Millsop Associates, Inc.

P.O. Box 236, Crosby, MN 56441
218-763-2907 • FAX: 218-763-2908
www.millsop.com

July 29, 2004

Ms. Sandra Kushman
Minnesota Pollution Control Agency
1800 College Drive
Baxter, Minnesota 56425

MAI Project No. M-04-29

RE: Submittal of Annual Monitoring Report for the former Wigwam Inn site near Onamia, Minnesota (MPCA Leaksite #12624)

Dear Ms. Kushman:

We have completed the above referenced report for the site and have recommended file closure. We appreciate your review of this matter. Please contact me if you have any questions.

Sincerely,

MILLSOP ASSOCIATES, INC.

Mark D. Millsop

Mark D. Millsop, P.G.
Principal Hydrogeologist

c: Mr. Ryan Rupp, Mille Lacs Band of Ojibwe

ANNUAL MONITORING REPORT
FORMER WIGWAM INN
ONAMIA, MINNESOTA

MAI PROJECT NO. M-04-29
JULY 29, 2004

Prepared For:

Mr. Ryan Rupp
Mille Lacs Band of Ojibwe
43408 Oodena Drive
Onamia, Minnesota 56359-9530

ANNUAL MONITORING REPORT
FORMER WIGWAM INN
ONAMIA, MINNESOTA

MAI PROJECT NO. M-04-29
JULY 29, 2004

Prepared For:

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July 29, 2004

Mr. Ryan Rupp
Mille Lacs Band of Ojibwe
43408 Oodena Drive
Onamia, Minnesota 56359-9530

MAI Project No. M-04-29

RE: Annual Monitoring Report for the former Wigwam Inn site near Onamia, Minnesota (MPCA Leaksite #12624)

Dear Mr. Rupp:

In accordance with your authorization of our proposal, we have completed our services for this project.

We appreciate this opportunity to be of service to you. If you have any questions, please call me at 218-763-2907.

Sincerely,

MILLSOP ASSOCIATES, INC.

Mark D. Millsop, P.G.
Principal Hydrogeologist

Leaking Petroleum Storage Tanks

Minnesota Pollution Control Agency

http://www.pca.state.mn.us/programs/lust_p.html

Annual Monitoring Report

Fact Sheet 3.26

After the Corrective Action Design (CAD) has been approved, update and submit this worksheet annually. If a remedial system has been installed, submit fact sheet 3.31 *CAD System Monitoring Worksheet* along with this worksheet.

Under certain circumstances Minnesota Pollution Control Agency (MPCA) staff may request submittal of the monitoring information on a quarterly schedule. This should be conducted according to fact sheet 3.25, *Quarterly Monitoring Report.*

MPCA Site ID: Leak000*12624*

Date: *07-29-04*

Responsible Party: *Mille Lacs Band of Ojibwe*

R.P. phone #: *320-532-7442*

Consultant: *Millsop Associates, Inc.*

Consultant phone #: *218-763-2907*

Facility Name: *Former Wigwam Inn*

Facility Address: *18271 460th Street*

City: *Garrison*

County: *Mille Lacs*

Zip Code: *56450*

Site location: The required coordinate scheme for reporting site location is Universal Transverse Mercator (UTM), Extended Zone 15, 1983 North American Datum (NAD83). Refer to **http://www.ot.state.mn.us/ot_files/handbook/standard/std17-1.html** for Minnesota spatial data standards, or **http://mac.usgs.gov/mac/isb/pubs/factsheets/fs15799.html** for more information about UTM Coordinates.

VAC's Former Buildings Location
11/1/04

X coordinate (Easting) $^{1504}38^{838}$ *E* meters 438806

Y coordinate (Northing) $^{51}17^{940}$ *N* meters 5118152

What feature does the coordinate represent? (i.e. center of parcel, approximate center of source area, etc. Please describe) *Center of parcel.*

What method was used to determine the coordinate? (i.e. GPS receiver, map interpolation, address matching, etc. Please describe) *Map interpolation.*

If a paper map, digital map, aerial photo or digital orthophotoquad was used to find the site location, please provide the scale of the map or photo (i.e. 1:24,000, etc.) *1:24,000*

Section 1. GROUND WATER MONITORING

Discuss the groundwater monitoring results, including water level measurements and analytical results, performed since the remedial investigation (RI) report or the last progress report submitted. Indicate whether samples were purged or unpurged (see fact sheet 3.23). If purged, indicate purging method.

On July 17, 2003, the MPCA wrote a letter requesting additional work at the site, as GME Consultants, Inc. had recommended in their March 25, 2003 RI report. The three existing monitoring wells at the site were to be sampled on a quarterly basis and an annual report was due by August 7, 2004.

We sampled monitoring wells MW-1, MW-2 and MW-3 on August 5 and November 13, 2003 and on April 6 and July 8, 2004. The attached tabulated water level measurements (Table 2) and groundwater flow maps (Figures 4, 5, 6 and 7) indicate that the estimated groundwater flow was reasonably consistent; the shallow groundwater generally flows to the southeast toward Mille Lacs Lake.

After groundwater levels were measured, the monitoring wells were sampled using disposable latex gloves and polyethylene bailers with nylon rope. New equipment was used for each well. The samples were collected after purging approximately 5 well volumes and they were labeled and preserved on ice in the field. They were shipped to a laboratory under chain-of-custody procedures.

The laboratory analysis for diesel range organics (DRO), gasoline range organics (GRO), benzene, toluene, ethylbenzene, and xylenes (BTEX), and methyl tertiary butyl ether (MTBE) indicated only low, intermittent detections of DRO in the samples from wells MW-2 and MW-3 (Table 3). There were relatively low detections of ethylbenzene, xylenes and MTBE in the samples collected from well MW-1. None of the detections exceeded Minnesota Department of Health (MDH) Health Risk Limits (HRLs). Although there have been exceedances of MPCA action levels for GRO and DRO, the recent concentrations appear to indicate a stable plume. Also, the concentrations have decreased since June 2002. For example, the GRO concentration has decreased from a maximum of 11,000 parts per billion (ppb) to 3900 ppb (Figure 8).

Section 2. VAPOR IMPACT MONITORING

If vapor impacts were detected during previous assessments, discuss the results of follow-up vapor monitoring. Include in your discussion the sampling instrument and sampling method.

Vapor monitoring was not required.

NOTE: If vapor concentrations exceed 10 percent of the lower explosive limit, exit the building and contact the local fire department immediately. Then contact the Minnesota Duty Officer (24 hours) at 651/649-5451 (metro and outside Minnesota) or 1-800/422-0798 (Greater Minnesota). TTY users call 651/297-5353 (V/TTY) or 1-800/627-3529 (V/TTY). Vapor mitigation is required.

Section 3. RECOMMENDATIONS

Discuss your recommendations. Your recommendation should be based on fact sheet #3.1, *Leaking Underground Storage Tank Program.*

Based on the results of the quarterly groundwater monitoring, we recommend leaksite file closure for the site. The recent sampling results and the results of GME's RI work indicate that the groundwater impacts likely are primarily in the vicinity of the former underground storage tank (UST) basin. Further, the concentration trends for well MW-1 indicate that the plume appears to be stable.

If additional corrective action is recommended, please provide your justification.

If significant reduction of risk has been achieved at the site, recommendations and rationale for the reduction or termination of corrective actions may be presented.

See above.

If additional monitoring is recommended, indicate the proposed monitoring schedule and frequency.

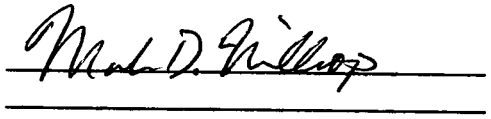
If closure is recommended, summarize significant site investigative events and describe how site specific risk issues have been adequately addressed or minimized to acceptable low risk levels.

See above.

Section 4: CONSULTANT INFORMATION

By signing this document, I/we acknowledge that we are submitting this document on behalf of and as agents of the responsible person or volunteer for this leaksite. I/we acknowledge that if information in this document is inaccurate or incomplete, it will delay the completion of remediation and may harm the environment and may result in reduction of reimbursement awards. In addition, I/we acknowledge on behalf of the responsible person or volunteer for this leaksite that if this document is determined to contain a false material statement, representation, or certification, or if it omits material information, the responsible person or volunteer may be found to be in violation of Minn. Stat. § 115.075 (1994) or Minn. Rules 7000.0300 (Duty of Candor), and that the responsible person or volunteer may be liable for civil penalties.

MPCA staff are instructed to reject unsigned monitoring reports or if the report form has been altered.

Name and Title:	Signature:	Date signed:
Mark D. Millsop, P.G. Principal Hydrogeologist		07-29-04

Company and mailing address:

Millsop Associates, Inc.
P.O. Box 236
Crosby, Minnesota 56441

Phone: 218-763-2907
Fax: 218-763-2908

Attach Tables:

- Table 1 - Monitoring Well Completion Information
- Table 2 - Summary of Water Levels Measurements
- Table 3 - Analytical Results of Water Samples
- Table 4 - Other Contaminants Detected in Water Samples (Petroleum or Non-petroleum Derived)
- Table 6 - Results of Natural Attenuation
- Table 7 - Results of Vapor Monitoring

Table 1
Monitoring Well Completion Information

Well Number	Unique Well Number	Date Installed	Surface Elevation	Top of Riser Elevation	Bottom of Well (Elevation)	Screen Interval (Elev. - Elev.)
MW-1	674275	06-20-02	1253.40	1256.14	1237.40	1237.40 – 1247.40
MW-2	674276	06-20-02	1253.63	1256.31	1237.63	1237.63 – 1247.63
MW-3	674277	06-20-02	1254.27	1257.26	1238.26	1238.26 – 1248.26
MW-1	674275	08-05-03	NM	99.61	80.87	80.87 – 90.87
MW-2	674276	08-05-03	NM	99.80	81.12	81.12 – 91.12
MW-3	674277	08-05-03	NM	100.82	81.82	81.82 – 91.82

Note: All data prior to 08-05-03 were given in GME Consultant's, Inc. March 25, 2003 RI Report. Wells were re-surveyed to a site datum (top of telephone pedestal at road intersection, 100.00 feet) on 08-05-03.

Table 2
Summary of Water Level Measurements

Well Number	Date	Depth of Water from Top of Riser (Feet)	Product Thickness (Inches)	Depth of Water Below Grade (Feet)	Relative Groundwater Elevation (Feet)	Water Level Above Screen (Y/N)
MW-1	06-25-02	7.52	0	4.78	1248.62	Y
	09-11-02	7.01	0	4.27	1249.13	Y
	08-05-03	8.03	0	5.29	91.58	Y
	11-13-03	8.09	0	5.35	91.52	Y
	04-06-04	8.40	0	5.66	91.21	Y
	07-08-04	8.97	0	6.23	90.64	N
MW-2	06-25-02	7.22	0	4.54	1249.09	Y
	09-11-02	6.69	0	4.01	1249.62	Y
	08-05-03	8.04	0	5.36	91.76	Y
	11-13-03	8.06	0	5.38	91.74	Y
	04-06-04	7.89	0	5.21	91.91	Y
	07-08-04	8.91	0	6.23	90.89	N
MW-3	06-25-02	7.75	0	4.76	1245.52	N
	09-11-02	8.15	0	5.16	1246.12	N
	08-05-03	9.22	0	6.23	91.60	N
	11-13-03	9.27	0	6.28	91.55	N
	04-06-04	9.38	0	6.39	91.44	N
	07-08-04	10.08	0	7.09	90.74	N

Describe the methods and procedures used to measure water levels and product thickness.
Notes:
Water level measurements were taken with a Solinst electronic water level indicator. Potential free product was visually checked by initially lowering the bailer into the water column, so that it would fill only about halfway.
All data prior to 08-05-03 were given in GME Consultant's, Inc. March 25, 2003 RI Report.

Table 3
Analytical Results of Water Samples

Well #	Date	Benzene (ppb)	Toluene (ppb)	Ethyl Benzene (ppb)	Xylenes (ppb)	MTBE (ppb)	GRO (ppb)	DRO (ppb)	Lab Type
MW-1	06-25-02	<10	<10	72	450	NA	11000	3400	Fixed
	09-11-02	<5.0	<5.0	38	243	NA	5300	4200	Fixed
	08-05-03	<2.5	<2.5	8.9	43	<2.5	3400	1600	Fixed
	11-13-03	<2.5	<2.5	17	84	<2.5	3800	3000	Fixed
	04-06-04	<1.0	<1.0	8.7	48	<1.0	3500	1000	Fixed
	07-08-04	<1.0	<1.0	12	62	3.0	3900	2400	Fixed
MW-2	06-25-02	<1.0	<1.0	<1.0	<2.0	NA	<50	<100	Fixed
	09-11-02	<1.0	<1.0	<1.0	<2.0	NA	<50	<100	Fixed
	08-05-03	<1.0	<1.0	<1.0	<2.0	NA	<50	<100	Fixed
	11-13-03	<1.0	<1.0	<1.0	<2.0	NA	<50	<100	Fixed
	04-06-04	<1.0	<1.0	<1.0	<2.0	NA	<50	330	Fixed
	07-08-04	<1.0	<1.0	<1.0	<2.0	NA	<50	<94	Fixed
MW-3	06-25-02	<1.0	<1.0	<1.0	<2.0	NA	<50	<100	Fixed
	09-11-02	<1.0	<1.0	<1.0	<2.0	NA	<50	110	Fixed
	08-05-03	<1.0	<1.0	<1.0	<2.0	NA	<50	130	Fixed
	11-13-03	<1.0	<1.0	<1.0	<2.0	NA	<50	<100	Fixed
	04-06-04	<1.0	<1.0	<1.0	<2.0	NA	<50	490	Fixed
	07-08-04	<1.0	<1.0	<1.0	<2.0	NA	<50	<94	Fixed
Duplicate (MW-1)	08-05-03	<1.0	<1.0	11	50	NA	NA	NA	Fixed
	11-13-03	<1.0	<1.0	17	83	NA	NA	NA	Fixed
	04-06-04	<1.0	<1.0	13	65	NA	NA	NA	Fixed
	07-08-04	<1.0	<1.0	7.8	42	NA	NA	NA	Fixed
Trip Blank	06-25-02	<1.0	<1.0	<1.0	<2.0	NA	<50	NA	Fixed
	08-05-03	<1.0	<1.0	<1.0	<2.0	NA	NA	NA	Fixed
	04-06-04	<1.0	<1.0	<1.0	<2.0	NA	NA	NA	Fixed
	07-08-04	<1.0	<1.0	<1.0	<2.0	NA	NA	NA	Fixed
HRL (ug/L)		10	1000	700	10,000	-	-	-	

NA = Not Analyzed *ppb = parts per billion*

Note: MPCA action levels for GRO and DRO typically are 1000 ppb.

Table 4
Other Contaminants Detected in Water Samples
(Petroleum or Non-Petroleum Derived)

Parameter	n-Butylbenzene	Isopropylbenzene	p-Isopropylbenzene	Naphthalene	n-Propylbenzene	1,2,4-Trimetnylbenzene	1,3,5-Trimethylbenzene			
MW-1 (06-25-02)	120	89	21	97	270	1600	440			
MW-1 (09-11-02)	83	40	--	40	110	630	250			
HRL (ug/L)										

Report results in ug/L. Indicate other contaminants (either petroleum or non-petroleum derived) detected in water samples collected from the borings, temporary wells or push probes.
Notes: VOCs were not required during the last four events.

Table 5
Natural Attenuation Parameters

Monitoring Well	Sample Date	Temp. °C	PH	Dissolved Oxygen (mg/L)	Nitrate (mg/L)	(Fe II) (mg/L)	(H_2S, HS^-) (mg/L)
MW-1	06-25-02	12.0	8.45	1.25	NS	NS	1650
	09-11-02	15.8	6.84	0.66	NS	NS	870
	08-05-03						
	11-13-03						
	04-06-04						
MW-2	06-25-02	8.8	8.05	2.18	NS	NS	250
	09-11-02	14.7	6.20	0.73	NS	NS	130
	08-05-03						
	11-13-03						
	04-06-04						
MW-3	06-25-02	7.7	7.77	1.20	NS	NS	610
	09-11-02	12.4	6.35	2.72	NS	NS	500
	08-05-03						
	11-13-03						
	04-06-04						

Describe the methods and procedures used.
Notes: These parameters were not required during the last four events..

Table 6
Results of Vapor Monitoring

Location #	Date	PID reading (ppm)	Percent of the LEL

Note: Vapor monitoring was not required.

Attach Figures:

Figures - (all maps are to include a north arrow, scale and legend) *Approximate scales are not acceptable.*

- Site location map. Adapt this map from a U.S. Geological Survey 7.5 minute quadrangle and identify the name of the 7.5 minute quadrangle.
- Site map showing the locations of all ground water and vapor monitoring points.
- Updated ground water contour maps, using water level elevations from all rounds of water level measurements since the last report. Show all wells at the site, and differentiate wells constructed in different aquifers. Label ground water contours and elevations at each data point used for contouring.
- Hydrograph for all monitoring and recovery wells.
- Graph(s) showing contaminant concentrations over time for all monitoring and recovery wells.

Attach Appendices:

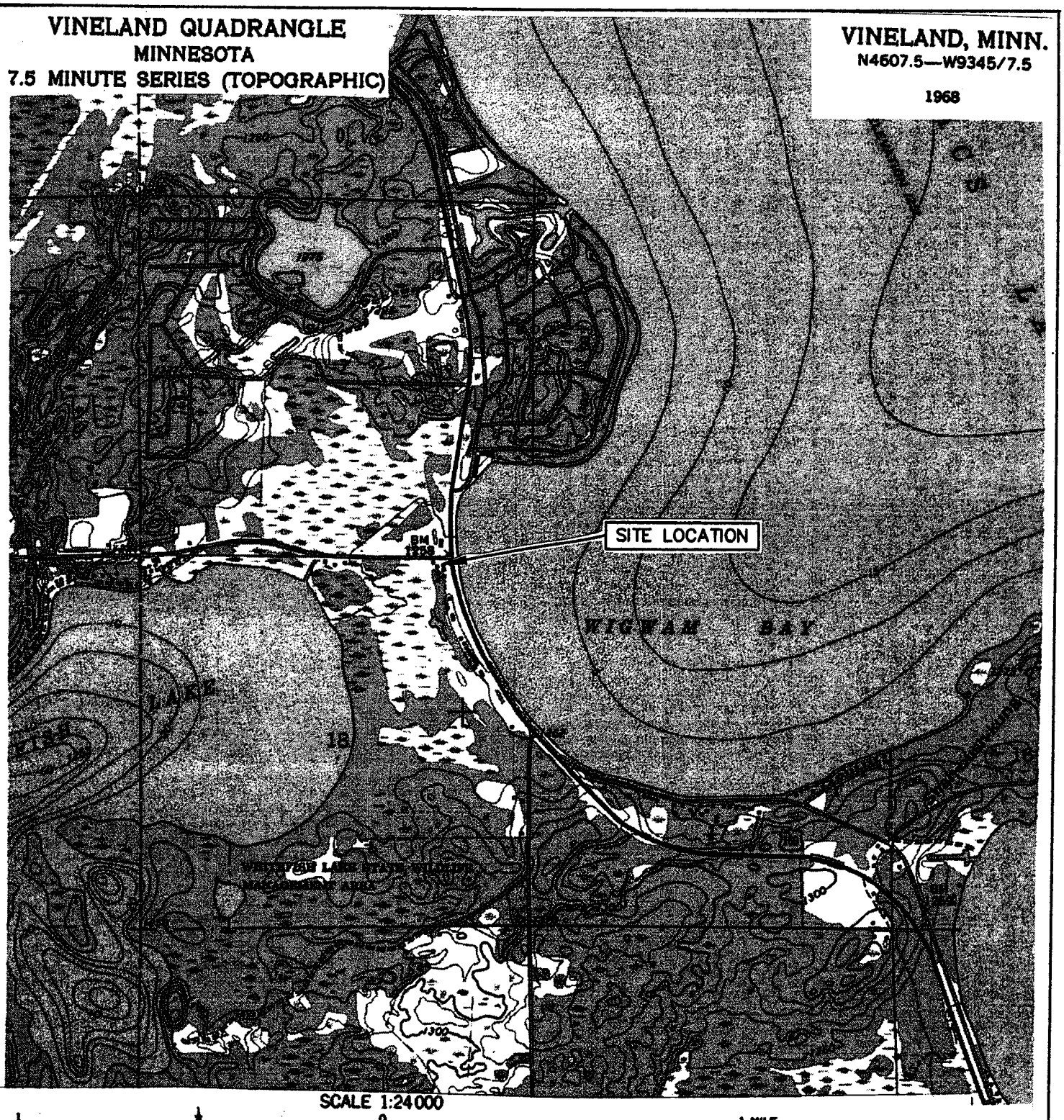
The appendix section of the report contains sufficient information to document all activities completed since the last report. All reproduced data must be legible.

- Copies of most recent laboratory reports for ground water analyses, including a copy of the Chain of Custody and the MDH laboratory certification number.
- Sample collection information, including procedure, equipment, and decontamination.
- Field or sampling data sheets.

Web pages and phone numbers

MPCA staff	http://data.pca.state.mn.us/pca/emplsearch.html
MPCA toll free	1-800-657-3864
LUST web page	http://www.pca.state.mn.us/programs/lust_p.html
MPCA Infor. Request	http://www.pca.state.mn.us/about/inforequest.html
PetroFund Web Page	http://www.commerce.state.mn.us/mainpf.htm
PetroFund Phone	651-297-1119, or 1-800-638-0418
State Duty Officer	651-649-5451 or 1-800-422-0798

FIGURES



MILLSOP ASSOCIATES, INC.
P.O. BOX 236
35797 DOLNEY LAKE ROAD
CROSBY, MINNESOTA 56441
218-763-2907

FIGURE 1: REGIONAL LOCATION MAP
FORMER WIGWAM INN
GARRISON, MINNESOTA

JULY 2004

MAI PROJECT NO. M-04-29

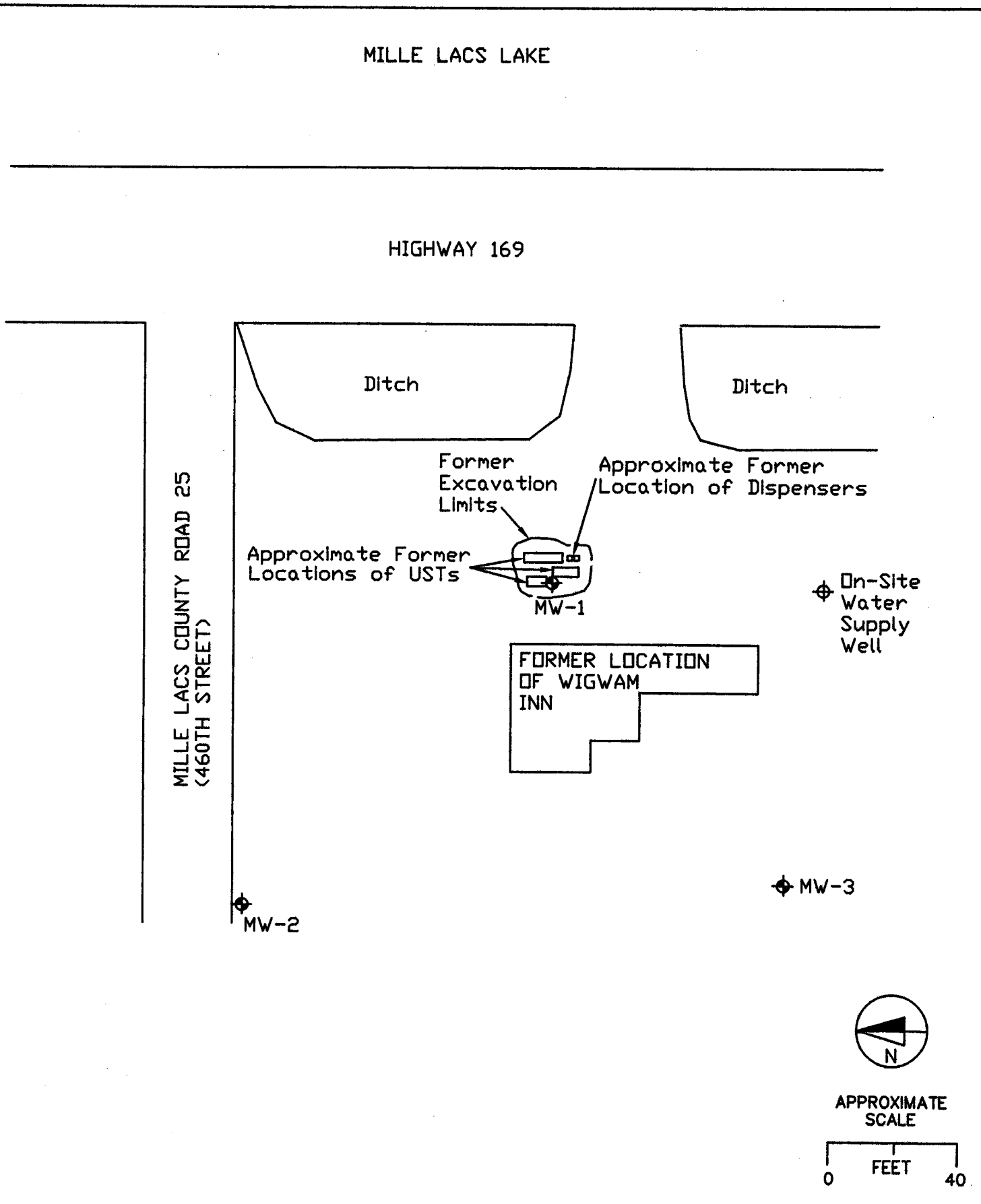


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FIGURE 2: APPROXIMATE SITE DIAGRAM
FORMER WIGWAM INN
GARRISON, MINNESOTA

JULY 2004 | MAI PROJECT NO. M-04-29

HYDROGRAPHS

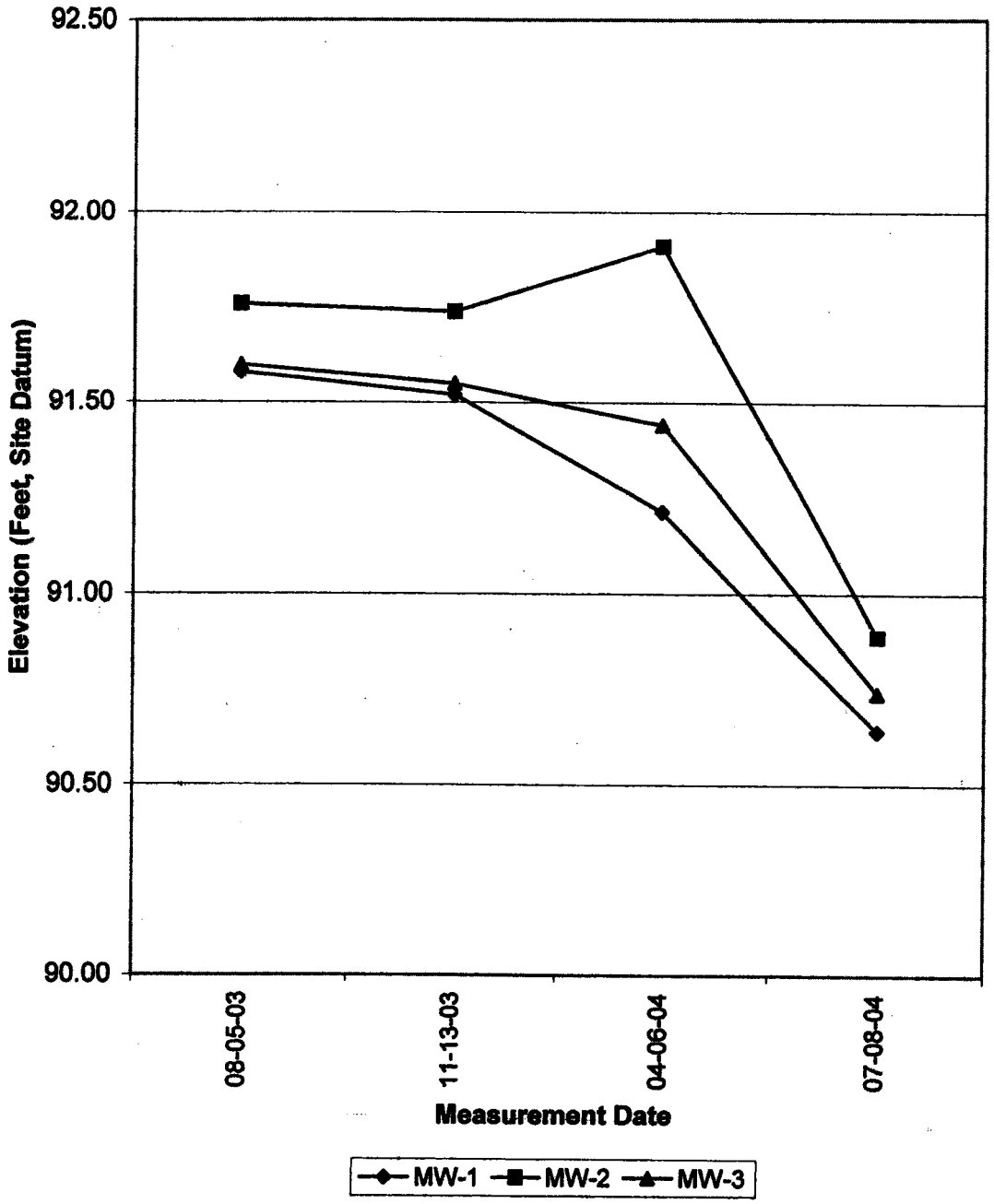

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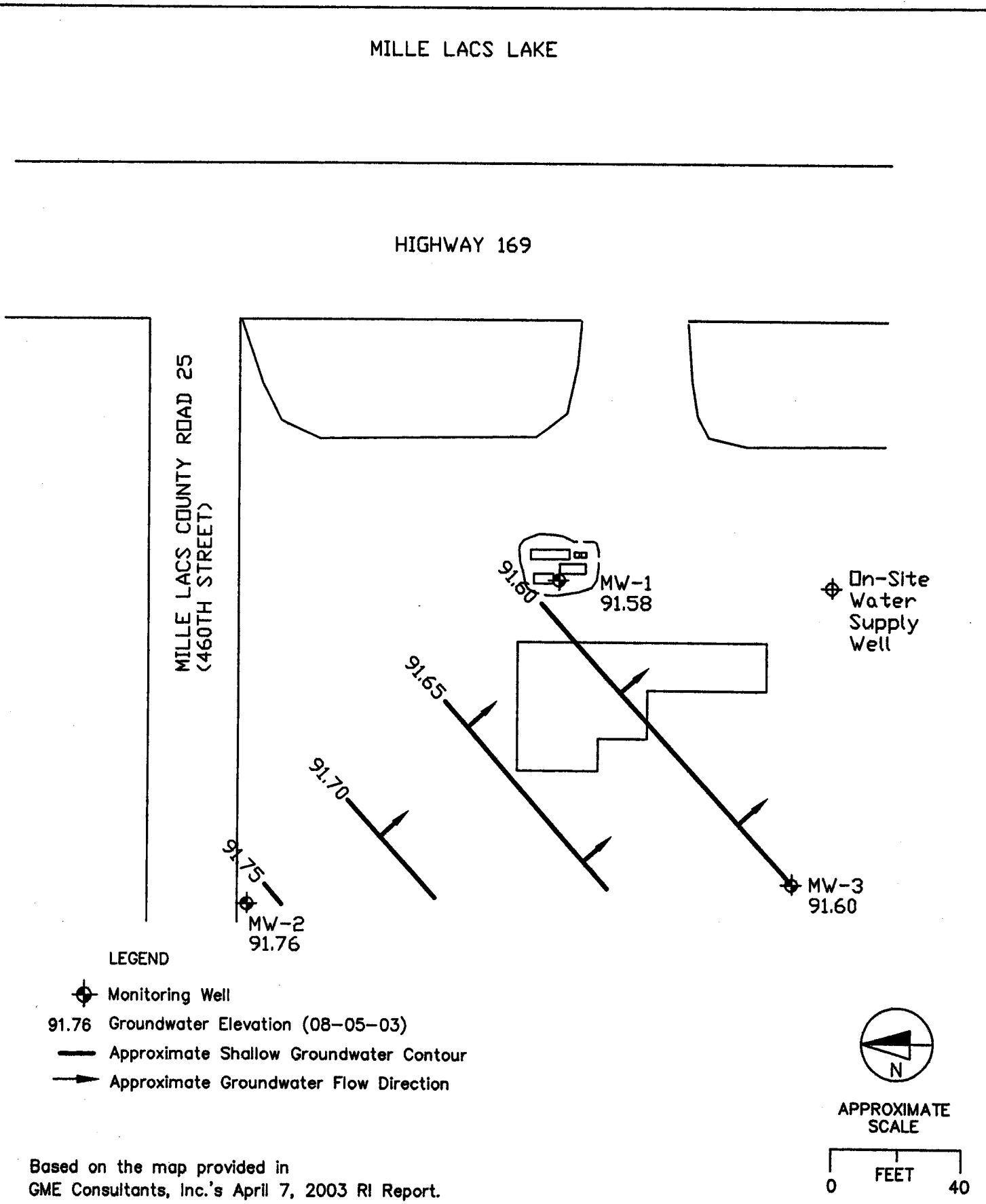
FIGURE 3: HYDROGRAPHS
FORMER WIGWAM INN
GARRISON, MINNESOTA

JULY 2004

MAI PROJECT NO. M-04-29



Based on the map provided in
GME Consultants, Inc.'s April 7, 2003 RI Report.

