PRE-REMEDY GROUNDWATER MONITORING REPORT SEPTEMBER 1999 SAMPLING EVENT

TAYLOR INSTRUMENTS SITE
ROCHESTER, NEW YORK

PREPARED FOR:

COMBUSTION ENGINEERING
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TABLE OF CONTENTS

Pre-Remedy Groundwater Monitoring Report
September 1999 Sampling Event
Taylor Instruments Site
Rochester, New York

Section	Description	Page No.
1.0	INTRODUCTION	1-1
2.0	SCOPE OF WORK	2-1
3.0	SUMMARY OF RESULTS	3-1
	3.1 Volatile Organic Compound Results	3-1
	3.1.1 Overburden Wells	3-1
	3.1.2 Bedrock Wells	3-1
	3.2 Natural Attenuation Parameters	3-2
4.0	ANALYTICAL PROGRAM	4-1
	4.1 Analytical Precision and Accuracy	4-2
	4.1.1 Volatile Organic Compounds	4-2
	4.2 Analytical Representativeness	4-2
	4.2.1 Volatile Organic Compounds	4-2
	4.3 Completeness	4-2
	4.4 Comparability	4-2
5.0	CONCLUSIONS	5-1
6.0	REFERENCES	6-1

APPENDICES:

Appendix A Figures
Appendix B Field Sample Records
Appendix C Data Tables
Appendix D Chain Of Custody Forms
Appendix E Laboratory Reports

LIST OF TABLES

Pre-Remedy Groundwater Monitoring Report
September 1999 Sampling Event
Taylor Instruments Site
Rochester, New York

Table	Description	Page No.
2-1	Wells and Analyses, September 1999 Sampling Event	2-1
4-1	Analyses/Methods, September 1999 Sampling Event	4-1

LIST OF ACRONYMS

µg/L	micrograms per liter
COC	contaminants of concern
ELAP	Environmental Laboratory Accreditation Program
HLA	Harding Lawson Associates
LCS	laboratory control sample
mL/min	milliliters per minute
MS/MSD	matrix spike/matrix spike duplicate
NYSDEC	New York State Department of Environmental Conservation
RPD	relative percent difference
TCE	trichloroethene
USEPA	U.S. Environmental Protection Agency
VOC	volatile organic compound

1.0 INTRODUCTION

This report summarizes activities and results for the second of the 1999 tri-annual groundwater sampling events at the former Taylor Instruments Facility - New York Department of Environmental Conservation (NYSDEC) Site #828028a located in Rochester, New York. The Pre-Remedy Groundwater Monitoring Program has been implemented to establish baseline groundwater conditions from which an evaluation of natural and remediation-induced trends of site-related contaminants of concern (COCs) can be determined. Interim remedial work on the on-site storm sewers had taken place just prior to the collection of these samples.

2.0 SCOPE OF WORK

Harding Lawson Associates (HLA) collected groundwater samples from selected monitoring wells at the Taylor Instruments Site from September 15 to 17, 1999. Sampling was accomplished in accordance with the work plan for the Pre-Remedy Groundwater Monitoring Program (HLA, 1999). The wells associated with the groundwater monitoring plan and analyses for which they were submitted is listed in Table 2-1. Figure 1 (Appendix A) shows the site boundary and locations of monitoring wells.

Table 2-1
Wells and Analyses
September 1999 Sampling Event

Pre-Remedy Groundwater Monitoring Report
September 1999 Sampling Event
Taylor Instruments Site
Rochester, New York

Well ID	Well Type	Volatile Organic Compounds	Natural Attenuation Parameters
BR-01	Bedrock	X	
BR-02	Bedrock	X	
BR-03	Bedrock	X	
BR-04	Bedrock	X	
BR-05	Bedrock	X	
BR-07	Bedrock	X	
OB-04	Overburden	X	X
OB-05	Overburden	X	X
MW00	Overburden	X	
TW01	Overburden	X	
TW04	Overburden	X	
TW07	Overburden	X	
TW09	Overburden	X	
TW13	Overburden	X	
TW17	Overburden	X	
TW20	Overburden	X	
W-2	Overburden		X
W-4	Overburden	X	
W-5	Overburden	X	
W-6	Overburden	X	

All monitoring wells were sampled using low-flow peristaltic pumps at flow rates of 400 milliliters per minute (mL/min) or less. Field measurements of pH, conductivity, temperature, turbidity, and dissolved oxygen were collected during purging. Purge and sample data can be found on the field data records (Appendix B).

3.0 SUMMARY OF RESULTS

The following paragraphs discuss the volatile organic compound (VOC) results of the September 1999 sampling event. Natural attenuation parameters were also collected to provide data for use in remedial design. These results are reported herein, but not discussed. Data tables for all analytical parameters are presented in Appendix C.

3.1 VOLATILE ORGANIC COMPOUND RESULTS

3.1.1 Overburden Wells

A total of thirteen overburden wells were sampled during the September 1999 Groundwater Sampling Event and analyzed for VOCs. Results for only those compounds detected in any of the on-site wells sampled are presented in Table 1 (Appendix C). Table 2 in Appendix C lists results for all VOC analytes and includes the results for previous sampling events of September 1997, October 1997, and May 1999.

Trichloroethene (TCE) is the predominant site-related VOC historically detected in the groundwater at the Taylor Instruments Site. TCE was reported in samples from eight of the thirteen overburden wells that were sampled in September 1999. TCE was not present in the upgradient wells that were sampled during this event. TCE was reported at highest concentrations in samples from OB-04 (43,000 micrograms per liter [µg/L] and OB-05 (86,000 µg/L). These wells are located at the two known TCE source areas. Concentrations of TCE reported in downgradient site perimeter wells ranged from non-detect (< 5.0 µg/L) to 1,400 µg/L (TW17). Figure 2 (Appendix A) is an interpretive potentiometric surface map for shallow-overburden groundwater.

Other VOCs detected (and the highest reported concentration) included biotic transformation products of TCE: cis-1,2-dichloroethene (up to 5,000 µg/L), and trans-1,2-dichloroethene (30 µg/L) (Table 1 in Appendix C).

Compounds identified in the September 1999 sampling event are consistent with historical sampling data. Concentrations of TCE show a marked decrease at the source area OB-04 and an increase at the source area OB-05 when compared to the May 1999 levels.

3.1.2 Bedrock Wells

Six of the seven site bedrock wells were sampled and analyzed for VOCs. Upgradient well BR-06 was not sampled during this event. TCE and cis-1,2-dichloroethene were detected in five of the six wells sampled. TCE was detected in source area wells (BR-04 and BR-05) at concentrations of 9,900 and 3,500 µg/L, respectively. TCE was present in downgradient perimeter wells at concentrations from 56 µg/L (BR-03) to 940 µg/L (BR-01).

Other VOCs detected included the TCE biotic transformation products: cis-1,2-dichloroethene (up to 1,800 µg/L [BR-01]), trans-1,2-dichloroethene (13 µg/L [BR-02]), and vinyl chloride (up to 340 µg/L [BR-07]).

Compounds identified in the September 1999 sampling event are consistent with historical sampling data. The concentration of TCE in the source area bedrock well BR-05 continues to decrease when compared to the September and October 1997 and May 1999 results. However, the concentration of TCE in the source area bedrock well BR-04 has increased when compared to the May 1999 results (Table 2 in Appendix C).

3.2 NATURAL ATTENUATION PARAMETERS

Natural attenuation parameters were collected to evaluate the potential for biodegradation at the site. This information will be evaluated further for site remedial purposes. Results are presented in Table 3 in Appendix C.

4.0 ANALYTICAL PROGRAM

Groundwater samples from the September 1999 sampling event were analyzed at Columbia Analytical Services, Rochester, New York, for VOC analyses by U.S. Environmental Protection Agency (USEPA) 8260B. Selected samples were submitted for natural attenuation parameters to provide additional data for treatment system design. Analyses and methods are listed in Table 4-1. The chain-of-custody forms are located in Appendix D.

Table 4-1
Analyses/Methods
September 1999 Sampling Event

Pre-Remedy Groundwater Monitoring Report
September 1999 Sampling Event
Taylor Instruments Site
Rochester, New York

ANALYSIS	METHOD	DESCRIPTION
Volatile Organic Compounds	8260B	Volatiles by GC/MS
Natural Attenuation Parameters		
Carbon Dioxide	4500B	Carbon Dioxide (calculation)
TOC	415.1	Total Organic Carbon
TDS	160.1	Total Dissolved Solids
Ferrous Iron	3500	Biochemical Oxygen Demand (5-Day)
Alkalinity	310.1	Alkalinity
Nitrogen	351/353	Nitrate/Nitrite as N
Chloride	300.0	Chloride by ion chromatography
Sulfate	300.0	Sulfate by ion chromatography
Volatile Fatty Acids	HPLC	Organic acids by HPLC
Sulfide	376.1	Sulfide, total
Gases (ethene, ethane, methane)	8015	Gases by modified 8015

Notes: GC/MS = gas chromatography and mass spectroscopy
TOC = total organic carbon
TDS = total dissolved solids
HPLC = high pressure liquid chromatography

Data quality was evaluated in accordance with the work plan using the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review* (USEPA, 1994), where applicable. The data set was evaluated for the following four categories:

- Precision and Accuracy
- Representativeness
- Completeness
- Comparability

4.1 ANALYTICAL PRECISION AND ACCURACY

4.1.1 Volatile Organic Compounds

The matrix spike/matrix spike duplicate (MS/MSD) analysis was performed on sample W6099901 from well W-6. The MS/MSD recoveries and relative percent differences (RPDs) were within the specified control limits, indicating acceptable accuracy for the matrix and the method and acceptable precision for the laboratory. All of the laboratory control samples (LCSs) exhibited acceptable recoveries.

All surrogate standard recoveries were within acceptance limits for all samples; therefore, no qualifications were necessary.

Water samples BR07099901, BR07099901D (duplicate), BR02099901, BR01099901, TW09099901, TW17099901, and W5099901 were analyzed at dilutions based on historical or screening data to bring target analytes within the calibration range of the method. Samples BR04099901, OB05099901, and OB04099901 were re-analyzed at higher dilutions to bring target analytes within the calibration range of the method. No qualifications were necessary. The laboratory data reports are located in Appendix E.

4.2 ANALYTICAL REPRESENTATIVENESS

4.2.1 Volatile Organic Compounds

All method blanks, rinsate blanks and field blanks were free of contamination.

4.3 COMPLETENESS

No major laboratory deficiencies were discovered during the evaluation. No target analyte data was rejected. The data set is 100 percent complete.

4.4 COMPARABILITY

All analyses were performed by Columbia Analytical Services, an Environmental Laboratory Accreditation Program (ELAP)-certified laboratory. Results were reported according to NYSDEC Analytical Services Protocols. The data are interpreted to be comparable to other data sets provided by ELAP-certified laboratories using comparable analytical methods.

5.0 CONCLUSIONS

The September 1999 groundwater results are consistent with earlier groundwater sampling data and will be used to provide an ongoing baseline of contaminant concentration trends prior to site remediation. The next sampling event is scheduled for January 2000 and will be completed in accordance with the *Pre-Remedy Groundwater Monitoring Work Plan* (HLA, 1999).

6.0 REFERENCES

HLA, 1999. *Pre-Remedy Groundwater Program Work Plan* (April).

New York State Department of Environmental Conservation (NYSDEC), 1992. *Division of Hazardous Substances Regulation, Bureau of Technical Support, TAGM 3028 (November).*

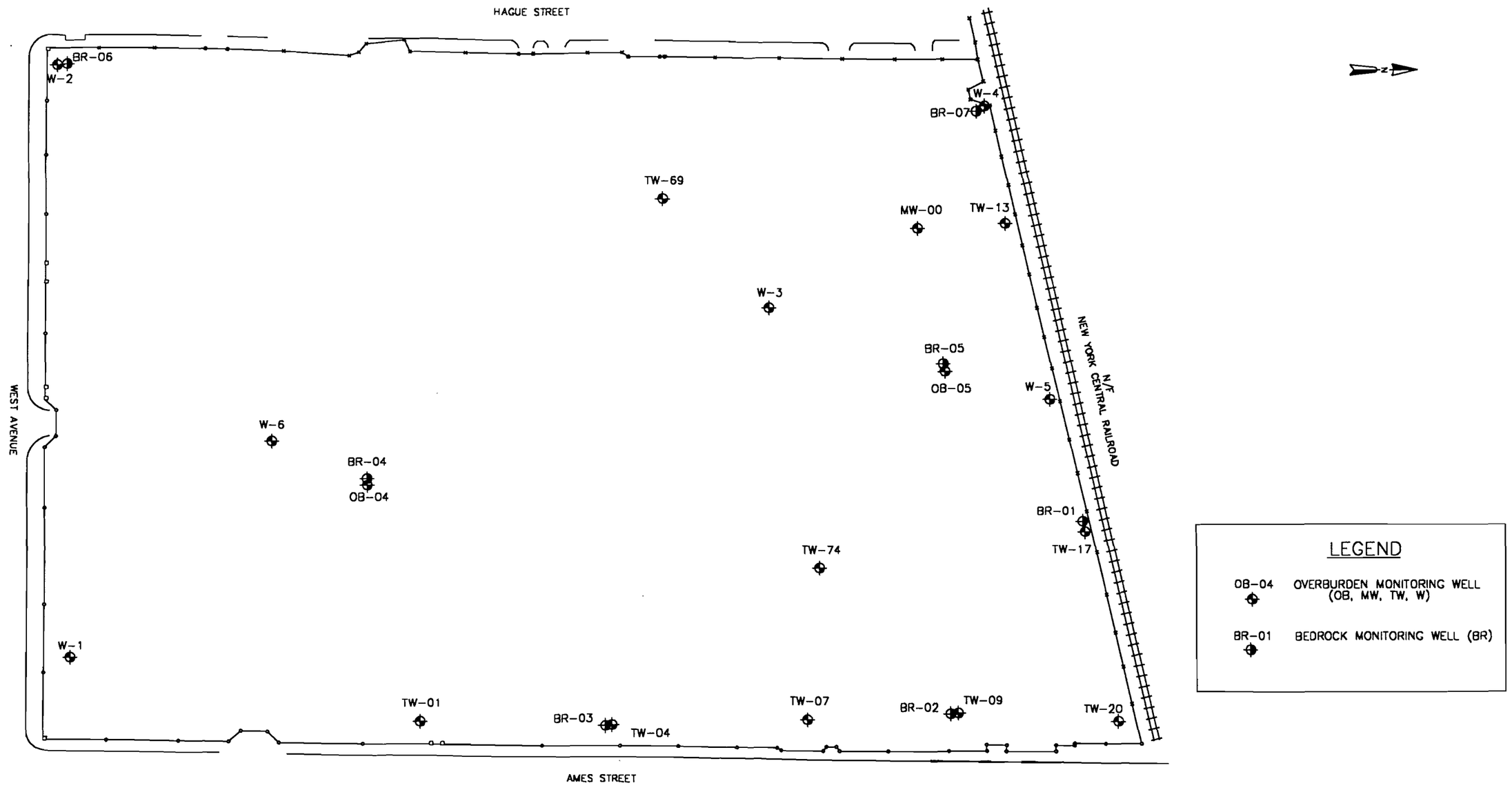
NYSDEC, 1997. *Voluntary Cleanup Agreement Taylor Instruments Site #828028a* (November).

United States Environmental Protection Agency (USEPA), 1998. *Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Groundwater.* EPA/600/R-98/128, Office of Research and Development, Washington, DC 20460 (September).

USEPA, 1994. *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review.*

APPENDIX A

FIGURES



LEGEND

OB-04 — OVERBURDEN MONITORING WELL (OB, MW, TW, W)

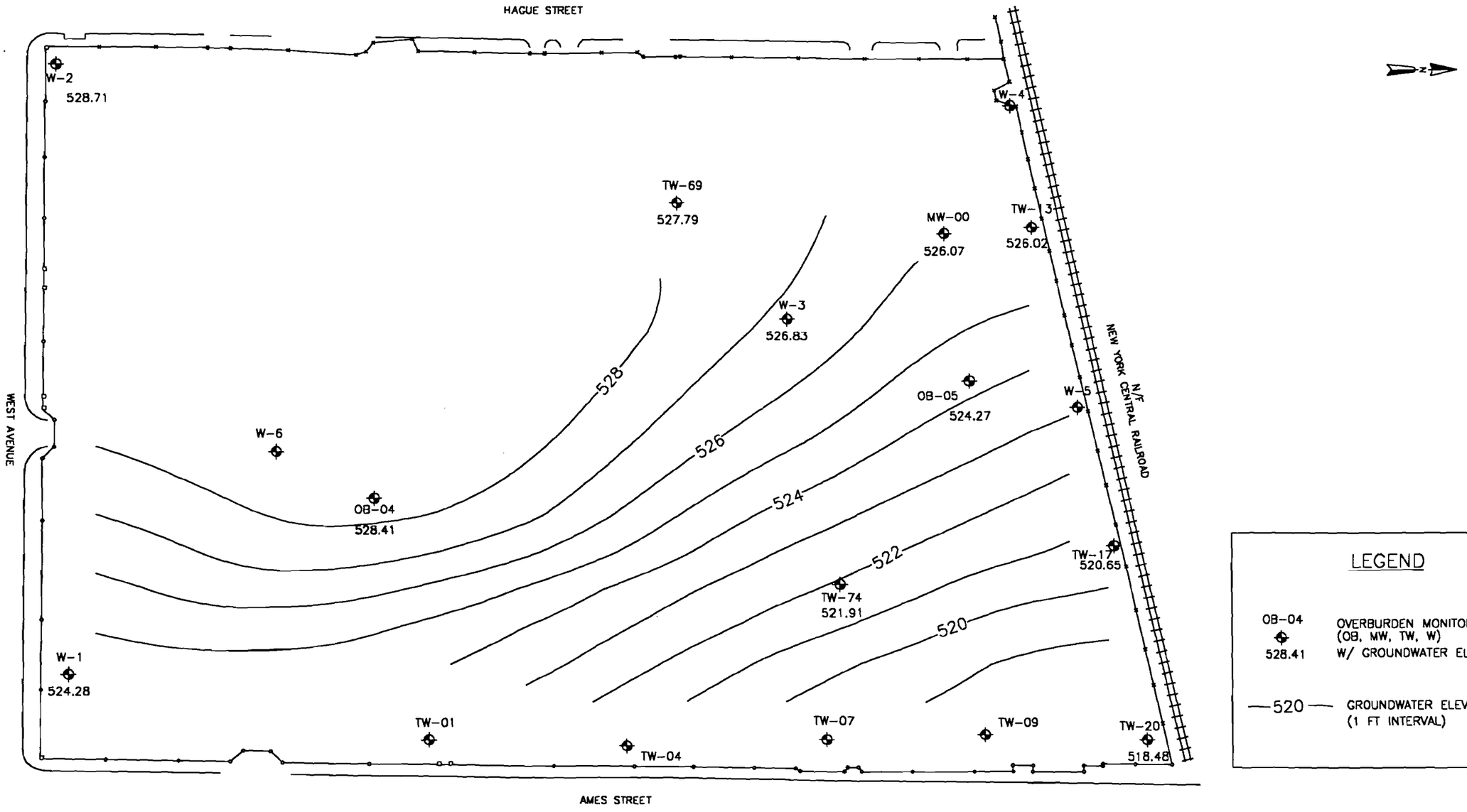
BR-01 — BEDROCK MONITORING WELL (BR)

HLA Harding Lawson Associates

TITLE:
GROUNDWATER MONITORING LOCATIONS
PRE-REMEDY GROUNDWATER MONITORING PROGRAM
TAYLOR INSTRUMENTS SITE, ROCHESTER, NY

0 50 100
FEET

DWN: JRF	DES.:	PROJECT NO.: 44836	
CHKD:	APPD:		
DATE: 7/7/99	REV.: 00	FIGURE NO.: 1	



Harding Lawson Associates

TITLE:
POTENTIOMETRIC SURFACE MAP
OVERBURDEN GROUNDWATER, SEPTEMBER 1999
TAYLOR INSTRUMENTS FACILITY, ROCHESTER, NY.

0 50 100
FEET

DWN: JRF	DES.: DES	PROJECT NO.: 44836	
CHKD: CKD	APPD: APP	FIGURE NO.: 2	
DATE: 11/29/99	REV.: REV		

Table 2

VOC Results
September 1997 - September 1999
Pre-Remedy Groundwater Monitoring Plan
Taylor Instruments Facility
Rochester, NY

CONSTITUENT (Units in ug/l)	SITE	BR-05	BR-05	BR-05	BR-05	BR-06	BR-06
	SAMPLE ID	BR05XXXX	BR05XXXX	BR05059901	BR05099901	BR06XXXX	BR06XXXX
	DATE	09/09/97	10/01/97	05/06/99	09/17/99	09/09/97	10/01/97
	RESULT TYPE	Primary	Primary	Primary	Primary	Primary	Primary
Acetone		500 U	500 U	20 U	400 U	20 U	20 U
Benzene		130 U	130 U	5 U	100 U	5 U	5 U
Bromodichloromethane		130 U	130 U	5 U	100 U	5 U	5 U
Bromoform		130 U	130 U	5 U	100 U	5 U	5 U
Bromomethane		130 U	130 U	5 U	100 U	5 U	5 U
2-Butanone (MEK)		250 U	250 U	10 U	200 U	10 U	10 U
Carbon disulfide		250 U	250 U	10 U	200 U	10 U	10 U
Carbon tetrachloride		130 U	130 U	5 U	100 U	5 U	5 U
Chlorobenzene		130 U	130 U	5 U	100 U	5 U	5 U
Chloroethane		130 U	130 U	5 U	100 U	5 U	5 U
Chloroform		130 U	130 U	5 U	100 U	5 U	5 U
Chloromethane		130 U	130 U	5 U	100 U	5 U	5 U
Dibromochloromethane		130 U	130 U	5 U	100 U	5 U	5 U
1,1-Dichloroethane		130 U	130 U	5.2 J	100 U	5 U	5 U
1,2-Dichloroethane		130 U	130 U	5 U	100 U	5 U	5 U
1,1-Dichloroethene		130 U	130 U	23 J	100 U	5 U	5 U
cis-1,2-Dichloroethene		580	620	440	1400	5 U	5 U
trans-1,2-Dichloroethene		130 U	130 U	84 J	100 U	5 U	5 U
1,2-Dichloropropane		130 U	130 U	5 U	100 U	5 U	5 U
cis-1,3-Dichloropropene		130 U	130 U	5 U	100 U	5 U	5 U
trans-1,3-Dichloropropene		130 U	130 U	5 U	100 U	5 U	5 U
Ethylbenzene		130 U	130 U	5 U	100 U	5 U	5 U
2-Hexanone		250 U	250 U	10 U	200 U	10 U	10 U
Methylene chloride		130 U	130 U	5 U	100 U	5 U	5 U
4-Methyl-2-pentanone(MIBK)		250 U	250 U	10 U	200 U	10 U	10 U
Styrene		130 U	130 U	5 U	100 U	5 U	5 U

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

Table 2

VOC Results
September 1997 - September 1999
Pre-Remedy Groundwater Monitoring Plan
Taylor Instruments Facility
Rochester, NY

CONSTITUENT (Units in ug/l)	SITE	BR-05	BR-05	BR-05	BR-05	BR-06	BR-06
	SAMPLE ID	BR05XXXX	BR05XXXX	BR05059901	BR05099901	BR06XXXX	BR06XXXX
	DATE	09/09/97	10/01/97	05/06/99	09/17/99	09/09/97	10/01/97
	RESULT TYPE	Primary	Primary	Primary	Primary	Primary	Primary
1,1,2,2-Tetrachloroethane		130 U	130 U	5 U	100 U	5 U	5 U
Tetrachloroethene		130 U	130 U	5 U	100 U	5 U	5 U
Toluene		130 U	130 U	5 U	100 U	5 U	5 U
1,1,1-Trichloroethane		130 U	130 U	5 U	100 U	5 U	5 U
1,1,2-Trichloroethane		130 U	130 U	5 U	100 U	5 U	5 U
Trichloroethene		10000	12000	6700	3500	5 U	5 U
Vinyl chloride		130 U	130 U	95 J	120	5 U	5 U
o-Xylene		130 U	130 U	5 U	100 U	5 U	5 U
m + p-Xylene		130 U	130 U	5 U	100 U	5 U	5 U

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U = Not Detected, quantitation limit noted, J = Estimated Value, UJ = Quantitation Limit estimated For RCL VOA

Table 2

VOC Results
September 1997 - September 1999
Pre-Remedy Groundwater Monitoring Plan
Taylor Instruments Facility
Rochester, NY

CONSTITUENT (Units in ug/l)	SITE	BR-06	BR-07	BR-07	BR-07	BR-07	BR-07
	SAMPLE ID	BR06059901	BR07XXXX	BR07XXXX	BR07XXXD	BR07059901	BR07099901
	DATE	05/04/99	09/07/97	10/01/97	10/01/97	05/05/99	09/15/99
	RESULT TYPE	Primary	Primary	Primary	Duplicate 1	Primary	Primary
Acetone		20 U	40 U	100 U	50 U	20 U	50 U
Benzene		5 U	10 U	25 U	13 U	5 U	13 U
Bromodichloromethane		5 U	10 U	25 U	13 U	5 U	13 U
Bromoform		5 U	10 U	25 U	13 U	5 U	13 U
Bromomethane		5 U	10 U	25 U	13 U	5 U	13 U
2-Butanone (MEK)		10 U	20 U	50 U	25 U	10 U	25 U
Carbon disulfide		10 U	20 U	50 U	25 U	10 U	25 U
Carbon tetrachloride		5 U	10 U	25 U	13 U	5 U	13 U
Chlorobenzene		5 U	10 U	25 U	13 U	5 U	13 U
Chloroethane		5 U	10 U	25 U	13 U	5 U	13 U
Chloroform		5 U	14	25 U	13 U	5 U	13 U
Chloromethane		5 U	10 U	25 U	13 U	5 U	13 U
Dibromochloromethane		5 U	10 U	25 U	13 U	5 U	13 U
1,1-Dichloroethane		5 U	10 U	25 U	13 U	5 U	13 U
1,2-Dichloroethane		5 U	10 U	25 U	13 U	5 U	13 U
1,1-Dichloroethene		5 U	10 U	25 U	13 U	5 U	13 U
cis-1,2-Dichloroethene		5 U	62	460	450	53	32
trans-1,2-Dichloroethene		5 U	10 U	25 U	13 U	5.9	13 U
1,2-Dichloropropane		5 U	10 U	25 U	13 U	5 U	13 U
cis-1,3-Dichloropropene		5 U	10 U	25 U	13 U	5 U	13 U
trans-1,3-Dichloropropene		5 U	10 U	25 U	13 U	5 U	13 U
Ethylbenzene		5 U	10 U	25 U	13 U	5 U	13 U
2-Hexanone		10 U	20 U	50 U	25 U	10 U	25 U
Methylene chloride		5 U	10 U	25 U	13 U	5 U	13 U
4-Methyl-2-pentanone(MIBK)		10 U	20 U	50 U	25 U	10 U	25 U
Styrene		5 U	10 U	25 U	13 U	5 U	13 U

