US EPA RECORDS CENTER REGION 5
426636

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December 18, 2002

WRITER'S DIRECT LINE (312) 861-8075
WRITER'S DIRECT FACSIMILE (312) 861-2899
DOUGLAS.B.SANDERS@BAKERNET.COM

VIA MESSENGER

Mr. Steve Faryan,
U.S. Environmental Protection Agency
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Re: Sampling results for wells along Inverness Rd.

Dear Mr. Faryan

Enclosed are the results and analytical backup for the sampling along Inverness Rd. I apologize for any delay in sending the information.

Please call me or Rick Saines if you have any questions regarding the data.

Sincerely,

Douglas B. Sanders

DBS/llh
cc: Kendra Pohn
Michelle Ryan
Stan Komperda
Deb Smith
Dennis Walsh
Ken Funk

CHIDOCS02:545113.1

First Environmental Laboratories, Inc.
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233
IEPA Certification #100292

October 24, 2002

Mr. Bill Elwell
CLAYTON GROUP SERVICES INC.
3140 Finley Road
Downers Grove, IL 60515

Project ID: 15-65263.01-013
First Environmental File ID: 71928-31
Date Received: October 18, 2002

Dear Mr. Elwell:

The above referenced samples were analyzed as requested on the enclosed chain of custody record.

PROJECT SUMMARY

Analyses were performed in accordance with the methods found in the EPA publication: Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Edition, December 1996. Specific method references are listed on the Analytical Report.

A QC Package has been included as part of this report.

I thank you for the opportunity to be of service and look forward to working with you again in the future. Should you have any questions regarding any of the enclosed analytical data, please contact me at (630) 778-1200.

Sincerely,

William H. Mottashed
Project Manager

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Analytical Report

Client:	CLAYTON GROUP SERVICES		
Project ID:	15-65263-01-013	Date Received:	10/18/02
Sample Number:	71928	Date Taken:	10/17/02
Sample Description:	GW1/38-41	Time Taken:	1149
Lab File ID:	71928-31	Date Reported:	10/24/02

Volatile Organic Compounds Method 5030B/8260B
Analysis Date: 10/22/02

Analyte	Result	Units	Flags
Acetone	< 5.0	ug/L	
Benzene	< 1.0	ug/L	
Bromodichloromethane	< 1.0	ug/L	
Bromoform	< 1.0	ug/L	
Bromomethane	< 2.0	ug/L	
2-Butanone	< 5.0	ug/L	
Carbon disulfide	< 1.0	ug/L	
Carbon tetrachloride	< 1.0	ug/L	
Chlorobenzene	< 1.0	ug/L	
Chlorodibromomethane	< 1.0	ug/L	
Chloroethane	< 2.0	ug/L	
Chloroform	< 1.0	ug/L	
Chloromethane	< 2.0	ug/L	
1,1-Dichloroethane	< 1.0	ug/L	
1,2-Dichloroethane	< 1.0	ug/L	
1,1-Dichloroethene	< 1.0	ug/L	
cis-1,2-Dichloroethene	< 1.0	ug/L	
trans-1,2-Dichloroethene	< 1.0	ug/L	
1,2-Dichloropropane	< 1.0	ug/L	
cis-1,3-Dichloropropene	< 1.0	ug/L	
trans-1,3-Dichloropropene	< 1.0	ug/L	
Ethyl benzene	< 1.0	ug/L	
2-Hexanone	< 5.0	ug/L	
4-Methyl-2-pentanone	< 5.0	ug/L	
Methylene chloride	< 1.0	ug/L	
Styrene	< 1.0	ug/L	
1,1,2,2-Tetrachloroethane	< 1.0	ug/L	
Tetrachloroethene	< 1.0	ug/L	
Toluene	< 1.0	ug/L	
1,1,1-Trichloroethane	< 1.0	ug/L	
1,1,2-Trichloroethane	< 1.0	ug/L	
Trichloroethene	< 1.0	ug/L	
Vinyl Acetate	< 1.0	ug/L	
Vinyl Chloride	< 2.0	ug/L	
Xylenes (total)	< 3.0	ug/L	

"J" = estimated concentration above Method Detection Limit but below Reporting Limit.

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Analytical Report

Client:	CLAYTON GROUP SERVICES		
Project ID:	15-65263-01-013	Date Received:	10/18/02
Sample Number:	71929	Date Taken:	10/17/02
Sample Description:	GW1/73-75	Time Taken:	1450
Lab File ID:	71928-31	Date Reported:	10/24/02

Analyte	Result	Units	Flags
Volatile Organic Compounds Method 5030B/8260B			
Analysis Date: 10/22/02			
Acetone	< 5.0	ug/L	
Benzene	< 1.0	ug/L	
Bromodichloromethane	2.5	ug/L	
Bromoform	< 1.0	ug/L	
Bromomethane	< 2.0	ug/L	
2-Butanone	< 5.0	ug/L	
Carbon disulfide	< 1.0	ug/L	
Carbon tetrachloride	< 1.0	ug/L	
Chlorobenzene	< 1.0	ug/L	
Chlorodibromomethane	1.1	ug/L	
Chloroethane	< 2.0	ug/L	
Chloroform	5.8	ug/L	
Chloromethane	< 2.0	ug/L	
1,1-Dichloroethane	< 1.0	ug/L	
1,2-Dichloroethane	< 1.0	ug/L	
1,1-Dichloroethene	< 1.0	ug/L	
cis-1,2-Dichloroethene	< 1.0	ug/L	
trans-1,2-Dichloroethene	< 1.0	ug/L	
1,2-Dichloropropane	< 1.0	ug/L	
cis-1,3-Dichloropropene	< 1.0	ug/L	
trans-1,3-Dichloropropene	< 1.0	ug/L	
Ethyl benzene	< 1.0	ug/L	
2-Hexanone	< 5.0	ug/L	
4-Methyl-2-pentanone	< 5.0	ug/L	
Methylene chloride	< 1.0	ug/L	
Styrene	< 1.0	ug/L	
1,1,2,2-Tetrachloroethane	< 1.0	ug/L	
Tetrachloroethene	< 1.0	ug/L	
Toluene	< 1.0	ug/L	
1,1,1-Trichloroethane	< 1.0	ug/L	
1,1,2-Trichloroethane	< 1.0	ug/L	
Trichloroethene	< 1.0	ug/L	
Vinyl Acetate	< 1.0	ug/L	
Vinyl Chloride	< 2.0	ug/L	
Xylenes (total)	< 3.0	ug/L	

"J" = estimated concentration above Method Detection Limit but below Reporting Limit.

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Analytical Report

Client:	CLAYTON GROUP SERVICES		
Project ID:	15-65263-01-013	Date Received:	10/18/02
Sample Number:	71930	Date Taken:	10/17/02
Sample Description:	GW2/20-25	Time Taken:	1044
Lab File ID:	71928-31	Date Reported:	10/24/02

Volatile Organic Compounds Method 5030B/8260B
Analysis Date: 10/22/02

Analyte	Result	Units	Flags
Acetone	< 5.0	ug/L	
Benzene	< 1.0	ug/L	
Bromodichloromethane	< 1.0	ug/L	
Bromoform	< 1.0	ug/L	
Bromomethane	< 2.0	ug/L	
2-Butanone	< 5.0	ug/L	
Carbon disulfide	< 1.0	ug/L	
Carbon tetrachloride	< 1.0	ug/L	
Chlorobenzene	< 1.0	ug/L	
Chlorodibromomethane	< 1.0	ug/L	
Chloroethane	< 2.0	ug/L	
Chloroform	< 1.0	ug/L	
Chloromethane	< 2.0	ug/L	
1,1-Dichloroethane	< 1.0	ug/L	
1,2-Dichloroethane	< 1.0	ug/L	
1,1-Dichloroethene	< 1.0	ug/L	
cis-1,2-Dichloroethene	< 1.0	ug/L	
trans-1,2-Dichloroethene	< 1.0	ug/L	
1,2-Dichloropropane	< 1.0	ug/L	
cis-1,3-Dichloropropene	< 1.0	ug/L	
trans-1,3-Dichloropropene	< 1.0	ug/L	
Ethyl benzene	< 1.0	ug/L	
2-Hexanone	< 5.0	ug/L	
4-Methyl-2-pentanone	< 5.0	ug/L	
Methylene chloride	< 1.0	ug/L	
Styrene	< 1.0	ug/L	
1,1,2,2-Tetrachloroethane	< 1.0	ug/L	
Tetrachloroethene	< 1.0	ug/L	
Toluene	< 1.0	ug/L	
1,1,1-Trichloroethane	< 1.0	ug/L	
1,1,2-Trichloroethane	< 1.0	ug/L	
Trichloroethene	< 1.0	ug/L	
Vinyl Acetate	< 1.0	ug/L	
Vinyl Chloride	< 2.0	ug/L	
Xylenes (total)	< 3.0	ug/L	

"J" = estimated concentration above Method Detection Limit but below Reporting Limit.

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Analytical Report

Client:	CLAYTON GROUP SERVICES		
Project ID:	15-65263-01-013	Date Received:	10/18/02
Sample Number:	71931	Date Taken:	10/17/02
Sample Description:	TB400	Time Taken:	N/A
Lab File ID:	71928-31	Date Reported:	10/24/02

Volatile Organic Compounds Method 5030B/8260B
Analysis Date: 10/22/02

Analyte	Result	Units	Flags
Acetone	< 5.0	ug/L	
Benzene	< 1.0	ug/L	
Bromodichloromethane	< 1.0	ug/L	
Bromoform	< 1.0	ug/L	
Bromomethane	< 2.0	ug/L	
2-Butanone	< 5.0	ug/L	
Carbon disulfide	< 1.0	ug/L	
Carbon tetrachloride	< 1.0	ug/L	
Chlorobenzene	< 1.0	ug/L	
Chlorodibromomethane	< 1.0	ug/L	
Chloroethane	< 2.0	ug/L	
Chloroform	< 1.0	ug/L	
Chloromethane	< 2.0	ug/L	
1,1-Dichloroethane	< 1.0	ug/L	
1,2-Dichloroethane	< 1.0	ug/L	
1,1-Dichloroethene	< 1.0	ug/L	
cis-1,2-Dichloroethene	< 1.0	ug/L	
trans-1,2-Dichloroethene	< 1.0	ug/L	
1,2-Dichloropropane	< 1.0	ug/L	
cis-1,3-Dichloropropene	< 1.0	ug/L	
trans-1,3-Dichloropropene	< 1.0	ug/L	
Ethyl benzene	< 1.0	ug/L	
2-Hexanone	< 5.0	ug/L	
4-Methyl-2-pentanone	< 5.0	ug/L	
Methylene chloride	< 1.0	ug/L	
Styrene	< 1.0	ug/L	
1,1,2,2-Tetrachloroethane	< 1.0	ug/L	
Tetrachloroethene	< 1.0	ug/L	
Toluene	< 1.0	ug/L	
1,1,1-Trichloroethane	< 1.0	ug/L	
1,1,2-Trichloroethane	< 1.0	ug/L	
Trichloroethene	< 1.0	ug/L	
Vinyl Acetate	< 1.0	ug/L	
Vinyl Chloride	< 2.0	ug/L	
Xylenes (total)	< 3.0	ug/L	

"J" = estimated concentration above Method Detection Limit but below Reporting Limit.

CHAIN OF CUSTODY RECORD

Page 1 of 1 pgs

First Environmental Laboratories, Inc.

First Environmental Laboratories
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Company Name: Clayton Group Services
Street Address: 3140 Finley Rd
City: Downers Grove State: IL Zip: 60515
Phone: 630-795-3200 Fax: 630 795-1130
Send Report To: B. Elwell
Sampled By: JDC

MEJ 016807

Project I.D.: 15-65263.01-013
P.O. #.:

Matrix Codes: S = Soil W = Water O = Other

Analyses: VOCs

Date/Time Taken	Sample Description	Matrix	VOCs								Comments	Lab I.D.
10-17-02/1149	GW1 / 38-41	W	X									71928
1450	GW1 / 73-75											929
1044	GW2 / 20-25											930
—	TB400											931

Cooler Temperature: _____ °C
Received within 6 hrs. of collection: _____

Notes and Special Instructions:

Relinquished By: [signature] Date/Time 10-18-02/1623 Received By: [signature] Date/Time 10/18/02 1620
Relinquished By: _____ Date/Time _____ Received By: _____ Date/Time _____

Rev. 1/01

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CASE NARRATIVE
QA/QC Summary

Mr. William Elwell
CLAYTON GROUP SERVICES
3140 Finley Road
Downers Grove, IL 60515

October 24, 2002

Project I.D.: **15-65263**
First Environmental File ID: **71928-31**
Date Received : **October 18, 2002**

The following data package includes the supporting quality control information for the above referenced project.

Reference Document: Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, SW-846, 3rd Edition, December 1996 and it's updates.

Volatiles Analysis

All analyses were performed within established holding times, and all quality control criteria, as outlined in the methods, have been met.

Project Manager: Bill Mottashed

Reviewed by: R. Franklin

Date: 10/24/02

Sample List for Group VOA_Oct_23_2002

Printing Date 3/2002 10:31:50 AM

Lab File ID	EPA SAMPLE NO.	Lab Sample ID	Date Acq.	Date Rec.	Date Due
C64221.D	VBLK01	VBLKW01	10/22/02 11:20	10/18/02	
C64226.D	LCS	LCS	10/22/02 13:57	10/18/02	
C64227.D	LCSD	LCSD	10/22/02 14:29	10/18/02	
C64228.D	GW2/20-25DL	71930DLMS	10/22/02 15:00	10/18/02	
C64229.D	GW2/20-25DL	71930DLMSD	10/22/02 15:31	10/18/02	
C64230.D	GW2/20-25DL	71930DL	10/22/02 16:03	10/18/02	
C64234.D	TB 400	71931	10/22/02 18:09	10/18/02	
C64239.D	GW1/38-41	71928	10/22/02 20:46	10/18/02	
C64240.D	GW1/73-75	71929	10/22/02 21:18	10/18/02	
C64241.D	GW2/20-25	71930	10/22/02 21:49	10/18/02	

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: FIRST ENVIRONMENTAL LABS Contract: CLAYTON

Lab Code: _____ Case No.: 65263 SAS No.: _____ SDG No.: _____

	EPA SAMPLE NO.	SMC1 #	SMC2 #	SMC3 #	TOT OUT
01	VBLK01	103	99	82	0
02	LCS	100	100	97	0
03	LCSD	104	103	102	0
04	GW2/20-25DLMS	105	99	98	0
05	GW2/20-25DLMS	106	99	102	0
06	GW2/20-25DL	108	93	90	0
07	TB 400	108	98	93	0
08	GW1/38-41	109	96	91	0
09	GW1/73-75	112	104	87	0
10	GW2/20-25	115	96	87	0

			QC LIMITS
SMC1	=	Dibromofluoromethane	(78-126)
SMC2	=	d8-Toluene	(89-108)
SMC3	=	4-Bromofluorobenzene	(73-113)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK01

Lab Name: FIRST ENVIRONMENTAL LABS Contract: CLAYTON

Lab Code: _____ Case No.: 65263 SAS No.: _____ SDG No.: _____

Lab File ID: C64221.D Lab Sample ID: VBLKW01

Date Analyzed: 10/22/02 Time Analyzed: 11:20

GC Column: ZB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

Instrument ID: "C"

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS	LCS	C64226.D	13:57
02	LCSD	LCSD	C64227.D	14:29
03	GW2/20-25DLMS	71930DLMS	C64228.D	15:00
04	GW2/20-25DLMSD	71930DLMSD	C64229.D	15:31
05	GW2/20-25DL	71930DL	C64230.D	16:03
06	TB 400	71931	C64234.D	18:09
07	GW1/38-41	71928	C64239.D	20:46
08	GW1/73-75	71929	C64240.D	21:18
09	GW2/20-25	71930	C64241.D	21:49

COMMENTS:

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK01

Lab Name: FIRST ENVIRONMENTAL LABS Contract: CLAYTON

Lab Code: _____ Case No.: 65263 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: VBLKW01

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: C64221.D

Level: (low/med) LOW Date Received: 10/18/02

% Moisture: not dec. _____ Date Analyzed: 10/22/02

GC Column: ZB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND (ug/L or ug/Kg) UG/L		Q
74-87-3	Chloromethane	2	U
75-01-4	Vinyl Chloride	2	U
74-83-9	Bromomethane	2	U
75-00-3	Chloroethane	2	U
67-64-1	Acetone	5	U
75-35-4	1,1-Dichloroethene	1	U
75-09-2	Methylene chloride	1	U
75-15-0	Carbon disulfide	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
156-59-4	cis-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
78-93-3	2-Butanone (MEK)	5	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon tetrachloride	1	U
107-06-2	1,2-Dichloroethane	1	U
71-43-2	Benzene	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	1	U
124-48-1	Chlorodibromomethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethyl benzene	1	U
108-38-3	m&p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK01

Lab Name: FIRST ENVIRONMENTAL LABS Contract: CLAYTON

Lab Code: _____ Case No.: 65263 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: VBLKW01

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: C64221.D

Level: (low/med) LOW Date Received: 10/18/02

% Moisture: not dec. _____ Date Analyzed: 10/22/02

GC Column: ZB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

Spike Recovery and RPD Summary Report - WATER

Method : C:\HPCHEM\1\METHODS\C_8260BW.M (RTE Integrator)
Title : Volatile Organic Analysis; Method 8260 Aqueous
Last Update : Thu Oct 03 08:55:38 2002
Response via : Initial Calibration

Non-Spiked Sample: C64221.D

	Spike Sample	Spike Duplicate Sample
File ID :	C64226.D	C64227.D
Sample :	LCS #5948	LCSD #5948
Acq Time:	22 Oct 2002 1:57 pm	22 Oct 2002 2:29 pm

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
1,1-Dichloroethene	0.0	50	62	63	124	126	2	14	52-168
Benzene	0.0	50	57	55	114	111	3	11	58-147
Trichloroethene	0.0	50	51	55	102	111	8	14	60-148
Toluene	0.0	50	49	53	99	106	7	13	63-148
Chlorobenzene	0.0	50	47	51	94	102	7	13	76-134

- Fails Limit Check

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: FIRST ENVIRONMENTAL LABS Contract: CLAYTON

Lab Code: _____ Case No.: 65263 SAS No.: _____ SDG No.: _____

Matrix Spike - EPA Sample No. GW2/20-25DL

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	0.0	64	128	52 - 168
Benzene	50	0.0	54	108	58 - 147
Trichloroethene	50	0.0	51	102	60 - 148
Toluene	50	0.0	50	100	63 - 148
Chlorobenzene	50	0.0	48	96	76 - 134

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50	63	126	2	14	52 - 168
Benzene	50	54	108	0	11	58 - 147
Trichloroethene	50	52	104	2	14	60 - 148
Toluene	50	49	98	2	13	63 - 148
Chlorobenzene	50	51	102	6	13	76 - 134

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS: _____

First
Environmental
Laboratories, Inc.
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233
IEPA Certification #100292

October 23, 2002

Mr. Bill Elwell
CLAYTON GROUP SERVICES INC.
3140 Finley Road
Downers Grove, IL 60515

Project ID:15-65263.03-001
First Environmental File ID: 72070-71
Date Received: October 22, 2002

Dear Mr. Elwell:

The above referenced samples were analyzed as requested on the enclosed chain of custody record.

