample Date		04/19/01		04/19/01		04/19/01		04/18/01		04/18/01	
M2720C											
Ethane	(ug/L)	100	ND	0.50	ND	100	ND	0.92	=	120	ND
Ethene	(ug/L)	100	ND	0.50	ND	100	ND	0.50	ND	120	ND
Methane	(ug/L)	6800	D,B	1100	E,B	5600	D,B	750	E,B	6400	D,B
SULFATE/NI											
Nitrate	(mg/L)	--		0.50	ND	--		0.50	ND	--	
Sulfate	(mg/L)	--		1.0	ND	--		1.0	ND	--	
VOC											
1,1,1-Trichloroethane	(ug/L)	--		3.3	ND	--		10	ND	--	
1,1,2,2-Tetrachloroethane	(ug/L)	--		3.3	ND	--		10	ND	--	
1,1,2-Trichloroethane	(ug/L)	--		3.3	ND	--		10	ND	--	
1,1-Dichloroethane	(ug/L)	--		3.3	ND	--		10	ND	--	
1,1-Dichloroethene	(ug/L)	--		3.3	ND	--		10	ND	--	
1,2-Dichloroethane	(ug/L)	--		3.3	ND	--		10	ND	--	
1,2-Dichloropropane	(ug/L)	--		3.3	ND	--		10	ND	--	
2-Butanone	(ug/L)	--		33	ND	--		100	ND	--	
2-Hexanone	(ug/L)	--		33	ND	--		100	ND	--	
4-Methyl-2-pentanone	(ug/L)	--		33	ND	--		100	ND	--	
Acetone	(ug/L)	--		33	ND	--		100	ND	--	
Benzene	(ug/L)	--		38	=	--		49	=	--	
Bromodichloromethane	(ug/L)	--		3.3	ND	--		10	ND	--	
Bromoform	(ug/L)	--		3.3	ND	--		10	ND	--	
Bromomethane	(ug/L)	--		6.7	ND	--		20	ND	--	
Carbon disulfide	(ug/L)	--		3.3	ND	--		10	ND	--	
Carbon tetrachloride	(ug/L)	--		3.3	ND	--		10	ND	--	
Chlorobenzene	(ug/L)	--		3.3	ND	--		10	ND	--	
Chloroethane	(ug/L)	--		6.7	ND	--		20	ND	--	
Chloroform	(ug/L)	--		3.3	ND	--		10	ND	--	
Chloromethane	(ug/L)	--		6.7	ND	--		20	ND	--	
Dibromochloromethane	(ug/L)	--		3.3	ND	--		10	ND	--	
Ethylbenzene	(ug/L)	--		3.3	ND	--		32	=	--	
Methyl tert-butyl ether	(ug/L)	--		17	ND	--		50	ND	--	
Methylene chloride	(ug/L)	--		3.3	ND	--		10	ND	--	
Styrene	(ug/L)	--		3.3	ND	--		10	ND	--	
Tetrachloroethene	(ug/L)	--		3.3	ND	--		10	ND	--	
Toluene	(ug/L)	--		3.3	ND	--		10	ND	--	
Trichloroethene	(ug/L)	--		6.7	ND	--		20	ND	--	
Vinyl chloride	(ug/L)	--		3.3	ND	--		10	ND	--	
Xylenes (total)	(ug/L)	--		3.3	ND	--		28	=	--	
cis-1,2-Dichloroethene	(ug/L)	--		1.7	ND	--		5.0	ND	--	
cis-1,3-Dichloropropene	(ug/L)	--		3.3	ND	--		10	ND	--	
trans-1,2-Dichloroethene	(ug/L)	--		1.7	ND	--		5.0	ND	--	
trans-1,3-Dichloropropene	(ug/L)	--		3.3	ND	--		10	ND	--	

Wright-Patterson AFB
April 2001 - OU2 Data - Ground Water
The IT Group, Project 777097

Sample Number		BMP-NEA-MW25-1D-0401		BMP-NEA-MW25-2I-0401		BMP-NEA-MW25-2I-0401 R2		BMP-NEA-MW26-3S-0401		BMP-NEA-MW28-5S-0401	
Sample Date		04/16/01		04/16/01		04/16/01		04/17/01		04/17/01	
M2720C											
Ethane	(ug/L)	0.50	ND	0.48	J	100	ND	0.50	ND	0.27	J
Ethene	(ug/L)	0.50	ND	0.50	ND	100	ND	0.50	ND	0.50	ND
Methane	(ug/L)	0.47	J,B	1000	E,B	8900	D,B	38	B	740	E,B
SULFATE/NI											
Nitrate	(mg/L)	0.50	ND	0.50	ND	--		0.50	ND	0.50	ND
Sulfate	(mg/L)	74.2	=	1.0	ND	--		57.5	=	1.7	=
VOC											
1,1,1-Trichloroethane	(ug/L)	1.0	ND	1.0	ND	--		1.0	ND	2.5	ND
1,1,2,2-Tetrachloroethane	(ug/L)	1.0	ND	1.0	ND	--		1.0	ND	2.5	ND
1,1,2-Trichloroethane	(ug/L)	1.0	ND	1.0	ND	--		1.0	ND	2.5	ND
1,1-Dichloroethane	(ug/L)	1.0	ND	1.0	ND	--		1.0	ND	2.5	ND
1,1-Dichloroethene	(ug/L)	1.0	ND	1.0	ND	--		1.0	ND	2.5	ND
1,2-Dichloroethane	(ug/L)	1.0	ND	1.0	ND	--		1.0	ND	2.5	ND
1,2-Dichloropropane	(ug/L)	1.0	ND	1.0	ND	--		1.0	ND	2.5	ND
2-Butanone	(ug/L)	10	ND	10	ND	--		10	ND	25	ND
2-Hexanone	(ug/L)	10	ND	10	ND	--		10	ND	25	ND
4-Methyl-2-pentanone	(ug/L)	10	ND	10	ND	--		10	ND	25	ND
Acetone	(ug/L)	10	ND	10	ND	--		10	ND	25	ND
Benzene	(ug/L)	1.0	ND	1.0	ND	--		1.0	ND	2.5	ND
Bromodichloromethane	(ug/L)	1.0	ND	1.0	ND	--		1.0	ND	2.5	ND
Bromoform	(ug/L)	1.0	ND	1.0	ND	--		1.0	ND	2.5	ND
Bromomethane	(ug/L)	2.0	ND	2.0	ND	--		2.0	ND	5.0	ND
Carbon disulfide	(ug/L)	1.0	ND	1.0	ND	--		1.0	ND	2.5	ND
Carbon tetrachloride	(ug/L)	1.0	ND	1.0	ND	--		1.0	ND	2.5	ND
Chlorobenzene	(ug/L)	1.0	ND	4.4	=	--		1.0	ND	2.5	ND
Chloroethane	(ug/L)	2.0	ND	2.0	ND	--		2.0	ND	5.0	ND
Chloroform	(ug/L)	1.0	ND	1.0	ND	--		1.0	ND	2.5	ND
Chloromethane	(ug/L)	2.0	ND	2.0	ND	--		2.0	ND	5.0	ND
Dibromochloromethane	(ug/L)	1.0	ND	1.0	ND	--		1.0	ND	2.5	ND
Ethylbenzene	(ug/L)	1.0	ND	1.0	ND	--		1.0	ND	2.5	ND
Methyl tert-butyl ether	(ug/L)	5.0	ND	5.0	ND	--		5.0	ND	12	ND
Methylene chloride	(ug/L)	0.34	J	1.0	ND	--		1.0	ND	2.5	ND
Styrene	(ug/L)	1.0	ND	1.0	ND	--		1.0	ND	2.5	ND
Tetrachloroethene	(ug/L)	1.0	ND	1.0	ND	--		1.0	ND	2.5	ND
Toluene	(ug/L)	1.0	ND	1.0	ND	--		1.0	ND	2.5	ND
Trichloroethene	(ug/L)	2.0	ND	2.0	ND	--		2.0	ND	5.0	ND
Vinyl chloride	(ug/L)	1.0	ND	1.0	ND	--		1.0	ND	2.5	ND
Xylenes (total)	(ug/L)	1.0	ND	1.0	ND	--		1.0	ND	2.5	ND
cis-1,2-Dichloroethene	(ug/L)	0.50	ND	0.50	ND	--		0.50	ND	1.2	ND
cis-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND	--		1.0	ND	2.5	ND
trans-1,2-Dichloroethene	(ug/L)	0.50	ND	0.50	ND	--		0.50	ND	1.2	ND
trans-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND	--		1.0	ND	2.5	ND

Wright-Patterson AFB
April 2001 - OU2 Data - Ground Water
The IT Group, Project 777097

Sample Number		BMP-NEA-MW28-5S-0401 R2		BMP-NEA-MW28-5S-AMB01		BMP-OW-1-0401		BMP-OW-1-0401 R2		BMP-OW-1-5401	
Sample Date		04/17/01		04/17/01		04/16/01		04/16/01		04/16/01	
M2720C											
Ethane	(ug/L)	50	ND	0.50	ND	0.49	J	50	ND	0.51	=
Ethene	(ug/L)	50	ND	0.54	=	0.50	ND	50	ND	0.50	ND
Methane	(ug/L)	4000	D	0.44	J,B	790	E,B	5600	D,B	770	E,B
SULFATE/NI											
Nitrate	(mg/L)	--		0.50	ND	0.50	ND	--		0.50	ND
Sulfate	(mg/L)	--		1.0	ND	1.3	=	--		1.2	=
VOC											
1,1,1-Trichloroethane	(ug/L)	--		1.0	ND	2.0	ND	--		2.0	ND
1,1,2,2-Tetrachloroethane	(ug/L)	--		1.0	ND	2.0	ND	--		2.0	ND
1,1,2-Trichloroethane	(ug/L)	--		1.0	ND	2.0	ND	--		2.0	ND
1,1-Dichloroethane	(ug/L)	--		1.0	ND	2.0	ND	--		2.0	ND
1,1-Dichloroethene	(ug/L)	--		1.0	ND	2.0	ND	--		2.0	ND
1,2-Dichloroethane	(ug/L)	--		1.0	ND	2.0	ND	--		2.0	ND
1,2-Dichloropropane	(ug/L)	--		1.0	ND	2.0	ND	--		2.0	ND
2-Butanone	(ug/L)	--		3.9	J	20	ND	--		20	ND
2-Hexanone	(ug/L)	--		10	ND	20	ND	--		20	ND
4-Methyl-2-pentanone	(ug/L)	--		10	ND	20	ND	--		20	ND
Acetone	(ug/L)	--		32	=	20	ND	--		20	ND
Benzene	(ug/L)	--		1.0	ND	0.84	J	--		0.85	J
Bromodichloromethane	(ug/L)	--		0.34	J	2.0	ND	--		2.0	ND
Bromoform	(ug/L)	--		1.0	ND	2.0	ND	--		2.0	ND
Bromomethane	(ug/L)	--		2.0	ND	4.0	ND	--		4.0	ND
Carbon disulfide	(ug/L)	--		1.0	ND	2.0	ND	--		2.0	ND
Carbon tetrachloride	(ug/L)	--		1.0	ND	2.0	ND	--		2.0	ND
Chlorobenzene	(ug/L)	--		1.0	ND	2.0	ND	--		2.0	ND
Chloroethane	(ug/L)	--		2.0	ND	4.0	ND	--		4.0	ND
Chloroform	(ug/L)	--		1.6	=	2.0	ND	--		2.0	ND
Chloromethane	(ug/L)	--		2.0	ND	4.0	ND	--		4.0	ND
Dibromochloromethane	(ug/L)	--		1.0	ND	2.0	ND	--		2.0	ND
Ethylbenzene	(ug/L)	--		1.0	ND	2.0	ND	--		2.0	ND
Methyl tert-butyl ether	(ug/L)	--		5.0	ND	10	ND	--		10	ND
Methylene chloride	(ug/L)	--		1.0	ND	2.0	ND	--		2.0	ND
Styrene	(ug/L)	--		1.0	ND	2.0	ND	--		2.0	ND
Tetrachloroethene	(ug/L)	--		1.0	ND	2.0	ND	--		2.0	ND
Toluene	(ug/L)	--		1.0	ND	2.0	ND	--		2.0	ND
Trichloroethene	(ug/L)	--		2.0	ND	4.0	ND	--		4.0	ND
Vinyl chloride	(ug/L)	--		1.0	ND	2.0	ND	--		2.0	ND
Xylenes (total)	(ug/L)	--		1.0	ND	2.0	ND	--		2.0	ND
cis-1,2-Dichloroethene	(ug/L)	--		0.50	ND	1.0	ND	--		1.0	ND
cis-1,3-Dichloropropene	(ug/L)	--		1.0	ND	2.0	ND	--		2.0	ND
trans-1,2-Dichloroethene	(ug/L)	--		0.50	ND	1.0	ND	--		1.0	ND
trans-1,3-Dichloropropene	(ug/L)	--		1.0	ND	2.0	ND	--		2.0	ND

Wright-Patterson AFB
April 2001 - OU2 Data - Ground Water
The IT Group, Project 777097

Sample Number		BMP-OW-1-5401 R2		BMP-OW-2-0401		BMP-OW-2-0401 R2		BMP-OW-3-0401		BMP-OW-3-0401 R2	
Sample Date		04/16/01		04/17/01		04/17/01		04/17/01		04/17/01	
M2720C											
Ethane	(ug/L)	62	ND	0.48	J	62	ND	0.70	=	50	ND
Ethene	(ug/L)	62	ND	0.50	ND	62	ND	0.50	ND	50	ND
Methane	(ug/L)	5600	D,B	860	E,B	6900	D,B	720	E,B	3900	D
SULFATE/NI											
Nitrate	(mg/L)	--		0.50	ND	--		0.50	ND	--	
Sulfate	(mg/L)	--		1.0	ND	--		1.0	=	--	
VOC											
1,1,1-Trichloroethane	(ug/L)	--		2.5	ND	--		5.0	ND	--	
1,1,2,2-Tetrachloroethane	(ug/L)	--		2.5	ND	--		5.0	ND	--	
1,1,2-Trichloroethane	(ug/L)	--		2.5	ND	--		5.0	ND	--	
1,1-Dichloroethane	(ug/L)	--		2.5	ND	--		5.0	ND	--	
1,1-Dichloroethene	(ug/L)	--		2.5	ND	--		5.0	ND	--	
1,2-Dichloroethane	(ug/L)	--		2.5	ND	--		5.0	ND	--	
1,2-Dichloropropane	(ug/L)	--		2.5	ND	--		5.0	ND	--	
2-Butanone	(ug/L)	--		25	ND	--		50	ND	--	
2-Hexanone	(ug/L)	--		25	ND	--		50	ND	--	
4-Methyl-2-pentanone	(ug/L)	--		25	ND	--		50	ND	--	
Acetone	(ug/L)	--		25	ND	--		50	ND	--	
Benzene	(ug/L)	--		2.5	ND	--		5.0	ND	--	
Bromodichloromethane	(ug/L)	--		2.5	ND	--		5.0	ND	--	
Bromoform	(ug/L)	--		2.5	ND	--		5.0	ND	--	
Bromomethane	(ug/L)	--		5.0	ND	--		10	ND	--	
Carbon disulfide	(ug/L)	--		2.5	ND	--		5.0	ND	--	
Carbon tetrachloride	(ug/L)	--		2.5	ND	--		5.0	ND	--	
Chlorobenzene	(ug/L)	--		2.5	ND	--		5.0	ND	--	
Chloroethane	(ug/L)	--		5.0	ND	--		10	ND	--	
Chloroform	(ug/L)	--		2.5	ND	--		5.0	ND	--	
Chloromethane	(ug/L)	--		5.0	ND	--		10	ND	--	
Dibromochloromethane	(ug/L)	--		2.5	ND	--		5.0	ND	--	
Ethylbenzene	(ug/L)	--		2.5	ND	--		5.0	ND	--	
Methyl tert-butyl ether	(ug/L)	--		12	ND	--		25	ND	--	
Methylene chloride	(ug/L)	--		2.5	ND	--		5.0	ND	--	
Styrene	(ug/L)	--		2.5	ND	--		5.0	ND	--	
Tetrachloroethene	(ug/L)	--		2.5	ND	--		5.0	ND	--	
Toluene	(ug/L)	--		2.5	ND	--		5.0	ND	--	
Trichloroethene	(ug/L)	--		5.0	ND	--		10	ND	--	
Vinyl chloride	(ug/L)	--		2.5	ND	--		5.0	ND	--	
Xylenes (total)	(ug/L)	--		2.5	ND	--		5.0	ND	--	
cis-1,2-Dichloroethene	(ug/L)	--		1.2	ND	--		2.5	ND	--	
cis-1,3-Dichloropropene	(ug/L)	--		2.5	ND	--		5.0	ND	--	
trans-1,2-Dichloroethene	(ug/L)	--		1.2	ND	--		2.5	ND	--	
trans-1,3-Dichloropropene	(ug/L)	--		2.5	ND	--		5.0	ND	--	

Wright-Patterson AFB
April 2001 - OU2 Data - Ground Water
The IT Group, Project 777097

Sample Number		BMP-OW-4-0401		BMP-OW-4-0401 R2		BMP-P18-1-0401		BMP-P18-1-0401 R2		BMP-P18-2-0401	
Sample Date		04/17/01		04/17/01		04/17/01		04/17/01		04/17/01	
M2720C											
Ethane	(ug/L)	0.32	J	50	ND	0.50	ND	50	ND	0.50	ND
Ethene	(ug/L)	0.50	ND	50	ND	0.50	ND	50	ND	0.50	ND
Methane	(ug/L)	730	E,B	3400	D	780	E,B	3600	D	620	E,B
SULFATE/NI											
Nitrate	(mg/L)	0.50	ND	--		0.50	ND	--		1.1	=
Sulfate	(mg/L)	2.0	=	--		1.1	=	--		191	=
VOC											
1,1,1-Trichloroethane	(ug/L)	1.0	ND	--		2.5	ND	--		2.5	ND
1,1,2,2-Tetrachloroethane	(ug/L)	1.0	ND	--		2.5	ND	--		2.5	ND
1,1,2-Trichloroethane	(ug/L)	1.0	ND	--		2.5	ND	--		2.5	ND
1,1-Dichloroethane	(ug/L)	1.0	ND	--		2.5	ND	--		2.5	ND
1,1-Dichloroethene	(ug/L)	1.0	ND	--		2.5	ND	--		2.5	ND
1,2-Dichloroethane	(ug/L)	1.0	ND	--		2.5	ND	--		2.5	ND
1,2-Dichloropropane	(ug/L)	1.0	ND	--		2.5	ND	--		2.5	ND
2-Butanone	(ug/L)	10	ND	--		25	ND	--		25	ND
2-Hexanone	(ug/L)	10	ND	--		25	ND	--		25	ND
4-Methyl-2-pentanone	(ug/L)	10	ND	--		25	ND	--		25	ND
Acetone	(ug/L)	10	ND	--		25	ND	--		25	ND
Benzene	(ug/L)	1.0	ND	--		2.5	ND	--		1.0	J
Bromodichloromethane	(ug/L)	1.0	ND	--		2.5	ND	--		2.5	ND
Bromoform	(ug/L)	1.0	ND	--		2.5	ND	--		2.5	ND
Bromomethane	(ug/L)	2.0	ND	--		5.0	ND	--		5.0	ND
Carbon disulfide	(ug/L)	1.0	ND	--		2.5	ND	--		2.5	ND
Carbon tetrachloride	(ug/L)	1.0	ND	--		2.5	ND	--		2.5	ND
Chlorobenzene	(ug/L)	1.0	ND	--		2.5	ND	--		2.5	ND
Chloroethane	(ug/L)	2.0	ND	--		5.0	ND	--		5.0	ND
Chloroform	(ug/L)	1.0	ND	--		2.5	ND	--		2.5	ND
Chloromethane	(ug/L)	2.0	ND	--		5.0	ND	--		5.0	ND
Dibromochloromethane	(ug/L)	1.0	ND	--		2.5	ND	--		2.5	ND
Ethylbenzene	(ug/L)	1.0	ND	--		2.5	ND	--		2.5	ND
Methyl tert-butyl ether	(ug/L)	5.0	ND	--		12	ND	--		12	ND
Methylene chloride	(ug/L)	1.0	ND	--		2.5	ND	--		2.5	ND
Styrene	(ug/L)	1.0	ND	--		2.5	ND	--		2.5	ND
Tetrachloroethene	(ug/L)	1.0	ND	--		2.5	ND	--		2.5	ND
Toluene	(ug/L)	1.0	ND	--		2.5	ND	--		2.5	ND
Trichloroethene	(ug/L)	2.0	ND	--		5.0	ND	--		5.0	ND
Vinyl chloride	(ug/L)	1.0	ND	--		2.5	ND	--		2.5	ND
Xylenes (total)	(ug/L)	1.0	ND	--		2.5	ND	--		2.5	ND
cis-1,2-Dichloroethene	(ug/L)	0.50	ND	--		1.2	ND	--		1.2	ND
cis-1,3-Dichloropropene	(ug/L)	1.0	ND	--		2.5	ND	--		2.5	ND
trans-1,2-Dichloroethene	(ug/L)	0.50	ND	--		1.2	ND	--		1.2	ND
trans-1,3-Dichloropropene	(ug/L)	1.0	ND	--		2.5	ND	--		2.5	ND

Wright-Patterson AFB
April 2001 - OU2 Data - Ground Water
The IT Group, Project 777097

Sample Number		BMP-P18-2-0401 R2	
Sample Date		04/17/01	
M2720C			
Ethane	(ug/L)	25	ND
Ethene	(ug/L)	25	ND
Methane	(ug/L)	1900	D
SULFATE/NI			
Nitrate	(mg/L)	--	
Sulfate	(mg/L)	--	
VOC			
1,1,1-Trichloroethane	(ug/L)	--	
1,1,2,2-Tetrachloroethane	(ug/L)	--	
1,1,2-Trichloroethane	(ug/L)	--	
1,1-Dichloroethane	(ug/L)	--	
1,1-Dichloroethene	(ug/L)	--	
1,2-Dichloroethane	(ug/L)	--	
1,2-Dichloropropane	(ug/L)	--	
2-Butanone	(ug/L)	--	
2-Hexanone	(ug/L)	--	
4-Methyl-2-pentanone	(ug/L)	--	
Acetone	(ug/L)	--	
Benzene	(ug/L)	--	
Bromodichloromethane	(ug/L)	--	
Bromoform	(ug/L)	--	
Bromomethane	(ug/L)	--	
Carbon disulfide	(ug/L)	--	
Carbon tetrachloride	(ug/L)	--	
Chlorobenzene	(ug/L)	--	
Chloroethane	(ug/L)	--	
Chloroform	(ug/L)	--	
Chloromethane	(ug/L)	--	
Dibromochloromethane	(ug/L)	--	
Ethylbenzene	(ug/L)	--	
Methyl tert-butyl ether	(ug/L)	--	
Methylene chloride	(ug/L)	--	
Styrene	(ug/L)	--	
Tetrachloroethene	(ug/L)	--	
Toluene	(ug/L)	--	
Trichloroethene	(ug/L)	--	
Vinyl chloride	(ug/L)	--	
Xylenes (total)	(ug/L)	--	
cis-1,2-Dichloroethene	(ug/L)	--	
cis-1,3-Dichloropropene	(ug/L)	--	
trans-1,2-Dichloroethene	(ug/L)	--	
trans-1,3-Dichloropropene	(ug/L)	--	

-- = Not Applicable, ND = Not Detected

CASE NARRATIVE

A1E030254

The following report contains the analytical results for sixteen air samples sent directly to STL Santa Ana by IT Corporation from the WPAFB-OU2 Site. The samples were received May 3, 2001, according to documented sample acceptance procedures.

Fixed Gases in Air, TPH in Air, and BTEX by TO-3 analyses were performed at STL's Santa Ana facility.

STL utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the Analytical Methods Summary page in accordance with the methods indicated. A summary of QC data for these analyses is included at the rear of the report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

ANALYTICAL METHODS SUMMARY

A1E030254

PARAMETER	ANALYTICAL METHOD
BTEX by TO-3	EPA-19 TO-3
Fixed Gases	ASTM D1946
TPH by TO-3	EPA-19 TO-3

References:

ASTM Annual Book Of ASTM Standards.

EPA-19 "Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air", EPA/600/4-89/017, June 1988.

SAMPLE SUMMARY

A1E030254

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
ECRGL	001	ROD-OU2-SV12-050101	05/01/01	11:20
ECRGV	002	ROD-OU2-SV13-050101	05/01/01	13:15
ECRGX	003	ROD-OU2-SV11-050101	05/01/01	15:05
ECRG1	004	ROD-OU2-SV08-050101	05/01/01	15:25
ECRG2	005	ROD-OU2-SV01-050101	05/01/01	15:45
ECRG3	006	ROD-OU2-SV04-050101	05/01/01	16:00
ECRG4	007	ROD-OU2-SV03-050101	05/01/01	16:25
ECRG5	008	ROD-OU2-SV03-050151	05/01/01	16:25
ECRG6	009	ROD-OU2-SV06-050101	05/01/01	16:50
ECRG7	010	ROD-OU2-SV14-050201	05/02/01	09:35
ECRG9	011	ROD-OU2-SV15-050201	05/02/01	09:50
ECRHA	012	ROD-OU2-SV09-050201	05/02/01	10:00
ECRHD	013	ROD-OU2-SV10-050201	05/02/01	10:10
ECRHG	014	ROD-OU2-SV07-050201	05/02/01	10:25
ECRHH	015	ROD-OU2-SV02-050201	05/02/01	10:38
ECRHM	016	ROD-OU2-SV02-RB01	05/02/01	10:42

NOTE(S):

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

Analytical Legend

AMB – Ambient
B (or MBB, MBD, MBE) - Method blank contamination present
D - Diluted sample analytical results
DUP - Duplicate
EW – Extraction Well
E - Estimated result. Concentration exceeds the calibration range
I - Quantification suspect due to matrix interference
IW – Insufficient Water
J – Estimated Result. Result less than Reporting Limit
L – Serial dilution of a digestate in the analytical batch indicates that physical and chemical interferences are present.
LCS – Laboratory Control Sample
LF – Landfill
LW – Line Water
mg/L – milligrams/Liter
µg/L – micrograms/Liter
MW – Monitoring Well
N – Spiked analyte recovery is outside stated control limits
NA - Not Applicable
ND – Not Detected
NR – Not Reported
pg/L – picograms/Liter
Q - Estimated maximum possible concentration
RB – Rinsate Blank
R2 – Indicates second re-extraction analysis run was required due to surrogate recoveries outside of acceptance criteria on the initial sample run or that analytical results presented are for a diluted sample due to high target analytes.
T or TB – Trip Blank

-- – Not Analyzed
= – Confirmed detection
( ) – Result exceeds MCL value
[ ] – Result exceeds background value

Wright-Patterson AFB
April 2001 - OU2-SV Data - Soil Gas
The IT Group, Project 777097

Sample Number		ROD-OU2-SV01-050101		ROD-OU2-SV02-050201		ROD-OU2-SV02-RB01		ROD-OU2-SV03-050101		ROD-OU2-SV03-050151	
Sample Date		05/01/01		05/02/01		05/02/01		05/01/01		05/01/01	
D1946											
Carbon dioxide	(%(v/v))	1.1	=	3.1	=	0.041	=	14	=	14	=
Methane	(%(v/v))	0.00014	J	0.00019	J	0.00022	=	0.45	=	0.41	=
Oxygen	(%(v/v))	20	=	17	=	21	=	2.6	=	2.5	=
TO3											
Benzene	(ug/L)	0.022	J	0.034	J	ND		7.5	D	11	D
Ethylbenzene	(ug/L)	0.083	J	0.32	=	0.17	=	14	D	17	D
TPH (as Gasoline)	(mg/m3)	16	MBE	50	=	30	=	4700	D	5000	D
TPH (as Jet Fuel JP-4)	(mg/m3)	16	MBE	49	=	29	=	4600	D	4900	D
Toluene	(ug/L)	0.085	=	0.20	=	0.12	=	24	D	27	D
m-Xylene & p-Xylene	(ug/L)	0.21	=	0.73	=	0.39	=	31	D	38	D
o-Xylene	(ug/L)	ND		0.16	=	0.079	J	6.0	D,J	7.8	D

Wright-Patterson AFB
April 2001 - OU2-SV Data - Soil Gas
The IT Group, Project 777097

Sample Number		ROD-OU2-SV04-050101		ROD-OU2-SV06-050101		ROD-OU2-SV07-050201		ROD-OU2-SV08-050101		ROD-OU2-SV09-050201	
Sample Date		05/01/01		05/01/01		05/02/01		05/01/01		05/02/01	
D1946											
Carbon dioxide	(%(v/v))	0.43	=	1.1	=	9.3	=	1.7	=	1.1	=
Methane	(%(v/v))	0.0094	=	33	=	0.77	=	4.7	=	ND	
Oxygen	(%(v/v))	22	=	1.8	=	1.8	=	12	=	20	=
TO3											
Benzene	(ug/L)	ND		91	D	7.3	D	18	D	0.058	J
Ethylbenzene	(ug/L)	0.052	J	40	D	12	D	12	D	0.53	=
TPH (as Gasoline)	(mg/m3)	15	MBE	22000	D	2300	D	3900	D	78	=
TPH (as Jet Fuel JP-4)	(mg/m3)	15	MBE	22000	D	2200	D	3900	D	76	=
Toluene	(ug/L)	0.12	=	94	D	14	D	24	D	0.40	=
m-Xylene & p-Xylene	(ug/L)	0.093	=	80	D	17	D	24	D	1.2	=
o-Xylene	(ug/L)	ND		12	D	4.0	D	2.2	D	0.25	=

Wright-Patterson AFB
April 2001 - OU2-SV Data - Soil Gas
The IT Group, Project 777097

Sample Number		ROD-OU2-SV10-050201		ROD-OU2-SV11-050101		ROD-OU2-SV12-050101		ROD-OU2-SV13-050101		ROD-OU2-SV14-050201	
Sample Date		05/02/01		05/01/01		05/01/01		05/01/01		05/02/01	
D1946											
Carbon dioxide	(%(v/v))	8.9	=	7.0	=	4.5	=	0.90	=	9.9	=
Methane	(%(v/v))	3.3	=	ND		ND		ND		2.1	=
Oxygen	(%(v/v))	1.7	=	7.1	=	14	=	21	=	1.7	=
TO3											
Benzene	(ug/L)	19	D	ND		ND		ND		79	D
Ethylbenzene	(ug/L)	35	D	ND		ND		ND		100	D
TPH (as Gasoline)	(mg/m3)	7300	D	4.3	MBE	5.2	MBE	4.4	MBE	31000	D
TPH (as Jet Fuel JP-4)	(mg/m3)	7100	D	4.2	J,MBE	5.1	J,MBE	4.4	J,MBE	31000	D
Toluene	(ug/L)	42	D	ND		0.026	J	ND		200	D
m-Xylene & p-Xylene	(ug/L)	70	D	ND		ND		ND		190	D
o-Xylene	(ug/L)	11	D	ND		ND		ND		25	D

Wright-Patterson AFB
April 2001 - OU2-SV Data - Soil Gas
The IT Group, Project 777097

Sample Number	ROD-OU2-SV15-050201
Sample Date	05/02/01

D1946			
Carbon dioxide	(%(v/v))	0.97	=
Methane	(%(v/v))	0.00017	J
Oxygen	(%(v/v))	21	=
TO3			
Benzene	(ug/L)	0.15	D,J
Ethylbenzene	(ug/L)	1.3	D
TPH (as Gasoline)	(mg/m3)	210	D
TPH (as Jet Fuel JP-4)	(mg/m3)	210	D
Toluene	(ug/L)	1.1	D
m-Xylene & p-Xylene	(ug/L)	3.2	D
o-Xylene	(ug/L)	0.53	D

-- = Not Applicable, ND = Not Detected

Wright-Patterson AFB
April 2001 - OU2-SV Data - Soil Gas
The IT Group, Project 777097

Sample Number		ROD-OU2-SV01-050101		ROD-OU2-SV02-050201		ROD-OU2-SV02-RB01		ROD-OU2-SV03-050101		ROD-OU2-SV03-050151	
Sample Date		05/01/01		05/02/01		05/02/01		05/01/01		05/01/01	
D1946											
Carbon dioxide	(%(v/v))	1.1	=	3.1	=	0.041	=	14	=	14	=
Methane	(%(v/v))	0.00014	J	0.00019	J	0.00022	=	0.45	=	0.41	=
Oxygen	(%(v/v))	20	=	17	=	21	=	2.6	=	2.5	=
TO3											
Benzene	(ug/L)	0.022	J	0.034	J	0.064	ND	7.5	D	11	D
Ethylbenzene	(ug/L)	0.083	J	0.32	=	0.17	=	14	D	17	D
TPH (as Gasoline)	(mg/m3)	16	MBE	50	=	30	=	4700	D	5000	D
TPH (as Jet Fuel JP-4)	(mg/m3)	16	MBE	49	=	29	=	4600	D	4900	D
Toluene	(ug/L)	0.085	=	0.20	=	0.12	=	24	D	27	D
m-Xylene & p-Xylene	(ug/L)	0.21	=	0.73	=	0.39	=	31	D	38	D
o-Xylene	(ug/L)	0.087	ND	0.16	=	0.079	J	6.0	D,J	7.8	D

Wright-Patterson AFB
April 2001 - OU2-SV Data - Soil Gas
The IT Group, Project 777097

Sample Number		ROD-OU2-SV04-050101		ROD-OU2-SV06-050101		ROD-OU2-SV07-050201		ROD-OU2-SV08-050101		ROD-OU2-SV09-050201	
Sample Date		05/01/01		05/01/01		05/02/01		05/01/01		05/02/01	
D1946											
Carbon dioxide	(%(v/v))	0.43	=	1.1	=	9.3	=	1.7	=	1.1	=
Methane	(%(v/v))	0.0094	=	33	=	0.77	=	4.7	=	0.00020	ND
Oxygen	(%(v/v))	22	=	1.8	=	1.8	=	12	=	20	=
TO3											
Benzene	(ug/L)	0.064	ND	91	D	7.3	D	18	D	0.058	J
Ethylbenzene	(ug/L)	0.052	J	40	D	12	D	12	D	0.53	=
TPH (as Gasoline)	(mg/m3)	15	MBE	22000	D	2300	D	3900	D	78	=
TPH (as Jet Fuel JP-4)	(mg/m3)	15	MBE	22000	D	2200	D	3900	D	76	=
Toluene	(ug/L)	0.12	=	94	D	14	D	24	D	0.40	=
m-Xylene & p-Xylene	(ug/L)	0.093	=	80	D	17	D	24	D	1.2	=
o-Xylene	(ug/L)	0.087	ND	12	D	4.0	D	2.2	D	0.25	=

Wright-Patterson AFB
April 2001 - OU2-SV Data - Soil Gas
The IT Group, Project 777097

Sample Number		ROD-OU2-SV10-050201		ROD-OU2-SV11-050101		ROD-OU2-SV12-050101		ROD-OU2-SV13-050101		ROD-OU2-SV14-050201	
Sample Date		05/02/01		05/01/01		05/01/01		05/01/01		05/02/01	
D1946											
Carbon dioxide	(%(v/v))	8.9	=	7.0	=	4.5	=	0.90	=	9.9	=
Methane	(%(v/v))	3.3	=	0.00020	ND	0.00020	ND	0.00020	ND	2.1	=
Oxygen	(%(v/v))	1.7	=	7.1	=	14	=	21	=	1.7	=
TO3											
Benzene	(ug/L)	19	D	0.064	ND	0.064	ND	0.064	ND	79	D
Ethylbenzene	(ug/L)	35	D	0.087	ND	0.087	ND	0.087	ND	100	D
TPH (as Gasoline)	(mg/m3)	7300	D	4.3	MBE	5.2	MBE	4.4	MBE	31000	D
TPH (as Jet Fuel JP-4)	(mg/m3)	7100	D	4.2	J,MBE	5.1	J,MBE	4.4	J,MBE	31000	D
Toluene	(ug/L)	42	D	0.075	ND	0.026	J	0.075	ND	200	D
m-Xylene & p-Xylene	(ug/L)	70	D	0.087	ND	0.087	ND	0.087	ND	190	D
o-Xylene	(ug/L)	11	D	0.087	ND	0.087	ND	0.087	ND	25	D

Wright-Patterson AFB
April 2001 - OU2-SV Data - Soil Gas
The IT Group, Project 777097

Sample Number	ROD-OU2-SV15-050201
Sample Date	05/02/01

D1946			
Carbon dioxide	(%(v/v))	0.97	=
Methane	(%(v/v))	0.00017	J
Oxygen	(%(v/v))	21	=
TO3			
Benzene	(ug/L)	0.15	D,J
Ethylbenzene	(ug/L)	1.3	D
TPH (as Gasoline)	(mg/m3)	210	D
TPH (as Jet Fuel JP-4)	(mg/m3)	210	D
Toluene	(ug/L)	1.1	D
m-Xylene & p-Xylene	(ug/L)	3.2	D
o-Xylene	(ug/L)	0.53	D

-- = Not Applicable, ND = Not Detected

Appendix H

Basewide LTM Sample Collection Forms

Bill of Lading from Perma-Fix - April

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: BS 6 **Well #:** BS6-P-1 **Sample Number :** LTM-BS6-P-1-0401

Purging Method/Equipment: bladder pump **Samplers** M. Smith / K. Havens **Well Secure (Y/N)** Y

Well Casing Diameter : _____ in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** _____ gal

Sounding (Depth to Well Bottom): 18.91 **Static Water Level** (Depth to Water): 3.00

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/20/01	1043		5.55	initial	9.8	7.60	~~5~~ 0.939	0	211.0	0.76	
04/20/01	1048		5.55	0.5	9.6	7.49	0.901	0	202.8	0.54	
04/20/01	1053		5.55	1.0	9.5	7.48	0.876	0	200.2	0.66	
04/20/01	1058		5.55	1.1	9.4	7.47	0.849	0	194.3	0.65	
04/20/01	~~1103~~ 1103		5.55	1.2	9.5	7.45	0.841	0	178.3	0.75	
04/20/01	1108		5.55	1.3	9.5	7.46	0.845	0	151.2	0.76	
04/20/01	1113		5.55	1.4	9.5	7.46	0.849	0	119.2	0.71	
04/20/01	1118		5.55	1.6	9.5	7.46	0.850	0	83.2	0.77	
04/20/01	1123		5.55	1.8	9.5	7.46	0.850	0	77.1	0.77	
04/20/01	1128		5.55	2.0	9.5	7.45	0.851	0	65.5	0.76	
04/20/01	11:33		5.55	2.2	9.7	7.46	0.853	0	54.1	0.76	
04/20/01	11:38		5.55	2.4	9.7	7.46	0.841	0	41.0	1.17	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 04/20/01 **Sample Collection Time:** 1147

Prepared by: M. Smith

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: B56 Well #: B56 - P-1 Sample Number: LTM - B56 - P-1 - 0401

Purging Method/Equipment: BLADDER PUMP Samplers M. SMITH / K. HAVENS Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): 18.91 **Static Water Level** (Depth to Water): 3.00

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/20/01	11:43		5.5	2.7	9.8	7.46	0.824	0	26.6	1.46	
04/20/01	1147	sampled									
04/20/01	1152			final	9.9	7.34	0.826	0	10.1	2.63	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: _____ **Sample Collection Time:** _____

Prepared by: _____

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: BS6 Well #: BS6-P2 Sample Number: LTM-BS6-P2-0401

Purging Method/Equipment: Bladder Samplers: J. Neese / M. Chiller Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: 2 gal

Sounding (Depth to Well Bottom): 15.18 Static Water Level (Depth to Water): 4.18

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4-20-01	1015	start purging									
	1020		4.20	0.2	10.4	6.85	2.20	80	-114.8	0.83	cloudy
	1025		4.23	0.4	10.3	6.92	2.22	49	-129.2	1.17	
	1030		4.25	0.6	10.2	7.02	2.19	10	-124.0	3.83	clear
	1035		4.25	0.8	10.2	7.07	2.18	0	-123.1	3.02	
	1040		4.25	0.9	10.2	7.09	2.16	0	-122.1	3.18	
	1045		4.26	1.0	10.2	7.13	2.14	0	-119.1	3.84	
	1050		4.25	1.1	10.2	7.17	2.12	0	-119.0	4.70	
	1055		4.25	1.3	10.2	7.20	2.09	0	-118.4	5.34	
	1100		4.26	1.5	10.3	7.23	2.06	0	-117.9	5.96	
	1105		4.26	1.8	10.3	7.24	2.05	0	-117.2	6.26	
	1110		4.27	2.0	10.3	7.25	2.03	0	-116.7	6.27	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4-20-01 **Sample Collection Time:** 1122

Prepared by: M. Chiller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

Page 2 of ___

SITE ID: BS6 Well #: BS6-P2 Sample Number: LTM-BS6-P2-0101

Purging Method/Equipment: Bladder Samplers: J. Neese/M. Chuller Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: 2 gal

Sounding (Depth to Well Bottom): 15.18 Static Water Level (Depth to Water): 4.18

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4-20-01	1115		4.27	2.2	10.3	7.26	2.01	0	-116.3	6.44	clear
	1120		4.27	2.4	10.3	7.27	1.99	0	-116.8	6.61	
	1122	SAMPLE									
	1128		4.28	POST	10.3	7.29	1.97	0	-140.2	7.02	

Test Parameters: Tmetals (HNO_3) Fmetals (VOC (HCl)) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): (None) Duplicate/Split: _____ MS/MSD: _____ / _____

Sample Collection Date: 4-20-01 Sample Collection Time: 1122

Prepared by: M. Chuller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: SP11 **Well #:** SP11- MW01 **Sample Number:** LTM-SP11-MW01-0401

Purging Method/Equipment: Bladder **Samplers** J. Reese/M. Chiller **Well Secure (Y/N)** Y

Well Casing Diameter: _____ in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** 2 gal

Sounding (Depth to Well Bottom): 26.28 **Static Water Level** (Depth to Water): 8.97

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4-19-01	1425	start purging									
	1430		9.02	0.3	12.8	7.31	1.45	8	-78.5	1.53	
	1435		9.03	0.5	12.9	7.28	1.47	7	-87.2	0.88	
	1440		9.06	0.9	12.7	7.27	1.49	11	-90.2	0.69	
	1445		9.03	1.1	12.9	7.27	1.50	5	-94.3	0.53	
	1450		9.02	1.4	13.0	7.26	1.50	4	-96.7	0.44	
	1455		9.04	1.6	13.1	7.26	1.51	5	-99.6	0.44	
	1500		9.03	1.7	13.2	7.25	1.51	5	-101.7	0.44	
	1505		9.03	1.85	13.3	7.25	1.51	5	-103.7	0.48	
	1510		9.04	2.0	13.3	7.25	1.52	4	-105.8	0.48	
	1515		9.03	2.1	13.4	7.25	1.51	4	-107.0	0.48	
	1520		9.02	2.2	13.4	7.25	1.52	4	-108.6	0.52	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4-19-01 **Sample Collection Time:** 1523

Prepared by: M. Chiller

1528 9.03 POST 13.0 7.28 1.53 8 -107.4 1.92

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: SP11/FAA-B Well #: Sp11 - MW02 Sample Number: LTM-SP11-MW02-0401

Purging Method/Equipment: Micro/Bladder Samplers B.M., D.M. Well Secure (Y/N) Y

Well Casing Diameter: 2 in. Unit Casing Volume (UC): NA gal. Target Purge Volume: NA gal

Sounding (Depth to Well Bottom): 21.15 **Static Water Level** (Depth to Water): 6.28

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/20/01	0900		11.5	int.	11.6	6.53	2.33	0	-11.6	.38	slightly cloudy (brown)
4/20/01	0905		11.3	.5	11.6	6.85	2.40	0	-10.5	.10	
4/20/01	0910		10.7	1.0	10.9	6.92	2.42	375	-34.2	11.53	
4/20/01	0920 ~~0915~~ B.M.		11.1	1.5	10.9	6.95	2.38	134	-64.6	3.35	
4/20/01	0930 B.M. ~~0920~~		11.1	2.0	10.8	6.96	2.39	114	-88.4	.84	
4/20/01	0940		11.1	2.5	10.8	6.96	2.41	87	-103.1	1.28	slightly cloudy (clear)
4/20/01	0950		11.1	3.0	10.7	6.96	2.42	1	-110.3	2.19	clear
4/20/01	0953		Collect Sample								clear
4/20/01	1000		11.1	post	10.6	6.97	2.42	0	-121.5	5.98	clear

Test Parameters: Tmetals (HNO_3) Fmetals (VOC (HCl)) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): (None) **Duplicate/Split:** _____ **MS/MSD:** /

Sample Collection Date: 4/20/01 **Sample Collection Time:** 0953

Prepared by: B. Mitchell, D. Martin

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: SP11 **Well #:** SP11-MW03 **Sample Number:** LTM-SP11-MW03-0401

Purging Method/Equipment: Bailer **Samplers** J. Neese/M. Miller **Well Secure (Y/N)** Y

Well Casing Diameter: _____ in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** 2 gal

Sounding (Depth to Well Bottom): 12.15 **Static Water Level** (Depth to Water): 6.91

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4-16-01	1346	Begin Bailing									
	1351		7.03	1.0	10.0	6.44	1.44	646	-51.7	2.73	cloudy
	1356		7.31	2.0	9.9	6.47	1.47	552	-64.8	3.29	
	1403		7.38	3.0	9.7	6.55	1.48	820	-73.4	3.95	
	1410		7.36	4.0	9.8	6.56	1.47	521	-63.0	3.55	
	1420		7.31	5.0	9.3	6.51	1.48	441	-53.0	3.71	
	1425	SAMPLE									
	1433		7.12	DOS		6.14	1.49	302	-55.0	11.65	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** OEPA **MS/MSD:** _____ / _____

Sample Collection Date: 4-16-01 **Sample Collection Time:** 1425

Prepared by: M. Miller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: SP11 **Well #:** SP11-MW07 **Sample Number:** LTM-SP11-MW07-0401

Purging Method/Equipment: P **Samplers** J Nicoe/M Chiller/G. Plamondon **Well Secure (Y/N)** Y

Well Casing Diameter: _____ in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** 2 gal

Sounding (Depth to Well Bottom): 22.45 **Static Water Level** (Depth to Water): 9.08

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
	1315	Start Purging									
4-23-01	1330		9.08	4.0	13.6	7.01	5.38	610	-142.5	2.01	muddy
	1340		9.08	4.5	13.0	6.84	556	200	-151.2	12.38	
	1345		9.08	5.0	12.8	6.88	554	181	-162.0	1.06	
	1350		8.75	5.5	12.7	6.74	554	165	-168.1	9.70	
	1355		9.02	6.0	13.2	6.90	560	2	-152.1	13.22	
	1357						5				
	1400		8.75	POT	13.3	6.89	522	1	-148.2	13.78	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4-23-01 **Sample Collection Time:** 1357

Prepared by: M. Chiller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: SP11 Well #: SP11-MW08 Sample Number: LTM-SP11-MW08-0401

Purging Method/Equipment: Bladder Samplers: J Neese/M. Miller Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: 2 gal

Sounding (Depth to Well Bottom): 31.81 **Static Water Level** (Depth to Water): 5.02

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/16/01	1025	start purging									
	1030		7.80	0.8	12.8	7.58	444	40	-201.2	0.65	brown
	1035		7.50	1.1	12.4	7.29	590	352	-161.5	0.45	
	1040		7.11	1.6	12.0	7.03	695	203	-133.7	2.46	
	1045		6.98	2.0	12.1	6.95	741	151	-134.6	0.81	
	1050		6.81	2.4	11.8	6.90	809	185	-118.7	1.23	
	1055		6.84	2.8	11.7	6.84	823	161	-114.7	7.23	
	1100		6.67	3.0	11.7	6.86	836	70	-114.7	8.56	
	1105		6.52	3.2	11.6	6.84	856	51	-116.4	8.44	
	1110		6.46	3.5	11.2	6.79	863	93	-116.6	2.94	
	1115		6.38	3.7	11.1	6.80	872	89	-117.0	1.10	
	1120		6.54	3.8	11.2	6.78	873	84	-120.8	0.68	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: DEPA **MS/MSD:** /

Sample Collection Date: 4-16-01 **Sample Collection Time:** _____

Prepared by: M. Miller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: SP11 Well #: SP11-MW08-0401 Sample Number: LTM-SP11-MW08-0401

Purging Method/Equipment: Bladder Samplers: S. Neese/M. Miller Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: 2 gal

Sounding (Depth to Well Bottom): _____ **Static Water Level** (Depth to Water): 5.02

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4-16-01	1125		6.74	4.1	11.7	6.78	871	144	-126.1	1.97	
	1130		6.72	4.3	11.8	6.77	873	143	-129.2	0.97	
	1135		6.71	4.5	11.9	6.76	873	125	-134.6	0.56	
	1140		6.73	4.7	11.7	6.74	866	181	-125.8	0.38	
	1145		6.77	4.9	11.8	6.75	876	165	-127.4	0.38	
	1150		6.74	5.1	11.9	6.74	882	138	-131.1	0.40	
	1155		6.77	5.3	11.8	6.74	892	123	-134.2	0.39	
	1200		6.77	5.6	11.9	6.72	899	91	-137.5	0.24	
	1205		6.82	6.0	12.0	6.73	905	80	-139.2	0.26	
	1210		6.68	6.3	12.0	6.74	931	77	-139.0	0.34	
	1215		6.67	6.7	11.8	6.74	939	68	-138.8	1.89	
	1220		6.64	7.0	11.8	6.74	944	65	-138.6	0.88	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: OEPA MS/MSD: /

Sample Collection Date: _____ **Sample Collection Time:** _____

Prepared by: _____

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: SP11 **Well #:** SP11-MW08 **Sample Number :** LTM-SP11-MW08-0401

Purging Method/Equipment: Bladder **Samplers** J. Neese / M. Chiller **Well Secure (Y/N)** Y

Well Casing Diameter : _____ in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** 2 gal

Sounding (Depth to Well Bottom): _____ **Static Water Level** (Depth to Water): 5.02

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4-16-01	1225		6.61	~~6~~ 7.3	11.8	6.74	947	62	-140.0	1.79	
	1230		6.58	7.5	11.8	6.73	953	62	-141.3	2.19	
	1235		6.57	7.8	11.8	6.73	957	64	-142.2	2.69	
	1240		6.57	8.2	11.9	6.72	960	64	-143.6	1.06	
	1243	SAMPLE									
	1252		6.57	POST	12.4	6.75	984	252	-135.8	9.42	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split OEPA **MS/MSD:** /

Sample Collection Date: 4-16-01 **Sample Collection Time:** 1243

Prepared by: M. Chiller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: SP11/FAA-B

Well #: SP11 MW09

Sample Number: LTM-SP11-MW09-0401

Purging Method/Equipment: Micro/Bailer

Samplers B.M., D.M.