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

Table 2

VOC Results
September 1997 - September 1999
Pre-Remedy Groundwater Monitoring Plan
Taylor Instruments Facility
Rochester, NY

CONSTITUENT (Units in ug/l)	SITE	BR-06	BR-07	BR-07	BR-07	BR-07	BR-07
	SAMPLE ID	BR06059901	BR07XXXX	BR07XXXX	BR07XXXD	BR07059901	BR07099901
	DATE	05/04/99	09/07/97	10/01/97	10/01/97	05/05/99	09/15/99
	RESULT TYPE	Primary	Primary	Primary	Duplicate 1	Primary	Primary
1,1,2,2-Tetrachloroethane		5 U	10 U	25 U	13 U	5 U	13 U
Tetrachloroethene		5 U	10 U	25 U	13 U	5 U	13 U
Toluene		5 U	26	61	54	5 U	13 U
1,1,1-Trichloroethane		5 U	10 U	25 U	13 U	5 U	13 U
1,1,2-Trichloroethane		5 U	10 U	25 U	13 U	5 U	13 U
Trichloroethene		5 U	210	110	13 U	5.4	13 U
Vinyl chloride		5 U	200	700	530	360 J	340
o-Xylene		5 U	10 U	25 U	13 U	5 U	13 U
m + p-Xylene		5 U	10 U	25 U	13 U	5 U	13 U

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U = Not Detected, quantitation limit noted, J = Estimated Value, UJ = Quantitation Limit estimated For RCL VOA

Table 2

VOC Results
September 1997 - September 1999
Pre-Remedy Groundwater Monitoring Plan
Taylor Instruments Facility
Rochester, NY

CONSTITUENT (Units in ug/l)	SITE	BR-07	MW00	MW00	OB-04	OB-04	OB-04
	SAMPLE ID	BR07099901D	MW00059901	MW00099901	OB04XXXX	OB04XXXX	OB04059901
	DATE	09/15/99	05/05/99	09/15/99	09/09/97	10/02/97	05/06/99
	RESULT TYPE	Duplicate 1	Primary	Primary	Primary	Primary	Primary
Acetone		50 U	20 U	20 U	50000 U	50000 U	20 U
Benzene		13 U	5 U	5 U	13000 U	13000 U	5.7
Bromodichloromethane		13 U	5 U	5 U	13000 U	13000 U	5 U
Bromoform		13 U	5 U	5 U	13000 U	13000 U	5 U
Bromomethane		13 U	5 U	5 U	13000 U	13000 U	5 U
2-Butanone (MEK)		25 U	10 U	10 U	25000 U	25000 U	10 U
Carbon disulfide		25 U	10 U	10 U	25000 U	25000 U	10 U
Carbon tetrachloride		13 U	5 U	5 U	13000 U	13000 U	5 U
Chlorobenzene		13 U	5 U	5 U	13000 U	13000 U	5 U
Chloroethane		13 U	5 U	5 U	13000 U	13000 U	5 U
Chloroform		13 U	5 U	5 U	13000 U	13000 U	5 U
Chloromethane		13 U	5 U	5 U	13000 U	13000 U	5 U
Dibromochloromethane		13 U	5 U	5 U	13000 U	13000 U	5 U
1,1-Dichloroethane		13 U	5 U	5 U	13000 U	13000 U	5 U
1,2-Dichloroethane		13 U	5 U	5 U	13000 U	13000 U	5 U
1,1-Dichloroethene		13 U	5 U	5 U	13000 U	13000 U	19
cis-1,2-Dichloroethene		33	5 U	5 U	27000	13000	1800 J
trans-1,2-Dichloroethene		13 U	5 U	5 U	13000 U	13000 U	25
1,2-Dichloropropane		13 U	5 U	5 U	13000 U	13000 U	5 U
cis-1,3-Dichloropropene		13 U	5 U	5 U	13000 U	13000 U	5 U
trans-1,3-Dichloropropene		13 U	5 U	5 U	13000 U	13000 U	5 U
Ethylbenzene		13 U	6.1	5 U	13000 U	13000 U	5 U
2-Hexanone		25 U	10 U	10 U	25000 U	25000 U	10 U
Methylene chloride		13 U	5 U	5 U	13000 U	13000 U	5 U
4-Methyl-2-pentanone(MIBK)		25 U	10 U	10 U	25000 U	25000 U	10 U
Styrene		13 U	5 U	5 U	13000 U	13000 U	5 U

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

Table 2

VOC Results
September 1997 - September 1999
Pre-Remedy Groundwater Monitoring Plan
Taylor Instruments Facility
Rochester, NY

CONSTITUENT (Units in ug/l)	SITE	BR-07	MW00	MW00	OB-04	OB-04	OB-04
	SAMPLE ID	BR07099901D	MW00059901	MW00099901	OB04XXXX	OB04XXXX	OB04059901
	DATE	09/15/99	05/05/99	09/15/99	09/09/97	10/02/97	05/06/99
	RESULT TYPE	Duplicate 1	Primary	Primary	Primary	Primary	Primary
1,1,2,2-Tetrachloroethane		13 U	5 U	5 U	13000 U	13000 U	5 U
Tetrachloroethene		13 U	5 U	5 U	13000 U	13000 U	23
Toluene		13 U	5 U	5 U	13000 U	13000 U	5.7
1,1,1-Trichloroethane		13 U	5 U	5 U	13000 U	13000 U	5 U
1,1,2-Trichloroethane		13 U	5 U	5 U	13000 U	13000 U	5 U
Trichloroethene		13 U	5 U	5 U	550000	280000	68000 J
Vinyl chloride		350	12	5 U	13000 U	13000 U	5 U
o-Xylene		13 U	5 U	5 U	13000 U	13000 U	5 U
m + p-Xylene		13 U	5 U	5 U	13000 U	13000 U	5 U

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

U = Not Detected, quantitation limit noted, J = Estimated Value, UJ = Quantitation Limit estimated For RCL VOA

Table 2

VOC Results
September 1997 - September 1999
Pre-Remedy Groundwater Monitoring Plan
Taylor Instruments Facility
Rochester, NY

CONSTITUENT (Units in ug/l)	SITE	OB-04	OB-05	OB-05	OB-05	OB-05	TW01
	SAMPLE ID	OB04099901	OB05XXXX	OB05XXXX	OB05059901	OB05099901	TW01XXXX
	DATE	09/17/99	09/09/97	10/01/97	05/06/99	09/17/99	09/08/97
	RESULT TYPE	Primary	Primary	Primary	Primary	Primary	Primary
Acetone		2000 U	20000 U	5000 U	20 U	1000 U	20 U
Benzene		500 U	5000 U	1300 U	5 U	250 U	5 U
Bromodichloromethane		500 U	5000 U	1300 U	5 U	250 U	5 U
Bromoform		500 U	5000 U	1300 U	5 U	250 U	5 U
Bromomethane		500 U	5000 U	1300 U	5 U	250 U	5 U
2-Butanone (MEK)		1000 U	10000 U	2500 U	10 U	500 U	10 U
Carbon disulfide		1000 U	10000 U	2500 U	10 U	500 U	10 U
Carbon tetrachloride		500 U	5000 U	1300 U	5 U	250 U	5 U
Chlorobenzene		500 U	5000 U	1300 U	5 U	250 U	5 U
Chloroethane		500 U	5000 U	1300 U	5 U	250 U	5 U
Chloroform		500 U	5000 U	1300 U	5 U	250 U	5 U
Chloromethane		500 U	5000 U	1300 U	5 U	250 U	5 U
Dibromochloromethane		500 U	5000 U	1300 U	5 U	250 U	5 U
1,1-Dichloroethane		500 U	5000 U	1300 U	5 U	250 U	5 U
1,2-Dichloroethane		500 U	5000 U	1300 U	5 U	250 U	5 U
1,1-Dichloroethene		500 U	5000 U	1300 U	23	250 U	5 U
cis-1,2-Dichloroethene		5000	5000 U	1300 U	2700 J	2800	5 U
trans-1,2-Dichloroethene		500 U	5000 U	1300 U	29	250 U	5 U
1,2-Dichloropropane		500 U	5000 U	1300 U	5 U	250 U	5 U
cis-1,3-Dichloropropene		500 U	5000 U	1300 U	5 U	250 U	5 U
trans-1,3-Dichloropropene		500 U	5000 U	1300 U	5 U	250 U	5 U
Ethylbenzene		500 U	5000 U	1300 U	5 U	250 U	5 U
2-Hexanone		1000 U	10000 U	2500 U	10 U	500 U	10 U
Methylene chloride		500 U	5000 U	1300 U	5 U	250 U	5 U
4-Methyl-2-pentanone(MIBK)		1000 U	10000 U	2500 U	10 U	500 U	10 U
Styrene		500 U	5000 U	1300 U	5 U	250 U	5 U

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Table 2

VOC Results
September 1997 - September 1999
Pre-Remedy Groundwater Monitoring Plan
Taylor Instruments Facility
Rochester, NY

CONSTITUENT (Units in ug/l)	SITE	OB-04	OB-05	OB-05	OB-05	OB-05	TW01
	SAMPLE ID	OB04099901	OB05XXXX	OB05XXXX	OB05059901	OB05099901	TW01XXXX
	DATE	09/17/99	09/09/97	10/01/97	05/06/99	09/17/99	09/08/97
	RESULT TYPE	Primary	Primary	Primary	Primary	Primary	Primary
1,1,2,2-Tetrachloroethane		500 U	5000 U	1300 U	5 U	250 U	5 U
Tetrachloroethene		500 U	5000 U	1300 U	20	250 U	5 U
Toluene		500 U	5000 U	1300 U	5 U	250 U	5 U
1,1,1-Trichloroethane		500 U	5000 U	1300 U	5 U	250 U	5 U
1,1,2-Trichloroethane		500 U	5000 U	1300 U	5 U	250 U	5 U
Trichloroethene		43000	120000	47000	23000 J	86000	6.0
Vinyl chloride		500 U	5000 U	1300 U	140	250 U	5 U
o-Xylene		500 U	5000 U	1300 U	5 U	250 U	5 U
m + p-Xylene		500 U	5000 U	1300 U	5 U	250 U	5 U

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Table 2

VOC Results
September 1997 - September 1999
Pre-Remedy Groundwater Monitoring Plan
Taylor Instruments Facility
Rochester, NY

CONSTITUENT (Units in ug/l)	SITE	TW01	TW01	TW04	TW04	TW04	TW04
	SAMPLE ID	TW01059901	TW01099901	TW04XXXX	TW04XXXD	TW04059901	TW04099901
	DATE	05/04/99	09/17/99	09/06/97	09/06/97	05/04/99	09/16/99
	RESULT TYPE	Primary	Primary	Primary	Duplicate 1	Primary	Primary
Acetone		20 U	20 U	20 U	20 U	20 U	20 U
Benzene		5 U	5 U	5 U	5 U	5 U	5 U
Bromodichloromethane		5 U	5 U	5 U	5 U	5 U	5 U
Bromoform		5 U	5 U	5 U	5 U	5 U	5 U
Bromomethane		5 U	5 U	5 U	5 U	5 U	5 U
2-Butanone (MEK)		10 U	10 U	10 U	10 U	10 U	10 U
Carbon disulfide		10 U	10 U	10 U	10 U	10 U	10 U
Carbon tetrachloride		5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene		5 U	5 U	5 U	5 U	5 U	5 U
Chloroethane		5 U	5 U	5 U	5 U	5 U	5 U
Chloroform		5 U	5 U	5 U	5 U	5 U	5 U
Chloromethane		5 U	5 U	5 U	5 U	5 U	5 U
Dibromochloromethane		5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane		5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane		5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene		5 U	5 U	5 U	5 U	5 U	5 U
cis-1,2-Dichloroethene		5 U	5 U	5 U	5 U	5 U	5 U
trans-1,2-Dichloroethene		5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane		5 U	5 U	5 U	5 U	5 U	5 U
cis-1,3-Dichloropropene		5 U	5 U	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene		5 U	5 U	5 U	5 U	5 U	5 U
Ethylbenzene		5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone		10 U	10 U	10 U	10 U	10 U	10 U
Methylene chloride		5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone(MIBK)		10 U	10 U	10 U	10 U	10 U	10 U
Styrene		5 U	5 U	5 U	5 U	5 U	5 U

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Table 2

VOC Results
September 1997 - September 1999
Pre-Remedy Groundwater Monitoring Plan
Taylor Instruments Facility
Rochester, NY

CONSTITUENT (Units in ug/l)	SITE	TW01	TW01	TW04	TW04	TW04	TW04
	SAMPLE ID	TW01059901	TW01099901	TW04XXXX	TW04XXXD	TW04059901	TW04099901
	DATE	05/04/99	09/17/99	09/06/97	09/06/97	05/04/99	09/16/99
	RESULT TYPE	Primary	Primary	Primary	Duplicate 1	Primary	Primary
1,1,2,2-Tetrachloroethane		5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene		5 U	5 U	5 U	5 U	5 U	5 U
Toluene		5 U	5 U	5 U	5 U	5 U	5 U
1,1,1-Trichloroethane		5 U	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane		5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethene		5 U	5.1	77	72	91	92
Vinyl chloride		5 U	5 U	5 U	5 U	5 U	5 U
o-Xylene		5 U	5 U	5 U	5 U	5 U	5 U
m+p-Xylene		5 U	5 U	5 U	5 U	5 U	5 U

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Table 2

VOC Results
September 1997 - September 1999
Pre-Remedy Groundwater Monitoring Plan
Taylor Instruments Facility
Rochester, NY

Date: 12/09/99

CONSTITUENT (Units in ug/l)	SITE	TW07	TW07	TW07	TW07	TW09	TW09
	SAMPLE ID	TW07XXXX	TW07XXXX	TW07059901	TW07099901	TW09XXXX	TW09059901
	DATE	09/07/97	10/02/97	05/05/99	09/15/99	09/07/97	05/05/99
	RESULT TYPE	Primary	Primary	Primary	Primary	Primary	Primary
Acetone		20 U	20 U	20 U	20 U	50 U	40 U
Benzene		5.0 U	5 U	5 U	5.0 U	13 U	10 U
Bromodichloromethane		5.0 U	5 U	5 U	5.0 U	13 U	10 U
Bromoform		5.0 U	5 U	5 U	5.0 U	13 U	10 U
Bromomethane		5.0 U	5 U	5 U	5.0 U	13 U	10 U
2-Butanone (MEK)		10 U	10 U	10 U	10 U	25 U	20 U
Carbon disulfide		10 U	10 U	10 U	10 U	25 U	20 U
Carbon tetrachloride		5.0 U	5 U	5 U	5.0 U	13 U	10 U
Chlorobenzene		5.0 U	5 U	5 U	5.0 U	13 U	10 U
Chloroethane		5.0 U	5 U	5 U	5.0 U	13 U	10 U
Chloroform		5.0 U	5 U	5 U	5.0 U	13 U	10 U
Chloromethane		5.0 U	5 U	5 U	5.0 U	13 U	10 U
Dibromochloromethane		5.0 U	5 U	5 U	5.0 U	13 U	10 U
1,1-Dichloroethane		5.0 U	5 U	5 U	5.0 U	13 U	10 U
1,2-Dichloroethane		5.0 U	5 U	5 U	5.0 U	13 U	10 U
1,1-Dichloroethene		5.0 U	5 U	5 U	5.0 U	13 U	10 U
cis-1,2-Dichloroethene		5.3	5 U	5 U	12	23	34 J
trans-1,2-Dichloroethene		35	31	5 U	30	13 U	10 U
1,2-Dichloropropane		5.0 U	5 U	5 U	5.0 U	13 U	10 U
cis-1,3-Dichloropropene		5.0 U	5 U	5 U	5.0 U	13 U	10 U
trans-1,3-Dichloropropene		5.0 U	5 U	5 U	5.0 U	13 U	10 U
Ethylbenzene		5.0 U	5 U	5 U	5.0 U	13 U	10 U
2-Hexanone		10 U	10 U	10 U	10 U	25 U	20 U
Methylene chloride		5.0 U	5 U	5 U	5.0 U	13 U	10 U
4-Methyl-2-pentanone(MIBK)		10 U	10 U	10 U	10 U	25 U	20 U
Styrene		5.0 U	5 U	5 U	5.0 U	13 U	10 U

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Table 2

VOC Results
September 1997 - September 1999
Pre-Remedy Groundwater Monitoring Plan
Taylor Instruments Facility
Rochester, NY

Date: 12/09/99

CONSTITUENT (Units in ug/l)	SITE	TW07	TW07	TW07	TW07	TW09	TW09
	SAMPLE ID	TW07XXXX	TW07XXXX	TW07059901	TW07099901	TW09XXXX	TW09059901
	DATE	09/07/97	10/02/97	05/05/99	09/15/99	09/07/97	05/05/99
	RESULT TYPE	Primary	Primary	Primary	Primary	Primary	Primary
1,1,2,2-Tetrachloroethane		5.0 U	5 U	5 U	5.0 U	13 U	10 U
Tetrachloroethene		5.0 U	5 U	5 U	5.0 U	13 U	10 U
Toluene		5.0 U	5 U	5 U	5.0 U	13 U	10 U
1,1,1-Trichloroethane		5.0 U	5 U	5 U	5.0 U	13 U	10 U
1,1,2-Trichloroethane		5.0 U	5 U	5 U	5.0 U	13 U	10 U
Trichloroethene		41	32	14	70	410	880 J
Vinyl chloride		5.0 U	5 U	5 U	5.0 U	13 U	10 U
o-Xylene		5.0 U	5 U	5 U	5.0 U	13 U	10 U
m+p-Xylene		5.0 U	5 U	5 U	5.0 U	13 U	10 U

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Table 2

VOC Results
September 1997 - September 1999
Pre-Remedy Groundwater Monitoring Plan
Taylor Instruments Facility
Rochester, NY

Date: 12/09/99

CONSTITUENT (Units in ug/l)	SITE	TW09	TW09	TW13	TW13	TW13	TW17
	SAMPLE ID	TW09059901D	TW09099901	TW13XXXX	TW13059901	TW13099901	TW17XXXX
	DATE	05/05/99	09/17/99	09/08/97	05/05/99	09/15/99	09/06/97
	RESULT TYPE	Duplicate 1	Primary	Primary	Primary	Primary	Primary
Acetone		20 U	100 U	20 U	20 U	20 U	200 U
Benzene		5 U	25 U	5.0 U	5 U	5.0 U	50 U
Bromodichloromethane		5 U	25 U	5.0 U	5 U	5.0 U	50 U
Bromoform		5 U	25 U	5.0 U	5 U	5.0 U	50 U
Bromomethane		5 U	25 U	5.0 U	5 U	5.0 U	50 U
2-Butanone (MEK)		10 U	50 U	10 U	10 U	10 U	100 U
Carbon disulfide		10 U	50 U	10 U	10 U	10 U	100 U
Carbon tetrachloride		5 U	25 U	5.0 U	5 U	5.0 U	50 U
Chlorobenzene		5 U	25 U	5.0 U	5 U	5.0 U	50 U
Chloroethane		5 U	25 U	5.0 U	5 U	5.0 U	50 U
Chloroform		5 U	25 U	5.0 U	5 U	5.0 U	50 U
Chloromethane		5 U	25 U	5.0 U	5 U	5.0 U	50 U
Dibromochloromethane		5 U	25 U	5.0 U	5 U	5.0 U	50 U
1,1-Dichloroethane		5 U	25 U	5.0 U	5 U	5.0 U	50 U
1,2-Dichloroethane		5 U	25 U	5.0 U	5 U	5.0 U	50 U
1,1-Dichloroethene		5 U	25 U	5.0 U	5 U	5.0 U	50 U
cis-1,2-Dichloroethene		28 J	39	5.0 U	5 U	5.0 U	50 U
trans-1,2-Dichloroethene		5 U	25 U	5.0 U	5 U	5.0 U	50 U
1,2-Dichloropropane		5 U	25 U	5.0 U	5 U	5.0 U	50 U
cis-1,3-Dichloropropene		5 U	25 U	5.0 U	5 U	5.0 U	50 U
trans-1,3-Dichloropropene		5 U	25 U	5.0 U	5 U	5.0 U	50 U
Ethylbenzene		5 U	25 U	5.0 U	5 U	5.0 U	50 U
2-Hexanone		10 U	50 U	10 U	10 U	10 U	100 U
Methylene chloride		5 U	25 U	5.0 U	5 U	5.0 U	50 U
4-Methyl-2-pentanone(MIBK)		10 U	50 U	10 U	10 U	10 U	100 U
Styrene		5 U	25 U	5.0 U	5 U	5.0 U	50 U

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VOC Results
September 1997 - September 1999
Pre-Remedy Groundwater Monitoring Plan
Taylor Instruments Facility
Rochester, NY

CONSTITUENT (Units in ug/l)	SITE	TW09	TW09	TW13	TW13	TW13	TW17
	SAMPLE ID	TW09059901D	TW09099901	TW13XXXX	TW13059901	TW13099901	TW17XXXX
	DATE	05/05/99	09/17/99	09/08/97	05/05/99	09/15/99	09/06/97
	RESULT TYPE	Duplicate 1	Primary	Primary	Primary	Primary	Primary
1,1,2,2-Tetrachloroethane		5 U	25 U	5.0 U	5 U	5.0 U	50 U
Tetrachloroethene		5 U	25 U	5.0 U	5 U	5.0 U	50 U
Toluene		5 U	25 U	5.0 U	5 U	5.0 U	50 U
1,1,1-Trichloroethane		5 U	25 U	5.0 U	5 U	5.0 U	50 U
1,1,2-Trichloroethane		5 U	25 U	5.0 U	5 U	5.0 U	50 U
Trichloroethene		990 J	520	5.0 U	5 U	5.0 U	1900
Vinyl chloride		5 U	25 U	5.0 U	5 U	5.0 U	50 U
o-Xylene		5 U	25 U	5.0 U	5 U	5.0 U	50 U
m+p-Xylene		5 U	25 U	5.0 U	5 U	5.0 U	50 U

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Table 2

VOC Results
September 1997 - September 1999
Pre-Remedy Groundwater Monitoring Plan
Taylor Instruments Facility
Rochester, NY

Date: 12/09/99

CONSTITUENT (Units in ug/l)	SITE	TW17	TW17	TW20	TW20	TW20	TW20
	SAMPLE ID	TW17059901	TW17099901	TW20XXXX	TW20059901	TW20099901	TW20099901D
	DATE	05/06/99	09/17/99	09/08/97	05/05/99	09/16/99	09/16/99
	RESULT TYPE	Primary	Primary	Primary	Primary	Primary	Duplicate 1
Acetone		20 U	200 U	20 U	20 U	20 U	20 U
Benzene		5 U	50 U	5.0 U	5 U	5.0 U	5.0 U
Bromodichloromethane		5 U	50 U	5.0 U	5 U	5.0 U	5.0 U
Bromoform		5 U	50 U	5.0 U	5 U	5.0 U	5.0 U
Bromomethane		5 U	50 U	5.0 U	5 U	5.0 U	5.0 U
2-Butanone (MEK)		10 U	100 U	10 U	10 U	10 U	10 U
Carbon disulfide		10 U	100 U	10 U	10 U	10 U	10 U
Carbon tetrachloride		5 U	50 U	5.0 U	5 U	5.0 U	5.0 U
Chlorobenzene		5 U	50 U	5.0 U	5 U	5.0 U	5.0 U
Chloroethane		5 U	50 U	5.0 U	5 U	5.0 U	5.0 U
Chloroform		5 U	50 U	5.0 U	5 U	5.0 U	5.0 U
Chloromethane		5 U	50 U	5.0 U	5 U	5.0 U	5.0 U
Dibromochloromethane		5 U	50 U	5.0 U	5 U	5.0 U	5.0 U
1,1-Dichloroethane		5 U	50 U	5.0 U	5 U	5.0 U	5.0 U
1,2-Dichloroethane		5 U	50 U	5.0 U	5 U	5.0 U	5.0 U
1,1-Dichloroethene		5 U	50 U	5.0 U	5 U	5.0 U	5.0 U
cis-1,2-Dichloroethene		11 J	50 U	5.0 U	5 U	5.0 U	5.0 U
trans-1,2-Dichloroethene		5 U	50 U	5.0 U	5 U	5.0 U	5.0 U
1,2-Dichloropropane		5 U	50 U	5.0 U	5 U	5.0 U	5.0 U
cis-1,3-Dichloropropene		5 U	50 U	5.0 U	5 U	5.0 U	5.0 U
trans-1,3-Dichloropropene		5 U	50 U	5.0 U	5 U	5.0 U	5.0 U
Ethylbenzene		5 U	50 U	5.0 U	5 U	5.0 U	5.0 U
2-Hexanone		10 U	100 U	10 U	10 U	10 U	10 U
Methylene chloride		5 U	50 U	5.0 U	5 U	5.0 U	5.0 U
4-Methyl-2-pentanone(MIBK)		10 U	100 U	10 U	10 U	10 U	10 U
Styrene		5 U	50 U	5.0 U	5 U	5.0 U	5.0 U