MILLSOP ASSOCIATES, INC.
P.O. BOX 236
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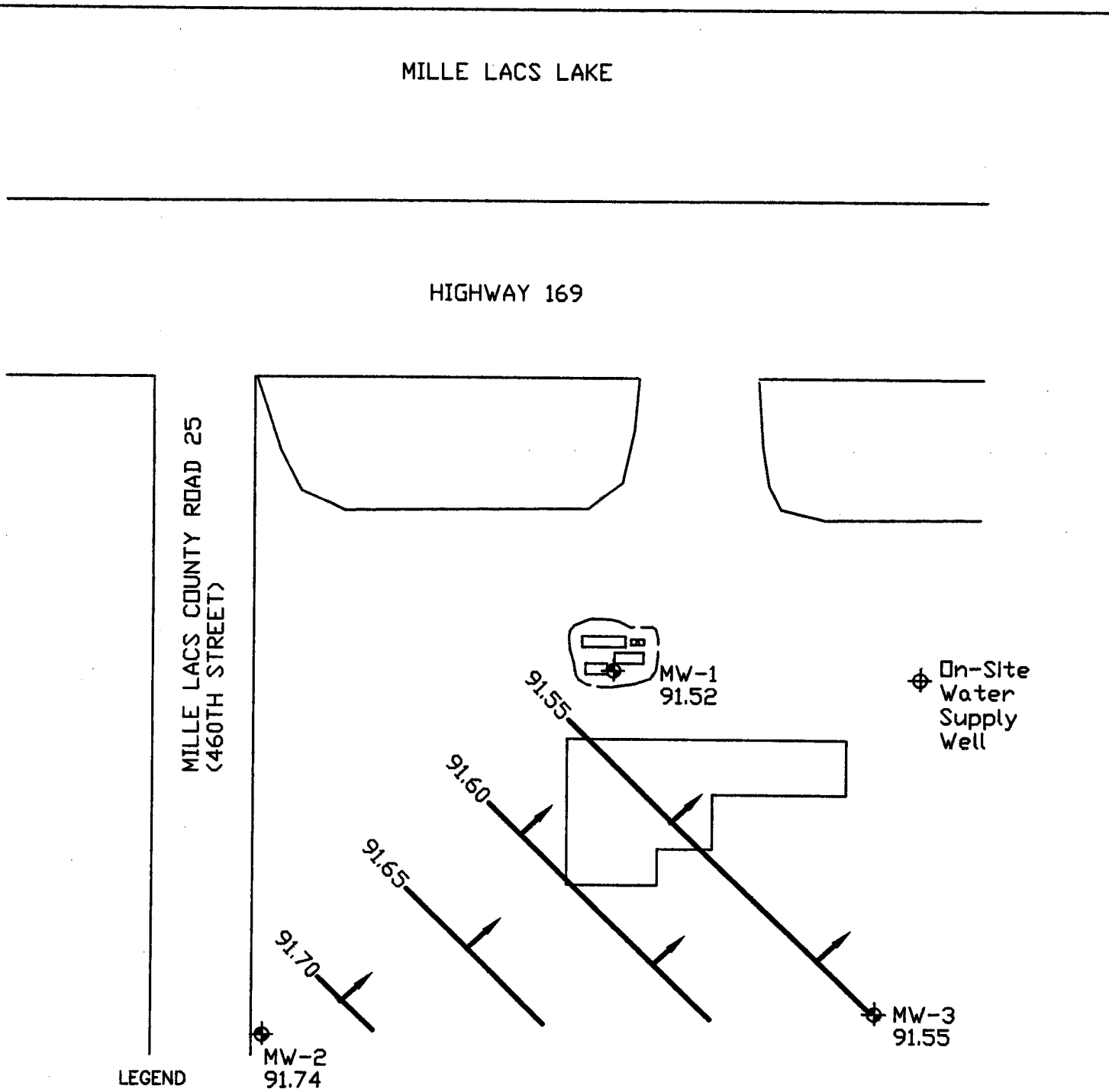
218-763-2907

FIGURE 4: APPROXIMATE SHALLOW GROUNDWATER CONTOUR MAP (08-05-03)
FORMER WIGWAM INN
GARRISON, MINNESOTA

JULY 2004 | MAI PROJECT NO. M-04-29



Based on the map provided in
GME Consultants, Inc.'s April 7, 2003 RI Report.

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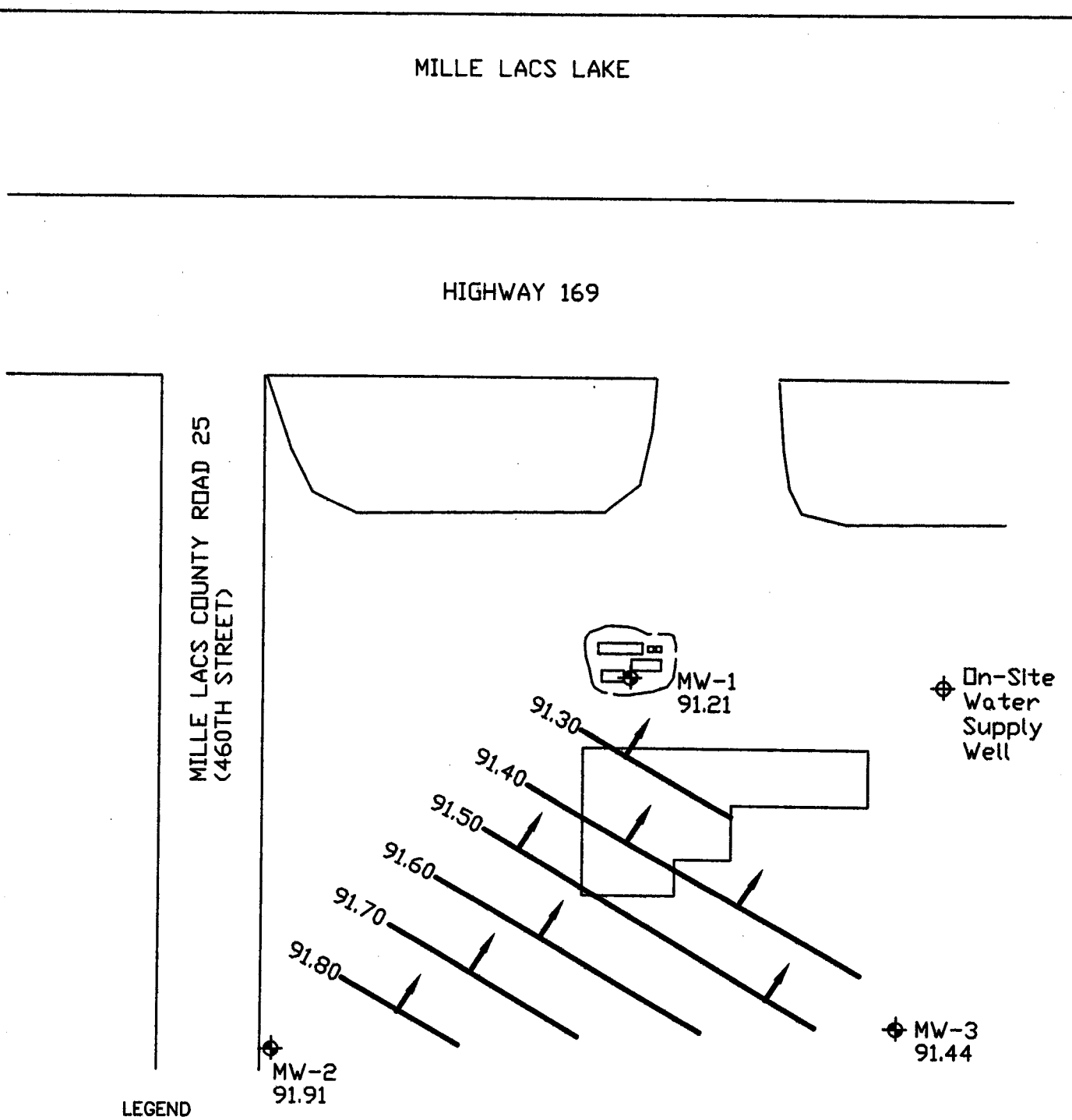
FIGURE 5: APPROXIMATE SHALLOW GROUNDWATER CONTOUR MAP (11-13-03)
FORMER WIGWAM INN
GARRISON, MINNESOTA

JULY 2004 | MAI PROJECT NO. M-04-29



Based on the map provided in
GME Consultants, Inc.'s April 7, 2003 RI Report.

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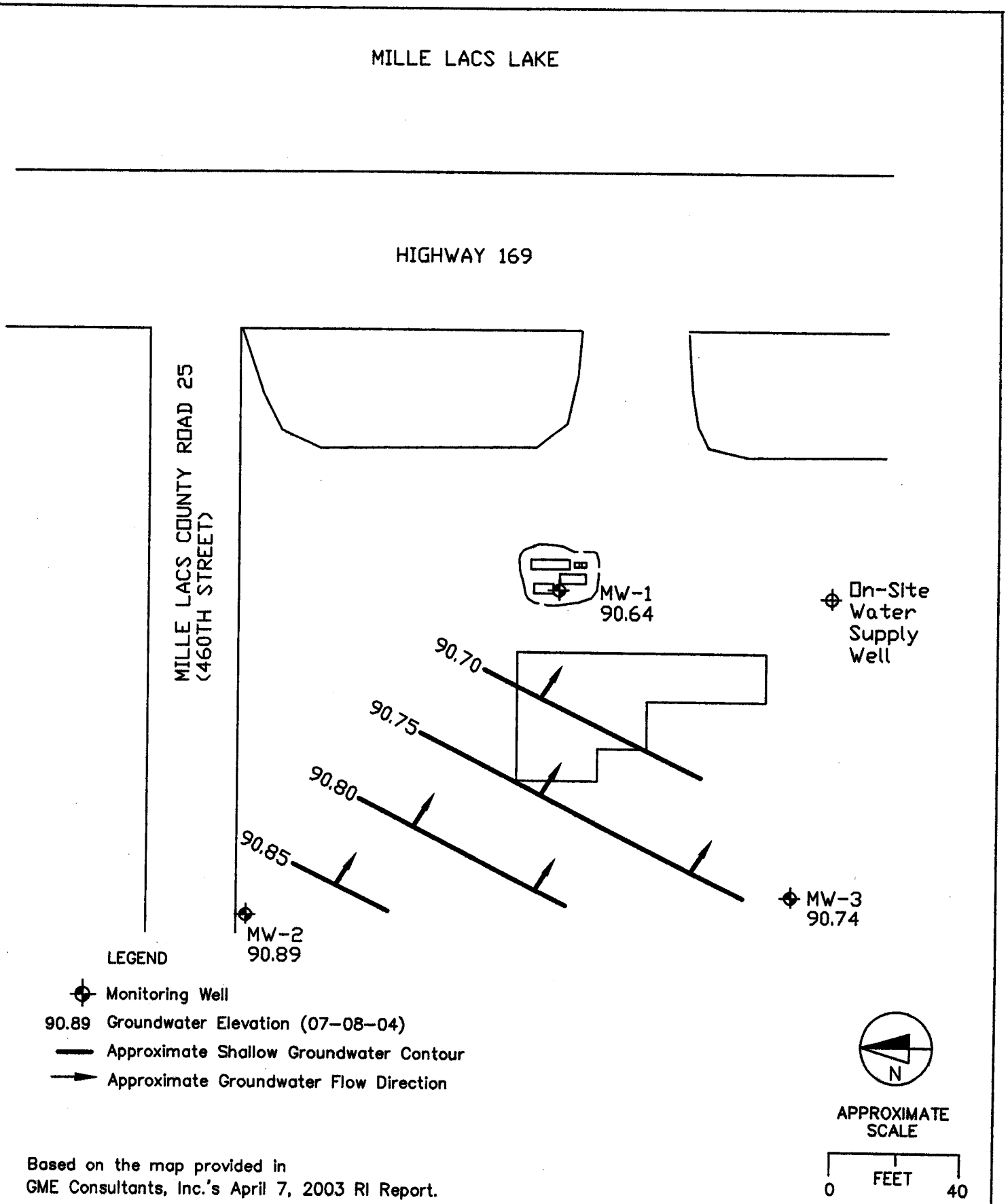
FIGURE 6: APPROXIMATE SHALLOW GROUNDWATER CONTOUR MAP (04-06-04)
FORMER WIGWAM INN
GARRISON, MINNESOTA

JULY 2004 | MAI PROJECT NO. M-04-29



Based on the map provided in
GME Consultants, Inc.'s April 7, 2003 RI Report.

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CROSBY, MINNESOTA 56441
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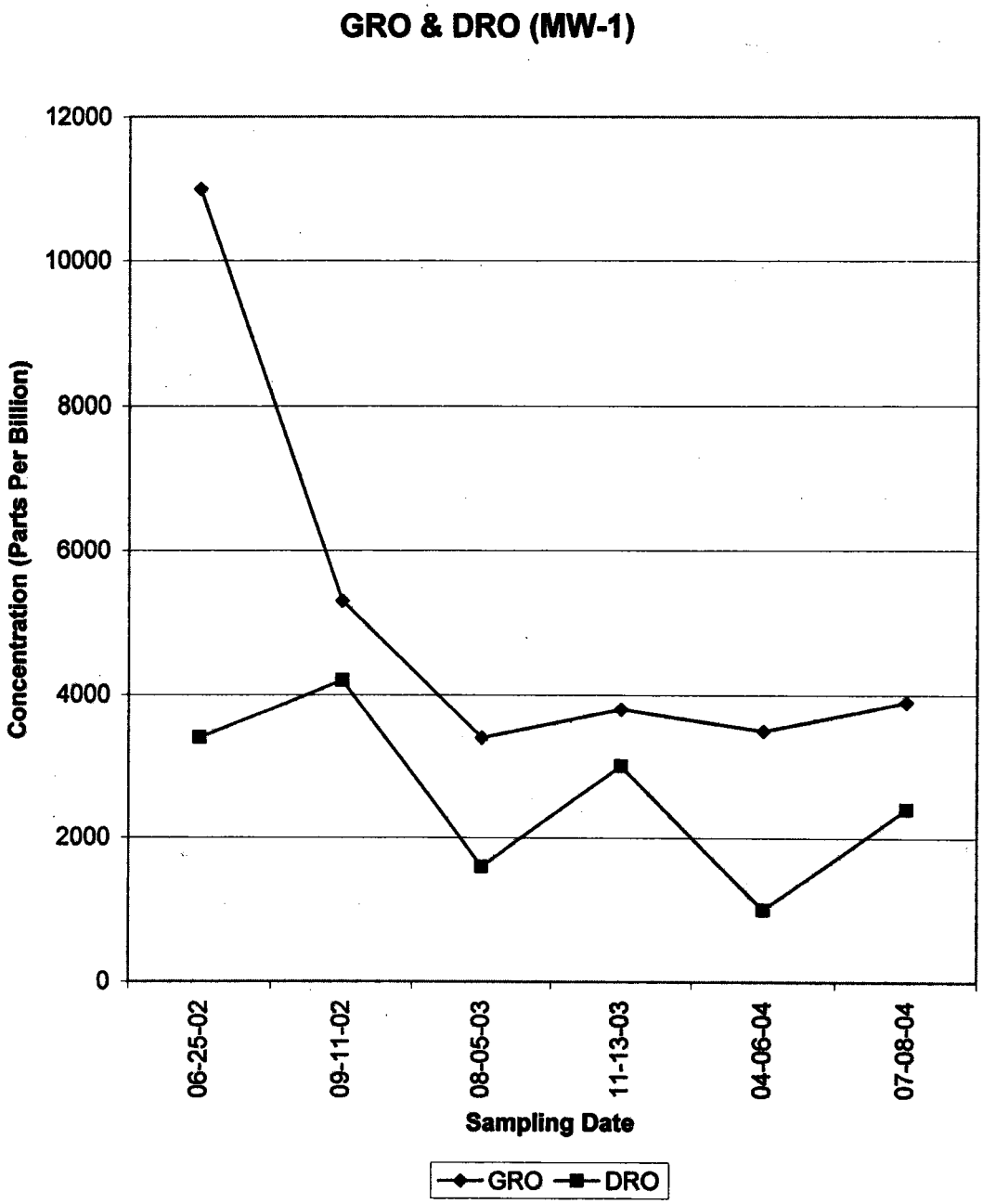
FIGURE 7: APPROXIMATE SHALLOW GROUNDWATER CONTOUR MAP (07-08-04)
FORMER WIGWAM INN
GARRISON, MINNESOTA

JULY 2004 | MAI PROJECT NO. M-04-29



MILLSOP ASSOCIATES, INC.
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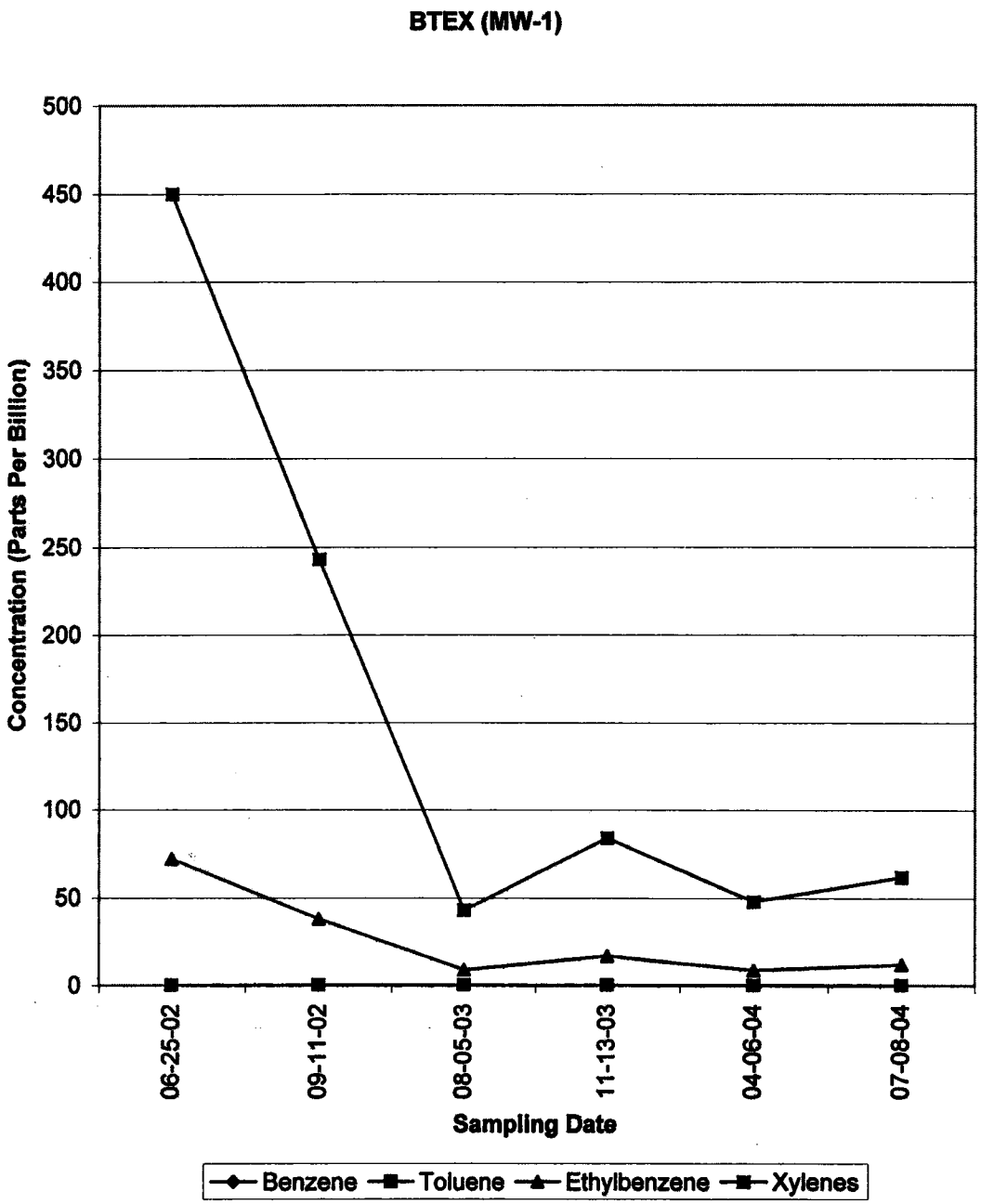
35797 DOLNEY LAKE ROAD
CROSBY, MINNESOTA 56441
218-763-2907

FIGURE 8: GROUNDWATER CHEMISTRY GRAPH
GRO & DRO (MW-1)
FORMER WIGWAM INN
GARRISON, MINNESOTA

JULY 2004 | MAI PROJECT NO. M-04-29



MILLSOP ASSOCIATES, INC.
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35797 DOLNEY LAKE ROAD
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FIGURE 9: GROUNDWATER CHEMISTRY GRAPH
BTEX (MW-1)
FORMER WIGWAM INN
GARRISON, MINNESOTA

JULY 2004 | MAI PROJECT NO. M-04-29

EN CHEM INC.

Corporate Office & Laboratory
1241 Bellevue Street, Suite 9, Green Bay, WI 54302
920-469-2436, Fax: 920-469-8827
www.enchem.com

Analytical Report Number: 848583

Client: MILLSOP AND ASSOCIATES, INC.
Lab Contact: Eric Bullock
Project Name: WIGWAM
Project Number: M-029

Lab Sample Number	Field ID	Matrix	Collection Date
848583-001	TRIP BLANK	WATER	07/08/04
848583-002	DUPE	WATER	07/08/04
848583-003	MW-1	WATER	07/08/04
848583-004	MW-2	WATER	07/08/04
848583-005	MW-3	WATER	07/08/04

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and Laboratory Standard Operating Procedure. Exceptions, if any, are discussed in the accompanying sample comments. Release of this final report is authorized by Laboratory management, as is verified by the following signature. Reported results shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested.

Approval Signature

7/13/04
Date

En Chem Inc.

1241 Bellevue Street
Green Bay, WI 54302
920-469-2436

Analytical Report Number: 848583

Client : MILLSOP AND ASSOCIATES, INC.
Project Name : WIGWAM
Project Number : M-029
Field ID : TRIP BLANK

Matrix Type : WATER
Collection Date : 07/08/04
Report Date : 07/13/04
Lab Sample Number : 848583-001

BTEX

Prep Date: 07/12/04

Analyte		Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	<	1.0	1.0	1	ug/L		07/12/04	SW846 5030B	SW846 M8021B
Ethylbenzene	<	1.0	1.0	1	ug/L		07/12/04	SW846 5030B	SW846 M8021B
Toluene	<	1.0	1.0	1	ug/L		07/12/04	SW846 5030B	SW846 M8021B
Xylene, o	<	1.0	1.0	1	ug/L		07/12/04	SW846 5030B	SW846 M8021B
Xylenes, m + p	<	2.0	2.0	1	ug/L		07/12/04	SW846 5030B	SW846 M8021B
a,a,a-Trifluorotoluene		104	---	1	%Recov		07/12/04	SW846 5030B	SW846 M8021B

BTEX BLANK

Prep Date: 07/12/04

Analyte	Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
BTEX Blank ID	1449-16		1					

En Chem Inc.

1241 Bellevue Street
Green Bay, WI 54302
920-469-2436

Analytical Report Number: 848583

Client : MILLSOP AND ASSOCIATES, INC.
Project Name : WIGWAM
Project Number : M-029
Field ID : DUPE

Matrix Type : WATER
Collection Date : 07/08/04
Report Date : 07/13/04
Lab Sample Number : 848583-002

BTEX

Prep Date: 07/12/04

Analyte		Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	<	1.0	1.0	1	ug/L		07/12/04	SW846 5030B	SW846 M8021B
Ethylbenzene		7.8	1.0	1	ug/L		07/12/04	SW846 5030B	SW846 M8021B
Toluene	<	1.0	1.0	1	ug/L		07/12/04	SW846 5030B	SW846 M8021B
Xylene, o		13	1.0	1	ug/L		07/12/04	SW846 5030B	SW846 M8021B
Xylenes, m + p		29	2.0	1	ug/L		07/12/04	SW846 5030B	SW846 M8021B
a,a,a-Trifluorotoluene		117	---	1	%Recov		07/12/04	SW846 5030B	SW846 M8021B

BTEX BLANK

Prep Date: 07/12/04

Analyte	Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
BTEX Blank ID	1449-16		1					

En Chem Inc.

1241 Bellevue Street
Green Bay, WI 54302
920-469-2436

Analytical Report Number: 848583

Client : MILLSOP AND ASSOCIATES, INC.
Project Name : WIGWAM
Project Number : M-029
Field ID : MW-1

Matrix Type : WATER
Collection Date : 07/08/04
Report Date : 08/02/04
Lab Sample Number : 848583-003

DIESEL RANGE ORGANICS

Prep Date: 07/12/04

Analyte		Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
Diesel Range Organics		2400	94	1	ug/L		07/13/04	WI MOD DRO	WI MOD DRO
DRO Blank	<	50	50	1	ug/L		07/13/04	WI MOD DRO	WI MOD DRO
DRO Blank Spike		95	---	1	%Recov		07/13/04	WI MOD DRO	WI MOD DRO
DRO Blank Spike Duplicate		91	---	1	%Recov		07/13/04	WI MOD DRO	WI MOD DRO

BTEX + MTBE

Prep Date: 07/12/04

Analyte		Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	<	1.0	1.0	1	ug/L		07/12/04	SW846 5030B	WI MOD GRO
Ethylbenzene		12	1.0	1	ug/L		07/12/04	SW846 5030B	WI MOD GRO
Methyl-tert-butyl-ether		3.0	1.0	1	ug/L		07/12/04	SW846 5030B	WI MOD GRO
Toluene	<	1.0	1.0	1	ug/L		07/12/04	SW846 5030B	WI MOD GRO
Xylene, o		20	1.0	1	ug/L		07/12/04	SW846 5030B	WI MOD GRO
Xylenes, m + p		42	2.0	1	ug/L		07/12/04	SW846 5030B	WI MOD GRO
a,a,a-Trifluorotoluene		120	---	1	%Recov		07/12/04	SW846 5030B	WI MOD GRO

BTEX BLANK

Prep Date: 07/12/04

Analyte	Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
BTEX Blank ID	1449-16		1					

GASOLINE RANGE ORGANICS

Prep Date: 07/12/04

Analyte		Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
Gasoline Range Organics		3900	50	1	ug/L		07/12/04	WI MOD GRO	WI MOD GRO
GRO Blank	<	50	50	1	ug/L		07/12/04	WI MOD GRO	WI MOD GRO
GRO Blank Spike		94	---	1	%Recov		07/12/04	WI MOD GRO	WI MOD GRO
GRO Blank Spike Duplicate		94	---	1	%Recov		07/12/04	WI MOD GRO	WI MOD GRO

En Chem Inc.

1241 Bellevue Street
Green Bay, WI 54302
920-469-2436

Analytical Report Number: 848583

Client : MILLSOP AND ASSOCIATES, INC.
Project Name : WIGWAM
Project Number : M-029
Field ID : MW-2

Matrix Type : WATER
Collection Date : 07/08/04
Report Date : 08/02/04
Lab Sample Number : 848583-004

DIESEL RANGE ORGANICS

Prep Date: 07/12/04

Analyte		Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
Diesel Range Organics	<	94	94	1	ug/L		07/13/04	WI MOD DRO	WI MOD DRO
DRO Blank	<	50	50	1	ug/L		07/13/04	WI MOD DRO	WI MOD DRO
DRO Blank Spike		95	---	1	%Recov		07/13/04	WI MOD DRO	WI MOD DRO
DRO Blank Spike Duplicate		91	---	1	%Recov		07/13/04	WI MOD DRO	WI MOD DRO

BTEX + MTBE

Prep Date: 07/12/04

Analyte		Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	<	1.0	1.0	1	ug/L		07/12/04	SW846 5030B	WI MOD GRO
Ethylbenzene	<	1.0	1.0	1	ug/L		07/12/04	SW846 5030B	WI MOD GRO
Methyl-tert-butyl-ether	<	1.0	1.0	1	ug/L		07/12/04	SW846 5030B	WI MOD GRO
Toluene	<	1.0	1.0	1	ug/L		07/12/04	SW846 5030B	WI MOD GRO
Xylene, o	<	1.0	1.0	1	ug/L		07/12/04	SW846 5030B	WI MOD GRO
Xylenes, m + p	<	2.0	2.0	1	ug/L		07/12/04	SW846 5030B	WI MOD GRO
a,a,a-Trifluorotoluene		105	---	1	%Recov		07/12/04	SW846 5030B	WI MOD GRO

BTEX BLANK

Prep Date: 07/12/04

Analyte	Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
BTEX Blank ID	1449-16		1					

GASOLINE RANGE ORGANICS

Prep Date: 07/12/04

Analyte		Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
Gasoline Range Organics	<	50	50	1	ug/L		07/12/04	WI MOD GRO	WI MOD GRO
GRO Blank	<	50	50	1	ug/L		07/12/04	WI MOD GRO	WI MOD GRO
GRO Blank Spike		94	---	1	%Recov		07/12/04	WI MOD GRO	WI MOD GRO
GRO Blank Spike Duplicate		94	---	1	%Recov		07/12/04	WI MOD GRO	WI MOD GRO

En Chem Inc.