Well Secure (Y/N) Y

Well Casing Diameter: 2. in.

Unit Casing Volume (UC): NA gal.

Target Purge Volume: NA gal

Sounding (Depth to Well Bottom): 17.49

Static Water Level (Depth to Water): 5.50

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/20/01	1022			int.	10.3	7.18	2.21	353	-106.3	11.03	Cloudy (Brown)
4/20/01	1025			2gal	10.3	7.01	2.25	829	-118.3	11.09	Cloudy (Brown)
4/20/01	1031			5gal	10.3	7.03	2.29	836	-139.3	11.01	Cloudy (Clear)
4/20/01	1035			7.5gal	10.3	7.05	2.30	879	-143.6	10.94	Cloudy (Clear)
4/20/01	1038			10.0gal	10.3	7.06	2.33	870	-156.8	10.96	Cleared Slightly
4/20/01	~~1030~~ 1046 BM			15gal	10.3	7.02	2.29	907	-164.7	10.85	Cloudy
4/20/01	1050			Collect Sample							Cloudy
~~4/20/01~~				post BM							

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH) BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4/20/01 **Sample Collection Time:** 1050

Prepared by: B Mitchell, D Martin

ITERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU8 Well #: OU8- MW2S Sample Number: LTM-OU8-MW-02S-0401

Purging Method/Equipment: bladder Samplers BM/KM Well Secure (Y/N) Y

Well Casing Diameter: 2 in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): 28.52 **Static Water Level** (Depth to Water): 21.08

Date 2001	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/11	1350		21.94	initial	20.7	6.99	1.25	0	113.9	6.21	
	1355		22.62	1.0	18.5	7.46	1.45	1	115.6	1.53	
	1400		22.91	1.5	18.2	7.55	1.41	1	116.0	0.96	
	1405		22.98	3.0	17.9	7.24	1.37	0	116.7	0.57	
	1410		22.98	4.0	17.9	7.05	1.35	0	116.3	0.38	
	1415		22.98	5.0	17.9	6.91	1.34	18	110.0	0.34	
	1420		22.98	6.0	17.8	6.87	1.34	5	108.3	0.30	
	1425		22.98	7.0	17.7	6.85	1.34	7	110.8	0.26	
	1425		Collect Sample								
	1427		22.98	Post	18.0	6.83	1.34	2	108.1	0.84	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4/11/01 **Sample Collection Time:** 1425

Prepared by: K. Mercurio

Note: NO Product

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU8 **Well #:** P6-1 **Sample Number:** LTM-P6-1-0401

Purging Method/Equipment: Bladder **Samplers** J. Neese/M. Chiller **Well Secure (Y/N)** Y

Well Casing Diameter: _____ in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** 2 gal

Sounding (Depth to Well Bottom): 28.5 **Static Water Level** (Depth to Water): 20.42

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/11/01	1250										
	1255		20.56	0.6	16.3	6.64	0.94	2	-68.2	3.20	
	1300		20.46	1.2	16.4	6.61	0.96	0	-79.3	2.61	
	1305		20.46	1.5	16.3	6.62	1.00	1	-96.3	2.50	
	1310		20.44	1.8	16.5	6.63	1.03	0	/	1.36	Orion meter stopped
	1315		20.44	2.1	16.5	6.63	1.04	0	/	1.21	working - no Redox
	1320		20.44	2.5	16.6	6.62	1.05	0	/	1.01	↓
	1325		20.45	3.0	16.7	6.61	1.06	0	-106.1	0.95	
	1328	SAMPLE									
	1338		20.45	POST	16.9	6.62	1.07	0	/	1.01	SAA

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4/11/01 **Sample Collection Time:** 1328

Prepared by: M. Chiller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU8 Well #: PL6-2 Sample Number: LTM-PL6-2-0401

Purging Method/Equipment: Bladder Samplers J Niese/M. Chiller Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: 2 gal

Sounding (Depth to Well Bottom): 28.46 **Static Water Level** (Depth to Water): 19.60

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/11/07	1410	Purging									
	1415		19.61	0.3	17.0	6.93	1.54	0	-105.2	0.94	orange susp solids
	1420		19.61	0.5	16.9	6.92	1.54	1	-103.8	0.78	
	1425		19.61	1.1	16.7	6.92	1.54	0	-108.4	0.68	
	1430		19.60	2.0	16.5	6.92	1.54	0	-117.9	2.96	
	1435		19.60	2.2	16.5	6.91	1.54	0	-120.8	1.68	
	1440		19.63	2.5	16.6	6.90	1.55	0	-123.5	0.83	
	1445		19.63	3.4	16.6	6.89	1.55	0	-128.0	0.41	
	1450		SAMPLE								
	1453		19.63	POST	16.7	6.89	1.54	0	-111.3	1.29	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4/11/07 **Sample Collection Time:** 1450

Prepared by: M. Chiller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: (OU9) EFD22 Well #: EFD22-MW03 Sample Number: LTM-EFD22-MW03-0401

Purging Method/Equipment: Bladder Samplers: J. Neese/M. Chiller Well Secure (Y/N): Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: 2 gal

Sounding (Depth to Well Bottom): _____ Static Water Level (Depth to Water): 6.01

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4-19-01	1125	start	purging								
	1130		7.65	0.4	12.2	6.97	1.16	6	140.5	1.64	orange suspended solids
	1135		7.16	0.6	12.3	7.08	1.15	5	123.2	1.63	
	1140		6.91	0.8	12.5	7.11	1.15	8	109.7	1.40	
	1145		6.61	0.9	12.5	7.15	1.15	5	99.6	1.78	
	1150		6.01	1.0	12.9	7.18	1.15	5	91.0	1.50	
	1155		6.00	1.1	12.7	7.20	1.15	5	85.9	1.95	
	1200		6.49	1.2	12.7	7.20	1.15	5	79.8	1.45	
	1205		6.53	1.3	12.7	7.21	1.15	5	75.0	1.37	
	1210		6.56	1.4	12.6	7.22	1.16	5	69.7	1.39	
	1215		6.54	1.5	12.6	7.24	1.15	5	66.2	1.46	
	1220		6.44	1.6	12.7	7.23	1.16	4	62.1	1.31	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: _____ MS/MSD: _____ / _____

Sample Collection Date: 4-19-01 Sample Collection Time: 1305

Prepared by: M. Chiller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: (019) EFD22 Well #: EFD22-MW03 Sample Number: LTM-EFD22-MW03-0407

Purging Method/Equipment: Bladder Samplers J.Neese/M.Chiller Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: 2 gal

Sounding (Depth to Well Bottom): 29.25 Static Water Level (Depth to Water): 6.01

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4-19-01	1225		6.42	1.4	12.7	7.26	1.15	4	58.9	1.47	
	1230		6.40	1.8	12.9	7.26	1.15	3	55.7	1.36	
	1235		6.38	1.85	12.9	7.28	1.15	3	52.0	1.31	
	1240		6.32	1.9	12.9	7.29	1.16	3	50.6	1.54	
	1245		6.28	1.95	13.1	7.30	1.15	3	48.1	1.53	
	1250		6.28	2.0	13.1	7.30	1.15	3	46.1	1.60	
	1255		6.29	2.05	13.3	7.29	1.15	3	44.8	1.47	
	1300		6.28	2.1	13.3	7.31	1.15	2	43.6	1.66	
	1305	SAMPLE									
	1310		6.28	POST	13.0	7.33	1.17	4	45.2	10.88	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: _____ MS/MSD: _____ / _____

Sample Collection Date: 4-19-01 Sample Collection Time: 1305

Prepared by: M.Chiller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: EFD204 Well #: EFD04-MW06 Sample Number: LTM-EFD04-MW06-0401

Purging Method/Equipment: bladder Samplers BM/KM Well Secure (Y/N) Y

Well Casing Diameter: 2 in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): 37.58 **Static Water Level** (Depth to Water): 18.22

Date 2001	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/12	1035		21.64	initial	15.0	6.80	1.06	39	270.9	1.34	
	1040		26.45	2.0	14.4	6.75	1.04	31	262.8	1.15	Bacteria byproduct
	1045		26.67	2.5	15.7	6.73	1.04	20	250.4	0.99	"
	1050		27.64	2.75	15.5	6.72	1.05	19	250.3	0.49	
	1055		27.64	3.00	14.8	6.73	1.05	12	278.5	0.56	
	1100		27.64	3.25	14.7	6.74	1.05	13	278.8	0.83	
	1105		27.64	3.5	14.9	6.74	1.06	17	259.0	0.51	
	1110		Collect	Sample							
	1113		27.64	Post	15.2	6.75	1.07	9	244.6	1.97	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4/12/01 **Sample Collection Time:** ~~18.22~~ 1110

Prepared by: K. Mercurio

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: EFD209 Well #: 575-M Sample Number: LTM-EFD09-M575-0401

Purging Method/Equipment: bladder Samplers BM/KM Well Secure (Y/N): Y

Well Casing Diameter: 2 in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): _____ **Static Water Level** (Depth to Water): 2.87

Date 2001	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/12	0915		2.91	initial	12.9	6.51	1.48	65	233.4	13.41	
	0920		2.91	2	11.8	6.49	1.78	0	237.1	14.16	
	0925		2.91	4.5	11.7	6.55	1.82	0	241.5	14.07	
	0930		2.91	7.0	11.7	6.54	1.82	0	244.5	13.62	
	0935		2.91	10.5	11.8	6.56	1.85	0	246.4	13.59	
	0940		Collect	Sample							
	0943		2.91	Post	11.7	6.58	1.83	0	247.4	13.76	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4/12/01 **Sample Collection Time:** 0940

Prepared by: K. Mercurio

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: B55 Well #: LTM-B55-P-1-0401 Sample Number: LTM-B55-P-1-0401

Purging Method/Equipment: Micro/Bladder Samplers BM, DM Well Secure (Y/N) Y

Well Casing Diameter: 2 in. Unit Casing Volume (UC): NA gal. Target Purge Volume: NA gal

Sounding (Depth to Well Bottom): 37.79 **Static Water Level** (Depth to Water): 31.95

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/19/01	1555		32.20	int	14.0	7.14	.825	0	NA	9.36	Clear
	1600		32.20	1 gal	13.5	7.11	.584	0		9.21	
	1605		32.20	2 gal	13.4	7.08	.577	0		9.24	
	1610		32.20	3 gal	13.3	7.06	.569	0		9.19	
	1615		Collect Sample								
	1620		32.20	post	14.0	7.09	.564	0		9.52	

Test Parameters: Tmetals (HNO_3) Fmetals (VOC (HCl)) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): (None) **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4/ _____ **Sample Collection Time:** 1615

Prepared by: B. Mitchell

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: BS5 **Well #:** BS5-P2 **Sample Number :** LTM-BS5-P-2-0401

Purging Method/Equipment: bladder pump **Samplers** M. Smith/K. Havens **Well Secure (Y/N)** Y

Well Casing Diameter : _____ in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** _____ gal

Sounding (Depth to Well Bottom): 39.28 **Static Water Level** (Depth to Water): 33.08

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/19/01	1545		33.58	initial	14.7	7.41	0.697	0	149.9	9.09	
04/19/01	1550		33.58	0.75	14.4	7.35	0.578	0	158.9	7.45	
04/19/01	1555		33.58	1.25	14.6	7.37	0.581	0	158.1	7.50	
04/19/01	1600		33.58	1.50	14.8	7.34	0.579	0	157.4	7.58	
04/19/01	1605		33.58	1.75	14.6	7.34	0.577	0	157.7	8.08	
04/19/01	1610		33.58	2.0	13.5	7.35	0.576	0	158.2	8.24	
04/19/01	1615		33.58	3.0	13.4	7.33	0.576	0	157.6	8.04	
04/19/01	1620			4.0	13.5	7.33	0.576	0	156.7	7.99	
04/19/01	1624	Sampled									
04/19/01	1627		final		14.1	7.31	0.576	0	152.5	8.19	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** 1

Sample Collection Date: 04/19/01 **Sample Collection Time:** 1624

Prepared by: M. Smith

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: BS5 Well #: BS5-P3 Sample Number: LTM-BS5-P3-0401

Purging Method/Equipment: Bladder Samplers J. Neese/M. Chiller Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: 2 gal

Sounding (Depth to Well Bottom): 43.55 Static Water Level (Depth to Water): 37.08

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
	1600	start purging									
	1605		37.08	0.1	13.3	7.48	1.50	5	-13.6	7.07	clear
	1610		37.08	0.4	13.0	7.44	1.60	5	-0.1	7.06	
	1615		37.08	0.7	12.9	7.43	1.64	3	9.8	6.51	
	1620		37.08	1.1	12.9	7.44	1.68	3	15.7	6.09	
	1625		37.09	1.5	12.9	7.43	1.69	3	19.5	5.95	
	1630		37.08	1.7	13.0	7.43	1.68	3	21.8	6.05	
	1635		37.09	2.0	12.9	7.43	1.69	2	24.8	7.33	
	1640		37.08	2.5	12.8	7.43	1.70	3	28.0	6.94	
	1645		37.08	3.0	13.0	7.43	1.70	2	30.4	5.96	
	1647	SAMPLE			13.3	7.44	1.71	0	32.0	6.17	
	1653	Post	37.08	Post	Jan	Jan	Jan	Jan	Jan	Jan	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: _____ MS/MSD: _____ / _____

Sample Collection Date: 4-19-01 Sample Collection Time: 1647

Prepared by: M. Chiller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: BS5 Well #: BS5-P-4 Sample Number: CTM-BS5-P-4-0401

Purging Method/Equipment: bladder pump Samplers M.Smith / K.Havens Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): 50.14 Static Water Level (Depth to Water): 37.15

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/20/01	0929	~~0929~~ ins	37.00	initial	9.9	6.30	1.35	0	227.9	8.40	
04/20/01	0934		37.00	1.5	11.3	7.13	1.69	0	203.0	7.47	
04/20/01	0939		37.00	3.0	11.3	7.33	1.68	0	185.1	7.44	
04/20/01	0944		37.00	4.5	11.3	7.41	1.69	0	163.3	7.52	
04/20/01	0949		37.00	5.5	11.3	7.44	1.69	0	158.1	7.04	
04/20/01	0954	Sampled									
04/20/01	0957		final		11.4	7.45	1.69	0	136.2	7.54	
04/20/01											

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: CTM-BS5-P-4-5401 MS/MSD: /

Sample Collection Date: 04/20/01 Sample Collection Time: 0954

Prepared by: M.Smith

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

Page 1 of ___

SITE ID: OU2 Well #: NEA-MW27-3I Sample Number: LTM-WP-NEA-MW27-3I-0401

Purging Method/Equipment: bladder Samplers BM/KM Well Secure (Y/N) Y

Well Casing Diameter: 2 in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): 44.35 Static Water Level (Depth to Water): 19.17

Date 2001	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/16	1000		19.17	1.0	12.0	7.04	0.698	4	234.9	16.15	
	1005		19.17	1.25	12.3	6.92	0.682	1	235.2	16.06	
	1010		19.17	2.0	12.5	6.88	0.678	1	235.6	14.81	
	1015		19.17	2.5	12.6	6.88	0.677	2	235.7	13.80	
	1020		19.17	3.0	12.7	6.87	0.676	2	235.1	12.87	
	1025		19.17	4.0	12.7	6.87	0.676	1	234.3	12.04	
	1030		Collect	Sample							
	1037		19.17	Post	12.6	6.88	0.672	1	234.8	11.99	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: DEPH MS/MSD: _____ / _____

Sample Collection Date: 4/16/01 Sample Collection Time: 1030

Prepared by: K. Mercurio

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: 012 Well #: MW34-2S Sample Number: LTM-WP-NE7-MW34-2S-0401

Purging Method/Equipment: bladder Samplers BM/KM Well Secure (Y/N) Y

Well Casing Diameter: 2 in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): 20.16 Static Water Level (Depth to Water): 9.65

Date 2001	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/17	1410		9.65	0.3	10.7	6.97	0.541	70	193.4	7.34	
	1415		9.65	2.5	10.9	6.95	0.514	13	150.0	13.11	
	1420		9.65	4.0	10.9	6.94	0.504	4	164.1	15.94	
	1425		9.65	6.0	10.9	6.95	0.497	2	175.9	16.59	
	1430		9.65	8.0	10.8	6.95	0.496	0	151.9	16.33	
	1435		Collect	Sample							
	1437		9.65	Post	10.7	6.96	0.490	0	95.8	12.20	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: _____ MS/MSD: _____ / _____

Sample Collection Date: 4/17/01 Sample Collection Time: 1435

Prepared by: K. Mercurio

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: FTA2 **Well #:** MW02C **Sample Number :** FTA2:MW02C-0401

Purging Method/Equipment: grundfos **Samplers** DR/MS **Well Secure (Y/N)** Y

Well Casing Diameter : 2 in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** 3 gal

Sounding (Depth to Well Bottom): _____ **Static Water Level** (Depth to Water): 13.46

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/18/01	0956		13.46	INT	10.7	6.63	.835	0	-20.1	2.00	clear
	1001		13.96	4	11.7	6.80	1.13	0	-53.8	1.06	
	1006		13.46	5	11.9	6.82	1.13	0	-60.3	0.85	
	1011		13.46	6.5	11.9	6.82	1.13	0	-69.5	0.65	
	1016		13.46	8.5	11.9	6.87	1.13	0	-69.6	0.51	
	1019		sampled		FTA2:MW02C-0401						
	1025		13.46		12.0	6.89	1.13	0	-70.2	10.51	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** 1

Sample Collection Date: 4/18/01 **Sample Collection Time:** 1029

Prepared by: D. Rasor

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU3 Well #: LF12 - MW15A Sample Number: LTM-LF12-MW15A-0401

Purging Method/Equipment: bladder Samplers BM/KM Well Secure (Y/N) Y

Well Casing Diameter: 2 in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): 15.52 **Static Water Level** (Depth to Water): 7.01

Date 2001	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/16	1100		7.02	0.5	10.8	6.87	0.687	0	256.4	11.51	
	1105		7.02	1.5	10.8	6.83	0.686	1	255.0	6.53	
	1110		7.02	2.0	10.8	6.83	0.685	0	254.5	5.81	
	1115		7.02	3.0	10.8	6.83	0.685	0	253.6	5.60	
	1120		7.02	4.0	10.8	6.84	0.685	0	254.1	6.52	
	1125		Collect	Sample							
	1132		7.02	Post	10.7	6.85	0.685	0	254.3	6.84	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: OEPA **MS/MSD:** _____ / _____

Sample Collection Date: 4/16/01 **Sample Collection Time:** 1125

Prepared by: K. Mercurio

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU3 **Well #:** 07-520-M **Sample Number:** LTM-07-520-M-0401

Purging Method/Equipment: bladderpump **Samplers** M. Smith/K. Havens **Well Secure (Y/N)** Y

Well Casing Diameter: _____ in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** _____ gal

Sounding (Depth to Well Bottom): 16.73 **Static Water Level** (Depth to Water): 9.00

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/23/01	0830		9.54	initial	Zus 13.4	6.29	1.09	0	44.5	4.92	
04/23/01	0835		9.54	0.5	11.8	6.32	1.12	0	-28.4	0.85	
04/23/01	0840		9.54	1.0	11.7	6.36	1.12	0	-39.4	0.38	
04/23/01	0845		9.54	2.0	11.5	6.45	1.13	0	-48.3	0.30	
04/23/01	0850		9.54	3.0	11.6	6.51	1.13	0	-56.3	0.19	
04/23/01	0855		9.54	3.5	11.6	6.51	1.13	0	-62.3	0.19	
04/23/01	0900		9.54	4.25	11.6	6.57	1.13	0	-66.8	0.18	
04/23/01	0903	Sampled									
04/23/01	0916		final		11.1	6.57	1.13	0	-68.3	0.28	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 04/23/01 **Sample Collection Time:** 0903

Prepared by: M. Smith

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU3 Well #: 05-DM-1235 Sample Number: LTM-05-DM-1235-G401

Purging Method/Equipment: bbddv Samplers BM/KM Well Secure (Y/N) Y

Well Casing Diameter: 2 in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): NT **Static Water Level** (Depth to Water): 7.18

Date 2001	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/16	1140		7.18	initial	10.6	6.87	0.688	0	99.3	16.53	
	1145		7.18	0.5	10.3	6.90	0.693	0	118.4	13.91	
	1150		7.18	1.5	10.2	6.87	0.694	0	105.4	11.66	
	1155		7.18	2.0	10.1	6.82	0.692	0	105.0	8.97	
	1200		Collect	Sample							
	1203		7.18	Post	10.0	6.83	0.693	0	105.3	8.62	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4/16/01 **Sample Collection Time:** 1200

Prepared by: K. Mercurio

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU3 Well #: 05-DM-123I Sample Number: LTM-05-DM-123I-0401

Purging Method/Equipment: bladder Samplers BM/KM Well Secure (Y/N) Y

Well Casing Diameter: 2 in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): NT **Static Water Level** (Depth to Water): 7.11

Date 2001	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/10	1430		7.11	initial	12.9	6.92	0.698	0	128.7	13.76	
	1435		7.11	2.0	12.8	6.93	0.701	0	~~128.5~~	13.82	
	1440		7.11	4.0	13.0	6.89	0.694	0	146.1 124.0	13.14	
	1445		7.11	5.5	13.0	6.97	0.699	0	189	13.35	
	1450		Collect Sample								
	1453		7.11	Post	12.6	6.91	0.698	0	190.7	13.49	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4/10/01 **Sample Collection Time:** 1450

Prepared by: K. Mercurio

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU3 **Well #:** 05-DM-123D **Sample Number :** LTM-05-DM-123D-0401

Purging Method/Equipment: bladder **Samplers** BM/KM **Well Secure (Y/N)** Y

Well Casing Diameter : 2 in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** _____ gal

Sounding (Depth to Well Bottom): cannot remove pump **Static Water Level** (Depth to Water): 6.28

Date 2001	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV) 111.2	DO mg/L	Water Description
4/10	1402		7.45	0.5	14.3	6.85	0.675	0	~~259.5~~ 160	13.19	Organic matter
	1405		7.81	3.0	13.8	6.96	0.691	0	148.4	13.37	
	1410		7.81	3.5	13.5	6.97	0.694	0	148.6	13.40	
	1415		7.81	5.0	13.4	6.95	0.692	0	146.6	13.19	
	1420		7.81	6.5	13.1	6.97	0.694	0	147.5	13.47	
	1420		Collect Sample								
	1424		7.82	13 Post	13.0	6.97	0.698	0	151.3	13.68	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4/10/01 **Sample Collection Time:** 1420

Prepared by: K. Mercurio

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: 044 **Well #:** 01B-60 **Sample Number:** LTM-044-01B-60-0401

Purging Method/Equipment: bladder **Samplers** BM/KM **Well Secure (Y/N)** Y

Well Casing Diameter: 2 in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** _____ gal

Sounding (Depth to Well Bottom): 59.70 **Static Water Level** (Depth to Water): ~~8.72~~ (VM) 8.12

Date 2001	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/9	1355		8.17	initial	16.8	7.20	6.72	2	233.3	1.45	
	1400		8.17	1.0	16.1	7.05	1.57	3	190.4	0.42	
	1405		8.17	2.0	15.9	7.05	1.59	0	179.4	0.23	
	1410		8.17	2.5	15.7	7.06	1.59	0	171.8	0.19	
	1415		8.17	3.0	15.7	7.05	1.59	0	164.3	0.18	
	1415		Collect	Sample							
	1417		8.17	Post	16.2	7.05	1.59	0	166.2	0.20	

Test Parameters: Tmetals (HNO_3) Fmetals (VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4/9/01 **Sample Collection Time:** 1415

Prepared by: K. Mercurio

Note: DO broken membrane, Cond not calibrating

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INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: 044 **Well #:** 01C-84 **Sample Number:** LTM-044-01C-84-0401

Purging Method/Equipment: bladder **Samplers** BH/KM **Well Secure (Y/N)** Y

Well Casing Diameter: 2 in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** _____ gal

Sounding (Depth to Well Bottom): _____ **Static Water Level** (Depth to Water): 8.01

Date 2001	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/9	1435		8.01	initial	19.0	7.21	1.37	3	189.2	1.98	
	1440		8.01	0.25	18.6	7.19	1.26	3	196.4	1.59	
	1445		8.01	0.50	18.3	7.17	1.16	2	-12.2	1.19	
	1450		8.01	0.75	17.6	7.16	1.14	1	-59.1	0.96	
	1455		8.01	1.0	17.9	7.15	1.17	0	-79.4	0.72	
	1500		8.01	1.25	17.6	7.15	1.17	0	-85.9	0.44	
	1505		Collect	Sample							
	1507		8.01	Post	14.6	7.17	1.14	13	-90.3	0.18	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4/9/01 **Sample Collection Time:** 1505

Prepared by: K Mercurio

Note: Broken DO meter, Cond not calibrating

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INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: 014 **Well #:** 014-MW-02A **Sample Number:** LTM-014-MW-02A-0401

Purging Method/Equipment: Bladder **Samplers** J. Neese/M. Chiller **Well Secure (Y/N)** Y

Well Casing Diameter: _____ in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** 2 gal

Sounding (Depth to Well Bottom): 22.02 **Static Water Level** (Depth to Water): 12.83

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/9/01	1525	start purging									
	1530		12.88	1.0	13.7	6.99	1.25	88	-73.8	0.34	orange
	1535		12.84	1.8	14.7	6.99	1.25	63	-75.4	0.46	yellow ~~orange~~ orange
	1540		12.85	2.2	16.0	7.00	1.23	29	-68.1	1.42	clear
	1545		12.85	2.5	16.2	6.98	1.24	32	-72.0	1.39	(bucket is in the sun)
	1550		12.85	3.0	15.8	6.99	1.25	10	-68.7	1.36	
	1554	SAMPLE									
	1559		12.85	POST	15.7	6.98	1.24	7	-69.3	1.03	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4/9/01 **Sample Collection Time:** 1554

Prepared by: M. Chiller

TERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: 0214

Well #: 0214-MW-02B

Sample Number: LTM-04-MW-02B-0401

Purging Method/Equipment: Bladder

Samplers J Neese/M Chiller

Well Secure (Y/N) Y

Well Casing Diameter : _____ in.

Unit Casing Volume (UC): _____ gal.

Target Purge Volume: 2 gal

Sounding (Depth to Well Bottom): 61.15

Static Water Level (Depth to Water): 12.52

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/9/01	1438	Stand	purging								
	1442		12.53	0.4	15.5	7.06	1.35	5	-82.4	1.59	
	1447		12.53	1.1	15.2	7.14	1.28	1	-65.7	0.53	
	1452		12.53	2.0	15.1	7.15	1.28	0	-63.8	0.40	
	1457		12.54	2.5	15.3	7.15	1.27	0	-63.3	0.39	
	1502		12.54	3.0	15.9	7.13	1.27	0	-63.4	0.42	
	1505	SAMPLE									
	1511		12.54	POST	16.3	7.13	1.27	0	-53.8	1.00	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4/9/01 **Sample Collection Time:** 1505

Prepared by: M Chiller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: 044 Well #: 044-MW03B Sample Number: LTM-044-MW-03B-0401

Purging Method/Equipment: bladder Samplers BM/KM Well Secure (Y/N) _____

Well Casing Diameter: 2 in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): 67.09 Static Water Level (Depth to Water): 11.93

Date 2001	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/16	0910		11.93	0.25	12.5	6.94	1.65	3	115.1	6.37	
	0915		11.93	1.0	13.4	6.83	1.22	0	235.0	7.17	
	0920		11.93	2.0	13.6	6.85	1.17	0	233.5	15.46	
	0925		11.93	3.0	13.5	6.86	1.17	0	233.0	15.62	
	0930		11.93	5.0	13.4	6.88	1.18	0	232.4	10.64	
	0935		Collect	Sample							
	0943		11.93	Post	13.0	6.91	1.19	0	118.5	7.27	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: OEPA MS/MSD: /

Sample Collection Date: 4/16/01 Sample Collection Time: 0935

Prepared by: K. Mercuno

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: Well #: OU4-MW-03C Sample Number: LTM-OU4-MW-03C-0401

Purging Method/Equipment: bladder pump Samplers M.Smith/D.Rasor Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): ~~80.19~~ 87.19 **Static Water Level** (Depth to Water): 13.38

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/09/01	1413		13.38	initial	17.8	7.64	1.26	1	191.9	1.49	clear
04/09/01	1418		13.38	1.25	16.3	7.35	~~1.61~~ 1.27	4	193.9	0.62	clear
04/09/01	1423		13.38	2	15.9	7.30	1.26	0	196.1	0.39	clear
04/09/01	1428		13.38	3.5	15.7	7.27	1.25	1	197.7	0.21	clear
04/09/01	1433		13.38	4.25	15.5	7.25	1.25	2	198.3	0.21	clear
04/09/01	1438		13.38	5.25	15.4	7.25	1.26	2	198.8	0.17	clear
04/09/01	1440	Sample		taken							
04/09/01	1443		13.38		15.5	7.24	1.26	0	199.7	0.15	

Test Parameters: Tmetals (HNO_3) Fmetals (VOC (HCl)) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): (None) **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: ~~04/~~ 04/09/01 **Sample Collection Time:** 1440

Prepared by: M.Smith

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU4 **Well #:** OU4-MW-04A **Sample Number :** LTM-OU4-MW-04A-0401

Purging Method/Equipment: bladder pump **Samplers** M. Smith/D. Rasor **Well Secure (Y/N)** Y

Well Casing Diameter : _____ in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** _____ gal

Sounding (Depth to Well Bottom): 22.10 **Static Water Level** (Depth to Water): MS ~~7.84~~ 8.74

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/11/01	1123		8.78	initial	13.8	6.83	1.16	9	111.4	4.13	very light brown, clear
04/11/01	1128		8.78	2.0	12.0	6.69	1.28	8	22.1	0.17	clear
04/11/01	1133		8.78	4.0	11.8	6.69	1.27	5	-0.8	0.12	clear
04/11/01	1138		8.78	6.5	11.9	6.70	1.27	5	-20.3	MS ~~5~~ 0.12	clear
04/11/01	1143		8.78	8.0	11.7	6.71	1.27	5	-32.1	0.13	clear
04/11/01	1145	Sampled			~~11.5~~	~~6.70~~	~~1.27~~	~~6~~		~~0.68~~	MS
04/11/01	1148				11.5	6.70	1.27	6	-31.6	0.68	clear

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 04/11/01 **Sample Collection Time:** 1145

Prepared by: M. Smith

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID:

Well #: OU4-~~12~~ MW-12B

Sample Number: LTM-OU4-MW-12B-0401

Purging Method/Equipment: bladder pump

Samplers M. Smith/D. Rasor

Well Secure (Y/N) Y

Well Casing Diameter: _____ in.

Unit Casing Volume (UC): _____ gal.

Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): 54.70

Static Water Level (Depth to Water): 12.67

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/09/01	1522		12.67	initial	16.0	7.70	1.15	-3	147.1	5.31	clear
04/09/01	1527		12.67	1	15.2	7.36	1.08	1	163.6	0.73	clear
04/09/01	1532		12.67	2.5	15.1	7.31	1.10	-2	186.4	0.38	clear
04/09/01	1537		12.67	3.5	15.4	7.30	1.09	2	191.9	0.32	clear
04/09/01	1542		12.67	4.25	15.0	7.28	1.09	-3	191.5	0.31	clear
04/09/01	1547		12.67	6.0	14.6	7.27	1.09	-3	194.7	0.25	clear
04/09/01	1550	Sample taken									
04/09/01	1555		12.67		14.8	7.27	1.09	0	186.3	0.27	clear

Test Parameters: Tmetals (HNO_3) Fmetals (VOC (HCl)) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): (None) **Duplicate/Split:** _____ **MS/MSD:** /

Sample Collection Date: 04/09/01 **Sample Collection Time:** 1550

Prepared by: M. Smith

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: 045 **Well #:** CW04-060 **Sample Number:** LTM-CW04-060-0401

Purging Method/Equipment: bladder **Samplers** BM/KM **Well Secure (Y/N)** Y

Well Casing Diameter: 2 in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** _____ gal

Sounding (Depth to Well Bottom): 83.05 **Static Water Level** (Depth to Water): 19.91

Date 2000	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/10	1020		19.91	Initial	12.0	7.42	0.831	0	227.9	2.29	
	1025		19.91	0.5	12.9	7.00	0.789	0	230.5	0.76	
	1030		19.91	1.3	13.4	6.94	0.814	0	234.4	0.52	
	1035		19.91	1.9	13.5	6.92	0.816	0	236.9	0.11	
	1040		19.91	2.7	13.6	6.93	0.818	0	239.1	0.47	
	1045		19.91	3.5	13.6	6.93	0.822	0	240.6	0.28	
	1045		Collect	Sample							
	1050		19.91	Post	13.8	6.93	0.820	0	7.6	0.05	

Test Parameters: Tmetals (HNO_3) Fmetals (VOC) (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4/10/01 **Sample Collection Time:** 1045

Prepared by: K. Mercuno

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: 045 Well #: CWS-55 Sample Number: LTM-CWS-055-0401

Purging Method/Equipment: bladder Samplers BM/KM Well Secure (Y/N) Y

Well Casing Diameter: 2 in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): 59.09 **Static Water Level** (Depth to Water): 21.91

Date 2001	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/09	1210		~~12~~21.91	initial	15.3	7.48	0.93	17	111.0	0.73	
	1215		21.92	1.5	13.4	7.24	1.05	34	18.0	0.23	
	1220		21.92	2.2	13.3	7.23	1.06	12	-10.0	0.26	
	1225		21.92	3.3	13.2	7.22	1.06	15	-30.0	0.19	
	1230		21.92	4.5	13.1	7.22	1.06	0	-40.6	0.20	
	1230		Collect	Sample							
	1237		21.92	Post	13.6	7.20	1.06	2	-51.3	0.43	

Test Parameters: Tmetals (HNO_3) Fmetals (VOC (HCl)) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None (Duplicate/Split: LTM-CWS-055-0451) **MS/MSD:** /

Sample Collection Date: 4/9/01 **Sample Collection Time:** 1230

Prepared by: K. Mercurio

Note: Broken DO Membrane, Cond not calibrating

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU5 **Well #:** CW05-85 **Sample Number:** LTM-CW05-085-0401

Purging Method/Equipment: bladder **Samplers** BN/KM **Well Secure (Y/N)** Y

Well Casing Diameter: 2 in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** _____ gal

Sounding (Depth to Well Bottom): 91.77 **Static Water Level** (Depth to Water): 22.23

Date 2001	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/10	0935		22.23	initial	13.4	6.94	1.06	0	277.5	3.32	
	0940		22.23	1.0	12.7	6.83	1.10	0	232.5	0.53	
	0945		22.23	2.5	12.5	6.80	1.11	0	164.6	0.78	
	0950		22.23	3.5	12.5	6.78	1.12	0	93.5	0.30	
	(AM) ~~1000~~ 0955		22.23	4.5	12.4	6.80	1.12	0	77.2	0.04	
	(002)		Collect Sample								
	1003		22.23	Post	12.5	6.79	1.12	0	72.7	0.29	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4/10/01 **Sample Collection Time:** 1002

Prepared by: K. Mercuric

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: Well #: CW7-055 Sample Number: LTM-CW07-055-0401

Purging Method/Equipment: Bladder pump Samplers M.Smith /D.Rasor Well Secure (Y/N) Y

Well Casing Diameter : _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): 16.05 **Static Water Level** (Depth to Water): 16.72

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/09/01	1134		16.72	initial	14.8	7.13	0.920	8	-43.4	1.69	clear
04/09/01	1139		16.69	1.8	13.6	7.05	0.929	3	-26.4	0.45	clear
04/09/01	1144		16.72	2.25	13.3	7.08	0.934	1	-23.7	0.24	clear
04/09/01	1149		16.70	3.0	13.0	7.06	0.930	0	-30.0	0.12	clear
04/09/01	1154		16.72	3.5	12.9	7.05	0.930	0	-37.4	0.08	clear
04/09/01	1159		16.72	4.0	13.3	7.25	0.933	0	-55.4	1.52	clear
04/09/01	1204		16.72	5.0	13.0	7.16	0.933	0	-48.1	0.14	clear
04/09/01	1209		16.72	5.5	13.8	7.16	0.933	0	-39.1	0.15	clear
04/09/01	1211	Sample taken									
04/09/01	1214		16.72		13.8	7.21	0.927	0	-49.4	0.59	clear

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** 1

Sample Collection Date: 04/09/01 **Sample Collection Time:** 1211

Prepared by: M.Smith

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU5 **Well #:** CW10-55 **Sample Number:** LTM-CW10-055-0401

Purging Method/Equipment: Bailer **Samplers** M. Chiller/J. Neese **Well Secure (Y/N)** Y

Well Casing Diameter: _____ in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** 2 gal

Sounding (Depth to Well Bottom): 57.81 **Static Water Level** (Depth to Water): 22.56

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/9/01	1235	start bailing									
	1241		22.57	1.0	14.9	6.85	0.682	37	308.3	13.73	
	1247		22.58	2.0	13.4	7.27	0.680	28	283.5	14.61	
	1252		22.58	2.2	13.3	7.39	0.686	24	276.0	14.62	
	1256		22.58	2.4	13.3	7.43	0.686	25	273.7	14.91	
	1304	POST	22.58	POST	16.1	7.45	0.690	18	267.5	10.81	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4/9/01 **Sample Collection Time:** 1258

Prepared by: MC

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU5 Well #: LTM-CW15-055-0401 Sample Number: LTM-CW15-0401

Purging Method/Equipment: Micro/Bladder Samplers DM, BM Well Secure (Y/N) Y

Well Casing Diameter: 2 in. Unit Casing Volume (UC): NA gal. Target Purge Volume: NA gal

Sounding (Depth to Well Bottom): _____ **Static Water Level** (Depth to Water): 17.35

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/19	0900		17.35	int.	11.1	6.67	.731	0	Not	-.07	clear
	0905		17.35	3gal	11.8	6.83	.717	0		0.05	clear
	0910		17.35	5gal	11.9	6.87	.716	0		.67	clear
	0915		17.35	7gal	11.9	6.88	.716	0		.13	clear
	0920		17.35	9.0gal	12.0	6.90	.716	0		.07	clear
	0925		Collect sample								
	0931		17.35	post	11.7	6.94	.708	0		1.61	clear

Test Parameters: Tmetals (HNO_3) Fmetals (VOC (HCl)) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): (None) **Duplicate/Split:** _____ **MS/MSD:** /