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Table 2

VOC Results
September 1997 - September 1999
Pre-Remedy Groundwater Monitoring Plan
Taylor Instruments Facility
Rochester, NY

Date: 12/09/99

CONSTITUENT (Units in ug/l)	SITE	TW17	TW17	TW20	TW20	TW20	TW20
	SAMPLE ID	TW17059901	TW17099901	TW20XXXX	TW20059901	TW20099901	TW20099901D
	DATE	05/06/99	09/17/99	09/08/97	05/05/99	09/16/99	09/16/99
	RESULT TYPE	Primary	Primary	Primary	Primary	Primary	Duplicate 1
1,1,2,2-Tetrachloroethane		5 U	50 U	5.0 U	5 U	5.0 U	5.0 U
Tetrachloroethene		5 U	50 U	5.0 U	5 U	5.0 U	5.0 U
Toluene		5 U	50 U	5.0 U	5 U	5.0 U	5.0 U
1,1,1-Trichloroethane		5 U	50 U	5.0 U	5 U	5.0 U	5.0 U
1,1,2-Trichloroethane		5 U	50 U	5.0 U	5 U	5.0 U	5.0 U
Trichloroethene		1500	1400	11	11 J	5.0 U	5.0 U
Vinyl chloride		5 U	50 U	5.0 U	5 U	5.0 U	5.0 U
o-Xylene		5 U	50 U	5.0 U	5 U	5.0 U	5.0 U
m + p-Xylene		5 U	50 U	5.0 U	5 U	5.0 U	5.0 U

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Table 2

VOC Results
September 1997 - September 1999
Pre-Remedy Groundwater Monitoring Plan
Taylor Instruments Facility
Rochester, NY

Date: 12/09/99

CONSTITUENT (Units in ug/l)	SITE	TW69	TW69	TW74	TW74	W-1	W-1
	SAMPLE ID	TW69XXXX	TW69059901	TW74XXXX	TW74059901	MWW1XXXX	MWW1XXXD
	DATE	09/08/97	05/05/99	09/07/97	05/05/99	09/08/97	09/08/97
	RESULT TYPE	Primary	Primary	Primary	Primary	Primary	Duplicate 1
Acetone		20 U	20 U	20 U	20 U	20 U	20 U
Benzene		5.0 U	5 U	5.0 U	5 U	5.0 U	5.0 U
Bromodichloromethane		5.0 U	5 U	5.0 U	5 U	5.0 U	5.0 U
Bromoform		5.0 U	5 U	5.0 U	5 U	5.0 U	5.0 U
Bromomethane		5.0 U	5 U	5.0 U	5 U	5.0 U	5.0 U
2-Butanone (MEK)		10 U	10 U	10 U	10 U	10 U	10 U
Carbon disulfide		10 U	10 U	10 U	10 U	10 U	10 U
Carbon tetrachloride		5.0 U	5 U	5.0 U	5 U	5.0 U	5.0 U
Chlorobenzene		5.0 U	5 U	5.0 U	5 U	5.0 U	5.0 U
Chloroethane		5.0 U	5 U	5.0 U	5 U	5.0 U	5.0 U
Chloroform		5.0 U	5 U	5.0 U	5 U	5.0 U	5.0 U
Chloromethane		5.0 U	5 U	5.0 U	5 U	5.0 U	5.0 U
Dibromochloromethane		5.0 U	5 U	5.0 U	5 U	5.0 U	5.0 U
1,1-Dichloroethane		5.0 U	5 U	5.0 U	5 U	5.0 U	5.0 U
1,2-Dichloroethane		5.0 U	5 U	5.0 U	5 U	5.0 U	5.0 U
1,1-Dichloroethene		5.0 U	5 U	5.0 U	5 U	5.0 U	5.0 U
cis-1,2-Dichloroethene		5.0 U	5 U	5.0 U	5 U	5.0 U	5.0 U
trans-1,2-Dichloroethene		5.0 U	5 U	5.0 U	5 U	5.0 U	5.0 U
1,2-Dichloropropane		5.0 U	5 U	5.0 U	5 U	5.0 U	5.0 U
cis-1,3-Dichloropropene		5.0 U	5 U	5.0 U	5 U	5.0 U	5.0 U
trans-1,3-Dichloropropene		5.0 U	5 U	5.0 U	5 U	5.0 U	5.0 U
Ethylbenzene		5.0 U	5 U	5.0 U	5 U	5.0 U	5.0 U
2-Hexanone		10 U	10 U	10 U	10 U	10 U	10 U
Methylene chloride		5.0 U	5 U	5.0 U	5 U	5.0 U	5.0 U
4-Methyl-2-pentanone(MIBK)		10 U	10 U	10 U	10 U	10 U	10 U
Styrene		5.0 U	5 U	5.0 U	5 U	5.0 U	5.0 U

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

VOC Results
September 1997 - September 1999
Pre-Remedy Groundwater Monitoring Plan
Taylor Instruments Facility
Rochester, NY

Date: 12/09/99

CONSTITUENT (Units in ug/l)	SITE	TW69	TW69	TW74	TW74	W-1	W-1
	SAMPLE ID	TW69XXXX	TW69059901	TW74XXXX	TW74059901	MWW1XXXX	MWW1XXXD
	DATE	09/08/97	05/05/99	09/07/97	05/05/99	09/08/97	09/08/97
	RESULT TYPE	Primary	Primary	Primary	Primary	Primary	Duplicate 1
1,1,2,2-Tetrachloroethane		5.0 U	5 U	5.0 U	5 U	5.0 U	5.0 U
Tetrachloroethene		5.0 U	5 U	5.0 U	5 U	5.0 U	5.0 U
Toluene		5.0 U	5 U	5.0 U	5 U	5.0 U	5.0 U
1,1,1-Trichloroethane		5.0 U	5 U	5.0 U	5 U	5.0 U	5.0 U
1,1,2-Trichloroethane		5.0 U	5 U	5.0 U	5 U	5.0 U	5.0 U
Trichloroethene		5.0 U	5 U	19	18 J	5.0 U	5.0 U
Vinyl chloride		5.0 U	5 U	5.0 U	5 U	5.0 U	5.0 U
o-Xylene		5.0 U	5 U	5.0 U	5 U	5.0 U	5.0 U
m + p-Xylene		5.0 U	5 U	5.0 U	5 U	5.0 U	5.0 U

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

U = Not Detected, quantitation limit noted, J = Estimated Value, UJ = Quantitation Limit estimated For RCL VOA

Table 2

VOC Results
September 1997 - September 1999
Pre-Remedy Groundwater Monitoring Plan
Taylor Instruments Facility
Rochester, NY

Date: 12/09/99

CONSTITUENT (Units in ug/l)	SITE	W-1	W-2	W-2	W-2	W-3	W-3
	SAMPLE ID	W1059901	MWW2XXXX	MWW2XXXX	W2059901	MWW3XXXX	W3059901
	DATE	05/04/99	09/09/97	10/01/97	05/04/99	09/07/97	05/05/99
	RESULT TYPE	Primary	Primary	Primary	Primary	Primary	Primary
Acetone		20 U	20 U	20 U	20 U	20 U	20 U
Benzene		5 U	5.0 U	5 U	5 U	5.0 U	5 U
Bromodichloromethane		5 U	5.0 U	5 U	5 U	5.0 U	5 U
Bromoform		5 U	5.0 U	5 U	5 U	5.0 U	5 U
Bromomethane		5 U	5.0 U	5 U	5 U	5.0 U	5 U
2-Butanone (MEK)		10 U	10 U	10 U	10 U	10 U	10 U
Carbon disulfide		10 U	10 U	10 U	10 U	10 U	10 U
Carbon tetrachloride		5 U	5.0 U	5 U	5 U	5.0 U	5 U
Chlorobenzene		5 U	5.0 U	5 U	5 U	5.0 U	5 U
Chloroethane		5 U	5.0 U	5 U	5 U	5.0 U	5 U
Chloroform		5 U	5.0 U	5 U	5 U	5.0 U	5 U
Chloromethane		5 U	5.0 U	5 U	5 U	5.0 U	5 U
Dibromochloromethane		5 U	5.0 U	5 U	5 U	5.0 U	5 U
1,1-Dichloroethane		5 U	5.0 U	5 U	5 U	5.0 U	5 U
1,2-Dichloroethane		5 U	5.0 U	5 U	5 U	5.0 U	5 U
1,1-Dichloroethene		5 U	5.0 U	5 U	5 U	5.0 U	5 U
cis-1,2-Dichloroethene		5 U	5.0 U	5 U	5 U	5.0 U	5 U
trans-1,2-Dichloroethene		5 U	5.0 U	5 U	5 U	5.0 U	5 U
1,2-Dichloropropane		5 U	5.0 U	5 U	5 U	5.0 U	5 U
cis-1,3-Dichloropropene		5 U	5.0 U	5 U	5 U	5.0 U	5 U
trans-1,3-Dichloropropene		5 U	5.0 U	5 U	5 U	5.0 U	5 U
Ethylbenzene		5 U	5.0 U	5 U	5 U	5.0 U	5 U
2-Hexanone		10 U	10 U	10 U	10 U	10 U	10 U
Methylene chloride		5 U	5.0 U	5 U	5 U	5.0 U	5 U
4-Methyl-2-pentanone(MIBK)		10 U	10 U	10 U	10 U	10 U	10 U
Styrene		5 U	5.0 U	5 U	5 U	5.0 U	5 U

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

VOC Results
September 1997 - September 1999
Pre-Remedy Groundwater Monitoring Plan
Taylor Instruments Facility
Rochester, NY

CONSTITUENT (Units in ug/l)	SITE	W-1	W-2	W-2	W-2	W-3	W-3
	SAMPLE ID	W1059901	MWW2XXXX	MWW2XXXX	W2059901	MWW3XXXX	W3059901
	DATE	05/04/99	09/09/97	10/01/97	05/04/99	09/07/97	05/05/99
	RESULT TYPE	Primary	Primary	Primary	Primary	Primary	Primary
1,1,2,2-Tetrachloroethane		5 U	5.0 U	5 U	5 U	5.0 U	5 U
Tetrachloroethene		5 U	5.0 U	5 U	5 U	5.0 U	5 U
Toluene		5 U	5.0 U	5 U	5 U	5.0 U	5 U
1,1,1-Trichloroethane		5 U	5.0 U	5 U	5 U	5.0 U	5 U
1,1,2-Trichloroethane		5 U	5.0 U	5 U	5 U	5.0 U	5 U
Trichloroethene		5 U	23	5 U	5 U	10	5 U
Vinyl chloride		5 U	5.0 U	5 U	5 U	5.0 U	5 U
o-Xylene		5 U	5.0 U	5 U	5 U	5.0 U	5 U
m+p-Xylene		5 U	5.0 U	5 U	5 U	5.0 U	5 U

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

U = Not Detected, quantitation limit noted, J = Estimated Value, UJ = Quantitation Limit estimated For RCL VOA

Table 2

VOC Results
September 1997 - September 1999
Pre-Remedy Groundwater Monitoring Plan
Taylor Instruments Facility
Rochester, NY

Date: 12/09/99

CONSTITUENT (Units in ug/l)	SITE	W-4	W-4	W-4	W-5	W-5	W-5
	SAMPLE ID	MWW4XXXX	W4059901	W4099901	MWW5XXXX	MWW5XXXX	W5059901
	DATE	09/07/97	05/05/99	09/16/99	09/08/97	10/01/97	05/05/99
	RESULT TYPE	Primary	Primary	Primary	Primary	Primary	Primary
Acetone		20 U	20 U	20 U	20 U	100 U	20 U
Benzene		5.0 U	5 U	5.0 U	5.0 U	25 U	5 U
Bromodichloromethane		5.0 U	5 U	5.0 U	5.0 U	25 U	5 U
Bromoform		5.0 U	5 U	5.0 U	5.0 U	25 U	5 U
Bromomethane		5.0 U	5 U	5.0 U	5.0 U	25 U	5 U
2-Butanone (MEK)		10 U	10 U	10 U	10 U	50 U	10 U
Carbon disulfide		10 U	10 U	10 U	10 U	50 U	10 U
Carbon tetrachloride		5.0 U	5 U	5.0 U	5.0 U	25 U	5 U
Chlorobenzene		5.0 U	5 U	5.0 U	5.0 U	25 U	5 U
Chloroethane		5.0 U	5 U	5.0 U	5.0 U	25 U	5 U
Chloroform		5.0 U	5 U	5.0 U	5.0 U	25 U	5 U
Chloromethane		5.0 U	5 U	5.0 U	5.0 U	25 U	5 U
Dibromochloromethane		5.0 U	5 U	5.0 U	5.0 U	25 U	5 U
1,1-Dichloroethane		5.0 U	5 U	5.0 U	5.0 U	25 U	5 U
1,2-Dichloroethane		5.0 U	5 U	5.0 U	5.0 U	25 U	5 U
1,1-Dichloroethene		5.0 U	5 U	5.0 U	5.0 U	25 U	6.2 J
cis-1,2-Dichloroethene		5.0 U	5 U	5.0 U	18	26	840 J
trans-1,2-Dichloroethene		5.0 U	5 U	5.0 U	7.8	25 U	41 J
1,2-Dichloropropane		5.0 U	5 U	5.0 U	5.0 U	25 U	5 U
cis-1,3-Dichloropropene		5.0 U	5 U	5.0 U	5.0 U	25 U	5 U
trans-1,3-Dichloropropene		5.0 U	5 U	5.0 U	5.0 U	25 U	5 U
Ethylbenzene		5.0 U	5 U	5.0 U	5.0 U	25 U	5 U
2-Hexanone		10 U	10 U	10 U	10 U	50 U	10 U
Methylene chloride		5.0 U	5 U	5.0 U	5.0 U	25 U	5 U
4-Methyl-2-pentanone(MIBK)		10 U	10 U	10 U	10 U	50 U	10 U
Styrene		5.0 U	5 U	5.0 U	5.0 U	25 U	5 U

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

Table 2

VOC Results
September 1997 - September 1999
Pre-Remedy Groundwater Monitoring Plan
Taylor Instruments Facility
Rochester, NY

Date: 12/09/99

CONSTITUENT (Units in ug/l)	SITE	W-4	W-4	W-4	W-5	W-5	W-5
	SAMPLE ID	MWW4XXXX	W4059901	W4099901	MWW5XXXX	MWW5XXXX	W5059901
	DATE	09/07/97	05/05/99	09/16/99	09/08/97	10/01/97	05/05/99
	RESULT TYPE	Primary	Primary	Primary	Primary	Primary	Primary
1,1,2,2-Tetrachloroethane		5.0 U	5 U	5.0 U	5.0 U	25 U	5 U
Tetrachloroethene		5.0 U	5 U	5.0 U	5.0 U	25 U	5 U
Toluene		5.0 U	5 U	5.0 U	5.0 U	25 U	5 U
1,1,1-Trichloroethane		5.0 U	5 U	5.0 U	5.0 U	25 U	5 U
1,1,2-Trichloroethane		5.0 U	5 U	5.0 U	5.0 U	25 U	5 U
Trichloroethene		5.3	5 U	5.0 U	2000	2200	3000 J
Vinyl chloride		5.0 U	5 U	5.0 U	5.0 U	25 U	5 U
o-Xylene		5.0 U	5 U	5.0 U	5.0 U	25 U	5 U
m + p-Xylene		5.0 U	5 U	5.0 U	5.0 U	25 U	5 U

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U = Not Detected, quantitation limit noted, J = Estimated Value, UJ = Quantitation Limit estimated For RCL VOA

Table 2

VOC Results
September 1997 - September 1999
Pre-Remedy Groundwater Monitoring Plan
Taylor Instruments Facility
Rochester, NY

CONSTITUENT (Units in ug/l)	SITE	W-5	W-6	W-6	W-6
	SAMPLE ID	W5099901	MWW6XXXX	W6059901	W6099901
	DATE	09/17/99	09/08/97	05/05/99	09/16/99
	RESULT TYPE	Primary	Primary	Primary	Primary
Acetone		40 U	20 U	20 U	20 U
Benzene		10 U	5.0 U	5 U	5.0 U
Bromodichloromethane		10 U	5.0 U	5 U	5.0 U
Bromoform		10 U	5.0 U	5 U	5.0 U
Bromomethane		10 U	5.0 U	5 U	5.0 U
2-Butanone (MEK)		20 U	10 U	10 U	10 U
Carbon disulfide		20 U	10 U	10 U	10 U
Carbon tetrachloride		10 U	5.0 U	5 U	5.0 U
Chlorobenzene		10 U	5.0 U	5 U	5.0 U
Chloroethane		10 U	5.0 U	5 U	5.0 U
Chloroform		10 U	5.0 U	5 U	5.0 U
Chloromethane		10 U	5.0 U	5 U	5.0 U
Dibromochloromethane		10 U	5.0 U	5 U	5.0 U
1,1-Dichloroethane		10 U	5.0 U	5 U	5.0 U
1,2-Dichloroethane		10 U	5.0 U	5 U	5.0 U
1,1-Dichloroethene		10 U	5.0 U	5 U	5.0 U
cis-1,2-Dichloroethene		76	5.0 U	5 U	14
trans-1,2-Dichloroethene		10 U	5.0 U	5 U	5.0 U
1,2-Dichloropropane		10 U	5.0 U	5 U	5.0 U
cis-1,3-Dichloropropene		10 U	5.0 U	5 U	5.0 U
trans-1,3-Dichloropropene		10 U	5.0 U	5 U	5.0 U
Ethylbenzene		10 U	5.0 U	5 U	5.0 U
2-Hexanone		20 U	10 U	10 U	10 U
Methylene chloride		10 U	5.0 U	5 U	5.0 U
4-Methyl-2-pentanone(MIBK)		20 U	10 U	10 U	10 U
Styrene		10 U	5.0 U	5 U	5.0 U

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

VOC Results
September 1997 - September 1999
Pre-Remedy Groundwater Monitoring Plan
Taylor Instruments Facility
Rochester, NY

CONSTITUENT (Units in ug/l)	SITE	W-5	W-6	W-6	W-6
	SAMPLE ID	W5099901	MWW6XXXX	W6059901	W6099901
	DATE	09/17/99	09/08/97	05/05/99	09/16/99
	RESULT TYPE	Primary	Primary	Primary	Primary
1,1,2,2-Tetrachloroethane		10 U	5.0 U	5 U	5.0 U
Tetrachloroethene		10 U	5.0 U	5 U	5.0 U
Toluene		10 U	5.0 U	5 U	5.0 U
1,1,1-Trichloroethane		10 U	5.0 U	5 U	5.0 U
1,1,2-Trichloroethane		10 U	5.0 U	5 U	5.0 U
Trichloroethene		270	5.0 U	5 U	5.0 U
Vinyl chloride		10 U	5.0 U	5 U	5.0 U
o-Xylene		10 U	5.0 U	5 U	5.0 U
m+p-Xylene		10 U	5.0 U	5 U	5.0 U

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Table 3
Natural Attenuation Results
September 1999 Groundwater Sampling Event

Pre-Remedy Groundwater Monitoring Plan
Taylor Instruments Facility
Rochester, NY

Site ID	Parameter	Result	Units
OB-04	Alkalinity, total	387	mg/L
	Carbon Dioxide (calculated)	85.0	mg/L
	Chloride	9.40	mg/L
	Ethane	1.4	µg/L
	Ethene	3.1	µg/L
	Iron	0.100 U	mg/L
	Methane	3.3	µg/L
	Nitrate/Nitrite as N	0.266	mg/L
	pH	6.94	
	Propane	1.0 U	µg/L
	Sulfate	51.0	mg/L
	Sulfide, total	1.00 U	mg/L
	Total Organic Carbon	2.97	mg/L
	Volatile Fatty Acids	6.02	mg/L
OB-05	Alkalinity, total	239	mg/L
	Carbon Dioxide (calculated)	13.0	mg/L
	Chloride	80.8	mg/L
	Ethane	16	µg/L
	Ethene	31	µg/L
	Iron	0.100 U	mg/L
	Methane	9.6	µg/L
	Nitrate/Nitrite as N	3.70	mg/L
	pH	7.57	
	Propane	2.2	µg/L
	Sulfate	370	mg/L
	Sulfide, total	1.00 U	mg/L
	Total Organic Carbon	12.3	mg/L
	Volatile Fatty Acids	234	mg/L
W-2	Alkalinity, total	290	mg/L
	Carbon Dioxide (calculated)	40.0	mg/L
	Chloride	8.44	mg/L
	pH	7.17	

Notes: ID = identification.
mg/L = milligrams per liter
µg/L = micrograms per liter

HARDING LAWSON ASSOCIATES
FIELD DATA RECORD - GROUND WATER

Sample ID: QARBØ99Ø1

Project: Ames St. Pre-Remedy GWMP

Job Number: 44836/0719841

Date: 9/15/99

Sample Location ID: Rinsate Blank

Location Activity: Start 0845 End 0900

Field QC Data: ☐ Field Duplicate Collected Dup ID _____

WATER LEVEL / WELL DATA

Well Depth ____ FT ☐ Measured ☐ Historical ☐ TOC ☐ Top of Prot. Casing ☐ _____

Well Stick-up (from ground) ____ FT

Prot. Casing/ TOC Diff. ____ FT

Depth to Water ____ FT

Historical Well Depth ____ FT

Well Material: ☐ PVC ☐ SS ☐ _____

Well Dia. ☐ 2 inch ☐ 4 inch ☐ 6 inch ☐ _____

Well Integrity:

	Yes	No	N/A
Prot. Casing Secure	☐	☐	☐
Concrete Collar Intact	☐	☐	☐
Well Locked	☐	☐	☐
Other: _____	☐	☐	☐

Height of Water Column ____ FT X ☐ .16 GAL/FT (2 IN) ☐ .65 GAL/FT (4 IN) ☐ 1.5 GAL/FT (6 IN) ☐ ___ GAL/FT (___ IN) = ____ GAL/VOL ____ TOTAL GAL PURGED

Ambient Air ____ PPM

Well Mouth ____ PPM

PURGE DATA

Purge Volume	Start Purge: @ ___ GAL	@ ___ GAL	@ ___ GAL	@ ___ GAL	End Purge: @ ___ GAL
Temp, Deg C					
pH, Units					
Specific Conductivity umhos/cm					
_____					

Sample Observations

☐ Clear
☐ Colored _____
☐ Cloudy _____
☐ Turbid _____
☐ Odor _____
☐ Other (see notes)

EQUIPMENT DOCUMENTATION

Purging	Sampling	Equipment ID	Decon Fluids Used	Water Level Equip. Used
☐	☐ Peristaltic Pump	ISCO # _____	☒ Liqui-Nox	☐ Electric Cond. Probe
☐	☐ Submersible Pump	KECK # _____	☐ Deionized Water	☐ Float Activated
☐	☐ Bailer	☐ 2" ☐ 1" # ___	☐ HNO3	☐ Keck Interface Probe
☐	☐ Teflon Tubing	☐ CED	☐ Potable Water	☐ Other _____
☐	☐ Air Lift		☐ Isopropanol	
☐	☐ Waterra		☐ None	Number of Filters Used ____
	☐ In-line Filter		☐ distilled H_2O	
	☐ Press/Vac Filter			
☐	☐ _____	_____		

NOTES: VOCs

SM Approval _____ Date: 9/15/99

Signature: _____

APPENDIX C

DATA TABLES

Table 1

VOC Positive Results
September 1999 Groundwater Sampling Event
Pre-Remedy Groundwater Monitoring Plan
Taylor Instruments Facility
Rochester, NY

Date: 12/20/99

CONSTITUENT (Units in ug/l)	SITE	BR-01	BR-02	BR-03	BR-04	BR-05	BR-07
	SAMPLE ID	BR01099901	BR02099901	BR03099901	BR04099901	BR05099901	BR07099901
	DATE	09/16/99	09/16/99	09/16/99	09/17/99	09/17/99	09/15/99
	RESULT TYPE	Primary	Primary	Primary	Primary	Primary	Primary
cis-1,2-Dichloroethene		1800	56	5 U	690	1400	32
trans-1,2-Dichloroethene		50 U	13	5 U	100 U	100 U	13 U
Trichloroethene		940	300	56	9900	3500	13 U
Vinyl chloride		50 U	10 U	5 U	100 U	120	340

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

VOC Positive Results
September 1999 Groundwater Sampling Event
Pre-Remedy Groundwater Monitoring Plan
Taylor Instruments Facility
Rochester, NY

Date: 12/20/99

CONSTITUENT (Units in ug/l)	SITE	BR-07	MW00	OB-04	OB-05	TW01	TW04
	SAMPLE ID	BR07099901D	MW00099901	OB04099901	OB05099901	TW01099901	TW04099901
	DATE	09/15/99	09/15/99	09/17/99	09/17/99	09/17/99	09/16/99
	RESULT TYPE	Duplicate 1	Primary	Primary	Primary	Primary	Primary
cis-1,2-Dichloroethene		33	5 U	5000	2800	5 U	5 U
trans-1,2-Dichloroethene		13 U	5 U	500 U	250 U	5 U	5 U
Trichloroethene		13 U	5 U	43000	86000	5.1	92
Vinyl chloride		350	5 U	500 U	250 U	5 U	5 U

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

U = Not Detected, quantitation limit noted, J = Estimated Value, UJ = Quantitation Limit estimated For RCL VOA

Table 1

VOC Positive Results
September 1999 Groundwater Sampling Event
Pre-Remedy Groundwater Monitoring Plan
Taylor Instruments Facility
Rochester, NY

