

Re: Additional Information to Support the City of Iqaluit Water License Application.

Please find attached to this letter additional information requested by the Nunavut Water Board in support of the City of Iqaluit's water license application.

The City is submitting with this letter a copy of the analytical results of effluent discharged from the sewage disposal lagoon. The effluent samples were taken on June 16, 2005.

The City is submitting with this letter a copy of the tender package documents completed by Earth Tech Canada Inc. for the Upgrade of Sewage Lift Station No. 1

The City is submitting with this letter a copy of the tender package documents completed by Earth Tech Canada Inc. for the construction of a new water booster station in the new Plateau Subdivision.

If you have any questions, concerns or require any clarification of the information contained in this letter please do not hesitate to contact the undersigned.

Best Regards,


Geoff Baker
Manager, Capital Projects
City of Iqaluit

Nunavut Water Board

JUL 26 2005

Public Registry

Cc. Ian Fremantle, CAO, City of Iqaluit
Elisapee Sheutiapik, Mayor, City of Iqaluit

W:\Engineering\Projects\2005\Water License\Letter to NWB- July 06, 2005.doc



*Driven by Service and Science*

CITY OF IQALUIT
PO Box 460
Iqaluit, NU
CANADA X0A 0T0

Report Date: 2005/06/30

Your C.O.C. #: NA

ANALYTICAL REPORT**MAXXAM JOB #: A555895**

Received: 2005/06/20, 13:58

Sample Matrix: LIQUID

Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Biological Oxygen Demand (BOD)	1	N/A	2005/06/24	Ont SOP 0068	APHA 5210B
Total Metals Analysis in Water by ICPMS	1	2005/06/25	2005/06/27	Ont SOP 0624	EPA 6020
Ammonia-N	1	N/A	2005/06/26	Ont SOP 0101	APHA 4500
Total Oil and Grease	1	2005/06/27	2005/06/27	Ont SOP 0098	APHA 5520
PAH Compounds in Water by GC/MS (SIM)	1	2005/06/24	2005/06/28	EPA 8270	GC/MS
Orthophosphate-P	1	N/A	2005/06/27	Ont SOP 0103	APHA 4500 PE
Total Dissolved Solids	1	N/A	2005/06/24	Ont SOP-0076	APHA 2540C
Total Suspended Solids	1	N/A	2005/06/24	Ont SOP 0076	APHA 2540D
Volatile Organic Compounds in Water	1	N/A	2005/06/25	Ont SOP 0806	EPA 8260 modified

MAXXAM ANALYTICS INC.

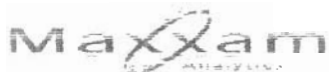
BRAD NEWMAN
Scientific Services

BNE/aun
encl.

Total cover pages: 1

Mississauga Env: 6740 Campobello Road L5N 2L8 Telephone(905) 817-5700 FAX(905) 817-5777

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Maxxam Job #: A555693
Report Date: 2005/06/30

CITY OF IQALUIT
Client Project #:
Project name:
Sampler Initials:

RESULTS OF ANALYSES OF LIQUID

Maxxam ID		G73741		
Sampling Date		2005/06/15		
COC Number		NA		
	Units	# 100	DL	QC Batch

OIL & GREASE				
Total Oil & Grease	mg/L	1.6	0.5	767184
Inorganics				
Total Ammonia-N	mg/L	23.0	0.5	767046
Total BOD ₅	mg/L	120	2	766293
Total Dissolved Solids	mg/L	125	1	766219
Dissolved Orthophosphate (P)	mg/L	2.10	0.025	767281
Total Suspended Solids	mg/L	25	1	766234

QC Batch = Quality Control Batch
Please check for attached comments



Driven by Service and Science

Maxxam Job #: A055695
Report Date: 2005/06/30

CITY OF IQALUIT
Client Project #:
Project name:
Sampler Initials:

ELEMENTS BY ATOMIC SPECTROSCOPY (LIQUID)

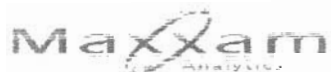
Maxxam ID	G73741		
Sampling Date	2005/05/16		
COC Number	NA		
Initials	# 100	DL	QC Batch