Sample Collection Date: 4/19/01 **Sample Collection Time:** 0925

Prepared by: B. Mitchell

Refer to Log Book for Redox

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU5 **Well #:** HD-11 **Sample Number :** LTM-HD-11-0401

Purging Method/Equipment: bladder pump **Samplers** M. Smith / D. Rasor **Well Secure (Y/N)** Y

Well Casing Diameter : _____ in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** _____ gal

Sounding (Depth to Well Bottom): 80.17 **Static Water Level** (Depth to Water): 19.84

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/10/01	0933		18.44	initial	12.9	6.73	1.00	4	140.3	2.40	Clear
04/10/01	0938		19.84	0.5	12.5	6.88	1.04	6	-10.3	0.47	Clear
04/10/01	0943		19.84	0.8	12.9	6.91	1.05	6	-40.6	0.43	Clear
04/10/01	0948		19.84	1.2	12.9	7.01	1.05	4	-60.7	1.39	clear
04/10/01	0953		19.84	1.5	13.0	7.05	1.06	7	-71.3	0.34	clear
04/10/01	0958		19.84	1.6	12.9	7.09	1.06	3	-75.2	0.32	clear
04/10/01	1003		19.84	2.0	12.9	7.14	1.06	2	-80.6	0.28	clear
04/10/01	1008		19.84	2.2	13.0	7.17	1.06	2	-83.6	0.27	clear
04/10/01	1013		19.84	2.5	13.0	7.21	1.06	2	-83.3	0.25	clear
04/10/01	1018		19.84	2.8	12.9	7.24	1.06	3	-87.6	0.22	clear
04/10/01	1025	Sampled									
04/10/01	1045	Final	19.84		14.4	7.27	1.06	15	-84.4	1.24	

Test Parameters: (Tmetals (HNO_3)) Fmetals (VOC (HCl)) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): (None) **Duplicate/Split:** _____ **MS/MSD:** 1

Sample Collection Date: 04/10/01 **Sample Collection Time:** 1025

Prepared by: M. Smith

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU5 **Well #:** HD-125 **Sample Number :** LTM-HD-125-0401

Purging Method/Equipment: bladder pump **Samplers** M. Smith / D. Rasor **Well Secure (Y/N)** Y

Well Casing Diameter : _____ in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** _____ gal

Sounding (Depth to Well Bottom): 27.25 **Static Water Level** (Depth to Water): unknown – water level below top of pump (18.62)

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/10/01	1233		—	initial	14.8	7.15	0.968	2	27.3	2.20	clear
04/10/01	1238		—	0.5	13.3	7.01	0.972	2	~~0.26~~ 18.7 µS	~~18.7~~ 0.21	clear
04/10/01	1243		—	1.1	13.2	7.00	0.974	3	-24.2	0.15	clear
04/10/01	1248		—	1.8	13.2	6.98	0.975	2	-27.9	0.09	clear
04/10/01	1253		—	2.2	13.2	6.97	0.976	2	-31.2	0.07	clear
04/10/01	1258		—	2.8	13.2	6.97	0.976	2	-31.7	0.06	clear
04/10/01	1303		—	3.2	13.2	6.96	.977	0	-32.5	0.05	clear
04/10/01	1315	Sampled									
04/10/01	1321		—	final	15.1	7.01	0.963	0	-24.6	2.26	clear

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 04/10/01 **Sample Collection Time:** 1315

Prepared by: M. Smith

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: 005 **Well #:** HD-12M **Sample Number :** LTM-HD-12M-0401

Purging Method/Equipment: bladder pump **Samplers** M.Smith / D. Rasor **Well Secure (Y/N)** Y

Well Casing Diameter : _____ in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** _____ gal

Sounding (Depth to Well Bottom): 56.09 **Static Water Level** (Depth to Water): 19.64

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/10/01	1127		19.64	initial	15.0	7.49	1.03	12	50.4	4.05	clear
04/10/01	1132		19.48	0.5	12.8	7.17	0.99	12	-58.7	0.45	clear
04/10/01	1137		19.46	1.2	12.7	7.13	0.99	10	-67.8	0.19	clear
04/10/01	1142		19.46	1.8	12.7	7.11	0.99	10	-71.3	0.16	clear
04/10/01	1147		19.44	2.5	12.7	7.09	0.99	10	-74.2	0.12	clear
04/10/01	1152		19.44	3.2	12.7	7.08	0.99	9	-76.3	0.10	clear
04/10/01	1157		19.44	4.0	12.7	7.08	0.99	6	-77.7	0.09	clear
04/10/01	1212 gms	Sampled									
04/10/01	1214		...	final	13.5	7.14	1.00	0	-79.1	0.85	clear

Test Parameters: Tmetals (HNO_3) Fmetals (VOC (HCl)) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): (None) **Duplicate/Split:** _____ **MS/MSD:** 1

Sample Collection Date: 04/10/01 **Sample Collection Time:** 1212

Prepared by: M. Smith

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU5 Well #: HD135 Sample Number: LTM-HD-135-0407

Purging Method/Equipment: Bladder Samplers: J. Neese, M. Chiller Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: 2 gal

Sounding (Depth to Well Bottom): _____ Static Water Level (Depth to Water): 16.10

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/11/07	0955	start purging									
	1000		16.18	0.3	13.4	6.98	1.00	7	-50.1	5.94	
	1005		16.17	1.0	13.0	6.95	1.00	8	-55.1	5.37	
	1010		16.18	1.3	13.9	7.03	1.00	8	-66.8	6.29	
	1015		16.17	1.5	13.7	7.00	1.00	1	-61.7	6.50	
	1020		16.17	~~1.9~~ 2.0 (MC)	13.6	6.99	1.00	4	-64.0	7.51	
	1025		16.17	2.4	13.3	6.96	1.00	5	-65.4	5.01	
	1030		16.16	3.2	13.4	6.96	1.00	5	-68.2	5.41	
	1035	SAMPLE									
	1043		16.14	POST	13.0	6.95	0.995	9	-68.3	~~7.00~~ (MC)	5.83

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): AMU301 None Duplicate/Split: City of Dayton MS/MSD: 1

Sample Collection Date: 4/11/07 Sample Collection Time: 1035

Prepared by: M. Chiller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU5 Well #: MAD-MOW 127 (HD130) Sample Number: LTM-MAD-MOW127-0401

Purging Method/Equipment: Bladder Samplers J. Neese/M Chiller Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: 2 gal

Sounding (Depth to Well Bottom): 111.05 Static Water Level (Depth to Water): 17.16

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/11/01	0854	start purging									
	0859		17.15	0.9	12.6	6.94	1.00	7	-56.8	0.35	
	0904		17.13	1.8	12.6	6.99	1.00	0	-84.7	0.27	
	0909		17.13	2.5	12.6	7.00	1.01	0	-95.8	0.26	
	0914		17.11	3.2	12.8	7.00	1.01	0	-103.5	0.27	(bucket in the sun)
	0919		17.11	3.8	13.0	7.00	1.01	0	-107.6	0.23	↓
	0922	SAMPLE									
	0929		17.08	POST	12.7	7.03	1.00	0	-108.4	0.97	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): [redacted] Duplicate/Split: CH195 DUP MS/MSD: _____ / _____

Sample Collection Date: 4/11/01 Sample Collection Time: 0922

Prepared by: M. Chiller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU5 Well #: MW131M Sample Number: LTM-MW131M-0401

Purging Method/Equipment: Bladder Samplers J. Neese/M Chiller Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: 2 gal

Sounding (Depth to Well Bottom): 69.52 Static Water Level (Depth to Water): 15.41

Date	Time (24hr)	Purge Rate (gal/min)	~~Dynamic H2O Level~~ (ft) VOL	~~Volume Purged~~ (gal) DTW	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/10/01	1010	start	purging								
	1015		0.8	15.54	12.1	6.86	1.01	12	-39.6	1.46	murky
	1020		1.5	15.45	12.3	6.91	1.02	10	-54.4	0.97	
	1025		2.0	15.46	12.3	6.93	1.03	11	-60.5	0.81	
	1030		2.3	15.48	12.4	6.93	1.03	11	-72.2	0.73	
	1035		2.6	15.48	12.5	6.93	1.03	8	-79.1	0.68	
	1040		2.9	15.45	12.6	6.93	1.03	9	-83.8	0.62	
	1045	SAMPLE									
	1055		POST	15.47	12.1	6.96	1.03	1	-89.5	0.51	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: OEPA/City of Dayton MS/MSD: _____ / _____

Sample Collection Date: 4/10/01 Sample Collection Time: 1045

Prepared by: M. Chiller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: 615 Well #: MW131S Sample Number: LTM-MW131S-0401

Purging Method/Equipment: Bladder Samplers J. Neese/M. Chiller Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: 2 gal

Sounding (Depth to Well Bottom): _____ **Static Water Level** (Depth to Water): – obstruction in well –

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/10/01	1112	Start purging									
	1117		—	0.7	12.7	6.86	0.95	43	-15.5	12.76	
	1123		—	1.0	12.1	6.87	0.95	76	-19.4	13.19	
	1127		—	1.3	12.1	6.86	0.97	6	-19.8	9.82	
	1132		—	1.8	12.2	6.87	0.97	4	-22.0	9.62	
	1137		—	2.3	12.2	6.87	0.97	2	-22.1	10.42	
	1142		—	2.7	12.3	6.87	0.97	1	-23.7	14.36	
	1147		—	3.2	12.3	6.87	0.97	0	-23.0	9.87	
	1150	SAMPLE -	Split w/ City of Dayton & collect MS/MSD samples								
	1202			POST	12.7	6.93	0.943	8	-24.9	3.18	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: City of Dayton MS/MSD: /

Sample Collection Date: 4/10/01 **Sample Collection Time:** 1150

Prepared by: M. Chiller

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SID

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU5 **Well #:** MW132S **Sample Number:** LTM-132S-0401

Purging Method/Equipment: bladder **Samplers** BM/KM **Well Secure (Y/N)** Y

Well Casing Diameter: 2 in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** _____ gal

Sounding (Depth to Well Bottom): 50.20 **Static Water Level** (Depth to Water): 19.23

Date 2001	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/10	1140		19.23	initial	13.1	7.42	0.893	0	~~276.5~~ 221.6	12.48	
	1145		19.23	1.0	13.1	6.94	0.779	0	210.5	12.91	
	1150		19.23	2.0	12.9	6.87	0.784	0	200.6	13.09	
	1155		19.23	3.0	13.0	6.88	0.786	0	193.6	13.43	
	1200		19.23	4.0	13.0	6.87	0.783	0	~~186.7~~ 193.3	13.57	
	1200		Collect	Sample							
	1205		19.23	Post	12.9	6.85	0.781	0	193.1	13.36	

Test Parameters: Tmetals (HNO_3) Fmetals (VOC (HCl)) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: LTM-132S-0401 **MS/MSD:** /

Sample Collection Date: 4/10/01 **Sample Collection Time:** 1200

Prepared by: K. Mercurio

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU5 Well #: TTW-02 Sample Number: LTM-TTW-02-0401

Purging Method/Equipment: Bladder Samplers J.Neese/M.Chiller Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: 2 gal

Sounding (Depth to Well Bottom): 79.0 Static Water Level (Depth to Water): 14.92

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4-19-01	0915	start	purging								
	0920		14.92	0.3	11.0	6.73	1.42	0	47.8	1.52	
	0925		14.91	0.8	11.0	6.90	1.41	0	-53.8	1.04	
	0930		14.92	1.2	11.1	6.93	1.41	0	-66.8	0.93	
	0935		14.92	1.7	11.2	7.01	1.41	0	-77.7	0.82	
	0940		14.92	2.3	11.2	7.13	1.40	0	-84.0	0.72	
	0945		14.92	2.9	11.3	7.17	1.40	0	-87.7	0.72	
	0950		14.92	3.3	11.3	7.20	1.41	0	-90.4	0.66	
	0955		14.91	3.9	11.3	7.23	1.41	0	-92.6	0.64	
	1000		14.91	4.4	11.3	7.25	1.41	0	-93.2	0.51	
	1005	SAMPLE									
	1011		14.91	POST	11.4	7.31	1.41	0	-93.3	1.49	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: _____ MS/MSD: _____ / _____

Sample Collection Date: _____ Sample Collection Time: 1005

Prepared by: M. Chiller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: 048 Well #: CW3-77 Sample Number: LTM-CW3-77-0401

Purging Method/Equipment: Bladder Samplers: J. Neese / M. Chiller Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: 2 gal

Sounding (Depth to Well Bottom): 80.16 Static Water Level (Depth to Water): 24.01

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/16/01	0917	start	purging								
	0922		24.01	0.3	13.5	6.50	732	0	182.7	3.18	clear, bucket is
	0927		24.01	0.8	13.8	6.68	701	0	180.4	2.97	in the sun
	0932		24.01	1.3	13.9	6.78	688	0	177.3	3.09	
	0937		24.01	1.8	13.9	6.85	683	0	170.3	2.97	
	0942		24.01	2.2	13.9	6.90	683	0	165.9	2.87	
	0947		24.02	2.8	13.9	6.93	682	0	159.0	2.94	
	0952		24.02	3.3	13.8	6.96	682	0	151.2	2.72	
	0955	SAMPLE									
	1000		24.01	POST	13.9	6.97	691	0	140.6	3.31	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: OEPA MS/MSD: /

Sample Collection Date: 4/16/01 Sample Collection Time: 0955

Prepared by: M. Chiller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: ~~CHP4~~ MS OU10 Well #: CHP4-MW01 Sample Number: LTM-CHP4-MW01-0401

Purging Method/Equipment: bladder pump Samplers M.Smith/D.Rasor Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): 38.36 **Static Water Level** (Depth to Water): 27.78

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/10/01	1458		MS ~~28.7~~ 28.78	initial	16.7	7.27	2.19	85	MS -20.1	1.22	reddish brown tint
04/10/01	1503		MS ~~28.7~~ 28.78	2.8	16.0	7.17	1.54	1	-24.4	4.13	clear
04/10/01	1508		27.78	5.5	15.9	7.14	1.60	3	-28.3	4.40	clear
04/10/01	1513		27.78	8.0	15.9	7.10	1.62	3	-27.9	4.11	clear
04/10/01	1518		27.78	9.5	15.9	7.10	1.61	2	-27.4	4.18	clear
04/10/01	1521		Sampled								
04/10/01	1525			final	15.9	7.19	1.66	5	-24.6	1.43	

Test Parameters: Tmetals (HNO_3) Fmetals (VOC (HCl)) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): (None) **Duplicate/Split:** _____ **MS/MSD:** 1

Sample Collection Date: 04/10/01 **Sample Collection Time:** 1521

Prepared by: M.Smith

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: CHP 4 Well #: GR330 Sample Number: LTM-GR-330-0401

Purging Method/Equipment: bladder Samplers BM/KM Well Secure (Y/N) Y

Well Casing Diameter: 2 in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): 50.90 Static Water Level (Depth to Water): 34.06

Date 2001	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/11	0945		34.07	initial	16.9	7.05	0.93	2	138.3	4.43	
	0950		34.07	2.5	14.85	6.78	0.771	27	139.5	2.07	brown
	0955		34.07	4.75	14.7	6.78	0.746	8	136.3	2.21	
	1000		34.07	6.75	14.7	6.78	0.739	7	134.0	1.15	
	1005		34.07	8.25	14.7	6.77	0.741	0	133.4	1.47	
	1010		Collect	Sample							
	1013		34.07	Post	14.8	6.77	0.742	0	129.2	1.96	

Test Parameters: Tmetals (HNO_3) Fmetals (VOC) (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: _____ MS/MSD: _____ / _____

Sample Collection Date: 4/11/01 Sample Collection Time: 1010

Prepared by: K. Mercurio

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: Well #: GR 33 Sample Number : LTM-GR33-0401

Purging Method/Equipment: grafos Samplers DR/MS Well Secure (Y/N) Y

Well Casing Diameter : 4 in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: 3 gal

Sounding (Depth to Well Bottom): _____ **Static Water Level** (Depth to Water): 14.43

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/18/01	1125	4	14.43	INT	13.9	7.07	1.31	854	-16.0	3.28	Fe stained
	1130		14.43	2.5	14.6	7.21	1.28	89	0.3	3.22	
	1135		14.43	3.75	15.1	7.15	1.28	0	4.8	3.49	clear
	1140		14.43	7.75	14.7	7.20	1.28	0	8.1	3.13	
	1145		14.43	10.75	14.7	7.18	1.28	0	6.4	3.08	
	1150		14.43	14.00	14.7	7.19	1.29	0	6.0	3.16	
	1155	Sampled									
	1205	Final			14.6	7.27	1.29	2	3.8	10.25	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: LTM-GR33-5401 MS/MSD: 1

Sample Collection Date: 4/18/01 **Sample Collection Time:** 1155

Prepared by: D. Rasor

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU 3 Well #: GR-334 Sample Number: LTM-GR-334-0401 ~~LTM 334-0~~

Purging Method/Equipment: gramtos Samplers DR/MS Well Secure (Y/N) Y

Well Casing Diameter: ~~2~~ 4 in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: 3 gal

Sounding (Depth to Well Bottom): 151.60 Static Water Level (Depth to Water): 13.72

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/18/01	1050		13.72	INT	13.5	7.73	0.970	0	-58.3	2.51	
	1055		13.72	4	14.2	7.28	0.960	0	-110.7	0.18	
	1100		13.72	10	14.4	7.23	0.950	0	-118.0	0.05	
	1105		13.72	14	14.4	7.25	0.950	0	-120.1	0.05	
	1110	Sampled									
	1115		13.72		14.5	7.20	0.933	0	-120.4	0.03	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** 1

Sample Collection Date: 4/18/01 **Sample Collection Time:** 1110

Prepared by: D. Raser

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU10 **Well #:** OU10-MW-03S **Sample Number:** LTM-OU10-MW-03S-0101

Purging Method/Equipment: bladder **Samplers** BMIKM **Well Secure (Y/N)** Y

Well Casing Diameter: 2 in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** _____ gal

Sounding (Depth to Well Bottom): 36.41 **Static Water Level** (Depth to Water): 28.04

Date 2001	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/11	0845		28.06	0.25	14.4	6.95	0.635	0	224.6	9.12	
	0850		28.06	1.25	15.0	6.89	0.674	0	193.6	5.94	
	0855		28.06	3.0	14.9	6.90	0.677	0	185.7	5.06	
	0900		28.06	5.0	14.9	6.89	0.679	0	185.7	4.81	
	0905		28.06	6.0	14.9	6.90	0.677	0	189.9	5.02	
	0910		Collect	Sample							
	0917		28.06	Post	15.2	6.91	0.680	0	202.1	5.34	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4/11/01 **Sample Collection Time:** 0910

Prepared by: K. Mercuno

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU10 **Well #:** OU10-MW-06D **Sample Number :** LTM-OU10-~~06~~ MW-06D-0401

Purging Method/Equipment: bladder pump **Samplers** M. Smith / D. Rasor **Well Secure (Y/N)** Y

Well Casing Diameter : _____ in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** _____ gal

Sounding (Depth to Well Bottom): 151.30 **Static Water Level** (Depth to Water): 28.52

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/11/01	0851		28.52	initial	15.1	6.62	0.933	0	196.3	5.42	clear
04/11/01	0856		28.52	0.5	14.6	6.92	0.904	0	-11.8	3.75	clear
04/11/01	0901		28.52	1.0	14.4	7.04	0.922	0	-72.3	1.51	clear
04/11/01	0906		28.52	1.8	14.2	7.07	0.918	0	-73.3	1.36	clear
04/11/01	0911		28.52	2.5	14.0	7.08	0.912	0	-75.4	1.14	clear
04/11/01	0916		28.52	3.5	14.0	7.07	0.909	0	-77.1	0.94	clear
04/11/01	0921		28.52	4.5	13.9	7.07	0.909	-2	-79.4	1.33	clear
04/11/01	0926		28.52	6.0	13.8	7.08	0.908	-1	-81.8	0.82	clear
04/11/01	0929	sampled									
04/11/01	0931				14.3	7.11	0.904	-1	-82.0	1.14	clear

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 04/11/01 **Sample Collection Time:** 0929

Prepared by: M. Smith

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: 0010 Well #: 0010-MW-06S Sample Number: LTM-0010-MW-06S-0401

Purging Method/Equipment: bladder pump Samplers M.Smith / D.Rasor Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): 60.28 **Static Water Level** (Depth to Water): 27.74

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/11/01	0950		27.74	initial	14.8	7.47	0.804	3	62.6	7.67	clear
04/11/01	0955		27.74	2.5	14.4	7.21	0.813	1	62.7	5.75	clear
04/11/01	~~09~~ MS 1000		27.74	5.0	14.4	7.19	0.817	0	64.5	4.49	clear
04/11/01	1005		27.74	8.0	14.3	7.17	0.818	0	35.4	3.32	Clear
04/11/01	1010		27.74	11.0	14.3	7.14	0.819	-1	53.3	0.31	clear
04/11/01	1012	Sampled			~~14.9~~	~~7.22~~	~~0.810~~	~~0~~	~~11.1~~	~~0.82~~	~~clear~~ MS
04/11/01	1024			final	14.9	7.22	0.810	0	11.1	0.82	Clear

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: LTM-0010-MW-06S-5401 MS/MSD: 1

Sample Collection Date: 04/11/01 **Sample Collection Time:** 1012

Prepared by: M. Smith

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: 5010 **Well #:** MW-11D **Sample Number :** LTM-000-MW-11D-0401

Purging Method/Equipment: bladder pump **Samplers** M. Smith / D. Kaser **Well Secure (Y/N)** Y

Well Casing Diameter : _____ in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** _____ gal

Sounding (Depth to Well Bottom): 97.32 **Static Water Level** (Depth to Water): 11.64

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/16/01	1454		11.64	initial	11.2	7.68	0.645	0	94.8	7.35	
	1459		11.64	0.5	13.3	7.07	0.805	0	96.1	1.13	
	1504		11.64	1.5	13.3	7.01	0.849	0	94.5	0.29	
	1509		11.64	2.5	13.4	6.99	0.844	0	93.7	0.22	
	1514		11.64	3.5	13.4	6.99	0.842	0	93.3	0.19	
	1519		11.64	4.5	13.4	6.99	0.840	0	93.9	0.17	
	1522		Sampled								
	1525				13.1	7.01	0.840	0	93.7	0.58	
					~~13.1~~	~~7.01~~					

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** 1

Sample Collection Date: 04/16/01 **Sample Collection Time:** 1522

Prepared by: M. Smith

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU10 Well #: OU10-MW-11S Sample Number: LTM-OU10-MW-11S-0401

Purging Method/Equipment: bladder pump Samplers M.Smith/D.Rasor Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): 61.64 Static Water Level (Depth to Water): 11.58

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/16/01	1359		11.58	initial	11.9	7.55	~~0.784~~ 0.819	7	83.0	7.66	
04/16/01	1404		11.58	1	13.7	7.04	0.863	0	80.7	3.67	
04/16/01	1409		11.58	1.5	13.8	7.01	0.862	0	80.5	3.65	
04/16/01	1414		11.58	2.5	13.8	7.00	0.862	0	82.7	3.57	
04/16/01	1419		11.58	3.5	13.8	6.96	0.862	0	88.1	3.59	
04/16/01	1424		11.58	4.5	13.8	6.97	0.862	0	94.5	3.58	
04/16/01	1428	sampled			~~1~~ MS						
04/16/01	1433		final		13.7	6.97	0.867	0	96.5	4.06	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: _____ MS/MSD: _____ / _____

Sample Collection Date: 04/16/01 Sample Collection Time: 1428

Prepared by: M.Smith

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU10 **Well #:** OU10-MW19D **Sample Number :** LTM-OU10-MW19D-0401

Purging Method/Equipment: Bladder **Samplers** J.Nlese/M.Culler **Well Secure (Y/N)** Y

Well Casing Diameter : _____ in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** _____ gal

Sounding (Depth to Well Bottom): _____ **Static Water Level** (Depth to Water): 34.41

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/10/01	1350	start purging									
	1400		34.41	0.8	15.3	7.02	1.07	0	21.6	4.60	
	1405		34.42	1.3	15.3	7.02	1.04	0	26.8	4.78	
	1410		34.44	2.2	15.3	7.02	1.04	0	30.1	4.70	
	1415		34.45	2.8	15.5	7.01	1.04	0	34.4	4.64	
	1420		34.44	3.2	15.5	7.00	1.04	0	36.1	4.73	
	1425	SAMPLE									
	1428		34.45	POST	15.4	7.03	1.03	0	36.9	5.85	

Test Parameters: Tmetals (HNO_3) Fmetals (VOC (HCl)) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4/10/01 **Sample Collection Time:** 1425

Prepared by: M.Culler

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU10 Well #: MW21S Sample Number: LTM-OU10-MW21S-0401

Purging Method/Equipment: bladder Samplers BN/KM Well Secure (Y/N) Y

Well Casing Diameter: 2 in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): 24.52 **Static Water Level** (Depth to Water): 6.89

Date 2001	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/18	1115		6.89	initial	12.3	6.98	1.24	0	270.4	3.40	
	1120		6.89	2.0	11.8	6.87	1.24	0	154.8	2.13	
	1125		6.89	4.0	11.7	6.87	1.24	0	91.9	1.23	
	1130		6.89	6.0	11.7	6.86	1.24	0	86.7	1.64	
	1135		Collect	Sample							
	1138		6.89	Post	12.5	6.90	1.23	0	114.4	4.24	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4/18/01 **Sample Collection Time:** 1135

Prepared by: K. Mercuno

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: 0110 **Well #:** 0110-MW-25S **Sample Number:** ITM-0110-MW-25S-0401

Purging Method/Equipment: Bladder **Samplers** J. Neese/M. Chiller **Well Secure (Y/N)** Y

Well Casing Diameter: _____ in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** 2 gal

Sounding (Depth to Well Bottom): 45.75 **Static Water Level** (Depth to Water): 28.~~18~~81 (MC)

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/12/01	1120	Start purging									
	1125		28.86	0.2	16.0	6.78	777	0	71.0	3.61	clear
	1130		28.85	0.9	15.2	6.79	793	0	74.6	3.72	
	1135		28.87	1.3	15.2	6.83	795	0	78.6	3.76	
	1140		28.88	1.6	15.2	6.86	796	0	79.3	3.79	
	1145		28.86	2.1	15.2	6.87	796	0	78.5	3.70	
	1150		28.86	2.8	15.3	6.88	797	0	77.8	3.77	
	1155		28.85	3.4	15.3	6.89	796	0	76.4	3.69	
	1158	SAMPLE									
	1200		28.86	POST	15.3	6.92	797	0	77.7	4.69	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4/12/01 **Sample Collection Time:** 1158

Prepared by: M. Chiller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: 0410 **Well #:** MW37-1D **Sample Number:** LTM-NEA-MW37-1D-0401

Purging Method/Equipment: bladder **Samplers** BM/KM **Well Secure (Y/N)** Y

Well Casing Diameter: 2 in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** _____ gal

Sounding (Depth to Well Bottom): 98.05 **Static Water Level** (Depth to Water): 9.35

Date 20101	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/18	1425		9.35	0.3	12.6	7.20	1.17	0	79.0	3.44	
	1430		9.37	~~2.0~~ 1.5	13.4	6.88	1.22	0	55.9	0.31	
	1435		9.37	2.5	13.1	6.86	1.22	0	43.0	0.12	
	1440		9.37	3.5	13.4	6.86	1.22	0	34.0	0.09	
	1445		Collect	Sample							
	1447		9.37	Pest	13.4	6.85	1.22	0	40.2	0.48	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4/18/01 **Sample Collection Time:** 1445

Prepared by: K. Mercurio

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: CHP4 Well #: LTM-23-578-M Sample Number: LTM-23-578-M-0401

Purging Method/Equipment: Bladder Samplers: J Neese/M. Chiller Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: 2 gal

Sounding (Depth to Well Bottom): 43.69 **Static Water Level** (Depth to Water): 32.33

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/10/01	1508	Start pumping									
	1514		32.35	0.5	15.5	7.15	1.58	0	59.8	3.17	
	1519		32.35	0.7	16.1	7.13	1.58	0	52.5	3.90	
	1524		32.35	1.7	15.4	7.10	1.56	0	46.5	4.31	
	1529		32.35	2.1	15.7	7.10	1.57	0	4.92 (DO)	40.0 (Redox)	
	1534		32.37	2.5	15.5	7.09	1.57	0	37.2	6.15	
	1539		32.38	3.0	15.5	7.09	1.56	0	34.7	6.04	
	1542	SAMPLE									
	1545		32.38	POST	15.6	7.11	1.56	0	33.6	5.64	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4/10/01 **Sample Collection Time:** 1545

Prepared by: M. Chiller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: 012 **Well #:** 14-554-m **Sample Number:** LTM-14-554-m-010101

Purging Method/Equipment: Bladder **Samplers:** J. Abege / M. Chiller **Well Secure (Y/N)** N - lock latch broken

Well Casing Diameter: _____ in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** 2 gal

Sounding (Depth to Well Bottom): 17.11 **Static Water Level** (Depth to Water): 9.18

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4-18-01	0915	start purging									
	0920		9.18	0.8	9.6	7.09	1.10	10	221.7	5.98	clear
	0925		9.19	1.8	9.7	7.27	1.07	0	218.1	6.16	bucket in intake
	0930		9.18	2.4	9.8	7.27	1.07	0	215.6	5.22	
	0935		9.18	2.8	9.9	7.28	1.07	0	210.1	4.83	
	0940		9.19	3.2	10.0	7.30	1.07	0	205.1	4.84	
	0945	SAMPLE									
	0950		9.18	POST	10.2	7.31	1.06	0	197.2	5.59	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: April 18, 2001 **Sample Collection Time:** 0945

Prepared by: M. Chiller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU2 **Well #:** NEA-MW01-1S **Sample Number:** LTM-WP-NEA-MW01-1S-0401

Purging Method/Equipment: Bladder **Samplers** J. Nose/M Chiller **Well Secure (Y/N)** Y

Well Casing Diameter: _____ in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** 2 gal

Sounding (Depth to Well Bottom): 26.94 **Static Water Level** (Depth to Water): 16.45

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4-18-01	1105	start	purging								
	1110		16.45	0.2	11.7	6.98	1.43	0	-67.9	4.19	clear
	1115		16.45	0.8	11.6	7.25	1.34	0	-82.3	5.40	
	1120		16.45	1.3	11.5	7.34	1.27	0	-60.0	6.45	
	1125		16.45	1.7	11.3	7.35	1.26	0	-43.5	6.69	
	1130		16.45	2.0	11.2	7.36	1.25	0	-26.8	6.61	
	1135		16.45	2.3	11.0	7.37	1.25	0	-15.7	6.63	
	1140		16.45	2.8	11.2	7.36	1.24	0	-11.5	6.81	
	1145	SAMPLE									
	1147		16.46	POST	11.6	7.38	1.26	0	-28.9	7.21	

Test Parameters: (Tmetals (HNO_3)) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): (None) **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: April 18, 2001 **Sample Collection Time:** 1145

Prepared by: M. Chiller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

Page 1 of ___

SITE ID: OU2 Well #: NEA-MW02-2S Sample Number: LTM-WP-NEA-MW02-2S-0401

Purging Method/Equipment: Bladder Samplers J. Neese / M. Chiller Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: 2 gal

Sounding (Depth to Well Bottom): 20.29 **Static Water Level** (Depth to Water): 10.31

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4-18-01	1005	START PURGING									
	1010		10.31	0.2	10.4	7.39	1.27	0	225.3	6.69	clear
	1015		10.31	0.8	10.3	7.38	1.30	0	220.3	6.06	
	1020		10.31	1.4	10.2	7.39	1.29	0	213.3	5.98	
	1025		10.32	1.8	10.3	7.39	1.29	0	210.2	6.11	
	1030		10.32	2.3	10.3	7.40	1.29	0	205.3	6.11	
	1035		10.32	2.8	10.3	7.41	1.29	0	200.8	6.07	
	1040		10.31	3.3	10.4	7.41	1.29	0	195.8	6.19	
	1045	SAMPLE									
	1048		10.32	POST	10.2	7.39	1.27	0	194.2	6.90	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: April 18, 2001 **Sample Collection Time:** 1045

Prepared by: M. Chiller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU2 Well #: NEA-MW20-2S Sample Number: BMP-NEA-MW20-2S-0407

Purging Method/Equipment: Bladder Samplers MS/DR Well Secure (Y/N) Y

Well Casing Diameter: — in. Unit Casing Volume (UC): — gal. Target Purge Volume: 2 gal

Sounding (Depth to Well Bottom): — Static Water Level (Depth to Water): 10.10

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/17/01	1550		10.20	initial	11.2	6.94	0.847	4	-61.4	0.37	
	1555		10.20	2.0	11.3	6.93	0.805	2	-88.9	0.13	
	1600		10.20	3.5	11.3	6.94	0.797	1	-99.7	0.08	
	1605		10.20	5.5	11.3	7.00	0.796	1	-98.6	0.15	
	1610		10.20	7.0	11.3	7.02	0.795	2	-103.7	0.08	
	1615	SAMPLED									
	1620		10.20	final	11.4	7.02	0.791	7	-106.6	0.31	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: — MS/MSD: /

Sample Collection Date: 4/17/01 Sample Collection Time: 1615

Prepared by: M. Chiller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU2 Well #: NEA-MW20-2S Sample Number: BMP-NEA-MW20-2S-0401

Purging Method/Equipment: bladder pump Samplers M. Smith / K. Havens Well Secure (Y/N): Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): _____ Static Water Level (Depth to Water): 10.21

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/19/01	1101		10.35	initial	12.9	6.59	0.982	0 ~~10~~	-76.6	0.80	
04/19/01	1106		10.35	2.0	12.2	6.54	0.963	0	-111.5	0.17	
04/19/01	1111		10.35	3.5	12.2	6.72	0.952	0	-120.2 ~~0.05~~	0.05	
04/19/01	1116		10.35	5.5	12.2	6.82	0.948	0	-123.2	0.05	
04/19/01	1121		10.35	7.0	12.2	6.89	0.946	0	-125.0	0.04	
04/19/01	1126		10.35	8.5	12.2	6.90	0.943	0	-124.8	0.06	
04/19/01	1129		Sampled								
04/19/01	1151		final		12.7	6.91	0.91	0	-123.7	0.57	
	Fe = 1.77		mg/L								

Test Parameters: Tmetals (HNO_3) (dup only) Fmetals (dup only) VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH) BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: BMP-NEA-MW20-2S-0401 MS/MSD: 1

Sample Collection Date: 04/19/01 Sample Collection Time: 1129

Prepared by: M. Smith

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU2 Well #: NEA-MW23-2S Sample Number: LTM-WP-NEA-MW23-2S-04

Purging Method/Equipment: Bladder Samplers J. Neese / M Chiller Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: 2 gal

Sounding (Depth to Well Bottom): 15.25 Static Water Level (Depth to Water): 7.75

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4-17-01	1116		7.74	0.4	10.1	6.89	772	0	81.8	2.76	clear
	1121		7.75	1.0	10.2	6.89	759	0	78.7	3.08	
	1126		7.75	1.7	10.1	6.89	776	0	75.5	2.80	
	1131		7.75	2.3	9.8	6.89	788	0	72.4	2.47	
	1136		7.76	3.0	9.8	6.88	794	0	70.1	2.43	
	1141		7.75	3.9	9.7	6.88	796	0	67.0	2.46	
	1145	SAMPLE									
	1153		7.74	POST	9.3	6.90	.806	0	59.4	3.13	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4-17-01 **Sample Collection Time:** 1145

Prepared by: M. Chiller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU2 Well #: MW24-2S Sample Number: LTM-WP-NEA-MW24-2S-0401

Purging Method/Equipment: bladder Samplers BM/KM Well Secure (Y/N) Y

Well Casing Diameter: 2 in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): 24.41 **Static Water Level** (Depth to Water): 10.85

Date 2001	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/17	1505		10.85	0.5	11.0	6.87	0.98	91	331.4	10.24	Bacteria byproduct
	1510		10.85	1.0	10.7	6.81	0.96	55	88.4	13.29	"
	1515		10.85	1.5	10.5	6.81	0.94	21	99.9	14.42	clear
	1520		10.85	2.0	10.5	6.81	0.95	14	127.4	13.98	
	1525		10.85	3.0	10.3	6.81	0.95	15	81.8	13.41	
	1530		10.85	3.5	10.0	6.81	0.94	14	88.2	13.17	
	1535		Collect Sample								
	1541		10.85	Post	9.5	6.82	0.95	38	241.4	12.02	

Test Parameters: Tmetals (HNO_3) Emetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4/17/01 **Sample Collection Time:** 1535

Prepared by: K. Mercuno

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU2 **Well #:** NE17-MW31-3S **Sample Number:** LTM-WP-NE17-MW31-3S

Purging Method/Equipment: bladder **Samplers** BW/KM **Well Secure (Y/N)** Y

Well Casing Diameter: _____ in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** _____ gal

Sounding (Depth to Well Bottom): 20.45 **Static Water Level** (Depth to Water): 14.98

Date 2001	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/18	0920		14.98	0.5	11.0	5.94	1.52	0	276.7	4.84	
	0925		14.98	1.5	11.6	6.64	1.34	0	63.5	5.82	
	0930		14.98	2.5	11.7	6.75	1.33	0	67.5	8.45	
	0935		14.98	3.5	11.7	6.78	1.33	0	68.1	9.54	
	0940		14.98	4.5	11.8	6.79	1.33	0	67.5	9.15	
	0945		collect	sample							
	0950		14.98	post	11.6	6.82	1.34	0	70.3	8.80	

Test Parameters: Tmetals (HNO_3) Emetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4/18/01 **Sample Collection Time:** 0945

Prepared by: K Mercurio

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU3 Well #: 07-520-M Sample Number: LTM-07-520-M-0401

Purging Method/Equipment: bladderpump Samplers M. Smith/K. Havens Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): 16.73 Static Water Level (Depth to Water): 9.00

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/23/01	0830		9.54	initial	~~Zero~~ 13.4	6.29	1.09	0	44.5	4.92	
04/23/01	0835		9.54	0.5	11.8	6.32	1.12	0	-28.4	0.85	
04/23/01	0840		9.54	1.0	11.7	6.36	1.12	0	-39.4	0.38	
04/23/01	0845		9.54	2.0	11.5	6.45	1.13	0	-48.3	0.30	
04/23/01	0850		9.54	3.0	11.6	6.51	1.13	0	-56.3	0.19	
04/23/01	0855		9.54	3.5	11.6	6.51	1.13	0	-62.3	0.19	
04/23/01	0900		9.54	4.25	11.6	6.57	1.13	0	-66.8	0.18	
04/23/01	0903	Sampled									
04/23/01	0916		final		11.1	6.57	1.13	0	-68.3	0.28	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: _____ MS/MSD: _____ / _____

Sample Collection Date: 04/23/01 Sample Collection Time: 0903

Prepared by: M. Smith

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU5 Well #: HD-11 Sample Number: LTM-HD-11-0401

Purging Method/Equipment: bladder pump Samplers M. Smith / D. Rasor Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): 80.17 Static Water Level (Depth to Water): 19.84

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/10/01	0933		18.44	initial	12.9	6.73	1.00	4	140.3	2.40	Clear
04/10/01	0938		19.84	0.5	12.5	6.88	1.04	6	-10.3	0.47	Clear
04/10/01	0943		19.84	0.8	12.9	6.91	1.05	6	-40.6	0.43	Clear
04/10/01	0948		19.84	1.2	12.9	7.01	1.05	4	-60.7	1.39	clear
04/10/01	0953		19.84	1.5	13.0	7.05	1.06	7	-71.3	0.34	clear
04/10/01	0958		19.84	1.6	12.9	7.09	1.06	3	-75.2	0.32	clear
04/10/01	1003		19.84	2.0	12.9	7.14	1.06	2	-80.6	0.28	clear
04/10/01	1008		19.84	2.2	13.0	7.17	1.06	2	-83.6	0.27	clear
04/10/01	1013		19.84	2.5	13.0	7.21	1.06	2	-83.3	0.25	clear
04/10/01	1018		19.84	2.8	12.9	7.24	1.06	3	-87.6	0.22	clear
04/10/01	1025	Sampled									
04/10/01	1045	Final	19.84		14.4	7.27	1.06	15	-84.4	1.24	

Test Parameters: (Tmetals (HNO_3)) Fmetals (VOC (HCl)) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): (None) Duplicate/Split: _____ MS/MSD: 1

Sample Collection Date: 04/10/01 Sample Collection Time: 1025

Prepared by: M. Smith

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU8 Well #: OU8 MW2D Sample Number: LTM-OU8-MW-02D-0401

Purging Method/Equipment: bladder Samplers BM/KM Well Secure (Y/N) Y

Well Casing Diameter: 2 in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): 74.83 **Static Water Level** (Depth to Water): 31.57

Date 2001	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/11	1440		31.82	initial	18.7	7.09	0.696	57	114.6	3.37	
	1445		31.82	3.0	17.4	11.34	2.61	343	106.8	3.56	milky
	1450		31.82	4.0	17.7	11.40	3.04	376	109.4	3.09	"
	~~1455~~		~~31.82~~	~~5.0~~	KM	NO parameters taken					
	1500		31.82	5.5	18.4	10.70	1.14	360	115.1	1.67	
	1505		31.82	6.5	16.8	9.73	0.698	464	115.6	0.54	
	1510		31.82	7.5	16.6	8.06	0.708	171	118.0	2.14	
	1515		31.82	8.5	16.6	7.79	0.728	113	118.1	0.34	
	1520		31.82	9.5	16.7	7.73	0.735	81	118.5	0.53	
	1525		31.82	10.5	16.6	7.56	0.737	47	123.7	0.48	
	1530		31.82	11.5	16.6	7.52	0.740	44	128.1	0.36	
	1535		31.82	12.5	16.6	7.47	0.743	40	132.5	0.37	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4/11/01 **Sample Collection Time:** 1535

Prepared by: K. Marcuno

1540 31.82 Post 17.2 7.42 0.745 26 142.7 0.99 Note: No product

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INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OUC Well #: MW23D Sample Number: LTM-OUC-MW-23D-0401

Purging Method/Equipment: bladder pump Samplers: DR / MS Well Secure (Y/N): Y

Well Casing Diameter: 2 in. Unit Casing Volume (UC): 2 gal. Target Purge Volume: ___ gal

Sounding (Depth to Well Bottom): 51.54 **Static Water Level** (Depth to Water): 30.68

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/12/01	0850		30.74	INT	16.7	6.33	.735	9	82.0	3.55	clear
	0855		30.72	1	17.0	6.59	.964	9	-54.4	0.48	clear
	0900		30.68	1.5	17.1	6.65	.955	2	-63.1	0.34	
	0905		30.68	2.0	17.1	6.70	.948	0	-66.8	0.25	
	0910		30.68	2.5	17.1	6.72	.945	1	-69.0	0.22	
	0915		30.68	3.0	17.2	6.72	.942	1	-70.3	0.22	
	0920		30.68	3.5	17.2	6.73	.939	0	-71.6	0.20	
	0925	Sampled									
	0930	Final	30.68		17.0	6.81	.931	5	-71.6	0.21	

Test Parameters: (Tmetals (HNO_3)) (Fmetals) VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): (None) **Duplicate/Split:** ___ **MS/MSD:** 1

Sample Collection Date: 4/12/01 **Sample Collection Time:** 0925

Prepared by: D. Rosier

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: Well #: P4-2 Sample Number: LTM-P4-2-0401

Purging Method/Equipment: bladder pump Samplers M.Smith / K. Havens Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): 18.95 **Static Water Level** (Depth to Water): 5.81

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/19/01	~~1351~~ 1353		6.48	initial	12.2	7.66	0.921	0	153.2	2.43	
04/19/01	1358		7.00	0.75	10.3	6.99	0.932	0	152.8	2.32	
04/19/01	1403		7.00	1.25	10.3	7.03	0.915	0	151.4	3.47	
04/19/01	1408		7.32	1.5	10.4	7.10	0.905	0	151.6	4.57	
04/19/01	1413		8.51	2.5	9.4	7.18	0.913	0	151.9	6.37	
04/19/01	1418		9.43	3.75	9.2	7.17	0.931	0	152.7	7.07	
04/19/01	1423		9.84	4.5	9.5	7.21	0.936	0	152.8	6.99	
04/19/01	1428		9.84	4.75	9.8	7.20	0.943	0	153.4	6.99	
04/19/01	1433		9.84	5	9.9	7.23	0.957	0	155.6	6.93	
04/19/01	1435	Sampled		final	9.1	7.29	0.971	0	156.9	7.28	
04/19/01	1442		NS		↓	↓	↓	↓	↓	↓	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 04/19/01 **Sample Collection Time:** 1435

Prepared by: M.Smith

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: 049 Well #: EF023-MW02 Sample Number : WP-EF023-MW02-0401

