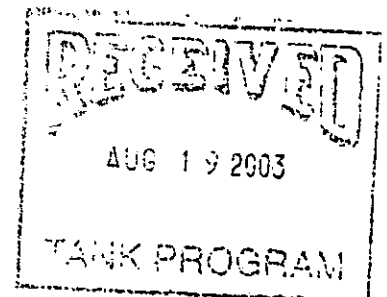


BARONS HARDWARE SOIL EXCAVATION

214 Main Street, Barons, Alberta

June 10, 2003



Prepared For:
ASR Enterprises Ltd.
Ms. Marie Read
PO Box 267
Irma, Alberta
T0B 2H0

Prepared By:
Hasegawa Engineering
Consulting Professional Engineers
A Division of 993997 Alberta Ltd.
1220 31st Street North
Lethbridge, AB
T1H 5J8



Environmental
Agricultural
Structural
Civil
Municipal

HASEGAWA ENGINEERING

Consulting Professional Engineers

A Division of 993997 Alberta Ltd.

1220 31st Street North, Lethbridge, AB T1H 5J8
Bus: 328-2686 Fax: 328-2728 E-mail: hasgm@telusplanet.net

August 13, 2003

Ms. Marie Read

ASR Enterprises
BOX 267
Irma, Alberta
T0B 2H0

Dear Ms. Read,

Re: Barons Hardware Soil Excavation

As per your request, Hasegawa Engineering has performed the Soil Excavation according to the Remediation Plan approved by the Safety Codes Council Barons Hardware located at 214 Main Street (Site 5102, Plan 2605X, Block 6, Lot 28 to 35) Barons, Alberta.

We trust that the enclosed information meets your requirements. Please do not hesitate to contact us if you have any questions.

Yours truly,

Mark Hasegawa, P. Eng.
Environmental Engineer

MAH/cms

Enclosure

Executive Summary

Hasegawa Engineering has performed Soil Excavation, which was approved by the Safety Codes Council for Barons Hardware located at 214 Main Street Barons, Alberta. The soil excavation was completed May 20th through 24th, 2003 as part of the requirements for completion of the Remediation Plan from Hasegawa Engineering (2002).

The activities involved in the soil excavation included:

- Removing the overlying uncontaminated soil and stockpiling it onsite for later use as backfill.
- Screening soil samples using the OVM headspace analysis for volatile hydrocarbons.
- Removing the underlying contaminated soil and transporting it to the Keho Lake Colony for land farming.
- Extending the excavation to the property line on the south and east, to the SVE piping on the west and extending north into the property. A total volume of 364 m³ of uncontaminated soil and 800 m³ of contaminated soil was removed from the excavation.
- Obtaining duplicate samples from 6 locations within the soil pit (3 from the north wall and 1 from each other wall). These samples were sent to the lab for analysis of Benzene, Toluene, Ethylbenzene, Toluene (BTEX), and F1-F4 fractions.
- Backfilling the pit with the uncontaminated soil on the bottom and overlain by clean pit run.
- Applying gravel to the site to evenly grade and restore the site.

The criteria used to compare contaminant concentrations in the soil for the site was residential for offsite impact and commercial/industrial fine grained Risk Management Criteria for onsite impact. A grid system was used to systematically label samples, which starts at 0N and 0E on the southeast corner of the property (refer to Figure 2). Analytical results determined that sample [2.5N,2E] at 4 m depth on the south wall, exceeded onsite criteria for benzene and F1. Sample [3N,0E] at 4 m depth on the west wall, was broken during transport from the Norwest Lab Lethbridge location to the Edmonton location. The analysis was still completed and showed an exceedance of onsite criteria in F1 fractions. Because the sample jar was broken, the validity of the results may not reflect the true hydrocarbon concentrations. Sample [6N,3E], located at 4 m depth on the east wall exceeded offsite criteria for F1 fractions. The analytical results of the samples taken from the north end of the excavation met criteria.

As per mark, excavated to ~4m throughout
[01/22/04 telephone conversation]

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APPENDIX B - NORWEST LABS ANALYTICAL RESULTS	

1.0 Introduction

Hasegawa Engineering has performed the Soil Excavation approved by the Safety Codes Council at Barons Hardware located at 214 Main Street Barons, Alberta. The soil excavation was completed May 20th through 24th, 2003 as part of the requirements for completion of the Remediation Plan created by Hasegawa Engineering (2002).

The excavation was limited on the east by the property boundary, to the south by the sidewalk and to the west by the Soil Vapour Extraction system (SVE) installed by Hasegawa Engineering in 1996. A site map (Figure 1) and pictures taken on site are provided in Appendix A.

2.0 Methodology

The excavation took place between May 20th through 22nd and back filling on May 23rd and 24th. The excavation area and sampling grid plan (comprised of 3 m intervals) was determined prior to the excavation (see Figure 2).

Samples were taken and screened throughout the excavation to determine the depth contamination began and to what depth it ended and if the excavation area would need to be extended. The screening was done using the OVM headspace analysis for volatile hydrocarbons using the Gastech Hydrocarbon Monitor instrument with a range of 1-11000 parts per million (ppm).

The soil OVM headspace analysis was completed using the following procedure:

- A soil sample as taken and place in a clean Ziploc plastic bag and sealed;
- A duplicate sample was then placed in a 250 ml glass jar provided by the lab and sealed. The jar was filled with as much soil as possible to leave as little air space as possible
- The Gastech probe was inserted into the plastic bag after approximately 20 minutes to allow vapors to accumulate in the headspace. The readings were recorded in ppm.
- 6 samples from the excavation walls were sent to Norwest Labs for analysis of BTEX and F1-F4 fractions. The sample locations were chosen to show the contaminant concentrations on the outer walls of the excavation.

The 70 m² excavation area and sampling grid plan (comprised of 3 m intervals) was determined prior to the excavation (see Figure 2). The excavation took place between May 20-22 and back filling on May 23 and 24. The site was excavated as close to the south and east property lines as possible. The excavation was also bounded by the SVE system to the west.

Initially, 1.5 m of overburden was removed and stockpiled on site. Further overburden

was removed after screening determined the uncontaminated soil reached 2 m. The underlying contaminated soil was excavated and loaded into trucks. The depth of contamination was determined to reach 5.4 m, at which point bedrock was encountered.

The initial area of 70 m² was extended 7.5 m north when contamination on the north wall was still apparent in the screened samples. The total area of excavation upon completion was 182 m².

The contaminated soil was hauled to the land-farming site at the Keho Lake Hutterite Colony and dumped into 54 piles approximately 3 m high, and 4 m diameter. These piles were spread out and will be tilled once every 2 weeks by the Hutterite Colony. As a precautionary measure, a plastic liner was attached to the north wall at 3 m - 5 m as a barrier against any contamination still present within the north wall.

Of the screened samples, 6 (3 from the north wall and 1 from the east, west and south walls) were sent to Norwest labs for analysis of BTEX and F1-F4 fractions. The sample locations were chosen to show the contaminant concentrations on the outer walls of the excavation. An overhead view of sampling locations is shown in Figure 3. The results of soil analysis are included in Section 3.0

The pit was backfilled using the stockpiled uncontaminated soil on the bottom and overlain by pit. Because some water had drained into the southeast corner of the hole, 1.5 m of stockpiled soil was mixed with pit run before any compaction took place. The remainder of backfill was compacted every 0.5 m.

After backfilling was complete the area was covered by gravel to even grade and the site restored.

3.0 Soil Analytical Results

The samples were screened using the OVM headspace analysis for volatile hydrocarbons using, Gas Tech GT 200 and 5 of the samples from the walls were sent to the lab for analysis (see Table 1). An overhead view of the sample locations is shown in Figure 3.