Date: 12/20/99

CONSTITUENT (Units in ug/l)	SITE	TW07	TW09	TW13	TW17	TW20	TW20
	SAMPLE ID	TW07099901	TW09099901	TW13099901	TW17099901	TW20099901	TW20099901D
	DATE	09/15/99	09/17/99	09/15/99	09/17/99	09/16/99	09/16/99
	RESULT TYPE	Primary	Primary	Primary	Primary	Primary	Duplicate 1
cis-1,2-Dichloroethene		12	39	5 U	50 U	5 U	5 U
trans-1,2-Dichloroethene		30	25 U	5 U	50 U	5 U	5 U
Trichloroethene		70	520	5 U	1400	5 U	5 U
Vinyl chloride		5 U	25 U	5 U	50 U	5 U	5 U

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

Date: 12/20/99

VOC Positive Results
September 1999 Groundwater Sampling Event
Pre-Remedy Groundwater Monitoring Plan
Taylor Instruments Facility
Rochester, NY

CONSTITUENT (Units in ug/l)	SITE	W-4	W-5	W-6
	SAMPLE ID	W4099901	W5099901	W6099901
	DATE	09/16/99	09/17/99	09/16/99
	RESULT TYPE	Primary	Primary	Primary
cis-1,2-Dichloroethene		5 U	76	14
trans-1,2-Dichloroethene		5 U	10 U	5 U
Trichloroethene		5 U	270	5 U
Vinyl chloride		5 U	10 U	5 U

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

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Table 2

VOC Results
September 1997 - September 1999
Pre-Remedy Groundwater Monitoring Plan
Taylor Instruments Facility
Rochester, NY

CONSTITUENT (Units in ug/l)	SITE	BR-01	BR-01	BR-01	BR-01	BR-02	BR-02
	SAMPLE ID	BR01XXXX	BR01XXXX	BR01059901	BR01099901	BR02XXXX	BR02XXXX
	DATE	09/07/97	10/01/97	05/06/99	09/16/99	09/07/97	10/01/97
	RESULT TYPE	Primary	Primary	Primary	Primary	Primary	Primary
Acetone		400 U	500 U	20 U	200 U	40 U	2000 U
Benzene		100 U	130 U	5 U	50 U	10 U	500 U
Bromodichloromethane		100 U	130 U	5 U	50 U	10 U	500 U
Bromoform		100 U	130 U	5 U	50 U	10 U	500 U
Bromomethane		100 U	130 U	5 U	50 U	10 U	500 U
2-Butanone (MEK)		200 U	250 U	10 U	100 U	20 U	1000 U
Carbon disulfide		200 U	250 U	10 U	100 U	20 U	1000 U
Carbon tetrachloride		100 U	130 U	5 U	50 U	10 U	500 U
Chlorobenzene		100 U	130 U	5 U	50 U	10 U	500 U
Chloroethane		100 U	130 U	5 U	50 U	10 U	500 U
Chloroform		100 U	130 U	5 U	50 U	10 U	500 U
Chloromethane		100 U	130 U	5 U	50 U	10 U	500 U
Dibromochloromethane		100 U	130 U	5 U	50 U	10 U	500 U
1,1-Dichloroethane		100 U	130 U	5 U	50 U	10 U	500 U
1,2-Dichloroethane		100 U	130 U	5 U	50 U	10 U	500 U
1,1-Dichloroethene		100 U	130 U	5 U	50 U	10 U	500 U
cis-1,2-Dichloroethene		100 U	130 U	320	1800	98	640
trans-1,2-Dichloroethene		100 U	130 U	5 U	50 U	85	500 U
1,2-Dichloropropane		100 U	130 U	5 U	50 U	10 U	500 U
cis-1,3-Dichloropropene		100 U	130 U	5 U	50 U	10 U	500 U
trans-1,3-Dichloropropene		100 U	130 U	5 U	50 U	10 U	500 U
Ethylbenzene		100 U	130 U	5 U	50 U	10 U	500 U
2-Hexanone		200 U	250 U	10 U	100 U	20 U	1000 U
Methylene chloride		100 U	130 U	5 U	50 U	10 U	500 U
4-Methyl-2-pentanone(MIBK)		200 U	250 U	10 U	100 U	20 U	1000 U
Styrene		100 U	130 U	5 U	50 U	10 U	500 U

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

Table 2

VOC Results
September 1997 - September 1999
Pre-Remedy Groundwater Monitoring Plan
Taylor Instruments Facility
Rochester, NY

CONSTITUENT (Units in ug/l)	SITE	BR-01	BR-01	BR-01	BR-01	BR-02	BR-02
	SAMPLE ID	BR01XXXX	BR01XXXX	BR01059901	BR01099901	BR02XXXX	BR02XXXX
	DATE	09/07/97	10/01/97	05/06/99	09/16/99	09/07/97	10/01/97
	RESULT TYPE	Primary	Primary	Primary	Primary	Primary	Primary
1,1,2,2-Tetrachloroethane		100 U	130 U	5 U	50 U	10 U	500 U
Tetrachloroethene		100 U	130 U	5 U	50 U	10 U	500 U
Toluene		100 U	130 U	5 U	50 U	10 U	500 U
1,1,1-Trichloroethane		100 U	130 U	5 U	50 U	10 U	500 U
1,1,2-Trichloroethane		100 U	130 U	5 U	50 U	10 U	500 U
Trichloroethene		3600	3800	1800	940	260	18000
Vinyl chloride		100 U	130 U	5 U	50 U	10 U	500 U
o-Xylene		100 U	130 U	5 U	50 U	10 U	500 U
m+p-Xylene		100 U	130 U	5 U	50 U	10 U	500 U

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

U = Not Detected, quantitation limit noted, J = Estimated Value, UJ = Quantitation Limit estimated For RCL VOA

Table 2

VOC Results
September 1997 - September 1999
Pre-Remedy Groundwater Monitoring Plan
Taylor Instruments Facility
Rochester, NY

CONSTITUENT (Units in ug/l)	SITE	BR-02	BR-02	BR-03	BR-03	BR-03	BR-03
	SAMPLE ID	BR02059901	BR02099901	BR03XXXX	BR03XXXX	BR03059901	BR03099901
	DATE	05/05/99	09/16/99	09/07/97	10/02/97	05/04/99	09/16/99
	RESULT TYPE	Primary	Primary	Primary	Primary	Primary	Primary
Acetone		20 U	40 U	200 U	20 U	20 U	20 U
Benzene		5 U	10 U	50 U	5 U	5 U	5 U
Bromodichloromethane		5 U	10 U	50 U	5 U	5 U	5 U
Bromoform		5 U	10 U	50 U	5 U	5 U	5 U
Bromomethane		5 U	10 U	50 U	5 U	5 U	5 U
2-Butanone (MEK)		10 U	20 U	100 U	10 U	10 U	10 U
Carbon disulfide		10 U	20 U	100 U	10 U	10 U	10 U
Carbon tetrachloride		5 U	10 U	50 U	5 U	5 U	5 U
Chlorobenzene		5 U	10 U	50 U	5 U	5 U	5 U
Chloroethane		5 U	10 U	50 U	5 U	5 U	5 U
Chloroform		5 U	10 U	50 U	5 U	5 U	5 U
Chloromethane		5 U	10 U	50 U	5 U	5 U	5 U
Dibromochloromethane		5 U	10 U	50 U	5 U	5 U	5 U
1,1-Dichloroethane		5 U	10 U	50 U	5 U	5 U	5 U
1,2-Dichloroethane		5 U	10 U	50 U	5 U	5 U	5 U
1,1-Dichloroethene		6.0	10 U	50 U	5 U	5 U	5 U
cis-1,2-Dichloroethene		1200 J	56	50 U	6.1	5.5	5 U
trans-1,2-Dichloroethene		24	13	50 U	5 U	5 U	5 U
1,2-Dichloropropane		5 U	10 U	50 U	5 U	5 U	5 U
cis-1,3-Dichloropropene		5 U	10 U	50 U	5 U	5 U	5 U
trans-1,3-Dichloropropene		5 U	10 U	50 U	5 U	5 U	5 U
Ethylbenzene		5 U	10 U	50 U	5 U	5 U	5 U
2-Hexanone		10 U	20 U	100 U	10 U	10 U	10 U
Methylene chloride		5 U	10 U	50 U	5 U	5 U	5 U
4-Methyl-2-pentanone(MIBK)		10 U	20 U	100 U	10 U	10 U	10 U
Styrene		5 U	10 U	50 U	5 U	5 U	5 U

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

VOC Results
September 1997 - September 1999
Pre-Remedy Groundwater Monitoring Plan
Taylor Instruments Facility
Rochester, NY

CONSTITUENT (Units in ug/l)	SITE	BR-02	BR-02	BR-03	BR-03	BR-03	BR-03
	SAMPLE ID	BR02059901	BR02099901	BR03XXXX	BR03XXXX	BR03059901	BR03099901
	DATE	05/05/99	09/16/99	09/07/97	10/02/97	05/04/99	09/16/99
	RESULT TYPE	Primary	Primary	Primary	Primary	Primary	Primary
1,1,2,2-Tetrachloroethane		5 U	10 U	50 U	5 U	5 U	5 U
Tetrachloroethene		5 U	10 U	50 U	5 U	5 U	5 U
Toluene		5 U	10 U	50 U	5 U	5 U	5 U
1,1,1-Trichloroethane		5 U	10 U	50 U	5 U	5 U	5 U
1,1,2-Trichloroethane		5 U	10 U	50 U	5 U	5 U	5 U
Trichloroethene		3300 J	300	850	440	420 J	56
Vinyl chloride		5 U	10 U	50 U	5 U	5 U	5 U
o-Xylene		5 U	10 U	50 U	5 U	5 U	5 U
m+p-Xylene		5 U	10 U	50 U	5 U	5 U	5 U

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

U = Not Detected, quantitation limit noted, J = Estimated Value, UJ = Quantitation Limit estimated For RCL VOA

Table 2

VOC Results
September 1997 - September 1999
Pre-Remedy Groundwater Monitoring Plan
Taylor Instruments Facility
Rochester, NY

CONSTITUENT (Units in ug/l)	SITE	BR-04	BR-04	BR-04	BR-04	BR-04	BR-04
	SAMPLE ID	BR04XXXX	BR04XXXD	BR04XXXX	BR04059901	BR04059901D	BR04099901
	DATE	09/09/97	09/09/97	10/02/97	05/06/99	05/06/99	09/17/99
	RESULT TYPE	Primary	Duplicate 1	Primary	Primary	Duplicate 1	Primary
Acetone		500 U	500 U	2000 U	200 U	200 U	400 U
Benzene		130 U	130 U	500 U	50 U	50 U	100 U
Bromodichloromethane		130 U	130 U	500 U	50 U	50 U	100 U
Bromoform		130 U	130 U	500 U	50 U	50 U	100 U
Bromomethane		130 U	130 U	500 U	50 U	50 U	100 U
2-Butanone (MEK)		250 U	250 U	1000 U	100 U	100 U	200 U
Carbon disulfide		250 U	250 U	1000 U	100 U	100 U	200 U
Carbon tetrachloride		130 U	130 U	500 U	50 U	50 U	100 U
Chlorobenzene		130 U	130 U	500 U	50 U	50 U	100 U
Chloroethane		130 U	130 U	500 U	50 U	50 U	100 U
Chloroform		130 U	130 U	500 U	50 U	50 U	100 U
Chloromethane		130 U	130 U	500 U	50 U	50 U	100 U
Dibromochloromethane		130 U	130 U	500 U	50 U	50 U	100 U
1,1-Dichloroethane		130 U	130 U	500 U	50 U	50 U	100 U
1,2-Dichloroethane		130 U	130 U	500 U	50 U	50 U	100 U
1,1-Dichloroethene		130 U	130 U	500 U	50 U	50 U	100 U
cis-1,2-Dichloroethene		240	260	500 U	160	210	690
trans-1,2-Dichloroethene		130 U	130 U	500 U	50 U	50 U	100 U
1,2-Dichloropropane		130 U	130 U	500 U	50 U	50 U	100 U
cis-1,3-Dichloropropene		130 U	130 U	500 U	50 U	50 U	100 U
trans-1,3-Dichloropropene		130 U	130 U	500 U	50 U	50 U	100 U
Ethylbenzene		130 U	130 U	500 U	50 U	50 U	100 U
2-Hexanone		250 U	250 U	1000 U	100 U	100 U	200 U
Methylene chloride		130 U	130 U	500 U	50 U	50 U	100 U
4-Methyl-2-pentanone(MIBK)		250 U	250 U	1000 U	100 U	100 U	200 U
Styrene		130 U	130 U	500 U	50 U	50 U	100 U

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

Table 2

VOC Results
September 1997 - September 1999
Pre-Remedy Groundwater Monitoring Plan
Taylor Instruments Facility
Rochester, NY

CONSTITUENT (Units in ug/l)	SITE	BR-04	BR-04	BR-04	BR-04	BR-04	BR-04
	SAMPLE ID	BR04XXXX	BR04XXXD	BR04XXXX	BR04059901	BR04059901D	BR04099901
	DATE	09/09/97	09/09/97	10/02/97	05/06/99	05/06/99	09/17/99
	RESULT TYPE	Primary	Duplicate 1	Primary	Primary	Duplicate 1	Primary
1,1,2,2-Tetrachloroethane		130 U	130 U	500 U	50 U	50 U	100 U
Tetrachloroethene		130 U	130 U	500 U	50 U	50 U	100 U
Toluene		130 U	130 U	500 U	50 U	50 U	100 U
1,1,1-Trichloroethane		130 U	130 U	500 U	50 U	50 U	100 U
1,1,2-Trichloroethane		130 U	130 U	500 U	50 U	50 U	100 U
Trichloroethene		3700	4700	27000	2100 J	2100 J	9900
Vinyl chloride		130 U	130 U	500 U	50 U	50 U	100 U
o-Xylene		130 U	130 U	500 U	50 U	50 U	100 U
m + p-Xylene		130 U	130 U	500 U	50 U	50 U	100 U

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

U = Not Detected, quantitation limit noted, J = Estimated Value, UJ = Quantitation Limit estimated For RCL VOA

APPENDIX B

FIELD SAMPLE RECORDS

HARDING LAWSON ASSOCIATES
FIELD DATA RECORD - GROUND WATER

Page 1 of 1

Sample ID: ~~BR01099901~~ RE 9/16/99 — BR01099902

Project: Ames St. Pre-Remedy Gwmp

Job Number: 44836/071984.1 Date: 9/16/99

Sample Location ID: BR-01

Location Activity: Start 1600 End 1630

Field QC Data: ☐ Field Duplicate Collected Dup ID _____

WATER LEVEL / WELL DATA

Well Depth: 41.91 FT — ☐ Measured ☒ Historical — ☒ TOC ☐ Top of Prot. Casing ☐ _____

Well Stick-up (from ground): _____ FT Prot. Casing/ TOC Diff.: _____ FT

Depth to Water: 9/14 14.23 FT; 9/16 14.22 — Historical Well Depth: 41.91 FT

Well Material: ☐ PVC ☒ SS ☐ _____

Well Dia.: ☐ 2 inch ☒ 4 inch ☐ 6 inch ☐ _____

Well Integrity:

	Yes	No	N/A
Prot. Casing Secure	☒	☐	☐
Concrete Collar Intact	☐	☐	☒
Well Locked	☐	☐	☐
Other: _____	☐	☐	☐

Height of Water Column: 27.68 FT X ☐ .16 GAL/FT (2 IN) ☒ .65 GAL/FT (4 IN) ☐ 1.5 GAL/FT (6 IN) ☐ ___ GAL/FT (___ IN) = 18 GAL/VOL

1.5 TOTAL GAL PURGED

Ambient Air: 0.0 PPM

Well Mouth: 0.0 PPM

PURGE DATA

flow rate ≈ 250 ml/min

Start Purge: 1601 End Purge: 1628

Purge Volume	@ 0.5 GAL	@ 0.5 GAL	@ 1.0 GAL	@ 1.5 GAL	@ 1.5 GAL
Temp. Deg C	14.3	14.2	14.2	14.3	14.5
pH, Units	7.3	7.3	7.3	7.3	7.3
Specific Conductivity umhos/cm	1.3	1.3	1.3	1.3	1.3
Turbidity (NTU)	690	330	180	100	67
DO (mg/L)	2.6	2.6	2.6	3.0	2.7
ORP (mV)	-164	-162	-159	-159	-159

Sample Observations

☐ Clear ☐ Colored _____ ☒ Cloudy _____ ☒ Turbid _____ ☐ Odor _____ ☐ Other (see notes)

EQUIPMENT DOCUMENTATION

Purging	Sampling	
☒	☒	Peristaltic Pump
☐	☐	Submersible Pump
☐	☐	Bailer
☐	☐	Teflon Tubing
☐	☐	Air Lift
☐	☐	Waterra
	☐	In-line Filter
	☐	Press/Vac Filter
☐	☐	_____

Equipment ID: ISCO # _____ KECK # M20.32 ☐ 2" ☒ 1" # ___ ☐ CED _____

Decon Fluids Used: ☒ Liqui-Nox ☐ Deionized Water ☐ HNO3 ☐ Potable Water ☐ Isopropanol ☐ None ☒ distilled wate

Water Level Equip. Used: ☐ Electric Cond. Probe ☐ Float Activated ☒ Keck Interface Probe ☐ Other _____

Number of Filters Used _____

NOTES: flow rate ≈ 250 ml/min final DTW = 15.19'

SM Approval _____ Date: 9/16/99

Signature: _____

HARDING LAWSON ASSOCIATES
FIELD DATA RECORD - GROUND WATER

Page 1 of 1

Sample ID: BR02099901

Project: Ames St. Pre-Remedy GWMP

Job Number: 44836/074841

Date: 9/16/99

Sample Location ID: BR-02

Location Activity: Start 1340 End 1430

Field QC Data: ☐ Field Duplicate Collected Dup ID: _____

WATER LEVEL / WELL DATA

Well Depth: 44.29 FT ☐ Measured ☒ Historical

Well Stick-up (from ground): _____ FT

Prot. Casing/TOC Diff.: _____ FT

☒ TOC ☐ Top of Prot. Casing ☐ _____

Depth to Water: 26.20 FT

Historical Well Depth: 44.29 FT

Well Material: ☐ PVC ☒ SS ☐ _____

Well Dia. ☐ 2 inch ☒ 4 inch ☐ 6 inch ☐ _____

Well Integrity:

	Yes	No	N/A
Prot. Casing Secure	☒	☐	☐
Concrete Collar Intact	☐	☐	☒
Well Locked	☒	☐	☐
Other: _____	☐	☐	☐

Height of Water Column: 18.09 FT

x ☐ .16 GAL/FT (2 IN) ☒ .65 GAL/FT (4 IN) ☐ 1.5 GAL/FT (6 IN) ☐ ___ GAL/FT (___ IN)

= 11.8 GAL/VOL

1-1 TOTAL GAL PURGED

Ambient Air: 0.0 PPM

Well Mouth: 0.0 PPM

PURGE DATA

Start Purge: 1351 End Purge: 1422

Purge Volume	@ 0.5 GAL	@ 0.8 GAL	@ 1.1 GAL	@ 1.3 GAL	@ ___ GAL
Temp. Deg C	16.2	16.3	16.3		
pH, Units	7.6	7.3	7.3		
Specific Conductivity umhos/cm	1.3	1.3	1.3		
Turbidity (NTU)	17	20	19		
DO (mg/L)	6.7	6.5			
DO (mV)	-54	-52	-50		

Sample Observations

☒ ~~Clear~~
☐ Colored _____
☐ Cloudy _____
☐ Turbid _____
☐ Odor _____
☐ Other (see notes)

EQUIPMENT DOCUMENTATION

Purging	Sampling		Equipment ID	Decon Fluids Used	Water Level Equip. Used
☒	☒	Peristaltic Pump	ISCO # _____	☒ Liqui-Nox	☐ Electric Cond. Probe
☐	☐	Submersible Pump	KECK # M2025C	☐ Deionized Water	☐ Float Activated
☐	☐	Bailer	☐ 2" ~~4"~~ 1" # ___	☐ HNO3	☒ ~~Keck~~ Interface Probe
☐	☐	Teflon Tubing	☐ QED	☐ Potable Water	☐ Other _____
☐	☐	Air Lift		☐ Isopropanol	
☐	☐	Waterra		☐ None	Number of Filters Used _____
	☐	In-line Filter		☒ distilled water	
	☐	Press/Vac Filter			
☐	☐	_____	_____		

NOTES: flow rate ≈ 114 mL/min. final DTW = 26.43'

Date: 9/16/99

SM Approval _____ Signature: _____

HARDING LAWSON ASSOCIATES
FIELD DATA RECORD - GROUND WATER

Page 1 of 1

Sample ID: BR03099901

Project: Ames Sf. - Pre-Remedy GWMP | Job Number: 44836/074484 | Date: 9/16/99

Sample Location ID: BR-03 | Location Activity: Start 1130 End 1215

Field QC Data: ☐ | Field Duplicate Collected | Dup ID: _____

WATER LEVEL / WELL DATA

Well Depth: 40.91 ft | ☐ Measured ☒ Historical | ☒ TOC ☐ Top of Prot. Casing ☐ _____

Well Stick-up (from ground): _____ FT | Prot. Casing/TOC Diff.: _____ FT

Depth to Water 9/14: 14.35 ft | Historical Well Depth: 40.91 ft | Well Material: ☐ PVC ☒ SS ☐ _____

Well Dia: ☐ 2 inch ☒ 4 inch ☐ 6 inch ☐ _____

Well Integrity:

	Yes	No	N/A
Prot. Casing Secure	☐	☐	☐
Concrete Collar Intact	☐	☐	☐
Well Locked	☐	☐	☐
Other: _____	☐	☐	☐

Height of Water Column: 26.57 ft (9/16: 14.34) | X ☐ .16 GAL/FT (2 IN) ☒ .65 GAL/FT (4 IN) ☐ 1.5 GAL/FT (6 IN) ☐ ___ GAL/FT (___ IN) | = 17.2 GAL/VOL | 1.9 TOTAL GAL PURGED

Ambient Air: 0.0 PPM | Well Mouth: 0.0 PPM

PURGE DATA

flow rate ≤ 300 mL/min

Start Purge: 1141 | End Purge: 1205

Purge Volume	@ 2.3 GAL	@ 2.6 GAL	@ 1.3 GAL	@ 1.6 GAL	@ 1.9 GAL
Temp. Deg C	15.2	15.2	15.2	15.3	15.3
pH, Units	7.5	7.5	7.5	7.5	7.5
Specific Conductivity umhos/cm	1.6	1.6	1.6	1.6	1.6
turbidity	200	175	160	140	120
DO	3.6	2.4	3.1	3.2	3.1
	-167	-122	-167	-170	-170

Sample Observations:
☐ Clear ☐ Colored _____ ☒ Cloudy dk. green ☐ Turbid _____ ☒ Odor sulfur ☐ Other (see notes)

EQUIPMENT DOCUMENTATION

Purging	Sampling	
☒	☒	Peristaltic Pump
☐	☐	Submersible Pump
☐	☐	Bailer
☐	☐	Teflon Tubing
☐	☐	Air Lift
☐	☐	Waterra
	☐	In-line Filter
	☐	Presa/Vac Filter
☐	☐	_____

Equipment ID: ISCO # _____ | KECK # M20030 | ☐ 2" ☐ 1" # ___ | ☐ QED

Decon Fluids Used: ☒ Liqui-Nox ☐ Deionized Water ☐ HNO3 ☐ Potable Water ☐ Isopropanol ☐ None ☒ distilled H2O

Water Level Equip. Used: ☐ Electric Cond. Probe ☐ Float Activated ☒ Keck Interface Probe ☐ Other _____

Number of Filters Used: _____

NOTES: final DTW = 15.0'

SM Approval: _____ | Date: 9/16/99 | Signature: _____

3.18

HARDING LAWSON ASSOCIATES
FIELD DATA RECORD - GROUND WATER

Page 1 of 1

Sample ID: BR04999901

Project: Ames St.-Pre-Remedy GWMP

Job Number: 44836/0719841

Date: 9/17/99

Sample Location ID: BR-04

Location Activity: Start 1010 End 1055

Field QC Data: ☐ Field Duplicate Collected Dup ID _____

WATER LEVEL / WELL DATA

Well Depth: 45.30 FT ☐ Measured ☒ Historical ☒ TOC ☐ Top of Prot. Casing ☐ _____

Well Stick-up (from ground): _____ FT

Prot. Casing/ TOC Diff.: _____ FT

Well Dia. ☐ 2 inch ☒ 4 inch ☐ 6 inch ☐ _____

Well Integrity: Yes / No / N/A
Prot. Casing Secure ☒ ☐ ☐
Concrete Collar Intact ☒ ☐ ☐
Well Locked ☒ ☐ ☐
Other: _____ ☐ ☐ ☐

Depth to Water: 9/14 23.00 FT; 9/17 22.97

Historical Well Depth: 45.30 FT

Well Material: ☐ PVC ☒ SS ☐ _____

Height of Water Column: 22.33 FT

X ☐ .16 GAL/FT (2 IN) ☒ .65 GAL/FT (4 IN) ☐ 1.5 GAL/FT (6 IN) ☐ ___ GAL/FT (___ IN)

= 14.6 GAL/VOL

1.3 TOTAL GAL PURGED

Ambient Air: 0.0 PPM

Well Mouth: 0.0 PPM

PURGE DATA

Initial flow ≈ 133 ml/min, adjusted to 250 ml/min (134)

Start Purge: 1023 End Purge: 1050

Purge Volume	@ 0.5 GAL	@ 0.8 GAL	@ 1.1 GAL	@ 1.3 GAL	@ ___ GAL
Temp. Deg C	16.9	17.4	17.4	17.5	
pH, Units	7.2	7.2	7.2	7.2	
Specific Conductivity umhos/cm	2.4	2.4	2.3	2.4	
Turbidity (NTU)	55	51	52	49	
DO (mg/L)	6.1	6.3	6.4	6.2	

Sample Observations
☒ Clear ☐ Colored _____ ☐ Cloudy _____ ☐ Turbid _____ ☐ Odor _____ ☐ Other (see notes)

EQUIPMENT DOCUMENTATION

ORP (mV) → -75 -81 -81 -82

Purging	Sampling		Equipment ID	Decon Fluids Used	Water Level Equip. Used
☒	☒	Peristaltic Pump	ISCO # _____	☒ Liqui-Nox	☐ Electric Cond. Probe
☐	☐	Submersible Pump	KECK # M22030	☐ Deionized Water	☐ Float Activated
☐	☐	Bailer	☐ 2" ☒ 1" # ___	☐ HNO3	☒ Keck Interface Probe
☐	☐	Teflon Tubing	☐ CED	☐ Potable Water	☐ Other _____
☐	☐	Air Lift		☐ Isopropanol	
☐	☐	Waterra		☐ None	Number of Filters Used _____
	☐	In-line Filter		☒ distilled H_2O	
	☐	Press/Vac Filter			
☐	☐	_____	_____		

NOTES: final Depth To Water ≈ 23.00'

SM Approval _____ Date: 9/17/99

Signature: _____

HARDING LAWSON ASSOCIATES
FIELD DATA RECORD - GROUND WATER

Page 1 of 1

Sample ID: BR05099901

Project: Ames St. Pre-Remedy GWMP

Job Number: 44836/0799841

Date: 9/17/99

Sample Location ID: BR-05

Location Activity: Start 0840 End 0915

Field QC Data: ☐ Field Duplicate Collected Dup ID _____

WATER LEVEL / WELL DATA

Well Depth: 51.56 FT ☐ Measured ☒ Historical ☒ TOC ☐ Top of Prot. Casing ☐ _____

Well Stick-up (from ground): _____ FT

Prot. Casing/TOC Diff.: _____ FT

Well Dia: ☐ 2 inch ☒ 4 inch ☐ 6 inch ☐ _____

Well Integrity: Yes / No / N/A
- Prot. Casing Secure
- Concrete Collar Intact
- Well Locked
- Other: _____

Depth to Water: 9/14 24.54 FT; 9/17 24.49

Historical Well Depth: 51.56 FT

Well Material: ☐ PVC ☒ SS ☐ _____

Height of Water Column: 27.07 FT

☐ .16 GAL/FT (2 IN) ☒ .65 GAL/FT (4 IN) ☐ 1.5 GAL/FT (6 IN) ☐ ___ GAL/FT (___ IN)

X .65 = 17.6 GAL/VOL

1.2 TOTAL GAL PURGED

Ambient Air: 0.0 PPM

Well Mouth: 0.0 PPM

PURGE DATA

Start Purge: 0845 End Purge: 0908

Purge Volume	@ 0.6 GAL	@ 0.9 GAL	@ 1.2 GAL	@ ___ GAL	@ ___ GAL
Temp. Deg C	15.3	16.1	16.1		
pH, Units	7.2	7.3	7.2		
Specific Conductivity umhos/cm	2.0	2.0	2.0		
Turbidity	130	120	130		
DO	7.1	7.4	7.3		

Sample Observations
- ☐ Clear
- ☐ Colored _____
- ☐ Cloudy _____
- ☒ Turbid Thanks
- ☐ Odor _____
- ☐ Other (see notes)

EQUIPMENT DOCUMENTATION

-102 -102 -104

ORP

Purging	Sampling	Equipment ID	Decon Fluids Used	Water Level Equip. Used
☒	☒ Peristaltic Pump	ISCO # _____	☒ Liqui-Nox	☐ Electric Cond. Probe
☐	☐ Submersible Pump	KECK # MW30	☐ Deionized Water	☐ Float Activated
☐	☐ Bailer	☐ 2" ☒ 1" # ___	☐ HNO3	☒ Keck Interface Probe
☐	☐ Teflon Tubing	☐ CED	☐ Potable Water	☐ Other _____
☐	☐ Air Lift		☐ Isopropanol	Number of Filters Used _____
☐	☐ Waterra		☐ None	
	☐ In-line Filter		☒ distilled H2O	
	☐ Press/Vac Filter			
☐	☐ _____	_____		

NOTES: VOCs flow rate ≈ 158 ml/min, final DTW = 24.60 ml/min.