PROJECT SUMMARY

Analyses were performed in accordance with the methods found in the EPA publication: Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Edition, December 1996. Specific method references are listed on the Analytical Report.

A QC Package has been included as part of this report.

I thank you for the opportunity to be of service and look forward to working with you again in the future. Should you have any questions regarding any of the enclosed analytical data, please contact me at (630) 778-1200.

Sincerely,

W. Mottashed

William H. Mottashed
Project Manager

First
Environmental
Laboratories, Inc.
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233
IEPA Certification #100292

Analytical Report

Client:	CLAYTON GROUP SERVICES		
Project ID:	15-65263-03-001	Date Received:	10/22/02
Sample Number:	72070	Date Taken:	10/21/02
Sample Description:	GW1115	Time Taken:	1755
Lab File ID:	72070-71	Date Reported:	10/23/02

Volatile Organic Compounds Method 5030B/8260B
Analysis Date: 10/22/02

Analyte	Result	Units	Flags
Acetone	< 5.0	ug/L	
Benzene	< 1.0	ug/L	
Bromodichloromethane	< 1.0	ug/L	
Bromoform	< 1.0	ug/L	
Bromomethane	< 2.0	ug/L	
2-Butanone	< 5.0	ug/L	
Carbon disulfide	< 1.0	ug/L	
Carbon tetrachloride	< 1.0	ug/L	
Chlorobenzene	< 1.0	ug/L	
Chlorodibromomethane	< 1.0	ug/L	
Chloroethane	< 2.0	ug/L	
Chloroform	< 1.0	ug/L	
Chloromethane	< 2.0	ug/L	
1,1-Dichloroethane	< 1.0	ug/L	
1,2-Dichloroethane	< 1.0	ug/L	
1,1-Dichloroethene	< 1.0	ug/L	
cis-1,2-Dichloroethene	< 1.0	ug/L	
trans-1,2-Dichloroethene	< 1.0	ug/L	
1,2-Dichloropropane	< 1.0	ug/L	
cis-1,3-Dichloropropene	< 1.0	ug/L	
trans-1,3-Dichloropropene	< 1.0	ug/L	
Ethyl benzene	< 1.0	ug/L	
2-Hexanone	< 5.0	ug/L	
4-Methyl-2-pentanone	< 5.0	ug/L	
Methylene chloride	< 1.0	ug/L	
Styrene	< 1.0	ug/L	
1,1,2,2-Tetrachloroethane	< 1.0	ug/L	
Tetrachloroethene	< 1.0	ug/L	
Toluene	< 1.0	ug/L	
1,1,1-Trichloroethane	< 1.0	ug/L	
1,1,2-Trichloroethane	< 1.0	ug/L	
Trichloroethene	1.3	ug/L	
Vinyl Acetate	< 1.0	ug/L	
Vinyl Chloride	< 2.0	ug/L	
Xylenes (total)	< 3.0	ug/L	

"J" = estimated concentration above Method Detection Limit but below Reporting Limit.

CHAIN OF CUSTODY RECORD

Page____ of ____ pgs

First Environmental Laboratories, Inc.

First Environmental Laboratories
1600 Shore Road, Suite D
Naperville, Illinois 60563
Phone: (630) 778-1200 • Fax: (630) 778-1233
24 Hr. Pager (708) 569-7507
E-mail: info@firstenv.com
IEPA Certification# 100292

Company Name: Clayton Group Services
Street Address: 3140 Finley Rd
City: Downers Grove State: IL Zip: 60515
Phone: 630-795-3200 Fax: 630-795-1130
Send Report To: B. Etwell
Sampled By: JDC

MEJ 016819

Analyses

Project I.D.: 15-65263.03-001
P.O. #.:

Matrix Codes: S = Soil W = Water O = Other

Date/Time Taken	Sample Description	Matrix	VOCs							Comments	Lab I.D.
10-21-02/1755	GW1/115	W	X							24 hr turn	72070
10-21-02/—	TB401	W	X							↓	72071

Cooler Temperature: ~4 Blue Ice °C
Received within 6 hrs. of collection: _____

Notes and Special Instructions: 24 hr turn

Relinquished By: Joe Stoell Date/Time 10-22-02/730 Received By: [signature] Date/Time 10/22/02 1115
Relinquished By: _____ Date/Time _____ Received By: _____ Date/Time _____

Rev. 1/01

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IEPA Certification #100292

Analytical Report

Client:	CLAYTON GROUP SERVICES		
Project ID:	15-65263-03-001	Date Received:	10/22/02
Sample Number:	72071	Date Taken:	10/21/02
Sample Description:	TB401	Time Taken:	N/A
Lab File ID:	72070-71	Date Reported:	10/23/02

Volatile Organic Compounds Method 5030B/8260B
Analysis Date: 10/22/02

Analyte	Result	Units	Flags
Acetone	< 5.0	ug/L	
Benzene	< 1.0	ug/L	
Bromodichloromethane	< 1.0	ug/L	
Bromoform	< 1.0	ug/L	
Bromomethane	< 2.0	ug/L	
2-Butanone	< 5.0	ug/L	
Carbon disulfide	< 1.0	ug/L	
Carbon tetrachloride	< 1.0	ug/L	
Chlorobenzene	< 1.0	ug/L	
Chlorodibromomethane	< 1.0	ug/L	
Chloroethane	< 2.0	ug/L	
Chloroform	< 1.0	ug/L	
Chloromethane	< 2.0	ug/L	
1,1-Dichloroethane	< 1.0	ug/L	
1,2-Dichloroethane	< 1.0	ug/L	
1,1-Dichloroethene	< 1.0	ug/L	
cis-1,2-Dichloroethene	< 1.0	ug/L	
trans-1,2-Dichloroethene	< 1.0	ug/L	
1,2-Dichloropropane	< 1.0	ug/L	
cis-1,3-Dichloropropene	< 1.0	ug/L	
trans-1,3-Dichloropropene	< 1.0	ug/L	
Ethyl benzene	< 1.0	ug/L	
2-Hexanone	< 5.0	ug/L	
4-Methyl-2-pentanone	< 5.0	ug/L	
Methylene chloride	< 1.0	ug/L	
Styrene	< 1.0	ug/L	
1,1,2,2-Tetrachloroethane	< 1.0	ug/L	
Tetrachloroethene	< 1.0	ug/L	
Toluene	< 1.0	ug/L	
1,1,1-Trichloroethane	< 1.0	ug/L	
1,1,2-Trichloroethane	< 1.0	ug/L	
Trichloroethene	< 1.0	ug/L	
Vinyl Acetate	< 1.0	ug/L	
Vinyl Chloride	< 2.0	ug/L	
Xylenes (total)	< 3.0	ug/L	

"J" = estimated concentration above Method Detection Limit but below Reporting Limit.

First Environmental Laboratories, Inc.
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CASE NARRATIVE
QA/QC Summary

Mr. William Elwell
CLAYTON GROUP SERVICES
3140 Finley Road
Downers Grove, IL 60515

October 23, 2002

Project I.D.: **15-65263**
First Environmental File ID: 72070-71
Date Received : 10/22/02

The following data package includes the supporting quality control information for the above referenced project.

Reference Document: Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, SW-846, 3rd Edition, December 1996 and it's updates.

Volatiles Analysis

All analyses were performed within established holding times, and all quality control criteria, as outlined in the methods, have been met.

Project Manager: Bill Mottashed

Reviewed by: Lori Frantz

Date: 10/23/02

Sample List for Group VOA_Oct_22_2002

Printing Date /23/2002 9:18:27 AM

Lab File ID	EPA SAMPLE NO.	Lab Sample ID	Date Acq.	Date Rec.	Date Due
C64221.D	VBLK01	VBLKW01	10/22/02 11:20	10/22/02	
C64226.D	LCS	LCS	10/22/02 13:57	10/22/02	
C64227.D	LCSD	LCSD	10/22/02 14:29	10/22/02	
C64228.D	71930DLMS	71930DLMS	10/22/02 15:00	10/22/02	
C64229.D	71930DLMSD	71930DLMSD	10/22/02 15:31	10/22/02	
C64230.D	71930DL	71930DL	10/22/02 16:03	10/22/02	
C64231.D	TB 401	72071	10/22/02 16:34	10/22/02	
C64235.D	GW11115	72070	10/22/02 18:40	10/22/02	

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: FIRST ENVIRONMENTAL LABS Contract: CLAYTON

Lab Code: _____ Case No.: 65263 SAS No.: _____ SDG No.: _____

	EPA SAMPLE NO.	SMC1 #	SMC2 #	SMC3 #	TOT OUT
01	VBLK01	103	99	82	0
02	LCS	100	100	97	0
03	LCSD	104	103	102	0
04	71930DLMS	105	99	98	0
05	71930DLMSD	106	99	102	0
06	71930DL	108	93	90	0
07	TB 401	105	102	85	0
08	GW11115	114	100	88	0

			QC LIMITS
SMC1	=	Dibromofluoromethane	(78-126)
SMC2	=	d8-Toluene	(89-108)
SMC3	=	4-Bromofluorobenzene	(73-113)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK01

Lab Name: FIRST ENVIRONMENTAL LABS Contract: CLAYTON

Lab Code: _____ Case No.: 65263 SAS No.: _____ SDG No.: _____

Lab File ID: C64221.D Lab Sample ID: VBLKW01

Date Analyzed: 10/22/02 Time Analyzed: 11:20

GC Column: ZB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

Instrument ID: "C"

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS	LCS	C64226.D	13:57
02	LCSD	LCSD	C64227.D	14:29
03	71930DLMS	71930DLMS	C64228.D	15:00
04	71930DLMSD	71930DLMSD	C64229.D	15:31
05	71930DL	71930DL	C64230.D	16:03
06	TB 401	72071	C64231.D	16:34
07	GW11115	72070	C64235.D	18:40

COMMENTS:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK01

Lab Name: FIRST ENVIRONMENTAL LABS Contract: CLAYTON

Lab Code: _____ Case No.: 65263 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: VBLKW01

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: C64221.D

Level: (low/med) LOW Date Received: 10/22/02

% Moisture: not dec. _____ Date Analyzed: 10/22/02

GC Column: ZB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	2	U
75-01-4	Vinyl Chloride	2	U
74-83-9	Bromomethane	2	U
75-00-3	Chloroethane	2	U
67-64-1	Acetone	5	U
75-35-4	1,1-Dichloroethene	1	U
75-09-2	Methylene chloride	1	U
75-15-0	Carbon disulfide	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
156-59-4	cis-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
78-93-3	2-Butanone (MEK)	5	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon tetrachloride	1	U
107-06-2	1,2-Dichloroethane	1	U
71-43-2	Benzene	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	1	U
124-48-1	Chlorodibromomethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethyl benzene	1	U
108-38-3	m&p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK01

Lab Name: FIRST ENVIRONMENTAL LABS Contract: CLAYTON

Lab Code: _____ Case No.: 65263 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: VBLKW01

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: C64221.D

Level: (low/med) LOW Date Received: 10/22/02

% Moisture: not dec. _____ Date Analyzed: 10/22/02

GC Column: ZB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

Spike Recovery and RPD Summary Report - WATER

Method : C:\HPCHEM\1\METHODS\C_8260BW.M (RTE Integrator)
Title : Volatile Organic Analysis; Method 8260 Aqueous
Last Update : Thu Oct 03 08:55:38 2002
Response via : Initial Calibration

Non-Spiked Sample: C64221.D

	Spike Sample	Spike Duplicate Sample
File ID :	C64226.D	C64227.D
Sample :	LCS #5948	LCSD #5948
Acq Time:	22 Oct 2002 1:57 pm	22 Oct 2002 2:29 pm

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
1,1-Dichloroethene	0.0	50	62	63	124	126	2	14	52-168
Benzene	0.0	50	57	55	114	111	3	11	58-147
Trichloroethene	0.0	50	51	55	102	111	8	14	60-148
Toluene	0.0	50	49	53	99	106	7	13	63-148
Chlorobenzene	0.0	50	47	51	94	102	7	13	76-134

- Fails Limit Check

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: FIRST ENVIRONMENTAL LABS Contract: CLAYTON

Lab Code: _____ Case No.: 65263 SAS No.: _____ SDG No.: _____

Matrix Spike - EPA Sample No. 71930DL

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	0.0	64	128	52 - 168
Benzene	50	0.0	54	108	58 - 147
Trichloroethene	50	0.0	51	102	60 - 148
Toluene	50	0.0	50	100	63 - 148
Chlorobenzene	50	0.0	48	96	76 - 134

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50	63	126	2	14	52 - 168
Benzene	50	54	108	0	11	58 - 147
Trichloroethene	50	52	104	2	14	60 - 148
Toluene	50	49	98	2	13	63 - 148
Chlorobenzene	50	51	102	6	13	76 - 134

Batch QC

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS: _____

First Environmental Laboratories, Inc.
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233
IEPA Certification #100292

November 1, 2002

Mr. Bill Elwell
CLAYTON GROUP SERVICES INC.
3140 Finley Road
Downers Grove, IL 60515

Project ID: 15-65263.03-001
First Environmental File ID: 72608-09
Date Received: October 25, 2002

Dear Mr. Elwell:

The above referenced samples were analyzed as requested on the enclosed chain of custody record.

PROJECT SUMMARY

Analyses were performed in accordance with the methods found in the EPA publication: Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Edition, December 1996. Specific method references are listed on the Analytical Report.

A QC summary data package has been included as part of this report.

I thank you for the opportunity to be of service and look forward to working with you again in the future. Should you have any questions regarding any of the enclosed analytical data, please contact me at (630) 778-1200.

Sincerely,

William H. Mottashed
Project Manager

First
Environmental
Laboratories, Inc.
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233
IEPA Certification #100292

Analytical Report

Client:	CLAYTON GROUP SERVICES		
Project ID:	15-65263-01-001	Date Received:	10/25/02
Sample Number:	72608	Date Taken:	10/25/02
Sample Description:	GW2/115	Time Taken:	1230
Lab File ID:	72608-09	Date Reported:	11/01/02

Analyte	Result	Units	Flags
Volatile Organic Compounds Method 5030B/8260B			
Analysis Date: 10/29/02			
Acetone	< 5.0	ug/L	
Benzene	< 1.0	ug/L	
Bromodichloromethane	< 1.0	ug/L	
Bromoform	< 1.0	ug/L	
Bromomethane	< 2.0	ug/L	
2-Butanone	< 5.0	ug/L	
Carbon disulfide	< 1.0	ug/L	
Carbon tetrachloride	< 1.0	ug/L	
Chlorobenzene	< 1.0	ug/L	
Chlorodibromomethane	< 1.0	ug/L	
Chloroethane	< 2.0	ug/L	
Chloroform	< 1.0	ug/L	
Chloromethane	< 2.0	ug/L	
1,1-Dichloroethane	< 1.0	ug/L	
1,2-Dichloroethane	< 1.0	ug/L	
1,1-Dichloroethene	< 1.0	ug/L	
cis-1,2-Dichloroethene	< 1.0	ug/L	
trans-1,2-Dichloroethene	< 1.0	ug/L	
1,2-Dichloropropane	< 1.0	ug/L	
cis-1,3-Dichloropropene	< 1.0	ug/L	
trans-1,3-Dichloropropene	< 1.0	ug/L	
Ethyl benzene	< 1.0	ug/L	
2-Hexanone	< 5.0	ug/L	
4-Methyl-2-pentanone	< 5.0	ug/L	
Methylene chloride	< 1.0	ug/L	
Styrene	< 1.0	ug/L	
1,1,2,2-Tetrachloroethane	< 1.0	ug/L	
Tetrachloroethene	< 1.0	ug/L	
Toluene	< 1.0	ug/L	
1,1,1-Trichloroethane	< 1.0	ug/L	
1,1,2-Trichloroethane	< 1.0	ug/L	
Trichloroethene	2.7	ug/L	
Vinyl Acetate	< 1.0	ug/L	
Vinyl Chloride	< 2.0	ug/L	
Xylenes (total)	< 3.0	ug/L	

"J" = estimated concentration above Method Detection Limit but below Reporting Limit.

