QUARTERLY PROGRESS REPORT
SECOND QUARTER 2001

FORMER TAYLOR INSTRUMENTS SITE
ROCHESTER, NEW YORK

PREPARED FOR:

COMBUSTION ENGINEERING
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LIST OF ACRONYMS

CO_2	carbon dioxide
cis-1,2-DCE	cis-1,2-dichlroethylene
DCE	dichloroethylene
DO	dissolved oxygen
DPVE	dual-phase vacuum extraction
EPA	Environmental Protection Agency (United States)
J	estimated value
µg/L	micrograms per liter
MCL	maximum contaminant level
mg/L	milligrams per liter
mL/min	milliliters per minute
MS	matrix spike
MS/MSD	matrix spike/matrix spike duplicate
MSD	matrix spike duplicate
NYSDEC	New York State Department of Environmental Conservation
O&M	Operation and Maintenance
ORP	oxidation reduction potential
PARCC	precision, accuracy, representativeness, completeness, and comparability
PVC	polyvinyl chloride
QC	quality control
%R	recovery
RPD	relative percent difference
SQL	sample quantitation limit
System	dual-phase vacuum extraction and groundwater remedial treatment system
TCE	trichloroethylene
U	non-detect
VOC	volatile organic compound

1.0 INTRODUCTION

This report summarizes the activities and results for the second quarterly sampling event, which was conducted in June 2001, following implementation of the dual-phase vacuum extraction and groundwater remedial treatment system (System). A summary of the first quarterly sampling event results are also included. These activities occurred at the former Taylor Instruments Site – New York State Department of Environmental Conservation (NYSDEC) Site #828028a located at 95 Ames Street in Rochester, New York (Figure 1, Appendix A), pursuant to a Voluntary Cleanup Agreement. An operational summary of the System for the second quarter of operation is also presented. This monitoring program has been implemented to document remedial progress in reducing contaminants of concern.

2.0 SCOPE OF WORK

2.1 JUNE 2001 QUARTERLY SAMPLING EVENT

Harding ESE personnel performed the June sampling event to provide an inclusive set of groundwater analytical data for the second quarterly period following start-up of the groundwater conveyance and treatment system. Forty-five samples were collected and submitted to Columbia Analytical Services (Table 2-1). Forty-four samples were submitted for volatile organic analyses by U.S. Environmental Protection Agency (EPA) Method 8260B. Of the forty-five samples collected, eight were also submitted for natural biodegradation parameters which include nitrate, sulfate, and chloride by Method 300.0, total organic carbon by Method 415.1, sulfide by Method 376.1, ferrous iron by Method SM3500B, methane, ethane, and ethene by Method 8015B, carbon dioxide by Method SM4500B, and alkalinity by Method 310.1. One sample was submitted for selected natural biodegradation parameters, which were alkalinity, chloride, and carbon dioxide. Thirty-two of the samples were environmental samples collected from monitor and extraction wells located on the Site. Thirteen of the forty-five samples were associated with quality control efforts. All environmental samples, including field duplicates and matrix spike/matrix spike duplicate (MS/MSD) samples, were collected using low-flow peristaltic pumps at flow rates <400 milliliters per minute (mL/min). A summary of analytical results for the overburden and bedrock monitor wells is presented in Tables 3-1, 3-2, and 3-3 and Figures 2 and 3, respectively. Laboratory reports and sample chain of custody forms for all samples are located in Appendix B and C, respectively. Field measurements of pH, Conductivity, temperature, turbidity, oxidation reduction potential, and dissolved oxygen (DO) were collected during purging. Purge and sample data are presented on the field data records located in Appendix D.

2.2 TREATMENT SYSTEM OPERATION AND MAINTENANCE (O&M)

Harding ESE provides full-scale O&M services for the System at the subject site. The System is monitored remotely on a daily basis via telemetry. Key operational data and alarms are accessed through the programmable logic controller via phone line which allows Harding ESE to determine the status of the System and quickly contact local O&M personnel, if necessary, thus maximizing System runtime. Routine O&M activities are conducted monthly and major activities are conducted quarterly. These activities include the following:

- Monthly
  - Collecting System operational data including line pressures, equipment runtime, flow rates, vacuum levels, and other pertinent data.

Table 2-1
Samples and Analysis,
June 2001 Sampling Event

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Sample ID	Sample Date	VOCs[1] Analysis	Natural Biodegradation Parameter Analysis[2]	Description
QATB01	06/14/01	X		Trip Blank
QAFB01	06/14/01	X		Field Blank
QARB01	06/14/01	X		Rinsate
BR-07	06/14/01	X		Environmental Sample
BR-07 (DUP)	06/14/01	X		Duplicate
TW-13	06/14/01	X		Environmental Sample
W-4	06/15/01	X		Environmental Sample
OB-06	06/15/01	X		Environmental Sample
BR-08	06/15/01	X		Environmental Sample
BR-17	06/15/01	X		Environmental Sample
BR-06	06/15/01	X		Environmental Sample
BR-06 (MS)	06/15/01	X		Matrix Spike
BR-06 (MD)	06/15/01	X		Matrix Spike Duplicate
W-2	06/15/01		X[3]	Environmental Sample
TW-04	06/15/01	X	X	Environmental Sample
BR-03	06/15/01	X		Environmental Sample
QATB02	06/15/01	X		Trip Blank
BR-14	06/16/01	X		Environmental Sample
BR-01	06/16/01	X		Environmental Sample
TW-17	06/16/01	X	X	Environmental Sample
TW-20	06/16/01	X	X	Environmental Sample
TW-07	06/16/01	X	X	Environmental Sample
TW-09	06/16/01	X	X	Environmental Sample
BR-02	06/17/01	X		Environmental Sample
OB-09	06/17/01	X	X	Environmental Sample
BR-16	06/17/01	X		Environmental Sample
OB-07	06/17/01	X	X	Environmental Sample
BR-12	06/17/01	X		Environmental Sample
QAFB02	06/17/01	X		Field Blank
QARB02	06/17/01	X		Rinsate
QATB03	06/17/01	X		Trip Blank

See notes at end of table.

Table 2-1 (Continued)
Samples and Analysis,
June 2001 Sampling Event

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Rochester, New York

Sample ID	Sample Date	VOCs[1] Analysis	Natural Biodegradation Parameter Analysis[2]	Description
W-5	06/18/01	X	X	Environmental Sample
BR-13	06/18/01	X		Environmental Sample
BR-15	06/18/01	X		Environmental Sample
BR-10	06/18/01	X		Environmental Sample
OB-04	06/18/01	X		Environmental Sample
BR-05	06/19/01	X		Environmental Sample
BR-05 (DUP)	06/19/01	X		Duplicate
W-5 (MS)	06/19/01	X		Matrix Spike
W-5 (MD)	06/19/01	X		Matrix Spike Duplicate
BR-04	06/19/01	X		Environmental Sample
BR-09	06/19/01	X		Environmental Sample
OB-08	06/19/01	X		Environmental Sample
BR-11	06/20/01	X		Environmental Sample
EW-S-5	06/20/01	X		Environmental Sample

[1] VOCs analyzed by Method 8260.

[2] Natural biodegradation parameters include nitrate by Method 300.0, sulfate by Method 300.0, chloride by Method 300.0, total organic carbon by Method 415.1, sulfide by Method 376.1, ferrous iron by Method SM3500B, methane by Method 8015B, ethane by Method 8015B, ethene by Method 8015B, carbon dioxide by Method SM4500B, and alkalinity by Method 310.1.

[3] Analyzed for alkalinity by Method 310.1, chloride by Method 300.0, and carbon dioxide by Method SM4500B.

Notes: ID = identification
VOC = volatile organic compound
DUP = duplicate
MS = matrix spike
MD = matrix spike duplicate

- Checking operation of all equipment for vibration or unusual noise, leaks, and unusual operation.
- Collecting water levels from site monitor wells.
- Checking filters, operating fluid levels, and cleanliness of vacuum and transfer pumps and groundwater treatment components.
- Cleaning the System building interior.
- Collecting System performance and effluent compliance samples. Performance samples are collected from each vacuum pump and air stripper exhaust stack, and the influent and effluent of the air stripper. Compliance samples are collected from the effluent of the System prior to discharge to the Monroe County Pure Waters Sewer System.

- Quarterly
  - Completing all monthly activities
  - Checking pump motors for wear
  - Checking all electrical components for proper operation
  - Cleaning groundwater treatment equipment

The O&M manual for the System contains the above information and full details of all equipment and components (Harding ESE, 2001).

3.0 SUMMARY OF RESULTS

The wells sampled during the second quarterly (June 2001) event are divided into four categories. These categories are (1) the North and South Trichloroethylene (TCE) Source Areas; (2) Upgradient, which includes wells upgradient of the source areas; (3) Downgradient Perimeter, which includes wells downgradient of the source areas, and (4) Deep Bedrock, which includes BR-08 and BR-14. Well construction information is provided in Appendix E.

A summary of wells sampled and the analyses performed are found in Table 2-1. The sample results for the June 2001 sampling event are summarized in Tables 3-1, 3-2, and 3-3. These tables present only positive (i.e., detected) volatile organic compound (VOC) results. Sample VOC results are also presented in "flag boxes" in Appendix A, Figures 2 and 3, representing overburden monitor wells and bedrock monitor wells. TCE concentration trend graphs for both overburden and bedrock monitor wells are provided in Appendix F. These graphs present data from the Baseline, March 2001, and June 2001 sampling events. Natural biodegradation results for the June 2001 event are summarized in Table 3-4. Comprehensive results can be found in the laboratory reports located in Appendix B.

3.1 NORTH AND SOUTH TCE SOURCE AREAS

Overburden Monitor Wells

Monitor wells OB-04 and OB-06 are both located within the South TCE Source Area while OB-07 is within the plume. OB-04 exhibited TCE concentrations of 39,000 micrograms per liter (µg/L) with cis-1,2-dichlroethylene (cis-1,2-DCE) concentrations of 21,000 µg/L. This reflects a decline in TCE concentrations from the Baseline event, with a rise in daughter product concentrations. OB-06 also showed a decline in TCE concentration from the Baseline event, with TCE detected at 720 µg/L. Also, cis-1,2-DCE was detected at 12 J (estimated value) µg/L. However, TCE and daughter product concentrations increased in these wells from the March Quarterly event results. This can be attributed to the shut-down of one of the extraction pumps for the South TCE Source Area prior to the sampling activities due to mechanical difficulties. This decrease in pumping conditions likely allowed the groundwater levels to recover and come in contact with previously unsaturated contaminated soil. OB-07 exhibited only an estimated 10 µg/L of TCE.

Monitor wells OB-05 and OB-08 are both located within the North TCE Source Area while OB-09 is within the plume. OB-05 was dry during the June sampling event and, therefore, was not sampled. TCE

Table 3-1
Summary of Extraction Well VOC Results for the Baseline Sampling Event

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Sample ID	Date Sampled	TCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)
EW-N-1*	11/10/00	2,400	93	28 J	--	--
EW-N-2*	11/10/00	7,200	1,100	--	--	--
EW-N-3*	11/10/00	13,000	490 J	--	--	--
EW-N-4*	11/11/00	840	31	--	--	--
EW-N-5*	11/11/00	640	--	--	--	--
EW-N-6*	11/11/00	6,800	130 J	--	--	--
EW-S-1S*	11/10/00	160	16 J	--	--	--
EW-S-1S (DUP)*	11/10/00	170	18 J	--	--	--
EW-S-1D*	11/10/00	200,000	11,000	--	--	--
EW-S-2*	11/08/00	360	180	18	180	4.5 J
EW-S-3*	10/27/00	1,100	60	--	--	--
EW-S-4*	10/26/00	60,000	36,000	--	--	--
EW-S-5*	10/27/00	590,000	--	--	--	--
EW-S-5**	03/21/01	38,000	--	--	--	--
EW-S-5*	06/20/01	67,000	520 J	--	--	--
EW-S-6*	10/27/00	13,000	1,200	--	--	--
EW-S-7*	11/08/00	130,000	1,900 J	--	--	--
EW-S-8*	10/27/00	570,000	--	--	--	--
EW-S-9*	11/08/00	16,000	460 J	--	--	--
EW-S-10*	11/09/00	--	--	--	--	--
EW-S-11*	11/08/00	--	--	--	--	--
EW-S-12*	11/08/00	--	--	--	--	--
EW-S-13*	11/09/00	--	--	--	--	--
EW-S-14*	11/09/00	--	--	--	--	--
EW-S-15*	11/09/00	--	--	--	--	--
EW-S-16*	11/09/00	--	--	--	--	--
BREW-N-1*	11/19/00	1,000	53	1.5 J	--	--
BREW-S-1*	11/19/00	250	140	3.1 J	--	--

See notes at end of table.

Table 3-1 (Continued)
Summary of Extraction Well VOC Results for the
Baseline Sampling Event

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Notes:
-- = no detections
* = unique sampling event
** = EW-S-5 was sampled in March for natural biodegradation parameters
µg/L = micrograms per liter
1,1-DCE = 1,1-dichloroethylene
cis-1,2-DCE = cis-1,2-dichloroethylene
DUP = duplicate
ID = identification
J = estimated value
TCE = trichloroethylene
trans-1,2-DCE = trans-1,2-dichloroethylene
VOC = volatile organic compound

Table 3-2
Summary of Overburden VOC Results for the Baseline, March 2001, and June 2001 Sampling Events

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Rochester, New York

Sample ID	Date Sampled	TCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)
OB-04	11/19/00	70,000	2,900	--	--	--
OB-04	03/24/01	150	3.2 J	--	--	--
OB-04	06/18/01	39,000	21,000	--	--	--
OB-05	11/19/00	25,000	4,600	--	--	350
OB-05	03/25/01	NS (Dry)	NS (Dry)	NS (Dry)	NS (Dry)	NS (Dry)
OB-05	06/14/01	NS (Dry)	NS (Dry)	NS (Dry)	NS (Dry)	NS (Dry)
OB-06	11/17/00	2,600	60	--	--	--
OB-06 (DUP)	11/17/00	3,300	80 J	--	--	--
OB-06	03/21/01	540	--	--	--	--
OB-06	06/15/01	720	12 J	--	--	--
OB-07	11/16/00	--	--	--	--	--
OB-07	03/28/01	7.5	--	--	--	--
OB-07	06/17/01	10 J	--	--	--	--
OB-08	11/16/00	40,000	390 J	--	--	--
OB-08	03/20/01	29,000	390 J	--	--	--
OB-08	06/19/01	15,000	240 J	--	--	--
OB-09	11/16/00	180	14	--	--	--
OB-09	03/26/01	150	16	--	--	--
OB-09	06/17/01	150	17	--	--	--
TW-01	10/24/00	--	--	--	--	--
TW-01*	03/01	NS	NS	NS	NS	NS
TW-01*	06/01	NS	NS	NS	NS	NS
TW-04	10/24/00	42	79	--	--	--
TW-04	03/22/01	14	16	--	--	--
TW-04	06/15/01	--	--	--	--	--
TW-07	10/25/00	28	7.2	28	--	--
TW-07	03/29/01	--	--	1.2 J	--	--
TW-07	06/16/01	27	3.9 J	13	--	--
TW-09	10/24/00	230	36	--	--	--
TW-09	03/27/01	120	1.9 J	--	--	--
TW-09	06/16/01	200	7.4	--	--	--

See notes at end of table.

Table 3-2 (Continued)
Summary of Overburden VOC Results for the Baseline, March 2001, and June 2001 Sampling Events

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Sample ID	Date Sampled	TCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)
TW-13	11/16/00	--	--	--	--	--
TW-13	03/20/01	--	--	--	--	--
TW-13	06/14/01	--	--	--	--	--
TW-17	11/17/00	1,000	7.9 J	--	--	--
TW-17	03/23/01	530	--	--	--	--
TW-17	06/16/01	490	--	--	--	--
TW-20	10/25/00	5.2	--	--	--	--
TW-20	03/27/01	12	--	--	--	--
TW-20	06/16/01	2.9 J	--	--	--	--
W-2	10/21/00	--	--	--	--	--
W-2*	03/29/01	NS	NS	NS	NS	NS
W-2*	06/15/01	NS	NS	NS	NS	NS
W-4	11/17/00	--	--	--	--	--
W-4	03/22/01	1.6 J	--	--	--	--
W-4	06/15/01	1.1 J	--	--	--	--
W-5	11/16/00	--	27	11	--	--
W-5	03/23/01	120	25	8.1	--	--
W-5	06/18/01	62	23	9.6	--	--
W-6	10/24/00	--	--	--	--	--
W-6**	03/01	NS	NS	NS	NS	NS
W-6**	06/01	NS	NS	NS	NS	NS

Notes:
-- = no detections
* = will not be sampled during quarterly events
** = W-6 was not sampled due to obstruction.
µg/L = micrograms per liter
1,1-DCE = 1,1-dichloroethylene
cis-1,2-DCE = cis-1,2-dichloroethylene
DUP = duplicate
ID = identification
J = estimated value
NS = not sampled
TCE = trichloroethylene
trans-1,2-DCE = trans-1,2-dichloroethylene
VOC = volatile organic compound

Table 3-3
Summary of Bedrock VOC Results for the Baseline, March 2001, and June 2001 Sampling Events

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Sample ID	Date Sampled	TCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)
BR-01	11/17/00	180	550	4.3 J	--	3.5 J
BR-01	03/21/01	320	34	2.2 J	--	--
BR-01 (DUP)	03/21/01	320	35	2.4 J	--	--
BR-01	06/16/01	270	59	4.4 J	--	--
BR-02	11/18/00	1,800	540	31 J	--	--
BR-02	03/21/01	1,200	95	--	--	--
BR-02	06/17/01	1,000	94	27 J	--	--
BR-03	11/18/00	440	99	1.2 J	2.2 J	--
BR-03	03/22/01	810	12 J	--	3.2 J	--
BR-03	06/15/01	500	20 J	--	--	--
BR-04	11/19/00	10,000	600	140	17 J	25 J
BR-04	03/24/01	9,000	400	95 J	--	--
BR-04	06/19/01	4,300	320	61 J	--	--
BR-05	11/19/00	4,800	1,200	130	--	160
BR-05	03/25/01	5,800	850	120 J	--	160
BR-05	06/19/01	4,300	1,600	130	37 J	290
BR-05 (DUP)	06/19/01	3,700	1,500	--	--	270
BR-06	11/17/00	--	--	--	--	--
BR-06	03/22/01	--	--	--	--	--
BR-06	06/15/01	1.6 J	--	--	--	--
BR-07	11/18/00	7.4	29	10	--	220
BR-07	03/23/01	3.4 J	34	13	--	210
BR-07	06/14/01	2.7 J	33	13	--	200
BR-07 (DUP)	06/14/01	2.2 J	34	12	--	200
BR-08 (Deep)	11/19/00	540	44	5.2 J	--	7.0 J
BR-08 (Deep)	03/24/01	1,100	320	6.7 J	--	--
BR-08 (Deep)	06/15/01	720	210	--	--	--
BR-09	11/18/00	13,000	190 J	--	--	--
BR-09	03/28/01	9,500	100 J	--	--	--
BR-09	06/19/01	1,500	36 J	--	--	--

See notes at end of table.

Table 3-3 (Continued)
Summary of Bedrock VOC Results for the Baseline, March 2001, and June 2001 Sampling Events

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Sample ID	Date Sampled	TCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)
BR-10	11/18/00	4,000	450	27 J	--	--
BR-10	03/28/01	4,700	980	110 J	--	--
BR-10	06/18/01	8,500	1,000	--	--	--
BR-11	11/18/00	1,400	320	52	--	13 J
BR-11	03/28/01	44,000	260	120	21	--
BR-11 (DUP)	03/28/01	52,000	270	120	19 J	21
BR-11	06/20/01	39,000	660 J	--	--	--
BR-12	11/19/00	200	8.1	--	--	--
BR-12	03/25/01	130	21	--	--	--
BR-12	06/17/01	99	26	--	--	--
BR-13	11/19/00	2.5 J	--	--	--	--
BR-13	03/25/01	3,200 J	150	14	1.7 J	1 J
BR-13	06/18/01	3,100	160	--	--	--
BR-14 (Deep)	11/19/00	--	1.2 J	--	--	--
BR-14 (Deep)	03/23/01	1.2 J	--	--	--	--
BR-14 (Deep)	06/16/01	--	--	--	--	--
BR-15	11/19/00	2,700	54 J	--	--	--
BR-15 (DUP)	11/19/00	2,700	49 J	--	--	--
BR-15	03/26/01	2,500	33 J	--	--	--
BR-15	06/18/01	2,300	49 J	--	--	--
BR-16	11/19/00	6.0	3.8 J	--	--	--
BR-16	03/25/01	1.2 J	--	--	--	--
BR-16	06/17/01	--	--	--	--	--
BR-17	11/18/00	840	160	84	3.6 J	--
BR-17	03/24/01	6,900	360	93	9.4 J	52
BR-17	06/15/01	5,200	260	68 J	--	46

Notes:
-- = no detections
µg/L = micrograms per liter
1,1-DCE = 1,1-dichloroethylene
cis-1,2-DCE = cis-1,2-dichloroethylene
DUP = duplicate
ID = identification
J = estimated value
TCE = trichloroethylene
trans-1,2-DCE = trans-1,2-dichloroethylene
VOC = volatile organic compound

Table 3-4
Summary of Natural Biodegradation Results, June 2001 Sampling Event[1]

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Parameter	Value Favorable for Natural Biodegradation	TW-04	TW-07	TW-09	TW-17	TW-20	W-5	W-2 (background)
DO (mg/L)	<0.5	0.44	0.07	3.68	5.40	0.28	0.19	6.30
Nitrate (mg/L)	<1	<0.5	88.9	0.744	<0.5	2.15	<0.5	NA
Iron II (mg/L)	>1	0.107	<0.1	<0.1	<0.1	<0.1	0.714	NA
Sulfate (mg/L)	<20	230	395	328	84.4	79.2	432	NA
Sulfide (mg/L)	>1	<1	<1	<1	<1	<1	<1	NA
Methane (mg/L)	>0.5	<0.002	<0.002	<0.002	<0.002	<0.002	0.0026	NA
ORP (mV)	<50	-259	-33	-60	-60	-56	-235	-33
pH	5<pH<9	7.01	6.65	7.12	6.99	6.98	6.65	7.69
TOC (mg/L)	>20	3.82	3.2	2.35	1.41	<1	4.65	NA
Temperature (°C)	>20	19.0	14.6	13.9	14.8	12.7	13.2	20.5
CO_2 (mg/L)	Note 1	55	150	35	63	70	380	12
Alkalinity (mg/L)	Note 1	278	351	201	293	350	570	242
Chloride (mg/L)	Note 1	9.89	46.2	11.5	12.7	13.6	31.4	16.6
BTEX (mg/L)	>0.1	<0.500	<0.025	<0.025	<0.125	<0.025	<0.025	NA
Ethene (mg/L)	>0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA
Ethane (mg/L)	>0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA
Daughter Products Detected	Any detection of daughter products	Note 2	Yes	Yes	Note 3	No	Yes	NA

[1] W-2 is the background well; other wells are perimeter wells.

Note 1: A value greater than two times the background value is considered favorable for natural biodegradation. The W-2 value is the background value.

Note 2: None detected; elevated sample quantitation limits (100 µg/L for DCE isomers, 20 µg/L for vinyl chloride) due to acetone concentration.

Note 3: None detected; somewhat elevated sample quantitation limits (25 µg/L for DCE isomers, 5 µg/L for vinyl chloride) due to TCE concentration.

Note: Shading indicates parameters supportive of natural biodegradation.

Continued on next page.

Table 3-4 (Continued)
Summary of Natural Biodegradation Results, June 2001 Sampling Event[1]

Quarterly Progress Report
Second Quarter 2001
Former Taylor Instruments Site
Rochester, New York

Reference: EPA. 1998. *Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Ground Water* EPA/600/R-98/128 (September).

DO = dissolved oxygen
mg/L = milligrams per liter
NA = not applicable
ORP = oxygen reduction potential
mV = millivolt
TOC = total organic compound
°C = degrees Celsius
CO_2 = carbon dioxide
BTEX= benzene, toluene, ethylbenzene, and xylene
DCE = dichloroethylene
VOC = volatile organic compound
J = estimated
EPA = Environmental Protection Agency (United States)
µg/L = micrograms per liter
TCE = trichloroethylene

concentrations in OB-08 dropped 48 percent (29,000 µg/L in March to 15,000 µg/L in June), while cis-1,2-DCE concentrations also dropped from 390 J to 240 J µg/L (38 percent). OB-09 remained constant (TCE concentrations of 150 µg/L in both March and June).

Acetone was detected (620 µg/L) in one source area well (OB-07). Acetone has no listed maximum contaminant level (MCL) and is a known laboratory artifact. OB-07 was diluted prior to being analyzed. The acetone contamination was possibly introduced through the dilution water. Since acetone was not determined as a contaminant of concern for this site and has not been detected historically in on-site monitor wells, this contamination is not considered representative of site groundwater conditions.

Bedrock

Bedrock monitor wells BR-04, BR-09, BR-10, BR-11, and BR-17 are located within the South TCE Source Area. BR-04 and BR-09 both exhibited a decrease in TCE and daughter product concentrations. A 52 percent reduction (from 9,000 to 4,300 µg/L) was measured in BR-04 from the March to the June event. Concentrations of TCE in BR-09 decreased from 9,500 to 1,500 µg/L (84 percent reduction). TCE concentrations increased (by approximately 55 percent from 4,700 to 8,500 µg/L) in well BR-10. In well BR-17, concentrations dropped by 25 percent (from 6,900 to 5,200 µg/L). Decreases in daughter products (cis-1,2-DCE and vinyl chloride) were also recorded. BR-11 TCE concentrations decreased from 44,000 to 39,000 µg/L, an 11 percent reduction.

BR-05, BR-12, BR-15, and BR-16 are located in the North TCE Source Area. BR-15 showed a decline from the March event to the June event in TCE (8 percent). BR-16 showed a decline from 1.2 µg/L to non-detect in June. BR-05 showed a 26 percent decline in TCE. BR-12 showed a 24 percent decrease in TCE concentration from 130 to 99 µg/L.

Acetone was detected in the BR-09 sample at 420 µg/L. Acetone has no listed MCL and is a known laboratory artifact. BR-09 was diluted prior to being analyzed. The acetone contamination was possibly introduced through the dilution water. Since acetone was not determined as a contaminant of concern for this site and has not been detected historically in on-site monitor wells, this contamination is not considered representative of site groundwater conditions.

3.2 UPGRADIENT MONITOR WELLS

Overburden Monitor Wells

W-2 and W-6 are southwest of the source areas and are considered to be upgradient. Neither well contained detectable concentrations of TCE, or any of its daughter products during the Baseline sampling event. These wells have historically shown non-detectable levels and are not included in quarterly sampling events.

Bedrock Monitor Wells

BR-06 is also an upgradient well, located southwest of the source areas. BR-06 exhibited TCE at a concentration of 1.6 J µg/L. BR-07 showed a possible slight decrease in TCE concentrations, dropping from 3.4 J to 2.7 J µg/L. Daughter product concentrations in BR-07 remained constant. The sample from BR-06 also displayed an acetone detection of 21 µg/L. Acetone has no listed MCL and is a known laboratory artifact. Since acetone was not determined as a contaminant of concern for this site and has not been detected historically in on-site monitor wells, this contamination is not considered representative of site groundwater conditions.

3.3 PERIMETER DOWNGRADIENT MONITOR WELLS

Overburden Monitor Wells

Downgradient well TW-13 showed no VOC detections. TW-04, TW-20 and TW-17 displayed a decline in TCE and daughter product concentrations. TCE concentrations in TW-17, dropped 8 percent (from 530 to 490 µg/L), and levels in TW-04 dropped from 14 µg/L to below detection levels. Measured concentrations in two perimeter wells showed apparent increases from March to June in TCE (from below detection levels to 27 µg/L) in TW-07 and from 120 to 200 µg/L in TW-09. TCE concentrations dropped 48 percent (from 120 to 62 milligrams per liter [mg/L]) in W-5 while cis-1,2-DCE concentrations remained essentially stable (25 and 23 µg/L). Acetone was detected in monitor wells TW-04 and W-5 at concentrations of 3,500 and 590 µg/L, respectively. Acetone has no listed MCL and is a known laboratory artifact. These samples were diluted prior to being analyzed. The acetone contamination was possibly introduced through the dilution water. Acetone was also detected in TW-13 at 160 µg/L. Since acetone was not determined as a contaminant of concern for this site and has not been detected historically in on-site monitor wells, this contamination is not considered representative of site groundwater conditions. 2-Butanone was also detected in W-5 at a concentration of 2,500 µg/L but is associated with polyvinyl chloride (PVC) glue used to repair the well head prior to sampling activities.

Bedrock Monitor Wells

The perimeter downgradient bedrock monitor wells are BR-01, BR-02, BR-03, and BR-13. Concentrations of TCE decreased in all of these wells. The highest of these, BR-13, displayed a slight change in TCE, from 3,200 J to 3,100 µg/L. Daughter product concentrations changed slightly, with cis-1,2-DCE levels increasing (BR-13 increased from 150 µg/L in March to 160 µg/L in June).

3.4 DEEP BEDROCK MONITOR WELLS

BR-08 is the deep bedrock well located in the South TCE Source Area, while BR-14 is located in the North TCE Source Area. BR-08 showed decreases in concentrations of TCE-related products from the March event with TCE decreasing from 1,100 to 720 µg/L and cis-1,2-DCE concentrations decreasing from 320 to 210 µg/L. Contaminant levels were expected to decrease due to the continued extraction of groundwater from the bedrock pumping well, which creates a capture zone that encompasses this monitor well. TCE-related product levels remained essentially stable in BR-14, with reported levels below or just above the detection level.

Acetone was detected in the samples from both deep bedrock wells (1,500 and 34 µg/L). Acetone has no listed MCL and is a known laboratory artifact. BR-08 was diluted prior to being analyzed. The acetone contamination was possibly introduced through the dilution water. Since acetone was not determined as a contaminant of concern for this site and has not been detected historically in on-site monitor wells, this contamination is not considered representative of site groundwater conditions. Toluene was also detected in BR-14 at 13 µg/L.

3.5 POTENTIOMETRIC SURFACE

A potentiometric surface map was generated to depict groundwater elevations for the overburden groundwater. Surfer™ (Version 7.0), a Windows-based program, was used to plot the potentiometric surface map in Appendix A, Figure 4. This program mathematically calculates contours based upon groundwater elevation measurements collected in the field.

The June 2001 map was based upon water level information collected immediately prior to sampling activities on the subject site. Four new off-site wells (OS-1OB through OS-4OB) installed by Haley & Aldrich of New York have been added to the second quarter sampling event potentiometric surface map.

Overburden potentiometric surface mapping for the June 2001 event agrees with the March 2001 mapping, which indicates that groundwater flow is being directly affected by pumping conditions.

Four new off-site bedrock monitor wells (OS-1BR through OS-4BR) installed by Haley and Aldrich of New York have been added to the second quarterly bedrock ground elevation map. Attempts were made to contour the bedrock potentiometric surface, but the bedrock water level data cannot readily be plotted due to the large variation in elevation heads. These variations are due to the fractured bedrock system. The head data appears to be bi-modally distributed possibly reflecting differing elevations of water bearing fractures. The absence of contaminants at the southwest corner of the site (BR-6) and their presence in wells along the north and east site perimeter also support a supposition that bedrock flow is generally towards the north. Bedrock water level elevations are presented in Figure 5 in Appendix A.

3.6 NATURAL BIODEGRADATION

During the June 2001 sampling event, natural biodegradation parameters were collected from nine monitor wells including background well W-2 and perimeter wells TW-04, TW-07, TW-09, TW-17, TW-20, and W-5. Samples were also collected from OB-07 and OB-09, which are located within the TCE source areas. Natural biodegradation is more readily apparent in downgradient wells; therefore, results from OB-07 and OB-09 were not included in Table 3-4. Table 3-4 shows a comparison between the natural biodegradation parameters in the perimeter wells and the values given in the EPA screening protocol as favorable for natural biodegradation of chlorinated solvents (EPA, 1998). Shaded values in the table show values favorable for natural biodegradation. W-2 data is provided for background values.

Table 3-4 shows that TCE daughter products were detected in three out of the six perimeter monitor wells. Several other parameters measured in each of these monitor wells containing TCE daughter products were indicative that natural biodegradation is occurring. Daughter products were not detected in TW-04, TW-17, and TW-20. However, due to the concentration of acetone in the sample, the TW-04 analysis sample quantitation limits (SQLs) were increased to 100 µg/L for dichloroethylene (DCE) isomers and 20 µg/L for vinyl chloride because the sample had to be diluted prior to analysis. Similarly, due to the concentration of TCE in the TW-17 sample, SQLs were increased to 25 and 5 µg/L for DCE isomers and vinyl chloride, respectively. These dilutions may have masked the presence of daughter products in TW-04 and TW-17. Values for the following parameters from TW-04 samples indicated conditions conducive to natural biodegradation: DO, nitrate, ORP, pH, and carbon dioxide (CO_2). Values for the following parameters from TW-17 indicated conditions conducive to natural biodegradation: nitrate, ORP, pH, and CO_2. TW-20, while having four parameter readings possibly indicating natural biodegradation, is at the northeast corner of the property. It is the furthest downgradient monitor

well, and the June 2001 results show a low concentration of TCE of 2.9 µg/L. Concentrations of daughter products may be present in the TW-20 vicinity at concentrations less than the SQLs.

In summary, values for various natural biodegradation parameters and the presence of TCE daughter products indicate that natural biodegradation is occurring.

3.7 TREATMENT SYSTEM PERFORMANCE

The System was fully operational on January 6, 2001. Since then, it has operated 94 percent of available hours through June 2001. The system has operated 99.9 percent of available hours through the second quarter of operation from April to June 2001. Downtime of the System during the first quarter of operation is attributed to initial operating adjustments and routine O&M. The limited downtime during the second quarter of operation is attributed to routine O&M. Table 3-5 provides a summary of monthly System operational data.

The System is currently extracting soil vapor and groundwater from 23 dual-phase vacuum extraction (DPVE) wells: EW-S-1 through EW-S-16 and EW-N-1 through EW-N-6, and groundwater from two bedrock extraction wells BREW-S-1 and BREW-N-1 (see Figure 1, Appendix A). The vapor extracted from the dual-phase operation is discharged through the effluent piping manifold of the three vacuum pumps. The groundwater collected from both the DPVE wells and from the bedrock extraction wells is combined in an equalization tank prior to treatment via the tray air stripper. The system has extracted approximately 7.1 million gallons of groundwater through June 2001.

During the second quarter of operation, 3.3 million gallons of groundwater was extracted with flow rates ranging from 25 to 26 gallons per minute, and a total of 443 pounds of VOCs were removed from the subsurface (see Figures 6 and 7, Appendix A). A total of 1,349 pounds of contaminants have been removed since startup of the system. The majority of VOCs are still being removed from the overburden through the vapor phase and stripped from groundwater during the vacuum extraction process. During the second quarter of operation, approximately 416 pounds (94 percent) of VOCs were removed by the vacuum extraction process and the remaining 27 pounds (6 percent) was removed by air stripping of the collected groundwater. Table 3-6 summarizes groundwater sample results from the equalization tank and vapor sampling results from the effluent of three vacuum pumps and air stripper. As indicated by the results, the total monthly mass of VOCs extracted by the treatment system has decreased during the second quarter of operation, which is expected since there is both less VOC mass to extract and it is expected that the more loosely bound and easily extracted VOCs were extracted first. This decrease in VOC mass can also be generally seen in the groundwater monitoring results discussed earlier in this report.

Table 3-5
System Operational Summary,
January 2001 – June 2001

Quarterly Progress Report
Second Quarter 2001
Former Taylor Instruments Site
Rochester, New York

Parameter	2001					
	January	February	March	April	May	June
System Up-time (%)	97	76	93	99.9	99.9	99.9
Average System Vacuum[1]						
South Source Area (in. Hg)	18	18	20	17	16	16
North Source Area (in. Hg)	14	14	18	18	20	15
Average System Groundwater Flowrates[2]						
Total System (gpm)	23	27	29	26	26	25
Dual Phase Extraction (gpm)	5	8	11	8	7	7
Bedrock Extraction (gpm)	18	19	18	18	19	18
Average System Vapor Flowrates[1]						
Dual Phase Extraction South Source Area (CFM)	189	157	137	168	180	180
Dual Phase Extraction North Source Area (CFM)	112	117	123	110	110	120
System Mass Removal Rate (lbs./hr)[3]	0.33	0.13	0.06	0.08	0.05	0.03
System Mass Removed (lbs.)[3]	387	383	136	245	145	53
Cumulative Mass Removed (lbs.)[3]	387	770	906	1151	1296	1349
Air Stripper Removal Efficiency (%)[3]	99.6	99.6	99.6	99.6	99.6	99.6
Cumulative Groundwater Recovered (gallons)[2]	1,546,559	2,637,226	3,833,248	4,999,392	6,141,936	7,178,379

[1] Instantaneous.
[2] Continuous.
[3] Calculated.

Notes: in. Hg = inches of mercury
gpm = gallons per minute
CFM = cubic feet per minute
lbs./hr = pounds per hour

Table 3-6
System Analytical Data,
January 2001 – June 2001

Quarterly Progress Report
Second Quarter 2001
Former Taylor Instruments Site
Rochester, New York

Sample Location	Date	cis-1,2 DCE	trans-1,2 DCE	TCE	Vinyl Chloride
		Vapor Analytical Results (mg/m^3)			
Vacuum Pump #1 (South TCE Source Area)	1/6/01	<25	<25	914.00	<25
	2/7/01	2.70	<1.0	371.00	<1.0
	3/6/01	<5.0	<5.0	129.00	<5.0
	4/17/01	1.60	<1.0	215.00	<1.0
	5/16/01	1.20	<1.0	120.00	<1.0
	6/7/01	1.20	<1.0	110.00	<1.0
Vacuum Pump #2 (South TCE Source Area)	1/6/01	<25	<25	963.00	<25
	2/7/01	<12.5	<12.5	425.00	<12.5
	3/6/01	<5.0	<5.0	140.00	<5.0
	4/17/01	2.30	<1.0	247.00	<1.0
	5/16/01	1.20	<1.0	110.00	<1.0
	6/7/01	NS	NS	NS	NS
Vacuum Pump #3 (North TCE Source Area)	1/6/01	<1.0	<1.0	41.00	<1.0
	2/7/01	1.40	<1.0	38.00	<1.0
	3/6/01	<1.0	<1.0	35.00	<1.0
	4/17/01	1.10	<1.0	42.00	<1.0
	5/16/01	2.20	<1.0	95.00	<1.0
	6/7/01	<1.0	<1.0	26.00	<1.0
Air Stripper Effluent	1/6/01	1.20	<1.0	32.00	<1.0
	2/7/01	1.20	<1.0	17.00	<1.0
	3/6/01	2.10	<1.0	25.00	<1.0
	4/17/01	4.00	<1.0	40.00	<1.0
	5/16/01	4.90	<1.0	26.00	<1.0
	6/7/01	4.50	<1.0	17.00	<1.0

See notes at end of table.

Table 3-6 (Continued)
System Analytical Data,
January 2001 – June 2001

Quarterly Progress Report
Second Quarter 2001
Former Taylor Instruments Site
Rochester, New York

Sample Location	Date	cis-1,2 DCE	trans-1,2 DCE	TCE	Vinyl Chloride
		Groundwater Analytical Results (µg/L)			
Air Stripper Influent	1/6/01	210	<130.00	5,000.00	<25.00
	2/7/01	300.00	12.00	4,100.00	1.10
	3/6/01	340.00	<130.00	4,000.00	<25.00
	4/17/01	390.00	12.00	3,500.00	<1.00
	5/16/01	660.00	16.00	3,200.00	<1.0
	6/7/01	750.00	15.00	3,000.00	1.50

Notes:
< = less than
µg/L = micrograms per liter
DCE = dichloroethylene
EPA = Environmental Protection Agency (United States)
Groundwater Analysis = EPA Method 8260
mg/m^3 = milligrams per cubic meter
NS = Vacuum Pump #2 was not sampled because it was shut down due to mechanical problems.
TCE = trichloroethylene
Vapor Analysis = EPA Method TO-14 Modified

4.0 ANALYTICAL PROGRAM

Overall data quality is assessed by grouping particular data evaluation findings and reviewing them in terms of precision, accuracy, representativeness, completeness, and comparability (PARCC) criteria. Data generated during this monitoring period were evaluated for PARCC criteria after receipt of all analytical data.

4.1 PRECISION

Precision is a quantitative evaluation of the repeatability of a measurement. Precision of analytical measurements is determined by calculating the relative percent difference (RPD) between the two numerical values. For precision, the matrix spike (MS) is performed in duplicate, and the values from both analyses are evaluated. Comparison of results from duplicate field samples may also be indicative of overall precision of a data set. However, field duplicates may be influenced by sampling precision and are not as controlled as laboratory duplicates.

For quality control purposes, a MS and matrix spike duplicate (MSD) was taken for each set of 20 samples with a net result of 2 MS/MSD analyses for the June 2001 sampling event. The evaluation of MS/MSD criteria was used to qualify the data. The evaluations of MS/MSD analyses are presented in the following tables.

BR-06

Analyte	MS % Recovery	MSD % Recovery	RPD	Control Limits	RPD Limit
Benzene	94	94	0	76 – 127	11
Chlorobenzene	90	90	0	75 – 130	13
1,1-Dichloroethylene	96	92	4	61 – 145	14
Toluene	100	98	2	76 – 125	13
Trichloroethlyene	96	94	2	71 – 120	14

W-5

Analyte	MS % Recovery	MSD % Recovery	RPD	Control Limits	RPD Limit
Benzene	98	99	1	76 – 127	11
Chlorobenzene	96	95	1	75 – 130	13
1,1-Dichloroethylene	96	91	5	61 – 145	14
Toluene	95	96	1	76 – 125	13
Trichloroethylene	95	95	0	71 – 120	14

These evaluations demonstrate that MS/MSD analyses are within acceptable limits.

Field duplicate sampling followed the same sampling outline as MS/MSD analysis. One duplicate sample was collected for each set of twenty field samples, resulting in two duplicate samples for the June 2001 sampling event. Field duplicate precision is presented in the following tables.

Sample ID	Analyte	Practical Quantitation Limit	Sample Result (µg/L)	Flag	Duplicate Result (µg/L)	Flag	RPD
BR-05	1,1-Dichloroethene	50	37	J	130	U	NA
	cis-1,2-Dichloroethylene	50	1,600		1,500		6
	trans-1,2-Dichloroethene	50	130		130	U	NA
	Trichloroethylene	130	4,300		3,700		14
	Vinyl Chloride	10	290		270		7
BR-07	cis-1,2-Dichloroethylene	10	33		34		3
	trans-1,2-Dichloroethene	10	13		12		8
	Trichloroethylene	10	2.7	J	2.2	J	19
	Vinyl Chloride	2	200		200		0

This table demonstrates that field duplicate precision is acceptable.

4.2 ACCURACY

Accuracy is a quantitative measurement of agreement between an analytical result and the true value. Accuracy is determined by comparing known amounts of analytes, which are added to the sample prior to analysis, to the field analytical results. Accuracy is expressed as a percentage of recovery (%R) of the total amount of spiked analyte. For VOC analyses, each sample was spiked with surrogate compounds prior to analysis (and extraction), and chosen samples were spiked (in duplicate) with additional spikes (MS). Surrogate and MS recoveries evaluate accuracy and identify interferences from the sample matrix.

Surrogate recoveries were acceptable for VOC analyses for this sampling event.

4.3 REPRESENTATIVENESS

Representativeness is a qualitative measurement of the degree to which analytical results reflect the true concentrations of analytes that may (or not) be present in a sample. Representativeness of organic analytical results of true site conditions is evaluated using trip blanks, field blanks, method blanks, and rinsates from decontaminated sampling equipment. Target organic compounds in quality control samples may represent contamination during sampling or transportation of samples to the laboratory. Compliance with holding time and extraction criteria also assures representativeness of results.

Three field blanks for the June 2001 event were analyzed to characterize the water source used during these sampling events. Potable water was used by the field crews for field blanks. In both of the two field blanks analyzed, chloroform was detected at 15 and 20 µg/L, as well as bromodichloromethane at 7.3 and 9.0 µg/L.

No target VOCs were detected above the reporting limit in any method blank.

Trip blanks were analyzed as part of the VOC laboratory quality control (QC) program. No target VOCs were detected above the reporting limits for all three trip blanks analyzed.

Equipment rinse samples were collected per every 20 production samples, using potable water to rinse field equipment, and analyzed for all target constituents. Two rinsate blanks were collected during the June 2001 event. In both of the two rinse blanks analyzed, chloroform was detected at 15 and 12 µg/L, as well as bromodichloromethane at 8.8 and 5.8 µg/L.

4.4 COMPLETENESS

Completeness is a quantitative measurement of the usability of a data set. Completeness is defined as the percentage of data that satisfy validation criteria. Rejected data are not usable. Data qualified as estimated, however, is usable. Completeness goals were 100 percent for this report and are considered to be met.

