

Water (Inorganic)

Conductivity - Water (004)

VA-TM-1005; modified from APHA 2510-B

CONDUCTIVITY METER

Conductivity (25°C)

Water (Inorganic)

Cyanide - Water (178)

WQSM04_04_01; modified from APHA 4500-CN-C, E & I

COLOR - DISTILLATION

Cyanide (SAD)

Cyanide (WAD)

Water (Inorganic)

Cyanide - Water (209)

VA-TM-1043; modified from ISO 14403 & SM 4500-CN- I

AUTO COLOR - DISTILLATION

Cyanide (SAD)

Cyanide (WAD)

Water (Inorganic)

Cyanide - Water (210)

VA-TM-1043; modified from ASTM 7237

AUTO COLOR (GAS DIFFUSION)

Cyanide (Free)

Water (Inorganic)

Dissolved Metals - Seawater (118)

VA-TM-1076/NA-TP-2002; modified from PUGET SOUND PROTOCOLS & EPA 200.8

ICP/MS - EXTRACTION/FILTRATION

Aluminum

Cadmium

Cobalt

Copper

Iron

Lead

Manganese

Nickel

Uranium

Zinc

Water (Inorganic)

Dissolved Metals - Water (032)

NA-TM-1002/NA-TP-2002; modified from APHA 3030 B AND EPA 200.8

ICP/MS - FILTRATION

Aluminum

Antimony

Arsenic

Barium

Beryllium

Bismuth

Boron

Cadmium

Calcium

Chromium

Cobalt

Copper

Iron

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Lead
Lithium
Magnesium
Manganese
Molybdenum
Nickel
Phosphorus
Potassium
Selenium
Silicon
Silver
Sodium
Strontium
Thallium
Tin
Titanium
Uranium
Vanadium
Zinc

Water (Inorganic)

Dissolved Metals - Water (036)

VA-TM-1066/NA-TP-2002; modified from APHA 3030 B & EPA 200.7

ICP/OES

Aluminum (High)

Antimony

Arsenic

Barium

Beryllium

Bismuth

Boron

Cadmium

Calcium

Chromium

Cobalt

Copper

Iron

Lead

Lithium

Magnesium

Manganese

Molybdenum

Nickel

Phosphorus

Potassium

Selenium

Silicon

Silver

Sodium

Strontium

Thallium (High)

Tin

Titanium

Vanadium

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Zinc

Water (Inorganic)

Dissolved Metals - Water (198)

TMSM07_01/NA-TP-2002; modified from APHA 3030B AND EPA 200.8

HI RESOLUTION ICP/MS - FILTRATION

Aluminum
Antimony
Arsenic
Barium
Beryllium
Bismuth
Boron
Cadmium
Calcium
Cesium
Chromium
Cobalt
Copper
Gallium
Indium
Iron
Lead
Lithium
Magnesium
Manganese
Molybdenum
Nickel
Phosphorus
Potassium
Rhenium
Rubidium
Scandium
Selenium
Silicon
Silver
Sodium
Strontium
Tellurium
Thallium
Thorium
Tin
Titanium
Tungsten
Uranium
Vanadium
Yttrium
Zinc
Zirconium

Water (Inorganic)

Fluoride - Water (005)

VA-TM-1016; modified from APHA 4500-F -C

SIE

Fluoride

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Water (Inorganic)

Mercury (Total and Dissolved)- Water (136)
VA-TM-1061, NA-TP-2002; modified from EPA 1631 E
CVAFS - BrCl DIGESTION
Mercury

Water (Inorganic)

Methyl Mercury - Water (192)
VA-TM-1062; modified from EPA 1630
P&T GC-CVAFS-DISTILLATION
Methyl Mercury

Water (Inorganic)

Nitrogen - Water (217)
VA-TM-1045; modified from APHA 4500-P J
AUTO COLOR - DIGESTION
Nitrate plus Nitrite
Total Dissolved Nitrogen
Total Nitrogen

Water (Inorganic)

Oil and Grease - Water (061)
TOSM07_04; modified from EPA 1664
GRAVIMETRIC - EXTRACTION
Mineral Oil and Grease
Total Oil and Grease

Water (Inorganic)

Oxidation Reduction Potential (ORP) - Water (221)
VA-TM-1006; modified from APHA 2580
MV METER
ORP

Water (Inorganic)

pH - Water (018)
VA-TM-1007; modified from APHA 4500-H -B
pH METER
pH

Water (Inorganic)

Phosphorus - Water (179)
WQSM03_03_02; modified from APHA 4500-P B&E
COLOR - DIGESTION (AUTOCLAVE)
Phosphate
Total Dissolved Phosphorus
Total Phosphorus

Water (Inorganic)

Reactive Silica - Water (008)
VA-TM-1018; modified from APHA 4500-SiO2 -D
COLORIMETRIC
Reactive Silica

Water (Inorganic)

Solids - Water (016)
VA-TM-1008/VA-TM-1009; modified from APHA 2540-C & D
GRAVIMETRIC
Total Dissolved Solids
Total Suspended Solids

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Water (Inorganic)

Sulfide - Water (010)

VA-TM-1020; modified from APHA 4500-S2 -D

COLOR

Sulfide

Water (Inorganic)

Sulphate - Water (009)

WQSM02_07_01; modified from APHA 4500-SO4 -E

TURBIDIMETRIC

Sulfate

Water (Inorganic)

Tannin and Lignin - Water (231)

VA-TM-1035; modified from APHA 5550 B

COLORIMETRIC

Tannin and Lignin

Water (Inorganic)

Thiocyanate - Water (014)

VA-TM-1029; modified from APHA 4500-CN -M

COLOR

Thiocyanate

Water (Inorganic)