First
Environmental
Laboratories, Inc.
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233
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Analytical Report

Client:	CLAYTON GROUP SERVICES		
Project ID:	15-65263-01-001	Date Received:	10/25/02
Sample Number:	72609	Date Taken:	10/25/02
Sample Description:	TB402	Time Taken:	N/A
Lab File ID:	72608-09	Date Reported:	11/01/02

Analyte	Result	Units	Flags
Volatile Organic Compounds Method 5030B/8260B			
Analysis Date: 10/29/02			
Acetone	< 5.0	ug/L	
Benzene	< 1.0	ug/L	
Bromodichloromethane	< 1.0	ug/L	
Bromoform	< 1.0	ug/L	
Bromomethane	< 2.0	ug/L	
2-Butanone	< 5.0	ug/L	
Carbon disulfide	< 1.0	ug/L	
Carbon tetrachloride	< 1.0	ug/L	
Chlorobenzene	< 1.0	ug/L	
Chlorodibromomethane	< 1.0	ug/L	
Chloroethane	< 2.0	ug/L	
Chloroform	< 1.0	ug/L	
Chloromethane	< 2.0	ug/L	
1,1-Dichloroethane	< 1.0	ug/L	
1,2-Dichloroethane	< 1.0	ug/L	
1,1-Dichloroethene	< 1.0	ug/L	
cis-1,2-Dichloroethene	< 1.0	ug/L	
trans-1,2-Dichloroethene	< 1.0	ug/L	
1,2-Dichloropropane	< 1.0	ug/L	
cis-1,3-Dichloropropene	< 1.0	ug/L	
trans-1,3-Dichloropropene	< 1.0	ug/L	
Ethyl benzene	< 1.0	ug/L	
2-Hexanone	< 5.0	ug/L	
4-Methyl-2-pentanone	< 5.0	ug/L	
Methylene chloride	< 1.0	ug/L	
Styrene	< 1.0	ug/L	
1,1,2,2-Tetrachloroethane	< 1.0	ug/L	
Tetrachloroethene	< 1.0	ug/L	
Toluene	< 1.0	ug/L	
1,1,1-Trichloroethane	< 1.0	ug/L	
1,1,2-Trichloroethane	< 1.0	ug/L	
Trichloroethene	< 1.0	ug/L	
Vinyl Acetate	< 1.0	ug/L	
Vinyl Chloride	< 2.0	ug/L	
Xylenes (total)	< 3.0	ug/L	

"J" = estimated concentration above Method Detection Limit but below Reporting Limit.

CHAIN OF CUSTODY RECORD

Page 1 of 1 pgs

MEJ 016831

First Environmental Laboratories, Inc.

First Environmental Laboratories
1600 Shore Road, Suite D
Naperville, Illinois 60563
Phone: (630) 778-1200 • Fax: (630) 778-1233
24 Hr. Pager (708) 569-7507
E-mail: info@firstenv.com
IEPA Certification# 100292

Company Name: Clayton Group Services
Street Address: 3140 Finley Rd
City: Downers Grove State: IL Zip: 60515
Phone: 795-3200 Fax: 795-1130
Send Report To: Bill Elwell
Sampled By: Darren W. Lonsma

Project I.D.: 15-65763.03-001
P.O. #:

Matrix Codes: S = Soil W = Water O = Other

Analyses

Date/Time Taken	Sample Description	Matrix	VOCs								Comments	Lab I.D.
10/25 1230	GW2/115	W	X									72608
10/25 —	TB402	W	X									72609

Cooler Temperature: 4 °C
Received within 6 hrs. of collection: ✓

Notes and Special Instructions:

Relinquished By: [signature] Date/Time 10/25 1535 Received By: [signature] Date/Time 10/25/12 1535
Relinquished By: Date/Time Received By: Date/Time

Rev. 1/01

Sample List for Group VOA_Oct_30_2002

Printing Date *0/2002 10:09:33 AM*

Lab File ID	EPA SAMPLE NO.	Lab Sample ID	Date Acq.	Date Rec.	Date Due
C64462.D	VBLK01	VBLKW01	10/29/02 10:59	10/25/02	
C64469.D	LCS	LCS	10/29/02 14:40	10/25/02	
C64470.D	LCSD	LCSD	10/29/02 15:11	10/25/02	
C64471.D	72813DLMS	72813DLMS	10/29/02 15:43	10/25/02	
C64472.D	72813DLMSD	72813DLMSD	10/29/02 16:15	10/25/02	
C64473.D	72813DL	72813DL	10/29/02 16:46	10/25/02	
C64475.D	TB402	72609	10/29/02 17:49	10/25/02	
C64477.D	GW2/115	72608	10/29/02 18:52	10/25/02	

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: FIRST ENVIRONMENTAL LABS Contract: CLAYTON

Lab Code: _____ Case No.: 65263 SAS No.: _____ SDG No.: _____

	EPA SAMPLE NO.	SMC1 #	SMC2 #	SMC3 #	TOT OUT
01	VBLK01	90	102	80	0
02	LCS	90	100	92	0
03	LCSD	94	104	92	0
04	72813DLMS	94	104	95	0
05	72813DLMSD	89	103	98	0
06	72813DL	91	103	88	0
07	TB402	89	101	86	0
08	GW2/115	89	101	89	0

			QC LIMITS
SMC1	=	Dibromofluoromethane	(78-126)
SMC2	=	d8-Toluene	(89-108)
SMC3	=	4-Bromofluorobenzene	(73-113)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

MEJ 016833

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK01

Lab Name: FIRST ENVIRONMENTAL LABS Contract: CLAYTON

Lab Code: _____ Case No.: 65263 SAS No.: _____ SDG No.: _____

Lab File ID: C64462.D Lab Sample ID: VBLKW01

Date Analyzed: 10/29/02 Time Analyzed: 10:59

GC Column: ZB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

Instrument ID: "C"

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS	LCS	C64469.D	14:40
02	LCSD	LCSD	C64470.D	15:11
03	72813DLMS	72813DLMS	C64471.D	15:43
04	72813DLMSD	72813DLMSD	C64472.D	16:15
05	72813DL	72813DL	C64473.D	16:46
06	TB402	72609	C64475.D	17:49
07	GW2/115	72608	C64477.D	18:52

COMMENTS:

MEJ 016834

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK01

Lab Name: FIRST ENVIRONMENTAL LABS Contract: CLAYTON

Lab Code: _____ Case No.: 65263 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: VBLKW01

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: C64462.D

Level: (low/med) LOW Date Received: 10/25/02

% Moisture: not dec. _____ Date Analyzed: 10/29/02

GC Column: ZB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND (ug/L or ug/Kg) UG/L		Q
74-87-3	Chloromethane	2	U
75-01-4	Vinyl Chloride	2	U
74-83-9	Bromomethane	2	U
75-00-3	Chloroethane	2	U
67-64-1	Acetone	5	U
75-35-4	1,1-Dichloroethene	1	U
75-09-2	Methylene chloride	1	U
75-15-0	Carbon disulfide	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
156-59-4	cis-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
78-93-3	2-Butanone (MEK)	5	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon tetrachloride	1	U
107-06-2	1,2-Dichloroethane	1	U
71-43-2	Benzene	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	1	U
124-48-1	Chlorodibromomethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethyl benzene	1	U
108-38-3	m&p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK01

Lab Name: FIRST ENVIRONMENTAL LABS Contract: CLAYTON

Lab Code: _____ Case No.: 65263 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: VBLKW01

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: C64462.D

Level: (low/med) LOW Date Received: 10/25/02

% Moisture: not dec. _____ Date Analyzed: 10/29/02

GC Column: ZB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

Spike Recovery and RPD Summary Report - WATER

Method : C:\HPCHEM\1\METHODS\C_8260BW.M (RTE Integrator)
Title : Volatile Organic Analysis; Method 8260 Aqueous
Last Update : Thu Oct 03 08:55:38 2002
Response via : Initial Calibration

Non-Spiked Sample: C64462.D

	Spike Sample	Spike Duplicate Sample
File ID :	C64469.D	C64470.D
Sample :	LCS #5949	LCSD #5949
Acq Time:	29 Oct 2002 2:40 pm	29 Oct 2002 3:11 pm

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
1,1-Dichloroethene	0.0	50	57	63	113	126	11	14	52-168
Benzene	0.0	50	54	59	107	118	9	11	58-147
Trichloroethene	0.0	50	44	47	87	95	8	14	60-148
Toluene	0.0	50	52	55	103	110	6	13	63-148
Chlorobenzene	0.0	50	51	54	102	109	6	13	76-134

- Fails Limit Check

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: FIRST ENVIRONMENTAL LABS Contract: CLAYTON

Lab Code: _____ Case No.: 65263 SAS No.: _____ SDG No.: _____

Matrix Spike - EPA Sample No. 72813DL

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	0.0	59	118	52 - 168
Benzene	50	0.0	58	116	58 - 147
Trichloroethene	50	0.0	46	92	60 - 148
Toluene	50	0.0	54	108	63 - 148
Chlorobenzene	50	0.0	56	112	76 - 134

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50	59	118	0	14	52 - 168
Benzene	50	55	110	5	11	58 - 147
Trichloroethene	50	45	90	2	14	60 - 148
Toluene	50	51	102	6	13	63 - 148
Chlorobenzene	50	55	110	2	13	76 - 134

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS: _____

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November 6, 2002

Mr. Bill Elwell
CLAYTON GROUP SERVICES INC.
3140 Finley Road
Downers Grove, IL 60515

Project ID: 15-65263.03-001
First Environmental File ID: 72969-72
Date Received: October 31, 2002

Dear Mr. Elwell:

The above referenced samples were analyzed as requested on the enclosed chain of custody record.

PROJECT SUMMARY

Analyses were performed in accordance with the methods found in the EPA publication: Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Edition, December 1996. Specific method references are listed on the Analytical Report.

A QC Package has been included as part of this report.

I thank you for the opportunity to be of service and look forward to working with you again in the future. Should you have any questions regarding any of the enclosed analytical data, please contact me at (630) 778-1200.

Sincerely,

William H. Mottashed
Project Manager

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Analytical Report

Client:	CLAYTON GROUP SERVICES		
Project ID:	15-65263-03-001	Date Received:	10/31/02
Sample Number:	72970	Date Taken:	10/29/02
Sample Description:	GW3/115	Time Taken:	13:23
Lab File ID:	72969-72	Date Reported:	11/06/02

Volatile Organic Compounds Method 5030B/8260B
Analysis Date: 11/05/02

Analyte	Result	Units	Flags
Acetone	< 5.0	ug/L	
Benzene	< 1.0	ug/L	
Bromodichloromethane	< 1.0	ug/L	
Bromoform	< 1.0	ug/L	
Bromomethane	< 2.0	ug/L	
2-Butanone	< 5.0	ug/L	
Carbon disulfide	< 1.0	ug/L	
Carbon tetrachloride	< 1.0	ug/L	
Chlorobenzene	< 1.0	ug/L	
Chlorodibromomethane	< 1.0	ug/L	
Chloroethane	< 2.0	ug/L	
Chloroform	< 1.0	ug/L	
Chloromethane	< 2.0	ug/L	
1,1-Dichloroethane	< 1.0	ug/L	
1,2-Dichloroethane	< 1.0	ug/L	
1,1-Dichloroethene	< 1.0	ug/L	
cis-1,2-Dichloroethene	< 1.0	ug/L	
trans-1,2-Dichloroethene	< 1.0	ug/L	
1,2-Dichloropropane	< 1.0	ug/L	
cis-1,3-Dichloropropene	< 1.0	ug/L	
trans-1,3-Dichloropropene	< 1.0	ug/L	
Ethyl benzene	< 1.0	ug/L	
2-Hexanone	< 5.0	ug/L	
4-Methyl-2-pentanone	< 5.0	ug/L	
Methylene chloride	< 1.0	ug/L	
Styrene	< 1.0	ug/L	
1,1,2,2-Tetrachloroethane	< 1.0	ug/L	
Tetrachloroethene	< 1.0	ug/L	
Toluene	< 1.0	ug/L	
1,1,1-Trichloroethane	< 1.0	ug/L	
1,1,2-Trichloroethane	< 1.0	ug/L	
Trichloroethene	2.1	ug/L	
Vinyl Acetate	< 1.0	ug/L	
Vinyl Chloride	< 2.0	ug/L	
Xylenes (total)	< 3.0	ug/L	

"J" = estimated concentration above Method Detection Limit but below Reporting Limit.

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Analytical Report

Client:	CLAYTON GROUP SERVICES		
Project ID:	15-65263-03-001	Date Received:	10/31/02
Sample Number:	72971	Date Taken:	10/30/02
Sample Description:	GW5/110	Time Taken:	14:05
Lab File ID:	72969-72	Date Reported:	11/06/02

Analyte	Result	Units	Flags
Volatile Organic Compounds Method 5030B/8260B			
Analysis Date: 11/05/02			
Acetone	< 5.0	ug/L	
Benzene	< 1.0	ug/L	
Bromodichloromethane	< 1.0	ug/L	
Bromoform	< 1.0	ug/L	
Bromomethane	< 2.0	ug/L	
2-Butanone	< 5.0	ug/L	
Carbon disulfide	< 1.0	ug/L	
Carbon tetrachloride	< 1.0	ug/L	
Chlorobenzene	< 1.0	ug/L	
Chlorodibromomethane	< 1.0	ug/L	
Chloroethane	< 2.0	ug/L	
Chloroform	< 1.0	ug/L	
Chloromethane	< 2.0	ug/L	
1,1-Dichloroethane	< 1.0	ug/L	
1,2-Dichloroethane	< 1.0	ug/L	
1,1-Dichloroethene	< 1.0	ug/L	
cis-1,2-Dichloroethene	< 1.0	ug/L	
trans-1,2-Dichloroethene	< 1.0	ug/L	
1,2-Dichloropropane	< 1.0	ug/L	
cis-1,3-Dichloropropene	< 1.0	ug/L	
trans-1,3-Dichloropropene	< 1.0	ug/L	
Ethyl benzene	< 1.0	ug/L	
2-Hexanone	< 5.0	ug/L	
4-Methyl-2-pentanone	< 5.0	ug/L	
Methylene chloride	< 1.0	ug/L	
Styrene	< 1.0	ug/L	
1,1,2,2-Tetrachloroethane	< 1.0	ug/L	
Tetrachloroethene	< 1.0	ug/L	
Toluene	< 1.0	ug/L	
1,1,1-Trichloroethane	< 1.0	ug/L	
1,1,2-Trichloroethane	< 1.0	ug/L	
Trichloroethene	< 1.0	ug/L	
Vinyl Acetate	< 1.0	ug/L	
Vinyl Chloride	< 2.0	ug/L	
Xylenes (total)	< 3.0	ug/L	

"J" = estimated concentration above Method Detection Limit but below Reporting Limit.

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Analytical Report

Client:	CLAYTON GROUP SERVICES		
Project ID:	15-65263-03-001	Date Received:	10/31/02
Sample Number:	72972	Date Taken:	10/31/02
Sample Description:	GW1604D/66	Time Taken:	9:20
Lab File ID:	72969-72	Date Reported:	11/06/02

Analyte	Result	Units	Flags
Volatile Organic Compounds Method 5030B/8260B			
Analysis Date: 11/05/02			
Acetone	< 5.0	ug/L	
Benzene	< 1.0	ug/L	
Bromodichloromethane	< 1.0	ug/L	
Bromoform	< 1.0	ug/L	
Bromomethane	< 2.0	ug/L	
2-Butanone	< 5.0	ug/L	
Carbon disulfide	< 1.0	ug/L	
Carbon tetrachloride	< 1.0	ug/L	
Chlorobenzene	< 1.0	ug/L	
Chlorodibromomethane	< 1.0	ug/L	
Chloroethane	< 2.0	ug/L	
Chloroform	< 1.0	ug/L	
Chloromethane	< 2.0	ug/L	
1,1-Dichloroethane	< 1.0	ug/L	
1,2-Dichloroethane	< 1.0	ug/L	
1,1-Dichloroethene	< 1.0	ug/L	
cis-1,2-Dichloroethene	< 1.0	ug/L	
trans-1,2-Dichloroethene	< 1.0	ug/L	
1,2-Dichloropropane	< 1.0	ug/L	
cis-1,3-Dichloropropene	< 1.0	ug/L	
trans-1,3-Dichloropropene	< 1.0	ug/L	
Ethyl benzene	< 1.0	ug/L	
2-Hexanone	< 5.0	ug/L	
4-Methyl-2-pentanone	< 5.0	ug/L	
Methylene chloride	< 1.0	ug/L	
Styrene	< 1.0	ug/L	
1,1,2,2-Tetrachloroethane	< 1.0	ug/L	
Tetrachloroethene	< 1.0	ug/L	
Toluene	< 1.0	ug/L	
1,1,1-Trichloroethane	< 1.0	ug/L	
1,1,2-Trichloroethane	< 1.0	ug/L	
Trichloroethene	7.0	ug/L	
Vinyl Acetate	< 1.0	ug/L	
Vinyl Chloride	< 2.0	ug/L	
Xylenes (total)	< 3.0	ug/L	

"J" = estimated concentration above Method Detection Limit but below Reporting Limit.