1241 Bellevue Street
Green Bay, WI 54302
920-469-2436

Analytical Report Number: 848583

Client : MILLSOP AND ASSOCIATES, INC.
Project Name : WIGWAM
Project Number : M-029
Field ID : MW-3

Matrix Type : WATER
Collection Date : 07/08/04
Report Date : 08/02/04
Lab Sample Number : 848583-005

DIESEL RANGE ORGANICS

Prep Date: 07/12/04

Analyte		Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
Diesel Range Organics	<	94	94	1	ug/L		07/13/04	WI MOD DRO	WI MOD DRO
DRO Blank	<	50	50	1	ug/L		07/13/04	WI MOD DRO	WI MOD DRO
DRO Blank Spike		95	---	1	%Recov		07/13/04	WI MOD DRO	WI MOD DRO
DRO Blank Spike Duplicate		91	---	1	%Recov		07/13/04	WI MOD DRO	WI MOD DRO

BTEX + MTBE

Prep Date: 07/12/04

Analyte		Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	<	1.0	1.0	1	ug/L		07/12/04	SW846 5030B	WI MOD GRO
Ethylbenzene	<	1.0	1.0	1	ug/L		07/12/04	SW846 5030B	WI MOD GRO
Methyl-tert-butyl-ether	<	1.0	1.0	1	ug/L		07/12/04	SW846 5030B	WI MOD GRO
Toluene	<	1.0	1.0	1	ug/L		07/12/04	SW846 5030B	WI MOD GRO
Xylene, o	<	1.0	1.0	1	ug/L		07/12/04	SW846 5030B	WI MOD GRO
Xylenes, m + p	<	2.0	2.0	1	ug/L		07/12/04	SW846 5030B	WI MOD GRO
a,a,a-Trifluorotoluene		104	---	1	%Recov		07/12/04	SW846 5030B	WI MOD GRO

BTEX BLANK

Prep Date: 07/12/04

Analyte	Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
BTEX Blank ID	1449-16		1					

GASOLINE RANGE ORGANICS

Prep Date: 07/12/04

Analyte		Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
Gasoline Range Organics	<	50	50	1	ug/L		07/12/04	WI MOD GRO	WI MOD GRO
GRO Blank	<	50	50	1	ug/L		07/12/04	WI MOD GRO	WI MOD GRO
GRO Blank Spike		94	---	1	%Recov		07/12/04	WI MOD GRO	WI MOD GRO
GRO Blank Spike Duplicate		94	---	1	%Recov		07/12/04	WI MOD GRO	WI MOD GRO

En Chem Inc.

1241 Bellevue Street
Green Bay, WI 54302
920-469-2436
Fax: 920-469-8827

Lab Number	TestGroupID	Field ID	Comment
848583-003	GRO-W	MW-1	Early and late eluting peaks were present outside the window of analysis.

Qualifier Codes

Flag	Applies To	Explanation
A	Inorganic	Analyte is detected in the method blank. Method blank criteria is evaluated to the laboratory method detection limit. Additionally, method blank acceptance may be based on project specific criteria or determined from analyte concentrations in the sample and are evaluated on a sample by sample basis.
B	Inorganic	The analyte has been detected between the method detection limit and the reporting limit.
B	Organic	Analyte is present in the method blank. Method blank criteria is evaluated to the laboratory method detection limit. Additionally, method blank acceptance may be based on project specific criteria or determined from analyte concentrations in the sample and are evaluated on a sample by sample basis.
C	All	Elevated detection limit.
D	All	Analyte value from diluted analysis or surrogate result not applicable due to sample dilution.
E	Inorganic	Estimated concentration due to matrix interferences. During the metals analysis the serial dilution failed to meet the established control limits of 0-10%. The sample concentration is greater than 50 times the IDL for analysis done on the ICP or 100 times the IDL for analysis done on the ICP-MS. The result was flagged with the E qualifier to indicate that a physical interference was observed.
E	Organic	Analyte concentration exceeds calibration range.
F	Inorganic	Due to potential interferences for this analysis by Inductively Coupled Plasma techniques (SW-846 Method 6010), this analyte has been confirmed by and reported from an alternate method.
F	Organic	Surrogate results outside control criteria.
H	All	Preservation, extraction or analysis performed past holding time.
HF	Inorganic	This test is considered a field parameter, and the recommended holding time is 15 minutes from collection. The analysis was performed in the laboratory beyond the recommended holding time.
J	Inorganic	The analyte has been detected between the method detection limit and the reporting limit.
J	Organic	Concentration detected is greater than the method detection limit but less than the reporting limit.
K	Inorganic	Sample received unpreserved. Sample was either preserved at the time of receipt or at the time of sample preparation.
K	Organic	Detection limit may be elevated due to the presence of an unrequested analyte.
L	All	Elevated detection limit due to low sample volume.
M	Organic	Sample pH was greater than 2
N	All	Spiked sample recovery not within control limits.
O	Organic	Sample received overweight.
P	Organic	The relative percent difference between the two columns for detected concentrations was greater than 40%.
Q	All	The analyte has been detected between the limit of detection (LOD) and limit of quantitation (LOQ). The results are qualified due to the uncertainty of analyte concentrations within this range.
S	Organic	The relative percent difference between quantitation and confirmation columns exceeds internal quality control criteria. Because the result is unconfirmed, it has been reported as a non-detect with an elevated detection limit.
U	All	The analyte was not detected at or above the reporting limit.
V	All	Sample received with headspace.
W	All	A second aliquot of sample was analyzed from a container with headspace.
X	All	See Sample Narrative.
&	All	Laboratory Control Spike recovery not within control limits.
*	All	Precision not within control limits.
<	All	The analyte was not detected at or above the reporting limit.
1	Inorganic	Dissolved analyte or filtered analyte greater than total analyte; analyses passed QC based on precision criteria.
2	Inorganic	Dissolved analyte or filtered analyte greater than total analyte; analyses failed QC based on precision criteria.
3	Inorganic	BOD result is estimated due to the BOD blank exceeding the allowable oxygen depletion.
4	Inorganic	BOD duplicate precision not within control limits. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.
5	Inorganic	BOD result is estimated due to insufficient oxygen depletion. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.
6	Inorganic	BOD laboratory control sample not within control limits. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.
7	Inorganic	BOD result is estimated due to complete oxygen depletion. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.

En Chem Inc.

Analysis Summary by Laboratory

1241 Bellevue Street
Green Bay, WI 54302

1090 Kennedy Avenue
Kimberly, WI 54136

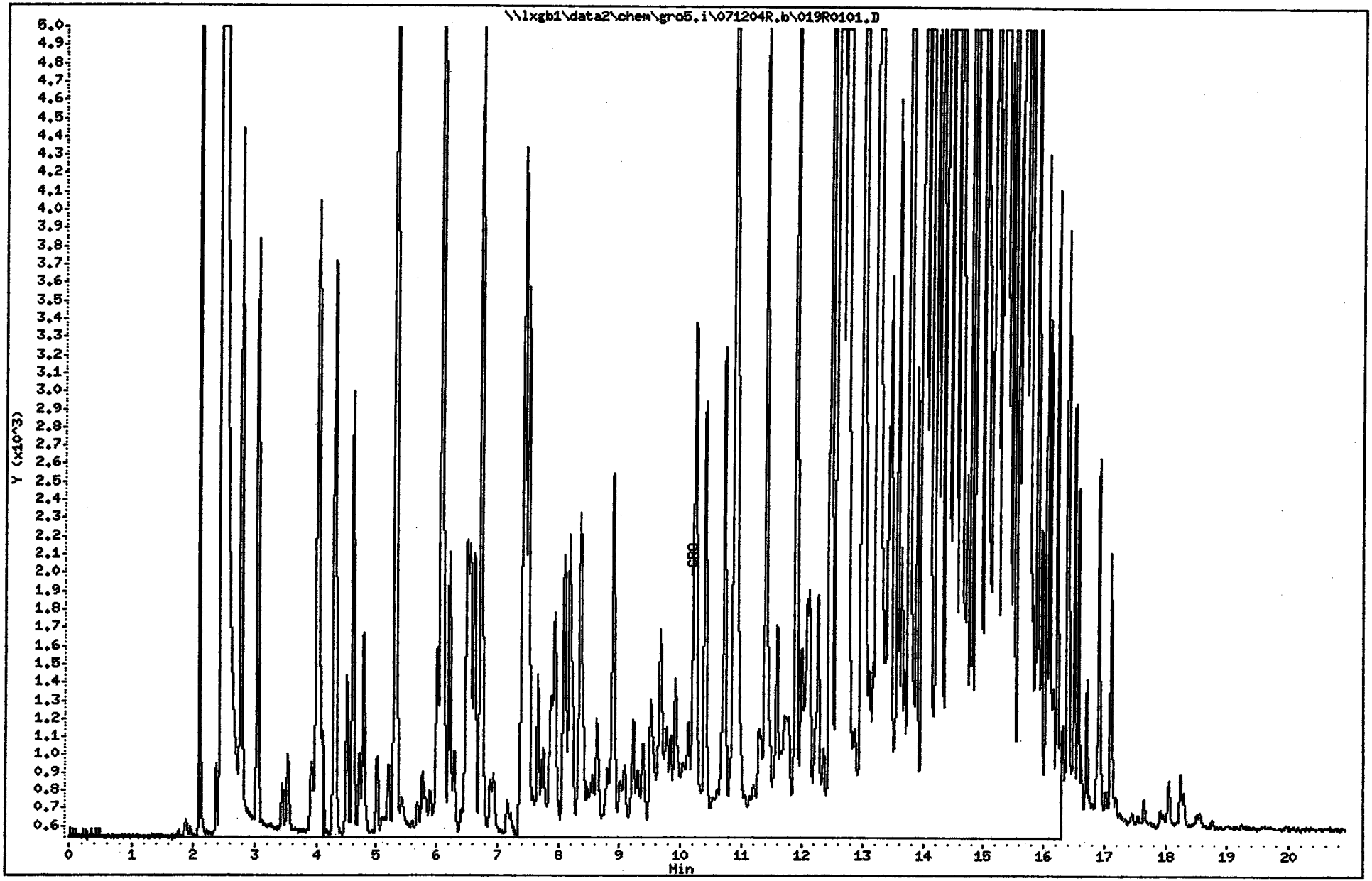
Test Group Name	848583-001	848583-002	848583-003	848583-004	848583-005
BTEX	G	G			
BTEX + MTBE			G	G	G
BTEX BLANK	G	G	G	G	G
GASOLINE RANGE ORGANICS			G	G	G

Minnesota Certification	
G = En Chem Green Bay	055-999-334
K = En Chem Kimberly	055-999-107
S = En Chem Superior	Not Applicable
C = Subcontracted Analysis	

Data File: \\lxgb1\data2\chem\gro5.i\071204R.b\019R0101.D
Date : 12-JUL-2004 16:06
Client ID: 848583-003
Sample Info: 48583B003WCJ1
Purge Volume: 5.0
Column phase: DB-624

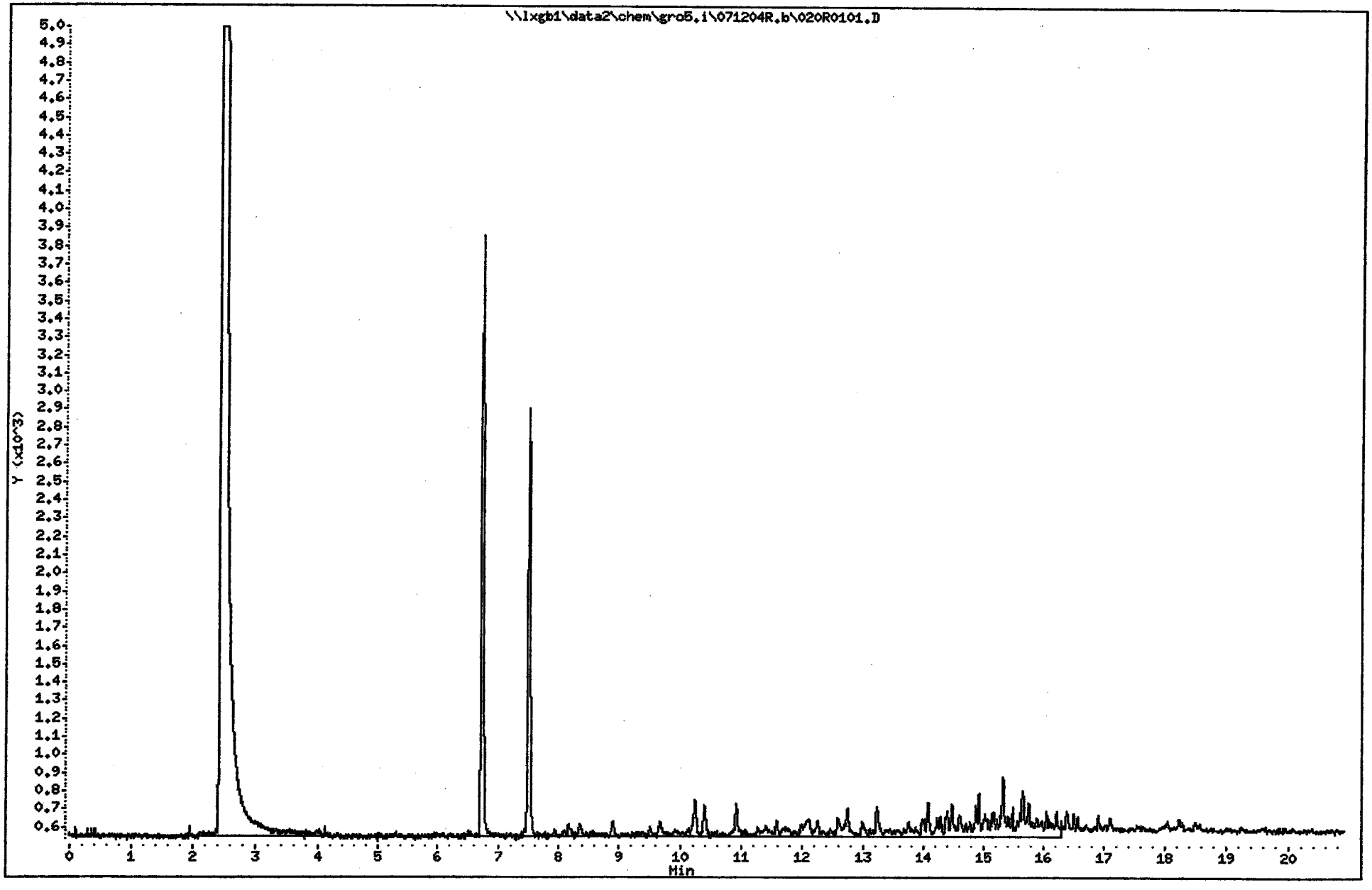
Instrument: gro5.i

Operator: SMT
Column diameter: 0.32



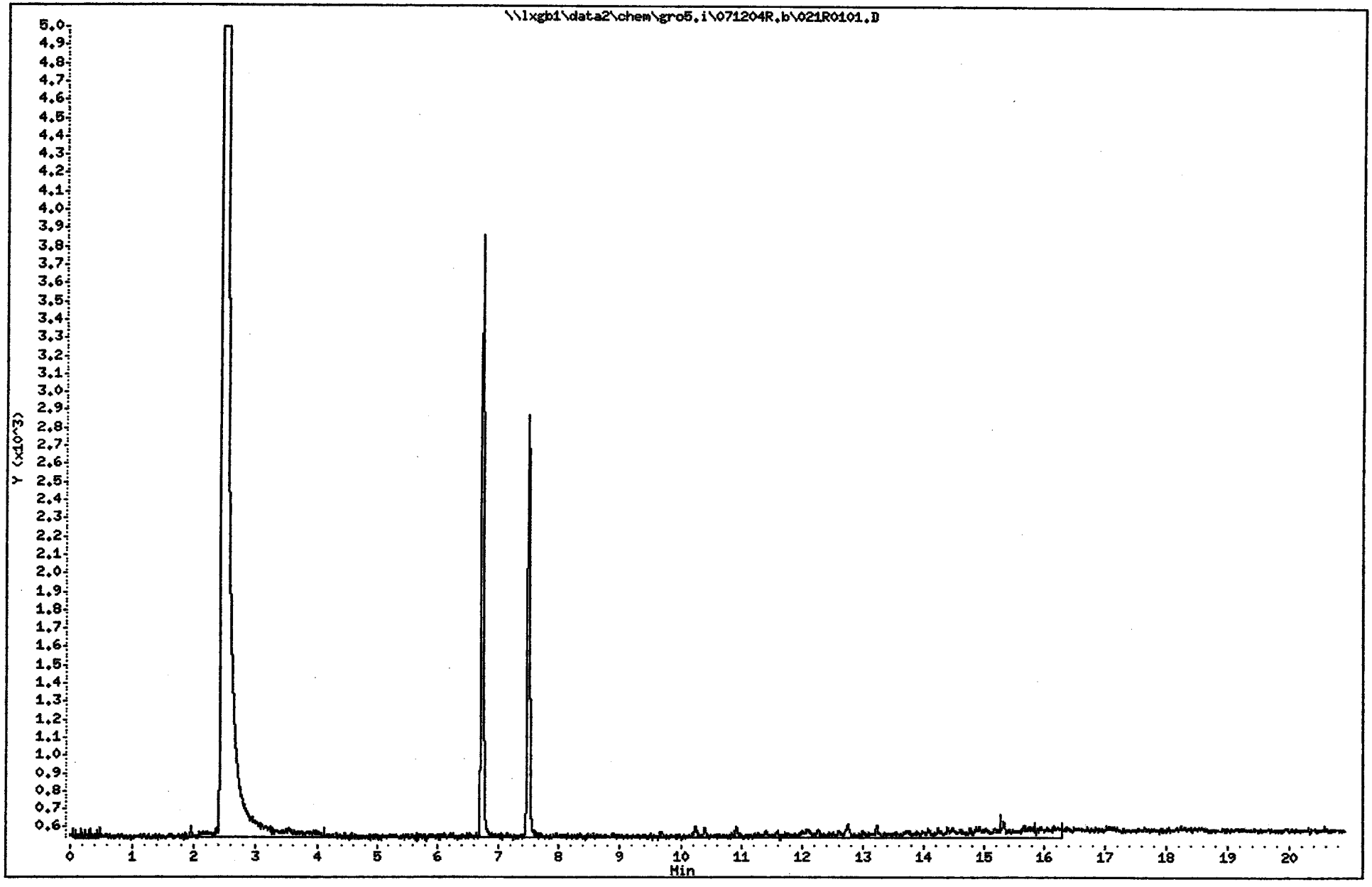
Data File: \\lxgb1\data2\chem\gro5.i\071204R.b\020R0101.D
Date : 12-JUL-2004 16:32
Client ID: 848583-004
Sample Info: 48583B004WCJ1
Purge Volume: 5.0
Column phase: DB-624

Instrument: gro5.i
Operator: SMT
Column diameter: 0.32



Data File: \\lxgb1\data2\chem\gro5.i\071204R.b\021R0101.D
Date : 12-JUL-2004 16:57
Client ID: 848583-005
Sample Info: 48583B005WCJ1
Purge Volume: 5.0
Column phase: DB-624

Instrument: gro5.i
Operator: SMT
Column diameter: 0.32



FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

BLKJ 1449-16

Lab Name: ENCHEM INC. - GREEN BAY Contract:

Lab Code: ENCHEMGB Case No.: SAS No.: SDG No.: GRO5-071204

Matrix: (soil/water) WATER Lab Sample ID: BLKJ 1449-16

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 008F0101

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 07/12/04

GC Column: DB-624 ID: 0.32 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	1.000	U
71-43-2	Benzene	1.000	U
108-88-3	Toluene	1.000	U
100-41-4	Ethylbenzene	1.000	U
108-38-3	m/p-Xylene	2.000	U
95-47-6	o-Xylene	1.000	U
108-67-8	1,3,5-Trimethylbenzene	1.000	U
95-63-6	1,2,4-Trimethylbenzene	1.000	U
91-20-3	Naphthalene	1.000	U
----------	Total Xylenes	3.000	U

FORM 3
WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ENCHEM INC. - GREEN BAY Contract:

Lab Code: ENCHEMGB Case No.: SAS No.: SDG No.: GRO5-071204

Matrix Spike - Sample No.: 847559-055

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Methyl tert-butyl ether	20.00	0.0000	21.58	108	79-120
Benzene	20.00	1.219	23.10	109	80-120
Toluene	20.00	0.0000	21.88	109	80-120
Ethylbenzene	20.00	1.190	23.08	109	80-120
m/p-Xylene	40.00	1.099	44.65	109	78-124
o-Xylene	20.00	0.0000	21.84	109	80-120
1,3,5-Trimethylbenzene	20.00	0.0000	21.70	108	71-124
1,2,4-Trimethylbenzene	20.00	0.0000	21.44	107	72-123
Naphthalene	20.00	0.0000	20.45	102	72-123
Total Xylenes	60.00	1.099	66.50	109	78-124

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Methyl tert-butyl ether	20.00	21.54	108	0	20	79-120
Benzene	20.00	22.88	108	1	20	80-120
Toluene	20.00	21.60	108	1	20	80-120
Ethylbenzene	20.00	22.82	108	1	20	80-120
m/p-Xylene	40.00	44.13	108	1	20	78-124
o-Xylene	20.00	21.62	108	1	20	80-120
1,3,5-Trimethylbenzene	20.00	21.42	107	1	20	71-124
1,2,4-Trimethylbenzene	20.00	21.24	106	1	20	72-123
Naphthalene	20.00	21.48	107	5	20	72-123
Total Xylenes	60.00	65.74	108	1	20	78-124

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

* Values outside of QC limits

RPD: 0 out of 10 outside limits
Spike Recovery: 0 out of 20 outside limits

COMMENTS: _____

_____

FORM 3
WATER VOLATILE BLANK SPIKE RECOVERY

Lab Name: ENCHEM INC. - GREEN BAY Contract:

Lab Code: ENCHEMGB Case No.: SAS No.: SDG No.: GRO5-071204

Matrix Spike - Sample No.: BLKJ 1449-16

COMPOUND	SPIKE ADDED (ug/L)	BLANK CONCENTRATION (ug/L)	BS CONCENTRATION (ug/L)	BS % REC #	QC. LIMITS REC.
Methyl tert-butyl ether	20.00	0.0000	20.32	102	82-116
Benzene	20.00	0.0000	20.40	102	85-115
Toluene	20.00	0.0000	20.19	101	85-115
Ethylbenzene	20.00	0.0000	19.99	100	85-115
m/p-Xylene	40.00	0.0000	40.16	100	85-115
o-Xylene	20.00	0.0000	20.36	102	85-115
1,3,5-Trimethylbenzene	20.00	0.0000	20.10	100	83-115
1,2,4-Trimethylbenzene	20.00	0.0000	20.02	100	82-115
Naphthalene	20.00	0.0000	19.19	96	80-120
Total Xylenes	60.00	0.0000	60.52	101	85-115

COMPOUND	SPIKE ADDED (ug/L)	BSD CONCENTRATION (ug/L)	BSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Methyl tert-butyl ether	20.00	20.47	102	1	20	82-116
Benzene	20.00	20.44	102	0	20	85-115
Toluene	20.00	20.20	101	0	20	85-115
Ethylbenzene	20.00	20.02	100	0	20	85-115
m/p-Xylene	40.00	40.24	101	0	20	85-115
o-Xylene	20.00	20.38	102	0	20	85-115
1,3,5-Trimethylbenzene	20.00	20.16	101	0	20	83-115
1,2,4-Trimethylbenzene	20.00	20.02	100	0	20	82-115
Naphthalene	20.00	19.55	98	2	20	80-120
Total Xylenes	60.00	60.63	101	0	20	85-115

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

* Values outside of QC limits

RPD: 0 out of 10 outside limits
Spike Recovery: 0 out of 20 outside limits

COMMENTS: _____

_____

Effective Date: July 14,2002

Surrogates
En Chem - Green Bay

Revised: 5/27/2004

	Aqueous		Low Level Solids		Methanol Solids	
GC VOA	LCL	UCL	LCL	UCL	LCL	UCL
α,α,α–Trifluorotoluene	80	124	65	139	80	119

	Aqueous		Low Level Solids		Methanol Solids	
GCMS VOA	LCL	UCL	LCL	UCL	LCL	UCL
Dibromofluoromethane	69	140	59	105	62	123
Toluene-d_8	72	137	63	118	73	123
4-Bromoflurobenzene	65	133	44	107	66	119

	Aqueous		Solids	
GCMS PAH	LCL	UCL	LCL	UCL
Nitrobenzene-$_{d5}$	30	170	35	126
2-Fluorobiphenyl	30	126	44	110
Terphenyl-d_{14}	56	148	38	145

	Aqueous		Solids	
GCMS BNA	LCL	UCL	LCL	UCL
2-Fluorophenol	13	70	35	113
Phenol-$_{d5}$	8	44	29	114
2-Chlorophenol-$_{d4}$	29	104	34	107
1,2-Dichlorobenzene-$_{d4}$	34	112	27	116
Nitrobenezene-$_{d5}$	34	126	32	118
2-Fluorobiphenyl	36	126	26	126
2,4,6-Tribromophenol	39	133	17	129
Terphenyl-$_{d14}$	56	139	23	141

	Aqueous		Solids	
GC PCB	LCL	UCL	LCL	UCL
Decachlorobiphenyl	22	133	11	142

	Aqueous		Solids	
TPH Diesel	LCL	UCL	LCL	UCL
o - Terphenyl	33	133	34	106

	Aqueous		Solids	
TPH Gas	LCL	UCL	LCL	UCL
α,α,α–Trifluorotoluene	80	124	69	146

(Please Print Legibly)
Company Name: Millsop Assoc.
Branch or Location:
Project Contact: Mark
Telephone: 218-763-2907
Project Number: M-029
Project Name: Wigwam
Project State: MN
Sampled By (Print): Mark Millsop
PO #:

EN CHEM INC.
...chemistry for the environment.
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Green Bay, WI 54302
920-469-2436
Fax 920-469-8827

CHAIN OF CUSTODY

No 117851

Page 1 of 1
Quote #:
Mail Report To: Millsop
Company:
Address:
Invoice To:
Company:
Address:
Mail Invoice To:

Data Package Options - (please circle if requested)
Sample Results Only (no QC)
EPA Level II (Subject to Surcharge)
EPA Level III (Subject to Surcharge)
EPA Level IV (Subject to Surcharge)

Regulatory Program: UST, RCRA, SDWA, NPDES, CERCLA

Matrix Codes: W=Water, S=Soil, A=Air, C=Charcoal, B=Biota, Sl=Sludge

*Preservation Codes: A=None, B=HCL, C=H2SO4, D=HNO3, E=EnCore, F=Methanol, G=NaOH, H=Sodium Bisulfate Solution, I=Sodium Thiosulfate, J=Other

LABORATORY ID (Lab Use Only)	FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO)	PRESERVATION (CODE)*	ANALYSES REQUESTED: DRO	GRO/BTEX/MTBE	BTEX	TOTAL # OF BOTTLES SENT	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)
	Temp Blank	7/8	am	W						1	Shared in	
001	Trip Blank							X		2	cooler	2-40mls H2O T.B.
002	Dupe							X		4	HOLD DRO	3-40mls
003	MW-1				N	B	X	X		4		1-1 Amber
004	MW-2				N	B	X	X		4		2-40mls
005	MW-3				N	B	X	X		4		3-40mls

Rush Turnaround Time Requested (TAT) - Prelim
(Rush TAT subject to approval/surcharge)
Date Needed:
Transmit Prelim Rush Results by (circle):
Phone Fax E-Mail
Phone #:
Fax #:
E-Mail Address:

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
Mark D. Millsop	7/8/04 4pm		
UPS			
			7/9/04 1005

En Chem Project No.: 848583
Sample Receipt Temp: 1°C
Sample Receipt pH (Wet Metals): N/A
Cooler Custody Seal Present / Not Present
Intact / Not Intact

Version 4.0: 07/03

EN CHEM INC.

Corporate Office & Laboratory
1241 Bellevue Street, Suite 9, Green Bay, WI 54302
920-469-2436, Fax: 920-469-8827
www.enchem.com

Analytical Report Number: 845326

Client: MILLSOP AND ASSOCIATES, INC.

Lab Contact: Eric Bullock

Project Name: WIGWAM

Project Number:

Lab Sample Number	Field ID	Matrix	Collection Date
845326-001	TRIP BLANK	WATER	04/06/04
845326-002	DUPE	WATER	04/06/04
845326-003	MW-1	WATER	04/06/04
845326-004	MW-2	WATER	04/06/04
845326-005	MW-3	WATER	04/06/04

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and Laboratory Standard Operating Procedure. Exceptions, if any, are discussed in the accompanying sample comments. Release of this final report is authorized by Laboratory management, as is verified by the following signature. Reported results shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested.

Approval Signature

4/15/04
Date

En Chem Inc.

