APPENDIX C

LABORATORY ANALYTICAL REPORTS (ENVIRO-TEST LABORATORIES)





PRFI	IMINA	RYF	RESUI	TS

EBA ENG	CONSU	LTANTS	LTD
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ATTN: S.TAYLOR

14940 123 AVE NORTH BLDG EDMONTON AB T5V 1B4

DATE: 25-JUN-04 09:16 AM

Lab Work Order #: L181189

Sampled By:

S.TAYLOR

Date Received: 22-JUN-04

Project P.O. #:

Project Reference: MIRAMAR

Comments:

Sample Specific Comments: L181189-1: raise DL due to moisture content,

DOUG JOHNSON

Director of Operations, Edmonton

KAREN HUEBNER Client Service Specialist

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- STANDARDS COUNCIL OF CANADA IN COOPERATION WITH THE CANADIAN ASSOCIATION FOR ENVIRONMENTAL ANALYTICAL LABORATORIES (CAEAL) FOR SPECIFIC TESTS AS REGISTERED BY THE COUNCIL (EDMONTON, CALGARY, GRANDE PRAIRIE, SASKATOON, WINNIPEG, THUNDER BAY, WATERLOO)

 *AMERICAN INDUSTRIAL HYGIENE ASSOCIATION (AIHA) IN THE INDUSTRIAL HYGIENE PROGRAM (EDMONTON, WINNIPEG)
- * STANDARDS COUNCIL OF CANADA IN COOPERATION WITH THE CANADIAN FOOD INSPECTION AGENCY (CFIA) FOR FERTILIZER AND FEED TESTING (SASKATOON) AND FOR MICROBIOLOGICAL TESTING IN FOOD (WINNIPEG) LABORATORY RECOGNITIONS:
- · STANDARDS COUNCIL OF CANADA GLP COMPLIANT FACILITY (EDMONTON, OTTAWA)

Sample Details/Parameters	Result	Qualifier	D.L.	Units	Extracted	Analyzed	Ву	Batch
L181189-1 WORST CASE								
Sample Date: 19-JUN-04								
Matrix: SOIL								
CCME TVHs and TEHs								
CCME Total Hydrocarbons								
F1 (C6-C10)	<5		5	mg/kg		24-JUN-04		
F1-BTEX	<5		5	mg/kg		24-JUN-04		
F2 (C10-C16)	240		5	mg/kg		24-JUN-04		
F3 (C16-C34)	1100		5	mg/kg		24-JUN-04		
F4 (C34-C50)	220		5	mg/kg	10	24-JUN-04		
Total Hydrocarbons (C6-C50)	1600		5	mg/kg	1	24-JUN-04		
Chromatogram to baseline at nC50	NO					24-JUN-04		
CCME Total Extractable Hydrocarbons								
Prep/Analysis Dates					23-JUN-04	24-JUN-04	AML	R19398
CCME BTEX					V	L	1409240	
Benzene	<0.06		0.06	mg/kg		23-JUN-04	IAG	R19376
Toluene	< 0.06		0.06	mg/kg		23-JUN-04	IAG	R19376
Ethylbenzene	<0.06		0.06	mg/kg		23-JUN-04	IAG	R19376
Xylenes	<0.06		0.06	mg/kg	22-JUN-04	23-JUN-04	IAG	R19376
Note: raise DL due to moisture content								
% Moisture	73		0.1	%		23-JUN-04	BDH	R19359
L181189-2 A1								
Sample Date: 19-JUN-04								
Matrix: SOIL								
CCME TVHs and TEHs								
CCME Total Hydrocarbons						1		
F1 (C6-C10)	<5		5	mg/kg		24-JUN-04		
F1-BTEX	<5		5	mg/kg		24-JUN-04		
F2 (C10-C16)	<5	1 7	5	mg/kg		24-JUN-04		
F3 (C16-C34)	21		5	mg/kg		24-JUN-04		
F4 (C34-C50)	6	1	5	mg/kg		24-JUN-04		
Total Hydrocarbons (C6-C50)	27	1	5	mg/kg		24-JUN-04		
Chromatogram to baseline at nC50	YES				4.	24-JUN-04		
CCME Total Extractable Hydrocarbons Prep/Analysis Dates					23-JUN-04	24-JUN-04	AML	R19398
CCME ETEX							7	1110000
Benzene	<0.01		0.01	mg/kg	22-JUN-04	23-JUN-04	IAG	R19376
Toluene	<0.01		0.01	mg/kg	Line and the second	23-JUN-04		R19376
Ethylbenzene	<0.01		0.01	mg/kg		23-JUN-04	IAG	R19376
Xylenes	<0.01		0.01	mg/kg		23-JUN-04	IAG	R19376
	0 5			3.3			-	
% Moisture	20		0.1	%		23-JUN-04	BDH	R19359
L181189-3 A2								
Sample Date: 19-JUN-04								
Matrix: SOIL	1							
CCME TVHs and TEHs								
CCME Total Hydrocarbons						ESTER SERVICE AND ASS		
F1 (C6-C10)	<5		5	mg/kg		24-JUN-04		
F1-BTEX	<5		5	mg/kg		24-JUN-04		
F2 (C10-C16)	<5		5	mg/kg		24-JUN-04		
F3 (C16-C34)	13		5	mg/kg		24-JUN-04		
F4 (C34-C50)	<5		5	mg/kg		24-JUN-04		
Total Hydrocarbons (C6-C50)	13	1	5	mg/kg		24-JUN-04		T .