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Analytical Report

Client:	CLAYTON GROUP SERVICES		
Project ID:	15-65263-03-001	Date Received:	10/31/02
Sample Number:	72969	Date Taken:	10/29/02
Sample Description:	TB404	Time Taken:	N/A
Lab File ID:	72969-72	Date Reported:	11/06/02

Volatile Organic Compounds Method 5030B/8260B
Analysis Date: 11/05/02

Analyte	Result	Units	Flags
Acetone	< 5.0	ug/L	
Benzene	< 1.0	ug/L	
Bromodichloromethane	< 1.0	ug/L	
Bromoform	< 1.0	ug/L	
Bromomethane	< 2.0	ug/L	
2-Butanone	< 5.0	ug/L	
Carbon disulfide	< 1.0	ug/L	
Carbon tetrachloride	< 1.0	ug/L	
Chlorobenzene	< 1.0	ug/L	
Chlorodibromomethane	< 1.0	ug/L	
Chloroethane	< 2.0	ug/L	
Chloroform	< 1.0	ug/L	
Chloromethane	< 2.0	ug/L	
1,1-Dichloroethane	< 1.0	ug/L	
1,2-Dichloroethane	< 1.0	ug/L	
1,1-Dichloroethene	< 1.0	ug/L	
cis-1,2-Dichloroethene	< 1.0	ug/L	
trans-1,2-Dichloroethene	< 1.0	ug/L	
1,2-Dichloropropane	< 1.0	ug/L	
cis-1,3-Dichloropropene	< 1.0	ug/L	
trans-1,3-Dichloropropene	< 1.0	ug/L	
Ethyl benzene	< 1.0	ug/L	
2-Hexanone	< 5.0	ug/L	
4-Methyl-2-pentanone	< 5.0	ug/L	
Methylene chloride	< 1.0	ug/L	
Styrene	< 1.0	ug/L	
1,1,2,2-Tetrachloroethane	< 1.0	ug/L	
Tetrachloroethene	< 1.0	ug/L	
Toluene	< 1.0	ug/L	
1,1,1-Trichloroethane	< 1.0	ug/L	
1,1,2-Trichloroethane	< 1.0	ug/L	
Trichloroethene	< 1.0	ug/L	
Vinyl Acetate	< 1.0	ug/L	
Vinyl Chloride	< 2.0	ug/L	
Xylenes (total)	< 3.0	ug/L	

"J" = estimated concentration above Method Detection Limit but below Reporting Limit.

CHAIN OF CUSTODY RECORD

Page 1 of 1 pgs

First Environmental Laboratories, Inc.

First Environmental Laboratories
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Naperville, Illinois 60563
Phone: (630) 778-1200 • Fax: (630) 778-1233
24 Hr. Pager (708) 569-7507
E-mail: info@firstenv.com
IEPA Certification# 100292

Company Name: Clayton Group Services
Street Address: 3140 Finley Rd
City: Downers Grove State: IL Zip: 60515
Phone: 795-3200 Fax: 795-1130
Send Report To: Bill Elwell
Sampled By: Darren W. Lemsma

Project I.D.: 15-65263.03-001
P.O. #.:

Analyses: VOCs

Matrix Codes: S = Soil W = Water O = Other

Date/Time Taken	Sample Description	Matrix	VOCs								Comments	Lab I.D.
10/29 —	TB404	W	X									72969
10/29 1323	GW3/115	W	X									70
10/30 1405	GW5/110	W	X									71
10/31 0920	GW1604D/66	W	X									72

Cooler Temperature: 4.6 °C
Received within 6 hrs. of collection: _____

Notes and Special Instructions: _____

Relinquished By: [signature] Date/Time 10/31 1030 Received By: [signature] Date/Time 10/31/02 1030
Relinquished By: _____ Date/Time _____ Received By: _____ Date/Time _____

Rev. 1/01

MEJ 016844

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CASE NARRATIVE
QA/QC Summary

Mr. William Elwell
CLAYTON GROUP SERVICES
3140 Finley Road
Downers Grove, IL 60515

November 11, 2002

Project I.D.: **15-65263**
First Environmental File ID: **72969-72**
Date Received : **October 31, 2002**

The following data package includes the supporting quality control information for the above referenced project.

Reference Document: Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, SW-846, 3rd Edition, December 1996 and it's updates.

Volatiles Analysis

All analyses were performed within established holding times, and all quality control criteria, as outlined in the methods, have been met.

Project Manager: Bill Mottashed

Reviewed by: L. Frantzel

Date: 11/11/02

Sample List for Group VOA_Nov_6_2002

Printing Date 6/2002 11:47:20 AM

Lab File ID	EPA SAMPLE NO.	Lab Sample ID	Date Acq.	Date Rec.	Date Due
C64631.D	VBLK01	VBLKW01	11/05/02 09:35	10/31/02	
C64632.D	LCS	LCS	11/05/02 10:06	10/31/02	
C64633.D	LCSD	LCSD	11/05/02 10:38	10/31/02	
C64634.D	73035DLMS	73035DLMS	11/05/02 11:09	10/31/02	
C64635.D	73035DLMSD	73035DLMSD	11/05/02 11:41	10/31/02	
C64636.D	73035DL	73035DL	11/05/02 12:12	10/31/02	
C64639.D	TB 404	72969	11/05/02 13:47	10/31/02	
C64644.D	GW 3/115	72970	11/05/02 16:24	10/31/02	
C64645.D	GW 5/110	72971	11/05/02 16:56	10/31/02	
C64646.D	GW 1604D/66	72972	11/05/02 17:27	10/31/02	

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: FIRST ENVIRONMENTAL LABS Contract: CLAYTON

Lab Code: _____ Case No.: 65263 SAS No.: _____ SDG No.: _____

	EPA SAMPLE NO.	SMC1 #	SMC2 #	SMC3 #	TOT OUT
01	VBLK01	96	98	92	0
02	LCS	94	99	102	0
03	LCSD	98	101	102	0
04	73035DLMS	96	99	99	0
05	73035DLMSD	94	98	99	0
06	73035DL	95	93	92	0
07	TB 404	96	97	83	0
08	GW 3/115	93	95	81	0
09	GW 5/110	98	97	76	0
10	GW 1604D/66	87	98	83	0

			QC LIMITS
SMC1	=	Dibromofluoromethane	(78-126)
SMC2	=	d8-Toluene	(89-108)
SMC3	=	4-Bromofluorobenzene	(73-113)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK01

Lab Name: FIRST ENVIRONMENTAL LABS Contract: CLAYTON

Lab Code: _____ Case No.: 65263 SAS No.: _____ SDG No.: _____

Lab File ID: C64631.D Lab Sample ID: VBLKW01

Date Analyzed: 11/05/02 Time Analyzed: 09:35

GC Column: ZB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

Instrument ID: "C"

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS	LCS	C64632.D	10:06
02	LCSD	LCSD	C64633.D	10:38
03	73035DLMS	73035DLMS	C64634.D	11:09
04	73035DLMSD	73035DLMSD	C64635.D	11:41
05	73035DL	73035DL	C64636.D	12:12
06	TB 404	72969	C64639.D	13:47
07	GW 3/115	72970	C64644.D	16:24
08	GW 5/110	72971	C64645.D	16:56
09	GW 1604D/66	72972	C64646.D	17:27

COMMENTS:

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK01

Lab Name: FIRST ENVIRONMENTAL LABS Contract: CLAYTON

Lab Code: _____ Case No.: 65263 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: VBLKW01

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: C64631.D

Level: (low/med) LOW Date Received: 10/31/02

% Moisture: not dec. _____ Date Analyzed: 11/05/02

GC Column: ZB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	2	U
75-01-4	Vinyl Chloride	2	U
74-83-9	Bromomethane	2	U
75-00-3	Chloroethane	2	U
67-64-1	Acetone	5	U
75-35-4	1,1-Dichloroethene	1	U
75-09-2	Methylene chloride	1	U
75-15-0	Carbon disulfide	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
156-59-4	cis-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
78-93-3	2-Butanone (MEK)	5	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon tetrachloride	1	U
107-06-2	1,2-Dichloroethane	1	U
71-43-2	Benzene	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	1	U
124-48-1	Chlorodibromomethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethyl benzene	1	U
108-38-3	m&p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U

MEJ 016849

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK01

Lab Name: FIRST ENVIRONMENTAL LABS Contract: CLAYTON

Lab Code: _____ Case No.: 65263 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: VBLKW01

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: C64631.D

Level: (low/med) LOW Date Received: 10/31/02

% Moisture: not dec. _____ Date Analyzed: 11/05/02

GC Column: ZB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ *(uL)* *Soil Aliquot Volume:* _____ *(uL)*

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

Spike Recovery and RPD Summary Report - WATER

Method : C:\HPCHEM\1\METHODS\C_8260BW.M (RTE Integrator)
Title : Volatile Organic Analysis; Method 8260 Aqueous
Last Update : Thu Oct 03 08:55:38 2002
Response via : Initial Calibration

Non-Spiked Sample: C64631.D

	Spike Sample	Spike Duplicate Sample
File ID :	C64632.D	C64633.D
Sample :	LCS #5950	LCSD #5950
Acq Time:	5 Nov 2002 10:06 am	5 Nov 2002 10:38 am

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
1,1-Dichloroethene	0.0	50	55	50	110	101	9	14	52-168
Benzene	0.0	50	50	50	100	100	0	11	58-147
Trichloroethene	0.0	50	52	50	105	100	5	14	60-148
Toluene	0.0	50	53	52	106	104	3	13	63-148
Chlorobenzene	0.0	50	55	54	111	109	2	13	76-134

- Fails Limit Check

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: FIRST ENVIRONMENTAL LABS Contract: CLAYTON

Lab Code: _____ Case No.: 65263 SAS No.: _____ SDG No.: _____

Matrix Spike - EPA Sample No. 73035DL

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	0.0	52	104	52 - 168
Benzene	50	0.0	47	94	58 - 147
Trichloroethene	50	0.0	47	94	60 - 148
Toluene	50	0.0	50	100	63 - 148
Chlorobenzene	50	0.0	54	108	76 - 134

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50	49	98	6	14	52 - 168
Benzene	50	47	94	0	11	58 - 147
Trichloroethene	50	47	94	0	14	60 - 148
Toluene	50	50	100	0	13	63 - 148
Chlorobenzene	50	53	106	2	13	76 - 134

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS: _____

First
Environmental
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IEPA Certification #100292

October 30, 2002

Mr. Bill Elwell
CLAYTON GROUP SERVICES INC.
3140 Finley Road
Downers Grove, IL 60515

Project ID: 15-65263.03-001
First Environmental File ID: 72812-13
Date Received: October 29, 2002

Dear Mr. Elwell:

The above referenced samples were analyzed as requested on the enclosed chain of custody record.

PROJECT SUMMARY

Analyses were performed in accordance with the methods found in the EPA publication: Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Edition, December 1996. Specific method references are listed on the Analytical Report.

A QC Package has been included as part of this report.

I thank you for the opportunity to be of service and look forward to working with you again in the future. Should you have any questions regarding any of the enclosed analytical data, please contact me at (630) 778-1200.

Sincerely,

William H. Mottashed
Project Manager

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Analytical Report

Client:	CLAYTON GROUP SERVICES		
Project ID:	15-65263-03-001	Date Received:	10/29/02
Sample Number:	72812	Date Taken:	10/28/02
Sample Description:	TB403	Time Taken:	N/A
Lab File ID:	72812-13	Date Reported:	10/30/02

Volatile Organic Compounds Method 5030B/8260B
Analysis Date: 10/29/02

Analyte	Result	Units	Flags
Acetone	< 5.0	ug/L	
Benzene	< 1.0	ug/L	
Bromodichloromethane	< 1.0	ug/L	
Bromoform	< 1.0	ug/L	
Bromomethane	< 2.0	ug/L	
2-Butanone	< 5.0	ug/L	
Carbon disulfide	< 1.0	ug/L	
Carbon tetrachloride	< 1.0	ug/L	
Chlorobenzene	< 1.0	ug/L	
Chlorodibromomethane	< 1.0	ug/L	
Chloroethane	< 2.0	ug/L	
Chloroform	< 1.0	ug/L	
Chloromethane	< 2.0	ug/L	
1,1-Dichloroethane	< 1.0	ug/L	
1,2-Dichloroethane	< 1.0	ug/L	
1,1-Dichloroethene	< 1.0	ug/L	
cis-1,2-Dichloroethene	< 1.0	ug/L	
trans-1,2-Dichloroethene	< 1.0	ug/L	
1,2-Dichloropropane	< 1.0	ug/L	
cis-1,3-Dichloropropene	< 1.0	ug/L	
trans-1,3-Dichloropropene	< 1.0	ug/L	
Ethyl benzene	< 1.0	ug/L	
2-Hexanone	< 5.0	ug/L	
4-Methyl-2-pentanone	< 5.0	ug/L	
Methylene chloride	< 1.0	ug/L	
Styrene	< 1.0	ug/L	
1,1,2,2-Tetrachloroethane	< 1.0	ug/L	
Tetrachloroethene	< 1.0	ug/L	
Toluene	< 1.0	ug/L	
1,1,1-Trichloroethane	< 1.0	ug/L	
1,1,2-Trichloroethane	< 1.0	ug/L	
Trichloroethene	< 1.0	ug/L	
Vinyl Acetate	< 1.0	ug/L	
Vinyl Chloride	< 2.0	ug/L	
Xylenes (total)	< 3.0	ug/L	

"J" = estimated concentration above Method Detection Limit but below Reporting Limit.

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Analytical Report

Client:	CLAYTON GROUP SERVICES		
Project ID:	15-65263-03-001	Date Received:	10/29/02
Sample Number:	72813	Date Taken:	10/28/02
Sample Description:	BW4/115	Time Taken:	17:35
Lab File ID:	72812-13	Date Reported:	10/30/02

Volatile Organic Compounds Method 5030B/8260B
Analysis Date: 10/29/02

Analyte	Result	Units	Flags
Acetone	< 5.0	ug/L	
Benzene	< 1.0	ug/L	
Bromodichloromethane	< 1.0	ug/L	
Bromoform	< 1.0	ug/L	
Bromomethane	< 2.0	ug/L	
2-Butanone	< 5.0	ug/L	
Carbon disulfide	< 1.0	ug/L	
Carbon tetrachloride	< 1.0	ug/L	
Chlorobenzene	< 1.0	ug/L	
Chlorodibromomethane	< 1.0	ug/L	
Chloroethane	< 2.0	ug/L	
Chloroform	< 1.0	ug/L	
Chloromethane	< 2.0	ug/L	
1,1-Dichloroethane	< 1.0	ug/L	
1,2-Dichloroethane	< 1.0	ug/L	
1,1-Dichloroethene	< 1.0	ug/L	
cis-1,2-Dichloroethene	< 1.0	ug/L	
trans-1,2-Dichloroethene	< 1.0	ug/L	
1,2-Dichloropropane	< 1.0	ug/L	
cis-1,3-Dichloropropene	< 1.0	ug/L	
trans-1,3-Dichloropropene	< 1.0	ug/L	
Ethyl benzene	< 1.0	ug/L	
2-Hexanone	< 5.0	ug/L	
4-Methyl-2-pentanone	< 5.0	ug/L	
Methylene chloride	< 1.0	ug/L	
Styrene	< 1.0	ug/L	
1,1,2,2-Tetrachloroethane	< 1.0	ug/L	
Tetrachloroethene	< 1.0	ug/L	
Toluene	< 1.0	ug/L	
1,1,1-Trichloroethane	< 1.0	ug/L	
1,1,2-Trichloroethane	< 1.0	ug/L	
Trichloroethene	< 1.0	ug/L	
Vinyl Acetate	< 1.0	ug/L	
Vinyl Chloride	< 2.0	ug/L	
Xylenes (total)	< 3.0	ug/L	

"J" = estimated concentration above Method Detection Limit but below Reporting Limit.

CHAIN OF CUSTODY RECORD

Page 1 of ___ pgs

MEJ 016856

First Environmental Laboratories, Inc.

First Environmental Laboratories
1600 Shore Road, Suite D
Naperville, Illinois 60563
Phone: (630) 778-1200 • Fax: (630) 778-1233
24 Hr. Pager (708) 569-7507
E-mail: info@firstenv.com
IEPA Certification# 100292

Company Name: Clayton Group Services
Street Address: 3140 Finley Rd
City: Downers Grove State: IL Zip: 60515
Phone: 795-3200 Fax: 795-1130
Send Report To: Bill Elwell
Sampled By: Darren W. Lonsma

Project I.D.: 15-65263.03-001
P.O. #.:

Matrix Codes: S = Soil W = Water O = Other

Analyses

Date/Time Taken	Sample Description	Matrix	VOCs								Comments	Lab I.D.
10/28 —	TB403	~~S~~W	X									72812
10/28 1735	GW4/115	W	X									813

Cooler Temperature: on ice
Received within 6 hrs. of collection: ~~on~~ ice

Notes and Special Instructions: 24 hour turn

Relinquished By: [illegible] Date/Time 10/29 0730 Received By: [illegible] Date/Time 10/29/02 1300
Relinquished By: ___ Date/Time ___ Received By: ___ Date/Time ___

Rev. 1/01

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CASE NARRATIVE
QA/QC Summary

Mr. William Elwell
CLAYTON GROUP SERVICES
3140 Finley Road
Downers Grove, IL 60515

October 30, 2002

Project I.D.: **15-65263**
First Environmental File ID: **72812-13**
Date Received : **10/29/02**

The following data package includes the supporting quality control information for the above referenced project.

Reference Document: Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, SW-846, 3rd Edition, December 1996 and it's updates.

Volatiles Analysis

All analyses were performed within established holding times, and all quality control criteria, as outlined in the methods, have been met.