Total Kjeldahl Nitrogen (TKN) - Water (211)

VA-TM-1044; modified from SM 4500 NORG- D

AUTO FLUORESCENCE - DIGESTION

Dissolved Kjeldahl Nitrogen

Total Kjeldahl Nitrogen

Water (Inorganic)

Total Metals - Water (031)

NA-TM-1002/NA-TP-2001; modified from APHA 3030E AND EPA 200.8

ICP/MS - DIGESTION

Aluminum

Antimony

Arsenic

Barium

Beryllium

Bismuth

Boron

Cadmium

Calcium

Chromium

Cobalt

Copper

Iron

Lead

Lithium

Magnesium

Manganese

Molybdenum

Nickel

Phosphorus

Potassium

Selenium

Silicon

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Silver
Sodium
Strontium
Thallium
Tin
Titanium
Uranium
Vanadium
Zinc

Water (Inorganic)

Total Metals - Water (041)

VA-TM-1066/NA-TP-2001; modified from APHA 3030 E & EPA 200.7

ICP/OES - DIGESTION

Aluminum
Antimony
Arsenic
Barium
Beryllium
Bismuth
Boron
Cadmium
Calcium
Chromium
Cobalt
Copper
Iron
Lead
Lithium
Magnesium
Manganese
Molybdenum
Nickel
Phosphorus
Potassium
Selenium
Silicon
Silver
Sodium
Strontium
Thallium
Tin
Titanium
Vanadium
Zinc

Water (Inorganic)

Total Metals - Water (199)

TMSM07_01/NA-TP-2001; modified from APHA 3030E AND EPA 200.8

HI RESOLUTION ICP/MS - DIGESTION

Aluminum
Antimony
Arsenic
Barium
Beryllium

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Bismuth
Boron
Cadmium
Calcium
Cesium
Chromium
Cobalt
Copper
Gallium
Indium
Iron
Lead
Lithium
Magnesium
Manganese
Molybdenum
Nickel
Phosphorus
Potassium
Rhenium
Rubidium
Scandium
Selenium
Silicon
Silver
Sodium
Strontium
Tellurium
Thallium
Thorium
Tin
Titanium
Tungsten
Uranium
Vanadium
Yttrium
Zinc
Zirconium

Water (Inorganic)

Turbidity - Water (020)

VA-TM-1011; modified from APHA 2130-B
TURBIDIMETRIC

Turbidity

Water (Microbiology)

Coliforms - Water (145)

VA-TM-1202; modified from APHA 9223 B
MOST PROBABLE NUMBER (ENZYME SUBSTRATE)

Escherichia coli (E. coli)

Total Coliforms

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Water (Microbiology)

Enterococci - Water (186)

VA-TM-1203; modified from APHA 9230 C

MEMBRANE FILTRATION (mENTEROCOCCUS)

Enterococci

Water (Microbiology)

Fecal (Thermotolerant) Coliforms - Water (029)

VA-TM-1200; modified from APHA 9221 E

MOST PROBABLE NUMBER

Fecal Coliforms

Water (Microbiology)

Fecal (Thermotolerant) Coliforms - Water (030)

VA-TM-1201; modified from APHA 9222 D

MEMBRANE FILTRATION (mFC)

Fecal (Thermotolerant) Coliforms

Water (Microbiology)

Heterotrophic Plate Count (HPC) - Water (126)

VA-TM-1205; modified from APHA 9215B

POUR PLATE (PLATE COUNT AGAR)

Heterotrophic Plate Count (HPC)

Water (Microbiology)

Pseudomonas aeruginosa - Water (187)

VA-TM-1204; modified from APHA 9213 E

MEMBRANE FILTRATION (mPAC)

Pseudomonas aeruginosa

Water (Microbiology)

Total Coliforms - Water (142)

VA-TM-1200; modified from APHA 9221 B

MOST PROBABLE NUMBER

Total Coliforms

Water (Microbiology)

Total Coliforms - Water (143)

VA-TM-1201; modified from APHA 9222 B

MEMBRANE FILTRATION (mENDO)

Total Coliforms

Water (Organic)

Extractable Petroleum Hydrocarbons (EPH) - Water (063)

VA-TM-1115/VA-TM-1116; BCLM EPH IN WATER AND SILICA GEL CLEANUP OF EPH

GC/FID - EXTRACTION

EPH 10-19

EPH 10-19 (sg)

EPH 19-32

EPH 19-32 (sg)

Total Extractable Hydrocarbons (C10-30)

Water (Organic)

Glycols - Water (155)

VA-TM-1113; modified from EPA 8015 B

GC/FID - EXTRACTION

1,2-Propylene Glycol

Diethylene Glycol

Ethylene Glycol

Triethylene Glycol

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Water (Organic)

Organochlorine Pesticides (OC) - Water (065)

VA-TM-1121; modified from EPA SW846 3510, 3610, 3630, 3660, 8081

GC/ECD - EXTRACTION

2,4'-DDD

2,4'-DDE

2,4'-DDT

4,4'-DDD

4,4'-DDE

4,4'-DDT

A -BHC

a - Chlordane

Aldrin

Beta-BHC

cis-Nonachlor

Delta-BHC

Dieldrin

Endosulfan I

Endosulfan II

Endosulfan Sulfate

Endrin

g - Chlordane

Heptachlor

Heptachlor Epoxide

Lindane (gamma-BHC)

Mirex

o,p' - DDT

Oxychlordane

p,p' - DDT

p,p' Methoxychlor

trans-Nonachlor

Water (Organic)

Phenols - Water (059)