Date: 9/17/99

SM Approval _____ Signature: _____

HARDING LAWSON ASSOCIATES
FIELD DATA RECORD - GROUND WATER

Page 1 of 1

Sample ID: BR07099901

Project: Ames St. Pre-Remedy GWMP

Job Number: 44836/074944 Date: 9/15/99

Sample Location ID: BR-07

Location Activity: Start 1425 End 1538

Field QC Data: ☒ Field Duplicate Collected Dup ID: BR07099901D

WATER LEVEL / WELL DATA

Well Depth: 52.88 FT ☐ Measured ☒ Historical ☒ TOC ☐ Top of Prot. Casing ☐ _____

Well Stick-up (from ground): _____ FT Prot. Casing/TOC Diff.: _____ FT

Well Dia. ☐ 2 inch ☒ 4 inch ☐ 6 inch ☐ _____

Well Integrity: Yes / No / N/A
Prot. Casing Secure ☒ ☐ ☐
Concrete Collar Intact ☒ ☐ ☐
Well Locked ☒ ☐ ☐
Other: _____ ☐ ☐ ☐

Depth to Water 4/14: 25.50 FT 4/15: 25.53

Historical Well Depth: 52.88 FT

Well Material: ☐ PVC ☒ SS ☐ _____

Height of Water Column: 27.38 FT x ☐ .16 GAL/FT (2 IN) ☒ .65 GAL/FT (4 IN) ☐ 1.5 GAL/FT (6 IN) ☐ ___ GAL/FT (___ IN) = 18 GAL/VOL

1.6 TOTAL GAL PURGED

Ambient Air: 0.0 PPM Well Mouth: 0.0 PPM

PURGE DATA

flow rate x 103 ml/min

Start Purge: 1435 End Purge: 1526

Purge Volume	@ 0.5 GAL	@ 1.1 GAL	@ 1.3 GAL	@ 1.6 GAL	@ ___ GAL
Temp. Deg C	19.9	19.2	19.1	19.2	
pH, Units	7.4	7.5	7.3	7.3	
Specific Conductivity umhos/cm	4.6	4.7	4.7	4.7	
Turbidity (NTU)	31	21	21	19	
DO (mg/L)	5.9	6.1	5.9	5.9	
ORP (mV)	-144	-122	-121	-121	

Sample Observations
☒ Clear ☐ Colored _____ ☐ Cloudy _____ ☐ Turbid _____ ☐ Odor _____ ☐ Other (see notes)

EQUIPMENT DOCUMENTATION

Purging	Sampling	
☒	☒	Peristaltic Pump
☐	☐	Submersible Pump
☐	☐	Bailer
☐	☐	Teflon Tubing
☐	☐	Air Lift
☐	☐	Waterra
	☐	In-line Filter
	☐	Press/Vac Filter
☐	☐	_____

Equipment ID: ISCO # _____ KECK # M2W30 ☐ 2" ☒ 1" # ___ ☐ CED

Decon Fluids Used: ☒ Liqui-Nox ☐ Deionized Water ☐ HNO3 ☐ Potable Water ☐ Isopropanol ☐ None ☒ distilled H_2O

Water Level Equip. Used: ☐ Electric Cond. Probe ☐ Float Activated ☒ Keck Interface Probe ☐ Other _____

Number of Filters Used: _____

NOTES: Duplicate Collected @ 40ml VOA Vials Collected

1507 flow rate ≈ 100ml/min. Final DTW = 25.53'

Date: 9/15/99

SM Approval: _____ Signature: _____

HARDING LAWSON ASSOCIATES
FIELD DATA RECORD - GROUND WATER

Page 1 of 1

Sample ID: MWØØØ999Ø1

Project: Ames St. Pre-Remedy GWMP

Job Number: 44836/0719841

Date: 9/15/99

Sample Location ID: MW-00

Location Activity: Start 1545 End 1635

Field QC Data: ☐ Field Duplicate Collected Dup ID _____

WATER LEVEL / WELL DATA

Well Depth: 12.23 FT ☐ Measured ☒ Historical ☒ TOC ☐ Top of Prot. Casing ☐ _____

Well Stick-up (from ground): _____ FT

Prot. Casing/ TOC Diff.: _____ FT

Well Dia. ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ _____

Well Integrity: Yes / No / N/A
- Prot. Casing Secure: ☒ / ☐ / ☐
- Concrete Collar Intact: ☐ / ☐ / ☒
- Well Locked: ☐ / ☒ / ☐
- Other: _____ ☐ / ☐ / ☐

Depth to Water: 4/14 8.65 FT; 9/15 8.58

Historical Well Depth: 12.23 FT

Well Material: ☒ PVC ☐ SS ☐ _____

Height of Water Column: 3.58 FT

X ☒ .16 GAL/FT (2 IN) ☐ .65 GAL/FT (4 IN) ☐ 1.5 GAL/FT (6 IN) ☐ ___ GAL/FT (___ IN)

= 0.6 GAL/VOL

1.3 TOTAL GAL PURGED

Ambient Air: 0.0 PPM

Well Mouth: 1.6 PPM

PURGE DATA

Initial flow rate ≈ 200 ml/min, re-adjusted to ≈ 138 ml/min

Start Purge: 1554 End Purge: 1626

Purge Volume	@ 0.8 GAL	@ 1.1 GAL	@ 1.3 GAL	@ ___ GAL	@ ___ GAL
Temp, Deg C	23.2	23.3	23.2		
pH, Units	7.0	7.0	7.0		
Specific Conductivity umhos/cm	0.85	0.83	0.83		
Turbidity (NTU)	16	18	18		
Do (mg/L)	2.9	3.1	3.0		

Sample Observations
- ☒ Clear
- ☐ Colored _____
- ☐ Cloudy _____
- ☐ Turbid _____
- ☐ Odor _____
- ☐ Other (see notes)

EQUIPMENT DOCUMENTATION

ORP (mV) → -122 -122

Purging	Sampling	Equipment ID	Decon Fluids Used	Water Level Equip. Used
☒	☒ Peristaltic Pump	ISCO # _____	☒ Liquinox dissolved	☐ Electric Cond. Probe
☐	☐ Submersible Pump	KECK # _____	☒ Deionized Water RF 9/14/99	☐ Float Activated
☐	☐ Bailer	☐ 2" ☐ 1" # ___	☐ HNO3	☐ Keck Interface Probe
☐	☐ Teflon Tubing	☐ QED	☐ Potable Water	☐ Other _____
☐	☐ Air Lift		☐ Isopropanol	Number of Filters Used _____
☐	☐ Waterra		☐ None	
	☐ In-line Filter		☐ _____	
	☐ Press/Vac Filter			
☐	☐ _____	_____		

NOTES: VOCs
Final depth to water = 9.61'

Date: 9/15/99

SM Approval: _____ Signature: _____

HARDING LAWSON ASSOCIATES
FIELD DATA RECORD - GROUND WATER

Sample ID: 0B0409901

Project: Ames St. Pre-Remedy GWMP

Job Number: 44836/079841

Date: 9/17/99

Sample Location ID: OB-04

Location Activity: Start 09:20 End 10:05

Field QC Data: ☐ Field Duplicate Collected Dup ID ______

WATER LEVEL / WELL DATA

Well Depth: 18.73 FT ☐ Measured ☒ Historical ☒ TOC ☐ Top of Prot. Casing ☐ ______

Well Stick-up (from ground): ______ FT

Prot. Casing/ TOC Diff.: ______ FT

Well Dia. ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ ______

Well Integrity: (Yes / No / N/A)
Prot. Casing Secure ☐ ☐ ☐
Concrete Collar Intact ☐ ☐ ☐
Well Locked ☐ ☐ ☐
Other: ______ ☐ ☐ ☐

Depth to Water: 9/14 6.78 FT; 9/17 ~~4.12~~ ~~5.~~ 4.12 ~~ft~~ 9/17/99

Historical Well Depth: 18.73 FT

Well Material: ☒ PVC ☐ SS ☐ ______

Height of Water Column: 14.61 FT × ☒ .16 GAL/FT (2 IN) ☐ .65 GAL/FT (4 IN) ☐ 1.5 GAL/FT (6 IN) ☐ ___ GAL/FT (___ IN) = 2.4 GAL/VOL

1.3 TOTAL GAL PURGED

Ambient Air: 0.0 PPM

Well Mouth: 530 PPM

PURGE DATA

flow rate ≈ 190 ml/min final DTW = 5.68

Start Purge: 0927 End Purge: 0954

Purge Volume	@ 0.5 GAL	@ 0.8 GAL	@ 1.1 GAL	@ 1.3 GAL	@ ___ GAL
Temp, Deg C	18.7	19.1	19.3	19.3	
pH, Units	7.2	7.2	7.2	7.2	
Specific Conductivity umhos/cm	1.5	1.5	1.6	1.5	
Turbidity (NTU)	50	42	41	40	
DO (mg/L)	2.9	3.5	3.3	3.2	
ORP (mv)	-41	-43	-40	-35	

Sample Observations: ☒ Clear ☐ Colored ______ ☐ Cloudy ______ ☐ Turbid ______ ☐ Odor ______ ☐ Other (see notes)

EQUIPMENT DOCUMENTATION

Purging	Sampling	
☒	☒	Peristaltic Pump
☐	☐	Submersible Pump
☐	☐	Bailer
☐	☐	Teflon Tubing
☐	☐	Air Lift
☐	☐	Waterra
	☐	In-line Filter
	☐	Press/Vac Filter
☐	☐	______

Equipment ID: ISCO # ______; KECK # MZ2632; ☐ 2" ☒ 1" # ___; ☐ CED; ______

Decon Fluids Used: ☒ Liquinox; ☐ ~~Deionized~~ distilled Water; ☐ HNO3 RF 9/14/99; ☐ Potable Water; ☐ Isopropanol; ☐ None; ☒ distilled H_2O

Water Level Equip. Used: ☐ Electric Cond. Probe; ☐ Float Activated; ☒ Keck Interface Probe; ☐ Other ______

Number of Filters Used ______

NOTES: VOCs, Nitrate, Iron, Sulfate, Sulfide, [Methane, Ethane, Ethene], TOC, CO_2, Alkalinity, chloride, volatile fatty acids.

0950 flow increased ≈ 330 ml/min.

SM Approval ______

Date: 9/17/99

Signature: [signature]

HARDING LAWSON ASSOCIATES
FIELD DATA RECORD - GROUND WATER

Page 1 of 1

Sample ID: OB05099901

Project: Ames St. Pre-Remedy GWMP

Job Number: 44836/0719841

Date: 9/17/99

Sample Location ID: OB-05

Location Activity: Start 0730 End 0830

Field QC Data: ☐ Field Duplicate Collected Dup ID _____

WATER LEVEL / WELL DATA

Well Depth: 20.07 FT ☐ Measured ☒ Historical ☒ TOC ☐ Top of Prot. Casing ☐ _____

Well Stick-up (from ground): _____ FT

Prot. Casing/ TOC Diff.: _____ FT

Depth to Water: 9/14 9.97 FT; 9/17 8.89

Historical Well Depth: 20.07 FT

Well Material: ☒ PVC ☐ SS ☐ _____

Well Dia. ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ _____

Well Integrity:

	Yes	No	N/A
Prot. Casing Secure	☐	☐	☐
Concrete Collar Intact	☐	☐	☐
Well Locked	☐	☐	☐
Other: _____	☐	☐	☐

Height of Water Column: 11.18 FT

X ☒ .16 GAL/FT (2 IN) ☐ .65 GAL/FT (4 IN) ☐ 1.5 GAL/FT (6 IN) ☐ ___ GAL/FT (___ IN)

= 1.8 GAL/VOL

1.3 TOTAL GAL PURGED

Ambient Air: 0.0 PPM

Well Mouth: 441 PPM

PURGE DATA

flow rate ≈ 250 mL/min

Start Purge: 0802

final DTW = 10.02'

End Purge: 0820

Purge Volume	@ 0.5 GAL	@ 2.5 GAL	@ 1.1 GAL	@ 1.3 GAL	@ ___ GAL
Temp, Deg C	17.9	18.1	18.3	18.4	
pH, Units	7.0	7.0	7.0	7.0	
Specific Conductivity umhos/cm	0.9	0.9	0.86	0.86	
turbidity (NTU)	43	38	37	39	
DO (mg/L)	3.7	3.2	3.0	3.3	

Sample Observations

☒ Clear ☐ Colored _____ ☐ Cloudy _____ ☐ Turbid _____ ☐ Odor _____ ☐ Other (see notes)

EQUIPMENT DOCUMENTATION

ORP → -1 -3 -2 -2

Purging	Sampling	Equipment ID	Decon Fluids Used	Water Level Equip. Used
☒	☒ Peristaltic Pump	ISCO # _____	☒ Liqui-Nox	☐ Electric Cond. Probe
☐	☐ Submersible Pump	KECK # MW30	☒ Deionized Water distilled PF 9/14/99	☐ Float Activated
☐	☐ Bailer	☐ 2" ☒ 1" # ___	☐ HNO3	☒ Keck Interface Probe
☐	☐ Teflon Tubing	☐ QED	☐ Potable Water	☐ Other _____
☐	☐ Air Lift		☐ Isopropanol	Number of Filters Used _____
☐	☐ Waterra		☐ None	
	☐ In-line Filter		☐ _____	
	☐ Press/Vac Filter			
☐	☐ _____	_____		

NOTES: VOCs, Nitrate, Iron, Sulfate, Sulfide, [methane, ethane, ethene], TOC, CO_2 Alkalinity, chloride, volatile fatty acids.

SM Approval _____ Date: 9/17/99

Signature: [signature]

HARDING LAWSON ASSOCIATES
FIELD DATA RECORD - GROUND WATER

Page 1 of 1

Sample ID: TW01099901

Project: Ames St. Pre-Remedy GWMP

Job Number: 44836/071984.1

Date: 9/17/99

Sample Location ID: TW-01

Location Activity: Start 1105 End 1156

Field QC Data: ☐ Field Duplicate Collected Dup ID _____

WATER LEVEL / WELL DATA

Well Stick-up (from ground): _____ FT

Prot. Casing/ TOC Diff.: _____ FT

Well Depth: 22.03 FT ☐ Measured ☒ Historical ☒ TOC ☐ Top of Prot. Casing ☐ _____

Well Dia.: ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ _____

Well Integrity:

	Yes	No	N/A
Prot. Casing Secure	☐	☐	☐
Concrete Collar Intact	☐	☐	☐
Well Locked	☐	☐	☐
Other: _____	☐	☐	☐

Depth to Water: 11.26 FT

Historical Well Depth: 22.03 FT

Well Material: ☒ PVC ☐ SS ☐ _____

Height of Water Column: 10.77 FT x ☒ .16 GAL/FT (2 IN) ☐ .65 GAL/FT (4 IN) ☐ 1.5 GAL/FT (6 IN) ☐ ___ GAL/FT (__ IN) = 1.7 GAL/VOL

3.5 TOTAL GAL PURGED

Ambient Air: 0.0 PPM

Well Mouth: 0.6 PPM

PURGE DATA

flowrate ≈ 125 ml/min.

Start Purge: 1116 End Purge: 1138

Purge Volume	@ 3.5 GAL	@ ___ GAL	@ ___ GAL	@ ___ GAL	@ ___ GAL
Temp. Deg C	16.8				
pH, Units	7.5				
Specific Conductivity umhos/cm	1.0				
Turbidity (NTU)	480				
DO (mg/L)	2.6				
ORP (mV) → -71					

Sample Observations:

☒ Clear ☐ Colored _____ ☒ Cloudy Algae ☐ Turbid _____ ☒ Odor Sulfur ☐ Other (see notes)

EQUIPMENT DOCUMENTATION

Purging	Sampling		Equipment ID	Decon Fluids Used	Water Level Equip. Used
☒	☒	Peristaltic Pump	ISCO # _____	☒ Liqui-Nox	☐ Electric Cond. Probe
☐	☐	Submersible Pump	KECK # M20050	☐ Deionized Water	☐ Float Activated
☐	☐	Bailer	☐ 2" ☒ 1" # ___	☐ HNO3	☒ Keck Interface Probe
☐	☐	Teflon Tubing	☐ QED	☐ Potable Water	☐ Other _____
☐	☐	Air Lift		☐ Isopropanol	
☐	☐	Waterra		☐ None	Number of Filters Used _____
	☐	In-line Filter		☒ distilled water	
	☐	Press/Vac Filter			
☐	☐	_____	_____		

NOTES: VOCs 1155 Collected 3-40mL VOA vials

Removed 3.5 gal, purged well dry, then sampled.

SM Approval _____ Date: 9/17/99

Signature: _____

HARDING LAWSON ASSOCIATES
FIELD DATA RECORD - GROUND WATER

Page 1 of 1

Sample ID: TW04099901

Project: Ames St. Pre-Remedy GWMP

Job Number: 44836/871984

Date: 9/16/99

Sample Location ID: TW-04

Location Activity: Start 1027 End 1115

Field QC Data: ☐ Field Duplicate Collected Dup ID: _____

WATER LEVEL / WELL DATA

Well Stick-up (from ground): _____ FT

Prot. Casing/ TOC Diff.: _____ FT

Well Depth: 20.55 FT ☐ Measured ☒ Historical ☒ TOC ☐ Top of Prot. Casing ☐ _____

Well Dia.: ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ _____

Well Integrity:

	Yes	No	N/A
Prot. Casing Secure	☒	☐	☐
Concrete Collar Intact	☐	☐	☒
Well Locked	☒	☐	☐
Other: _____	☐	☐	☐

Depth to Water: 9/14 13.89 FT; 9/16 13.87

Historical Well Depth: 20.55 FT

Well Material: ☒ PVC ☐ SS ☐ _____

Height of Water Column: 6.66 FT

X ☒ .16 GAL/FT (2 IN) ☐ .65 GAL/FT (4 IN) ☐ 1.5 GAL/FT (6 IN) ☐ ___ GAL/FT (___ IN)

= 1.1 GAL/VOL

2.5 TOTAL GAL PURGED

Ambient Air: 0.0 PPM

Well Mouth: 0.0 PPM

PURGE DATA

flow rate ≈ 235 ml/min

Start Purge: 1032 End Purge: 1104

Purge Volume	@ 0.5 GAL	@ 1.1 GAL	@ 1.3 GAL	@ 1.5 GAL	@ ___ GAL
Temp. Deg C	16.3	16.6	16.4	16.6	
pH, Units	7.8	7.8	7.6	7.5	
Specific Conductivity umhos/cm	1.4	1.4	1.3	1.3	
turbidity (NTU)	53	34	36	30	
DO (mg/L)	2.4	2.8	2.6	2.6	

Sample Observations: ☐ Clear ☐ Colored _____ ☒ Cloudy _____ ☐ Turbid _____ ☒ Odor sulfur ☐ Other (see notes)

EQUIPMENT DOCUMENTATION

ORP → -243 -243 -238 -225

Purging	Sampling	
☒	☒	Peristaltic Pump
☐	☐	Submersible Pump
☐	☐	Bailer
☐	☐	Teflon Tubing
☐	☐	Air Lift
☐	☐	Waterra
	☐	In-line Filter
	☐	Press/Vac Filter
☐	☐	_____

Equipment ID: ISCO # _____ KECK # M20070 ☐ 2" ☒ 1" # ___ ☐ CED _____

Decon Fluids Used: ☒ Liqui-Nox ☐ Deionized Water ☐ HNO3 ☐ Potable Water ☐ Isopropanol ☐ None ☒ distilled water

Water Level Equip. Used: ☐ Electric Cond. Probe ☐ Float Activated ☒ Keck Interface Probe ☐ Other _____

Number of Filters Used: _____

NOTES: VOC

Final DTW = 16.0'

SM Approval _____ Date: 9/16/99

Signature: _____

HARDING LAWSON ASSOCIATES
FIELD DATA RECORD - GROUND WATER

Page 1 of 1

Sample ID: TW07099901

Project: Ames St. Pre-Remedy GWMP

Job Number: 44836/074841

Date: 9/16/99

Sample Location ID: TW-07

Location Activity: Start 0905 End 1020

Field QC Data: ☐ Field Duplicate Collected Dup ID _____

WATER LEVEL / WELL DATA

Well Depth: 18.31 FT ☐ Measured ☒ Historical

☒ TOC ☐ Top of Prot. Casing ☐ _____

Well Stick-up (from ground): _____ FT

Prot. Casing/ TOC Diff.: _____ FT

Well Dia. ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ _____

Well Integrity: Yes / No / N/A

Prot. Casing Secure ☒ ☐ ☐

Concrete Collar Intact ☐ ☐ ☒

Well Locked ☐ ☐ ☐

Other: _____

Depth to Water: 9/14 13.23 FT; 9/16 13:41

Historical Well Depth: 18.31 FT

Well Material: ☒ PVC ☐ SS ☐ _____

Height of Water Column: 5.08 FT

X ☒ .16 GAL/FT (2 IN) ☐ .65 GAL/FT (4 IN) ☐ 1.5 GAL/FT (6 IN) ☐ ___ GAL/FT (___ IN)

= 0.9 GAL/VOL

1.7 TOTAL GAL PURGED

Ambient Air: 0.0 PPM

Well Mouth: 1.2 PPM

PURGE DATA

Flow rate ≈ 153 ml/min, adjusted to 100 ml/min

Start Purge: 0915 End Purge: 1010

Purge Volume	@ 0.5 GAL	@ 1.2 GAL	@ 1.5 GAL	@ 1.7 GAL	@ ___ GAL
Temp. Deg C	16.7	16.4	16.9	16.6	
pH, Units	7.3	7.4	7.2	7.2	
Specific Conductivity umhos/cm	2.3	2.2	2.2	2.2	
Turbidity (NTUs)	63	16	16	17	
DO (mg/L)	3.4	3.5	3.6	3.6	

Sample Observations

☒ Clear ☐ Colored _____ ☐ Cloudy _____ ☐ Turbid _____ ☐ Odor _____ ☐ Other (see notes)