Table 1 - OVM readings for soil samples(location distance in meters).

OVM Readings:			Comments
Depth	Location	OVM (ppm)	
1.5m	3N,0.5E	150	No smell
	3N,3E	90	No smell
2m	2.5N,0E	700	
	2.5N,2E	1020	
	3N,3E	680	
	5N,3E	620	
	6N,2E	300	
2.5m	3N,2E	1500	
	3.5N,1E	1800	
4m	5N,2E	3500	
	5.5N,2E	560	
	6N,1E	880	
	6.2N,1E	1360	
	6.5N,1E	980	Lab sample
	6N,3E	1300	Lab sample
	7N,3E	1400	Lab sample
	3N,0E	5000	Lab sample
	2.5N,2E	1300	Lab sample
4.5m	3N,3E	2500	
	3N,1E	2000	
	7N,2E	240	Lab sample
5m	6N,2E	300	
	2.5N,2E	2500	
5.4m	3,2N.5E	1700	
	6,0N.5E	3000	
5.5m	B	700	Bedrock

The phase II investigation of the property performed by Hasegawa Engineering classified the soil as fine-grained. The property includes both onsite (commercial) and offsite (residential) Risk Management Criteria.

Table 5: Soil Analytical Results

Sample Location	Depth ft	Benzene mg/kg	Toluene mg/kg	Ethyl Benzene mg/kg	Xylenes mg/kg	F1 mg/kg	F2 mg/kg	F3 mg/kg	F4 mg/kg
Onsite Criteria	-	9	450	690	1500	660	1500	2500	6600
Offsite Criteria	-	1.9	300	450	500	260	900	800	5600
2.5 N,2 E	4	14.3	235	41.2	331	1890	163	100	21
3 N,0 E	4	0.35	8.60	7.99	93.4	864	815	475	14
6N, 3E*	4	0.48	1.79	6.87	27.8	358	57	31	13
6.5N,1E*	4	0.05	0.05	0.06	0.47	42	94	84	<10
7N,2E*	4.5	0.02	0.06	<0.02	0.06	<1	<10	14	13
7N,3E*	4	<0.02	<0.02	<0.02	0.04	<1	11	22	17
Indicates concentration exceeds applicable remedial criteria Sample jar was broken during transport									

* Offsite Criteria Applies

Analytical results determined that sample [2.5N,2E] located at 4 m depth on the south wall, exceeded onsite criteria for benzene and F1. Sample [3N,0E] located on the west wall, was broken during transport from the Norwest Lab Lethbridge location to the Edmonton location. The analysis was still completed and showed an exceedance of onsite criteria in F1 fractions. Because the sample jar was broken, the validity of the results may not reflect the true hydrocarbon concentrations. Sample [6N,3E], located at 4 m depth on the east wall exceeded offsite criteria for F1 fractions.

The samples taken from the north wall upon completion of the excavation do not exceed applicable remediation criteria. Complete lab results from Norwest labs are provided in Appendix B.

4.0 Conclusions and Recommendations

The soil excavation at Barons Hardware located at 214 Main Street Barons, Alberta took place between May 20th and 22nd and back filling on May 23 and 24 as part of the requirements of the Remediation Plan from by Hasegawa Engineering (2002).

Through completion, the total area excavated was extended from 70 m² to 182 m² with a total overburden volume of 364 m³ and a contaminated volume of 800 m³. The excavation was limited on the east by the property boundary, to the south by the sidewalk and to the west by the SVE installed by Hasegawa Engineering in 1996.

Analytical results determined that:

- [2.5N,2E] at 4 m depth on the south wall, exceeded onsite criteria for benzene and F1.
- [3N,0E] at 4 m depth on the west wall adjacent to the SVE system and previous excavation, exceeded onsite criteria for F1 fractions. This may not be a representative sample as the jar was broken during transport from the Norwest Lab Lethbridge location to the Edmonton location.
- [6N,3E], located at 4 m depth on the east wall exceeded offsite criteria for F1 fractions. However, the offsite property belongs to Turbo and was previously excavated and remediated.
- Samples taken from the north wall upon completion of the excavation do not exceed applicable remediation criteria.

The site has been remediated to the property line on the south and east. The impacted material to the north side of the pit has been removed. The remaining concentrations of hydrocarbons on site are relatively low. As a result, Hasegawa Engineering recommends the performance of a risk assessment to determine if the remaining concentrations are acceptable.

APPENDIX A

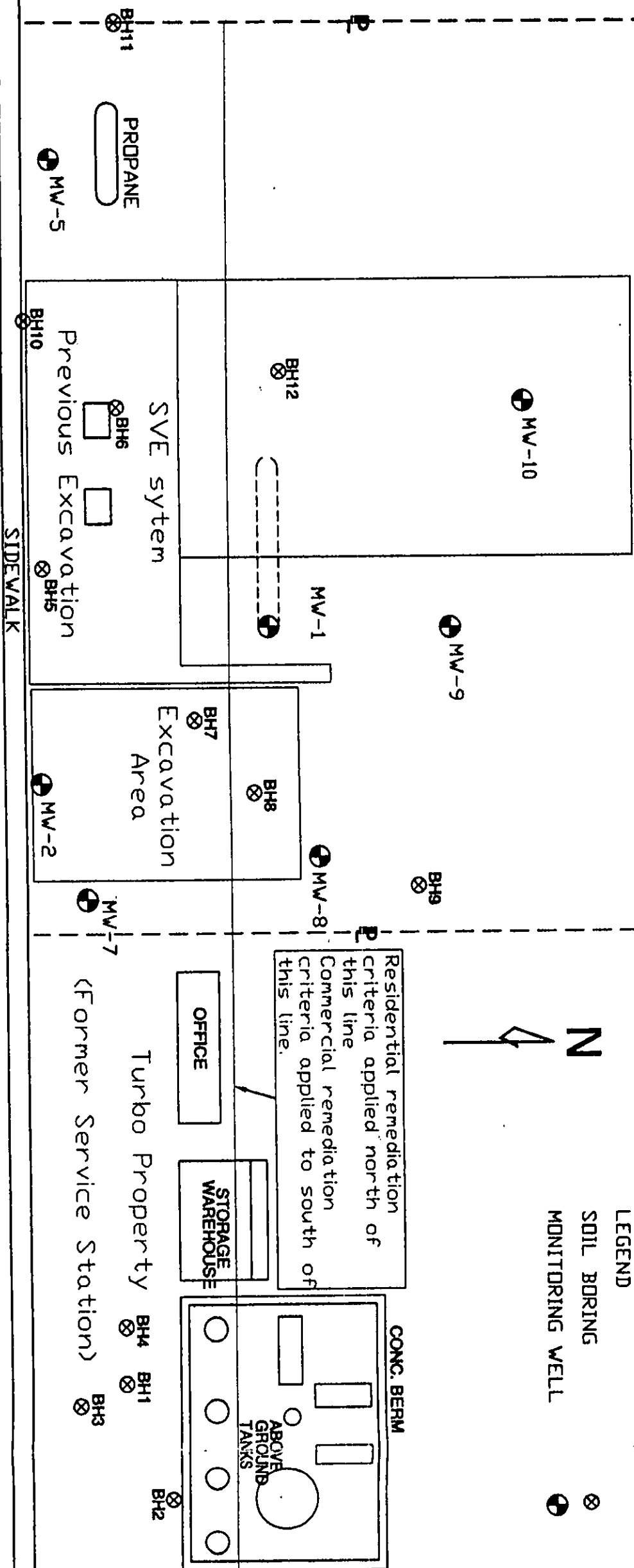
FIGURES



LEGEND
SOIL BORING ⊗
MONITORING WELL ⊕



Residential remediation
criteria applied north of
this line
Commercial remediation
criteria applied to south of
this line.