Sample Details/Parameters	Result	Qualifier	D.L.	Units	Extracted	Analyzed	Ву	Batch
L181189-3 A2								
Sample Date: 19-JUN-04								
Matrix: SOIL								
CCME TVHs and TEHs						1		
CCME Total Hydrocarbons						11		
Chromatogram to baseline at nC50	YES					24-JUN-04		
CCME Total Extractable Hydrocarbons	120					24 0011 04		
Prep/Analysis Dates					23-JUN-04	24-JUN-04	AML	R19398
CCME BTEX							7 (11)	1110000
Benzene	< 0.01		0.01	mg/kg	22-JUN-04	23-JUN-04	IAG	R19376
Toluene	< 0.01		0.01	mg/kg	22-JUN-04	23-JUN-04	IAG	R19376
Ethylbenzene	< 0.01		0.01	mg/kg	22-JUN-04	23-JUN-04	IAG	R19376
Xylenes	0.03		0.01	mg/kg	22-JUN-04	23-JUN-04	IAG	R19376
5.00 x x 10 x 2000000			No.	2000				
% Moisture	20		0.1	%		23-JUN-04	BDH	R19359
_181189-4 SPILL								
Sample Date: 20-JUN-04								
Matrix: WATER								
BTEX, F1 (C6-C10) and F2 (>C10-C16)				- 0	be nave	22	1010000	200000000000000000000000000000000000000
F2 (>C10-C16)	0.85		0.05	mg/L	22-JUN-04	22-JUN-04	AML	R19378
BTEX and F1 (C6-C10)	-0.0005			n n	00 11111 04	00 11111 04	FUE	540000
Benzene	<0.0005		0.0005	mg/L	22-JUN-04		EMP	R19368
Toluene	<0.0005		0.0005	mg/L	22-JUN-04		EMP	R19368
EthylBenzene	<0.0005		0.0005	mg/L	22-JUN-04		EMP	R19368
Xylenes	0.0019		0.0005	mg/L		23-JUN-04	EMP	R19368
F1(C6-C10)	<0.5		0.5	mg/L	22-JUN-04		EMP	R19368
F1-BTEX	<0.1		0.1	mg/L	22-JUN-04	23-JUN-04	EMP	R193689
L181189-5 NORTH								
Sample Date: 20-JUN-04								
Matrix: WATER								
BTEX, F1 (C6-C10) and F2 (>C10-C16)								
F2 (>C10-C16)	< 0.05		0.05	mg/L	22-JUN-04	22-JUN-04	AML	R19378
BTEX and F1 (C6-C10)	1000000		82 (50%)					
Benzene	< 0.0005		0.0005	mg/L	22-JUN-04	23-JUN-04	EMP	R19368
Toluene	< 0.0005		0.0005	mg/L	22-JUN-04	23-JUN-04	EMP	R19368
EthylBenzene	< 0.0005		0.0005	mg/L	22-JUN-04	23-JUN-04	EMP	R19368
Xylenes	< 0.0005		0.0005	mg/L	22-JUN-04	23-JUN-04	EMP	R19368
F1(C6-C10)	<0.5		0.5	mg/L	22-JUN-04		EMP	R19368
F1-BTEX	<0.1		0.1	mg/L	22-JUN-04	23-JUN-04	EMP	R19368
L181189-6 SOUTH								
Sample Date: 20-JUN-04								
Matrix: WATER								
BTEX, F1 (C6-C10) and F2 (>C10-C16)					00 11111 04	00 11111 04		D40070
F2 (>C10-C16)	<0.05	1	0.05	mg/L	22-JUN-04	22-JUN-04	AML	R19378
BTEX and F1 (C6-C10)	-0.000F		0.0005	ma = /1	22 1111 04	22 11 151 04	EMP	D10260
Benzene	<0.0005		0.0005	mg/L		23-JUN-04	EMP	R19368
Toluene	0.0005		0.0005	mg/L		23-JUN-04	EMP	R19368
EthylBenzene	<0.0005		0.0005	mg/L		23-JUN-04	EMP	R19368
Xylenes	0.0028		0.0005	mg/L		23-JUN-04	EMP	R19368
F1(C6-C10)	<0.5		0.5	mg/L		23-JUN-04	EMP	R19368
F1-BTEX	<0.1		0.1	mg/L	22-JUN-04	23-JUN-04	EMP	R19368