Element				
Total Aluminum (Al)	mg/L	0.36	0.005	767000
Total Antimony (Sb)	mg/L	ND	0.001	767000
Total Arsenic (As)	mg/L	ND	0.001	767000
Total Barium (Ba)	mg/L	0.009	0.005	767000
Total Beryllium (Be)	mg/L	ND	0.0005	767000
Total Bismuth (Bi)	mg/L	ND	0.001	767000
Total Boron (B)	mg/L	0.10	0.01	767000
Total Cadmium (Cd)	mg/L	ND	0.0001	767000
Total Calcium (Ca)	mg/L	26	0.2	767000
Total Chromium (Cr)	mg/L	ND	0.005	767000
Total Cobalt (Co)	mg/L	ND	0.0005	767000
Total Copper (Cu)	mg/L	0.14	0.005	767000
Total Iron (Fe)	mg/L	0.02	0.05	767000
Total Lead (Pb)	mg/L	0.0013	0.0005	767000
Total Lithium (Li)	mg/L	ND	0.005	767000
Total Magnesium (Mg)	mg/L	4.1	0.05	767000
Total Manganese (Mn)	mg/L	0.002	0.002	767000
Total Molybdenum (Mo)	mg/L	0.002	0.001	767000
Total Nickel (Ni)	mg/L	0.001	0.001	767000
Total Potassium (K)	mg/L	9.6	0.2	767000
Total Selenium (Se)	mg/L	ND	0.002	767000
Total Silicon (Si)	mg/L	4.0	0.05	767000
Total Silver (Ag)	mg/L	0.0009	0.0005	767000
Total Sodium (Na)	mg/L	41	0.2	767000
Total Strontium (Sr)	mg/L	0.048	0.001	767000
Total Thallium (Tl)	mg/L	ND	0.00005	767000
Total Tin (Sn)	mg/L	ND	0.001	767000
Total Titanium (Ti)	mg/L	0.007	0.005	767000
Total Tungsten (W)	mg/L	ND	0.001	767000
Total Uranium (U)	mg/L	ND	0.0001	767000
Total Vanadium (V)	mg/L	ND	0.001	767000
Total Zinc (Zn)	mg/L	0.032	0.005	767000

ND = Not detected

QC Batch = Quality Control Batch

Please check for attached comments



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Maxxam Job #: A555655
Report Date: 2005/06/30

CITY OF IQALUIT
Client Project #:
Project name:
Sampler Initials:

SEMI-VOLATILE ORGANICS BY GC-MS (LIQUID)

Maxxam ID	G73741		
Sampling Date	2005/06/16		
COC Number	NA		
	Units	# 100	DL QC Batch

PAH'S				
Benzo(h)fluoranthene	ug/l	ND	0.05	766256
Naphthalene	ug/L	0.05	0.05	766256
Acenaphthylene	ug/L	ND	0.05	766256
Acenaphthene	ug/L	ND	0.05	766256
Fluorene	ug/L	ND	0.05	766256
Phenanthrene	ug/L	ND	0.05	766256
Anthracene	ug/L	ND	0.05	766256
Fluoranthene	ug/L	ND	0.05	766256
Pyrene	ug/L	ND	0.05	766256
Benzo(a)anthracene	ug/L	ND	0.05	766256
Chrysene	ug/L	ND	0.05	766256
Benzo(k)fluoranthene	ug/L	ND	0.05	766256
Benzo(a)pyrene	ug/L	ND	0.01	766256
Indeno(1,2,3-cd)pyrene	ug/L	ND	0.1	766256
Dibenzo(a,h)anthracene	ug/L	ND	0.1	766256
Benzo(ghi)perylene	ug/L	ND	0.1	766256
Surrogate Recovery (%)				
2-Fluorobiphenyl	%	45		766256
D14-Terphenyl (FS)	%	69		766256
D5-Nitrobenzene	%	35		766256

ND = Not detected
QC Batch = Quality Control Batch
Please check for attached comments



Maxxam Job #: A555595
Report Date: 2005/06/30

Driven by Service and Science

CITY OF IQALUIT
Client Project #:
Project name:
Sampler Initials:

VOLATILE ORGANICS BY GC-MS (LIQUID)