VA-TM-1101; modified from EPA 3510, 8270

GC/MS - EXTRACTION

2-Chlorophenol

2,3-Dichlorophenol

2,3,4-Trichlorophenol

2,3,4,5-Tetrachlorophenol

2,3,4,6-tetrachlorophenol

2,3,5-Trichlorophenol

2,3,5,6-Tetrachlorophenol

2,3,6-Trichlorophenol

2,4-Dichlorophenol

2,4-Dimethylphenol

2,4,5-Trichlorophenol

2,4,6-trichlorophenol

2,6-Dichlorophenol

3-Chlorophenol

3,4-Dichlorophenol

3,4,5-Trichlorophenol

3,5-Dichlorophenol

4-Chloro-3-Methylphenol

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4-Chlorophenol
m-cresol
o-Cresol
p-Cresol
Pentachlorophenol
Phenol

Water (Organic)

Polycyclic Aromatic Hydrocarbons (PAH) - Water (068)
VA-TM-1115; modified from EPA SW846 3510,3630,8270

GC/MS - EXTRACTION

2-Methylnaphthalene
Acenaphthene
Acenaphthylene
Acridine
Anthracene
Benzo (a) anthracene
Benzo (a) pyrene
Benzo (b) fluoranthene
Benzo(b&i)fluoranthene
Benzo(b&j&k)Fluoranthene
Benzo (g,h,i) perylene
Benzo (k) fluoranthene
Chrysene
Dibenzo (a,h) anthracene
Dibenzo(a,h)pyrene
Fluoranthene
Fluorene
Indeno (1,2,3 - cd) pyrene
Naphthalene
Phenanthrene
Pyrene
Quinoline

Water (Organic)

Resin and Fatty Acids - Water (212)
VA-TM-1105; EPA 3510, 8270

GC/MS/LIQUID-LIQUID EXTRACTION

1,2-Chlorodehydro-abietic Acid
1,4-Chlorodehydro-abietic Acid
Abietic Acid
Arachidic Acid
Behenic Acid
Dehydroabietic Acid
Dichlorodehydro-abietic Acid
Isopimaric and Palustric Acid
Lauric Acid
Levopimaric Acid
Lignoceric Acid
Linoleic Acid
Linolenic Acid
Myristic Acid
Neoabietic Acid
Oleic Acid
Palmitic Acid

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Pimaric Acid
Sandaracopimaric Acid
Stearic Acid

Water (Organic)

Total PCBs - Water (115)
VA-TM-1121; EPA 3510, 3620, 3660, 3665 & 8082
GC/ECD - EXTRACTION
Total PCB

Water (Organic)

Volatile Hydrocarbons (VH) - Water (197)
VA-TM-1108/TOSM05_12; modified from EPA 5021 A & 5015 B
GC/FID - HEADSPACE
CWS-F1
VH 6-10

Water (Organic)

Volatile Organic Compounds (VOC) - Water (196)
NA-TM-1102, NA-TM-1103; modified from EPA 5021 A and 5015 B
GC/MS - HEADSPACE
1,1-Dichloroethane
1,1-Dichloroethylene
1,1,1-Trichloroethane
1,1,1,2-Tetrachloroethane
1,1,2-Trichloroethane
1,1,2,2-Tetrachloroethane
1,2-Dichlorobenzene
1,2-Dichloroethane
1,2-Dichloropropane
1,3-Dichlorobenzene
1,4-Dichlorobenzene
Benzene
Bromodichloromethane
Bromoform
Carbon Tetrachloride
Chlorobenzene
Chlorodibromomethane
Chloroethane
Chloroform
Chloromethane
cis-1,2-Dichloroethylene
cis-1,3-Dichloropropene
Dichloromethane
Ethylbenzene
m/p-xylene
Methyl t-butyl ether
o-xylene
Styrene
Tetrachloroethylene
Toluene
trans-1,2-Dichloroethylene
trans-1,3-Dichloropropene
Trichloroethylene
Trichlorofluoromethane
Vinyl Chloride

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Appendix D

Laboratory Analytical Methods

The information contained herein is proprietary Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

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Details of Quotation

48h-Single Conc.-Daphnia

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
hold sample	HOLD C HOLD	0	

96h-Single Conc-RainTrout

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
hold sample	HOLD C HOLD	0	

Alkalinity - Water

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
Alkalinity as CaCO3	Alkalinity : Auto - AMAPCAE1 SM 2320B	5	mg/L