sample Details/Parameters	Result	Qualifier	D.L.	Units	Extracted	Analyzed	Ву	Batch
.181189-7 EAST								
Sample Date: 20-JUN-04								
Matrix: WATER								
BTEX, F1 (C6-C10) and F2 (>C10-C16)								
F2 (>C10-C16)	< 0.05		0.05	mg/L	22-JUN-04	22-JUN-04	AML	R193782
BTEX and F1 (C6-C10)			0.00					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Benzene	< 0.0005		0.0005	mg/L	22-JUN-04	23-JUN-04	EMP	R193689
Toluene	< 0.0005	40	0.0005	mg/L	22-JUN-04	23-JUN-04	EMP	R193689
EthylBenzene	< 0.0005		0.0005	mg/L	22-JUN-04	23-JUN-04	EMP	R193689
Xylenes	<0.0005		0.0005	mg/L	22-JUN-04		EMP	R19368
F1(C6-C10)	<0.5		0.5	mg/L		23-JUN-04	EMP	R19368
F1-BTEX	<0.1		0.1	mg/L	22-JUN-04	23-JUN-04	EMP	R193689
181189-8 TAP								
ample Date: 20-JUN-04								
latrix: WATER								
BTEX, F1 (C6-C10) and F2 (>C10-C16)								
F2 (>C10-C16)	< 0.05		0.05	mg/L	22-JUN-04	22-JUN-04	AML	R193782
BTEX and F1 (C6-C10)	1000000		the contract					
Benzene	< 0.0005		0.0005	mg/L	22-JUN-04		EMP	R19368
Toluene	< 0.0005		0.0005	mg/L		23-JUN-04	EMP	R19368
EthylBenzene	<0.0005		0.0005	mg/L	22-JUN-04		EMP	R19368
Xylenes	<0.0005		0.0005	mg/L	22-JUN-04		EMP	R19368
F1(C6-C10)	<0.5		0.5	mg/L	22-JUN-04		EMP	R19368
F1-BTEX	<0.1		0.1	mg/L	22-JUN-04	23-JUN-04	EMP	R19368

Laboratory Location

Reference Information

Methods Listed (if applicable):

ETL Test Code	Matrix	Test Description	Preparation Method Reference(Based On)	Analytical Method Reference(Based On)
BTX,F1-ED	Water	BTEX and F1 (C6-C10)	EPA 5030	EPA 5030/8015&8260-P&T GC-MS & FID
ETL-BTX,TVH-CCME-ED	Soil	CCME BTEX	EPA 5030	CCME CWS-PHC Dec-2000 - Pub# 1310
ETL-TEH-CCME-ED	Soil	CCME Total Extractable Hydrocarbons		CCME CWS-PHC Dec-2000 - Pub# 1310
F2-ED	Water	F2 (>C10-C16)		EPA 3510/8000-GC-FID
PREP-MOISTURE-ED	Soil	% Moisture		Oven dry 105C-Gravimetric
			** Laboratory Methods employed follow in- generally based on nationally or internation	
Chain of Custody number	ers:			
097963				

Laboratory Definition Code

GLOSSARY OF REPORT TERMS

Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds. The reported surrogate recovery value provides a measure of method efficiency. The Laboratory warning units are determined under column heading D.L.

mg/kg (units) - unit of concentration based on mass, parts per million mg/L (units) - unit of concentration based on volume, parts per million

Laboratory Location

Alberta, Canada

Enviro-Test Laboratories - Edmonton,

< - Less than

Laboratory Definition Code

ED

D.L. - Detection Limit

N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

UNLESS OTHERWISE STATED, SAMPLES ARE NOT CORRECTED FOR CLIENT FIELD BLANKS.

Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.



PREL	IMINA	RYI	RESU	ITS
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EBA ENG CONSULTANTS LTD

ATTN: STEVE TAYLOR

14940 123 AVE NORTH BLDG

EDMONTON AB T5V 1B4

DATE: 25-JUN-04 04:49 PM

Lab Work Order #: L182149

Sampled By: S.TAYLOR Date Received: 24-JUN-04

Project P.O. #:

Project Reference: MIRAMAR

Comments:

DOUG JOHNSON

Director of Operations, Edmonton

KAREN HUEBNER Client Service Specialist

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- * STANDARDS COUNCIL OF CANADA IN COOPERATION WITH THE CANADIAN ASSOCIATION FOR ENVIRONMENTAL ANALYTICAL LABORATORIES (CAEAL) FOR SPECIFIC TESTS AS REGISTERED BY THE COUNCIL (EDMONTON, CALGARY, GRANDE PRAIRIE, SASKATOON, WINNIPEG, THUNDER BAY, WATERLOO)

 *AMERICAN INDUSTRIAL HYGIENE ASSOCIATION (AIHA) IN THE INDUSTRIAL HYGIENE PROGRAM (EDMONTON, WINNIPEG)
- STANDARDS COUNCIL OF CANADA IN COOPERATION WITH THE CANADIAN FOOD INSPECTION AGENCY (CFIA) FOR FERTILIZER AND FEED TESTING (SASKATOON) AND FOR MICROBIOLOGICAL TESTING IN FOOD (WINNIPEG) LABORATORY RECOGNITIONS:
- STANDARDS COUNCIL OF CANADA GLP COMPLIANT FACILITY (EDMONTON, OTTAWA)