EQUIPMENT DOCUMENTATION

DRP (mV) → 3 -2 3 -4

Purging	Sampling	Equipment ID	Decon Fluids Used	Water Level Equip. Used
☒	☒ Peristaltic Pump	ISCO # _____	☒ Liqui-Nox	☐ Electric Cond. Probe
☐	☐ Submersible Pump	KECK # M20030	☐ Deionized Water	☐ Float Activated
☐	☐ Bailer	☐ 2" ☒ 1" # ___	☐ HNO3	☒ Keck Interface Probe
☐	☐ Teflon Tubing	☐ CED	☐ Potable Water	☐ Other _____
☐	☐ Air Lift		☐ Isopropanol	
☐	☐ Waterra		☐ None	Number of Filters Used _____
	☐ In-line Filter		☒ distilled H_2O	
	☐ Press/Vac Filter			
☐	☐ _____	_____		

NOTES: VOC 0944 flow rate ≈ 100 ml/min final DTW = 14.45'

SM Approval _____ Date: 9/16/99

Signature: _____

HARDING LAWSON ASSOCIATES
FIELD DATA RECORD - GROUND WATER

Sample ID: TW099901

Project: Ames St. Pre-Remedy GWMP

Job Number: 44836/07193.41

Date: 9/16/99

Sample Location ID: TW-09

Location Activity: Start ~~1215~~ 1320 End

Field QC Data: ☐ Field Duplicate Collected Dup ID: _____

WATER LEVEL / WELL DATA

Well Stick-up (from ground): _____ FT

Prot. Casing/ TOC Diff.: _____ FT

Well Depth: 17.40 FT ☐ Measured ☒ Historical ☒ TOC ☐ Top of Prot. Casing ☐ _____

Well Dia. ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ _____

Well Integrity:

	Yes	No	N/A
Prot. Casing Secure	☒	☐	☐
Concrete Collar Intact	☐	☒	☐
Well Locked	☒	☐	☐
Other: _____	☐	☐	☐

Depth to Water: 9/14 15.08 FT; 9/16 15.04

Historical Well Depth: 17.40 FT

Well Material: ☒ PVC ☐ SS ☐ _____

Height of Water Column: 3.33 FT X ☒ .16 GAL/FT (2 IN) ☐ .65 GAL/FT (4 IN) ☐ 1.5 GAL/FT (6 IN) ☐ ___ GAL/FT (___ IN) = 0.53 = 0.6 GAL/VOL

0.6 TOTAL GAL PURGED

Ambient Air: 0.0 PPM

Well Mouth: 1.3 PPM

PURGE DATA

flow rate x 167 ml/min = drawdown

Start Purge: 1327 End Purge: 1338

Purge Volume	@ ___ GAL	@ ___ GAL	@ ___ GAL	@ ___ GAL	@ ___ GAL
Temp. Deg C					
pH, Units					
Specific Conductivity umhos/cm					
Turbidity (NTU)					
DO (mg/L)					

Sample Observations:
☐ Clear ☒ Colored dk green ☒ Cloudy _____ ☐ Turbid _____ ☒ Odor Sulfur ☐ Other (see notes)

EQUIPMENT DOCUMENTATION

ORP (mV)

Purging	Sampling	
☒	☒	Peristaltic Pump
☐	☐	Submersible Pump
☐	☐	Bailer
☐	☐	Teflon Tubing
☐	☐	Air Lift
☐	☐	Waterra
	☐	In-line Filter
	☐	Press/Vac Filter
☐	☐	_____

Equipment ID: ISCO # _____ KECK # 01200 SW ☐ 2" ☒ 1" # ___ ☐ CED

Decon Fluids Used: ☒ Liqui-Nox ☐ Deionized Water ☐ HNO3 ☐ Potable Water ☐ Isopropanol ☐ None ☒ distilled H2O

Water Level Equip. Used: ☐ Electric Cond. Probe ☐ Float Activated ☒ Keck Interface Probe ☐ Other _____

Number of Filters Used: _____

NOTES: VOC
1327 DTW = 15.04
1334 DTW = 17.3, flow rate = 167 ml/min drawdown occurring.
1338 well purged dry, come back and sample 9/16/99

SM Approval: _____ Signature: _____ Date: 9/16/99

HARDING LAWSON ASSOCIATES
FIELD DATA RECORD - GROUND WATER

Sample ID: TW09099901

Project: Ames St Pre-Remedy GWMP

Job Number: 34836/[illegible]

Date: 9/17/99

Sample Location ID: TW-09

Location Activity: Start 06:45 End 0700

Field QC Data: ☐ Field Duplicate Collected Dup ID ______

WATER LEVEL / WELL DATA

Well Depth: 17.40 FT ☐ Measured ☒ Historical ☒ TOC ☐ Top of Prot. Casing ☐ ______

Depth to Water 9/17: 14.03 FT

Historical Well Depth: ______ FT

Well Stick-up (from ground): ______ FT

Prot. Casing/TOC Diff.: ______ FT

Well Dia.: ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ ______

Well Material: ☒ PVC ☐ SS ☐ ______

Well Integrity:	Yes	No	N/A
Prot. Casing Secure	☒	☐	☐
Concrete Collar Intact	☐	☒	☐
Well Locked	☒	☐	☐
Other: ______	☐	☐	☐

Height of Water Column: 3.37 FT × ☒ .16 GAL/FT (2 IN) ☐ .65 GAL/FT (4 IN) ☐ 1.5 GAL/FT (6 IN) ☐ ___ GAL/FT (__ IN) = 0.54 GAL/VOL

0.6 TOTAL GAL PURGED

Ambient Air: 0.0 PPM

Well Mouth: 1.3 PPM

PURGE DATA

Start Purge: 06:45 End Purge: ______

Purge Volume	@ __ GAL	@ __ GAL	@ __ GAL	@ __ GAL	@ __ GAL
Temp, Deg C	15.4				
pH, Units	7.2				
Specific Conductivity umhos/cm	1.3				
turbidity	790				
DO	3.8				
ORP	-38				

Sample Observations:
- ☐ Clear
- ☒ Colored dk green
- ☐ Cloudy ______
- ☐ Turbid ______
- ☒ Odor sulfur
- ☐ Other (see notes)

EQUIPMENT DOCUMENTATION

Purging	Sampling		
☒	☒	Peristaltic Pump	
☐	☐	Submersible Pump	
☐	☐	Bailer	
☐	☐	Teflon Tubing	
☐	☐	Air Lift	
☐	☐	Waterra	
	☐	In-line Filter	
	☐	Press/Vac Filter	
☐	☐	______	

Equipment ID:
- ISCO # ______
- KECK # M20020
- ☐ 2" ☒ 1" # ___
- ☐ CED
- ______

Decon Fluids Used:
- ☒ Liqui-Nox
- ☐ Deionized Water
- ☐ HNO3
- ☐ Potable Water
- ☐ Isopropanol
- ☐ None
- ☒ distilled H_2O

Water Level Equip. Used:
- ☐ Electric Cond. Probe
- ☐ Float Activated
- ☒ Keck Interface Probe
- ☐ Other ______

Number of Filters Used ______

NOTES: VOCs collected

SM Approval ______

Date: 9/17/99

Signature: [signature]

HARDING LAWSON ASSOCIATES
FIELD DATA RECORD - GROUND WATER

Page 1 of 1

Sample ID: TW13099901

Project: Ames St. Pre-Remedy GWMP

Job Number: 44836/0719841

Date: 9/15/99

Sample Location ID: TW-13

Location Activity: Start 1640 End 1745

Field QC Data: ☐ Field Duplicate Collected Dup ID: _____

WATER LEVEL / WELL DATA

Well Depth: 14.88 FT ☐ Measured ☒ Historical ☒ TOC ☐ Top of Prot. Casing ☐ _____

Well Stick-up (from ground): _____ FT

Prot. Casing/TOC Diff.: _____ FT

Well Dia.: ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ _____

Well Integrity:

	Yes	No	N/A
Prot. Casing Secure	☐	☐	☐
Concrete Collar Intact	☐	☐	☐
Well Locked	☐	☐	☐
Other: _____	☐	☐	☐

Depth to Water: 9/14 5.80 FT; 9/15 5.80

Historical Well Depth: 14.88 FT

Well Material: ☒ PVC ☐ SS ☐ _____

Height of Water Column: 9.08 FT

X ☒ .16 GAL/FT (2 IN) ☐ .65 GAL/FT (4 IN) ☐ 1.5 GAL/FT (6 IN) ☐ ___ GAL/FT (___ IN)

= 1.5 GAL/VOL

1.3 TOTAL GAL PURGED

Ambient Air: 0.0 PPM

Well Mouth: 3.3 PPM

PURGE DATA

flow rate ≈ 90 ml/min, flow rate adjusted to ≈108 ml/min

Start Purge: 1645 End Purge: 1734

Purge Volume	@ 0.2 GAL	@ 1.1 GAL	@ 1.3 GAL	@ ___ GAL	@ ___ GAL
Temp. Deg C	22.0	20.6	20.1		
pH, Units	7.2	7.1	7.1		
Specific Conductivity umhos/cm	1.7	1.7	1.7		
turbidity (NTU)	22	20	21		
DO (mg/L)	3.7	3.5	3.7		

Sample Observations: ☒ Clear ☐ Colored _____ ☐ Cloudy _____ ☐ Turbid _____ ☐ Odor _____ ☐ Other (see notes)

EQUIPMENT DOCUMENTATION

ORP (mV) -111 -100 -102

Purging	Sampling		Equipment ID	Decon Fluids Used	Water Level Equip. Used
☒	☐	Peristaltic Pump	ISCO # _____	☒ Liqui-Nox	☐ Electric Cond. Probe
☐	☐	Submersible Pump	KECK # M20x30	☐ Deionized Water	☐ Float Activated
☐	☐	Bailer	☐ 2" ☐ 1" # ___	☐ HNO3	☒ Keck Interface Probe
☐	☐	Teflon Tubing	☐ QED	☐ Potable Water	☐ Other _____
☐	☐	Air Lift		☐ Isopropanol	
☐	☐	Waterra		☐ None	Number of Filters Used _____
	☐	In-line Filter		☒ distilled H_2O	
	☐	Press/Vac Filter			
☐	☐	_____	_____		

NOTES: VOC

1705 had to replace battery on pump. re-setting flow rate ≈ 108 ml/min.

final DTW = 6.5'

SM Approval _____ Date: 9/15/99

Signature: _____

HARDING LAWSON ASSOCIATES
FIELD DATA RECORD - GROUND WATER

Sample ID: TW17Ø999Ø1

Project: Ames St. Pre-Remedy GWMP

Job Number: 44836/074841

Date: 9/16/99

Sample Location ID: TW-17

Location Activity: Start 1515 End 1552 (come back)

Field QC Data: ☐ Field Duplicate Collected Dup ID: _____

WATER LEVEL / WELL DATA

Well Stick-up (from ground): _____ FT

Prot. Casing/ TOC Diff.: _____ FT

Well Depth: 17.60 FT ☐ Measured ☒ Historical ☒ TOC ☐ Top of Prot. Casing ☐ _____

Well Dia. ☒ 2 Inch ☐ 4 Inch ☐ 6 Inch ☐ _____

Well Integrity:

	Yes	No	N/A
Prot. Casing Secure	☒	☐	☐
Concrete Collar Intact	☒	☐	☐
Well Locked	☐	☒	☐
Other: _____	☐	☐	☐

Depth to Water: 9/14 11.26 FT; 9/16 11.38

Historical Well Depth: 17.60 FT

Well Material: ☒ PVC ☐ SS ☐ _____

Height of Water Column: 6.22 FT

X ☒ .16 GAL/FT (2 IN) ☐ .65 GAL/FT (4 IN) ☐ 1.5 GAL/FT (6 IN) ☐ ___ GAL/FT (___ IN)

= 1.0 GAL/VOL

1.2 TOTAL GAL PURGED

Ambient Air: 0.0 PPM

Well Mouth: 1.3 PPM

PURGE DATA

flow rate ≈ 200 ml/min - drawdown occurring

Start Purge: 1523 End Purge: 1552

Purge Volume	@ 0.9 GAL	@ 1.2 GAL	@ ___ GAL	@ ___ GAL	@ ___ GAL
Temp. Deg C	16.5	16.6			
pH, Units	7.2	7.2			
Specific Conductivity umhos/cm	1.2	1.2			
Turbid. by (NTU)	270	830			
DO (mg/L)	4.1	5.3			

Sample Observations

☐ Clear ☐ Colored _____ ☐ Cloudy _____ ☒ Turbid _____ ☐ Odor _____ ☐ Other (see notes)

EQUIPMENT DOCUMENTATION

ORP (mV) 4 5

Purging	Sampling	
☒	☒	Peristaltic Pump
☐	☐	Submersible Pump
☐	☐	Bailer
☐	☐	Teflon Tubing
☐	☐	Air Lift
☐	☐	Waterra
	☐	In-line Filter
	☐	Press/Vac Filter
☐	☐	_____

Equipment ID: ISCO # _____ KECK # M20030 ☐ 2" ☒ 1" # ___ ☐ QED

Decon Fluids Used: ☒ Liqui-Nox ☐ Deionized Water ☐ HNO3 ☐ Potable Water ☐ Isopropanol ☐ None ☒ distilled H2O

Water Level Equip. Used: ☐ Electric Cond. Probe ☐ Float Activated ☒ Keck Interface Probe ☐ Other _____

Number of Filters Used: _____

NOTES: VOC ; purged dry come back and sample

SM Approval _____ Date: 9/16/99

Signature: _____

HARDING LAWSON ASSOCIATES
FIELD DATA RECORD - GROUND WATER

Sample ID: TW17099901

Project: Ames St. Pre-Remedy GWMP | Job Number: 44836/47184 | Date: 9/17/99

Sample Location ID: TW-17 | Location Activity: Start 0705 End 0712

Field QC Data: ☐ | Field Duplicate Collected | Dup ID: _____

WATER LEVEL / WELL DATA

Well Depth: 17.60 FT | ☐ Measured ☒ Historical | ☐ TOC ☐ Top of Prot. Casing ☐ _____

Well Stick-up (from ground): _____ FT | Prot. Casing/TOC Diff.: _____ FT

Depth to Water: 10.80 FT | Historical Well Depth: _____ FT

Well Material: ☒ PVC ☐ SS ☐ _____

Well Dia.: ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ _____

Well Integrity:

	Yes	No	N/A
Prot. Casing Secure	☒	☐	☐
Concrete Collar Intact	☒	☐	☐
Well Locked	☐	☒	☐
Other: _____	☐	☐	☐

Height of Water Column: _____ FT X ☒ .16 GAL/FT (2 IN) ☐ .65 GAL/FT (4 IN) ☐ 1.5 GAL/FT (6 IN) ☐ ___ GAL/FT (___ IN) = _____ GAL/VOL

TOTAL GAL PURGED

Ambient Air: 0.0 PPM | Well Mouth: 1.3 PPM

PURGE DATA

Start Purge: 0705 | End Purge: 0712

Purge Volume	@ ___ GAL	@ ___ GAL	@ ___ GAL	@ ___ GAL	@ ___ GAL
Temp. Deg C	15.2				
pH, Units	7.0				
Specific Conductivity umhos/cm	1.2				
Turbidity (NTU)	520				
DO (mg/L)	5.2				

Sample Observations:
☐ Clear ☐ Colored _____ ☐ Cloudy _____ ☒ Turbid _____ ☐ Odor _____ ☐ Other (see notes)

EQUIPMENT DOCUMENTATION

Purging	Sampling	Equipment ID	Decon Fluids Used	Water Level Equip. Used
☒ ORP	☒ Peristaltic Pump	ISCO # _____	☒ Liquinox	☐ Electric Cond. Probe
☐	☐ Submersible Pump	KECK # M20030	☐ Deionized Water	☐ Float Activated
☐	☐ Bailer	☐ 2" ☒ 1" # _____	☐ HNO3	☒ Keck Interface Probe
☐	☐ Teflon Tubing	☐ QED	☐ Potable Water	☐ Other _____
☐	☐ Air Lift		☐ Isopropanol	
☐	☐ Waterra		☐ None	Number of Filters Used: _____
	☐ In-line Filter		☒ distilled H2O	
	☐ Press/Vac Filter			
☐	☐ _____	_____		

NOTES:

SM Approval: _____ | Date: 9/17/99 | Signature: _____

HARDING LAWSON ASSOCIATES
FIELD DATA RECORD - GROUND WATER

Sample ID: TW2ØØ99Ø1

Project: Ames St. Pre-Remedy GWMP

Job Number: 41836/074841

Date: 9/16/99

Sample Location ID: TW-2D

Location Activity: Start 1642 End 1718

Field QC Data: ☒ Field Duplicate Collected: Dup ID: TW2Ø999Ø2D

WATER LEVEL / WELL DATA

Well Stick-up (from ground): FT

Prot. Casing/ TOC Diff.: FT

Well Depth: 17.22 FT ☐ Measured ☒ Historical ☒ TOC ☐ Top of Prot. Casing ☐ ____

Well Dia.: ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ ____

Well Integrity:

	Yes	No	N/A
Prot. Casing Secure	☒	☐	☐
Concrete Collar Intact	☐	☐	☒
Well Locked	☒	☐	☐
Other: ____	☐	☐	☐

Depth to Water: 13.96 FT (9/16 13.99)

Historical Well Depth: 17.22 FT

Well Material: ☒ PVC ☐ SS ☐ ____

Height of Water Column: 3.23 FT

X ☒ .16 GAL/FT (2 IN) ☐ .65 GAL/FT (4 IN) ☐ 1.5 GAL/FT (6 IN) ☐ ____ GAL/FT (____ IN)

= 0.6 GAL/VOL

1.1 TOTAL GAL PURGED

Ambient Air: 0.0 PPM

Well Mouth: 1.6 PPM

PURGE DATA

flowrate ≈ 167 mL/min

Start Purge: 1646 End Purge: 1713

Purge Volume	@ 0.5 GAL	@ 0.8 GAL	@ 1.1 GAL	@ ____ GAL	@ ____ GAL
Temp. Deg C	15.1	15.1	15.0		
pH, Units	7.5	7.4	7.4		
Specific Conductivity umhos/cm	0.9	0.87	0.9		
Turbidity (NTU)	46	44	45		
DO (mg/L)	2.2	1.4	3.5		
ORP (mV) → -55	-58	-50			

Sample Observations

☒ Clear ☐ Colored ____ ☐ Cloudy ____ ☐ Turbid ____ ☐ Odor ____ ☐ Other (see notes)

EQUIPMENT DOCUMENTATION

Purging	Sampling	
☒	☒	Peristaltic Pump
☐	☐	Submersible Pump
☐	☐	Bailer
☐	☐	Teflon Tubing
☐	☐	Air Lift
☐	☐	Waterra
	☐	In-line Filter
	☐	Press/Vac Filter
☐	☐	____

Equipment ID: ISCO # ____ KECK # ____ ☐ 2" ☐ 1" # ____ ☐ CED ____

Decon Fluids Used: ☒ Liqui-Nox ☐ Deionized Water ☐ HNO3 ☐ Potable Water ☐ Isopropanol ☐ None ☒ distilled H_2O

Water Level Equip. Used: ☐ Electric Cond. Probe ☐ Float Activated ☐ Keck Interface Probe ☐ Other ____

Number of Filters Used: ____

NOTES: VOCs duplicate Collected Final DTW = 15.05

SM Approval: ____ Date: 9/16/99 Signature: [signature]

HARDING LAWSON ASSOCIATES
FIELD DATA RECORD - GROUND WATER

Page 1 of 1

Sample ID: ~~W-2~~ W2Ø99981

Project: Ames St. Pre-Remedy GWMP

Job Number: 44863/071984 Date: 9/15/99

Sample Location ID: W-2

Location Activity: Start 0925 End 1135

Begin purging 1035

Field QC Data: ☐ Field Duplicate Collected Dup ID

WATER LEVEL / WELL DATA

Well Depth: 20.46 FT ☐ Measured ☒ Historical ☒ TOC ☐ Top of Prot. Casing ☐ ____

Well Stick-up (from ground): FT Prot. Casing/ TOC Diff.: FT

Depth to Water: 10.55 FT Historical Well Depth: 20.46 FT

Well Material: ☒ PVC ☐ SS ☐ ____

Well Dia. ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ ____

Well Integrity:

	Yes	No	N/A
Prot. Casing Secure	☒	☒	☐
Concrete Collar Intact	☐	☐	☒
Well Locked	☐	☒	☐
Other: ____	☐	☐	☐

Height of Water Column: 9.91 FT X ☒ .16 GAL/FT (2 IN) ☐ .65 GAL/FT (4 IN) ☐ 1.5 GAL/FT (6 IN) ☐ ____ GAL/FT (__ IN) = 1.6 GAL/VOL

2.9 TOTAL GAL PURGED

Ambient Air: 0.0 PPM

Well Mouth: 0.2 PPM

PURGE DATA

flow-rate ≈ 260 ml/min

Start Purge: 1035 5L End Purge: 1124 11L

Purge Volume	@ 0.8 GAL	@ 1.3 GAL	@ 1.8 GAL 7L	@ 2.4 GAL 9L	@ 2.9 GAL 11L
Temp. Deg C	16.6	16.4	16.3	16.2	16.2
pH, Units	6.9	7.0	6.9	7.0	7.0
Specific Conductivity ~~umhos/cm~~	0.70	0.70	0.70	0.71	0.71
Turbidity (NTU)	15	20	5	2	0
DO (mg/L)	4.8	5.0	4.8	4.8	4.6
ORP (MV)	47	31	28	37	42

Sample Observations: ☒ Clear ☐ Colored ____ ☐ Cloudy ____ ☐ Turbid ____ ☐ Odor ____ ☐ Other (see notes)

EQUIPMENT DOCUMENTATION

Purging	Sampling	
☒	☒	Peristaltic Pump
☐	☐	Submersible Pump
☐	☐	Bailer
☐	☐	Teflon Tubing
☐	☐	Air Lift
☐	☐	Waterra
	☐	In-line Filter
	☐	Press/Vac Filter
☐	☐	____

Equipment ID: ISCO # ____ KECK # M200-50 ☐ 2" ☒ 1" # ____ ☐ CED

Decon Fluids Used: ☒ Liqui-Nox ☒ ~~Deionized Water~~ distilled PF 9-15-99 ☐ HNO3 ☒ ~~Potable Water~~ ☐ Isopropanol PF 9/14/99 ☐ None ☒ distilled H_2O

Water Level Equip. Used: ☐ Electric Cond. Probe ☐ Float Activated ☒ Keck Interface Probe ☐ Other ____

Number of Filters Used: ____

NOTES: flow rate ≈ 200 ml/min (111). Collected for CO_2, Alkalinity & Chloride

Final depth to water ≈ 13.80 and rising.