4.5 COMPARABILITY

Comparability is a qualitative assessment of the confidence with which different data sets may be used to characterize a site. Comparability is a necessary criteria because sampling is often performed at different times and precision, accuracy, and representativeness are unique to each sampling event. Comparability between data generated at different times at a single site is evaluated by reviewing sample collection and handling procedures, sample matrix, and analytical methods used. Standardization of sampling protocols and analytical methods assures comparability as long as precision and accuracy criteria are satisfied for each data set. The overall analytical performance for this report was evaluated, and should be comparable to previous and future data sets.

5.0 CONCLUSIONS

A comparison of analytical data from the Baseline, first quarterly (March), and second quarterly (June) sampling events provides an evaluation of the System performance. The System has been successful in removing VOC contaminants from the subsurface as indicated by the groundwater monitoring data and mass removal quantities. Significant overall decreases in TCE concentrations have been observed in both the South and North TCE Source Areas, with the exception of OB-04. This decrease is also evident in the system influent data. The performance of the System will continue to be tracked through future quarterly sampling events.

6.0 REFERENCES

EPA. 1998. *Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Ground Water*. EPA/600/R-98/128 (September).

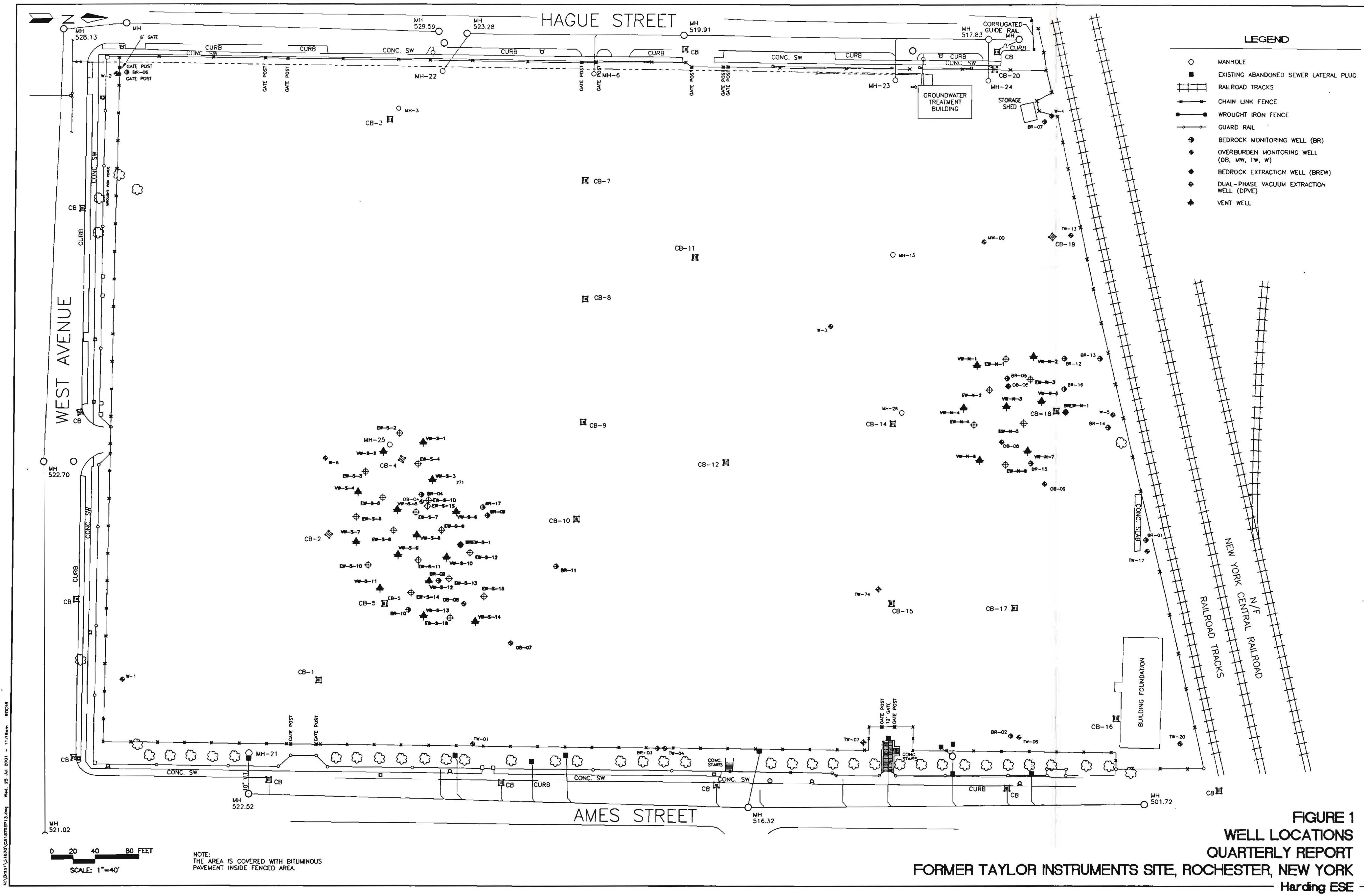
Harding ESE. 2001. *Quarterly Progress Report, First Quarter 2001, Former Taylor Instruments Site, 95 Ames Street in Rochester, New York*. Prepared for Combustion Engineering, Norwalk, Connecticut (March).

Harding ESE. 2001. *Dual-Phase Vacuum Extraction Remediation System Operation and Maintenance Manual*, prepared for the former Taylor Instruments Site, 95 Ames Street in Rochester, New York (March).

NYSDEC. 1997. Voluntary Cleanup Agreement regarding the Taylor Instruments Site, Number B8-0508-97-02 (November).

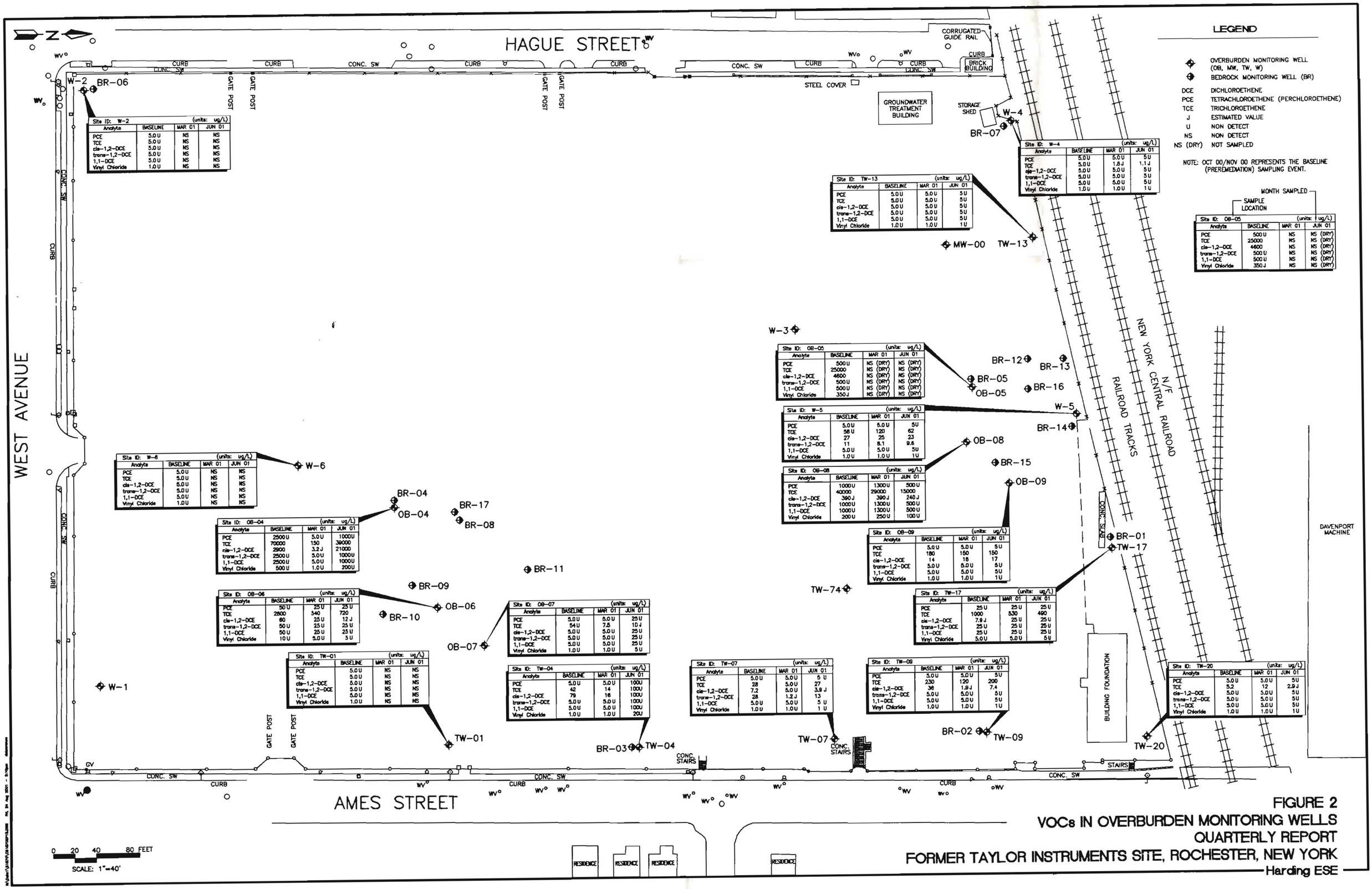
APPENDIX A

FIGURES



NOTE:
THE AREA IS COVERED WITH BITUMINOUS PAVEMENT INSIDE FENCED AREA.

FIGURE 1
WELL LOCATIONS
QUARTERLY REPORT
FORMER TAYLOR INSTRUMENTS SITE, ROCHESTER, NEW YORK
Harding ESE



Site ID: W-2 (units: ug/L)

Analyte	BASELINE	MAR 01	JUN 01
PCE	5.0 U	NS	NS
TCE	5.0 U	NS	NS
cis-1,2-DCE	5.0 U	NS	NS
trans-1,2-DCE	5.0 U	NS	NS
1,1-DCE	5.0 U	NS	NS
Vinyl Chloride	1.0 U	NS	NS

Site ID: W-4 (units: ug/L)

Analyte	BASELINE	MAR 01	JUN 01
PCE	5.0 U	5.0 U	5 U
TCE	5.0 U	1.8 J	1.1 J
cis-1,2-DCE	5.0 U	5.0 U	5 U
trans-1,2-DCE	5.0 U	5.0 U	5 U
1,1-DCE	5.0 U	5.0 U	5 U
Vinyl Chloride	1.0 U	1.0 U	1 U

Site ID: TW-13 (units: ug/L)

Analyte	BASELINE	MAR 01	JUN 01
PCE	5.0 U	5.0 U	5 U
TCE	5.0 U	5.0 U	5 U
cis-1,2-DCE	5.0 U	5.0 U	5 U
trans-1,2-DCE	5.0 U	5.0 U	5 U
1,1-DCE	5.0 U	5.0 U	5 U
Vinyl Chloride	1.0 U	1.0 U	1 U

Site ID: OB-05 (units: ug/L)

Analyte	BASELINE	MAR 01	JUN 01
PCE	500 U	NS (DRY)	NS (DRY)
TCE	25000	NS (DRY)	NS (DRY)
cis-1,2-DCE	4600	NS (DRY)	NS (DRY)
trans-1,2-DCE	500 U	NS (DRY)	NS (DRY)
1,1-DCE	500 U	NS (DRY)	NS (DRY)
Vinyl Chloride	350 J	NS (DRY)	NS (DRY)

Site ID: W-5 (units: ug/L)

Analyte	BASELINE	MAR 01	JUN 01
PCE	5.0 U	6.0 U	5U
TCE	58 U	120	62
cis-1,2-DCE	27	25	23
trans-1,2-DCE	11	8.1	9.5
1,1-DCE	5.0 U	5.0 U	5U
Vinyl Chloride	1.0 U	1.0 U	1U

Site ID: W-6 (units: ug/L)

Analyte	BASELINE	MAR 01	JUN 01
PCE	5.0 U	NS	NS
TCE	5.0 U	NS	NS
cis-1,2-DCE	5.0 U	NS	NS
trans-1,2-DCE	5.0 U	NS	NS
1,1-DCE	5.0 U	NS	NS
Vinyl Chloride	1.0 U	NS	NS

Site ID: OB-08 (units: ug/L)

Analyte	BASELINE	MAR 01	JUN 01
PCE	1000 U	1300 U	500 U
TCE	40000	29000	15000
cis-1,2-DCE	390 J	390 J	240 J
trans-1,2-DCE	1000 U	1300 U	500 U
1,1-DCE	1000 U	1300 U	500 U
Vinyl Chloride	200 U	250 U	100 U

Site ID: OB-04 (units: ug/L)

Analyte	BASELINE	MAR 01	JUN 01
PCE	2500 U	5.0 U	1000 U
TCE	70000	150	39000
cis-1,2-DCE	2900	3.2 J	21000
trans-1,2-DCE	2500 U	5.0 U	1000 U
1,1-DCE	2500 U	5.0 U	1000 U
Vinyl Chloride	500 U	1.0 U	200 U

Site ID: OB-09 (units: ug/L)

Analyte	BASELINE	MAR 01	JUN 01
PCE	5.0 U	5.0 U	5 U
TCE	180	150	150
cis-1,2-DCE	14	18	17
trans-1,2-DCE	5.0 U	5.0 U	5 U
1,1-DCE	5.0 U	5.0 U	5 U
Vinyl Chloride	1.0 U	1.0 U	1 U

Site ID: OB-06 (units: ug/L)

Analyte	BASELINE	MAR 01	JUN 01
PCE	50 U	25 U	25 U
TCE	2800	540	720
cis-1,2-DCE	80	25 U	12 J
trans-1,2-DCE	50 U	25 U	25 U
1,1-DCE	50 U	25 U	25 U
Vinyl Chloride	10 U	5.0 U	5 U

Site ID: OB-07 (units: ug/L)

Analyte	BASELINE	MAR 01	JUN 01
PCE	5.0 U	5.0 U	25 U
TCE	54 U	7.5	10 J
cis-1,2-DCE	5.0 U	5.0 U	25 U
trans-1,2-DCE	5.0 U	5.0 U	25 U
1,1-DCE	5.0 U	5.0 U	25 U
Vinyl Chloride	1.0 U	1.0 U	5 U

Site ID: TW-17 (units: ug/L)

Analyte	BASELINE	MAR 01	JUN 01
PCE	25 U	25 U	25 U
TCE	1000	530	490
cis-1,2-DCE	7.9 J	25 U	25 U
trans-1,2-DCE	25 U	25 U	25 U
1,1-DCE	25 U	25 U	25 U
Vinyl Chloride	5.0 U	5.0 U	5U

Site ID: TW-01 (units: ug/L)

Analyte	BASELINE	MAR 01	JUN 01
PCE	5.0 U	NS	NS
TCE	5.0 U	NS	NS
cis-1,2-DCE	5.0 U	NS	NS
trans-1,2-DCE	5.0 U	NS	NS
1,1-DCE	5.0 U	NS	NS
Vinyl Chloride	1.0 U	NS	NS

Site ID: TW-04 (units: ug/L)

Analyte	BASELINE	MAR 01	JUN 01
PCE	5.0 U	5.0 U	100 U
TCE	42	14	100 U
cis-1,2-DCE	79	16	100 U
trans-1,2-DCE	5.0 U	5.0 U	100 U
1,1-DCE	5.0 U	5.0 U	100 U
Vinyl Chloride	1.0 U	1.0 U	20 U

Site ID: TW-07 (units: ug/L)

Analyte	BASELINE	MAR 01	JUN 01
PCE	5.0 U	5.0 U	5 U
TCE	28	5.0 U	27
cis-1,2-DCE	7.2	5.0 U	3.9 J
trans-1,2-DCE	28	1.2 J	13
1,1-DCE	5.0 U	5.0 U	5 U
Vinyl Chloride	1.0 U	1.0 U	1 U

Site ID: TW-09 (units: ug/L)

Analyte	BASELINE	MAR 01	JUN 01
PCE	5.0 U	5.0 U	5U
TCE	230	120	200
cis-1,2-DCE	36	1.9 J	7.4
trans-1,2-DCE	5.0 U	5.0 U	5U
1,1-DCE	5.0 U	5.0 U	5U
Vinyl Chloride	1.0 U	1.0 U	1U

Site ID: TW-20 (units: ug/L)

Analyte	BASELINE	MAR 01	JUN 01
PCE	5.0 U	5.0 U	5U
TCE	5.2	12	2.2 J
cis-1,2-DCE	5.0 U	5.0 U	5U
trans-1,2-DCE	5.0 U	5.0 U	5U
1,1-DCE	5.0 U	5.0 U	5U
Vinyl Chloride	1.0 U	1.0 U	1U

LEGEND

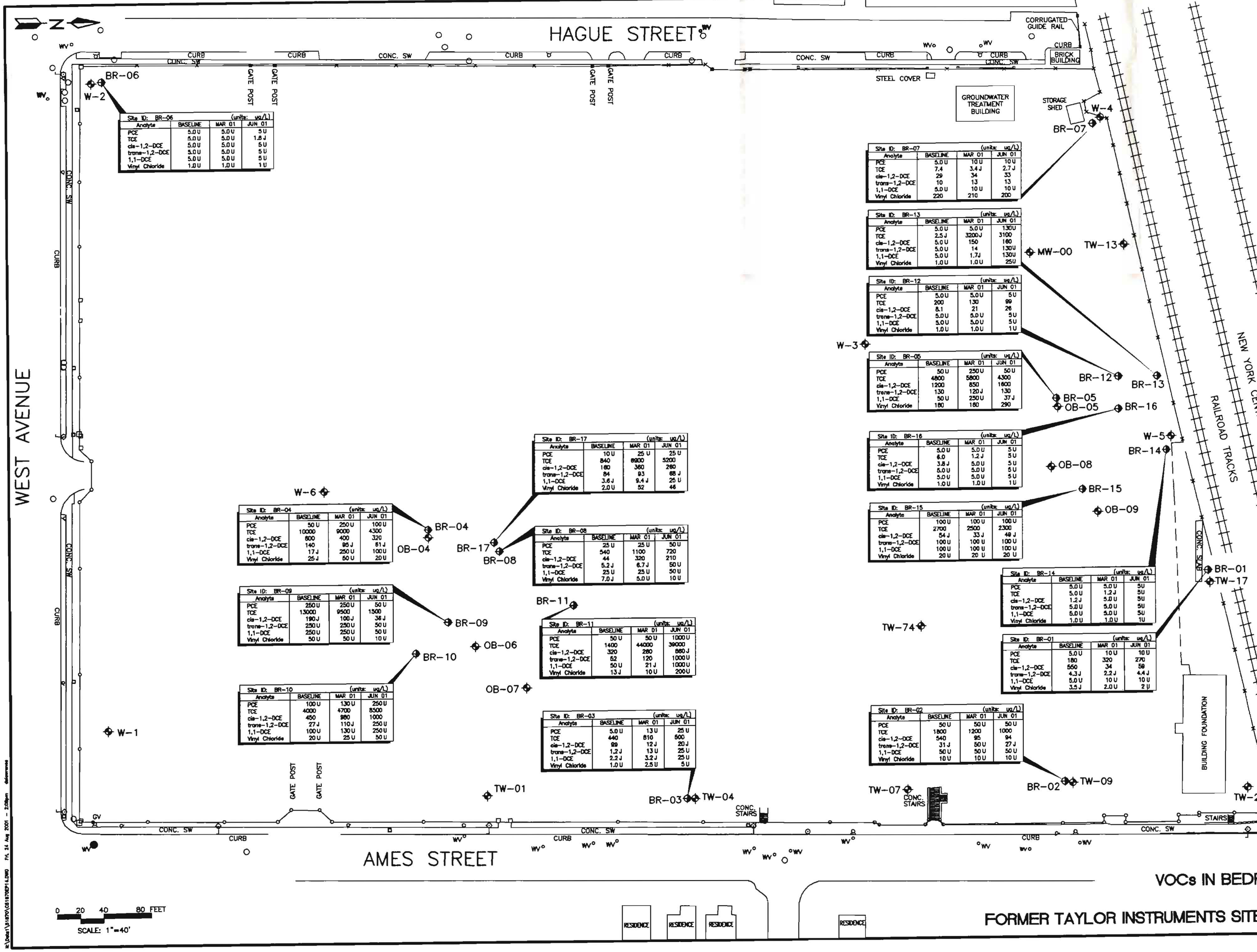
- OVERBURDEN MONITORING WELL (OB, MW, TW, W)
- BEDROCK MONITORING WELL (BR)

DCE DICHLOROETHENE
PCE TETRACHLOROETHENE (PERCHLOROETHENE)
TCE TRICHLOROETHENE
J ESTIMATED VALUE
U NON DETECT
NS NON DETECT
NS (DRY) NOT SAMPLED

NOTE: OCT 00/NOV 00 REPRESENTS THE BASELINE (PREREMEDIATION) SAMPLING EVENT.

MONTH SAMPLED
SAMPLE LOCATION

FIGURE 2
VOCs IN OVERBURDEN MONITORING WELLS
QUARTERLY REPORT
FORMER TAYLOR INSTRUMENTS SITE, ROCHESTER, NEW YORK
Harding ESE



Site ID: BR-06	(units: ug/L)		
Analyte	BASELINE	MAR 01	JUN 01
PCE	5.0 U	5.0 U	5 U
TCE	5.0 U	5.0 U	1.8 J
cis-1,2-DCE	5.0 U	5.0 U	5 U
trans-1,2-DCE	5.0 U	5.0 U	5 U
1,1-DCE	5.0 U	5.0 U	5 U
Vinyl Chloride	1.0 U	1.0 U	1 U

Site ID: BR-07	(units: ug/L)		
Analyte	BASELINE	MAR 01	JUN 01
PCE	5.0 U	10 U	10 U
TCE	7.4	3.4 J	2.7 J
cis-1,2-DCE	29	34	33
trans-1,2-DCE	10	13	13
1,1-DCE	5.0 U	10 U	10 U
Vinyl Chloride	220	210	200

Site ID: BR-13	(units: ug/L)		
Analyte	BASELINE	MAR 01	JUN 01
PCE	5.0 U	5.0 U	130U
TCE	2.5 J	3200 J	3100
cis-1,2-DCE	5.0 U	150	160
trans-1,2-DCE	5.0 U	14	130U
1,1-DCE	5.0 U	1.7J	130U
Vinyl Chloride	1.0 U	1.0 U	25U

Site ID: BR-12	(units: ug/L)		
Analyte	BASELINE	MAR 01	JUN 01
PCE	5.0 U	5.0 U	5 U
TCE	200	130	89
cis-1,2-DCE	8.1	21	26
trans-1,2-DCE	5.0 U	5.0 U	5 U
1,1-DCE	5.0 U	5.0 U	5 U
Vinyl Chloride	1.0 U	1.0 U	1 U

Site ID: BR-05	(units: ug/L)		
Analyte	BASELINE	MAR 01	JUN 01
PCE	50 U	250 U	50 U
TCE	4800	5800	4300
cis-1,2-DCE	1200	850	1600
trans-1,2-DCE	130	120 J	130
1,1-DCE	50 U	250 U	37 J
Vinyl Chloride	180	160	290

Site ID: BR-16	(units: ug/L)		
Analyte	BASELINE	MAR 01	JUN 01
PCE	5.0 U	5.0 U	5 U
TCE	6.0	1.2 J	5 U
cis-1,2-DCE	3.8 J	5.0 U	5 U
trans-1,2-DCE	5.0 U	5.0 U	5 U
1,1-DCE	5.0 U	5.0 U	5 U
Vinyl Chloride	1.0 U	1.0 U	1 U

Site ID: BR-15	(units: ug/L)		
Analyte	BASELINE	MAR 01	JUN 01
PCE	100 U	100 U	100 U
TCE	2700	2500	2300
cis-1,2-DCE	54 J	33 J	49 J
trans-1,2-DCE	100 U	100 U	100 U
1,1-DCE	100 U	100 U	100 U
Vinyl Chloride	20 U	20 U	20 U

Site ID: BR-14	(units: ug/L)		
Analyte	BASELINE	MAR 01	JUN 01
PCE	5.0 U	5.0 U	5U
TCE	5.0 U	1.2 J	5U
cis-1,2-DCE	1.2 J	5.0 U	5U
trans-1,2-DCE	5.0 U	5.0 U	5U
1,1-DCE	5.0 U	5.0 U	5U
Vinyl Chloride	1.0 U	1.0 U	1U

Site ID: BR-01	(units: ug/L)		
Analyte	BASELINE	MAR 01	JUN 01
PCE	5.0 U	10 U	10 U
TCE	180	320	270
cis-1,2-DCE	550	34	58
trans-1,2-DCE	4.3 J	2.2 J	4.4 J
1,1-DCE	5.0 U	10 U	10 U
Vinyl Chloride	3.5 J	2.0 U	2 U

Site ID: BR-02	(units: ug/L)		
Analyte	BASELINE	MAR 01	JUN 01
PCE	50 U	50 U	50 U
TCE	1800	1200	1000
cis-1,2-DCE	540	95	94
trans-1,2-DCE	31 J	50 U	27 J
1,1-DCE	50 U	50 U	50 U
Vinyl Chloride	10 U	10 U	10 U

Site ID: BR-04	(units: ug/L)		
Analyte	BASELINE	MAR 01	JUN 01
PCE	50 U	250 U	100 U
TCE	10000	9000	4300
cis-1,2-DCE	600	400	320
trans-1,2-DCE	140	95 J	61 J
1,1-DCE	17 J	250 U	100 U
Vinyl Chloride	25 J	50 U	20 U

Site ID: BR-09	(units: ug/L)		
Analyte	BASELINE	MAR 01	JUN 01
PCE	250 U	250 U	50 U
TCE	13000	9500	1500
cis-1,2-DCE	190 J	100 J	36 J
trans-1,2-DCE	250 U	250 U	50 U
1,1-DCE	250 U	250 U	50 U
Vinyl Chloride	50 U	50 U	10 U

Site ID: BR-10	(units: ug/L)		
Analyte	BASELINE	MAR 01	JUN 01
PCE	100 U	130 U	250 U
TCE	4000	4700	8500
cis-1,2-DCE	450	980	1000
trans-1,2-DCE	27 J	110 J	250 U
1,1-DCE	100 U	130 U	250 U
Vinyl Chloride	20 U	25 U	50 U

Site ID: BR-17	(units: ug/L)		
Analyte	BASELINE	MAR 01	JUN 01
PCE	10 U	25 U	25 U
TCE	840	6900	5200
cis-1,2-DCE	180	360	260
trans-1,2-DCE	84	93	68 J
1,1-DCE	3.6 J	9.4 J	25 U
Vinyl Chloride	2.0 U	52	46

Site ID: BR-08	(units: ug/L)		
Analyte	BASELINE	MAR 01	JUN 01
PCE	25 U	25 U	50 U
TCE	540	1100	720
cis-1,2-DCE	44	320	210
trans-1,2-DCE	5.2 J	6.7 J	50 U
1,1-DCE	25 U	25 U	50 U
Vinyl Chloride	7.0 J	5.0 U	10 U

Site ID: BR-11	(units: ug/L)		
Analyte	BASELINE	MAR 01	JUN 01
PCE	50 U	50 U	1000 U
TCE	1400	44000	39000
cis-1,2-DCE	320	280	860 J
trans-1,2-DCE	62	120	1000 U
1,1-DCE	50 U	21 J	1000 U
Vinyl Chloride	13 J	10 U	200 U

Site ID: BR-03	(units: ug/L)		
Analyte	BASELINE	MAR 01	JUN 01
PCE	5.0 U	13 U	25 U
TCE	440	810	600
cis-1,2-DCE	89	12 J	20 J
trans-1,2-DCE	1.2 J	13 U	25 U
1,1-DCE	2.2 J	3.2 J	25 U
Vinyl Chloride	1.0 U	2.5 U	5 U

LEGEND

- OVERBURDEN MONITORING WELL (OB, MW, TW, W)
- BEDROCK MONITORING WELL (BR)
- DCE DICHLOROETHENE
- PCE TETRACHLOROETHENE (PERCHLOROETHENE)
- TCE TRICHLOROETHENE
- J ESTIMATED VALUE
- U NON DETECT

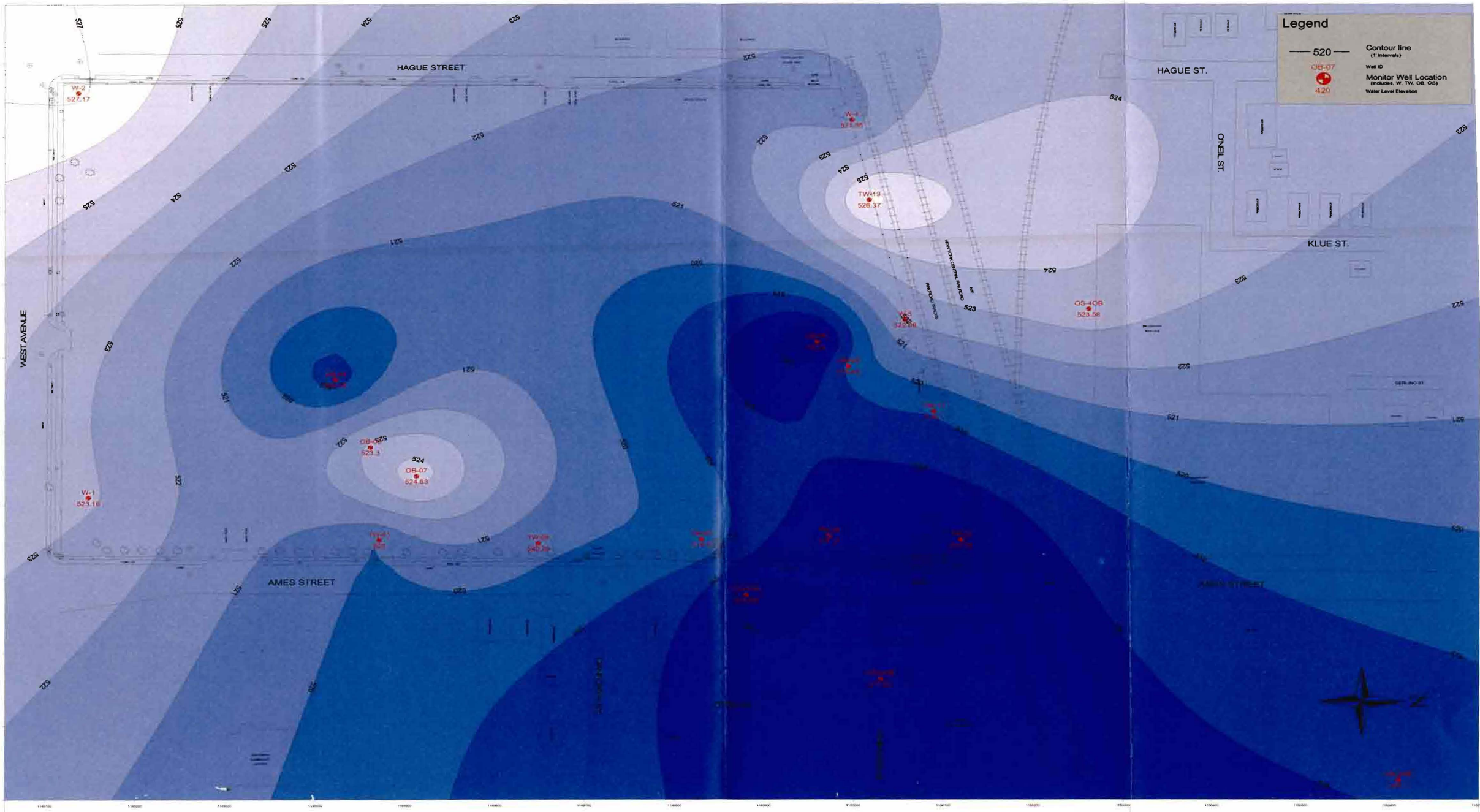
NOTE: OCT 00/NOV 00 REPRESENTS THE BASELINE (PREREMEDIATION) SAMPLING EVENT.

MONTH SAMPLED
SAMPLE LOCATION

Site ID: BR-06	(units: ug/L)		
Analyte	BASELINE	MAR 01	JUN 01
PCE	5.0 U	5.0 U	5 U
TCE	5.0 U	5.0 U	1.6 J
cis-1,2-DCE	5.0 U	5.0 U	5 U
trans-1,2-DCE	5.0 U	5.0 U	5 U
1,1-DCE	5.0 U	5.0 U	5 U
Vinyl Chloride	1.0 U	1.0 U	1 U

FIGURE 3
VOCs IN BEDROCK MONITORING WELLS
QUARTERLY REPORT
FORMER TAYLOR INSTRUMENTS SITE, ROCHESTER, NEW YORK

Harding ESE



Note: Data for Monitor Wells OS-1OB, OS-2OB, OS-3OB, and OS-4OB was provided by Haley and Aldrich of New York.
Data collected on June 14, 2001

FIGURE 4
OVERBURDEN POTENTIOMETRIC SURFACE MAP (JUNE 2001)
QUARTERLY REPORT
FORMER TAYLOR INSTRUMENTS SITE, ROCHESTER, NEW YORK
Harding ESE

Note: Data for Monitor Wells OS-1BR, OS-2BR, OS-3BR, and OS-4BR was provided by Haley and Aldrich of New York.
Data collected on June 14, 2001

FIGURE 5
BEDROCK GROUNDWATER ELEVATIONS (JUNE 2001)
QUARTERLY REPORT
FORMER TAYLOR INSTRUMENTS SITE, ROCHESTER, NEW YORK
Harding ESE

Figure 6
Monthly Average Groundwater Flowrates

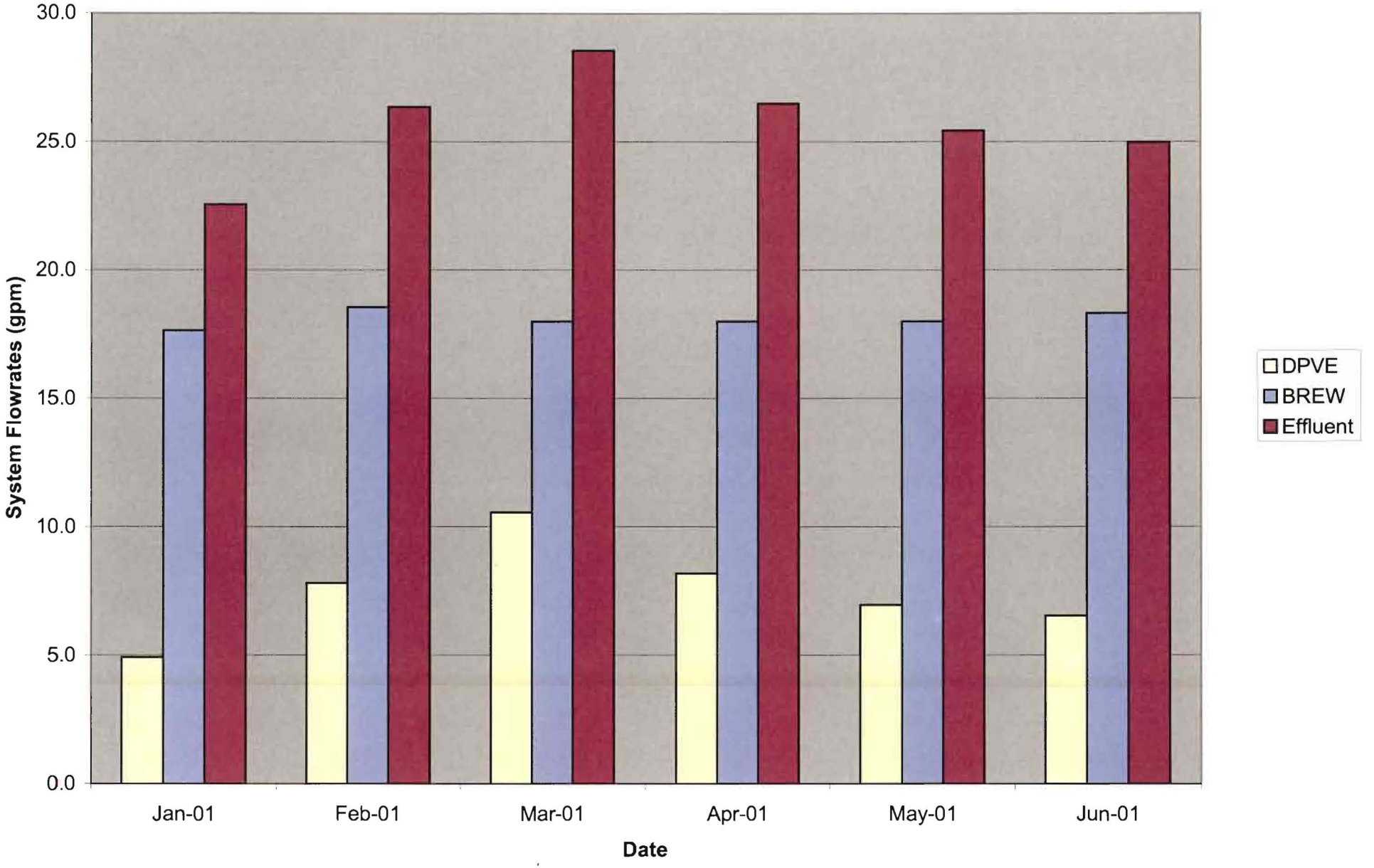
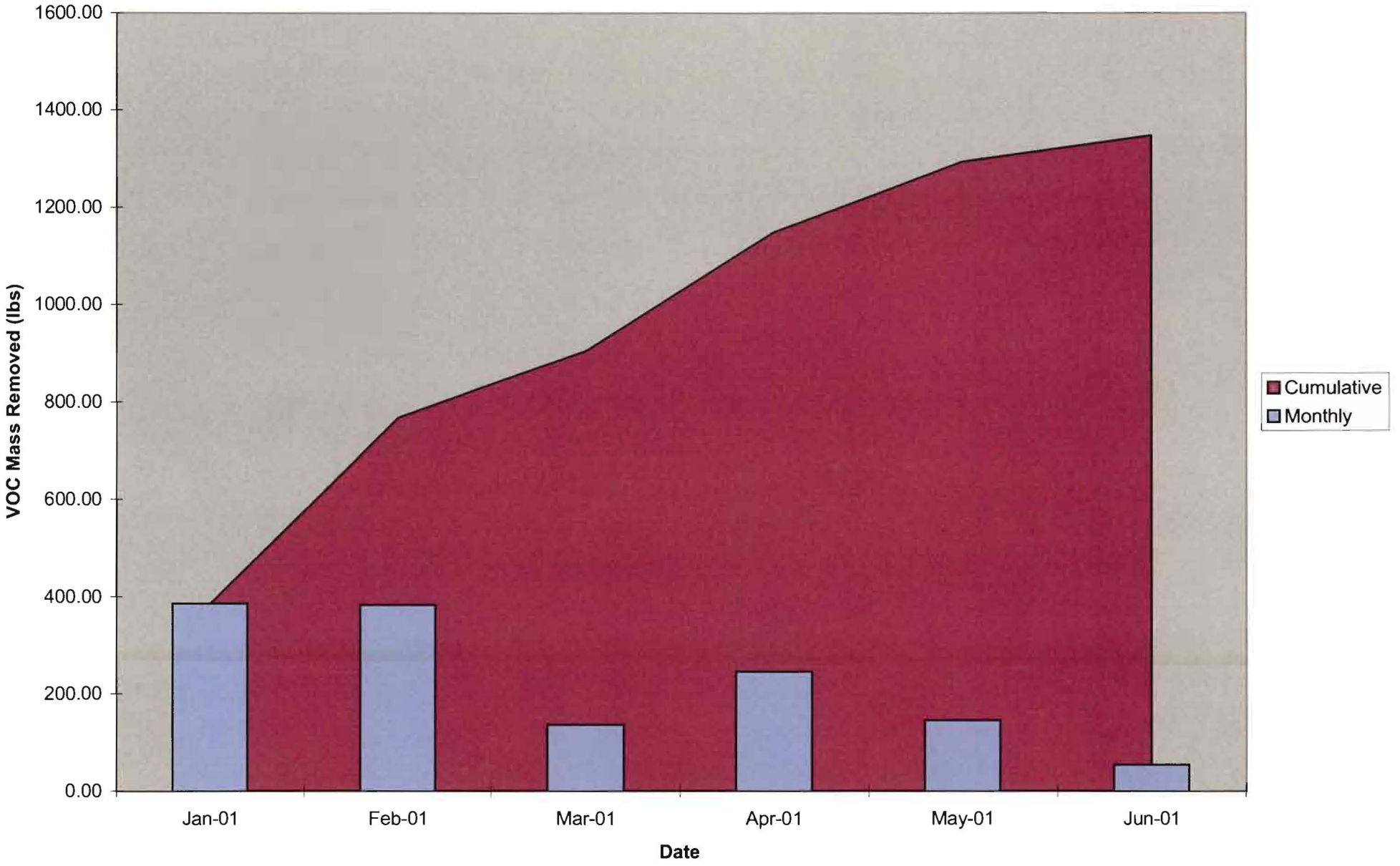


Figure 7
TCE Mass Removed



APPENDIX B

LABORATORY REPORTS, GROUNDWATER SAMPLING EVENTS

Columbia Analytical Services inc.

A FULL SERVICE ENVIRONMENTAL LABORATORY

July 17, 2001

Mr. Rick Ryan
Harding ESE
1400 Center Point Blvd.
Suite 158
Knoxville, TN 37932-1968

PROJECT:FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Submission #:R2107377

Dear Mr. Ryan

Enclosed are the analytical results of the analyses requested. All data has been reviewed prior to report submission. Should you have any questions please contact me at (716) 288-5380.

Thank you for letting us provide this service.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

Michael Perry
Laboratory Director

Enc.

1 Mustard St.• Suite 250 • Rochester, NY 14609 • Tele:(716)288-5380 • Fax:(716)288-8475

Columbia Analytical Services, Inc.
1 Mustard ST.
Suite 250
Rochester, NY 14609

THIS IS AN ANALYTICAL TEST REPORT FOR:

Client : Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Lab Submission # : R2107377
Reported : 07/17/01

Report Contains a total of 110 pages

This package has been reviewed by Columbia Analytical Services' QA Department/Laboratory Director to comply with NELAC standards prior to report submittal.

CASE NARRATIVE

COMPANY: Harding ESE
Former Taylor Instruments Site - Ames Street
SUBMISSION #: R2107377

Samples were collected on 06/14/01 - 06/20/01 and received at CAS on 6/15/01 – 6/20/01 in good condition. An electronic deliverable has been sent via E-Mail.

VOLATILE ORGANICS

Forty-two water samples were analyzed for TCL Volatiles plus Freon 113 by SW-846 method 8260B.

All Tuning criteria for BFB were within QC limits.

All the initial and continuing calibration criteria were met for all analytes.

All surrogate standard recoveries were within acceptance limits.

All internal standard areas were within QC limits.

Matrix Spike/Matrix Spike Duplicate recoveries and the % RPD for samples BR-06 and W-5 were all within QC limits. The Blank Spike recoveries were all acceptable.

The Laboratory Blanks associated with these analyses were free of contamination.

Several samples were reanalyzed at higher dilutions to bring target analytes within the calibration range of the method. Both dilutions were reported with target analytes over the calibration range flagged with an "E".

To help facilitate seeing lower detection limits, all detected compounds between the reported PQL and the statistical MDL have been flagged with a "J" as being estimated. Also, Vinyl Chloride has been reported to a PQL of 1.0 ug/l

No other analytical or QC problems were encountered.

1 Mustard Street, Suite 250 ▪ Rochester, NY 14609-6925 ▪ Telephone (716) 288-5380 ▪ Fax (716) 288-8475

NATURAL ATTENUATION ANALYSES

Nine samples were analyzed for the list of natural attenuation analytes. These samples were analyzed for: Total and Bicarbonate Alkalinity by EPA method 310.1; Chloride by EPA method 300.0; Ferrous Iron by SM method 3500D; Free Carbon dioxide by SM method 4500B; Nitrate by EPA method 300.0; Sulfate by EPA method 300.0; pH by EPA method 150.1; Total Dissolved Solids by EPA method 160.2; Total Sulfide by EPA method 376.1; and TOC by EPA method 415.1. These samples were also analyzed for Low Molecular Weight gases by GC method 8015B.

The Blank Spike recoveries (LCS) were all acceptable.

No analytical or QC problems were encountered with these analyses.

Columbia Analytical Services Inc.

This report contains analytical results for the following samples:

Submission #: R2107377

Lab ID	Client ID
471629	QATB01
471630	QAFB01
471631	QARB01
471632	BR-07
471633	BR-07 (DUP)
471634	TW-13
471635	W-4
471638	OB-06
471641	BR-08
471643	BR-17
471645	BR-06
471651	W-2
471984	TW-04
471985	BR-03
471986	BR-14
471987	BR-01
471992	TW-17
471993	TW-20
471994	TW-07
471995	TW-09
471996	QATB02
471997	BR-02
472577	OB-09
472578	BR-16
472579	OB-07
472580	BR-12
472581	QAFB02
472582	QARB02
472583	QATB02
472584	W-5

Columbia Analytical Services inc.

This report contains analytical results for the following samples:

Submission #: R2107377

Lab ID	Client ID
472585	BR-13
472586	BR-15
472587	BR-10
472588	OB-04
472589	BR-05
472590	BR-05 (DUP)
472592	W-5
472593	BR-04
472594	BR-09
472595	OB-08
472596	BR-11
472597	EW-S-5

Columbia Analytical Services Inc.