Maxxam ID	G73741
Sampling Date	2005/06/16
COC Number	NA
Units	# 100 DL QC Batch

VOLATILES				
1,1-Dichloroethane	ug/l	ND	0.8	766498
1,1-Dichloroethylene	ug/L	ND	0.8	766498
1,1,1-Trichloroethane	ug/L	ND	0.8	766498
1,1,1,2-Tetrachloroethane	ug/L	ND	0.8	766498
1,1,2-Trichloroethane	ug/L	ND	2	766498
1,1,2,2-Tetrachloroethane	ug/L	ND	0.8	766498
1,2-Dibromoethane (EDB)	ug/L	ND	2	766498
1,2-Dichlorobenzene	ug/L	ND	0.8	766498
1,2-Dichloroethane	ug/L	ND	0.8	766498
cis-1,2-Dichloroethylene	ug/L	ND	0.8	766498
trans-1,2-Dichloroethylene	ug/L	ND	0.8	766498
1,2-Dichloropropane	ug/L	ND	0.8	766498
1,3-Dichlorobenzene	ug/L	ND	0.8	766498
cis-1,3-Dichloropropene	ug/L	ND	2	766498
trans-1,3-Dichloropropene	ug/L	ND	2	766498
1,4-Dichlorobenzene	ug/L	0.8	0.8	766498
Acetone	ug/L	111	60	766498
Benzene	ug/L	ND	0.8	766498
Bromodichloromethane	ug/L	ND	0.8	766498
Bromoform	ug/L	ND	2	766498
Bromomethane	ug/L	ND	4	766498
Carbon Tetrachloride	ug/L	ND	0.8	766498
Chlorobenzene	ug/L	ND	0.8	766498
Chloroethane	ug/L	ND	2	766498
Chloroform	ug/L	2.9	0.8	766498
Chloromethane	ug/L	ND	4	766498
Dibromochloromethane	ug/L	ND	2	766498
Dichloromethane(Methylene Chloride)	ug/L	ND	4	766498
Ethylbenzene	ug/L	ND	0.8	766498
2-Butanone (Methyl Ethyl Ketone)	ug/L	ND	40	766498
Methyl t-butyl ether (MTBE)	ug/L	ND	2	766498
4-Methyl-2-Pentanone (MIBK)	ug/L	ND	40	766498
Styrene	ug/L	ND	0.8	766498

ND = Not detected
QC Batch = Quality Control Batch
Please check for attached comments



Driven by Service and Science

Maxxam Job #: A555595
Report Date: 2005/06/30

CITY OF IQALUIT
Client Project #:
Project name:
Sampler Initials:

VOLATILE ORGANICS BY GC-MS (LIQUID)

Maxxam ID	G73741
Sampling Date	2005/06/16
COC Number	NA
Units	# 100 IDL QC Batch

Trichloroethylene	ug/l	ND	0.8	766498
Toluene	ug/l	ND	2	766498
Trichloroethylene	ug/L	ND	0.8	766498
Trichlorofluoromethane (FREON 11)	ug/L	ND	2	766498
Vinyl Chloride	ug/L	ND	2	766498
p-Xylene	ug/L	ND	0.8	766498
m-Xylene	ug/L	ND	0.8	766498
Surrogate Recovery (%)				
4-Bromofluorobenzene	%	94		766498
D4 1,2 Dichloroethane	%	100		766498
D8-Toluene	%	108		766498

ND = Not detected
QC Batch = Quality Control Batch
Please check for attached comments



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Maxxam Job #: A555835
Report Date: 2005/06/30

CITY OF IQALUIT
Client Project #:
Project name:
Sampler Initials:

GENERAL COMMENTS

Sample G73741-01: VOC Analysis: Due to foaming, the sample #100 required dilution. The DLs were adjusted accordingly

Results relate only to the items tested



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CITY OF KALAMAZOO

Attention:

Client Project #:

P.O. #:

Project name:

Quality Assurance Report

Maxxam Job Number: MA556895

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
766219 KWA	QC STANDARD	Total Dissolved Solids	2005/06/24		100	%	90 - 110
	Method Blank	Total Dissolved Solids	2005/06/24	ND, DL=1		mg/L	
	RPD	Total Dissolved Solids	2005/06/24	0.3		%	25
766234 KWA	QC STANDARD	Total Suspended Solids	2005/06/24		99	%	85 - 115
	Method Blank	Total Suspended Solids	2005/06/24	ND, DL=1		mg/L	
	RPD	Total Suspended Solids	2005/06/24	NC		%	25
766256 MWG	Spiked Blank	2-Fluorobiphenyl	2005/06/28		65	%	30 - 130
		D14-Terphenyl (FS)	2005/06/28		90	%	30 - 130
		D5-Nitrobenzene	2005/06/28		46	%	30 - 130
		Benzo(b)fluoranthene	2005/06/28		85	%	N/A
		Naphthalene	2005/06/28		60	%	30 - 130
		Acenaphthylene	2005/06/28		70	%	30 - 130
		Acenaphthene	2005/06/28		68	%	30 - 130
		Fluorene	2005/06/28		75	%	30 - 130
		Phenanthrene	2005/06/28		81	%	30 - 130
		Anthracene	2005/06/28		74	%	30 - 130
		Fluoranthene	2005/06/28		78	%	30 - 130
		Pyrene	2005/06/28		79	%	30 - 130
		Benzo(a)anthracene	2005/06/28		79	%	30 - 130
		Chrysene	2005/06/28		82	%	30 - 130
		Benzo(k)fluoranthene	2005/06/28		84	%	30 - 130
		Benzo(a)pyrene	2005/06/28		80	%	30 - 130
		Indeno(1,2,3-cd)pyrene	2005/06/28		67	%	30 - 130
		Dibenzo(a,h)anthracene	2005/06/28		71	%	30 - 130
		Benzo(ghi)perylene	2005/06/28		58	%	30 - 130
	Method Blank	2-Fluorobiphenyl	2005/06/28		78	%	30 - 130
		D14-Terphenyl (FS)	2005/06/28		102	%	30 - 130
		D5-Nitrobenzene	2005/06/28		53	%	30 - 130
		Benzo(h)fluoranthene	2005/06/28	ND, DL=0.05		ug/L	
		Naphthalene	2005/06/28	ND, DL=0.05		ug/L	
		Acenaphthylene	2005/06/28	ND, DL=0.05		ug/L	
		Acenaphthene	2005/06/28	ND, DL=0.05		ug/L	
		Fluorene	2005/06/28	ND, DL=0.05		ug/L	
		Phenanthrene	2005/06/28	ND, DL=0.05		ug/L	
		Anthracene	2005/06/28	ND, DL=0.05		ug/L	
		Fluoranthene	2005/06/28	ND, DL=0.05		ug/L	
		Pyrene	2005/06/28	ND, DL=0.05		ug/L	
		Benzo(a)anthracene	2005/06/28	ND, DL=0.05		ug/L	
		Chrysene	2005/06/28	ND, DL=0.05		ug/L	
		Benzo(k)fluoranthene	2005/06/28	ND, DL=0.05		ug/L	
		Benzo(a)pyrene	2005/06/28	ND, DL=0.05		ug/L	
		Indeno(1,2,3-cd)pyrene	2005/06/28	ND, DL=0.1		ug/L	
		Dibenzo(a,h)anthracene	2005/06/28	ND, DL=0.1		ug/L	
		Benzo(ghi)perylene	2005/06/28	ND, DL=0.1		ug/L	
	RPD	Naphthalene	2005/06/28	NC		%	40
		Acenaphthylene	2005/06/28	NC		%	40
		Acenaphthene	2005/06/28	NC		%	40
		Fluorene	2005/06/28	NC		%	40
		Phenanthrene	2005/06/28	NC		%	40
		Anthracene	2005/06/28	NC		%	40
		Fluoranthene	2005/06/28	NC		%	40
		Pyrene	2005/06/28	NC		%	40
		Benzo(a)anthracene	2005/06/28	NC		%	40
		Chrysene	2005/06/28	NC		%	40
		Benzo(k)fluoranthene	2005/06/28	NC		%	40
		Benzo(a)pyrene	2005/06/28	NC		%	10

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CITY OF CALUMET

Attention:

Client Project #:

P.O. #:

Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: MAG55885

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
766256 MWG	RPD	Indeno(1,2,3-cd)pyrene	2005/06/28	NC		%	40
		Dibenzo(a,h)anthracene	2005/06/28	NC		%	40
		Benzo(ghi)perylene	2005/06/28	NC		%	40
766293 FZH	QC STANDARD	Total BOD5	2005/06/24		96	%	65 - 115
	Method Blank	Total BOD5	2005/06/24	ND, DL=2		mg/L	
	RPD	Total BOD5	2005/06/24	NC		%	25
766498 TPI	Spiked Blank	4-Bromofluorobenzene	2005/06/25		99	%	70 - 130
		1,1,2-Dichloroethane	2005/06/25		94	%	70 - 130
		D8-Toluene	2005/06/25		103	%	70 - 130
		1,1-Dichloroethane	2005/06/25		106	%	70 - 130
		1,1-Dichloroethylene	2005/06/25		108	%	70 - 130
		1,1,1-Trichloroethane	2005/06/25		104	%	70 - 130
		1,1,1,2-Tetrachloroethane	2005/06/25		101	%	70 - 130
		1,1,2-Trichloroethane	2005/06/25		96	%	70 - 130
		1,1,2,2-Tetrachloroethane	2005/06/25		89	%	70 - 130
		1,2-Dibromoethane (EDB)	2005/06/25		94	%	70 - 130
		1,2-Dichlorobenzene	2005/06/25		100	%	70 - 130
		1,2-Dichloroethane	2005/06/25		98	%	70 - 130
		cis-1,2-Dichloroethylene	2005/06/25		104	%	70 - 130
		trans-1,2-Dichloroethylene	2005/06/25		107	%	70 - 130
		1,2-Dichloropropane	2005/06/25		101	%	70 - 130
		1,3-Dichlorobenzene	2005/06/25		101	%	70 - 130
		cis-1,3-Dichloropropene	2005/06/25		99	%	70 - 130
		trans-1,3-Dichloropropene	2005/06/25		95	%	70 - 130
		1,4-Dichlorobenzene	2005/06/25		103	%	70 - 130
		Acetone	2005/06/25		93	%	60 - 140
		Benzene	2005/06/25		100	%	70 - 130
		Bromodichloromethane	2005/06/25		101	%	70 - 130
		Bromoform	2005/06/25		95	%	70 - 130
		Bromomethane	2005/06/25		104	%	60 - 140
		Carbon Tetrachloride	2005/06/25		104	%	70 - 130
		Chlorobenzene	2005/06/25		94	%	70 - 130
		Chloroethane	2005/06/25		109	%	60 - 140
		Chloroform	2005/06/25		103	%	70 - 130
		Chloromethane	2005/06/25		120	%	60 - 140
		Dibromochloromethane	2005/06/25		100	%	70 - 130
		Dichloromethane/Methylene Chloride	2005/06/25		95	%	70 - 130
		Ethylbenzene	2005/06/25		108	%	70 - 130
		2-Butanone (Methyl Ethyl Ketone)	2005/06/25		91	%	60 - 140
		Methyl t-butyl ether (MTBE)	2005/06/25		94	%	70 - 130
		4-Methyl-2-Pentanone (MIBK)	2005/06/25		87	%	60 - 140
		Styrene	2005/06/25		111	%	70 - 130
		Tetrachloroethylene	2005/06/25		97	%	70 - 130
		Toluene	2005/06/25		96	%	70 - 130
		Trichloroethylene	2005/06/25		96	%	70 - 130
		Trichlorofluoromethane (FREON 11)	2005/06/25		109	%	70 - 130
		Vinyl Chloride	2005/06/25		118	%	60 - 140
		o-Xylene	2005/06/25		114	%	70 - 130
		p-Xylene	2005/06/25		112	%	70 - 130
	Method Blank	4-Bromofluorobenzene	2005/06/25		89	%	70 - 130
		D4 1,2-Dichloroethane	2005/06/25		104	%	70 - 130
		D8-Toluene	2005/06/25		101	%	70 - 130
		1,1-Dichloroethane	2005/06/25	ND, DL=0.1		ug/L	
		1,1-Dichloroethylene	2005/06/25	ND, DL=0.1		ug/L	
		1,1,1-Trichloroethane	2005/06/25	ND, DL=0.1		ug/L	
		1,1,1,2-Tetrachloroethane	2005/06/25	ND, DL=0.1		ug/L	

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CITY OF IQUUIT

Attention:

Client Project #:

P.O. #:

Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: MA555695

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
766498 TPI	Method Blank	1,1,2-Trichloroethane	2005/06/25	ND, DL=0.2		ug/L	
		1,1,2,2-Tetrachloroethane	2005/06/25	ND, DL=0.1		ug/L	
		1,2-Dibromoethane (EDB)	2005/06/25	ND, DL=0.2		ug/L	
		1,2-Dichlorobenzene	2005/06/25	ND, DL=0.1		ug/L	
		1,2-Dichloroethane	2005/06/25	ND, DL=0.1		ug/L	
		cis-1,2-Dichloroethylene	2005/06/25	ND, DL=0.1		ug/L	
		trans-1,2-Dichloroethylene	2005/06/25	ND, DL=0.1		ug/L	
		1,2-Dichloropropane	2005/06/25	ND, DL=0.1		ug/L	
		1,3-Dichlorobenzene	2005/06/25	ND, DL=0.1		ug/L	
		cis-1,3-Dichloropropene	2005/06/25	ND, DL=0.2		ug/L	
		trans-1,3-Dichloropropene	2005/06/25	ND, DL=0.2		ug/L	
		1,4-Dichlorobenzene	2005/06/25	ND, DL=0.1		ug/L	
		Acetone	2005/06/25	ND, DL=10		ug/L	
		Benzene	2005/06/25	ND, DL=0.1		ug/L	
		Bromodichloromethane	2005/06/25	ND, DL=0.1		ug/L	
		Bromoform	2005/06/25	ND, DL=0.2		ug/L	
		Bromomethane	2005/06/25	ND, DL=0.5		ug/L	
		Carbon Tetrachloride	2005/06/25	ND, DL=0.1		ug/L	
		Chlorobenzene	2005/06/25	ND, DL=0.1		ug/L	
		Chloroethane	2005/06/25	ND, DL=0.2		ug/L	
		Chloroform	2005/06/25	ND, DL=0.1		ug/L	
		Chloromethane	2005/06/25	ND, DL=0.5		ug/L	
		Dibromochloromethane	2005/06/25	ND, DL=0.2		ug/L	
		Dichloromethane (Methylene Chloride)	2005/06/25	ND, DL=0.5		ug/L	
		Ethylbenzene	2005/06/25	ND, DL=0.1		ug/L	
		2-Butanone (Methyl Ethyl Ketone)	2005/06/25	ND, DL=5		ug/L	
		Methyl t-butyl ether (MTBE)	2005/06/25	ND, DL=0.2		ug/L	
		4-Methyl-2-Pentanone (MIBK)	2005/06/25	ND, DL=5		ug/L	
		Styrene	2005/06/25	ND, DL=0.1		ug/L	
		Tetrachloroethylene	2005/06/25	ND, DL=0.1		ug/L	
		Toluene	2005/06/25	ND, DL=0.2		ug/L	
		Trichloroethylene	2005/06/25	ND, DL=0.1		ug/L	
		Trichlorofluoromethane (FREON 11)	2005/06/25	ND, DL=0.2		ug/L	
		Vinyl Chloride	2005/06/25	ND, DL=0.2		ug/L	
		o-Xylene	2005/06/25	ND, DL=0.1		ug/L	
		p+m-Xylene	2005/06/25	ND, DL=0.1		ug/L	
767000 HRF	MATRIX SPIKE	Total Aluminum (Al)	2005/06/27	96	%		75 - 125
		Total Antimony (Sb)	2005/06/27	105	%		75 - 125
		Total Arsenic (As)	2005/06/27	99	%		75 - 125
		Total Barium (Ba)	2005/06/27	98	%		75 - 125
		Total Beryllium (Be)	2005/06/27	100	%		75 - 125
		Total Bismuth (Bi)	2005/06/27	96	%		75 - 125
		Total Boron (B)	2005/06/27	114	%		75 - 125
		Total Cadmium (Cd)	2005/06/27	99	%		75 - 125
		Total Chromium (Cr)	2005/06/27	96	%		75 - 125
		Total Cobalt (Co)	2005/06/27	96	%		75 - 125
		Total Copper (Cu)	2005/06/27	93	%		75 - 125
		Total Iron (Fe)	2005/06/27	99	%		75 - 125
		Total Lead (Pb)	2005/06/27	101	%		75 - 125
		Total Lithium (Li)	2005/06/27	98	%		75 - 125
		Total Magnesium (Mg)	2005/06/27	118	%		75 - 125
		Total Manganese (Mn)	2005/06/27	95	%		75 - 125
		Total Molybdenum (Mo)	2005/06/27	96	%		75 - 125
		Total Nickel (Ni)	2005/06/27	92	%		75 - 125
		Total Potassium (K)	2005/06/27	110	%		75 - 125
		Total Selenium (Se)	2005/06/27	91	%		75 - 125

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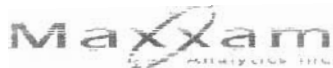
Quality Assurance Report (Continued)