Baseline - Sediment

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
Ca	Metals soil FAA - AMSFAAE2 M SM3111B-3050B	100	ug/g
Mg	Metals soil FAA - AMSFAAE2 M SM3111B-3050B	100	ug/g
Na	Metals soil FAA - AMSFAAE2 M SM3111B-3050B	100	ug/g
K	Metals soil FAA - AMSFAAE2 M SM3111B-3050B	100	ug/g
Al	ICP-MS SOIL PE6100 EPA 200.8	5	ug/g
Ba	ICP-MS SOIL PE6100 EPA 200.8	1	ug/g
Be	ICP-MS SOIL PE6100 EPA 200.8	1	ug/g
Cd	ICP-MS SOIL PE6100 EPA 200.8	0.5	ug/g
Cr	ICP-MS SOIL PE6100 EPA 200.8	1	ug/g
Co	ICP-MS SOIL PE6100 EPA 200.8	1	ug/g
Cu	ICP-MS SOIL PE6100 EPA 200.8	1	ug/g
Fe	ICP-MS SOIL PE6100 EPA 200.8	5	ug/g
Pb	ICP-MS SOIL PE6100 EPA 200.8	1	ug/g
Mn	ICP-MS SOIL PE6100 EPA 200.8	1	ug/g
Mo	ICP-MS SOIL PE6100 EPA 200.8	1	ug/g
Ni	ICP-MS SOIL PE6100 EPA 200.8	1	ug/g
Ag	ICP-MS SOIL PE6100 EPA 200.8	0.2	ug/g
Sr	ICP-MS SOIL PE6100 EPA 200.8	1	ug/g
Tl	ICP-MS SOIL PE6100 EPA 200.8	1	ug/g
V	ICP-MS SOIL PE6100 EPA 200.8	2	ug/g
Zn	ICP-MS SOIL PE6100 EPA 200.8	2	ug/g
As	ICP-MS SOIL PE6100 EPA 200.8	1	ug/g
Sb	ICP-MS SOIL PE6100 EPA 200.8	1	ug/g
Se	ICP-MS SOIL PE6100 EPA 200.8	1	ug/g
Hg	Hydride - Soil M SM3114C-3500C	0.1	ug/g
Sand (>0.050mm)	Particle Size C Ag Particle	1	%
Silt (>0.002-0.050mm)	Particle Size C Ag Particle	1	%
Clay (<=0.002mm)	Particle Size C Ag Particle	1	%
Moisture	MOISTURE C SM2540B	0.1	%
Total Kjeldahl Nitrogen	TKN soil/solids - AMTKNHX8 C SM4500-Norg-B	0.01	%
TOC	Organic matter Ag Soil	0.01	%
N-NO2	SOIL - Extractable N C 33-3 Methods of So	1	ppm

Details of Quotation

N-NO3	SOIL - Extractable N C 33-3 Methods of So	1	ppm
NO2 + NO3 as N	SOIL - Extractable N C 33-3 Methods of So	1	ppm
Boron (hot water extract)	Boron - hot water EXT Boron HWE	0.5	ug/g

Baseline - SW Chem

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
pH	pH in water : Auto - AMAPCAE1 C SM4500-H+B	1	
Conductivity	Conductivity : Auto - AMAPCAE1 C SM2510B	5	uS/cm
Alkalinity as CaCO3	Alkalinity : Auto - AMAPCAE1 SM 2320B	5	mg/L
TDS (COND - CALC)	solids in water - AMSOLWE1 C SM2540	5	mg/L
Turbidity	Turbidity - AMTURBE1 C SM2130B	0.1	NTU
Phenols	Phenols 4-AAP - AMPHACE1 C SM5530D	0.001	mg/L
N-NH3	NH3 water low - AMNH3LE1 C SM4500-NH3D	0.02	mg/L
SO4	Anions by IC - DX-100 SM 4110C	3	mg/L
Cl	Anions by IC - DX-100 SM 4110C	1	mg/L
Br	Anions by IC - DX-100 SM 4110C	0.05	mg/L
N-NO2	Low NO2 - Technicon C SM4500-NO2-B	0.005	mg/L
N-NO3	NO2/NO3 SKALAR - AMNOXSE1 C SM4500-NO3-F	0.1	mg/L
NO2 + NO3 as N	NO2/NO3 SKALAR - AMNOXSE1 C SM4500-NO3-F	0.1	mg/L
TOC	TOC in water - AMDTOCE1 C SM5310C	0.5	mg/L
DOC	TOC in water - AMDTOCE1 C SM5310C	0.5	mg/L
Total Suspended Solids	solids in water - AMSOLWE1 C SM2540	2	mg/L
Total P	Low Total P C SM4500-PF	0.003	mg/L
Total Kjeldahl Nitrogen	TKN low water - AMTKNLE1 C SM4500-Norg-C	0.1	mg/L

Baseline Chlorophyll-Pheo

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
Chlorophyll-a	Chlorophyll C SM10200H	0.2	mg/m3
Pheophytin-a	Chlorophyll C SM10200H	0.2	mg/m3

Baseline Dissolved Metals

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
Ca	ALS Low Level ICP-MS DISS Met ALS-OUTSIDE	50	ug/L
Mg	ALS Low Level ICP-MS DISS Met ALS-OUTSIDE	100	ug/L
Na	ALS Low Level ICP-MS DISS Met ALS-OUTSIDE	50	ug/L
K	ALS Low Level ICP-MS DISS Met ALS-OUTSIDE	50	ug/L
Al	ALS Low Level ICP-MS DISS Met ALS-OUTSIDE	3	ug/L
Sb	ALS Low Level ICP-MS DISS Met ALS-OUTSIDE	0.1	ug/L
As	ALS Low Level ICP-MS DISS Met ALS-OUTSIDE	0.1	ug/L
Ba	ALS Low Level ICP-MS DISS Met ALS-OUTSIDE	0.05	ug/L
Be	ALS Low Level ICP-MS DISS Met ALS-OUTSIDE	0.5	ug/L
Bi	ALS Low Level ICP-MS DISS Met ALS-OUTSIDE	0.5	ug/L
B	ALS Low Level ICP-MS DISS Met ALS-OUTSIDE	10	ug/L
Cd	ALS Low Level ICP-MS DISS Met ALS-OUTSIDE	0.01	ug/L
Cr	ALS Low Level ICP-MS DISS Met ALS-OUTSIDE	0.5	ug/L
Co	ALS Low Level ICP-MS DISS Met ALS-OUTSIDE	0.1	ug/L
Cu	ALS Low Level ICP-MS DISS Met ALS-OUTSIDE	0.5	ug/L
Fe	ALS Low Level ICP-MS DISS Met ALS-OUTSIDE	30	ug/L