Purging Method/Equipment: bladder pump Samplers DR/MS Well Secure (Y/N) Y

Well Casing Diameter : 2 in. Unit Casing Volume (UC): 2 gal. Target Purge Volume: — gal

Sounding (Depth to Well Bottom): 24.92 **Static Water Level** (Depth to Water): 8.09

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/12/01	1015		10.40	INT	13.6	6.96	.101	317	98.8	10.17	Fe staining
	1020		11.60	.5	13.7	6.84	1.04	280	78.2	1.55	
	1025		11.35	.9	14.7	6.82	1.02	246	35.4	5.59	
	1030		11.30	1.1	15.1	6.88	1.01	210	24.8	5.63	
	1035		11.80	1.3	13.8	6.90	1.00	216	16.6	2.19	
	1040		12.08	1.5	13.5	6.88	1.00	108	14.0	1.76	
	1045		12.46	1.8	13.5	6.87	1.01	102	13.8	1.42	
	1050		12.76	2.2	13.5	6.85	1.01	60	11.8	1.35	
	1055		12.76	2.7	13.5	6.84	1.01	46	9.0	1.68	
	1100		12.76	3.0	13.8	6.83	1.01	47	8.6	1.38	
	1105		12.76	3.3	13.9	6.82	1.01	42	9.3	1.72	
	1110	Sampled									

Test Parameters: Tmetals (HNO_3) Emetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** — **MS/MSD:** — /

Sample Collection Date: 4/12/01 **Sample Collection Time:** 1110

Prepared by: D. Kaser

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU9 Well #: EFDZ3-MW03 Sample Number: LTM-EFDZ3-MW03-0401

Purging Method/Equipment: Micro / Bladder Samplers OM, BM, Well Secure (Y/N) Y

Well Casing Diameter: 2 in. Unit Casing Volume (UC): NA gal. Target Purge Volume: NA gal

Sounding (Depth to Well Bottom): 26.30 **Static Water Level** (Depth to Water): 6.25

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/19/01	1045		6.25	int	12.1	6.81	.715	0	NA	2.54	Clear
4/19/01	1050		10.72	1gal	12.7	6.77	.581	0		2.47	Clear
4/19/01	1055		10.77	1.5	14.0	6.77	.582	0		2.39	Clear
4/19/01	1100		10.52	1.75	15.2	6.78	.582	0		2.40	Clear
4/19/01	1110		10.20	1.90	17.9	6.78	.584	0		2.56	Clear
4/19/01	1115		10.10	2	17.9	6.78	.582	0		2.26	Clear
4/19/01	1120		10.25	2.2	18.0	6.78	.586	0		2.55	Clear
4/19/01	1125		10.28	2.35	17.9	6.79	.586	0		2.55	Clear
4/19/01	1130		10.39	2.5	17.8	6.79	.585	0		2.38	Clear
4/19/01	1135		10.39	2.6	17.8	6.79	.585	0		2.48	Clear
4/19/01	1140		Collect	Sample							
4/19/01	1201		10.41	post	16.6	6.87	.551	0		6.71	Clear

Test Parameters: (Tmetals (HNO_3)) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): (None) **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4/19/01 **Sample Collection Time:** 1140

Prepared by: B. Mitchell

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU 9 Well #: LTM-EFDZB-MW01 Sample Number: LTM-EFDZB-MW01-0401

Purging Method/Equipment: Micro/Bladder Samplers B.M., D.M. Well Secure (Y/N) Y

Well Casing Diameter: 2 in. Unit Casing Volume (UC): NA gal. Target Purge Volume: NA gal

Sounding (Depth to Well Bottom): 45.9 **Static Water Level** (Depth to Water): 15.75

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/19/01	1305		15.75	int	15.1	7.76	1.45	0	NA	4.13	slightly cloudy
4/19/01	1310		18.2	.25	14.5	7.12	2.01	0		1.28	clear
4/19/01	1315		19.55	.50	14.9	7.11	1.97	0		1.07	
4/19/01	1320		20.00	.6	15.6	7.11	1.93	7		1.32	
4/19/01	1325		20.00	.7	16.0	7.11	1.92	7		1.28	
4/19/01	1330		20.11	.72	16.3	7.11	1.91	0		1.36	
4/19/01	1335		20.35	.73	16.9	7.12	1.88	7		1.43	
4/19/01	1345		20.50	.75	17.6	7.13	1.85	6		1.60	
4/19/01	1355		20.63	.80	17.7	7.16	1.74	0		1.73	
4/19/01	1410		20.81	1.15	17.8	7.20	1.76	0		1.99	
4/19/01	1415		Collect	Sample							
4/19/01	1450		20.96	post	15.5	7.58	1.45	0		3.45	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** 1

Sample Collection Date: 4/19/01 **Sample Collection Time:** 1415

Prepared by: B. Mitchell

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU10 Well #: 25-582-m Sample Number: LTM-25-582-m-5401

Purging Method/Equipment: Bladder Samplers J.Neese/M.Chiller Well Secure (Y/N): Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: 2 gal

Sounding (Depth to Well Bottom): 38.15 Static Water Level (Depth to Water): 29.12

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/12/01	1253	start purging									
	1258		29.12	0.3	15.4	6.98	710	0	69.5	4.99	clear
	1304		29.12	0.5	17.5	6.97	787	0	71.6	4.88	
	1309		29.14	1.0	15.6	6.95	795	0	73.0	5.51	
	1314		29.13	1.5	15.3	6.95	795	0	73.2	5.21	
	1319		29.13	2.0	15.4	6.90	793	0	73.4	5.71	
	1324		29.13	2.6	15.5	6.92	795	0	71.2	5.28	
	1329		29.13	3.2	15.7	6.91	795	0	69.9	5.33	
	1333	SAMPLE									
	1345		29.13	POST	14.6	6.94	787	0	65.8	5.36	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: _____ MS/MSD: 1

Sample Collection Date: 4/12/01 Sample Collection Time: 1333

Prepared by: M.Chiller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU10 Well #: 25-582-M Sample Number: LTM-OU10-25-582-M

Purging Method/Equipment: bladder Samplers BM/KM Well Secure (Y/N) Y

Well Casing Diameter: 2 in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): 36.45 **Static Water Level** (Depth to Water): 29.13

Date 2001	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/12	1510		29.13	initial	15.8	6.79	0.061	1	131.0	7.34	
	1515		29.13	1.5	14.7	6.78	0.053	1	130.6	5.91	
	1520		29.13	3.0	14.7	6.78	0.053	0	130.2	5.85	
	1525		29.13	5.0	14.8	6.78	0.053	0	130.1	5.67	
	1530		Collect	sample							
	1535		29.13	Post	15.3	6.78	0.053	0	130.2	5.93	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4/12/01 **Sample Collection Time:** 1530

Prepared by: K. Mekunio

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU10 **Well #:** 25-583-M **Sample Number:** LTM-25-583-M-0401

Purging Method/Equipment: Bladder **Samplers** J. Moore/M. Chiller **Well Secure (Y/N)** Y

Well Casing Diameter: _____ in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** 0 gal

Sounding (Depth to Well Bottom): 21.39 **Static Water Level** (Depth to Water): 17.32

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/12/01	1405	start	Purging								
	1410		17.33	0.5	14.0	6.94	803	4	59.1	6.67	clear
	1415		17.34	2.0	13.9	6.93	800	1	63.0	6.06	
	1420		17.33	2.2	14.2	6.92	777	0	63.9	5.62	
	1425		17.33	2.5	14.6	6.90	803	0	65.2	6.01	
	1430		17.33	3.2	14.2	6.90	800	0	66.2	5.97	
	1433	SAMPLE									
	1440		17.33	POST	14.9	6.91	798	0	65.2	6.29	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None ~~None~~ ~~Duplicate/Split~~: _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4/12/01 **Sample Collection Time:** 1433

Prepared by: M. Chiller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU10 Well #: 25-584-M Sample Number: LTM-OH10-25-584-M

Purging Method/Equipment: bladder Samplers BM/KM Well Secure (Y/N) _____

Well Casing Diameter: ~~2~~ 4 in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): 27.87 Static Water Level (Depth to Water): 19.82

Date 2001	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/12	1430		19.82	initial	15.8	6.81	0.673	1	147.7	6.30	
	1435		19.82	2.5	14.8	6.77	0.667	0	145.3	6.53	
	1440		19.82	4.0	14.7	6.76	0.668	0	142.1	6.25	
	1445		19.82	6.5	14.6	6.75	0.671	1	140.4	6.23	
	1450		Collect Sample								
	1455		19.82	Post	14.6	6.75	0.672	1	132.9	6.50	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: _____ MS/MSD: _____ / _____

Sample Collection Date: 4/12/01 Sample Collection Time: 1450

Prepared by: K. Mercuno

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU10 Well #: OU10 – MW-03S Sample Number: LTM-OU10-MW-03S-0101

Purging Method/Equipment: bladder Samplers BMIKM Well Secure (Y/N) Y

Well Casing Diameter: 2 in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): 36.41 Static Water Level (Depth to Water): 28.04

Date 2001	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/11	0845		28.06	0.25	14.4	6.95	0.635	0	224.6	9.12	
	0850		28.06	1.25	15.0	6.89	0.674	0	193.6	5.94	
	0855		28.06	3.0	14.9	6.90	0.677	0	185.7	5.06	
	0900		28.06	5.0	14.9	6.89	0.679	0	185.7	4.81	
	0905		28.06	6.0	14.9	6.90	0.677	0	189.9	5.02	
	0910		Collect	Sample							
	0917		28.06	Post	15.2	6.91	0.680	0	202.1	5.34	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: _____ MS/MSD: _____ / _____

Sample Collection Date: 4/11/01 Sample Collection Time: 0910

Prepared by: K. Mercurio

ERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: OU10 Well #: OU10-MW-06S Sample Number: LTM-OU10-MW-06S-0401

Purging Method/Equipment: bladder pump Samplers M.Smith / D.Rasor Well Secure (Y/N) Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): 60.28 Static Water Level (Depth to Water): 27.74

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/11/01	0950		27.74	initial	14.8	7.47	0.804	3	62.6	7.67	clear
04/11/01	0955		27.74	2.5	14.4	7.21	0.813	1	62.7	5.75	clear
04/11/01	~~09~~ MS 1000		27.74	5.0	14.4	7.19	0.817	0	64.5	4.49	clear
04/11/01	1005		27.74	8.0	14.3	7.17	0.818	0	35.4	3.32	Clear
04/11/01	1010		27.74	11.0	14.3	7.14	0.819	-1	53.3	0.31	clear
04/11/01	1012	Sampled			~~14.9~~	~~7.22~~	~~0.810~~	~~0~~	~~11.1~~	~~0.82~~	~~clear~~ MS
04/11/01	1024			final	14.9	7.22	0.810	0	11.1	0.82	Clear

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: LTM-OU10-MW-06S-5401 MS/MSD: 1

Sample Collection Date: 04/11/01 Sample Collection Time: 1012

Prepared by: M. Smith

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

Page 1 of ___

SITE ID: OU10 Well #: OU10-MW10I Sample Number: LTM-OU10-MW10I-0401

Purging Method/Equipment: Bladder Samplers: J.Neese/M.Chiller Well Secure (Y/N): Y

Well Casing Diameter: _____ in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: 2 gal

Sounding (Depth to Well Bottom): 78.66 **Static Water Level** (Depth to Water): 30.94

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/12/01	1505	Start pump									
	1510		30.94	0.4	15.9	6.89	0.93	5	78.1	2.35	clear
	1515		30.94	1.0	16.1	6.88	0.95	2	73.2	2.77	
	1520		30.93	1.4	16.4	6.88	0.96	2	69.3	2.69	
	1525		30.93	1.7	16.5	6.87	0.96	1	70.0	2.78	
	1530		30.94	2.0	16.6	6.87	0.96	1	73.6	2.73	
	1535		30.94	2.3	16.8	6.87	0.96	1	79.1	2.73	
	1540		30.94	2.6	16.6	6.87	0.96	1	72.9	2.70	
	1543		SAMPLE								
	1550		30.94	POST	16.6	6.89	0.96	1	54.1	3.16	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: 4/12/01 **Sample Collection Time:** 1543

Prepared by: M. Chiller

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: Bldg 59 Well #: MW01 Sample Number: LTM-B59-MW-01-0401

Purging Method/Equipment: bladder Samplers BM/KM Well Secure (Y/N) Y

Well Casing Diameter: 2 in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): 14.49 Static Water Level (Depth to Water): 3.36

Date 2001	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/11	1045		3.91	Initial	13.9	7.63	0.658	94	126.5	12.13	
	1050		3.91	2.0	~~13.712~~	7.27	1.25	13	130.4	12.69	
	1055		3.91	3.0	12.4	7.18	1.66	5	129.7	13.22	
	1100		3.91	4.0	12.3	7.15	1.73	2	130.9	13.33	
	1105		3.91	5.0	12.5	7.23	1.76	4	214.8	13.09	
	1110		3.91	6.0	12.9	7.36	1.74	12	214.2	13.13	
	1115		3.91	7.0	13.0	7.35	1.76	12	213.6	13.23	
	1120		Collect	Sample							
	1124		3.91	Post	13.3	7.32	1.76	10	133.7	13.23	

Test Parameters: Tmetals (HNO_3) Fmetals (VOC) (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: _____ MS/MSD: _____ / _____

Sample Collection Date: 4/11/01 Sample Collection Time: 1120

Prepared by: K. Mercuno

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: Bldg 59 Well #: MW02 Sample Number: LTM-B59-MW-02-040A

Purging Method/Equipment: bladdur Samplers BM/KM Well Secure (Y/N) Y

Well Casing Diameter: 2 in. Unit Casing Volume (UC): _____ gal. Target Purge Volume: _____ gal

Sounding (Depth to Well Bottom): 30.89 Static Water Level (Depth to Water): ~~[illegible]~~ KM 10.66

Date 2001	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/11	1140		13.67	initial	15.8	7.24	3.96	3	170.3	11.62	
	1145		13.67	1.5	14.7	7.29	1.18	1	162.7	12.53	
	1150		13.67	2.5	14.6	7.12	0.688	1	171.8	13.05	
	1155		14.62	4.0	14.7	7.13	0.627	0	167.0	13.19	
	1200		14.62	5.0	14.6	7.07	0.614	1	161.6	13.29	
	1205		14.62	6.0	14.8	7.04	0.596	1	150.6	12.98	
	1210		14.62	7.0	14.8	7.06	0.602	1	144.9	13.10	
	1215		14.62	8.0	14.9	7.07	0.600	0	128.9	13.32	
	1220		Collect	Sample							
	1223		14.62	Post	14.9	7.07	0.601	0	134.5	13.56	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: _____ MS/MSD: _____ / _____

Sample Collection Date: 4/11/01 Sample Collection Time: 1220

Prepared by: K. Mercurio

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: B59 Well #: B59 MW03 Sample Number: LTM-B59-MW-03-0401

Purging Method/Equipment: bladder pump Samplers OK/AS Well Secure (Y/N) Y

Well Casing Diameter: 2 in. Unit Casing Volume (UC): 2 gal. Target Purge Volume: — gal

Sounding (Depth to Well Bottom): ~~12.80~~ 19.48 Static Water Level (Depth to Water): 8.74

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
4/11/01	1437		8.74	INT	13.4	7.45	.624	614	113.2	0.63	Fe staining
04/11/01	1442		15.12	2.5	13.3	7.23	.634	245	87.3	0.20	clearing
04/11/01	1447		14.10	2.75	15.5	7.15	.631	206	79.3	0.47	
04/11/01	1452		14.60	3.75	13.7	7.14	0.636	141	77.2	0.61	
04/11/01	1457		14.60	4.25	13.5	7.17	0.644	349	74.0	1.73	
04/11/01	1502		14.60	5.0	15.5	7.17	0.644	316	72.8	1.26	
04/11/01	1507		14.60	5.5	15.6	7.21	0.643	118	71.0	0.67	
04/11/01	1512		14.60	6.0	14.9	7.25	.646	175	70.2	0.58	
04/11/01	1517		14.60	6.5	14.5	7.24	0.639	141	68.0	0.91	
04/11/01	1522		14.60	7.0	15.8	7.23	0.643	92	65.4	0.69	
04/11/01	1527		14.60	7.5	15.9	7.24	0.643	88	66.1	0.60	
04/11/01	1532		14.60	8.0	16.0	7.24	.642	80	65.4	0.62	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None Duplicate/Split: Duplicate/Split: MS/MSD: 1

Sample Collection Date: 04/11/01 Sample Collection Time: 1554

Prepared by: M. Smith

INTERNATIONAL TECHNOLOGY CORPORATION

Groundwater Purge Log

WPAFB/ Fairborn, OH
PROJECT 777097

SITE ID: B59 **Well #:** B59-MW-03 **Sample Number :** LTM-B59-MW-03-0401

Purging Method/Equipment: bladder pump **Samplers** M.Smith/D.Rasor **Well Secure (Y/N)** Y

Well Casing Diameter : _____ in. **Unit Casing Volume (UC):** _____ gal. **Target Purge Volume:** _____ gal

Sounding (Depth to Well Bottom): MS ~~22.80~~ 19.48 **Static Water Level** (Depth to Water): 8.74

Date	Time (24hr)	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp (C°)	pH	Cond. (mV)	Turbidity (NTU)	Redox (mV)	DO mg/L	Water Description
04/11/01	1537	~~8.~~ MS	14.60	8.5	16.0	7.24	0.642	81	61.3	0.59	
04/11/01	1542		14.60	MS ~~15.9~~ MS	~~15.9~~ MS 15.9	7.24	0.642	53	49.6	0.42	
04/11/01	1547		14.60	9.5	15.9	7.25	0.642	37	44.0	0.32	
04/11/01	1554	Sampled									
04/11/01	1600	End	14.6		18.6	7.28	.636	25	56.9	2.05	

Test Parameters: Tmetals (HNO_3) Fmetals VOC (HCl) SVOC Pest/PCB Dioxin/Furans NH_3 (H_2SO_4) CN (NaOH)
BTEX (HCl) Sulfate/Nitrate Methane/Ethane/Ethene (no preserv) TPH/DROExtra

QA/QC Samples Taken (Circle Applicable): None **Duplicate/Split:** _____ **MS/MSD:** _____ / _____

Sample Collection Date: _____ **Sample Collection Time:** _____

Prepared by: _____

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DRIVER Mike Jensen DATE 8-17-01

TRUCK# 292 PHONE#

NAME WPAFB (IT Corp)

STREET IT trailer

CITY Fairborn, Ohio ZIP CODE

CASH ☐ CHARGE ☐ NO CHARGE ☐

	OIL, NOS COMBUSTIBLE, LIQUID	Unit Price		
700	gal. wastewater picked up			
	Bill: IT Corp.			
	T. J. [illegible]			
	IT corporation			
	THANK YOU Present this bill with claims			

We/I certify that the above identified materials are classified as non-regulated materials and/or are suitable for recycling in accordance with 40CFR279 and have not been mixed with any listed hazardous constituent. We further agree to pay our invoices when they come due, or to pay all of sellers' costs of collection in the event any legal action is required to collect any indebtedness.

NAME_____ TITLE_____

Appendix I

Basewide LTM Chain of Custody Records

Chain of Custody Record

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

STL-4124 (0700)

Client: IT Group	Project Manager: Joe Tyburski	Date: 04/09/01	Chain of Custody Number: 029448
Address: 11499 Chester Rd.	Telephone Number (Area Code)/Fax Number: (513) 782-4700 / (513) 782-4749	Lab Number: (330) 966-9789	Page 1 of 1
City: Cincinnati; State: OH; Zip Code: 45246	Site Contact: Greg Plamondon	Lab Contact: Denise Pohl	
Project Name and Location (State): WPAFB, OHIO	Carrier/Waybill Number: Fedex / 820967086806		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	HNO3	Analysis (Attach list if more space is needed): VOCs w/MTBE	TAL METALS (Total)	Special Instructions/ Conditions of Receipt
LTM-CW07-055-0401	04/09/01	1211									3				✓		Crew #3
LTM-004-03C-0401	04/09/01	1440									3				✓		
LTM-004-MW-12B-0401	04/09/01	1550									3				✓		
LTM-HD-11-0401	04/10/01	1025									3			1	✓	✓	
LTM-HD-12M-0401	04/10/01	1212									3				✓		
LTM-HD-12S-0401	04/10/01	1315									3				✓		
LTM-CHP4-MW01-0401	04/10/01	1521									3				✓		

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

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Normal

QC Requirements (Specify):

1. Relinquished By: [signature]	Date: 4/10/01	Time: 1700	1. Received By: Fed Ex / Kinko's	Date: 4/10/01	Time: 1700
2. Relinquished By:	Date:	Time:	2. Received By: [signature]	Date: 4-11-01	Time: 0955
3. Relinquished By:	Date:	Time:	3. Received By:	Date:	Time:

Comments:

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

STL North Canton

68

Chain of Custody Record

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

STL-4124 (0700)

Client: IT Corporation	Project Manager: Joe Tyburski	Date: 4/10/01	Chain of Custody Number: 029449
Address: 11499 Chester Rd	Telephone Number (Area Code)/Fax Number: (513) 782-4970 / (513) 782-4749	Lab Number:	Page 1 of 1
City: Cincinnati; State: OH; Zip Code: 45246	Site Contact: Greg Plamondon; Lab Contact: Denise Pohl		
Project Name and Location (State): WPAFB, OHIO	Carrier/Waybill Number: FEDEX/820967086806		
Contract/Purchase Order/Quote No.			

Analysis (Attach list if more space is needed)

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNOS	HCl	NaOH	ZnAc/NaOH	VOC w/MTBE	Special Instructions/ Conditions of Receipt
LTM-CW05-055-0401	4/9/01	1230		X						X 3			X	Crew #2
LTM-CW05-055-5401	↓	↓		X						X 3			X	
LTM-OU4-01B-60-0401	4/9/01	1415		X						X 3			X	
LTM-CW05-085-0401	4/10/01	1000		X						3			X	
LTM-CW04-60-0401	4/10/01	1045		X						3			X	
LTM-MW132S-0401	4/10/01	1200		X						3			X	
LTM-05-DM-123D-0401	4/10/01	1420		X						3			X	
LTM-05-DM-123I-0401	4/10/01	1450		X						3			X	
LTM-MW132S-5401	4/10/01	1200		X						3			X	
LTM-OU4-01C-084-0401	4/9/01	1505		X						3			X	
TB040901	4/9/01	0800		X						2			X	

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

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Normal

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: [signature]	4/10/01	1700	1. Received By: FedEx/Kinkos	4/10/01	1700
2. Relinquished By:			2. Received By: [signature]	4-11-01	0955
3. Relinquished By:			3. Received By:		

Comments

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

STL North Canton

67

Chain of Custody Record

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

STL-4124 (0700)

Client: IT Corp	Project Manager: Joe Tyburski	Date: 4/10/01	Chain of Custody Number: 029447
Address: 11499 Chester Rd	Telephone Number (Area Code)/Fax Number: (513) 782-4700 / (513) 782-4749	Lab Number: (330) 966-9789	Page 1 of 1
City: Cincinnati; State: OH; Zip Code: 45246	Site Contact: G. Plamondon	Lab Contact: Denise Pohl	
Project Name and Location (State): WPAFB, Ohio	Carrier/Waybill Number: Fedex 820967086806		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Other	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Other	Analysis (Attach list if more space is needed): VOCs w/MTBE	Special Instructions/ Conditions of Receipt
LTM-CW10-055-0401	4/9/01	1258		X							3				X	Crew #1
LTM-014-MW02B-0401		1505		X							3				X	
LTM-014-MW02B-0401MS				X							3				X	
LTM-014-MW02B-0401MSD				X							3				X	
LTM-014-MW02A-0401		1554		X							3				X	
LTM-MW131M-0401	4/10/01	1045		X							3				X	
LTM-MW131S-0401		1150		X							3				X	
LTM-MW131S-0401 MS				X							3				X	
LTM-MW131S-0401 MSD				X							3				X	
LTM-OW10-MW19D-0401		1425		X							3				X	
LTM-23-578-M-0401				X							3				X	
—LAST ENTRY—																

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

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Normal

QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By: [signature]	4/10/01	1700	1. Received By: Fed Ex / Kinkos	4/10/01	1700
2. Relinquished By:			2. Received By: [signature]	4/11/01	0955
3. Relinquished By:			3. Received By:		

Comments:

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

STL North Canton

99

Chain of Custody Record

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

STL-4124 (0700)

Client: IT Group	Project Manager: Joe Tyburski	Date: 4/11/01	Chain of Custody Number: 029430
Address: 11499 Chester Rd	Telephone Number (Area Code)/Fax Number: (513) 782-4700 / (513) 782-4749	Lab Number: (330) 966-9789	Page 1 of 1
City: Cincinnati; State: OH; Zip Code: 45246	Site Contact: G. Plamondon; Lab Contact: Denise Pohl		
Project Name and Location (State): WPAFB, OHIO	Carrier/Waybill Number: fedex 820967086520		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	VOCs w/MTBE	Special Instructions/ Conditions of Receipt
LTM-MAD-MON127-0401	4/11/01	0922		X						3			X	
LTM-HD-13S-0401	4/11/01	1035		X						3			X	
LTM-HD-13S-~~0401~~ AMB01		1035		X						3			X	
LTM-P6-1-0401		1328		X						3			X	
LTM-P6-2-0401		1450		X						3			X	
TB-041101		0800		X						2			X	

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

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Normal

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: [signature]	4/11/01	1700	1. Received By: Fed Ex	4/11/01	1700
2. Relinquished By			2. Received By: [signature]	4-12-01	0945
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

STL North Canton

67

[redacted]

Chain of Custody Record

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

STL-4124 (0700)

Client: IT Group	Project Manager: Joe Tyburski	Date:	Chain of Custody Number: 029402
Address: 11499 Chester Rd	Telephone Number (Area Code)/Fax Number: (513) 782-4700 / (513) 782-4749	Lab Number: (330) 966-9789	Page 1 of 1
City: Cincinnati; State: OH; Zip Code: 45246	Site Contact: G. Plamondon	Lab Contact: Denise Pohl	
Project Name and Location (State): WPAFB, OHIO	Carrier/Waybill Number: Fedex		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	HNO3	Analysis (Attach list if more space is needed): VOCs w/ MTBE	TAL metals	TAL Metals dissolved	Special Instructions/ Conditions of Receipt
LTM-0410-MW-03S-0401	4/11/01	0910		X						3			2	X	X	X	
LTM-GR-330-0401	4/11/01	1010		X						3				X			
~~LTM-B59-MW-01-0401~~	~~4/11/01~~	~~1120~~		~~X~~						~~3~~				~~X~~			
~~LTM-B59-MW-02-0401~~	~~4/11/01~~	~~1220~~		~~X~~						~~3~~				~~X~~			
LTM-0418-MW-02S-0401	4/11/01	1425		X						3				X			
LTM-0418-MW-02D-0401	4/11/01	1535		X									2		X	X	
LTM-0410-MW-06D-0401	04/11/01	0929		X						3				X			
LTM-0410-MW-06S-0401	04/11/01	1012		X						3			2	X	X	X	
LTM-0410-MW-06S-5401	04/11/01	1012		X						3			2	X	X	X	
LTM-0410-MW-04A-0401	04/11/01	1145		X						3				X			
~~LTM-B59-MW-03-0401~~	~~04/11/01~~	~~1554~~		~~X~~						~~3~~				~~X~~			

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

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Normal

QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By: [signature]	4/11/01	1700	1. Received By: FedEx / Kinkos	4/11/01	1700
2. Relinquished By:			2. Received By: [signature]	4-12-01	0945
3. Relinquished By:			3. Received By:		

Comments:

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

STL North Canton

[redacted]

Chain of Custody Record

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

STL-4124 (0700)

Client	IT Corporation
Address	11499 Chester Rd
City / State / Zip Code	Cincinnati / OH / 45246
Project Name and Location (State)	WPAFB · WPAFB, OH
Contract/Purchase Order/Quote No.	
Project Manager	Joe Tybulski
Telephone Number (Area Code)/Fax Number	(513) 782-4970 / (513) 782-
Site Contact	Greg Plamondon
Lab Contact	Denise Pohl
Carrier/Waybill Number	FEDEX / 820967086530
Date	4/12/01
Lab Number	
Chain of Custody Number	029429
Page	1 of 1

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil		Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	HNO3	VOC 4 MTBE	TAL Metals (T)	TAL Metals (F)										Special Instructions/ Conditions of Receipt
LTM-EFD09-H575-0401	4/12/01	0940		X							3				X												
LTM-EFD04-MW06-0401		1110		X							3				X												
LTM-OU10-25-584-M-0401		1450		X										2		X	X										
LTM-OU10-25-582-M-0401		1530		X										2		X	X										
LTM-25-583-m-0401		1433		X										2		X	X										
LTM-25-582-m-0401		1333		X										2		X	X										
LTM-OU10-MW-25S-0401		1158		X							3				X												
LTM-OU10-MW10I-0401		1543		X										2		X	X										
TB041201		0800		X							2				X												
LTM-OU8-MW23D-0401		0925		X										2		X	X										
LTM-EFD23-MW02-0401		1110		X										2		X	X										
~~LTM-WP-NEA-MW21-25S-0401~~		~~1615~~		X										2		X	X										

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

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Norm.

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: [signature]	4/12/01	1720	1. Received By: Fed Ex / Kinko	4/12/01	1720
2. Relinquished By			2. Received By: [signature]	4/13/01	9:20/A
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

STL North Canton

58

Chain of Custody Record

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

STL-4124 (0700)

Client: IT Group	Project Manager: Joe Tybursk	Date: 4-16-01	Chain of Custody Number: 029427
Address: 11499 Chester Rd	Telephone Number (Area Code)/Fax Number: (513) 782-4700 / (513) 782-4749	Lab Number: (330) 966-9687	Page 1 of 1
City: Cincinnati; State: OH; Zip Code: 46246	Site Contact: G. Plamondon	Lab Contact: Denise Pohl	
Project Name and Location (State): WPAFB, OH	Carrier/Waybill Number: Fedex 816215056388		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNOS	HCl	NaOH	ZnAc/NaOH		Analysis (Attach list if more space is needed): VOCs w/ MTBE	Special Instructions/ Conditions of Receipt
LTM-CW03-77-0401	4/16/01	0955		X						3				X	
LTM-SP11-MW08-0401		1243		X						3				X	
LTM-SP11-MW03-0401		1425		X						3				X	
LAST ENTRY															

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

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Normal

QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By: [signature]	4/16/01	1600	1. Received By: Gerry Burns	4/17/01	945/A
2. Relinquished By:			2. Received By:		
3. Relinquished By:			3. Received By:		

Comments:

DISTRIBUTION: WHITE - Stays with the Sample. CANARY - Returned to Client with Report. PINK - Field Copy

STL North Canton

32

Chain of Custody Record

SEVERN TRENT SERVICES — Severn Trent Laboratories, Inc.

STL-4124 (0700)

Client: AFCEE WPAFB / IT Corp	Project Manager: Joe Tybulski	Date: 4-16-01	Chain of Custody Number: 029426
Address: 11499 Chester Rd	Telephone Number (Area Code)/Fax Number: (513) 782-4970 / (513) 782-	Lab Number: (330) 966-9687	Page 1 of 1
City: Cincinnati; State: OH; Zip Code: 45246	Site Contact: G. Plamondon	Lab Contact: Denise Poni	
Project Name and Location (State): WPAFB, OH	Carrier/Waybill Number: Fedex 816215056388		
Contract/Purchase Order/Quote No.			

Analysis (Attach list if more space is needed)

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH		VOC w/ MTBE	Nitrates	Sulfate	Methane, ethane, ethene	Special Instructions/ Conditions of Receipt
LTM-OU4-MW-03B-0401	4/16/01	0935		X						3				X				
LTM-WP-NEA-MW27-3E-0401	4/16/01	1030		X						3				X				
LTM-LFD-MW15A-0401	4/16/01	1125		X						3				X				
LTM-US-DM-1235-0401	4/16/01	1200		X						3				X				
BMP-OW-1-0401		1435		X			1	1		6				X	X	X	X	
BMP-OW-1-5401		1435		X			1	1		6				X	X	X	X	
LAST ENTRY																		
TB041601		0900								3				X				
LAST ENTRY																		

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

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Normal

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: [signature]	4/16/01	1600	1. Received By: [signature]	4/17/01	945/A
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

STL North Canton

41

Chai[illegible] f Custody Record

SEVERN TRENT SERVICES **Severn Trent Laboratories, Inc.**

STL-4124 (0700)

Client: IT Group	Project Manager: Joe Tyburski	Date: 04/16/01	Chain of Custody Number: 029428
Address: 11499 Chester Rd	Telephone Number (Area Code)/Fax Number: (513) 782-4700 / (513) 782-4749	Lab Number: (330) 966-9789	Page 1 of 1
City: Cincinnati; State: OH; Zip Code: 45246	Site Contact: Greg Plamondon; Lab Contact: Denise Pohl		
Project Name and Location (State): WPAFB, OH	Carrier/Waybill Number: Fedex 816215056388		
Contract/Purchase Order/Quote No.:			

Analysis (Attach list if more space is needed)

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNOS	HCl	NaOH	ZnAc/NaOH	VOC w/MTBE	Sulfate	Nitrate	Methane/Ethane/Ethene	Special Instructions/ Conditions of Receipt
BMP-NEA-MW25-1D-0401	04/16/01	1048					4	1		3			X	X	X	X	
BMP-NEA-MW25-2I-0401	04/16/01	1203					4	1		3			X	X	X	X	
LTM-OU10-MW-11S-0401	04/16/01	1428								3			X				
LTM-OU10-MW-11D-0401	04/16/01	1522								3			X				
— LAST ENTRY —																	

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

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Normal

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: [signature]	4/[illegible]	1600	1. Received By: [signature]	4/17/01	945/A
2. Relinquished By:			2. Received By:		
3. Relinquished By:			3. Received By:		

Comments

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

STL North Canton

40

[redacted]

Chain of Custody Record

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

STL-4124 (0700)

Client: WPAFB / IT Corporation	Project Manager: Joe Tybulski	Date: 4-17-01	Chain of Custody Number: 032089
Address: 11499 Chester Rd	Telephone Number (Area Code)/Fax Number: (513) 782-4970 (513) 782-4749	Lab Number: (330) 966-9687	Page ____ of ____
City: Cinti; State: OH; Zip Code: 45246	Site Contact: G. Plamondon; Lab Contact: Denise Pohl		
Project Name and Location (State): WPAFB, OH	Carrier/Waybill Number: fedex 816215056480		
Contract/Purchase Order/Quote No.			

Analysis (Attach list if more space is needed)

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres	H2SO4	HNOS	HCl	NaOH	ZnAc/NaOH	HNO3	VOC w/ MTBE	Meth, etc, etc	Sulfate	Nitrates	Metals (total)	Metals (filtered)	Special Instructions/ Conditions of Receipt
BMP-P18-1-0401	4/17/01	1105		X			1	1		6				X	X	X	X			
BMP-OW-4-0401	4/17/01	1055		X			1	1		6				X	X	X	X			
BMP-P18-2-0401	4/17/01	1130		X			1	1		6				X	X	X	X			
BMP-OW-3-0401	4/17/01	1340		X			1	1		6				X	X	X	X			
LTM-WP-NEA-MW34-2S-0401	4/17/01	1435		X						3				X						
LTM-WP-NEA-MW24-2S-0401	4/17/01	1535		X									2					X	X	
LAST ENTRY																				

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

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Normal

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: [signature]	4/17/01	1630	1. Received By: fedex / Kinkos		
2. Relinquished By:			2. Received By: Jenny Stiller	4-18-01	9:00
3. Relinquished By:			3. Received By:		

Comments

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

STL North Canton

36

[redacted]

Chain of Custody Record

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

STL-4124 (0700)

Client: IT Group	Project Manager: Joe Tyburski	Date:	Chain of Custody Number: 029409
Address: 11499 Chester Rd	Telephone Number (Area Code)/Fax Number: (513) 782-4700/(513) 782-4749	Lab Number: (330) 966-9787	Page ____ of ____
City: Cincinnati; State: OH; Zip Code: 45246	Site Contact: G. Plamondon; Lab Contact: Denise Pohl		
Project Name and Location (State): WPAFB, Ohio	Carrier/Waybill Number: Fedex		
Contract/Purchase Order/Quote No.			

Analysis (Attach list if more space is needed)

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	HNO3	VOCs w/MTBE	TAL Metals	Metals (filtered)	NaOH/alkaline/ethyl	Nitrates	Sulfate	Special Instructions/ Conditions of Receipt
LTM-WP-NEA-MW31-3S-0401	4/18/01	0945		X									2		X	X				
BMP-NEA-MW21-3S-0401	↓	1040		X			1	1		6				X			X	X	X	
LTM-OU10-MW-21S-0401		1135		X						3				X						
LTM-OU10-MW-21S-0401MS		↓		X						3				X						
LTM-OU10-MW-21S-0401MSD				X						3				X						
LTM-NEA-MW37-1D-0401		1445		X						3				X						
BMP-04-518-M-0401	↓	1530		X			1	1		6				X	X		X	X	X	

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

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other ____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: [signature]	4/18/01	1700	1. Received By		
2. Relinquished By			2. Received By: Scott Irwin	4-19-01	9:50 AM
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

STL North Canton

55

Chain Custody Record

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

STL-4124 (0700)

Client: IT Corporation	Project Manager: Joe Tyburski	Date: 04/18/01	Chain of Custody Number: 029424
Address: 11499 Chester Rd	Telephone Number (Area Code)/Fax Number	Lab Number	Page ____ of ____
City: Cincinnati; State: OH; Zip Code: 45246	Site Contact: Greg Plamondon	Lab Contact: Denise Pohl	
Project Name and Location (State): WPAFB, OH	Carrier/Waybill Number: Fedex		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH		Analysis (Attach list if more space is needed): VOC w/ MTBE											Special Instructions/ Conditions of Receipt
LTM-FTA2:MW02C-0401	04/18/01	1019									3				X											
LTM-GR-334-0401	04/18/01	1110									3				X											
LTM-GR-333-0401	04/18/01	1155									3				X											
LTM-GR-333-5401	04/18/01	1155									3				X											
TB041801	04/18/01	0800									1				X											

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

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other PER QAPP

QC Requirements (Specify):

1. Relinquished By	Date: 4/18/01	Time: 1700	1. Received By	Date	Time
2. Relinquished By	Date	Time	2. Received By	Date: 4-19-01	Time: 9:50 AM
3. Relinquished By	Date	Time	3. Received By	Date	Time

Comments

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

56

STL North Canton

Chain Custody Record

STL-4124 (0700)

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

52

Client	IT Group
Address	11499 Chester Rd
City	Cincinnati
State	OH
Zip Code	45246
Project Name and Location (State)	WPAFB, OHIO
Contract/Purchase Order/Quote No.	
Project Manager	Joe Tyburski
Telephone Number (Area Code)/Fax Number	(513) 782-4700 / (513) 782-4749
Site Contact	Greg Plamondon
Lab Contact	Denise Pohl
Carrier/Waybill Number	FedEx 816215056506
Date	04/19/01
Chain of Custody Number	029401
Lab Number	(330) 966-9789
Page	1 of 1

Analysis (Attach list if more space is needed)

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	HNO3	VOCs w/ MTBE	TAL Metals	Methane/Ethane/Ethene	Sulfate	Nitrate	Special Instructions/ Conditions of Receipt
BMP-NEA-MW20-25-0401				X			4	1	~~2~~	3			1	X	X	X	X	X	
BMP-NEA-MW20-25-5401				X			4	1	~~2~~	3			1	X	X	X	X	X	
LTM-BS5-P-2-0401				X						3				X	X	X			
LTM-P4-2-0401				X					2						X				
LAST ENTRY																			

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

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Normal

QC Requirements (Specify)

1. Relinquished By	Date 4/19/01	Time 1800	1. Received By FedEx / Kinkos	Date 4/19/01	Time 1800
2. Relinquished By	Date	Time	2. Received By	Date 4/20/01	Time 9:00
3. Relinquished By	Date	Time	3. Received By	Date	Time

Comments

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

STL North Canton

Chain of Custody Record

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

STL-4124 (0700)

Client: IT Corp.	Project Manager: Joe Tylowski	Date: 4-19-01	Chain of Custody Number: 029418
Address: 11499 Chester Rd	Telephone Number (Area Code)/Fax Number: (513) 782-4700 / (513) 782-4749	Lab Number: (330) 966-9687	Page 1 of 1
City: Cincinnati; State: OH; Zip Code: 45246	Site Contact: G. Plamondon	Lab Contact: Denise Pohl	
Project Name and Location (State): WPAFB, OH	Carrier/Waybill Number: fedex 816215050506		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis (Attach list if more space is needed): VOCs w/ MTBE	Special Instructions/ Conditions of Receipt
LTM-TTW-02-0401	4-19-01	1005		X						3			X	
LTM-EFD22-MW03-0401		1305		X						3			X	
LTM-SP11-MW01-0401		1523		X						3			X	
LTM-BS5-P3-0401		1647		X						3			X	
TB-041901		0900		X						2			X	
LAST ENTRY														

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

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Normal

QC Requirements (Specify)

1. Relinquished By: [signature]	Date: 4/19/01	Time: 1900	1. Received By: FedEx / Kinko's	Date: 4/19/01	Time: 1900
2. Relinquished By:	Date:	Time:	2. Received By: [signature]	Date: 4/20/01	Time: 9:10
3. Relinquished By:	Date:	Time:	3. Received By:	Date:	Time:

Comments

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

STL North Canton

54

Chain of Custody Record

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

STL-4124 (0700)

Client	IT Corporation
Address	11499 Chester Rd.
City	Cincinnati
State	OH
Zip Code	45246
Project Name and Location (State)	WPAFB WPAFB (OH)
Contract/Purchase Order/Quote No.	
Project Manager	Joe Tyburski
Telephone Number (Area Code)/Fax Number	513-782-4970
Site Contact	Greg Plamondon
Lab Contact	DenBe Pohl
Carrier/Waybill Number	Fedex/~~820~~ 8162/5056506
Date	4/19/01
Chain of Custody Number	032000
Lab Number	
Page	1 of 1

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil		Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	HNO3	VOC	TAL Metals (T)	TAL Metals (F)	Special Instructions/ Conditions of Receipt
LTM-CW15-055-0401	4/19/01	0925		X				X							X			* VOCs w/ no pres.
LTM-EF023-MW03-0401		1140		X										2		X	X	
LTM-EF028-MW01-0401		1415		X										2		X	X	
LTM-055-P-1-0401		1615		X							3				X			
— LAST ENTRY —																		

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

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Normal

QC Requirements (Specify):

	Date	Time
1. Relinquished By	4/19/01	1800
2. Relinquished By		
3. Relinquished By		

	Date	Time
1. Received By Fed Ex / Kinko's	4/19/01	1800
2. Received By	4/20/01	9:10
3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

STL North Canton

53

Chain of Custody Record

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

STL-4124 (0700)

Client: IT Corp.	Project Manager: Joe Tyburski	Date: 4-20-01	Chain of Custody Number: 029419
Address: 11499 Chester Rd	Telephone Number (Area Code)/Fax Number: (513) 782-4700 / (513) 782-4749	Lab Number: (330) 966-9789	Page 1 of 1
City: Cincinnati; State: OH; Zip Code: 45246	Site Contact: G. Plamondon	Lab Contact: Denise Pohl	
Project Name and Location (State): WPAFB, OH	Carrier/Waybill Number: FedEx 816215051691		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis (Attach list if more space is needed): VOCs w/MTBE
TB-042001	4-20-01	0900		X						2			X
LTM-BS5-P4-0401		0954		X						3			X
LTM-BS5-P4-5401		0954		X						3			X
LTM-BS6-P1-0401		1147		X						3			X
LTM-BS6-P2-0401		1122		X						3			X
LTM-SP11-MW09-0401		1050		X						3			X
LTM-SP11-MW02-0401		0953		X						3			X
LAST ENTRY													

Special Instructions/ Conditions of Receipt

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

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Normal

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: Guy Plamondon	4/20/01	1300	1. Received By: FedEx	4/20/01	1300
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

Chain of Custody Record

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

STL-4124 (0700)

Client	Project Manager	Date	Chain of Custody Number
IT Group	Joe Tyburski	4/23/01	029412

Address	Telephone Number (Area Code)/Fax Number	Lab Number	Page
11499 Chester Rd	(513) 782 4700/(513) 782-4749	(330)966-9739	1 of 1

City	State	Zip Code	Site Contact	Lab Contact
Cincinnati	OH	45246	G. Plamondon	Denise Pohl

Project Name and Location (State)	Carrier/Waybill Number
WPAFB, Ohio	fedex 816215056517

Contract/Purchase Order/Quote No.