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including, etc., code.

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1220 - 31 Street North
Lethbridge Alberta T1H 5J8
Ph: 328-2686
Fax: 328-2728
email:hosgm@telusplanet.net

CALGARY OFFICE
201,2815-21 Street NE
Calgary Alberta T2E 6Z2
Ph: 250-5261

CALGARY
MARIE READ

BARONS
HARDWARE

Site Map

01-009

FIG.1



LEGEND
SOIL BORING
MONITORING WELL



Notes:

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Do not scale Drawing.
All construction shall be in accordance with the latest code, may be in construction, mechanical, etc. code.

No.	Revision	Date	By



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1220 - 51 Street North
Lethbridge Alberta T1H 5J8
Ph: 328-2686
Fax: 328-2728
email:hosegn@telusplanet.net

CALGARY OFFICE
201,2816-21 Street NE
Calgary Alberta T2E 6Z2
Ph: 250-5261

CLIENT
MARIE READ

PROJECT TITLE
BARONS
HARDWARE

Grid Plan

PROJECT NO.
01-009

DESIGNER
H.E.
AS SHOWN

DATE
June 9, 2003

FIG.2

MAIN STREET

SIDEWALK

PROPANE

MW-5

MW-11

MW-4

MW-3

0

1

2

3

4

5

6

7

0

1

2

3

MW-2

MW-7

MW-1

MW-8

MW-10

MW-9

MW-12

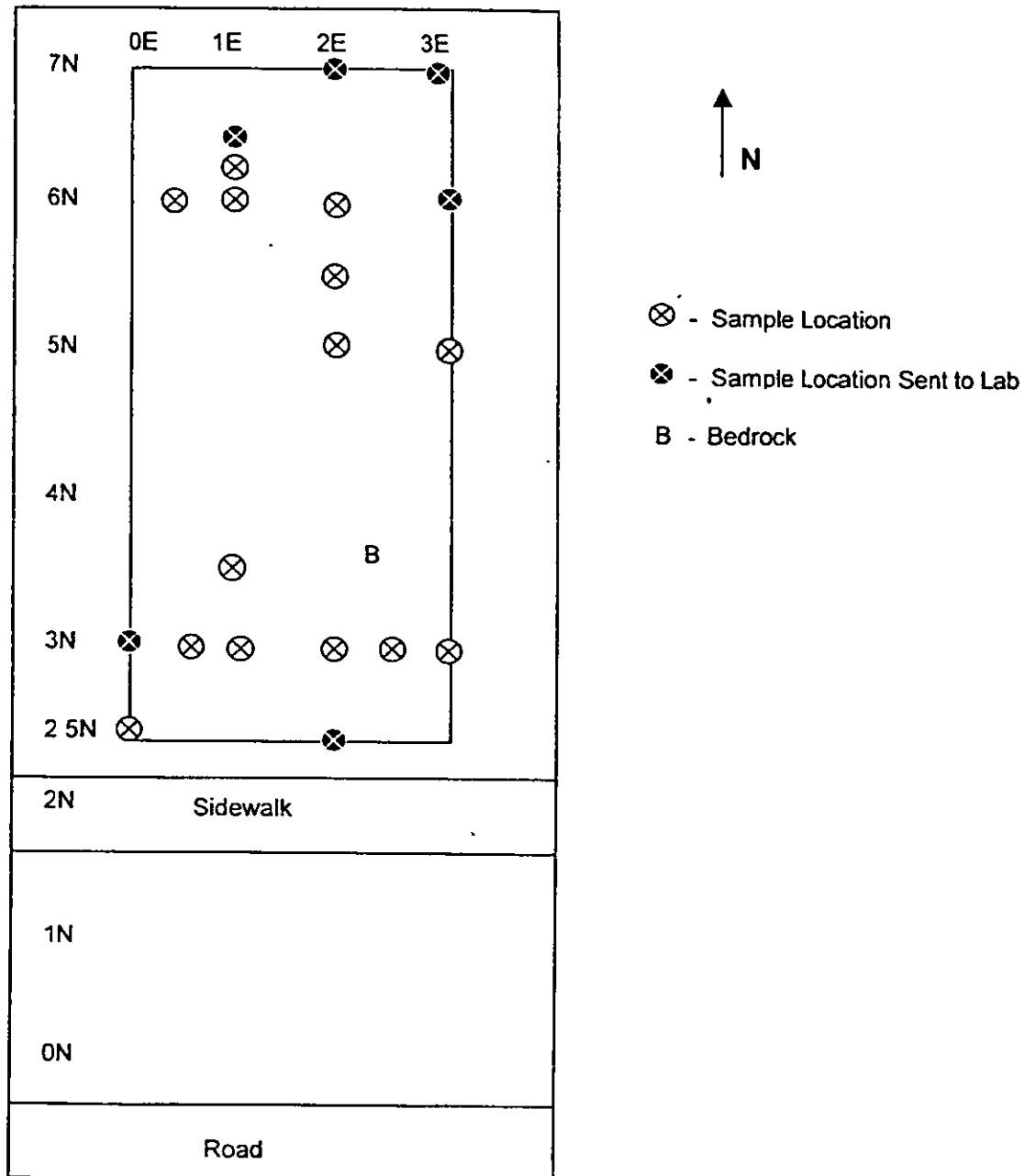


Figure 3: Overhead view of sample locations

APPENDIX B

NORWEST LABS ANALYTICAL RESULTS



Report Transmission Cover Page

Norwest Labs
Bay 6, 2712-37 Avenue N.E.
Calgary, AB. T1Y-5L3
Phone: (403) 291-2022
Fax: (403) 291-2021

Bill to: Hasegawa Engineering Ltd.
Report to: Hasegawa Engineering Ltd.
1220 - 31 Street North
Lethbridge, AB, Canada
T1H 5J8
Attn: Caroline Gilliat
Sampled By: Caroline
Company: Hasegawa

Project
ID: Barons 01-009
Name: Excavation
Location:
LSD:
P.O.:
Acct. Code:

NWL Lot ID: 235076
Control Number: E 124339
Date Received: May 22, 2003
Date Reported: May 29, 2003
Report Number: 406492

Copies	Contact	Company	Address	Fax	x	Post
0	George Hasegawa	Hasegawa Engineering Ltd.	1224A - 31 Street North Lethbridge, AB T1H 5J8 Phone: (403) 328-2686 Fax: (403) 328-2728 Email: hasgm@tclusplanet.net	Email		Pickup
				Custom Email		Courier
				Web		Hand
				Email Notification		
1	Caroline Gilliat	Hasegawa Engineering Ltd.	1220 - 31 Street North Lethbridge, AB T1H 5J8 Phone: (403) 328-2686 Fax: (403) 328-2728 Email: hasgm@tclusplanet.net	Fax	x	Post x
				Email		Pickup
				Custom Email		Courier
				Web		Hand
				Email Notification		

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Report Transmission Notes

Agreement Notes

Lot Notes

Sample Notes:

Notes to Clients

Agreement Notes

Lot Notes

Sample Notes:

Comment:

See Methodology and Notes page of Analytical Report for all comments pertaining to this report.

If this report transmission is not satisfactory, please send report requirements to the address at the top of this page.



Agri-Food & Environmental Group
Calgary Edmonton Winnipeg Lethbridge Surrey

Sample Custody

Norwest Labs
Bay 6, 2712-37 Avenue N.E.
Calgary, AB. T1Y-5L3
Phone: (403) 291-2022
Fax: (403) 291-2021

Bill to: Hasegawa Engineering Ltd.
Report to: Hasegawa Engineering Ltd.