1241 Bellevue Street
Green Bay, WI 54302
920-469-2436

Analytical Report Number: 845326

Client : MILLSOP AND ASSOCIATES, INC.
Project Name : WIGWAM
Project Number :
Field ID : TRIP BLANK

Matrix Type : WATER
Collection Date : 04/06/04
Report Date : 04/14/04
Lab Sample Number : 845326-001

BTEX

Prep Date: 04/10/04

Analyte		Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	<	1.0	1.0	1	ug/L		04/10/04	SW846 5030B	SW846 M8021B
Ethylbenzene	<	1.0	1.0	1	ug/L		04/10/04	SW846 5030B	SW846 M8021B
Toluene	<	1.0	1.0	1	ug/L		04/10/04	SW846 5030B	SW846 M8021B
Xylene, o	<	1.0	1.0	1	ug/L		04/10/04	SW846 5030B	SW846 M8021B
Xylenes, m + p	<	2.0	2.0	1	ug/L		04/10/04	SW846 5030B	SW846 M8021B
a,a,a-Trifluorotoluene		108	—	1	%Recov		04/10/04	SW846 5030B	SW846 M8021B

BTEX BLANK

Prep Date: 04/09/04

Analyte	Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
BTEX Blank ID	1397-89		1					

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Analytical Report Number: 845326

Client : MILLSOP AND ASSOCIATES, INC.
Project Name : WIGWAM
Project Number :
Field ID : DUPE

Matrix Type : WATER
Collection Date : 04/06/04
Report Date : 04/14/04
Lab Sample Number : 845326-002

BTEX

Prep Date: 04/10/04

Analyte		Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	<	1.0	1.0	1	ug/L		04/10/04	SW846 5030B	SW846 M8021B
Ethylbenzene		13	1.0	1	ug/L		04/10/04	SW846 5030B	SW846 M8021B
Toluene	<	1.0	1.0	1	ug/L		04/10/04	SW846 5030B	SW846 M8021B
Xylene, o		23	1.0	1	ug/L		04/10/04	SW846 5030B	SW846 M8021B
Xylenes, m + p		42	2.0	1	ug/L		04/10/04	SW846 5030B	SW846 M8021B
a,a,a-Trifluorotoluene		110	---	1	%Recov		04/10/04	SW846 5030B	SW846 M8021B

BTEX BLANK

Prep Date: 04/09/04

Analyte	Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
BTEX Blank ID	1397-89		1					

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Analytical Report Number: 845326

Client : MILLSOP AND ASSOCIATES, INC.
Project Name : WIGWAM
Project Number :
Field ID : MW-1

Matrix Type : WATER
Collection Date : 04/06/04
Report Date : 04/14/04
Lab Sample Number : 845326-003

DIESEL RANGE ORGANICS

Prep Date: 04/09/04

Analyte		Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
Diesel Range Organics		1000	94	1	ug/L		04/12/04	WI MOD DRO	WI MOD DRO
DRO Blank	<	50	50	1	ug/L		04/12/04	WI MOD DRO	WI MOD DRO
DRO Blank Spike		87	—	1	%Recov		04/12/04	WI MOD DRO	WI MOD DRO
DRO Blank Spike Duplicate		84	—	1	%Recov		04/12/04	WI MOD DRO	WI MOD DRO

BTEX + MTBE

Prep Date: 04/09/04

Analyte		Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	<	1.0	1.0	1	ug/L		04/09/04	SW846 5030B	WI MOD GRO
Ethylbenzene		8.7	1.0	1	ug/L		04/09/04	SW846 5030B	WI MOD GRO
Methyl-tert-butyl-ether	<	1.0	1.0	1	ug/L		04/09/04	SW846 5030B	WI MOD GRO
Toluene	<	1.0	1.0	1	ug/L		04/09/04	SW846 5030B	WI MOD GRO
Xylene, o		16	1.0	1	ug/L		04/09/04	SW846 5030B	WI MOD GRO
Xylenes, m + p		32	2.0	1	ug/L		04/09/04	SW846 5030B	WI MOD GRO
a,a,a-Trifluorotoluene		104	—	1	%Recov		04/09/04	SW846 5030B	WI MOD GRO

BTEX BLANK

Prep Date: 04/09/04

Analyte	Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
BTEX Blank ID	1397-88		1					

GASOLINE RANGE ORGANICS

Prep Date: 04/09/04

Analyte		Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
Gasoline Range Organics		3500	50	1	ug/L		04/09/04	WI MOD GRO	WI MOD GRO
GRO Blank	<	50	50	1	ug/L		04/09/04	WI MOD GRO	WI MOD GRO
GRO Blank Spike		100	—	1	%Recov		04/09/04	WI MOD GRO	WI MOD GRO
GRO Blank Spike Duplicate		100	—	1	%Recov		04/09/04	WI MOD GRO	WI MOD GRO

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Analytical Report Number: 845326

Client : MILLSOP AND ASSOCIATES, INC.
Project Name : WIGWAM
Project Number :
Field ID : MW-2

Matrix Type : WATER
Collection Date : 04/06/04
Report Date : 04/14/04
Lab Sample Number : 845326-004

DIESEL RANGE ORGANICS

Prep Date: 04/09/04

Analyte		Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
Diesel Range Organics		330	94	1	ug/L		04/12/04	WI MOD DRO	WI MOD DRO
DRO Blank	<	50	50	1	ug/L		04/12/04	WI MOD DRO	WI MOD DRO
DRO Blank Spike		87	—	1	%Recov		04/12/04	WI MOD DRO	WI MOD DRO
DRO Blank Spike Duplicate		84	—	1	%Recov		04/12/04	WI MOD DRO	WI MOD DRO

BTEX + MTBE

Prep Date: 04/10/04

Analyte		Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	<	1.0	1.0	1	ug/L		04/10/04	SW846 5030B	WI MOD GRO
Ethylbenzene	<	1.0	1.0	1	ug/L		04/10/04	SW846 5030B	WI MOD GRO
Methyl-tert-butyl-ether	<	1.0	1.0	1	ug/L		04/10/04	SW846 5030B	WI MOD GRO
Toluene	<	1.0	1.0	1	ug/L		04/10/04	SW846 5030B	WI MOD GRO
Xylene, o	<	1.0	1.0	1	ug/L		04/10/04	SW846 5030B	WI MOD GRO
Xylenes, m + p	<	2.0	2.0	1	ug/L		04/10/04	SW846 5030B	WI MOD GRO
a,a,a-Trifluorotoluene		108	—	1	%Recov		04/10/04	SW846 5030B	WI MOD GRO

BTEX BLANK

Prep Date: 04/09/04

Analyte	Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
BTEX Blank ID	1397-89		1					

GASOLINE RANGE ORGANICS

Prep Date: 04/10/04

Analyte		Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
Gasoline Range Organics	<	50	50	1	ug/L		04/10/04	WI MOD GRO	WI MOD GRO
GRO Blank	<	50	50	1	ug/L		04/10/04	WI MOD GRO	WI MOD GRO
GRO Blank Spike		103	—	1	%Recov		04/10/04	WI MOD GRO	WI MOD GRO
GRO Blank Spike Duplicate		90	—	1	%Recov		04/10/04	WI MOD GRO	WI MOD GRO

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Analytical Report Number: 845326

Client : MILLSOP AND ASSOCIATES, INC.
Project Name : WIGWAM
Project Number :
Field ID : MW-3

Matrix Type : WATER
Collection Date : 04/06/04
Report Date : 04/14/04
Lab Sample Number : 845326-005

DIESEL RANGE ORGANICS

Prep Date: 04/09/04

Analyte		Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
Diesel Range Organics		490	94	1	ug/L		04/12/04	WI MOD DRO	WI MOD DRO
DRO Blank	<	50	50	1	ug/L		04/12/04	WI MOD DRO	WI MOD DRO
DRO Blank Spike		87	---	1	%Recov		04/12/04	WI MOD DRO	WI MOD DRO
DRO Blank Spike Duplicate		84	---	1	%Recov		04/12/04	WI MOD DRO	WI MOD DRO

BTEX + MTBE

Prep Date: 04/10/04

Analyte		Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	<	1.0	1.0	1	ug/L		04/10/04	SW846 5030B	WI MOD GRO
Ethylbenzene	<	1.0	1.0	1	ug/L		04/10/04	SW846 5030B	WI MOD GRO
Methyl-tert-butyl-ether	<	1.0	1.0	1	ug/L		04/10/04	SW846 5030B	WI MOD GRO
Toluene	<	1.0	1.0	1	ug/L		04/10/04	SW846 5030B	WI MOD GRO
Xylene, o	<	1.0	1.0	1	ug/L		04/10/04	SW846 5030B	WI MOD GRO
Xylenes, m + p	<	2.0	2.0	1	ug/L		04/10/04	SW846 5030B	WI MOD GRO
a,a,a-Trifluorotoluene		108	---	1	%Recov		04/10/04	SW846 5030B	WI MOD GRO

BTEX BLANK

Prep Date: 04/09/04

Analyte	Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
BTEX Blank ID	1397-89		1					

GASOLINE RANGE ORGANICS

Prep Date: 04/10/04

Analyte		Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
Gasoline Range Organics	<	50	50	1	ug/L		04/10/04	WI MOD GRO	WI MOD GRO
GRO Blank	<	50	50	1	ug/L		04/10/04	WI MOD GRO	WI MOD GRO
GRO Blank Spike		103	---	1	%Recov		04/10/04	WI MOD GRO	WI MOD GRO
GRO Blank Spike Duplicate		90	---	1	%Recov		04/10/04	WI MOD GRO	WI MOD GRO

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Fax: 920-469-8827

Lab Number	TestGroupID	Field ID	Comment
845326-003	DRO-W	MW-1	Front eluting peaks were present along with diesel peaks.
845326-003	GRO-W	MW-1	Early and late eluting peaks were present outside the window of analysis.

Qualifier Codes

Flag	Applies To	Explanation
A	Inorganic	Analyte is detected in the method blank. Method blank criteria is evaluated to the laboratory method detection limit. Additionally, method blank acceptance may be based on project specific criteria or determined from analyte concentrations in the sample and are evaluated on a sample by sample basis.
B	Inorganic	The analyte has been detected between the method detection limit and the reporting limit.
B	Organic	Analyte is present in the method blank. Method blank criteria is evaluated to the laboratory method detection limit. Additionally, method blank acceptance may be based on project specific criteria or determined from analyte concentrations in the sample and are evaluated on a sample by sample basis.
C	All	Elevated detection limit.
D	All	Analyte value from diluted analysis or surrogate result not applicable due to sample dilution.
E	Inorganic	Estimated concentration due to matrix interferences. During the metals analysis the serial dilution failed to meet the established control limits of 0-10%. The sample concentration is greater than 50 times the IDL for analysis done on the ICP or 100 times the IDL for analysis done on the ICP-MS. The result was flagged with the E qualifier to indicate that a physical interference was observed.
E	Organic	Analyte concentration exceeds calibration range.
F	Inorganic	Due to potential interferences for this analysis by Inductively Coupled Plasma techniques (SW-846 Method 6010), this analyte has been confirmed by and reported from an alternate method.
F	Organic	Surrogate results outside control criteria.
H	All	Preservation, extraction or analysis performed past holding time.
HF	Inorganic	This test is considered a field parameter, and the recommended holding time is 15 minutes from collection. The analysis was performed in the laboratory beyond the recommended holding time.
J	Inorganic	The analyte has been detected between the method detection limit and the reporting limit.
J	Organic	Concentration detected is greater than the method detection limit but less than the reporting limit.
K	Inorganic	Sample received unpreserved. Sample was either preserved at the time of receipt or at the time of sample preparation.
K	Organic	Detection limit may be elevated due to the presence of an unrequested analyte.
L	All	Elevated detection limit due to low sample volume.
M	Organic	Sample pH was greater than 2
N	All	Spiked sample recovery not within control limits.
O	Organic	Sample received overweight.
P	Organic	The relative percent difference between the two columns for detected concentrations was greater than 40%.
Q	All	The analyte has been detected between the limit of detection (LOD) and limit of quantitation (LOQ). The results are qualified due to the uncertainty of analyte concentrations within this range.
S	Organic	The relative percent difference between quantitation and confirmation columns exceeds internal quality control criteria. Because the result is unconfirmed, it has been reported as a non-detect with an elevated detection limit.
U	All	The analyte was not detected at or above the reporting limit.
V	All	Sample received with headspace.
W	All	A second aliquot of sample was analyzed from a container with headspace.
X	All	See Sample Narrative.
&	All	Laboratory Control Spike recovery not within control limits.
*	All	Precision not within control limits.
<	All	The analyte was not detected at or above the reporting limit.
1	Inorganic	Dissolved analyte or filtered analyte greater than total analyte; analyses passed QC based on precision criteria.
2	Inorganic	Dissolved analyte or filtered analyte greater than total analyte; analyses failed QC based on precision criteria.
3	Inorganic	BOD result is estimated due to the BOD blank exceeding the allowable oxygen depletion.
4	Inorganic	BOD duplicate precision not within control limits. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.
5	Inorganic	BOD result is estimated due to insufficient oxygen depletion. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.
6	Inorganic	BOD laboratory control sample not within control limits. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.
7	Inorganic	BOD result is estimated due to complete oxygen depletion. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.

En Chem Inc.

Analysis Summary by Laboratory

1241 Bellevue Street
Green Bay, WI 54302

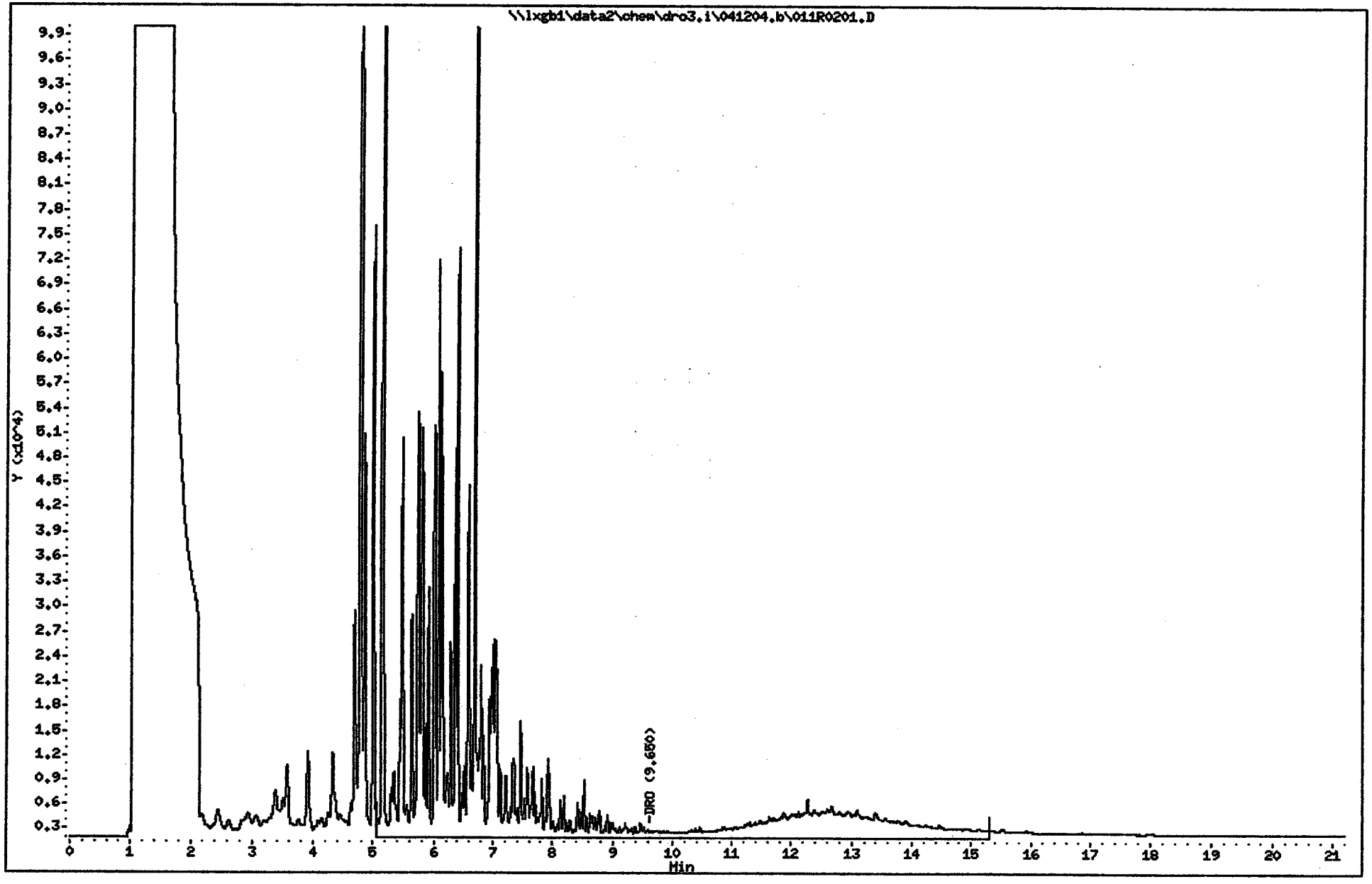
1090 Kennedy Avenue
Kimberly, WI 54136

Test Group Name	845326-001	845326-002	845326-003	845326-004	845326-005
BTEX	G	G			
BTEX + MTBE			G	G	G
BTEX BLANK	G	G	G	G	G
DIESEL RANGE ORGANICS			G	G	G
GASOLINE RANGE ORGANICS			G	G	G

Minnesota Certification	
G = En Chem Green Bay	055-999-334
K = En Chem Kimberly	055-999-107
S = En Chem Superior	Not Applicable
C = Subcontracted Analysis	

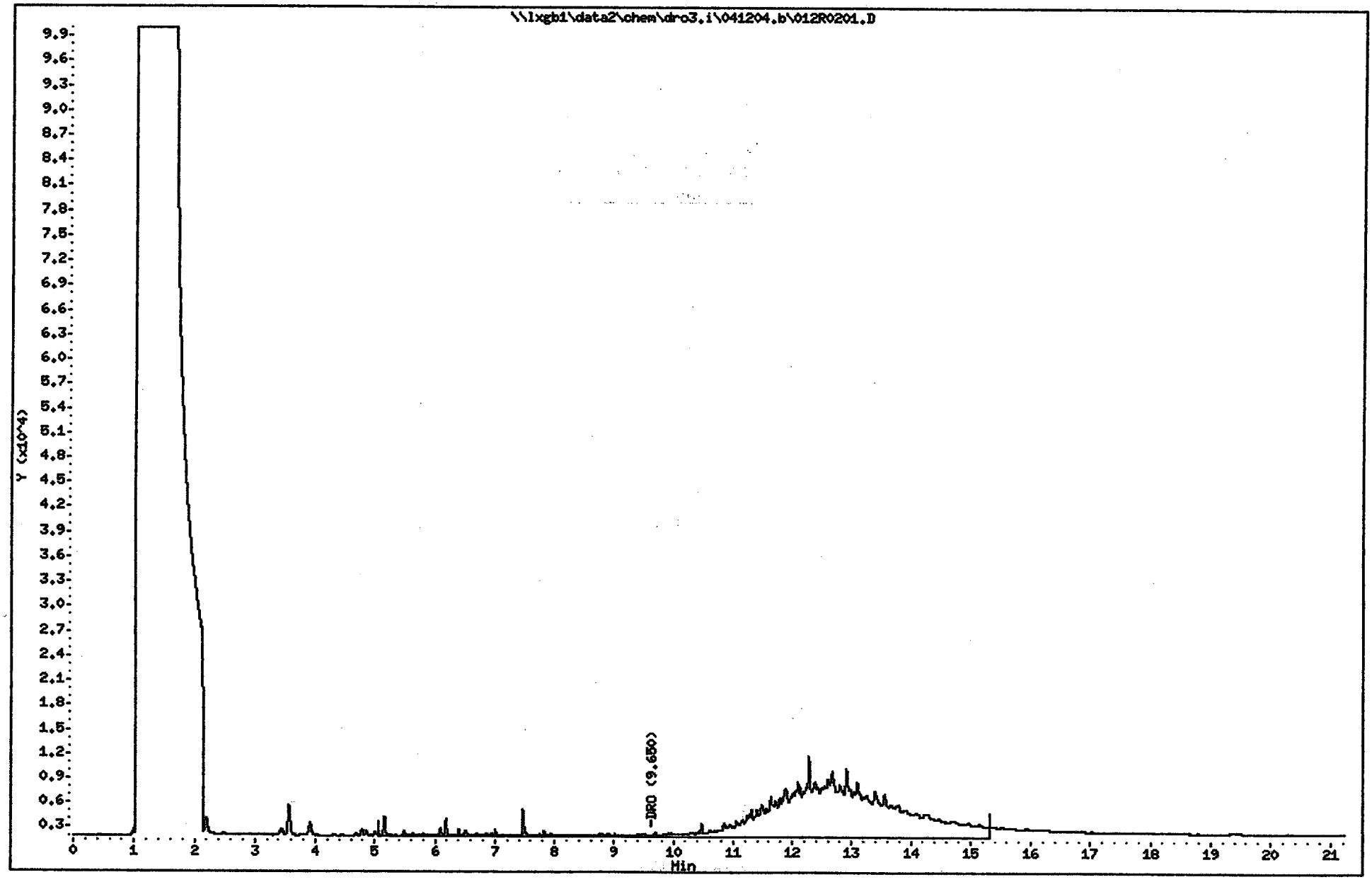
Data File: \\lxgb1\data2\chem\dro3.i\041204.b\011R0201.D
Date : 12-APR-2004 16:14
Client ID: 845326-003
Sample Info: 45326D003WQX1
Volume Injected (uL): 2.0
Column phase: RTX-5/I.G.

Instrument: dro3.i
Operator: SVH
Column diameter: 0.53



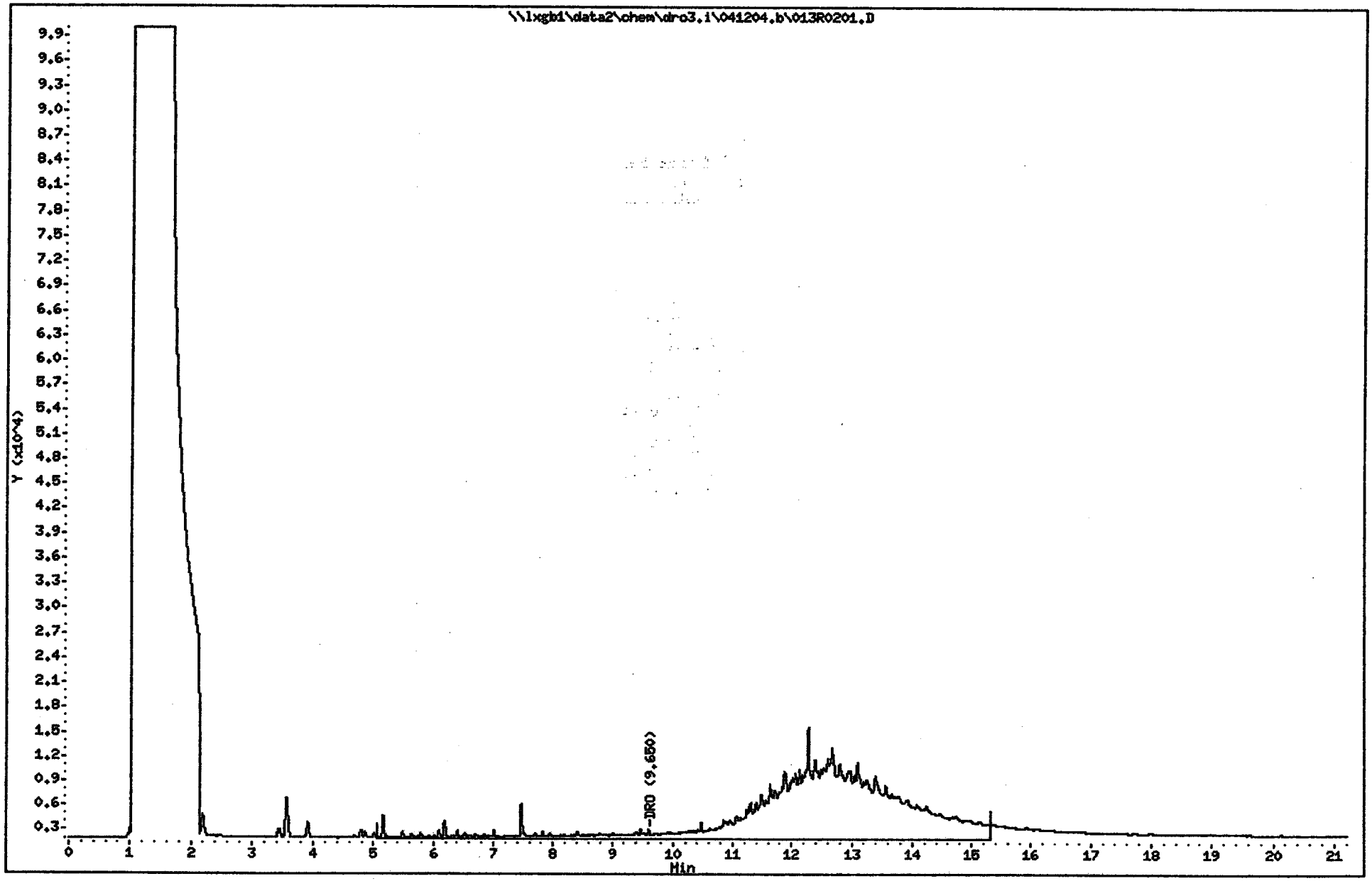
Data File: \\lxgb1\data2\chem\dro3.i\041204.b\012R0201.D
Date : 12-APR-2004 16:40
Client ID: 845326-004
Sample Info: 45326D004WQX1
Volume Injected (uL): 2.0
Column phase: RTX-5/I.G.

Instrument: dro3.i
Operator: SVH
Column diameter: 0.53



Data File: \\lxgb1\data2\chem\dro3.i\041204.b\013R0201.D
Date : 12-APR-2004 17:07
Client ID: 845326-005
Sample Info: 45326D005WDX1
Volume Injected (uL): 2.0
Column phase: RTX-5/I.G.

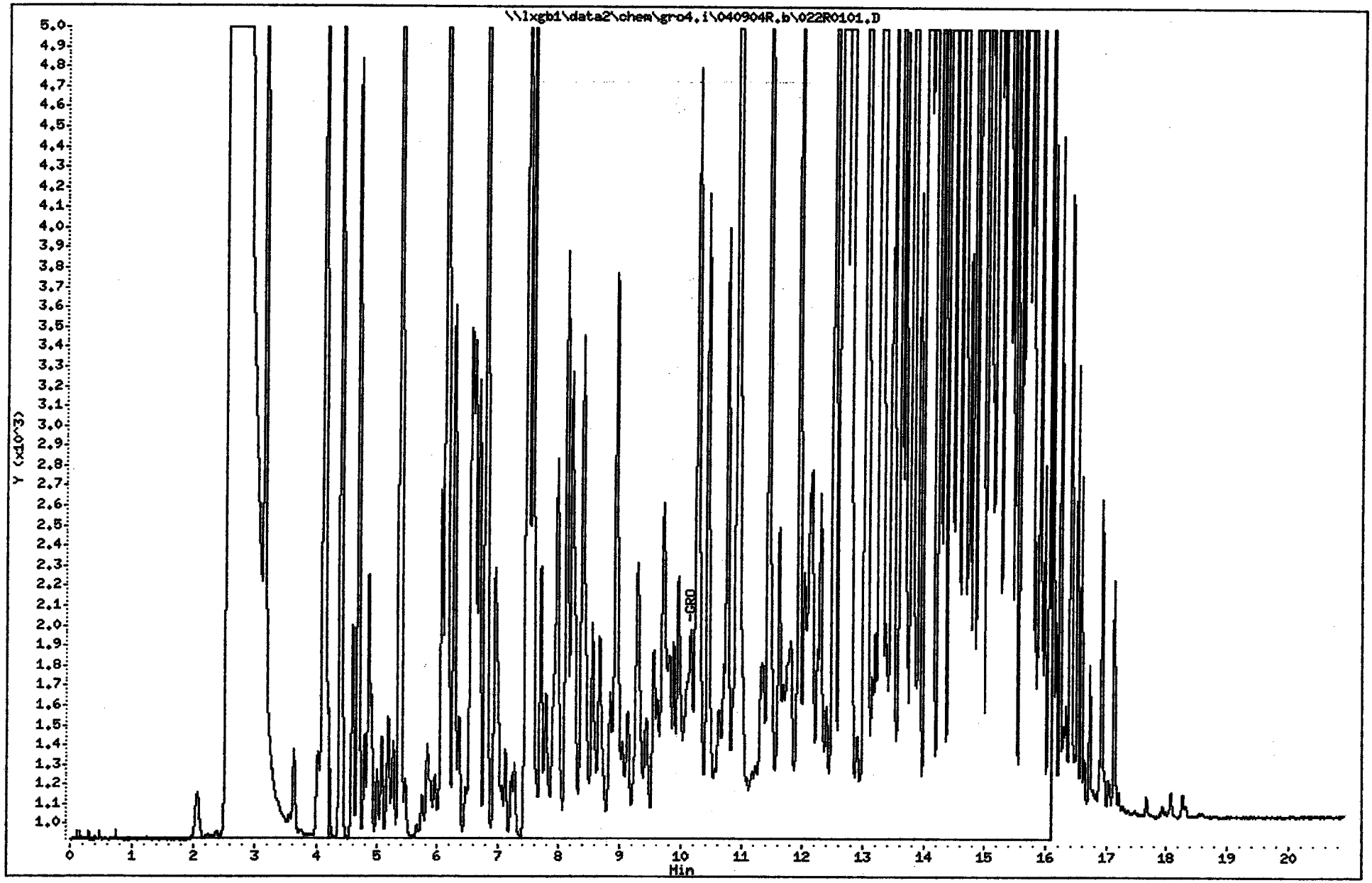
Instrument: dro3.i
Operator: SVH
Column diameter: 0.53



Data File: \\lxgb1\data2\chem\gro4.i\040904R.b\022R0101.D
Date : 09-APR-2004 16:19
Client ID: 845326-003
Sample Info: 45326B003WCM1
Purge Volume: 5.0
Column phase: DB-624

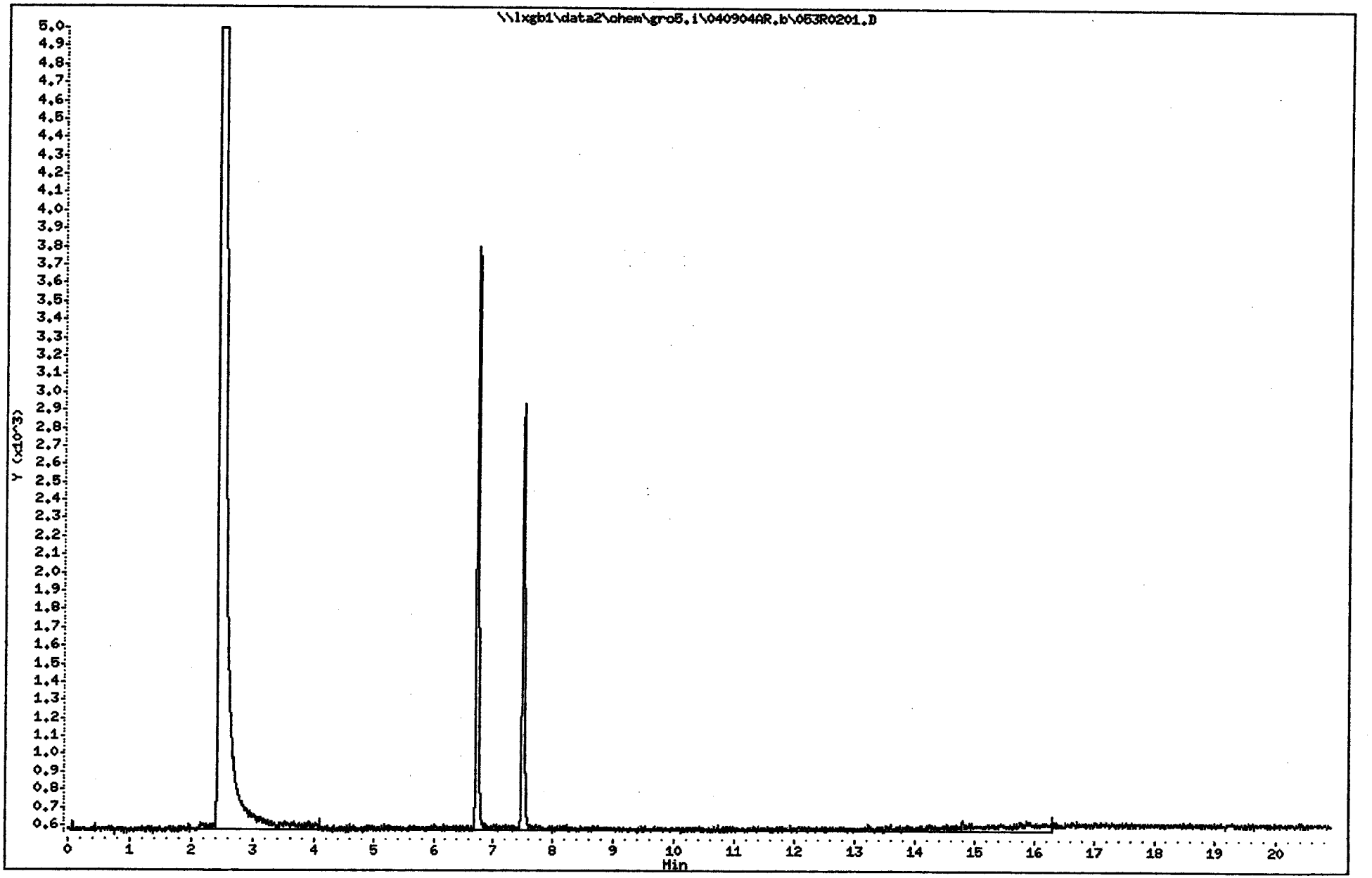
Instrument: gro4.i

Operator: SES
Column diameter: 0.32



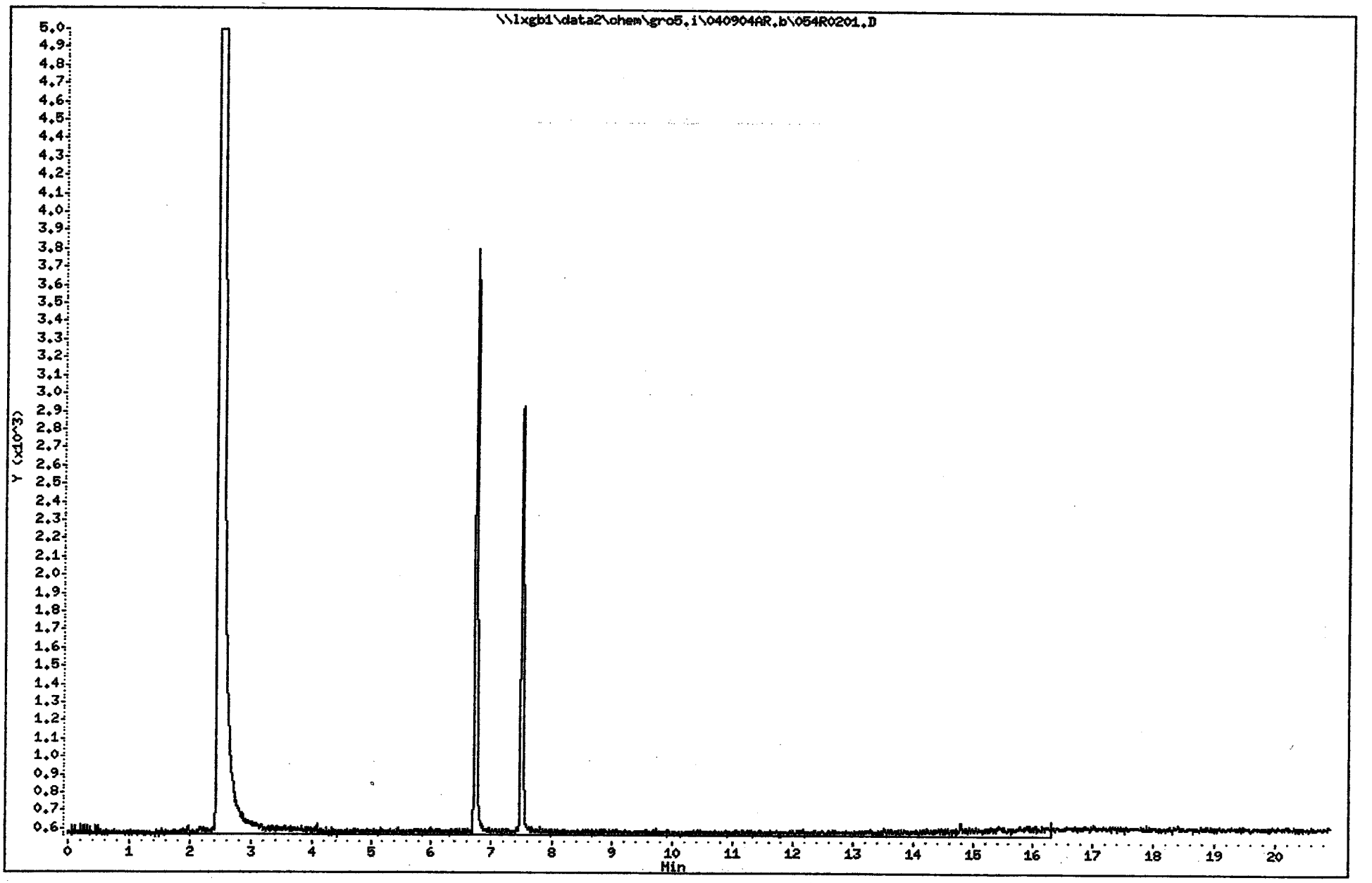
Data File: \\lxgb1\data2\chem\gro5.i\040904AR.b\053R0201.D
Date : 10-APR-2004 07:45
Client ID: 845326-004
Sample Info: 45326B004WCS1
Purge Volume: 5.0
Column phase: DB-624