Analysis (Attach list if more space is needed)

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNOS	HCl	NaOH	ZnAc/NaOH	HNO3	VOCs w/ MTBE	TAL metals	filtered metals	Special Instructions/ Conditions of Receipt
02-DM-81D-M-0401	4-23-01	0959		X						3			1	X	X		
LF8-MW05B-0401	4-23-01	1212		X						3			1	X	X		
LF8-MW05B-0451		1212		X						3			1	X	X		
LTM-SP11-MW07-0401		1357		X						3				X			
LF10-MW07A-0401		1515		X						3			1	X	X		
LF10-MW07A-0451		1515		X						3			1	X	X		
LF10-MW05B-0401		1650		X						3			1	X	X		
TB042301	4-23-01	0900		X						2				X			
LTM-07-520-M-0401	4/23/01	0903		X						3			2	X	X	X	
02-DM-82M-0401	4/23/01	1058		X						3			1	X	X		
LF8-MW02C-0401	4/23/01	1317		X						3			1	X	X		
01-004-M-0401	4/23/01	1602		X						3			1	X	X		

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

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Normal

QC Requirements (Specify)

1. Relinquished By	Date	Time	1. Received By	Date	Time
[signature]	4/23/01	1745	FedEx/Kinkos	4/23/01	1745
2. Relinquished By	Date	Time	2. Received By	Date	Time
3. Relinquished By	Date	Time	3. Received By	Date	Time

Comments

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

[redacted]

Chain of Custody Record

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

STL-4124 (0700)

Client: IT Group	Project Manager: Joe Tyburski	Date: 04/09/01	Chain of Custody Number: 029448
Address: 11499 Chester Rd.	Telephone Number (Area Code)/Fax Number: (513) 782-4700 / (513) 782-4749	Lab Number: (330) 966-9789	Page 1 of 1
City: Cincinnati; State: OH; Zip Code: 45246	Site Contact: Greg Plamondon	Lab Contact: Denise Pohl	
Project Name and Location (State): WPAFB, OHIO	Carrier/Waybill Number: Fedex / 820967086806		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	NaNO3	Analysis (Attach list if more space is needed): VOCs w/MTBE	TAL METALS (Total)	Special Instructions/ Conditions of Receipt
LTM-CW07-055-0401	04/09/01	1211									3				✓		Crew #3
LTM-004-03C-0401	04/09/01	1440									3				✓		
LTM-004-MW-12B-0401	04/09/01	1550									3				✓		
LTM-HD-11-0401	04/10/01	1025									3			1	✓	✓	
LTM-HD-12M-0401	04/10/01	1212									3				✓		
LTM-HD-12S-0401	04/10/01	1315									3				✓		
LTM-CHP4-MW01-0401	04/10/01	1521									3				✓		

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

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Normal

QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By: [signature]	4/10/01	1700	1. Received By: Fed Ex / Kinko's	4/10/01	1700
2. Relinquished By:			2. Received By: [signature]	4-11-01	0955
3. Relinquished By:			3. Received By:		

Comments:

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

STL North Canton

68

[redacted]

Chain of Custody Record

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

STL-4124 (0700)

Client: IT Group	Project Manager: Joe Tyburski	Date:	Chain of Custody Number: 029402
Address: 11499 Chester Rd	Telephone Number (Area Code)/Fax Number: (513) 782-4700 / (513) 782-4749	Lab Number: (330) 966-9789	Page 1 of 1
City: Cincinnati; State: OH; Zip Code: 45246	Site Contact: G. Plamondon	Lab Contact: Denise Pohl	
Project Name and Location (State): WPAFB, Ohio	Carrier/Waybill Number: Fedex		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	HNO3	Analysis (Attach list if more space is needed): VOCs w/ MTBE	TAL metals	TAL Metals dissolved	Special Instructions/ Conditions of Receipt
LTM-0410-MW-03S-0401	4/11/01	0910		X							3			2	X	X	X	
LTM-GR-330-0401	4/11/01	1010		X							3				X			
~~LTM-B59-MW-01-0401~~	~~4/11/01~~	~~1120~~		~~X~~							~~3~~				~~X~~			
~~LTM-B59-MW-02-0401~~	~~4/11/01~~	~~1220~~		~~X~~							~~3~~				~~X~~			
LTM-0418-MW-02S-0401	4/11/01	1425		X							3				X			
LTM-0418-MW-02D-0401	4/11/01	1535		X										2		X	X	
LTM-0410-MW-06D-0401	04/11/01	0929		X							3				X			
LTM-0410-MW-06S-0401	04/11/01	1012		X							3			2	X	X	X	
LTM-0410-MW-06S-5401	04/11/01	1012		X							3			2	X	X	X	
LTM-0410-MW-04A-0401	04/11/01	1145		X							3				X			
~~LTM-B59-MW-03-0401~~	~~04/11/01~~	~~1554~~		~~X~~							~~3~~				~~X~~			

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

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Normal

QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By: [signature]	4/11/01	1700	1. Received By: FedEx / Kinkos	4/11/01	1700
2. Relinquished By:			2. Received By: [signature]	4-12-01	0945
3. Relinquished By:			3. Received By:		

Comments:

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

STL North Canton

89

Chain of Custody Record

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

STL-4124 (0700)

Client	IT Corporation
Address	11499 Chester Rd
City / State / Zip Code	Cincinnati / OH / 45246
Project Name and Location (State)	WPAFB · WPAFB, OH
Contract/Purchase Order/Quote No.	
Project Manager	Joe Tybulski
Telephone Number (Area Code)/Fax Number	(513) 782-4970 / (513) 782-
Site Contact	Greg Plamondon
Lab Contact	Denise Pohl
Carrier/Waybill Number	FEDEX / 820967086530
Date	4/12/01
Lab Number	
Chain of Custody Number	029429
Page	1 of 1

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	HNO3	VOC w MTBE	TAL Metals (T)	TAL Metals (F)	Special Instructions/ Conditions of Receipt
LTM-EFD09-H575-0401	4/12/01	0940		X						3				X			
LTM-EFD04-MW06-0401		1110		X						3				X			
LTM-OU10-25-584-M-0401		1450		X									2		X	X	
LTM-OU10-25-582-M-0401		1530		X									2		X	X	
LTM-25-583-m-0401		1433		X									2		X	X	
LTM-25-582-m-0401		1333		X									2		X	X	
LTM-OU10-MW-25S-0401		1158		X						3				X			
LTM-OU10-MW10I-0401		1543		X									2		X	X	
TB041201		0800		X						2				X			
LTM-OU8-MW23D-0401		0925		X									2		X	X	
LTM-EFD23-MW02-0401		1110		X									2		X	X	
~~LTM-WP-NEA-MW21-25-0401~~		1615		X									2		X	X	

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

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Norm

QC Requirements (Specify)

Relinquished By	Date	Time	Received By	Date	Time
1. [signature]	4/12/01	1720	1. Fed Ex / Kinko	4/12/01	1720
2.			2. [signature]	4/13/01	9:20 A
3.			3.		

Comments

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

58

STL North Canton

Chain of Custody Record

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

STL-4124 (0700)

Client	IT Corp.
Address	11499 Chester Rd
City / State / Zip Code	Cincinnati / OH / 45246
Project Name and Location (State)	WPAFB, OHIO
Contract/Purchase Order/Quote No.	
Project Manager	Joe Tyburski
Telephone Number (Area Code)/Fax Number	(513)782-4700/(513)782-4749
Site Contact	G. Plamondon
Carrier/Waybill Number	fedex 816215056480
Lab Contact	Denise Pohl
Date	4-17-01
Chain of Custody Number	029425
Lab Number	(330)966-9687
Page ____ of ____	

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNOS	HCl	NaOH	ZnAc/NaOH	HNO3	VOCs w/ MTBE	Methylene Chloride	Nitrates	Sulfates	TAL metals	TAL metals (filtered)	Special Instructions/ Conditions of Receipt
BMP-OW-24-0401	4-17-01	1040		X			1	1		6				X	X	X	X			
LTM-WP-NEA-MW23-2S-0401		1145		X									2					X	X	
BMP-04-016-M-0401		1405		X			1	1		3				X	X	X	X			
BMP-04-016-M-0401 MS				X			1	1		3				X	X	X	X			
BMP-04-016-M-0401 MSD				X			1	1		3				X	X	X	X			
BMP-NEA-MW26-3S-0401		1550		X			1	1		3				X	X	X	X			
TB-041701		0900		X						2				X						
LTM-NEA-MW28-5S 0401		1115		X			1	1		6				X	X	X	X			
BMP-NEA-MW20-2S 0401		1615		X									4					X	X	
LTM-NEA-MW28 5S-AmBel		1115		X			1	1		6				X	X	X	X			
— LAST ENTRY —																				

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

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Normal

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	4/17/01	1630	1. Received By: fedex/kinkos		
2. Relinquished By			2. Received By: Jennifer Miller	4-18-01	9:00am
3. Relinquished By			3. Received By:		

Comments

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

STL North Canton

35

[redacted]

Chain of Custody Record

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

STL-4124 (0700)

Client	Project Manager	Date	Chain of Custody Number
WPAFB / IT Corporation	Joe Tylinski	4-17-01	032089

Address	Telephone Number (Area Code)/Fax Number	Lab Number	Page ____ of ____
11499 Chester Rd	(513) 782-4970 (513) 782-4749	(330) 966-9687	

City	State	Zip Code	Site Contact	Lab Contact
Cinti	OH	45246	G. Phimondon	Denise Pohl

Project Name and Location (State)	Carrier/Waybill Number
WPAFB, OH	fedex 816215056480

Contract/Purchase Order/Quote No.

Analysis (Attach list if more space is needed)

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil		Unpres	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	HNO3	VOC w MTBE	Methane, ethane	Sulfate	Nitrates	Metals (total)	Metals (filtered)							Special Instructions/ Conditions of Receipt
BMP-PIB-1-0401	4/17/01	1705		X				1	1		6				X	X	X	X									
BMP-OW-4-0401	4/17/01	1055		X				1	1		6				X	X	X	X									
BMP-PIB-2-0401	4/17/01	1130		X				1	1		6				X	X	X	X									
BMP-OW-3-0401	4/17/01	1340		X				1	1		6				X	X	X	X									
LTM-WP-NEA-MW34-2S-0401	4/17/01	1635		X							3				X												
LTM-WP-NEA-MW34-2S-0401	4/17/01	1535		X										2					X	X							
LAST ENTRY																											

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal

☐ Return To Client ☒ Disposal By Lab ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Normal

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	4/17/01	1630	1. Received By: fedex / kinko's		
2. Relinquished By			2. Received By: Jane Miller	4/18/01	9:00
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report. PINK - Field Copy

STL North Canton

36

[redacted]

Chain of Custody Record

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

STL-4124 (0700)

Client	Project Manager	Date	Chain of Custody Number
IT Group	Joe Tylburski		029409

Address	Telephone Number (Area Code)/Fax Number	Lab Number	Page ____ of ____
11499 Chester Rd	(513) 782-4700 / (513) 782-4749	(330) 966-9787	

City	State	Zip Code	Site Contact	Lab Contact
Cincinnati	OH	45246	G. Plamondon	Denise Pohl

Project Name and Location (State)	Carrier/Waybill Number
WPAFB, OHIO	Fedex

Contract/Purchase Order/Quote No.

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNOS	HCl	NaOH	ZnAc/NaOH	HADB	Analysis (Attach list if more space is needed): VOCs w/MTBE	TAL-Metals	Metals (filtered)	Alkalinity	Nitrates	Sulfate								Special Instructions/ Conditions of Receipt
LTN-WP-NEA-MW31-3S-0401	4/18/01	0945		X										2		X	X											
BMP-NEA-MW21-3S-0401		1040		X				1	1		6				X			X	X	X								
LTN-OWO-MW-21S-0401		1135		X							3				X													
LTN-OWO-MW-21S-0401MS				X							3				X													
LTN-OWO-MW-21S-0401MSD				X							3				X													
LTN-NEA-MW37-1D-0401		1445		X							3				X													
BMP-04518-M-0401		1530		X				1	1		6				X	X		X	X	X								

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

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other ____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	4/18/01	1700	1. Received By		
2. Relinquished By			2. Received By	4-19-01	9:50 AM
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

55

STL North Canton

Chain of Custody Record

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

STL-4124 (0700)

Client: IT Group	Project Manager: Joe Tyburski	Date:	Chain of Custody Number: 029411
Address: 11499 Chester Rd	Telephone Number (Area Code)/Fax Number: (513) 782-4700 / (513) 782-4749	Lab Number: (330) 966-9789	Page ____ of ____
City: Cincinnati; State: OH; Zip Code: 45246	Site Contact: G. Plamondon	Lab Contact: Denise Pohl	
Project Name and Location (State): WPAFB, OHIO	Carrier/Waybill Number: Fedex		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	HNO3	VOCs w/MTBE	TPH-Metals	TPH-Metals (filtered)
LTM-14-554-M-0401	4-18-01	0945		X									2		X	X
LTM-WP-NEA-MW02-2S-0401	4-18-01	1045		X									2		X	X
LTM-WP-NEA-MW01-1S-0401	4-18-01	1145		X									2		X	X

Analysis (Attach list if more space is needed)

Special Instructions/ Conditions of Receipt

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

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Normal

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	4/18/01	1700	1. Received By		
2. Relinquished By			2. Received By	4-19-01	9:50 AM
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

54

STL North Canton

Chai[redacted]
Custody Record

STL-4124 (0700)

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

53

Client: IT Corporation	Project Manager: Joe Tyburski	Date: 4/19/01	Chain of Custody Number: 032000
Address: 11499 Chester Rd.	Telephone Number (Area Code)/Fax Number: 513-782-4970	Lab Number:	Page 1 of 1
City: Cincinnati; State: OH; Zip Code: 45246	Site Contact: Greg Plamondon; Lab Contact: DenBe Pohl		
Project Name and Location (State): WPAFB WPAFB (OH)	Carrier/Waybill Number: Fedex/~~820~~ 8162/5056506		
Contract/Purchase Order/Quote No.			

Analysis (Attach list if more space is needed)

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	HNO3	VOC	TAL Metals (T)	TAL Metals (F)	Special Instructions/ Conditions of Receipt
LTM-CW15-055-0401	4/19/01	0925		X			3X							X			* VOCs unpres.
LTM-EFDZ3-MW03-0401		1140		X									2		X	X	
LTM-EFDZ8-MW01-0401		1415		X									2		X	X	
LTM-BS5-P-1-0401		1615		X						3				X			
— LAST ENTRY —																	

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

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Normal

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: [signature]	4/19/01	1800	1. Received By: Fed Ex / Kinkos	4/19/01	1800
2. Relinquished By:			2. Received By: [signature]	4/20/01	9:10
3. Relinquished By:			3. Received By:		

Comments

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

STL North Canton

Chain of Custody Record

STL-4124 (0700)

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

52

Client	IT Group
Address	11499 Chester Rd
City	Cincinnati
State	OH
Zip Code	45246
Project Name and Location (State)	WPAFB, OHIO
Contract/Purchase Order/Quote No.	
Project Manager	Joe Tyburski
Telephone Number (Area Code)/Fax Number	(513) 782-4700 / (513) 782-4749
Site Contact	Greg Plamondon
Lab Contact	Denise Pohl
Carrier/Waybill Number	FedEx 816215056506
Date	04/19/01
Chain of Custody Number	029401
Lab Number	(330) 966-9789
Page	1 of 1

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil		Unpres.	H2SO4	HNOS	HCl	NaOH	ZnAc/NaOH	HNO3	VOCs w/ MTBE	TPH Methods	Methane/Ethane/Ethylene	Sulfate	Nitrate									Special Instructions/ Conditions of Receipt
BMP-NEA-MW20-25-0401				X				4	1	~~3~~	3			1	X	X	X	X	X									
BMP-NEA-MW20-25-5401				X				4	1	~~3~~	3			1	X	X	X	X	X									
LTM-BS5-P-2-0401				X							3				X	X	X											
LTM-P4-2-0401				X						2						X												
— LAST ENTRY —																												

Analysis (Attach list if more space is needed)

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal

☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Normal

QC Requirements (Specify)

	Date	Time
1. Relinquished By	4/19/01	1800
2. Relinquished By		
3. Relinquished By		

	Date	Time
1. Received By (FedEx / Kinkos)	4/19/01	1800
2. Received By	4/20/01	9:00
3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

STL North Canton

Appendix J

Basewide LTM Semiannual and Annual VOCs Analytical Data

CASE NARRATIVE
A1D110130

The following report contains the analytical results for twenty-four water samples and one quality control sample submitted to STL North Canton by IT Corporation from the WPAFB, Ohio site. The samples were received April 11, 2001, 2001, according to documented sample acceptance procedures.

STL North Canton utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the Analytical Methods Summary page in accordance with the methods indicated. A summary of QC data for these analyses is included at the rear of the report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The samples were received at the North Canton laboratory at a temperature of 1.5° C.

GC/MS VOLATILES

Sample(s) that contain results between the MDL and the RL were flagged with "J". There is the possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

METALS

Serial dilution of a sample in this lot indicates that physical and chemical interferences were present. Refer to the sample report pages for the affected analytes.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

** for analyses run on TJA Trace ICP or GFAA only*

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample are spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If the surrogate recoveries are outside criteria for environmental or MS/MSD samples, the batch is acceptable if the Method Blank, LCS, and LCSD surrogate recoveries are within acceptance criteria. The only exception is if the surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank and the associated sample(s) are ND, the batch is acceptable. If the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide/PCB, PAH, and Herbicide methods, the surrogate criteria is that one of two surrogate compounds meet acceptance criteria.

ANALYTICAL METHODS SUMMARY

A1D110130

PARAMETER	ANALYTICAL METHOD
Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Mercury (Manual Cold Vapor Technique)	MCAWW 245.1
Trace Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Volatile Organics by GC/MS	SW846 8260B

References:

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

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

SAMPLE SUMMARY

A1D110130

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
EAN0Q	001	LTM-CW10-055-0401	04/09/01	12:5
EAN0R	002	LTM-OU4-MW02B-0401	04/09/01	15:0
EAN0T	003	LTM-OU4-MW02A-0401	04/09/01	15:5
EAN0V	004	LTM-MW131M-0401	04/10/01	10:4
EAN0W	005	LTM-MW131S-0401	04/10/01	11:5
EAN01	006	LTM-OU10-MW19D-0401	04/10/01	14:2
EAN03	007	LTM-23-578-M-0401	04/10/01	
EAN06	008	LTM-CW05-55-0401	04/09/01	12:3
EAN07	009	LTM-CW05-55-5401	04/09/01	12:3
EAN08	010	LTM-OU4-01B-60-0401	04/09/01	14:1
EAN1A	011	LTM-CW05-085-0401	04/10/01	10:0
EAN1C	012	LTM-CW04-60-0401	04/10/01	10:4
EAN1E	013	LTM-MW132S-0401	04/10/01	12:0
EAN1F	014	LTM-05-DM-123D-0401	04/10/01	14:2
EAN1G	015	LTM-05-DM-123I-0401	04/10/01	14:5
EAN1H	016	LTM-MW132S-5401	04/10/01	12:0
EAN1J	017	LTM-OU4-01C-084-0401	04/09/01	15:0
EAN1K	018	TB040901	04/09/01	08:0
EAN1L	019	LTM-CW07-055-0401	04/09/01	12:1
EAN1M	020	LTM-OU4-03C-0401	04/09/01	14:4
EAN1N	021	LTM-OU4-MW-12B-0401	04/09/01	15:5
EAN1P	022	LTM-HD-11-0401	04/10/01	10:2
EAN1Q	023	LTM-HD-12M-0401	04/10/01	12:1
EAN1R	024	LTM-HD-12S-0401	04/10/01	13:1
EAN1T	025	LTM-CHP4-MW01-0401	04/10/01	15:2

NOTE(S):

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

CASE NARRATIVE

A1D120244

The following report contains the analytical results for sixteen water samples and one quality control sample submitted to STL North Canton by IT Corporation from the WPAFB, Ohio site. The samples were received April 12, 2001, 2001, according to documented sample acceptance procedures.

STL North Canton utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the Analytical Methods Summary page in accordance with the methods indicated. A summary of QC data for these analyses is included at the rear of the report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The samples were received at the North Canton laboratory at a temperature of 1.6° C.

GC/MS VOLATILES

Sample(s) that contain results between the MDL and the RL were flagged with "J". There is the possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

** for analyses run on TJA Trace ICP or GFAA only*

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample are spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If the surrogate recoveries are outside criteria for environmental or MS/MSD samples, the batch is acceptable if the Method Blank, LCS, and LCSD surrogate recoveries are within acceptance criteria. The only exception is if the surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank and the associated sample(s) are ND, the batch is acceptable. If the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide/PCB, PAH, and Herbicide methods, the surrogate criteria is that one of two surrogate compounds meet acceptance criteria.

ANALYTICAL METHODS SUMMARY

A1D120244

PARAMETER	ANALYTICAL METHOD
Dissolved ICP Metals	MCAWW 200.7
Dissolved Mercury (CVAA)	MCAWW 245.1
Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Mercury (Manual Cold Vapor Technique)	MCAWW 245.1
Trace Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Volatile Organics by GC/MS	SW846 8260B

References:

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

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

SAMPLE SUMMARY

A1D120244

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAM TIM
EAQ8T	001	LTM-B59-MW-01-0401	04/11/01	11::
EAQ8X	002	LTM-B59-MW-02-0401	04/11/01	12::
EAQ81	003	LTM-B59-MW-03-0401	04/11/01	15::
EAQ82	004	LTM-MAD-MON127-0401	04/11/01	09::
EAQ83	005	LTM-HD-13S-0401	04/11/01	10::
EAQ84	006	LTM-HD-13S-AMB01	04/11/01	10::
EAQ85	007	LTM-P6-1-0401	04/11/01	13::
EAQ87	008	LTM-P6-2-0401	04/11/01	14::
EAQ88	009	TB-041101	04/11/01	08::
EAQ9C	010	LTM-OU10-MW-03S-0401	04/11/01	09::
EAQ9J	011	LTM-GR-330-0401	04/11/01	10::
EAQ9K	012	LTM-OU8-MW-02S-0401	04/11/01	14::
EAQ9M	013	LTM-OU8-MW-02D-0401	04/11/01	15::
EAQ9X	014	LTM-OU10-MW-06D-0401	04/11/01	09::
EAQ93	015	LTM-OU10-MW-06S-0401	04/11/01	10::
EAQ95	016	LTM-OU10-MW-06S-5401	04/11/01	10::
EAQ96	017	LTM-OU~~10~~4-MW-04A-0401	04/11/01	11::

NOTE(S): MC

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

CASE NARRATIVE
A1D130174

The following report contains the analytical results for twelve water samples submitted to STL North Canton by the IT Corporation – Cincinnati from the WPAFB, Ohio Site. The samples were received April 13, 2001, according to documented sample acceptance procedures.

STL North Canton utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the Analytical Methods Summary page in accordance with the methods indicated. A summary of QC data for these analyses is included in this report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 2.7° C. . The samples were received in wet ice.

GC/MS VOLATILES

Sample(s) that contain results between the MDL and the RL were flagged with "J". There is the possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

** for analyses run on TJA Trace ICP or GFAA only*

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample are spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If the surrogate recoveries are outside criteria for environmental or MS/MSD samples, the batch is acceptable if the Method Blank, LCS, and LCSD surrogate recoveries are within acceptance criteria. The only exception is if the surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank and the associated sample(s) are ND, the batch is acceptable. If the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide/PCB, PAH, and Herbicide methods, the surrogate criteria is that one of two surrogate compounds meet acceptance criteria.

ANALYTICAL METHODS SUMMARY

A1D130174

PARAMETER	ANALYTICAL METHOD
Dissolved ICP Metals	MCAWW 200.7
Dissolved Mercury (CVAA)	MCAWW 245.1
Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Mercury (Manual Cold Vapor Technique)	MCAWW 245.1
Trace Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Volatile Organics by GC/MS	SW846 8260B

References:

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

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

SAMPLE SUMMARY

A1D130174

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
EATTG	001	LTM-EFD09-M575-0401	04/12/01	09:4
EATTL	002	LTM-EFD04-MW06-0401	04/12/01	11:1
EATTM	003	LTM-OU10-25-584-M-0401	04/12/01	14:5
EATTQ	004	LTM-OU10-25-582-M-0401	04/12/01	15:3
EATTR	005	LTM-25-583-M-0401	04/12/01	14:3
EATTV	006	LTM-25-582-M-5401	04/12/01	13:3
EATTW	007	LTM-OU10-MW-25S-0401	04/12/01	11:5
EATT1	008	LTM-OU10-MW10I-0401	04/12/01	15:4
EATT4	009	TB041201	04/12/01	08:0
EATT6	010	LTM-OU8-MW23D-0401	04/12/01	09:2
EATT8	011	LTM-EFDZ3-MW02-0401	04/12/01	11:1
EATT9	012	LTM-WP-NEA-MW24-2S-0401	04/12/01	16:1

NOTE(S):

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

CASE NARRATIVE
A1D200286

The following report contains the analytical results for ten water samples and one quality control sample submitted to STL North Canton by IT Corporation from the WPAFB, OH Site. The samples were received April 17, 2001, 2001, according to documented sample acceptance procedures.

STL North Canton utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the Analytical Methods Summary page in accordance with the methods indicated. A summary of QC data for these analyses is included at the rear of the report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The samples were received at the North Canton laboratory at a temperature of 2.7° C.

See STL's Cooler Receipt Form for additional information.

GC/MS VOLATILES

Sample(s) that contain results between the MDL and the RL were flagged with "J". There is the possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

The pH of the sample TB-041901 was greater than 2. The sample was analyzed within the normal 14 day holding time; however, experimental evidence suggests that some aromatic compounds in wastewater samples, notably Benzene, Toluene, and Ethylbenzene are susceptible to biological degradation if samples are not preserved to a pH of 2.

STL Cooler Receipt Form/Narrative
North Canton Facility

Client: IT Corp Project: _____ Quote#: _____
Cooler Received on: 4/20/01 Opened on: 4/20/01 by: [signature] (Signature)

Fedex ☒ Client Drop Off ☐ UPS ☐ Airborne ☐
Other: _____

Cooler ☒ Safe ☐ Foam Box ☐ Client Cooler ☐ Other: _____
STL Shipper No#: K57

1. Were custody seals on the outside of the cooler and intact? Yes ☒ No ☐
   If YES, Quantity 2 Location below opening
   Were the custody seals signed and dated? Yes ☒ No ☐ NA ☐
2. Shipper's packing slip attached to this form? Yes ☒ No ☐
3. Were custody papers included inside the cooler and relinquished? Yes ☒ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☒ No ☐
5. Packing material used:
Peanuts ☐ Bubble Wrap ☒ Vermiculite ☐ Foam ☐ None ☐ Other: _____
6. Cooler temperature upon receipt 2.7 °C (see back of form for multiple coolers/temp)
METHOD: Temperature Vial ☒ Between Coolant & Sample Container ☐ Against Bottles ☐
COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐
7. Were all the bottles sealed in separate plastic bags? Yes ☒ No ☐
8. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
9. Did all bottle labels and tags agree with the custody papers? Yes ☒ No ☐
10. Were samples at the correct pH? Yes ☒ No ☐ NA ☐
11. Were correct bottles used for the tests indicated? Yes ☒ No ☐
12. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☒ NA ☐
13. Was a sufficient amount of sample sent in each bottle? Yes ☒ No ☐
Contacted PM DJP Date: 4/20/01 by: TB via Voice Mail ☐ Verbal ☒ Other ☐
Concerning: Anomalies

√	MACRO	MACRO
	1. CHAIN OF CUSTODY	
	SR1A	Samples were received under proper custody procedures and without discrepancies.
	SR1B	The chain of custody and sample bottles did not agree. The following discrepancies occurred _____
	2. SAMPLE CONDITION	
	SR2A	Sample(s) _____ were received or requested after the recommended holding time had expired.
	SR2B	Sample(s) _____ were received with insufficient volume
	SR2C	Sample(s) _____ were received in a broken container.
	3. SAMPLE PRESERVATION	
	SR3A	Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s).
	SR3B	Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)
	4. NCM	
	SR4A	NCM has been generated. Refer to Clouseau for details

5. Other Anomalies (see below or back) LTM-BSS-P-2-0401 only rec 3X40 VOC tests = VOC/metals/disappeared logged only VOC - DJP aware. TB 4/20/01. LTM-P4-2-0401 rec 2l for total + diss metals - TAL metals listed on COC - logged total + diss metals - DJP aware - TB 4/20/01.

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials
LTM-P4-2-0401	<2 <2		
BMP-NEA-MW20-25-5401	<2		
BMP-NEA-MW20-25-5401	<2		
LTM-EFDZ5-MW05-0401	<2 <2		
LTM-EFDZ8-MW01-0401	<2 <2		

Cooler	Temp	Method	Comments

Discrepancies Cont.

Macro Name:

Macro Name:

Macro Name:

Macro Name:

Other Anomalies:

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

** for analyses run on TJA Trace ICP or GFAA only*

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample are spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If the surrogate recoveries are outside criteria for environmental or MS/MSD samples, the batch is acceptable if the Method Blank, LCS, and LCSD surrogate recoveries are within acceptance criteria. The only exception is if the surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank and the associated sample(s) are ND, the batch is acceptable. If the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide/PCB, PAH, and Herbicide methods, the surrogate criteria is that one of two surrogate compounds meet acceptance criteria.

ANALYTICAL METHODS SUMMARY

A1D200286

PARAMETER	ANALYTICAL METHOD
Dissolved ICP Metals	MCAWW 200.7
Dissolved Mercury (CVAA)	MCAWW 245.1
Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Mercury (Manual Cold Vapor Technique)	MCAWW 245.1
Trace Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Volatile Organics by GC/MS	SW846 8260B

References:

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SAMPLE SUMMARY

A1D200286

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAM TIM
EA6LQ	001	LTM-TTW-02-0401	04/19/01	10:
EA6L6	002	LTM-EFDZ2-MW03-0401	04/19/01	13:
EA6MC	003	LTM-SP11-MW01-0401	04/19/01	15:
EA6MK	004	LTM-BS5-P3-0401	04/19/01	16:
EA6MP	005	TB-041901	04/19/01	09:
EA6MR	006	LTM-CW15-055-0401	04/19/01	09:
EA6NW	007	LTM-EFDZ3-MW03-0401	04/19/01	11:
EA6PE	008	LTM-EFDZ8-MW01-0401	04/19/01	14:
EA6PV	009	LTM-BS5-P-1-0401	04/19/01	16:
EA6P6	010	LTM-BS5-P-2-0401	04/19/01	16:
EA6P9	011	LTM-P4-2-0401	04/19/01	14:

NOTE(S):

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

CASE NARRATIVE
A1D170227

The following report contains the analytical results for nine water samples and one quality control sample submitted to STL North Canton by IT Corporation from the WPAFB, OH. The samples were received April 17, 2001, 2001, according to documented sample acceptance procedures.

STL North Canton utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter listed on the Analytical Methods Summary page in accordance with the method indicated. A summary of QC data for these analyses is included at the rear of the report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The samples were received at the North Canton laboratory at a temperature of 2.6° C.

The chain-of-custody listed three Trip Blanks but only two were received.

Sample LTM-SP11-MW07-0401 listed on the chain-of-custody was labeled LTM-SP11-MW08-0401 on the bottle label. Sample was logged per bottle label.

GC/MS VOLATILES

Sample(s) that contain results between the MDL and the RL were flagged with "J". There is the possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

** for analyses run on TJA Trace ICP or GFAA only*

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample are spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If the surrogate recoveries are outside criteria for environmental or MS/MSD samples, the batch is acceptable if the Method Blank, LCS, and LCSD surrogate recoveries are within acceptance criteria. The only exception is if the surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank and the associated sample(s) are ND, the batch is acceptable. If the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide/PCB, PAH, and Herbicide methods, the surrogate criteria is that one of two surrogate compounds meet acceptance criteria.

ANALYTICAL METHODS SUMMARY

A1D170227

PARAMETER	ANALYTICAL METHOD
Volatile Organics by GC/MS	SW846 8260B

References:

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

SAMPLE SUMMARY

A1D170227

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
EAXWF	001	LTM-OU10-MW-11S-0401	04/16/01	14:2
EAXWX	002	LTM-OU10-MW-11D-0401	04/16/01	15:2
EAXW1	003	LTM-CW03-77-0401	04/16/01	09:5
EAXW3	004	LTM-SP11-MW08-0401	04/16/01	12:4
EAXW5	005	LTM-SP11-MW03-0401	04/16/01	14:2
EAXW6	006	LTM-OU4-MW03B-0401	04/16/01	09:3
EAXW7	007	LTM-WP-NEA-MW27-3I-0401	04/16/01	10:3
EAXW8	008	LTM-LF12-MW15A-0401	04/16/01	11:2
EAXW9	009	LTM-05-DM-123S-0401	04/16/01	12:0
EAXXC	010	TB041601	04/16/01	09:0

NOTE(S):

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

CASE NARRATIVE
A1D190107

The following report contains the analytical results for four water samples submitted to STL North Canton by IT Corporation – Cincinnati from the WPAFB, Ohio Site. The samples were received April 18, 2001, according to documented sample acceptance procedures.

The remaining samples listed on the chain-of-custody are reported under separate cover.

STL North Canton utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the Analytical Methods Summary page in accordance with the methods indicated. A summary of QC data for these analyses is included in this report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 3.1° C. . The samples were received in wet ice.

See STL's Cooler Receipt Form for additional information.

STL Cooler Receipt Form/Narrative
North Canton Facility

Client: IT Corp. Project: WPAFB Quote#: 38700
Cooler Received on: 4-18-01 Opened on: 4-18-01 by: Jennifer Stiller (Signature)

Fedx [X] Client Drop Off [ ] UPS [ ] Airborne [ ] Other: _____

Cooler [X] Safe [ ] Foam Box [ ] Client Cooler [ ] Other: _____
STL Shipper No#: J799

1. Were custody seals on the outside of the cooler and intact? Yes [X] No [ ]
   If YES, Quantity 2 Location overlid
   Were the custody seals signed and dated? Yes [X] No [ ] NA [ ]
2. Shipper's packing slip attached to this form? Yes [X] No [ ]
3. Were custody papers included inside the cooler and relinquished? Yes [X] No [ ]
4. Did you sign the custody papers in the appropriate place? Yes [X] No [ ]
5. Packing material used:
   Peanuts [ ] Bubble Wrap [X] Vermiculite [ ] Foam [ ] None [ ] Other: _____
6. Cooler temperature upon receipt 3.1 °C (see back of form for multiple coolers/temp)
   METHOD: Temperature Vial [X] Between Coolant & Sample Container [ ] Against Bottles [ ]
   COOLANT: Wet Ice [X] Blue Ice [ ] Dry Ice [ ] Water [ ] None [ ]
7. Were all the bottles sealed in separate plastic bags? Yes [ ] No [X]
8. Did all bottles arrive in good condition (Unbroken)? Yes [X] No [ ]
9. Did all bottle labels and tags agree with the custody papers? Yes [X] No [X]
10. Were samples at the correct pH? Yes [ ] No [ ] NA [ ]
11. Were correct bottles used for the tests indicated? Yes [X] No [ ]
12. Were air bubbles >6 mm in any VOA vials? Yes [ ] No [X] NA [ ]
13. Was a sufficient amount of sample sent in each bottle? Yes [X] No [ ]

Contacted PM DJP Date: 4-19-01 by: JAJ via Voice Mail [ ] Verbal [X] Other [ ]
Concerning: discreps

√	MACRO	MACRO
1. CHAIN OF CUSTODY		
	SR1A	Samples were received under proper custody procedures and without discrepancies.
√	SR1B	The chain of custody and sample bottles did not agree. The following discrepancies occurred First sample on CoC # 29425 is BMP-OW-4-0401 at 10:40. Labels read BMP-OW-2-0401. Log per lab see back. (sep lot)
2. SAMPLE CONDITION		
	SR2A	Sample(s) _____ were received or requested after the recommended holding time had expired.
	SR2B	Sample(s) _____ were received with insufficient volume
	SR2C	Sample(s) _____ were received in a broken container.
3. SAMPLE PRESERVATION		
√	SR3A	Sample(s) see back. were further preserved in sample receiving to meet recommended pH level(s).
	SR3B	Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)
4. NCM		
	SR4A	NCM has been generated. Refer to Clouseau for details
5. Other Anomalies (see below or back)		

Revision 14, January 15, 2001
SOP: NC-SC-0005, Sample Receiving
n:\qaqc\narrativ\stl\cooler_stl_rev011501.doc

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials
BMP-OW-2-0401	<2	4-18-01	gpd
LTM-WP-NEA-MW23-25-0401	<2 <2		
BMP-OH-016-M-0401	<2, <2, <2		
BMP-NEA-MW26-35-0401	<2		
BMP-NEA-MW20-25-0401	<2, <2 <2, <2		
BMP-P18-1-0401	<2		
BMP-OW-4-0401	<2		
BMP-P18-2-0401	<2		
BMP-OW-3-0401	<2		
LTM-WP-NEA-MW24-25-0401	<2, <2		
BMP-NEA-MW28-55-0401	<2	4-19-01	gpd
BMP-NEA-MW28-55-AMB01	<2		

Cooler	Temp	Method	Comments

Discrepancies Cont.

Macro Name: SR1B - Samples LTM-NEA-MW28-55-0401 LTM-NEA-MW28-55-AMB01 and IDs start w/ BMP on bottles. Log per bottles per DJP.

Macro Name: gpd 4-19-01

Macro Name: SR3A - BMP-NEA-MW28-55-0401 1x500 added sulfuric BMP-NEA-MW28-55-AMB01 1x1L added sulfuric

Macro Name:

Other Anomalies:

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

** for analyses run on TJA Trace ICP or GFAA only*

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample are spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If the surrogate recoveries are outside criteria for environmental or MS/MSD samples, the batch is acceptable if the Method Blank, LCS, and LCSD surrogate recoveries are within acceptance criteria. The only exception is if the surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank and the associated sample(s) are ND, the batch is acceptable. If the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide/PCB, PAH, and Herbicide methods, the surrogate criteria is that one of two surrogate compounds meet acceptance criteria.

ANALYTICAL METHODS SUMMARY

A1D190107

PARAMETER	ANALYTICAL METHOD
Dissolved ICP Metals	MCAWW 200.7
Dissolved Mercury (CVAA)	MCAWW 245.1
Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Mercury (Manual Cold Vapor Technique)	MCAWW 245.1
Trace Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Volatile Organics by GC/MS	SW846 8260B

References:

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

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

SAMPLE SUMMARY

A1D190107

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMI TIM
EA2NT	001	LTM-WP-NEA-MW23-2S-0401	04/17/01	11:4
EA2N1	002	TB-041701	04/17/01	09:0
EA2N2	003	LTM-WP-NEA-MW34-2S-0401	04/17/01	14:3
EA2N3	004	LTM-WP-NEA-MW24-2S-0401	04/17/01	15:3

NOTE(S):

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

CASE NARRATIVE
A1D190213

The following report contains the analytical results for eleven water samples submitted to STL North Canton by IT Corporation – Cincinnati from the WPAFB, Ohio Site. The samples were received April 19, 2001, according to documented sample acceptance procedures.

The remaining samples listed on the chain-of-custody are reported under separate cover.

STL North Canton utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the Analytical Methods Summary page in accordance with the methods indicated. A summary of QC data for these analyses is included in this report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 3.2° C. . The samples were received in wet ice.

See STL's Cooler Receipt Form for additional information.

GC/MS VOLATILES

Sample(s) that contain results between the MDL and the RL were flagged with "J". There is the possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

STL Cooler Receipt Form/Narrative
North Canton Facility

Client: IT GROUP Project: WPAFB OHIO Quote#: 38700
Cooler Received on: 4-19-01 Opened on: 4-19-01 by: Scott [illegible] (Signature)

Fedx ☒ Client Drop Off ☐ UPS ☐ Airborne ☐ Other: _____

Cooler ☒ Safe ☐ Foam Box ☐ Client Cooler ☐ Other: _____
STL Shipper No#: J829

1. Were custody seals on the outside of the cooler and intact? Yes ☒ No ☐
   If YES, Quantity 2 Location over closure
   Were the custody seals signed and dated? Yes ☒ No ☐ NA ☐
2. Shipper's packing slip attached to this form? Yes ☒ No ☐
3. Were custody papers included inside the cooler and relinquished? Yes ☒ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☒ No ☐
5. Packing material used:
   Peanuts ☐ Bubble Wrap ☒ Vermiculite ☐ Foam ☐ None ☐ Other: _____
6. Cooler temperature upon receipt 3.2 °C (see back of form for multiple coolers/temp)
   METHOD: Temperature Vial ☒ Between Coolant & Sample Container ☐ Against Bottles ☐
   COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐
7. Were all the bottles sealed in separate plastic bags? Yes ☒ No ☐
8. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
9. Did all bottle labels and tags agree with the custody papers? Yes ☐ No ☒
10. Were samples at the correct pH? Yes ☒ No ☐ NA ☐
11. Were correct bottles used for the tests indicated? Yes ☒ No ☐
12. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☒ NA ☐
13. Was a sufficient amount of sample sent in each bottle? Yes ☒ No ☐

Contacted PM _____ Date: _____ by: _____ via Voice Mail ☐ Verbal ☐ Other ☐
Concerning:

√	MACRO	MACRO
1. CHAIN OF CUSTODY		
	SR1A	Samples were received under proper custody procedures and without discrepancies.
X	SR1B	The chain of custody and sample bottles did not agree. The following discrepancies occurred 2 Trip blanks were received only 1 listed on coc. will log/on each lot per past. [illegible] 4-19-01
2. SAMPLE CONDITION		
	SR2A	Sample(s) _____ were received or requested after the recommended holding time had expired.
	SR2B	Sample(s) _____ were received with insufficient volume
	SR2C	Sample(s) _____ were received in a broken container.
3. SAMPLE PRESERVATION		
	SR3A	Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s).
	SR3B	Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)
4. NCM		
	SR4A	NCM has been generated. Refer to Clouseau for details
5. Other Anomalies (see below or back)		

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials
LTM-14-554-M-0401	<2 <2	4-19-01	SWR
LTM-WP-NEA-MW02-2S-0407	<2 <2		
LTM-WP-NEA-MW01-1S-0401	<2 <2		
LTM-NP-NEA-MW31-3S-0401	<2 <2		

Cooler	Temp	Method	Comments

Discrepancies Cont.

Macro Name:

Macro Name:

Macro Name:

Macro Name:

Other Anomalies:

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

** for analyses run on TJA Trace ICP or GFAA only*

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample are spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If the surrogate recoveries are outside criteria for environmental or MS/MSD samples, the batch is acceptable if the Method Blank, LCS, and LCSD surrogate recoveries are within acceptance criteria. The only exception is if the surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank and the associated sample(s) are ND, the batch is acceptable. If the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide/PCB, PAH, and Herbicide methods, the surrogate criteria is that one of two surrogate compounds meet acceptance criteria.

ANALYTICAL METHODS SUMMARY

A1D190213

PARAMETER	ANALYTICAL METHOD
Dissolved ICP Metals	MCAWW 200.7
Dissolved Mercury (CVAA)	MCAWW 245.1
Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Mercury (Manual Cold Vapor Technique)	MCAWW 245.1
Trace Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Volatile Organics by GC/MS	SW846 8260B

References:

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

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

SAMPLE SUMMARY

A1D190213

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
EA3QA	001	LTM-14-554-M-0401	04/18/01	09:45
EA3QH	002	LTM-WP-NEA-MW02-2S-0401	04/18/01	10:45
EA3QK	003	LTM-WP-NEA-MW01-1S-0401	04/18/01	11:45
EA3QN	004	LTM-WP-NEA-MW31-3S-0401	04/18/01	09:45
EA3QR	005	LTM-OU10-MW-21S-0401	04/18/01	11:35
EA3Q3	006	LTM-NEA-MW37-1D-0401	04/18/01	14:45
EA3Q4	007	LTM-FTA2:MW02C-0401	04/18/01	10:19
EA3Q5	008	LTM-GR-334-0401	04/18/01	11:10
EA3Q6	009	LTM-GR-333-0401	04/18/01	11:55
EA3Q7	010	LTM-GR-333-5401	04/18/01	11:55
EA3Q8	011	TB041801	04/18/01	08:00

NOTE(S):

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

CASE NARRATIVE

A1D210148

The following report contains the analytical results for seven water samples submitted to STL North Canton by IT Corporation – Cincinnati from the WPAFB, Ohio Site. The samples were received April 21, 2001, according to documented sample acceptance procedures.

