

Appendix I

Analytical Reports, Maxxam Analytics Inc.





MAXXAM ANALYTICS INC.
5540 McADAM ROAD
MISSISSAUGA, ON
CANADA L4Z 1P1

Attention: KATHY SAFFARY

Report Date: 2003/11/28

Your Project #: MA330703
Your C.O.C. #: 330703

ANALYTICAL REPORT

MAXXAM JOB #: A316723

Received: 2003/08/22, 8:30

Sample Matrix: Soil
Samples Received: 18

Analyses	Quantity	Date	Date	Laboratory	Method	Analytical	Method
		Extracted	Analyzed				
BTEX (MSD)	3	2003/08/25	2003/08/26	CAL SOP#	0048	GC/MS-PURGE &	
Moisture (ccme)	18	2003/08/27	2003/08/27	CAL SOP#	0028	GRAVIMETRIC	
Gravimetric Heavy Hydrocarbon (F4G)	18	N/A	2003/08/26	CAL SOP#	0065	CCME	
F1 (CCME Hydrocarbons C6-C10)	3	2003/08/25	2003/08/28	CAL SOP#	0066	CCME	
Particle Size by Wet Sieve (75 micron)	18	2003/08/27	2003/08/27	CAL SOP#	0104	GRAVIMETRIC	
F2 - F4 (CCME Hydrocarbons)	18	2003/08/26	2003/08/27	CAL SOP#	0066	CCME	

MAXXAM Analytics Inc.

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Total cover pages: 1

Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone(403) 291-3077 FAX(403) 291-9468

RESULTS OF CHEMICAL ANALYSES OF SOIL

Maxxam ID		478206		478474	478475		
SamplingDate		2003/08/03		2003/08/03	2003/08/03		
	Units	TP03-301-2	QA Batch	TP03-301-3	TP03-302-4	DI	QA Batch

Physical Properties							
Moisture	%	5.3	341991	5.7	6.0	1	342079
Sieve - #200 (>0.075mm -TS)	%	92	342376	83	96	0.01	342376
Sieve - Pan	%	8.5	342376	17	4.1	0.01	342376
Please check for attached comments							

Maxxam ID		478476	478477	478478	478479	478489	
SamplingDate		2003/08/03	2003/08/03	2003/08/03	2003/08/03	2003/08/03	
	Units	TP03-303-4	TP03-304-4	TP03-305-3	TP03-305-4	TP03-306-4	DI QA Batch

Physical Properties							
Moisture	%	7.0	8.6	3.1	10	6.9	1 342079
Sieve - #200 (>0.075mm -TS)	%	92	92	96	95	90	0.01 342477
Sieve - Pan	%	8.0	8.3	3.6	5.1	9.7	0.01 342477
Please check for attached comments							

Maxxam ID		478490	478491	478492	478493	478494	
SamplingDate		2003/08/03	2003/08/03	2003/08/03	2003/08/03	2003/08/03	
	Units	TP03-307-3	TP03-307-4	TP03-308-1	TP03-308-2	TP03-309-4	DI QA Batch

Physical Properties							
Moisture	%	5.7	7.7	4.8	6.7	6.9	1 342079
Sieve - #200 (>0.075mm -TS)	%	88	96	89	81	78	0.01 342477
Sieve - Pan	%	12	4.0	11	19	22	0.01 342477
Please check for attached comments							

Maxxam ID		478495	478496	478497	478498	478499	
SamplingDate		2003/08/03	2003/08/11	2003/08/11			
	Units	TP03-310-4	TP03-325-3	TP03-328-2	TP03-328-3	TP03-329-1	DI QA Batch

Physical Properties							
Moisture	%	4.9	3.2	5.2	3.0	3.9	1 342079
Sieve - #200 (>0.075mm -TS)	%	84	92	77	95	84	0.01 342477
Sieve - Pan	%	16	8.3	23	5.1	16	0.01 342477
Please check for attached comments							

PETROLEUM HYDROCARBONS (CCME TIER 1)

Maxxam ID		478206		478474	478475	478476		
SamplingDate		2003/08/03		2003/08/03	2003/08/03	2003/08/03		
	Units	TP03-301-2	DL	TP03-301-3	TP03-302-4	TP03-303-4	DL	QA Batch

Ext. Pet. Hydrocarbon								
F1 (C06-C10) - BTEX	mg/kg	N/A	N/A	N/A	N/A	200	10	340334
F2 (C10-C16 Hydrocarbons)	mg/kg	900	4	140	ND	380	4	340514
F3 (C16-C34 Hydrocarbons)	mg/kg	150	10	190	ND	10	9	340514
F4 (C34-C50 Hydrocarbons)	mg/kg	ND	9	ND	ND	ND	8	340514
F4G sg (Gravimetric HC-Silica Gel)	mg/kg	ND	300	ND	ND	ND	300	340519
Reached Baseline at C50	mg/kg	YES	N/A	YES	YES	YES	N/A	340514
ND = Not detected N/A = Not Applicable Please check for attached comments								