Instrument: gro5.i
Operator: SMT
Column diameter: 0.32



Data File: \\lxgb1\data2\chem\gro5.i\040904AR.b\054R0201.D
Date : 10-APR-2004 08:11
Client ID: 845326-005
Sample Info: 45326B005WCS1
Purge Volume: 5.0
Column phase: DB-624

Instrument: gro5.i
Operator: SHT
Column diameter: 0.32



FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

BLKW 1397-88

Lab Name: ENCHEM INC. - GREEN BAY Contract:

Lab Code: ENCHEMGB Case No.: SAS No.: SDG No.: GRO4-040904

Matrix: (soil/water) WATER Lab Sample ID: BLKW 1397-88

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 006F0101

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 04/09/04

GC Column: DB-624 ID: 0.32 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	1.00	U
71-43-2	Benzene	1.00	U
108-88-3	Toluene	1.00	U
100-41-4	Ethylbenzene	1.00	U
108-38-3	m/p-Xylene	2.00	U
95-47-6	o-Xylene	1.00	U
108-67-8	1,3,5-Trimethylbenzene	1.00	U
95-63-6	1,2,4-Trimethylbenzene	1.00	U
91-20-3	Naphthalene	1.00	U
----------	Total Xylenes	3.00	U

FORM 3
WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ENCHEM INC. - GREEN BAY Contract:

Lab Code: ENCHEMGB Case No.: SAS No.: SDG No.: GRO4-040904

Matrix Spike - Sample No.: 844431-044

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Methyl tert-butyl ether	20.00	0.00	18.34	92	77-118
Benzene	20.00	2.64	22.09	97	62-135
Toluene	20.00	0.35	19.49	96	69-132
Ethylbenzene	20.00	9.68	28.79	96	61-137
m/p-Xylene	40.00	1.22	38.09	92	65-134
o-Xylene	20.00	2.64	21.40	94	68-132
1,3,5-Trimethylbenzene	20.00	0.21	18.01	89	57-136
1,2,4-Trimethylbenzene	20.00	1.78	19.56	89	59-134
Naphthalene	20.00	12.56	28.85	81	42-145
Total Xylenes	60.00	3.86	59.49	93	69-132

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Methyl tert-butyl ether	20.00	19.35	97	5	21	77-118
Benzene	20.00	22.92	101	4	30	62-135
Toluene	20.00	20.53	101	5	21	69-132
Ethylbenzene	20.00	29.93	101	4	22	61-137
m/p-Xylene	40.00	40.79	99	7	27	65-134
o-Xylene	20.00	22.48	99	5	21	68-132
1,3,5-Trimethylbenzene	20.00	19.33	96	7	33	57-136
1,2,4-Trimethylbenzene	20.00	20.89	96	6	31	59-134
Naphthalene	20.00	30.92	92	7	34	42-145
Total Xylenes	60.00	63.28	99	6	30	69-132

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

* Values outside of QC limits

RPD: 0 out of 10 outside limits
Spike Recovery: 0 out of 20 outside limits

COMMENTS: _____

FORM 3
WATER VOLATILE BLANK SPIKE RECOVERY

Lab Name: ENCHEM INC. - GREEN BAY Contract:

Lab Code: ENCHEMGB Case No.: SAS No.: SDG No.: GRO4-040904

Matrix Spike - Sample No.: BLKW 1397-88

COMPOUND	SPIKE ADDED (ug/L)	BLANK CONCENTRATION (ug/L)	BS CONCENTRATION (ug/L)	BS % REC #	QC. LIMITS REC.
Methyl tert-butyl ether	20.00	0.00	20.17	101	80-120
Benzene	20.00	0.00	21.07	105	80-120
Toluene	20.00	0.00	20.80	104	80-120
Ethylbenzene	20.00	0.00	20.85	104	80-120
m/p-Xylene	40.00	0.00	41.72	104	80-120
o-Xylene	20.00	0.00	20.57	103	80-120
1,3,5-Trimethylbenzene	20.00	0.00	21.33	107	80-120
1,2,4-Trimethylbenzene	20.00	0.00	20.66	103	80-120
Naphthalene	20.00	0.00	18.63	93	80-120
Total Xylenes	60.00	0.00	62.30	104	80-120

COMPOUND	SPIKE ADDED (ug/L)	BSD CONCENTRATION (ug/L)	BSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Methyl tert-butyl ether	20.00	20.24	101	0	20	80-120
Benzene	20.00	21.23	106	1	20	80-120
Toluene	20.00	20.94	105	1	20	80-120
Ethylbenzene	20.00	21.08	105	1	20	80-120
m/p-Xylene	40.00	42.04	105	1	20	80-120
o-Xylene	20.00	20.74	104	1	20	80-120
1,3,5-Trimethylbenzene	20.00	21.55	108	1	20	80-120
1,2,4-Trimethylbenzene	20.00	20.85	104	1	20	80-120
Naphthalene	20.00	17.05	85	9	20	80-120
Total Xylenes	60.00	62.79	105	1	20	80-120

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

* Values outside of QC limits

RPD: 0 out of 10 outside limits
Spike Recovery: 0 out of 20 outside limits

COMMENTS: _____

_____

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

BLKS 1397-89

Lab Name: ENCHEM INC. - GREEN BAY Contract:

Lab Code: ENCHEMGB Case No.: SAS No.: SDG No.: GRO5-040904A

Matrix: (soil/water) WATER Lab Sample ID: BLKS 1397-89

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 037F0201

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 04/10/04

GC Column: DB-624 ID: 0.32 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	1.000	U
71-43-2	Benzene	1.000	U
108-88-3	Toluene	1.000	U
100-41-4	Ethylbenzene	1.000	U
108-38-3	m/p-Xylene	2.000	U
95-47-6	o-Xylene	1.000	U
108-67-8	1,3,5-Trimethylbenzene	1.000	U
95-63-6	1,2,4-Trimethylbenzene	1.000	U
91-20-3	Naphthalene	1.000	U
----------	Total Xylenes	3.000	U

FORM 3
WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ENCHEM INC. - GREEN BAY Contract:

Lab Code: ENCHEMGB Case No.: SAS No.: SDG No.: GRO5-040904A

Matrix Spike - Sample No.: 844431-047

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Methyl tert-butyl ether	20.00	0.0000	20.81	104	77-118
Benzene	20.00	0.8150	21.74	105	62-135
Toluene	20.00	0.0000	21.01	105	69-132
Ethylbenzene	20.00	0.0000	20.85	104	61-137
m/p-Xylene	40.00	0.0000	40.44	101	65-134
o-Xylene	20.00	0.0000	20.39	102	68-132
1,3,5-Trimethylbenzene	20.00	0.0000	19.59	98	57-136
1,2,4-Trimethylbenzene	20.00	0.6073	19.44	94	59-134
Naphthalene	20.00	0.0000	19.06	95	42-145
Total Xylenes	60.00	0.0000	60.83	101	69-132

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Methyl tert-butyl ether	20.00	21.23	106	2	21	77-118
Benzene	20.00	22.54	109	4	30	62-135
Toluene	20.00	22.08	110	5	21	69-132
Ethylbenzene	20.00	22.05	110	6	22	61-137
m/p-Xylene	40.00	43.00	108	6	27	65-134
o-Xylene	20.00	21.44	107	5	21	68-132
1,3,5-Trimethylbenzene	20.00	21.08	105	7	33	57-136
1,2,4-Trimethylbenzene	20.00	21.10	102	8	31	59-134
Naphthalene	20.00	19.94	100	4	34	42-145
Total Xylenes	60.00	64.44	107	6	30	69-132

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

* Values outside of QC limits

RPD: 0 out of 10 outside limits
Spike Recovery: 0 out of 20 outside limits

COMMENTS: _____

FORM 3
WATER VOLATILE BLANK SPIKE RECOVERY

Lab Name: ENCHEM INC. - GREEN BAY Contract:

Lab Code: ENCHEMGB Case No.: SAS No.: SDG No.: GRO5-040904A

Matrix Spike - Sample No.: BLKS 1397-89

COMPOUND	SPIKE ADDED (ug/L)	BLANK CONCENTRATION (ug/L)	BS CONCENTRATION (ug/L)	BS % REC #	QC. LIMITS REC.
Methyl tert-butyl ether	20.00	0.0000	21.81	109	80-120
Benzene	20.00	0.0000	22.15	111	80-120
Toluene	20.00	0.0000	22.06	110	80-120
Ethylbenzene	20.00	0.0000	21.88	109	80-120
m/p-Xylene	40.00	0.0000	43.74	109	80-120
o-Xylene	20.00	0.0000	21.98	110	80-120
1,3,5-Trimethylbenzene	20.00	0.0000	21.96	110	80-120
1,2,4-Trimethylbenzene	20.00	0.0000	21.70	108	80-120
Naphthalene	20.00	0.0000	20.43	102	80-120
Total Xylenes	60.00	0.0000	65.72	110	80-120

COMPOUND	SPIKE ADDED (ug/L)	BSD CONCENTRATION (ug/L)	BSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Methyl tert-butyl ether	20.00	21.69	108	0	20	80-120
Benzene	20.00	22.10	110	0	20	80-120
Toluene	20.00	22.00	110	0	20	80-120
Ethylbenzene	20.00	21.92	110	0	20	80-120
m/p-Xylene	40.00	43.77	109	0	20	80-120
o-Xylene	20.00	22.00	110	0	20	80-120
1,3,5-Trimethylbenzene	20.00	21.98	110	0	20	80-120
1,2,4-Trimethylbenzene	20.00	21.67	108	0	20	80-120
Naphthalene	20.00	20.36	102	0	20	80-120
Total Xylenes	60.00	65.77	110	0	20	80-120

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

* Values outside of QC limits

RPD: 0 out of 10 outside limits
Spike Recovery: 0 out of 20 outside limits

COMMENTS: _____

_____

Surrogates
En Chem - Green Bay

Effective Date: 07/14/2002

	Aqueous		Low Level Solids		Methanol Solids	
Surrogate - GC VOA	LCL	UCL	LCL	UCL	LCL	UCL
α,α,α–Trifluorotoluene	61	149	54	144	62	154

Effective Date : 12/29/03

	Aqueous		Low Level Solids		Methanol Solids	
Surrogate - GCMS VOA	LCL	UCL	LCL	UCL	LCL	UCL
Dibromofluoromethane	69	140	59	105	62	123
Toluene-d_8	72	137	63	118	73	123
4-Bromoflurobenzene	65	133	66	119	44	107

Effective Date: 07/14/2002

	Aqueous		Solids	
Surrogate - GCMS PAH	LCL	UCL	LCL	UCL
Nitrobenzene-$_{d5}$	30	170	35	126
2-Fluorobiphenyl	30	126	44	110
Terphenyl-d_{14}	56	148	38	145

Effective Date: 07/14/2002

	Aqueous		Solids	
Surrogate - GCMS BNA	LCL	UCL	LCL	UCL
2-Fluorophenol	13	70	35	114
Phenol-$_{d5}$	8	44	29	114
2-Chlorophenol-$_{d4}$	29	104	34	107
1,2-Dichlorobenzene-$_{d4}$	34	112	27	116
Nitrobenezene-$_{d5}$	34	126	26	126
2-Fluorobiphenyl	36	126	26	126
2,4,6-Tribromophenol	39	133	17	129
Terphenyl-$_{d14}$	56	139	23	141

Effective Date: 07/14/2002

	Aqueous		Solids	
Surrogate - GC PCB	LCL	UCL	LCL	UCL
Decachlorobiphenyl	22	133	11	142

Effective Date: 07/14/2002

	Aqueous		Solids	
Surrogate - TPH Diesel	LCL	UCL	LCL	UCL
o - Terphenyl	33	133	34	106

Effective Date: 07/14/2002

	Aqueous		Solids	
Surrogate - TPH Gas	LCL	UCL	LCL	UCL
α,α,α–Trifluorotoluene	61	149	62	154

En Chem, Inc. Cooler Receipt Log

Batch No. 845326

Project Name or ID Wigwam No. of Coolers: 1 Temps: 0°C

A. Receipt Phase: Date cooler was opened: 4/8/04 **By:** dd

1: Were samples received on ice? (Must be ≤ 6 C)	YES	NO[2]	NA
2. Was there a Temperature Blank?	YES	NO	
3: Were custody seals present and intact on cooler? (Record on COC)	YES	NO	
4: Are COC documents present?	YES	NO[2]	
5: Does this Project require quick turn around analysis?	YES	NO	
6: Is there any sub-work?	YES	NO	
7: Are there any short hold time tests?	YES	NO	
8: Are any samples nearing expiration of hold-time? (Within 2 days)	YES[1]	NO	Contacted by/Who
9: Do any samples need to be Filtered or Preserved in the lab?	YES[1]	NO	Contacted by/Who

B. Check-in Phase: Date samples were Checked-in: 4/8/04 **By:** dd

1: Were all sample containers listed on the COC received and intact?	YES	NO[2]	NA
2: Sign the COC as received by En Chem. Completed	YES	NO	
3: Do sample labels match the COC?	YES	NO[2]	
4: Completed pH check on preserved samples.. *(This statement does not apply to water: VOC, O&G, TOC, DRO, Total Rec. Phenolics)*	YES	NO	NA
5: Do samples have correct chemical preservation? *(This statement does not apply to water: VOC, O&G, TOC, DRO, Total Rec. Phenolics)*	YES	NO[2]	NA
6: Are dissolved parameters field filtered?	YES	NO[2]	NA
7: Are sample volumes adequate for tests requested?	YES	NO[2]	
8: Are VOC samples free of bubbles >6mm	YES	NO[2]	NA
9: Enter samples into logbook. Completed	YES	NO	
10: Place laboratory sample number on all containers and COC. Completed	YES	NO	
11: Complete Laboratory Tracking Sheet (LTS). Completed	YES	NO	NA
12: Start Nonconformance form.	YES	NO	NA
13: Initiate Subcontracting procedure. Completed	YES	NO	NA
14: Check laboratory sample number on all containers and COC. KD	YES	NO	NA

Short Hold-time tests:

24 Hours or less	48 Hours	7 days
Coliform	BOD	Ash
Corrosivity = pH	Color	Aqueous Extractable Organics- ALL
Dissolved Oxygen	Nitrite or Nitrate	Flashpoint
Hexavalent Chromium	Ortho Phosphorus	Free Liquids
HPC	Surfactants	Sulfide
Ferrous Iron	Turbidity	TDS
Eh	En Core Preservation	TSS
Odor	Power stop preservation	Total Solids
Residual Chlorine		TVS
Sulfite		TVSS
		Unpreserved VOC's

Footnotes
1 Notify proper lab group immediately.
2 Complete nonconformance memo.

Rev. 2/05/04, Attachment to 1-REC-5.
Subject to QA Audit.

Reviewed by/date EB 4/9/04

p:/everyone/forms/samplereceiving/crl.doc

(Please Print Legibly)
Company Name: Millsop Assoc.
Branch or Location:
Project Contact: Mark
Telephone: 218-763-2907
Project Number:
Project Name: Wigwam
Project State: MN
Sampled By (Print): Mark Millsop
PO #:

EN CHEM INC.
...chemistry for the environment.
1241 Bellevue St., Suite 9
Green Bay, WI 54302
920-469-2436
Fax 920-469-8827

CHAIN OF CUSTODY

No: 115242

Page 1 of 1
Quote #:
Mail Report To: Millsop
Company:
Address:
Invoice To:
Company:
Address:
Mail Invoice To:

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=EnCore F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

Data Package Options - (please circle if requested)
Sample Results Only (no QC)
EPA Level II (Subject to Surcharge)
EPA Level III (Subject to Surcharge)
EPA Level IV (Subject to Surcharge)

Regulatory Program: UST, RCRA, SDWA, NPDES, CERCLA

Matrix Codes: W=Water, S=Soil, A=Air, C=Charcoal, B=Biota, Sl=Sludge

LABORATORY ID (Lab Use Only)	FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO)	PRESERVATION (CODE)*	ANALYSES REQUESTED: DRO	BTEX/MTBE/GRO	BTEX	TOTAL # OF BOTTLES SENT	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)
	~~Temp Blank~~	4/6	pm	W						1		
001	Trip "								X	2	40ml H2O Blk (B)	
002	Dupe				~~X~~				X	3	3-40ml B	
003	MW-1				X	X				4	1-L Amber B	
004	MW-2				X	X				4		
005	MW-3				X	X				4		

Rush Turnaround Time Requested (TAT) - Prelim
(Rush TAT subject to approval/surcharge)
Date Needed:
Transmit Prelim Rush Results by (circle):
Phone Fax E-Mail
Phone #:
Fax #:
E-Mail Address:

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
Mark D Millsop	4/7/04 11am	UPS	4/7/04
UPS	4/8/04 10:10	Lori Stevens	4/8/04 10:10

En Chem Project No.: 845326
Sample Receipt Temp.: 0°C
Sample Receipt pH (if applicable): N/A
Cooler Custody Seal: Present / Not Present
Intact / Not Intact

Version 4.0: 07/03

EN CHEM INC.

Corporate Office & Laboratory
1241 Bellevue Street, Suite 9, Green Bay, WI 54302
920-469-2436, 800-7-ENCHEM, Fax: 920-469-8827
www.enchem.com

Analytical Report Number: 841068

Client : MILLSOP AND ASSOCIATES, INC.

Project Name : WIGWAM INN

Project Number : M-029

Lab Sample Number	Field ID	Matrix	Collection Date
841068-001	MW-1	WATER	11/13/03
841068-002	MW-2	WATER	11/13/03
841068-003	MW-3	WATER	11/13/03
841068-004	DUPE	WATER	11/13/03

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and Laboratory Standard Operating Procedure. Exceptions, if any, are discussed in the accompanying sample comments. Release of this final report is authorized by Laboratory management, as is verified by the following signature. Reported results shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested.

Approval Signature

11/24/3
Date

En Chem Inc.

1241 Bellevue Street
Green Bay, WI 54302
920-469-2436

Analytical Report Number: 841068

Client : MILLSOP AND ASSOCIATES, INC.
Project Name : WIGWAM INN
Project Number : M-029
Field ID : MW-1

Matrix Type : WATER
Collection Date : 11/13/03
Report Date : 11/20/03
Lab Sample Number : 841068-001

DIESEL RANGE ORGANICS

Prep Date: 11/17/03

Analyte		Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
Diesel Range Organics		3000	100	1	ug/L		11/18/03	WI MOD DRO	WI MOD DRO
DRO Blank	<	50	50	1	ug/L		11/18/03	WI MOD DRO	WI MOD DRO
DRO Blank Spike		92	---	1	%Recov		11/18/03	WI MOD DRO	WI MOD DRO
DRO Blank Spike Duplicate		93	---	1	%Recov		11/18/03	WI MOD DRO	WI MOD DRO

BTEX + MTBE

Prep Date: 11/18/03

Analyte		Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	<	2.5	2.5	2.5	ug/L		11/18/03	SW846 5030B	WI MOD GRO
Ethylbenzene		17	2.5	2.5	ug/L		11/18/03	SW846 5030B	WI MOD GRO
Methyl-tert-butyl-ether	<	2.5	2.5	2.5	ug/L		11/18/03	SW846 5030B	WI MOD GRO
Toluene	<	2.5	2.5	2.5	ug/L		11/18/03	SW846 5030B	WI MOD GRO
Xylene, o		31	2.5	2.5	ug/L		11/18/03	SW846 5030B	WI MOD GRO
Xylenes, m + p		53	5.0	2.5	ug/L		11/18/03	SW846 5030B	WI MOD GRO
a,a,a-Trifluorotoluene		94	---	1	%Recov		11/18/03	SW846 5030B	WI MOD GRO

BTEX BLANK

Prep Date: 11/16/03

Analyte	Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
BTEX Blank ID	1337-46		1					

GASOLINE RANGE ORGANICS

Prep Date: 11/18/03

Analyte		Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
Gasoline Range Organics		3800	120	2.5	ug/L		11/18/03	WI MOD GRO	WI MOD GRO
GRO Blank	<	50	50	1	ug/L		11/18/03	WI MOD GRO	WI MOD GRO
GRO Blank Spike		93	---	1	%Recov		11/18/03	WI MOD GRO	WI MOD GRO
GRO Blank Spike Duplicate		102	---	1	%Recov		11/18/03	WI MOD GRO	WI MOD GRO

En Chem Inc.

1241 Bellevue Street
Green Bay, WI 54302
920-469-2436

Analytical Report Number: 841068

Client : MILLSOP AND ASSOCIATES, INC.
Project Name : WIGWAM INN
Project Number : M-029
Field ID : MW-2

Matrix Type : WATER
Collection Date : 11/13/03
Report Date : 11/20/03
Lab Sample Number : 841068-002

DIESEL RANGE ORGANICS

Prep Date: 11/17/03

Analyte		Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
Diesel Range Organics	<	100	100	1	ug/L		11/18/03	WI MOD DRO	WI MOD DRO
DRO Blank	<	50	50	1	ug/L		11/18/03	WI MOD DRO	WI MOD DRO
DRO Blank Spike		92	---	1	%Recov		11/18/03	WI MOD DRO	WI MOD DRO
DRO Blank Spike Duplicate		93	---	1	%Recov		11/18/03	WI MOD DRO	WI MOD DRO

BTEX + MTBE

Prep Date: 11/17/03

Analyte		Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	<	1.0	1.0	1	ug/L		11/17/03	SW846 5030B	WI MOD GRO
Ethylbenzene	<	1.0	1.0	1	ug/L		11/17/03	SW846 5030B	WI MOD GRO
Methyl-tert-butyl-ether	<	1.0	1.0	1	ug/L		11/17/03	SW846 5030B	WI MOD GRO
Toluene	<	1.0	1.0	1	ug/L		11/17/03	SW846 5030B	WI MOD GRO
Xylene, o	<	1.0	1.0	1	ug/L		11/17/03	SW846 5030B	WI MOD GRO
Xylenes, m + p	<	2.0	2.0	1	ug/L		11/17/03	SW846 5030B	WI MOD GRO
a,a,a-Trifluorotoluene		100	---	1	%Recov		11/17/03	SW846 5030B	WI MOD GRO

BTEX BLANK

Prep Date: 11/16/03

Analyte	Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
BTEX Blank ID	1337-46		1					

GASOLINE RANGE ORGANICS

Prep Date: 11/17/03

Analyte		Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
Gasoline Range Organics	<	50	50	1	ug/L		11/17/03	WI MOD GRO	WI MOD GRO
GRO Blank	<	50	50	1	ug/L		11/17/03	WI MOD GRO	WI MOD GRO
GRO Blank Spike		93	---	1	%Recov		11/17/03	WI MOD GRO	WI MOD GRO
GRO Blank Spike Duplicate		102	---	1	%Recov		11/17/03	WI MOD GRO	WI MOD GRO

En Chem Inc.

1241 Bellevue Street
Green Bay, WI 54302
920-469-2436

Analytical Report Number: 841068

Client : MILLSOP AND ASSOCIATES, INC.
Project Name : WIGWAM INN
Project Number : M-029
Field ID : MW-3

Matrix Type : WATER
Collection Date : 11/13/03
Report Date : 11/20/03
Lab Sample Number : 841068-003

DIESEL RANGE ORGANICS

Prep Date: 11/17/03

Analyte		Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
Diesel Range Organics	<	100	100	1	ug/L		11/18/03	WI MOD DRO	WI MOD DRO
DRO Blank	<	50	50	1	ug/L		11/18/03	WI MOD DRO	WI MOD DRO
DRO Blank Spike		92	---	1	%Recov		11/18/03	WI MOD DRO	WI MOD DRO
DRO Blank Spike Duplicate		93	---	1	%Recov		11/18/03	WI MOD DRO	WI MOD DRO

BTEX + MTBE

Prep Date: 11/18/03

Analyte		Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	<	1.0	1.0	1	ug/L		11/18/03	SW846 5030B	WI MOD GRO
Ethylbenzene	<	1.0	1.0	1	ug/L		11/18/03	SW846 5030B	WI MOD GRO
Methyl-tert-butyl-ether	<	1.0	1.0	1	ug/L		11/18/03	SW846 5030B	WI MOD GRO
Toluene	<	1.0	1.0	1	ug/L		11/18/03	SW846 5030B	WI MOD GRO
Xylene, o	<	1.0	1.0	1	ug/L		11/18/03	SW846 5030B	WI MOD GRO
Xylenes, m + p	<	2.0	2.0	1	ug/L		11/18/03	SW846 5030B	WI MOD GRO
a,a,a-Trifluorotoluene		101	---	1	%Recov		11/18/03	SW846 5030B	WI MOD GRO

BTEX BLANK

Prep Date: 11/16/03

Analyte	Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
BTEX Blank ID	1337-46		1					

GASOLINE RANGE ORGANICS

Prep Date: 11/18/03

Analyte		Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
Gasoline Range Organics	<	50	50	1	ug/L		11/18/03	WI MOD GRO	WI MOD GRO
GRO Blank	<	50	50	1	ug/L		11/18/03	WI MOD GRO	WI MOD GRO
GRO Blank Spike		93	---	1	%Recov		11/18/03	WI MOD GRO	WI MOD GRO
GRO Blank Spike Duplicate		102	---	1	%Recov		11/18/03	WI MOD GRO	WI MOD GRO

En Chem Inc.

1241 Bellevue Street
Green Bay, WI 54302
920-469-2436

Analytical Report Number: 841068

Client : MILLSOP AND ASSOCIATES, INC.
Project Name : WIGWAM INN
Project Number : M-029
Field ID : DUPE

Matrix Type : WATER
Collection Date : 11/13/03
Report Date : 11/20/03
Lab Sample Number : 841068-004

BTEX

Prep Date: 11/18/03

Analyte		Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	<	1.0	1.0	1	ug/L		11/18/03	SW846 5030B	SW846 M8021B
Ethylbenzene		17	1.0	1	ug/L		11/18/03	SW846 5030B	SW846 M8021B
Toluene	<	1.0	1.0	1	ug/L		11/18/03	SW846 5030B	SW846 M8021B
Xylene, o		31	1.0	1	ug/L		11/18/03	SW846 5030B	SW846 M8021B
Xylenes, m + p		52	2.0	1	ug/L		11/18/03	SW846 5030B	SW846 M8021B
a,a,a-Trifluorotoluene		105	---	1	%Recov		11/18/03	SW846 5030B	SW846 M8021B

BTEX BLANK

Prep Date: 11/16/03

Analyte	Result	EQL	Dilution	Units	Code	Anl Date	Prep Method	Anl Method
BTEX Blank ID	1337-46		1					

En Chem Inc.

1241 Bellevue Street
Green Bay, WI 54302
920-469-2436
800-7-ENCHEM
Fax: 920-469-8827

Lab Number	TestGroupID	Field ID	Comment
841068-001	DRO-W	MW-1	Front eluting peaks, late eluting hump and diesel range peaks were present in the chromatogram.
841068-001	GRO-W	MW-1	Early and late eluting peaks were present outside the window of analysis.

En Chem Inc.