Project Manager: Bill Mottashed

Reviewed by: Louie Trantz

Date: 10/30/02

Sample List for Group VOA_Oct_29_2002

Printing Date /30/2002 9:59:04 AM

Lab File ID	EPA SAMPLE NO.	Lab Sample ID	Date Acq.	Date Rec.	Date Due
C64462.D	VBLK01	VBLKW01	10/29/02 10:59	10/29/02	
C64469.D	LCS	LCS	10/29/02 14:40	10/29/02	
C64470.D	LCSD	LCSD	10/29/02 15:11	10/29/02	
C64471.D	GW4/115DLMS	72813DLMS	10/29/02 15:43	10/29/02	
C64472.D	GW4/115DLMS	72813DLMSD	10/29/02 16:15	10/29/02	
C64473.D	GW4/115DL	72813DL	10/29/02 16:46	10/29/02	
C64474.D	TB403	72812	10/29/02 17:18	10/29/02	
C64476.D	GW4/115	72813	10/29/02 18:20	10/29/02	

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: FIRST ENVIRONMENTAL LABS Contract: CLAYTON

Lab Code: _____ Case No.: 65263 SAS No.: _____ SDG No.: _____

	EPA SAMPLE NO.	SMC1 #	SMC2 #	SMC3 #	TOT OUT
01	VBLK01	90	102	80	0
02	LCS	90	100	92	0
03	LCSD	94	104	92	0
04	GW4/115DLMS	94	104	95	0
05	GW4/115DLMSD	89	103	98	0
06	GW4/115DL	91	103	88	0
07	TB403	90	104	92	0
08	GW4/115	89	96	94	0

			QC LIMITS
SMC1	=	Dibromofluoromethane	(78-126)
SMC2	=	d8-Toluene	(89-108)
SMC3	=	4-Bromofluorobenzene	(73-113)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK01

Lab Name: FIRST ENVIRONMENTAL LABS Contract: CLAYTON

Lab Code: _____ Case No.: 65263 SAS No.: _____ SDG No.: _____

Lab File ID: C64462.D Lab Sample ID: VBLKW01

Date Analyzed: 10/29/02 Time Analyzed: 10:59

GC Column: ZB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

Instrument ID: "C"

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS	LCS	C64469.D	14:40
02	LCSD	LCSD	C64470.D	15:11
03	GW4/115DLMS	72813DLMS	C64471.D	15:43
04	GW4/115DLMSD	72813DLMSD	C64472.D	16:15
05	GW4/115DL	72813DL	C64473.D	16:46
06	TB403	72812	C64474.D	17:18
07	GW4/115	72813	C64476.D	18:20

COMMENTS:

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK01

Lab Name: FIRST ENVIRONMENTAL LABS Contract: CLAYTON

Lab Code: _____ Case No.: 65263 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: VBLKW01

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: C64462.D

Level: (low/med) LOW Date Received: 10/29/02

% Moisture: not dec. _____ Date Analyzed: 10/29/02

GC Column: ZB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND (ug/L or ug/Kg) UG/L		Q
74-87-3	Chloromethane	2	U
75-01-4	Vinyl Chloride	2	U
74-83-9	Bromomethane	2	U
75-00-3	Chloroethane	2	U
67-64-1	Acetone	5	U
75-35-4	1,1-Dichloroethene	1	U
75-09-2	Methylene chloride	1	U
75-15-0	Carbon disulfide	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
156-59-4	cis-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
78-93-3	2-Butanone (MEK)	5	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon tetrachloride	1	U
107-06-2	1,2-Dichloroethane	1	U
71-43-2	Benzene	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	1	U
124-48-1	Chlorodibromomethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethyl benzene	1	U
108-38-3	m&p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U

Spike Recovery and RPD Summary Report - WATER

Method : C:\HPCHEM\1\METHODS\C_8260BW.M (RTE Integrator)
Title : Volatile Organic Analysis; Method 8260 Aqueous
Last Update : Thu Oct 03 08:55:38 2002
Response via : Initial Calibration

Non-Spiked Sample: C64462.D

	Spike Sample	Spike Duplicate Sample
File ID :	C64469.D	C64470.D
Sample :	LCS #5949	LCSD #5949
Acq Time:	29 Oct 2002 2:40 pm	29 Oct 2002 3:11 pm

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
1,1-Dichloroethene	0.0	50	57	63	113	126	11	14	52-168
Benzene	0.0	50	54	59	107	118	9	11	58-147
Trichloroethene	0.0	50	44	47	87	95	8	14	60-148
Toluene	0.0	50	52	55	103	110	6	13	63-148
Chlorobenzene	0.0	50	51	54	102	109	6	13	76-134

- Fails Limit Check

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: FIRST ENVIRONMENTAL LABS Contract: CLAYTON

Lab Code: _____ Case No.: 65263 SAS No.: _____ SDG No.: _____

Matrix Spike - EPA Sample No. GW4/115DL

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	0.0	59	118	52 - 168
Benzene	50	0.0	58	116	58 - 147
Trichloroethene	50	0.0	46	92	60 - 148
Toluene	50	0.0	54	108	63 - 148
Chlorobenzene	50	0.0	56	112	76 - 134

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50	59	118	0	14	52 - 168
Benzene	50	55	110	5	11	58 - 147
Trichloroethene	50	45	90	2	14	60 - 148
Toluene	50	51	102	6	13	63 - 148
Chlorobenzene	50	55	110	2	13	76 - 134

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS: _____

First
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November 6, 2002

Mr. Bill Elwell
CLAYTON GROUP SERVICES INC.
3140 Finley Road
Downers Grove, IL 60515

Project ID: 15-65263.01-013
First Environmental File ID: 73317-18
Date Received: November 5, 2002

Dear Mr. Elwell:

The above referenced samples were analyzed as requested on the enclosed chain of custody record.

PROJECT SUMMARY

Analyses were performed in accordance with the methods found in the EPA publication: Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Edition, December 1996. Specific method references are listed on the Analytical Report.

A QC Package has been included as part of this report.

I thank you for the opportunity to be of service and look forward to working with you again in the future. Should you have any questions regarding any of the enclosed analytical data, please contact me at (630) 778-1200.

Sincerely,

William H. Mottashed
Project Manager

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Analytical Report

Client:	CLAYTON GROUP SERVICES		
Project ID:	15-65263-01-013	Date Received:	11/05/02
Sample Number:	73317	Date Taken:	11/05/02
Sample Description:	GW61105	Time Taken:	13:55
Lab File ID:	73317-18	Date Reported:	11/06/02

Analyte	Result	Units	Flags
Volatile Organic Compounds Method 5030B/8260B			
Analysis Date: 11/05/02			
Acetone	< 5.0	ug/L	
Benzene	< 1.0	ug/L	
Bromodichloromethane	< 1.0	ug/L	
Bromoform	< 1.0	ug/L	
Bromomethane	< 2.0	ug/L	
2-Butanone	< 5.0	ug/L	
Carbon disulfide	< 1.0	ug/L	
Carbon tetrachloride	< 1.0	ug/L	
Chlorobenzene	< 1.0	ug/L	
Chlorodibromomethane	< 1.0	ug/L	
Chloroethane	< 2.0	ug/L	
Chloroform	< 1.0	ug/L	
Chloromethane	< 2.0	ug/L	
1,1-Dichloroethane	< 1.0	ug/L	
1,2-Dichloroethane	< 1.0	ug/L	
1,1-Dichloroethene	< 1.0	ug/L	
cis-1,2-Dichloroethene	< 1.0	ug/L	
trans-1,2-Dichloroethene	< 1.0	ug/L	
1,2-Dichloropropane	< 1.0	ug/L	
cis-1,3-Dichloropropene	< 1.0	ug/L	
trans-1,3-Dichloropropene	< 1.0	ug/L	
Ethyl benzene	< 1.0	ug/L	
2-Hexanone	< 5.0	ug/L	
4-Methyl-2-pentanone	< 5.0	ug/L	
Methylene chloride	< 1.0	ug/L	
Styrene	< 1.0	ug/L	
1,1,2,2-Tetrachloroethane	< 1.0	ug/L	
Tetrachloroethene	< 1.0	ug/L	
Toluene	< 1.0	ug/L	
1,1,1-Trichloroethane	< 1.0	ug/L	
1,1,2-Trichloroethane	< 1.0	ug/L	
Trichloroethene	< 1.0	ug/L	
Vinyl Acetate	< 1.0	ug/L	
Vinyl Chloride	< 2.0	ug/L	
Xylenes (total)	< 3.0	ug/L	

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IEPA Certification #100292

Analytical Report

Client:	CLAYTON GROUP SERVICES		
Project ID:	15-65263-01-013	Date Received:	11/05/02
Sample Number:	73318	Date Taken:	11/05/02
Sample Description:	TB405	Time Taken:	N/A
Lab File ID:	73317-18	Date Reported:	11/06/02

Volatile Organic Compounds Method 5030B/8260B
Analysis Date: 11/05/02

Analyte	Result	Units	Flags
Acetone	< 5.0	ug/L	
Benzene	< 1.0	ug/L	
Bromodichloromethane	< 1.0	ug/L	
Bromoform	< 1.0	ug/L	
Bromomethane	< 2.0	ug/L	
2-Butanone	< 5.0	ug/L	
Carbon disulfide	< 1.0	ug/L	
Carbon tetrachloride	< 1.0	ug/L	
Chlorobenzene	< 1.0	ug/L	
Chlorodibromomethane	< 1.0	ug/L	
Chloroethane	< 2.0	ug/L	
Chloroform	< 1.0	ug/L	
Chloromethane	< 2.0	ug/L	
1,1-Dichloroethane	< 1.0	ug/L	
1,2-Dichloroethane	< 1.0	ug/L	
1,1-Dichloroethene	< 1.0	ug/L	
cis-1,2-Dichloroethene	< 1.0	ug/L	
trans-1,2-Dichloroethene	< 1.0	ug/L	
1,2-Dichloropropane	< 1.0	ug/L	
cis-1,3-Dichloropropene	< 1.0	ug/L	
trans-1,3-Dichloropropene	< 1.0	ug/L	
Ethyl benzene	< 1.0	ug/L	
2-Hexanone	< 5.0	ug/L	
4-Methyl-2-pentanone	< 5.0	ug/L	
Methylene chloride	< 1.0	ug/L	
Styrene	< 1.0	ug/L	
1,1,2,2-Tetrachloroethane	< 1.0	ug/L	
Tetrachloroethene	< 1.0	ug/L	
Toluene	< 1.0	ug/L	
1,1,1-Trichloroethane	< 1.0	ug/L	
1,1,2-Trichloroethane	< 1.0	ug/L	
Trichloroethene	< 1.0	ug/L	
Vinyl Acetate	< 1.0	ug/L	
Vinyl Chloride	< 2.0	ug/L	
Xylenes (total)	< 3.0	ug/L	

CHAIN OF CUSTODY RECORD

Page 1 of 1 pgs

First Environmental Laboratories, Inc.

First Environmental Laboratories
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E-mail: info@firstenv.com
IEPA Certification# 100292

Company Name: Clayton Group Services
Street Address: 3140 Finley Rd
City: Downers Grove State: IL Zip: 60515
Phone: 630-795-3200 Fax: 630-795-1130
Send Report To: B. Blewell
Sampled By: JDC

Project I.D.: 15-65263.01-013
P.O. #:

Matrix Codes: S = Soil W = Water O = Other

Analyses: VOCs

Date/Time Taken	Sample Description	Matrix	VOCs								Comments	Lab I.D.
11-5-02 / 1355	DW 6 / 105	W	X								24 hr turn	73317
11-5-02 / —	TB 405	W	X									73318

Cooler Temperature: ____ °C
Received within 6 hrs. of collection: ✓

Notes and Special Instructions: 24 hr turn

Relinquished By: Joe Gleeel Date/Time 11-5-02 / 1505 Received By: Ryan C Date/Time 11/5/02 1505
Relinquished By: ____ Date/Time ____ Received By: ____ Date/Time ____

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CASE NARRATIVE
QA/QC Summary

Mr. William Elwell
CLAYTON GROUP SERVICES
3140 Finley Road
Downers Grove, IL 60515

November 11, 2002

Project I.D.: **15-65263**
First Environmental File ID: **73317-18**
Date Received : **November 5, 2002**

The following data package includes the supporting quality control information for the above referenced project.

Reference Document: Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, SW-846, 3rd Edition, December 1996 and it's updates.

Volatiles Analysis

All analyses were performed within established holding times, and all quality control criteria, as outlined in the methods, have been met.

Project Manager: Bill Mottashed

Reviewed by: Louie Trandafir

Date: 11/11/02

Sample List for Group VOA_Nov_5_2002

Printing Date 6/2002 11:21:04 AM

Lab File ID	EPA SAMPLE NO.	Lab Sample ID	Date Acq.	Date Rec.	Date Due
C64631.D	VBLK01	VBLKW01	11/05/02 09:35	11/05/02	
C64632.D	LCS	LCS	11/05/02 10:06	11/05/02	
C64633.D	LCSD	LCSD	11/05/02 10:38	11/05/02	
C64634.D	73035DLMS	73035DLMS	11/05/02 11:09	11/05/02	
C64635.D	73035DLMSD	73035DLMSD	11/05/02 11:41	11/05/02	
C64636.D	73035DL	73035DL	11/05/02 12:12	11/05/02	
C64647.D	TB 405	73318	11/05/02 17:59	11/05/02	
C64648.D	GW 6/105	73317	11/05/02 18:30	11/05/02	

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: FIRST ENVIRONMENTAL LABS Contract: CLAYTON

Lab Code: _____ Case No.: 65263 SAS No.: _____ SDG No.: _____

	EPA SAMPLE NO.	SMC1 #	SMC2 #	SMC3 #	TOT OUT
01	VBLK01	96	98	92	0
02	LCS	94	99	102	0
03	LCSD	98	101	102	0
04	73035DLMS	96	99	99	0
05	73035DLMSD	94	98	99	0
06	73035DL	95	93	92	0
07	TB 405	91	95	93	0
08	GW 6/105	97	96	77	0

			QC LIMITS
SMC1	=	Dibromofluoromethane	(78-126)
SMC2	=	d8-Toluene	(89-108)
SMC3	=	4-Bromofluorobenzene	(73-113)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK01

Lab Name: FIRST ENVIRONMENTAL LABS Contract: CLAYTON

Lab Code: _____ Case No.: 65263 SAS No.: _____ SDG No.: _____

Lab File ID: C64631.D Lab Sample ID: VBLKW01

Date Analyzed: 11/05/02 Time Analyzed: 09:35

GC Column: ZB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

Instrument ID: "C"

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS	LCS	C64632.D	10:06
02	LCSD	LCSD	C64633.D	10:38
03	73035DLMS	73035DLMS	C64634.D	11:09
04	73035DLMSD	73035DLMSD	C64635.D	11:41
05	73035DL	73035DL	C64636.D	12:12
06	TB 405	73318	C64647.D	17:59
07	GW 6/105	73317	C64648.D	18:30

COMMENTS:

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK01

Lab Name: FIRST ENVIRONMENTAL LABS Contract: CLAYTON

Lab Code: _____ Case No.: 65263 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: VBLKW01

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: C64631.D

Level: (low/med) LOW Date Received: 11/05/02

% Moisture: not dec. _____ Date Analyzed: 11/05/02

GC Column: ZB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	2	U
75-01-4	Vinyl Chloride	2	U
74-83-9	Bromomethane	2	U
75-00-3	Chloroethane	2	U
67-64-1	Acetone	5	U
75-35-4	1,1-Dichloroethene	1	U
75-09-2	Methylene chloride	1	U
75-15-0	Carbon disulfide	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
156-59-4	cis-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
78-93-3	2-Butanone (MEK)	5	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon tetrachloride	1	U
107-06-2	1,2-Dichloroethane	1	U
71-43-2	Benzene	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	1	U
124-48-1	Chlorodibromomethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethyl benzene	1	U
108-38-3	m&p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK01

Lab Name: FIRST ENVIRONMENTAL LABS Contract: CLAYTON

Lab Code: _____ Case No.: 65263 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: VBLKW01

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: C64631.D

Level: (low/med) LOW Date Received: 11/05/02

% Moisture: not dec. _____ Date Analyzed: 11/05/02

GC Column: ZB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

Spike Recovery and RPD Summary Report - WATER

Method : C:\HPCHEM\1\METHODS\C_8260BW.M (RTE Integrator)
Title : Volatile Organic Analysis; Method 8260 Aqueous
Last Update : Thu Oct 03 08:55:38 2002
Response via : Initial Calibration

Non-Spiked Sample: C64631.D

	Spike Sample	Spike Duplicate Sample
File ID :	C64632.D	C64633.D
Sample :	LCS #5950	LCSD #5950
Acq Time:	5 Nov 2002 10:06 am	5 Nov 2002 10:38 am

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
1,1-Dichloroethene	0.0	50	55	50	110	101	9	14	52-168
Benzene	0.0	50	50	50	100	100	0	11	58-147
Trichloroethene	0.0	50	52	50	105	100	5	14	60-148
Toluene	0.0	50	53	52	106	104	3	13	63-148
Chlorobenzene	0.0	50	55	54	111	109	2	13	76-134

- Fails Limit Check

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: FIRST ENVIRONMENTAL LABS Contract: CLAYTON

Lab Code: _____ Case No.: 65263 SAS No.: _____ SDG No.: _____

Matrix Spike - EPA Sample No. 73035DL

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	0.0	52	104	52 - 168
Benzene	50	0.0	47	94	58 - 147
Trichloroethene	50	0.0	47	94	60 - 148
Toluene	50	0.0	50	100	63 - 148
Chlorobenzene	50	0.0	54	108	76 - 134

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50	49	98	6	14	52 - 168
Benzene	50	47	94	0	11	58 - 147
Trichloroethene	50	47	94	0	14	60 - 148
Toluene	50	50	100	0	13	63 - 148
Chlorobenzene	50	53	106	2	13	76 - 134