SM Approval ____ Date: 9/15/99

Signature: [signature]

Yes DO meter gal 1.3 = 4.78

0.2 gal

HARDING LAWSON ASSOCIATES
FIELD DATA RECORD - GROUND WATER

Sample ID: W4099901

Project: Ames St. Pre-Remedy | Job Number: 44836/071941 | Date: 9/15/99

Sample Location ID: W-4 | Location Activity: Start 1315 End 1425

Field QC Data: ☐ | Field Duplicate Collected | Dup ID: _____

WATER LEVEL / WELL DATA

Well Depth: 28.52 FT | ☐ Measured ☒ Historical | ☒ TOC ☐ Top of Prot. Casing ☐ _____

Well Stick-up (from ground): _____ FT | Prot. Casing/TOC Diff.: _____ FT

Well Dia: ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ _____

Well Integrity: Prot Casing Secure (Yes ☒) Concrete Collar Intact (Yes ☒) Well Locked (No ☒) Other: _____

Depth to Water: 9/44 12.04 FT | Historical Well Depth: 28.52 FT | Well Material: ☒ PVC ☐ SS ☐ _____

Height of Water Column: ~~16.48~~ 9/15 11.3 FT | 17.22 RF 9/15/99

X ☒ .16 GAL/FT (2 IN) ☐ .65 GAL/FT (4 IN) ☐ 1.5 GAL/FT (6 IN) ☐ ___ GAL/FT (___ IN)

= ~~2.72~~ RF 9/15/99 2.8 GAL/VOL

1.6 TOTAL GAL PURGED

Ambient Air: 0.0 PPM | Well Mouth: 0.0 PPM

PURGE DATA

initial flow rate ≈ 214 ml/min.; flow rate ≈ 140 ml/min

Start Purge: 1333 | End Purge: 1412

Purge Volume	@ 0.5 GAL	@ 1.1 GAL	@ 1.6 GAL	@ ___ GAL	@ ___ GAL
Temp. Deg C	19.8	19.4	19.6		
pH, Units	7.4	7.3	7.4		
Specific Conductivity umhos/cm	1.2	1.2	1.3		
Turbidity (NTU)	130	45	47		
DO (mg/L)	2.2	2.3	2.6		

ORP (mV) → -247 -261 -248

Sample Observations: ☐ Clear ☐ Colored _____ ☐ Cloudy _____ ☒ Turbid Black flecks ☒ Odor Sulfur ☐ Other (see notes)

EQUIPMENT DOCUMENTATION

Purging	Sampling		Equipment ID	Decon Fluids Used	Water Level Equip. Used
☒	☒	Peristaltic Pump	ISCO # _____	☒ Liqui-Nox	☐ Electric Cond. Probe
☐	☐	Submersible Pump	KECK # M20030	☒ ~~Deionized Water~~ distilled RF 9-15-99	☐ Float Activated
☐	☐	Bailer	☐ 2" ☒ 1" # ___	☐ HNO3	☒ Keck Interface Probe
☐	☐	Teflon Tubing	☐ CED	☒ ~~Potable Water~~ RF 9-14-99	☐ Other _____
☐	☐	Air Lift		☐ Isopropanol	Number of Filters Used _____
☐	☐	Waterra		☐ None	
	☐	In-line Filter		☒ distilled H_2O	
	☐	Press/Vac Filter			
☐	☐	_____	_____		

NOTES: VOCs
1405 flow rate ≈ 105 ml/min.
1411 DTW = 17.57'
1414 purge dry
water level continuing to drop. will purge dry and come back and sample.
1421 well dry

SM Approval _____ | Date: 9/15/99 | Signature: _____

HARDING LAWSON ASSOCIATES
FIELD DATA RECORD - GROUND WATER

Sample ID: W4ø99ø1

Project: Ames St. Pre-Remedy

Job Number: 44831.0 / 7H548

Date: 9/16/99

Sample Location ID: N-4

Location Activity: Start 0835 End 0855

Field QC Data: ☐ Field Duplicate Collected Dup ID ________

WATER LEVEL / WELL DATA

Well Depth: 28.52 FT ☐ Measured ☒ Historical ☒ TOC ☐ Top of Prot. Casing ☐ ________

Well Stick-up (from ground): ________ FT

Prot. Casing/TOC Diff.: ________ FT

Depth to Water: 10.89 FT

Historical Well Depth: ________ FT

Well Material: ☒ PVC ☐ SS ☐ ________

Well Dia.: ☐ 2 inch ☐ 4 inch ☐ 6 inch ☐ ________

Well integrity:

	Yes	No	N/A
Prot. Casing Secure	☒	☐	☐
Concrete Collar Intact	☐	☐	☒
Well Locked	☐	☒	☐
Other: ________	☐	☐	☐

Height of Water Column: ________ FT X ☒ .16 GAL/FT (2 IN) ☐ .65 GAL/FT (4 IN) ☐ 1.5 GAL/FT (6 IN) ☐ ___ GAL/FT (__ IN) = ________ GAL/VOL ________ TOTAL GAL PURGED

Ambient Air: 0.0 PPM

Well Mouth: 0.0 PPM

PURGE DATA

Start Purge: 0835 End Purge: 0855

Purge Volume	@ ___ GAL	@ ___ GAL	@ ___ GAL	@ ___ GAL	@ ___ GAL
Temp, Deg C	15.3				
pH, Units	7.5				
Specific Conductivity umhos/cm	1.4				
Turbidity (NTU)	440				
DO (mg/L)	0.7				
ORP (mV)	-141				

Sample Observations:
- ☐ Clear
- ☐ Colored ________
- ☐ Cloudy ________
- ☒ Turbid black flecks
- ☒ Odor Sulfur
- ☐ Other (see notes)

EQUIPMENT DOCUMENTATION

Purging	Sampling	
☒	☒	Peristaltic Pump
☐	☐	Submersible Pump
☐	☐	Bailer
☐	☐	Teflon Tubing
☐	☐	Air Lift
☐	☐	Waterra
	☐	In-line Filter
	☐	Press/Vac Filter
☐	☐	________

Equipment ID:
- ISCO # ________
- KECK # Micro w
- ☐ 2" ☒ 1" # ___
- ☐ CED
- ________

Decon Fluids Used:
- ☒ Liqui-Nox
- ☐ Deionized Water
- ☐ HNO3
- ☐ Potable Water
- ☐ Isopropanol
- ☐ None
- ☒ distilled H_2O

Water Level Equip. Used:
- ☐ Electric Cond. Probe
- ☐ Float Activated
- ☒ Keck Interface Probe
- ☐ Other ________

Number of Filters Used ________

NOTES: sample collected after purging dry on 9/15/99

Date: 9/16/99

SM Approval ________

Signature: [signature]

HARDING LAWSON ASSOCIATES
FIELD DATA RECORD - GROUND WATER

Sample ID: W5Ø99Ø1

Project: Ames St. - Pre-Remedy GWMP

Job Number: 44836/0719541

Date: 9/16/99

Sample Location ID: W-5

Location Activity: Start 1225 End

Field QC Data: ☐ Field Duplicate Collected: Dup ID: _____

WATER LEVEL / WELL DATA

Well Depth: 22.25 FT ☐ Measured ☒ Historical ☐ TOC ☒ Top of Prot. Casing (top of riser*)

Well Stick-up (from ground): _____ FT

Prot. Casing/TOC Diff.: _____ FT

Well Dia.: ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ _____

Well Integrity:

	Yes	No	N/A
Prot. Casing Secure	☐	☒	☐
Concrete Collar Intact	☒	☐	☐
Well Locked	☐	☒	☐
Other: _____	☐	☐	☐

Depth to Water: 9/14 8.85 FT; 9/16 8.85

Historical Well Depth: 22.25 FT

Well Material: ☒ PVC ☐ SS ☐ _____

Height of Water Column: 13.4 FT

X ☒ .16 GAL/FT (2 IN) ☐ .65 GAL/FT (4 IN) ☐ 1.5 GAL/FT (6 IN) ☐ ___ GAL/FT (___ IN)

= 2.2 GAL/VOL

1.1 TOTAL GAL PURGED

Ambient Air: 0.0 PPM

Well Mouth: 0.4 PPM

PURGE DATA

flow rate ≈ 200 ml/min

Start Purge: 1242

End Purge: 1306 (pumped dry)

Purge Volume	@ 1.5 GAL	@ 1.1 GAL	@ ___ GAL	@ ___ GAL	@ ___ GAL
Temp. Deg C	16.9	16.8			
pH, Units	7.2	7.2			
Specific Conductivity umhos/cm	24	2.4			
Turbidity (NTU)	35	30			
DO (mg/L)	2.7	5.0			

Sample Observations: ☒ Clear ☐ Colored _____ ☐ Cloudy _____ ☐ Turbid _____ ☐ Odor _____ ☐ Other (see notes)

EQUIPMENT DOCUMENTATION

ORP (mV) → -187 -187

Purging	Sampling	
☒	☒	Peristaltic Pump
☐	☐	Submersible Pump
☐	☐	Bailer
☐	☐	Teflon Tubing
☐	☐	Air Lift
☐	☐	Waterra
	☐	In-line Filter
	☐	Press/Vac Filter
☐	☐	_____

Equipment ID: ISCO # _____ KECK # NW1W ☐ 2" ☒ 1" # ___ ☐ QED _____

Decon Fluids Used: ☒ Liquinox ☒ ~~Deionized~~ distilled Water ☐ HNO3 ☐ Potable Water ☐ Isopropanol ☐ None ☐ _____

Water Level Equip. Used: ☐ Electric Cond. Probe ☐ Float Activated ☒ Keck Interface Probe ☐ Other _____

Number of Filters Used: _____

NOTES: VOCs 1306 pumped well dry, come back and sample, after it reaches static.

* Top 5 inches of the pvc riser has been broken/burnt off. (measured at broken area)

SM Approval _____ Date: 9/16/99

Signature: _____

HARDING LAWSON ASSOCIATES
FIELD DATA RECORD - GROUND WATER

Sample ID: W5Ø99Ø1

Project: Ames St. Pre-Remedy GWMP

Job Number: 44836/0719.41

Date: 9/17/99

Sample Location ID: W-5

Location Activity: Start 0713 End 0722

Field QC Data: ☐ Field Duplicate Collected: Dup ID: _____

WATER LEVEL / WELL DATA

Well Depth: 22.25 FT ☐ Measured ☒ Historical ☒ TOC ☐ Top of Prot. Casing ☐ _____

Well Stick-up (from ground): _____ FT

Prot. Casing/TOC Diff.: _____ FT

Well Dia.: ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ _____

Well Integrity: Yes / No / N/A
- Prot. Casing Secure: ☐ / ☒ / ☐
- Concrete Collar Intact: ☐ / ☒ / ☐
- Well Locked: ☐ / ☐ / ☐
- Other: _____

Depth to Water: 8.85 FT

Historical Well Depth: _____ FT

Well Material: ☒ PVC ☐ SS ☐ _____

Height of Water Column: 13.4 FT

X ☒ .16 GAL/FT (2 IN) ☐ .65 GAL/FT (4 IN) ☐ 1.5 GAL/FT (6 IN) ☐ ___ GAL/FT (___ IN)

= 2.2 GAL/VOL

TOTAL GAL PURGED

Ambient Air: 0.0 PPM

Well Mouth: 0.4 PPM

PURGE DATA

Start Purge: 0713 End Purge: 0722

Purge Volume	① ___ GAL	② ___ GAL	③ ___ GAL	④ ___ GAL	⑤ ___ GAL
Temp. Deg C	15.6				
pH, Units	6.6				
Specific Conductivity umhos/cm	2.8				
Turbidity (NTU)	64				
DO (mg/L)	2.6				

Sample Observations
- ☒ Clear
- ☐ Colored _____
- ☐ Cloudy _____
- ☐ Turbid _____
- ☐ Odor _____
- ☐ Other (see notes)

EQUIPMENT DOCUMENTATION

ORP → -48

Purging	Sampling	Equipment ID	Decon Fluids Used	Water Level Equip. Used
☒	☒ Peristaltic Pump	ISCO # _____	☒ Liqui-Nox	☐ Electric Cond. Probe
☐	☐ Submersible Pump	KECK # M20:30	☐ Deionized Water	☐ Float Activated
☐	☐ Bailer	☐ 2" ☒ 1" # ___	☐ HNO3	☒ Keck Interface Probe
☐	☐ Teflon Tubing	☐ CED	☐ Potable Water	☐ Other _____
☐	☐ Air Lift		☐ Isopropanol	Number of Filters Used: _____
☐	☐ Waterra		☐ None	
	☐ In-line Filter		☒ distilled H2O	
	☐ Press/Vac Filter			
☐	☐ _____	_____		

NOTES:

S/M Approval: _____

Date: 9/17/99

Signature: _____

HARDING LAWSON ASSOCIATES
FIELD DATA RECORD - GROUND WATER

Sample ID: W6Ø999Ø1

Project: Ames St. Pre-Remedy GWMP

Job Number: 44836/0719841

Date: 9/15/99

Sample Location ID: W-6

Location Activity: Start 1207 End 1300

Field QC Data: ☐ MS/MSD Field Duplicate Collected RF 9-15-99 Dup ID _____

WATER LEVEL / WELL DATA

RF 9/14/99

Well Depth: 14.45 FT — ~~Measured~~ ☒ Historical — ☒ TOC ☐ Top of Prot. Casing ☐ _____

Well Stick-up (from ground): _____ FT

Prot. Casing/TOC Diff.: _____ FT

Depth to Water: 9/14 5.79 FT; 9/15 5.96

Historical Well Depth: 14.45 FT

Well Material: ☒ PVC ☐ SS ☐ _____

Well Dia.: ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ _____

Well Integrity:

	Yes	No	N/A
Prot. Casing Secure	☒	☐	☐
Concrete Collar Intact	☒	☐	☐
Well Locked	☒	☐	☐
Other: _____	☐	☐	☐

Height of Water Column: 8.66 FT

X ☒ .16 GAL/FT (2 IN) ☐ .65 GAL/FT (4 IN) ☐ 1.5 GAL/FT (6 IN) ☐ ___ GAL/FT (___ IN)

= 1.4 GAL/VOL

1.8 TOTAL GAL PURGED

Ambient Air: 0.0 PPM

Well Mouth: 1.8 PPM

PURGE DATA

flow rate ≈ 180 ml/min

Start Purge: 1208 End Purge: 1253

Purge Volume	@ 0.5 GAL	@ 1.3 GAL	@ 1.8 GAL	@ ___ GAL	@ ___ GAL
Temp. Deg C	21.6	21.7	21.2		
pH, Units	10.1	9.4	9.0		
Specific Conductivity umhos/cm	0.5	0.75	1.1		
Turbidity (NTUs)	480	67	52		
DO (mg/L)	3.2	3.4	3.2		

-34 -45

ORP → -18

Sample Observations

☐ Clear ☐ Colored _____ ☒ Cloudy brown ☐ Turbid _____ ☐ Odor _____ ☐ Other (see notes)

EQUIPMENT DOCUMENTATION

Purging	Sampling	Equipment ID	Decon Fluids Used	Water Level Equip. Used
☒	☒ Peristaltic Pump	ISCO # _____	☒ Liqui-Nox ☒ Distilled Water	☐ Electric Cond. Probe
☐	☐ Submersible Pump	KECK # M20030	☐ HNO3	☐ Float Activated
☐	☐ Bailer	☐ 2" ☒ 1" # ___	☐ ~~Potable Water~~	☒ Keck Interface Probe
☐	☐ Teflon Tubing	☐ CED	☐ Isopropanol	☐ Other _____
☐	☐ Air Lift		☐ None	Number of Filters Used _____
☐	☐ Waterra		☐ _____	
	☐ In-line Filter			
	☐ Press/Vac Filter			
☐	☐ _____	_____		

NOTES: VOCs - collect MS/MSD. *DTW Kept dropping & purging well dry and come back and sample!
1227 re-setting flow rate
1233 flow rate ≈ 140 ml/min.

Date: 9/15/99

SM Approval _____

Signature: _____

HARDING LAWSON ASSOCIATES
FIELD DATA RECORD - GROUND WATER

Sample ID: W6Ø999Ø1

Project: Ames St.

Job Number: 44836 / 049844

Date: 9/16/99

Sample Location ID: W-6

Location Activity: Start 0805 End 0820

Field QC Data: ☒ ~~Field Duplicate Collected~~ ms/msD Dup ID ________

WATER LEVEL / WELL DATA

Well Depth: 14.45 FT ☐ Measured ☒ Historical ☒ TOC ☐ Top of Prot. Casing ☐ ________

Well Stick-up (from ground): ____ FT

Prot. Casing/TOC Diff.: ____ FT

Well Dia. ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ ________

Depth to Water: 6.41 FT

Historical Well Depth: ____ FT

Well Material: ☒ PVC ☐ SS ☐ ________

Well Integrity	Yes	No	N/A
Prot. Casing Secure	☒	☐	☐
Concrete Collar Intact	☒	☐	☐
Well Locked	☒	☐	☐
Other: ________	☐	☐	☐

Height of Water Column: 8.04 FT × ☒ .16 GAL/FT (2 IN) ☐ .65 GAL/FT (4 IN) ☐ 1.5 GAL/FT (6 IN) ☐ ___ GAL/FT (__ IN) = 1.3 GAL/VOL

TOTAL GAL PURGED: ________

Ambient Air: 0.0 PPM

Well Mouth: ____ PPM

PURGE DATA

Start Purge: 0805 End Purge: 0820

Purge Volume	@ ___ GAL	@ ___ GAL	@ ___ GAL	@ ___ GAL	@ ___ GAL
Temp, Deg C	18.5				
pH, Units	7.8				
Specific Conductivity umhos/cm	2.1				
Turbidity (NTUs)	18				
DO (mg/L)	0.9				

ORP (mV) → -21

Sample Observations:
- ☐ Clear
- ☐ Colored ________
- ☒ Cloudy brown
- ☐ Turbid ________
- ☐ Odor ________
- ☐ Other (see notes)

EQUIPMENT DOCUMENTATION

Purging	Sampling	
☒	☒	Peristaltic Pump
☐	☐	Submersible Pump
☐	☐	Bailer
☐	☐	Teflon Tubing
☐	☐	Air Lift
☐	☐	Waterra
	☐	In-line Filter
	☐	Press/Vac Filter
☐	☐	________

Equipment ID:
- ISCO # ________
- KECK # 3/1100 30
- ☐ 2" ☒ 1" # ___
- ☐ CED
- ________

Decon Fluids Used:
- ☒ Liqui-Nox
- ☐ Deionized Water
- ☐ HNO3
- ☐ Potable Water
- ☐ Isopropanol
- ☐ None
- ☒ distilled H_2O

Water Level Equip. Used:
- ☐ Electric Cond. Probe
- ☐ Float Activated
- ☒ Keck Interface Probe
- ☐ Other ________

Number of Filters Used ________

NOTES: VOCs ms/msd.

SM Approval ________

Date: 9/16/99

Signature: [signature]

HARDING LAWSON ASSOCIATES
FIELD DATA RECORD - GROUND WATER

Page 1 of 1

Sample ID: QAFB099901

Project: Ames St. - Pre-Remedy GWMP

Job Number: 44836/0719841

Date: 9/15/99

Sample Location ID: Field Blank (potable water)

Location Activity: Start 0845 End 0900

Field QC Data: ☒ Field Duplicate Collected: Dup ID: _____

WATER LEVEL / WELL DATA

Well Depth: ____ FT ☐ Measured ☐ Historical ☐ TOC ☐ Top of Prot. Casing ☐ _____

Well Stick-up (from ground): ____ FT

Prot. Casing/ TOC Diff.: ____ FT

Depth to Water: ____ FT

Historical Well Depth: ____ FT

Well Material: ☐ PVC ☐ SS ☐ _____

Well Dia. ☐ 2 inch ☐ 4 inch ☐ 6 inch ☐ _____

Well Integrity:	Yes	No	N/A
Prot. Casing Secure	☐	☐	☐
Concrete Collar Intact	☐	☐	☐
Well Locked	☐	☐	☐
Other: _____	☐	☐	☐

Height of Water Column: ____ FT X ☐ .16 GAL/FT (2 IN) ☐ .65 GAL/FT (4 IN) ☐ 1.5 GAL/FT (6 IN) ☐ ___ GAL/FT (__ IN) = ____ GAL/VOL

TOTAL GAL PURGED

Ambient Air: ____ PPM

Well Mouth: ____ PPM

PURGE DATA

Start Purge: End Purge:

Purge Volume	@ ___ GAL	@ ___ GAL	@ ___ GAL	@ ___ GAL	@ ___ GAL
Temp, Deg C					
pH, Units					
Specific Conductivity umhos/cm					
_____					

Sample Observations
- ☐ Clear
- ☐ Colored _____
- ☐ Cloudy _____
- ☐ Turbid _____
- ☐ Odor _____
- ☐ Other (see notes)

EQUIPMENT DOCUMENTATION

Purging	Sampling	Equipment ID	Decon Fluids Used	Water Level Equip. Used
☐	☐ Peristaltic Pump	ISCO # _____	☒ Liqui-Nox	☐ Electric Cond. Probe
☐	☐ Submersible Pump	KECK # _____	☐ Deionized Water	☐ Float Activated
☐	☐ Bailer	☐ 2" ☐ 1" # ___	☐ HNO3	☐ Keck Interface Probe
☒	☐ Teflon Tubing	☐ CED	☐ Potable Water	☐ Other _____
☐	☐ Air Lift		☐ Isopropanol	
☐	☐ Waterra		☐ None	Number of Filters Used ____
	☐ In-line Filter		☒ distilled H_2O	
	☐ Press/Vac Filter			
☐	☐ _____	_____		

NOTES: VOCs

Date: 9/15/99

SM Approval _____ Signature: _____

APPENDIX D

CHAIN OF CUSTODY FORMS

COLUMBIA ANALYTICAL SERVICES, INC.
1 Mustard St., Suite 250, Rochester, NY 14609-6925
(716) 288-5380 • FAX (716) 288-8475

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

(800) 695-7222

DATE 9/17/99 PAGE 1 OF 3

PROJECT NAME Ames St. Pre-Remedy Groundwater Monitoring Plan

PROJECT MANAGER/CONTACT Rick Ryan

COMPANY/ADDRESS 1400 Centerpoint Blvd. Ste 158
Knoxville, TN 37932-1968

TEL (423) ~~477~~ 531-1922 FAX (423) 531-8226

SAMPLER'S SIGNATURE

ANALYSIS REQUESTED [Alkalinity Bicarbonate, Temp, TDS]

SAMPLE I.D.	DATE	TIME	FOR OFFICE USE ONLY LAB I.D.	SAMPLE MATRIX	# OF CONTAINERS	GC/MS VOA's ☐ 624 ☐ 95-1 ☐ 8260	GC/MS SVOA's ☐ 625 ☐ 95-2 ☐ 8270	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES/PCB's ☐ 8081 ☐ 608 ☐ 95-3	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 BELOW)	METALS, DISSOLVED (LIST BELOW)	CO_2 Carbon Dioxide	Alkalinity Total	Chloride				PRESERVATION pH < 2.0	pH > 12	Other
QAFB0999@1	9/15/99	0845	325419	potable	3	3																	
QARB0999@1	9/15/99	0845	420	rinsate	3	3																	
W2@999@1	9/15/99	1124	325459	groundwater	3											1	1	1					
W6@999@1	9/16/99	0805	421	groundwater	3	3																	
W6@999@1MS	9/16/99	0805		groundwater	3	3													(matrix spike)				
W6@999@1MD	9/16/99	0805		groundwater	3	3													(matrix spike duplicate)				
W4@999@1	9/16/99	~~1412~~ 0835	9-17-99 422	groundwater	3	3																	
BR@7@999@1	9/15/99	1526	423	groundwater	3	3																	
BR@7@999@1D	9/15/99	1526	424	duplicate	3	3													(Duplicate)				
MW@@@999@1	9/15/99	1626	425	groundwater	3	3																	

RELINQUISHED BY:
Signature
Printed Name Jerry R. Fields Jr.
Firm MLA
Date/Time 9/17/99 14:54

RECEIVED BY:
Signature
Printed Name Michael C. Perry
Firm CAS
Date/Time 9/17/99 14:54

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name Brian Gallems
Firm CAS
Date/Time 9/17/99 1454

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

TURNAROUND REQUIREMENTS
__ 24 hr. __ 48 hr. __ 5 day
__ Standard (10-15 working days)
__ Provide Verbal Preliminary Results
__ Provide FAX Preliminary Results
Requested Report Date

REPORT REQUIREMENTS
__ 1. Routine Report
__ 2. Routine Rep. w/CASE Narrative
__ 3. EPA Level III Validatable Package
__ 4. N.J. Reduced Deliverables Level IV
__ 5. NY ASP/CLP Deliverables
__ 6. Site specific QC.

INVOICE INFORMATION:
P.O. #:
Bill To:

SAMPLE RECEIPT:
Shipping Via: Client
Shipping #:
Temperature: 2.8
Submission No: 9909-248

SPECIAL INSTRUCTIONS/COMMENTS:
METALS
ORGANICS: ☐ TCL ☐ PPL ☐ AE Only ☐ BN Only ☐ Special List

COLUMBIA ANALYTICAL SERVICES, INC.
1 Mustard St., Suite 250, Rochester, NY 14609-6925
(716) 288-5380 • FAX (716) 288-8475

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

(800) 695-7222

DATE 9/17/99 PAGE 2 OF 3

PROJECT NAME Ames St. Groundwater Monitoring Plan
PROJECT MANAGER/CONTACT Rick Ryan
COMPANY/ADDRESS 1400 Centerpoint Blvd. Ste 158 Knoxville, TN 37932-1968
TEL (423) 531 1922 FAX (423) 531 8226
SAMPLER'S SIGNATURE [signature]

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	FOR OFFICE USE ONLY LAB I.D.	SAMPLE MATRIX	# OF CONTAINERS	GC/MS VOA's ☐ 624 ☐ 95-1 ☐ 8260	GC/MS SVOA's ☐ 8270 ☐ 625 ☐ 95-2	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES/PCB's ☐ 8081 ☐ 608 ☐ 95-3	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 BELOW)	METALS, DISSOLVED (LIST BELOW)	PRESERVATION pH < 2.0	pH > 12	Other
TW13Ø99Ø1	9/15/99	1734	325426	groundwater	3	3												
TWØ7Ø99Ø1	9/16/99	1010	427	groundwater	3	3												
TWØ4Ø99Ø1	9/16/99	1104	428	groundwater	3	3												
BRØ3Ø99Ø1	9/16/99	1205	431	groundwater	3	3												
BRØ2Ø99Ø1	9/16/99	1422	434	groundwater	3	3												
BRØ1Ø99Ø1	9/16/99	1628	437	groundwater	3	3												
TW2Ø99Ø1	9/16/99	1713	438	groundwater	3	3												
TW2Ø99Ø1D	9/16/99	1713	439	duplicate	3	3												
															Duplicate			

RP 9-17-99

RELINQUISHED BY:
Signature [signature]
Printed Name Jerry Fields
Firm HLA
Date/Time 9/17/99 1454

RECEIVED BY:
Signature [signature]
Printed Name Michael Perry
Firm CAS
Date/Time 9/17/99 14:54

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature [signature]
Printed Name Brian Collom
Firm CAS
Date/Time 9/17/99 1454

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

TURNAROUND REQUIREMENTS
__ 24 hr. __ 48 hr. __ 5 day
__ Standard (10-15 working days)
__ Provide Verbal Preliminary Results
__ Provide FAX Preliminary Results
Requested Report Date _____

REPORT REQUIREMENTS
__ 1. Routine Report
__ 2. Routine Rep. w/CASE Narrative
__ 3. EPA Level III Validatable Package
__ 4. N.J. Reduced Deliverables Level IV
__ 5. NY ASP/CLP Deliverables
__ 6. Site specific QC.