Sample Details/Parameters	Result	Qualifier	D.L.	Units	Extracted	Analyzed	Ву	Batch
L182149-1 4 PM BEFORE								
Sample Date: 22-JUN-04								
Matrix: WATER								
BTEX, F1 (C6-C10) and F2 (>C10-C16)								
F2 (>C10-C16)	0.79		0.05	mg/L	24-JUN-04	24-JUN-04	AAT	R194427
BTEX and F1 (C6-C10)	0.70		0.00		2,00,,01	2.001.01	7041	11104421
Benzene	< 0.0005		0.0005	mg/L	23-JUN-04	25-JUN-04	K1M	R194487
Toluene	< 0.0005		0.0005	mg/L	23-JUN-04	25-JUN-04	K1M	R194487
EthylBenzene	< 0.0005		0.0005	mg/L	23-JUN-04	25-JUN-04	K1M	R194487
Xylenes	0.0040		0.0005	mg/L	23-JUN-04	25-JUN-04	K1M	R194487
F1(C6-C10)	0.1		0.1	mg/L		25-JUN-04	K1M	R194487
F1-BTEX	<0.1		0.1	mg/L	23-JUN-04	25-JUN-04	K1M	R194487
L182149-2 4 PM AFTER								
Sample Date: 22-JUN-04								
Matrix: WATER			1					
BTEX, F1 (C6-C10) and F2 (>C10-C16)								
F2 (>C10-C16)	0.19		0.05	mg/L	24-JUN-04	24-JUN-04	AAT	R194427
BTEX and F1 (C6-C10)			100000					
Benzene	< 0.0005		0.0005	mg/L	23-JUN-04	25-JUN-04	K1M	R194487
Toluene	< 0.0005		0.0005	mg/L	23-JUN-04	25-JUN-04	K1M	R194487
EthylBenzene	< 0.0005		0.0005	mg/L	23-JUN-04	25-JUN-04	K1M	R194487
Xylenes	< 0.0005		0.0005	mg/L	23-JUN-04	25-JUN-04	K1M	R194487
F1(C6-C10)	<0.1		0.1	mg/L	23-JUN-04	25-JUN-04	K1M	R194487
F1-BTEX	<0.1		0.1	mg/L	23-JUN-04	25-JUN-04	K1M	R194487
					1)			
					1			

Reference Information

ETL Test Code	Matrix	Test Description	Preparation Method Reference(Based On)	Analytical Method Reference(Based On)
BTX.F1-ED	Water	BTEX and F1 (C6-C10)		EPA 5030/8015&8260-P&T GC-MS & FID
F2-ED	Water	F2 (>C10-C16)		EPA 3510/8000-GC-FID
			** Laboratory Methods employed follow in- generally based on nationally or internation	
	92			

Chain of Custody numbers:

Methods Listed (if applicable):

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
ED	Enviro-Test Laboratories - Edmonton, Alberta, Canada		

GLOSSARY OF REPORT TERMS

Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds. The reported surrogate recovery value provides a measure of method efficiency. The Laboratory warning units are determined under column heading D.L.

mg/kg (units) - unit of concentration based on mass, parts per million mg/L (units) - unit of concentration based on volume, parts per million

< - Less than

D.L. - Detection Limit

N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

UNLESS OTHERWISE STATED, SAMPLES ARE NOT CORRECTED FOR CLIENT FIELD BLANKS.

Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.



P	RFI	IMI	NARY	RESIL	TS

EBA ENG CONSULTANTS LTD ATTN: STEVE TAYLOR

14940 123 AVE NORTH BLDG

EDMONTON AB T5V 1B4

DATE: 12-JUL-04 05:06 PM

Lab Work Order #: L184439 Sampled By: CLIENT

Date Received: 02-JUL-04

Project P.O. #:

Project Reference: 40065.003

Comments:

DOUG JOHNSON

Director of Operations, Edmonton

KAREN HUEBNER Client Service Specialist

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LABORATORY ACCREDITATIONS:

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*STANDARDS COUNCIL OF CANADA IN COOPERATION WITH THE CANADIAN ASSOCIATION FOR ENVIRONMENTAL ANALYTICAL LABORATORIES (CAEAL)

FOR SPECIFIC TESTS AS REGISTERED BY THE COUNCIL (EDMONTON, CALGARY, GRANDE PRAIRIE, SASKATOON, WINNIPEG, THUNDER BAY, WATERLOO)

*AMERICAN INDUSTRIAL HYGIENE ASSOCIATION (AIHA) IN THE INDUSTRIAL HYGIENE PROGRAM (EDMONTON, WINNIPEG)

*STANDARDS COUNCIL OF CANADA IN COOPERATION WITH THE CANADIAN FOOD INSPECTION AGENCY (CFIA) FOR FERTILIZER AND FEED TESTING (SASKATOON)

AND FOR MICROBIOLOGICAL TESTING IN FOOD (WINNIPEG) LABORATORY RECOGNITIONS:

· STANDARDS COUNCIL OF CANADA - GLP COMPLIANT FACILITY (EDMONTON, OTTAWA)