1220 - 31 Street North
Lethbridge, AB, Canada
T1H 5J8
Attn: Caroline Gilliat
Sampled By: Caroline
Company: Hasegawa

Project
ID: Barons 01-009
Name: Excavation
Location:
LSD:
P.O.:
Acct. Code:

NWL Lot ID: 235076
Control Number: E 124339
Date Received: May 22, 2003
Date Reported: May 29, 2003
Report Number: 406492

Sample Disposal Date: Jun 28, 2003

All samples will be stored until this date unless other instructions are received. Please indicate other requirements below and return this form to the address or fax number on the upper right of this page.

_____ Extend Sample Storage Until _____ (MM/DD/YY)

The following charges apply to extended sample storage:

Storage for 1 to 5 samples per month	\$ 10.00
Storage for 6 to 20 samples per month	\$ 15.00
Storage for 21 to 50 samples per month	\$ 30.00
Storage for 51 to 200 samples per month	\$ 60.00
Storage for more than 200 samples per month	\$ 110.00

_____ Return Sample, collect, to the address below via:

_____ Greyhound
_____ Loomis
_____ Purolator
_____ Other (Specify) _____

Name: _____
Company: _____
Address: _____

Phone: _____
Fax: _____
Signature: _____

If no other arrangements have been made, samples will be disposed of on Jun 28, 2003.



**NORWEST
LABS**

Agri-Food & Environmental Group
Calgary Edmonton Winnipeg Lethbridge Surrey

Analytical Report

Norwest Labs
Bay 6, 2712-37 Avenue N.E.
Calgary, AB. T1Y-5L3
Phone: (403) 291-2022
Fax: (403) 291-2021

Bill to: Hasegawa Engineering Ltd.
Report to: Hasegawa Engineering Ltd.

1220 - 31 Street North
Lethbridge, AB, Canada
T1H 5J8

Attn: Caroline Gilliat
Sampled By: Caroline
Company: Hasegawa

Project
ID: Barons 01-009
Name: Excavation
Location:
LSD:
P.O.:
Acct. Code:

NWL Lot ID: 235076
Control Number: E124339
Date Received: May 22, 2003
Date Reported: May 29, 2003
Report Number: 406492

Page: 1 of 3

		NWL Number	235076-1	235076-2	235076-3		
		Sample Date	May 22, 2003	May 22, 2003	May 22, 2003		
		Sample Description	2.5,2.4 m	6,3.4 m	7,2.4.5 m		
Analyte		Units	Results	Results	Results	Detection Limit	
Mono-Aromatic Hydrocarbons - Soil							
Extraction Date			27-May-03	27-May-03	27-May-03		
Benzene	Dry Weight	mg/kg	14.3	0.48	0.02	0.02	
Toluene	Dry Weight	mg/kg	235	0.79	0.06	0.02	
Ethylbenzene	Dry Weight	mg/kg	41.2	6.87	<0.02	0.02	
Total Xylenes (m,p,o)	Dry Weight	mg/kg	331	27.8	0.06	0.02	
Volatile Petroleum Hydrocarbons - Soil							
Extraction Date			27-May-03	27-May-03	27-May-03		
F1 C6-C10	Dry Weight	mg/kg	1890	358	<1	1	
F1 -BTEX	Dry Weight	mg/kg	1270	322	<1	1	
Extractable Petroleum Hydrocarbons - Soxhlet							
Extraction Date			27-May-03	27-May-03	27-May-03		
F2 C10-C16	Dry Weight	mg/kg	163	57	<10	10	
F3 C16-C34	Dry Weight	mg/kg	100	31	14	10	
F4 C34-C50	Dry Weight	mg/kg	21	13	13	10	
F4HTGC C34-C50+	Dry Weight	mg/kg	44	25	28	10	
% C50+		%	7.5	10.3	37.0		
Silica Gel Cleanup							
Silica Gel Cleanup			Done	Done	Done		
Soil % Moisture	Soil % Moisture	%	26.8	21.0	23.2		



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Agri-Food & Environmental Group
Calgary Edmonton Winnipeg Lethbridge Surrey

Analytical Report

Norwest Labs
Bay 6, 2712-37 Avenue N.E.
Calgary, AB. T1Y-5L3
Phone: (403) 291-2022
Fax: (403) 291-2021

Bill to: Hasegawa Engineering Ltd.
Report to: Hasegawa Engineering Ltd.

1220 - 31 Street North
Lethbridge, AB, Canada
T1H 5J8

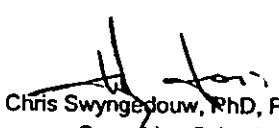
Attn: Caroline Gilliat
Sampled By: Caroline
Company: Hasegawa

Project
ID: Barons 01-009
Name: Excavation
Location:
LSD:
P.O.:
Acct. Code:

NWL Lot ID: 235076
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Date Received: May 22, 2003
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Page: 2 of 3

		NWL Number	235076-4	235076-5	235076-6	
		Sample Date	May 22, 2003	May 22, 2003	May 22, 2003	
		Sample Description	7,3 4 m	6,5,1 4 m	3,0 4 m	
Analyte	Units	Results	Results	Results	Detection Limit	
Mono-Aromatic Hydrocarbons - Soil						
Extraction Date		27-May-03	27-May-03	27-May-03		
Benzene	Dry Weight	mg/kg	<0.02	0.05	0.35	0.02
Toluene	Dry Weight	mg/kg	<0.02	0.05	8.60	0.02
Ethylbenzene	Dry Weight	mg/kg	<0.02	0.06	7.99	0.02
Total Xylenes (m,p,o)	Dry Weight	mg/kg	0.04	0.47	93.4	0.02
Volatile Petroleum Hydrocarbons - Soil						
Extraction Date		27-May-03	27-May-03	27-May-03		
F1 C6-C10	Dry Weight	mg/kg	<1	42	864	1
F1 -BTEX	Dry Weight	mg/kg	<1	41	754	1
Extractable Petroleum Hydrocarbons - Soxhlet						
Extraction Date		27-May-03	27-May-03	27-May-03		
F2 C10-C16	Dry Weight	mg/kg	11	94	815	10
F3 C16-C34	Dry Weight	mg/kg	22	84	475	10
F4 C34-C50	Dry Weight	mg/kg	17	<10	14	10
F4HTGC C34-C50+	Dry Weight	mg/kg	32	10	24	10
% C50+	%		24.2	0.0	0.7	
Silica Gel Cleanup						
Silica Gel Cleanup		Done	Done	Done		
Soil % Moisture						
Moisture	Soil % Moisture	%	18.7	21.5	27.6	

Approved by:  Chris Swynge-Jouw, PhD, PChem
Consulting Scientist



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Methodology and Notes

Norwest Labs
Bay 6, 2712-37 Avenue N.E.
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Phone: (403) 291-2022
Fax: (403) 291-2021

Bill to: Hasegawa Engineering Ltd.
Report to: Hasegawa Engineering Ltd.
1220 - 31 Street North
Lethbridge, AB, Canada
T1H 5J8
Attn: Caroline Gilliat
Sampled By: Caroline
Company: Hasegawa

Project
ID: Barons 01-009
Name: Excavation
Location:
LSD:
P.O.:
Acct. Code:

NWL Lot ID: 235076
Control Number: E 124339
Date Received: May 22, 2003
Date Reported: May 29, 2003
Report Number: 406492

Page: 3 of 3

Method of Analysis:

Method Name	Reference	Method	Date Analysis Completed	Location	Analyst
BTEX-CCME - Soil	CCME	Reference Method - Canada-Wide Standard for PHC in Soil, CWS PHC	May 28, 2003	Norwest Labs Calgary	Mackenzie Harris
TEH-CCME-Soil (Soxhlet)	CCME	Reference Method - Canada-Wide Standard for PHC in Soil, CWS PHC	May 29, 2003	Norwest Labs Calgary	Nancy Ycung

* Norwest method(s) is based on reference method

References:

CCME

Canadian Council of Ministers of the Environment

Comments:

Sample #6 broke in transit, called client and let them know that sample may be compromised, she said to continue with the analysis, nf,
05/26/03

Please direct any inquiries regarding this report to our Client Services group.