Maxxam ID		478477		478478	478479	478489		
SamplingDate		2003/08/03		2003/08/03	2003/08/03	2003/08/03		
	Units	TP03-304-4	DL	TP03-305-3	TP03-305-4	TP03-306-4	DL	QA Batch

Ext. Pet. Hydrocarbon								
F1 (C06-C10) - BTEX	mg/kg	N/A	10	N/A	47	N/A	10	340334
F2 (C10-C16 Hydrocarbons)	mg/kg	ND	4	ND	190	42	4	340514
F3 (C16-C34 Hydrocarbons)	mg/kg	ND	9	ND	ND	ND	10	340514
F4 (C34-C50 Hydrocarbons)	mg/kg	ND	8	ND	ND	ND	9	340514
F4G sg (Gravimetric HC-Silica Gel)	mg/kg	ND	300	ND	ND	ND	300	340519
Reached Baseline at C50	mg/kg	YES	N/A	YES	YES	YES	N/A	340514
ND = Not detected N/A = Not Applicable Please check for attached comments								

Maxxam ID		478490		478491	478492		
SamplingDate		2003/08/03		2003/08/03	2003/08/03		
	Units	TP03-307-3	DL	TP03-307-4	TP03-308-1	DL	QA Batch

Ext. Pet. Hydrocarbon								
F2 (C10-C16 Hydrocarbons)	mg/kg	ND	4	ND	300	4	340514	
F3 (C16-C34 Hydrocarbons)	mg/kg	ND	10	ND	5200	9	340514	
F4 (C34-C50 Hydrocarbons)	mg/kg	ND	9	ND	860	8	340514	
F4G sg (Gravimetric HC-Silica Gel)	mg/kg	ND	300	ND	5110	300	340519	
Reached Baseline at C50	mg/kg	YES	N/A	YES	NO	N/A	340514	
ND = Not detected N/A = Not Applicable Please check for attached comments								

PETROLEUM HYDROCARBONS (CCMETIER 1)

Maxxam ID		478493		478494	478495	478496		
SamplingDate		2003/08/03		2003/08/03	2003/08/03	2003/08/11		
	Units	TP03-308-2	DI	TP03-309-4	TP03-310-4	TP03-325-3	DI	QA Batch

Ext. Pet. Hydrocarbon								
F1 (C06-C10) - BTEX	mg/kg	N/A	10	N/A	41	N/A	10	340334
F2 (C10-C16 Hydrocarbons)	mg/kg	ND	4	ND	320	ND	4	340514
F3 (C16-C34 Hydrocarbons)	mg/kg	ND	10	ND	160	85	9	340514
F4 (C34-C50 Hydrocarbons)	mg/kg	ND	9	ND	13	20	8	340514
F4G sg (Gravimetric HC-Silica Gel)	mg/kg	ND	300	ND	ND	ND	300	340519
Reached Baseline at C50	mg/kg	YES	N/A	YES	YES	YES	N/A	340514
ND = Not detected N/A = Not Applicable Please check for attached comments								

Maxxam ID		478497		478498	478499		
SamplingDate		2003/08/11					
	Units	TP03-328-2	DI	TP03-328-3	TP03-329-1	DI	QA Batch

Ext. Pet. Hydrocarbon								
F2 (C10-C16 Hydrocarbons)	mg/kg	27	4	9.6	130	4	340514	
F3 (C16-C34 Hydrocarbons)	mg/kg	84	10	2400	1300	9	340514	
F4 (C34-C50 Hydrocarbons)	mg/kg	110	9	1800	87	8	340514	
F4G sg (Gravimetric HC-Silica Gel)	mg/kg	ND	300	3550	1340	300	340519	
Reached Baseline at C50	mg/kg	NO	N/A	NO	NO	N/A	340514	
ND = Not detected N/A = Not Applicable Please check for attached comments								

VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID	478476	478479	478495					
SamplingDate	2003/08/03	2003/08/03	2003/08/03					
	Units	TP03-303-A	DI	TP03-305-A	DI	TP03-310-A	DI	QA Batch

VOLATILES								
Purgeable (MeOH) Benzene	mg/kg	ND	0.03	ND	0.03	ND	0.03	340358
Purgeable (MeOH) Toluene	mg/kg	0.15	0.03	0.07	0.03	0.38	0.03	340358
Purgeable (MeOH) Ethylbenzene	mg/kg	ND	0.03	ND	0.03	0.18	0.03	340358
Purgeable (MeOH) m & p-Xylene	mg/kg	0.38	0.05	0.11	0.06	0.72	0.05	340358
Purgeable (MeOH) o-Xylene	mg/kg	0.73	0.03	0.11	0.03	0.40	0.03	340358
Surrogate Recovery (%)								
Purgeable (MeOH) D8-TOLUENE (sur.)	%	103	N/A	105	N/A	104	N/A	340358

ND = Not detected

N/A = Not Applicable

Please check for attached comments



Maxxam Job #: A316723
Report Date: 2003/11/28

MAXXAM ANALYTICS INC.
Client Project #: MA330703
Site Reference:
Sampler Initials:

Results relate only to the items tested.