Analysis Summary by Laboratory

1241 Bellevue Street
Green Bay, WI 54302

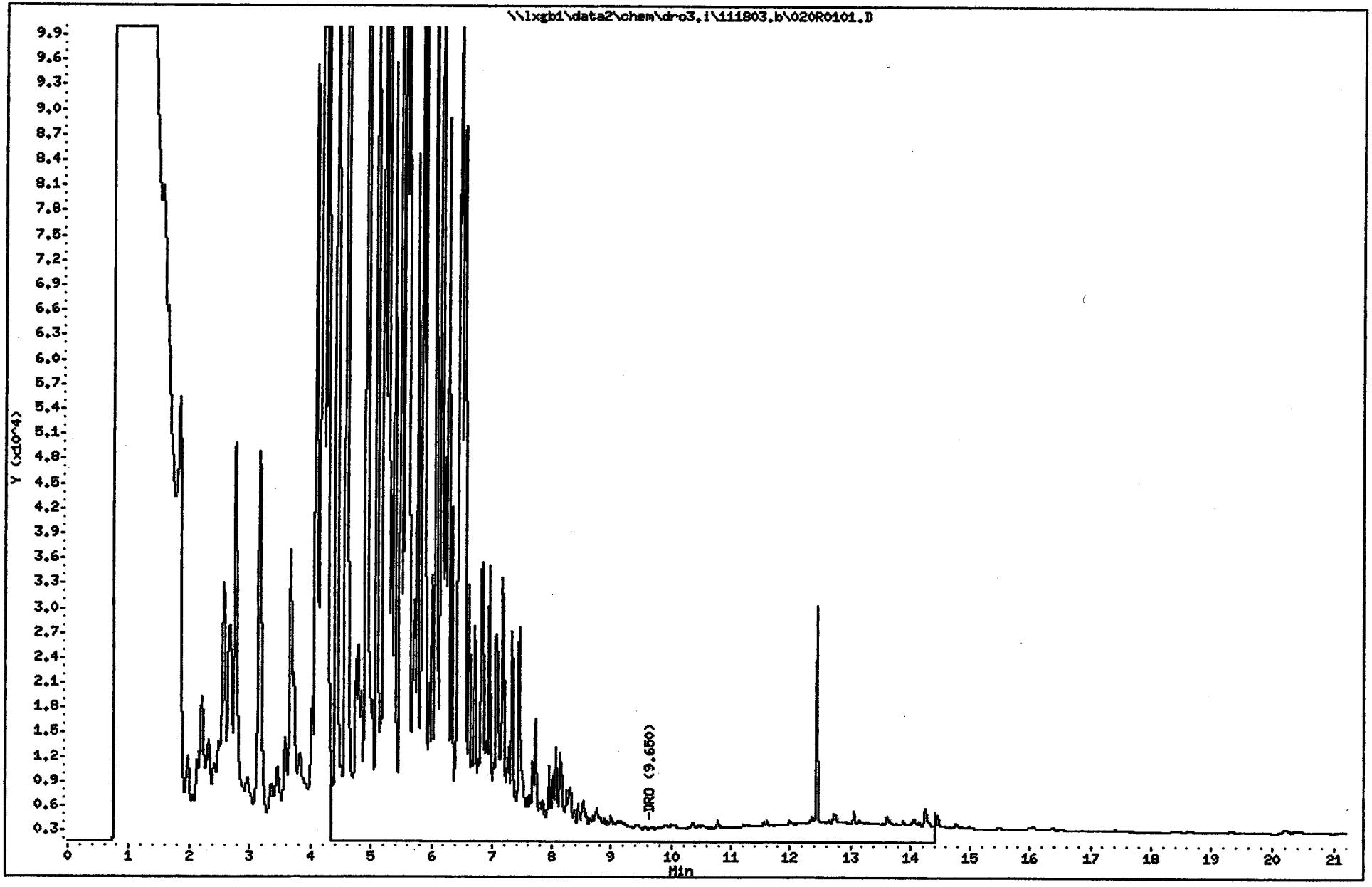
1090 Kennedy Avenue
Kimberly, WI 54136

Test Group Name	841068-001	841068-002	841068-003	841068-004
BTEX				G
BTEX + MTBE	G	G	G	
BTEX BLANK	G	G	G	G
DIESEL RANGE ORGANICS	G	G	G	
GASOLINE RANGE ORGANICS	G	G	G	

Minnesota Certification	
G = En Chem Green Bay	055-999-334
K = En Chem Kimberly	055-999-107
S = En Chem Superior	Not Applicable
C = Subcontracted Analysis	

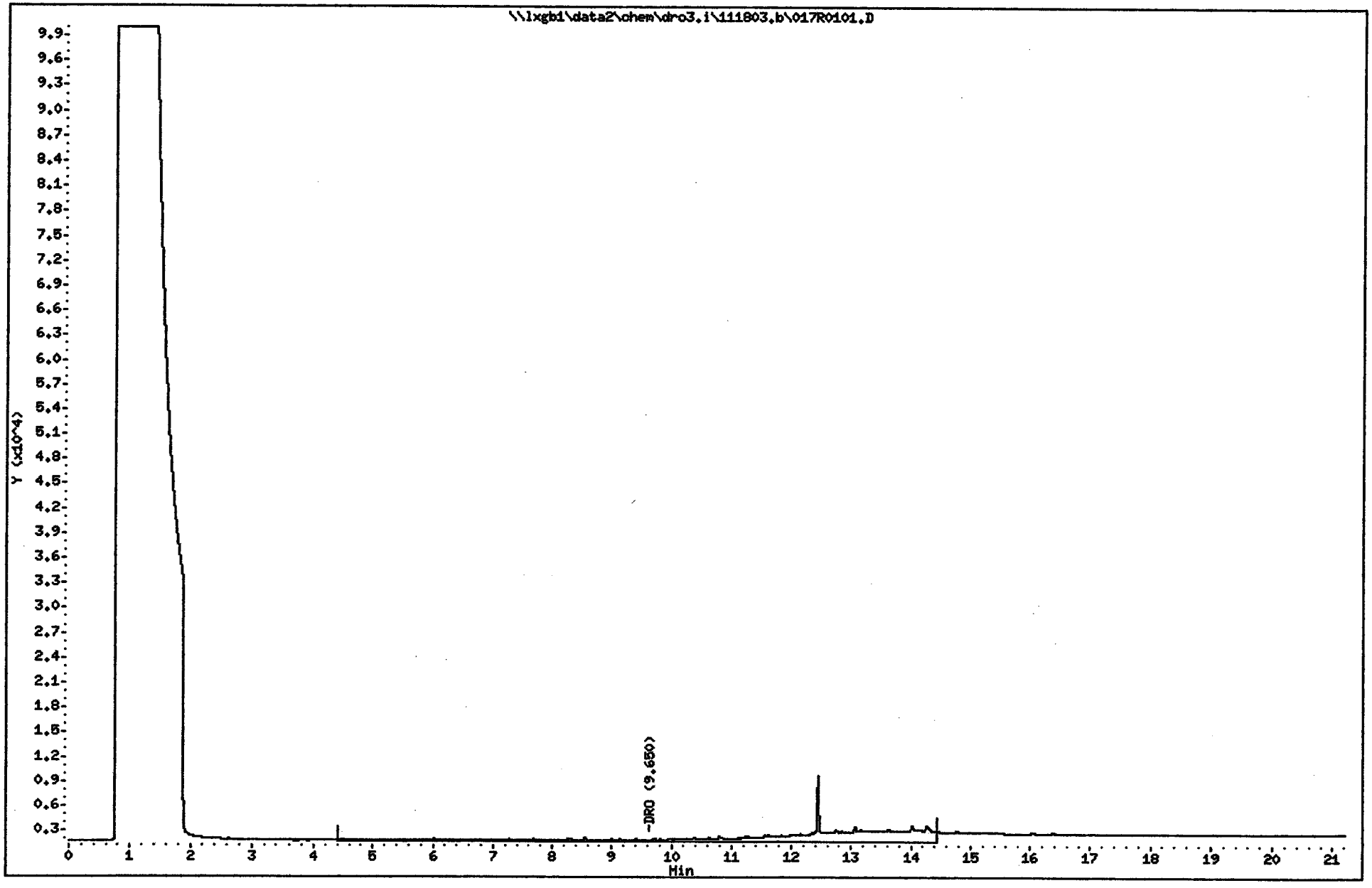
Data File: \\lxgb1\data2\chem\dro3.i\111803.b\020R0101.D
Date : 18-NOV-2003 16:39
Client ID: 841068-001
Sample Info: 41068S001WOX1
Volume Injected (uL): 2.0
Column phase: RTX-5/I.G.

Instrument: dro3.i
Operator: KEG
Column diameter: 0.53



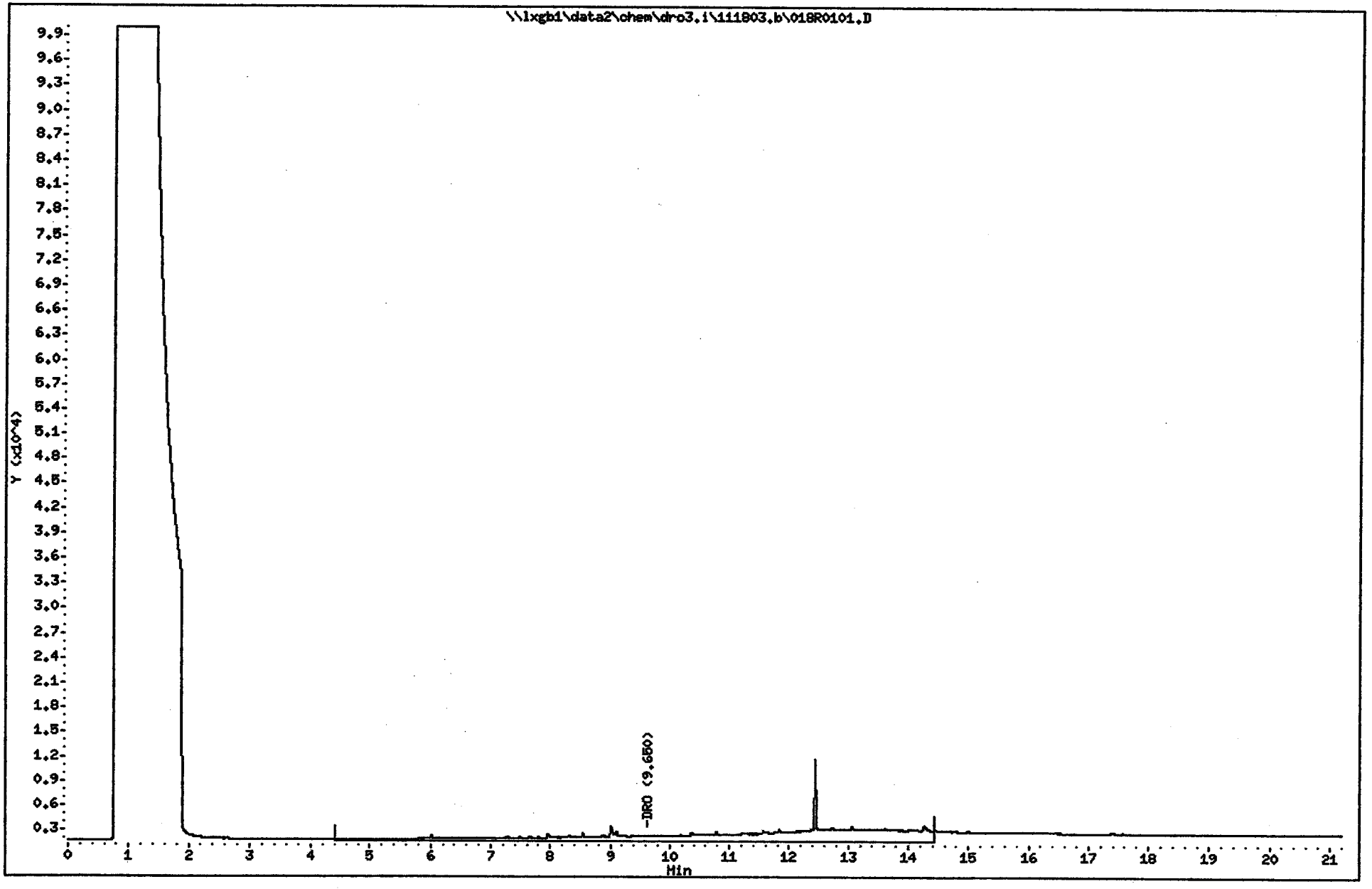
Data File: \\lxgb1\data2\chem\dro3.i\111803.b\017R0101.D
Date : 18-NOV-2003 15:20
Client ID: 841068-002
Sample Info: 41068D002WOX1
Volume Injected (uL): 2.0
Column phase: RTX-5/I.G.

Instrument: dro3.i
Operator: KEG
Column diameter: 0.53



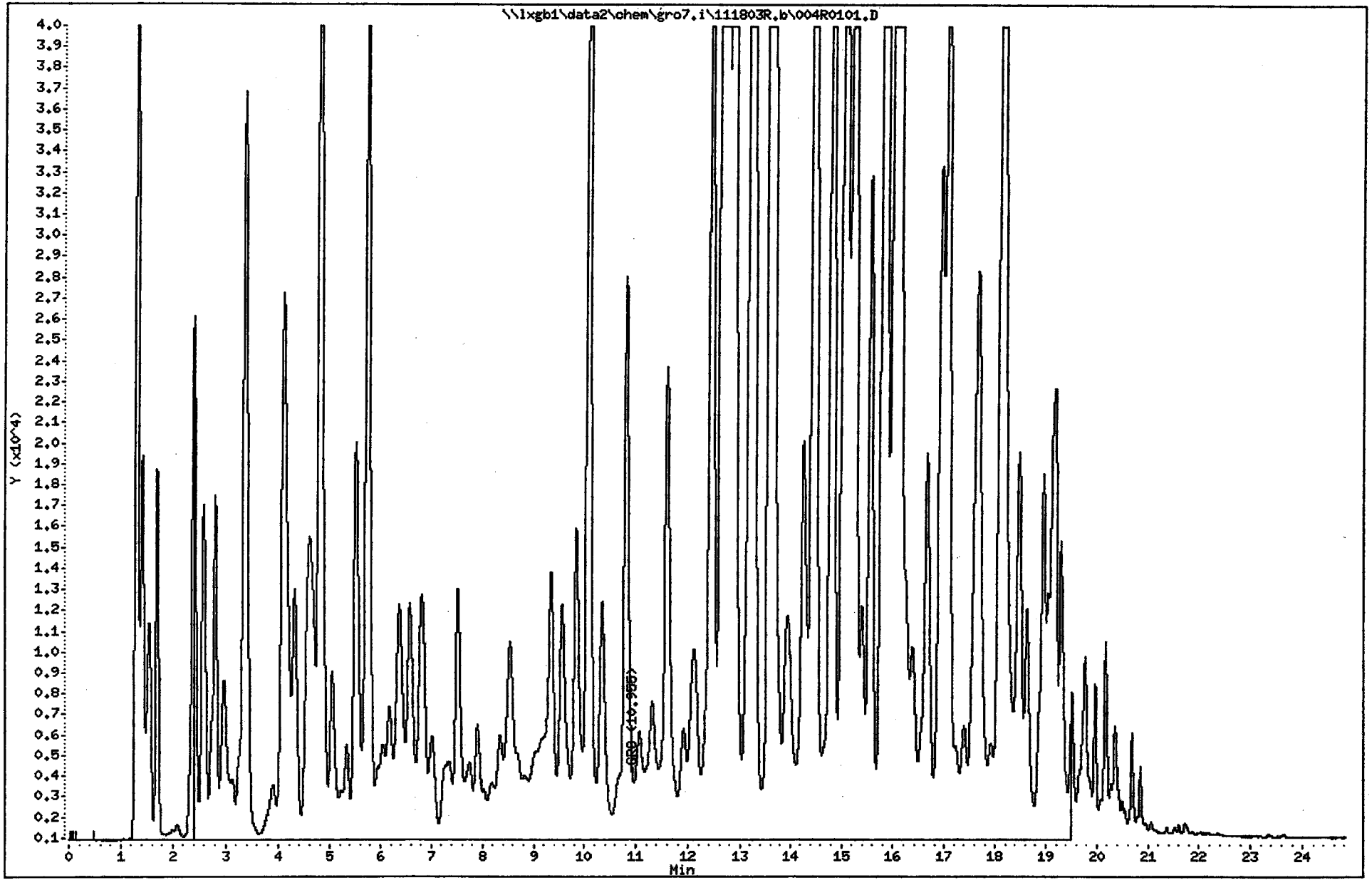
Data File: \\lxgb1\data2\chem\dro3.i\111803.b\018R0101.D
Date : 18-NOV-2003 15:46
Client ID: 841068-003
Sample Info: 41068D003WDX1
Volume Injected (uL): 2.0
Column phase: RTX-5/I.G.

Instrument: dro3.i
Operator: KEG
Column diameter: 0.53



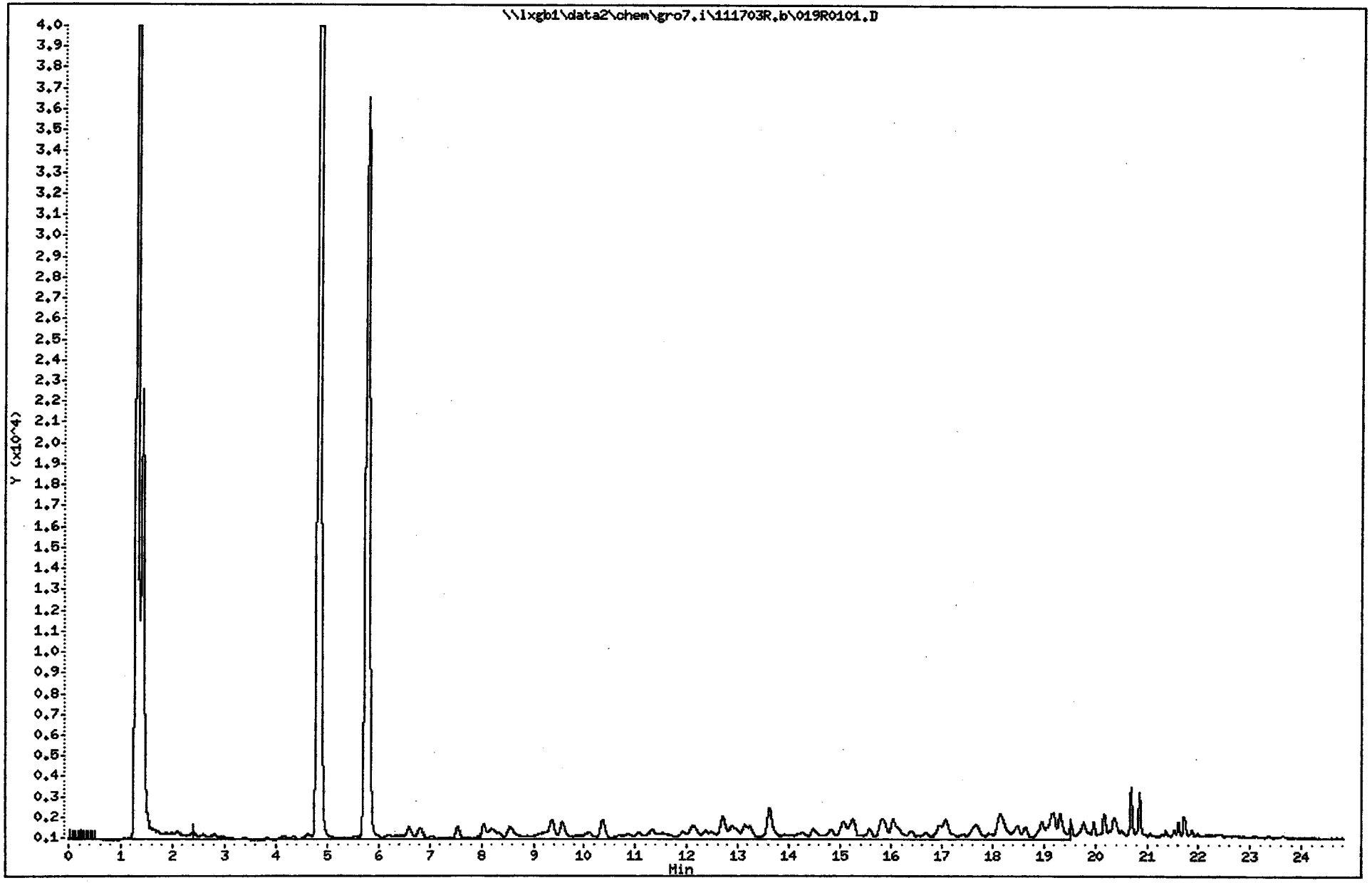
Data File: \\lxgb1\data2\chem\gro7.i\111803R.b\004R0101.D
Date : 18-NOV-2003 12:33
Client ID: 841068-001
Sample Info: 41068B001WCQ2.5
Purge Volume: 5.0
Column phase: DB-624

Instrument: gro7.i
Operator: SES
Column diameter: 0.53



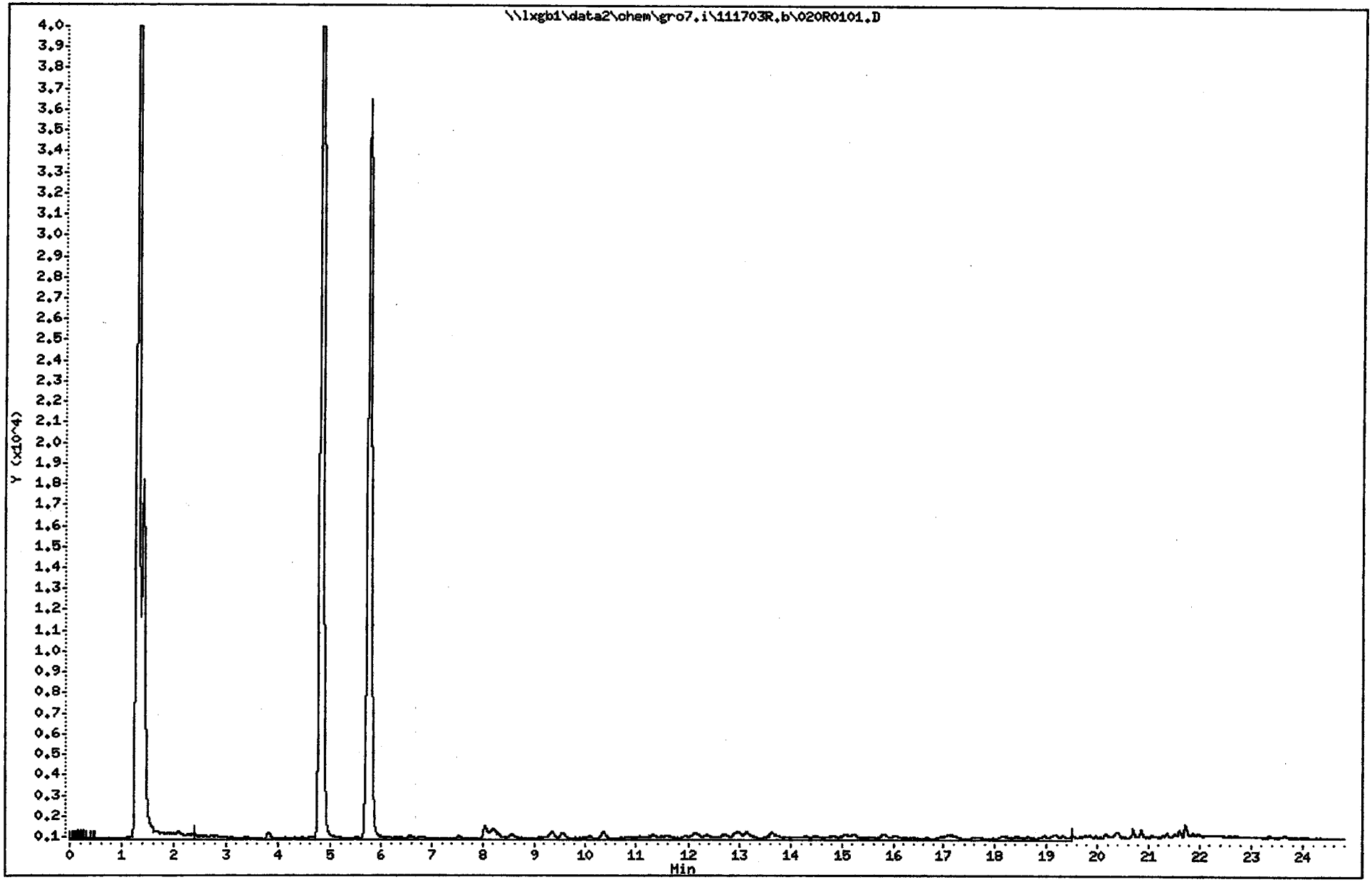
Data File: \\lxgb1\data2\chem\gro7.i\111703R.b\019R0101.D
Date : 17-NOV-2003 23:37
Client ID: 841068-002
Sample Info: 41068B002WCQ1
Purge Volume: 5.0
Column phase: DB-624

Instrument: gro7.i
Operator: SES
Column diameter: 0.53



Data File: \\lxgb1\data2\chem\gro7.i\111703R.b\020R0101.D
Date : 18-NOV-2003 00:11
Client ID: 841068-003
Sample Info: 41068B003WCQ1
Purge Volume: 5.0
Column phase: DB-624

Instrument: gro7.i
Operator: SES
Column diameter: 0.53



FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

BLKQ 1337-46

Lab Name: EN CHEM INC. - GREEN BAY Contract:

Lab Code: ENCHEMGB Case No.: SAS No.: SDG No.: GRO7-111703

Matrix: (soil/water) WATER Lab Sample ID: BLKQ 1337-46

Sample wt/vol: _____ (g/mL) ML Lab File ID: 002F0101

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 11/17/03

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	1.00	U
71-43-2	Benzene	1.00	U
108-88-3	Toluene	1.00	U
100-41-4	Ethylbenzene	1.00	U
108-38-3	m/p-Xylene	2.00	U
95-47-6	o-Xylene	1.00	U
108-67-8	1,3,5-Trimethylbenzene	1.00	U
95-63-6	1,2,4-Trimethylbenzene	1.00	U
91-20-3	Naphthalene	0.76	J
----------	Total Xylenes	3.00	U

FORM 3
WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: EN CHEM INC. - GREEN BAY Contract:

Lab Code: ENCHEMGB Case No.: SAS No.: SDG No.: GRO7-111703

Matrix Spike - Sample No.: 840735-028

Batch QC

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Methyl tert-butyl ether	20.00	0.00	20.45	102	77-118
Benzene	20.00	0.62	22.39	109	62-135
Toluene	20.00	0.00	21.34	107	69-132
Ethylbenzene	20.00	5.22	25.88	103	61-137
m/p-Xylene	40.00	0.00	40.85	102	65-134
o-Xylene	20.00	0.00	20.85	104	68-132
1,3,5-Trimethylbenzene	20.00	0.00	19.70	98	57-136
1,2,4-Trimethylbenzene	20.00	0.00	19.17	96	59-134
Naphthalene	20.00	1.28	18.46	86	42-145
Total Xylenes	60.00	0.00	61.71	103	69-132

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Methyl tert-butyl ether	20.00	20.15	101	1	21	77-118
Benzene	20.00	21.56	105	4	30	62-135
Toluene	20.00	20.62	103	3	21	69-132
Ethylbenzene	20.00	25.00	99	3	22	61-137
m/p-Xylene	40.00	38.75	97	5	27	65-134
o-Xylene	20.00	19.65	98	6	21	68-132
1,3,5-Trimethylbenzene	20.00	16.92	85	15	33	57-136
1,2,4-Trimethylbenzene	20.00	15.85	79	19	31	59-134
Naphthalene	20.00	14.01	64	27	34	42-145
Total Xylenes	60.00	58.40	97	6	30	69-132

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

* Values outside of QC limits

RPD: 0 out of 10 outside limits
Spike Recovery: 0 out of 20 outside limits

COMMENTS: _____

_____

FORM 3
WATER VOLATILE BLANK SPIKE RECOVERY

Lab Name: EN CHEM INC. - GREEN BAY Contract:

Lab Code: ENCHEMGB Case No.: SAS No.: SDG No.: GRO7-111703

Matrix Spike - Sample No.: BLKQ 1337-46

COMPOUND	SPIKE ADDED (ug/L)	BLANK CONCENTRATION (ug/L)	BS CONCENTRATION (ug/L)	BS % REC #	QC. LIMITS REC.
Methyl tert-butyl ether	20.00	0.00	20.74	104	80-120
Benzene	20.00	0.00	20.31	102	80-120
Toluene	20.00	0.00	19.81	99	80-120
Ethylbenzene	20.00	0.00	19.38	97	80-120
m/p-Xylene	40.00	0.00	38.92	97	80-120
o-Xylene	20.00	0.00	19.57	98	80-120
1,3,5-Trimethylbenzene	20.00	0.00	18.32	92	80-120
1,2,4-Trimethylbenzene	20.00	0.00	18.51	92	80-120
Naphthalene	20.00	0.76	18.76	90	80-120
Total Xylenes	60.00	0.00	58.49	97	80-120

COMPOUND	SPIKE ADDED (ug/L)	BSD CONCENTRATION (ug/L)	BSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Methyl tert-butyl ether	20.00	20.14	101	3	20	80-120
Benzene	20.00	21.28	106	5	20	80-120
Toluene	20.00	20.81	104	5	20	80-120
Ethylbenzene	20.00	20.48	102	6	20	80-120
m/p-Xylene	40.00	40.92	102	5	20	80-120
o-Xylene	20.00	20.49	102	4	20	80-120
1,3,5-Trimethylbenzene	20.00	19.42	97	6	20	80-120
1,2,4-Trimethylbenzene	20.00	19.74	99	6	20	80-120
Naphthalene	20.00	17.97	86	4	20	80-120
Total Xylenes	60.00	61.41	102	5	20	80-120

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

* Values outside of QC limits

RPD: 0 out of 10 outside limits
Spike Recovery: 0 out of 20 outside limits

COMMENTS: _____

Effective Date: 07/14/2002

Surrogates - 2002
En Chem - Green Bay

	Aqueous		Low Level Solids		Methanol Solids	
Surrogate - GC VOA	LCL	UCL	LCL	UCL	LCL	UCL
α,α,α–Trifluorotoluene	61	149	54	144	62	154

	Aqueous		Low Level Solids		Methanol Solids	
Surrogate - GCMS VOA	LCL	UCL	LCL	UCL	LCL	UCL
Dibromofluoromethane	61	136	51	127	57	118
Toluene-d_8	63	140	62	126	72	115
4-Bromoflurobenzene	55	136	60	109	67	112

	Aqueous		Solids	
Surrogate - GCMS PAH	LCL	UCL	LCL	UCL
Nitrobenzene-$_{d5}$	30	170	35	126
2-Fluorobiphenyl	30	126	44	110
Terphenyl-d_{14}	56	148	38	145

	Aqueous		Solids	
Surrogate - GCMS BNA	LCL	UCL	LCL	UCL
2-Fluorophenol	13	70	35	114
Phenol-$_{d5}$	8	44	29	114
2-Chlorophenol-$_{d4}$	29	104	34	107
1,2-Dichlorobenzene-$_{d4}$	34	112	27	116
Nitrobenezene-$_{d5}$	34	126	26	126
2-Fluorobiphenyl	36	126	26	126
2,4,6-Tribromophenol	39	133	17	129
Terphenyl-$_{d14}$	56	139	23	141

	Aqueous		Solids	
Surrogate - GC PCB	LCL	UCL	LCL	UCL
Decachlorobiphenyl	22	133	11	142

	Aqueous		Solids	
Surrogate - TPH Diesel	LCL	UCL	LCL	UCL
o - Terphenyl	33	133	34	106

	Aqueous		Solids	
Surrogate - TPH Gas	LCL	UCL	LCL	UCL
α,α,α–Trifluorotoluene	61	149	62	154

En Chem, Inc. Cooler Receipt Log

Batch No. 841068

Project Name or ID M-029 No. of Coolers: 1 Temps: 2.0°C

A. Receipt Phase: Date cooler was opened: 11-14-03 **By:** AM

1: Were samples received on ice? (Must be ≤ 6 C)	(YES)	NO[2]	
2. Was there a Temperature Blank?	(YES)	NO	
3: Were custody seals present and intact? (Record on COC)	YES	(NO)	
4: Are COC documents present?	(YES)	NO[2]	
5: Does this Project require quick turn around analysis?	YES	(NO)	
6: Is there any sub-work?	YES	(NO)	
7: Are there any short hold time tests?	(YES)	NO	
8: Are any samples nearing expiration of hold-time? (Within 2 days)	YES[1]	(NO)	Contacted by/Who_____
9: Do any samples need to be Filtered or Preserved in the lab?	YES[1]	(NO)	Contacted by/Who_____

B. Check-in Phase: Date samples were Checked-In: 11-14-03 **By:** AM

1: Were all sample containers listed on the COC received and intact?	(YES)	NO[2]	NA
2: Sign the COC as received by En Chem. Completed	(YES)	NO	
3: Do sample labels match the COC?	(YES)	NO[2]	
4: Completed pH check on preserved samples.. *(This statement does not apply to water: VOC, O&G, TOC, DRO, Total Rec. Phenolics)*	YES	NO	(NA)
5: Do samples have correct chemical preservation? *(This statement does not apply to water: VOC, O&G, TOC, DRO, Total Rec. Phenolics)*	YES	NO[2]	(NA)
6: Are dissolved parameters field filtered?	YES	NO[2]	(NA)
7: Are sample volumes adequate for tests requested?	(YES)	NO[2]	
8: Are VOC samples free of bubbles >6mm	(YES)	NO[2]	NA
9: Enter samples into logbook. Completed	(YES)	NO	
10: Place laboratory sample number on all containers and COC. Completed	(YES)	NO	
11: Complete Laboratory Tracking Sheet (LTS). Completed	YES	NO	(NA)
12: Start Nonconformance form.	YES	NO	(NA)
13: Initiate Subcontracting procedure. Completed	YES	NO	(NA)
14: Check laboratory sample number on all containers and COC.	(YES)	NO	NA

Short Hold-time tests:

48 Hours or less	7 days	Footnotes
Coliform (6 hrs)	Flashpoint	1 Notify proper lab group immediately.
Hexavalent Chromium (24 Hrs)	TSS	
BOD	Total Solids	2 Complete nonconformance memo.
Nitrite or Nitrate	TDS	
Low Level Mercury	Sulfide	
Ortho Phosphorus	Free Liquids	
Turbidity	Total Volatile Solids	
Surfactants	(Aqueous Extractable Organics- ALL)	
Sulfite	Unpreserved VOC's	
En Core Preservation	Ash	
Color		

Rev. 4/11/03, Attachment to 1-REC-5.
Subject to QA Audit.