Maxxam Job Number: MA555685

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
767000 HRE	MATRIX SPIKE	Total Silicon (Si)	2005/06/27		102	%	75 - 125
		Total Strontium (Sr)	2005/06/27		119	%	75 - 125
		Total Thallium (Tl)	2005/06/27		102	%	75 - 125
		Total Tin (Sn)	2005/06/27		104	%	75 - 125
		Total Titanium (Ti)	2005/06/27		97	%	75 - 125
		Total Tungsten (W)	2005/06/27		104	%	75 - 125
		Total Uranium (U)	2005/06/27		105	%	75 - 125
		Total Vanadium (V)	2005/06/27		96	%	75 - 125
		Total Zinc (Zn)	2005/06/27		94	%	75 - 125
	Spiked Blank	Total Aluminum (Al)	2005/06/27		92	%	75 - 125
		Total Antimony (Sb)	2005/06/27		108	%	82 - 128
		Total Arsenic (As)	2005/06/27		100	%	86 - 119
		Total Barium (Ba)	2005/06/27		100	%	83 - 115
		Total Beryllium (Be)	2005/06/27		105	%	85 - 132
		Total Bismuth (Bi)	2005/06/27		99	%	78 - 120
		Total Boron (B)	2005/06/27		109	%	78 - 133
		Total Cadmium (Cd)	2005/06/27		105	%	85 - 116
		Total Calcium (Ca)	2005/06/27		100	%	75 - 125
		Total Chromium (Cr)	2005/06/27		102	%	76 - 120
		Total Cobalt (Co)	2005/06/27		94	%	82 - 117
		Total Copper (Cu)	2005/06/27		100	%	79 - 117
		Total Iron (Fe)	2005/06/27		93	%	80 - 125
		Total Lead (Pb)	2005/06/27		97	%	80 - 123
		Total Lithium (Li)	2005/06/27		102	%	86 - 131
		Total Magnesium (Mg)	2005/06/27		101	%	75 - 125
		Total Manganese (Mn)	2005/06/27		91	%	75 - 125
		Total Molybdenum (Mo)	2005/06/27		98	%	82 - 117
		Total Nickel (Ni)	2005/06/27		97	%	81 - 117
		Total Potassium (K)	2005/06/27		101	%	75 - 125
		Total Selenium (Se)	2005/06/27		100	%	82 - 118
		Total Silicon (Si)	2005/06/27		100	%	67 - 140
		Total Silver (Ag)	2005/06/27		98	%	75 - 125
		Total Sodium (Na)	2005/06/27		101	%	75 - 125
		Total Strontium (Sr)	2005/06/27		102	%	83 - 120
		Total Thallium (Tl)	2005/06/27		97	%	80 - 129
		Total Tin (Sn)	2005/06/27		106	%	83 - 119
		Total Titanium (Ti)	2005/06/27		101	%	60 - 125
		Total Tungsten (W)	2005/06/27		102	%	81 - 123
		Total Uranium (U)	2005/06/27		99	%	82 - 124
		Total Vanadium (V)	2005/06/27		98	%	82 - 118
		Total Zinc (Zn)	2005/06/27		99	%	80 - 129
	Method Blank	Total Aluminum (Al)	2005/06/27	0.005, DL=0.005		mg/L	
		Total Antimony (Sb)	2005/06/27	ND, DL=0.001		mg/L	
		Total Arsenic (As)	2005/06/27	ND, DL=0.001		mg/L	
		Total Barium (Ba)	2005/06/27	ND, DL=0.005		mg/L	
		Total Beryllium (Be)	2005/06/27	ND, DL=0.0005		mg/L	
		Total Bismuth (Bi)	2005/06/27	ND, DL=0.001		mg/L	
		Total Boron (B)	2005/06/27	ND, DL=0.01		mg/L	
		Total Cadmium (Cd)	2005/06/27	ND, DL=0.0001		mg/L	
		Total Calcium (Ca)	2005/06/27	ND, DL=0.2		mg/L	
		Total Chromium (Cr)	2005/06/27	ND, DL=0.005		mg/L	
		Total Cobalt (Co)	2005/06/27	ND, DL=0.0005		mg/L	
		Total Copper (Cu)	2005/06/27	ND, DL=0.005		mg/L	
		Total Iron (Fe)	2005/06/27	ND, DL=0.05		mg/L	
		Total Lead (Pb)	2005/06/27	ND, DL=0.0005		mg/L	
		Total Lithium (Li)	2005/06/27	ND, DL=0.005		mg/L	

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Quality Assurance Report (Continued)