Quality Assurance Report

Maxxam Job Number: CA316723

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
340334 OJ	Calibration Check	F1 (C06-C10) - BTEX	2003/08/28		101	%	80 - 120
	QC STANDARD	F1 (C06-C10) - BTEX	2003/08/28		94	%	80 - 120
	SPIKE	F1 (C06-C10) - BTEX	2003/08/28		102	%	85 - 115
	BLANK	F1 (C06-C10) - BTEX	2003/08/28	ND		mg/kg	
	RPD	F1 (C06-C10) - BTEX	2003/08/28	27.5		%	N/A
340358 SMC	Calibration Check	Purgeable (MeOH) Benzene	2003/08/26		110	%	85 - 115
		Purgeable (MeOH) Toluene	2003/08/26		102	%	85 - 115
		Purgeable (MeOH) Ethylbenzene	2003/08/26		100	%	85 - 115
		Purgeable (MeOH) m & p-Xylene	2003/08/26		112	%	85 - 115
		Purgeable (MeOH) o-Xylene	2003/08/26		102	%	85 - 115
	SPIKE	Purgeable (MeOH) Benzene	2003/08/26		90	%	75 - 125
		Purgeable (MeOH) Toluene	2003/08/26		86	%	75 - 125
		Purgeable (MeOH) Ethylbenzene	2003/08/26		75	%	75 - 125
		Purgeable (MeOH) m & p-Xylene	2003/08/26		82	%	75 - 125
		Purgeable (MeOH) o-Xylene	2003/08/26		89	%	75 - 125
	BLANK	Purgeable (MeOH) D8-TOLUENE (sur.)	2003/08/26		102	%	80 - 117
		Purgeable (MeOH) Benzene	2003/08/26	ND		mg/kg	
		Purgeable (MeOH) Toluene	2003/08/26	ND		mg/kg	
		Purgeable (MeOH) Ethylbenzene	2003/08/26	ND		mg/kg	
		Purgeable (MeOH) m & p-Xylene	2003/08/26	ND		mg/kg	
	RPD	Purgeable (MeOH) o-Xylene	2003/08/26	ND		mg/kg	
		Purgeable (MeOH) Benzene	2003/08/26	NC		%	N/A
		Purgeable (MeOH) Toluene	2003/08/26	NC		%	N/A
		Purgeable (MeOH) Ethylbenzene	2003/08/26	NC		%	N/A
		Purgeable (MeOH) m & p-Xylene	2003/08/26	NC		%	N/A
340514 JMA	Calibration Check	Purgeable (MeOH) o-Xylene	2003/08/26	4.0		%	N/A
		F2 (C10-C16 Hydrocarbons)	2003/08/27		106	%	85 - 115
		F3 (C16-C34 Hydrocarbons)	2003/08/27		111	%	85 - 115
		F4 (C34-C50 Hydrocarbons)	2003/08/27		103	%	85 - 115
	QC STANDARD	F2 (C10-C16 Hydrocarbons)	2003/08/27		78	%	50 - 120
		F3 (C16-C34 Hydrocarbons)	2003/08/27		105	%	80 - 120
	SPIKE	F4 (C34-C50 Hydrocarbons)	2003/08/27		93	%	80 - 120
		F2 (C10-C16 Hydrocarbons)	2003/08/27		107	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2003/08/27		113	%	80 - 120
	BLANK	F4 (C34-C50 Hydrocarbons)	2003/08/27		104	%	80 - 120
		F2 (C10-C16 Hydrocarbons)	2003/08/27	ND		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2003/08/27	ND		mg/kg	
	RPD	F4 (C34-C50 Hydrocarbons)	2003/08/27	ND		mg/kg	
		Reached Baseline at C50	2003/08/27	YES		mg/kg	
		F2 (C10-C16 Hydrocarbons)	2003/08/27	17.6		%	N/A
		F3 (C16-C34 Hydrocarbons)	2003/08/27	10.3		%	N/A
		F4 (C34-C50 Hydrocarbons)	2003/08/27	2.5		%	N/A
340519 NS3	BLANK	F4G sg (Gravimetric HC-Silica Gel)	2003/08/26	ND		mg/kg	
	RPD	F4G sg (Gravimetric HC-Silica Gel)	2003/08/26	NC		%	N/A
341991 TN	RPD	Moisture	2003/08/27	NC		%	N/A
342079 TN	RPD	Moisture	2003/08/27	NC		%	N/A