Effective 04/01/96

CAS LIST OF QUALIFIERS

(The basis of this proposal are the EPA-CLP Qualifiers)

U - Indicates compound was analyzed for but was not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.

J - Indicates an estimated value. For further explanation see case narrative / cover letter.

B - This flag is used when the analyte is found in the associated blank as well as in the sample.

E - This flag identifies compounds whose concentrations exceed the calibration range.

A - This flag indicates that a TIC is a suspected aldol-condensation product.

N - Spiked sample recovery not within control limits.
(Flag the entire batch - Inorganic analysis only)

* - Duplicate analysis not within control limits.
(Flag the entire batch - Inorganic analysis only)

- Also used to qualify Organics QC data outside limits.

D - Spike diluted out.

S - Reported value determined by Method of Standard Additions. (MSA)

X - As specified in the case narrative.

CAS Lab ID # for State Certifications

NY ID # in Rochester:	10145	NJ ID # in Rochester:	73004
CT ID # in Rochester:	PH0556	RI ID # in Rochester:	158
MA ID # in Rochester:	M-NY032	NH ID # in Rochester:	294198-A
AIHA # in Rochester:	7889		

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : QATB01

Date Sampled : 06/14/01 10:00 **Order #:** 471629 **Sample Matrix:** WATER
Date Received: 06/15/01 **Submission #:** R2107377 **Analytical Run** 66652

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/24/01			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
FREON 113	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	105	%
TOLUENE-D8	(88 - 110 %)	104	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	100	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : QAFB01

Date Sampled : 06/14/01 10:45 **Order #:** 471630 **Sample Matrix:** WATER
Date Received: 06/15/01 **Submission #:** R2107377 **Analytical Run** 66652

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/24/01			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	7.3	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	15	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
FREON 113	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	103	%
TOLUENE-D8	(88 - 110 %)	104	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	103	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : QARB01

Date Sampled : 06/14/01 10:50 **Order #:** 471631 **Sample Matrix:** WATER
Date Received: 06/15/01 **Submission #:** R2107377 **Analytical Run** 66652

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/24/01			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	8.8	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	15	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
FREON 113	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	102	%
TOLUENE-D8	(88 - 110 %)	105	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	103	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : BR-07

Date Sampled : 06/14/01 16:42 **Order #:** 471632 **Sample Matrix:** WATER
Date Received: 06/15/01 **Submission #:** R2107377 **Analytical Run** 66652

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/24/01			
ANALYTICAL DILUTION: 2.00			
ACETONE	20	40 U	UG/L
BENZENE	5.0	10 U	UG/L
BROMODICHLOROMETHANE	5.0	10 U	UG/L
BROMOFORM	5.0	10 U	UG/L
BROMOMETHANE	5.0	10 U	UG/L
2-BUTANONE (MEK)	10	20 U	UG/L
CARBON DISULFIDE	10	20 U	UG/L
CARBON TETRACHLORIDE	5.0	10 U	UG/L
CHLOROBENZENE	5.0	10 U	UG/L
CHLOROETHANE	5.0	10 U	UG/L
CHLOROFORM	5.0	10 U	UG/L
CHLOROMETHANE	5.0	10 U	UG/L
DIBROMOCHLOROMETHANE	5.0	10 U	UG/L
1,1-DICHLOROETHANE	5.0	10 U	UG/L
1,2-DICHLOROETHANE	5.0	10 U	UG/L
1,1-DICHLOROETHENE	5.0	10 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	33	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	13	UG/L
1,2-DICHLOROPROPANE	5.0	10 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	10 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	10 U	UG/L
ETHYLBENZENE	5.0	10 U	UG/L
FREON 113	5.0	10 U	UG/L
2-HEXANONE	10	20 U	UG/L
METHYLENE CHLORIDE	5.0	10 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	20 U	UG/L
STYRENE	5.0	10 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	10 U	UG/L
TETRACHLOROETHENE	5.0	10 U	UG/L
TOLUENE	5.0	10 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	10 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	10 U	UG/L
TRICHLOROETHENE	5.0	2.7 J	UG/L
VINYL CHLORIDE	1.0	200	UG/L
O-XYLENE	5.0	10 U	UG/L
M+P-XYLENE	5.0	10 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	103	%
TOLUENE-D8	(88 - 110 %)	106	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	104	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : BR-07 (DUP)

Date Sampled : 06/14/01 16:42 **Order #:** 471633 **Sample Matrix:** WATER
Date Received: 06/15/01 **Submission #:** R2107377 **Analytical Run** 66652

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/24/01			
ANALYTICAL DILUTION: 2.00			
ACETONE	20	40 U	UG/L
BENZENE	5.0	8.2 J	UG/L
BROMODICHLOROMETHANE	5.0	10 U	UG/L
BROMOFORM	5.0	10 U	UG/L
BROMOMETHANE	5.0	10 U	UG/L
2-BUTANONE (MEK)	10	20 U	UG/L
CARBON DISULFIDE	10	20 U	UG/L
CARBON TETRACHLORIDE	5.0	10 U	UG/L
CHLOROBENZENE	5.0	10 U	UG/L
CHLOROETHANE	5.0	10 U	UG/L
CHLOROFORM	5.0	10 U	UG/L
CHLOROMETHANE	5.0	10 U	UG/L
DIBROMOCHLOROMETHANE	5.0	10 U	UG/L
1,1-DICHLOROETHANE	5.0	10 U	UG/L
1,2-DICHLOROETHANE	5.0	10 U	UG/L
1,1-DICHLOROETHENE	5.0	10 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	34	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	12	UG/L
1,2-DICHLOROPROPANE	5.0	10 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	10 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	10 U	UG/L
ETHYLBENZENE	5.0	10 U	UG/L
FREON 113	5.0	10 U	UG/L
2-HEXANONE	10	20 U	UG/L
METHYLENE CHLORIDE	5.0	10 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	20 U	UG/L
STYRENE	5.0	10 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	10 U	UG/L
TETRACHLOROETHENE	5.0	10 U	UG/L
TOLUENE	5.0	10 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	10 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	10 U	UG/L
TRICHLOROETHENE	5.0	2.2 J	UG/L
VINYL CHLORIDE	1.0	200	UG/L
O-XYLENE	5.0	10 U	UG/L
M+P-XYLENE	5.0	10 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	105	%
TOLUENE-D8	(88 - 110 %)	106	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	104	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : TW-13

Date Sampled : 06/14/01 18:12 **Order #:** 471634 **Sample Matrix:** WATER
Date Received: 06/15/01 **Submission #:** R2107377 **Analytical Run** 66652

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/24/01			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	160	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
FREON 113	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	99	%
TOLUENE-D8	(88 - 110 %)	105	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	101	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : W-4

Date Sampled : 06/15/01 08:30 **Order #:** 471635 **Sample Matrix:** WATER
Date Received: 06/15/01 **Submission #:** R2107377 **Analytical Run** 66652

DATE ANALYZED : 06/24/01
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	20	840 E	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
FREON 113	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	1.1 J	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	103	%
TOLUENE-D8	(88 - 110 %)	105	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	102	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : W-4

Date Sampled : 06/15/01 08:30 **Order #:** 471635 **Sample Matrix:** WATER
Date Received: 06/15/01 **Submission #:** R2107377 **Analytical Run** 66652

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/25/01			
ANALYTICAL DILUTION: 5.00			
ACETONE	20	840	UG/L
BENZENE	5.0	25 U	UG/L
BROMODICHLOROMETHANE	5.0	25 U	UG/L
BROMOFORM	5.0	25 U	UG/L
BROMOMETHANE	5.0	25 U	UG/L
2-BUTANONE (MEK)	10	50 U	UG/L
CARBON DISULFIDE	10	50 U	UG/L
CARBON TETRACHLORIDE	5.0	25 U	UG/L
CHLOROBENZENE	5.0	25 U	UG/L
CHLOROETHANE	5.0	25 U	UG/L
CHLOROFORM	5.0	25 U	UG/L
CHLOROMETHANE	5.0	25 U	UG/L
DIBROMOCHLOROMETHANE	5.0	25 U	UG/L
1,1-DICHLOROETHANE	5.0	25 U	UG/L
1,2-DICHLOROETHANE	5.0	25 U	UG/L
1,1-DICHLOROETHENE	5.0	25 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	25 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	25 U	UG/L
1,2-DICHLOROPROPANE	5.0	25 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	25 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	25 U	UG/L
ETHYLBENZENE	5.0	25 U	UG/L
FREON 113	5.0	25 U	UG/L
2-HEXANONE	10	50 U	UG/L
METHYLENE CHLORIDE	5.0	25 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	50 U	UG/L
STYRENE	5.0	25 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	25 U	UG/L
TETRACHLOROETHENE	5.0	25 U	UG/L
TOLUENE	5.0	25 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	25 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	25 U	UG/L
TRICHLOROETHENE	5.0	25 U	UG/L
VINYL CHLORIDE	1.0	5.0 U	UG/L
O-XYLENE	5.0	25 U	UG/L
M+P-XYLENE	5.0	25 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	105	%
TOLUENE-D8	(88 - 110 %)	104	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	104	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : OB-06

Date Sampled : 06/15/01 08:43 **Order #:** 471638 **Sample Matrix:** WATER
Date Received: 06/15/01 **Submission #:** R2107377 **Analytical Run** 66652

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/24/01			
ANALYTICAL DILUTION: 5.00			
ACETONE	20	100 U	UG/L
BENZENE	5.0	25 U	UG/L
BROMODICHLOROMETHANE	5.0	25 U	UG/L
BROMOFORM	5.0	25 U	UG/L
BROMOMETHANE	5.0	25 U	UG/L
2-BUTANONE (MEK)	10	50 U	UG/L
CARBON DISULFIDE	10	50 U	UG/L
CARBON TETRACHLORIDE	5.0	25 U	UG/L
CHLOROBENZENE	5.0	25 U	UG/L
CHLOROETHANE	5.0	25 U	UG/L
CHLOROFORM	5.0	25 U	UG/L
CHLOROMETHANE	5.0	25 U	UG/L
DIBROMOCHLOROMETHANE	5.0	25 U	UG/L
1,1-DICHLOROETHANE	5.0	25 U	UG/L
1,2-DICHLOROETHANE	5.0	25 U	UG/L
1,1-DICHLOROETHENE	5.0	25 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	12 J	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	25 U	UG/L
1,2-DICHLOROPROPANE	5.0	25 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	25 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	25 U	UG/L
ETHYLBENZENE	5.0	25 U	UG/L
FREON 113	5.0	25 U	UG/L
2-HEXANONE	10	50 U	UG/L
METHYLENE CHLORIDE	5.0	25 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	50 U	UG/L
STYRENE	5.0	25 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	25 U	UG/L
TETRACHLOROETHENE	5.0	25 U	UG/L
TOLUENE	5.0	25 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	25 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	25 U	UG/L
TRICHLOROETHENE	5.0	720	UG/L
VINYL CHLORIDE	1.0	5.0 U	UG/L
O-XYLENE	5.0	25 U	UG/L
M+P-XYLENE	5.0	25 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	103	%
TOLUENE-D8	(88 - 110 %)	105	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	104	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : BR-08

Date Sampled : 06/15/01 10:02 **Order #:** 471641 **Sample Matrix:** WATER
Date Received: 06/15/01 **Submission #:** R2107377 **Analytical Run** 66653

DATE ANALYZED : 06/25/01
ANALYTICAL DILUTION: 10.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	20	1500	UG/L
BENZENE	5.0	50 U	UG/L
BROMODICHLOROMETHANE	5.0	50 U	UG/L
BROMOFORM	5.0	50 U	UG/L
BROMOMETHANE	5.0	50 U	UG/L
2-BUTANONE (MEK)	10	100 U	UG/L
CARBON DISULFIDE	10	100 U	UG/L
CARBON TETRACHLORIDE	5.0	50 U	UG/L
CHLOROBENZENE	5.0	50 U	UG/L
CHLOROETHANE	5.0	50 U	UG/L
CHLOROFORM	5.0	50 U	UG/L
CHLOROMETHANE	5.0	50 U	UG/L
DIBROMOCHLOROMETHANE	5.0	50 U	UG/L
1,1-DICHLOROETHANE	5.0	50 U	UG/L
1,2-DICHLOROETHANE	5.0	50 U	UG/L
1,1-DICHLOROETHENE	5.0	50 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	210	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	50 U	UG/L
1,2-DICHLOROPROPANE	5.0	50 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	50 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	50 U	UG/L
ETHYLBENZENE	5.0	50 U	UG/L
FREON 113	5.0	50 U	UG/L
2-HEXANONE	10	100 U	UG/L
METHYLENE CHLORIDE	5.0	50 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	100 U	UG/L
STYRENE	5.0	50 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	50 U	UG/L
TETRACHLOROETHENE	5.0	50 U	UG/L
TOLUENE	5.0	50 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	50 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	50 U	UG/L
TRICHLOROETHENE	5.0	720	UG/L
VINYL CHLORIDE	1.0	10 U	UG/L
O-XYLENE	5.0	50 U	UG/L
M+P-XYLENE	5.0	50 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	102	%
TOLUENE-D8	(88 - 110 %)	102	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	101	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : BR-17

Date Sampled : 06/15/01 11:17 **Order #:** 471643 **Sample Matrix:** WATER
Date Received: 06/15/01 **Submission #:** R2107377 **Analytical Run** 66652

DATE ANALYZED : 06/24/01
ANALYTICAL DILUTION: 5.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	20	100 U	UG/L
BENZENE	5.0	25 U	UG/L
BROMODICHLOROMETHANE	5.0	25 U	UG/L
BROMOFORM	5.0	25 U	UG/L
BROMOMETHANE	5.0	25 U	UG/L
2-BUTANONE (MEK)	10	50 U	UG/L
CARBON DISULFIDE	10	50 U	UG/L
CARBON TETRACHLORIDE	5.0	25 U	UG/L
CHLOROBENZENE	5.0	25 U	UG/L
CHLOROETHANE	5.0	25 U	UG/L
CHLOROFORM	5.0	25 U	UG/L
CHLOROMETHANE	5.0	25 U	UG/L
BROMOCHLOROMETHANE	5.0	25 U	UG/L
,1-DICHLOROETHANE	5.0	25 U	UG/L
1,2-DICHLOROETHANE	5.0	25 U	UG/L
1,1-DICHLOROETHENE	5.0	25 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	260	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	68	UG/L
1,2-DICHLOROPROPANE	5.0	25 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	25 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	25 U	UG/L
ETHYLBENZENE	5.0	25 U	UG/L
FREON 113	5.0	25 U	UG/L
2-HEXANONE	10	50 U	UG/L
METHYLENE CHLORIDE	5.0	25 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	50 U	UG/L
STYRENE	5.0	25 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	25 U	UG/L
TETRACHLOROETHENE	5.0	25 U	UG/L
TOLUENE	5.0	25 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	25 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	25 U	UG/L
TRICHLOROETHENE	5.0	4900 E	UG/L
VINYL CHLORIDE	1.0	46	UG/L
O-XYLENE	5.0	25 U	UG/L
M+P-XYLENE	5.0	25 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	105	%
TOLUENE-D8	(88 - 110 %)	103	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	104	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : BR-17

Date Sampled : 06/15/01 11:17 **Order #:** 471643 **Sample Matrix:** WATER
Date Received: 06/15/01 **Submission #:** R2107377 **Analytical Run** 66652

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/25/01			
ANALYTICAL DILUTION: 50.00			
ACETONE	20	1000 U	UG/L
BENZENE	5.0	250 U	UG/L
BROMODICHLOROMETHANE	5.0	250 U	UG/L
BROMOFORM	5.0	250 U	UG/L
BROMOMETHANE	5.0	250 U	UG/L
2-BUTANONE (MEK)	10	500 U	UG/L
CARBON DISULFIDE	10	500 U	UG/L
CARBON TETRACHLORIDE	5.0	250 U	UG/L
CHLOROBENZENE	5.0	250 U	UG/L
CHLOROETHANE	5.0	250 U	UG/L
CHLOROFORM	5.0	250 U	UG/L
CHLOROMETHANE	5.0	250 U	UG/L
DIBROMOCHLOROMETHANE	5.0	250 U	UG/L
1,1-DICHLOROETHANE	5.0	250 U	UG/L
1,2-DICHLOROETHANE	5.0	250 U	UG/L
1,1-DICHLOROETHENE	5.0	250 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	260	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	250 U	UG/L
1,2-DICHLOROPROPANE	5.0	250 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	250 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	250 U	UG/L
ETHYLBENZENE	5.0	250 U	UG/L
FREON 113	5.0	250 U	UG/L
2-HEXANONE	10	500 U	UG/L
METHYLENE CHLORIDE	5.0	250 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	500 U	UG/L
STYRENE	5.0	250 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	250 U	UG/L
TETRACHLOROETHENE	5.0	250 U	UG/L
TOLUENE	5.0	250 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	250 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	250 U	UG/L
TRICHLOROETHENE	5.0	5200	UG/L
VINYL CHLORIDE	1.0	50 U	UG/L
O-XYLENE	5.0	250 U	UG/L
M+P-XYLENE	5.0	250 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	105	%
TOLUENE-D8	(88 - 110 %)	103	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	103	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : BR-06

Date Sampled : 06/15/01 14:27 **Order #:** 471645 **Sample Matrix:** WATER
Date Received: 06/15/01 **Submission #:** R2107377 **Analytical Run** 66652

DATE ANALYZED : 06/24/01
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	20	21	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
BROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
FREON 113	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	1.6 J	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	108	%
TOLUENE-D8	(88 - 110 %)	107	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	105	%

COLUMBIA ANALYTICAL SERVICES

Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : W-2

Date Sampled : 06/15/01 15:27 **Order #:** 471651 **Sample Matrix:** WATER
Date Received: 06/15/01 **Submission #:** R2107377

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PH	150.1		7.69		06/15/01	15:27	1.0
TEMPERATURE	170.1		20.5	°C	06/15/01	15:27	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : W-2

Date Sampled : 06/15/01 15:27 **Order #:** 471651 **Sample Matrix:** WATER
Date Received: 06/15/01 **Submission #:** R2107377

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
BICARBONATE ALKALINITY	310.1	2.00	242	MG/L	06/26/01	10:45	1.0
CHLORIDE	300.0	0.100	16.6	MG/L	07/03/01	16:39	10.0
FREE CARBON DIOXIDE CONTENT	4500B	0.100	12	MG/L			1.0
TOTAL ALKALINITY	310.1	2.00	242	MG/L	06/26/01	10:45	1.0
TOTAL DISSOLVED SOLIDS	160.1	10.0	345	MG/L	06/20/01	09:10	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : TW-04

Date Sampled : 06/15/01 17:20 **Order #:** 471984 **Sample Matrix:** WATER
Date Received: 06/18/01 **Submission #:** R2107377

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PH	150.1		7.01		06/15/01	17:20	1.0
TEMPERATURE	170.1		19.0	°C	06/15/01	17:20	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : TW-04

Date Sampled : 06/15/01 17:20 **Order #:** 471984 **Sample Matrix:** WATER
Date Received: 06/18/01 **Submission #:** R2107377

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
BICARBONATE ALKALINITY	310.1	2.00	278	MG/L	06/26/01	10:45	1.0
CHLORIDE	300.0	0.100	9.89	MG/L	06/19/01	14:23	10.0
FERROUS IRON	FE+2	0.100	0.107	MG/L	06/19/01	16:00	1.0
FREE CARBON DIOXIDE CONTENT	4500B	0.100	55	MG/L			1.0
NITRATE NITROGEN	300.0	0.0500	0.500 U	MG/L	06/19/01	14:23	10.0
SULFATE	300.0	0.200	230	MG/L	07/03/01	16:51	100.0
TOTAL ALKALINITY	310.1	2.00	278	MG/L	06/26/01	10:45	1.0
TOTAL DISSOLVED SOLIDS	160.1	10.0	637	MG/L	06/20/01	09:10	1.0
TOTAL ORGANIC CARBON	415.1	1.00	3.82	MG/L	07/05/01	15:59	1.0
TOTAL SULFIDE	376.1	1.00	1.00 U	MG/L	06/22/01	10:00	1.0

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : TW-04

Date Sampled : 06/15/01 17:20 **Order #:** 471984 **Sample Matrix:** WATER
Date Received: 06/18/01 **Submission #:** R2107377 **Analytical Run** 66653

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/25/01			
ANALYTICAL DILUTION: 20.00			
ACETONE	20	4100 E	UG/L
BENZENE	5.0	100 U	UG/L
BROMODICHLOROMETHANE	5.0	100 U	UG/L
BROMOFORM	5.0	100 U	UG/L
BROMOMETHANE	5.0	100 U	UG/L
2-BUTANONE (MEK)	10	200 U	UG/L
CARBON DISULFIDE	10	200 U	UG/L
CARBON TETRACHLORIDE	5.0	100 U	UG/L
CHLOROBENZENE	5.0	100 U	UG/L
CHLOROETHANE	5.0	100 U	UG/L
CHLOROFORM	5.0	100 U	UG/L
CHLOROMETHANE	5.0	100 U	UG/L
DIBROMOCHLOROMETHANE	5.0	100 U	UG/L
1,1-DICHLOROETHANE	5.0	100 U	UG/L
1,2-DICHLOROETHANE	5.0	100 U	UG/L
1,1-DICHLOROETHENE	5.0	100 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	100 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	100 U	UG/L
1,2-DICHLOROPROPANE	5.0	100 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	100 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	100 U	UG/L
ETHYLBENZENE	5.0	100 U	UG/L
FREON 113	5.0	100 U	UG/L
2-HEXANONE	10	200 U	UG/L
METHYLENE CHLORIDE	5.0	100 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	200 U	UG/L
STYRENE	5.0	100 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	100 U	UG/L
TETRACHLOROETHENE	5.0	100 U	UG/L
TOLUENE	5.0	100 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	100 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	100 U	UG/L
TRICHLOROETHENE	5.0	100 U	UG/L
VINYL CHLORIDE	1.0	20 U	UG/L
O-XYLENE	5.0	100 U	UG/L
M+P-XYLENE	5.0	100 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	102	%
TOLUENE-D8	(88 - 110 %)	103	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	103	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : TW-04

Date Sampled : 06/15/01 17:20 **Order #:** 471984 **Sample Matrix:** WATER
Date Received: 06/18/01 **Submission #:** R2107377 **Analytical Run** 66653

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 07/01/01			
ANALYTICAL DILUTION: 50.00			
ACETONE	20	3500	UG/L
BENZENE	5.0	250 U	UG/L
BROMODICHLOROMETHANE	5.0	250 U	UG/L
BROMOFORM	5.0	250 U	UG/L
BROMOMETHANE	5.0	250 U	UG/L
2-BUTANONE (MEK)	10	500 U	UG/L
CARBON DISULFIDE	10	500 U	UG/L
CARBON TETRACHLORIDE	5.0	250 U	UG/L
CHLOROBENZENE	5.0	250 U	UG/L
CHLOROETHANE	5.0	250 U	UG/L
CHLOROFORM	5.0	250 U	UG/L
CHLOROMETHANE	5.0	250 U	UG/L
BROMOCHLOROMETHANE	5.0	250 U	UG/L
1,1-DICHLOROETHANE	5.0	250 U	UG/L
1,2-DICHLOROETHANE	5.0	250 U	UG/L
1,1-DICHLOROETHENE	5.0	250 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	250 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	250 U	UG/L
1,2-DICHLOROPROPANE	5.0	250 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	250 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	250 U	UG/L
ETHYLBENZENE	5.0	250 U	UG/L
FREON 113	5.0	250 U	UG/L
2-HEXANONE	10	500 U	UG/L
METHYLENE CHLORIDE	5.0	250 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	500 U	UG/L
STYRENE	5.0	250 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	250 U	UG/L
TETRACHLOROETHENE	5.0	250 U	UG/L
TOLUENE	5.0	250 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	250 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	250 U	UG/L
TRICHLOROETHENE	5.0	250 U	UG/L
VINYL CHLORIDE	1.0	50 U	UG/L
O-XYLENE	5.0	250 U	UG/L
M+P-XYLENE	5.0	250 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	99	%
TOLUENE-D8	(88 - 110 %)	99	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	100	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8015B GASES
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : TW-04

Date Sampled : 06/15/01 17:20 **Order #:** 471984 **Sample Matrix:** WATER
Date Received: 06/18/01 **Submission #:** R2107377 **Analytical Run** 66408

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/27/01			
ANALYTICAL DILUTION: 1.00			
ETHANE	1.0	1.0 U	UG/L
ETHYLENE	1.0	1.0 U	UG/L
METHANE	2.0	2.0 U	UG/L
PROPANE	1.0	1.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : BR-03

Date Sampled : 06/15/01 18:40 **Order #:** 471985 **Sample Matrix:** WATER
Date Received: 06/18/01 **Submission #:** R2107377 **Analytical Run** 66653

DATE ANALYZED : 06/25/01
ANALYTICAL DILUTION: 5.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	20	100 U	UG/L
BENZENE	5.0	25 U	UG/L
BROMODICHLOROMETHANE	5.0	25 U	UG/L
BROMOFORM	5.0	25 U	UG/L
BROMOMETHANE	5.0	25 U	UG/L
2-BUTANONE (MEK)	10	50 U	UG/L
CARBON DISULFIDE	10	50 U	UG/L
CARBON TETRACHLORIDE	5.0	25 U	UG/L
CHLOROBENZENE	5.0	25 U	UG/L
CHLOROETHANE	5.0	25 U	UG/L
CHLOROFORM	5.0	25 U	UG/L
CHLOROMETHANE	5.0	25 U	UG/L
IBROMOCHLOROMETHANE	5.0	25 U	UG/L
,1-DICHLOROETHANE	5.0	25 U	UG/L
1,2-DICHLOROETHANE	5.0	25 U	UG/L
1,1-DICHLOROETHENE	5.0	25 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	20 J	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	25 U	UG/L
1,2-DICHLOROPROPANE	5.0	25 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	25 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	25 U	UG/L
ETHYLBENZENE	5.0	25 U	UG/L
FREON 113	5.0	25 U	UG/L
2-HEXANONE	10	50 U	UG/L
METHYLENE CHLORIDE	5.0	25 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	50 U	UG/L
STYRENE	5.0	25 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	25 U	UG/L
TETRACHLOROETHENE	5.0	25 U	UG/L
TOLUENE	5.0	25 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	25 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	25 U	UG/L
TRICHLOROETHENE	5.0	500	UG/L
VINYL CHLORIDE	1.0	5.0 U	UG/L
O-XYLENE	5.0	25 U	UG/L
M+P-XYLENE	5.0	25 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	104	%
TOLUENE-D8	(88 - 110 %)	103	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	100	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : BR-14

Date Sampled : 06/16/01 09:34 **Order #:** 471986 **Sample Matrix:** WATER
Date Received: 06/18/01 **Submission #:** R2107377 **Analytical Run** 66655

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/28/01			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	34	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
FREON 113	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	13	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	106	%
TOLUENE-D8	(88 - 110 %)	105	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	100	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : BR-01

Date Sampled : 06/16/01 10:44 **Order #:** 471987 **Sample Matrix:** WATER
Date Received: 06/18/01 **Submission #:** R2107377 **Analytical Run** 66653

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/25/01			
ANALYTICAL DILUTION: 2.00			
ACETONE	20	40 U	UG/L
BENZENE	5.0	10 U	UG/L
BROMODICHLOROMETHANE	5.0	10 U	UG/L
BROMOFORM	5.0	10 U	UG/L
BROMOMETHANE	5.0	10 U	UG/L
2-BUTANONE (MEK)	10	20 U	UG/L
CARBON DISULFIDE	10	20 U	UG/L
CARBON TETRACHLORIDE	5.0	10 U	UG/L
CHLOROBENZENE	5.0	10 U	UG/L
CHLOROETHANE	5.0	10 U	UG/L
CHLOROFORM	5.0	10 U	UG/L
CHLOROMETHANE	5.0	10 U	UG/L
DIBROMOCHLOROMETHANE	5.0	10 U	UG/L
1,1-DICHLOROETHANE	5.0	10 U	UG/L
1,2-DICHLOROETHANE	5.0	10 U	UG/L
1,1-DICHLOROETHENE	5.0	10 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	59	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	4.4 J	UG/L
1,2-DICHLOROPROPANE	5.0	10 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	10 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	10 U	UG/L
ETHYLBENZENE	5.0	10 U	UG/L
FREON 113	5.0	10 U	UG/L
2-HEXANONE	10	20 U	UG/L
METHYLENE CHLORIDE	5.0	10 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	20 U	UG/L
STYRENE	5.0	10 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	10 U	UG/L
TETRACHLOROETHENE	5.0	10 U	UG/L
TOLUENE	5.0	10 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	10 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	10 U	UG/L
TRICHLOROETHENE	5.0	270	UG/L
VINYL CHLORIDE	1.0	2.0 U	UG/L
O-XYLENE	5.0	10 U	UG/L
M+P-XYLENE	5.0	10 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	103	%
TOLUENE-D8	(88 - 110 %)	105	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	105	%

COLUMBIA ANALYTICAL SERVICES

Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : TW-17

Date Sampled : 06/16/01 11:34 **Order #:** 471992 **Sample Matrix:** WATER
Date Received: 06/18/01 **Submission #:** R2107377

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
[illegible]	150.1		6.99		06/16/01	11:34	1.0
[illegible]PERATURE	170.1		14.8	°C	06/16/01	11:34	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : TW-17

Date Sampled : 06/16/01 11:34 **Order #:** 471992 **Sample Matrix:** WATER
Date Received: 06/18/01 **Submission #:** R2107377

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
BICARBONATE ALKALINITY	310.1	2.00	293	MG/L	06/26/01	10:45	1.0
CHLORIDE	300.0	0.100	12.7	MG/L	06/19/01	14:35	10.0
FERROUS IRON	FE+2	0.100	0.100 U	MG/L	06/19/01	16:00	1.0
FREE CARBON DIOXIDE CONTENT	4500B	0.100	63	MG/L			1.0
NITRATE NITROGEN	300.0	0.0500	0.500 U	MG/L	06/19/01	14:35	10.0
SULFATE	300.0	0.200	84.4	MG/L	06/19/01	14:35	10.0
TOTAL ALKALINITY	310.1	2.00	293	MG/L	06/26/01	10:45	1.0
DISSOLVED SOLIDS	160.1	10.0	433	MG/L	06/22/01	08:45	1.0
ORGANIC CARBON	415.1	1.00	1.41	MG/L	07/05/01	16:29	1.0
SULFIDE	376.1	1.00	1.00 U	MG/L	06/22/01	10:00	1.0

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : TW-17

Date Sampled : 06/16/01 11:34 **Order #:** 471992 **Sample Matrix:** WATER
Date Received: 06/18/01 **Submission #:** R2107377 **Analytical Run** 66653

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/25/01			
ANALYTICAL DILUTION: 5.00			
ACETONE	20	100 U	UG/L
BENZENE	5.0	25 U	UG/L
BROMODICHLOROMETHANE	5.0	25 U	UG/L
BROMOFORM	5.0	25 U	UG/L
BROMOMETHANE	5.0	25 U	UG/L
2-BUTANONE (MEK)	10	50 U	UG/L
CARBON DISULFIDE	10	50 U	UG/L
CARBON TETRACHLORIDE	5.0	25 U	UG/L
CHLOROBENZENE	5.0	25 U	UG/L
CHLOROETHANE	5.0	25 U	UG/L
CHLOROFORM	5.0	25 U	UG/L
CHLOROMETHANE	5.0	25 U	UG/L
DIBROMOCHLOROMETHANE	5.0	25 U	UG/L
1,1-DICHLOROETHANE	5.0	25 U	UG/L
1,2-DICHLOROETHANE	5.0	25 U	UG/L
1,1-DICHLOROETHENE	5.0	25 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	25 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	25 U	UG/L
1,2-DICHLOROPROPANE	5.0	25 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	25 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	25 U	UG/L
ETHYLBENZENE	5.0	25 U	UG/L
FREON 113	5.0	25 U	UG/L
2-HEXANONE	10	50 U	UG/L
METHYLENE CHLORIDE	5.0	25 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	50 U	UG/L
STYRENE	5.0	25 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	25 U	UG/L
TETRACHLOROETHENE	5.0	25 U	UG/L
TOLUENE	5.0	25 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	25 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	25 U	UG/L
TRICHLOROETHENE	5.0	490	UG/L
VINYL CHLORIDE	1.0	5.0 U	UG/L
O-XYLENE	5.0	25 U	UG/L
M+P-XYLENE	5.0	25 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	102	%
TOLUENE-D8	(88 - 110 %)	103	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	103	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8015B GASES
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : TW-17

Date Sampled : 06/16/01 11:34 **Order #:** 471992 **Sample Matrix:** WATER
Date Received: 06/18/01 **Submission #:** R2107377 **Analytical Run** 66408

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/27/01			
ANALYTICAL DILUTION: 1.00			
ETHANE	1.0	1.0 U	UG/L
ETHYLENE	1.0	1.0 U	UG/L
METHANE	2.0	2.0 U	UG/L
PROPANE	1.0	1.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : TW-20

Date Sampled : 06/16/01 15:30 **Order #:** 471993 **Sample Matrix:** WATER
Date Received: 06/18/01 **Submission #:** R2107377

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
	150.1		6.98		06/16/01	15:30	1.0
TEMPERATURE	170.1		12.7	°C	06/16/01	15:30	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : TW-20

Date Sampled : 06/16/01 15:30 **Order #:** 471993 **Sample Matrix:** WATER
Date Received: 06/18/01 **Submission #:** R2107377

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
BICARBONATE ALKALINITY	310.1	2.00	350	MG/L	06/26/01	10:45	1.0
CHLORIDE	300.0	0.100	13.6	MG/L	06/19/01	15:25	10.0
FERROUS IRON	FE+2	0.100	0.100 U	MG/L	06/19/01	16:00	1.0
CARBON DIOXIDE CONTENT	4500B	0.100	70	MG/L			1.0
NITRATE NITROGEN	300.0	0.0500	2.15	MG/L	06/19/01	15:25	10.0
SULFATE	300.0	0.200	79.2	MG/L	06/19/01	15:25	10.0
TOTAL ALKALINITY	310.1	2.00	350	MG/L	06/26/01	10:45	1.0
TOTAL DISSOLVED SOLIDS	160.1	10.0	485	MG/L	06/22/01	08:45	1.0
TOTAL ORGANIC CARBON	415.1	1.00	1.00 U	MG/L	07/05/01	16:59	1.0
TOTAL SULFIDE	376.1	1.00	1.00 U	MG/L	06/22/01	10:00	1.0

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : TW-20

Date Sampled : 06/16/01 15:30 **Order #:** 471993 **Sample Matrix:** WATER
Date Received: 06/18/01 **Submission #:** R2107377 **Analytical Run** 66653

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/25/01			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
ɔMODICHLOROMETHANE	5.0	5.0 U	UG/L
ɔMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
FREON 113	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	2.9 J	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	104	%
TOLUENE-D8	(88 - 110 %)	104	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	103	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8015B GASES
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : TW-20

Date Sampled : 06/16/01 15:30 **Order #:** 471993 **Sample Matrix:** WATER
Date Received: 06/18/01 **Submission #:** R2107377 **Analytical Run** 0

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/27/01			
ANALYTICAL DILUTION: 1.00			
ETHANE	1.0	1.0 U	UG/L
ETHYLENE	1.0	1.0 U	UG/L
METHANE	2.0	2.0 U	UG/L
PROPANE	1.0	1.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : TW-07

Date Sampled : 06/16/01 16:41 **Order #:** 471994 **Sample Matrix:** WATER
Date Received: 06/18/01 **Submission #:** R2107377

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
[illegible]	150.1		6.65		06/16/01	16:41	1.0
[illegible]PERATURE	170.1		14.6	°C	06/16/01	16:41	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : TW-07

Date Sampled : 06/16/01 16:41 **Order #:** 471994 **Sample Matrix:** WATER
Date Received: 06/18/01 **Submission #:** R2107377

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
BICARBONATE ALKALINITY	310.1	2.00	351	MG/L	06/26/01	10:45	1.0
CHLORIDE	300.0	0.100	46.2	MG/L	06/19/01	15:37	10.0
FERROUS IRON	FE+2	0.100	0.100 U	MG/L	06/19/01	16:00	1.0
E CARBON DIOXIDE CONTENT	4500B	0.100	150	MG/L			1.0
RATE NITROGEN	300.0	0.0500	88.9	MG/L	06/27/01	09:56	40.0
SULFATE	300.0	0.200	395	MG/L	07/05/01	15:24	100.0
TOTAL ALKALINITY	310.1	2.00	351	MG/L	06/26/01	10:45	1.0
TOTAL DISSOLVED SOLIDS	160.1	10.0	1460	MG/L	06/22/01	08:45	1.0
TOTAL ORGANIC CARBON	415.1	1.00	3.20	MG/L	07/05/01	17:14	1.0
TOTAL SULFIDE	376.1	1.00	1.00 U	MG/L	06/22/01	10:00	1.0

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : TW-07

Date Sampled : 06/16/01 16:41 **Order #:** 471994 **Sample Matrix:** WATER
Date Received: 06/18/01 **Submission #:** R2107377 **Analytical Run** 66653

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/25/01			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	3.9 J	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	13	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
FREON 113	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	27	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	103	%
TOLUENE-D8	(88 - 110 %)	103	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	104	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8015B GASES
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : TW-07

Date Sampled : 06/16/01 16:41 **Order #:** 471994 **Sample Matrix:** WATER
Date Received: 06/18/01 **Submission #:** R2107377 **Analytical Run** 66408

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/27/01			
ANALYTICAL DILUTION: 1.00			
ETHANE	1.0	1.0 U	UG/L
ETHYLENE	1.0	1.0 U	UG/L
METHANE	2.0	2.0 U	UG/L
PROPANE	1.0	1.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : TW-09

Date Sampled : 06/16/01 18:27 **Order #:** 471995 **Sample Matrix:** WATER
Date Received: 06/18/01 **Submission #:** R2107377

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PH	150.1		7.12		06/16/01	18:27	1.0
TEMPERATURE	170.1		13.9	°C	06/16/01	18:27	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : TW-09

Date Sampled : 06/16/01 18:27 **Order #:** 471995 **Sample Matrix:** WATER
Date Received: 06/18/01 **Submission #:** R2107377

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
BICARBONATE ALKALINITY	310.1	2.00	201	MG/L	06/26/01	10:45	1.0
[illegible]ORIDE	300.0	0.100	11.5	MG/L	06/19/01	15:50	10.0
[illegible]ERROUS IRON	FE+2	0.100	0.100 U	MG/L	06/19/01	16:00	1.0
FREE CARBON DIOXIDE CONTENT	4500B	0.100	35	MG/L			1.0
[illegible]ITRATE NITROGEN	300.0	0.0500	0.744	MG/L	06/19/01	15:50	10.0
SULFATE	300.0	0.200	328	MG/L	07/05/01	16:14	100.0
TOTAL ALKALINITY	310.1	2.00	201	MG/L	06/26/01	10:45	1.0
TOTAL DISSOLVED SOLIDS	160.1	10.0	721	MG/L	06/22/01	08:45	1.0
TOTAL ORGANIC CARBON	415.1	1.00	2.35	MG/L	07/05/01	17:29	1.0
TOTAL SULFIDE	376.1	1.00	1.00 U	MG/L	06/22/01	10:00	1.0

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : TW-09

Date Sampled : 06/16/01 18:27 **Order #:** 471995 **Sample Matrix:** WATER
Date Received: 06/18/01 **Submission #:** R2107377 **Analytical Run** 66653

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/25/01			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	7.4	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
FREON 113	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	240 E	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	103	%
TOLUENE-D8	(88 - 110 %)	103	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	104	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : TW-09

Date Sampled : 06/16/01 18:27 **Order #:** 471995 **Sample Matrix:** WATER
Date Received: 06/18/01 **Submission #:** R2107377 **Analytical Run** 66653

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/28/01			
ANALYTICAL DILUTION: 2.00			
ACETONE	20	40 U	UG/L
BENZENE	5.0	10 U	UG/L
BROMODICHLOROMETHANE	5.0	10 U	UG/L
BROMOFORM	5.0	10 U	UG/L
BROMOMETHANE	5.0	10 U	UG/L
2-BUTANONE (MEK)	10	20 U	UG/L
CARBON DISULFIDE	10	20 U	UG/L
CARBON TETRACHLORIDE	5.0	10 U	UG/L
CHLOROBENZENE	5.0	10 U	UG/L
CHLOROETHANE	5.0	10 U	UG/L
CHLOROFORM	5.0	10 U	UG/L
CHLOROMETHANE	5.0	10 U	UG/L
DIBROMOCHLOROMETHANE	5.0	10 U	UG/L
1,1-DICHLOROETHANE	5.0	10 U	UG/L
1,2-DICHLOROETHANE	5.0	10 U	UG/L
1,1-DICHLOROETHENE	5.0	10 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	10 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	10 U	UG/L
1,2-DICHLOROPROPANE	5.0	10 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	10 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	10 U	UG/L
ETHYLBENZENE	5.0	10 U	UG/L
FREON 113	5.0	10 U	UG/L
2-HEXANONE	10	20 U	UG/L
METHYLENE CHLORIDE	5.0	10 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	20 U	UG/L
STYRENE	5.0	10 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	10 U	UG/L
TETRACHLOROETHENE	5.0	10 U	UG/L
TOLUENE	5.0	10 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	10 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	10 U	UG/L
TRICHLOROETHENE	5.0	200	UG/L
VINYL CHLORIDE	1.0	2.0 U	UG/L
O-XYLENE	5.0	10 U	UG/L
M+P-XYLENE	5.0	10 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	105	%
TOLUENE-D8	(88 - 110 %)	103	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	101	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8015B GASES
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : TW-09

Date Sampled : 06/16/01 18:27 **Order #:** 471995 **Sample Matrix:** WATER
Date Received: 06/18/01 **Submission #:** R2107377 **Analytical Run** 66408

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/27/01			
ANALYTICAL DILUTION: 1.00			
ETHANE	1.0	1.0 U	UG/L
ETHYLENE	1.0	1.0 U	UG/L
METHANE	2.0	2.0 U	UG/L
PROPANE	1.0	1.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : QATB02

Date Sampled : 06/15/01 00:00 **Order #:** 471996 **Sample Matrix:** WATER
Date Received: 06/18/01 **Submission #:** R2107377 **Analytical Run** 66654

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/26/01			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
IBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
FREON 113	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	105	%
TOLUENE-D8	(88 - 110 %)	105	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	104	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : BR-02

Date Sampled : 06/15/01 09:27 **Order #:** 471997 **Sample Matrix:** WATER
Date Received: 06/18/01 **Submission #:** R2107377 **Analytical Run** 66654

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/26/01			
ANALYTICAL DILUTION: 10.00			
ACETONE	20	200 U	UG/L
BENZENE	5.0	50 U	UG/L
BROMODICHLOROMETHANE	5.0	50 U	UG/L
BROMOFORM	5.0	50 U	UG/L
BROMOMETHANE	5.0	50 U	UG/L
2-BUTANONE (MEK)	10	100 U	UG/L
CARBON DISULFIDE	10	100 U	UG/L
CARBON TETRACHLORIDE	5.0	50 U	UG/L
CHLOROBENZENE	5.0	50 U	UG/L
CHLOROETHANE	5.0	50 U	UG/L
CHLOROFORM	5.0	50 U	UG/L
CHLOROMETHANE	5.0	50 U	UG/L
DIBROMOCHLOROMETHANE	5.0	50 U	UG/L
1,1-DICHLOROETHANE	5.0	50 U	UG/L
1,2-DICHLOROETHANE	5.0	50 U	UG/L
1,1-DICHLOROETHENE	5.0	50 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	94	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	27 J	UG/L
1,2-DICHLOROPROPANE	5.0	50 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	50 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	50 U	UG/L
ETHYLBENZENE	5.0	50 U	UG/L
FREON 113	5.0	50 U	UG/L
2-HEXANONE	10	100 U	UG/L
METHYLENE CHLORIDE	5.0	50 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	100 U	UG/L
STYRENE	5.0	50 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	50 U	UG/L
TETRACHLOROETHENE	5.0	50 U	UG/L
TOLUENE	5.0	50 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	50 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	50 U	UG/L
TRICHLOROETHENE	5.0	1000	UG/L
VINYL CHLORIDE	1.0	10 U	UG/L
O-XYLENE	5.0	50 U	UG/L
M+P-XYLENE	5.0	50 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	103	%
TOLUENE-D8	(88 - 110 %)	105	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	101	%

COLUMBIA ANALYTICAL SERVICES

Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : OB-09

Date Sampled : 06/17/01 10:38 **Order #:** 472577 **Sample Matrix:** WATER
Date Received: 06/20/01 **Submission #:** R2107377

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PH	150.1		7.02		06/17/01	10:38	1.0
TEMPERATURE	170.1		16.1	°C	06/17/01	10:38	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : OB-09

Date Sampled : 06/17/01 10:38 **Order #:** 472577 **Sample Matrix:** WATER
Date Received: 06/20/01 **Submission #:** R2107377