Sample Details/Parameters	Result	Qualifier	D.L.	Units	Extracted	Analyzed	Ву	Batch
_184439-1 B1								
Sample Date: 26-JUN-04					1			
Matrix: SOIL)	
CCME TVHs and TEHs								
CCME Total Hydrocarbons								
F1 (C6-C10)	<5		5	mg/kg		12-JUL-04		12
F1-BTEX	<5		5	mg/kg		12-JUL-04		
F2 (C10-C16)	<5		5	mg/kg		12-JUL-04		
F3 (C16-C34)	11		5	mg/kg		12-JUL-04		
F4 (C34-C50)	<5		5	mg/kg		12-JUL-04		
Total Hydrocarbons (C6-C50)	11		5	mg/kg		12-JUL-04		
Chromatogram to baseline at nC50	YES					12-JUL-04		
CCME Total Extractable Hydrocarbons	No.					12 002 01		
Prep/Analysis Dates					08-JUL-04	08-JUL-04	AAT	R19829
CCME BTEX								
Benzene	< 0.01		0.01	mg/kg	10-JUL-04	12-JUL-04	IAG	R19850
Toluene	< 0.01		0.01	mg/kg	10-JUL-04	12-JUL-04	IAG	R19850
Ethylbenzene	<0.01		0.01	mg/kg	10-JUL-04	12-JUL-04	IAG	R19850
Xylenes	<0.01		0.01	mg/kg	10-JUL-04	12-JUL-04	IAG	R19850
% Moisture	16		0.1	%		07-JUL-04	DDU	R19754
.184439-2 B2	10		0.1	70	1	07-30L-04	DDO	K19754
Sample Date: 26-JUN-04								
Matrix: SOIL								
CCME TVHs and TEHs								
CCME Total Hydrocarbons F1 (C6-C10)	<5		5	mg/kg		12-JUL-04		
F1-BTEX	<5		5	mg/kg	1	12-JUL-04		
F2 (C10-C16)	110		5	mg/kg		12-JUL-04		
F3 (C16-C34)	990		5	mg/kg		12-JUL-04		
F4 (C34-C50)	430		5	mg/kg		12-JUL-04		
F4G-SG (GHH-Silica)	400		100	mg/kg	4	12-JUL-04		
Total Hydrocarbons (C6-C50)	1500	6	5	mg/kg		12-JUL-04		
Chromatogram to baseline at nC50	NO		5	Highty		12-JUL-04		
CCME Total Extractable Hydrocarbons	NO							
Prep/Analysis Dates					08-JUL-04	08-JUL-04	AAT	R19829
CCME BTEX					10 111	40	12.12(C-12)	127 177 177 177
Benzene	<0.01		0.01	mg/kg	The state of the s	12-JUL-04	IAG	R19850
Toluene	<0.01		0.01	mg/kg		12-JUL-04	IAG	R19850
Ethylbenzene	<0.01		0.01	mg/kg	10-JUL-04		IAG	R19850
Xylenes	0.06		0.01	mg/kg	10-JUL-04	12-JUL-04	IAG	R19850
% Moisture	21		0.1	%		07-JUL-04	DDU	R19754
Prep/Analysis Dates					12-JUL-04	12-JUL-04	AAT	R19884
_184439-3 B3								
Sample Date: 26-JUN-04								
Matrix: SOIL								
CCME TVHs and TEHs								
CCME Total Hydrocarbons								
F1 (C6-C10)	<5		5	mg/kg		12-JUL-04		
F1-BTEX	<5		5	mg/kg		12-JUL-04		
F2 (C10-C16)	49		5	mg/kg	1	12-JUL-04		
F3 (C16-C34)	32		5	mg/kg		12-JUL-04		
F4 (C34-C50)	<5		5	mg/kg		12-JUL-04	1	1

Sample Details/Parameters	Result	Qualifier	D.L.	Units	Extracted	Analyzed	Ву	Batch
L184439-3 B3								
Sample Date: 26-JUN-04								
Matrix: SOIL								
CCME TVHs and TEHs								
CCME Total Hydrocarbons				er samme process				
Total Hydrocarbons (C6-C50)	81		5	mg/kg		12-JUL-04		
Chromatogram to baseline at nC50	YES					12-JUL-04		
CCME Total Extractable Hydrocarbons		1	1					
Prep/Analysis Dates			9 9		08-JUL-04	08-JUL-04	AAT	R19829
CCME BTEX					200	Miles Manager Committee		
Benzene	<0.01		0.01	mg/kg	10-JUL-04		IAG	R19850
Toluene	<0.01		0.01	mg/kg	10-JUL-04	12-JUL-04	IAG	R198503
Ethylbenzene	<0.01		0.01	mg/kg	10-JUL-04	12-JUL-04	IAG	R198503
Xylenes	< 0.01		0.01	mg/kg	10-JUL-04	12-JUL-04	IAG	R198503
			1					
% Moisture	19		0.1	%		07-JUL-04	DDU	R197545
_184439-4 B4								
Sample Date: 26-JUN-04								
Matrix: SOIL	1.							1
CCME TVHs and TEHs								
CCME Total Hydrocarbons								
F1 (C6-C10)	<5		5	mg/kg		12-JUL-04		
F1-BTEX	<5		5	mg/kg		12-JUL-04		
F2 (C10-C16)	<5		5	mg/kg		12-JUL-04		
F3 (C16-C34)	19		930			12-JUL-04		1
	3.55		5	mg/kg				
F4 (C34-C50)	5		5	mg/kg		12-JUL-04		
Total Hydrocarbons (C6-C50)	24		5	mg/kg		12-JUL-04		
Chromatogram to baseline at nC50	YES					12-JUL-04		
CCME Total Extractable Hydrocarbons Prep/Analysis Dates					08-JUL-04	08-JUL-04	AAT	R198290
CCME BTEX								
Benzene	<0.01	1	0.01	mg/kg	10-JUL-04	12-JUL-04	IAG	R198503
Toluene	< 0.01	4	0.01	mg/kg		12-JUL-04	IAG	R19850
Ethylbenzene	<0.01		0.01	mg/kg		12-JUL-04	IAG	R198503
Xylenes	<0.01		0.01	mg/kg		12-JUL-04	IAG	R198503
29101100	40.01		0.01	mg/kg	10-301-04	12-301-04	IAG	K 19050
% Moisture	17		0.1	%		07-JUL-04	DDU	R19754
_184439-5 B5					1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -			
Sample Date: 26-JUN-04								
Matrix: SOIL								
CCME TVHs and TEHs								
CCME Total Hydrocarbons					1			
F1 (C6-C10)	<5		5	mg/kg		12-JUL-04		
F1-BTEX	<5		5	mg/kg		12-JUL-04		
F2 (C10-C16)	12		5	mg/kg		12-JUL-04		
F3 (C16-C34)	24		5	mg/kg		12-JUL-04		
F4 (C34-C50)	<5		5	mg/kg		12-JUL-04		
Total Hydrocarbons (C6-C50)	36		5	mg/kg		12-JUL-04		
	YES		3	mg/kg		12-JUL-04		
Chromatogram to baseline at nC50 CCME Total Extractable Hydrocarbons	TES					12-JUL-04		
Prep/Analysis Dates					08-JUL-04	08-JUL-04	AAT	R19829
CCME BTEX								
Benzene	< 0.01		0.01	mg/kg	10-JUL-04	12-JUL-04	IAG	R19850
Toluene	< 0.01		0.01	mg/kg	10-JUL-04	12-JUL-04	IAG	R19850
T. T. A. T. C.	525000			3.3		THE STREET, SANS	2760-27	17 (2. 54)