ND = Not detected
N/A = Not Applicable
NC = Non-calculable
RPD = Relative Percent Difference

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MAXXAM ANALYTICS INC.
5540 McADAM ROAD
MISSISSAUGA, ON
CANADA L4Z 1P1

Attention: KATHY SAFFARY

Report Date: 2003/09/02

Your Project #: MA330703
Your C.O.C. #: 330703

ANALYTICAL REPORT

MAXXAM JOB #: A316905

Received: 2003/08/22, 8:30

Sample Matrix: Soil
Samples Received: 23

Analyses	Quantity	Date	Date	Laboratory	Method	Analytical	Method
		Extracted	Analyzed				
Moisture (ccme)	23	2003/08/29	2003/08/29	CAL SOP#	0028	GRAVIMETRIC	
Gravimetric Heavy Hydrocarbon (F4G)	23	N/A	2003/08/25	CAL SOP#	0065	CCME	
Particle Size by Wet Sieve (75 micron)	23	2003/08/27	2003/08/27	CAL SOP#	0104	GRAVIMETRIC	
F2 - F4 (CCME Hydrocarbons)	23	2003/08/26	2003/08/27	CAL SOP#	0066	CCME	

MAXXAM Analytics Inc.

AZMINA MERALI
Manager - Inorganics

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Total cover pages: 1

Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone(403) 291-3077 FAX(403) 291-9468

RESULTS OF CHEMICAL ANALYSES OF SOIL

Maxxam ID		479286	479287	479288	479289	479290		
SamplingDate								
	Units	TP03-329-2	TP03-330-4	TP03-331-1	TP03-331-2	TP03-331-3	DI	QA Batch

Physical Properties								
Moisture	%	5.1	3.9	5.2	10	8.3	1	344289
Sieve - #200 (>0.075mm -TS)	%	88	83	94	52	59	0.01	342477
Sieve - Pan	%	12	17	6.4	48	41	0.01	342477
Please check for attached comments								

Maxxam ID		479291	479292	479293	479294	479295		
SamplingDate								
	Units	TP03-331-4	TP03-332-4	TP03-333-2	TP03-333-3	TP03-334-1	DI	QA Batch

Physical Properties								
Moisture	%	8.1	2.8	6.5	5.7	4.7	1	344289
Sieve - #200 (>0.075mm -TS)	%	60	81	82	83	83	0.01	342566
Sieve - Pan	%	40	19	19	17	17	0.01	342566
Please check for attached comments								

Maxxam ID		479296	479297	479298	479299	479300		
SamplingDate								
	Units	TP03-334-4	TP03-338-3	TP03-339-4	TP03-339-5	TP03-340-3	DI	QA Batch

Physical Properties								
Moisture	%	5.8	3.5	13	11	5.8	1	344289
Sieve - #200 (>0.075mm -TS)	%	98	90	99	100	86	0.01	342566
Sieve - Pan	%	2.4	9.7	1.4	0.20	14	0.01	342566
Please check for attached comments								

Maxxam ID		479301	479302	479303		479304		
SamplingDate								
	Units	TP03-340-4	TP03-340-5	TP03-341-3	QA Batch	TP03-341-4	DI	QA Batch

Physical Properties								
Moisture	%	6.7	5.9	4.6	344289	9.6	1	344294
Sieve - #200 (>0.075mm -TS)	%	91	93	91	342566	90	0.01	342566
Sieve - Pan	%	9.4	7.5	9.1	342566	9.5	0.01	342566
Please check for attached comments								

RESULTS OF CHEMICAL ANALYSES OF SOIL

Maxxam ID		479305	479306	479307	479308		
Sampling Date							
	Units	TP03-342-4	TP03-343-3	TP03-344-3	TP03-344-4	DL	QA Batch
Physical Properties							
Moisture	%	6.5	2.1	7.0	9.8	1	344294
Sieve - #200 (>0.075mm -TS)	%	99	96	75	72	0.01	342566
Sieve - Pan	%	1.3	4.3	25	28	0.01	342566
Please check for attached comments							

PETROLEUM HYDROCARBONS (CCME TIER 1)

Maxxam ID		479286	479287	479288		479289		
Sampling Date								
	Units	TP03-329-2	TP03-330-4	TP03-331-1	DI	TP03-331-2	DI	QA Batch
Ext. Pet. Hydrocarbon								
F2 (C10-C16 Hydrocarbons)	mg/kg	500	ND	450	4	710	5	340527
F3 (C16-C34 Hydrocarbons)	mg/kg	4100	ND	1800	9	65	10	340527
F4 (C34-C50 Hydrocarbons)	mg/kg	270	ND	44	8	ND	9	340527
F4G sg (Gravimetric HC-Silica Gel)	mg/kg	2130	ND	1660	300	ND	300	340538
Reached Baseline at C50	mg/kg	NO	YES	NO	N/A	YES	N/A	340527
ND = Not detected N/A = Not Applicable Please check for attached comments								