Maxxam Job Number: MA555695

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
767000 HRE	Method Blank	Total Magnesium (Mg)	2005/06/27	ND, DL=0.05		mg/L	
		Total Manganese (Mn)	2005/06/27	ND, DL=0.002		mg/L	
		Total Molybdenum (Mo)	2005/06/27	ND, DL=0.001		mg/L	
		Total Nickel (Ni)	2005/06/27	ND, DL=0.001		mg/L	
		Total Potassium (K)	2005/06/27	ND, DL=0.2		mg/L	
		Total Selenium (Se)	2005/06/27	ND, DL=0.002		mg/L	
		Total Silicon (Si)	2005/06/27	ND, DL=0.05		mg/L	
		Total Silver (Ag)	2005/06/27	ND, DL=0.0005		mg/L	
		Total Sodium (Na)	2005/06/27	ND, DL=0.2		mg/L	
		Total Strontium (Sr)	2005/06/27	ND, DL=0.001		mg/L	
		Total Thallium (Tl)	2005/06/27	ND, DL=0.00005		mg/L	
		Total Tin (Sn)	2005/06/27	ND, DL=0.001		mg/L	
		Total Titanium (Ti)	2005/06/27	ND, DL=0.005		mg/L	
		Total Tungsten (W)	2005/06/27	ND, DL=0.001		mg/L	
		Total Uranium (U)	2005/06/27	ND, DL=0.0001		mg/L	
		Total Vanadium (V)	2005/06/27	ND, DL=0.001		mg/L	
		Total Zinc (Zn)	2005/06/27	ND, DL=0.005		mg/L	
	RPD	Total Aluminum (Al)	2005/06/27	1.5		%	25
		Total Antimony (Sb)	2005/06/27	NC		%	25
		Total Arsenic (As)	2005/06/27	NC		%	25
		Total Barium (Ba)	2005/06/27	NC		%	25
		Total Beryllium (Be)	2005/06/27	NC		%	25
		Total Bismuth (Bi)	2005/06/27	NC		%	25
		Total Cadmium (Cd)	2005/06/27	NC		%	25
		Total Chromium (Cr)	2005/06/27	NC		%	25
		Total Cobalt (Co)	2005/06/27	NC		%	25
		Total Copper (Cu)	2005/06/27	NC		%	25
		Total Iron (Fe)	2005/06/27	3.7		%	25
		Total Lead (Pb)	2005/06/27	0.7		%	25
		Total Manganese (Mn)	2005/06/27	3.4		%	25
		Total Molybdenum (Mo)	2005/06/27	1.8		%	25
		Total Nickel (Ni)	2005/06/27	NC		%	25
		Total Selenium (Se)	2005/06/27	NC		%	25
		Total Silver (Ag)	2005/06/27	NC		%	25
		Total Tin (Sn)	2005/06/27	NC		%	25
		Total Titanium (Ti)	2005/06/27	NC		%	25
		Total Vanadium (V)	2005/06/27	NC		%	25
		Total Zinc (Zn)	2005/06/27	1.1		%	25
767046 ADB	MATRIX SPIKE	Total Ammonia-N	2005/06/26		101	%	75 - 125
	QC STANDARD	Total Ammonia-N	2005/06/26		106	%	85 - 115
	Spiked Blank	Total Ammonia-N	2005/06/26		110	%	75 - 125
	Method Blank	Total Ammonia-N	2005/06/26	ND, DL=0.05		mg/L	
	RPD	Total Ammonia-N	2005/06/26	0.8		%	25
767184 FA	MATRIX SPIKE	Total Oil & Grease	2005/06/27		100	%	75 - 125
	Spiked Blank	Total Oil & Grease	2005/06/27		104	%	85 - 115
	Method Blank	Total Oil & Grease	2005/06/27	ND, DL=0.5		mg/L	
	RPD	Total Oil & Grease	2005/06/27	NC		%	25
767281 MGH	MATRIX SPIKE	Dissolved Orthophosphate (P)	2005/06/27		99	%	75 - 125
	QC STANDARD	Dissolved Orthophosphate (P)	2005/06/27		99	%	85 - 115
	Spiked Blank	Dissolved Orthophosphate (P)	2005/06/27		99	%	75 - 125
	Method Blank	Dissolved Orthophosphate (P)	2005/06/27	ND, DL=0.005		mg/L	
	RPD	Dissolved Orthophosphate (P)	2005/06/27	0		%	25

ND = Not detected

N/A = Not Applicable

NC = Non-calculable

RPD = Relative Percent Difference

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QC Standard = Quality Control Standard

SPIKE = Fortified sample

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