Sample Details/Parameters	Result Q	Qualifier D.L.	Units	Extracted	Analyzed	Ву	Batch
L184439-5 B5							
Sample Date: 26-JUN-04							
Matrix: SOIL							
CCME TVHs and TEHs							
CCME BTEX							
Ethylbenzene	<0.01	0.01	mg/kg	10-JUL-04	12-JUL-04	IAG	R198503
Xylenes	<0.01	0.01	mg/kg	10-JUL-04	12-JUL-04	IAG	R198503
% Moisture	19	0.1	%		07-JUL-04	DDU	R197545
L184439-6 B6					200 Page		
Sample Date: 26-JUN-04							
Matrix: SOIL		1					
CCME TVHs and TEHs							
CCME Total Hydrocarbons							
F1 (C6-C10)	<5	5	mg/kg		12-JUL-04		
F1-BTEX	<5	5	mg/kg		12-JUL-04		
F2 (C10-C16)	<5	5	mg/kg		12-JUL-04		
F3 (C16-C34)	16	5	mg/kg		12-JUL-04		
F4 (C34-C50)	<5	5	mg/kg		12-JUL-04		
Total Hydrocarbons (C6-C50)	16	5	mg/kg		12-JUL-04		
Chromatogram to baseline at nC5	50 YES				12-JUL-04		
CCME Total Extractable Hydrocarbons Prep/Analysis Dates	3			08-JUL-04	08-JUL-04	AAT	R198290
CCME BTEX					200000000000000000000000000000000000000	INCOME.	200 B 10 C 20 C
Benzene	<0.01	0.01	mg/kg	10-JUL-04	11-JUL-04	IAG	R198503
Toluene	<0.01	0.01	mg/kg	10-JUL-04	11-JUL-04	IAG	R198503
Ethylbenzene	<0.01	0.01	mg/kg	10-JUL-04	11-JUL-04	IAG	R198503
Xylenes	<0.01	0.01	mg/kg	10-JUL-04	11-JUL-04	IAG	R198503
% Moisture	18	0.1	%		07-JUL-04	DDU	R197545
% Moisture	18	0.1	70		07-30L-04	DDO	K197545
Refer to Referenced Information	on for Qualifiers (if any) and Methodo	ology.					
		1					

Reference Information

Methods Listed (if applicable):

ETL Test Code	Matrix	Test Description	Preparation Method Reference(Based On)	Analytical Method Reference(Based On)
ETL-BTX,TVH-CCME-ED	Soil	CCME BTEX	EPA 5030	CCME CWS-PHC Dec-2000 - Pub# 1310
ETL-OGG-CCME-ED	Soil	CCME Gravimetric Heavy Hydrocarbons (Sil		CCME CWS-PHC Dec-2000 - Pub# 1310
ETL-TEH-CCME-ED	Soil	CCME Total Extractable Hydrocarbons		CCME CWS-PHC Dec-2000 - Pub# 1310
ETL-TVH,TEH-CCME-ED	Soil	CCME Total Hydrocarbons		CCME CWS-PHC Dec-2000 - Pub#

Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

Hydrocarbon results are expressed on a dry weight basis.

In cases where results for both F4 and F4G are reported, the greater of the two results must be used in any application of the CWS PHC guidelines and the gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.

In samples where BTEX and F1 were analyzed, F1-BTEX represents a value where the sum of Benzene, Toluene, Ethylbenzene and total Xylenes has been subtracted from F1.

In samples where PAHs, F2 and F3 were analyzed, F2-Naphth represents the result where Naphthalene has been subtracted from F2. F3-PAH represents a result where the sum of Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Phenanthrene, and Pyrene has been subtracted from F3.

Unless otherwise qualified, the following quality control criteria have been met for the F1 hydrocarbon range:

- 1. All extraction and analysis holding times were met.
- 2. Instrument performance showing response factors for C6 and C10 within 30% of the response factor for toluene.
- 3. Linearity of gasoline response within 15% throughout the calibration range.

Unless otherwise qualified, the following quality control criteria have been met for the F2-F4 hydrocarbon ranges:

- 1. All extraction and analysis holding times were met.
- 2. Instrument performance showing C10, C16 and C34 response factors within 10% of their average.
- 3. Instrument performance showing the C50 response factor within 30% of the average of the C10, C16 and C34 response factors.
- 4. Linearity of diesel or motor oil response within 15% throughout the calibration range.

PREP-MOISTURE-ED Soil % Moisture Oven dry 105C-Gravimetric

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies.