INVOICE INFORMATION:
P.O. #:
Bill To:

SAMPLE RECEIPT:
Shipping Via: client
Shipping #:
Temperature: 2.8
Submission No: 9-248

SPECIAL INSTRUCTIONS/COMMENTS:
METALS
ORGANICS: ☐ TCL ☐ PPL ☐ AE Only ☐ BN Only ☐ Special List

COLUMBIA ANALYTICAL SERVICES, INC.
1 Mustard St., Suite 250, Rochester, NY 14609-6925
(716) 288-5380 • FAX (716) 288-8475

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

(800) 695-7222

DATE 9/17/99 PAGE 3 OF 3

PROJECT NAME Ames St. Pre-Remedy Groundwater Monitoring Plan
PROJECT MANAGER/CONTACT Rick Ryan
COMPANY/ADDRESS 1400 Centerpoint Blvd. Ste 158
Knoxville, TN 37932-1968
TEL (423) 531 1922 FAX (423) 531 8226
SAMPLER'S SIGNATURE Jan R Fields Jr

ANALYSIS REQUESTED [Alkalinity Bicarbonate, ph, TDS]

SAMPLE I.D.	DATE	TIME	FOR OFFICE USE ONLY LAB I.D.	SAMPLE MATRIX	# OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624 ☐ 95-1	GC/MS SVOA's ☐ 8270 ☐ 625 ☐ 95-2	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES/PCB's ☐ 8081 ☐ 608 ☐ 95-3	STAR'S LIST 8021 VOA's ☐ TOTAL ☐ TCLP	STAR'S LIST 8270 SVOA's ☐ TOTAL ☐ TCLP	TOLP ☐ METALS ☐ VOA's ☐ SVOA's Nitrate	WASTE CHARACTERIZATION ☐ React ☐ Corros. ☐ Ignit.	METALS, TOTAL (LIST BELOW) Ferrous Iron	METALS, DISSOLVED (LIST BELOW)	Sulfide	Methane, Ethane Ethene (8015)	TOC	CO_2 Carbon dioxide	Alkalinity Total	Chloride	Volatile fatty Acids	PRESERVATION pH < 2.0	pH > 12	Other
TW09099001	9/17/99	0645	325441	groundwater	3	3																		
TW17099001	9/17/99	0705	443	groundwater	3	3																		
W5099001	9/17/99	0713	445	groundwater	3	3																		
BR04099001	9/17/99	1050	447	groundwater	3	3																		
OB04099001	9/17/99	0954	455		15	3						1		1	1	1	2	2	1	1	X	2		
BR05099001	9/17/99	0908	449		3	3																		
DB05099001	9/17/99	0820	456		15	3						1		1	1	1	2	2	1	1	X	2		
TW01099001	9/17/99	1155	450		3	3																		

RE 9/17/99

RELINQUISHED BY:
Signature Jan R Fields Jr
Printed Name Jerry Fields
Firm HA
Date/Time 9/17/99 1454

RECEIVED BY:
Signature Michelle Rooney
Printed Name Michelle Rooney
Firm CAS
Date/Time 9/17/99 1454

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature Bonnie Colton
Printed Name Bonnie Colton
Firm GBS
Date/Time 9/17/99 1454

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

TURNAROUND REQUIREMENTS
__ 24 hr. __ 48 hr. __ 5 day
__ Standard (10-15 working days)
__ Provide Verbal Preliminary Results
__ Provide FAX Preliminary Results
Requested Report Date _____

REPORT REQUIREMENTS
__ 1. Routine Report
__ 2. Routine Rep. w/CASE Narrative
__ 3. EPA Level III Validatable Package
__ 4. N.J. Reduced Deliverables Level IV
__ 5. NY ASP/CLP Deliverables
__ 6. Site specific QC.

INVOICE INFORMATION:
P.O. #:
Bill To:

SAMPLE RECEIPT:
Shipping Via: Client
Shipping #:
Temperature: 2.8
Submission No: CT-2018

SPECIAL INSTRUCTIONS/COMMENTS:
METALS
ORGANICS: ☐ TCL ☐ PPL ☐ AE Only ☐ BN Only ☐ Special List

APPENDIX E

LABORATORY REPORTS

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/13/99

Harding Lawson Associates
Project Reference: AMES ST. PRE-REMEDY GROUNDWATER MONITORING PLAN
Client Sample ID : BR01099901

Date Sampled : 09/16/99 **Order #:** 325437 **Sample Matrix:** WATER
Date Received: 09/17/99 **Submission #:** 9909000248 **Analytical Run** 43041

DATE ANALYZED : 09/22/99
ANALYTICAL DILUTION: 10.00

ANALYTE	PQL	RESULT	UNITS
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	1800	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
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	940	UG/L
VINYL CHLORIDE	5.0	50 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 %)	96	%
TOLUENE-D8	(88 - 110 %)	100	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	102	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/13/99

Harding Lawson Associates
Project Reference: AMES ST. PRE-REMEDY GROUNDWATER MONITORING PLAN
Client Sample ID : BR02099901

Date Sampled : 09/16/99 **Order #:** 325434 **Sample Matrix:** WATER
Date Received: 09/17/99 **Submission #:** 9909000248 **Analytical Run** 43041

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/23/99			
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	56	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
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	300	UG/L
VINYL CHLORIDE	5.0	10 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 %)	97	%
TOLUENE-D8	(88 - 110 %)	99	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	103	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/13/99

Harding Lawson Associates
Project Reference: AMES ST. PRE-REMEDY GROUNDWATER MONITORING PLAN
Client Sample ID : BR03099901

Date Sampled : 09/16/99 **Order #:** 325431 **Sample Matrix:** WATER
Date Received: 09/17/99 **Submission #:** 9909000248 **Analytical Run** 43041

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/23/99			
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
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	56	UG/L
VINYL CHLORIDE	5.0	5.0 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 %)	96	%
TOLUENE-D8	(88 - 110 %)	98	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	100	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/13/99

Harding Lawson Associates
Project Reference: AMES ST. PRE-REMEDY GROUNDWATER MONITORING PLAN
Client Sample ID : BR04099901

Date Sampled : 09/17/99 **Order #:** 325447 **Sample Matrix:** WATER
Date Received: 09/17/99 **Submission #:** 9909000248 **Analytical Run** 43041

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/23/99			
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	690	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
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	9400 E	UG/L
VINYL CHLORIDE	5.0	100 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 %)	94	%
TOLUENE-D8	(88 - 110 %)	98	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	107	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/13/99

Harding Lawson Associates
Project Reference: AMES ST. PRE-REMEDY GROUNDWATER MONITORING PLAN
Client Sample ID : BR04099901

Date Sampled : 09/17/99 **Order #:** 325447 **Sample Matrix:** WATER
Date Received: 09/17/99 **Submission #:** 9909000248 **Analytical Run** 0

DATE ANALYZED : 09/23/99
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	680	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
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	9900	UG/L
VINYL CHLORIDE	5.0	250 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 %)	90	%
TOLUENE-D8	(88 - 110 %)	93	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	100	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/13/99

Harding Lawson Associates
Project Reference: AMES ST. PRE-REMEDY GROUNDWATER MONITORING PLAN
Client Sample ID : BR05099901

Date Sampled : 09/17/99 **Order #:** 325449 **Sample Matrix:** WATER
Date Received: 09/17/99 **Submission #:** 9909000248 **Analytical Run** 43041

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/23/99			
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	1400	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
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	3500	UG/L
VINYL CHLORIDE	5.0	120	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 %)	93	%
TOLUENE-D8	(88 - 110 %)	96	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	102	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/13/99

Harding Lawson Associates
Project Reference: AMES ST. PRE-REMEDY GROUNDWATER MONITORING PLAN
Client Sample ID : BR07099901

Date Sampled : 09/15/99 **Order #:** 325423 **Sample Matrix:** WATER
Date Received: 09/17/99 **Submission #:** 9909000248 **Analytical Run** 43041

DATE ANALYZED : 09/22/99
ANALYTICAL DILUTION: 2.50

ANALYTE	PQL	RESULT	UNITS
ACETONE	20	50 U	UG/L
BENZENE	5.0	13 U	UG/L
BROMODICHLOROMETHANE	5.0	13 U	UG/L
BROMOFORM	5.0	13 U	UG/L
BROMOMETHANE	5.0	13 U	UG/L
2-BUTANONE (MEK)	10	25 U	UG/L
CARBON DISULFIDE	10	25 U	UG/L
CARBON TETRACHLORIDE	5.0	13 U	UG/L
CHLOROBENZENE	5.0	13 U	UG/L
CHLOROETHANE	5.0	13 U	UG/L
CHLOROFORM	5.0	13 U	UG/L
CHLOROMETHANE	5.0	13 U	UG/L
DIBROMOCHLOROMETHANE	5.0	13 U	UG/L
1,1-DICHLOROETHANE	5.0	13 U	UG/L
1,2-DICHLOROETHANE	5.0	13 U	UG/L
1,1-DICHLOROETHENE	5.0	13 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	32	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	13 U	UG/L
1,2-DICHLOROPROPANE	5.0	13 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	13 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	13 U	UG/L
ETHYLBENZENE	5.0	13 U	UG/L
2-HEXANONE	10	25 U	UG/L
METHYLENE CHLORIDE	5.0	13 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	25 U	UG/L
STYRENE	5.0	13 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	13 U	UG/L
TETRACHLOROETHENE	5.0	13 U	UG/L
TOLUENE	5.0	13 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	13 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	13 U	UG/L
TRICHLOROETHENE	5.0	13 U	UG/L
VINYL CHLORIDE	5.0	340	UG/L
O-XYLENE	5.0	13 U	UG/L
M+P-XYLENE	5.0	13 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	96	%
TOLUENE-D8	(88 - 110 %)	99	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	100	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/13/99

Harding Lawson Associates
Project Reference: AMES ST. PRE-REMEDY GROUNDWATER MONITORING PLAN
Client Sample ID : BR07099901DUP

Date Sampled : 09/15/99 **Order #:** 325424 **Sample Matrix:** WATER
Date Received: 09/17/99 **Submission #:** 9909000248 **Analytical Run** 43041

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/22/99			
ANALYTICAL DILUTION: 2.50			
ACETONE	20	50 U	UG/L
BENZENE	5.0	13 U	UG/L
BROMODICHLOROMETHANE	5.0	13 U	UG/L
BROMOFORM	5.0	13 U	UG/L
BROMOMETHANE	5.0	13 U	UG/L
2-BUTANONE (MEK)	10	25 U	UG/L
CARBON DISULFIDE	10	25 U	UG/L
CARBON TETRACHLORIDE	5.0	13 U	UG/L
CHLOROBENZENE	5.0	13 U	UG/L
CHLOROETHANE	5.0	13 U	UG/L
CHLOROFORM	5.0	13 U	UG/L
CHLOROMETHANE	5.0	13 U	UG/L
DIBROMOCHLOROMETHANE	5.0	13 U	UG/L
1,1-DICHLOROETHANE	5.0	13 U	UG/L
1,2-DICHLOROETHANE	5.0	13 U	UG/L
1,1-DICHLOROETHENE	5.0	13 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	33	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	13 U	UG/L
1,2-DICHLOROPROPANE	5.0	13 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	13 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	13 U	UG/L
ETHYLBENZENE	5.0	13 U	UG/L
2-HEXANONE	10	25 U	UG/L
METHYLENE CHLORIDE	5.0	13 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	25 U	UG/L
STYRENE	5.0	13 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	13 U	UG/L
TETRACHLOROETHENE	5.0	13 U	UG/L
TOLUENE	5.0	13 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	13 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	13 U	UG/L
TRICHLOROETHENE	5.0	13 U	UG/L
VINYL CHLORIDE	5.0	350	UG/L
O-XYLENE	5.0	13 U	UG/L
M+P-XYLENE	5.0	13 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	97	%
TOLUENE-D8	(88 - 110 %)	100	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	108	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/13/99

Harding Lawson Associates
Project Reference: AMES ST. PRE-REMEDY GROUNDWATER MONITORING PLAN
Client Sample ID : MW00099901

Date Sampled : 09/15/99 **Order #:** 325425 **Sample Matrix:** WATER
Date Received: 09/17/99 **Submission #:** 9909000248 **Analytical Run** 43041

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/22/99			
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
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	5.0	5.0 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 %)	95	%
TOLUENE-D8	(88 - 110 %)	99	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	102	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/13/99

Harding Lawson Associates
Project Reference: AMES ST. PRE-REMEDY GROUNDWATER MONITORING PLAN
Client Sample ID : 0B04099901

Date Sampled : 09/17/99 **Order #:** 325455 **Sample Matrix:** WATER
Date Received: 09/17/99 **Submission #:** 9909000248 **Analytical Run** 43041

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/23/99			
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	5000	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
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	37000 E	UG/L
VINYL CHLORIDE	5.0	500 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 %)	93	%
TOLUENE-D8	(88 - 110 %)	97	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	106	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/13/99

Harding Lawson Associates
Project Reference: AMES ST. PRE-REMEDY GROUNDWATER MONITORING PLAN
Client Sample ID : 0B04099901

Date Sampled : 09/17/99 **Order #:** 325455 **Sample Matrix:** WATER
Date Received: 09/17/99 **Submission #:** 9909000248 **Analytical Run** 0

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/23/99			
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	5700	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
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	43000	UG/L
VINYL CHLORIDE	5.0	1300 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 %)	94	%
TOLUENE-D8	(88 - 110 %)	95	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	111	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8015B GASES
Reported: 10/13/99

Harding Lawson Associates
Project Reference: AMES ST. PRE-REMEDY GROUNDWATER MONITORING PLAN
Client Sample ID : 0B04099901

Date Sampled : 09/17/99 **Order #:** 325455 **Sample Matrix:** WATER
Date Received: 09/17/99 **Submission #:** 9909000248 **Analytical Run** 43108

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/30/99			
ANALYTICAL DILUTION: 1.00			
ETHANE	1.0	1.4	UG/L
ETHYLENE	1.0	3.1	UG/L
METHANE	2.0	3.3	UG/L
PROPANE	1.0	1.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

Reported: 10/13/99

Harding Lawson Associates
Project Reference:AMES ST. PRE-REMEDY GROUNDWATER MONITORING PLAN
Client Sample ID :0B04099901

Date Sampled : 09/17/99 **Order #:** 325455 **Sample Matrix:** WATER
Date Received: 09/17/99 **Submission #:**9909000248

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
WET CHEMISTRY					
BICARBONATE ALKALINITY	2.00	387	MG/L	09/23/99	1.0
CHLORIDE	0.100	9.40	MG/L	10/04/99	10.0
FERROUS IRON	0.100	0.100 U	MG/L	09/21/99	1.0
FREE CARBON DIOXIDE CONTENT	1.0	85	MG/L	10/12/99	1.0
NITRATE/NITRITE NITROGEN	0.0500	0.266	MG/L	09/22/99	1.0
PH		6.94		09/21/99	NA
SULFATE	0.200	51.0	MG/L	10/04/99	10.0
TEMPERATURE		13.0	°C	09/21/99	NA
TOTAL ALKALINITY	2.00	387	MG/L	09/23/99	1.0
TOTAL DISSOLVED SOLIDS	10.0	484	MG/L	09/23/99	1.0
TOTAL ORGANIC CARBON	1.00	2.97	MG/L	09/23/99	1.0
TOTAL SULFIDE	1.00	1.00 U	MG/L	09/21/99	1.0
VOLATILE ACIDS	1.00	6.02	MG/L	10/05/99	1.0

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/13/99

Harding Lawson Associates
Project Reference: AMES ST. PRE-REMEDY GROUNDWATER MONITORING PLAN
Client Sample ID : 0B05099901

Date Sampled : 09/17/99 **Order #:** 325456 **Sample Matrix:** WATER
Date Received: 09/17/99 **Submission #:** 9909000248 **Analytical Run** 43041

DATE ANALYZED : 09/23/99
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	2800	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
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	80000 E	UG/L
VINYL CHLORIDE	5.0	250 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 %)	94	%
TOLUENE-D8	(88 - 110 %)	98	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	110	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/13/99

Harding Lawson Associates
Project Reference: AMES ST. PRE-REMEDY GROUNDWATER MONITORING PLAN
Client Sample ID : 0B05099901

Date Sampled : 09/17/99 **Order #:** 325456 **Sample Matrix:** WATER
Date Received: 09/17/99 **Submission #:** 9909000248 **Analytical Run** 0

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/23/99			
ANALYTICAL DILUTION: 1000.00			
ACETONE	20	20000 U	UG/L
BENZENE	5.0	5000 U	UG/L
BROMODICHLOROMETHANE	5.0	5000 U	UG/L
BROMOFORM	5.0	5000 U	UG/L
BROMOMETHANE	5.0	5000 U	UG/L
2-BUTANONE (MEK)	10	10000 U	UG/L
CARBON DISULFIDE	10	10000 U	UG/L
CARBON TETRACHLORIDE	5.0	5000 U	UG/L
CHLOROBENZENE	5.0	5000 U	UG/L
CHLOROETHANE	5.0	5000 U	UG/L
CHLOROFORM	5.0	5000 U	UG/L
CHLOROMETHANE	5.0	5000 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5000 U	UG/L
1,1-DICHLOROETHANE	5.0	5000 U	UG/L
1,2-DICHLOROETHANE	5.0	5000 U	UG/L
1,1-DICHLOROETHENE	5.0	5000 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5000 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5000 U	UG/L
1,2-DICHLOROPROPANE	5.0	5000 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5000 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5000 U	UG/L
ETHYLBENZENE	5.0	5000 U	UG/L
2-HEXANONE	10	10000 U	UG/L
METHYLENE CHLORIDE	5.0	5000 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10000 U	UG/L
STYRENE	5.0	5000 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5000 U	UG/L
TETRACHLOROETHENE	5.0	5000 U	UG/L
TOLUENE	5.0	5000 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5000 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5000 U	UG/L
TRICHLOROETHENE	5.0	86000	UG/L
VINYL CHLORIDE	5.0	5000 U	UG/L
O-XYLENE	5.0	5000 U	UG/L
M+P-XYLENE	5.0	5000 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	95	%
TOLUENE-D8	(88 - 110 %)	97	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	97	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8015B GASES
Reported: 10/13/99

Harding Lawson Associates
Project Reference: AMES ST. PRE-REMEDY GROUNDWATER MONITORING PLAN
Client Sample ID : 0B05099901

Date Sampled : 09/17/99 **Order #:** 325456 **Sample Matrix:** WATER
Date Received: 09/17/99 **Submission #:** 9909000248 **Analytical Run** 43108

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/30/99			
ANALYTICAL DILUTION: 1.00			
ETHANE	1.0	16	UG/L
ETHYLENE	1.0	31	UG/L
METHANE	2.0	9.6	UG/L
PROPANE	1.0	2.2	UG/L

COLUMBIA ANALYTICAL SERVICES

Reported: 10/13/99

Harding Lawson Associates
Project Reference:AMES ST. PRE-REMEDY GROUNDWATER MONITORING PLAN
Client Sample ID :0B05099901

Date Sampled : 09/17/99 **Order #:** 325456 **Sample Matrix:** WATER
Date Received: 09/17/99 **Submission #:**9909000248

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
WET CHEMISTRY					
BICARBONATE ALKALINITY	2.00	239	MG/L	09/23/99	1.0
CHLORIDE	0.100	80.8	MG/L	10/04/99	10.0
FERROUS IRON	0.100	0.100 U	MG/L	09/21/99	1.0
FREE CARBON DIOXIDE CONTENT	1.0	13	MG/L	10/12/99	1.0
NITRATE/NITRITE NITROGEN	0.0500	3.70	MG/L	09/22/99	10.0
PH		7.57		09/21/99	NA
SULFATE	0.200	370	MG/L	10/04/99	50.0
TEMPERATURE		13.5	°C	09/21/99	NA
TOTAL ALKALINITY	2.00	239	MG/L	09/23/99	1.0
TOTAL DISSOLVED SOLIDS	10.0	964	MG/L	09/23/99	1.0
TOTAL ORGANIC CARBON	1.00	12.3	MG/L	09/23/99	1.0
TOTAL SULFIDE	1.00	1.00 U	MG/L	09/21/99	1.0
VOLATILE ACIDS	1.00	234	MG/L	10/05/99	1.0

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/13/99

Harding Lawson Associates
Project Reference: AMES ST. PRE-REMEDY GROUNDWATER MONITORING PLAN
Client Sample ID : TW01099901

Date Sampled : 09/17/99 **Order #:** 325450 **Sample Matrix:** WATER
Date Received: 09/17/99 **Submission #:** 9909000248 **Analytical Run** 43041

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/23/99			
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
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	5.1	UG/L
VINYL CHLORIDE	5.0	5.0 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 %)	95	%
TOLUENE-D8	(88 - 110 %)	98	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	108	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/13/99

Harding Lawson Associates
Project Reference: AMES ST. PRE-REMEDY GROUNDWATER MONITORING PLAN
Client Sample ID : TW04099901

Date Sampled : 09/16/99 **Order #:** 325428 **Sample Matrix:** WATER
Date Received: 09/17/99 **Submission #:** 9909000248 **Analytical Run** 43041

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/22/99			
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
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	92	UG/L
VINYL CHLORIDE	5.0	5.0 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 %)	96	%
TOLUENE-D8	(88 - 110 %)	100	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	107	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/13/99

Harding Lawson Associates
Project Reference: AMES ST. PRE-REMEDY GROUNDWATER MONITORING PLAN
Client Sample ID : TW07099901

Date Sampled : 09/16/99 **Order #:** 325427 **Sample Matrix:** WATER
Date Received: 09/17/99 **Submission #:** 9909000248 **Analytical Run** 43041

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/22/99			
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	12	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	30	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
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	70	UG/L
VINYL CHLORIDE	5.0	5.0 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 %)	95	%
TOLUENE-D8	(88 - 110 %)	99	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	104	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/13/99

Harding Lawson Associates
Project Reference: AMES ST. PRE-REMEDY GROUNDWATER MONITORING PLAN
Client Sample ID : TW09099901

Date Sampled : 09/17/99 **Order #:** 325441 **Sample Matrix:** WATER
Date Received: 09/17/99 **Submission #:** 9909000248 **Analytical Run** 43041

DATE ANALYZED : 09/23/99
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
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	39	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
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	520	UG/L
VINYL CHLORIDE	5.0	25 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 %)	96	%
TOLUENE-D8	(88 - 110 %)	101	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	110	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/13/99

Harding Lawson Associates
Project Reference: AMES ST. PRE-REMEDY GROUNDWATER MONITORING PLAN
Client Sample ID : TW13099901

Date Sampled : 09/15/99 **Order #:** 325426 **Sample Matrix:** WATER
Date Received: 09/17/99 **Submission #:** 9909000248 **Analytical Run** 43041

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/22/99			
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
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	5.0	5.0 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 %)	96	%
TOLUENE-D8	(88 - 110 %)	99	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	100	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/13/99

Harding Lawson Associates
Project Reference: AMES ST. PRE-REMEDY GROUNDWATER MONITORING PLAN
Client Sample ID : TW17099901

Date Sampled : 09/17/99 **Order #:** 325443 **Sample Matrix:** WATER
Date Received: 09/17/99 **Submission #:** 9909000248 **Analytical Run** 43041

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/23/99			
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	50 U	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
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	1400	UG/L
VINYL CHLORIDE	5.0	50 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 %)	97	%
TOLUENE-D8	(88 - 110 %)	99	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	108	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/13/99

Harding Lawson Associates
Project Reference: AMES ST. PRE-REMEDY GROUNDWATER MONITORING PLAN
Client Sample ID : TW20099901

Date Sampled : 09/16/99 **Order #:** 325438 **Sample Matrix:** WATER
Date Received: 09/17/99 **Submission #:** 9909000248 **Analytical Run** 43041

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/22/99			
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
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	5.0	5.0 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 %)	96	%
TOLUENE-D8	(88 - 110 %)	98	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	106	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/13/99

Harding Lawson Associates
Project Reference: AMES ST. PRE-REMEDY GROUNDWATER MONITORING PLAN
Client Sample ID : TW20099901DUP

Date Sampled : 09/16/99 **Order #:** 325439 **Sample Matrix:** WATER
Date Received: 09/17/99 **Submission #:** 9909000248 **Analytical Run** 43041

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/23/99			
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
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	5.0	5.0 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 %)	93	%
TOLUENE-D8	(88 - 110 %)	99	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	104	%

COLUMBIA ANALYTICAL SERVICES

Reported: 10/13/99

Harding Lawson Associates
Project Reference: AMES ST. PRE-REMEDY GROUNDWATER MONITORING PLAN
Client Sample ID : W2099901

Date Sampled : 09/15/99 **Order #:** 325459 **Sample Matrix:** WATER
Date Received: 09/17/99 **Submission #:** 9909000248

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
WET CHEMISTRY					
BICARBONATE ALKALINITY	2.00	290	MG/L	09/23/99	1.0
CHLORIDE	0.100	8.44	MG/L	10/04/99	10.0
FREE CARBON DIOXIDE CONTENT	1.0	40	MG/L	10/12/99	1.0
PH		7.17		09/21/99	NA
TEMPERATURE		11.8	°C	09/21/99	NA
TOTAL ALKALINITY	2.00	290	MG/L	09/23/99	1.0
TOTAL DISSOLVED SOLIDS	10.0	393	MG/L	09/23/99	1.0

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/13/99

Harding Lawson Associates
Project Reference: AMES ST. PRE-REMEDY GROUNDWATER MONITORING PLAN
Client Sample ID : W4099901

Date Sampled : 09/16/99 **Order #:** 325422 **Sample Matrix:** WATER
Date Received: 09/17/99 **Submission #:** 9909000248 **Analytical Run** 43041

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/22/99			
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
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	5.0	5.0 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 %)	101	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	99	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/13/99

Harding Lawson Associates
Project Reference: AMES ST. PRE-REMEDY GROUNDWATER MONITORING PLAN
Client Sample ID : W5099901

Date Sampled : 09/17/99 **Order #:** 325445 **Sample Matrix:** WATER
Date Received: 09/17/99 **Submission #:** 9909000248 **Analytical Run** 43041

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/23/99			
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	76	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
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	5.0	10 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 %)	96	%
TOLUENE-D8	(88 - 110 %)	98	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	100	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/13/99

Harding Lawson Associates
Project Reference: AMES ST. PRE-REMEDY GROUNDWATER MONITORING PLAN
Client Sample ID : W6099901

Date Sampled : 09/16/99 **Order #:** 325421 **Sample Matrix:** WATER
Date Received: 09/17/99 **Submission #:** 9909000248 **Analytical Run** 43041

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/22/99			
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	14	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
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	5.0	5.0 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 %)	102	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	97	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/13/99

Harding Lawson Associates
Project Reference: AMES ST. PRE-REMEDY GROUNDWATER MONITORING PLAN
Client Sample ID : QAFB099901

Date Sampled : 09/15/99 **Order #:** 325419 **Sample Matrix:** WATER
Date Received: 09/17/99 **Submission #:** 9909000248 **Analytical Run** 43041

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/22/99			
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
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	5.0	5.0 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 %)	97	%
TOLUENE-D8	(88 - 110 %)	100	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	100	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/13/99

Harding Lawson Associates
Project Reference: AMES ST. PRE-REMEDY GROUNDWATER MONITORING PLAN
Client Sample ID : QARB099901

Date Sampled : 09/15/99 **Order #:** 325420 **Sample Matrix:** WATER
Date Received: 09/17/99 **Submission #:** 9909000248 **Analytical Run** 43041

DATE ANALYZED : 09/22/99
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
1,1-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
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	5.0	5.0 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 %)	98	%
TOLUENE-D8	(88 - 110 %)	99	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	97	%