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
BICARBONATE ALKALINITY	310.1	2.00	288	MG/L	06/26/01	10:45	1.0
CHLORIDE	300.0	0.100	39.7	MG/L	06/21/01	09:40	10.0
FERROUS IRON	FE+2	0.100	0.100 U	MG/L	06/20/01	16:45	1.0
CARBON DIOXIDE CONTENT	4500B	0.100	70	MG/L			1.0
NITRATE NITROGEN	300.0	0.0500	2.45	MG/L	06/21/01	09:40	10.0
SULFATE	300.0	0.200	459	MG/L	07/05/01	14:47	100.0
TOTAL ALKALINITY	310.1	2.00	288	MG/L	06/26/01	10:45	1.0
TOTAL DISSOLVED SOLIDS	160.1	10.0	1020	MG/L	06/22/01	08:45	1.0
TOTAL ORGANIC CARBON	415.1	1.00	2.26	MG/L	07/06/01	18:05	1.0
TOTAL SULFIDE	376.1	1.00	1.00 U	MG/L	06/22/01	10:00	1.0

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : OB-09

Date Sampled : 06/17/01 10:38 **Order #:** 472577 **Sample Matrix:** WATER
Date Received: 06/20/01 **Submission #:** R2107377 **Analytical Run** 66654

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/26/01			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
BROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	17	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
FREON 113	5.0	5.1	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	150	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	102	%
TOLUENE-D8	(88 - 110 %)	105	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	104	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8015B GASES
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : OB-09

Date Sampled : 06/17/01 10:38 **Order #:** 472577 **Sample Matrix:** WATER
Date Received: 06/20/01 **Submission #:** R2107377 **Analytical Run** 66408

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/27/01			
ANALYTICAL DILUTION: 1.00			
ETHANE	1.0	1.0 U	UG/L
ETHYLENE	1.0	1.0 U	UG/L
METHANE	2.0	2.0 U	UG/L
PROPANE	1.0	1.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : BR-16

Date Sampled : 06/17/01 11:58 **Order #:** 472578 **Sample Matrix:** WATER
Date Received: 06/20/01 **Submission #:** R2107377 **Analytical Run** 66655

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/28/01			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
FREON 113	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	106	%
TOLUENE-D8	(88 - 110 %)	101	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	102	%

COLUMBIA ANALYTICAL SERVICES

Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : OB-07

Date Sampled : 06/17/01 14:38 **Order #:** 472579 **Sample Matrix:** WATER
Date Received: 06/20/01 **Submission #:** R2107377

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PH	150.1		7.85		06/17/01	14:38	1.0
TEMPERATURE	170.1		18.6	°C	06/17/01	14:38	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : OB-07

Date Sampled : 06/17/01 14:38 **Order #:** 472579 **Sample Matrix:** WATER
Date Received: 06/20/01 **Submission #:** R2107377

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
BICARBONATE ALKALINITY	310.1	2.00	105	MG/L	06/26/01	10:45	1.0
CHLORIDE	300.0	0.100	113	MG/L	07/05/01	14:59	100.0
FERROUS IRON	FE+2	0.100	0.100 U	MG/L	06/20/01	16:45	1.0
CARBON DIOXIDE CONTENT	4500B	0.100	2.5	MG/L			1.0
NITRATE NITROGEN	300.0	0.0500	16.2	MG/L	06/21/01	09:52	10.0
SULFATE	300.0	0.200	684	MG/L	07/05/01	14:59	100.0
TOTAL ALKALINITY	310.1	2.00	105	MG/L	06/26/01	10:45	1.0
TOTAL DISSOLVED SOLIDS	160.1	10.0	1340	MG/L	06/22/01	08:45	1.0
TOTAL ORGANIC CARBON	415.1	1.00	10.4	MG/L	07/06/01	18:20	1.0
TOTAL SULFIDE	376.1	1.00	1.00 U	MG/L	06/22/01	10:00	1.0

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : OB-07

Date Sampled : 06/17/01 14:38 **Order #:** 472579 **Sample Matrix:** WATER
Date Received: 06/20/01 **Submission #:** R2107377 **Analytical Run** 66656

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 07/01/01			
ANALYTICAL DILUTION: 5.00			
ACETONE	20	620	UG/L
BENZENE	5.0	25 U	UG/L
BROMODICHLOROMETHANE	5.0	25 U	UG/L
BROMOFORM	5.0	25 U	UG/L
BROMOMETHANE	5.0	25 U	UG/L
2-BUTANONE (MEK)	10	50 U	UG/L
CARBON DISULFIDE	10	50 U	UG/L
CARBON TETRACHLORIDE	5.0	25 U	UG/L
CHLOROBENZENE	5.0	25 U	UG/L
CHLOROETHANE	5.0	25 U	UG/L
CHLOROFORM	5.0	25 U	UG/L
CHLOROMETHANE	5.0	25 U	UG/L
DIBROMOCHLOROMETHANE	5.0	25 U	UG/L
1,1-DICHLOROETHANE	5.0	25 U	UG/L
1,2-DICHLOROETHANE	5.0	25 U	UG/L
1,1-DICHLOROETHENE	5.0	25 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	25 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	25 U	UG/L
1,2-DICHLOROPROPANE	5.0	25 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	25 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	25 U	UG/L
ETHYLBENZENE	5.0	25 U	UG/L
FREON 113	5.0	25 U	UG/L
2-HEXANONE	10	50 U	UG/L
METHYLENE CHLORIDE	5.0	25 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	50 U	UG/L
STYRENE	5.0	25 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	25 U	UG/L
TETRACHLOROETHENE	5.0	25 U	UG/L
TOLUENE	5.0	25 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	25 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	25 U	UG/L
TRICHLOROETHENE	5.0	10 J	UG/L
VINYL CHLORIDE	1.0	5.0 U	UG/L
O-XYLENE	5.0	25 U	UG/L
M+P-XYLENE	5.0	25 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	100	%
TOLUENE-D8	(88 - 110 %)	99	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	101	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8015B GASES
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : OB-07

Date Sampled : 06/17/01 14:38 **Order #:** 472579 **Sample Matrix:** WATER
Date Received: 06/20/01 **Submission #:** R2107377 **Analytical Run** 0

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/27/01			
ANALYTICAL DILUTION: 1.00			
ETHANE	1.0	1.0 U	UG/L
ETHYLENE	1.0	1.0 U	UG/L
METHANE	2.0	23	UG/L
PROPANE	1.0	1.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : BR-12

Date Sampled : 06/17/01 16:04 **Order #:** 472580 **Sample Matrix:** WATER
Date Received: 06/20/01 **Submission #:** R2107377 **Analytical Run** 66654

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/26/01			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	26	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
FREON 113	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	99	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	108	%
TOLUENE-D8	(88 - 110 %)	104	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	104	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : QAFB02

Date Sampled : 06/17/01 16:25 **Order #:** 472581 **Sample Matrix:** WATER
Date Received: 06/20/01 **Submission #:** R2107377 **Analytical Run** 66654

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/26/01			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	9.0	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	20	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
FREON 113	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	106	%
TOLUENE-D8	(88 - 110 %)	103	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	103	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : QARB02

Date Sampled : 06/17/01 16:30 **Order #:** 472582 **Sample Matrix:** WATER
Date Received: 06/20/01 **Submission #:** R2107377 **Analytical Run** 66654

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/26/01			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.8	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	12	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
FREON 113	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	105	%
TOLUENE-D8	(88 - 110 %)	103	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	102	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : QATB02

Date Sampled : 06/17/01 : **Order #:** 472583 **Sample Matrix:** WATER
Date Received: 06/20/01 **Submission #:** R2107377 **Analytical Run** 66654

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/26/01			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
BROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
FREON 113	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	107	%
TOLUENE-D8	(88 - 110 %)	105	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	101	%

COLUMBIA ANALYTICAL SERVICES

Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : W-5

Date Sampled : 06/18/01 09:13 **Order #:** 472584 **Sample Matrix:** WATER
Date Received: 06/20/01 **Submission #:** R2107377

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PH	150.1		6.65		06/18/01	09:13	1.0
TEMPERATURE	170.1		13.2	°C	06/18/01	09:13	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : W-5

Date Sampled : 06/18/01 09:13 **Order #:** 472584 **Sample Matrix:** WATER
Date Received: 06/20/01 **Submission #:** R2107377

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
BICARBONATE ALKALINITY	310.1	2.00	570	MG/L	06/26/01	10:45	1.0
CHLORIDE	300.0	0.100	31.4	MG/L	06/21/01	09:27	10.0
FERROUS IRON	FE+2	0.100	0.714	MG/L	06/20/01	16:45	1.0
FREE CARBON DIOXIDE CONTENT	4500B	0.100	380	MG/L			1.0
NITRATE NITROGEN	300.0	0.0500	0.500 U	MG/L	06/21/01	09:27	10.0
SULFATE	300.0	0.200	432	MG/L	07/05/01	15:12	100.0
TOTAL ALKALINITY	310.1	2.00	570	MG/L	06/26/01	10:45	1.0
TOTAL DISSOLVED SOLIDS	160.1	10.0	1240	MG/L	06/22/01	08:45	1.0
TOTAL ORGANIC CARBON	415.1	1.00	4.65	MG/L	07/06/01	18:35	1.0
TOTAL SULFIDE	376.1	1.00	1.00 U	MG/L	06/22/01	10:00	1.0

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : W-5

Date Sampled : 06/18/01 09:13 **Order #:** 472584 **Sample Matrix:** WATER
Date Received: 06/20/01 **Submission #:** R2107377 **Analytical Run** 66654

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/26/01			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	650 E	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	1900 E	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	23	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	9.6	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
FREON 113	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	62	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	107	%
TOLUENE-D8	(88 - 110 %)	105	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	104	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : W-5

Date Sampled : 06/18/01 09:13 **Order #:** 472584 **Sample Matrix:** WATER
Date Received: 06/20/01 **Submission #:** R2107377 **Analytical Run** 66654

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 07/01/01			
ANALYTICAL DILUTION: 20.00			
ACETONE	20	590	UG/L
BENZENE	5.0	100 U	UG/L
BROMODICHLOROMETHANE	5.0	100 U	UG/L
BROMOFORM	5.0	100 U	UG/L
BROMOMETHANE	5.0	100 U	UG/L
2-BUTANONE (MEK)	10	1900	UG/L
CARBON DISULFIDE	10	200 U	UG/L
CARBON TETRACHLORIDE	5.0	100 U	UG/L
CHLOROBENZENE	5.0	100 U	UG/L
CHLOROETHANE	5.0	100 U	UG/L
CHLOROFORM	5.0	100 U	UG/L
CHLOROMETHANE	5.0	100 U	UG/L
DIBROMOCHLOROMETHANE	5.0	100 U	UG/L
1,1-DICHLOROETHANE	5.0	100 U	UG/L
1,2-DICHLOROETHANE	5.0	100 U	UG/L
1,1-DICHLOROETHENE	5.0	100 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	100 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	100 U	UG/L
1,2-DICHLOROPROPANE	5.0	100 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	100 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	100 U	UG/L
ETHYLBENZENE	5.0	100 U	UG/L
FREON 113	5.0	100 U	UG/L
2-HEXANONE	10	200 U	UG/L
METHYLENE CHLORIDE	5.0	100 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	200 U	UG/L
STYRENE	5.0	100 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	100 U	UG/L
TETRACHLOROETHENE	5.0	100 U	UG/L
TOLUENE	5.0	100 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	100 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	100 U	UG/L
TRICHLOROETHENE	5.0	50 J	UG/L
VINYL CHLORIDE	1.0	20 U	UG/L
O-XYLENE	5.0	100 U	UG/L
M+P-XYLENE	5.0	100 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	99	%
TOLUENE-D8	(88 - 110 %)	99	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	99	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8015B GASES
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : W-5

Date Sampled : 06/18/01 09:13 **Order #:** 472584 **Sample Matrix:** WATER
Date Received: 06/20/01 **Submission #:** R2107377 **Analytical Run** 66408

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/27/01			
ANALYTICAL DILUTION: 1.00			
ETHANE	1.0	1.0 U	UG/L
ETHYLENE	1.0	1.0 U	UG/L
METHANE	2.0	2.6	UG/L
PROPANE	1.0	1.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : BR-13

Date Sampled : 06/18/01 11:53 **Order #:** 472585 **Sample Matrix:** WATER
Date Received: 06/20/01 **Submission #:** R2107377 **Analytical Run** 66654

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/26/01			
ANALYTICAL DILUTION: 25.00			
ACETONE	20	500 U	UG/L
BENZENE	5.0	130 U	UG/L
BROMODICHLOROMETHANE	5.0	130 U	UG/L
BROMOFORM	5.0	130 U	UG/L
BROMOMETHANE	5.0	130 U	UG/L
2-BUTANONE (MEK)	10	250 U	UG/L
CARBON DISULFIDE	10	250 U	UG/L
CARBON TETRACHLORIDE	5.0	130 U	UG/L
CHLOROBENZENE	5.0	130 U	UG/L
CHLOROETHANE	5.0	130 U	UG/L
CHLOROFORM	5.0	130 U	UG/L
CHLOROMETHANE	5.0	130 U	UG/L
BROMOCHLOROMETHANE	5.0	130 U	UG/L
1,1-DICHLOROETHANE	5.0	130 U	UG/L
1,2-DICHLOROETHANE	5.0	130 U	UG/L
1,1-DICHLOROETHENE	5.0	130 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	160	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	130 U	UG/L
1,2-DICHLOROPROPANE	5.0	130 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	130 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	130 U	UG/L
ETHYLBENZENE	5.0	130 U	UG/L
FREON 113	5.0	130 U	UG/L
2-HEXANONE	10	250 U	UG/L
METHYLENE CHLORIDE	5.0	130 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	250 U	UG/L
STYRENE	5.0	130 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	130 U	UG/L
TETRACHLOROETHENE	5.0	130 U	UG/L
TOLUENE	5.0	130 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	130 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	130 U	UG/L
TRICHLOROETHENE	5.0	3100	UG/L
VINYL CHLORIDE	1.0	25 U	UG/L
O-XYLENE	5.0	130 U	UG/L
M+P-XYLENE	5.0	130 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	105	%
TOLUENE-D8	(88 - 110 %)	105	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	104	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : BR-15

Date Sampled : 06/18/01 14:25 **Order #:** 472586 **Sample Matrix:** WATER
Date Received: 06/20/01 **Submission #:** R2107377 **Analytical Run** 66654

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/26/01			
ANALYTICAL DILUTION: 20.00			
ACETONE	20	400 U	UG/L
BENZENE	5.0	100 U	UG/L
BROMODICHLOROMETHANE	5.0	100 U	UG/L
BROMOFORM	5.0	100 U	UG/L
BROMOMETHANE	5.0	100 U	UG/L
2-BUTANONE (MEK)	10	200 U	UG/L
CARBON DISULFIDE	10	200 U	UG/L
CARBON TETRACHLORIDE	5.0	100 U	UG/L
CHLOROBENZENE	5.0	100 U	UG/L
CHLOROETHANE	5.0	100 U	UG/L
CHLOROFORM	5.0	100 U	UG/L
CHLOROMETHANE	5.0	100 U	UG/L
DIBROMOCHLOROMETHANE	5.0	100 U	UG/L
1,1-DICHLOROETHANE	5.0	100 U	UG/L
1,2-DICHLOROETHANE	5.0	100 U	UG/L
1,1-DICHLOROETHENE	5.0	100 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	49 J	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	100 U	UG/L
1,2-DICHLOROPROPANE	5.0	100 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	100 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	100 U	UG/L
ETHYLBENZENE	5.0	100 U	UG/L
FREON 113	5.0	100 U	UG/L
2-HEXANONE	10	200 U	UG/L
METHYLENE CHLORIDE	5.0	100 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	200 U	UG/L
STYRENE	5.0	100 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	100 U	UG/L
TETRACHLOROETHENE	5.0	100 U	UG/L
TOLUENE	5.0	100 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	100 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	100 U	UG/L
TRICHLOROETHENE	5.0	2300	UG/L
VINYL CHLORIDE	1.0	20 U	UG/L
O-XYLENE	5.0	100 U	UG/L
M+P-XYLENE	5.0	100 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	109	%
TOLUENE-D8	(88 - 110 %)	105	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	102	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : BR-10

Date Sampled : 06/18/01 15:36 **Order #:** 472587 **Sample Matrix:** WATER
Date Received: 06/20/01 **Submission #:** R2107377 **Analytical Run** 66654

DATE ANALYZED : 06/26/01
ANALYTICAL DILUTION: 50.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	20	1000 U	UG/L
BENZENE	5.0	250 U	UG/L
BROMODICHLOROMETHANE	5.0	250 U	UG/L
BROMOFORM	5.0	250 U	UG/L
BROMOMETHANE	5.0	250 U	UG/L
2-BUTANONE (MEK)	10	500 U	UG/L
CARBON DISULFIDE	10	500 U	UG/L
CARBON TETRACHLORIDE	5.0	250 U	UG/L
CHLOROBENZENE	5.0	250 U	UG/L
CHLOROETHANE	5.0	250 U	UG/L
CHLOROFORM	5.0	250 U	UG/L
CHLOROMETHANE	5.0	250 U	UG/L
DIBROMOCHLOROMETHANE	5.0	250 U	UG/L
1,1-DICHLOROETHANE	5.0	250 U	UG/L
1,2-DICHLOROETHANE	5.0	250 U	UG/L
1,1-DICHLOROETHENE	5.0	250 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	1000	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	250 U	UG/L
1,2-DICHLOROPROPANE	5.0	250 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	250 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	250 U	UG/L
ETHYLBENZENE	5.0	250 U	UG/L
FREON 113	5.0	250 U	UG/L
2-HEXANONE	10	500 U	UG/L
METHYLENE CHLORIDE	5.0	250 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	500 U	UG/L
STYRENE	5.0	250 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	250 U	UG/L
TETRACHLOROETHENE	5.0	250 U	UG/L
TOLUENE	5.0	250 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	250 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	250 U	UG/L
TRICHLOROETHENE	5.0	8500	UG/L
VINYL CHLORIDE	1.0	50 U	UG/L
O-XYLENE	5.0	250 U	UG/L
M+P-XYLENE	5.0	250 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	106	%
TOLUENE-D8	(88 - 110 %)	103	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	103	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : OB-04

Date Sampled : 06/18/01 16:59 **Order #:** 472588 **Sample Matrix:** WATER
Date Received: 06/20/01 **Submission #:** R2107377 **Analytical Run** 66656

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 07/01/01			
ANALYTICAL DILUTION: 200.00			
ACETONE	20	4000 U	UG/L
BENZENE	5.0	1000 U	UG/L
BROMODICHLOROMETHANE	5.0	1000 U	UG/L
BROMOFORM	5.0	1000 U	UG/L
BROMOMETHANE	5.0	1000 U	UG/L
2-BUTANONE (MEK)	10	2000 U	UG/L
CARBON DISULFIDE	10	2000 U	UG/L
CARBON TETRACHLORIDE	5.0	1000 U	UG/L
CHLOROBENZENE	5.0	1000 U	UG/L
CHLOROETHANE	5.0	1000 U	UG/L
CHLOROFORM	5.0	1000 U	UG/L
CHLOROMETHANE	5.0	1000 U	UG/L
DIBROMOCHLOROMETHANE	5.0	1000 U	UG/L
1,1-DICHLOROETHANE	5.0	1000 U	UG/L
1,2-DICHLOROETHANE	5.0	1000 U	UG/L
1,1-DICHLOROETHENE	5.0	1000 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	21000	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	1000 U	UG/L
1,2-DICHLOROPROPANE	5.0	1000 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	1000 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	1000 U	UG/L
ETHYLBENZENE	5.0	1000 U	UG/L
FREON 113	5.0	1000 U	UG/L
2-HEXANONE	10	2000 U	UG/L
METHYLENE CHLORIDE	5.0	1000 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	2000 U	UG/L
STYRENE	5.0	1000 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	1000 U	UG/L
TETRACHLOROETHENE	5.0	1000 U	UG/L
TOLUENE	5.0	1000 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	1000 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	1000 U	UG/L
TRICHLOROETHENE	5.0	39000	UG/L
VINYL CHLORIDE	1.0	200 U	UG/L
O-XYLENE	5.0	1000 U	UG/L
M+P-XYLENE	5.0	1000 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	100	%
TOLUENE-D8	(88 - 110 %)	98	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	99	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : BR-05

Date Sampled : 06/19/01 09:49 **Order #:** 472589 **Sample Matrix:** WATER
Date Received: 06/20/01 **Submission #:** R2107377 **Analytical Run** 66656

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 07/02/01			
ANALYTICAL DILUTION: 10.00			
ACETONE	20	200 U	UG/L
BENZENE	5.0	50 U	UG/L
BROMODICHLOROMETHANE	5.0	50 U	UG/L
BROMOFORM	5.0	50 U	UG/L
BROMOMETHANE	5.0	50 U	UG/L
2-BUTANONE (MEK)	10	100 U	UG/L
CARBON DISULFIDE	10	100 U	UG/L
CARBON TETRACHLORIDE	5.0	50 U	UG/L
CHLOROBENZENE	5.0	50 U	UG/L
CHLOROETHANE	5.0	50 U	UG/L
CHLOROFORM	5.0	50 U	UG/L
CHLOROMETHANE	5.0	50 U	UG/L
BROMOCHLOROMETHANE	5.0	50 U	UG/L
1,1-DICHLOROETHANE	5.0	50 U	UG/L
1,2-DICHLOROETHANE	5.0	50 U	UG/L
1,1-DICHLOROETHENE	5.0	37 J	UG/L
CIS-1,2-DICHLOROETHENE	5.0	1600	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	130	UG/L
1,2-DICHLOROPROPANE	5.0	50 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	50 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	50 U	UG/L
ETHYLBENZENE	5.0	50 U	UG/L
FREON 113	5.0	50 U	UG/L
2-HEXANONE	10	100 U	UG/L
METHYLENE CHLORIDE	5.0	50 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	100 U	UG/L
STYRENE	5.0	50 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	50 U	UG/L
TETRACHLOROETHENE	5.0	50 U	UG/L
TOLUENE	5.0	50 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	50 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	50 U	UG/L
TRICHLOROETHENE	5.0	4100 E	UG/L
VINYL CHLORIDE	1.0	290	UG/L
O-XYLENE	5.0	50 U	UG/L
M+P-XYLENE	5.0	50 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	99	%
TOLUENE-D8	(88 - 110 %)	100	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	103	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : BR-05

Date Sampled : 06/19/01 09:49 **Order #:** 472589 **Sample Matrix:** WATER
Date Received: 06/20/01 **Submission #:** R2107377 **Analytical Run** 0

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 07/02/01			
ANALYTICAL DILUTION: 25.00			
ACETONE	20	500 U	UG/L
BENZENE	5.0	130 U	UG/L
BROMODICHLOROMETHANE	5.0	130 U	UG/L
BROMOFORM	5.0	130 U	UG/L
BROMOMETHANE	5.0	130 U	UG/L
2-BUTANONE (MEK)	10	250 U	UG/L
CARBON DISULFIDE	10	250 U	UG/L
CARBON TETRACHLORIDE	5.0	130 U	UG/L
CHLOROBENZENE	5.0	130 U	UG/L
CHLOROETHANE	5.0	130 U	UG/L
CHLOROFORM	5.0	130 U	UG/L
CHLOROMETHANE	5.0	130 U	UG/L
DIBROMOCHLOROMETHANE	5.0	130 U	UG/L
1,1-DICHLOROETHANE	5.0	130 U	UG/L
1,2-DICHLOROETHANE	5.0	130 U	UG/L
1,1-DICHLOROETHENE	5.0	130 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	1600	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	140	UG/L
1,2-DICHLOROPROPANE	5.0	130 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	130 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	130 U	UG/L
ETHYLBENZENE	5.0	130 U	UG/L
FREON 113	5.0	130 U	UG/L
2-HEXANONE	10	250 U	UG/L
METHYLENE CHLORIDE	5.0	130 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	250 U	UG/L
STYRENE	5.0	130 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	130 U	UG/L
TETRACHLOROETHENE	5.0	130 U	UG/L
TOLUENE	5.0	130 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	130 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	130 U	UG/L
TRICHLOROETHENE	5.0	4300	UG/L
VINYL CHLORIDE	1.0	300	UG/L
O-XYLENE	5.0	130 U	UG/L
M+P-XYLENE	5.0	130 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	99	%
TOLUENE-D8	(88 - 110 %)	98	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	100	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : BR-05 (DUP)

Date Sampled : 06/19/01 09:49 **Order #:** 472590 **Sample Matrix:** WATER
Date Received: 06/20/01 **Submission #:** R2107377 **Analytical Run** 66656

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 07/02/01			
ANALYTICAL DILUTION: 25.00			
ACETONE	20	500 U	UG/L
BENZENE	5.0	130 U	UG/L
BROMODICHLOROMETHANE	5.0	130 U	UG/L
BROMOFORM	5.0	130 U	UG/L
BROMOMETHANE	5.0	130 U	UG/L
2-BUTANONE (MEK)	10	250 U	UG/L
CARBON DISULFIDE	10	250 U	UG/L
CARBON TETRACHLORIDE	5.0	130 U	UG/L
CHLOROBENZENE	5.0	130 U	UG/L
CHLOROETHANE	5.0	130 U	UG/L
CHLOROFORM	5.0	130 U	UG/L
CHLOROMETHANE	5.0	130 U	UG/L
BROMOCHLOROMETHANE	5.0	130 U	UG/L
1-DICHLOROETHANE	5.0	130 U	UG/L
1,2-DICHLOROETHANE	5.0	130 U	UG/L
1,1-DICHLOROETHENE	5.0	130 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	1500	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	130 U	UG/L
1,2-DICHLOROPROPANE	5.0	130 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	130 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	130 U	UG/L
ETHYLBENZENE	5.0	130 U	UG/L
FREON 113	5.0	130 U	UG/L
2-HEXANONE	10	250 U	UG/L
METHYLENE CHLORIDE	5.0	130 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	250 U	UG/L
STYRENE	5.0	130 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	130 U	UG/L
TETRACHLOROETHENE	5.0	130 U	UG/L
TOLUENE	5.0	130 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	130 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	130 U	UG/L
TRICHLOROETHENE	5.0	3700	UG/L
VINYL CHLORIDE	1.0	270	UG/L
O-XYLENE	5.0	130 U	UG/L
M+P-XYLENE	5.0	130 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	100	%
TOLUENE-D8	(88 - 110 %)	99	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	100	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : W-5

Date Sampled : 06/19/01 10:25 **Order #:** 472592 **Sample Matrix:** WATER
Date Received: 06/20/01 **Submission #:** R2107377 **Analytical Run** 66656

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 07/02/01			
ANALYTICAL DILUTION: 20.00			
ACETONE	20	540	UG/L
BENZENE	5.0	100 U	UG/L
BROMODICHLOROMETHANE	5.0	100 U	UG/L
BROMOFORM	5.0	100 U	UG/L
BROMOMETHANE	5.0	100 U	UG/L
2-BUTANONE (MEK)	10	2500	UG/L
CARBON DISULFIDE	10	200 U	UG/L
CARBON TETRACHLORIDE	5.0	100 U	UG/L
CHLOROBENZENE	5.0	100 U	UG/L
CHLOROETHANE	5.0	100 U	UG/L
CHLOROFORM	5.0	100 U	UG/L
CHLOROMETHANE	5.0	100 U	UG/L
DIBROMOCHLOROMETHANE	5.0	100 U	UG/L
1,1-DICHLOROETHANE	5.0	100 U	UG/L
1,2-DICHLOROETHANE	5.0	100 U	UG/L
1,1-DICHLOROETHENE	5.0	100 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	20 J	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	100 U	UG/L
1,2-DICHLOROPROPANE	5.0	100 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	100 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	100 U	UG/L
ETHYLBENZENE	5.0	100 U	UG/L
FREON 113	5.0	100 U	UG/L
2-HEXANONE	10	200 U	UG/L
METHYLENE CHLORIDE	5.0	100 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	200 U	UG/L
STYRENE	5.0	100 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	100 U	UG/L
TETRACHLOROETHENE	5.0	100 U	UG/L
TOLUENE	5.0	100 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	100 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	100 U	UG/L
TRICHLOROETHENE	5.0	56 J	UG/L
VINYL CHLORIDE	1.0	20 U	UG/L
O-XYLENE	5.0	100 U	UG/L
M+P-XYLENE	5.0	100 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	97	%
TOLUENE-D8	(88 - 110 %)	97	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	102	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : BR-04

Date Sampled : 06/19/01 11:45 **Order #:** 472593 **Sample Matrix:** WATER
Date Received: 06/20/01 **Submission #:** R2107377 **Analytical Run** 66656

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 07/02/01			
ANALYTICAL DILUTION: 20.00			
ACETONE	20	400 U	UG/L
BENZENE	5.0	100 U	UG/L
BROMODICHLOROMETHANE	5.0	100 U	UG/L
BROMOFORM	5.0	100 U	UG/L
BROMOMETHANE	5.0	100 U	UG/L
2-BUTANONE (MEK)	10	200 U	UG/L
CARBON DISULFIDE	10	200 U	UG/L
CARBON TETRACHLORIDE	5.0	100 U	UG/L
CHLOROBENZENE	5.0	100 U	UG/L
CHLOROETHANE	5.0	100 U	UG/L
CHLOROFORM	5.0	100 U	UG/L
CHLOROMETHANE	5.0	100 U	UG/L
IBROMOCHLOROMETHANE	5.0	100 U	UG/L
,1-DICHLOROETHANE	5.0	100 U	UG/L
1,2-DICHLOROETHANE	5.0	100 U	UG/L
1,1-DICHLOROETHENE	5.0	100 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	320	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	61 J	UG/L
1,2-DICHLOROPROPANE	5.0	100 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	100 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	100 U	UG/L
ETHYLBENZENE	5.0	100 U	UG/L
FREON 113	5.0	100 U	UG/L
2-HEXANONE	10	200 U	UG/L
METHYLENE CHLORIDE	5.0	100 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	200 U	UG/L
STYRENE	5.0	100 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	100 U	UG/L
TETRACHLOROETHENE	5.0	100 U	UG/L
TOLUENE	5.0	100 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	100 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	100 U	UG/L
TRICHLOROETHENE	5.0	4500 E	UG/L
VINYL CHLORIDE	1.0	20 U	UG/L
O-XYLENE	5.0	100 U	UG/L
M+P-XYLENE	5.0	100 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	100	%
TOLUENE-D8	(88 - 110 %)	97	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	101	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : BR-04

Date Sampled : 06/19/01 11:45 **Order #:** 472593 **Sample Matrix:** WATER
Date Received: 06/20/01 **Submission #:** R2107377 **Analytical Run** 0

DATE ANALYZED : 07/02/01
ANALYTICAL DILUTION: 50.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	20	1000 U	UG/L
BENZENE	5.0	250 U	UG/L
BROMODICHLOROMETHANE	5.0	250 U	UG/L
BROMOFORM	5.0	250 U	UG/L
BROMOMETHANE	5.0	250 U	UG/L
2-BUTANONE (MEK)	10	500 U	UG/L
CARBON DISULFIDE	10	500 U	UG/L
CARBON TETRACHLORIDE	5.0	250 U	UG/L
CHLOROBENZENE	5.0	250 U	UG/L
CHLOROETHANE	5.0	250 U	UG/L
CHLOROFORM	5.0	250 U	UG/L
CHLOROMETHANE	5.0	250 U	UG/L
DIBROMOCHLOROMETHANE	5.0	250 U	UG/L
1,1-DICHLOROETHANE	5.0	250 U	UG/L
1,2-DICHLOROETHANE	5.0	250 U	UG/L
1,1-DICHLOROETHENE	5.0	250 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	300	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	250 U	UG/L
1,2-DICHLOROPROPANE	5.0	250 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	250 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	250 U	UG/L
ETHYLBENZENE	5.0	250 U	UG/L
FREON 113	5.0	250 U	UG/L
2-HEXANONE	10	500 U	UG/L
METHYLENE CHLORIDE	5.0	250 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	500 U	UG/L
STYRENE	5.0	250 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	250 U	UG/L
TETRACHLOROETHENE	5.0	250 U	UG/L
TOLUENE	5.0	250 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	250 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	250 U	UG/L
TRICHLOROETHENE	5.0	4300	UG/L
VINYL CHLORIDE	1.0	50 U	UG/L
O-XYLENE	5.0	250 U	UG/L
M+P-XYLENE	5.0	250 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	100	%
TOLUENE-D8	(88 - 110 %)	99	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	100	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : BR-09

Date Sampled : 06/19/01 14:29 **Order #:** 472594 **Sample Matrix:** WATER
Date Received: 06/20/01 **Submission #:** R2107377 **Analytical Run** 66656

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 07/02/01			
ANALYTICAL DILUTION: 10.00			
ACETONE	20	420	UG/L
BENZENE	5.0	50 U	UG/L
BROMODICHLOROMETHANE	5.0	50 U	UG/L
BROMOFORM	5.0	50 U	UG/L
BROMOMETHANE	5.0	50 U	UG/L
2-BUTANONE (MEK)	10	100 U	UG/L
CARBON DISULFIDE	10	100 U	UG/L
CARBON TETRACHLORIDE	5.0	50 U	UG/L
CHLOROBENZENE	5.0	50 U	UG/L
CHLOROETHANE	5.0	50 U	UG/L
CHLOROFORM	5.0	50 U	UG/L
CHLOROMETHANE	5.0	50 U	UG/L
DIBROMOCHLOROMETHANE	5.0	50 U	UG/L
,1-DICHLOROETHANE	5.0	50 U	UG/L
1,2-DICHLOROETHANE	5.0	50 U	UG/L
1,1-DICHLOROETHENE	5.0	50 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	36 J	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	50 U	UG/L
1,2-DICHLOROPROPANE	5.0	50 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	50 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	50 U	UG/L
ETHYLBENZENE	5.0	50 U	UG/L
FREON 113	5.0	50 U	UG/L
2-HEXANONE	10	100 U	UG/L
METHYLENE CHLORIDE	5.0	50 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	100 U	UG/L
STYRENE	5.0	50 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	50 U	UG/L
TETRACHLOROETHENE	5.0	50 U	UG/L
TOLUENE	5.0	50 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	50 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	50 U	UG/L
TRICHLOROETHENE	5.0	1500	UG/L
VINYL CHLORIDE	1.0	10 U	UG/L
O-XYLENE	5.0	50 U	UG/L
M+P-XYLENE	5.0	50 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
-BROMOFLUOROBENZENE	(86 - 115 %)	99	%
TOLUENE-D8	(88 - 110 %)	97	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	101	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : OB-08

Date Sampled : 06/19/01 17:07 **Order #:** 472595 **Sample Matrix:** WATER
Date Received: 06/20/01 **Submission #:** R2107377 **Analytical Run** 66656

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 07/02/01			
ANALYTICAL DILUTION: 100.00			
ACETONE	20	2000 U	UG/L
BENZENE	5.0	500 U	UG/L
BROMODICHLOROMETHANE	5.0	500 U	UG/L
BROMOFORM	5.0	500 U	UG/L
BROMOMETHANE	5.0	500 U	UG/L
2-BUTANONE (MEK)	10	1000 U	UG/L
CARBON DISULFIDE	10	1000 U	UG/L
CARBON TETRACHLORIDE	5.0	500 U	UG/L
CHLOROBENZENE	5.0	500 U	UG/L
CHLOROETHANE	5.0	500 U	UG/L
CHLOROFORM	5.0	500 U	UG/L
CHLOROMETHANE	5.0	500 U	UG/L
DIBROMOCHLOROMETHANE	5.0	500 U	UG/L
1,1-DICHLOROETHANE	5.0	500 U	UG/L
1,2-DICHLOROETHANE	5.0	500 U	UG/L
1,1-DICHLOROETHENE	5.0	500 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	240 J	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	500 U	UG/L
1,2-DICHLOROPROPANE	5.0	500 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	500 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	500 U	UG/L
ETHYLBENZENE	5.0	500 U	UG/L
FREON 113	5.0	500 U	UG/L
2-HEXANONE	10	1000 U	UG/L
METHYLENE CHLORIDE	5.0	500 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	1000 U	UG/L
STYRENE	5.0	500 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	500 U	UG/L
TETRACHLOROETHENE	5.0	500 U	UG/L
TOLUENE	5.0	500 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	500 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	500 U	UG/L
TRICHLOROETHENE	5.0	15000	UG/L
VINYL CHLORIDE	1.0	100 U	UG/L
O-XYLENE	5.0	500 U	UG/L
M+P-XYLENE	5.0	500 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	100	%
TOLUENE-D8	(88 - 110 %)	100	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	98	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : BR-11

Date Sampled : 06/20/01 09:31 **Order #:** 472596 **Sample Matrix:** WATER
Date Received: 06/20/01 **Submission #:** R2107377 **Analytical Run** 66656

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 07/02/01			
ANALYTICAL DILUTION: 200.00			
ACETONE	20	4000 U	UG/L
BENZENE	5.0	1000 U	UG/L
BROMODICHLOROMETHANE	5.0	1000 U	UG/L
BROMOFORM	5.0	1000 U	UG/L
BROMOMETHANE	5.0	1000 U	UG/L
2-BUTANONE (MEK)	10	2000 U	UG/L
CARBON DISULFIDE	10	2000 U	UG/L
CARBON TETRACHLORIDE	5.0	1000 U	UG/L
CHLOROBENZENE	5.0	1000 U	UG/L
CHLOROETHANE	5.0	1000 U	UG/L
CHLOROFORM	5.0	1000 U	UG/L
CHLOROMETHANE	5.0	1000 U	UG/L
DIBROMOCHLOROMETHANE	5.0	1000 U	UG/L
1,1-DICHLOROETHANE	5.0	1000 U	UG/L
1,2-DICHLOROETHANE	5.0	1000 U	UG/L
1,1-DICHLOROETHENE	5.0	1000 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	660 J	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	1000 U	UG/L
1,2-DICHLOROPROPANE	5.0	1000 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	1000 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	1000 U	UG/L
ETHYLBENZENE	5.0	1000 U	UG/L
FREON 113	5.0	1000 U	UG/L
2-HEXANONE	10	2000 U	UG/L
METHYLENE CHLORIDE	5.0	1000 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	2000 U	UG/L
STYRENE	5.0	1000 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	1000 U	UG/L
TETRACHLOROETHENE	5.0	1000 U	UG/L
TOLUENE	5.0	1000 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	1000 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	1000 U	UG/L
TRICHLOROETHENE	5.0	41000 E	UG/L
VINYL CHLORIDE	1.0	200 U	UG/L
O-XYLENE	5.0	1000 U	UG/L
M+P-XYLENE	5.0	1000 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	101	%
TOLUENE-D8	(88 - 110 %)	97	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	101	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : BR-11

Date Sampled : 06/20/01 09:31 **Order #:** 472596 **Sample Matrix:** WATER
Date Received: 06/20/01 **Submission #:** R2107377 **Analytical Run** 0

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 07/02/01			
ANALYTICAL DILUTION: 500.00			
ACETONE	20	10000 U	UG/L
BENZENE	5.0	2500 U	UG/L
BROMODICHLOROMETHANE	5.0	2500 U	UG/L
BROMOFORM	5.0	2500 U	UG/L
BROMOMETHANE	5.0	2500 U	UG/L
2-BUTANONE (MEK)	10	5000 U	UG/L
CARBON DISULFIDE	10	5000 U	UG/L
CARBON TETRACHLORIDE	5.0	2500 U	UG/L
CHLOROBENZENE	5.0	2500 U	UG/L
CHLOROETHANE	5.0	2500 U	UG/L
CHLOROFORM	5.0	2500 U	UG/L
CHLOROMETHANE	5.0	2500 U	UG/L
DIBROMOCHLOROMETHANE	5.0	2500 U	UG/L
1,1-DICHLOROETHANE	5.0	2500 U	UG/L
1,2-DICHLOROETHANE	5.0	2500 U	UG/L
1,1-DICHLOROETHENE	5.0	2500 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	690 J	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	2500 U	UG/L
1,2-DICHLOROPROPANE	5.0	2500 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	2500 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	2500 U	UG/L
ETHYLBENZENE	5.0	2500 U	UG/L
FREON 113	5.0	2500 U	UG/L
2-HEXANONE	10	5000 U	UG/L
METHYLENE CHLORIDE	5.0	2500 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	5000 U	UG/L
STYRENE	5.0	2500 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	2500 U	UG/L
TETRACHLOROETHENE	5.0	2500 U	UG/L
TOLUENE	5.0	2500 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	2500 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	2500 U	UG/L
TRICHLOROETHENE	5.0	39000	UG/L
VINYL CHLORIDE	1.0	500 U	UG/L
O-XYLENE	5.0	2500 U	UG/L
M+P-XYLENE	5.0	2500 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	94	%
TOLUENE-D8	(88 - 110 %)	99	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	101	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : EW-S-5

Date Sampled : 06/20/01 11:19 **Order #:** 472597 **Sample Matrix:** WATER
Date Received: 06/20/01 **Submission #:** R2107377 **Analytical Run** 66656

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 07/02/01			
ANALYTICAL DILUTION: 250.00			
ACETONE	20	5000 U	UG/L
BENZENE	5.0	1300 U	UG/L
BROMODICHLOROMETHANE	5.0	1300 U	UG/L
BROMOFORM	5.0	1300 U	UG/L
BROMOMETHANE	5.0	1300 U	UG/L
2-BUTANONE (MEK)	10	2500 U	UG/L
CARBON DISULFIDE	10	2500 U	UG/L
CARBON TETRACHLORIDE	5.0	1300 U	UG/L
CHLOROBENZENE	5.0	1300 U	UG/L
CHLOROETHANE	5.0	1300 U	UG/L
CHLOROFORM	5.0	1300 U	UG/L
CHLOROMETHANE	5.0	1300 U	UG/L
DIBROMOCHLOROMETHANE	5.0	1300 U	UG/L
1,1-DICHLOROETHANE	5.0	1300 U	UG/L
1,2-DICHLOROETHANE	5.0	1300 U	UG/L
1,1-DICHLOROETHENE	5.0	1300 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	520 J	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	1300 U	UG/L
1,2-DICHLOROPROPANE	5.0	1300 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	1300 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	1300 U	UG/L
ETHYLBENZENE	5.0	1300 U	UG/L
FREON 113	5.0	1300 U	UG/L
2-HEXANONE	10	2500 U	UG/L
METHYLENE CHLORIDE	5.0	1300 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	2500 U	UG/L
STYRENE	5.0	1300 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	1300 U	UG/L
TETRACHLOROETHENE	5.0	1300 U	UG/L
TOLUENE	5.0	1300 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	1300 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	1300 U	UG/L
TRICHLOROETHENE	5.0	64000 E	UG/L
VINYL CHLORIDE	1.0	250 U	UG/L
O-XYLENE	5.0	1300 U	UG/L
M+P-XYLENE	5.0	1300 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	101	%
TOLUENE-D8	(88 - 110 %)	100	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	101	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Harding ESE
Project Reference: FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY
Client Sample ID : EW-S-5

Date Sampled : 06/20/01 11:19 **Order #:** 472597 **Sample Matrix:** WATER
Date Received: 06/20/01 **Submission #:** R2107377 **Analytical Run** 0

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 07/02/01			
ANALYTICAL DILUTION: 500.00			
ACETONE	20	10000 U	UG/L
BENZENE	5.0	2500 U	UG/L
BROMODICHLOROMETHANE	5.0	2500 U	UG/L
BROMOFORM	5.0	2500 U	UG/L
BROMOMETHANE	5.0	2500 U	UG/L
2-BUTANONE (MEK)	10	5000 U	UG/L
CARBON DISULFIDE	10	5000 U	UG/L
CARBON TETRACHLORIDE	5.0	2500 U	UG/L
CHLOROBENZENE	5.0	2500 U	UG/L
CHLOROETHANE	5.0	2500 U	UG/L
CHLOROFORM	5.0	2500 U	UG/L
CHLOROMETHANE	5.0	2500 U	UG/L
DIBROMOCHLOROMETHANE	5.0	2500 U	UG/L
1,1-DICHLOROETHANE	5.0	2500 U	UG/L
1,2-DICHLOROETHANE	5.0	2500 U	UG/L
1,1-DICHLOROETHENE	5.0	2500 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	570 J	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	2500 U	UG/L
1,2-DICHLOROPROPANE	5.0	2500 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	2500 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	2500 U	UG/L
ETHYLBENZENE	5.0	2500 U	UG/L
FREON 113	5.0	2500 U	UG/L
2-HEXANONE	10	5000 U	UG/L
METHYLENE CHLORIDE	5.0	2500 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	5000 U	UG/L
STYRENE	5.0	2500 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	2500 U	UG/L
TETRACHLOROETHENE	5.0	2500 U	UG/L
TOLUENE	5.0	2500 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	2500 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	2500 U	UG/L
TRICHLOROETHENE	5.0	67000	UG/L
VINYL CHLORIDE	1.0	500 U	UG/L
O-XYLENE	5.0	2500 U	UG/L
M+P-XYLENE	5.0	2500 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	96	%
TOLUENE-D8	(88 - 110 %)	97	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	98	%

COLUMBIA ANALYTICAL SERVICES

INORGANIC BLANK SPIKE SUMMARY

CAS Submission #: R2107377
Client: Harding ESE
FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY

BLANK SPIKES

	BLANK	FOUND	ADDED	% REC	LIMITS	RUN	UNITS
CHLORIDE	0.100 U	2.52	2.50	101	90 - 110	65635	MG/L
SULFATE	0.200 U	2.51	2.50	100	90 - 110	65636	MG/L
NITRATE NITROGEN	0.0500 U	1.20	1.25	96	90 - 110	65649	MG/L
TOTAL DISSOLVED SOLIDS	10.0 U	924	919	101	80 - 120	65666	MG/L
FERROUS IRON	0.100 U	0.382	0.400	96	80 - 120	65727	MG/L
TOTAL DISSOLVED SOLIDS	10.0 U	917	919	100	80 - 120	65771	MG/L
TOTAL SULFIDE	1.00 U	4.54	4.23	107	44 - 122	65772	MG/L
CHLORIDE	0.100 U	2.55	2.50	102	90 - 110	65828	MG/L
NITRATE NITROGEN	0.0500 U	1.21	1.25	96	90 - 110	65831	MG/L
FERROUS IRON	0.100 U	0.389	0.400	97	80 - 120	65838	MG/L

COLUMBIA ANALYTICAL SERVICES

INORGANIC BLANK SPIKE SUMMARY

CAS Submission #: R2107377
Client: Harding ESE
FORMER TAYLOR INSTRUMENTS SITE - QUARTERLY

BLANK SPIKES

	BLANK	FOUND	ADDED	% REC	LIMITS	RUN	UNITS
TOTAL ALKALINITY	2.00 U	20.8	20.0	104	88 - 112	65878	MG/L
BICARBONATE ALKALINITY	2.00 U	19.9	20.0	100	88 - 112	65879	MG/L
NITRATE NITROGEN	0.0500 U	1.21	1.25	97	90 - 110	65949	MG/L
CHLORIDE	0.100 U	2.50	2.50	100	90 - 110	66154	MG/L
SULFATE	0.200 U	2.59	2.50	103	90 - 110	66155	MG/L
TOTAL ORGANIC CARBON	1.00 U	9.83	10.0	98	81 - 116	66170	MG/L
CHLORIDE	0.100 U	2.36	2.50	94	90 - 110	66234	MG/L
SULFATE	0.200 U	2.50	2.50	100	90 - 110	66235	MG/L
TOTAL ORGANIC CARBON	1.00 U	9.24	10.0	92	81 - 116	66274	MG/L

COLUMBIA ANALYTICAL SERVICES

QUALITY CONTROL SUMMARY MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

WATER

Spiked Order No. : 471645 Harding ESE

Client ID: BR-06

Test: 8260B TCL+FREON 113

Analytical Units: UG/L

Run Number : 66652

ANALYTE	SPIKE ADDED	SAMPLE CONCENT.	MATRIX SPIKE FOUND	MATRIX SPIKE % REC.	MATRIX SPIKE DUP. FOUND	MATRIX SPIKE DUP. % REC.	RPD	QC LIMITS RPD	QC LIMITS REC.
BENZENE	50.0	0	47.0	94	47.0	94	0	11	76 - 127
CHLOROBENZENE	50.0	0	45.0	90	45.0	90	0	13	75 - 130
1,1-DICHLOROETHENE	50.0	0	48.0	96	46.0	92	4	14	61 - 145
TOLUENE	50.0	0	50.0	100	49.0	98	2	13	76 - 125
TRICHLOROETHENE	50.0	0	48.0	96	47.0	94	2	14	71 - 120

COLUMBIA ANALYTICAL SERVICES

QUALITY CONTROL SUMMARY MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

WATER

Spiked Order No. : 472592 Harding ESE

Client ID: W-5

Test: 8260B TCL+FREON 113

Analytical Units: UG/L

Run Number : 66656

			MATRIX SPIKE		MATRIX SPIKE DUP.			QC LIMITS	
ANALYTE	SPIKE ADDED	SAMPLE CONCENT.	FOUND	% REC.	FOUND	% REC.	RPD	RPD	REC.
BENZENE	1000	0	980	98	990	99	1	11	76 - 127
CHLOROBENZENE	1000	0	960	96	950	95	1	13	75 - 130
1,1-DICHLOROETHENE	1000	0	960	96	910	91	5	14	61 - 145
TOLUENE	1000	0	950	95	960	96	1	13	76 - 125
TRICHLOROETHENE	1000	0	950	95	950	95	0	14	71 - 120

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD: 8260B TCL+FREON 113

LABORATORY REFERENCE SPIKE SUMMARY

REFERENCE ORDER #: 478885 ANALYTICAL RUN # : 66652

ANALYTE	TRUE VALUE	% RECOVERY	QC LIMITS
DATE ANALYZED : 06/24/01			
ANALYTICAL DILUTION: 1.0			
ACETONE	20.0	93	21 - 165
BENZENE	20.0	108	37 - 151
BROMODICHLOROMETHANE	20.0	112	35 - 155
BROMOFORM	20.0	101	45 - 169
BROMOMETHANE	20.0	117	10 - 242
2-BUTANONE (MEK)	20.0	96	25 - 162
CARBON DISULFIDE	20.0	97	45 - 148
CARBON TETRACHLORIDE	20.0	101	70 - 140
CHLOROBENZENE	20.0	107	37 - 160
CHLOROETHANE	20.0	127	53 - 149
CHLOROFORM	20.0	113	51 - 138
CHLOROMETHANE	20.0	131	10 - 273
DIBROMOCHLOROMETHANE	20.0	103	53 - 149
1,1-DICHLOROETHANE	20.0	117	59 - 155
1,2-DICHLOROETHANE	20.0	115	49 - 155
1,1-DICHLOROETHENE	20.0	98	10 - 234
CIS-1,2-DICHLOROETHENE	20.0	111	54 - 156
TRANS-1,2-DICHLOROETHENE	20.0	105	54 - 156
1,2-DICHLOROPROPANE	20.0	106	10 - 210
CIS-1,3-DICHLOROPROPENE	20.0	105	10 - 227
TRANS-1,3-DICHLOROPROPENE	20.0	106	17 - 183
ETHYLBENZENE	20.0	112	37 - 162
FREON 113	20.0	114	25 - 162
2-HEXANONE	20.0	89	22 - 155
METHYLENE CHLORIDE	20.0	109	10 - 221
4-METHYL-2-PENTANONE (MIBK)	20.0	90	46 - 157
STYRENE	20.0	106	66 - 144
1,1,2,2-TETRACHLOROETHANE	20.0	74	46 - 157
TETRACHLOROETHENE	20.0	104	64 - 148
TOLUENE	20.0	114	47 - 150
1,1,1-TRICHLOROETHANE	20.0	102	52 - 162
1,1,2-TRICHLOROETHANE	20.0	109	52 - 150
TRICHLOROETHENE	20.0	129	71 - 157
VINYL CHLORIDE	20.0	127	10 - 251
O-XYLENE	20.0	106	71 - 135
M+P-XYLENE	40.0	106	71 - 135

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD: 8260B TCL+FREON 113

LABORATORY REFERENCE SPIKE SUMMARY

REFERENCE ORDER #: 478889 ANALYTICAL RUN # : 66653

ANALYTE	TRUE VALUE	% RECOVERY	QC LIMITS
DATE ANALYZED : 06/25/01			
ANALYTICAL DILUTION: 1.0			
ACETONE	20.0	108	21 - 165
BENZENE	20.0	99	37 - 151
BROMODICHLOROMETHANE	20.0	108	35 - 155
BROMOFORM	20.0	100	45 - 169
BROMOMETHANE	20.0	91	10 - 242
2-BUTANONE (MEK)	20.0	98	25 - 162
CARBON DISULFIDE	20.0	101	45 - 148
CARBON TETRACHLORIDE	20.0	88	70 - 140
CHLOROBENZENE	20.0	96	37 - 160
CHLOROETHANE	20.0	106	53 - 149
CHLOROFORM	20.0	105	51 - 138
CHLOROMETHANE	20.0	102	10 - 273
DIBROMOCHLOROMETHANE	20.0	93	53 - 149
1,1-DICHLOROETHANE	20.0	104	59 - 155
1,2-DICHLOROETHANE	20.0	109	49 - 155
1,1-DICHLOROETHENE	20.0	90	10 - 234
CIS-1,2-DICHLOROETHENE	20.0	98	54 - 156
TRANS-1,2-DICHLOROETHENE	20.0	96	54 - 156
1,2-DICHLOROPROPANE	20.0	96	10 - 210
CIS-1,3-DICHLOROPROPENE	20.0	104	10 - 227
TRANS-1,3-DICHLOROPROPENE	20.0	105	17 - 183
ETHYLBENZENE	20.0	102	37 - 162
FREON 113	20.0	89	25 - 162
2-HEXANONE	20.0	98	22 - 155
METHYLENE CHLORIDE	20.0	97	10 - 221
4-METHYL-2-PENTANONE (MIBK)	20.0	96	46 - 157
STYRENE	20.0	104	66 - 144
1,1,2,2-TETRACHLOROETHANE	20.0	90	46 - 157
TETRACHLOROETHENE	20.0	91	64 - 148
TOLUENE	20.0	102	47 - 150
1,1,1-TRICHLOROETHANE	20.0	88	52 - 162
1,1,2-TRICHLOROETHANE	20.0	103	52 - 150
TRICHLOROETHENE	20.0	94	71 - 157
VINYL CHLORIDE	20.0	104	10 - 251
O-XYLENE	20.0	99	71 - 135
M+P-XYLENE	40.0	101	71 - 135

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD: 8260B TCL+FREON 113

LABORATORY REFERENCE SPIKE SUMMARY

REFERENCE ORDER #: 478893 ANALYTICAL RUN # : 66654

ANALYTE	TRUE VALUE	% RECOVERY	QC LIMITS
DATE ANALYZED : 06/26/01			
ANALYTICAL DILUTION: 1.0			
ACETONE	20.0	103	21 - 165
BENZENE	20.0	99	37 - 151
BROMODICHLOROMETHANE	20.0	105	35 - 155
BROMOFORM	20.0	97	45 - 169
BROMOMETHANE	20.0	80	10 - 242
2-BUTANONE (MEK)	20.0	90	25 - 162
CARBON DISULFIDE	20.0	93	45 - 148
CARBON TETRACHLORIDE	20.0	93	70 - 140
CHLOROBENZENE	20.0	99	37 - 160
CHLOROETHANE	20.0	111	53 - 149
CHLOROFORM	20.0	105	51 - 138
CHLOROMETHANE	20.0	102	10 - 273
DIBROMOCHLOROMETHANE	20.0	97	53 - 149
1,1-DICHLOROETHANE	20.0	109	59 - 155
1,2-DICHLOROETHANE	20.0	106	49 - 155
1,1-DICHLOROETHENE	20.0	89	10 - 234
CIS-1,2-DICHLOROETHENE	20.0	108	54 - 156
TRANS-1,2-DICHLOROETHENE	20.0	98	54 - 156
1,2-DICHLOROPROPANE	20.0	97	10 - 210
CIS-1,3-DICHLOROPROPENE	20.0	99	10 - 227
TRANS-1,3-DICHLOROPROPENE	20.0	101	17 - 183
ETHYLBENZENE	20.0	103	37 - 162
FREON 113	20.0	98	25 - 162
2-HEXANONE	20.0	91	22 - 155
METHYLENE CHLORIDE	20.0	99	10 - 221
4-METHYL-2-PENTANONE (MIBK)	20.0	91	46 - 157
STYRENE	20.0	101	66 - 144
1,1,2,2-TETRACHLOROETHANE	20.0	80	46 - 157
TETRACHLOROETHENE	20.0	98	64 - 148
TOLUENE	20.0	105	47 - 150
1,1,1-TRICHLOROETHANE	20.0	92	52 - 162
1,1,2-TRICHLOROETHANE	20.0	104	52 - 150
TRICHLOROETHENE	20.0	115	71 - 157
VINYL CHLORIDE	20.0	114	10 - 251
O-XYLENE	20.0	99	71 - 135
M+P-XYLENE	40.0	98	71 - 135

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COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD: 8260B TCL+FREON 113

LABORATORY REFERENCE SPIKE SUMMARY

REFERENCE ORDER #: 478897 ANALYTICAL RUN # : 66655

ANALYTE	TRUE VALUE	% RECOVERY	QC LIMITS
DATE ANALYZED : 06/28/01			
ANALYTICAL DILUTION: 1.0			
ACETONE	20.0	99	21 - 165
BENZENE	20.0	108	37 - 151
BROMODICHLOROMETHANE	20.0	103	35 - 155
BROMOFORM	20.0	93	45 - 169
BROMOMETHANE	20.0	78	10 - 242
2-BUTANONE (MEK)	20.0	98	25 - 162
CARBON DISULFIDE	20.0	99	45 - 148
CARBON TETRACHLORIDE	20.0	95	70 - 140
CHLOROBENZENE	20.0	101	37 - 160
CHLOROETHANE	20.0	115	53 - 149
CHLOROFORM	20.0	106	51 - 138
CHLOROMETHANE	20.0	128	10 - 273
DIBROMOCHLOROMETHANE	20.0	93	53 - 149
1,1-DICHLOROETHANE	20.0	111	59 - 155
1,2-DICHLOROETHANE	20.0	101	49 - 155
1,1-DICHLOROETHENE	20.0	101	10 - 234
CIS-1,2-DICHLOROETHENE	20.0	108	54 - 156
TRANS-1,2-DICHLOROETHENE	20.0	102	54 - 156
1,2-DICHLOROPROPANE	20.0	102	10 - 210
CIS-1,3-DICHLOROPROPENE	20.0	105	10 - 227
TRANS-1,3-DICHLOROPROPENE	20.0	100	17 - 183
ETHYLBENZENE	20.0	105	37 - 162
FREON 113	20.0	111	25 - 162
2-HEXANONE	20.0	90	22 - 155
METHYLENE CHLORIDE	20.0	108	10 - 221
4-METHYL-2-PENTANONE (MIBK)	20.0	93	46 - 157
STYRENE	20.0	106	66 - 144
1,1,2,2-TETRACHLOROETHANE	20.0	94	46 - 157
TETRACHLOROETHENE	20.0	98	64 - 148
TOLUENE	20.0	105	47 - 150
1,1,1-TRICHLOROETHANE	20.0	97	52 - 162
1,1,2-TRICHLOROETHANE	20.0	100	52 - 150
TRICHLOROETHENE	20.0	103	71 - 157
VINYL CHLORIDE	20.0	125	10 - 251
O-XYLENE	20.0	103	71 - 135
M+P-XYLENE	40.0	105	71 - 135

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD: 8260B TCL+FREON 113

LABORATORY REFERENCE SPIKE SUMMARY

REFERENCE ORDER #: 478901 ANALYTICAL RUN # : 66656

ANALYTE	TRUE VALUE	% RECOVERY	QC LIMITS
DATE ANALYZED : 07/01/01			
ANALYTICAL DILUTION: 1.0			
ACETONE	20.0	69	21 - 165
BENZENE	20.0	111	37 - 151
BROMODICHLOROMETHANE	20.0	112	35 - 155
BROMOFORM	20.0	102	45 - 169
BROMOMETHANE	20.0	128	10 - 242
2-BUTANONE (MEK)	20.0	90	25 - 162
CARBON DISULFIDE	20.0	115	45 - 148
CARBON TETRACHLORIDE	20.0	101	70 - 140
CHLOROBENZENE	20.0	111	37 - 160
CHLOROETHANE	20.0	111	53 - 149
CHLOROFORM	20.0	108	51 - 138
CHLOROMETHANE	20.0	117	10 - 273
DIBROMOCHLOROMETHANE	20.0	107	53 - 149
1,1-DICHLOROETHANE	20.0	114	59 - 155
1,2-DICHLOROETHANE	20.0	109	49 - 155
1,1-DICHLOROETHENE	20.0	97	10 - 234
CIS-1,2-DICHLOROETHENE	20.0	110	54 - 156
TRANS-1,2-DICHLOROETHENE	20.0	108	54 - 156
1,2-DICHLOROPROPANE	20.0	109	10 - 210
CIS-1,3-DICHLOROPROPENE	20.0	114	10 - 227
TRANS-1,3-DICHLOROPROPENE	20.0	109	17 - 183
ETHYLBENZENE	20.0	111	37 - 162
FREON 113	20.0	119	25 - 162
2-HEXANONE	20.0	87	22 - 155
METHYLENE CHLORIDE	20.0	109	10 - 221
4-METHYL-2-PENTANONE (MIBK)	20.0	95	46 - 157
STYRENE	20.0	109	66 - 144
1,1,2,2-TETRACHLOROETHANE	20.0	101	46 - 157
TETRACHLOROETHENE	20.0	105	64 - 148
TOLUENE	20.0	110	47 - 150
1,1,1-TRICHLOROETHANE	20.0	101	52 - 162
1,1,2-TRICHLOROETHANE	20.0	105	52 - 150
TRICHLOROETHENE	20.0	100	71 - 157
VINYL CHLORIDE	20.0	111	10 - 251
O-XYLENE	20.0	111	71 - 135
M+P-XYLENE	40.0	113	71 - 135

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD: 8260B TCL+FREON 113

LABORATORY REFERENCE SPIKE SUMMARY

REFERENCE ORDER #: 478903 ANALYTICAL RUN # : 66656

ANALYTE	TRUE VALUE	% RECOVERY	QC LIMITS
DATE ANALYZED : 07/02/01			
ANALYTICAL DILUTION: 1.0			
ACETONE	20.0	109	21 - 165
BENZENE	20.0	107	37 - 151
BROMODICHLOROMETHANE	20.0	114	35 - 155
BROMOFORM	20.0	111	45 - 169
BROMOMETHANE	20.0	52	10 - 242
2-BUTANONE (MEK)	20.0	109	25 - 162
CARBON DISULFIDE	20.0	112	45 - 148
CARBON TETRACHLORIDE	20.0	104	70 - 140
CHLOROBENZENE	20.0	105	37 - 160
CHLOROETHANE	20.0	89	53 - 149
CHLOROFORM	20.0	106	51 - 138
CHLOROMETHANE	20.0	99	10 - 273
DIBROMOCHLOROMETHANE	20.0	106	53 - 149
1,1-DICHLOROETHANE	20.0	106	59 - 155
1,2-DICHLOROETHANE	20.0	112	49 - 155
1,1-DICHLOROETHENE	20.0	95	10 - 234
CIS-1,2-DICHLOROETHENE	20.0	104	54 - 156
TRANS-1,2-DICHLOROETHENE	20.0	100	54 - 156
1,2-DICHLOROPROPANE	20.0	103	10 - 210
CIS-1,3-DICHLOROPROPENE	20.0	113	10 - 227
TRANS-1,3-DICHLOROPROPENE	20.0	110	17 - 183
ETHYLBENZENE	20.0	106	37 - 162
FREON 113	20.0	113	25 - 162
2-HEXANONE	20.0	116	22 - 155
METHYLENE CHLORIDE	20.0	101	10 - 221
4-METHYL-2-PENTANONE (MIBK)	20.0	111	46 - 157
STYRENE	20.0	106	66 - 144
1,1,2,2-TETRACHLOROETHANE	20.0	113	46 - 157
TETRACHLOROETHENE	20.0	102	64 - 148
TOLUENE	20.0	104	47 - 150
1,1,1-TRICHLOROETHANE	20.0	99	52 - 162
1,1,2-TRICHLOROETHANE	20.0	109	52 - 150
TRICHLOROETHENE	20.0	102	71 - 157
VINYL CHLORIDE	20.0	100	10 - 251
O-XYLENE	20.0	102	71 - 135
M+P-XYLENE	40.0	104	71 - 135

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 478883 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 66652

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/24/01			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
.1-DICHLOROETHANE	5.0	5.0 U	UG/L
,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
FREON 113	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
-BROMOFLUOROBENZENE	(86 - 115 %)	101	%
TOLUENE-D8	(88 - 110 %)	104	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	103	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 478888 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 66653

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/25/01			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
FREON 113	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	108	%
TOLUENE-D8	(88 - 110 %)	105	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	102	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 478892 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 66654

DATE ANALYZED : 06/26/01
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1-DICHLOROETHANE	5.0	5.0 U	UG/L
,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
FREON 113	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
-BROMOFLUOROBENZENE	(86 - 115 %)	103	%
TOLUENE-D8	(88 - 110 %)	104	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	103	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 478896 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 66655

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/28/01			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
FREON 113	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	102	%
TOLUENE-D8	(88 - 110 %)	102	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	98	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 478900 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 66656

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 07/01/01			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
,1-DICHLOROETHANE	5.0	5.0 U	UG/L
,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
FREON 113	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
-BROMOFLUOROBENZENE	(86 - 115 %)	100	%
TOLUENE-D8	(88 - 110 %)	99	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	97	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL+FREON 113
Reported: 07/17/01

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 478902 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 66656

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 07/02/01			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
FREON 113	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	102	%
TOLUENE-D8	(88 - 110 %)	98	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	103	%

COLUMBIA ANALYTICAL SERVICES

ORGANIC RUN QUALITY CONTROL SUMMARY
Report Date: 07/17/01

Client: Harding ESE
FORMER TAYLOR INSTRUMENTS SITE - SEMIANNUAL

CAS Submission #: R2107377
Reported Units: UG/L
Order #: 471984

	PRECISION		
	ORIGINAL	DUPLICATE	RPD
ETHANE	1.00 U	1.00 U	NC
ETHYLENE	1.00 U	1.00 U	NC
ETHANE	2.00 U	2.00 U	NC
PROPANE	1.00 U	1.00 U	NC

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD: 8015B GASES

LABORATORY REFERENCE SPIKE SUMMARY

EFERENCE ORDER #: 477223 ANALYTICAL RUN # : 66408

ANALYTE	TRUE VALUE	% RECOVERY	QC LIMITS
DATE ANALYZED : 06/27/01			
ANALYTICAL DILUTION: 1.0			
ETHANE	30.8	126	50 - 150
ETHYLENE	28.6	112	50 - 150
METHANE	16.5	100	50 - 150
PROPANE	45.6	108	50 - 150

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8015B GASES
Reported: 07/17/01

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 477222 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 66408

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/27/01			
ANALYTICAL DILUTION: 1.00			
ETHANE	1.0	1.0 U	UG/L
ETHYLENE	1.0	1.0 U	UG/L
METHANE	2.0	2.0 U	UG/L
PROPANE	1.0	1.0 U	UG/L

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

One Mustard St., Suite 250 • Rochester, NY 14609-0859 • (716) 288-5380 • 800-695-7222 x11 • FAX (716) 288-8475 PAGE 1 OF 2

SR #

CAS Contact Mike Perry

Project Name: Former Taylor Instruments	Project Number: 51870.4
Project Manager: Rick Ryan	Report CC:
Company/Address: Harding ESE 1400 Centerpoint Blvd. Ste 158 Knoxville, TN 37932-1968	
Phone #: 865 531 1922	FAX#: 865 531 8226
Sampler's Signature:	Sampler's Printed Name:

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: HCL

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS		REMARKS/ ALTERNATE DESCRIPTION
QATBØ1		6/14/01	00:00	W	3	3	Trip blank
QAFBØ1		6/14/01	10:45	W	3	3	field blank
QARBØ1		6/14/01	10:50	W	3	3	rinseate
BR-Ø7		6/14/01	16:42	GW	3	3	
BR-Ø7 (DUP)		6/14/01	16:42	GW	3	3	Duplicate
TW-13		6/14/01	18:12	GW	3	3	
W-4		6/15/01	07:30	GW	3	3	
OB-Ø6		6/15/01	08:43	GW	3	3	
BR-Ø8		6/15/01	10:02	GW	3	3	
BR-17		6/15/01	11:17	GW	3	3	

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP
GC/MS SVOA's ☐ 8270 ☐ 625 ☐ CLP
GC VOA's ☐ 8021 ☐ 601/602
PESTICIDES/ PCB's ☐ 8081 ☐ 608 ☐ CLP ☐ 8082
STARS LIST 8021 VOA's ☐ TOTAL ☐ TCLP
STARS LIST 8270 SVOA's ☐ TOTAL ☐ TCLP
TCLP ☐ VOA's ☐ METALS ☐ SVOA's ☐ H/P
WASTE CHARACTERIZATION ☐ React ☐ Corros. ☐ Ignit.
METALS; TOTAL (List in comments below)
METALS; DISSOLVED (List in comments below)

SPECIAL INSTRUCTIONS/COMMENTS
Metals

See QAPP ☐

SAMPLE RECEIPT: CONDITION/COOLER TEMP: 11 CUSTODY SEALS: Y N

TURNAROUND REQUIREMENTS
___ RUSH (SURCHARGES APPLY)
___ 24 hr ___ 48 hr ___ 5 day
X STANDARD
REQUESTED FAX DATE
REQUESTED REPORT DATE

REPORT REQUIREMENTS
___ I. Results Only
___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
X III. Results + QC and Calibration Summaries
___ IV. Data Validation Report with Raw Data
___ V. Speicalized Forms / Custom Report
Edata ___ Yes ___ No

INVOICE INFORMATION
PO# 6599
BILL TO:
R21-7777
SUBMISSION #:

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature:	Signature: Cindy Toomey	Signature:	Signature:	Signature:	Signature:
Printed Name: Jerry R. Fields Sr.	Printed Name: Cindy Toomey	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: Harding ESE	Firm: CAS	Firm:	Firm: CAS	Firm:	Firm:
Date/Time: 6/15 1605	Date/Time: 6/15/01 1605	Date/Time:	Date/Time: 6/15/01 1605	Date/Time:	Date/Time:

Distribution: White - ... to Originator; Yellow - Lab Copy; Pink - Retained by Client

SCOC-0101-08

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SR #

CAS Contact Mike Perry

Project Name: Former Taylor Instruments	Project Number: 51870.4
Project Manager: Rick Ryan	Report CC:
Company/Address: Harding ESE 1400 Centerpoint Blvd. Ste 158 Knoxville, TN 37932-1968	
Phone #: 865 531 1922	FAX#: 865 531 8226
Sampler's Signature:	Sampler's Printed Name:

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE: 1

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS		GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP	GC/MS SVOA's ☐ 8270 ☐ 625 ☐ CLP	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES/ PCB's ☐ 8081 ☐ 608 ☐ CLP ☐ 8082	STAR'S LIST 8021 VOA's ☐ TOTAL ☐ TCLP	STAR'S LIST 8270 SVOA's ☐ TOTAL ☐ TCLP	TCLP ☐ METALS ☐ VOA's ☐ SVOA's	WASTE CHARACTERIZATION ☐ H/P ☐ React ☐ Corros. ☐ Ignit.	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	Alkalinity / Sulfide / Chloride			REMARKS/ ALTERNATE DESCRIPTION
BR-06		6/15/01	1427	GW	3	3														
BR-06 (MS)		6/15/01	1427	GW	3	3														MATRIX SPIKE
BR-06 (MD)		6/15/01	1427	GW	3	3														MATRIX SPIKE DUP
W-2		6/15/01	1527	GW	2											1	1			

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals

See QAPP ☐

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y (N)

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
_____ 24 hr _____ 48 hr _____ 5 day
X STANDARD
REQUESTED FAX DATE
REQUESTED REPORT DATE

REPORT REQUIREMENTS
_____ I. Results Only
_____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
X III. Results + QC and Calibration Summaries
_____ IV. Data Validation Report with Raw Data
_____ V. Speicalized Forms / Custom Report
Edata _____ Yes _____ No

INVOICE INFORMATION
PO# 6599
BILL TO: Harding ESE
1400 Centerpoint Blvd.
Knoxville, TN 37932
SUBMISSION #: R21-7377

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature:	Signature: Cindy Toomey	Signature:	Signature:	Signature:	Signature:
Printed Name: Berry R. Fields Jr.	Printed Name: Cindy Toomey	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: Harding ESE	Firm: CAS	Firm:	Firm:	Firm:	Firm:
Date/Time: 6/15/01 1605	Date/Time: 6/15/01 1605	Date/Time:	Date/Time: 6/15/01 1695	Date/Time:	Date/Time:

SCOC-0101-08

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

Columbia Analytical Services Inc.
Cooler Receipt And Preservation Check Form

Project/Client Harding Submission Number 7377

Cooler received on 6/15/01 by: MB COURIER: CAS UPS FEDEX CD&L (CLIENT)

1.	Were custody seals on outside of cooler?					(YES)/NO
2.	Were custody papers properly filled out (ink, signed, etc.)?					(YES) NO
3.	Did all bottles arrive in good condition (unbroken)?					(YES) NO
4.	Did any VOA vials have significant air bubbles?					YES (NO) N/A
5.	Were **Ice** or **Ice packs** present?					(YES) NO
6.	Where did the bottles originate?					(CAS/ROC,) CLIENT
7.	Temperature of cooler(s) upon receipt:	11				
	Is the temperature within 0° - 6° C?:	Yes ☐	Yes ☐	Yes ☐	Yes ☐	Yes ☐
	If No, Explain Below	No ☐	No ☐	No ☐	No ☐	No ☐

Date/Time Temperatures Taken: 6/15/01 1610

Thermometer ID: _____ Temp Blank Sample Bottle Cooler Temp. (IR Gun)

If out of Temperature, Client Approval to Run Samples _____

Cooler Breakdown: Date: 6/18/01 by: MB

1.	Were all bottle labels complete (*i.e.* analysis, preservation, etc.)?	(YES) NO
2.	Did all bottle labels and tags agree with custody papers?	(YES) NO
3.	Were correct containers used for the tests indicated?	(YES) NO
4.	Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated (N/A)	

Explain any discrepancies: _____

		YES	NO	Sample I.D.	Reagent	Vol. Added
pH	Reagent					
12	NaOH					
2	HNO_3					
2	H_2SO_4					
Residual Chlorine (+/-)	for TCN & Phenol					
5-9*	P/PCBs (608 only)					

YES = All samples OK NO = Samples were preserved at lab as listed PC OK to adjust pH _____

*If pH adjustment is required, use NaOH and/or H_2SO_4

VOC Vial pH Verification (Tested after Analysis) Following Samples Exhibited pH > 2				
				--

Other Comments:

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SR # 1

CAS Contact Mike Perry

Project Name: Former Taylor Instruments	Project Number: 51870.4
Project Manager: Rick Ryan	Report CC:
Company/Address: Harding ESE 1400 Centerpoint Blvd. Ste. 158 Knoxville, TN 37932-1968	
Phone #: 865 531 1922	FAX#: 865 531 8226
Sampler's Signature: Jerry R. Fields Jr.	Sampler's Printed Name: Jerry R. Fields Jr.

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: 1 | 4 | 6 | 3 | 1 | 0 | 0

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS		GC/MS VOA's ☐8260 ☐624 ☐CLP	GC/MS SVOA's ☐8270 ☐625 ☐CLP	GC VOA's ☐8021 ☐601/602	PESTICIDES/PCB's ☐8081 ☐608 ☐CLP ☐8082	STAR'S LIST 8021 VOA's ☐TOTAL ☐TCLP	STAR'S LIST 8270 SVOA's ☐TOTAL ☐TCLP	TCLP ☐VOA's ☐METALS ☐SVOA's	WASTE CHARACTERIZATION ☐H/P ☐React ☐Corros. ☐Ignit.	METALS: TOTAL ~~Sulfide~~ (List in comments below)	METALS, DISSOLVED (List in comments below)	TOC	8015 (ethane, ethene, methane)	Alkalinity / Carbon Dioxide	Cl, Fe(II), Fe, NO3 SO4	REMARKS/ ALTERNATE DESCRIPTION
TW-04		6/15/01	1720	GW	10	3									1		2	2	1	1	
BR-03		6/15/01	1840	GW	3	3															
BR-14		6/16/01	0934	GW	3	3															
BR-01		6/16/01	1044	GW	3	3															
TW-17		6/16/01	1134	GW	10	3									1		2	2	1	1	
TW-20		6/16/01	1530	GW	10	3									1		2	2	1	1	
TW-07		6/16/01	1641	GW	10	3									1		2	2	1	1	
TW-09		6/16/01	1827	GW	10	3									1		2	2	1	1	
QATB02		6/15/01	0000	W	3	3															
BR-02		6/17/01	0927	GW	3	3															

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals

See QAPP ☐

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
_____ 24 hr _____ 48 hr _____ 5 day
X STANDARD
REQUESTED FAX DATE
REQUESTED REPORT DATE

REPORT REQUIREMENTS
_____ I. Results Only
_____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
X III. Results + QC and Calibration Summaries
_____ IV. Data Validation Report with Raw Data
_____ V. Speicalized Forms / Custom Report
Edata _____ Yes _____ No

INVOICE INFORMATION
PO# 6599
BILL TO:
SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: 2 CUSTODY SEALS: Y (N)

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Jerry R. Fields	Signature: Cindy Toomey	Signature:	Signature: Kelly Cook	Signature:	Signature:
Printed Name: Jerry R. Fields	Printed Name: CAS	Printed Name:	Printed Name: CAS	Printed Name:	Printed Name:
Firm: Harding ESE	Firm:	Firm:	Firm:	Firm:	Firm:
Date/Time: 6/18/01 16:22	Date/Time: 6/18/01 1622	Date/Time:	Date/Time: 6-18-01 1622	Date/Time:	Date/Time:

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

SCOC-0101-08

Columbia Analytical Services Inc.
Cooler Receipt And Preservation Check Form

Project/Client Harding-K Submission Number 22107377

Cooler received on 6/18/01 by: MB COURIER: CAS UPS FEDEX CD&L CLIENT

1.	Were custody seals on outside of cooler?					YES (NO)
2.	Were custody papers properly filled out (ink, signed, etc.)?					(YES) NO
3.	Did all bottles arrive in good condition (unbroken)?					(YES) NO
4.	Did any VOA vials have significant air bubbles?					YES (NO) N/A
5.	Were Ice or Ice packs present?					(YES) NO
6.	Where did the bottles originate?					(CAS/ROC) CLIENT
7.	Temperature of cooler(s) upon receipt:	2				
	Is the temperature within 0° - 6° C?:	(Yes) ☐	Yes ☐	Yes ☐	Yes ☐	Yes ☐
	If No, Explain Below	No ☐	No ☐	No ☐	No ☐	No ☐

Date/Time Temperatures Taken: 6/18/01 1825

Thermometer ID:_____ Temp Blank Sample Bottle Cooler Temp. (IR Gun)

If out of Temperature, Client Approval to Run Samples_____

Cooler Breakdown: Date: 6-19-01 by: KMC

1.	Were all bottle labels complete (*i.e.* analysis, preservation, etc.)?	(YES)	NO
2.	Did all bottle labels and tags agree with custody papers?	(YES)	NO
3.	Were correct containers used for the tests indicated?	(YES)	NO
4.	Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated		(N/A)

Explain any discrepancies: _____

		YES	NO	Sample I.D.	Reagent	Vol. Added
pH	Reagent					
12	NaOH					
2	HNO_3					
2	H_2SO_4					
Residual Chlorine (+/-)	for TCN & Phenol					
5-9*	P/PCBs (608 only)					

YES = All samples OK NO = Samples were preserved at lab as listed PC OK to adjust pH_____

*If pH adjustment is required, use NaOH and/or H_2SO_4

VOC Vial pH Verification (Tested after Analysis) Following Samples Exhibited pH > 2				
				--

Other Comments:

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PAGE 1 ~~2~~ OF 3

SR #: 1
CAS Contact: Mike Perry

Project Name: Former Taylor Instruments	Project Number: 51870.4
Project Manager: Rick Ryan	Report CC:
Company/Address: Harding ESE, 1400 Centerpoint Blvd Ste 158, Knoxville TN 37932-1968	
Phone #: 865 531 1422	FAX#: 865 531 8226
Sampler's Signature: [signature]	Sampler's Printed Name: Jerry R. Fields Jr.

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☒ 8260 ☐ 624 ☐ CLP	GC/MS SVOA's ☐ 8270 ☐ 625 ☐ CLP	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES/ PCB's ☐ 8081 ☐ 608 ☐ CLP ☐ 8082	STAR'S LIST 8021 VOA's ☐ TOTAL ☐ TCLP	STAR'S LIST 8270 SVOA's ☐ TOTAL ☐ TCLP	TCLP ☐ VOA's ☐ METALS ☐ SVOA's ☐ H/P	WASTE CHARACTERIZATION ☐ React ☐ Corros. ☐ Ignit.	~~METALS, TOTAL (List in comments below)~~ Sulfide	METALS, DISSOLVED (List in comments below)	TOC	BOD5 (Ethane Ethene Methane)	Alkalinity/Carbon Dioxide	Cl, Ferrous Fe, NO3, SO4	REMARKS/ ALTERNATE DESCRIPTION
PRESERVATIVE						1								4		3	1	0	0	
OB-Ø9		6/17/01	1038	GW	10	3								1		2	2	1	1	
BR-16		6/17/01	1158	GW	3	3														
OB-Ø7		6/17/01	1438	GW	10	3								1		2	2	1	1	
BR-12		6/17/01	1604	GW	3	3														
QAFBØ2		6/17/01	1625	W	3	3														Field blank
QARBØ2		6/17/01	1630	W	3	3														rinseate
QATBØ3		6/17/01	00:00	W	3	3														trip blank
W-5		6/18/01	09:13	GW	10	3								1		2	2	1	1	
BR-13		6/18/01	11:53	GW	3	3														
BR-15		6/18/01	14:25	GW	3	3														

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other ______

SPECIAL INSTRUCTIONS/COMMENTS
Metals

See QAPP ☐

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
X 24 hr ____ 48 hr ____ 5 day
X STANDARD
REQUESTED FAX DATE ______
REQUESTED REPORT DATE ______

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
X III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
____ V. Specialized Forms / Custom Report
Edata ____ Yes ____ No

INVOICE INFORMATION
PO# 6599
BILL TO:
R21-7377
SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: 2   CUSTODY SEALS: Y (N)   Client

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: [signature]	Signature: Cindy Toomey	Signature: [signature]	Signature:	Signature:	Signature:
Printed Name: Jerry R. Fields Jr	Printed Name: Cindy Toomey	Printed Name: M Beck	Printed Name:	Printed Name:	Printed Name:
Firm: Harding ESE	Firm: CAS	Firm: CAS	Firm:	Firm:	Firm:
Date/Time: 6/20/01 12:30	Date/Time: 6/20/01 1230	Date/Time: 6/20/01 1230	Date/Time:	Date/Time:	Date/Time:

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

SCOC-0101-08

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PAGE 2 OF 3

SR #

CAS Contact Mike Perry

Project Name: Former Taylor Instruments	Project Number: 51870.4
Project Manager: Rick Ryan	Report CC:
Company/Address: Harding ESE 1400 Centerpoint Blvd. Ste. 158 Knoxville, TN.	
Phone #: 865 531 1922	FAX#: 865 531 8226
Sampler's Signature: Jerry R Fields	Sampler's Printed Name: Jerry R. Fields, Jr.

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE: 1

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS		REMARKS/ ALTERNATE DESCRIPTION
BR-10		6/18/01	1536	GW	3	3	
OB-04		6/18/01	1659	GW	3	3	
BR-05		6/19/01	0949	GW	3	3	
BR-05 (DUP)		6/19/01	0949	GW	3	3	(duplicate)
W-5 (MS)		6/19/01	1025	GW	3	3	(matrix spike)
W-5 (MD)		6/19/01	1025	GW	3	3	(matrix spike duplicate)
BR-04		6/19/01	1145	GW	3	3	
BR-09		6/19/01	1429	GW	3	3	
OB-08		6/19/01	1707	GW	3	3	
BR-11		6/20/01	0931	GW	3	3	

GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP; GC/MS SVOA's ☐ 8270 ☐ 625 ☐ CLP; GC VOA's ☐ 8021 ☐ 601/602; PESTICIDES/ PCB's ☐ 8081 ☐ 608 ☐ CLP ☐ 8082; STAR'S LIST 8021 VOA's ☐ TOTAL ☐ TCLP; STAR'S LIST 8270 SVOA's ☐ TOTAL ☐ TCLP; TCLP ☐ VOA's ☐ METALS ☐ SVOA's ☐ H/P; WASTE CHARACTERIZATION ☐ React ☐ Corros. ☐ Ignit.; METALS, TOTAL (List in comments below); METALS, DISSOLVED (List in comments below)

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS

~~Metals~~

W-5 sample was collected on 6/19/01, MS/MSD for this location was collected on 6/19/01. PF 6/19/01

See QAPP ☐

TURNAROUND REQUIREMENTS
___ RUSH (SURCHARGES APPLY)
___ 24 hr ___ 48 hr ___ 5 day
X STANDARD
REQUESTED FAX DATE
REQUESTED REPORT DATE

REPORT REQUIREMENTS
___ I. Results Only
___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
X III. Results + QC and Calibration Summaries
___ IV. Data Validation Report with Raw Data
___ V. Specialized Forms / Custom Report
Edata ___ Yes ___ No

INVOICE INFORMATION
PO# 6599
BILL TO:
R21-7377
SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: 2° CUSTODY SEALS: Y (N) Client

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Jerry R Fields Jr.	Signature: Cindy Toomey	Signature:	Signature:	Signature:	Signature:
Printed Name: Jerry R Fields Jr.	Printed Name: Cindy Toomey	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: Harding ESE	Firm: CAS	Firm:	Firm:	Firm:	Firm:
Date/Time: 6/20 12:30	Date/Time: 6/20/01 1230	Date/Time:	Date/Time:	Date/Time:	Date/Time:

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

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PAGE 3 OF 3

SR #

CAS Contact Mike Perry

Project Name: Former Taylor Instruments	Project Number: 57870.4
Project Manager: Rick Ryan	Report CC:
Company/Address: 1400 Centerpoint Blvd. Ste. 158 Harding ESE Knoxville, TN 37932-1968	
Phone #: 865 531 1922	FAX#: 865 531 8226
Sampler's Signature:	Sampler's Printed Name: Jerry R. Fields Jr.