Maxxam ID		479290		479291		479292		
Sampling Date								
	Units	TP03-331-3	DI	TP03-331-4	TP03-332-4	DI	QA Batch	
Ext. Pet. Hydrocarbon								
F2 (C10-C16 Hydrocarbons)	mg/kg	11	4	ND	ND	4		340527
F3 (C16-C34 Hydrocarbons)	mg/kg	59	10	ND	ND	9		340527
F4 (C34-C50 Hydrocarbons)	mg/kg	ND	9	ND	ND	8		340527
F4G sg (Gravimetric HC-Silica Gel)	mg/kg	ND	300	ND	ND	300		340538
Reached Baseline at C50	mg/kg	YES	N/A	YES	YES	N/A		340527
ND = Not detected N/A = Not Applicable Please check for attached comments								

Maxxam ID		479293		479294		479295		
Sampling Date								
	Units	TP03-333-2	DI	TP03-333-3	DI	TP03-334-1	DI	QA Batch
Ext. Pet. Hydrocarbon								
F2 (C10-C16 Hydrocarbons)	mg/kg	ND	4	ND	5	7.9	4	340527
F3 (C16-C34 Hydrocarbons)	mg/kg	ND	10	ND	10	160	9	340527
F4 (C34-C50 Hydrocarbons)	mg/kg	ND	9	ND	9	ND	8	340527
F4G sg (Gravimetric HC-Silica Gel)	mg/kg	ND	300	ND	300	ND	300	340538
Reached Baseline at C50	mg/kg	YES	N/A	YES	N/A	YES	N/A	340527
ND = Not detected N/A = Not Applicable Please check for attached comments								

PETROLEUM HYDROCARBONS (CCME TIER 1)

Maxxam ID		479296		479297	479298	479299		
SamplingDate								
	Units	TP03-334-4	DL	TP03-338-3	TP03-339-4	TP03-339-5	DL	QA Batch
Ext. Pet. Hydrocarbon								
F2 (C10-C16 Hydrocarbons)	mg/kg	ND	4	ND	ND	ND	4	340527
F3 (C16-C34 Hydrocarbons)	mg/kg	ND	9	ND	ND	ND	10	340527
F4 (C34-C50 Hydrocarbons)	mg/kg	ND	8	ND	ND	ND	9	340527
F4G sg (Gravimetric HC-Silica Gel)	mg/kg	ND	300	ND	ND	ND	300	340538
Reached Baseline at C50	mg/kg	YES	N/A	YES	YES	YES	N/A	340527
ND = Not detected N/A = Not Applicable Please check for attached comments								

Maxxam ID		479300		479301		479302		
SamplingDate								
	Units	TP03-340-3	DL	TP03-340-4	DL	TP03-340-5	DL	QA Batch
Ext. Pet. Hydrocarbon								
F2 (C10-C16 Hydrocarbons)	mg/kg	910	4	37	4	97	4	340527
F3 (C16-C34 Hydrocarbons)	mg/kg	ND	10	ND	9	ND	10	340527
F4 (C34-C50 Hydrocarbons)	mg/kg	ND	9	ND	8	ND	9	340527
F4G sg (Gravimetric HC-Silica Gel)	mg/kg	ND	300	ND	300	ND	300	340538
Reached Baseline at C50	mg/kg	YES	N/A	YES	N/A	YES	N/A	340527
ND = Not detected N/A = Not Applicable Please check for attached comments								

Maxxam ID		479303		479304		479305		
SamplingDate								
	Units	TP03-341-3	DL	TP03-341-4	TP03-342-4	DL	QA Batch	
Ext. Pet. Hydrocarbon								
F2 (C10-C16 Hydrocarbons)	mg/kg	1100	4	970	ND	4	340527	
F3 (C16-C34 Hydrocarbons)	mg/kg	100	9	ND	ND	10	340527	
F4 (C34-C50 Hydrocarbons)	mg/kg	ND	8	ND	ND	9	340527	
F4G sg (Gravimetric HC-Silica Gel)	mg/kg	ND	300	ND	ND	300	340538	
Reached Baseline at C50	mg/kg	YES	N/A	YES	YES	N/A	340527	
ND = Not detected N/A = Not Applicable Please check for attached comments								

PETROLEUM HYDROCARBONS (CCME TIER 1)

Maxxam ID		479306	479307	479308		
Sampling Date						
	Units	TP03-343-3	TP03-344-3	TP03-344-4	DL	QA Batch
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	ND	ND	ND	4	340527
F3 (C16-C34 Hydrocarbons)	mg/kg	ND	ND	ND	9	340527
F4 (C34-C50 Hydrocarbons)	mg/kg	ND	ND	ND	8	340527
F4G sg (Gravimetric HC-Silica Gel)	mg/kg	ND	ND	ND	300	340538
Reached Baseline at C50	mg/kg	YES	YES	YES	N/A	340527
ND = Not detected N/A = Not Applicable Please check for attached comments						



Maxxam Job #: A316905
Report Date: 2003/09/02

MAXXAM ANALYTICS INC.
Client Project #: MA330703
Site Reference:
Sampler Initials:

Results relate only to the items tested.