Results relate only to samples as submitted

The test report shall not be reproduced except in full, without the written approval of the laboratory

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**NORWEST
LABS**

Agri-Food & Environmental Group
Calgary Edmonton Winnipeg Lethbridge Surrey

Hydrocarbon Chromatogram

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Calgary, AB. T1Y-5L3
Phone: (403) 291-2022
Fax: (403) 291-2021

Bill to: Hasegawa Engineering Ltd.
Report to: Hasegawa Engineering Ltd.

1220 - 31 Street North
Lethbridge, AB, Canada
T1H 5J8

Attn: Caroline Gilliat

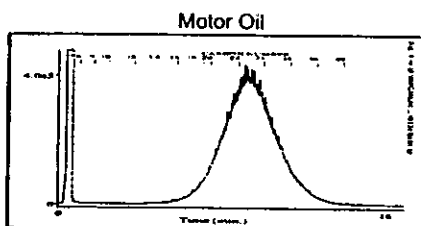
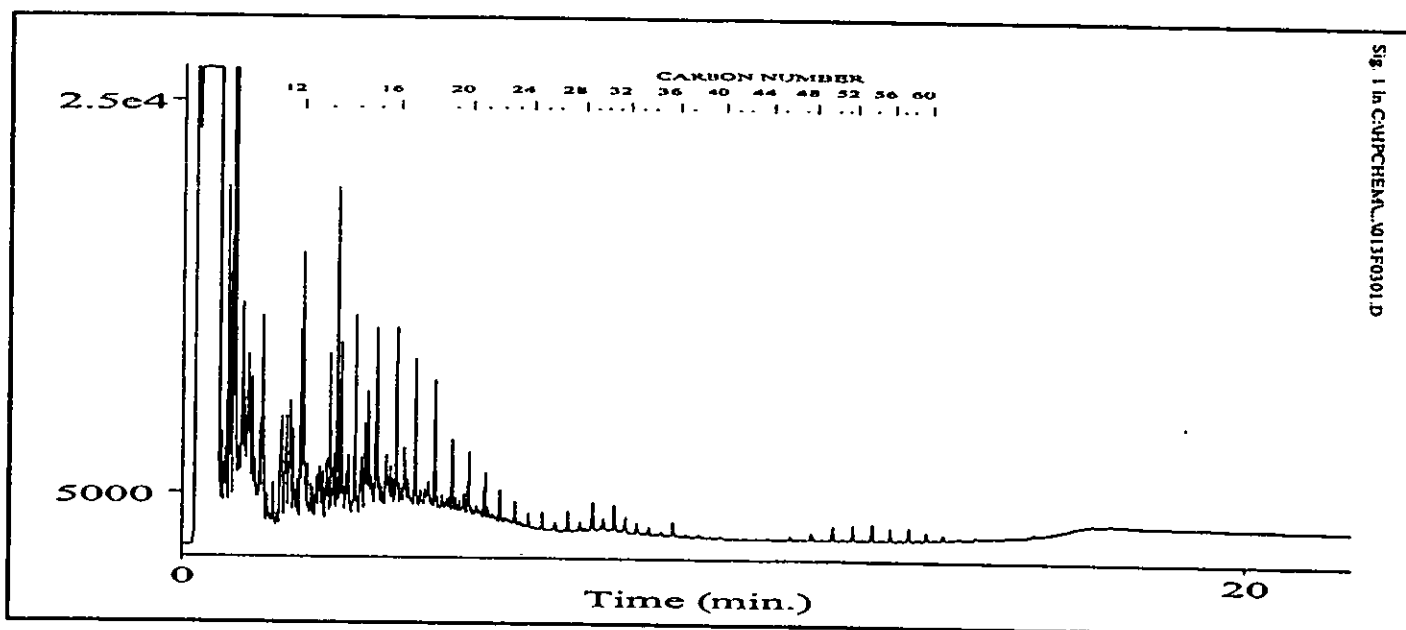
Sampled by: Caroline
Hasegawa

Project ID: Barons 01-009
Name: Excavation
Location:
LSD:
P.O.:

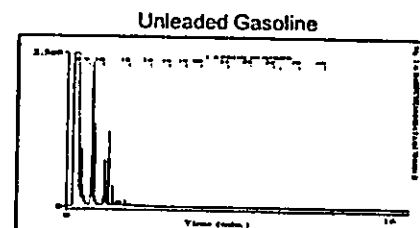
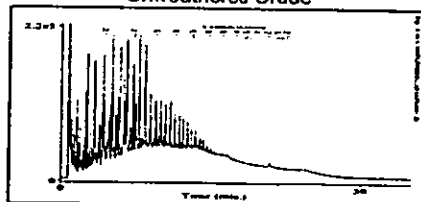
NWL Lot ID: 235076
Control Number: E 124339
Date Received: May 22, 2003
Date Reported:

NWL Number: 235076-1
Sample Date: May 22, 2003

Sample Description: 2.5,2
4 m



TYPICAL PRODUCT CHROMATOGRAMS



Product Carbon Number Ranges

Gasoline C4-C12
Varsol C8-C12

Kerosene C7-C16
Diesel C8-C22

Lubricating Oils C20-C40
Crude Oils C3-C60+



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**NORWEST
LABS**

Hydrocarbon Chromatogram

Bay 6, 2712-37 Avenue N.E.

Calgary, AB. T1Y-SL3

Phone: (403) 291-2022

Fax: (403) 291-2021

Agri-Food & Environmental Group
Calgary Edmonton Winnipeg Lethbridge Surrey

Bill to: Hasegawa Engineering Ltd.
Report to: Hasegawa Engineering Ltd.

1220 - 31 Street North
Lethbridge, AB, Canada
T1H 5J8

Attn: Caroline Gilliat

Sampled by: Caroline
Hasegawa

Project ID: Barons 01-009

Name: Excavation

Location:

LSD:

P.O.:

NWL Lot ID: 235076

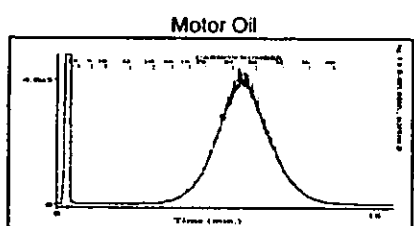
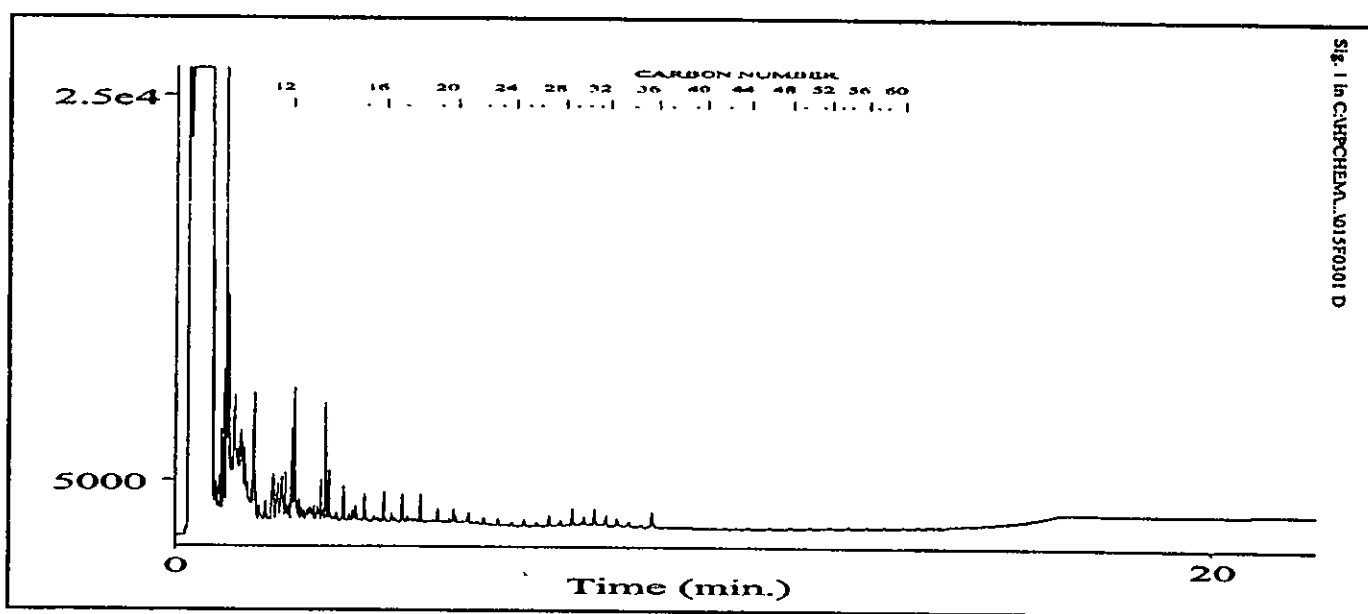
Control Number: E 124339

Date Received: May 22, 2003

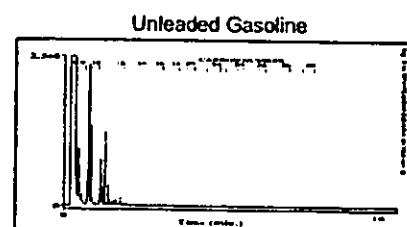
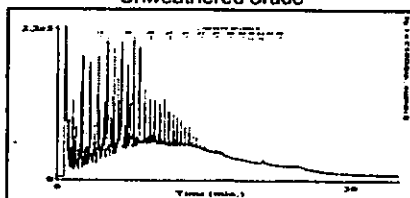
Date Reported:

NWL Number 235076-2
Sample Date: May 22, 2003

Sample Description: 6,3
4 m



TYPICAL PRODUCT CHROMATOGRAMS
Unweathered Crude



Product Carbon Number Ranges

Gasoline C4-C12
Varsol C8-C12

Kerosene C7-C16
Diesel C8-C22

Lubricating Oils C20-C40
Crude Oils C3-C60+



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Agri-Food & Environmental Group
Calgary Edmonton Winnipeg Lethbridge Surrey

Hydrocarbon Chromatogram

Bay 6, 2712-37 Avenue N.E.
Calgary, AB. T1Y-5L3

Phone: (403) 291-2022

Fax: (403) 291-2021

Bill to: Hasegawa Engineering Ltd.
Report to: Hasegawa Engineering Ltd.

1220 - 31 Street North
Lethbridge, AB, Canada
T1H 5J8

Attn: Caroline Gilliat

Sampled by: Caroline
Hasegawa

Project ID: Barons 01-009

Name: Excavation

Location:

LSD:

P.O.:

NWL Lot ID: 235076

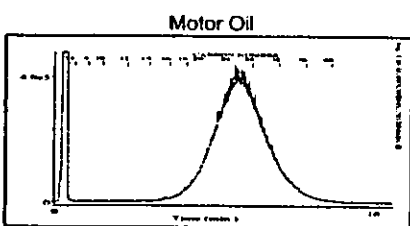
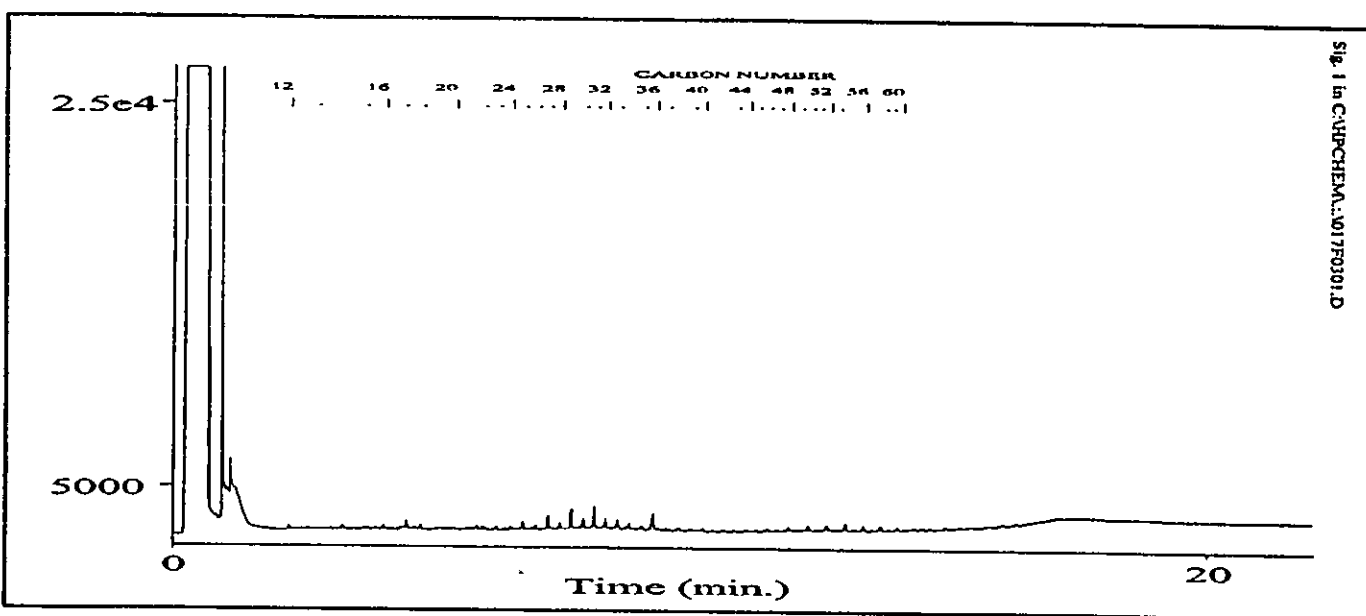
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Date Received: May 22, 2003

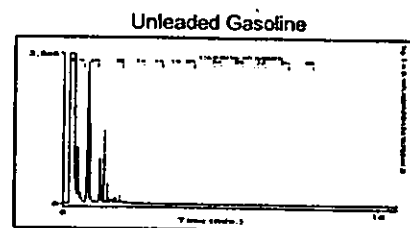
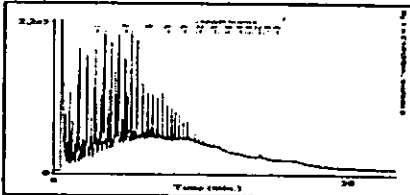
Date Reported:

NWL Number: 235076-3
Sample Date: May 22, 2003

Sample Description: 7,2
4.5 m



TYPICAL PRODUCT CHROMATOGRAMS



Product Carbon Number Ranges					
Gasoline	C4-C12	Kerosene	C7-C16	Lubricating Oils	C20-C40
Varsol	C8-C12	Diesel	C8-C22	Crude Oils	C3-C60+