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE: 1

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☒ 8260 ☐ 624 ☐ CLP	GC/MS SVOA's ☐ 8270 ☐ 625 ☐ CLP	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES/ PCB's ☐ 8081 ☐ 608 ☐ CLP ☐ 8082	STARS LIST 8021 VOA's ☐ TOTAL ☐ TCLP	STARS LIST 8270 SVOA's ☐ TOTAL ☐ TCLP	TCLP ☐ METALS ☐ VOA's ☐ SVOA's ☐ H/P	WASTE CHARACTERIZATION ☐ React ☐ Corros. ☐ Ignit.	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	REMARKS/ ALTERNATE DESCRIPTION
EW-S-5		6/20/01	11:19	GW	3	3										

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals

See QAPP ☐

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ 24 hr ____ 48 hr ____ 5 day
X STANDARD
REQUESTED FAX DATE
REQUESTED REPORT DATE

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
X III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
____ V. Speicalized Forms / Custom Report
Edata ____ Yes ____ No

INVOICE INFORMATION
PO# 6599
BILL TO:
R21-7377
SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: 2 CUSTODY SEALS: Y (N)

Client

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Signature: Cindy Toomey	Signature	Signature	Signature	Signature
Printed Name: Jerry R. Fields Jr.	Printed Name: Cindy Toomey	Printed Name	Printed Name	Printed Name	Printed Name
Firm: Harding ESE	Firm: CAS	Firm	Firm	Firm	Firm
Date/Time: 6/20/01 12:30	Date/Time: 6/20/01 1230	Date/Time	Date/Time	Date/Time	Date/Time

SCOC-0101-08

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

Columbia Analytical Services Inc.
Cooler Receipt And Preservation Check Form

Project/Client Hardy K Submission Number 7377

Cooler received on 6/20/01 by: BL COURIER: CAS UPS FEDEX CD&L (CLIENT)

1. Were custody seals on outside of cooler? YES / (NO)
2. Were custody papers properly filled out (ink, signed, etc.)? (YES) NO
3. Did all bottles arrive in good condition (unbroken)? (YES) NO
4. Did any VOA vials have significant air bubbles? YES (NO) N/A
5. Were Ice or Ice packs present? (YES) NO
6. Where did the bottles originate? (CAS/ROC,) CLIENT
7. Temperature of cooler(s) upon receipt: 2

Is the temperature within 0° - 6° C?:	Yes ☐	Yes ☐	Yes ☐	Yes ☐	Yes ☐
If No, Explain Below	No ☐	No ☐	No ☐	No ☐	No ☐

Date/Time Temperatures Taken: 6/20/01 12:35

Thermometer ID: 161 (Temp Blank) Sample Bottle Cooler Temp. IR Gun

If out of Temperature, Client Approval to Run Samples _____

Cooler Breakdown: Date: 6/20/01 by: _____

1. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? (YES) NO
2. Did all bottle labels and tags agree with custody papers? (YES) NO
3. Were correct containers used for the tests indicated? (YES) NO
4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated (N/A)

Explain any discrepancies: _____

		YES	NO	Sample I.D.	Reagent	Vol. Added
pH	Reagent					
12	NaOH					
2	HNO_3					
2	H_2SO_4					
Residual Chlorine (+/-)	for TCN & Phenol					
5-9*	P/PCBs (608 only)					

YES = All samples OK NO = Samples were preserved at lab as listed PC OK to adjust pH _____

*If pH adjustment is required, use NaOH and/or H_2SO_4

VOC Vial pH Verification (Tested after Analysis) Following Samples Exhibited pH > 2				

Other Comments:

APPENDIX C

CHAIN-OF-CUSTODY FORMS

Columbia Analytical Services, INC.
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CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

One Mustard St., Suite 250 • Rochester, NY 14609-0859 • (716) 288-5380 • 800-695-7222 x11 • FAX (716) 288-8475 PAGE 1 OF 2

SR #

CAS Contact Mike Perry

Project Name: Former Taylor Instruments
Project Number: 51870.4
Project Manager: Rick Ryan
Report CC:
Company/Address: Harding ESE
1400 Centerpoint Blvd. Ste. 158
Knoxville, TN 37932-1968
Phone #: 865 531 1922
FAX#: 865 531 8226
Sampler's Signature:
Sampler's Printed Name:

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE: HCl

NUMBER OF CONTAINERS

- GC/MS VOA's ☒ 8260 ☐ 624 ☐ CLP
- GC/MS SVOA's ☐ 8270 ☐ 625 ☐ CLP
- GC VOA's ☐ 8021 ☐ 601/602
- PESTICIDES/ PCB's ☐ 8081 ☐ 608 ☐ CLP ☐ 8082
- STAR'S LIST 8021 VOA's ☐ TOTAL ☐ TCLP
- STAR'S LIST 8270 SVOA's ☐ TOTAL ☐ TCLP
- TCLP ☐ METALS ☐ VOA's ☐ SVOA's ☐ H/P
- WASTE CHARACTERIZATION ☐ React ☐ Corros. ☐ Ignit.
- METALS, TOTAL (List in comments below)
- METALS, DISSOLVED (List in comments below)

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

REMARKS/ ALTERNATE DESCRIPTION

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX			REMARKS/ ALTERNATE DESCRIPTION
QATBØ1		6/14/01	00:00	W	3	3	Trip blank
QAFBØ1		6/14/01	10:45	W	3	3	field blank
QARBØ1		6/14/01	10:50	W	3	3	rinseate
BR-Ø7		6/14/01	16:42	GW	3	3	
BR-Ø7 (DUP)		6/14/01	16:42	GW	3	3	Duplicate
TW-13		6/14/01	18:12	GW	3	3	
W-4		6/15/01	07:30	GW	3	3	
OB-Ø6		6/15/01	08:43	GW	3	3	
BR-Ø8		6/15/01	10:02	GW	3	3	
BR-17		6/15/01	11:17	GW	3	3	

SPECIAL INSTRUCTIONS/COMMENTS
Metals

See QAPP ☐

SAMPLE RECEIPT: CONDITION/COOLER TEMP: 11 CUSTODY SEALS: Y N

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
_____ 24 hr _____ 48 hr _____ 5 day
X STANDARD
REQUESTED FAX DATE
REQUESTED REPORT DATE

REPORT REQUIREMENTS
_____ I. Results Only
_____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
X III. Results + QC and Calibration Summaries
_____ IV. Data Validation Report with Raw Data
_____ V. Speicalized Forms / Custom Report
Edata _____ Yes _____ No

INVOICE INFORMATION
PO# 6599
BILL TO:
R21-7777
SUBMISSION #:

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Signature Cindy Toomey	Signature	Signature	Signature	Signature
Printed Name Jerry R. Fields Sr.	Printed Name Cindy Toomey	Printed Name	Printed Name CAS	Printed Name	Printed Name
Firm Harding ESE	Firm CAS	Firm	Firm	Firm	Firm
Date/Time 6/15 1605	Date/Time 6/15/01 1605	Date/Time	Date/Time 6/15/01 1605	Date/Time	Date/Time

Distribution: White - to Originator; Yellow - Lab Copy; Pink - Retained by Client

SCOC-0101-08

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SR # 1

CAS Contact Mike Perry

Project Name: Former Taylor Instruments	Project Number: 51870.4
Project Manager: Rick Ryan	Report CC:
Company/Address: Harding ESE 1400 Centerpoint Blvd. Ste 158 Knoxville, TN 37932-1968	
Phone #: 865 531 1922	FAX#: 865 531 9226
Sampler's Signature:	Sampler's Printed Name:

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: 1

NUMBER OF CONTAINERS

GC/MS VOA's ☒ 8260 ☐ 624 ☐ CLP
GC/MS SVOA's ☐ 8270 ☐ 625 ☐ CLP
GC VOA's ☐ 8021 ☐ 601/602
PESTICIDES/ PCB's ☐ 8081 ☐ 608 ☐ CLP ☐ 8082
STARS LIST 8021 VOA's ☐ TOTAL ☐ TCLP
STARS LIST 8270 SVOA's ☐ TOTAL ☐ TCLP
TCLP ☐ METALS ☐ VOA's ☐ SVOA's ☐ H/P
WASTE CHARACTERIZATION ☐ React ☐ Corros. ☐ Ignit.
METALS, TOTAL (List in comments below)
METALS, DISSOLVED (List in comments below)
Alkalinity / Sulfate / Chloride

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

REMARKS/ ALTERNATE DESCRIPTION

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX					REMARKS/ ALTERNATE DESCRIPTION
BR-06		6/15/01	1427	GW	3	3			
BR-06 (MS)		6/15/01	1427	GW	3	3			MATRIX SPIKE
BR-06 (MD)		6/15/01	1427	GW	3	3			MATRIX SPIKE DUP
W-2		6/15/01	1527	GW	2			1 1	

SPECIAL INSTRUCTIONS/COMMENTS
Metals

See QAPP ☐

TURNAROUND REQUIREMENTS
___ RUSH (SURCHARGES APPLY)
___ 24 hr ___ 48 hr ___ 5 day
☒ STANDARD
REQUESTED FAX DATE
REQUESTED REPORT DATE

REPORT REQUIREMENTS
___ I. Results Only
___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
☒ III. Results + QC and Calibration Summaries
___ IV. Data Validation Report with Raw Data
___ V. Speicalized Forms / Custom Report
Edata ___ Yes ___ No

INVOICE INFORMATION
PO# 6599
BILL TO: Harding ESE
1400 Centerpoint Blvd.
Knoxville, TN 37932
SUBMISSION #: R21-7377

SAMPLE RECEIPT: CONDITION/COOLER TEMP: 11 CUSTODY SEALS: Y (N)

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature:	Signature: Cindy Toomey	Signature:	Signature:	Signature:	Signature:
Printed Name: Sherry R. Fields Jr.	Printed Name:	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: Harding ESE	Firm:	Firm:	Firm:	Firm:	Firm:
Date/Time: 6/15/01 1605	Date/Time: 6/15/01 1605	Date/Time:	Date/Time: 6/15/01 1605	Date/Time:	Date/Time:

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

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SR #

CAS Contact Mike Perry

Project Name: Former Taylor Instruments
Project Number: 51870.4
Project Manager: Rick Ryan
Report CC:
Company/Address: Harding ESE, 1400 Centerpoint Blvd. Ste. 158, Knoxville, TN 37932-1968
Phone #: 865 531 1922
FAX#: 865 531 8226
Sampler's Signature:
Sampler's Printed Name: Jerry R. Fields Jr.

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: 1 | | | | | | | | | 4 | | 3 | 1 | 0 | 0

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS		GC/MS VOA's 8260 ☐ 624 ☐ CLP	GC/MS SVOA's ☐ 8270 ☐ 625 ☐ CLP	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES/ PCB's ☐ 8081 ☐ 608 ☐ CLP ☐ 8082	STAR'S LIST 8021 VOA's ☐ TOTAL ☐ TCLP	STAR'S LIST 8270 SVOA's ☐ TOTAL ☐ TCLP	TCLP ☐ METALS ☐ VOA's ☐ SVOA's ☐ H/P	WASTE CHARACTERIZATION ☐ React ☐ Corros. ☐ Ignit.	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	TOC	8015 Ethane, ethene, methane	Alkalinity / Carbon Dioxide	Cl, Fluoride, SO4	REMARKS/ ALTERNATE DESCRIPTION
TW-04		6/15/01	1720	GW	10	3									1		1	2	1	1	
BR-03		6/15/01	1840	GW	3	3															
BR-14		6/16/01	0934	GW	3	3															
BR-01		6/16/01	1044	GW	3	3															
TW-17		6/16/01	1134	GW	10	3									1		2	2	1	1	
TW-20		6/16/01	1530	GW	10	3									1		2	2	1	1	
TW-07		6/16/01	1641	GW	10	3									1		2	2	1	1	
TW-09		6/16/01	1827	GW	10	3									1		2	2	1	1	
QATB02		6/15/01	0000	W	3	3															
BR-02		6/17/01	0927	GW	3	3															

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals

See QAPP ☐

SAMPLE RECEIPT: CONDITION/COOLER TEMP: 2 CUSTODY SEALS: Y (N)

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
_____ 24 hr _____ 48 hr _____ 5 day
X STANDARD
REQUESTED FAX DATE
REQUESTED REPORT DATE

REPORT REQUIREMENTS
_____ I. Results Only
_____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
X III. Results + QC and Calibration Summaries
_____ IV. Data Validation Report with Raw Data
_____ V. Speicalized Forms / Custom Report
Edata _____ Yes _____ No

INVOICE INFORMATION
PO# 6599
BILL TO:
SUBMISSION #:

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Signature	Signature	Signature	Signature	Signature
Printed Name: Jerry R. Fields	Printed Name: Cindy Toohey	Printed Name	Printed Name: Kelly Cook	Printed Name	Printed Name
Firm: Harding ESE	Firm: CAS	Firm	Firm: CAS	Firm	Firm
Date/Time: 6/18/01 16:22	Date/Time: 6/18/01 1622	Date/Time	Date/Time: 6-18-01 1622	Date/Time	Date/Time

Distribution: White - ... to Originator; Yellow - Lab Copy; Pink - Retained by Client

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

SR #
CAS Contact: Mike Perry

Project Name: Former Taylor Instruments	Project Number: 57870.4
Project Manager: Rick Ryan	Report CC:
Company/Address: Harding ESE, 1400 Centerpoint Blvd Ste 158, Knoxville TN 37932-1968	
Phone #: 865 531 1422	FAX#: 865 531 8226
Sampler's Signature: [signature]	Sampler's Printed Name: Jerry R. Fields Jr.

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

Analysis columns:
1. GC/MS VOA's [X] 8260 ☐ 624 ☐ CLP
2. GC/MS SVOA's ☐ 8270 ☐ 625 ☐ CLP
3. GC VOA's ☐ 8021 ☐ 601/602
4. PESTICIDES/ PCB's ☐ 8081 ☐ 608 ☐ CLP ☐ 8082
5. STAR'S LIST 8021 VOA's ☐ TOTAL ☐ TCLP
6. STAR'S LIST 8270 SVOA's ☐ TOTAL ☐ TCLP
7. TCLP ☐ VOA's ☐ SVOA's ☐ METALS
8. WASTE CHARACTERIZATION ☐ React ☐ Corros. ☐ Ignit. ☐ H/P
9. ~~METALS, TOTAL (List in comments below)~~ Sulfide
10. METALS, DISSOLVED (List in comments below)
11. TOC
12. BOD5 (Ethane/Ethene/methane)
13. Alkalinity/Carbon Dioxide
14. Cl, Ferrous Fe, NO_3, SO_4

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	REMARKS/ ALTERNATE DESCRIPTION
PRESERVATIVE						1								4		3	1	0	0	
OB-ø9		6/17/01	1038	GW	10	3								1		2	2	1	1	
BR-16		6/17/01	1158	GW	3	3														
OB-ø7		6/17/01	1438	GW	10	3								1		2	2	1	1	
BR-12		6/17/01	1604	GW	3	3														
QAFBø2		6/17/01	1625	W	3	3														Field blank
QARBø2		6/17/01	1630	W	3	3														rinseate
QATBø3		6/17/01	00:00	W	3	3														trip blank
W-5		6/18/01	09:13	GW	10	3								1		2	2	1	1	
BR-13		6/18/01	11:53	GW	3	3														
BR-15		6/18/01	14:25	GW	3	3														

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other ______

SPECIAL INSTRUCTIONS/COMMENTS
Metals

See QAPP ☐

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ 24 hr ____ 48 hr ____ 5 day
X STANDARD
REQUESTED FAX DATE ________
REQUESTED REPORT DATE ________

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
X III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
____ V. Specialized Forms / Custom Report
Edata ____ Yes ____ No

INVOICE INFORMATION
PO# 6599
BILL TO:
R21-7377
SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: 2 CUSTODY SEALS: Y (N) Client

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: [signature]	Signature: Cindy Toomey [signature]	Signature: [signature]	Signature	Signature	Signature
Printed Name: Jerry R. Fields Jr	Printed Name: Cindy Toomey	Printed Name: [illegible]	Printed Name	Printed Name	Printed Name
Firm: Harding ESE	Firm: CAS	Firm: CAS	Firm	Firm	Firm
Date/Time: 6/20/01 12:30	Date/Time: 6/20/01 1230	Date/Time: 6/20/01 1230	Date/Time	Date/Time	Date/Time

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SR #

CAS Contact Mike Perry

Project Name: Former Taylor Instruments
Project Number: 51870.4
Project Manager: Rick Ryan
Report CC:
Company/Address: Harding ESE
1400 Centerpoint Blvd. Ste. 158
Knoxville, TN.
Phone #: 865 531 1922
FAX#: 865 531 8226
Sampler's Signature: Jerry R Fields
Sampler's Printed Name: Jerry R. Fields, Jr.

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: 1

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS		REMARKS/ ALTERNATE DESCRIPTION
BR-10		6/18/01	1536	GW	3	3	
OB-04		6/18/01	1659	GW	3	3	
BR-05		6/19/01	0949	GW	3	3	
BR-05 (DUP)		6/19/01	0949	GW	3	3	(duplicate)
W-5 (MS)		6/19/01	1025	GW	3	3	(matrix spike)
W-5 (MD)		6/19/01	1025	GW	3	3	(matrix spike duplicate)
BR-04		6/19/01	1145	GW	3	3	
BR-09		6/19/01	1429	GW	3	3	
OB-08		6/19/01	1707	GW	3	3	
BR-11		6/20/01	0931	GW	3	3	

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other

SPECIAL INSTRUCTIONS/COMMENTS

~~Metals~~

W-5 sample was collected on 6/18/01, MS/MSD for this location was collected on 6/19/01.

PF 6/19/01

See QAPP ☐

TURNAROUND REQUIREMENTS
___ RUSH (SURCHARGES APPLY)
___ 24 hr ___ 48 hr ___ 5 day
X STANDARD
REQUESTED FAX DATE
REQUESTED REPORT DATE

REPORT REQUIREMENTS
___ I. Results Only
___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
X III. Results + QC and Calibration Summaries
___ IV. Data Validation Report with Raw Data
___ V. Specialized Forms / Custom Report
Edata ___ Yes ___ No

INVOICE INFORMATION
PO# 6599
BILL TO:
SUBMISSION #: R21-7377

SAMPLE RECEIPT: CONDITION/COOLER TEMP: 2°
CUSTODY SEALS: Y (N)
Cleart

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Jerry R Fields Jr	Signature: Cindy Toomey	Signature:	Signature:	Signature:	Signature:
Printed Name: Jerry R. Fields Jr.	Printed Name: CTS	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: Harding ESE	Firm:	Firm:	Firm:	Firm:	Firm:
Date/Time: 6/20/01 12:30	Date/Time: 6/20/01 1230	Date/Time:	Date/Time:	Date/Time:	Date/Time:

Distribution: White - Returned to Originator; Yellow - Lab Copy; Pink - Retained by Client

SCOC-0101-08

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SR #

CAS Contact Mike Perry

Project Name: Former Taylor Instruments	Project Number: 57870.4
Project Manager: Rick Ryan	Report CC:
Company/Address: 1400 Centerpoint Blvd. Ste. 158 Harding ESE Knoxville, TN 37932-1968	
Phone #: 865 531 1922	FAX#: 865 531 8226
Sampler's Signature: Jerry R. Fields Jr.	Sampler's Printed Name: Jerry R. Fields Jr.

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE: 1

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☒ 8260 ☐ 624 ☐ CLP	GC/MS SVOA's ☐ 8270 ☐ 625 ☐ CLP	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES/ PCB's ☐ 8081 ☐ 608 ☐ CLP ☐ 8082	STAR'S LIST 8021 VOA's ☐ TOTAL ☐ TCLP	STAR'S LIST 8270 SVOA's ☐ TOTAL ☐ TCLP	TCLP ☐ METALS ☐ VOA's ☐ SVOA's ☐ H/P	WASTE CHARACTERIZATION ☐ React ☐ Corros. ☐ Ignit.	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	REMARKS/ ALTERNATE DESCRIPTION
EW-S-5		6/20/01	11:19	GW	3	3										

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals

See QAPP ☐

TURNAROUND REQUIREMENTS
___ RUSH (SURCHARGES APPLY)
___ 24 hr ___ 48 hr ___ 5 day
☒ STANDARD
REQUESTED FAX DATE
REQUESTED REPORT DATE

REPORT REQUIREMENTS
___ I. Results Only
___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
☒ III. Results + QC and Calibration Summaries
___ IV. Data Validation Report with Raw Data
___ V. Speicalized Forms / Custom Report
Edata ___ Yes ___ No

INVOICE INFORMATION
PO# 6599
BILL TO: Client
R21-7377
SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: 2 CUSTODY SEALS: Y (N)

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Jerry R. Fields Jr.	Signature: Cindy Toomey	Signature: Mike Perry	Signature:	Signature:	Signature:
Printed Name: Jerry R. Fields Jr.	Printed Name: Cindy Toomey	Printed Name: Mike Perry	Printed Name:	Printed Name:	Printed Name:
Firm: Harding ESE	Firm: CAS	Firm: CAS	Firm:	Firm:	Firm:
Date/Time: 6/20/01 12:30	Date/Time: 6/20/01 1230	Date/Time: 6/20/01 1230	Date/Time:	Date/Time:	Date/Time:

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

SCOC-0101-08

APPENDIX D

FIELD SAMPLE RECORDS

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 Qtr GW Sampling Former Taylor Instruments

DATE: 06/16/01

SITE ID: BR-01

SITE TYPE: WELL

SITE ACTIVITY: START 0955 END 1049

JOB NUMBER: 51870.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): 2.33 FT

PROTECTIVE CASING / WELL DIFFERENCE: — FT

INITIAL DEPTH TO WATER: 16.36 FT

WELL DEPTH: 38 FT

PID AMBIENT AIR: PPM

WELL DIAMETER: 4 IN

FINAL DEPTH TO WATER: 16.61 FT

SCREEN LENGTH: open boring FT

PID WELL MOUTH: PPM

DRAWDOWN: 0.25 FT

DRAWDOWN VOLUME: 0.16 GAL

PRODUCT THICKNESS: FT

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

WELL INTEGRITY:	YES	NO	N/A
CAP	X	—	—
CASING	X	—	—
LOCKED	X	—	—
COLLAR	X	—	—

PURGE RATE: ≈ 96 mL/MIN = 0.096 L/min

BEGIN PURGING: 1000

END PURGING: 1045

TOTAL VOL. PURGED: 4.32 GAL (purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L) flow-cell	DISSOLVED O_2 (mg/L) Horiba	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
1014	≈ 1.32	7.08	1.08	32.6	0.08	0.33	16.61	-225	≈94 mL/min
1023	≈ 2.17	7.08	1.08	60.1	0.07	0.11	15.91	-224	≈94 mL/min
1032	≈ 3.04	7.07	1.07	48.0	0.07	0.00	15.97	-223	≈97 mL/min
1041	≈ 3.91	7.08	1.08	15.4	0.06	0.00	15.85	-223	≈97 mL/min
1044	Collect sample BR-01 for 8260								

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [X] PERISTALTIC [ ] SUBMERSIBLE [ ] OTHER

TYPE OF TUBING: [ ] TEFLON OR TEFLON LINED [X] ~~HIGH-DENSITY~~ POLYETHYLENE [ ] OTHER

TYPE OF PUMP MATERIAL: [ ] POLYVINYL CHLORIDE [ ] STAINLESS STEEL [ ] OTHER

TYPE OF BLADDER MATERIAL (If applicable): [ ] TEFLON [ ] OTHER

PURGE OBSERVATIONS

SIGNATURE:

NOTES

1016 DTW = 16.56'

1024 DTW = 16.57'

1033 DTW = 16.58'

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 Qtr GW Sampling Former Taylor Instruments | DATE: 06/17/01

SITE ID: BR-02 | SITE TYPE: WELL

SITE ACTIVITY: START 0830 END 0935 | JOB NUMBER: 5787.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): flush FT

PROTECTIVE CASING / WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER	23.40 FT	WELL DEPTH	42.23 FT	PID AMBIENT AIR	PPM	WELL DIAMETER	4 IN
FINAL DEPTH TO WATER	24.00 FT	SCREEN LENGTH	open boring FT	PID WELL MOUTH	PPM		
DRAWDOWN	0.6 FT	DRAWDOWN VOLUME	0.39 GAL	PRODUCT THICKNESS	FT		

WELL INTEGRITY:

	YES	NO	N/A
CAP		X	
CASING	X		
LOCKED		X	
COLLAR	X		

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

PURGE RATE: ± 90 mL/MIN = 0.09 L/min | BEGIN PURGING: 0833 | END PURGING: 0929 | TOTAL VOL. PURGED: 5.04 GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L) Downhill	DISSOLVED O_2 (mg/L) Horiba	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
0849	≈ 1.39	7.00	1.21	21.7	0.06	0.40	17.12	-99	≈ 87 mL/min
0858	≈ 2.21	7.01	1.20	20.9	0.04	0.09	17.10	-107	≈ 91 mL/min
0907	≈ 3.03	7.01	1.20	19.6	0.04	0.00	16.52	-110	≈ 91 mL/min
0916	≈ 3.85	7.02	1.20	23.2	0.04	0.00	16.52	-113	≈ 91 mL/min
0925	≈ 4.67	7.02	1.20	27.3	0.04	0.00	16.85	-115	≈ 91 mL/min
0927	Collect sample BR-02 for 8260								

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	TYPE OF TUBING	TYPE OF PUMP MATERIAL	TYPE OF BLADDER MATERIAL (if applicable)
[X] PERISTALTIC	[ ] TEFLON OR TEFLON LINED	[ ] POLYVINYL CHLORIDE	[ ] TEFLON
[ ] SUBMERSIBLE	[X] ~~HIGH DENSITY~~ POLYETHYLENE	[ ] STAINLESS STEEL	[ ] OTHER
[ ] OTHER	[ ] OTHER	[ ] OTHER	

PURGE OBSERVATIONS

SIGNATURE:

NOTES

0858 DTW = 23.85'
0908 DTW = 23.90'
0916 DTW = 24.00'
0924 DTW = 23.95'

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 Qtr GW Sampling, Former Taylor Instruments | DATE: 06/15/01

SITE ID: BR-03 | SITE TYPE: WELL

SITE ACTIVITY: START 1742 END 1851 | JOB NUMBER: 51874.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [ ] TOP OF WELL RISER [X] TOP OF PROTECTIVE CASING [ ] OTHER ____

PROTECTIVE CASING STICKUP (FROM GROUND): 2.4 FT

PROTECTIVE CASING / WELL DIFFERENCE: — FT

INITIAL DEPTH TO WATER: 13.72 FT | WELL DEPTH: 42.0 FT | PID AMBIENT AIR: ____ PPM | WELL DIAMETER: 4 IN

FINAL DEPTH TO WATER: 13.89 FT | SCREEN LENGTH: open boring FT | PID WELL MOUTH: ____ PPM

DRAWDOWN: 0.17 FT | DRAWDOWN VOLUME: 0.11 GAL | PRODUCT THICKNESS: ____ FT

WELL INTEGRITY:	YES	NO	N/A
CAP	X	—	—
CASING	X	—	—
LOCKED	X	—	—
COLLAR	X	—	—

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

PURGE RATE: ≈96 mL/MIN = 0.096 L/min | BEGIN PURGING: 1746 | END PURGING: 1842 | TOTAL VOL. PURGED: 1.40 GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L) Rasmussen	DISSOLVED O_2 (mg/L) Horiba	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
1803	1.75	7.46	1.58	128.0	0.04	0.00	16.45	-246	≈103 mL/min
1812	2.83	7.44	1.56	109.0	0.05	0.00	16.31	-245	≈120 mL/min
1821	3.60	7.42	1.55	88.6	0.05	0.00	18.47	-242	≈ 86 mL/min
1828	4.20	7.43	1.54	78.2	0.02	0.00	18.03	-241	≈ 86 mL/min
1837	4.97	7.44	1.55	45.2	0.05	0.00	17.89	-241	≈86 mL/min
1840	Collect sample BR-03 for 8260								

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [X] PERISTALTIC [ ] SUBMERSIBLE [ ] OTHER ____

TYPE OF TUBING: [ ] TEFLON OR TEFLON LINED [X] ~~HIGH DENSITY~~ POLYETHYLENE [ ] OTHER ____

TYPE OF PUMP MATERIAL: [ ] POLYVINYL CHLORIDE [ ] STAINLESS STEEL [ ] OTHER ____

TYPE OF BLADDER MATERIAL (If applicable): [ ] TEFLON [ ] OTHER ____

PURGE OBSERVATIONS

SIGNATURE: [signature]

NOTES

1803 DTW = 13.18'
1813 DTW = 13.48'
1822 DTW = ~~13.65~~ 13.65'
1830 DTW = 13.76'
1838 DTW = 13.90'

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 Qtr GW Sampling Former Taylor Instruments

DATE: 06/19/01

SITE ID: BR-04

SITE TYPE: WELL

SITE ACTIVITY: START 1049 END 1157

JOB NUMBER: 57870.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- [X] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): flush FT

PROTECTIVE CASING / WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER	22.72 FT	WELL DEPTH	44.2 FT	PID AMBIENT AIR	PPM	WELL DIAMETER	4 IN
FINAL DEPTH TO WATER	22.74 FT	SCREEN LENGTH	open boring FT	PID WELL MOUTH	PPM		
DRAWDOWN	0.02 FT	DRAWDOWN VOLUME	0.01 GAL	PRODUCT THICKNESS	FT		

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

WELL INTEGRITY:	YES	NO	N/A
CAP		X	
CASING	X		
LOCKED		X	
COLLAR	X		

PURGE RATE: ≈ 76 mL/MIN = 0.076 L/min

BEGIN PURGING: 1100

END PURGING: 1150

TOTAL VOL. PURGED: 1.0 GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L) Quanta-well	DISSOLVED O_2 (mg/L) Horiba	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
1115	≈ 1.07	6.94	1.74	41.0	0.00	1.55	19.34	-150	≈ 71 mL/min
1124	≈ 1.76	6.94	1.75	58.0	0.00	0.82	18.95	-149	≈ 77 mL/min
1133	≈ 2.45	6.94	1.74	91.8	0.00	0.61	19.08	-148	≈ 77 mL/min
1142	≈ 3.14	6.94	1.74	61.8	0.00	0.54	19.10	-148	≈ 77 mL/min
1145	collect sample BR-04 for 8260								

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] OTHER

TYPE OF TUBING
- [ ] TEFLON OR TEFLON LINED
- [X] ~~HIGH DENSITY~~ POLYETHYLENE
- [ ] OTHER

TYPE OF PUMP MATERIAL
- [ ] POLYVINYL CHLORIDE
- [ ] STAINLESS STEEL
- [ ] OTHER

TYPE OF BLADDER MATERIAL (if applicable)
- [ ] TEFLON
- [ ] OTHER

PURGE OBSERVATIONS

SIGNATURE:

NOTES

1116 DTW = 22.74'

1124 DTW = 22.74'

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 Qtr GW Sampling Former Taylor Instruments | DATE: 06/19/01

SITE ID: BR-05 | SITE TYPE: WELL

SITE ACTIVITY: START 0831 END 1000 | JOB NUMBER: 51870.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): flush FT

PROTECTIVE CASING / WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER	22.27 FT	WELL DEPTH	49.9 FT	PID AMBIENT AIR	0.0 PPM	WELL DIAMETER	4 IN
FINAL DEPTH TO WATER	22.35 FT	SCREEN LENGTH	open boring FT	PID WELL MOUTH	PPM		
DRAWDOWN	0.08 FT	DRAWDOWN VOLUME	0.01 GAL	PRODUCT THICKNESS	NA FT		

WELL INTEGRITY:	YES	NO	N/A
CAP		X	
CASING	X		
LOCKED		X	
COLLAR	X		

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

PURGE RATE: ≈0.100 L/MIN | BEGIN PURGING: 0905 | END PURGING: 0950 | TOTAL VOL. PURGED: ≈ 4.1 GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L) Powers-well	DISSOLVED O_2 (mg/L) Horiba	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
0916	≈1.05	6.85	1.87	43.1	0.00	0.26	17.37	-160	≈ 95 ml/min
0925	≈ 1.91	6.86	1.88	28.6	0.00	0.02	17.33	-166	≈ 95 ml/min
0937	≈ 3.1	6.87	1.88	22.0	0.00	0.00	17.18	-168	≈ 100 ml/min
0947	≈ 4.1	6.88	1.88	28.7	0.00	0.00	17.33	-167	≈ 100 ml/min
0949	Collect	sample	BR-05	for 8260		+	BR-05 (DUP)	for 8260	

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [X] PERISTALTIC [ ] SUBMERSIBLE [ ] OTHER

TYPE OF TUBING: [ ] TEFLON OR TEFLON LINED [X] ~~HIGH DENSITY~~ POLYETHYLENE [ ] OTHER

TYPE OF PUMP MATERIAL: [ ] POLYVINYL CHLORIDE [ ] STAINLESS STEEL [ ] OTHER

TYPE OF BLADDER MATERIAL (if applicable): [ ] TEFLON [ ] OTHER

PURGE OBSERVATIONS

Water clear w/ some black flecks.

SIGNATURE:

NOTES

0918 DTW = 22.35'
0930 DTW = 22.34'
0943 DTW = 22.35'
0953 DTW = 22.35'

- also collected BR-05 (DUP) duplicate.

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2nd Qtr GW Sampling Former Taylor Instruments | DATE: 06/15/01

SITE ID: BR-06 | SITE TYPE: WELL

SITE ACTIVITY: START 1327 END 1440 | JOB NUMBER: 57870.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [ ] TOP OF WELL RISER [X] TOP OF PROTECTIVE CASING [ ] OTHER ____

PROTECTIVE CASING STICKUP (FROM GROUND): 2.17 FT

PROTECTIVE CASING / WELL DIFFERENCE: NA FT

INITIAL DEPTH TO WATER: 14.00 FT

WELL DEPTH: 45.1 FT

PID AMBIENT AIR: ____ PPM

WELL DIAMETER: 4 IN

FINAL DEPTH TO WATER: 14.32 FT

SCREEN LENGTH: open boring FT

PID WELL MOUTH: ____ PPM

DRAWDOWN: 0.32 FT

DRAWDOWN VOLUME: 0.21 GAL

PRODUCT THICKNESS: ____ FT

WELL INTEGRITY:	YES	NO	N/A
CAP	X	—	—
CASING	X	—	—
LOCKED	X	—	—
COLLAR	X	—	—

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

PURGE RATE: ≈91 mL/MIN ≈ 0.091 L/min

BEGIN PURGING: 1344

END PURGING: 1437

TOTAL VOL. PURGED: 1.25 GAL (purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L) Horiba	DISSOLVED O_2 (mg/L) Down-well	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
1354	0.91	7.18	1.34	99.4	0.02	0.65	18.15	-167	≈91 mL/min
1403	1.73	7.15	1.32	113.0	0.05	0.35	18.17	-167	≈91 mL/min
1412	2.55	7.14	1.32	129.0	0.05	0.31	17.87	-167	≈91 mL/min
1422	3.46	7.15	1.30	140.0	0.06	0.35	17.71	-167	≈91 mL/min
1427	Collect sample BR-06 for 8260								
	Collect samples BR-06 (MS) and BR-06 (MD)								

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	TYPE OF TUBING	TYPE OF PUMP MATERIAL	TYPE OF BLADDER MATERIAL (If applicable)
[X] PERISTALTIC	[ ] TEFLON OR TEFLON LINED	[ ] POLYVINYL CHLORIDE	[ ] TEFLON
[ ] SUBMERSIBLE	[X] ~~HIGH DENSITY~~ POLYETHYLENE	[ ] STAINLESS STEEL	[ ] OTHER ____
[ ] OTHER ____	[ ] OTHER ____	[ ] OTHER ____	

PURGE OBSERVATIONS

- water had black flecks

NOTES

1355 DTW = 14.15'
1405 DTW = 14.40'
1414 DTW = 14.55'
1423 DTW = 14.67'

SIGNATURE: [signature]

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 Qtr GW Sampling Former Taylor Instruments

DATE: 06/14/01

SITE ID: BR-07

SITE TYPE: WELL

SITE ACTIVITY: START 1534 END 1656

JOB NUMBER: 57870.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): 2.4 FT

PROTECTIVE CASING / WELL DIFFERENCE: - FT

INITIAL DEPTH TO WATER: 24.85 FT

WELL DEPTH: 54.69 FT

PID AMBIENT AIR: PPM

WELL DIAMETER: 4 IN

FINAL DEPTH TO WATER: 25.69 FT

SCREEN LENGTH: open boring FT

PID WELL MOUTH: PPM

DRAWDOWN: 0.84 FT

DRAWDOWN VOLUME: 0.55 GAL

PRODUCT THICKNESS: FT

WELL INTEGRITY:

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR	X		

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

PURGE RATE: avg. 77 mL/MIN = 0.077 L/min

BEGIN PURGING: 1549

END PURGING: 1650

TOTAL VOL. PURGED: 1.22 GAL (purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
1603	0.84	7.05	4.74	103.0	1.40	20.00	-151	≈60 mL/min
1614	1.50	7.03	4.74	55.4	0.97	19.28	-149	≈60 mL/min
1621	2.10	7.02	4.82	56.7	0.85	18.57	-149	≈85 mL/min
1630	2.87	7.01	4.75	77.2	0.73	17.71	-149	≈85 mL/min
1638	3.63	7.01	4.72	123.0	0.71	17.66	-153	≈95 mL/min
1642	Collect sample BR-07 for 8260							
	Collect sample BR-07 (DUP) for 8260							

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [X] PERISTALTIC [ ] SUBMERSIBLE [ ] OTHER

TYPE OF TUBING: [ ] TEFLON OR TEFLON LINED [X] ~~HIGH DENSITY~~ POLYETHYLENE [ ] OTHER

TYPE OF PUMP MATERIAL: [ ] POLYVINYL CHLORIDE [ ] STAINLESS STEEL [ ] OTHER

TYPE OF BLADDER MATERIAL (if applicable): [ ] TEFLON [ ] OTHER

PURGE OBSERVATIONS

SIGNATURE:

NOTES

~~1610 DTW =~~ RE

1615 DTW = 25.65'

1620 DTW = ~~25.68~~ RE 25.68'

1626 DTW = 25.64'

1634 DTW = 25.68'

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 Qtr GW Sampling Former Taylor Instruments | DATE: 06/15/01

SITE ID: BR-08 | SITE TYPE: WELL

SITE ACTIVITY: START 0907 END 1010 | JOB NUMBER: 51870.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): flush FT

PROTECTIVE CASING / WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER	23.13 FT	WELL DEPTH	73.0 FT	PID AMBIENT AIR	PPM	WELL DIAMETER	4 IN
FINAL DEPTH TO WATER	24.48 FT	SCREEN LENGTH	open boring FT	PID WELL MOUTH	PPM		
DRAWDOWN	1.35 FT	DRAWDOWN VOLUME	0.88 GAL	PRODUCT THICKNESS	FT		

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

WELL INTEGRITY:

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR	X		

PURGE RATE: ≈ 95.5 mL/MIN = 0.0956 L/min | BEGIN PURGING: 0919 | END PURGING: 1003 | TOTAL VOL. PURGED: 1.10 GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
0933	≈1.27	11.40	1.71	72.3	1.28	19.69	-227	≈91 mL/min
0941	≈2.05	11.41	1.71	144.0	2.37	19.36	-233	≈97 mL/min
0949	≈2.83	11.41	1.71	139.0	0.37	19.56	-240	≈97 mL/min
0958	≈3.70	11.41	1.71	133.0	0.32	19.68	-243	≈97 mL/min
1002	Collect sample BR-08 for 8260							

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	TYPE OF TUBING	TYPE OF PUMP MATERIAL	TYPE OF BLADDER MATERIAL (if applicable)
[X] PERISTALTIC	[ ] TEFLON OR TEFLON LINED	[ ] POLYVINYL CHLORIDE	[ ] TEFLON
[ ] SUBMERSIBLE	[X] ~~HIGH DENSITY~~ POLYETHYLENE	[ ] STAINLESS STEEL	[ ] OTHER
[ ] OTHER	[ ] OTHER	[ ] OTHER	

PURGE OBSERVATIONS

SIGNATURE:

NOTES

0933 DTW = 23.43'
0945 DTW = 23.90'
0951 DTW = 24.06'
0958 DTW = 24.37'

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 Qtr GW Sampling Former Taylor Instruments

DATE: 06/19/01

SITE ID: BR-09

SITE TYPE: WELL

SITE ACTIVITY: START 1327 END ~~1331~~ 1436

JOB NUMBER: 51870.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): flush FT

PROTECTIVE CASING / WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER: 22.70 FT

WELL DEPTH: 47 FT

PID AMBIENT AIR: PPM

WELL DIAMETER: 6 IN

FINAL DEPTH TO WATER: 22.80 FT

SCREEN LENGTH: open boring FT

PID WELL MOUTH: PPM

DRAWDOWN: 0.10 FT

DRAWDOWN VOLUME: 0.15 GAL

PRODUCT THICKNESS: FT

WELL INTEGRITY:	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED		X	
COLLAR	X		

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

PURGE RATE: ≈98 mL/MIN = 0.098 L/min

BEGIN PURGING: 1345

END PURGING: 1431

TOTAL VOL. PURGED: 4.5 GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L) Low-well	DISSOLVED O_2 (mg/L) Horiba	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
1359	≈1.4	7.41	1.39	110.0	0.00	0.75	24.09	-229	≈100 mL/min
1408	≈2.3	7.43	1.39	88.5	0.00	0.21	23.78	-234	≈100 mL/min
1417	≈3.2	7.43	1.40	40.5	0.00	0.08	23.63	-236	≈100 mL/min
1426	≈4.04	7.44	1.39	43.9	0.00	0.00	23.50	-238	≈93 mL/min
1429	Collect sample BR-09 for 8260								

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [X] PERISTALTIC [ ] SUBMERSIBLE [ ] OTHER

TYPE OF TUBING: [ ] TEFLON OR TEFLON LINED [X] ~~HIGH DENSITY~~ POLYETHYLENE [ ] OTHER

TYPE OF PUMP MATERIAL: [ ] POLYVINYL CHLORIDE [ ] STAINLESS STEEL [ ] OTHER

TYPE OF BLADDER MATERIAL (if applicable): [ ] TEFLON [ ] OTHER

PURGE OBSERVATIONS

SIGNATURE:

NOTES

1406 DTW = 22.80'

1425 DTW = 22.80'

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 Qtr GW Sampling Former Taylor Instruments | DATE: 06/18/01

SITE ID: BR-10 | SITE TYPE: WELL

SITE ACTIVITY: START 1451 END 1542 | JOB NUMBER: 51870.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): flush FT

PROTECTIVE CASING / WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER	22.00 FT	WELL DEPTH	47 FT	PID AMBIENT AIR	PPM	WELL DIAMETER	6 IN
FINAL DEPTH TO WATER	22.25 FT	SCREEN LENGTH	open boring FT	PID WELL MOUTH	PPM		
DRAWDOWN	0.25 FT	DRAWDOWN VOLUME	0.38 GAL	PRODUCT THICKNESS	FT		

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

WELL INTEGRITY:	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED		X	
COLLAR	X		

PURGE RATE: ≈ 87 mL/MIN = 0.087 L/min | BEGIN PURGING: 1454 | END PURGING: 1541 | TOTAL VOL. PURGED: 1.06 GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Down-well Horiba

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)		TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
1506	≈ 1.00	6.93	2.10	45.8	0.02	1.10	19.06	-67	≈83 mL/min
1515	≈ 1.75	6.92	2.16	19.5	0.01	0.08	19.55	-70	≈83 mL/min
1524	≈ 2.57	6.93	2.12	26.6	0.01	0.02	19.68	-68	≈91 mL/min
1533	≈ 3.39	6.94	2.03	28.1	0.01	0.01	19.94	-60	≈91 mL/min
1536	collect sample BR-10 for 8260								

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	TYPE OF TUBING	TYPE OF PUMP MATERIAL	TYPE OF BLADDER MATERIAL (if applicable)
[X] PERISTALTIC	[ ] TEFLON OR TEFLON LINED	[ ] POLYVINYL CHLORIDE	[ ] TEFLON
[ ] SUBMERSIBLE	[X] ~~HIGH-DENSITY~~ POLYETHYLENE	[ ] STAINLESS STEEL	[ ] OTHER
[ ] OTHER	[ ] OTHER	[ ] OTHER	

PURGE OBSERVATIONS

SIGNATURE:

NOTES

1507 DTW = 22.40'
1516 DTW = 22.20'
1521 DTW = 22.40'
1525 DTW = 22.40'
1533 DTW = 22.40'

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 Qtr GW Sampling Former Taylor Instruments
DATE: 06/20/01
SITE ID: BR-11
SITE TYPE: WELL
SITE ACTIVITY: START 0843 END 0939
JOB NUMBER: 57870.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING [ ] OTHER
PROTECTIVE CASING STICKUP (FROM GROUND): flush FT
PROTECTIVE CASING / WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER	22.80 FT	WELL DEPTH	52 FT	PID AMBIENT AIR	PPM	WELL DIAMETER	6 IN
FINAL DEPTH TO WATER	22.80 FT	SCREEN LENGTH	open boring FT	PID WELL MOUTH	PPM		
DRAWDOWN	0 FT	DRAWDOWN VOLUME	0 GAL	PRODUCT THICKNESS	FT		

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

WELL INTEGRITY:	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR	X		

PURGE RATE: ≈ 96 mL/MIN = 0.096 L/min
BEGIN PURGING: 0848
END PURGING: 0934
TOTAL VOL. PURGED: 1.15 GAL
{purge rate (L/min) x duration (min) x 0.26 gal/L}

PURGE DATA

Davis-well / Horiba

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)		TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
0900	≈ 1.14	7.03	2.03	64.1	0.00	0.77	15.39	-75	≈ 95 mL/min
0910	≈ 2.09	7.03	2.01	53.2	0.00	0.00	15.45	-81	≈ 95 mL/min
0920	≈ 3.06	7.04	2.00	1.2	0.00	0.00	15.39	-89	≈ 97 mL/min
0930	≈ 4.03	7.04	1.99	0	0.00	0.00	15.35	-93	≈ 97 mL/min
0931	Collect sample BR-11 for 8260								

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	TYPE OF TUBING	TYPE OF PUMP MATERIAL	TYPE OF BLADDER MATERIAL (if applicable)
[X] PERISTALTIC	[ ] TEFLON OR TEFLON LINED	[ ] POLYVINYL CHLORIDE	[ ] TEFLON
[ ] SUBMERSIBLE	[X] ~~HIGH DENSITY~~ POLYETHYLENE	[ ] STAINLESS STEEL	[ ] OTHER
[ ] OTHER	[ ] OTHER	[ ] OTHER	

PURGE OBSERVATIONS

SIGNATURE:

NOTES

0901 DTW = 22.80'
0910 DTW = 22.80'
0921 DTW = 22.80'
0930 DTW = 22.80'

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 qtr GW Sampling Former Taylor Instruments | DATE: 06/19/01

SITE ID: BL-12 | SITE TYPE: WELL

SITE ACTIVITY: START 1512 END 1611 | JOB NUMBER: 51870.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING [ ] OTHER ____

PROTECTIVE CASING STICKUP (FROM GROUND): flush FT

PROTECTIVE CASING / WELL DIFFERENCE: ____ FT

INITIAL DEPTH TO WATER	16.38 FT	WELL DEPTH	42.0 FT	PID AMBIENT AIR	PPM	WELL DIAMETER	6 IN
FINAL DEPTH TO WATER	17.00 FT	SCREEN LENGTH	open boring FT	PID WELL MOUTH	PPM		
DRAWDOWN	0.62 FT	DRAWDOWN VOLUME	0.93 GAL	PRODUCT THICKNESS	FT		

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

WELL INTEGRITY:

	YES	NO	N/A
CAP		X	—
CASING	X		—
LOCKED		X	—
COLLAR	X	—	—

PURGE RATE: ≈ 89 mL/MIN = 0.089 L/min | BEGIN PURGING: 1516 | END PURGING: 1606 | TOTAL VOL. PURGED: 1.16 GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Down well Horiba

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)		TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
1529	≈ 1.1	7.03	2.29	18.7	0.07	0.50	20.82	-204	≈ 85 mL/min
1539	≈ 2.0	7.02	2.30	21.2	0.03	0.07	20.34	-205	≈ 89 mL/min
1549	≈ 2.91	7.06	2.30	35.1	0.03	0.00	20.64	-208	≈ 91 mL/min
1559	≈ 3.82	7.06	2.28	45.7	0.09	0.00	20.60	-208	≈ 91 mL/min
1604	Collect sample BL-12 for 8260								

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [X] PERISTALTIC [ ] SUBMERSIBLE [ ] OTHER ____

TYPE OF TUBING: [ ] TEFLON OR TEFLON LINED [X] ~~HIGH DENSITY~~ POLYETHYLENE [ ] OTHER ____

TYPE OF PUMP MATERIAL: [ ] POLYVINYL CHLORIDE [ ] STAINLESS STEEL [ ] OTHER ____

TYPE OF BLADDER MATERIAL (if applicable): [ ] TEFLON [ ] OTHER ____

PURGE OBSERVATIONS

SIGNATURE: [signature]