Details of Quotation

Pb	ALS Low Level ICP-MS DISS Met ALS-OUTSIDE	0.05	ug/L
Li	ALS Low Level ICP-MS DISS Met ALS-OUTSIDE	5	ug/L
Mn	ALS Low Level ICP-MS DISS Met ALS-OUTSIDE	0.05	ug/L
Mo	ALS Low Level ICP-MS DISS Met ALS-OUTSIDE	0.05	ug/L
Ni	ALS Low Level ICP-MS DISS Met ALS-OUTSIDE	0.5	ug/L
Se	ALS Low Level ICP-MS DISS Met ALS-OUTSIDE	1	ug/L
Si	ALS Low Level ICP-MS DISS Met ALS-OUTSIDE	50	ug/L
Ag	ALS Low Level ICP-MS DISS Met ALS-OUTSIDE	0.01	ug/L
Sr	ALS Low Level ICP-MS DISS Met ALS-OUTSIDE	0.2	ug/L
Tl	ALS Low Level ICP-MS DISS Met ALS-OUTSIDE	0.1	ug/L
Sn	ALS Low Level ICP-MS DISS Met ALS-OUTSIDE	0.1	ug/L
Ti	ALS Low Level ICP-MS DISS Met ALS-OUTSIDE	10	ug/L
U	ALS Low Level ICP-MS DISS Met ALS-OUTSIDE	0.01	ug/L
V	ALS Low Level ICP-MS DISS Met ALS-OUTSIDE	1	ug/L
Zn	ALS Low Level ICP-MS DISS Met ALS-OUTSIDE	1	ug/L
Hardness as CaCO3	ALS Low Level ICP-MS DISS Met ALS-OUTSIDE	500	ug/L
Hg	ALS Low Level ICP-MS DISS Met ALS-OUTSIDE	0.01	ug/L

Baseline Total Metals

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
Ca	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	50	ug/L
Mg	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	100	ug/L
Na	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	50	ug/L
K	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	50	ug/L
Al	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	1	ug/L
Sb	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.1	ug/L
As	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.1	ug/L
Ba	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.05	ug/L
Be	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.1	ug/L
Bi	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.5	ug/L
B	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	10	ug/L
Cd	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.01	ug/L
Cr	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.1	ug/L
Co	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.1	ug/L
Cu	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.2	ug/L
Fe	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	10	ug/L
Pb	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.05	ug/L
Li	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.5	ug/L
Mn	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.05	ug/L
Mo	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.05	ug/L
Ni	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.5	ug/L
Se	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.1	ug/L
Si	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	50	ug/L
Ag	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.01	ug/L
Sr	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.2	ug/L
Tl	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.01	ug/L
Sn	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.1	ug/L

Details of Quotation

Ti	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	10	ug/L
U	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.01	ug/L
V	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	1	ug/L
Zn	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	3	ug/L
Hardness as CaCO ₃	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	500	ug/L
Hg	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.01	ug/L

BIM - BTE - water

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
Benzene	BTEX in water EPA 8260B	0.5	ug/L
Toluene	BTEX in water EPA 8260B	0.5	ug/L
Ethylbenzene	BTEX in water EPA 8260B	0.5	ug/L
Toluene-d8	surrogates - organics V 8260/8270	0	%

BIM DW Chem

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
Turbidity	Turbidity - AMTURBE1 C SM2130B	0.1	NTU
Alkalinity as CaCO ₃	Alkalinity : Auto - AMAPCAE1 SM 2320B	5	mg/L
Cl	Anions by IC - DX-100 SM 4110C	1	mg/L
Colour	Colour - AMCOLSE1 C SM2120C	2	TCU
Cyanide (free)	Cyanide - AMCNTFE8 C SM4500-CNC	0.005	mg/L
F	F Autotitrator C SM4500-FC	0.1	mg/L
N-NO ₃	NO ₂ /NO ₃ SKALAR - AMNOXSE1 C SM4500-NO ₃ -F	0.1	mg/L
pH	pH in water : Auto - AMAPCAE1 C SM4500-H+B	1	
SO ₄	Anions by IC - DX-100 SM 4110C	3	mg/L
TDS (COND - CALC)	solids in water - AMSOLWE1 C SM2540	5	mg/L
Conductivity	Conductivity : Auto - AMAPCAE1 C SM2510B	5	uS/cm
TOC	TOC in water - AMDTOCE1 C SM5310C	0.5	mg/L
DOC	TOC in water - AMDTOCE1 C SM5310C	0.5	mg/L
Total Suspended Solids	solids in water - AMSOLWE1 C SM2540	2	mg/L

BIM DW Metals

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
Al	ICP-MS PE6100 EPA 200.8	0.01	mg/L
As	ICP-MS PE6100 EPA 200.8	0.001	mg/L
Ba	ICP-MS PE6100 EPA 200.8	0.01	mg/L
Cd	ICP-MS PE6100 EPA 200.8	0.0001	mg/L
Cr	ICP-MS PE6100 EPA 200.8	0.001	mg/L
Cu	ICP-MS PE6100 EPA 200.8	0.001	mg/L
Fe	ICP-MS PE6100 EPA 200.8	0.03	mg/L
Pb	ICP-MS PE6100 EPA 200.8	0.001	mg/L
Mn	ICP-MS PE6100 EPA 200.8	0.01	mg/L
Hg	Hg in water - AMHGCTE1 M SM3112B-3500B	0.0001	mg/L
Se	ICP-MS PE6100 EPA 200.8	0.001	mg/L
Na	ICP metals - AMMICPE8 M SM3120B-3500C	2	mg/L
Hardness as CaCO ₃	Hardness C SM2340B	1	mg/L
Ca	ICP metals - AMMICPE8 M SM3120B-3500C	1	mg/L
Mg	ICP metals - AMMICPE8 M SM3120B-3500C	1	mg/L