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Agri-Food & Environmental Group
Calgary Edmonton Winnipeg Lethbridge Surrey

Hydrocarbon Chromatogram

Bay 6, 2712-37 Avenue N.E.
Calgary, AB. T1Y-5L3

Phone: (403) 291-2022

Fax: (403) 291-2021

Bill to: Hasegawa Engineering Ltd.
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1220 - 31 Street North
Lethbridge, AB, Canada
T1H 5J8

Attn: Caroline Gilliat

Sampled by: Caroline
Hasegawa

Project ID: Barons 01-009

Name: Excavation

Location:

LSD:

P.O.:

NWL Lot ID: 235076

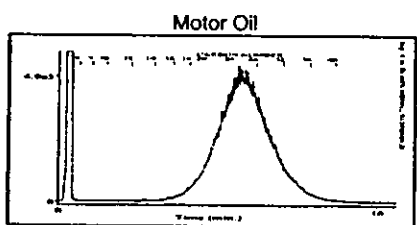
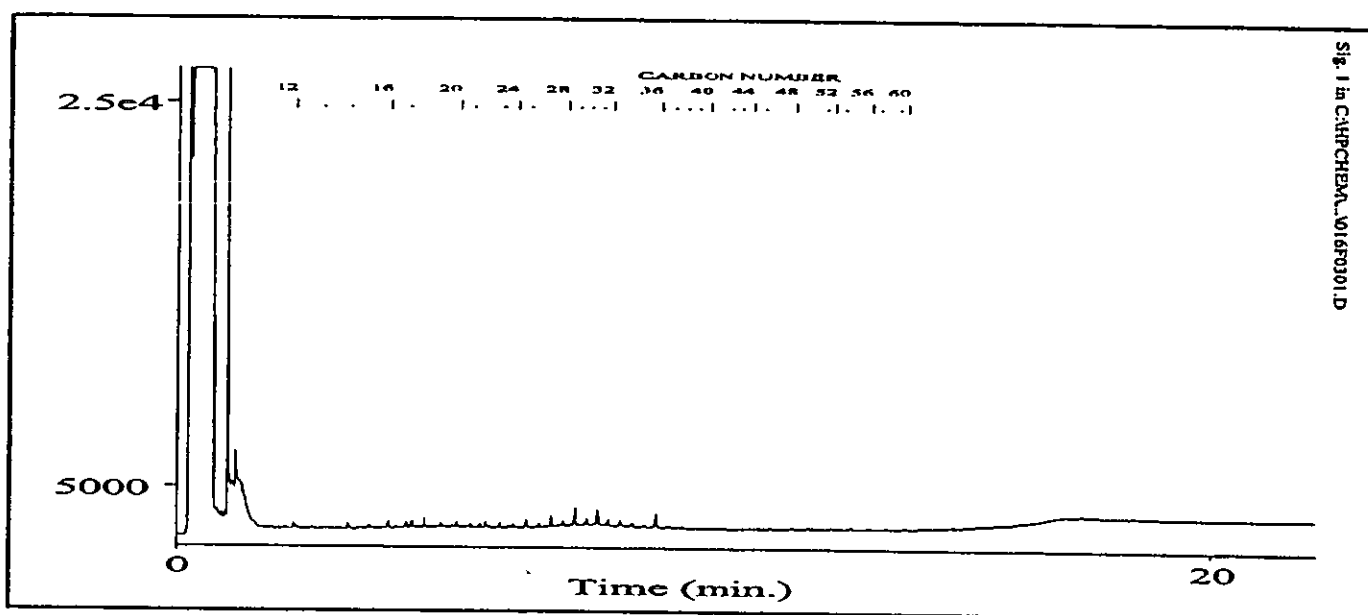
Control Number: E 124339

Date Received: May 22, 2003

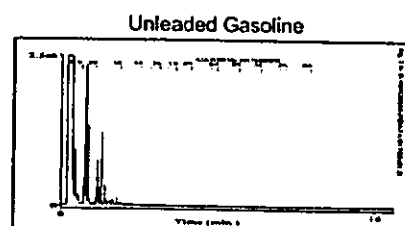
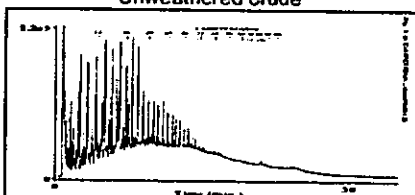
Date Reported:

NWL Number: 235076-4
Sample Date: May 22, 2003

Sample Description: 7,3
4 m



TYPICAL PRODUCT CHROMATOGRAMS



Product Carbon Number Ranges

Gasoline C4-C12
Varsol C8-C12

Kerosene C7-C16
Diesel C8-C22

Lubricating Oils C20-C40
Crude Oils C3-C60+



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LABS**

Hydrocarbon Chromatogram

Bay 6, 2712-37 Avenue N.E.
Calgary, AB. T1Y-5L3
Phone: (403) 291-2022
Fax: (403) 291-2021

Agri-Food & Environmental Group
Calgary Edmonton Winnipeg Lethbridge Surrey

Bill to: Hasegawa Engineering Ltd.
Report to: Hasegawa Engineering Ltd.

1220 - 31 Street North
Lethbridge, AB, Canada
T1H 5J8

Attn. Caroline Gilliat

Sampled by: Caroline
Hasegawa

Project ID: Barons 01-009

Name: Excavation

Location:

LSD:

P O.:

NWL Lot ID: 235076

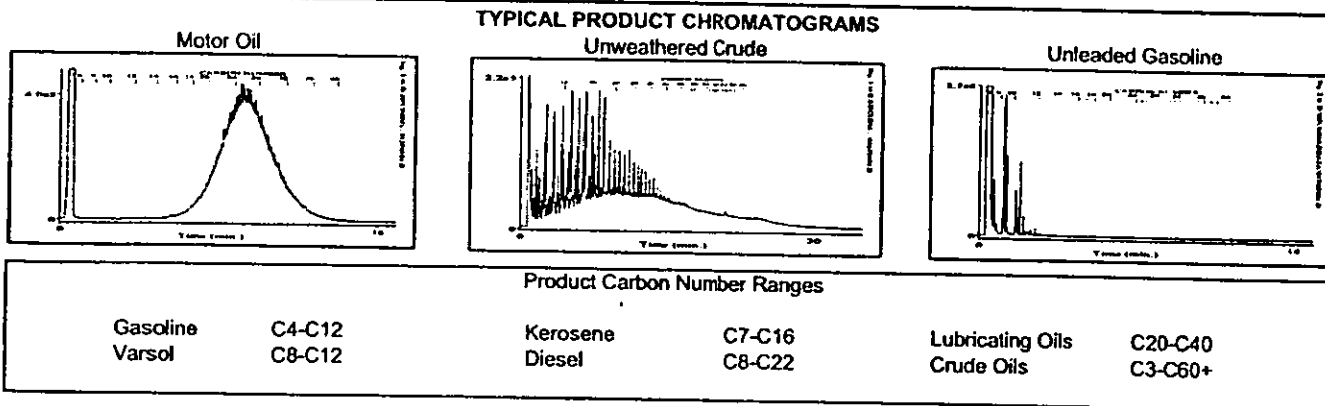
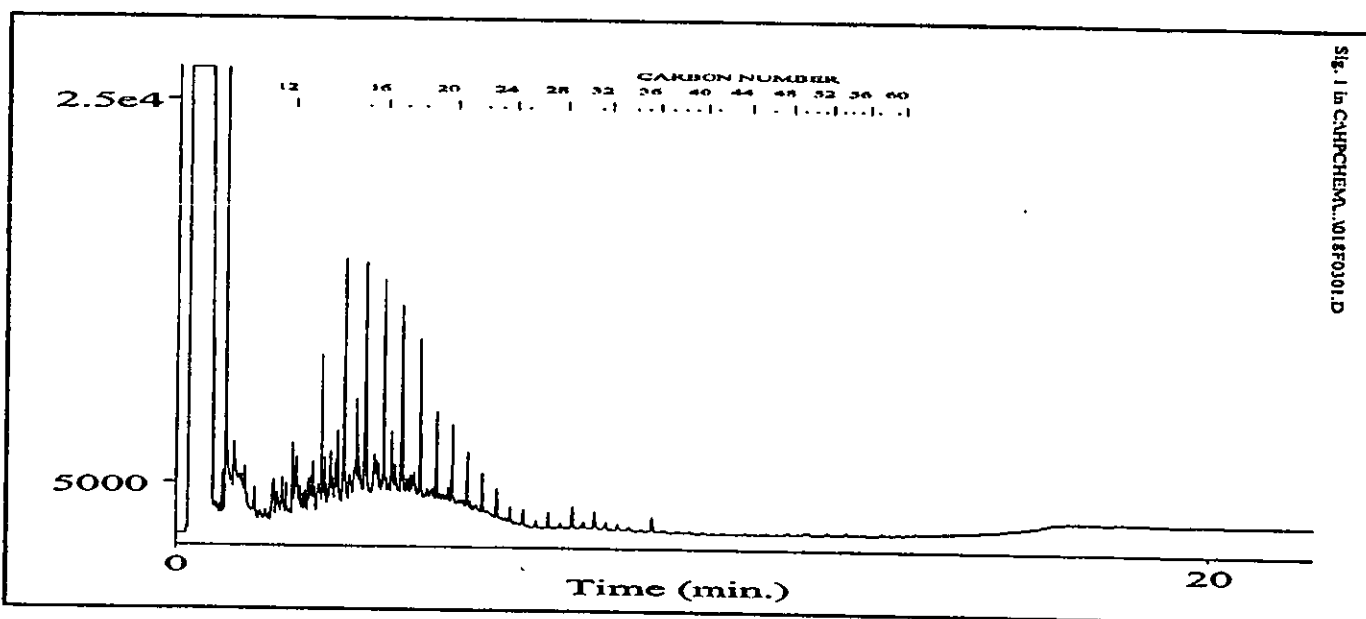
Control Number: E 124339

Date Received: May 22, 2003

Date Reported:

NWL Number: 235076-5
Sample Date: May 22, 2003

Sample Description: 6.5,1
4 m



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Hydrocarbon Chromatogram

Bay 6, 2712-37 Avenue N.E.
Calgary, AB. T1Y-5L3
Phone: (403) 291-2022
Fax: (403) 291-2021

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1220 - 31 Street North
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Attn: Caroline Gilliat

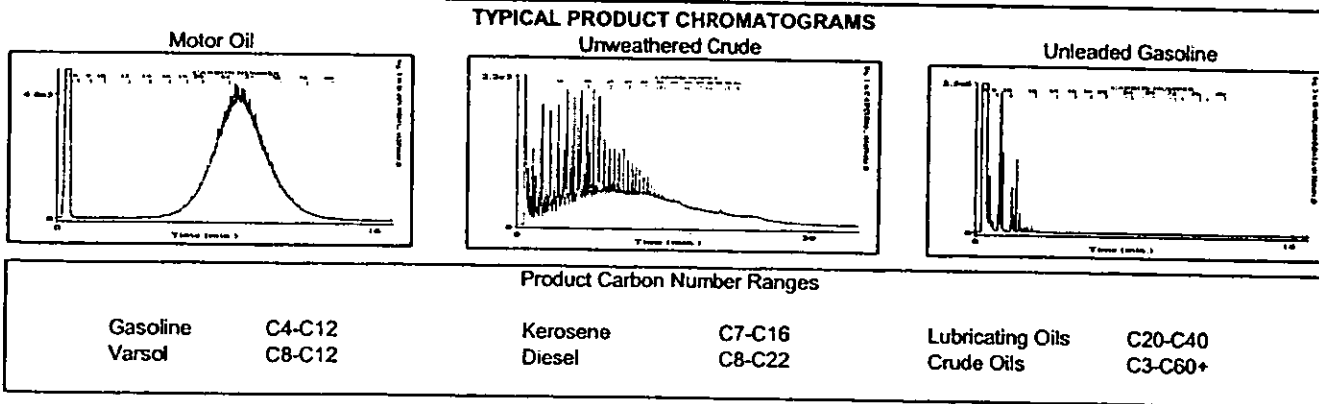
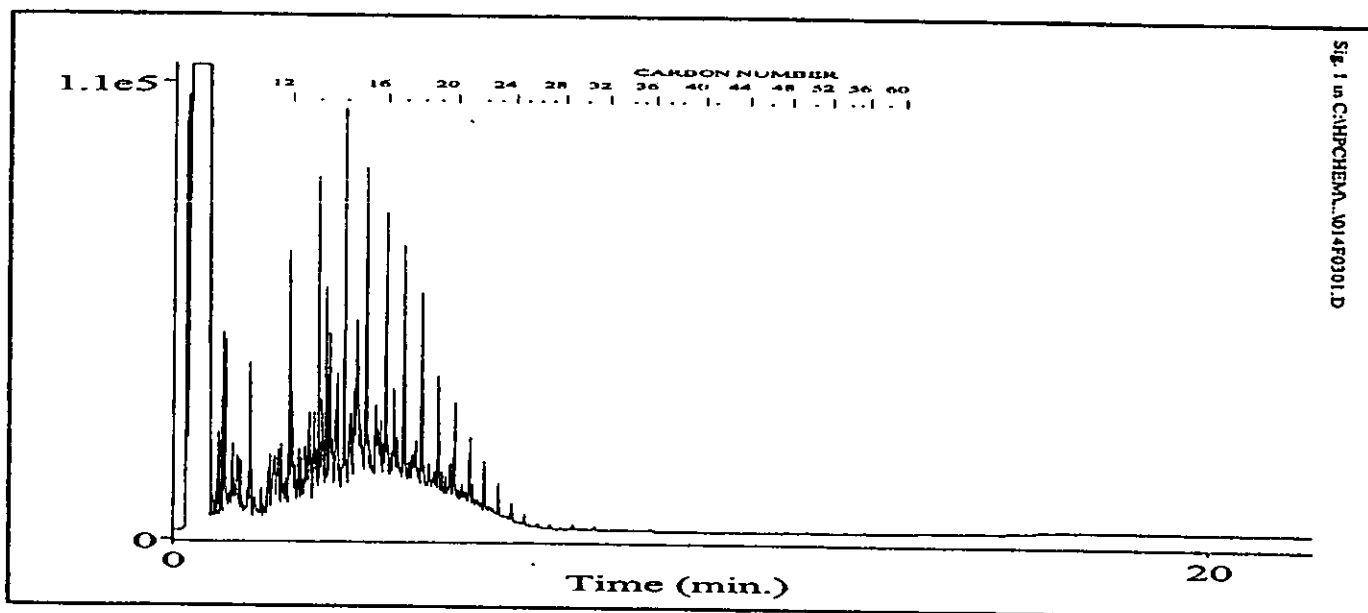
Sampled by: Caroline
Hasegawa

Project ID: Barons 01-009
Name: Excavation
Location:
LSD:
P.O.:

NWL Lot ID: 235076
Control Number E 124339
Date Received: May 22, 2003
Date Reported:

NWL Number: 235076-6
Sample Date: May 22, 2003

Sample Description: 3,0
4 m



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