STL North Canton utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the Analytical Methods Summary page in accordance with the methods indicated. A summary of QC data for these analyses is included in this report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 1.6° C. . The samples were received in wet ice.

GC/MS VOLATILES

Sample(s) that contain results between the MDL and the RL were flagged with "J". There is the possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

** for analyses run on TJA Trace ICP or GFAA only*

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample are spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If the surrogate recoveries are outside criteria for environmental or MS/MSD samples, the batch is acceptable if the Method Blank, LCS, and LCSD surrogate recoveries are within acceptance criteria. The only exception is if the surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank and the associated sample(s) are ND, the batch is acceptable. If the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide/PCB, PAH, and Herbicide methods, the surrogate criteria is that one of two surrogate compounds meet acceptance criteria.

ANALYTICAL METHODS SUMMARY

A1D210148

PARAMETER	ANALYTICAL METHOD
Volatile Organics by GC/MS	SW846 8260B

References:

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

SAMPLE SUMMARY

A1D210148

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
EA7J2	001	TB-042001	04/20/01	09:00
EA7J3	002	LTM-BS5-P4-0401	04/20/01	09:54
EA7J4	003	LTM-BS5-P4-5401	04/20/01	09:54
EA7J5	004	LTM-BS6-P1-0401	04/20/01	11:47
EA7J6	005	LTM-BS6-P2-0401	04/20/01	11:22
EA7J7	006	LTM-SP11-MW09-0401	04/20/01	10:50
EA7J8	007	LTM-SP11-MW02-0401	04/20/01	09:53

NOTE(S):

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

CASE NARRATIVE
A1D240180

The following report contains the analytical results for twelve water samples submitted to STL North Canton by IT Corporation – Cincinnati from the WPAFB, Ohio Site. The samples were received April 24, 2001, according to documented sample acceptance procedures.

STL North Canton utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the Analytical Methods Summary page in accordance with the methods indicated. A summary of QC data for these analyses is included in this report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 1.9° C. . The samples were received in wet ice.

GC/MS VOLATILES

Sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

An LCS/LCSD was provided for batch 1120523 since there was insufficient sample volume to perform an MS/MSD.

Sample(s) that contain results between the MDL and the RL were flagged with "J". There is the possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

** for analyses run on TJA Trace ICP or GFAA only*

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample are spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If the surrogate recoveries are outside criteria for environmental or MS/MSD samples, the batch is acceptable if the Method Blank, LCS, and LCSD surrogate recoveries are within acceptance criteria. The only exception is if the surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank and the associated sample(s) are ND, the batch is acceptable. If the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide/PCB, PAH, and Herbicide methods, the surrogate criteria is that one of two surrogate compounds meet acceptance criteria.

ANALYTICAL METHODS SUMMARY

A1D240180

PARAMETER	ANALYTICAL METHOD
Dissolved ICP Metals	MCAWW 200.7
Dissolved Mercury (CVAA)	MCAWW 245.1
Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Mercury (Manual Cold Vapor Technique)	MCAWW 245.1
Trace Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Volatile Organics by GC/MS	SW846 8260B

References:

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

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

SAMPLE SUMMARY

A1D240180

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
EA9J3	001	02-DM-81D-M-0401	04/23/01	09:59
EA9J9	002	LF8-MW05B-0401	04/23/01	12:12
EA9KF	003	LF8-MW05B-0451	04/23/01	12:12
EA9KL	004	LTM-SP11-MW07-0401	04/23/01	13:57
EA9KX	005	LF10-MW07A-0401	04/23/01	15:15
EA9K2	006	LF10-MW07A-0451	04/23/01	15:15
EA9K5	007	LF10-MW05B-0401	04/23/01	16:50
EA9K7	008	TB042301	04/23/01	09:00
EA9LA	009	LTM-07-520-M-0401	04/23/01	09:03
EA9LJ	010	02-DM-82M-0401	04/23/01	10:58
EA9LL	011	LF8-MW02C-0401	04/23/01	13:17
EA9LM	012	01-004-M-0401	04/23/01	16:02

NOTE(S):

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Analytical Legend

AMB – Ambient
B (or MBB, MBD, MBE) - Method blank contamination present
D - Diluted sample analytical results
DUP - Duplicate
EW – Extraction Well
E - Estimated result. Concentration exceeds the calibration range
I - Quantification suspect due to matrix interference
IW – Insufficient Water
J – Estimated Result. Result less than Reporting Limit
L – Serial dilution of a digestate in the analytical batch indicates that physical and chemical interferences are present.
LCS – Laboratory Control Sample
LF – Landfill
LW – Line Water
mg/L – milligrams/Liter
µg/L – micrograms/Liter
MW – Monitoring Well
N – Spiked analyte recovery is outside stated control limits
NA - Not Applicable
ND – Not Detected
NR – Not Reported
pg/L – picograms/Liter
Q - Estimated maximum possible concentration
RB – Rinsate Blank
R2 – Indicates second re-extraction analysis run was required due to surrogate recoveries outside of acceptance criteria on the initial sample run or that analytical results presented are for a diluted sample due to high target analytes.
T or TB – Trip Blank

-- – Not Analyzed
= – Confirmed detection
( ) – Result exceeds MCL value
[ ] – Result exceeds background value

Wright-Patterson AFB
April 2001 - Basewide VOC's Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-05-DM-123I-0401		LTM-05-DM-123S-0401		LTM-07-520-M-0401		LTM-23-578-M-0401		LTM-BS5-P-1-0401	
Sample Date		04/10/01		04/16/01		04/23/01		04/10/01		04/19/01	
VOC											
1,1,1-Trichloroethane	(ug/L)	ND		ND		ND		ND		ND	
1,1-Dichloroethane	(ug/L)	ND		ND		ND		ND		ND	
1,2-Dichloroethane	(ug/L)	ND		ND		ND		ND		ND	
Acetone	(ug/L)	ND		ND		ND		ND		ND	
Benzene	(ug/L)	ND		ND		ND		ND		ND	
Carbon tetrachloride	(ug/L)	ND		ND		ND		ND		ND	
Chlorobenzene	(ug/L)	ND		ND		1.9	=	ND		ND	
Chloroform	(ug/L)	ND		ND		ND		ND		ND	
Ethylbenzene	(ug/L)	ND		ND		ND		ND		ND	
Methylene chloride	(ug/L)	ND		ND		ND		ND		ND	
Tetrachloroethene	(ug/L)	ND		ND		ND		3.8	=	0.38	J
Trichloroethene	(ug/L)	1.9	J	2.5	=	ND		15	=	ND	
Vinyl chloride	(ug/L)	ND		ND		ND		ND		ND	
Xylenes (total)	(ug/L)	ND		ND		ND		ND		ND	
cis-1,2-Dichloroethene	(ug/L)	0.25	J	0.92	=	0.37	J	ND		ND	
trans-1,2-Dichloroethene	(ug/L)	ND		ND		ND		ND		ND	

Wright-Patterson AFB
April 2001 - Basewide VOC's Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-BS5-P3-0401		LTM-BS5-P4-0401		LTM-BS5-P4-5401		LTM-CHP4-MW01-0401		LTM-CW03-77-0401	
Sample Date		04/19/01		04/20/01		04/20/01		04/10/01		04/16/01	
VOC											
1,1,1-Trichloroethane	(ug/L)	ND		ND		ND		ND		ND	
1,1-Dichloroethane	(ug/L)	ND		ND		ND		ND		ND	
1,2-Dichloroethane	(ug/L)	ND		ND		ND		ND		ND	
Acetone	(ug/L)	ND		ND		ND		ND		ND	
Benzene	(ug/L)	ND		ND		ND		ND		ND	
Carbon tetrachloride	(ug/L)	ND		ND		ND		ND		ND	
Chlorobenzene	(ug/L)	ND		ND		ND		ND		ND	
Chloroform	(ug/L)	1.4	=	0.80	J	0.78	J	ND		ND	
Ethylbenzene	(ug/L)	ND		ND		ND		ND		ND	
Methylene chloride	(ug/L)	ND		ND		ND		ND		ND	
Tetrachloroethene	(ug/L)	19	=	17	=	17	=	11	=	1.1	=
Trichloroethene	(ug/L)	ND		ND		ND		1.8	J	2.4	=
Vinyl chloride	(ug/L)	ND		ND		ND		ND		ND	
Xylenes (total)	(ug/L)	ND		ND		ND		ND		ND	
cis-1,2-Dichloroethene	(ug/L)	ND		ND		ND		ND		ND	
trans-1,2-Dichloroethene	(ug/L)	ND		ND		ND		ND		ND	

Wright-Patterson AFB
April 2001 - Basewide VOC's Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-CW04-060-0401		LTM-CW05-055-0401		LTM-CW05-055-5401		LTM-CW05-085-0401		LTM-CW05-085-0401 R2	
Sample Date		04/10/01		04/09/01		04/09/01		04/10/01		04/10/01	
VOC											
1,1,1-Trichloroethane	(ug/L)	ND		ND		ND		ND		ND	
1,1-Dichloroethane	(ug/L)	ND		ND		ND		ND		ND	
1,2-Dichloroethane	(ug/L)	ND		ND		ND		ND		ND	
Acetone	(ug/L)	ND		ND		ND		ND		ND	
Benzene	(ug/L)	ND		ND		ND		ND		ND	
Carbon tetrachloride	(ug/L)	ND		ND		ND		ND		ND	
Chlorobenzene	(ug/L)	ND		1.3	=	1.4	=	ND		ND	
Chloroform	(ug/L)	ND		ND		ND		ND		ND	
Ethylbenzene	(ug/L)	ND		ND		ND		ND		ND	
Methylene chloride	(ug/L)	ND		ND		ND		ND		ND	
Tetrachloroethene	(ug/L)	ND		ND		ND		ND		ND	
Trichloroethene	(ug/L)	ND		13	=	13	=	76	E	67	=
Vinyl chloride	(ug/L)	ND		1.9	=	2.0	=	0.39	J	ND	
Xylenes (total)	(ug/L)	ND		ND		ND		ND		ND	
cis-1,2-Dichloroethene	(ug/L)	1.2	=	21	=	21	=	7.1	=	6.3	=
trans-1,2-Dichloroethene	(ug/L)	ND		0.54	=	0.54	=	0.57	=	0.50	J

Wright-Patterson AFB
April 2001 - Basewide VOC's Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-CW10-055-0401		LTM-CW15-055-0401		LTM-EFD04-MW06-0401		LTM-EFD09-M575-0401		LTM-EFDZ2-MW03-0401	
Sample Date		04/09/01		04/19/01		04/12/01		04/12/01		04/19/01	
VOC											
1,1,1-Trichloroethane	(ug/L)	ND		ND		ND		ND		ND	
1,1-Dichloroethane	(ug/L)	ND		ND		ND		ND		ND	
1,2-Dichloroethane	(ug/L)	ND		ND		12	=	ND		ND	
Acetone	(ug/L)	ND		ND		ND		ND		ND	
Benzene	(ug/L)	ND		ND		ND		ND		ND	
Carbon tetrachloride	(ug/L)	ND		ND		ND		ND		ND	
Chlorobenzene	(ug/L)	ND		ND		ND		ND		ND	
Chloroform	(ug/L)	ND		ND		ND		ND		ND	
Ethylbenzene	(ug/L)	ND		0.46	J	ND		ND		ND	
Methylene chloride	(ug/L)	ND		ND		ND		ND		ND	
Tetrachloroethene	(ug/L)	ND		ND		ND		2.8	=	ND	
Trichloroethene	(ug/L)	1.0	J	ND		0.48	J	2.3	=	0.40	J
Vinyl chloride	(ug/L)	ND		ND		ND		1.6	=	ND	
Xylenes (total)	(ug/L)	ND		ND		1.6	=	ND		ND	
cis-1,2-Dichloroethene	(ug/L)	ND		ND		0.22	J	6.7	=	0.18	J
trans-1,2-Dichloroethene	(ug/L)	ND		ND		ND		ND		ND	

Wright-Patterson AFB
April 2001 - Basewide VOC's Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-GR-330-0401		LTM-GR-333-0401		LTM-GR-333-5401		LTM-HD-11-0401		LTM-HD-12M-0401	
Sample Date		04/11/01		04/18/01		04/18/01		04/10/01		04/10/01	
VOC											
1,1,1-Trichloroethane	(ug/L)	ND		0.39	J	0.36	J	ND		ND	
1,1-Dichloroethane	(ug/L)	ND		ND		ND		ND		ND	
1,2-Dichloroethane	(ug/L)	ND		ND		ND		ND		ND	
Acetone	(ug/L)	ND		ND		ND		ND		ND	
Benzene	(ug/L)	ND		ND		ND		ND		ND	
Carbon tetrachloride	(ug/L)	ND		ND		ND		ND		ND	
Chlorobenzene	(ug/L)	ND		ND		ND		ND		ND	
Chloroform	(ug/L)	ND		1.4	=	1.4	=	ND		ND	
Ethylbenzene	(ug/L)	ND		ND		ND		ND		ND	
Methylene chloride	(ug/L)	ND		ND		ND		ND		ND	
Tetrachloroethene	(ug/L)	5.5	=	0.74	J	0.71	J	ND		ND	
Trichloroethene	(ug/L)	ND		3.3	=	3.2	=	7.0	=	0.96	J
Vinyl chloride	(ug/L)	ND		ND		ND		ND		ND	
Xylenes (total)	(ug/L)	ND		ND		ND		ND		ND	
cis-1,2-Dichloroethene	(ug/L)	ND		ND		ND		16	=	ND	
trans-1,2-Dichloroethene	(ug/L)	ND		ND		ND		0.54	=	ND	

Wright-Patterson AFB
April 2001 - Basewide VOC's Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-HD-12S-0401		LTM-HD-13S-0401		LTM-HD-13S-AMB01		LTM-LF12-MW15A-0401		LTM-MAD-MON127-0401	
Sample Date		04/10/01		04/11/01		04/11/01		04/16/01		04/11/01	
VOC											
1,1,1-Trichloroethane	(ug/L)	ND		ND		ND		ND		ND	
1,1-Dichloroethane	(ug/L)	ND		ND		ND		ND		ND	
1,2-Dichloroethane	(ug/L)	ND		ND		ND		ND		3.0	=
Acetone	(ug/L)	ND		ND		ND		ND		ND	
Benzene	(ug/L)	ND		ND		ND		ND		ND	
Carbon tetrachloride	(ug/L)	ND		ND		ND		ND		ND	
Chlorobenzene	(ug/L)	ND		ND		ND		ND		ND	
Chloroform	(ug/L)	0.37	J	ND		5.3	=	ND		ND	
Ethylbenzene	(ug/L)	ND		ND		ND		ND		ND	
Methylene chloride	(ug/L)	ND		ND		ND		ND		ND	
Tetrachloroethene	(ug/L)	2.1	=	ND		ND		ND		ND	
Trichloroethene	(ug/L)	0.74	J	ND		ND		2.4	=	ND	
Vinyl chloride	(ug/L)	ND		1.9	=	ND		ND		ND	
Xylenes (total)	(ug/L)	ND		ND		ND		ND		ND	
cis-1,2-Dichloroethene	(ug/L)	ND		8.4	=	ND		0.41	J	26	=
trans-1,2-Dichloroethene	(ug/L)	ND		ND		ND		ND		0.88	=

Wright-Patterson AFB
April 2001 - Basewide VOC's Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-MW131M-0401		LTM-MW131S-0401		LTM-MW132S-0401		LTM-MW132S-5401		LTM-NEA-MW27-3I-0401	
Sample Date		04/10/01		04/10/01		04/10/01		04/10/01		04/16/01	
VOC											
1,1,1-Trichloroethane	(ug/L)	ND		ND		ND		ND		ND	
1,1-Dichloroethane	(ug/L)	ND		ND		ND		ND		ND	
1,2-Dichloroethane	(ug/L)	ND		ND		ND		ND		ND	
Acetone	(ug/L)	ND		ND		ND		ND		ND	
Benzene	(ug/L)	ND		ND		ND		ND		ND	
Carbon tetrachloride	(ug/L)	ND		ND		ND		ND		ND	
Chlorobenzene	(ug/L)	ND		ND		ND		ND		ND	
Chloroform	(ug/L)	ND		ND		ND		ND		ND	
Ethylbenzene	(ug/L)	ND		ND		ND		ND		ND	
Methylene chloride	(ug/L)	ND		ND		ND		ND		0.36	J
Tetrachloroethene	(ug/L)	ND		1.8	=	4.0	=	4.1	=	16	=
Trichloroethene	(ug/L)	ND		1.0	J	31	=	31	=	ND	
Vinyl chloride	(ug/L)	12	=	ND		ND		ND		ND	
Xylenes (total)	(ug/L)	ND		ND		ND		ND		ND	
cis-1,2-Dichloroethene	(ug/L)	6.7	=	2.3	=	4.0	=	3.8	=	ND	
trans-1,2-Dichloroethene	(ug/L)	ND		ND		ND		ND		ND	

Wright-Patterson AFB
April 2001 - Basewide VOC's Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-OU10-MW-03S-0401		LTM-OU10-MW-06D-0401		LTM-OU10-MW-06S-0401		LTM-OU10-MW-06S-5401		LTM-OU10-MW-11D-0401	
Sample Date		04/11/01		04/11/01		04/11/01		04/11/01		04/16/01	
VOC											
1,1,1-Trichloroethane	(ug/L)	ND		ND		ND		ND		ND	
1,1-Dichloroethane	(ug/L)	ND		ND		ND		ND		ND	
1,2-Dichloroethane	(ug/L)	ND		ND		ND		ND		ND	
Acetone	(ug/L)	ND		ND		ND		ND		ND	
Benzene	(ug/L)	ND		ND		ND		ND		ND	
Carbon tetrachloride	(ug/L)	ND		ND		ND		ND		ND	
Chlorobenzene	(ug/L)	ND		ND		ND		ND		ND	
Chloroform	(ug/L)	ND		ND		ND		ND		ND	
Ethylbenzene	(ug/L)	ND		ND		ND		ND		ND	
Methylene chloride	(ug/L)	ND		ND		ND		ND		0.34	J
Tetrachloroethene	(ug/L)	7.9	=	2.6	=	ND		ND		0.42	J
Trichloroethene	(ug/L)	ND		ND		8.5	=	8.9	=	1.9	J
Vinyl chloride	(ug/L)	ND		ND		ND		ND		ND	
Xylenes (total)	(ug/L)	ND		ND		ND		ND		ND	
cis-1,2-Dichloroethene	(ug/L)	ND		ND		ND		ND		ND	
trans-1,2-Dichloroethene	(ug/L)	ND		ND		ND		ND		ND	

Wright-Patterson AFB
April 2001 - Basewide VOC's Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-OU10-MW-11S-0401		LTM-OU10-MW-21S-0401		LTM-OU10-MW-25S-0401		LTM-OU10-MW19D-0401		LTM-OU4-01B-60-0401	
Sample Date		04/16/01		04/18/01		04/12/01		04/10/01		04/09/01	
VOC											
1,1,1-Trichloroethane	(ug/L)	ND		ND		ND		ND		ND	
1,1-Dichloroethane	(ug/L)	ND		ND		ND		ND		0.70	J
1,2-Dichloroethane	(ug/L)	ND		ND		ND		ND		ND	
Acetone	(ug/L)	ND		ND		ND		ND		ND	
Benzene	(ug/L)	ND		ND		ND		ND		ND	
Carbon tetrachloride	(ug/L)	ND		1.4	=	ND		0.57	J	ND	
Chlorobenzene	(ug/L)	ND		ND		ND		ND		ND	
Chloroform	(ug/L)	ND		ND		ND		1.4	=	ND	
Ethylbenzene	(ug/L)	ND		ND		ND		ND		ND	
Methylene chloride	(ug/L)	ND		ND		ND		ND		ND	
Tetrachloroethene	(ug/L)	9.7	=	ND		19	=	ND		ND	
Trichloroethene	(ug/L)	ND		6.3	=	ND		4.6	=	2.3	=
Vinyl chloride	(ug/L)	ND		ND		ND		ND		0.49	J
Xylenes (total)	(ug/L)	ND		ND		ND		ND		ND	
cis-1,2-Dichloroethene	(ug/L)	ND		ND		ND		ND		2.9	=
trans-1,2-Dichloroethene	(ug/L)	ND		ND		ND		ND		ND	

Wright-Patterson AFB
April 2001 - Basewide VOC's Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-OU4-01C-084-0401		LTM-OU4-MW-02A-0401		LTM-OU4-MW-02B-0401		LTM-OU4-MW-03B-0401		LTM-OU4-MW-03C-0401	
Sample Date		04/09/01		04/09/01		04/09/01		04/16/01		04/09/01	
VOC											
1,1,1-Trichloroethane	(ug/L)	ND		ND		2.5	=	1.1	=	1.3	=
1,1-Dichloroethane	(ug/L)	ND		0.36	J	ND		0.42	J	0.47	J
1,2-Dichloroethane	(ug/L)	ND		ND		ND		ND		ND	
Acetone	(ug/L)	ND		ND		ND		ND		ND	
Benzene	(ug/L)	ND		ND		ND		ND		ND	
Carbon tetrachloride	(ug/L)	ND		ND		ND		ND		ND	
Chlorobenzene	(ug/L)	ND		ND		ND		0.44	J	0.98	J
Chloroform	(ug/L)	ND		ND		ND		ND		ND	
Ethylbenzene	(ug/L)	ND		ND		ND		ND		ND	
Methylene chloride	(ug/L)	ND		ND		ND		ND		ND	
Tetrachloroethene	(ug/L)	ND		ND		ND		ND		ND	
Trichloroethene	(ug/L)	ND		2.3	=	12	=	7.4	=	6.3	=
Vinyl chloride	(ug/L)	ND		ND		ND		ND		ND	
Xylenes (total)	(ug/L)	ND		ND		ND		ND		ND	
cis-1,2-Dichloroethene	(ug/L)	0.27	J	6.2	=	0.84	=	0.94	=	1.0	=
trans-1,2-Dichloroethene	(ug/L)	ND		ND		ND		ND		ND	

Wright-Patterson AFB
April 2001 - Basewide VOC's Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-OU4-MW-04A-0401		LTM-OU4-MW-12B-0401		LTM-OU8-MW-02S-0401		LTM-P6-1-0401		LTM-P6-2-0401	
Sample Date		04/11/01		04/09/01		04/11/01		04/11/01		04/11/01	
VOC											
1,1,1-Trichloroethane	(ug/L)	ND		1.2	=	ND		ND		ND	
1,1-Dichloroethane	(ug/L)	ND		ND		1.3	=	ND		ND	
1,2-Dichloroethane	(ug/L)	ND		ND		ND		ND		ND	
Acetone	(ug/L)	ND		ND		ND		ND		ND	
Benzene	(ug/L)	ND		ND		ND		ND		ND	
Carbon tetrachloride	(ug/L)	ND		ND		ND		ND		ND	
Chlorobenzene	(ug/L)	0.35	J	ND		ND		3.0	=	1.9	=
Chloroform	(ug/L)	ND		ND		ND		ND		ND	
Ethylbenzene	(ug/L)	ND		ND		ND		ND		ND	
Methylene chloride	(ug/L)	ND		ND		ND		ND		ND	
Tetrachloroethene	(ug/L)	ND		5.7	=	ND		ND		ND	
Trichloroethene	(ug/L)	ND		6.9	=	ND		ND		ND	
Vinyl chloride	(ug/L)	ND		ND		ND		ND		ND	
Xylenes (total)	(ug/L)	ND		ND		ND		ND		ND	
cis-1,2-Dichloroethene	(ug/L)	ND		0.86	=	0.18	J	ND		ND	
trans-1,2-Dichloroethene	(ug/L)	ND		ND		ND		ND		ND	

Wright-Patterson AFB
April 2001 - Basewide VOC's Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-SP11-MW01-0401		LTM-SP11-MW02-0401		LTM-SP11-MW03-0401		LTM-SP11-MW07-0401		LTM-SP11-MW08-0401	
Sample Date		04/19/01		04/20/01		04/16/01		04/23/01		04/16/01	
VOC											
1,1,1-Trichloroethane	(ug/L)	ND		ND		ND		ND		ND	
1,1-Dichloroethane	(ug/L)	ND		ND		ND		ND		0.35	J
1,2-Dichloroethane	(ug/L)	ND		ND		ND		ND		ND	
Acetone	(ug/L)	ND		ND		ND		69	J	ND	
Benzene	(ug/L)	ND		ND		ND		ND		0.41	J
Carbon tetrachloride	(ug/L)	ND		ND		ND		ND		ND	
Chlorobenzene	(ug/L)	ND		ND		ND		ND		ND	
Chloroform	(ug/L)	ND		ND		ND		ND		ND	
Ethylbenzene	(ug/L)	ND		ND		ND		ND		ND	
Methylene chloride	(ug/L)	ND		ND		ND		12	J,B	ND	
Tetrachloroethene	(ug/L)	ND		ND		ND		ND		ND	
Trichloroethene	(ug/L)	ND		0.34	J	74	=	57	=	ND	
Vinyl chloride	(ug/L)	17	=	0.48	J	120	=	54	=	11	=
Xylenes (total)	(ug/L)	ND		ND		ND		ND		ND	
cis-1,2-Dichloroethene	(ug/L)	6.4	=	3.3	=	170	=	570	=	18	=
trans-1,2-Dichloroethene	(ug/L)	2.6	=	0.35	J	5.2	=	26	=	3.1	=

Wright-Patterson AFB
April 2001 - Basewide VOC's Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-SP11-MW09-0401		LTM-TTW-02-0401	
Sample Date		04/20/01		04/19/01	
VOC					
1,1,1-Trichloroethane	(ug/L)	ND		ND	
1,1-Dichloroethane	(ug/L)	ND		ND	
1,2-Dichloroethane	(ug/L)	ND		ND	
Acetone	(ug/L)	ND		ND	
Benzene	(ug/L)	ND		ND	
Carbon tetrachloride	(ug/L)	ND		ND	
Chlorobenzene	(ug/L)	ND		ND	
Chloroform	(ug/L)	ND		ND	
Ethylbenzene	(ug/L)	ND		ND	
Methylene chloride	(ug/L)	ND		ND	
Tetrachloroethene	(ug/L)	ND		ND	
Trichloroethene	(ug/L)	4.6	=	16	=
Vinyl chloride	(ug/L)	4.0	=	ND	
Xylenes (total)	(ug/L)	ND		ND	
cis-1,2-Dichloroethene	(ug/L)	26	=	45	=
trans-1,2-Dichloroethene	(ug/L)	2.1	=	ND	

-- = Not Applicable, ND = Not Detected

Wright-Patterson AFB
April 2001 - B59 Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-B59-MW-02-0401		LTM-B59-MW-03-0401	
Sample Date		04/11/01		04/11/01	
VOC					
1,2-Dichloroethane	(ug/L)	3.6	J	ND	
Trichloroethene	(ug/L)	43	=	150	=
Vinyl chloride	(ug/L)	14	=	39	=
cis-1,2-Dichloroethene	(ug/L)	110	=	320	=
trans-1,2-Dichloroethene	(ug/L)	1.9	J	13	=

-- = Not Applicable, ND = Not Detected

Wright-Patterson AFB
April 2001 - Basewide VOC's Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-05-DM-123D-0401		LTM-05-DM-123I-0401		LTM-05-DM-123S-0401		LTM-07-520-M-0401		LTM-23-578-M-0401	
Sample Date		04/10/01		04/10/01		04/16/01		04/23/01		04/10/01	
VOC											
1,1,1-Trichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1,2,2-Tetrachloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1,2-Trichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1-Dichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1-Dichloroethene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,2-Dichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,2-Dichloropropane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
2-Butanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
2-Hexanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
4-Methyl-2-pentanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
Acetone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
Benzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromodichloromethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromoform	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromomethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Carbon disulfide	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Carbon tetrachloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Chlorobenzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.9	=	1.0	ND
Chloroethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Chloroform	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Chloromethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Dibromochloromethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Ethylbenzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Methyl tert-butyl ether	(ug/L)	5.0	ND	5.0	ND	5.0	ND	5.0	ND	5.0	ND
Methylene chloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Styrene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Tetrachloroethene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	3.8	=
Toluene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Trichloroethene	(ug/L)	2.0	ND	1.9	J	2.5	=	2.0	ND	15	=
Vinyl chloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Xylenes (total)	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
cis-1,2-Dichloroethene	(ug/L)	0.50	ND	0.25	J	0.92	=	0.37	J	0.50	ND
cis-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
trans-1,2-Dichloroethene	(ug/L)	0.50	ND	0.50	ND	0.50	ND	0.50	ND	0.50	ND
trans-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND

Wright-Patterson AFB
April 2001 - Basewide VOC's Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-BS5-P-1-0401		LTM-BS5-P-2-0401		LTM-BS5-P3-0401		LTM-BS5-P4-0401		LTM-BS5-P4-5401	
Sample Date		04/19/01		04/19/01		04/19/01		04/20/01		04/20/01	
VOC											
1,1,1-Trichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1,2,2-Tetrachloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1,2-Trichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1-Dichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1-Dichloroethene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,2-Dichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,2-Dichloropropane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
2-Butanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
2-Hexanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
4-Methyl-2-pentanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
Acetone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
Benzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromodichloromethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromoform	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromomethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Carbon disulfide	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Carbon tetrachloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Chlorobenzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Chloroethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Chloroform	(ug/L)	1.0	ND	1.0	ND	1.4	=	0.80	J	0.78	J
Chloromethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Dibromochloromethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Ethylbenzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Methyl tert-butyl ether	(ug/L)	5.0	ND	5.0	ND	5.0	ND	5.0	ND	5.0	ND
Methylene chloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Styrene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Tetrachloroethene	(ug/L)	0.38	J	1.0	ND	19	=	17	=	17	=
Toluene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Trichloroethene	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Vinyl chloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Xylenes (total)	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
cis-1,2-Dichloroethene	(ug/L)	0.50	ND	0.50	ND	0.50	ND	0.50	ND	0.50	ND
cis-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
trans-1,2-Dichloroethene	(ug/L)	0.50	ND	0.50	ND	0.50	ND	0.50	ND	0.50	ND
trans-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND

Wright-Patterson AFB
April 2001 - Basewide VOC's Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-BS6-P1-0401		LTM-BS6-P2-0401		LTM-CHP4-MW01-0401		LTM-CW03-77-0401		LTM-CW04-060-0401	
Sample Date		04/20/01		04/20/01		04/10/01		04/16/01		04/10/01	
VOC											
1,1,1-Trichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1,2,2-Tetrachloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1,2-Trichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1-Dichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1-Dichloroethene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,2-Dichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,2-Dichloropropane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
2-Butanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
2-Hexanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
4-Methyl-2-pentanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
Acetone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
Benzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromodichloromethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromoform	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromomethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Carbon disulfide	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Carbon tetrachloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Chlorobenzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Chloroethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Chloroform	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Chloromethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Dibromochloromethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Ethylbenzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Methyl tert-butyl ether	(ug/L)	5.0	ND	5.0	ND	5.0	ND	5.0	ND	5.0	ND
Methylene chloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Styrene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Tetrachloroethene	(ug/L)	1.0	ND	1.0	ND	11	=	1.1	=	1.0	ND
Toluene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Trichloroethene	(ug/L)	2.0	ND	2.0	ND	1.8	J	2.4	=	2.0	ND
Vinyl chloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Xylenes (total)	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
cis-1,2-Dichloroethene	(ug/L)	0.50	ND	0.50	ND	0.50	ND	0.50	ND	1.2	=
cis-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
trans-1,2-Dichloroethene	(ug/L)	0.50	ND	0.50	ND	0.50	ND	0.50	ND	0.50	ND
trans-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND

Wright-Patterson AFB
April 2001 - Basewide VOC's Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-CW05-055-0401		LTM-CW05-055-5401		LTM-CW05-085-0401		LTM-CW05-085-0401 R2		LTM-CW07-055-0401	
Sample Date		04/09/01		04/09/01		04/10/01		04/10/01		04/09/01	
VOC											
1,1,1-Trichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	2.0	ND	1.0	ND
1,1,2,2-Tetrachloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	2.0	ND	1.0	ND
1,1,2-Trichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	2.0	ND	1.0	ND
1,1-Dichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	2.0	ND	1.0	ND
1,1-Dichloroethene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	2.0	ND	1.0	ND
1,2-Dichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	2.0	ND	1.0	ND
1,2-Dichloropropane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	2.0	ND	1.0	ND
2-Butanone	(ug/L)	10	ND	10	ND	10	ND	20	ND	10	ND
2-Hexanone	(ug/L)	10	ND	10	ND	10	ND	20	ND	10	ND
4-Methyl-2-pentanone	(ug/L)	10	ND	10	ND	10	ND	20	ND	10	ND
Acetone	(ug/L)	10	ND	10	ND	10	ND	20	ND	10	ND
Benzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	2.0	ND	1.0	ND
Bromodichloromethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	2.0	ND	1.0	ND
Bromoform	(ug/L)	1.0	ND	1.0	ND	1.0	ND	2.0	ND	1.0	ND
Bromomethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	4.0	ND	2.0	ND
Carbon disulfide	(ug/L)	1.0	ND	1.0	ND	1.0	ND	2.0	ND	1.0	ND
Carbon tetrachloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	2.0	ND	1.0	ND
Chlorobenzene	(ug/L)	1.3	=	1.4	=	1.0	ND	2.0	ND	1.0	ND
Chloroethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	4.0	ND	2.0	ND
Chloroform	(ug/L)	1.0	ND	1.0	ND	1.0	ND	2.0	ND	1.0	ND
Chloromethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	4.0	ND	2.0	ND
Dibromochloromethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	2.0	ND	1.0	ND
Ethylbenzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	2.0	ND	1.0	ND
Methyl tert-butyl ether	(ug/L)	5.0	ND	5.0	ND	5.0	ND	10	ND	5.0	ND
Methylene chloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	2.0	ND	1.0	ND
Styrene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	2.0	ND	1.0	ND
Tetrachloroethene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	2.0	ND	1.0	ND
Toluene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	2.0	ND	1.0	ND
Trichloroethene	(ug/L)	13	=	13	=	76	E	67	=	2.0	ND
Vinyl chloride	(ug/L)	1.9	=	2.0	=	0.39	J	2.0	ND	1.0	ND
Xylenes (total)	(ug/L)	1.0	ND	1.0	ND	1.0	ND	2.0	ND	1.0	ND
cis-1,2-Dichloroethene	(ug/L)	21	=	21	=	7.1	=	6.3	=	0.50	ND
cis-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	2.0	ND	1.0	ND
trans-1,2-Dichloroethene	(ug/L)	0.54	=	0.54	=	0.57	=	0.50	J	0.50	ND
trans-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	2.0	ND	1.0	ND

Wright-Patterson AFB
April 2001 - Basewide VOC's Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-CW10-055-0401		LTM-CW15-055-0401		LTM-EFD04-MW06-0401		LTM-EFD09-M575-0401		LTM-EFDZ2-MW03-0401	
Sample Date		04/09/01		04/19/01		04/12/01		04/12/01		04/19/01	
VOC											
1,1,1-Trichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1,2,2-Tetrachloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1,2-Trichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1-Dichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1-Dichloroethene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,2-Dichloroethane	(ug/L)	1.0	ND	1.0	ND	12	=	1.0	ND	1.0	ND
1,2-Dichloropropane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
2-Butanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
2-Hexanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
4-Methyl-2-pentanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
Acetone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
Benzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromodichloromethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromoform	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromomethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Carbon disulfide	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Carbon tetrachloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Chlorobenzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Chloroethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Chloroform	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Chloromethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Dibromochloromethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Ethylbenzene	(ug/L)	1.0	ND	0.46	J	1.0	ND	1.0	ND	1.0	ND
Methyl tert-butyl ether	(ug/L)	5.0	ND	5.0	ND	5.0	ND	5.0	ND	5.0	ND
Methylene chloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Styrene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Tetrachloroethene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	2.8	=	1.0	ND
Toluene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Trichloroethene	(ug/L)	1.0	J	2.0	ND	0.48	J	2.3	=	0.40	J
Vinyl chloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.6	=	1.0	ND
Xylenes (total)	(ug/L)	1.0	ND	1.0	ND	1.6	=	1.0	ND	1.0	ND
cis-1,2-Dichloroethene	(ug/L)	0.50	ND	0.50	ND	0.22	J	6.7	=	0.18	J
cis-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
trans-1,2-Dichloroethene	(ug/L)	0.50	ND	0.50	ND	0.50	ND	0.50	ND	0.50	ND
trans-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND

Wright-Patterson AFB
April 2001 - Basewide VOC's Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-FTA2:MW02C-0401		LTM-GR-330-0401		LTM-GR-333-0401		LTM-GR-333-5401		LTM-GR-334-0401	
Sample Date		04/18/01		04/11/01		04/18/01		04/18/01		04/18/01	
VOC											
1,1,1-Trichloroethane	(ug/L)	1.0	ND	1.0	ND	0.39	J	0.36	J	1.0	ND
1,1,2,2-Tetrachloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1,2-Trichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1-Dichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1-Dichloroethene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,2-Dichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,2-Dichloropropane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
2-Butanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
2-Hexanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
4-Methyl-2-pentanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
Acetone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
Benzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromodichloromethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromoform	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromomethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Carbon disulfide	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Carbon tetrachloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Chlorobenzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Chloroethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Chloroform	(ug/L)	1.0	ND	1.0	ND	1.4	=	1.4	=	1.0	ND
Chloromethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Dibromochloromethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Ethylbenzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Methyl tert-butyl ether	(ug/L)	5.0	ND	5.0	ND	5.0	ND	5.0	ND	5.0	ND
Methylene chloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Styrene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Tetrachloroethene	(ug/L)	1.0	ND	5.5	=	0.74	J	0.71	J	1.0	ND
Toluene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Trichloroethene	(ug/L)	2.0	ND	2.0	ND	3.3	=	3.2	=	2.0	ND
Vinyl chloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Xylenes (total)	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
cis-1,2-Dichloroethene	(ug/L)	0.50	ND	0.50	ND	0.50	ND	0.50	ND	0.50	ND
cis-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
trans-1,2-Dichloroethene	(ug/L)	0.50	ND	0.50	ND	0.50	ND	0.50	ND	0.50	ND
trans-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND

Wright-Patterson AFB
April 2001 - Basewide VOC's Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-HD-11-0401		LTM-HD-12M-0401		LTM-HD-12S-0401		LTM-HD-13S-0401		LTM-HD-13S-AMB01	
Sample Date		04/10/01		04/10/01		04/10/01		04/11/01		04/11/01	
VOC											
1,1,1-Trichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1,2,2-Tetrachloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1,2-Trichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1-Dichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1-Dichloroethene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,2-Dichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,2-Dichloropropane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
2-Butanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
2-Hexanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
4-Methyl-2-pentanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
Acetone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
Benzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromodichloromethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromoform	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromomethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Carbon disulfide	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Carbon tetrachloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Chlorobenzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Chloroethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Chloroform	(ug/L)	1.0	ND	1.0	ND	0.37	J	1.0	ND	5.3	=
Chloromethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Dibromochloromethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Ethylbenzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Methyl tert-butyl ether	(ug/L)	5.0	ND	5.0	ND	5.0	ND	5.0	ND	5.0	ND
Methylene chloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Styrene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Tetrachloroethene	(ug/L)	1.0	ND	1.0	ND	2.1	=	1.0	ND	1.0	ND
Toluene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Trichloroethene	(ug/L)	7.0	=	0.96	J	0.74	J	2.0	ND	2.0	ND
Vinyl chloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.9	=	1.0	ND
Xylenes (total)	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
cis-1,2-Dichloroethene	(ug/L)	16	=	0.50	ND	0.50	ND	8.4	=	0.50	ND
cis-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
trans-1,2-Dichloroethene	(ug/L)	0.54	=	0.50	ND	0.50	ND	0.50	ND	0.50	ND
trans-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND

Wright-Patterson AFB
April 2001 - Basewide VOC's Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-LF12-MW15A-0401		LTM-MAD-MON127-0401		LTM-MW131M-0401		LTM-MW131S-0401		LTM-MW132S-0401	
Sample Date		04/16/01		04/11/01		04/10/01		04/10/01		04/10/01	
VOC											
1,1,1-Trichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1,2,2-Tetrachloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1,2-Trichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1-Dichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1-Dichloroethene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,2-Dichloroethane	(ug/L)	1.0	ND	3.0	=	1.0	ND	1.0	ND	1.0	ND
1,2-Dichloropropane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
2-Butanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
2-Hexanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
4-Methyl-2-pentanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
Acetone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
Benzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromodichloromethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromoform	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromomethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Carbon disulfide	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Carbon tetrachloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Chlorobenzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Chloroethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Chloroform	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Chloromethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Dibromochloromethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Ethylbenzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Methyl tert-butyl ether	(ug/L)	5.0	ND	5.0	ND	5.0	ND	5.0	ND	5.0	ND
Methylene chloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Styrene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Tetrachloroethene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.8	=	4.0	=
Toluene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Trichloroethene	(ug/L)	2.4	=	2.0	ND	2.0	ND	1.0	J	31	=
Vinyl chloride	(ug/L)	1.0	ND	1.0	ND	12	=	1.0	ND	1.0	ND
Xylenes (total)	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
cis-1,2-Dichloroethene	(ug/L)	0.41	J	26	=	6.7	=	2.3	=	4.0	=
cis-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
trans-1,2-Dichloroethene	(ug/L)	0.50	ND	0.88	=	0.50	ND	0.50	ND	0.50	ND
trans-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND

Wright-Patterson AFB
April 2001 - Basewide VOC's Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-MW132S-5401		LTM-NEA-MW27-3I-0401		LTM-NEA-MW34-2S-0401		LTM-NEA-MW37-1D-0401		LTM-OU10-MW-03S-0401	
Sample Date		04/10/01		04/16/01		04/17/01		04/18/01		04/11/01	
VOC											
1,1,1-Trichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1,2,2-Tetrachloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1,2-Trichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1-Dichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1-Dichloroethene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,2-Dichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,2-Dichloropropane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
2-Butanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
2-Hexanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
4-Methyl-2-pentanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
Acetone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
Benzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromodichloromethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromoform	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromomethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Carbon disulfide	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Carbon tetrachloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Chlorobenzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Chloroethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Chloroform	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Chloromethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Dibromochloromethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Ethylbenzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Methyl tert-butyl ether	(ug/L)	5.0	ND	5.0	ND	5.0	ND	5.0	ND	5.0	ND
Methylene chloride	(ug/L)	1.0	ND	0.36	J	1.0	ND	1.0	ND	1.0	ND
Styrene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Tetrachloroethene	(ug/L)	4.1	=	16	=	1.0	ND	1.0	ND	7.9	=
Toluene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Trichloroethene	(ug/L)	31	=	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Vinyl chloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Xylenes (total)	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
cis-1,2-Dichloroethene	(ug/L)	3.8	=	0.50	ND	0.50	ND	0.50	ND	0.50	ND
cis-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
trans-1,2-Dichloroethene	(ug/L)	0.50	ND	0.50	ND	0.50	ND	0.50	ND	0.50	ND
trans-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND

Wright-Patterson AFB
April 2001 - Basewide VOC's Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-OU10-MW-06D-0401		LTM-OU10-MW-06S-0401		LTM-OU10-MW-06S-5401		LTM-OU10-MW-11D-0401		LTM-OU10-MW-11S-0401	
Sample Date		04/11/01		04/11/01		04/11/01		04/16/01		04/16/01	
VOC											
1,1,1-Trichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1,2,2-Tetrachloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1,2-Trichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1-Dichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1-Dichloroethene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,2-Dichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,2-Dichloropropane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
2-Butanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
2-Hexanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
4-Methyl-2-pentanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
Acetone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
Benzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromodichloromethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromoform	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromomethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Carbon disulfide	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Carbon tetrachloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Chlorobenzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Chloroethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Chloroform	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Chloromethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Dibromochloromethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Ethylbenzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Methyl tert-butyl ether	(ug/L)	5.0	ND	5.0	ND	5.0	ND	5.0	ND	5.0	ND
Methylene chloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	0.34	J	1.0	ND
Styrene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Tetrachloroethene	(ug/L)	2.6	=	1.0	ND	1.0	ND	0.42	J	9.7	=
Toluene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Trichloroethene	(ug/L)	2.0	ND	8.5	=	8.9	=	1.9	J	2.0	ND
Vinyl chloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Xylenes (total)	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
cis-1,2-Dichloroethene	(ug/L)	0.50	ND	0.50	ND	0.50	ND	0.50	ND	0.50	ND
cis-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
trans-1,2-Dichloroethene	(ug/L)	0.50	ND	0.50	ND	0.50	ND	0.50	ND	0.50	ND
trans-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND

Wright-Patterson AFB
April 2001 - Basewide VOC's Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-OU10-MW-21S-0401		LTM-OU10-MW-25S-0401		LTM-OU10-MW19D-0401		LTM-OU4-01B-60-0401		LTM-OU4-01C-084-0401	
Sample Date		04/18/01		04/12/01		04/10/01		04/09/01		04/09/01	
VOC											
1,1,1-Trichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1,2,2-Tetrachloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1,2-Trichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1-Dichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	0.70	J	1.0	ND
1,1-Dichloroethene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,2-Dichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,2-Dichloropropane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
2-Butanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
2-Hexanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
4-Methyl-2-pentanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
Acetone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
Benzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromodichloromethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromoform	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromomethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Carbon disulfide	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Carbon tetrachloride	(ug/L)	1.4	=	1.0	ND	0.57	J	1.0	ND	1.0	ND
Chlorobenzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Chloroethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Chloroform	(ug/L)	1.0	ND	1.0	ND	1.4	=	1.0	ND	1.0	ND
Chloromethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Dibromochloromethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Ethylbenzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Methyl tert-butyl ether	(ug/L)	5.0	ND	5.0	ND	5.0	ND	5.0	ND	5.0	ND
Methylene chloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Styrene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Tetrachloroethene	(ug/L)	1.0	ND	19	=	1.0	ND	1.0	ND	1.0	ND
Toluene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Trichloroethene	(ug/L)	6.3	=	2.0	ND	4.6	=	2.3	=	2.0	ND
Vinyl chloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	0.49	J	1.0	ND
Xylenes (total)	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
cis-1,2-Dichloroethene	(ug/L)	0.50	ND	0.50	ND	0.50	ND	2.9	=	0.27	J
cis-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
trans-1,2-Dichloroethene	(ug/L)	0.50	ND	0.50	ND	0.50	ND	0.50	ND	0.50	ND
trans-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND

Wright-Patterson AFB
April 2001 - Basewide VOC's Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-OU4-MW-02A-0401		LTM-OU4-MW-02B-0401		LTM-OU4-MW-03B-0401		LTM-OU4-MW-03C-0401		LTM-OU4-MW-04A-0401	
Sample Date		04/09/01		04/09/01		04/16/01		04/09/01		04/11/01	
VOC											
1,1,1-Trichloroethane	(ug/L)	1.0	ND	2.5	=	1.1	=	1.3	=	1.0	ND
1,1,2,2-Tetrachloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1,2-Trichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1-Dichloroethane	(ug/L)	0.36	J	1.0	ND	0.42	J	0.47	J	1.0	ND
1,1-Dichloroethene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,2-Dichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,2-Dichloropropane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
2-Butanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
2-Hexanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
4-Methyl-2-pentanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
Acetone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
Benzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromodichloromethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromoform	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromomethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Carbon disulfide	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Carbon tetrachloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Chlorobenzene	(ug/L)	1.0	ND	1.0	ND	0.44	J	0.98	J	0.35	J
Chloroethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Chloroform	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Chloromethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Dibromochloromethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Ethylbenzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Methyl tert-butyl ether	(ug/L)	5.0	ND	5.0	ND	5.0	ND	5.0	ND	5.0	ND
Methylene chloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Styrene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Tetrachloroethene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Toluene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Trichloroethene	(ug/L)	2.3	=	12	=	7.4	=	6.3	=	2.0	ND
Vinyl chloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Xylenes (total)	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
cis-1,2-Dichloroethene	(ug/L)	6.2	=	0.84	=	0.94	=	1.0	=	0.50	ND
cis-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
trans-1,2-Dichloroethene	(ug/L)	0.50	ND	0.50	ND	0.50	ND	0.50	ND	0.50	ND
trans-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND

Wright-Patterson AFB
April 2001 - Basewide VOC's Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-OU4-MW-12B-0401		LTM-OU8-MW-02S-0401		LTM-P6-1-0401		LTM-P6-2-0401		LTM-SP11-MW01-0401	
Sample Date		04/09/01		04/11/01		04/11/01		04/11/01		04/19/01	
VOC											
1,1,1-Trichloroethane	(ug/L)	1.2	=	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1,2,2-Tetrachloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1,2-Trichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,1-Dichloroethane	(ug/L)	1.0	ND	1.3	=	1.0	ND	1.0	ND	1.0	ND
1,1-Dichloroethene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,2-Dichloroethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
1,2-Dichloropropane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
2-Butanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
2-Hexanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
4-Methyl-2-pentanone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
Acetone	(ug/L)	10	ND	10	ND	10	ND	10	ND	10	ND
Benzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromodichloromethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromoform	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Bromomethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Carbon disulfide	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Carbon tetrachloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Chlorobenzene	(ug/L)	1.0	ND	1.0	ND	3.0	=	1.9	=	1.0	ND
Chloroethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Chloroform	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Chloromethane	(ug/L)	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Dibromochloromethane	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Ethylbenzene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Methyl tert-butyl ether	(ug/L)	5.0	ND	5.0	ND	5.0	ND	5.0	ND	5.0	ND
Methylene chloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Styrene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Tetrachloroethene	(ug/L)	5.7	=	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Toluene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Trichloroethene	(ug/L)	6.9	=	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Vinyl chloride	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	17	=
Xylenes (total)	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
cis-1,2-Dichloroethene	(ug/L)	0.86	=	0.18	J	0.50	ND	0.50	ND	6.4	=
cis-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
trans-1,2-Dichloroethene	(ug/L)	0.50	ND	0.50	ND	0.50	ND	0.50	ND	2.6	=
trans-1,3-Dichloropropene	(ug/L)	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND

Wright-Patterson AFB
April 2001 - Basewide VOC's Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-SP11-MW02-0401		LTM-SP11-MW03-0401		LTM-SP11-MW07-0401		LTM-SP11-MW08-0401		LTM-SP11-MW09-0401	
Sample Date		04/20/01		04/16/01		04/23/01		04/16/01		04/20/01	
VOC											
1,1,1-Trichloroethane	(ug/L)	1.0	ND	10	ND	20	ND	1.0	ND	1.0	ND
1,1,2,2-Tetrachloroethane	(ug/L)	1.0	ND	10	ND	20	ND	1.0	ND	1.0	ND
1,1,2-Trichloroethane	(ug/L)	1.0	ND	10	ND	20	ND	1.0	ND	1.0	ND
1,1-Dichloroethane	(ug/L)	1.0	ND	10	ND	20	ND	0.35	J	1.0	ND
1,1-Dichloroethene	(ug/L)	1.0	ND	10	ND	20	ND	1.0	ND	1.0	ND
1,2-Dichloroethane	(ug/L)	1.0	ND	10	ND	20	ND	1.0	ND	1.0	ND
1,2-Dichloropropane	(ug/L)	1.0	ND	10	ND	20	ND	1.0	ND	1.0	ND
2-Butanone	(ug/L)	10	ND	100	ND	200	ND	10	ND	10	ND
2-Hexanone	(ug/L)	10	ND	100	ND	200	ND	10	ND	10	ND
4-Methyl-2-pentanone	(ug/L)	10	ND	100	ND	200	ND	10	ND	10	ND
Acetone	(ug/L)	10	ND	100	ND	69	J	10	ND	10	ND
Benzene	(ug/L)	1.0	ND	10	ND	20	ND	0.41	J	1.0	ND
Bromodichloromethane	(ug/L)	1.0	ND	10	ND	20	ND	1.0	ND	1.0	ND
Bromoform	(ug/L)	1.0	ND	10	ND	20	ND	1.0	ND	1.0	ND
Bromomethane	(ug/L)	2.0	ND	20	ND	40	ND	2.0	ND	2.0	ND
Carbon disulfide	(ug/L)	1.0	ND	10	ND	20	ND	1.0	ND	1.0	ND
Carbon tetrachloride	(ug/L)	1.0	ND	10	ND	20	ND	1.0	ND	1.0	ND
Chlorobenzene	(ug/L)	1.0	ND	10	ND	20	ND	1.0	ND	1.0	ND
Chloroethane	(ug/L)	2.0	ND	20	ND	40	ND	2.0	ND	2.0	ND
Chloroform	(ug/L)	1.0	ND	10	ND	20	ND	1.0	ND	1.0	ND
Chloromethane	(ug/L)	2.0	ND	20	ND	40	ND	2.0	ND	2.0	ND
Dibromochloromethane	(ug/L)	1.0	ND	10	ND	20	ND	1.0	ND	1.0	ND
Ethylbenzene	(ug/L)	1.0	ND	10	ND	20	ND	1.0	ND	1.0	ND
Methyl tert-butyl ether	(ug/L)	5.0	ND	50	ND	100	ND	5.0	ND	5.0	ND
Methylene chloride	(ug/L)	1.0	ND	10	ND	12	J,B	1.0	ND	1.0	ND
Styrene	(ug/L)	1.0	ND	10	ND	20	ND	1.0	ND	1.0	ND
Tetrachloroethene	(ug/L)	1.0	ND	10	ND	20	ND	1.0	ND	1.0	ND
Toluene	(ug/L)	1.0	ND	10	ND	20	ND	1.0	ND	1.0	ND
Trichloroethene	(ug/L)	0.34	J	74	=	57	=	2.0	ND	4.6	=
Vinyl chloride	(ug/L)	0.48	J	120	=	54	=	11	=	4.0	=
Xylenes (total)	(ug/L)	1.0	ND	10	ND	20	ND	1.0	ND	1.0	ND
cis-1,2-Dichloroethene	(ug/L)	3.3	=	170	=	570	=	18	=	26	=
cis-1,3-Dichloropropene	(ug/L)	1.0	ND	10	ND	20	ND	1.0	ND	1.0	ND
trans-1,2-Dichloroethene	(ug/L)	0.35	J	5.2	=	26	=	3.1	=	2.1	=
trans-1,3-Dichloropropene	(ug/L)	1.0	ND	10	ND	20	ND	1.0	ND	1.0	ND

Wright-Patterson AFB
April 2001 - Basewide VOC's Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-TTW-02-0401
Sample Date		04/19/01
VOC		
1,1,1-Trichloroethane	(ug/L)	2.0 ND
1,1,2,2-Tetrachloroethane	(ug/L)	2.0 ND
1,1,2-Trichloroethane	(ug/L)	2.0 ND
1,1-Dichloroethane	(ug/L)	2.0 ND
1,1-Dichloroethene	(ug/L)	2.0 ND
1,2-Dichloroethane	(ug/L)	2.0 ND
1,2-Dichloropropane	(ug/L)	2.0 ND
2-Butanone	(ug/L)	20 ND
2-Hexanone	(ug/L)	20 ND
4-Methyl-2-pentanone	(ug/L)	20 ND
Acetone	(ug/L)	20 ND
Benzene	(ug/L)	2.0 ND
Bromodichloromethane	(ug/L)	2.0 ND
Bromoform	(ug/L)	2.0 ND
Bromomethane	(ug/L)	4.0 ND
Carbon disulfide	(ug/L)	2.0 ND
Carbon tetrachloride	(ug/L)	2.0 ND
Chlorobenzene	(ug/L)	2.0 ND
Chloroethane	(ug/L)	4.0 ND
Chloroform	(ug/L)	2.0 ND
Chloromethane	(ug/L)	4.0 ND
Dibromochloromethane	(ug/L)	2.0 ND
Ethylbenzene	(ug/L)	2.0 ND
Methyl tert-butyl ether	(ug/L)	10 ND
Methylene chloride	(ug/L)	2.0 ND
Styrene	(ug/L)	2.0 ND
Tetrachloroethene	(ug/L)	2.0 ND
Toluene	(ug/L)	2.0 ND
Trichloroethene	(ug/L)	16 =
Vinyl chloride	(ug/L)	2.0 ND
Xylenes (total)	(ug/L)	2.0 ND
cis-1,2-Dichloroethene	(ug/L)	45 =
cis-1,3-Dichloropropene	(ug/L)	2.0 ND
trans-1,2-Dichloroethene	(ug/L)	1.0 ND
trans-1,3-Dichloropropene	(ug/L)	2.0 ND

-- = Not Applicable, ND = Not Detected

Wright-Patterson AFB
April 2001 - B59 Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-B59-MW-01-0401		LTM-B59-MW-02-0401		LTM-B59-MW-03-0401	
Sample Date		04/11/01		04/11/01		04/11/01	
VOC							
1,1,1-Trichloroethane	(ug/L)	1.0	ND	5.0	ND	14	ND
1,1,2,2-Tetrachloroethane	(ug/L)	1.0	ND	5.0	ND	14	ND
1,1,2-Trichloroethane	(ug/L)	1.0	ND	5.0	ND	14	ND
1,1-Dichloroethane	(ug/L)	1.0	ND	5.0	ND	14	ND
1,1-Dichloroethene	(ug/L)	1.0	ND	5.0	ND	14	ND
1,2-Dichloroethane	(ug/L)	1.0	ND	3.6	J	14	ND
1,2-Dichloropropane	(ug/L)	1.0	ND	5.0	ND	14	ND
2-Butanone	(ug/L)	10	ND	50	ND	140	ND
2-Hexanone	(ug/L)	10	ND	50	ND	140	ND
4-Methyl-2-pentanone	(ug/L)	10	ND	50	ND	140	ND
Acetone	(ug/L)	10	ND	50	ND	140	ND
Benzene	(ug/L)	1.0	ND	5.0	ND	14	ND
Bromodichloromethane	(ug/L)	1.0	ND	5.0	ND	14	ND
Bromoform	(ug/L)	1.0	ND	5.0	ND	14	ND
Bromomethane	(ug/L)	2.0	ND	10	ND	29	ND
Carbon disulfide	(ug/L)	1.0	ND	5.0	ND	14	ND
Carbon tetrachloride	(ug/L)	1.0	ND	5.0	ND	14	ND
Chlorobenzene	(ug/L)	1.0	ND	5.0	ND	14	ND
Chloroethane	(ug/L)	2.0	ND	10	ND	29	ND
Chloroform	(ug/L)	1.0	ND	5.0	ND	14	ND
Chloromethane	(ug/L)	2.0	ND	10	ND	29	ND
Dibromochloromethane	(ug/L)	1.0	ND	5.0	ND	14	ND
Ethylbenzene	(ug/L)	1.0	ND	5.0	ND	14	ND
Methyl tert-butyl ether	(ug/L)	5.0	ND	25	ND	71	ND
Methylene chloride	(ug/L)	1.0	ND	5.0	ND	14	ND
Styrene	(ug/L)	1.0	ND	5.0	ND	14	ND
Tetrachloroethene	(ug/L)	1.0	ND	5.0	ND	14	ND
Toluene	(ug/L)	1.0	ND	5.0	ND	14	ND
Trichloroethene	(ug/L)	2.0	ND	43	=	150	=
Vinyl chloride	(ug/L)	1.0	ND	14	=	39	=
Xylenes (total)	(ug/L)	1.0	ND	5.0	ND	14	ND
cis-1,2-Dichloroethene	(ug/L)	0.50	ND	110	=	320	=
cis-1,3-Dichloropropene	(ug/L)	1.0	ND	5.0	ND	14	ND
trans-1,2-Dichloroethene	(ug/L)	0.50	ND	1.9	J	13	=
trans-1,3-Dichloropropene	(ug/L)	1.0	ND	5.0	ND	14	ND

-- = Not Applicable, ND = Not Detected

Appendix K

Basewide LTM Annual Metals Analytical Data

CASE NARRATIVE
A1D110130

The following report contains the analytical results for twenty-four water samples and one quality control sample submitted to STL North Canton by IT Corporation from the WPAFB, Ohio site. The samples were received April 11, 2001, 2001, according to documented sample acceptance procedures.

STL North Canton utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the Analytical Methods Summary page in accordance with the methods indicated. A summary of QC data for these analyses is included at the rear of the report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The samples were received at the North Canton laboratory at a temperature of 1.5° C.

GC/MS VOLATILES

Sample(s) that contain results between the MDL and the RL were flagged with "J". There is the possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

METALS

Serial dilution of a sample in this lot indicates that physical and chemical interferences were present. Refer to the sample report pages for the affected analytes.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

** for analyses run on TJA Trace ICP or GFAA only*

QUALITY CONTROL ELEMENTS OF SW-846 METHODS
(Continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample are spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If the surrogate recoveries are outside criteria for environmental or MS/MSD samples, the batch is acceptable if the Method Blank, LCS, and LCSD surrogate recoveries are within acceptance criteria. The only exception is if the surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank and the associated sample(s) are ND, the batch is acceptable. If the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide/PCB, PAH, and Herbicide methods, the surrogate criteria is that one of two surrogate compounds meet acceptance criteria.

ANALYTICAL METHODS SUMMARY

A1D110130

PARAMETER	ANALYTICAL METHOD
Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Mercury (Manual Cold Vapor Technique)	MCAWW 245.1
Trace Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Volatile Organics by GC/MS	SW846 8260B

References:

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

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

SAMPLE SUMMARY

A1D110130

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
EAN0Q	001	LTM-CW10-055-0401	04/09/01	12:5
EAN0R	002	LTM-OU4-MW02B-0401	04/09/01	15:0
EAN0T	003	LTM-OU4-MW02A-0401	04/09/01	15:5
EAN0V	004	LTM-MW131M-0401	04/10/01	10:4
EAN0W	005	LTM-MW131S-0401	04/10/01	11:5
EAN01	006	LTM-OU10-MW19D-0401	04/10/01	14:2
EAN03	007	LTM-23-578-M-0401	04/10/01	
EAN06	008	LTM-CW05-55-0401	04/09/01	12:3
EAN07	009	LTM-CW05-55-5401	04/09/01	12:3
EAN08	010	LTM-OU4-01B-60-0401	04/09/01	14:1
EAN1A	011	LTM-CW05-085-0401	04/10/01	10:0
EAN1C	012	LTM-CW04-60-0401	04/10/01	10:4
EAN1E	013	LTM-MW132S-0401	04/10/01	12:0
EAN1F	014	LTM-05-DM-123D-0401	04/10/01	14:2
EAN1G	015	LTM-05-DM-123I-0401	04/10/01	14:5
EAN1H	016	LTM-MW132S-5401	04/10/01	12:0
EAN1J	017	LTM-OU4-01C-084-0401	04/09/01	15:0
EAN1K	018	TB040901	04/09/01	08:0
EAN1L	019	LTM-CW07-055-0401	04/09/01	12:1
EAN1M	020	LTM-OU4-03C-0401	04/09/01	14:4
EAN1N	021	LTM-OU4-MW-12B-0401	04/09/01	15:5
EAN1P	022	LTM-HD-11-0401	04/10/01	10:2
EAN1Q	023	LTM-HD-12M-0401	04/10/01	12:1
EAN1R	024	LTM-HD-12S-0401	04/10/01	13:1
EAN1T	025	LTM-CHP4-MW01-0401	04/10/01	15:2

NOTE(S):

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

CASE NARRATIVE

A1D120244

The following report contains the analytical results for sixteen water samples and one quality control sample submitted to STL North Canton by IT Corporation from the WPAFB, Ohio site. The samples were received April 12, 2001, 2001, according to documented sample acceptance procedures.

STL North Canton utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the Analytical Methods Summary page in accordance with the methods indicated. A summary of QC data for these analyses is included at the rear of the report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The samples were received at the North Canton laboratory at a temperature of 1.6° C.

GC/MS VOLATILES

Sample(s) that contain results between the MDL and the RL were flagged with "J". There is the possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

** for analyses run on TJA Trace ICP or GFAA only*

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample are spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If the surrogate recoveries are outside criteria for environmental or MS/MSD samples, the batch is acceptable if the Method Blank, LCS, and LCSD surrogate recoveries are within acceptance criteria. The only exception is if the surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank and the associated sample(s) are ND, the batch is acceptable. If the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide/PCB, PAH, and Herbicide methods, the surrogate criteria is that one of two surrogate compounds meet acceptance criteria.

ANALYTICAL METHODS SUMMARY

A1D120244

PARAMETER	ANALYTICAL METHOD
Dissolved ICP Metals	MCAWW 200.7
Dissolved Mercury (CVAA)	MCAWW 245.1
Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Mercury (Manual Cold Vapor Technique)	MCAWW 245.1
Trace Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Volatile Organics by GC/MS	SW846 8260B

References:

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

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

SAMPLE SUMMARY

A1D120244

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAM TIM
EAQ8T	001	LTM-B59-MW-01-0401	04/11/01	11::
EAQ8X	002	LTM-B59-MW-02-0401	04/11/01	12::
EAQ81	003	LTM-B59-MW-03-0401	04/11/01	15:5
EAQ82	004	LTM-MAD-MON127-0401	04/11/01	09::
EAQ83	005	LTM-HD-13S-0401	04/11/01	10::
EAQ84	006	LTM-HD-13S-AMB01	04/11/01	10::
EAQ85	007	LTM-P6-1-0401	04/11/01	13::
EAQ87	008	LTM-P6-2-0401	04/11/01	14:5
EAQ88	009	TB-041101	04/11/01	08:0
EAQ9C	010	LTM-OU10-MW-03S-0401	04/11/01	09::
EAQ9J	011	LTM-GR-330-0401	04/11/01	10::
EAQ9K	012	LTM-OU8-MW-02S-0401	04/11/01	14::
EAQ9M	013	LTM-OU8-MW-02D-0401	04/11/01	15::
EAQ9X	014	LTM-OU10-MW-06D-0401	04/11/01	09::
EAQ93	015	LTM-OU10-MW-06S-0401	04/11/01	10:1
EAQ95	016	LTM-OU10-MW-06S-5401	04/11/01	10:1
EAQ96	017	LTM-OU~~10~~4-MW-04A-0401	04/11/01	11:4

NOTE(S): MC

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

CASE NARRATIVE
A1D130174

The following report contains the analytical results for twelve water samples submitted to STL North Canton by the IT Corporation – Cincinnati from the WPAFB, Ohio Site. The samples were received April 13, 2001, according to documented sample acceptance procedures.

STL North Canton utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the Analytical Methods Summary page in accordance with the methods indicated. A summary of QC data for these analyses is included in this report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 2.7° C. . The samples were received in wet ice.

GC/MS VOLATILES

Sample(s) that contain results between the MDL and the RL were flagged with "J". There is the possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

** for analyses run on TJA Trace ICP or GFAA only*

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample are spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If the surrogate recoveries are outside criteria for environmental or MS/MSD samples, the batch is acceptable if the Method Blank, LCS, and LCSD surrogate recoveries are within acceptance criteria. The only exception is if the surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank and the associated sample(s) are ND, the batch is acceptable. If the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide/PCB, PAH, and Herbicide methods, the surrogate criteria is that one of two surrogate compounds meet acceptance criteria.

ANALYTICAL METHODS SUMMARY

A1D130174

PARAMETER	ANALYTICAL METHOD
Dissolved ICP Metals	MCAWW 200.7
Dissolved Mercury (CVAA)	MCAWW 245.1
Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Mercury (Manual Cold Vapor Technique)	MCAWW 245.1
Trace Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Volatile Organics by GC/MS	SW846 8260B

References:

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

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

SAMPLE SUMMARY

A1D130174

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
EATTG	001	LTM-EFD09-M575-0401	04/12/01	09:4
EATTL	002	LTM-EFD04-MW06-0401	04/12/01	11:1
EATTM	003	LTM-OU10-25-584-M-0401	04/12/01	14:5
EATTQ	004	LTM-OU10-25-582-M-0401	04/12/01	15:3
EATTR	005	LTM-25-583-M-0401	04/12/01	14:3
EATTV	006	LTM-25-582-M-5401	04/12/01	13:3
EATTW	007	LTM-OU10-MW-25S-0401	04/12/01	11:5
EATT1	008	LTM-OU10-MW10I-0401	04/12/01	15:4
EATT4	009	TB041201	04/12/01	08:0
EATT6	010	LTM-OU8-MW23D-0401	04/12/01	09:2
EATT8	011	LTM-EFDZ3-MW02-0401	04/12/01	11:1
EATT9	012	LTM-WP-NEA-MW24-2S-0401	04/12/01	16:1

NOTE(S):

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

CASE NARRATIVE
A1D200286

The following report contains the analytical results for ten water samples and one quality control sample submitted to STL North Canton by IT Corporation from the WPAFB, OH Site. The samples were received April 17, 2001, 2001, according to documented sample acceptance procedures.

STL North Canton utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the Analytical Methods Summary page in accordance with the methods indicated. A summary of QC data for these analyses is included at the rear of the report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The samples were received at the North Canton laboratory at a temperature of 2.7° C.

See STL's Cooler Receipt Form for additional information.

GC/MS VOLATILES

Sample(s) that contain results between the MDL and the RL were flagged with "J". There is the possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

The pH of the sample TB-041901 was greater than 2. The sample was analyzed within the normal 14 day holding time; however, experimental evidence suggests that some aromatic compounds in wastewater samples, notably Benzene, Toluene, and Ethylbenzene are susceptible to biological degradation if samples are not preserved to a pH of 2.

STL Cooler Receipt Form/Narrative
North Canton Facility

Client: IT Corp Project: ____ Quote #: ____
Cooler Received on: 4/20/01 Opened on: 4/20/01 by: [signature] (Signature)

Fedex ☒ Client Drop Off ☐ UPS ☐ Airborne ☐
Other: ____

Cooler ☒ Safe ☐ Foam Box ☐ Client Cooler ☐ Other: ____
STL Shipper No#: K57

1. Were custody seals on the outside of the cooler and intact? Yes ☒ No ☐
   If YES, Quantity 2 Location below opening
   Were the custody seals signed and dated? Yes ☒ No ☐ NA ☐
2. Shipper's packing slip attached to this form? Yes ☒ No ☐
3. Were custody papers included inside the cooler and relinquished? Yes ☒ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☒ No ☐
5. Packing material used:
Peanuts ☐ Bubble Wrap ☒ Vermiculite ☐ Foam ☐ None ☐ Other: ____
6. Cooler temperature upon receipt 2.7 °C (see back of form for multiple coolers/temp)
METHOD: Temperature Vial ☒ Between Coolant & Sample Container ☐ Against Bottles ☐
COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐
7. Were all the bottles sealed in separate plastic bags? Yes ☒ No ☐
8. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
9. Did all bottle labels and tags agree with the custody papers? Yes ☒ No ☐
10. Were samples at the correct pH? Yes ☒ No ☐ NA ☐
11. Were correct bottles used for the tests indicated? Yes ☒ No ☐
12. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☒ NA ☐
13. Was a sufficient amount of sample sent in each bottle? Yes ☒ No ☐
Contacted PM DJP Date: 4/20/01 by: TB via Voice Mail ☐ Verbal ☒ Other ☐
Concerning: Anomalies

√	MACRO	MACRO
	1. CHAIN OF CUSTODY	
	SR1A	Samples were received under proper custody procedures and without discrepancies.
	SR1B	The chain of custody and sample bottles did not agree. The following discrepancies occurred ____
	2. SAMPLE CONDITION	
	SR2A	Sample(s) ____ were received or requested after the recommended holding time had expired.
	SR2B	Sample(s) ____ were received with insufficient volume
	SR2C	Sample(s) ____ were received in a broken container.
	3. SAMPLE PRESERVATION	
	SR3A	Sample(s) ____ were further preserved in sample receiving to meet recommended pH level(s).
	SR3B	Sample(s) ____ were received with bubble > 6 mm in diameter (cc: PM)
	4. NCM	
	SR4A	NCM has been generated. Refer to Clouseau for details

5. Other Anomalies (see below or back) LTM-BSS-P-2-0401 only rec 3X40 VOC tests = VOC/metals/disagreement logged only VOC - DJP aware. TB 4/20/01. LTM-P4-2-0401 rec 2l for total + diss metals - TAL metals listed on COC - logged total + diss metals - DJP aware - TB 4/20/01.

Revision 14, January 15, 2001
SOP: NC-QC-0005, Sample Receiving
n:\qa\narrative\cooler_stl_rev011501.doc

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials
LTM-P4-2-0401	<2 <2		
SMP-NEA-MW20-25-5401	<2		
SMP-NEA-MW20-25-5401	<2		
LTM-EFDZ5-MW08-0401	<2 <2		
LTM-EFDZ8-MW01-0401	<2 <2		

Cooler	Temp	Method	Comments

Discrepancies Cont.

Macro Name:

Macro Name:

Macro Name:

Macro Name:

Other Anomalies:

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

** for analyses run on TJA Trace ICP or GFAA only*

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample are spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If the surrogate recoveries are outside criteria for environmental or MS/MSD samples, the batch is acceptable if the Method Blank, LCS, and LCSD surrogate recoveries are within acceptance criteria. The only exception is if the surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank and the associated sample(s) are ND, the batch is acceptable. If the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide/PCB, PAH, and Herbicide methods, the surrogate criteria is that one of two surrogate compounds meet acceptance criteria.

ANALYTICAL METHODS SUMMARY

A1D200286

PARAMETER	ANALYTICAL METHOD
Dissolved ICP Metals	MCAWW 200.7
Dissolved Mercury (CVAA)	MCAWW 245.1
Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Mercury (Manual Cold Vapor Technique)	MCAWW 245.1
Trace Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Volatile Organics by GC/MS	SW846 8260B

References:

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

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

SAMPLE SUMMARY

A1D200286

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAM TIM
EA6LQ	001	LTM-TTW-02-0401	04/19/01	10:
EA6L6	002	LTM-EFDZ2-MW03-0401	04/19/01	13:
EA6MC	003	LTM-SP11-MW01-0401	04/19/01	15:
EA6MK	004	LTM-BS5-P3-0401	04/19/01	16:
EA6MP	005	TB-041901	04/19/01	09:
EA6MR	006	LTM-CW15-055-0401	04/19/01	09:
EA6NW	007	LTM-EFDZ3-MW03-0401	04/19/01	11:
EA6PE	008	LTM-EFDZ8-MW01-0401	04/19/01	14:
EA6PV	009	LTM-BS5-P-1-0401	04/19/01	16:
EA6P6	010	LTM-BS5-P-2-0401	04/19/01	16:
EA6P9	011	LTM-P4-2-0401	04/19/01	14:

NOTE(S):

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

CASE NARRATIVE
A1D190104

The following report contains the analytical results for eleven water samples submitted to STL North Canton by IT Corporation – Cincinnati from the WPAFB, Ohio Site. The samples were received April 18, 2001, according to documented sample acceptance procedures.

The remaining samples listed on the chain-of-custody are reported under separate cover.

The Dissolved Gases analyses were performed at the STL Austin laboratory. A copy of their data is presented in this report.

STL North Canton utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the Analytical Methods Summary page in accordance with the methods indicated. A summary of QC data for these analyses is included in this report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 3.1° C. . The samples were received in wet ice.

See STL's Cooler Receipt Form for additional information.

The samples were further preserved at the laboratory for some analyses per phone conversation with Brian Mattingly on April 18, 2001.

GC/MS VOLATILES

Sample(s) that contain results between the MDL and the RL were flagged with "J". There is the possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

The sample(s) had elevated reporting limits due to TICs.

STL Cooler Receipt Form/Narrative
North Canton Facility

Client: IT Corp. Project: WPAFB Quote#: 38700
Cooler Received on: 4-18-01 Opened on: 4-18-01 by: Jennifer Miller (Signature)

Fedx ☒ Client Drop Off ☐ UPS ☐ Airborne ☐
Other: _____

Cooler ☒ Safe ☐ Foam Box ☐ Client Cooler ☐ Other: _____
STL Shipper No#: J799

1. Were custody seals on the outside of the cooler and intact? Yes ☒ No ☐
   If YES, Quantity 2 Location overlid
   Were the custody seals signed and dated? Yes ☒ No ☐ NA ☐
2. Shipper's packing slip attached to this form? Yes ☒ No ☐
3. Were custody papers included inside the cooler and relinquished? Yes ☒ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☒ No ☐
5. Packing material used:
   Peanuts ☐ Bubble Wrap ☒ Vermiculite ☐ Foam ☐ None ☐ Other: _____
6. Cooler temperature upon receipt 3.1 °C (see back of form for multiple coolers/temp)
   METHOD: Temperature Vial ☒ Between Coolant & Sample Container ☐ Against Bottles ☐
   COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐
7. Were all the bottles sealed in separate plastic bags? Yes ☐ No ☒
8. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
9. Did all bottle labels and tags agree with the custody papers? Yes ☒ No ☒
10. Were samples at the correct pH? Yes ☒ No ☐ NA ☐
11. Were correct bottles used for the tests indicated? Yes ☒ No ☐
12. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☒ NA ☐
13. Was a sufficient amount of sample sent in each bottle? Yes ☒ No ☐

Contacted PM DJP Date: 4-19-01 by: [illegible] via Voice Mail ☐ Verbal ☒ Other ☐
Concerning: discrepancy

√	MACRO	MACRO
	1. CHAIN OF CUSTODY	
	SR1A	Samples were received under proper custody procedures and without discrepancies.
√	SR1B	The chain of custody and sample bottles did not agree. The following discrepancies occurred First sample on COC #29425 is BMP-OU-4-0401 at 10:40. Labels read BMP-OU-2-0401. Log per label. See back.
	2. SAMPLE CONDITION	
	SR2A	Sample(s) _____ were received or requested after the recommended holding time had expired.
	SR2B	Sample(s) _____ were received with insufficient volume
	SR2C	Sample(s) _____ were received in a broken container.
	3. SAMPLE PRESERVATION	
√	SR3A	Sample(s) See back. were further preserved in sample receiving to meet recommended pH level(s).
	SR3B	Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)
	4. NCM	
	SR4A	NCM has been generated. Refer to Clouseau for details
	5. Other Anomalies (see below or back)	

Revision 14. January 15, 2001
SOP: NC-SC-0005, Sample Receiving
n:\quality\narrative\cooler_stl_rev011501.doc

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials
BMP-OW-2-0401	<2	4-18-01	gaf
LTM-WP-NEA-MW23-25-0401	<2,<2		
BMP-04-016-M-0401	<2,<2,<2		
BMP-NEA-MW26-35-0401	<2		
BMP-NEA-MW20-25-0401	<2,<2,<2,<2		
BMP-P18-1-0401	<2		
BMP-OW-4-0401	<2		
BMP-P18-2-0401	<2		
BMP-OW-3-0401	<2		
LTM-WP-NEA-MW24-25-0401	<2,<2		
BMP-NEA-MW28-55-0401	<2	4-19-01	gaf
BMP-NEA-MW28-53-AMB01	<2		

Cooler	Temp	Method	Comments

Discrepancies Cont.

Macro Name: SR1B - Samples LTM-NEA-MW28-55-0401
LTM-NEA-MW28-55-AMB01 on COC
ID's start w/ BMP on bottles. Log per bottles per DJP.

Macro Name: gaf 4-19-01

Macro Name: SR3A - BMP-NEA-MW28-55-0401 1x500 added sulfuric
BMP-NEA-MW28-55-AMB01 1x1L added sulfuric

Macro Name: - see Email

Other Anomalies:

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

** for analyses run on TJA Trace ICP or GFAA only*

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample are spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If the surrogate recoveries are outside criteria for environmental or MS/MSD samples, the batch is acceptable if the Method Blank, LCS, and LCSD surrogate recoveries are within acceptance criteria. The only exception is if the surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank and the associated sample(s) are ND, the batch is acceptable. If the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide/PCB, PAH, and Herbicide methods, the surrogate criteria is that one of two surrogate compounds meet acceptance criteria.

ANALYTICAL METHODS SUMMARY

A1D190104

PARAMETER	ANALYTICAL METHOD
Dissolved Gases in Water	RSK SOP-175
Dissolved ICP Metals	MCAWW 200.7
Dissolved Mercury (CVAA)	MCAWW 245.1
Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Mercury (Manual Cold Vapor Technique)	MCAWW 245.1
Nitrate as N	MCAWW 300.0A
Sulfate	MCAWW 300.0A
Trace Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Volatile Organics by GC/MS	SW846 8260B

References:

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

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

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

SAMPLE SUMMARY

A1D190104

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
EA2M0	001	BMP-OW-2-0401	04/17/01	10:40
EA2M6	002	BMP-04-016-M-0401	04/17/01	14:05
EA2M8	003	BMP-NEA-MW26-3S-0401	04/17/01	15:50
EA2ND	004	TB-041701	04/17/01	09:00
EA2NE	005	BMP-NEA-MW28-5S-0401	04/17/01	11:15
EA2NG	006	BMP-NEA-MW20-2S-0401	04/17/01	16:15
EA2NM	007	BMP-NEA-MW28-5S-AMB01	04/17/01	11:15
EA2NN	008	BMP-P18-1-0401	04/17/01	10:05
EA2NP	009	BMP-OW-4-0401	04/17/01	10:55
EA2NQ	010	BMP-P18-2-0401	04/17/01	11:30
EA2NR	011	BMP-OW-3-0401	04/17/01	13:40

NOTE(S):

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

CASE NARRATIVE
A1D190107

The following report contains the analytical results for four water samples submitted to STL North Canton by IT Corporation – Cincinnati from the WPAFB, Ohio Site. The samples were received April 18, 2001, according to documented sample acceptance procedures.

The remaining samples listed on the chain-of-custody are reported under separate cover.

STL North Canton utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the Analytical Methods Summary page in accordance with the methods indicated. A summary of QC data for these analyses is included in this report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 3.1° C. . The samples were received in wet ice.

See STL's Cooler Receipt Form for additional information.

STL Cooler Receipt Form/Narrative
North Canton Facility

Client: IT Corp. Project: WPAFB Quote#: 38700
Cooler Received on: 4-18-01 Opened on: 4-18-01 by: Jennifer Stiller (Signature)

Fedx [X] Client Drop Off [ ] UPS [ ] Airborne [ ] Other: _____

Cooler [X] Safe [ ] Foam Box [ ] Client Cooler [ ] Other: _____
STL Shipper No#: J799

1. Were custody seals on the outside of the cooler and intact? Yes [X] No [ ]
   If YES, Quantity 2 Location overlid
   Were the custody seals signed and dated? Yes [X] No [ ] NA [ ]
2. Shipper's packing slip attached to this form? Yes [X] No [ ]
3. Were custody papers included inside the cooler and relinquished? Yes [X] No [ ]
4. Did you sign the custody papers in the appropriate place? Yes [X] No [ ]
5. Packing material used:
   Peanuts [ ] Bubble Wrap [X] Vermiculite [ ] Foam [ ] None [ ] Other: _____
6. Cooler temperature upon receipt 3.1 °C (see back of form for multiple coolers/temp)
   METHOD: Temperature Vial [X] Between Coolant & Sample Container [ ] Against Bottles [ ]
   COOLANT: Wet Ice [X] Blue Ice [ ] Dry Ice [ ] Water [ ] None [ ]
7. Were all the bottles sealed in separate plastic bags? Yes [ ] No [X]
8. Did all bottles arrive in good condition (Unbroken)? Yes [X] No [ ]
9. Did all bottle labels and tags agree with the custody papers? Yes [X] No [X]
10. Were samples at the correct pH? Yes [ ] No [ ] NA [ ]
11. Were correct bottles used for the tests indicated? Yes [X] No [ ]
12. Were air bubbles >6 mm in any VOA vials? Yes [ ] No [X] NA [ ]
13. Was a sufficient amount of sample sent in each bottle? Yes [X] No [ ]

Contacted PM DJP Date: 4-19-01 by: JAJ via Voice Mail [ ] Verbal [X] Other [ ]
Concerning: discreps

√	MACRO	MACRO
1. CHAIN OF CUSTODY		
	SR1A	Samples were received under proper custody procedures and without discrepancies.
√	SR1B	The chain of custody and sample bottles did not agree. The following discrepancies occurred First sample on COC # 29425 is BMP-OW-4-0401 at 10:40. Labels read BMP-OW-2-0401. Log per lab see back (sep lot)
2. SAMPLE CONDITION		
	SR2A	Sample(s) _____ were received or requested after the recommended holding time had expired.
	SR2B	Sample(s) _____ were received with insufficient volume
	SR2C	Sample(s) _____ were received in a broken container.
3. SAMPLE PRESERVATION		
√	SR3A	Sample(s) see back. were further preserved in sample receiving to meet recommended pH level(s).
	SR3B	Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)
4. NCM		
	SR4A	NCM has been generated. Refer to Clouseau for details
5. Other Anomalies (see below or back)		

Revision 14, January 15, 2001
SOP: NC-SC-0005, Sample Receiving
n:\qaqc\narrativ\stl\cooler_stl_rev011501.doc
STL North Canton
3

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials
BMP-OW-2-0401	<2	4-18-01	gpd
LTM-WP-NEA-MW23-25-0401	<2 <2		
BMP-OH-016-M-0401	<2, <2, <2		
BMP-NEA-MW26-35-0401	<2		
BMP-NEA-MW20-25-0401	<2, <2 <2, <2		
BMP-P18-1-0401	<2		
BMP-OW-4-0401	<2		
BMP-P18-2-0401	<2		
BMP-OW-3-0401	<2		
LTM-WP-NEA-MW24-25-0401	<2, <2		
BMP-NEA-MW28-55-0401	<2	4-19-01	gpd
BMP-NEA-MW28-55-AMB01	<2		

Cooler	Temp	Method	Comments

Discrepancies Cont.

Macro Name: SR1B - Samples LTM-NEA-MW28-55-0401
LTM-NEA-MW28-55-AMB01 on COC
ID's start w/ BMP on bottles. Log per bottles per DJP.

Macro Name: gpd 4-19-01

Macro Name: SR3A - BMP-NEA-MW28-55-0401 1x500 added sulfuric
BMP-NEA-MW28-55-AMB01 1x1L added sulfuric

Macro Name:

Other Anomalies:

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

** for analyses run on TJA Trace ICP or GFAA only*

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample are spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If the surrogate recoveries are outside criteria for environmental or MS/MSD samples, the batch is acceptable if the Method Blank, LCS, and LCSD surrogate recoveries are within acceptance criteria. The only exception is if the surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank and the associated sample(s) are ND, the batch is acceptable. If the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide/PCB, PAH, and Herbicide methods, the surrogate criteria is that one of two surrogate compounds meet acceptance criteria.

ANALYTICAL METHODS SUMMARY

A1D190107

PARAMETER	ANALYTICAL METHOD
Dissolved ICP Metals	MCAWW 200.7
Dissolved Mercury (CVAA)	MCAWW 245.1
Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Mercury (Manual Cold Vapor Technique)	MCAWW 245.1
Trace Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Volatile Organics by GC/MS	SW846 8260B

References:

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

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

SAMPLE SUMMARY

A1D190107

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAM TIM
EA2NT	001	LTM-WP-NEA-MW23-2S-0401	04/17/01	11:
EA2N1	002	TB-041701	04/17/01	09:
EA2N2	003	LTM-WP-NEA-MW34-2S-0401	04/17/01	14:
EA2N3	004	LTM-WP-NEA-MW24-2S-0401	04/17/01	15:

NOTE(S):

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

CASE NARRATIVE
A1D190213

The following report contains the analytical results for eleven water samples submitted to STL North Canton by IT Corporation – Cincinnati from the WPAFB, Ohio Site. The samples were received April 19, 2001, according to documented sample acceptance procedures.

The remaining samples listed on the chain-of-custody are reported under separate cover.

STL North Canton utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the Analytical Methods Summary page in accordance with the methods indicated. A summary of QC data for these analyses is included in this report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 3.2° C. . The samples were received in wet ice.

See STL's Cooler Receipt Form for additional information.