Quality Assurance Report

Maxxam Job Number: CA316905

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
340527 JMA	Calibration Check	F2 (C10-C18 Hydrocarbons)	2003/08/27		106	%	85 - 115
		F3 (C16-C34 Hydrocarbons)	2003/08/27		114	%	85 - 115
		F4 (C34-C50 Hydrocarbons)	2003/08/27		103	%	85 - 115
	QC STANDARD	F2 (C10-C16 Hydrocarbons)	2003/08/27		78	%	50 - 120
		F3 (C16-C34 Hydrocarbons)	2003/08/27		105	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2003/08/27		93	%	80 - 120
	SPIKE	F2 (C10-C16 Hydrocarbons)	2003/08/27		107	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2003/08/27		113	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2003/08/27		104	%	80 - 120
	BLANK	F2 (C10-C16 Hydrocarbons)	2003/08/27	ND		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2003/08/27	ND		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2003/08/27	ND		mg/kg	
	RPD	Reached Baseline at C50	2003/08/27	YES		mg/kg	
		F2 (C10-C16 Hydrocarbons)	2003/08/27	8.7		%	N/A
		F3 (C16-C34 Hydrocarbons)	2003/08/27	NC		%	N/A
		F4 (C34-C50 Hydrocarbons)	2003/08/27	NC		%	N/A
340538 NS3	BLANK	F4G sg (Gravimetric HC-Silica Gel)	2003/08/25	ND		mg/kg	
		F4G sg (Gravimetric HC-Silica Gel)	2003/08/25	NC		%	N/A
344289 CP	RPD	Moisture	2003/08/29	NC		%	N/A
		Moisture	2003/08/29	NC		%	N/A
344294 CP	RPD	Moisture	2003/08/29	15.2		%	N/A
ND = Not detected N/A = Not Applicable NC = Non-calculable RPD = Relative Percent Difference							

Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone(403) 291-3077 FAX(403) 291-9468



MAXXAM ANALYTICS INC.
5540 McADAM ROAD
MISSISSAUGA, ON
CANADA L4Z 1P1

Attention: KATHY SAFFARY

Report Date: 2003/09/03

Your Project #: 331738
Your C.O.C. #: 331738

ANALYTICAL REPORT

MAXXAM JOB #: A317273

Received: 2003/08/27, 8:30

Sample Matrix: Soil
Samples Received: 24

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory	Method	Analytical	Method
Moisture (ccme)	24	2003/09/03	2003/09/03	CAL	SOP# 0028	GRAVIMETRIC	
Gravimetric Heavy Hydrocarbon (F4G)	24	N/A	2003/09/02	CAL	SOP# 0065	CCME	
Particle Size by Wet Sieve (75 micron)	24	2003/09/03	2003/09/03	CAL	SOP# 0104	GRAVIMETRIC	
F2 - F4 (CCME Hydrocarbons)	24	2003/08/29	2003/09/02	CAL	SOP# 0066	CCME	

MAXXAM Analytics Inc.

AZMINA MERALI
Manager - Inorganics

AM/jb1
encl.

Total cover pages: 1

Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone(403) 291-3077 FAX(403) 291-9468

RESULTS OF CHEMICAL ANALYSES OF SOIL

Maxxam ID		481431	481432	481433	481434	481435		
SamplingDate		2003/08/17	2003/08/17	2003/08/17	2003/08/17	2003/08/17		
	Units	TP03-364-3	TP03-367-3	TP03-368-3	TP03-369-2	TP03-370-3	DI	QA Batch

Physical Properties								
Moisture	%	7.0	9.3	7.5	7.0	11	1	347082
Sieve - #200 (>0.075mm -TS)	%	87	90	76	75	89	0.01	347149
Sieve - Pan	%	13	10	24	25	11	0.01	347149

Please check for attached comments

Maxxam ID		481436	481437	481438	481439	481440		
SamplingDate		2003/08/17	2003/08/17	2003/08/17	2003/08/17	2003/08/17		
	Units	TP03-371-1	TP03-371-2	TP03-371-3	TP03-372-3	TP03-373-2	DI	QA Batch