Reviewed by/date CB 11/17/03

p:/everyone/forms/samplereceiving/crl.doc

(Please Print Legibly)
Company Name: Millsop Assoc
Branch or Location:
Project Contact: Mark
Telephone: 218-763-2907
Project Number: M-029
Project Name: Wigwam Inn
Project State: MN
Sampled By (Print): Mark D Millsop
PO #:

EN CHEM INC.
...chemistry for the environment.

1241 Bellevue St., Suite 9
Green Bay, WI 54302
920-469-2436
Fax 920-469-8827

CHAIN OF CUSTODY

No 109984

Page 1 of
Quote #:
Mail Report To: Mark Millsop
Company:
Address:
Invoice To:
Company:
Address:
Mail Invoice To:

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=EnCore F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

Data Package Options - (please circle if requested)
Sample Results Only (no QC)
EPA Level II (Subject to Surcharge)
EPA Level III (Subject to Surcharge)
EPA Level IV (Subject to Surcharge)

Regulatory Program: UST, RCRA, SDWA, NPDES, CERCLA

Matrix Codes: W=Water, S=Soil, A=Air, C=Charcoal, B=Biota, Sl=Sludge

LABORATORY ID (Lab Use Only)	FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO)	PRESERVATION (CODE)*	ANALYSES REQUESTED: 6120/BTEX/MTBE	ANALYSES REQUESTED: BTEX	ANALYSES REQUESTED: DRO	TOTAL # OF BOTTLES SENT	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)
	Temp Blank	11/13	pm	W	N	B				1	1) 1000 liter amber 3) 40 ml vials	Jade Project
	Trip Blank				N	B	X			2	9-14-03 AM	trip blk is with 841067
001	MW-1				N	B	X	X		4	1) 1000 liter amber 3) 40 ml vials	
002	MW-2				N	B	X	X		4	↓	↓
003	MW-3				N	B	X	X		4	↓	3) 40 ml vials
004	Dupe				N	B	X			3		

Rush Turnaround Time Requested (TAT) - Prelim
(Rush TAT subject to approval/surcharge)
Date Needed:
Transmit Prelim Rush Results by (circle):
Phone Fax E-Mail
Phone #:
Fax #:
E-Mail Address:

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
Mark D Millsop	11/13/03 5pm		
UPS	11-14-03 1015	Quinette Yanke	11-14-03 1015

En Chem Project No.: 841068
Sample Receipt Temp.: 2.0°C
Sample Receipt pH (Wet/Metals): NA
Cooler Custody Seal: Present / Not Present
Intact / Not Intact

Version 4.0: 07/03

EN CHEM INC.

Corporate Office & Laboratory
1241 Bellevue Street, Suite 9, Green Bay, WI 54302
920-469-2436, 800-7-ENCHEM, Fax: 920-469-8827
www.enchem.com

Analytical Report Number: 837392

Client : MILLSOP AND ASSOCIATES, INC.

Project Name : WIGWAM INN

Project Number : M-029

Lab Sample Number	Field ID	Matrix	Collection Date
837392-001	TRIP BLANK	WATER	08/05/03
837392-002	DUPE	WATER	08/05/03
837392-003	MW-1	WATER	08/05/03
837392-004	MW-2	WATER	08/05/03
837392-005	MW-3	WATER	08/05/03

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and Laboratory Standard Operating Procedure. Exceptions, if any, are discussed in the accompanying sample comments. Release of this final report is authorized by Laboratory management, as is verified by the following signature. Reported results shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested.

Approval Signature

8/19/03
Date

En Chem Inc.

1241 Bellevue Street
Green Bay, WI 54302
920-469-2436
800-7-ENCHEM
Fax: 920-469-8827

Analytical Report Number: 837392

Client : MILLSOP AND ASSOCIATES, INC.
Project Name : WIGWAM INN
Project Number : M-029
Field ID : TRIP BLANK

Matrix Type : WATER
Collection Date : 08/05/03
Report Date : 08/14/03
Lab Sample Number : 837392-001

BTEX

Prep Date: 08/07/03

Analyte		Result	EQL	Dilution	Units	Code	Analysis Date	Prep Method	Analysis Method
Benzene	<	1.0	1.0	1	ug/l		08/07/03	SW846 5030B	SW846 M8021B
Ethylbenzene	<	1.0	1.0	1	ug/l		08/07/03	SW846 5030B	SW846 M8021B
Toluene	<	1.0	1.0	1	ug/l		08/07/03	SW846 5030B	SW846 M8021B
Xylene, o	<	1.0	1.0	1	ug/l		08/07/03	SW846 5030B	SW846 M8021B
Xylenes, m + p	<	2.0	2.0	1	ug/l		08/07/03	SW846 5030B	SW846 M8021B
a,a,a-Trifluorotoluene		101	---	1	%Recov		08/07/03	SW846 5030B	SW846 M8021B

BTEX BLANK

Prep Date: 08/07/03

Analyte	Result	EQL	Dilution	Units	Code	Analysis Date	Prep Method	Analysis Method
BTEX Blank ID	1275-80		1					

En Chem Inc.

1241 Bellevue Street
Green Bay, WI 54302
920-469-2436
800-7-ENCHEM
Fax: 920-469-8827

Analytical Report Number: 837392

Client : MILLSOP AND ASSOCIATES, INC.
Project Name : WIGWAM INN
Project Number : M-029
Field ID : DUPE

Matrix Type : WATER
Collection Date : 08/05/03
Report Date : 08/14/03
Lab Sample Number : 837392-002

BTEX

Prep Date: 08/07/03

Analyte		Result	EQL	Dilution	Units	Code	Analysis Date	Prep Method	Analysis Method
Benzene	<	1.0	1.0	1	ug/l		08/07/03	SW846 5030B	SW846 M8021B
Ethylbenzene		11	1.0	1	ug/l		08/07/03	SW846 5030B	SW846 M8021B
Toluene	<	1.0	1.0	1	ug/l		08/07/03	SW846 5030B	SW846 M8021B
Xylene, o		17	1.0	1	ug/l		08/07/03	SW846 5030B	SW846 M8021B
Xylenes, m + p		33	2.0	1	ug/l		08/07/03	SW846 5030B	SW846 M8021B
a,a,a-Trifluorotoluene		106	---	1	%Recov		08/07/03	SW846 5030B	SW846 M8021B

BTEX BLANK

Prep Date: 08/07/03

Analyte	Result	EQL	Dilution	Units	Code	Analysis Date	Prep Method	Analysis Method
BTEX Blank ID	1275-80		1					

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Analytical Report Number: 837392

Client : MILLSOP AND ASSOCIATES, INC.
Project Name : WIGWAM INN
Project Number : M-029
Field ID : MW-2

Matrix Type : WATER
Collection Date : 08/05/03
Report Date : 08/14/03
Lab Sample Number : 837392-004

DIESEL RANGE ORGANICS

Prep Date: 08/08/03

Analyte		Result	EQL	Dilution	Units	Code	Analysis Date	Prep Method	Analysis Method
Diesel Range Organics	<	100	100	1	ug/L		08/08/03	WI MOD DRO	WI MOD DRO
DRO Blank	<	50	50	1	ug/L		08/08/03	WI MOD DRO	WI MOD DRO
DRO Blank Spike		101	—	1	%Recov		08/08/03	WI MOD DRO	WI MOD DRO
DRO Blank Spike Duplicate		85	—	1	%Recov		08/08/03	WI MOD DRO	WI MOD DRO

BTEX + MTBE

Prep Date: 08/07/03

Analyte		Result	EQL	Dilution	Units	Code	Analysis Date	Prep Method	Analysis Method
Benzene	<	1.0	1.0	1	ug/l		08/07/03	SW846 5030B	WI MOD GRO
Ethylbenzene	<	1.0	1.0	1	ug/l		08/07/03	SW846 5030B	WI MOD GRO
Methyl-tert-butyl-ether	<	1.0	1.0	1	ug/l		08/07/03	SW846 5030B	WI MOD GRO
Toluene	<	1.0	1.0	1	ug/l		08/07/03	SW846 5030B	WI MOD GRO
Xylene, o	<	1.0	1.0	1	ug/l		08/07/03	SW846 5030B	WI MOD GRO
Xylenes, m + p	<	2.0	2.0	1	ug/l		08/07/03	SW846 5030B	WI MOD GRO
a,a,a-Trifluorotoluene		101	—	1	%Recov		08/07/03	SW846 5030B	WI MOD GRO

BTEX BLANK

Prep Date: 08/07/03

Analyte	Result	EQL	Dilution	Units	Code	Analysis Date	Prep Method	Analysis Method
BTEX Blank ID	1275-80		1					

GASOLINE RANGE ORGANICS

Prep Date: 08/07/03

Analyte		Result	EQL	Dilution	Units	Code	Analysis Date	Prep Method	Analysis Method
Gasoline Range Organics	<	50	50	1	ug/l		08/07/03	WI MOD GRO	WI MOD GRO
GRO Blank	<	50	50	1	ug/l		08/07/03	WI MOD GRO	WI MOD GRO
GRO Blank Spike		93	—	1	%Recov		08/07/03	WI MOD GRO	WI MOD GRO
GRO Blank Spike Duplicate		93	—	1	%Recov		08/07/03	WI MOD GRO	WI MOD GRO

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Fax: 920-469-8827

Analytical Report Number: 837392

Client : MILLSOP AND ASSOCIATES, INC.
Project Name : WIGWAM INN
Project Number : M-029
Field ID : MW-1

Matrix Type : WATER
Collection Date : 08/05/03
Report Date : 08/14/03
Lab Sample Number : 837392-003

DIESEL RANGE ORGANICS

Prep Date: 08/08/03

Analyte		Result	EQL	Dilution	Units	Code	Analysis Date	Prep Method	Analysis Method
Diesel Range Organics		1600	100	1	ug/L		08/08/03	WI MOD DRO	WI MOD DRO
DRO Blank	<	50	50	1	ug/L		08/08/03	WI MOD DRO	WI MOD DRO
DRO Blank Spike		101	—	1	%Recov		08/08/03	WI MOD DRO	WI MOD DRO
DRO Blank Spike Duplicate		85	—	1	%Recov		08/08/03	WI MOD DRO	WI MOD DRO

BTEX + MTBE

Prep Date: 08/08/03

Analyte		Result	EQL	Dilution	Units	Code	Analysis Date	Prep Method	Analysis Method
Benzene	<	2.5	2.5	2.5	ug/l		08/08/03	SW846 5030B	WI MOD GRO
Ethylbenzene		8.9	2.5	2.5	ug/l		08/08/03	SW846 5030B	WI MOD GRO
Methyl-tert-butyl-ether	<	2.5	2.5	2.5	ug/l		08/08/03	SW846 5030B	WI MOD GRO
Toluene	<	2.5	2.5	2.5	ug/l		08/08/03	SW846 5030B	WI MOD GRO
Xylene, o		15	2.5	2.5	ug/l		08/08/03	SW846 5030B	WI MOD GRO
Xylenes, m + p		28	5.0	2.5	ug/l		08/08/03	SW846 5030B	WI MOD GRO
a,a,a-Trifluorotoluene		95	—	1	%Recov		08/08/03	SW846 5030B	WI MOD GRO

BTEX BLANK

Prep Date: 08/07/03

Analyte	Result	EQL	Dilution	Units	Code	Analysis Date	Prep Method	Analysis Method
BTEX Blank ID	1275-80		1					

GASOLINE RANGE ORGANICS

Prep Date: 08/08/03

Analyte		Result	EQL	Dilution	Units	Code	Analysis Date	Prep Method	Analysis Method
Gasoline Range Organics		3400	120	2.5	ug/l		08/08/03	WI MOD GRO	WI MOD GRO
GRO Blank	<	50	50	1	ug/l		08/08/03	WI MOD GRO	WI MOD GRO
GRO Blank Spike		93	—	1	%Recov		08/08/03	WI MOD GRO	WI MOD GRO
GRO Blank Spike Duplicate		93	—	1	%Recov		08/08/03	WI MOD GRO	WI MOD GRO

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Green Bay, WI 54302
920-469-2436
800-7-ENCHEM
Fax: 920-469-8827

Analytical Report Number: 837392

Client : MILLSOP AND ASSOCIATES, INC.
Project Name : WIGWAM INN
Project Number : M-029
Field ID : MW-3

Matrix Type : WATER
Collection Date : 08/05/03
Report Date : 08/14/03
Lab Sample Number : 837392-005

DIESEL RANGE ORGANICS

Prep Date: 08/08/03

Analyte		Result	EQL	Dilution	Units	Code	Analysis Date	Prep Method	Analysis Method
Diesel Range Organics		130	100	1	ug/L		08/08/03	WI MOD DRO	WI MOD DRO
DRO Blank	<	50	50	1	ug/L		08/08/03	WI MOD DRO	WI MOD DRO
DRO Blank Spike		101	---	1	%Recov		08/08/03	WI MOD DRO	WI MOD DRO
DRO Blank Spike Duplicate		85	---	1	%Recov		08/08/03	WI MOD DRO	WI MOD DRO

BTEX + MTBE

Prep Date: 08/07/03

Analyte		Result	EQL	Dilution	Units	Code	Analysis Date	Prep Method	Analysis Method
Benzene	<	1.0	1.0	1	ug/l		08/07/03	SW846 5030B	WI MOD GRO
Ethylbenzene	<	1.0	1.0	1	ug/l		08/07/03	SW846 5030B	WI MOD GRO
Methyl-tert-butyl-ether	<	1.0	1.0	1	ug/l		08/07/03	SW846 5030B	WI MOD GRO
Toluene	<	1.0	1.0	1	ug/l		08/07/03	SW846 5030B	WI MOD GRO
Xylene, o	<	1.0	1.0	1	ug/l		08/07/03	SW846 5030B	WI MOD GRO
Xylenes, m + p	<	2.0	2.0	1	ug/l		08/07/03	SW846 5030B	WI MOD GRO
a,a,a-Trifluorotoluene		101	---	1	%Recov		08/07/03	SW846 5030B	WI MOD GRO

BTEX BLANK

Prep Date: 08/07/03

Analyte	Result	EQL	Dilution	Units	Code	Analysis Date	Prep Method	Analysis Method
BTEX Blank ID	1275-80		1					

GASOLINE RANGE ORGANICS

Prep Date: 08/07/03

Analyte		Result	EQL	Dilution	Units	Code	Analysis Date	Prep Method	Analysis Method
Gasoline Range Organics	<	50	50	1	ug/l		08/07/03	WI MOD GRO	WI MOD GRO
GRO Blank	<	50	50	1	ug/l		08/07/03	WI MOD GRO	WI MOD GRO
GRO Blank Spike		93	---	1	%Recov		08/07/03	WI MOD GRO	WI MOD GRO
GRO Blank Spike Duplicate		93	---	1	%Recov		08/07/03	WI MOD GRO	WI MOD GRO

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1241 Bellevue Street
Green Bay, WI 54302
920-469-2436
800-7-ENCHEM
Fax: 920-469-8827

Lab Number	TestGroupID	Field ID	Comment
837392-003	DRO-W	MW-1	Front eluting peaks and late eluting hump were present in the chromatogram.
837392-003	GRO-W	MW-1	Early and late eluting peaks were present outside the window of analysis.
837392-005	DRO-W	MW-3	Hump was present late in chromatogram.

Qualifier Codes

Flag	Applies To	Explanation
A	Inorganic	Analyte is detected in the method blank. Method blank criteria is evaluated to the laboratory method detection limit. Additionally, method blank acceptance may be based on project specific criteria or determined from analyte concentrations in the sample and are evaluated on a sample by sample basis.
B	Inorganic	The analyte has been detected between the method detection limit and the reporting limit.
B	Organic	Analyte is present in the method blank. Method blank criteria is evaluated to the laboratory method detection limit. Additionally, method blank acceptance may be based on project specific criteria or determined from analyte concentrations in the sample and are evaluated on a sample by sample basis.
C	All	Elevated detection limit.
D	All	Analyte value from diluted analysis or surrogate result not applicable due to sample dilution.
E	Inorganic	Estimated concentration due to matrix interferences. During the metals analysis using the inductively coupled plasma (ICP), the serial dilution failed to meet the established control limits of 0-10% and the sample concentration is greater than 50 times the IDL (100 times the IDL for analysis done on the ICP-MS). The result was flagged with the E qualifier to indicate that a physical interference was observed.
E	Organic	Analyte concentration exceeds calibration range.
F	Inorganic	Due to potential interferences for this analysis by Inductively Coupled Plasma techniques (SW-846 Method 6010), this analyte has been confirmed by and reported from an alternate method.
F	Organic	Surrogate results outside control criteria.
H	All	Preservation, extraction or analysis performed past holding time.
J	Inorganic	The analyte has been detected between the method detection limit and the reporting limit.
J	Organic	Concentration detected is greater than the method detection limit but less than the reporting limit.
K	Inorganic	Sample received unpreserved. Sample was either preserved at the time of receipt or at the time of sample preparation.
K	Organic	Detection limit may be elevated due to the presence of an unrequested analyte.
L	All	Elevated detection limit due to low sample volume.
N	All	Spiked sample recovery not within control limits.
P	Organic	The relative percent difference between the two columns for detected concentrations was greater than 40%.
Q	All	The analyte has been detected between the limit of detection (LOD) and limit of quantitation (LOQ). The results are qualified due to the uncertainty of analyte concentrations within this range.
S	Organic	The relative percent difference between quantitation and confirmation columns exceeds internal quality control criteria. Because the result is unconfirmed, it has been reported as a non-detect with an elevated detection limit.
U	All	The analyte was not detected at or above the reporting limit.
V	All	Sample received with headspace.
W	All	A second aliquot of sample was analyzed from a container with headspace.
X	All	See Sample Narrative.
&	All	Laboratory Control Spike recovery not within control limits.
*	All	Precision not within control limits.
<	All	The analyte was not detected at or above the reporting limit.
1	Inorganic	Dissolved analyte or filtered analyte greater than total analyte; analyses passed QC based on precision criteria.
2	Inorganic	Dissolved analyte or filtered analyte greater than total analyte; analyses failed QC based on precision criteria.
3	Inorganic	BOD result is estimated due to the BOD blank exceeding the allowable oxygen depletion.
4	Inorganic	BOD duplicate precision not within control limits. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.
5	Inorganic	BOD result is estimated due to insufficient oxygen depletion. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.
6	Inorganic	BOD laboratory control sample not within control limits. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.
7	Inorganic	BOD result is estimated due to complete oxygen depletion. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.

En Chem Inc.

Analysis Summary by Laboratory

1241 Bellevue Street
Green Bay, WI 54302

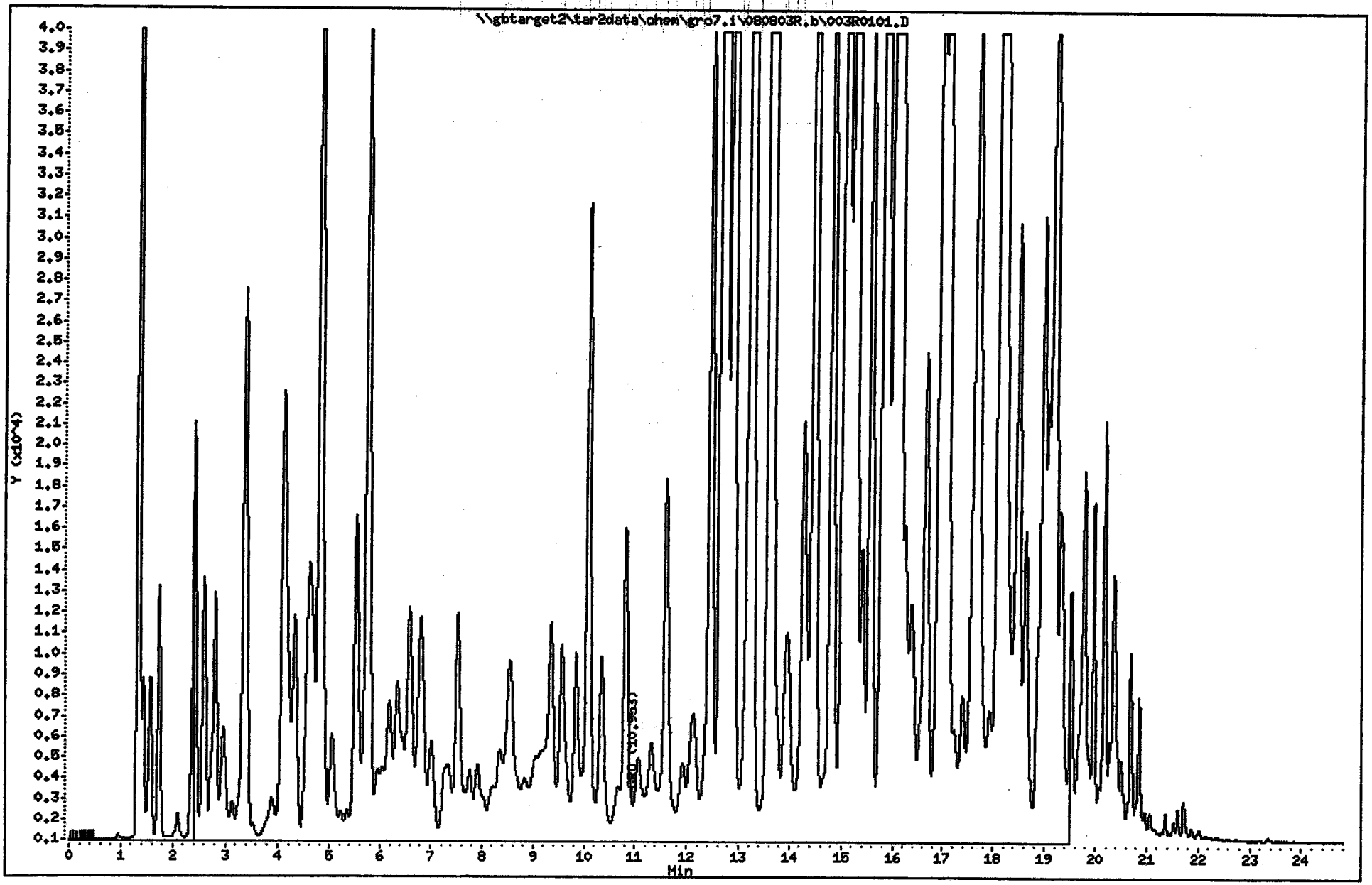
1090 Kennedy Avenue
Kimberly, WI 54136

Test Group Name	837392-001	837392-002	837392-003	837392-004	837392-005
BTEX	G	G			
BTEX + MTBE			G	G	G
BTEX BLANK	G	G	G	G	G
DIESEL RANGE ORGANICS			G	G	G
GASOLINE RANGE ORGANICS			G	G	G

Minnesota Certification	
G = En Chem Green Bay	055-999-334
K = En Chem Kimberly	055-999-107
S = Subcontracted Analysis	

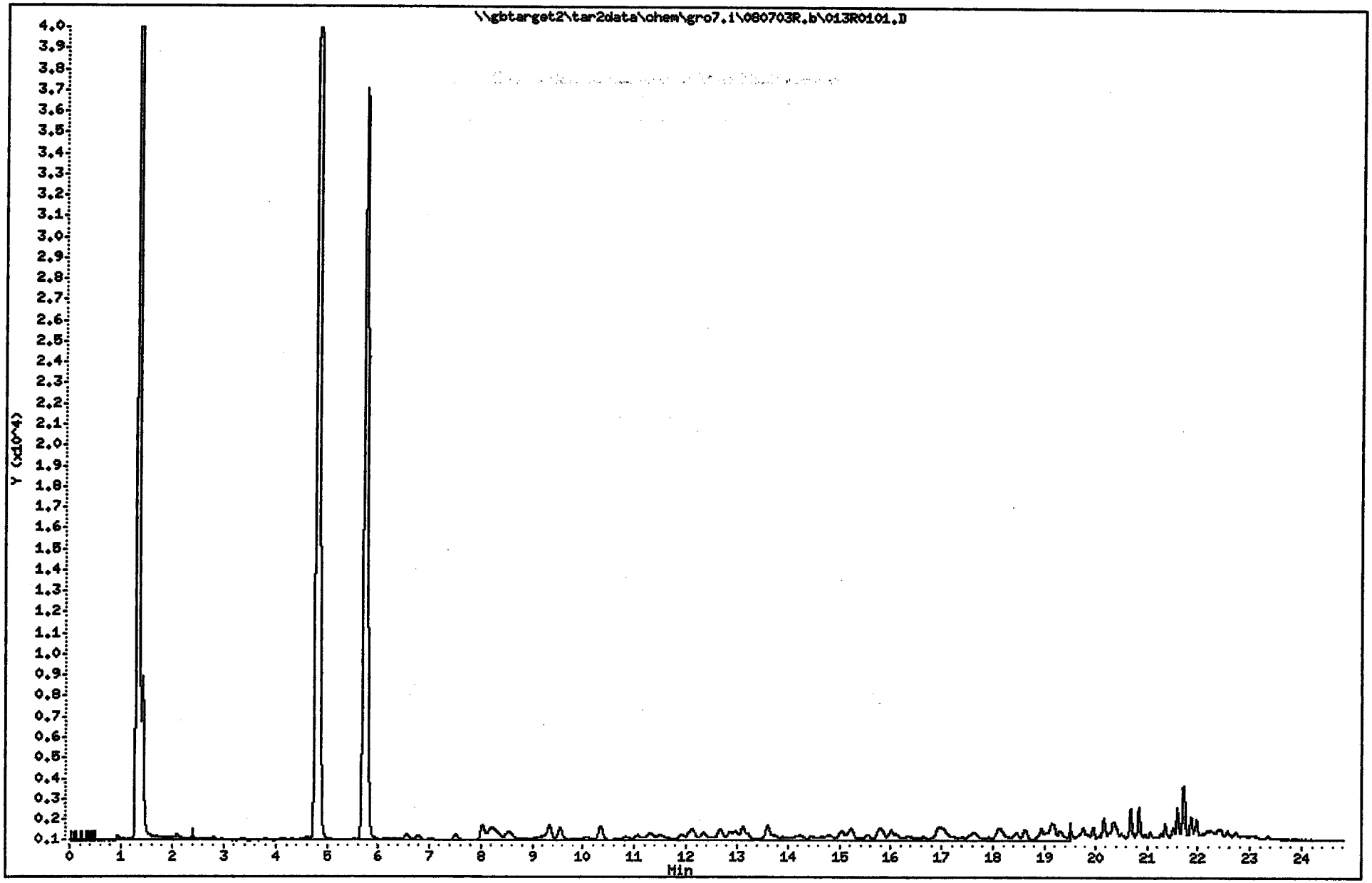
Data File: \\gbtarget2\tar2data\chem\gro7.i\080803R.b\003R0101.D
Date : 08-AUG-2003 09:26
Client ID: 837392-003
Sample Info: 37392B003WCT2.5
Purge Volume: 5.0
Column phase: DB-624

Instrument: gro7.i
Operator: SMT
Column diameter: 0.53



Data File: \\gbtarget2\tar2data\chem\gro7.i\080703R.b\013R0101.D
Date : 07-AUG-2003 16:56
Client ID: 837392-004
Sample Info: 37392B004WCT1
Purge Volume: 5.0
Column phase: DB-624