Details of Quotation

U	ICP-MS PE6100 EPA 200.8	0.001	mg/L
Zn	ICP-MS PE6100 EPA 200.8	0.01	mg/L

BIM DW Micro

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
Total Coliforms	Bacteria - AMBCOLM1 SM 9222B	0	ct/100mL
Escherichia Coli	Bacteria - AMBCOLM1 SM 9222B	0	ct/100mL

BIM Marine Inorganics

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
pH	pH in water : Auto - AMAPCAE1 C SM4500-H+B	1	
Conductivity	Conductivity : Auto - AMAPCAE1 C SM2510B	5	uS/cm
Total Suspended Solids	solids in water - AMSOLWE1 C SM2540	2	mg/L

BIM Marine Metals

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
Ca	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	50	ug/L
Mg	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	100	ug/L
Na	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	50	ug/L
K	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	50	ug/L
Al	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	1	ug/L
Sb	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.1	ug/L
As	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.1	ug/L
Ba	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.05	ug/L
Be	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.1	ug/L
Bi	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.5	ug/L
B	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	10	ug/L
Cd	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.01	ug/L
Cr	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.1	ug/L
Co	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.1	ug/L
Cu	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.2	ug/L
Fe	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	10	ug/L
Pb	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.05	ug/L
Li	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.5	ug/L
Mn	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.05	ug/L
Mo	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.05	ug/L
Ni	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.5	ug/L
Se	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.1	ug/L
Si	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	50	ug/L
Ag	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.01	ug/L
Sr	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.2	ug/L
Tl	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.01	ug/L
Sn	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.1	ug/L
Ti	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	10	ug/L
U	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.01	ug/L
V	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	1	ug/L
Zn	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	3	ug/L
Hardness as CaCO3	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	500	ug/L

Details of Quotation

Hg	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.01	ug/L
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BIM Soil BTEX / PHCs / O&G / Pb

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
Benzene	MX BTEX in soil V 8260B	0.05	ug/g
Toluene	MX BTEX in soil V 8260B	0.1	ug/g
Ethylbenzene	MX BTEX in soil V 8260B	0.1	ug/g
m/p-xylene	MX BTEX in soil V 8260B	0.2	ug/g
o-xylene	MX BTEX in soil V 8260B	0.1	ug/g
Toluene-d8	surrogates - organics V 8260/8270	0	%
F1 (C6-C10)	CCME TPH - SOIL CCME	10	ug/g
F2 (C10-C16)	CCME TPH - SOIL CCME	10	ug/g
F3 (C16-C34)	CCME TPH - SOIL CCME	20	ug/g
F4 (C34-C50)	CCME TPH - SOIL CCME	20	ug/g
F1-BTEX (C6-C10)	CCME TPH - SOIL CCME	10	ug/g
Moisture	Organic Moisture C SM2540B	0.1	%
Pb	ICP-MS SOIL PE6100 EPA 200.8	1	ug/g
Oil & Grease - Total	O&G soil - C SM5520D	100	ug/g

BIM SW BTE / O&G / Pb

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
Benzene	BTEX in water EPA 8260B	0.5	ug/L
Toluene	BTEX in water EPA 8260B	0.5	ug/L
Ethylbenzene	BTEX in water EPA 8260B	0.5	ug/L
Toluene-d8	surrogates - organics V 8260/8270	0	%
Pb	ICP-MS PE6100 EPA 200.8	0.001	mg/L
Oil & Grease - Total	O&G water - AMOGHXE1 C SM5520B	1	mg/L

BIM SW BTEX / PHCs / O&G / Pb

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
Benzene	BTEX in water EPA 8260B	0.5	ug/L
Toluene	BTEX in water EPA 8260B	0.5	ug/L
Ethylbenzene	BTEX in water EPA 8260B	0.5	ug/L
m/p-xylene	BTEX in water EPA 8260B	1	ug/L
o-xylene	BTEX in water EPA 8260B	0.5	ug/L
Toluene-d8	surrogates - organics V 8260/8270	0	%
F1 (C6-C10)	CCME TPH - WATER O CCME	0.1	mg/L
F2 (C10-C16)	CCME TPH - WATER O CCME	0.1	mg/L
F3 (C16-C34)	CCME TPH - WATER O CCME	0.2	mg/L
F4 (C34-C50)	CCME TPH - WATER O CCME	0.2	mg/L
F1-BTEX (C6-C10)	CCME TPH - WATER O CCME	0.1	mg/L
Pb	ICP-MS PE6100 EPA 200.8	0.001	mg/L
Oil & Grease - Total	O&G water - AMOGHXE1 C SM5520B	1	mg/L

BIM SW Chem

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
pH	pH in water : Auto - AMAPCAE1 C SM4500-H+B	1	
Conductivity	Conductivity : Auto - AMAPCAE1 C SM2510B	5	uS/cm

Details of Quotation

Alkalinity as CaCO ₃	Alkalinity : Auto - AMAPCAE1 SM 2320B	5	mg/L
TDS (COND - CALC)	solids in water - AMSOLWE1 C SM2540	5	mg/L
Turbidity	Turbidity - AMTURBE1 C SM2130B	0.1	NTU
SO ₄	Anions by IC - DX-100 SM 4110C	3	mg/L
Cl	Anions by IC - DX-100 SM 4110C	1	mg/L
N-NO ₃	NO ₂ /NO ₃ SKALAR - AMNOXSE1 C SM4500-NO ₃ -F	0.1	mg/L
NO ₂ + NO ₃ as N	NO ₂ /NO ₃ SKALAR - AMNOXSE1 C SM4500-NO ₃ -F	0.1	mg/L
Total Suspended Solids	solids in water - AMSOLWE1 C SM2540	2	mg/L
Total P	Low Total P C SM4500-PF	0.003	mg/L
Total Kjeldahl Nitrogen	TKN low water - AMTKNLE1 C SM4500-Norg-C	0.1	mg/L
CO ₃ as CaCO ₃	Alkalinity : Auto - AMAPCAE1 SM 2320B	2	mg/L
HCO ₃ as CaCO ₃	Alkalinity : Auto - AMAPCAE1 SM 2320B	5	mg/L