GC/MS VOLATILES

Sample(s) that contain results between the MDL and the RL were flagged with "J". There is the possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

STL Cooler Receipt Form/Narrative
North Canton Facility

Client: IT Group Project: WPAFB Ohio Quote#: 38700
Cooler Received on: 4-19-01 Opened on: 4-19-01 by: Scott [illegible] (Signature)

Fedx ☒ Client Drop Off ☐ UPS ☐ Airborne ☐
Other: _____

Cooler ☒ Safe ☐ Foam Box ☐ Client Cooler ☐ Other: _____
STL Shipper No#: J829

1. Were custody seals on the outside of the cooler and intact? Yes ☒ No ☐
   If YES, Quantity 2 Location over closure
   Were the custody seals signed and dated? Yes ☒ No ☐ NA ☐
2. Shipper's packing slip attached to this form? Yes ☒ No ☐
3. Were custody papers included inside the cooler and relinquished? Yes ☒ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☒ No ☐
5. Packing material used:
Peanuts ☐ Bubble Wrap ☒ Vermiculite ☐ Foam ☐ None ☐ Other: _____
6. Cooler temperature upon receipt 3.2 °C (see back of form for multiple coolers/temp)
METHOD: Temperature Vial ☒ Between Coolant & Sample Container ☐ Against Bottles ☐
COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐
7. Were all the bottles sealed in separate plastic bags? Yes ☒ No ☐
8. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
9. Did all bottle labels and tags agree with the custody papers? Yes ☐ No ☒
10. Were samples at the correct pH? Yes ☒ No ☐ NA ☐
11. Were correct bottles used for the tests indicated? Yes ☒ No ☐
12. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☒ NA ☐
13. Was a sufficient amount of sample sent in each bottle? Yes ☒ No ☐
Contacted PM _____ Date: _____ by: _____ via Voice Mail ☐ Verbal ☐ Other ☐
Concerning: _____

√	MACRO	MACRO
	1. CHAIN OF CUSTODY	
	SR1A	Samples were received under proper custody procedures and without discrepancies.
X	SR1B	The chain of custody and sample bottles did not agree. The following discrepancies occurred 2 Trip blanks were received only 1 listed on coc. will log 1 on each lot per past [illegible] 4-19-01
	2. SAMPLE CONDITION	
	SR2A	Sample(s) _____ were received or requested after the recommended holding time had expired.
	SR2B	Sample(s) _____ were received with insufficient volume
	SR2C	Sample(s) _____ were received in a broken container.
	3. SAMPLE PRESERVATION	
	SR3A	Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s).
	SR3B	Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)
	4. NCM	
	SR4A	NCM has been generated. Refer to Clouseau for details
	5. Other Anomalies (see below or back)	

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials
LTM-14-574-M-0401	<2 <2	4-19-01	SWR
LTM-WP-NEA-MW02-2S-0407	<2 <2		
LTM-WP-NEA-MW01-1S-0401	<2 <2		
LTM-NP-NEA-MW31-3S-0401	<2 <2		

Cooler	Temp	Method	Comments

Discrepancies Cont.

Macro Name:

Macro Name:

Macro Name:

Macro Name:

Other Anomalies:

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

** for analyses run on TJA Trace ICP or GFAA only*

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample are spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If the surrogate recoveries are outside criteria for environmental or MS/MSD samples, the batch is acceptable if the Method Blank, LCS, and LCSD surrogate recoveries are within acceptance criteria. The only exception is if the surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank and the associated sample(s) are ND, the batch is acceptable. If the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide/PCB, PAH, and Herbicide methods, the surrogate criteria is that one of two surrogate compounds meet acceptance criteria.

ANALYTICAL METHODS SUMMARY

A1D190213

PARAMETER	ANALYTICAL METHOD
Dissolved ICP Metals	MCAWW 200.7
Dissolved Mercury (CVAA)	MCAWW 245.1
Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Mercury (Manual Cold Vapor Technique)	MCAWW 245.1
Trace Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Volatile Organics by GC/MS	SW846 8260B

References:

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

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

SAMPLE SUMMARY

A1D190213

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
EA3QA	001	LTM-14-554-M-0401	04/18/01	09:45
EA3QH	002	LTM-WP-NEA-MW02-2S-0401	04/18/01	10:45
EA3QK	003	LTM-WP-NEA-MW01-1S-0401	04/18/01	11:45
EA3QN	004	LTM-WP-NEA-MW31-3S-0401	04/18/01	09:45
EA3QR	005	LTM-OU10-MW-21S-0401	04/18/01	11:35
EA3Q3	006	LTM-NEA-MW37-1D-0401	04/18/01	14:45
EA3Q4	007	LTM-FTA2:MW02C-0401	04/18/01	10:19
EA3Q5	008	LTM-GR-334-0401	04/18/01	11:10
EA3Q6	009	LTM-GR-333-0401	04/18/01	11:55
EA3Q7	010	LTM-GR-333-5401	04/18/01	11:55
EA3Q8	011	TB041801	04/18/01	08:00

NOTE(S):

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

CASE NARRATIVE
A1D240180

The following report contains the analytical results for twelve water samples submitted to STL North Canton by IT Corporation – Cincinnati from the WPAFB, Ohio Site. The samples were received April 24, 2001, according to documented sample acceptance procedures.

STL North Canton utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the Analytical Methods Summary page in accordance with the methods indicated. A summary of QC data for these analyses is included in this report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 1.9° C. . The samples were received in wet ice.

GC/MS VOLATILES

Sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

An LCS/LCSD was provided for batch 1120523 since there was insufficient sample volume to perform an MS/MSD.

Sample(s) that contain results between the MDL and the RL were flagged with "J". There is the possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

** for analyses run on TJA Trace ICP or GFAA only*

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample are spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If the surrogate recoveries are outside criteria for environmental or MS/MSD samples, the batch is acceptable if the Method Blank, LCS, and LCSD surrogate recoveries are within acceptance criteria. The only exception is if the surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank and the associated sample(s) are ND, the batch is acceptable. If the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide/PCB, PAH, and Herbicide methods, the surrogate criteria is that one of two surrogate compounds meet acceptance criteria.

ANALYTICAL METHODS SUMMARY

A1D240180

PARAMETER	ANALYTICAL METHOD
Dissolved ICP Metals	MCAWW 200.7
Dissolved Mercury (CVAA)	MCAWW 245.1
Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Mercury (Manual Cold Vapor Technique)	MCAWW 245.1
Trace Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Volatile Organics by GC/MS	SW846 8260B

References:

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

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

SAMPLE SUMMARY

A1D240180

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
EA9J3	001	02-DM-81D-M-0401	04/23/01	09:59
EA9J9	002	LF8-MW05B-0401	04/23/01	12:12
EA9KF	003	LF8-MW05B-0451	04/23/01	12:12
EA9KL	004	LTM-SP11-MW07-0401	04/23/01	13:57
EA9KX	005	LF10-MW07A-0401	04/23/01	15:15
EA9K2	006	LF10-MW07A-0451	04/23/01	15:15
EA9K5	007	LF10-MW05B-0401	04/23/01	16:50
EA9K7	008	TB042301	04/23/01	09:00
EA9LA	009	LTM-07-520-M-0401	04/23/01	09:03
EA9LJ	010	02-DM-82M-0401	04/23/01	10:58
EA9LL	011	LF8-MW02C-0401	04/23/01	13:17
EA9LM	012	01-004-M-0401	04/23/01	16:02

NOTE(S):

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

Analytical Legend

AMB – Ambient
B (or MBB, MBD, MBE) - Method blank contamination present
D - Diluted sample analytical results
DUP - Duplicate
EW – Extraction Well
E - Estimated result. Concentration exceeds the calibration range
I - Quantification suspect due to matrix interference
IW – Insufficient Water
J – Estimated Result. Result less than Reporting Limit
L – Serial dilution of a digestate in the analytical batch indicates that physical and chemical interferences are present.
LCS – Laboratory Control Sample
LF – Landfill
LW – Line Water
mg/L – milligrams/Liter
µg/L – micrograms/Liter
MW – Monitoring Well
N – Spiked analyte recovery is outside stated control limits
NA - Not Applicable
ND – Not Detected
NR – Not Reported
pg/L – picograms/Liter
Q - Estimated maximum possible concentration
RB – Rinsate Blank
R2 – Indicates second re-extraction analysis run was required due to surrogate recoveries outside of acceptance criteria on the initial sample run or that analytical results presented are for a diluted sample due to high target analytes.
T or TB – Trip Blank

-- – Not Analyzed
= – Confirmed detection
( ) – Result exceeds MCL value
[ ] – Result exceeds background value

Wright-Patterson AFB
April 2001 - Basewide Metals Data - Ground Water
The IT Group, Project 777097

Sample Number		BMP-NEA-MW20-2S-0401		BMP-NEA-MW20-2S-5401		LTM-07-520-M-0401		LTM-14-554-M-0401		LTM-25-582-M-0401	
Sample Date		04/17/01		04/19/01		04/23/01		04/18/01		04/12/01	
METAL											
Aluminum	(mg/L)	ND		ND		ND		ND		ND	
Aluminum-DISS	(mg/L)	ND		ND		ND		ND		ND	
Arsenic	(mg/L)	0.020	=	0.023	=	ND		ND		ND	
Arsenic-DISS	(mg/L)	0.020	=	0.022	=	ND		ND		ND	
Barium	(mg/L)	0.65	=	0.69	=	0.42	=	ND		ND	
Barium-DISS	(mg/L)	0.62	=	0.67	=	0.40	=	ND		ND	
Calcium	(mg/L)	116	=	121	=	181	=	107	=	86.8	=
Calcium-DISS	(mg/L)	114	=	118	=	176	=	110	=	91.4	=
Chromium	(mg/L)	ND		ND		ND		0.020	=	0.012	=
Chromium-DISS	(mg/L)	ND		ND		ND		ND		ND	
Iron	(mg/L)	7.1	=	7.7	=	10.3	=	ND		0.14	=
Iron-DISS	(mg/L)	6.9	=	7.0	=	8.9	=	ND		ND	
Magnesium	(mg/L)	25.3	=	26.6	=	43.8	=	28.4	=	31.6	=
Magnesium-DISS	(mg/L)	25.5	=	26.2	=	43.0	=	29.6	=	33.3	=
Manganese	(mg/L)	0.32	=	0.35	=	0.46	=	ND		ND	
Manganese-DISS	(mg/L)	0.32	=	0.33	=	0.46	=	ND		ND	
Nickel	(mg/L)	ND		ND		ND		ND		ND	
Nickel-DISS	(mg/L)	ND		ND		ND		ND		ND	
Potassium	(mg/L)	ND		ND		6.2	=	ND		5.8	=
Potassium-DISS	(mg/L)	ND		ND		6.0	=	ND		6.1	=
Sodium	(mg/L)	30.1	=	32.4	=	31.7	=	25.2	=	31.5	=
Sodium-DISS	(mg/L)	30.6	=	31.4	=	31.3	=	27.4	=	33.4	=
Zinc	(mg/L)	ND		ND		ND		ND		ND	
Zinc-DISS	(mg/L)	ND		ND		ND		ND		ND	

Wright-Patterson AFB
April 2001 - Basewide Metals Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-25-582-M-5401		LTM-25-583-M-0401		LTM-25-584-M-0401		LTM-EFDZ3-MW02-0401		LTM-EFDZ3-MW03-0401	
Sample Date		04/12/01		04/12/01		04/12/01		04/12/01		04/19/01	
METAL											
Aluminum	(mg/L)	ND		ND		ND		ND		ND	
Aluminum-DISS	(mg/L)	ND		ND		ND		ND		ND	
Arsenic	(mg/L)	ND		ND		ND		ND		ND	
Arsenic-DISS	(mg/L)	ND		ND		ND		ND		ND	
Barium	(mg/L)	ND		ND		ND		ND		ND	
Barium-DISS	(mg/L)	ND		ND		ND		ND		ND	
Calcium	(mg/L)	95.4	=	97.5	=	90.0	=	98.9	=	101	=
Calcium-DISS	(mg/L)	90.7	=	96.6	=	90.4	=	107	=	97.8	=
Chromium	(mg/L)	ND		0.038	=	ND		0.015	=	ND	
Chromium-DISS	(mg/L)	ND		ND		ND		ND		ND	
Iron	(mg/L)	ND		0.51	=	ND		1.4	=	ND	
Iron-DISS	(mg/L)	ND		ND		ND		0.24	=	ND	
Magnesium	(mg/L)	34.1	=	34.1	=	32.5	=	40.6	=	35.6	=
Magnesium-DISS	(mg/L)	32.0	=	34.2	=	32.6	=	44.0	=	34.5	=
Manganese	(mg/L)	ND		ND		ND		0.042	=	ND	
Manganese-DISS	(mg/L)	ND		ND		ND		0.036	=	ND	
Nickel	(mg/L)	ND		ND		ND		ND		ND	
Nickel-DISS	(mg/L)	ND		ND		ND		ND		ND	
Potassium	(mg/L)	6.2	=	5.6	=	6.3	=	ND		ND	
Potassium-DISS	(mg/L)	5.9	=	5.7	=	6.2	=	ND		ND	
Sodium	(mg/L)	33.7	=	36.2	=	35.7	=	76.4	=	5.7	=
Sodium-DISS	(mg/L)	31.7	=	36.3	=	35.2	=	81.8	=	6.7	=
Zinc	(mg/L)	0.051	=	ND		ND		ND		ND	
Zinc-DISS	(mg/L)	0.075	=	ND		ND		ND		ND	

Wright-Patterson AFB
April 2001 - Basewide Metals Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-EFDZ8-MW01-0401		LTM-HD-11-0401		LTM-NEA-MW01-1S-0401		LTM-NEA-MW02-2S-0401		LTM-NEA-MW23-2S-0401	
Sample Date		04/19/01		04/10/01		04/18/01		04/18/01		04/17/01	
METAL											
Aluminum	(mg/L)	0.56	=	0.36	=	ND		ND		ND	
Aluminum-DISS	(mg/L)	0.20	=	--		ND		ND		ND	
Arsenic	(mg/L)	ND		ND		ND		ND		ND	
Arsenic-DISS	(mg/L)	ND		--		ND		ND		ND	
Barium	(mg/L)	0.20	=	ND		ND		ND		0.30	=
Barium-DISS	(mg/L)	ND		--		ND		ND		0.29	=
Calcium	(mg/L)	35.8	=	123	=	109	=	104	=	106	=
Calcium-DISS	(mg/L)	34.7	=	--		113	=	106	=	104	=
Chromium	(mg/L)	0.043	=	ND		0.011	=	ND		ND	
Chromium-DISS	(mg/L)	0.021	=	--		ND		ND		ND	
Iron	(mg/L)	2.6	=	2.2	=	0.61	=	0.28	=	ND	
Iron-DISS	(mg/L)	0.97	=	--		0.77	=	ND		ND	
Magnesium	(mg/L)	26.2	=	43.6	=	35.6	=	37.1	=	33.3	=
Magnesium-DISS	(mg/L)	25.2	=	--		36.5	=	37.7	=	32.8	=
Manganese	(mg/L)	0.041	=	0.10	=	0.025	=	0.023	=	0.41	=
Manganese-DISS	(mg/L)	0.025	=	--		0.032	=	ND		0.37	=
Nickel	(mg/L)	0.28	=	ND		0.047	=	ND		ND	
Nickel-DISS	(mg/L)	0.19	=	--		0.14	=	ND		ND	
Potassium	(mg/L)	29.8	=	ND		5.3	=	ND		ND	
Potassium-DISS	(mg/L)	25.8	=	--		5.4	=	ND		ND	
Sodium	(mg/L)	219	=	60.2	=	40.8	=	47.3	=	31.8	=
Sodium-DISS	(mg/L)	182	=	--		42.0	=	47.7	=	31.6	=
Zinc	(mg/L)	ND		ND		ND		ND		ND	
Zinc-DISS	(mg/L)	ND		--		ND		ND		ND	

Wright-Patterson AFB
April 2001 - Basewide Metals Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-NEA-MW24-2S-0401		LTM-NEA-MW31-3S-0401		LTM-OU10-MW-03S-0401		LTM-OU10-MW-06S-0401		LTM-OU10-MW-06S-5401	
Sample Date		04/17/01		04/18/01		04/11/01		04/11/01		04/11/01	
METAL											
Aluminum	(mg/L)	0.20	=	ND		ND		ND		ND	
Aluminum-DISS	(mg/L)	ND		ND		ND		ND		ND	
Arsenic	(mg/L)	ND		ND		ND		ND		ND	
Arsenic-DISS	(mg/L)	ND		ND		ND		ND		ND	
Barium	(mg/L)	ND		ND		ND		ND		ND	
Barium-DISS	(mg/L)	ND		ND		ND		ND		ND	
Calcium	(mg/L)	112	=	99.7	=	93.2	=	86.7	=	88.7	=
Calcium-DISS	(mg/L)	110	=	103	=	86.9	=	87.4	=	88.2	=
Chromium	(mg/L)	0.74	=	ND		ND		ND		ND	
Chromium-DISS	(mg/L)	0.092	=	0.017	=	ND		ND		ND	
Iron	(mg/L)	5.3	=	0.28	=	ND		ND		ND	
Iron-DISS	(mg/L)	1.0	=	0.48	=	ND		ND		ND	
Magnesium	(mg/L)	37.2	=	34.8	=	35.2	=	30.9	=	32.1	=
Magnesium-DISS	(mg/L)	36.6	=	35.9	=	35.1	=	31.3	=	32.2	=
Manganese	(mg/L)	0.027	=	ND		ND		ND		ND	
Manganese-DISS	(mg/L)	ND		0.019	=	ND		ND		ND	
Nickel	(mg/L)	0.046	=	0.071	=	ND		ND		ND	
Nickel-DISS	(mg/L)	ND		0.093	=	ND		ND		ND	
Potassium	(mg/L)	8.8	=	23.5	=	ND		ND		ND	
Potassium-DISS	(mg/L)	8.7	=	24.0	=	ND		ND		ND	
Sodium	(mg/L)	46.4	=	46.8	=	43.0	=	38.6	=	36.9	=
Sodium-DISS	(mg/L)	46.2	=	48.3	=	42.4	=	38.8	=	37.1	=
Zinc	(mg/L)	ND		ND		ND		ND		ND	
Zinc-DISS	(mg/L)	ND		ND		ND		ND		ND	

Wright-Patterson AFB
April 2001 - Basewide Metals Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-OU10-MW10I-0401		LTM-OU8-MW-02D-0401		LTM-OU8-MW23D-0401		LTM-P4-2-0401	
Sample Date		04/12/01		04/11/01		04/12/01		04/19/01	
METAL									
Aluminum	(mg/L)	ND		0.47	=	ND		1.4	=
Aluminum-DISS	(mg/L)	ND		0.29	=	ND		ND	
Arsenic	(mg/L)	ND		ND		ND		ND	
Arsenic-DISS	(mg/L)	ND		ND		ND		ND	
Barium	(mg/L)	ND		ND		ND		ND	
Barium-DISS	(mg/L)	ND		ND		ND		ND	
Calcium	(mg/L)	104	=	97.3	=	97.0	=	122	=
Calcium-DISS	(mg/L)	97.0	=	95.1	=	96.9	=	122	=
Chromium	(mg/L)	ND		ND		ND		0.12	=
Chromium-DISS	(mg/L)	ND		ND		ND		ND	
Iron	(mg/L)	ND		0.82	=	1.1	=	1.6	=
Iron-DISS	(mg/L)	ND		0.54	=	1.1	=	ND	
Magnesium	(mg/L)	37.3	=	37.8	=	38.9	=	32.2	=
Magnesium-DISS	(mg/L)	35.0	=	35.5	=	39.6	=	31.2	=
Manganese	(mg/L)	ND		0.19	=	0.13	=	0.052	=
Manganese-DISS	(mg/L)	ND		0.17	=	0.13	=	0.026	=
Nickel	(mg/L)	ND		ND		ND		ND	
Nickel-DISS	(mg/L)	ND		ND		ND		ND	
Potassium	(mg/L)	8.9	=	18.1	=	ND		ND	
Potassium-DISS	(mg/L)	8.4	=	19.7	=	ND		ND	
Sodium	(mg/L)	53.0	=	64.4	=	49.3	=	23.0	=
Sodium-DISS	(mg/L)	49.5	=	64.8	=	50.3	=	22.9	=
Zinc	(mg/L)	ND		ND		ND		ND	
Zinc-DISS	(mg/L)	ND		ND		ND		ND	

-- = Not Applicable, ND = Not Detected

Wright-Patterson AFB
April 2001 - Basewide Metals Data - Ground Water
The IT Group, Project 777097

Sample Number		BMP-NEA-MW20-2S-0401		BMP-NEA-MW20-2S-5401		LTM-07-520-M-0401		LTM-14-554-M-0401		LTM-25-582-M-0401	
Sample Date		04/17/01		04/19/01		04/23/01		04/18/01		04/12/01	
MERCURY											
Mercury	(mg/L)	0.00020	ND	0.00020	ND	0.00020	ND	0.00020	ND	0.00020	ND
Mercury-DISS	(mg/L)	0.00020	ND	0.00020	ND	0.00020	ND	0.00020	ND	0.00020	ND
METAL											
Aluminum	(mg/L)	0.20	ND	0.20	ND	0.20	ND	0.20	ND	0.20	ND
Aluminum-DISS	(mg/L)	0.20	ND	0.20	ND	0.20	ND	0.20	ND	0.20	ND
Antimony	(mg/L)	0.060	ND	0.060	ND	0.060	ND	0.060	ND	0.060	ND
Antimony-DISS	(mg/L)	0.060	ND	0.060	ND	0.060	ND	0.060	ND	0.060	ND
Arsenic	(mg/L)	0.020	=	0.023	=	0.010	ND	0.010	ND	0.010	ND
Arsenic-DISS	(mg/L)	0.020	=	0.022	=	0.010	ND	0.010	ND	0.010	ND
Barium	(mg/L)	0.65	=	0.69	=	0.42	=	0.20	ND	0.20	ND
Barium-DISS	(mg/L)	0.62	=	0.67	=	0.40	=	0.20	ND	0.20	ND
Beryllium	(mg/L)	0.0040	ND	0.0040	ND	0.0040	ND	0.0040	ND	0.0040	ND
Beryllium-DISS	(mg/L)	0.0040	ND	0.0040	ND	0.0040	ND	0.0040	ND	0.0040	ND
Cadmium	(mg/L)	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND
Cadmium-DISS	(mg/L)	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND
Calcium	(mg/L)	116	=	121	=	181	=	107	=	86.8	=
Calcium-DISS	(mg/L)	114	=	118	=	176	=	110	=	91.4	=
Chromium	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.020	=	0.012	=
Chromium-DISS	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Cobalt	(mg/L)	0.050	ND	0.050	ND	0.050	ND	0.050	ND	0.050	ND
Cobalt-DISS	(mg/L)	0.050	ND	0.050	ND	0.050	ND	0.050	ND	0.050	ND
Copper	(mg/L)	0.025	ND	0.025	ND	0.025	ND	0.025	ND	0.025	ND
Copper-DISS	(mg/L)	0.025	ND	0.025	ND	0.025	ND	0.025	ND	0.025	ND
Iron	(mg/L)	7.1	=	7.7	=	10.3	=	0.10	ND	0.14	=
Iron-DISS	(mg/L)	6.9	=	7.0	=	8.9	=	0.10	ND	0.10	ND
Lead	(mg/L)	0.0030	ND	0.0030	ND	0.0030	ND	0.0030	ND	0.0030	ND
Lead-DISS	(mg/L)	0.0030	ND	0.0030	ND	0.0030	ND	0.0030	ND	0.0030	ND
Magnesium	(mg/L)	25.3	=	26.6	=	43.8	=	28.4	=	31.6	=
Magnesium-DISS	(mg/L)	25.5	=	26.2	=	43.0	=	29.6	=	33.3	=
Manganese	(mg/L)	0.32	=	0.35	=	0.46	=	0.015	ND	0.015	ND
Manganese-DISS	(mg/L)	0.32	=	0.33	=	0.46	=	0.015	ND	0.015	ND
Nickel	(mg/L)	0.040	ND	0.040	ND	0.040	ND	0.040	ND	0.040	ND
Nickel-DISS	(mg/L)	0.040	ND	0.040	ND	0.040	ND	0.040	ND	0.040	ND
Potassium	(mg/L)	5.0	ND	5.0	ND	6.2	=	5.0	ND	5.8	=
Potassium-DISS	(mg/L)	5.0	ND	5.0	ND	6.0	=	5.0	ND	6.1	=
Selenium	(mg/L)	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND
Selenium-DISS	(mg/L)	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND
Silver	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Silver-DISS	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Sodium	(mg/L)	30.1	=	32.4	=	31.7	=	25.2	=	31.5	=
Sodium-DISS	(mg/L)	30.6	=	31.4	=	31.3	=	27.4	=	33.4	=
Thallium	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Thallium-DISS	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND

Wright-Patterson AFB
April 2001 - Basewide Metals Data - Ground Water
The IT Group, Project 777097

Sample Number		BMP-NEA-MW20-2S-0401		BMP-NEA-MW20-2S-5401		LTM-07-520-M-0401		LTM-14-554-M-0401		LTM-25-582-M-0401	
Sample Date		04/17/01		04/19/01		04/23/01		04/18/01		04/12/01	
METAL											
Vanadium	(mg/L)	0.050	ND	0.050	ND	0.050	ND	0.050	ND	0.050	ND
Vanadium-DISS	(mg/L)	0.050	ND	0.050	ND	0.050	ND	0.050	ND	0.050	ND
Zinc	(mg/L)	0.050	ND	0.050	ND	0.050	ND	0.050	ND	0.050	ND
Zinc-DISS	(mg/L)	0.050	ND	0.050	ND	0.050	ND	0.050	ND	0.050	ND

Wright-Patterson AFB
April 2001 - Basewide Metals Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-25-582-M-5401		LTM-25-583-M-0401		LTM-25-584-M-0401		LTM-EFDZ3-MW02-0401		LTM-EFDZ3-MW03-0401	
Sample Date		04/12/01		04/12/01		04/12/01		04/12/01		04/19/01	
MERCURY											
Mercury	(mg/L)	0.00020	ND	0.00020	ND	0.00020	ND	0.00020	ND	0.00020	ND
Mercury-DISS	(mg/L)	0.00020	ND	0.00020	ND	0.00020	ND	0.00020	ND	0.00020	ND
METAL											
Aluminum	(mg/L)	0.20	ND	0.20	ND	0.20	ND	0.20	ND	0.20	ND
Aluminum-DISS	(mg/L)	0.20	ND	0.20	ND	0.20	ND	0.20	ND	0.20	ND
Antimony	(mg/L)	0.060	ND	0.060	ND	0.060	ND	0.060	ND	0.060	ND
Antimony-DISS	(mg/L)	0.060	ND	0.060	ND	0.060	ND	0.060	ND	0.060	ND
Arsenic	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Arsenic-DISS	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Barium	(mg/L)	0.20	ND	0.20	ND	0.20	ND	0.20	ND	0.20	ND
Barium-DISS	(mg/L)	0.20	ND	0.20	ND	0.20	ND	0.20	ND	0.20	ND
Beryllium	(mg/L)	0.0040	ND	0.0040	ND	0.0040	ND	0.0040	ND	0.0040	ND
Beryllium-DISS	(mg/L)	0.0040	ND	0.0040	ND	0.0040	ND	0.0040	ND	0.0040	ND
Cadmium	(mg/L)	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND
Cadmium-DISS	(mg/L)	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND
Calcium	(mg/L)	95.4	=	97.5	=	90.0	=	98.9	=	101	=
Calcium-DISS	(mg/L)	90.7	=	96.6	=	90.4	=	107	=	97.8	=
Chromium	(mg/L)	0.010	ND	0.038	=	0.010	ND	0.015	=	0.010	ND
Chromium-DISS	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Cobalt	(mg/L)	0.050	ND	0.050	ND	0.050	ND	0.050	ND	0.050	ND
Cobalt-DISS	(mg/L)	0.050	ND	0.050	ND	0.050	ND	0.050	ND	0.050	ND
Copper	(mg/L)	0.025	ND	0.025	ND	0.025	ND	0.025	ND	0.025	ND
Copper-DISS	(mg/L)	0.025	ND	0.025	ND	0.025	ND	0.025	ND	0.025	ND
Iron	(mg/L)	0.10	ND	0.51	=	0.10	ND	1.4	=	0.10	ND
Iron-DISS	(mg/L)	0.10	ND	0.10	ND	0.10	ND	0.24	=	0.10	ND
Lead	(mg/L)	0.0030	ND	0.0030	ND	0.0030	ND	0.0030	ND	0.0030	ND
Lead-DISS	(mg/L)	0.0030	ND	0.0030	ND	0.0030	ND	0.0030	ND	0.0030	ND
Magnesium	(mg/L)	34.1	=	34.1	=	32.5	=	40.6	=	35.6	=
Magnesium-DISS	(mg/L)	32.0	=	34.2	=	32.6	=	44.0	=	34.5	=
Manganese	(mg/L)	0.015	ND	0.015	ND	0.015	ND	0.042	=	0.015	ND
Manganese-DISS	(mg/L)	0.015	ND	0.015	ND	0.015	ND	0.036	=	0.015	ND
Nickel	(mg/L)	0.040	ND	0.040	ND	0.040	ND	0.040	ND	0.040	ND
Nickel-DISS	(mg/L)	0.040	ND	0.040	ND	0.040	ND	0.040	ND	0.040	ND
Potassium	(mg/L)	6.2	=	5.6	=	6.3	=	5.0	ND	5.0	ND
Potassium-DISS	(mg/L)	5.9	=	5.7	=	6.2	=	5.0	ND	5.0	ND
Selenium	(mg/L)	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND
Selenium-DISS	(mg/L)	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND
Silver	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Silver-DISS	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Sodium	(mg/L)	33.7	=	36.2	=	35.7	=	76.4	=	5.7	=
Sodium-DISS	(mg/L)	31.7	=	36.3	=	35.2	=	81.8	=	6.7	=
Thallium	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Thallium-DISS	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND

Wright-Patterson AFB
April 2001 - Basewide Metals Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-25-582-M-5401		LTM-25-583-M-0401		LTM-25-584-M-0401		LTM-EFDZ3-MW02-0401		LTM-EFDZ3-MW03-0401	
Sample Date		04/12/01		04/12/01		04/12/01		04/12/01		04/19/01	
METAL											
Vanadium	(mg/L)	0.050	ND	0.050	ND	0.050	ND	0.050	ND	0.050	ND
Vanadium-DISS	(mg/L)	0.050	ND	0.050	ND	0.050	ND	0.050	ND	0.050	ND
Zinc	(mg/L)	0.051	=	0.050	ND	0.050	ND	0.050	ND	0.050	ND
Zinc-DISS	(mg/L)	0.075	=	0.050	ND	0.050	ND	0.050	ND	0.050	ND

Wright-Patterson AFB
April 2001 - Basewide Metals Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-EFDZ8-MW01-0401		LTM-HD-11-0401		LTM-NEA-MW01-1S-0401		LTM-NEA-MW02-2S-0401		LTM-NEA-MW23-2S-0401	
Sample Date		04/19/01		04/10/01		04/18/01		04/18/01		04/17/01	
MERCURY											
Mercury	(mg/L)	0.00020	ND	0.00020	ND	0.00020	ND	0.00020	ND	0.00020	ND
Mercury-DISS	(mg/L)	0.00020	ND	--		0.00020	ND	0.00020	ND	0.00020	ND
METAL											
Aluminum	(mg/L)	0.56	=	0.36	=	0.20	ND	0.20	ND	0.20	ND
Aluminum-DISS	(mg/L)	0.20	=	--		0.20	ND	0.20	ND	0.20	ND
Antimony	(mg/L)	0.060	ND	0.060	ND	0.060	ND	0.060	ND	0.060	ND
Antimony-DISS	(mg/L)	0.060	ND	--		0.060	ND	0.060	ND	0.060	ND
Arsenic	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Arsenic-DISS	(mg/L)	0.010	ND	--		0.010	ND	0.010	ND	0.010	ND
Barium	(mg/L)	0.20	=	0.20	ND	0.20	ND	0.20	ND	0.30	=
Barium-DISS	(mg/L)	0.20	ND	--		0.20	ND	0.20	ND	0.29	=
Beryllium	(mg/L)	0.0040	ND	0.0040	ND	0.0040	ND	0.0040	ND	0.0040	ND
Beryllium-DISS	(mg/L)	0.0040	ND	--		0.0040	ND	0.0040	ND	0.0040	ND
Cadmium	(mg/L)	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND
Cadmium-DISS	(mg/L)	0.0050	ND	--		0.0050	ND	0.0050	ND	0.0050	ND
Calcium	(mg/L)	35.8	=	123	=	109	=	104	=	106	=
Calcium-DISS	(mg/L)	34.7	=	--		113	=	106	=	104	=
Chromium	(mg/L)	0.043	=	0.010	ND	0.011	=	0.010	ND	0.010	ND
Chromium-DISS	(mg/L)	0.021	=	--		0.010	ND	0.010	ND	0.010	ND
Cobalt	(mg/L)	0.050	ND	0.050	ND	0.050	ND	0.050	ND	0.050	ND
Cobalt-DISS	(mg/L)	0.050	ND	--		0.050	ND	0.050	ND	0.050	ND
Copper	(mg/L)	0.025	ND	0.025	ND	0.025	ND	0.025	ND	0.025	ND
Copper-DISS	(mg/L)	0.025	ND	--		0.025	ND	0.025	ND	0.025	ND
Iron	(mg/L)	2.6	=	2.2	=	0.61	=	0.28	=	0.10	ND
Iron-DISS	(mg/L)	0.97	=	--		0.77	=	0.10	ND	0.10	ND
Lead	(mg/L)	0.0030	ND	0.0030	ND	0.0030	ND	0.0030	ND	0.0030	ND
Lead-DISS	(mg/L)	0.0030	ND	--		0.0030	ND	0.0030	ND	0.0030	ND
Magnesium	(mg/L)	26.2	=	43.6	=	35.6	=	37.1	=	33.3	=
Magnesium-DISS	(mg/L)	25.2	=	--		36.5	=	37.7	=	32.8	=
Manganese	(mg/L)	0.041	=	0.10	=	0.025	=	0.023	=	0.41	=
Manganese-DISS	(mg/L)	0.025	=	--		0.032	=	0.015	ND	0.37	=
Nickel	(mg/L)	0.28	=	0.040	ND	0.047	=	0.040	ND	0.040	ND
Nickel-DISS	(mg/L)	0.19	=	--		0.14	=	0.040	ND	0.040	ND
Potassium	(mg/L)	29.8	=	5.0	ND	5.3	=	5.0	ND	5.0	ND
Potassium-DISS	(mg/L)	25.8	=	--		5.4	=	5.0	ND	5.0	ND
Selenium	(mg/L)	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND
Selenium-DISS	(mg/L)	0.0050	ND	--		0.0050	ND	0.0050	ND	0.0050	ND
Silver	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Silver-DISS	(mg/L)	0.010	ND	--		0.010	ND	0.010	ND	0.010	ND
Sodium	(mg/L)	219	=	60.2	=	40.8	=	47.3	=	31.8	=
Sodium-DISS	(mg/L)	182	=	--		42.0	=	47.7	=	31.6	=
Thallium	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Thallium-DISS	(mg/L)	0.010	ND	--		0.010	ND	0.010	ND	0.010	ND

Wright-Patterson AFB
April 2001 - Basewide Metals Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-EFDZ8-MW01-0401		LTM-HD-11-0401		LTM-NEA-MW01-1S-0401		LTM-NEA-MW02-2S-0401		LTM-NEA-MW23-2S-0401	
Sample Date		04/19/01		04/10/01		04/18/01		04/18/01		04/17/01	
METAL											
Vanadium	(mg/L)	0.050	ND	0.050	ND	0.050	ND	0.050	ND	0.050	ND
Vanadium-DISS	(mg/L)	0.050	ND	--		0.050	ND	0.050	ND	0.050	ND
Zinc	(mg/L)	0.050	ND	0.050	ND,L	0.050	ND	0.050	ND	0.050	ND
Zinc-DISS	(mg/L)	0.050	ND	--		0.050	ND	0.050	ND	0.050	ND

Wright-Patterson AFB
April 2001 - Basewide Metals Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-NEA-MW24-2S-0401		LTM-NEA-MW31-3S-0401		LTM-OU10-MW-03S-0401		LTM-OU10-MW-06S-0401		LTM-OU10-MW-06S-5401	
Sample Date		04/17/01		04/18/01		04/11/01		04/11/01		04/11/01	
MERCURY											
Mercury	(mg/L)	0.00020	ND	0.00020	ND	0.00020	ND	0.00020	ND	0.00020	ND
Mercury-DISS	(mg/L)	0.00020	ND	0.00020	ND	0.00020	ND	0.00020	ND	0.00020	ND
METAL											
Aluminum	(mg/L)	0.20	=	0.20	ND	0.20	ND	0.20	ND	0.20	ND
Aluminum-DISS	(mg/L)	0.20	ND	0.20	ND	0.20	ND	0.20	ND	0.20	ND
Antimony	(mg/L)	0.060	ND	0.060	ND	0.060	ND	0.060	ND	0.060	ND
Antimony-DISS	(mg/L)	0.060	ND	0.060	ND	0.060	ND	0.060	ND	0.060	ND
Arsenic	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Arsenic-DISS	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Barium	(mg/L)	0.20	ND	0.20	ND	0.20	ND	0.20	ND	0.20	ND
Barium-DISS	(mg/L)	0.20	ND	0.20	ND	0.20	ND	0.20	ND	0.20	ND
Beryllium	(mg/L)	0.0040	ND	0.0040	ND	0.0040	ND	0.0040	ND	0.0040	ND
Beryllium-DISS	(mg/L)	0.0040	ND	0.0040	ND	0.0040	ND	0.0040	ND	0.0040	ND
Cadmium	(mg/L)	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND
Cadmium-DISS	(mg/L)	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND
Calcium	(mg/L)	112	=	99.7	=	93.2	=	86.7	=	88.7	=
Calcium-DISS	(mg/L)	110	=	103	=	86.9	=	87.4	=	88.2	=
Chromium	(mg/L)	0.74	=	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Chromium-DISS	(mg/L)	0.092	=	0.017	=	0.010	ND	0.010	ND	0.010	ND
Cobalt	(mg/L)	0.050	ND	0.050	ND	0.050	ND	0.050	ND	0.050	ND
Cobalt-DISS	(mg/L)	0.050	ND	0.050	ND	0.050	ND	0.050	ND	0.050	ND
Copper	(mg/L)	0.025	ND	0.025	ND	0.025	ND	0.025	ND	0.025	ND
Copper-DISS	(mg/L)	0.025	ND	0.025	ND	0.025	ND	0.025	ND	0.025	ND
Iron	(mg/L)	5.3	=	0.28	=	0.10	ND	0.10	ND	0.10	ND
Iron-DISS	(mg/L)	1.0	=	0.48	=	0.10	ND	0.10	ND	0.10	ND
Lead	(mg/L)	0.0030	ND	0.0030	ND	0.0030	ND	0.0030	ND	0.0030	ND
Lead-DISS	(mg/L)	0.0030	ND	0.0030	ND	0.0030	ND	0.0030	ND	0.0030	ND
Magnesium	(mg/L)	37.2	=	34.8	=	35.2	=	30.9	=	32.1	=
Magnesium-DISS	(mg/L)	36.6	=	35.9	=	35.1	=	31.3	=	32.2	=
Manganese	(mg/L)	0.027	=	0.015	ND	0.015	ND	0.015	ND	0.015	ND
Manganese-DISS	(mg/L)	0.015	ND	0.019	=	0.015	ND	0.015	ND	0.015	ND
Nickel	(mg/L)	0.046	=	0.071	=	0.040	ND	0.040	ND	0.040	ND
Nickel-DISS	(mg/L)	0.040	ND	0.093	=	0.040	ND	0.040	ND	0.040	ND
Potassium	(mg/L)	8.8	=	23.5	=	5.0	ND	5.0	ND	5.0	ND
Potassium-DISS	(mg/L)	8.7	=	24.0	=	5.0	ND	5.0	ND	5.0	ND
Selenium	(mg/L)	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND
Selenium-DISS	(mg/L)	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND
Silver	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Silver-DISS	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Sodium	(mg/L)	46.4	=	46.8	=	43.0	=	38.6	=	36.9	=
Sodium-DISS	(mg/L)	46.2	=	48.3	=	42.4	=	38.8	=	37.1	=
Thallium	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Thallium-DISS	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND

Wright-Patterson AFB
April 2001 - Basewide Metals Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-NEA-MW24-2S-0401		LTM-NEA-MW31-3S-0401		LTM-OU10-MW-03S-0401		LTM-OU10-MW-06S-0401		LTM-OU10-MW-06S-5401	
Sample Date		04/17/01		04/18/01		04/11/01		04/11/01		04/11/01	
METAL											
Vanadium	(mg/L)	0.050	ND	0.050	ND	0.050	ND	0.050	ND	0.050	ND
Vanadium-DISS	(mg/L)	0.050	ND	0.050	ND	0.050	ND	0.050	ND	0.050	ND
Zinc	(mg/L)	0.050	ND	0.050	ND	0.050	ND	0.050	ND	0.050	ND
Zinc-DISS	(mg/L)	0.050	ND	0.050	ND	0.050	ND	0.050	ND	0.050	ND

Wright-Patterson AFB
April 2001 - Basewide Metals Data - Ground Water
The IT Group, Project 777097

Sample Number		LTM-OU10-MW10I-0401		LTM-OU8-MW-02D-0401		LTM-OU8-MW23D-0401		LTM-P4-2-0401	
Sample Date		04/12/01		04/11/01		04/12/01		04/19/01	
MERCURY									
Mercury	(mg/L)	0.00020	ND	0.00020	ND	0.00020	ND	0.00020	ND
Mercury-DISS	(mg/L)	0.00020	ND	0.00020	ND	0.00020	ND	0.00020	ND
METAL									
Aluminum	(mg/L)	0.20	ND	0.47	=	0.20	ND	1.4	=
Aluminum-DISS	(mg/L)	0.20	ND	0.29	=	0.20	ND	0.20	ND
Antimony	(mg/L)	0.060	ND	0.060	ND	0.060	ND	0.060	ND
Antimony-DISS	(mg/L)	0.060	ND	0.060	ND	0.060	ND	0.060	ND
Arsenic	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Arsenic-DISS	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Barium	(mg/L)	0.20	ND	0.20	ND	0.20	ND	0.20	ND
Barium-DISS	(mg/L)	0.20	ND	0.20	ND	0.20	ND	0.20	ND
Beryllium	(mg/L)	0.0040	ND	0.0040	ND	0.0040	ND	0.0040	ND
Beryllium-DISS	(mg/L)	0.0040	ND	0.0040	ND	0.0040	ND	0.0040	ND
Cadmium	(mg/L)	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND
Cadmium-DISS	(mg/L)	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND
Calcium	(mg/L)	104	=	97.3	=	97.0	=	122	=
Calcium-DISS	(mg/L)	97.0	=	95.1	=	96.9	=	122	=
Chromium	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.12	=
Chromium-DISS	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Cobalt	(mg/L)	0.050	ND	0.050	ND	0.050	ND	0.050	ND
Cobalt-DISS	(mg/L)	0.050	ND	0.050	ND	0.050	ND	0.050	ND
Copper	(mg/L)	0.025	ND	0.025	ND	0.025	ND	0.025	ND
Copper-DISS	(mg/L)	0.025	ND	0.025	ND	0.025	ND	0.025	ND
Iron	(mg/L)	0.10	ND	0.82	=	1.1	=	1.6	=
Iron-DISS	(mg/L)	0.10	ND	0.54	=	1.1	=	0.10	ND
Lead	(mg/L)	0.0030	ND	0.0030	ND	0.0030	ND	0.0030	ND
Lead-DISS	(mg/L)	0.0030	ND	0.0030	ND	0.0030	ND	0.0030	ND
Magnesium	(mg/L)	37.3	=	37.8	=	38.9	=	32.2	=
Magnesium-DISS	(mg/L)	35.0	=	35.5	=	39.6	=	31.2	=
Manganese	(mg/L)	0.015	ND	0.19	=	0.13	=	0.052	=
Manganese-DISS	(mg/L)	0.015	ND	0.17	=	0.13	=	0.026	=
Nickel	(mg/L)	0.040	ND	0.040	ND	0.040	ND	0.040	ND
Nickel-DISS	(mg/L)	0.040	ND	0.040	ND	0.040	ND	0.040	ND
Potassium	(mg/L)	8.9	=	18.1	=	5.0	ND	5.0	ND
Potassium-DISS	(mg/L)	8.4	=	19.7	=	5.0	ND	5.0	ND
Selenium	(mg/L)	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND
Selenium-DISS	(mg/L)	0.0050	ND	0.0050	ND	0.0050	ND	0.0050	ND
Silver	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Silver-DISS	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Sodium	(mg/L)	53.0	=	64.4	=	49.3	=	23.0	=
Sodium-DISS	(mg/L)	49.5	=	64.8	=	50.3	=	22.9	=
Thallium	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND
Thallium-DISS	(mg/L)	0.010	ND	0.010	ND	0.010	ND	0.010	ND

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METAL									
Vanadium	(mg/L)	0.050	ND	0.050	ND	0.050	ND	0.050	ND
Vanadium-DISS	(mg/L)	0.050	ND	0.050	ND	0.050	ND	0.050	ND
Zinc	(mg/L)	0.050	ND	0.050	ND	0.050	ND	0.050	ND
Zinc-DISS	(mg/L)	0.050	ND	0.050	ND	0.050	ND	0.050	ND

-- = Not Applicable, ND = Not Detected