Instrument: gro7.i
Operator: SMT
Column diameter: 0.53



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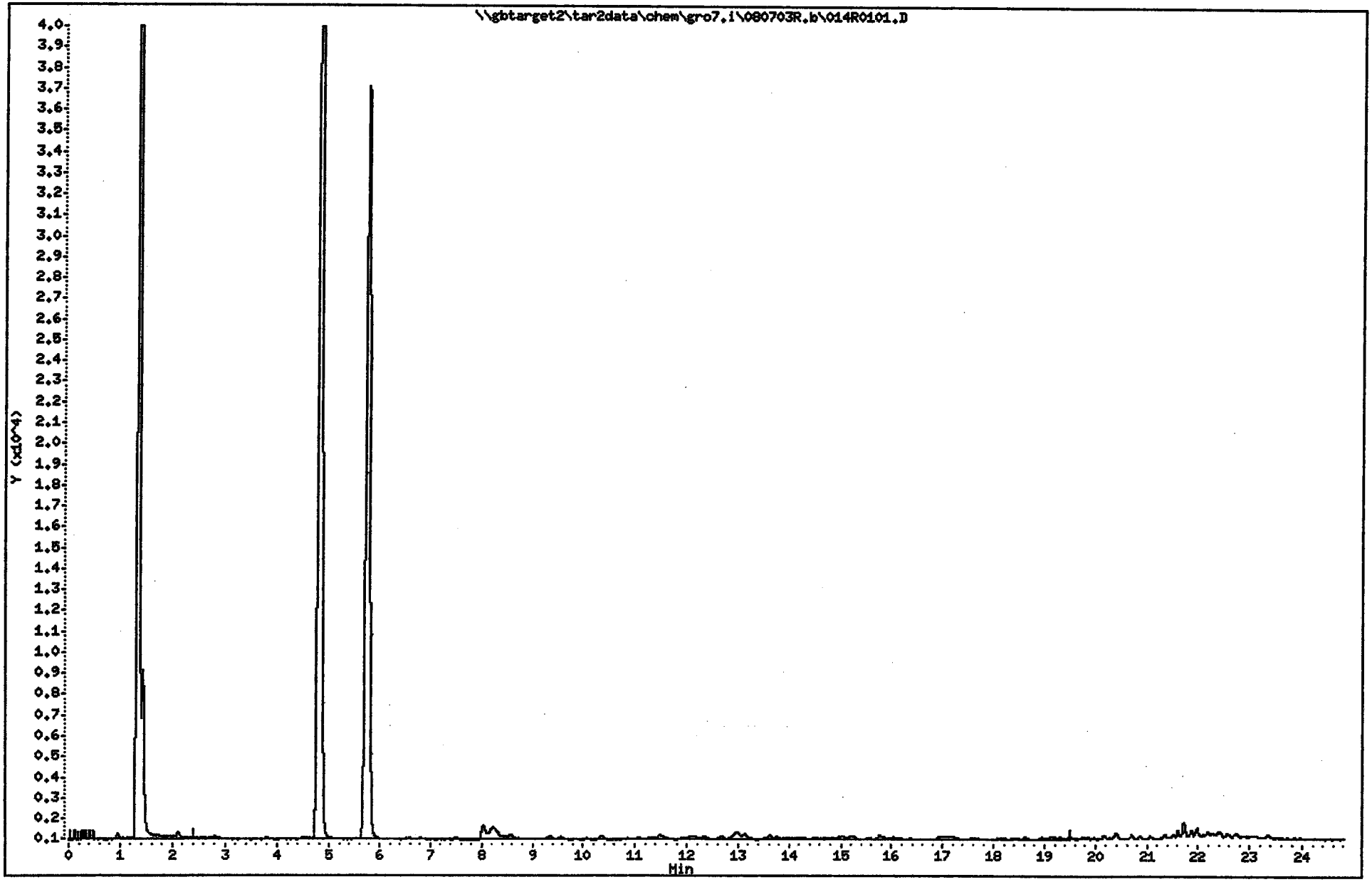
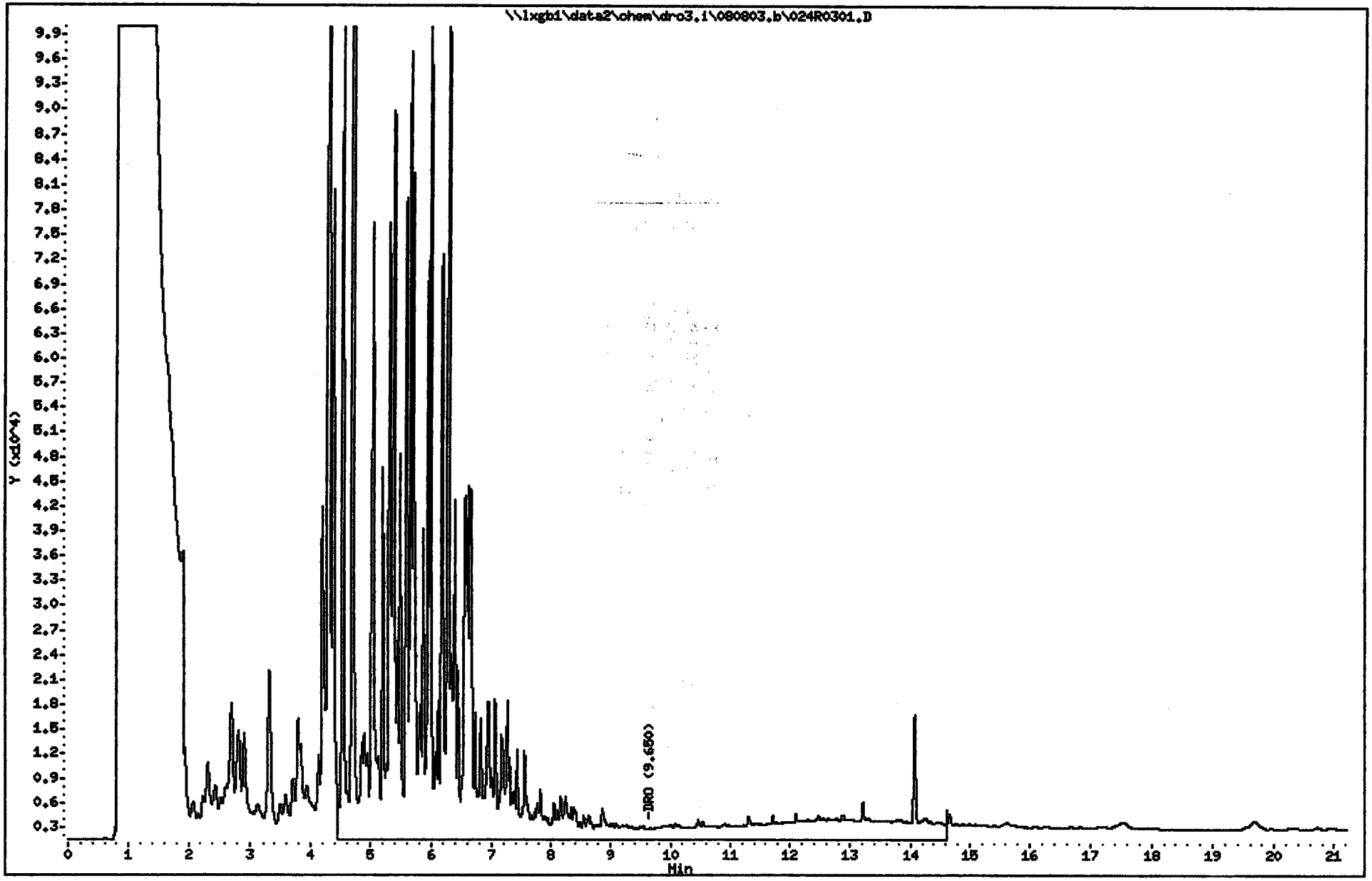
Date : 07-AUG-2003 17:29
Client ID: 837392-005
Sample Info: 37392B005WCT1
Purge Volume: 5.0
Column phase: DB-624

Instrument: gro7.i
Operator: SMT
Column diameter: 0.53



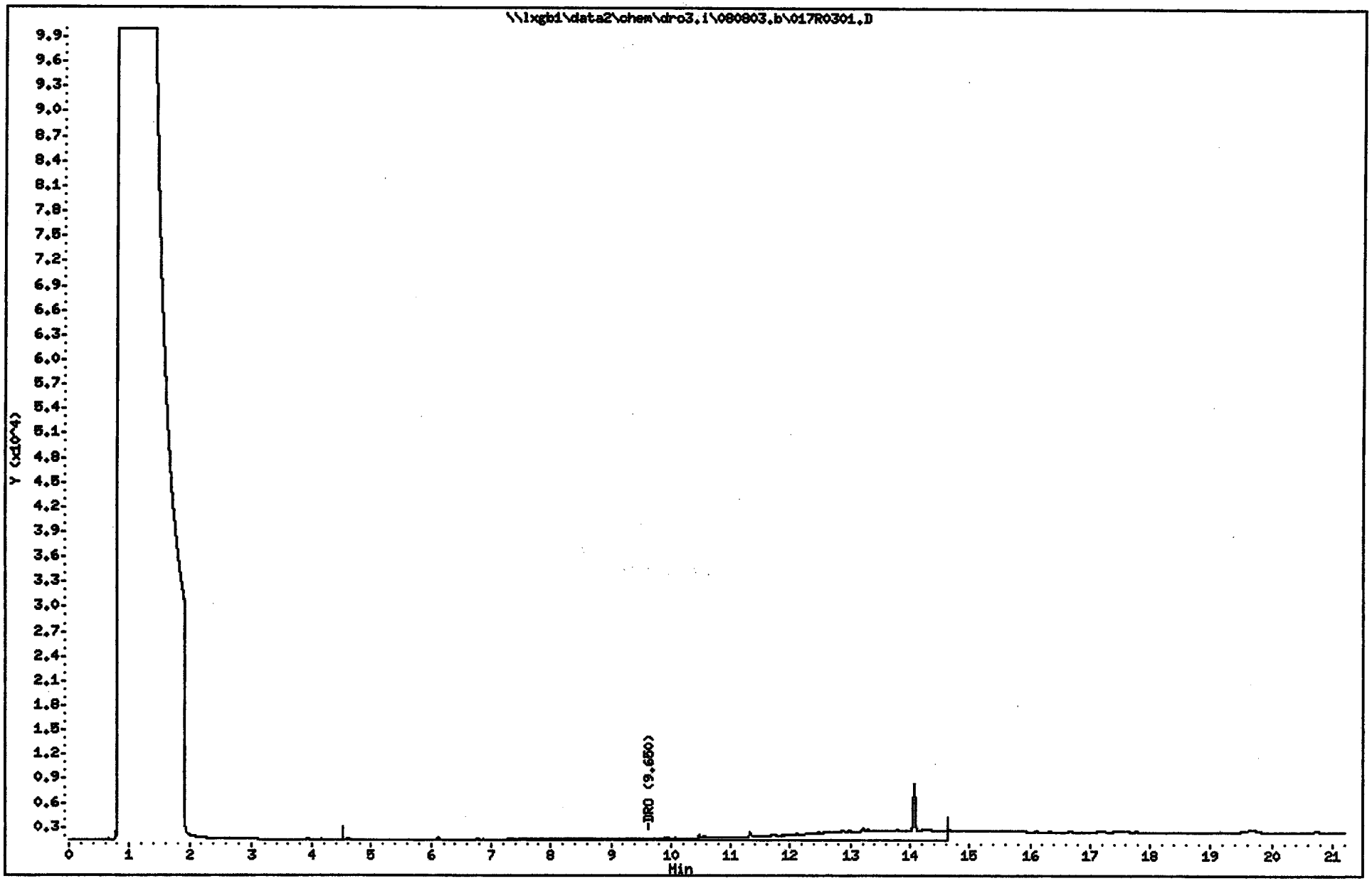
Data File: \\lxgb1\data2\chem\dro3.i\080803.b\024R0301.D
Date : 08-AUG-2003 22:03
Client ID: 837392-003
Sample Info: 37392D003WUX1
Volume Injected (uL): 2.0
Column phase: RTX-5/I.G.

Instrument: dro3.i
Operator: KEG
Column diameter: 0.53



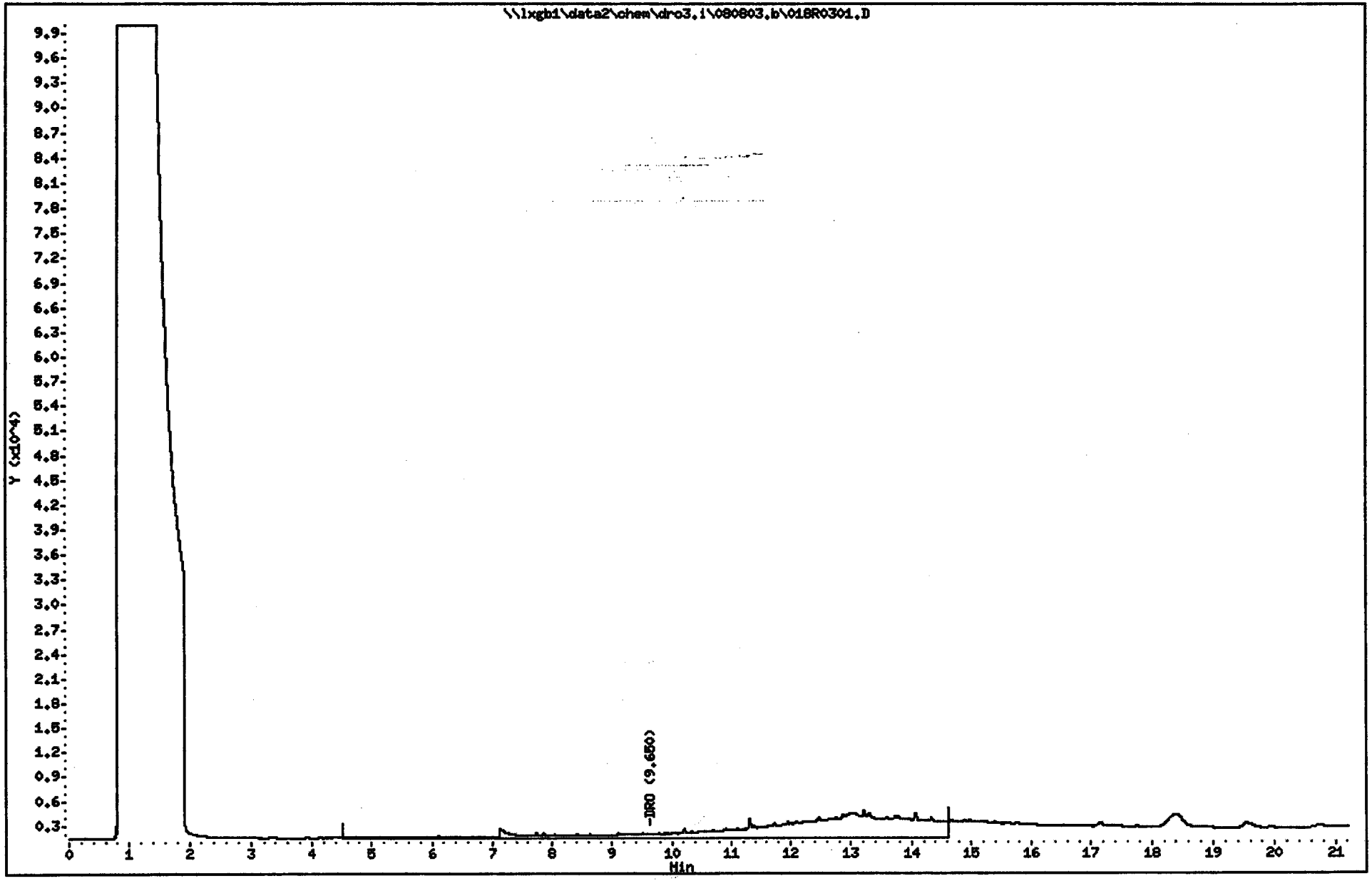
Data File: \\lxgb1\data2\chem\dro3.i\080803.b\017R0301.D
Date : 08-AUG-2003 18:59
Client ID: 837392-004
Sample Info: 37392D004WUX1
Volume Injected (uL): 2.0
Column phase: RTX-5/I.G.

Instrument: dro3.i
Operator: KEG
Column diameter: 0.53



Data File: \\lxgb1\data2\chem\dro3.i\080803.b\018R0301.D
Date : 08-AUG-2003 19:25
Client ID: 837392-005
Sample Info: 37392D005WUX1
Volume Injected (uL): 2.0
Column phase: RTX-5/I.G.

Instrument: dro3.i
Operator: KEG
Column diameter: 0.53



FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

BLKT 1275-80

Lab Name: ENCHEM INC. - GREEN BAY Contract:

Lab Code: ENCHEMGB Case No.: SAS No.: SDG No.: GRO7-080703

Matrix: (soil/water) WATER Lab Sample ID: BLKT 1275-80

Sample wt/vol: _____ (g/mL) ML Lab File ID: 002F0101

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 08/07/03

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	1.00	U
71-43-2	Benzene	1.00	U
108-88-3	Toluene	1.00	U
100-41-4	Ethylbenzene	1.00	U
108-38-3	m/p-Xylene	2.00	U
95-47-6	o-Xylene	1.00	U
108-67-8	1,3,5-Trimethylbenzene	1.00	U
95-63-6	1,2,4-Trimethylbenzene	1.00	U
91-20-3	Naphthalene	1.00	U
----------	Total Xylenes	3.00	U

FORM 3
WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ENCHEM INC. - GREEN BAY Contract:

Lab Code: ENCHEMGB Case No.: SAS No.: SDG No.: GRO7-080703

Matrix Spike - Sample No.: 836545-075

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Methyl tert-butyl ether	20.00	0.00	20.22	101	77-118
Benzene	20.00	1.71	22.89	106	62-135
Toluene	20.00	0.59	22.79	111	69-132
Ethylbenzene	20.00	2.79	24.96	111	61-137
m/p-Xylene	40.00	3.41	47.83	111	65-134
o-Xylene	20.00	7.74	29.91	111	68-132
1,3,5-Trimethylbenzene	20.00	0.95	22.36	107	57-136
1,2,4-Trimethylbenzene	20.00	2.78	24.45	108	59-134
Naphthalene	20.00	32.98	54.98	110	42-145
Total Xylenes	60.00	11.15	77.74	111	69-132

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Methyl tert-butyl ether	20.00	20.96	105	4	21	77-118
Benzene	20.00	23.46	109	2	30	62-135
Toluene	20.00	22.70	110	0	21	69-132
Ethylbenzene	20.00	24.66	109	1	22	61-137
m/p-Xylene	40.00	47.25	110	1	27	65-134
o-Xylene	20.00	29.54	109	1	21	68-132
1,3,5-Trimethylbenzene	20.00	22.32	107	0	33	57-136
1,2,4-Trimethylbenzene	20.00	24.03	106	2	31	59-134
Naphthalene	20.00	54.48	108	1	34	42-145
Total Xylenes	60.00	76.79	109	1	30	69-132

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

* Values outside of QC limits

RPD: 0 out of 10 outside limits
Spike Recovery: 0 out of 20 outside limits

COMMENTS: _____

_____

FORM 3
WATER VOLATILE BLANK SPIKE RECOVERY

Lab Name: ENCHEM INC. - GREEN BAY Contract:

Lab Code: ENCHEMGB Case No.: SAS No.: SDG No.: GRO7-080703

Matrix Spike - Sample No.: BLKT 1275-80

COMPOUND	SPIKE ADDED (ug/L)	BLANK CONCENTRATION (ug/L)	BS CONCENTRATION (ug/L)	BS % REC #	QC. LIMITS REC.
Methyl tert-butyl ether	20.00	0.00	20.23	101	80-120
Benzene	20.00	0.00	20.03	100	80-120
Toluene	20.00	0.00	19.72	99	80-120
Ethylbenzene	20.00	0.00	19.31	96	80-120
m/p-Xylene	40.00	0.00	38.84	97	80-120
o-Xylene	20.00	0.00	19.49	97	80-120
1,3,5-Trimethylbenzene	20.00	0.00	18.49	92	80-120
1,2,4-Trimethylbenzene	20.00	0.00	18.89	94	80-120
Naphthalene	20.00	0.00	19.49	97	80-120
Total Xylenes	60.00	0.00	58.34	97	80-120

COMPOUND	SPIKE ADDED (ug/L)	BSD CONCENTRATION (ug/L)	BSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Methyl tert-butyl ether	20.00	19.85	99	2	20	80-120
Benzene	20.00	19.96	100	0	20	80-120
Toluene	20.00	19.67	98	0	20	80-120
Ethylbenzene	20.00	19.27	96	0	20	80-120
m/p-Xylene	40.00	38.73	97	0	20	80-120
o-Xylene	20.00	19.45	97	0	20	80-120
1,3,5-Trimethylbenzene	20.00	18.46	92	0	20	80-120
1,2,4-Trimethylbenzene	20.00	18.88	94	0	20	80-120
Naphthalene	20.00	19.43	97	0	20	80-120
Total Xylenes	60.00	58.19	97	0	20	80-120

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

* Values outside of QC limits

RPD: 0 out of 10 outside limits
Spike Recovery: 0 out of 20 outside limits

COMMENTS: _____

_____

Effective Date: 07/14/2002

Surrogates - 2002
En Chem - Green Bay

	Aqueous		Low Level Solids		Methanol Solids	
Surrogate - GC VOA	LCL	UCL	LCL	UCL	LCL	UCL
α,α,α–Trifluorotoluene	61	149	54	144	62	154

	Aqueous		Low Level Solids		Methanol Solids	
Surrogate - GCMS VOA	LCL	UCL	LCL	UCL	LCL	UCL
Dibromofluoromethane	61	136	51	127	57	118
Toluene-d_8	63	140	62	126	72	115
4-Bromoflurobenzene	55	136	60	109	67	112

	Aqueous		Solids	
Surrogate - GCMS PAH	LCL	UCL	LCL	UCL
Nitrobenzene-$_{d5}$	30	170	35	126
2-Fluorobiphenyl	30	126	44	110
Terphenyl-d_{14}	56	148	38	145

	Aqueous		Solids	
Surrogate - GCMS BNA	LCL	UCL	LCL	UCL
2-Fluorophenol	13	70	35	114
Phenol-$_{d5}$	8	44	29	114
2-Chlorophenol-$_{d4}$	29	104	34	107
1,2-Dichlorobenzene-$_{d4}$	34	112	27	116
Nitrobenezene-$_{d5}$	34	126	26	126
2-Fluorobiphenyl	36	126	26	126
2,4,6-Tribromophenol	39	133	17	129
Terphenyl-$_{d14}$	56	139	23	141

	Aqueous		Solids	
Surrogate - GC PCB	LCL	UCL	LCL	UCL
Decachlorobiphenyl	22	133	11	142

	Aqueous		Solids	
Surrogate - TPH Diesel	LCL	UCL	LCL	UCL
o - Terphenyl	33	133	34	106

	Aqueous		Solids	
Surrogate - TPH Gas	LCL	UCL	LCL	UCL
α,α,α–Trifluorotoluene	61	149	62	154

En Chem, Inc. Cooler Receipt Log

Batch No. 837392

Project Name or ID M-029 No. of Coolers: 1 Temps: 3.0°C

A. Receipt Phase: Date cooler was opened: 8/6/03 By: CD

1: Were samples received on ice? (Must be ≤ 6 C)	YES	NO[2]	
2. Was there a Temperature Blank?	YES	NO	
3: Were custody seals present and intact? (Record on COC)	YES	NO	
4: Are COC documents present?	YES	NO[2]	
5: Does this Project require quick turn around analysis?	YES	NO	
6: Is there any sub-work?	YES	NO	
7: Are there any short hold time tests?	YES	NO	
8: Are any samples nearing expiration of hold-time? (Within 2 days)	YES[1]	NO	Contacted by/Who
9: Do any samples need to be Filtered or Preserved in the lab?	YES[1]	NO	Contacted by/Who

B. Check-In Phase: Date samples were Checked-In: 8/6/03 By: CD

1: Were all sample containers listed on the COC received and intact?	YES	NO[2]	NA
2: Sign the COC as received by En Chem. Completed	YES	NO	
3: Do sample labels match the COC?	YES	NO[2]	
4: Completed pH check on preserved samples.. *(This statement does not apply to water: VOC, O&G, TOC, DRO, Total Rec. Phenolics)*	YES	NO	NA
5: Do samples have correct chemical preservation? *(This statement does not apply to water: VOC, O&G, TOC, DRO, Total Rec. Phenolics)*	YES	NO[2]	NA
6: Are dissolved parameters field filtered?	YES	NO[2]	NA
7: Are sample volumes adequate for tests requested?	YES	NO[2]	
8: Are VOC samples free of bubbles >6mm	YES	NO[2]	NA
9: Enter samples into logbook. Completed	YES	NO	
10: Place laboratory sample number on all containers and COC. Completed	YES	NO	
11: Complete Laboratory Tracking Sheet (LTS). Completed	YES	NO	NA
12: Start Nonconformance form.	YES	NO	NA
13: Initiate Subcontracting procedure. Completed	YES	NO	NA
14: Check laboratory sample number on all containers and COC. JR	YES	NO	NA

Short Hold-time tests:

48 Hours or less	7 days
Coliform (6 hrs)	Flashpoint
Hexavalent Chromium (24 Hrs)	TSS
BOD	Total Solids
Nitrite or Nitrate	TDS
Low Level Mercury	Sulfide
Ortho Phosphorus	Free Liquids
Turbidity	Total Volatile Solids
Surfactants	Aqueous Extractable Organics- ALL
Sulfite	Unpreserved VOC's
En Core Preservation	Ash
Color	

Footnotes
1 Notify proper lab group immediately.
2 Complete nonconformance memo.

Rev. 4/11/03, Attachment to 1-REC-5.
Subject to QA Audit.

Reviewed by/date 8/8/03

p:/everyone/forms/samplereceiving/crl.doc

(Please Print Legibly)

Company Name: Millsop Assoc.

Branch or Location:

Project Contact: Mark

Telephone: 218-763-2907

Project Number: M-029

Project Name: Wigwam Inn

Project State: MN

Sampled By (Print): Luke Millsop

EN CHEM INC.

1241 Bellevue St., Suite 9
Green Bay, WI 54302
920-469-2436
FAX 920-469-8827

VJR

CHAIN OF CUSTODY

101293

Page 1 of 1

P.O. # Quote #

Mail Report To: Millsop

Company: Assoc.

Address: P.O. Box 236
Crosby MN 56441

Invoice To:

Company:

Address:

Mail Invoice To:

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=EnCore F=Methanol G=NaOH
H = Sodium Bisulfate Solution I = Sodium Thiosulfate J = Other

Data Package Options - (please circle if requested)

Sample Results Only (no QC)
EPA Level II (Subject to Surcharge)
EPA Level III (Subject to Surcharge)
EPA Level IV (Subject to Surcharge)

Regulatory Program: UST, RCRA, SDWA, NPDES, CERCLA

Matrix Codes: W=Water, S=Soil, A=Air, C=Charcoal, B=Biota, Sl=Sludge

LABORATORY ID (Lab Use Only)	FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO)	PRESERVATION (CODE)*	ANALYSES REQUESTED: DRO	BTEX	BTEX/GRO/MTBE	TOTAL # OF BOTTLES SENT	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)
					N	B						
001	Trip Blank	8/5	am	W			X			2	-40ml VOA	
002	Dupe						X			3		
003	MW-1				X			X		4	1L Amber	
004	MW-2				X			X		4		
005	MW-3				X			X		4		

Rush Turnaround Time Requested (TAT) - Prelim
(Rush TAT subject to approval/surcharge)

Date Needed:

Transmit Prelim Rush Results by (circle):
Phone Fax E-Mail

Phone #:

Fax #:

E-Mail Address:

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
Luke D Millsop	8/5/03 pm		
URS		Gloria Dykstra	8/6/03 1025

En Chem Project No.: 83798

Sample Receipt Temp: 3.0°C

Sample Receipt pH (Metals): N/A

Custody Seal: Present / Not Present

Intact / Not Intact

Version 2.0: 1/02

STANDARD OF CARE

This report does not account for any variations that may occur between the exploration locations. Soil and groundwater samples were collected and analyzed under the conditions stated in this report. These data have been reviewed and interpretations made in the text of this report; seasonal fluctuations in hydrogeologic characteristics likely will occur. Conclusions in this report represent our professional judgment. This report has been prepared in general accordance with the current local standard of care. No warranty, express or implied, is made.

Report Checklist For Hydrologists

1) Are there missing figures, tables, appendices, or pages of text. Are the figures unreadable? [*if this is a recurring problem with a certain consultant, then maybe the report should be rejected, otherwise, a call or letter to the consultant may be best*]

____ Yes (take appropriate action) ____ No

2) Was a stratigraphic boring done? Was it deep enough? (These are often not performed because the geology was not suitable for push probes and they did not take the geology into consideration prior to the field work).

____ Yes ____ No (*take appropriate action-rejection maybe if they should have known that a push probe would be inadequate or if they failed to budget for the deep boring)*

3) Soil analytical samples collected at correct depth(s) (see Fact Sheet # 19).

____ Yes ____ No (*take appropriate action-rejection maybe if they showed very poor judgment in selecting sampling intervals; e.g., sampled only at the water table when there was visible contamination or high PID readings at shallower depth*)

4) Section 8: Receptor Information/Assessment. Is receptor information complete? (they should list all residences within 500 feet and should try to interview the homeowners or at least visit the homes that do not respond to letters/cards. It is not sufficient to just verify that city water is available).

____ Yes

____ No (reject report if the table listing the homes is not filled out or if it appears they merely called to determine that there was public water available)

5) Are all utilities shown on a site map (with depths)?

____ Yes

____ No (reject report)

6) Grain size analysis performed?

____ Yes

____ No (take appropriate action)

7) Section 11: Is there an analysis of the data?

____ Yes ____ No (reject report)

8) Section 12: Conclusions or recommendations provided?

____ Yes ____ No (reject report)

9) Are the conclusions or recommendations supported by the data? (The data obviously do not support the conclusions or recommendations or there is a glaring misinterpretation of the data).

____ Yes ____ No (reject report-*this may be a difficult decision because this will appear to be a question of differing professional opinions between the consultant and the MPCA; report rejection would probably only be justified in cases where much of the data was not included in the report, if much of the data failed QAQC, or if the laboratory was not certified.*)

6) Section 8: Receptor Information/Assessment. Is receptor information complete? (they should list all residences within 500 feet and should try to interview the homeowners or at least visit the the homes that do not respond to letters/cards. It is not sufficient to just verify that city water is available).

__✓__ Yes

____ No (reject report if the table listing the homes is not filled out or if it appears they merely called to determine that there was public water available)

7) Section 11: Is there an analysis of the data?

__✓__ Yes ____ No (reject report)

8) Section 12: Conclusions or recommendations provided?

__✓__ Yes ____ No (reject report)

9) Other: Were full VOCs analyzed?

____ Yes

____ No (reject report)

__✓__ NA (the report was submitted subsequent to the first round of sampling)

10) Other: Are there missing figures, tables, appendices, or pages of text? Are the figures unreadable? [*if this is a recurring problem with a certain consultant, then maybe the report should be rejected, otherwise, a call or letter to the consultant may be best***]**

____ Yes (take appropriate action) __X__ No

11) Other: Are major parts of the document missing (e.g., no excavation report, no vapor survey, etc.)?

____ Yes (reject report) __X__ No

<u>If the site was investigated as a LSI, review is complete. If the report is a RI, please continue.</u>

12) Section 6.7: Did they answer *YES* to having a clean or nearly clean down gradient well? [*This item and 6.8 below may be more of a judgment call for hydros rather than a rejection criteria.***]**

____ Yes ____ No (take appropriate action)

13) Section 6.8: Did they answer YES to having a worst case well completed through the source area?

____ Yes ____ No (reject report)

14) Based on this checklist is the report ready for hydro review?

____ Yes ____ No (reject report)

PM Report Checklist for LSI or RI Report

The PM should completely review the items below before a hydrogeologist reviews the report. When applicable, the section of the report is referenced. Some items are repeated under the hydro checklist because the hydro may need to look at other technical issues. If the project manager is uncertain about rejecting a report, he/she can indicate this in the margin next to the item so that the hydro may consider it and they can decide together. ["take appropriate action" could mean rejection of the report, request more work, call the consultant for missing info, etc.]

Date: 8/10/04 PM: S. Kuehmann Hydro: ASekely

Type of Report:

____ LSI Soil Only Site
____ LSI Groundwater
____ RI/CAD
____ RI/Monitoring
____ RI/Closure
__X__ Annual or Semi-Annual Report

1) Is the report signed, or is the Consultant Information Section unaltered?

__X__ Yes
____ No (reject report)

2) Is the report in the most recent MPCA format?

__X__ Yes
____ No (reject report)

3) Is there a recommendation made for the site?

__X__ Yes
____ No (reject report)

4) Section 1: Is the site an Emergency or High Priority Site?

____ Yes (assign the site as a high priority review in the data base **AND** send the hydro assigned the site a brief FYI email about the report and site)
__X__ No

5) Section 4: Extent and Magnitude of Soil Contamination. Did they answer *YES* to the first three questions (4.1-4.3)?

__X__ Yes
____ No (take appropriate action)

Report Rejection Checklist

Background

Reports that omit important information can waste MPCA staff time and Petrofund money. Lust staff spent considerable time to develop comprehensive guidance to streamline the review process and provide consistency in the way we manage the program. The goal of the checklist is to ensure that the guidance is followed, that reports are reviewed in a timely manner, and that poor quality investigations and reporting are discouraged. One way to achieve these goals is to make sure that consultants are held accountable for failure to follow guidance.

Inadequate reports should be rejected. A rejected report may affect responsible party reimbursement.

Process

The following is a project manager report rejection checklist followed by a hydrologist report rejection checklist. The first checklist is intended for use by the PM to decide whether there is sufficient information to submit the report for hydro review. Following it is a list of rejection criteria for hydrogeologists. When a report is received by the PM, the PM fills out the PM checklist. Unless the PM rejects the report, the PM Checklist is attached to the report and submitted to the hydro for review. The hydro may reject the report for any of the reasons listed in the hydro checklist. Appropriate documentation of report rejections should include Report Tracking documentation, AND Remarks screen documentation (in fact Petrofund staff have indicated that Remarks documentation would be the best way for them to track report rejections for individual sites). The items listed below represent report problems that have been fairly common in recent years. There could be other reasons for rejecting a report such as failure to follow any guidance not referred to below.

A report rejection letter is flexible because sites and situations vary. In some cases a report will be rejected completely for failure to follow several important guidance documents. In most cases a report rejection letter will indicate a specific omission or error so that the responsible party may be eligible for reimbursement for those parts of the report that are acceptable. In order to expedite a project or to avoid delays over small omissions, a request for more work may include a comment indicating which portion of the work is not acceptable. The portion that is not acceptable should also be indicated in the Remarks screen. In some cases there may be a professional difference of opinion between the consultant and staff. For example, a consultant may recommend closure but staff may believe that the extent of contamination is not adequately defined. This may be a difference of opinion which may not be justification for a report rejection. The project team will have to consider whether the consultant is acting in good faith or is clearly ignoring obvious evidence.