Physical Properties								
Moisture	%	7.5	4.9	4.8	9.2	11	1	347082
Sieve - #200 (>0.075mm -TS)	%	61	90	94	77	66	0.01	347149
Sieve - Pan	%	39	10	6.2	23	34	0.01	347149

Please check for attached comments

Maxxam ID		481441	481442	481443	481444	481445		
SamplingDate		2003/08/17	2003/08/17	2003/08/17	2003/08/17	2003/08/18		
	Units	TP03-374-2	TP03-374-3	TP03-375-2	TP03-375-3	TP03-380-1	DI	QA Batch

Physical Properties								
Moisture	%	8.2	10	6.1	6.0	6.8	1	347082
Sieve - #200 (>0.075mm -TS)	%	80	61	61	97	79	0.01	347149
Sieve - Pan	%	20	39	39	2.7	21	0.01	347149

Please check for attached comments

Maxxam ID		481446	481447	481448	481449	481450		
SamplingDate		2003/08/18	2003/08/18	2003/08/18	2003/08/18	2003/08/18		
	Units	TP03-381-1	TP03-382-1	TP03-383-1	TP03-384-1	TP03-385-1	DI	QA Batch

Physical Properties								
Moisture	%	7.1	6.2	5.5	7.7	9.5	1	347082
Sieve - #200 (>0.075mm -TS)	%	80	84	69	78	69	0.01	347149
Sieve - Pan	%	20	16	31	22	31	0.01	347149

Please check for attached comments



Maxxam Job #: A317273
Report Date: 2003/09/03

MAXXAM ANALYTICS INC.
Client Project #: 331738
Site Reference:
Sampler Initials:

RESULTS OF CHEMICAL ANALYSES OF SOIL

Maxxam ID		481451	481452	481453	481454		
SamplingDate		2003/08/18	2003/08/18	2003/08/18	2003/08/18		
	Units	TP03-385-2	TP03-386-2	TP03-388-1	TP03-387-2	DL	QA Batch

Physical Properties							
Moisture	%	10	9.1	4.2	12	1	347082
Sieve - #200 (>0.075mm -TS)	%	82	82	67	62	0.01	347162
Sieve - Pan	%	18	18	33	38	0.01	347162
Please check for attached comments							

PETROLEUM HYDROCARBONS (CCME TIER 1)

Maxxam ID		481431		481432		481433		
SamplingDate		2003/08/17		2003/08/17		2003/08/17		
	Units	TP03-364-3	DI	TP03-367-3	DI	TP03-368-3	DI	QA Batch
Ext. Pet. Hydrocarbon								
F2 (C10-C16 Hydrocarbons)	mg/kg	ND	4	ND	4	ND	4	343427
F3 (C16-C34 Hydrocarbons)	mg/kg	ND	10	ND	10	ND	9	343427
F4 (C34-C50 Hydrocarbons)	mg/kg	ND	9	ND	8	ND	8	343427
F4G sg (Gravimetric HC-Silica Gel)	mg/kg	ND	300	ND	300	ND	300	343428
Reached Baseline at C50	mg/kg	YES	N/A	YES	N/A	YES	N/A	343427
ND = Not detected N/A = Not Applicable Please check for attached comments								

Maxxam ID		481434		481435		481436		
SamplingDate		2003/08/17		2003/08/17		2003/08/17		
	Units	TP03-369-2	DI	TP03-370-3	DI	TP03-371-1	DI	QA Batch
Ext. Pet. Hydrocarbon								
F2 (C10-C16 Hydrocarbons)	mg/kg	ND	4	ND	5	360	4	343427
F3 (C16-C34 Hydrocarbons)	mg/kg	ND	9	ND	10	ND	10	343427
F4 (C34-C50 Hydrocarbons)	mg/kg	ND	8	ND	10	ND	9	343427
F4G sg (Gravimetric HC-Silica Gel)	mg/kg	ND	300	ND	300	ND	300	343428
Reached Baseline at C50	mg/kg	YES	N/A	YES	N/A	YES	N/A	343427
ND = Not detected N/A = Not Applicable Please check for attached comments								

Maxxam ID		481437		481438		481439		
SamplingDate		2003/08/17		2003/08/17		2003/08/17		
	Units	TP03-371-2	DI	TP03-371-3	DI	TP03-372-3	DI	QA Batch
Ext. Pet. Hydrocarbon								
F2 (C10-C16 Hydrocarbons)	mg/kg	10	4	630	4	ND	5	343427
F3 (C16-C34 Hydrocarbons)	mg/kg	ND	9	ND	10	ND	10	343427
F4 (C34-C50 Hydrocarbons)	mg/kg	ND	8	ND	9	ND	9	343427
F4G sg (Gravimetric HC-Silica Gel)	mg/kg	ND	300	ND	300	ND	300	343428
Reached Baseline at C50	mg/kg	YES	N/A	YES	N/A	YES	N/A	343427
ND = Not detected N/A = Not Applicable Please check for attached comments								