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS: _____

Clayton GROUP SERVICES

BORING NO: RW-1	WELL NO: RW-1	PROJECT NO: 15-65263.03-001	PROJECT NAME: Lockformer
BORING LOCATION: 560 Inverness Rd.		COORDINATES: NA	

DRILLING CO: Boart Longyear	DRILLER: Jason Drebek	LOGGED BY: JDC
DRILLING EQUIP: Rotasonic	SCREEN INTERVAL: NA	CHECKED BY: JDC
STATIC WATER LEVEL: 98.0ft	SCREEN MTL/SLOT: NA	START DATE: 10-17-02
BOREHOLE DIA: 8"	STICKUP: Flushmount	START TIME (hours): 911
TOP of CASING ELEVATION: NA	G.S. ELEVATION: NA	FINISH DATE: 10-21-02
RISER DIA/MTL/LGTH: 6"/Steel/115'	DEV. METHODS: 4" Grundfos pump	FINISH TIME (hours): 1458

DEPTH (ft / m)	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	RECOVERY	METHOD	MOISTURE	BLOW CNT (6")	PID SCAN	HEADSPACE	REMARKS
0 / 0	**TOPSOIL** Silty clay, black, moist, organics, trace coarse sand, cohesive, high plasticity, stiff					SS	M	--	--	--	
2	**SILTY CLAY (CL)** Dark brown, moist, some fine gravel, cohesive, high plasticity					SS	M	--	--	--	
4	Grades to brown at 4.0ft				4/5	SS	M	--	--	--	
6 / 2						SS	M	--	--	--	
8	Grades to gray, very stiff, medium plasticity at 9.0ft				5/5	SS	M	--	--	--	
10	Fine gravel to cobbles at 11.0ft					SS	M	--	--	--	
12 / 4						SS	--	--	M	--	
14	5" cobble at 14.0ft				5/5	SS	--	--	M	--	
16						SS	M	--	--	--	
18					5/5	SS	M	--	--	--	
20 / 6											

Clayton GROUP SERVICES

BORING NO: RW-1	WELL NO: RW-1	PROJECT NO: 15-65263.03-001	PROJECT NAME: Lockformer

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	RECOVERY	METHOD	MOISTURE	BLOW CNT (6")	PID SCAN	HEADSPACE	REMARKS
						SS	M	--	--	--	
22						SS	M	--	--	--	
24					5/5	SS	M	--	--	--	
26						SS	VM	--	--	--	
8											
28	Very moist from 26.0 to 30.0ft					SS	VM	--	--	--	
30						SS	M	--	--	--	
32						SS	M	--	--	--	
10											
34					10/10	SS	M	--	--	--	
36						SS	M	--	--	--	
38	**SAND AND GRAVEL (GW)** Gray, wet, fine to coarse sand, some silt, trace clay, very poorly sorted, loose					SS	W	--	--	--	Collected groundwater sample for VOCs
12											
40											

Clayton GROUP SERVICES

BORING NO: RW-1	WELL NO: RW-1	PROJECT NO: 15-65263.03-001	PROJECT NAME: Lockformer

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	RECOVERY	METHOD	MOISTURE	BLOW CNT (6")	PID SCAN	HEADSPACE	REMARKS
						SS	VM	–	–	–	
42	**SILTY CLAY (CL)** Gray, moist, some fine to coarse gravel and cobbles, stiff, cohesive, plastic					SS	M	–	–	–	
44					9/10	SS	M	–	–	–	
46	14					SS	M	–	–	–	
48					5/5	SS	M	–	–	–	
50						SS	M	–	–	–	
52	16					SS	M	–	–	–	
54					5/5	SS	M	–	–	–	
56						SS	M	–	–	–	
58	**CLAY (CH)** Gray, moist, cohesive, very high plasticity					SS	M	–	–	–	
	18										
60											

Boring/Well No.: RW-1

Clayton GROUP SERVICES

BORING NO: RW-1	WELL NO: RW-1	PROJECT NO: 15-65263.03-001	PROJECT NAME: Lockformer

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	RECOVERY	METHOD	MOISTURE	BLOW CNT (6")	PID SCAN	HEADSPACE	REMARKS
						SS	M	--	--	--	
62						SS	M	--	--	--	
64					10/10	SS	M	--	--	--	
20 66	**SILTY CLAY (CL)** Gray, moist, some fine to coarse gravel, trace cobbles, stiff, medium plasticity					SS	M	--	--	--	
68						SS	M	--	--	--	
70						SS	M	--	--	--	
72 22	**CLAYEY GRAVEL (GC)** Gray, moist, fine to coarse sand, some silt, loose					SS	M/W	--	--	--	
74	Wet at 74.0ft				6/10	SS	W/VM	--	--	--	Collected groundwater sample for VOCs
76	**SILT (MH)** Gray, moist, some fine gravel, cohesive, stiff					SS	VM	--	--	--	
78 24	Some clay at 78.0ft					SS	VM	--	--	--	
80											

Clayton GROUP SERVICES

BORING NO: RW-1	WELL NO: RW-1	PROJECT NO: 15-65263.03-001	PROJECT NAME: Lockformer

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	RECOVERY	METHOD	MOISTURE	BLOW CNT (6")	PID SCAN	HEADSPACE	REMARKS
						SS	M	--	--	--	
82	**SAND (SP)** Gray, moist, fine grained sand, very well sorted										
	Cobbles at 82.5ft				7/9	SS	M	--	--	--	
84						SS	M	--	--	--	
26	**SILT (MH)** Gray, moist, some fine gravel and cobbles, cohesive, stiff										
86						SS	M	--	--	--	
88						SS	M	--	--	--	
90						SS	M	--	--	--	
92	28					SS	M	--	--	--	
94					5/11	SS	M	--	--	--	
96	**SAND (SP)** Gray, very moist, fine graned sand, some fine gravel, well sorted, loose					SS	M	--	--	--	
98	30					SS	M	--	--	--	
100											

Boring/Well No.: RW-1

Clayton GROUP SERVICES

BORING NO: RW-1	WELL NO: RW-1	PROJECT NO: 15-65263.03-001	PROJECT NAME: Lockformer

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	RECOVERY	METHOD	MOISTURE	BLOW CNT (6")	PID SCAN	HEADSPACE	REMARKS
	SAND (SM) Gray, very moist, fine grained sand, some silt, very well sorted, cohesive, stiff					SS	VM	–	–	–	
102						SS	VM	–	–	–	
104					8/10	SS	VM	–	–	–	
32											
106	Wet at 106.0ft					SS	W	–	–	–	
108	**WEATHERED BEDROCK** Light brown, angular fragments					SS	W	–	–	–	
110						SS	W	–	–	–	
34											
112	**DOLOMITE** Gray, vuggy, some fossils, chert nodules, iron stains, very broken, soft					SS	W	–	–	–	
114					10/10	SS	W	–	–	–	
	Casing set at 115.0ft										
116											
118											
36											
120											

Clayton GROUP SERVICES

BORING NO: RW-1	WELL NO: RW-1	PROJECT NO: 15-65263.03-001	PROJECT NAME: Lockformer

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	SAMPLES RECOVERY	SAMPLES METHOD	SAMPLES MOISTURE	SAMPLES BLOW CNT (6")	PID SCAN	PID HEADSPACE	REMARKS
122											
124											
38						SS	W	22 min for 20ft	--	--	RQD=0%
126											
128											
130											
40											
132											
134											
	Medium hardness, >4" cores from 135.0 to 144.0ft										
136											
42											
138											
140											

Clayton GROUP SERVICES

BORING NO: RW-1	WELL NO: RW-1	PROJECT NO: 15-65263.03-001	PROJECT NAME: Lockformer

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	SAMPLES RECOVERY	SAMPLES METHOD	SAMPLES MOISTURE	SAMPLES BLOW CNT (6")	PID SCAN	PID HEADSPACE	REMARKS
142											
144	Soft, very broken from 144.0 to 155.0ft										
44						SS	W	25 min for 20ft	--	--	RQD=29%
146											
148											
150											
46											
152											
154											
	Medium hardness, slightly broken from 155.0 to 165.0ft										
156											
48											
158											
160						SS	W	13 min for 10ft	--	--	RQD=1%

Boring/Well No.: RW-1

Clayton GROUP SERVICES

BORING NO: RW-1	WELL NO: RW-1	PROJECT NO: 15-65263.03-001	PROJECT NAME: Lockformer

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	SAMPLES RECOVERY	SAMPLES METHOD	SAMPLES MOISTURE	SAMPLES BLOW CNT (6")	PID SCAN	PID HEADSPACE	REMARKS
162											
164 — 50											
	End of Corehole at 165.0Ft										
166											
168											
170 — 52											
172											
174											
176 — 54											
178											
180											

Thursday Oct. 17

0708 J. Campbell, D. Lamsma, + B. Elwell onsite at Lockformer.
Boart Longyear onsite
D. Broux onsite
obj: set bedrock wells on Inverness Rd
weather: overcast, high 48°
PPE: Level D
Personnel: J. Campbell + D. Lamsma (Clayton)
D. Broux (Parsons) D. McGowan (Parsons)
J. Drebek, R. Brown, A. Rodriguez, J. Wenke
J. Fuso, J. Kautz (Boart Longyear)

0720 H+S meeting at Lockformer
0756 Offsite Lockformer to go to residential area
0816 Setting up on RW-1 in front of 560 Inverness Road
834 Calibrating PID # Hazco 13274 w/ Isobutylene
840 Picture #110: Rig set up in front of 560 Inverness Rd at RW-1
911 Started RW-1 w/ Rotasonic Rig
1134 Tried to take water sample at 35', but bailer came back dry
1149 Hit wet gravel / sand seam. Took sample GW1/38-41
1345 Hit wet clayey gravel at 75'. Going to purge 50gal of water from when the casing was set. No water has been used during sampling. 150gal used w/ casing.
1400 Started pumping water from RW-1.
1406 Picture #107: pumping RW1/70-75 w/ grundfos
1446 Stopped grundfos pump. Removed 160 gal.
1450 Sampled GW1/73-75 using disposable bailer.
1502 Pushing casing down to 75'

MEJ 016885

Monday, Oct. 21

1200 J. Campbell onsite
obj: bedrock core RW-1
weather: p cloudy, high 55°
PPE: Level D
Personnel: J. Campbell (Clifton)
D. Groux (Parsons)
J. Drebek, Robert, + John (Boart)
1235 Onsite ~~at~~ at RW-1 on Inverness Rd
- D. Groux onsite
- Setting up on RW-1 to bedrock core
1315 Began coring RW-1 / R-1 (115-135)
1337 Finished coring RW-1 / R-1
- used 220gal and recovered 200gal
1356 Began coring RW-1 / R-2 (135-155)
1421 Finished coring RW-1 / R-2
- used 350gal and recovered 0gal
1445 Started coring RW-1 / R-3 (155-165)
1458 Finished coring RW-1 / R-3
- used 300gal and recovered 0gal
1528 Lowering pump down the well
1548 DTW at RW-1 = 98'
Per B. Elwell: .87 gal/ft for 4 5/8" corehole = ~~26.46gal~~ 43.5gal x 3 = 130.5
1.47 gal/ft for 6" casing = 26.46gal
1.5 x what was lost (1.5x670) = 1005
total = 1162 gal
1550 Started grundfos pump
1755 Removed 1200gal from RW1. Going to collect sample GW1/115 from the 50ft of corehole
1828 Offsite Inverness Rd
1833 Onsite Loeleffler. Unloading pump + getting water
J. Campbell offsite

Clayton GROUP SERVICES

BORING NO: RW2	WELL NO: RW2	PROJECT NO: 15-65263.03-001	PROJECT NAME: Lockformer Lisle, IL
BORING LOCATION: Inverness Rd.		COORDINATES:	
DRILLING CO: Boart-Longyear	DRILLER: J. Weeks/R. Buckenburger	LOGGED BY: D. Lamsma	
DRILLING EQUIP: Rotasonic	SCREEN INTERVAL:	CHECKED BY:	
STATIC WATER LEVEL:	SCREEN MTL/SLOT:	START DATE: 10/17/2002	
BOREHOLE DIA: 8"	STICKUP:	START TIME (hours): 0929	
TOP of CASING ELEVATION:	G.S. ELEVATION:	FINISH DATE: 10/21/2002	
RISER DIA/MTL/LGTH:	DEV. METHODS:	FINISH TIME (hours): 1445	

DEPTH (ft / m)	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	RECOVERY	METHOD	MOISTURE	BLOW CNT (6")	PID SCAN	HEADSPACE	REMARKS
0 / 0	**FILL** Gravel, gray, moist										
2	**SILTY CLAY (CL)** Brown, moist, some fine to coarse sand, cohesive Gray mottle from 2.0 to 3.0 feet Grades soft from 3.0 to 4.0 feet				5/5	SS	M				
4	Grades soft from 5.0 to 9.0 feet Some fine gravel from 5.0 to 36.0feet										
6 / 2					5/5	SS	M				
8	Grades stiff from 9.0 to 10.0 feet										
10	Grades gray at 10.0 feet										
12 / 4					5/5	SS	M				
14											
16	More fine to medium sand from 17.0 to 19.0 feet				5/5	SS	M				
18	More fine gravel from 19.0 to 20.0 feet										
20 / 6											

Clayton GROUP SERVICES

BORING NO: RW2	WELL NO: RW2	PROJECT NO: 15-65263.03-001	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	RECOVERY	METHOD	MOISTURE	BLOW CNT (6")	PID SCAN	HEADSPACE	REMARKS
22	More sand and gravel, very moist from 22.0 to 24.0 feet				5/5	SS	M/VM				
24											
26					5/5	SS	M				
8											
28											
30					5/5	SS	M				
32											
10											
34											
36	**SAND AND GRAVEL (GW)** Gray, very moist, fine to coarse sand and fine gravel, some silt and clay, slightly rounded gravel				5/5	SS	VM/M				
38	**SILTY CLAY (CL)** *Gray, moist, some medium to* coarse sand, stiff, cohesive										
12											
40											

Clayton GROUP SERVICES

BORING NO: RW2	WELL NO: RW2	PROJECT NO: 15-65263.03-001	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	RECOVERY	METHOD	MOISTURE	BLOW CNT (6")	PID SCAN	HEADSPACE	REMARKS
	SAND (SP) Gray, moist, fine to coarse grained, some silt Some coarse sand from 41.5 to 42.0 feet										
42	**SILTY CLAY (CL)** Gray, moist, some medium to coarse sand, stiff, cohesive				5/5	SS	M				
44											
46 — 14											
	6" cobble at 47.5 feet				2.5/5	SS	M				
48											
50											
52 — 16					2/5	SS	M				
54											
56	Some fine to coarse gravel from 57.0 to 59.0 feet				5/5	SS	M				
58 — 18											
60											

Boring/Well No.: RW2

Clayton GROUP SERVICES

BORING NO: RW2	WELL NO: RW2	PROJECT NO: 15-65263.03-001	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	RECOVERY	METHOD	MOISTURE	BLOW CNT (6")	PID SCAN	HEADSPACE	REMARKS
62, 64	**CLAY (CL)** Gray, moist, some silt and fine sand, soft, cohesive					SS	M				
20, 66, 68, 70	Trace medium sand from 65.0 to 70.0 feet				10/10	SS	M				
22, 72, 74	**SILTY CLAY (CL)** Gray, moist, with fine to coarse sand and fine to coarse gravel, cohesive				5/5	SS	M				
76, 78, 24	**SAND (SP)** Brown, moist, fine to medium grained, trace silt Some fine gravel from 77.0 to 79.0 feet				4/4	SS	M				
80	**NO RECOVERY**										

Clayton GROUP SERVICES

BORING NO: RW2	WELL NO: RW2	PROJECT NO: 15-65263.03-001	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	RECOVERY	METHOD	MOISTURE	BLOW CNT (6")	PID SCAN	HEADSPACE	REMARKS
82					0/6	SS	–				
84											
26											
86											
88						SS	–				
90											
92					0/10	SS	–				
28											
94											
96	**SILTY SAND (SM)** Gray, wet, fine sand, cohesive Some medium to coarse sand and fine gravel from 96.0 to 99.0 feet					SS	W				
98											
30											
100											

Clayton GROUP SERVICES

BORING NO: RW2	WELL NO: RW2	PROJECT NO: 15-65263.03-001	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	RECOVERY	METHOD	MOISTURE	BLOW CNT (6")	PID SCAN	HEADSPACE	REMARKS
102					9/10	SS	W				
104											
32											
106											
	WEATHERED BEDROCK Tan, angular fragments				4/4	SS	W				
108											
110	**DOLOMITE** Gray, vugs, numerous chert nodules and fossils										
34											
112					4/6	SS	W				
114											
116											
118											
36											
120					3.2/10	SS	–	10 min for 10 ft			RQD = 0%

Clayton GROUP SERVICES

BORING NO: RW2	WELL NO: RW2	PROJECT NO: 15-65263.03-001	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	SAMPLES RECOVERY	SAMPLES METHOD	SAMPLES MOISTURE	SAMPLES BLOW CNT (6")	PID SCAN	PID HEADSPACE	REMARKS
122											
124											
38	Very broken from 125.0 to 130.0 feet										
126											
128											
130					2/10	SS	–	10 min for 10 ft			RQD = 4%
40											
132											
134											
	Very broken from 135.0 to 139.0 feet										
136											
	Bedding plane at 136.7 feet Iron stains from 137.5 to 138.0 feet										
42	Bedding plane at 137.9 feet Bedding plane at 138.1 feet										
138											
	Per driller–large void with sand on botton from 139.0 to 142.0 feet										
140					3.3/10	SS	–	7 min for 10			RQD = 2%