Chain of Custody numbers:

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
ED	Enviro-Test Laboratories - Edmonton, Alberta, Canada		

40065.003

L184439 CONTD.... PAGE 6 of 6

Reference Information

GLOSSARY OF REPORT TERMS

Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds. The reported surrogate recovery value provides a measure of method efficiency. The Laboratory warning units are determined under column heading D.L.

mg/kg (units) - unit of concentration based on mass, parts per million mg/L (units) - unit of concentration based on volume, parts per million < - Less than

D.L. - Detection Limit

N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory. UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION. UNLESS OTHERWISE STATED, SAMPLES ARE NOT CORRECTED FOR CLIENT FIELD BLANKS.

Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.



I	P	5	F	L	I	V	41	N	V	A	F	5	٧	,	F	?	F	S	1	J	Γ.	Т	S	

EBA ENG CONSULTANTS LTD

ATTN: STEVE TAYLOR

14940 123 AVE NORTH BLDG EDMONTON AB T5V 1B4

DATE: 12-JUL-04 06:23 PM

Lab Work Order #: L184451

Sampled By: CLIENT Date Received: 02-JUL-04

Project P.O. #:

Project Reference: MIRAMAR 40065.003

Comments:

DOUG JOHNSON

Director of Operations, Edmonton

KAREN HUEBNER Client Service Specialist

THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN AUTHORITY OF THE LABORATORY. ANY REMAINING SAMPLES WILL BE DISPOSED OF AFTER 30 DAYS FOLLOWING ANALYSIS. PLEASE CONTACT THE LAB IF YOU REQUIRE ADDITIONAL SAMPLE STORAGE TIME.

- * STANDARDS COUNCIL OF CANADA IN COOPERATION WITH THE CANADIAN ASSOCIATION FOR ENVIRONMENTAL ANALYTICAL LABORATORIES (CAEAL) FOR SPECIFIC TESTS AS REGISTERED BY THE COUNCIL (EDMONTON, CALGARY, GRANDE PRAIRIE, SASKATOON, WINNIPEG, THUNDER BAY, WATERLOO)

 * AMERICAN INDUSTRIAL HYGIENE ASSOCIATION (AIHA) IN THE INDUSTRIAL HYGIENE PROGRAM (EDMONTON, WINNIPEG)
- * STANDARDS COUNCIL OF CANADA IN COOPERATION WITH THE CANADIAN FOOD INSPECTION AGENCY (CFIA) FOR FERTILIZER AND FEED TESTING (SASKATOON) AND FOR MICROBIOLOGICAL TESTING IN FOOD (WINNIPEG) LABORATORY RECOGNITIONS:
- *STANDARDS COUNCIL OF CANADA GLP COMPLIANT FACILITY (EDMONTON, OTTAWA)

<0.05 <0.0005 <0.0005 <0.0005 <0.0005 <0.01 <0.1		0.05 0.0005 0.0005 0.0005 0.0005 0.1 0.1	mg/L mg/L mg/L mg/L mg/L mg/L		12-JUL-04 12-JUL-04 12-JUL-04 12-JUL-04	AMB IAG IAG IAG	R197809 R198848 R198848 R198848
<0.0005 <0.0005 <0.0005 <0.0005 <0.1		0.0005 0.0005 0.0005 0.0005 0.1	mg/L mg/L mg/L mg/L	11-JUL-04 11-JUL-04 11-JUL-04 11-JUL-04 11-JUL-04	12-JUL-04 12-JUL-04 12-JUL-04 12-JUL-04	IAG IAG	R198848 R198848 R198848
<0.0005 <0.0005 <0.0005 <0.0005 <0.1		0.0005 0.0005 0.0005 0.0005 0.1	mg/L mg/L mg/L mg/L	11-JUL-04 11-JUL-04 11-JUL-04 11-JUL-04 11-JUL-04	12-JUL-04 12-JUL-04 12-JUL-04 12-JUL-04	IAG IAG	R198848 R198848 R198848
<0.0005 <0.0005 <0.0005 <0.0005 <0.1		0.0005 0.0005 0.0005 0.0005 0.1	mg/L mg/L mg/L mg/L	11-JUL-04 11-JUL-04 11-JUL-04 11-JUL-04 11-JUL-04	12-JUL-04 12-JUL-04 12-JUL-04 12-JUL-04	IAG IAG	R198848 R198848 R198848
<0.0005 <0.0005 <0.0005 <0.0005 <0.1		0.0005 0.0005 0.0005 0.0005 0.1	mg/L mg/L mg/L mg/L	11-JUL-04 11-JUL-04 11-JUL-04 11-JUL-04 11-JUL-04	12-JUL-04 12-JUL-04 12-JUL-04 12-JUL-04	IAG IAG	R198848 R198848 R198848
<0.0005 <0.0005 <0.0005 <0.1		0.0005 0.0005 0.0005 0.1	mg/L mg/L mg/L mg/L	11-JUL-04 11-JUL-04 11-JUL-04 11-JUL-04 11-JUL-04	12-JUL-04 12-JUL-04 12-JUL-04 12-JUL-04	IAG IAG	R198848 R198848
<0.0005 <0.0005 <0.0005 <0.1		0.0005 0.0005 0.0005 0.1	mg/L mg/L mg/L mg/L	11-JUL-04 11-JUL-04 11-JUL-04 11-JUL-04	12-JUL-04 12-JUL-04 12-JUL-04	IAG IAG	R198848 R198848
<0.0005 <0.0005 <0.1		0.0005 0.0005 0.1	mg/L mg/L mg/L	11-JUL-04 11-JUL-04 11-JUL-04	12-JUL-04 12-JUL-04	IAG	R198848
<0.0005 <0.1		0.0005 0.1	mg/L mg/L	11-JUL-04 11-JUL-04	12-JUL-04		
<0.1		0.1	mg/L	11-JUL-04		IAG	
		32000 M			40 1111 01	898886	R198848
<0.1		0.1	mg/L			IAG	R198848
				11-JUL-04	12-JUL-04	IAG	R198848
< 0.05	1	0.05	mg/L	07-JUL-04	07-JUL-04	AMB	R197809
00.0050975		No. Decision in the last of th					
< 0.0005		0.0005	mg/L	11-JUL-04	12-JUL-04	IAG	R198848
< 0.0005		0.0005	mg/L			IAG	R198848
< 0.0005		0.0005	mg/L			IAG	R198848
		0.0005	mg/L			IAG	R19884
			mg/L			IAG	R198848
<0.1		0.1	mg/L	11-JUL-04	12-JUL-04	IAG	R198848
		1					
0.09		0.05	mg/L	07-JUL-04	07-JUL-04	AMB	R197809
< 0.0005		0.0005	mg/L			IAG	R19884
			7.0			1.000000	R198848
						W1127474	R198848
							R19884
		N 55500.7				65070	R198848
<0.1		0.1	mg/L	11-JUL-04	12-JUL-04	IAG	R198848
iers (if any) and Metho	odology.						
	<0.0005 <0.0005 <0.0005 <0.0005 <0.1 <0.1 0.09 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.1 <0.1	<0.0005 <0.0005 <0.0005 <0.0005 <0.1 <0.1 0.09 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