BIM SW D-Metals Full List

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
Ca	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	50	ug/L
Mg	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	100	ug/L
Na	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	50	ug/L
K	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	50	ug/L
Al	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	1	ug/L
Sb	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.1	ug/L
As	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.1	ug/L
Ba	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.05	ug/L
Be	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.1	ug/L
Bi	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.5	ug/L
B	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	10	ug/L
Cd	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.01	ug/L
Cr	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.1	ug/L
Co	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.1	ug/L
Cu	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.2	ug/L
Fe	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	10	ug/L
Pb	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.05	ug/L
Li	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.5	ug/L
Mn	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.05	ug/L
Mo	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.05	ug/L
Ni	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.5	ug/L
Se	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.1	ug/L
Si	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	50	ug/L
Ag	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.01	ug/L
Sr	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.2	ug/L
Tl	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.01	ug/L
Sn	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.1	ug/L
Ti	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	10	ug/L
U	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.01	ug/L
V	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	1	ug/L
Zn	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	3	ug/L
Hardness as CaCO ₃	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	500	ug/L

Details of Quotation

Hg	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.01	ug/L
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BIM SW D-Metals ShortList

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
Ca	Alkalis by FAA - LOW AMAMFAE1 SM 3111B-3500B	0.1	mg/L
Mg	Alkalis by FAA - LOW AMAMFAE1 SM 3111B-3500B	0.1	mg/L
Na	Alkalis by FAA - LOW AMAMFAE1 SM 3111B-3500B	0.05	mg/L
K	Alkalis by FAA - LOW AMAMFAE1 SM 3111B-3500B	0.01	mg/L
Al	ICP-MS PE6100 EPA 200.8	0.01	mg/L
Fe	ICP-MS PE6100 EPA 200.8	0.03	mg/L
Hardness as CaCO3	Hardness C SM2340B	1	mg/L

BIM SW Micro

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
Total Coliforms	Bacteria - AMBCOLM1 SM 9222B	0	ct/100mL
Faecal Coliforms	Bacteria - AMBCOLM1 SM 9222B	0	ct/100mL
Escherichia Coli	Bacteria - AMBCOLM1 SM 9222B	0	ct/100mL

BIM SW T-Metals Full List

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
Ca	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	50	ug/L
Mg	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	100	ug/L
Na	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	50	ug/L
K	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	50	ug/L
Al	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	1	ug/L
Sb	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.1	ug/L
As	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.1	ug/L
Ba	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.05	ug/L
Be	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.1	ug/L
Bi	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.5	ug/L
B	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	10	ug/L
Cd	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.01	ug/L
Cr	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.1	ug/L
Co	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.1	ug/L
Cu	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.2	ug/L
Fe	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	10	ug/L
Pb	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.05	ug/L
Li	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.5	ug/L
Mn	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.05	ug/L
Mo	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.05	ug/L
Ni	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.5	ug/L
Se	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.1	ug/L
Si	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	50	ug/L
Ag	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.01	ug/L
Sr	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.2	ug/L
Tl	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.01	ug/L
Sn	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.1	ug/L
Ti	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	10	ug/L

Details of Quotation

U	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.01	ug/L
V	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	1	ug/L
Zn	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	3	ug/L
Hardness as CaCO3	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	500	ug/L
Hg	ALS Low Level ICP-MS TOTAL Met ALS-OUTSIDE	0.01	ug/L

BIM SW T-Metals ShortList

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
Ca	Alkalis by FAA - LOW AMAMFAE1 SM 3111B-3500B	0.1	mg/L
Mg	Alkalis by FAA - LOW AMAMFAE1 SM 3111B-3500B	0.1	mg/L
Na	Alkalis by FAA - LOW AMAMFAE1 SM 3111B-3500B	0.05	mg/L
K	Alkalis by FAA - LOW AMAMFAE1 SM 3111B-3500B	0.01	mg/L
Al	ICP-MS PE6100 EPA 200.8	0.01	mg/L
Fe	ICP-MS PE6100 EPA 200.8	0.03	mg/L
Hardness as CaCO3	Hardness C SM2340B	1	mg/L

BIM WW Chem

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
BOD5	BOD5 - AMBODEE1 SM 5210B	1	mg/L
Total Suspended Solids	solids in water - AMSOLWE1 C SM2540	2	mg/L
pH	pH in water : Auto - AMAPCAE1 C SM4500-H+B	1	
Total Kjeldahl Nitrogen	TKN low water - AMTKNLE1 C SM4500-Norg-C	0.1	mg/L
N-NH3	NH3 water low - AMNH3LE1 C SM4500-NH3D	0.02	mg/L
Total P	Low Total P C SM4500-PF	0.003	mg/L
Oil & Grease - Total	O&G water - AMOGHXE1 C SM5520B	1	mg/L
Alkalinity as CaCO3	Alkalinity : Auto - AMAPCAE1 SM 2320B	5	mg/L

BIM WW Micro

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
Faecal Coliforms	Bacteria - AMBCOLM1 SM 9222B	0	ct/100mL

BOD5

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
BOD5	BOD5 - AMBODEE1 SM 5210B	1	mg/L

Chlorophyll/Pheophytin

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
Chlorophyll-a	Chlorophyll C SM10200H	0.2	mg/m3
Pheophytin-a	Chlorophyll C SM10200H	0.2	mg/m3