Clayton GROUP SERVICES

BORING NO: RW2	WELL NO: RW2	PROJECT NO: 15-65263.03-001	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	SAMPLES RECOVERY	SAMPLES METHOD	SAMPLES MOISTURE	SAMPLES BLOW CNT (6")	PID SCAN	PID HEADSPACE	REMARKS
142											
144											
44											
146											
148											
	Chert nodule at 149.4 feet										
150											
46											
152											
154											
					8.9/20	SS	–	14 min for 20 ft			RQD = 18%
156											
48											
158											
160											

Clayton GROUP SERVICES

BORING NO: RW2	WELL NO: RW2	PROJECT NO: 15-65263.03-001	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	SAMPLES RECOVERY	SAMPLES METHOD	SAMPLES MOISTURE	SAMPLES BLOW CNT (6")	PID SCAN	PID HEADSPACE	REMARKS
162											
164 — 50											
166	End of Boring at 165.0 Feet										
168											
170 — 52											
172											
174											
176 — 54											
178											
180											

10/17/02

0700 D. Lemsma on-site
obj: drill in residential area south of Lockfarmer
weather: chance rain/snow, high 40-45°F
PPE: Level D

0715 conduct Health and Safety Meeting
0800 Arrive at 583/589 Inverness and set up to drill RW-2
0825 per B. Elwell, okay to move location of RW2 a few feet in order to stay off private property owned by 589 Inverness
0929 Begin drilling at RW2
1044 collect GW sample GW2/20-25 for VOCs
1140 Begin setting 8" casing to depth of 35 ft - open hole drill below that depth
1600 Begin setting 8" casing to depth of 75 ft - open hole drill below that depth
1700 stop drilling for today at ~~85 ft~~ 84 ft; continue in morning
1720 B-L begin loading drums onto water truck and cleaning up drilling area
1725 D. McGowen off-site
1800 B-L and D. Lemsma off-site

Page 2
10/17/02

10/25/02

0730 D. Lemsma on-site; B-L already present
obj: core bedrock at RW-2
weather: showers, high 45-50°F
PPE: Level D

0750 conduct Health and Safety Meeting
0800 Arrive on Inverness Rd to core bedrock
at RW-2
0814 D. McGowen on-site
0836 Begin coring at RW-2
1025 complete coring RW-2 to depth of 165 ft
-use total of 560 gallons of water
during coring
1050 Begin pumping at RW-2 to collect GW sample
for VOCs
1.5 x water lost during coring = (1.5)(560) = 840
3 corehole volumes = (0.87)(50) = 43.5
1 casing volume = (1.47)(14) = 21
904.5 gallons
1230 remove 940 gallons of water from RW-2
and collect GW sample for VOCs: GW2/115
1233 B-L begin removing pump from corehole and
cleaning up area around RW-2
1235 D. McGowen off-site
1310 off-site at Inverness Rd
1318 Arrive at Lockformer, B-L cleaning
drilling materials
1410 D. Lemsma and B-L off-site

10/25/02

MEJ 016897

Clayton GROUP SERVICES

BORING NO: RW3	WELL NO: RW3	PROJECT NO: 15-65263.03	PROJECT NAME: Lockformer Lisle, IL
BORING LOCATION: Inverness Rd.		COORDINATES:	
DRILLING CO: Boart-Longyear	DRILLER: J. Weeks	LOGGED BY: J. Campbell	
DRILLING EQUIP: Rotasonic	SCREEN INTERVAL:	CHECKED BY:	
STATIC WATER LEVEL:	SCREEN MTL/SLOT:	START DATE: 10/22/2002	
BOREHOLE DIA: 8"	STICKUP:	START TIME (hours):	
TOP of CASING ELEVATION:	G.S. ELEVATION:	FINISH DATE:	
RISER DIA/MTL/LGTH:	DEV. METHODS:	FINISH TIME (hours):	

DEPTH (ft / m)	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	RECOVERY	METHOD	MOISTURE	BLOW CNT (6")	PID SCAN	HEADSPACE	REMARKS
0 / 0	**TOPSOIL** Dark brown, moist, organic										
2	**SILTY CLAY (CL)** Brown, gray mottle, moist, some fine gravel, stiff, cohesive, medium plasticity				4/5	SS	M				
4											
6 / 2	Grades soft at 5.5 feet				5/5	SS	M				
8	Grades gray, brown mottle, stiff at 9.0 feet										
10	Low plasticity at 10.0 feet				5/5	SS	M				
12 / 4											
14											
16	Medium plasticity at 16.0 feet					SS	M				
18											
20 / 6	Some coarse sand at 19.0 feet										

Boring/Well No.: RW3

Clayton GROUP SERVICES

BORING NO: RW3	WELL NO: RW3	PROJECT NO: 15-65263.03	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	RECOVERY	METHOD	MOISTURE	BLOW CNT (6")	PID SCAN	HEADSPACE	REMARKS
22					10/10	SS	M				
24											
26 (8)						SS	M				
28											
30											
32 (10)					10/10	SS	M				
34											
36						SS	M				
38	CLAYEY GRAVEL (GC) Gray, moist, fine to coarse gravel.										
40 (12)											

Clayton GROUP SERVICES

BORING NO: RW3	WELL NO: RW3	PROJECT NO: 15-65263.03	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	RECOVERY	METHOD	MOISTURE	BLOW CNT (6")	PID SCAN	HEADSPACE	REMARKS
	SILTY CLAY (CL) Gray, moist, some fine to coarse gravel, stiff, cohesive, medium plasticity										
42	**CLAYEY SAND (SC)** Gray, very moist, fine to coarse sand, trace fine gravel, some silt, soft, medium plasticity				10/10	SS	M/VM				
44	**SILTY CLAY (CL)** Gray, moist, some fine to coarse gravel, stiff, cohesive, medium plasticity										
46 14											
48						SS	M				
50	Very moist, high plasticity from 50.0 to 52.0 feet										
52 16					10/10	SS	VM/M				
54											
56											
58						SS				M	
18											
60											

Clayton GROUP SERVICES

BORING NO: RW3	WELL NO: RW3	PROJECT NO: 15-65263.03	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	SAMPLES RECOVERY	SAMPLES METHOD	SAMPLES MOISTURE	SAMPLES BLOW CNT (6")	PID SCAN	PID HEADSPACE	REMARKS
	CLAYEY GRAVEL (GC) Gray, very moist, fine to coarse sand, fine to coarse gravel, some silt, soft, cohesive, medium plasticity										
62	**SILTY CLAY (CL)** Gray, moist, some fine gravel, stiff, cohesive, medium plasticity				10/10	SS	VM/M				
64											
20											
66											
68						SS	M				
70	**CLAYEY SAND (SC)** Gray, very moist, medium sand, well sorted, some fine to coarse gravel, soft, cohesive, medium plasticity										
72	**SILTY CLAY (CL)** Gray, moist, some fine to coarse gravel, stiff, cohesive, medium plasticity				10/10	SS	VM/M				
22											
74											
76											
78						SS	M/VM				
24											
80											

Clayton GROUP SERVICES

BORING NO: RW3	WELL NO: RW3	PROJECT NO: 15-65263.03	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	SAMPLES RECOVERY	SAMPLES METHOD	SAMPLES MOISTURE	SAMPLES BLOW CNT (6")	PID SCAN	PID HEADSPACE	REMARKS
	CLAYEY SAND (SC) Gray, very moist, fine to coarse sand, some fine to coarse gravel, soft, cohesive, low plasticity										
82	**SILTY CLAY (CL)** Gray, moist, some fine to coarse gravel, stiff, cohesive, low plasticity				10/10	SS	M				
84											
26											
86	**CLAYEY GRAVEL (GC)** Gray, very moist, fine to coarse sand, fine to coarse gravel, cobbles, soft, very poorly sorted, cohesive, low plasticity					SS	VM				
88											
90											
92	28				10/10	SS	VM				
94											
96						SS	VM				
98	30										
100											

Boring/Well No.: RW3

MEJ 016902

Clayton GROUP SERVICES

BORING NO: RW3	WELL NO: RW3	PROJECT NO: 15-65263.03	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	RECOVERY	METHOD	MOISTURE	BLOW CNT (6")	PID SCAN	HEADSPACE	REMARKS
102, 104, 32, 106	**SILTY GRAVEL (GM)** Gray, very moist, fine to coarse sand, fine to coarse gravel, cobbles, very poorly sorted, loose, trace clay				7/10	SS	VM				
108, 110	**SAND (SP)** Gray, moist, fine grained, very well sorted, cohesive					SS	M				
34, 112	**WEATHERED BEDROCK** Light brown, wet, fine to coarse gravel, cobbles, angular fragments, some silt				10/10	SS	W				
114, 116, 118, 36, 120	**DOLOMITE** Very broken, chert nodules from 115.0 to 120.0 feet. Iron stains, mineral crystals from 115.0 to 135.0 feet										

Clayton GROUP SERVICES

BORING NO: RW3	WELL NO: RW3	PROJECT NO: 15-65263.03	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	SAMPLES RECOVERY	SAMPLES METHOD	SAMPLES MOISTURE	SAMPLES BLOW CNT (6")	PID SCAN	PID HEADSPACE	REMARKS
122											
124											
38					5/20	SS	W	22 min for 20 ft			RQD = 0%
126											
128											
130											
40											
132											
134											
	Very broken, iron stains, mineral crystals from 135.0 to 140.0 feet										
136											
42											
138											
140											

Clayton GROUP SERVICES

BORING NO: RW3	WELL NO: RW3	PROJECT NO: 15-65263.03	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	SAMPLES RECOVERY	SAMPLES METHOD	SAMPLES MOISTURE	SAMPLES BLOW CNT (6")	PID SCAN	PID HEADSPACE	REMARKS
	Mineral crystals at 140.5 feet Iron stains from 141.0 to 141.3 feet										
142	Bedding plane, iron stains at 142.0 feet Chert nodules from 142.9 to 143.2 feet										
144											
44					8.2/20	SS	W	26 min for 20 ft			RQD = 2%
146											
148											
150											
46											
152											
154											
	Chert nodule at 155.0 feet										
156											
48											
158											
160											

MEJ 016905

Clayton GROUP SERVICES

BORING NO: RW3	WELL NO: RW3	PROJECT NO: 15-65263.03	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	SAMPLES RECOVERY	SAMPLES METHOD	SAMPLES MOISTURE	SAMPLES BLOW CNT (6")	PID SCAN	PID HEADSPACE	REMARKS
162					9.5/12	SS	W	11 min fot 12 ft			RQD = 9%
164 50	More vugs from 165.0 to 167.0 feet										
166											
168	End of Boring at 167.0 Feet										
170 52											
172											
174											
176											
178 54											
180											

10/29/02

0735 D. Lensma on-site; B-L already present
obj: core bedrock at wells on Inverness Rd
weather: showers, high 40-45°F
PPE: Level D

0805 Conduct Health and Safety Meeting
0817 Arrive on Inverness Rd
0901 Begin coring at RW3
1036 complete coring at RW3 to depth of 167 ft
1111 Begin pumping at RW3 to collect GW sample for VOCs
1.5x water lost during coring = (1.5)(800) = 1200
3 corehole volumes = (0.87)(50)(3) = 130.5
1 casing volume = (1.47)(14) = 21
1351.5

1323 remove 1375 gallons of water and collect 2 40ml vials for VOCs: GW3/115
1325 B-L cleaning up around RW3; per J. Weeks: have enough drill rod and core barrels to continue without decon
1415 B-L setting up to core bedrock at RW5
1440 begin coring at RW5
1700 stop coring for today at 145 ft BGS
- rock is of poor quality and most does not stay in core barrel
1712 off-site at Inverness Rd
1720 on-site at Lockformer; B-L unloading supplies
1735 B-L and D. Lensma off-site

Clayton GROUP SERVICES

BORING NO: RW4	WELL NO: RW4	PROJECT NO: 15-65263.03-001	PROJECT NAME: Lockformer Lisle, IL
BORING LOCATION: Inverness Rd.		COORDINATES:	

DRILLING CO: Boart-Longyear	DRILLER: R. Buckenburger	LOGGED BY: D. Lamsma
DRILLING EQUIP: Rotasonic	SCREEN INTERVAL:	CHECKED BY:
STATIC WATER LEVEL:	SCREEN MTL/SLOT:	START DATE: 10/22/2002
BOREHOLE DIA: 8"	STICKUP:	START TIME (hours): 0914
TOP of CASING ELEVATION:	G.S. ELEVATION:	FINISH DATE: 10/23/2002
RISER DIA/MTL/LGTH:	DEV. METHODS: Grundfos	FINISH TIME (hours): 1050

DEPTH (ft / m)	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	RECOVERY	METHOD	MOISTURE	BLOW CNT (6")	PID SCAN	HEADSPACE	REMARKS
0 / 0	**FILL** Gravel, gray, moist Some silty clay, brown, moist at 0.3 feet										
2	**SILTY CLAY (CL)** Brown, moist, some fine sand, cohesive, soft				5/5	SS	M				
4	Grades gray, some medium to coarse sand, stiff at 3.0 feet										
	Some fine gravel from 5.0 to 30.0 feet										
6 / 2						SS	M				
8											
10											
12 / 4					8/10	SS	M				
14											
16											
18						SS	M				
20 / 6											

Boring/Well No.: RW4

Clayton GROUP SERVICES

BORING NO: RW4	WELL NO: RW4	PROJECT NO: 15-65263.03-001	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	RECOVERY	METHOD	MOISTURE	BLOW CNT (6")	PID SCAN	HEADSPACE	REMARKS
22					6/8	SS	M				
24											
26					7/7	SS	M				
8											
28											
30											
32						SS	M				
10											
34											
36					10/10	SS	M				
38											
12											
40	Trace fine gravel from 40.0 to										

MEJ 016909

Clayton GROUP SERVICES

BORING NO: RW4	WELL NO: RW4	PROJECT NO: 15-65263.03-001	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	SAMPLES RECOVERY	SAMPLES METHOD	SAMPLES MOISTURE	SAMPLES BLOW CNT (6")	PID SCAN	PID HEADSPACE	REMARKS
42	Trace coarse gravel from 43.0 to 45.0 feet				5/5	SS	M				
44											
46 14											
48						SS	M				
50											
52 16	More sand and gravel from 52.5 to 54.5 feet				9/10	SS	M				
54											
56	**SAND (SP)** Gray, moist, fine to medium grained, trace coarse sand, some fine gravel										
58 18	**SILTY CLAY (CL)** Gray, moist, some medium to coarse sand, trace fine gravel, stiff, cohesive					SS	M				
60											

Clayton GROUP SERVICES

BORING NO: RW4	WELL NO: RW4	PROJECT NO: 15-65263.03-001	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	SAMPLES RECOVERY	SAMPLES METHOD	SAMPLES MOISTURE	SAMPLES BLOW CNT (6")	PID SCAN	PID HEADSPACE	REMARKS
62					10/10	SS	M				
64											
20 66											
68						SS	M				
70											
72 22					10/10	SS	M				
74											
76	Some fine gravel from 75.0 to 85.0 feet										
78						SS	M				
24 80											

Clayton GROUP SERVICES

BORING NO: RW4	WELL NO: RW4	PROJECT NO: 15-65263.03-001	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	RECOVERY	METHOD	MOISTURE	BLOW CNT (6")	PID SCAN	HEADSPACE	REMARKS
82					10/10	SS	M				
84											
26											
86											
88						SS	M				
90											
92	**SILTY SAND (SM)** Gray, moist, fine to coarse sand, some clay, slightly cohesive				10/10	SS	M				
28											
94	**SAND (SP)** Gray, moist, fine to medium grained										
	NO RECOVERY										
96											
98						SS	–				
30											
100											

Clayton GROUP SERVICES

BORING NO: RW4	WELL NO: RW4	PROJECT NO: 15-65263.03-001	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	RECOVERY	METHOD	MOISTURE	BLOW CNT (6")	PID SCAN	HEADSPACE	REMARKS
102					0/10	SS	–				
104											
32	**WEATHERED BEDROCK** Tan, angular fragments										
106											
108						SS	W				
110											
34											
112	**DOLOMITE** Gray, vugs, chert nodules				4/10	SS	W				
114											
116	Fossils, pyrite nodules from 116.1 to 116.3 feet Bedding planes from 116.6 to 117.3 feet Iron stains from 117.3 to 117.6 feet										
118	36										
120	Bedding plane at 120.0 feet				5.8/10	SS	W	11 min for 10 in			RQD = 18%

Clayton GROUP SERVICES

BORING NO: RW4	WELL NO: RW4	PROJECT NO: 15-65263.03-001	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	SAMPLES RECOVERY	SAMPLES METHOD	SAMPLES MOISTURE	SAMPLES BLOW CNT (6")	PID SCAN	PID HEADSPACE	REMARKS
122											
124											
38											
126											
128	Horizontal fracture at 128.5 feet										
	Bedding plane at 129.5 feet										
130	Horizontal fracture at 130.1 feet Iron stains from 130.1 to 130.2 feet										
40	Chert nodule at 131.6 feet										
132	Horizontal fracture, chert nodule at 131.85 feet										
134					11.3/20	SS	W	24 min for 20 ft			RQD = 39%
136	Chert nodule at 136.2 feet										
42											
138											
140											