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Reference Information

Methods Listed (i	f applicable)	:
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ETL Test Code	Matrix	Test Description	Preparation Method Reference(Based On)	Analytical Method Reference(Based				
		BTEX and F1 (C6-C10)	EPA 5030	EPA 5030/8015&8260-P&T GC-MS 8 FID				
F2-ED	Water	F2 (>C10-C16)		EPA 3510/8000-GC-FID				
			** Laboratory Methods employed follow in- generally based on nationally or internation					
Chain of Custody n	umbers:							
The last two letters	of the above te	est code(s) indicate the laborator	y that performed analytical analysis for that tes	st. Refer to the list below:				
Laboratory Definition	n Code La	aboratory Location	Laboratory Definition Code	Laboratory Location				
ED	Er	nviro-Test Laboratories - Edmont	on,					

GLOSSARY OF REPORT TERMS

Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds. The reported surrogate recovery value provides a measure of method efficiency. The Laboratory warning units are determined under column heading D.L.

mg/kg (units) - unit of concentration based on mass, parts per million mg/L (units) - unit of concentration based on volume, parts per million

< - Less than

D.L. - Detection Limit

N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

UNLESS OTHERWISE STATED, SAMPLES ARE NOT CORRECTED FOR CLIENT FIELD BLANKS.

Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.



PRELIMINARY RESULTS

EBA ENG CONSULTANTS LTD ATTN: STEVE TAYLOR

14940 123 AVE NORTH BLDG EDMONTON AB T5V 1B4

DATE: 03-JUL-04 02:51 PM

Lab Work Order #: L184325

Sampled By:

CLIENT

Date Received: 02-JUL-04

Project P.O. #:

Project Reference: MIRAMAR

Comments:

DOUG JOHNSON

Director of Operations, Edmonton

KAREN HUEBNER Client Service Specialist

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 • AMERICAN INDUSTRIAL HYGIENE ASSOCIATION (AIHA) IN THE INDUSTRIAL HYGIENE PROGRAM (EDMONTON, WINNIPEG)
- STANDARDS COUNCIL OF CANADA IN COOPERATION WITH THE CANADIAN FOOD INSPECTION AGENCY (CFIA) FOR FERTILIZER AND FEED TESTING (SASKATOON) AND FOR MICROBIOLOGICAL TESTING IN FOOD (WINNIPEG) LABORATORY RECOGNITIONS:
- · STANDARDS COUNCIL OF CANADA GLP COMPLIANT FACILITY (EDMONTON, OTTAWA)

Sample Details/Parameters	Result	Qualifier	D.L.	Units	Extracted	Analyzed	Ву	Batch
.184325-1 TAP								
Sample Date: 30-JUN-04								
Matrix: WATER								
BTEX, F1 (C6-C10) and F2 (>C10-C16)								
F2 (>C10-C16)	<0.05		0.05	mg/L	02-JUL-04	02-1111-04	AMB	R196275
BTEX and F1 (C6-C10)	40.05		0.03	mg/L	02-001-04	02-30L-04	AIVID	K 1902/5
Benzene	<0.0005		0.0005	mg/L	02-JUL-04	03-JUL-04	EMP	R196232
Toluene	<0.0005		0.0005	mg/L	02-JUL-04		EMP	R196232
EthylBenzene	< 0.0005		0.0005	mg/L	02-JUL-04		EMP	R196232
Xylenes	< 0.0005		0.0005	mg/L	02-JUL-04		EMP	R196232
F1(C6-C10)	<0.1		0.1	mg/L	02-JUL-04		EMP	R196232
F1-BTEX	<0.1		0.1	mg/L	02-JUL-04		EMP	R196232
Refer to Referenced Information for Qua	lifiers (if any) and Meth	odology.						