NOTES

1532 DTW ≈ 16.65 'BTOC

1540 DTW ≈ 16.72' BTOC

1550 DTW ≈ 16.85 'BTOC

1601 DTW = 17.00'

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 Qtr GW Sampling Former: Taylor Instruments

DATE: 06/18/01

SITE ID: BR-13

SITE TYPE: WELL

SITE ACTIVITY: START 1056 END 1202

JOB NUMBER: 5787Ø.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- [X] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): flush FT

PROTECTIVE CASING / WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER	23.41 FT	WELL DEPTH	67.5 FT	PID AMBIENT AIR	PPM	WELL DIAMETER	6 IN
FINAL DEPTH TO WATER	23.44 FT	SCREEN LENGTH	open boring FT	PID WELL MOUTH	PPM		
DRAWDOWN	0.03 FT	DRAWDOWN VOLUME	0.05 GAL	PRODUCT THICKNESS	FT		

((initial - final) x 0.16 {2-inch} or x 0.65 {4-inch} or x 1.5 {6-inch})

WELL INTEGRITY:	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR	X		

PURGE RATE: ≈ 86 mL/MIN = 0.086 L/min

BEGIN PURGING: 1107

END PURGING: 1158

TOTAL VOL. PURGED: 1.14 GAL (purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Down-well / Horiba

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)		TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
1120	≈ 1.1	6.89	1.78	71.5	0.34	0.84	16.95	-172	≈ 86 mL/min
1130	≈ 1.96	6.90	1.79	105	0.07	0.20	16.95	-173	≈ 86 mL/min
1140	≈ 2.82	6.90	1.77	20.2	0.09	0.00	16.91	-173	≈ 86 mL/min
1150	≈ 3.68	6.91	1.79	32.9	0.03	0.00	16.82	-172	≈ 86 mL/min
1153	Collect sample BR-13 for 8260								

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] OTHER

TYPE OF TUBING
- [ ] TEFLON OR TEFLON LINED
- [X] ~~HIGH DENSITY~~ POLYETHYLENE
- [ ] OTHER

TYPE OF PUMP MATERIAL
- [ ] POLYVINYL CHLORIDE
- [ ] STAINLESS STEEL
- [ ] OTHER

TYPE OF BLADDER MATERIAL (If applicable)
- [ ] TEFLON
- [ ] OTHER

PURGE OBSERVATIONS

- Black flakes in water

NOTES

1122 DTW = 23.42'
1131 DTW = 23.41'
1140 DTW = 23.41'
1150 DTW = 23.41'

SIGNATURE:

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 Qtr GW Sampling Former Taylor Instruments

DATE: 06/16/01

SITE ID: BR-14

SITE TYPE: WELL

SITE ACTIVITY: START 0829 END 0941

JOB NUMBER: 51870.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- [X] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): flush FT

PROTECTIVE CASING / WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER: 21.00 FT

WELL DEPTH: 75.0 FT

PID AMBIENT AIR: PPM

WELL DIAMETER: 4 IN

FINAL DEPTH TO WATER: 23.13 FT

SCREEN LENGTH: open boring FT

PID WELL MOUTH: PPM

WELL INTEGRITY: YES / NO / N/A
- CAP: X (YES)
- CASING: X (YES)
- LOCKED: X (YES)
- COLLAR: X (YES)

DRAWDOWN: 2.13 FT

DRAWDOWN VOLUME: 1.38 GAL

PRODUCT THICKNESS: FT

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

PURGE RATE: ≤ 86 mL/MIN ≈ 0.086 L/min

BEGIN PURGING: 0841

END PURGING: 0935

TOTAL VOL. PURGED: 1.21 GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L) Tamarack	DISSOLVED O_2 (mg/L) Horiba	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
0853	≈1.33	7.14	2.00	42.3	~~0.87~~ 0.83	0.52	18.10	-239	≈ 111 mL/min
0903	≈2.10	7.06	2.00	77.5	0.18	0.19	19.24	-236	≈ 77 mL/min
0912	≈2.82	7.10	2.00	47.9	0.67	0.00	19.58	-248	≈ 80 mL/min
0921	≈3.54	7.13	2.00	19.6	0.21	0.00	19.44	-254	≈ 80 mL/min
0930	≈4.29	7.15	2.01	13.8	0.03	0.00	18.90	-255	≈ 83 mL/min
0934	Collect sample BR-14 for 8260								

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] OTHER ______

TYPE OF TUBING
- [ ] TEFLON OR TEFLON LINED
- [X] ~~HIGH DENSITY~~ POLYETHYLENE
- [ ] OTHER ______

TYPE OF PUMP MATERIAL
- [ ] POLYVINYL CHLORIDE
- [ ] STAINLESS STEEL
- [ ] OTHER ______

TYPE OF BLADDER MATERIAL (if applicable)
- [ ] TEFLON
- [ ] OTHER ______

PURGE OBSERVATIONS

▸ water very black / black flecks

NOTES

0855 DTW = 21.98'
0904 DTW = 22.27'
0912 DTW = 22.90'
0921 DTW = 22.78'
0931 DTW = 23.07'

SIGNATURE: [signature]

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 1st Qtr GW Sampling Former Taylor Instruments | DATE: 06/18/01

SITE ID: BR-15 | SITE TYPE: WELL

SITE ACTIVITY: START 1331 END 1435 | JOB NUMBER: 51870.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): flush FT

PROTECTIVE CASING / WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER	18.36 FT	WELL DEPTH	72.0 FT	PID AMBIENT AIR	PPM	WELL DIAMETER	6 IN
FINAL DEPTH TO WATER	19.22 FT	SCREEN LENGTH	open boring FT	PID WELL MOUTH	PPM		
DRAWDOWN	0.86 FT	DRAWDOWN VOLUME	1.29 GAL	PRODUCT THICKNESS	FT		

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

WELL INTEGRITY:	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR	X		

PURGE RATE: ≈88 mL/MIN = 0.088 L/min | BEGIN PURGING: 1341 | END PURGING: 1430 | TOTAL VOL. PURGED: 1.12 GAL (purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Pump-cell | Horiba

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)		TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
1354	≈1.37	6.92	1.36	35.2	0.00	1.15	18.17	-107	≈105 mL/min
1403	≈2.32	6.91	1.34	33.6	0.00	0.13	18.82	-113	≈105 mL/min
1412	≈2.96	6.93	1.36	40.4	0.00	0.16	19.44	-117	≈71 mL/min
1421	≈3.60	6.93	1.36	35.9	0.00	0.16	19.58	-118	≈71 mL/min
1425	Collect sample BR-15 for 8260								

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	TYPE OF TUBING	TYPE OF PUMP MATERIAL	TYPE OF BLADDER MATERIAL (if applicable)
[X] PERISTALTIC	[ ] TEFLON OR TEFLON LINED	[ ] POLYVINYL CHLORIDE	[ ] TEFLON
[ ] SUBMERSIBLE	[X] ~~HIGH DENSITY~~ POLYETHYLENE	[ ] STAINLESS STEEL	[ ] OTHER
[ ] OTHER	[ ] OTHER	[ ] OTHER	

PURGE OBSERVATIONS

SIGNATURE:

NOTES

1358 DTW = 19.05'
1403 DTW = 19.05'
1413 DTW = 19.20'

▶ Initial DTW probably erroneous - drawdown stabalized

GW_SAMPLE

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 Qtr GW Sampling Former Taylor Instruments | DATE: 06/17/01

SITE ID: BL-16 | SITE TYPE: WELL

SITE ACTIVITY: START 1109 END 1207 | JOB NUMBER: 57870.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): flush FT

PROTECTIVE CASING / WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER	22.50 FT	WELL DEPTH	55.0 FT	PID AMBIENT AIR	PPM	WELL DIAMETER	6 IN
FINAL DEPTH TO WATER	22.92 FT	SCREEN LENGTH	open boring FT	PID WELL MOUTH	PPM		
DRAWDOWN	0.42 FT	DRAWDOWN VOLUME	0.63 GAL	PRODUCT THICKNESS	FT		

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

WELL INTEGRITY:	YES	NO	N/A
CAP		X	
CASING	X		
LOCKED		X	
COLLAR	X		

PURGE RATE: ≈ 86 mL/MIN ≈ 0.086 L/min | BEGIN PURGING: 1117 | END PURGING: 1202 | TOTAL VOL. PURGED: 3.87 GAL (purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L) Pre-well / Flow-thru		TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
1126	0.77	7.20	2.40	109.0	0.37	0.40	18.30	-205	≈ 86 mL/min
1136	1.63	7.15	2.39	14.4	0.52	0.19	18.58	-193	≈ 86 mL/min
1145	2.40	7.14	2.44	12.4	0.40	0.20	18.02	-191	≈ 86 mL/min
1154	3.17	7.14	2.44	0	0.29	0.00	18.02	-189	≈ 86 mL/min
1158	Collect sample BL-16 for 8260								

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	TYPE OF TUBING	TYPE OF PUMP MATERIAL	TYPE OF BLADDER MATERIAL (if applicable)
[X] PERISTALTIC	[ ] TEFLON OR TEFLON LINED	[ ] POLYVINYL CHLORIDE	[ ] TEFLON
[ ] SUBMERSIBLE	[X] ~~HIGH DENSITY~~ POLYETHYLENE	[ ] STAINLESS STEEL	[ ] OTHER
[ ] OTHER	[ ] OTHER	[ ] OTHER	

PURGE OBSERVATIONS

NOTES

1137 DTW = 22.78'

1147 DTW = 22.89'

1154 DTW = 22.92'

SIGNATURE:

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 Qtr GW Sampling Former Taylor Instruments

DATE: 06/15/01

SITE ID: BR-17

SITE TYPE: WELL

SITE ACTIVITY: START 1010 END 1128

JOB NUMBER: 51870.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- [X] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): flush FT

PROTECTIVE CASING / WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER: 23.15 FT

WELL DEPTH: 52 FT

PID AMBIENT AIR: PPM

WELL DIAMETER: 6 IN

FINAL DEPTH TO WATER: 23.15 FT

SCREEN LENGTH: open boring FT

PID WELL MOUTH: PPM

DRAWDOWN: 0.00 FT

DRAWDOWN VOLUME: 0 GAL

PRODUCT THICKNESS: FT

WELL INTEGRITY:	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR	X		

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

PURGE RATE: ≈ 73.75 mL/MIN = 0.074 L/min

BEGIN PURGING: 1024

END PURGING: 1122

TOTAL VOL. PURGED: 1.12 GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
1040	1.10	6.94	2.04	74.5	0.81	21.70	-150	≈69 mL/min
1050	1.79	6.93	2.04	78.5	0.91	20.88	-145	≈69 mL/min
1100	2.59	6.93	2.02	82.8	0.34	22.11	-144	≈80 mL/min
1110	3.36	6.93	2.03	86.0	0.36	21.51	-140	≈77 mL/min
1117	Collect sample BR-17 for 8260							

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] OTHER

TYPE OF TUBING
- [ ] TEFLON OR TEFLON LINED
- [X] ~~HIGH DENSITY~~ POLYETHYLENE
- [ ] OTHER

TYPE OF PUMP MATERIAL
- [ ] POLYVINYL CHLORIDE
- [ ] STAINLESS STEEL
- [ ] OTHER

TYPE OF BLADDER MATERIAL (if applicable)
- [ ] TEFLON
- [ ] OTHER

PURGE OBSERVATIONS

SIGNATURE:

NOTES

1041 DTW = 23.15'
1050 DTW = 23.15'
1103 DTW = 23.15'
1110 DTW = 23.15'

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 Qtr GW Sampling Former Taylor Instruments | DATE: 06/18/01

SITE ID: OB-04 | SITE TYPE: WELL

SITE ACTIVITY: START 0949 END | JOB NUMBER: 51870.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): flush FT

PROTECTIVE CASING / WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER	14.77 FT	WELL DEPTH	17.5 FT	PID AMBIENT AIR	PPM	WELL DIAMETER	2 IN
FINAL DEPTH TO WATER	Dry FT	SCREEN LENGTH	15 FT	PID WELL MOUTH	PPM		
DRAWDOWN	FT	DRAWDOWN VOLUME	NA GAL	PRODUCT THICKNESS	FT		

WELL INTEGRITY:

	YES	NO	N/A
CAP		X	
CASING	X		
LOCKED		X	
COLLAR	X		

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

PURGE RATE: L/MIN | BEGIN PURGING: 956 / 1647 | END PURGING: 1045 / 49, 1703 / 16 | TOTAL VOL. PURGED: GAL (purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Pump-rel | Horiba

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)		TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
1007	≈1.05	7.27	1.15	0.8	10.65	8.30	16.02	-67	≈95 mL/min
1016		~~7.18~~							
	≈1.91	7.18	1.14	0	10.44	7.87	15.55	-80	≈95 mL/min
1025	≈2.77	7.13	1.13	2.1	10.14	6.95	15.78	-74	≈95 mL/min
1034	≈3.63	7.18	1.14	0.9	10.15	6.59	15.53	-80	≈95 mL/min
1043	≈4.49	7.21	1.04	0	10.21	6.56	17.69	-70	≈95 mL/min
1045	Well purged dry								
1657		7.24	1.18	0	9.94	6.67	16.10	-100	
1659	Collect sample OB-04 for 8260								

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [X] PERISTALTIC [ ] SUBMERSIBLE [ ] OTHER

TYPE OF TUBING: [ ] TEFLON OR TEFLON LINED [X] ~~HIGH DENSITY~~ POLYETHYLENE [ ] OTHER

TYPE OF PUMP MATERIAL: [ ] POLYVINYL CHLORIDE [ ] STAINLESS STEEL [ ] OTHER

TYPE OF BLADDER MATERIAL (if applicable): [ ] TEFLON [ ] OTHER

PURGE OBSERVATIONS

- Well purged dry while sampling

NOTES

1009 DTW = 15.40'
1019 DTW = 15.80'
1025 DTW = 15.98'
1029 DTW = 16.10'
1034 DTW = 16.42'
1646 DTW = 16.05'

SIGNATURE:

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 GW Sampling Former Taylor Instruments | DATE: 06/15/01

SITE ID: OB-06 | SITE TYPE: WELL

SITE ACTIVITY: START 0750 END 0849 | JOB NUMBER: 57870.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): Flush FT

PROTECTIVE CASING / WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER	9.84 FT	WELL DEPTH	16.32 FT	PID AMBIENT AIR	PPM	WELL DIAMETER	2 IN
FINAL DEPTH TO WATER	11.37 FT	SCREEN LENGTH	10 FT	PID WELL MOUTH	PPM		
DRAWDOWN	1.53 FT	DRAWDOWN VOLUME	0.24 GAL	PRODUCT THICKNESS	FT		

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

WELL INTEGRITY:	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR	X		

PURGE RATE: ≈ 111 mL/MIN = 0.111 L/min | BEGIN PURGING: 0759 | END PURGING: 0844 | TOTAL VOL. PURGED: 1.30 GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
0811	≈ 1.33	7.43	0.596	279.0	7.99	14.65	111	≈ 111 mL/min
0819	≈ 2.22	7.48	0.582	56.0	8.85	14.33	37	≈ 111 mL/min
0828	≈ 3.22	7.47	0.596	24.0	8.84	14.67	18	≈ 111 mL/min
0837	≈ 4.22	7.43	0.619	13.8	8.72	14.59	7	≈ 111 mL/min
0843	Collect sample OB-06 for 8260							

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	TYPE OF TUBING	TYPE OF PUMP MATERIAL	TYPE OF BLADDER MATERIAL (If applicable)
[X] PERISTALTIC	[ ] TEFLON OR TEFLON LINED	[ ] POLYVINYL CHLORIDE	[ ] TEFLON
[ ] SUBMERSIBLE	[X] ~~HIGH DENSITY~~ POLYETHYLENE	[ ] STAINLESS STEEL	[ ] OTHER
[ ] OTHER	[ ] OTHER	[ ] OTHER	

PURGE OBSERVATIONS

SIGNATURE:

NOTES

0811 DTW = 10.25'
0819 DTW = 10.54'
0829 DTW = 10.82'
0837 DTW = 11.25'

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 Qtr GW Sampling Former Taylor Instruments | DATE: 06/17/01

SITE ID: OB-07 | SITE TYPE: WELL

SITE ACTIVITY: START 1324 END 1458 | JOB NUMBER: 51870.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): flush FT

PROTECTIVE CASING / WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER	8.33 FT	WELL DEPTH	20.03 FT	PID AMBIENT AIR	PPM	WELL DIAMETER	2 IN
FINAL DEPTH TO WATER	9.10 FT	SCREEN LENGTH	10 FT	PID WELL MOUTH	PPM		
DRAWDOWN	0.77 FT	DRAWDOWN VOLUME	0.12 GAL	PRODUCT THICKNESS	FT		

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

WELL INTEGRITY:	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR	X		

PURGE RATE: ≈ 103 mL/MIN = 0.103 | BEGIN PURGING: 1330 | END PURGING: 1453 | TOTAL VOL. PURGED: 2.22 GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Ramwell | Horiba

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)		TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
1339	≈ 0.999	8.05	1.74	0	2.08	0.85	18.66	-102	≈ 111 mL/min
1349	≈ 2.11	8.04	1.73	12.0	2.92	0.00	18.90	-161	≈ 111 mL/min
1358	≈ 3.01	8.06	1.72	21.0	2.92	0.01	19.13	-167	≈ 100 mL/min
1407	≈ 3.91	8.07	1.69	27.4	1.89	0.00	18.50	-168	≈ 100 mL/min
1416	≈ 4.81	7.92	1.73	13.4	1.69	0.00	18.48	-131	≈ 100 mL/min
1425	≈ 5.71	7.86	1.81	20.0	0.62	0.04	18.34	-132	≈ 100 mL/min
1434	≈ 6.61	7.85	1.88	0	0.15	0.04	18.56	-136	≈ 100 mL/min
1438	Collect sample OB-07 for 8260 + NA								

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	TYPE OF TUBING	TYPE OF PUMP MATERIAL	TYPE OF BLADDER MATERIAL (if applicable)
[X] PERISTALTIC	[ ] TEFLON OR TEFLON LINED	[ ] POLYVINYL CHLORIDE	[ ] TEFLON
[ ] SUBMERSIBLE	[X] ~~HIGH DENSITY~~ POLYETHYLENE	[ ] STAINLESS STEEL	[ ] OTHER
[ ] OTHER	[ ] OTHER	[ ] OTHER	

PURGE OBSERVATIONS

SIGNATURE:

NOTES

1347 DTW = 9.21'
1358 DTW = 9.18'
1408 DTW = 9.20'
1414 DTW = 9.22'
1425 DTW = 9.40'
1435 DTW = 9.24'

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 Qtr GW Sampling Former Taylor Instruments | DATE: 06/19/01

SITE ID: OB-08 | SITE TYPE: WELL

SITE ACTIVITY: START 1604 END 1715 | JOB NUMBER: 51870.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): flush FT

PROTECTIVE CASING / WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER	14.92 FT	WELL DEPTH	25 FT	PID AMBIENT AIR	PPM	WELL DIAMETER	2 IN
FINAL DEPTH TO WATER	15.80 FT	SCREEN LENGTH	10 FT	PID WELL MOUTH	PPM		
DRAWDOWN	0.88 FT	DRAWDOWN VOLUME	0.14 GAL	PRODUCT THICKNESS	FT		

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

WELL INTEGRITY:

	YES	NO	N/A
CAP	X	—	—
CASING	X	—	—
LOCKED	X	—	—
COLLAR	X	—	—

PURGE RATE: ≈ 102 mL/MIN = 0.102 L/min | BEGIN PURGING: 1615 | END PURGING: 1710 | TOTAL VOL. PURGED: 1.46 GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L) Flow-cell	DISSOLVED O_2 (mg/L) Horiba	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
1626	≈ 1.30	7.05	1.33	12.3	0.00	0.80	19.68	-129	≈ 118 mL/min
1637	≈ 2.60	7.04	1.33	51.8	0.00	0.17	19.80	-136	≈ 118 mL/min
1646	≈ 3.42	7.06	1.33	34.0	0.00	0.08	20.31	-147	≈ 91 mL/min
1655	≈ 4.24	7.06	1.34	7.5	0.00	0.15	20.34	-154	≈ 91 mL/min
1704	≈ 5.06	7.08	1.34	1.5	0.00	0.04	20.16	-158	≈ 91 mL/min
1707	collect sample OB-08 for			8260					

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [X] PERISTALTIC [ ] SUBMERSIBLE [ ] OTHER

TYPE OF TUBING: [ ] TEFLON OR TEFLON LINED [X] ~~HIGH DENSITY~~ POLYETHYLENE [ ] OTHER

TYPE OF PUMP MATERIAL: [ ] POLYVINYL CHLORIDE [ ] STAINLESS STEEL [ ] OTHER

TYPE OF BLADDER MATERIAL (if applicable): [ ] TEFLON [ ] OTHER

PURGE OBSERVATIONS

SIGNATURE:

NOTES

1629 DTW = 15.50'
1637 DTW = 15.65'
1647 DTW = 15.73'
1655 DTW = 15.80'
1705 DTW = 15.90'

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2Q01 GW Sampling Former Taylor Instruments | DATE: 06/19/01

SITE ID: OB-09 | SITE TYPE: WELL

SITE ACTIVITY: START 0953 END 1056 | JOB NUMBER: 51870.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): flush FT

PROTECTIVE CASING / WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER	11.34 FT	WELL DEPTH	23.0 FT	PID AMBIENT AIR	PPM	WELL DIAMETER	2 IN
FINAL DEPTH TO WATER	11.75 FT	SCREEN LENGTH	10 FT	PID WELL MOUTH	PPM	WELL INTEGRITY: CAP	YES [X] NO [ ] N/A [ ]
DRAWDOWN	0.41 FT	DRAWDOWN VOLUME	0.07 GAL	PRODUCT THICKNESS	FT	CASING	YES [X] NO [ ] N/A [ ]
						LOCKED	YES [X] NO [ ] N/A [ ]
						COLLAR	YES [X] NO [ ] N/A [ ]

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

PURGE RATE: ≈100 mL/MIN = 0.1 L/min | BEGIN PURGING: 0958 | END PURGING: 1051 | TOTAL VOL. PURGED: 1.38 GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L) Run-well	DISSOLVED O_2 (mg/L) Flow-thru	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
1008	≈1.00	7.03	1.63	6.5	0.50	0.88	16.46	-66	≈100 mL/min
1017	≈1.90	7.02	1.62	13.2	0.05	0.28	16.66	-74	≈100 mL/min
1026	≈2.80	7.02	1.63	18.9	0.04	0.19	15.82	-77	≈100 mL/min
1035	≈3.70	7.02	1.62	25.5	0.05	0.00	16.13	-82	≈100 mL/min
1038	Collect sample OB-09 for B260 + NA								

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [X] PERISTALTIC [ ] SUBMERSIBLE [ ] OTHER

TYPE OF TUBING: [ ] TEFLON OR TEFLON LINED [X] ~~HIGH DENSITY~~ POLYETHYLENE [ ] OTHER

TYPE OF PUMP MATERIAL: [ ] POLYVINYL CHLORIDE [ ] STAINLESS STEEL [ ] OTHER

TYPE OF BLADDER MATERIAL (if applicable): [ ] TEFLON [ ] OTHER

PURGE OBSERVATIONS

SIGNATURE:

NOTES

1013 DTW = 11.86'
1019 DTW = 11.92'
1027 DTW = 11.93'
1035 DTW = 12.00'

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 Qtr GW Sampling Former Taylor Instruments | DATE: 06/15/01

SITE ID: TW-04 | SITE TYPE: WELL

SITE ACTIVITY: START 1634 END 1742 | JOB NUMBER: 51870.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): 2.6 FT

PROTECTIVE CASING / WELL DIFFERENCE: 0.2 FT

INITIAL DEPTH TO WATER	12.35 FT	WELL DEPTH	20.66 FT	PID AMBIENT AIR	PPM	WELL DIAMETER	2 IN
FINAL DEPTH TO WATER	14.03 FT	SCREEN LENGTH	5 FT	PID WELL MOUTH	PPM		
DRAWDOWN	1.68 FT	DRAWDOWN VOLUME	0.27 GAL	PRODUCT THICKNESS	FT		

WELL INTEGRITY:

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR	X		

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

PURGE RATE: ≈ 102 mL/MIN = 0.102 L/min | BEGIN PURGING: 1645 | END PURGING: 1738 | TOTAL VOL. PURGED: 1.41 GAL (purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L) Flow-cell	DISSOLVED O_2 (mg/L) Horiba	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
1652	≈ 1.17	7.04	1.08	24.9	0.46	0.71	16.22	-251	≈ 167 mL/min
1701	≈ 1.89	6.99	1.06	52.3	0.54	0.29	19.86	-250	≈ 80 mL/min
1710	≈ 2.61	7.01	1.07	60.5	0.50	0.18	18.99	-254	≈ 80 mL/min
1717	≈ 3.19	7.01	1.06	56.3	0.44	0.24	19.04	-259	≈ 83 mL/min
1720	Collect sample TW-04 for 8260 + NA								

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [X] PERISTALTIC [ ] SUBMERSIBLE [ ] OTHER

TYPE OF TUBING: [ ] TEFLON OR TEFLON LINED [X] ~~HIGH DENSITY~~ POLYETHYLENE [ ] OTHER

TYPE OF PUMP MATERIAL: [ ] POLYVINYL CHLORIDE [ ] STAINLESS STEEL [ ] OTHER

TYPE OF BLADDER MATERIAL (if applicable): [ ] TEFLON [ ] OTHER

PURGE OBSERVATIONS

- water has black/green tint
- water smells like sulphur

NOTES

1655 DTW = 13.59'
1703 DTW = 13.68'
1710 DTW = 13.83'
1717 DTW = 13.89'

SIGNATURE:

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 Qtr GW Sampling Former Taylor Instruments

DATE: 06/16/01

SITE ID: TW-07

SITE TYPE: WELL

SITE ACTIVITY: START 1554 END 1707

JOB NUMBER: 57870.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- [X] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): flush FT

PROTECTIVE CASING / WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER	11.60 FT	WELL DEPTH	18.12 FT	PID AMBIENT AIR	PPM	WELL DIAMETER	2 IN
FINAL DEPTH TO WATER	12.86 FT	SCREEN LENGTH	5 FT	PID WELL MOUTH	PPM		
DRAWDOWN	1.26 FT	DRAWDOWN VOLUME	0.20 GAL	PRODUCT THICKNESS	FT		

((initial - final) x 0.16 {2-inch} or x 0.65 {4-inch} or x 1.5 {6-inch})

WELL INTEGRITY:	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR	X		

PURGE RATE: ≈118 mL/MIN = 0.118 L/min

BEGIN PURGING: 1603

END PURGING: 1659

TOTAL VOL. PURGED: 1.72 GAL (purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L) Pre-purge	DISSOLVED O_2 (mg/L) Horiba	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
1613	≈ 1.18	6.65	2.06	0	0.07	0.09	14.95	-18	≈ 118 mL/min
1622	≈ 2.24	6.65	2.09	0	0.08	0.05	14.78	-24	≈ 118 mL/min
1631	≈ 3.30	6.66	2.06	0	0.07	0.01	14.72	-32	≈ 118 mL/min
1639	≈ 4.24	6.65	2.06	0	0.07	0.00	14.57	-33	≈ 118 mL/min
1641	Collect sample TW-07 for 8260 + NA								

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] OTHER

TYPE OF TUBING
- [ ] TEFLON OR TEFLON LINED
- [X] ~~HIGH DENSITY~~ POLYETHYLENE
- [ ] OTHER

TYPE OF PUMP MATERIAL
- [ ] POLYVINYL CHLORIDE
- [ ] STAINLESS STEEL
- [ ] OTHER

TYPE OF BLADDER MATERIAL (If applicable)
- [ ] TEFLON
- [ ] OTHER

PURGE OBSERVATIONS

SIGNATURE:

NOTES

1619 DTW = 12.10'
1623 DTW = 12.16'
1632 DTW = 12.45'
1639 DTW = 12.56'

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 Qtr GW Sampling Former Taylor Instruments
DATE: 06/16/01
SITE ID: TW-09
SITE TYPE: WELL
SITE ACTIVITY: START 1708 END 1851
JOB NUMBER: 51870.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING [ ] OTHER
PROTECTIVE CASING STICKUP (FROM GROUND): flush FT
PROTECTIVE CASING / WELL DIFFERENCE: 0.4 FT

INITIAL DEPTH TO WATER	13.40 FT	WELL DEPTH	17.53 FT	PID AMBIENT AIR	PPM	WELL DIAMETER	2 IN
FINAL DEPTH TO WATER	14.45 FT	SCREEN LENGTH	5 FT	PID WELL MOUTH	PPM		
DRAWDOWN	1.05 FT	DRAWDOWN VOLUME	0.17 GAL	PRODUCT THICKNESS	FT		

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

WELL INTEGRITY:

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR	X		

PURGE RATE: ≈113 mL/MIN = 0.113 L/min
BEGIN PURGING: 1713
END PURGING: 1844
TOTAL VOL. PURGED: 10.3 GAL (purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L) Rainwell	DISSOLVED O_2 (mg/L) Horiba	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
1725	≈1.36	6.96	1.17	0	3.57	3.65	13.69	-44	≈113 mL/min
1734	≈2.38	6.97	1.18	0	3.53	3.11	13.99	-35	≈113 mL/min
1743	≈3.40	6.98	1.18	0	3.54	2.67	13.55	-49	≈113 mL/min
1752	≈4.42	7.00	1.16	2.1	0.81	2.27	13.90	-61	≈113 mL/min
1800	≈5.32	7.04	1.13	12.9	0.07	1.96	13.80	-60	≈113 mL/min
1807	≈6.11	7.08	1.11	18.9	2.07	1.72	13.72	-68	≈113 mL/min
1816	≈7.13	7.11	1.09	22.2	3.25	2.52	13.84	-62	≈113 mL/min
1824						2.31			
	≈8.03	7.12	1.10	46.2	3.68	3.00	13.88	-60	≈113 mL/min
1827	Collect sample TW-09 for 8260 + MA								

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [X] PERISTALTIC [ ] SUBMERSIBLE [ ] OTHER
TYPE OF TUBING: [ ] TEFLON OR TEFLON LINED [X] ~~HIGH DENSITY~~ POLYETHYLENE [ ] OTHER
TYPE OF PUMP MATERIAL: [ ] POLYVINYL CHLORIDE [ ] STAINLESS STEEL [ ] OTHER
TYPE OF BLADDER MATERIAL (If applicable): [ ] TEFLON [ ] OTHER

PURGE OBSERVATIONS

SIGNATURE:

NOTES

1726 DTW = 13.64'
1735 DTW = 13.92'
1746 DTW = 14.24'
1801 DTW = 14.61'
1807 DTW = 14.75'
1817 DTW = 15.18'

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 Qtr GW Sampling Former Taylor Instruments — DATE: 06/14/01

SITE ID: TW-13 — SITE TYPE: WELL

SITE ACTIVITY: START 1715 END 1825 — JOB NUMBER: 51870.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): Flush FT

PROTECTIVE CASING / WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER	5.89 FT	WELL DEPTH	15.1 FT	PID AMBIENT AIR	PPM	WELL DIAMETER	2 IN
FINAL DEPTH TO WATER	6.56 FT	SCREEN LENGTH	5 FT	PID WELL MOUTH	PPM		
DRAWDOWN	0.67 FT	DRAWDOWN VOLUME	0.11 GAL	PRODUCT THICKNESS	FT		

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

WELL INTEGRITY:	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR	X		

PURGE RATE: ≈ 91.3 mL/MIN = 0.0913 L/min — BEGIN PURGING: 1724 — END PURGING: 1814 — TOTAL VOL. PURGED: 1.19 GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
1743	1.62	6.88	1.14	46.1	0.92	15.96	-49	≈ 85 mL/min
1751	2.38	6.88	1.13	57.0	0.74	15.87	-50	≈ 95 mL/min
1759	3.14	6.87	1.14	68.7	0.52	15.70	-49	≈ 95 mL/min
1808	3.95	6.86	1.14	89.6	0.41	15.59	-48	≈ 90 mL/min
1812	Collect sample TW-13 for 8260							

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	TYPE OF TUBING	TYPE OF PUMP MATERIAL	TYPE OF BLADDER MATERIAL (if applicable)
[X] PERISTALTIC	[ ] TEFLON OR TEFLON LINED	[ ] POLYVINYL CHLORIDE	[ ] TEFLON
[ ] SUBMERSIBLE	[X] ~~HIGH DENSITY~~ POLYETHYLENE	[ ] STAINLESS STEEL	[ ] OTHER
[ ] OTHER	[ ] OTHER	[ ] OTHER	

PURGE OBSERVATIONS

SIGNATURE:

NOTES

1745 DTW = 6.65'
1751 DTW = 6.68'
1759 DTW = 6.70'
1805 DTW = 6.75'

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 Qtr GW Sampling Former Taylor Instruments

DATE: 06/16/01

SITE ID: TW-17

SITE TYPE: WELL

SITE ACTIVITY: START 1050 END 1201

JOB NUMBER: 51870.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- [X] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER ______

PROTECTIVE CASING STICKUP (FROM GROUND): 2.3 FT

PROTECTIVE CASING / WELL DIFFERENCE: -0.25 FT

INITIAL DEPTH TO WATER: 10.74 FT

WELL DEPTH: 17.34 FT

PID AMBIENT AIR: ______ PPM

WELL DIAMETER: 2 IN

FINAL DEPTH TO WATER: 10.90 FT

SCREEN LENGTH: 5 FT

PID WELL MOUTH: ______ PPM

DRAWDOWN: 0.16 FT

DRAWDOWN VOLUME: 0.03 GAL

PRODUCT THICKNESS: ______ FT

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

WELL INTEGRITY	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR	X		

PURGE RATE: ≈ 109 mL/MIN = 0.109 L/min

BEGIN PURGING: 1055

END PURGING: 1153

TOTAL VOL. PURGED: 6.32 GAL (purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L) flow-cell	DISSOLVED O_2 (mg/L) Horiba	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
1105	≈1.0	7.01	0.708	0	5.39	5.26	14.75	-74	≈100 mL/min
1114	≈1.95	6.99	0.695	0	5.29	5.06	14.50	-62	≈105 mL/min
1123	≈2.95	6.99	0.712	0	5.29	5.18	14.59	-64	≈111 mL/min
1130	≈3.78	6.99	0.721	0	5.40	4.93	14.77	-60	≈118 mL/min
1134	collect sample TW-17 for 8260 + NA								

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] OTHER ______

TYPE OF TUBING
- [ ] TEFLON OR TEFLON LINED
- [X] ~~HIGH DENSITY~~ POLYETHYLENE
- [ ] OTHER ______

TYPE OF PUMP MATERIAL
- [ ] POLYVINYL CHLORIDE
- [ ] STAINLESS STEEL
- [ ] OTHER ______

TYPE OF BLADDER MATERIAL (if applicable)
- [ ] TEFLON
- [ ] OTHER ______

PURGE OBSERVATIONS

NOTES

1106 DTW = 10.94'
1115 DTW = 10.93'
1123 DTW = 11.00'
1130 DTW = 11.03'

SIGNATURE: [signature]

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 Qtr GW Sampling Former Taylor Instruments

DATE: 06/16/01

SITE ID: TW-20

SITE TYPE: WELL

SITE ACTIVITY: START 1432 END 1550

JOB NUMBER: 57870.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): 2.3 FT

PROTECTIVE CASING / WELL DIFFERENCE: 0.26 FT

INITIAL DEPTH TO WATER: 13.50 FT

WELL DEPTH: 17.35 FT

PID AMBIENT AIR: PPM

WELL DIAMETER: 2 IN

FINAL DEPTH TO WATER: 13.95 FT

SCREEN LENGTH: 5 FT

PID WELL MOUTH: PPM

DRAWDOWN: 0.45 FT

DRAWDOWN VOLUME: 0.07 GAL

PRODUCT THICKNESS: FT

WELL INTEGRITY:	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR	X		

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

PURGE RATE: ≈ 125 mL/MIN = 0.125 L/min

BEGIN PURGING: 1452

END PURGING: 1541

TOTAL VOL. PURGED: 1.59 GAL (purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L) Dan-well	DISSOLVED O_2 (mg/L) Horiba	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
1502	1.25	7.00	0.849	0	0.20	1.40	13.07	-58	≈125 mL/min
1513	2.63	6.98	0.821	0	0.22	3.15	13.10	-49	≈125 mL/min
1521	3.63	6.98	0.826	0	0.24	2.38	12.79	-53	≈125 mL/min
1527	4.38	6.98	0.832	0	0.28	2.39	12.69	-56	≈125 mL/min
1530	Collect sample TW-20 for 8260 + NA								

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [X] PERISTALTIC [ ] SUBMERSIBLE [ ] OTHER

TYPE OF TUBING: [ ] TEFLON OR TEFLON LINED [X] ~~HIGH DENSITY~~ POLYETHYLENE [ ] OTHER

TYPE OF PUMP MATERIAL: [ ] POLYVINYL CHLORIDE [ ] STAINLESS STEEL [ ] OTHER

TYPE OF BLADDER MATERIAL (if applicable): [ ] TEFLON [ ] OTHER

PURGE OBSERVATIONS

SIGNATURE:

NOTES

1505 DTW = 13.77'

1523 DTW = 13.90'

1528 DTW = 13.97'

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 Qtr GW Sampling Former Taylor Instruments

DATE: 06/15/01

SITE ID: W-2

SITE TYPE: WELL

SITE ACTIVITY: START 1440 END 1539

JOB NUMBER: 51870.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- [X] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): 2.33 FT

PROTECTIVE CASING / WELL DIFFERENCE: -0.17 FT

INITIAL DEPTH TO WATER: 9.88 FT

WELL DEPTH: 20.60 FT

PID AMBIENT AIR: PPM

WELL DIAMETER: 2 IN

FINAL DEPTH TO WATER: 11.19 FT

SCREEN LENGTH: 5 FT

PID WELL MOUTH: PPM

WELL INTEGRITY:

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR	X		

DRAWDOWN: ~~0.21~~ 1.31 FT

DRAWDOWN VOLUME: 0.21 GAL

PRODUCT THICKNESS: FT

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

PURGE RATE: ≈94 ml L/MIN ≈ 0.094 L/min

BEGIN PURGING: 1448-1455 1459

END PURGING: 1530

TOTAL VOL. PURGED: 0.76 GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L) Rum-well	DISSOLVED O_2 (mg/L) Horiba	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
1459	— Restart	pump -	shut down for	unknown reason					
1503	0.41	7.71	0.624	18.2	5.97	6.69	20.13	-26	≈103 ml/min
1515	1.41	7.69	0.607	64.2	6.09	5.78	21.50	-38	≈83 ml/min
1525	2.36	7.69	0.611	73.2	6.30	6.27	20.47	-33	≈95 ml/min
1527	Collect Sample W-2	for Alk, CO_2, Chloride							

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] OTHER

TYPE OF TUBING
- [ ] TEFLON OR TEFLON LINED
- [X] ~~HIGH DENSITY~~ POLYETHYLENE
- [ ] OTHER

TYPE OF PUMP MATERIAL
- [ ] POLYVINYL CHLORIDE
- [ ] STAINLESS STEEL
- [ ] OTHER

TYPE OF BLADDER MATERIAL (if applicable)
- [ ] TEFLON
- [ ] OTHER

PURGE OBSERVATIONS

SIGNATURE:

NOTES

1506 DTW = 10.72'
1517 DTW = 10.82'
1525 DTW = 10.88'

GW_SAMPLE

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 Qtr GW Sampling Former Taylor Instruments

DATE: 06/14/01, 06/15/01

SITE ID: W-4

SITE TYPE: WELL

SITE ACTIVITY: START 1445 END

JOB NUMBER: 51870.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): 1.45 FT

PROTECTIVE CASING / WELL DIFFERENCE: 0.25 FT

INITIAL DEPTH TO WATER: 6/14 10.26 FT

WELL DEPTH: 28.66 FT

PID AMBIENT AIR: PPM

WELL DIAMETER: 2 IN

FINAL DEPTH TO WATER: 6/15 11.96 FT

SCREEN LENGTH: 5 FT

PID WELL MOUTH: PPM

WELL INTEGRITY:

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED		X	
COLLAR			X

DRAWDOWN: NA FT

DRAWDOWN VOLUME: NA GAL

PRODUCT THICKNESS: FT

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

PURGE RATE: ≈100 mL/MIN = 0.1 L/min

BEGIN PURGING: ~~1500~~ 1505 (RE) · 0725

END PURGING: · 1530 · 0731

TOTAL VOL. PURGED: 0.806 GAL (purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

	Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
6/14	1511	≈ 0.9	7.26	1.32	65.8	1.45	15.37	-206	≈150 mL/min
	1517	≈1.47	7.26	1.27	53.1	0.56	16.48	-213	≈ 95 mL/min
	1527	≈2.42	7.26	1.29	47.1	0.83	17.32	-215	≈ 95 mL/min
	1530	— Too much drawdown → will pump well dry & plan to sample in morning							
6/15	0728		7.06	1.38	20.6	0.62	13.27	-184	
	0730	Collect sample W-4 for 8260							

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [X] PERISTALTIC [ ] SUBMERSIBLE [ ] OTHER

TYPE OF TUBING: [ ] TEFLON OR TEFLON LINED [X] HIGH DENSITY POLYETHYLENE [ ] OTHER

TYPE OF PUMP MATERIAL: [ ] POLYVINYL CHLORIDE [ ] STAINLESS STEEL [ ] OTHER

TYPE OF BLADDER MATERIAL (if applicable): [ ] TEFLON [ ] OTHER

PURGE OBSERVATIONS

SIGNATURE:

NOTES

15:13 - DTW ≈ 12.25' 6/14

15:20 - DTW ≈ 13.46'

1525 - DTW ≈ 13.93'

1527 - DTW ≈ 14.17'

0723 - DTW = 10.15' 6/15

~~0.82~~ gal / 1 · 1 L / 0.26 gal =

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 Qtr GW Sampling Former Taylor Instruments | DATE: 06/18/01

SITE ID: W-5 | SITE TYPE: WELL

SITE ACTIVITY: START 0815 END 0931 | JOB NUMBER: 57870.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): flush FT

PROTECTIVE CASING / WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER	9.87 FT	WELL DEPTH	21.65 FT	PID AMBIENT AIR	PPM	WELL DIAMETER	2 IN
FINAL DEPTH TO WATER	12.20 FT	SCREEN LENGTH	5 FT	PID WELL MOUTH	PPM		
DRAWDOWN	2.33 FT	DRAWDOWN VOLUME	0.37 GAL	PRODUCT THICKNESS	FT		

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

WELL INTEGRITY:	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR	X		

PURGE RATE: ≈99 mL/MIN = 0.099 L/min | BEGIN PURGING: 0823 | END PURGING: 0926 | TOTAL VOL. PURGED: 1.62 GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L) Pan-well	DISSOLVED O_2 (mg/L) Horiba	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
0833	≈0.95	6.67	1.91	0	0.66	0.28	13.77	-238	≈95 mL/min
0842	≈1.85	6.66	1.92	0	0.36	0.00	13.30	-244	≈100 mL/min
0851	≈2.75	6.66	1.93	0	0.21	0.00	13.28	-243	≈100 mL/min
0900	≈3.65	6.65	1.93	0	0.18	0.00	13.33	-238	≈100 mL/min
0909	≈4.55	6.65	1.93	0	0.19	0.00	13.23	-235	≈100 mL/min
0913	Collect sample W-5 for 8260 + NA								
1025	6/19/01	Collect matrix spike / matrix spike duplicate W-5 (MS) and W-5 (MD) for 8260							

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	TYPE OF TUBING	TYPE OF PUMP MATERIAL	TYPE OF BLADDER MATERIAL (if applicable)
[X] PERISTALTIC	[ ] TEFLON OR TEFLON LINED	[ ] POLYVINYL CHLORIDE	[ ] TEFLON
[ ] SUBMERSIBLE	[X] ~~HIGH DENSITY~~ POLYETHYLENE	[ ] STAINLESS STEEL	[ ] OTHER
[ ] OTHER	[ ] OTHER	[ ] OTHER	

PURGE OBSERVATIONS

- PVC shavings

NOTES

0847 DTW = 11.79'
0852 DTW = 11.95'
0859 DTW = 12.15'
0908 DTW = 12.32'

SIGNATURE:

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 Qtr GW Sampling Former Taylor Instruments
DATE: 06/20/01
SITE ID: EW-5-5
SITE TYPE: WELL
SITE ACTIVITY: START 1031 END 1126
JOB NUMBER: 51870.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING [ ] OTHER
PROTECTIVE CASING STICKUP (FROM GROUND): FT
PROTECTIVE CASING / WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER	7.05 TOR FT	WELL DEPTH	19.27 FT	PID AMBIENT AIR	PPM	WELL DIAMETER	4 IN
FINAL DEPTH TO WATER	~~7.63~~ 7.63 TOR FT	SCREEN LENGTH	0.38 FT	PID WELL MOUTH	PPM		
DRAWDOWN	0.58 FT	DRAWDOWN VOLUME	GAL	PRODUCT THICKNESS	FT		

WELL INTEGRITY:

	YES	NO	N/A
CAP			X
CASING			X
LOCKED			X
COLLAR			X

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

PURGE RATE: ≈ 110 mL/MIN = 0.110 L/min
BEGIN PURGING: 1040
END PURGING: 1120
TOTAL VOL. PURGED: 1.14 GAL
(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L) Horiba	DISSOLVED O_2 (mg/L) Hanna-well	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
1049	≈ 0.95	7.57	1.20	0	6.94	8.46	16.25	-43	≈105 mL/min
1058	≈ 1.90	7.57	1.20	0	6.57	7.93	16.25	-42	≈105 mL/min
1107	≈ 2.90	7.55	1.19	0	6.13	7.96	16.74	-66	≈ 111 mL/min
1116	≈ 3.96	7.56	1.19	0	6.01	8.03	16.17	-73	≈ 118 mL/min
1119	Collect sample EW-5-5 for 8260								

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	TYPE OF TUBING	TYPE OF PUMP MATERIAL	TYPE OF BLADDER MATERIAL (if applicable)
[X] PERISTALTIC	[ ] TEFLON OR TEFLON LINED	[ ] POLYVINYL CHLORIDE	[ ] TEFLON
[ ] SUBMERSIBLE	[X] ~~HIGH DENSITY~~ POLYETHYLENE	[ ] STAINLESS STEEL	[ ] OTHER
[ ] OTHER	[ ] OTHER	[ ] OTHER	

PURGE OBSERVATIONS

▶ 3.61' from lid to TOR

NOTES

1050 DTW = 10.72' (lid) 7.11' (TOR)
1058 DTW = 10.81' (lid) 7.20' (TOR)
1107 DTW = 11.13' (lid) 7.52' (TOR)

SIGNATURE:

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 Qtr GW Sampling Former Taylor Instruments

DATE: 06/14/01

SITE ID: OB-05

SITE TYPE: WELL

SITE ACTIVITY: START _____ END _____

JOB NUMBER: 5787Ø.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- [X] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): flush FT

PROTECTIVE CASING / WELL DIFFERENCE: _____ FT

INITIAL DEPTH TO WATER: Dry 17.61 FT

WELL DEPTH: 18.0 FT

PID AMBIENT AIR: 0.0 PPM

WELL DIAMETER: 2 IN

FINAL DEPTH TO WATER: _____ FT

SCREEN LENGTH: 15 FT

PID WELL MOUTH: 0.0 PPM

WELL INTEGRITY:

	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

DRAWDOWN: _____ FT

DRAWDOWN VOLUME: _____ GAL

PRODUCT THICKNESS: _____ FT

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

PURGE RATE: _____ L/MIN

BEGIN PURGING: _____

END PURGING: _____

TOTAL VOL. PURGED: _____ GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] OTHER _____

TYPE OF TUBING
- [ ] TEFLON OR TEFLON LINED
- [X] ~~HIGH DENSITY~~ POLYETHYLENE
- [ ] OTHER _____

TYPE OF PUMP MATERIAL
- [ ] POLYVINYL CHLORIDE
- [ ] STAINLESS STEEL
- [ ] OTHER _____

TYPE OF BLADDER MATERIAL (If applicable)
- [ ] TEFLON
- [ ] OTHER _____

PURGE OBSERVATIONS

SIGNATURE: _____

NOTES

Well dry - cannot collect sample

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 Qtr GW Sampling, Former Taylor Instruments

DATE: 06/14/01

SITE ID: MW-00

SITE TYPE: WELL

SITE ACTIVITY: START ____ END ____

JOB NUMBER: 51870.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- [X] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER ____

PROTECTIVE CASING STICKUP (FROM GROUND): flush FT

PROTECTIVE CASING / WELL DIFFERENCE: ____ FT

INITIAL DEPTH TO WATER: ____ FT

WELL DEPTH: ____ FT

PID AMBIENT AIR: ____ PPM

WELL DIAMETER: 2 IN

FINAL DEPTH TO WATER: ____ FT

SCREEN LENGTH: ____ FT

PID WELL MOUTH: ____ PPM

DRAWDOWN: ____ FT

DRAWDOWN VOLUME: ____ GAL

PRODUCT THICKNESS: ____ FT

WELL INTEGRITY:	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

PURGE RATE: ____ L/MIN

BEGIN PURGING: ____

END PURGING: ____

TOTAL VOL. PURGED: ____ GAL
(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] OTHER ____

TYPE OF TUBING
- [ ] TEFLON OR TEFLON LINED
- [X] ~~HIGH DENSITY~~ POLYETHYLENE
- [ ] OTHER ____

TYPE OF PUMP MATERIAL
- [ ] POLYVINYL CHLORIDE
- [ ] STAINLESS STEEL
- [ ] OTHER ____

TYPE OF BLADDER MATERIAL (if applicable)
- [ ] TEFLON
- [ ] OTHER ____

PURGE OBSERVATIONS

SIGNATURE: [signature]

NOTES

MW-00 obstructed

Cannot collect sample

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 Qtr GW Sampling Former Taylor Instruments

DATE: 06/14/01

SITE ID: W-6

SITE TYPE: WELL

SITE ACTIVITY: START ____ END ____

JOB NUMBER: 51870.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- [X] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER ____

PROTECTIVE CASING STICKUP (FROM GROUND): flush FT

PROTECTIVE CASING / WELL DIFFERENCE: ____ FT

INITIAL DEPTH TO WATER: ____ FT

WELL DEPTH: 14.92 FT

PID AMBIENT AIR: ____ PPM

WELL DIAMETER: 2 IN

FINAL DEPTH TO WATER: ____ FT

SCREEN LENGTH: 5 FT

PID WELL MOUTH: ____ PPM

WELL INTEGRITY:

	YES	NO	N/A
CAP	—	—	—
CASING	—	—	—
LOCKED	—	—	—
COLLAR	—	—	—

DRAWDOWN: ____ FT

DRAWDOWN VOLUME: ____ GAL

PRODUCT THICKNESS: ____ FT

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

PURGE RATE: ____ L/MIN

BEGIN PURGING: ____

END PURGING: ____

TOTAL VOL. PURGED: ____ GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] OTHER ____

TYPE OF TUBING
- [ ] TEFLON OR TEFLON LINED
- [X] ~~HIGH DENSITY~~ POLYETHYLENE
- [ ] OTHER ____

TYPE OF PUMP MATERIAL
- [ ] POLYVINYL CHLORIDE
- [ ] STAINLESS STEEL
- [ ] OTHER ____

TYPE OF BLADDER MATERIAL (if applicable)
- [ ] TEFLON
- [ ] OTHER ____

PURGE OBSERVATIONS

SIGNATURE: [signature]

NOTES

W-6 obstructed

Cannot collect sample

6/22 Note: work performed to repair W-6

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 qtr GW Sampling Former Taylor Instruments

DATE: 06/14/01

SITE ID: QATBØ1

SITE TYPE: ~~WELL~~

SITE ACTIVITY: START 00:00 END 00:00

JOB NUMBER: 51870.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- ☐ TOP OF WELL RISER
- ☐ TOP OF PROTECTIVE CASING
- ☐ OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): ____ FT

PROTECTIVE CASING / WELL DIFFERENCE: ____ FT

INITIAL DEPTH TO WATER: ____ FT

WELL DEPTH: ____ FT

PID AMBIENT AIR: ____ PPM

WELL DIAMETER: ____ IN

FINAL DEPTH TO WATER: ____ FT

SCREEN LENGTH: ____ FT

PID WELL MOUTH: ____ PPM

WELL INTEGRITY:

	YES	NO	N/A
CAP	—	—	—
CASING	—	—	—
LOCKED	—	—	—
COLLAR	—	—	—

DRAWDOWN: ____ FT

DRAWDOWN VOLUME: ____ GAL

PRODUCT THICKNESS: ____ FT

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

PURGE RATE: ____ L/MIN

BEGIN PURGING: ____

END PURGING: ____

TOTAL VOL. PURGED: ____ GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
00:00	Collect sample QATBØ1 for 8260							

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- ☐ PERISTALTIC
- ☐ SUBMERSIBLE
- ☐ OTHER _____

TYPE OF TUBING
- ☐ TEFLON OR TEFLON LINED
- ☐ HIGH DENSITY POLYETHYLENE
- ☐ OTHER _____

TYPE OF PUMP MATERIAL
- ☐ POLYVINYL CHLORIDE
- ☐ STAINLESS STEEL
- ☐ OTHER _____

TYPE OF BLADDER MATERIAL (if applicable)
- ☐ TEFLON
- ☐ OTHER _____

PURGE OBSERVATIONS

SIGNATURE: _____

NOTES

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 Qtr GW Sampling Former Taylor Instruments

DATE: 06/14/01

SITE ID: QAFB01

SITE TYPE: WELL

SITE ACTIVITY: START 10:45 END 10:45

JOB NUMBER: 51870.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- ☐ TOP OF WELL RISER
- ☐ TOP OF PROTECTIVE CASING
- ☐ OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): _____ FT

PROTECTIVE CASING / WELL DIFFERENCE: _____ FT

INITIAL DEPTH TO WATER: _____ FT

WELL DEPTH: _____ FT

PID AMBIENT AIR: _____ PPM

WELL DIAMETER: _____ IN

FINAL DEPTH TO WATER: _____ FT

SCREEN LENGTH: _____ FT

PID WELL MOUTH: _____ PPM

WELL INTEGRITY:

	YES	NO	N/A
CAP	—	—	—
CASING	—	—	—
LOCKED	—	—	—
COLLAR	—	—	—

DRAWDOWN: _____ FT

DRAWDOWN VOLUME: _____ GAL

PRODUCT THICKNESS: _____ FT

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

PURGE RATE: _____ L/MIN

BEGIN PURGING: _____

END PURGING: _____

TOTAL VOL. PURGED: _____ GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
10:45	Collect sample QAFB01 for 8260							

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- ☐ PERISTALTIC
- ☐ SUBMERSIBLE
- ☐ OTHER _____

TYPE OF TUBING
- ☐ TEFLON OR TEFLON LINED
- ☐ HIGH DENSITY POLYETHYLENE
- ☐ OTHER _____

TYPE OF PUMP MATERIAL
- ☐ POLYVINYL CHLORIDE
- ☐ STAINLESS STEEL
- ☐ OTHER _____

TYPE OF BLADDER MATERIAL (if applicable)
- ☐ TEFLON
- ☐ OTHER _____

PURGE OBSERVATIONS

NOTES

SIGNATURE: _____

GW_SAMPLE

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 Qtr GW Sampling Former Taylor Instruments

DATE: 06/14/01

SITE ID: QARBØ1

SITE TYPE: WELL

SITE ACTIVITY: START 10:50 END 10:50

JOB NUMBER: 51870.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- ☐ TOP OF WELL RISER
- ☐ TOP OF PROTECTIVE CASING
- ☐ OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): _____ FT

PROTECTIVE CASING / WELL DIFFERENCE: _____ FT

INITIAL DEPTH TO WATER: _____ FT

WELL DEPTH: _____ FT

PID AMBIENT AIR: _____ PPM

WELL DIAMETER: _____ IN

FINAL DEPTH TO WATER: _____ FT

SCREEN LENGTH: _____ FT

PID WELL MOUTH: _____ PPM

WELL INTEGRITY:

	YES	NO	N/A
CAP	—	—	—
CASING	—	—	—
LOCKED	—	—	—
COLLAR	—	—	—

DRAWDOWN: _____ FT

DRAWDOWN VOLUME: _____ GAL

PRODUCT THICKNESS: _____ FT

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

PURGE RATE: _____ L/MIN

BEGIN PURGING: _____

END PURGING: _____

TOTAL VOL. PURGED: _____ GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
10:50	Collect sample QARBØ1 for 8260							

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- ☐ PERISTALTIC
- ☐ SUBMERSIBLE
- ☐ OTHER _____

TYPE OF TUBING
- ☐ TEFLON OR TEFLON LINED
- ☐ HIGH DENSITY POLYETHYLENE
- ☐ OTHER _____

TYPE OF PUMP MATERIAL
- ☐ POLYVINYL CHLORIDE
- ☐ STAINLESS STEEL
- ☐ OTHER _____

TYPE OF BLADDER MATERIAL (If applicable)
- ☐ TEFLON
- ☐ OTHER _____

PURGE OBSERVATIONS

NOTES

SIGNATURE: _____

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 Qtr GW Sampling Former Taylor Instruments

DATE: 06/15/01

SITE ID: QATB02

SITE TYPE: WELL

SITE ACTIVITY: START 00:00 END 00:00

JOB NUMBER: 57870.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- ☐ TOP OF WELL RISER
- ☐ TOP OF PROTECTIVE CASING
- ☐ OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): ____ FT

PROTECTIVE CASING / WELL DIFFERENCE: ____ FT

INITIAL DEPTH TO WATER: ____ FT

WELL DEPTH: ____ FT

PID AMBIENT AIR: ____ PPM

WELL DIAMETER: ____ IN

FINAL DEPTH TO WATER: ____ FT

SCREEN LENGTH: ____ FT

PID WELL MOUTH: ____ PPM

WELL INTEGRITY:

	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

DRAWDOWN: ____ FT

DRAWDOWN VOLUME: ____ GAL

PRODUCT THICKNESS: ____ FT

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

PURGE RATE: ____ L/MIN

BEGIN PURGING: ____

END PURGING: ____

TOTAL VOL. PURGED: ____ GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
00:00	Collect sample QATB02 for 8260							

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- ☐ PERISTALTIC
- ☐ SUBMERSIBLE
- ☐ OTHER _____

TYPE OF TUBING
- ☐ TEFLON OR TEFLON LINED
- ☐ HIGH DENSITY POLYETHYLENE
- ☐ OTHER _____

TYPE OF PUMP MATERIAL
- ☐ POLYVINYL CHLORIDE
- ☐ STAINLESS STEEL
- ☐ OTHER _____

TYPE OF BLADDER MATERIAL (If applicable)
- ☐ TEFLON
- ☐ OTHER _____

PURGE OBSERVATIONS

NOTES

SIGNATURE: _____

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 Qtr GW Sampling Former Taylor Instruments

DATE: 6/17/01

SITE ID: QAFB02

SITE TYPE: WELL

SITE ACTIVITY: START 1625 END 1625

JOB NUMBER: 57870.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- ☐ TOP OF WELL RISER
- ☐ TOP OF PROTECTIVE CASING
- ☐ OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): ____ FT

PROTECTIVE CASING / WELL DIFFERENCE: ____ FT

INITIAL DEPTH TO WATER: ____ FT

WELL DEPTH: ____ FT

PID AMBIENT AIR: ____ PPM

WELL DIAMETER: ____ IN

FINAL DEPTH TO WATER: ____ FT

SCREEN LENGTH: ____ FT

PID WELL MOUTH: ____ PPM

WELL INTEGRITY:

	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

DRAWDOWN: ____ FT

DRAWDOWN VOLUME: ____ GAL

PRODUCT THICKNESS: ____ FT

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

PURGE RATE: ____ L/MIN

BEGIN PURGING: ____

END PURGING: ____

TOTAL VOL. PURGED: ____ GAL
(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
16:25	Collect sample QAFB02 for 8260							

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- ☐ PERISTALTIC
- ☐ SUBMERSIBLE
- ☐ OTHER _____

TYPE OF TUBING
- ☐ TEFLON OR TEFLON LINED
- ☐ HIGH DENSITY POLYETHYLENE
- ☐ OTHER _____

TYPE OF PUMP MATERIAL
- ☐ POLYVINYL CHLORIDE
- ☐ STAINLESS STEEL
- ☐ OTHER _____

TYPE OF BLADDER MATERIAL (if applicable)
- ☐ TEFLON
- ☐ OTHER _____

PURGE OBSERVATIONS

SIGNATURE: _____

NOTES

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 Qtr GW Sampling Former Taylor Instruments

DATE: 6/17/97

SITE ID: QARBØ2

SITE TYPE: WELL

SITE ACTIVITY: START 1630 END 1630

JOB NUMBER: 57870.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- ☐ TOP OF WELL RISER
- ☐ TOP OF PROTECTIVE CASING
- ☐ OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): ____ FT

PROTECTIVE CASING / WELL DIFFERENCE: ____ FT

INITIAL DEPTH TO WATER: ____ FT

WELL DEPTH: ____ FT

PID AMBIENT AIR: ____ PPM

WELL DIAMETER: ____ IN

FINAL DEPTH TO WATER: ____ FT

SCREEN LENGTH: ____ FT

PID WELL MOUTH: ____ PPM

WELL INTEGRITY:

	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

DRAWDOWN: ____ FT

DRAWDOWN VOLUME: ____ GAL

PRODUCT THICKNESS: ____ FT

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

PURGE RATE: ____ L/MIN

BEGIN PURGING: ____

END PURGING: ____

TOTAL VOL. PURGED: ____ GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
16:30	Collect sample QARBØ2 for 8260							

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	TYPE OF TUBING	TYPE OF PUMP MATERIAL	TYPE OF BLADDER MATERIAL (if applicable)
☐ PERISTALTIC	☐ TEFLON OR TEFLON LINED	☐ POLYVINYL CHLORIDE	☐ TEFLON
☐ SUBMERSIBLE	☐ HIGH DENSITY POLYETHYLENE	☐ STAINLESS STEEL	☐ OTHER _____
☐ OTHER _____	☐ OTHER _____	☐ OTHER _____	

PURGE OBSERVATIONS

NOTES

SIGNATURE: _____

Harding ESE

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: 2 Qtr GW Sampling Former Taylor Instruments

DATE: 6/17/01

SITE ID: RATB03

SITE TYPE: WELL

SITE ACTIVITY: START 0000 END 0000

JOB NUMBER: 5870.4

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- ☐ TOP OF WELL RISER
- ☐ TOP OF PROTECTIVE CASING
- ☐ OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): ____ FT

PROTECTIVE CASING / WELL DIFFERENCE: ____ FT

INITIAL DEPTH TO WATER: ____ FT

WELL DEPTH: ____ FT

PID AMBIENT AIR: ____ PPM

WELL DIAMETER: ____ IN

FINAL DEPTH TO WATER: ____ FT

SCREEN LENGTH: ____ FT

PID WELL MOUTH: ____ PPM

WELL INTEGRITY:

	YES	NO	N/A
CAP	—	—	—
CASING	—	—	—
LOCKED	—	—	—
COLLAR	—	—	—

DRAWDOWN: ____ FT

DRAWDOWN VOLUME: ____ GAL

PRODUCT THICKNESS: ____ FT

{(initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch)}

PURGE RATE: ____ L/MIN

BEGIN PURGING: ____

END PURGING: ____

TOTAL VOL. PURGED: ____ GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	Comments
00:00	Collect sample RATB03 for 8260							

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- ☐ PERISTALTIC
- ☐ SUBMERSIBLE
- ☐ OTHER _____

TYPE OF TUBING
- ☐ TEFLON OR TEFLON LINED
- ☐ HIGH DENSITY POLYETHYLENE
- ☐ OTHER _____

TYPE OF PUMP MATERIAL
- ☐ POLYVINYL CHLORIDE
- ☐ STAINLESS STEEL
- ☐ OTHER _____

TYPE OF BLADDER MATERIAL (If applicable)
- ☐ TEFLON
- ☐ OTHER _____

PURGE OBSERVATIONS

SIGNATURE: _____

NOTES

APPENDIX E

WELL CONSTRUCTION INFORMATION

Appendix E
Well Construction Information

Well ID	Date Installed	Boring Depth	Well Depth	Screen Interval		Coordinates			Well Material	Completion		
				Top	Bottom	Easting	Northing	Elevation	Riser/Screen	Flush-mount	Vault	Stick-up
BR-01	09/02/97	42.2	42.2	NA	NA	750363.33	1150087.01	529.5	Stainless / Open	X		
BR-02	09/02/97	44.0	44.0	NA	NA	750541.81	1149964.51	532.39	Stainless / Open	X		
BR-03	09/02/97	40.1	40.1	NA	NA	750552.93	1149641.68	533.8	Stainless / Open			X
BR-04	09/03/97	44.2	44.2	NA	NA	750322.96	1149422.13	532.68	Stainless / Open	X		
BR-05	09/03/97	49.9	49.9	NA	NA	750216.62	1149958.67	531.76	Stainless / Open	X		
BR-06	09/03/97	42.6	42.6	NA	NA	749939.91	1149145.54	537	Stainless / Open	X		
BR-07	09/03/97	53.3	53.3	NA	NA	749983.5	1149989.76	532.1	Stainless / Open			X
BR-08	07/28/00	73.0	73.0	NA	NA	750340.94	1149482.41	533.13	Iron / Open	X		
BR-09	07/28/00	47.0	47.0	NA	NA	750400.72	1149438.67	532.72	Iron / Open	X		
BR-10	07/28/00	47.0	47.0	NA	NA	750426.9	1149411.76	532.29	Iron / Open	X		
BR-11	07/28/00	52.0	52.0	NA	NA	750387.82	1149546.25	532.53	Iron / Open	X		
BR-12	07/28/00	42.0	42.0	NA	NA	750195.19	1150010.12	531.9	Iron / Open	X		
BR-13	07/28/00	67.5	67.5	NA	NA	750197.49	1150044.27	532.01	Iron / Open	X		
BR-14	07/28/00	75.3	75.3	NA	NA	750260.61	1150052.2	531.67	Iron / Open	X		
BR-15	07/26/00	72.0	72.0	NA	NA	750293.39	1149980.43	531.69	Iron / Open	X		
BR-16	07/26/00	55.0	55.0	NA	NA	750223.79	1150013.71	531.32	Iron / Open	X		
BR-17	07/28/00	52.0	52.0	NA	NA	750333.76	1149478.26	533.16	Iron / Open	X		
EW-N-1	08/15/00	27.0	27.0	5.2	26.0	750198.77	1149956.96	529.28	Stainless / PVC		X	
EW-N-2	08/23/00	27.0	27.0	5.5	26.0	750225.81	1149942.16	528.76	Stainless / PVC		X	
EW-N-3	08/22/00	26.8	26.8	5.2	25.8	750217.16	1149980.06	528.69	Stainless / PVC		X	
EW-N-4	08/23/00	26.0	26.0	7.2	25.0	750259.43	1149928.84	529.32	Stainless / PVC		X	
EW-N-5	08/16/00	27.0	27.0	5.5	26.0	750257.98	1149972.33	528.26	Stainless / PVC		X	
EW-N-6	08/18/00	25.5	25.0	6.1	24.0	750293.49	1149957.98	529.18	Stainless / PVC		X	
EW-S-1S	10/01/98	14.0	13.7	4.3	13.7	750332.8	1149428.08	529.41	Stainless		X	
EW-S-1D	10/01/98	18.3	18.3	4.3	17.9	750327.22	1149428.49	529.41	Stainless		X	
EW-S-2	07/26/00	23.1	22.0	5.5	21.0	750256.26	1149404.38	528.68	Stainless / PVC		X	
EW-S-3	07/28/00	23.5	22.0	5.5	21.0	750301.18	1149370.46	529.55	Stainless / PVC		X	
EW-S-4	07/26/00	23.5	22.0	5.5	21.0	750293.94	1149418.71	532.41	Stainless / PVC		X	
EW-S-5	08/01/00	23.5	22.5	5.8	21.5	750325.14	1149386.52	529.53	Stainless / PVC		X	
EW-S-6	07/31/00	22.9	22.4	5.9	20.9	750341.87	1149362.58	529.27	Stainless / PVC		X	
EW-S-7	08/07/00	23.1	22.5	5.9	21.6	750339.03	1149413.8	529.59	Stainless / PVC		X	

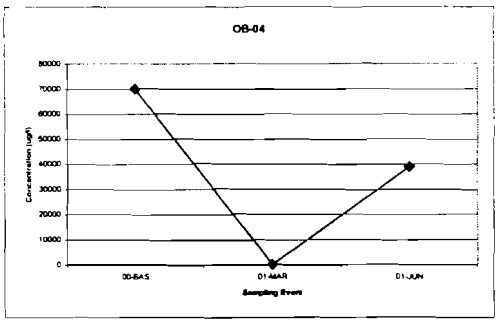
Appendix E
Well Construction Information

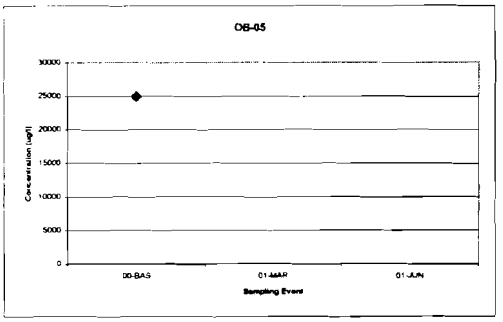
				Screen Interval		Coordinates			Well Material	Completion		
Well ID	Date Installed	Boring Depth	Well Depth	Top	Bottom	Easting	Northing	Elevation	Riser/Screen	Flush-mount	Vault	Stick-up
EW-S-8	08/02/00	23.0	22.5	5.8	21.5	750359.86	1149402.69	529.65	Stainless / PVC		X	
EW-S-9	08/03/00	23.0	22.5	6.0	21.5	750355.07	1149440.13	532.99	Stainless / PVC		X	
EW-S-10	08/09/00	22.6	22.5	6.0	21.5	750381.3	1149367.65	529.43	Stainless / PVC		X	
EW-S-11	08/08/00	22.6	22.5	5.9	22.0	750377.04	1149418.02	529.5	Stainless / PVC		X	
EW-S-12	08/04/00	22.3	22.3	5.8	21.3	750375.38	1149466.45	529.96	Stainless / PVC		X	
EW-S-13	08/10/00	22.0	22.0	6.0	21.0	750399.16	1149448.68	529.53	Stainless / PVC		X	
EW-S-14	08/11/00	22.0	22.0	5.6	21.0	750406.59	1149410.24	529.37	Stainless / PVC		X	
EW-S-15	08/14/00	22.0	21.8	5.2	20.8	750414.78	1149480.34	529.96	Stainless / PVC		X	
EW-S-16	08/10/00	21.3	21.3	5.2	20.3	750433.72	1149448.95	529.57	Stainless / PVC		X	
OB-04	09/05/97	17.5	17.5	2.5	17.5	750329.65	1149422.19	532.91	PVC	X		
OB-05	09/05/97	18.0	18.0	4.0	18.0	750223.51	1149958.83	531.7	PVC	X		
OB-06	07/19/00	17.0	17.0	6.8	16.8	750421.89	1149461.5	532.6	PVC	X		
OB-07	07/19/00	20.5	20.5	10.2	20.2	750461.13	1149512.6	533.03	PVC	X		
OB-08	07/28/00	25.5	25.3	15.3	25.1	750279	1149957.45	531.64	PVC	X		
OB-09	07/28/00	23.5	23.3	13.3	23.1	750312.26	1149992.94	531.85	PVC	X		
TW-01	03/12/96	22.0	22.0	17.0	22.0	750548.13	1149471.23	533	PVC	X		
TW-04	03/15/96	17.5	17.3	12.3	17.3	750552.18	1149648.54	532.6	PVC			X
TW-07	03/15/96	17.5	17.5	12.5	17.5	750546.69	1149830.01	531.4	PVC	X		
TW-09	03/30/96	16.0	16.0	11.0	16.0	750542.22	1149971.84	530.54	PVC	X		
TW-13	03/12/96	15.0	15.0	10.0	15.0	750086.24	1150016.03	532	PVC	X		
TW-17	03/13/96	15.0	15.0	10.0	15.0	750373.39	1150088.34	529.7	PVC			X
TW-20	03/13/96	15.0	15.0	10.0	15.0	750547.88	1150118.75	530.2	PVC			X
W-2	09/15/82	21.0	18.0	13.0	18.0	749940.43	1149136.77	537	PVC			X
W-4	09/22/82	29.0	26.0	21.0	26.0	749977.63	1149996.42	531.8	PVC			X
W-5	09/15/82	24.0	20.5	15.5	20.5	750248.88	1150056.27	531.9	PVC	X		
W-6	09/15/82	16.5	15.0	13.0	15.0	750288.78	1149332.79	532.58	PVC	X		

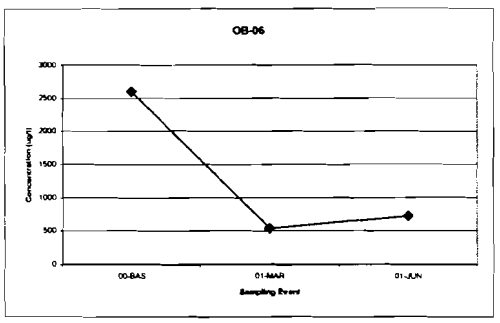
APPENDIX F

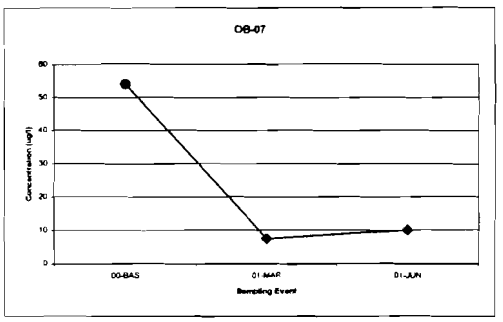
MONITOR WELL CONCENTRATION TREND GRAPHS

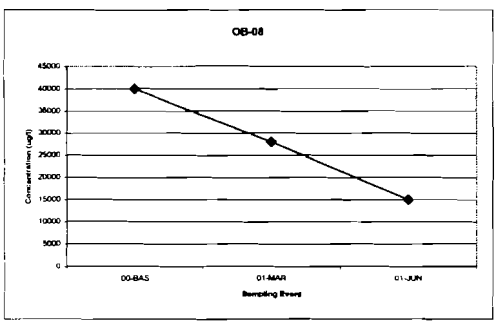
Overburden Wells
TCE Concentration Trends
Former Taylor Instruments Site
Rochester, NY

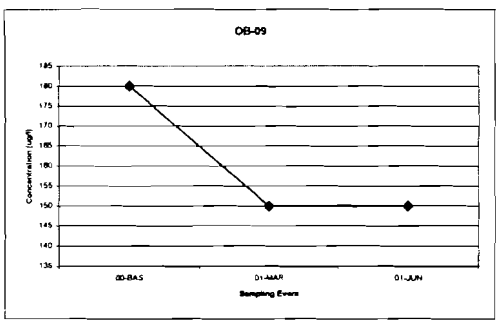


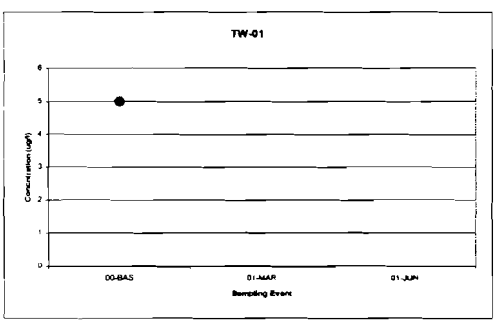


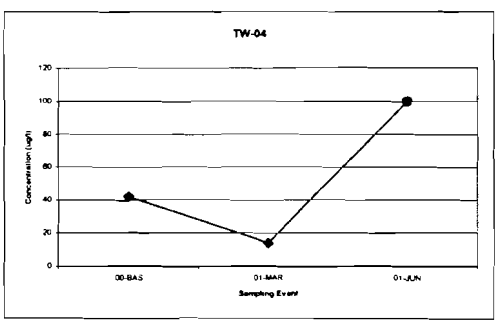


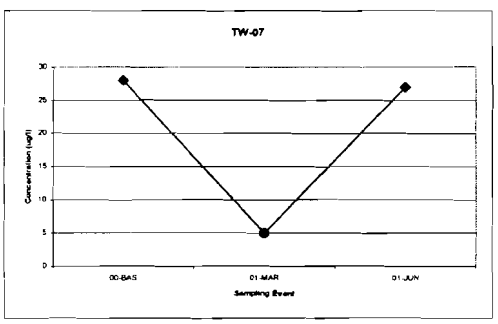


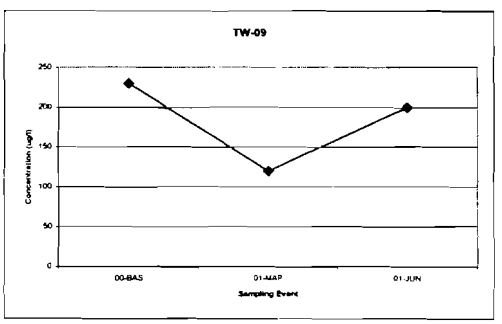






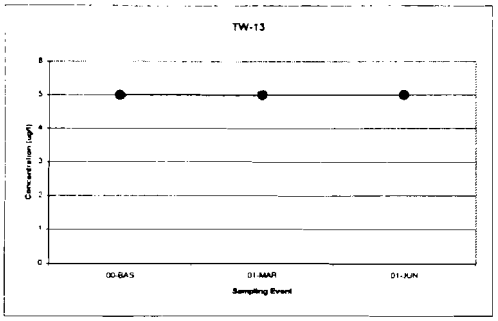


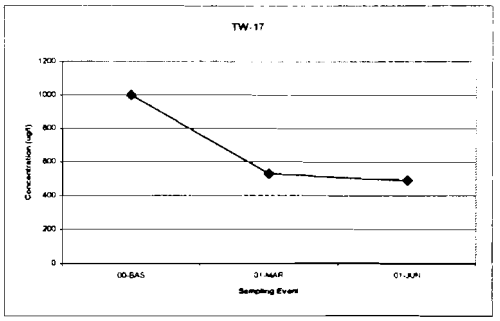


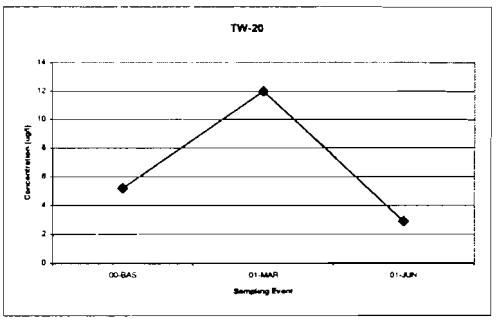


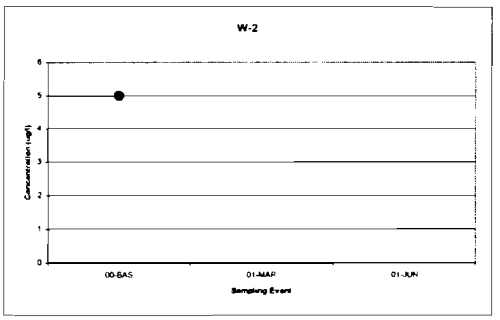
diamond = actual value
circle = value below graphed detection limit

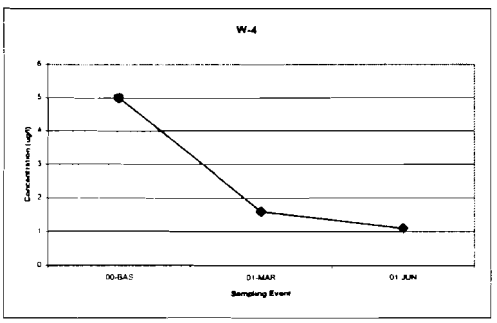
Overburden Wells
TCE Concentration Trends
Former Taylor Instruments Site
Rochester, NY

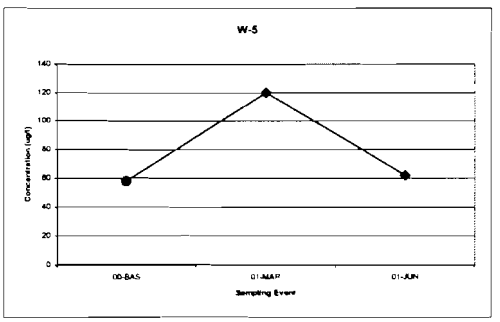


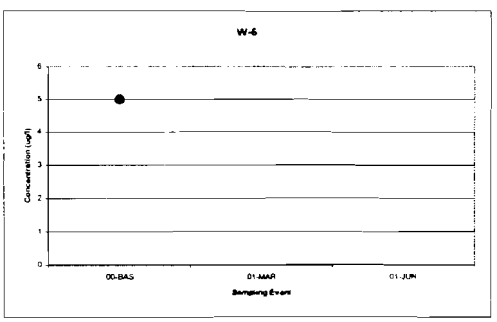






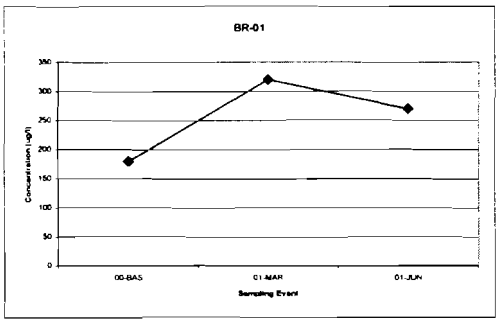


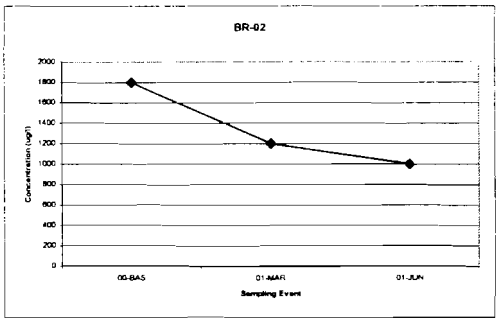


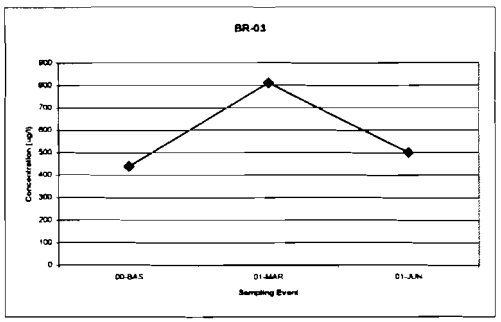


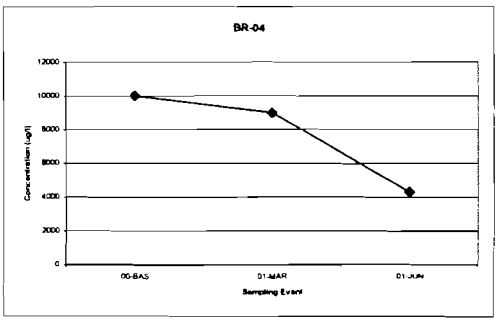
diamond = actual value
circle = value below graphed detection limit

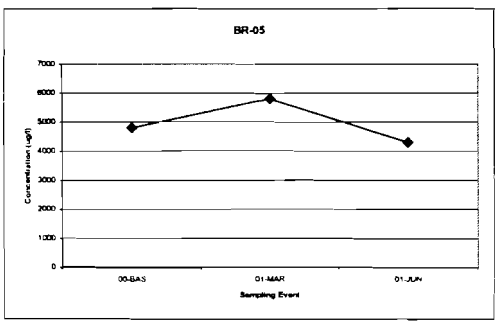
Bedrock Wells
TCE Concentration Trends
Former Taylor Instruments Site
Rochester, NY

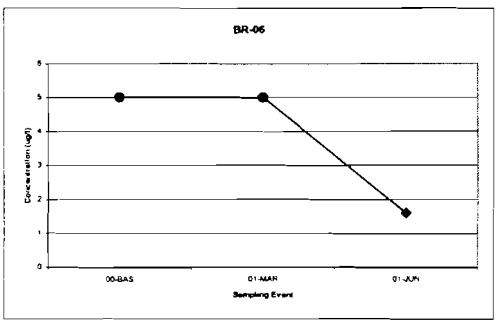


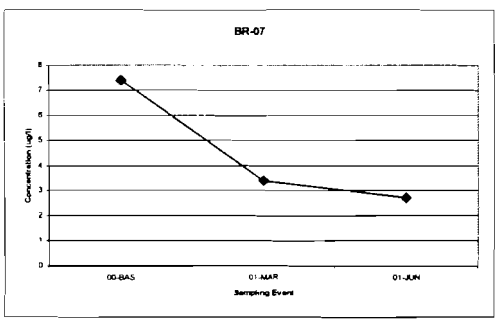


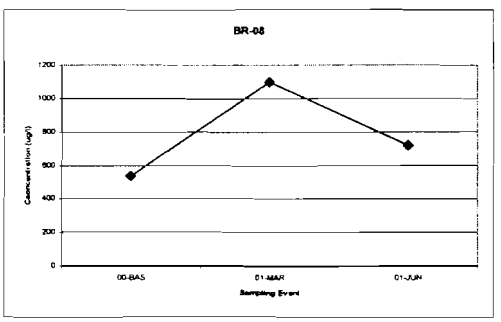


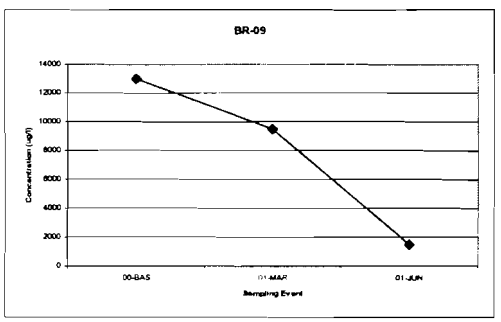


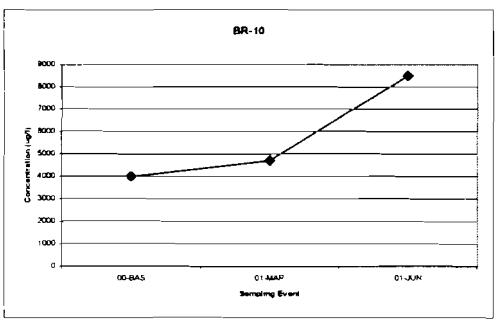












diamond = actual value
circle = value below graphed detecion limit

Bedrock Wells
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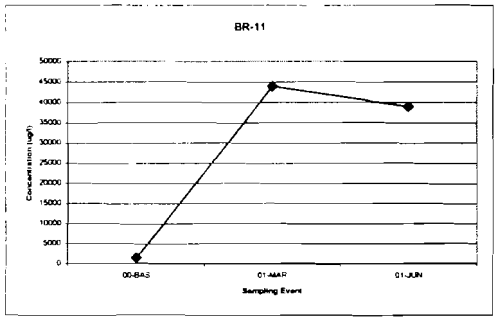

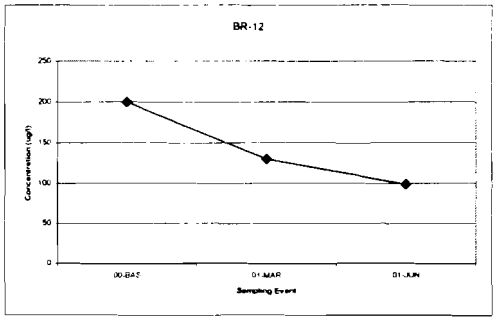

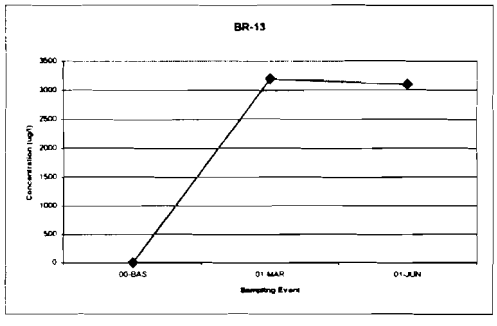

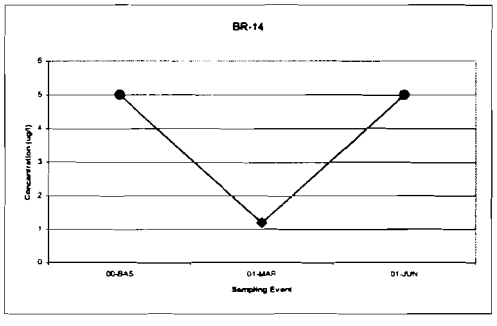

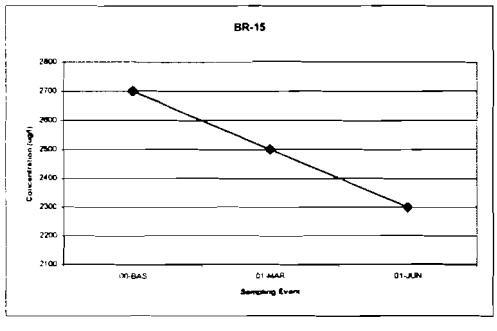

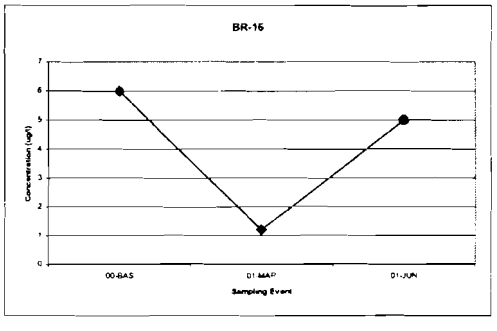

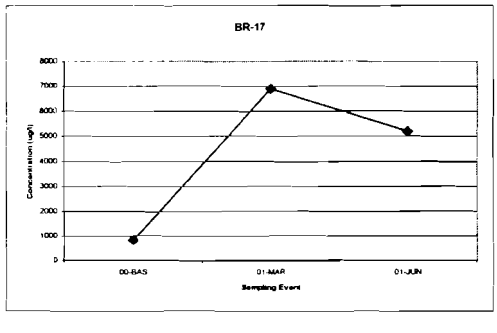

diamond = actual value
circle = value below graphed detecion limit