Clayton GROUP SERVICES

BORING NO: RW4	WELL NO: RW4	PROJECT NO: 15-65263.03-001	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	RECOVERY	METHOD	MOISTURE	BLOW CNT (6")	PID SCAN	HEADSPACE	REMARKS
142											
144											
44											
146	Iron stains from 146.0 to 146.1 feet										
148					4.6/6	SS	W	11 min for 6 ft			RQD = 34%
	Chert nodules from 149.0 to 149.6 feet										
150											
46	Numerous bedding planes from 151.0 to 152.9 feet										
152											
154											
	Mineral crystals from 154.5 to 156.0 feet										
156											
	Vertical fracture from 157.0 to 157.5 feet										
48											
158					9.7/14	SS	W	10 min for 14 ft			RQD = 18%
	More vugs from 159.0 to 160.65 feet										
160											

Clayton GROUP SERVICES

BORING NO: RW4	WELL NO: RW4	PROJECT NO: 15-65263.03-001	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	SAMPLES RECOVERY	SAMPLES METHOD	SAMPLES MOISTURE	SAMPLES BLOW CNT (6")	PID SCAN	PID HEADSPACE	REMARKS
162											
164 50											
166	End of Boring at 165.0 Feet										
168											
170 52											
172											
174											
176 54											
178											
180											

1125 D. Lemsma on-site
job: core bedrock at RW4
weather: cloudy, high near 45°F
PPE: Level D

1130 conduct Health and Safety Meeting
1133 B-L off-loading/loading drilling materials
1203 Arrive on Inverness Rd and set-up to core bedrock at RW4
1240 Begin coring at RW4
1442 complete coring RW4 to depth of 165 ft
1541 Begin pumping at RW4 to collect sample for VOC,

1.5 x water lost during coring	= (1.5)(450)	= 675.0
3 corehole volumes	= (0.87)(50)	= 43.5
1 casing volume	= (1.47)(14)	= 21.0
		742.5 gallons

1735 purge 750 gallons of water and collect GW4/115 for VOCs
1738 D. McGowan off-site
1755 complete securing RW4; off-site at Inverness Rd
1804 Arrive at Lockformer
1825 D. Lemsma off-site; B-L still present completing repairs on drill rig

Dan L.L.
10/28/02

Clayton
GROUP SERVICES

BORING NO: RW5	WELL NO: RW5	PROJECT NO: 15-65263.03	PROJECT NAME: Lockformer Lisle, IL
BORING LOCATION: Inverness Rd.		COORDINATES:	
DRILLING CO: Boart-Longyear	DRILLER: J. Drabek	LOGGED BY: J. Campbell	
DRILLING EQUIP: Rotasonic	SCREEN INTERVAL:	CHECKED BY:	
STATIC WATER LEVEL:	SCREEN MTL/SLOT:	START DATE: 10/23/2002	
BOREHOLE DIA: 8"	STICKUP:	START TIME (hours):	
TOP of CASING ELEVATION:	G.S. ELEVATION:	FINISH DATE:	
RISER DIA/MTL/LGTH:	DEV. METHODS:	FINISH TIME (hours):	

DEPTH (ft / m)	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	RECOVERY	METHOD	MOISTURE	BLOW CNT (6")	PID SCAN	HEADSPACE	REMARKS
0 / 0	**TOPSOIL** Dark brown, moist, organics										
2	**SILTY CLAY (CL)** Brown, moist, trace fine gravel, stiff, cohesive, medium plasticity				5/5	SS	M				
4											
6 / 2	Gray mottles at 7.0 feet				5/5	SS	M				
8	Grades gray at 8.0 feet										
10											
12					5/5	SS	M				
4 / 14	Some fine to coarse gravel, cobbles at 13.0 feet										
16											
18						SS	M				
6 / 20											

Clayton GROUP SERVICES

BORING NO: RW5	WELL NO: RW5	PROJECT NO: 15-65263.03	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	RECOVERY	METHOD	MOISTURE	BLOW CNT (6")	PID SCAN	HEADSPACE	REMARKS
22					10/10	SS	M				
24											
26	8										
28						SS	M				
30											
32	10				10/10	SS	M				
34											
36											
38						SS	M				
40	12										

Clayton GROUP SERVICES

BORING NO: RW5	WELL NO: RW5	PROJECT NO: 15-65263.03	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	SAMPLES RECOVERY	SAMPLES METHOD	SAMPLES MOISTURE	SAMPLES BLOW CNT (6")	PID SCAN	PID HEADSPACE	REMARKS
42					10/10	SS	M				
	SILT (ML) Gray, moist, stiff, cohesive, medium plasticity										
44	**SILTY CLAY (CL)** Gray, moist, some fine to coarse gravel and cobbles, stiff, *cohesive, medium plasticity*										
46 – 14						SS	M				
48											
50											
52 – 16					10/10	SS	M				
54											
56											
58 – 18						SS	M				
60	6" cobble at 60.0 feet										

Boring/Well No.: RW5

Clayton GROUP SERVICES

BORING NO: RW5	WELL NO: RW5	PROJECT NO: 15-65263.03	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	SAMPLES RECOVERY	SAMPLES METHOD	SAMPLES MOISTURE	SAMPLES BLOW CNT (6")	PID SCAN	PID HEADSPACE	REMARKS
62					10/10	SS				M	
64											
20 66											
						SS	M				
68											
70											
72 22					10/10	SS	M				
74											
76											
						SS	M				
78											
24 80											

Clayton GROUP SERVICES

BORING NO: RW5	WELL NO: RW5	PROJECT NO: 15-65263.03	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	RECOVERY	METHOD	MOISTURE	BLOW CNT (6")	PID SCAN	HEADSPACE	REMARKS
82					10/10	SS	M				
84											
26	**SILTY SAND (SM)** Gray, moist, fine grained sand, very well sorted, cohesive, soft, medium plasticity										
86											
88						SS	M				
90	**SAND (SP)** Brown, moist, fine to medium grained, some coarse, fine gravel and cobbles, poorly sorted, soft										
92	28				8/10	SS	M				
94											
96											
98	Grades gray, coarse grained, trace silt at 97.0 feet					SS	M				
100	30										

Clayton GROUP SERVICES

BORING NO: RW5	WELL NO: RW5	PROJECT NO: 15-65263.03	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	RECOVERY	METHOD	MOISTURE	BLOW CNT (6")	PID SCAN	HEADSPACE	REMARKS
102, 104					6/10	SS	M/W				
32											
106	**WEATHERED BEDROCK**										
						SS	W				
108	**DOLOMITE** Gray, vugs										
110					6/6	SS	W				
	Very broken from 111.0 to 165.0 feet										
34, 112	Occasional voids of 6-12" from 111.0 to 135.0 feet										
114, 116, 118											
36, 120											

Boring/Well No.: RW5

Clayton GROUP SERVICES

BORING NO: RW5	WELL NO: RW5	PROJECT NO: 15-65263.03	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	SAMPLES RECOVERY	SAMPLES METHOD	SAMPLES MOISTURE	SAMPLES BLOW CNT (6")	PID SCAN	PID HEADSPACE	REMARKS
122					5/24	SS	W	34 min for 24 ft			RQD = 0%
124											
38											
126											
128											
130											
40											
132											
134											
	Numerous voids from 135.0 to 165.0 feet										
136											
42											
138											
140											

Clayton
GROUP SERVICES

BORING NO: RW5	WELL NO: RW5	PROJECT NO: 15-65263.03	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	SAMPLES RECOVERY	SAMPLES METHOD	SAMPLES MOISTURE	SAMPLES BLOW CNT (6")	PID SCAN	PID HEADSPACE	REMARKS
142											
144											
44											
146											
148											
150					6.2/30	SS	W	73 min for 30 ft			RQD = 7%
46											
152											
154											
156											
48											
158											
160											

Clayton GROUP SERVICES

BORING NO: RW5	WELL NO: RW5	PROJECT NO: 15-65263.03	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	SAMPLES RECOVERY	SAMPLES METHOD	SAMPLES MOISTURE	SAMPLES BLOW CNT (6")	PID SCAN	PID HEADSPACE	REMARKS
162											
164 50											
166	End of Boring at 165.0 Feet										
168											
170 52											
172											
174											
176											
178 54											
180											

10/29/02

0735 D. Lensma on-site; B-L already present
obj: core bedrock at wells on Inverness Rd
weather: showers, high 40-45°F
PPE: Level D

0805 Conduct Health and Safety Meeting
0817 Arrive on Inverness Rd
0901 Begin coring at RW3
1036 complete coring at RW3 to depth of 167 ft
1111 Begin pumping at RW3 to collect GW sample for VOCs
1.5 x water lost during coring = (1.5)(800) = 1200
3 corehole volumes = (0.87)(50)(3) = 130.5
1 casing volume = (1.47)(14) = 21
1351.5

1323 remove 1375 gallons of water and collect 2 40 ml vials for VOCs: GW3/115
1325 B-L cleaning up around RW3; per J. Weeks: have enough drill rod and core barrels to continue without decon
1415 B-L setting up to core bedrock at RW5
1440 begin coring at RW5
1700 stop coring for today at 145 ft BGS
rock is of poor quality and most does not stay in core barrel
1712 off-site at Inverness Rd
1720 on-site at Lockformer; B-L unloading supplies
1735 B-L and D. Lensma off-site

0735 D. Lansma on-site
obj: core bedrock on Front St and Inverness Rd
weather: cloudy, high 45-50°F
PPE: Level D

0745 conduct Health and Safety Meeting
0800 Arrive on Inverness Rd; D. McGovern on-site
0823 resume coring at RW5
0945 complete coring RW5 to depth of 165 ft
-used 2000 gallons of water and recovered 900 ~~500~~ DWL gallons
1020 Begin pumping at RW5 to collect GW sample
1.5 x lost during coring = 1.5(1100) = 1650
3 corehole volumes = (0.87)(50)(3) = 130.5
1 casing volume = (1.47)(20) = 30
1810.5 gallons

1405 collect 2 vials of GW for VOCs: GW5/110
-remove total of 1850 gallons of water prior to sampling
1410 B-L begin cleaning up area around RW5
1510 B-L setting up to core bedrock at MW1604D
1544 Begin coring at MW1604D
1705 complete coring at MW1604D to depth of 106 ft
1745 off-site at Front St
1749 Arrive at Lockformer; B-L putting anti-freeze in pumps
1840 B-L and D. Lansma off-site

[signature]
10/30/02

Clayton GROUP SERVICES

BORING NO: RW6	WELL NO: RW6	PROJECT NO: 15-65263.03	PROJECT NAME: Lockformer Lisle, IL
BORING LOCATION: Maple Ave.		COORDINATES:	
DRILLING CO: Boart-Longyear	DRILLER: J. Drabek		LOGGED BY: D. Lamsma
DRILLING EQUIP: Rotasonic	SCREEN INTERVAL:		CHECKED BY:
STATIC WATER LEVEL:	SCREEN MTL/SLOT:		START DATE: 11/1/2002
BOREHOLE DIA: 8"	STICKUP:		START TIME (hours): 0948
TOP of CASING ELEVATION:	G.S. ELEVATION:		FINISH DATE: 11/2/2002
RISER DIA/MTL/LGTH:	DEV. METHODS: Grundfos		FINISH TIME (hours): 0855

DEPTH (ft / m)	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	RECOVERY	METHOD	MOISTURE	BLOW CNT (6")	PID SCAN	HEADSPACE	REMARKS
0 / 0	**TOPSOIL** Silty clay, black, moist, some fine sand, roots										
2	**SILTY CLAY (CL)** Brown, gray mottle, moist, some medium sand, stiff, cohesive					SS	M				
4	Some coarse sand at 5.0 feet										
6 / 2	Grades gray at 7.0 feet					SS	M				
8											
10	Trace fine gravel at 10.0 feet										
12 / 4						SS	M				
14											
16						SS	M				
18											
20 / 6											

Boring/Well No.: RW6

MEJ 016929

Clayton GROUP SERVICES

BORING NO: RW6	WELL NO: RW6	PROJECT NO: 15-65263.03	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	SAMPLES RECOVERY	SAMPLES METHOD	SAMPLES MOISTURE	SAMPLES BLOW CNT (6")	PID SCAN	PID HEADSPACE	REMARKS
22						SS	M				
24											
26						SS	M				
8											
28											
30						SS	M				
32											
10											
34											
36						SS	M				
38											
12											
40											

Clayton GROUP SERVICES

BORING NO: RW6	WELL NO: RW6	PROJECT NO: 15-65263.03	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	RECOVERY	METHOD	MOISTURE	BLOW CNT (6")	PID SCAN	HEADSPACE	REMARKS
42						SS	M				
44											
46 – 14	**CLAYEY SILT (ML)** Gray, moist, some fine to coarse sand, trace fine gravel, cohesive					SS	M				
48											
50	**SILTY CLAY (CL)** Gray, moist, some fine to coarse sand, trace fine gravel, stiff, cohesive										
52 – 16						SS	M				
54											
56											
58 – 18						SS	M				
60											

Clayton GROUP SERVICES

BORING NO: RW6	WELL NO: RW6	PROJECT NO: 15-65263.03	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	RECOVERY	METHOD	MOISTURE	BLOW CNT (6")	PID SCAN	HEADSPACE	REMARKS
62						SS	M				
64											
20 66						SS				M	
68											
70											
72 22						SS	M				
74											
76	Some fine gravel at 77.0 feet					SS	M				
78 24											
80											

Clayton GROUP SERVICES

BORING NO: RW6	WELL NO: RW6	PROJECT NO: 15-65263.03	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	SAMPLES RECOVERY	SAMPLES METHOD	SAMPLES MOISTURE	SAMPLES BLOW CNT (6")	PID SCAN	PID HEADSPACE	REMARKS
82	More sand and gravel at 81.0 feet					SS	M				
84	**SAND (SP)** Gray, moist, fine grained, trace *coarse sand and fine gravel*										
26											
86											
88	**SILTY SAND (SM)** Gray, moist, fine to coarse sand, trace fine gravel, slightly cohesive					SS	M				
90											
92	28					SS	M				
94											
96	Grades wet at 95.0 feet										
98						SS	W				
30											
100											

MEJ 016933

Clayton
GROUP SERVICES

BORING NO: RW6	WELL NO: RW6	PROJECT NO: 15-65263.03	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	SAMPLES RECOVERY	SAMPLES METHOD	SAMPLES MOISTURE	SAMPLES BLOW CNT (6")	PID SCAN	PID HEADSPACE	REMARKS
	DOLOMITE Gray, vugs										
102						SS	W				
104											
32	NO RECOVERY from 105.0 to 115.0 feet										
106											
108											
110						SS	W	6 min for 10 ft			RQD = 0%
34											
112											
114											
	Very broken, occasional chert nodules from 115.0 to 155.0 feet										
116											
118	36										
120											

Clayton GROUP SERVICES

BORING NO: RW6	WELL NO: RW6	PROJECT NO: 15-65263.03	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	SAMPLES RECOVERY	SAMPLES METHOD	SAMPLES MOISTURE	SAMPLES BLOW CNT (6")	PID SCAN	PID HEADSPACE	REMARKS
122											
124											
38						SS	W	19 min for 20 ft			RQD = 0%
126											
128											
130											
40											
132											
134											
136											
138											
42											
140											

Clayton GROUP SERVICES

BORING NO: RW6	WELL NO: RW6	PROJECT NO: 15-65263.03	PROJECT NAME: Lockformer Lisle, IL

DEPTH	DESCRIPTION	GRAPHIC	WELL	SAMPLES NUMBER	SAMPLES RECOVERY	SAMPLES METHOD	SAMPLES MOISTURE	SAMPLES BLOW CNT (6")	PID SCAN	PID HEADSPACE	REMARKS
142											
144											
44						SS	W	21 min for 20 ft			RQD = 0%
146											
148											
150											
46											
152											
154											
156	End of Boring at 155.0 Feet										
48											
158											
160											

11/4/02

1015 complete development of MW1121D; B-L remove pump from well

1106 B-L setting up to core at ~~at~~ DHL RW6

1252 Begin coring bedrock at RW6

1430 complete coring RW6 to depth of 155ft

1457 Begin pumping at RW6

1.5 x water lost during coring = (1.5)(400) = 600

3 corehole volumes = (3)(0.87)(50) = 130.5

1 casing volume = 5(1.47) = 7.35

737.85

1515 unable to keep any water above pump since only 5 ft of water in casing; stop pumping

1520 B-L begin cleaning up area around RW6

1610 off-site at Maple Ave

1615 on-site at Lockformer; B-L begin decon of drill rig

1800 D. Lamstra and B-L off-site

[illegible]
11/4/02

Tuesday, Nov. 5 2002

0820 J. Campbell + D. Frickly onsite at Lockformer to oversee Northbrook Rail off wastewater
0945 J. Campbell + D. Frickly offsite Lockformer
1000 Onsite at RW-6 on Maple Ave.
obj: develop RW-6
weather: cloudy, raining, high 40°
PPE: Level D
Personnel: J. Campbell + D. Frickly (Clayton)
D. Grove (Parsons)
Setting up on RW-6
1025 Started grundfos pump to remove 725 gal from RW-6

Time	pH	cond	turb	DO	temp	TDS	ORP	Gal
1048	6.65	1.85	0	1.89	11.60	1.2	98	75
1110	7.08	1.82	0	3.27	11.58	1.2	49	175
1142	7.16	1.82	0	2.53	11.47	1.2	49	275
1152	7.19	1.81	0	1.97	11.67	1.2	53	375
1220	7.15	1.82	0	2.19	11.51	1.2	37	500
1240	7.20	1.82	0	2.22	11.79	1.2	38	575
1335	7.22	1.83	0	2.29	11.25	1.2	13	650
1350	7.22	1.83	0	2.88	11.39	1.2	32	725

Removed 725 gal total from RW-6
1355 Sampled GW6/105 for VOCs
- Cleaning up site
1410 J. Campbell + D. Frickly offsite Maple Ave.

MEJ 016938

11/8/02