PETROLEUM HYDROCARBONS (CCME TIER 1)

Maxxam ID		481440		481441	481442	481443		
Sampling Date		2003/08/17		2003/08/17	2003/08/17	2003/08/17		
	Units	TP03-373-2	DI	TP03-374-2	TP03-374-3	TP03-375-2	DI	QA Batch
Ext. Pet. Hydrocarbon								
F2 (C10-C16 Hydrocarbons)	mg/kg	ND	4	ND	ND	ND	4	343427
F3 (C16-C34 Hydrocarbons)	mg/kg	ND	9	ND	ND	ND	10	343427
F4 (C34-C50 Hydrocarbons)	mg/kg	ND	8	ND	ND	ND	9	343427
F4G sg (Gravimetric HC-Silica Gel)	mg/kg	ND	300	ND	ND	ND	300	343428
Reached Baseline at C50	mg/kg	YES	N/A	YES	YES	YES	N/A	343427
ND = Not detected N/A = Not Applicable Please check for attached comments								

Maxxam ID		481444		481445		481446		
Sampling Date		2003/08/17		2003/08/18		2003/08/18		
	Units	TP03-375-3	TP03-380-1	DI	TP03-381-1	DI	QA Batch	
Ext. Pet. Hydrocarbon								
F2 (C10-C16 Hydrocarbons)	mg/kg	ND	360	4	5400	4	343427	
F3 (C16-C34 Hydrocarbons)	mg/kg	ND	14	9	92	10	343427	
F4 (C34-C50 Hydrocarbons)	mg/kg	ND	ND	8	ND	9	343427	
F4G sg (Gravimetric HC-Silica Gel)	mg/kg	ND	ND	300	ND	300	343428	
Reached Baseline at C50	mg/kg	YES	YES	N/A	YES	N/A	343427	
ND = Not detected N/A = Not Applicable Please check for attached comments								

Maxxam ID		481447		481448		481449		
Sampling Date		2003/08/18		2003/08/18		2003/08/18		
	Units	TP03-382-1	DI	TP03-383-1	DI	TP03-384-1	DI	QA Batch
Ext. Pet. Hydrocarbon								
F2 (C10-C16 Hydrocarbons)	mg/kg	390	4	510	4	550	4	343427
F3 (C16-C34 Hydrocarbons)	mg/kg	120	9	18	10	190	9	343427
F4 (C34-C50 Hydrocarbons)	mg/kg	ND	8	ND	9	ND	8	343427
F4G sg (Gravimetric HC-Silica Gel)	mg/kg	ND	300	ND	300	ND	300	343428
Reached Baseline at C50	mg/kg	YES	N/A	YES	N/A	YES	N/A	343427
ND = Not detected N/A = Not Applicable Please check for attached comments								

PETROLEUM HYDROCARBONS (CCMET TIER 1)

Maxxam ID		481450		481451		481452		
SamplingDate		2003/08/18		2003/08/18		2003/08/18		
	Units	TP03-385-1	DL	TP03-385-2	DL	TP03-386-2	DL	QA Batch
Ext. Pet. Hydrocarbon								
F2 (C10-C16 Hydrocarbons)	mg/kg	ND	4	ND	4	ND	4	343427
F3 (C16-C34 Hydrocarbons)	mg/kg	ND	9	ND	10	ND	9	343427
F4 (C34-C50 Hydrocarbons)	mg/kg	ND	8	ND	9	ND	8	343427
F4G sg (Gravimetric HC-Silica Gel)	mg/kg	ND	300	ND	300	ND	300	343428
Reached Baseline at C50	mg/kg	YES	N/A	YES	N/A	YES	N/A	343427
ND = Not detected N/A = Not Applicable Please check for attached comments								

Maxxam ID		481453	481454		
SamplingDate		2003/08/18	2003/08/18		
	Units	TP03-388-1	TP03-387-2	DL	QA Batch
Ext. Pet. Hydrocarbon					
F2 (C10-C16 Hydrocarbons)	mg/kg	ND	ND	4	343427
F3 (C16-C34 Hydrocarbons)	mg/kg	ND	ND	10	343427
F4 (C34-C50 Hydrocarbons)	mg/kg	ND	ND	9	343427
F4G sg (Gravimetric HC-Silica Gel)	mg/kg	ND	ND	300	343428
Reached Baseline at C50	mg/kg	YES	YES	N/A	343427
ND = Not detected N/A = Not Applicable Please check for attached comments					



Maxxam Job #: A317273
Report Date: 2003/09/03

MAXXAM ANALYTICS INC.
Client Project #: 331738
Site Reference:
Sampler Initials:

Results relate only to the items tested.