Chlorophyll/Pheophytin 2 +

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
Chlorophyll-a	Chlorophyll C SM10200H	0.2	mg/m3
Pheophytin-a	Chlorophyll C SM10200H	0.2	mg/m3

COD

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
COD	COD - AMCODTE1 C SM5220C	5	mg/L

Details of Quotation

DOC

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
DOC	TOC in water - AMDTOCE1 C SM5310C	0.5	mg/L

N-NH3 - water

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
N-NH3	NH3 water low - AMNH3LE1 C SM4500-NH3D	0.02	mg/L

N-NO2 - Low Water

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
N-NO2	Low NO2 - Technicon C SM4500-NO2-B	0.005	mg/L

N-NO3 - IC

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
N-NO3	NO2/NO3 SKALAR - AMNOXSE1 C SM4500-NO3-F	0.1	mg/L

O&G - water - T / M / N

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
Oil & Grease - Total	O&G water - AMOGHXE1 C SM5520B	1	mg/L
Oil & Grease - Mineral	O&G water - AMOGHXE1 C SM5520B	1	mg/L
Oil & Grease - Non-mineral	O&G water - AMOGHXE1 C SM5520B	1	mg/L

O&G - water Total

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
Oil & Grease - Total	O&G water - AMOGHXE1 C SM5520B	1	mg/L

Particle Size - Soil

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
Coarse Gravel (>4.750mm)	Particle Size C Ag Particle	1	%
Fine Gravel (>2.000-4.750mm)	Particle Size C Ag Particle	1	%
Very Coarse Sand (>1.000-2.000mm)	Particle Size C Ag Particle	1	%
Coarse Sand (>0.500-1.000mm)	Particle Size C Ag Particle	1	%
Medium Sand (>0.250-0.500mm)	Particle Size C Ag Particle	1	%
Fine Sand (>0.100-0.250mm)	Particle Size C Ag Particle	1	%
Very Fine Sand (>0.050-0.100mm)	Particle Size C Ag Particle	1	%
Silt (>0.002-0.050mm)	Particle Size C Ag Particle	1	%
Clay (<=0.002mm)	Particle Size C Ag Particle	1	%

Phenols - water (colour)

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
Phenols	Phenols 4-AAP - AMPHACE1 C SM5530D	0.001	mg/L

Ra-226

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
Ra-226	Radionuclides - WATER Radionucleotide	0.01	Bq/L

Reg 558 - Metals Only

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
Moisture	MOISTURE C SM2540B	0.1	%

Details of Quotation

Ba	ICP-MS PE6100 EPA 200.8	0.01	mg/L
B	ICP-MS PE6100 EPA 200.8	0.01	mg/L
Cd	ICP-MS PE6100 EPA 200.8	0.0001	mg/L
Cr	ICP-MS PE6100 EPA 200.8	0.001	mg/L
Pb	ICP-MS PE6100 EPA 200.8	0.001	mg/L
Hg	Hg in water - AMHGCTE1 M SM3112B-3500B	0.0001	mg/L
Ag	ICP-MS PE6100 EPA 200.8	0.0001	mg/L
U	ICP-MS PE6100 EPA 200.8	0.001	mg/L
As	ICP-MS PE6100 EPA 200.8	0.001	mg/L
Se	ICP-MS PE6100 EPA 200.8	0.001	mg/L

Reg 558 - TCLP Extraction

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
REG 558 Leach	Reg 347 Leach - AMLCHXE2 C MOEE Reg 347	0	

Sample Prep

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
hold sample	HOLD C HOLD	0	

Ship: Ott to SteFoy 1x20L

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
hold sample	HOLD C HOLD	0	

Ship: Ott to SteFoy 2x20L

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
hold sample	HOLD C HOLD	0	

Supply - 20L Cubitainers

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
hold sample	HOLD C HOLD	0	

TOC

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
TOC	TOC in water - AMDTOCE1 C SM5310C	0.5	mg/L

TSS

<u>ANALYTE</u>	<u>METHOD REFERENCE</u>	<u>MDL</u>	<u>UNITS</u>
Total Suspended Solids	solids in water - AMSOLWE1 C SM2540	2	mg/L

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Appendix E

Analytical Laboratory QA/QC Procedures

The information contained herein is proprietary Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

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Appendix E: QAQC Procedures

The primary objective of the Quality Assurance Program at Exova Ottawa is to ensure that all data produced by the Laboratory in its daily operation is within acceptable quality guidelines as established by any applicable regulatory bodies, laboratory associations, Exova Ottawa, or any of its Customers.

Method Validation

All methods will be validated by following the instructions in SOP AMVALID0 – Method Validation. Methods will be reviewed continually throughout any given year for effectiveness, suitability and validity, and all method audits will be completed over a two year cycle.

Sample Collection, Preservation and Storage

Samples will be collected and stored as required by each specific method since collection, preservation, and storage are parameter specific. All procedures will be based on available standard methods.

Daily Quality Checks

Daily quality control checks used in methods will include but not be limited to the following:

- Daily calibrations or re-calibrations (where applicable).
- Calibration verification by use of Certified Reference Materials or purchased known value standards independent of calibration standards. Alternately, a standard of a different concentration than a calibration standard, prepared from the same solution as the calibration standard, but verified at least weekly by the use of a CRM or second source standard.
- Replicate analyses, approximately 10 % of samples analyzed in duplicate.
- Blanks, all sample batches will contain reagent blanks.
- Spikes, where appropriate recovery spikes will be used.
- Customer requests, any additional QC as specifically requested.

(The instrumentation information would be the same as the previous application)