April 2009

REPORT ON

Interim Static Test Report for Waste Rock from the Tiriganiaq Deposit, Meliadine West Gold Project, Nunavut

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REPORT

Report Number: 08-1122-0292

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1.0 INTRODUCTION

Comaplex Minerals Corporation (Comaplex) is exploring the Meliadine West gold deposit located west of Rankin Inlet in Nunavut (Figure 1.1). It is understood that multiple aspects of the project are currently being developed and may change as the project advances. At this time, the surface of the Tiriganiaq deposit is anticipated to be operated as an open pit, while deeper portions will be exploited by underground mining techniques. It is anticipated that roughly 6 million tones (Mt) of waste rock will be produced from Tiriganiaq open pit and underground. Ore will be processed at on-site facilities and tailings will be stored on surface.

Golder Associates Ltd. (Golder) initiated a staged waste rock geochemical characterization program in October 2008 that is consistent with INAC (1992), MEND (2005) and Price (1997) recommended methods. The objective of the first stage of this program was to perform a scoping-level assessment of the chemical characteristics of the waste rock that is likely to be generated from exploitation of the Tiriganiaq deposit. Specifically, the mine waste material was assessed for its content of chemical constituents and its potential to generate acid rock drainage (ARD) and to leach metals to the receiving environment upon exposure to ambient conditions, through the use of static test methods. Results of this static testing program are meant to be a first step in guiding mine waste management practices for the proposed mining operation. The second stage, which would address gaps identified in the first phase of study and would utilize other testing methods, such as kinetic tests to evaluate weathering characteristics of the rock, are outside the scope of this study.

This report describes the scoping-level characterization program, presents interpreted static test results and provides preliminary recommendations on further sampling, characterization and mine waste management planning.

1.1 Information Reviewed

Background information on the geology, mineralogy, and chemistry of rock types present at the Site was obtained by reviewing the following information provided by Comaplex:

- Snowden (2008): Tiriganiaq Gold Deposit, Nunavut – Resource Update (NI43-101 report);
- Pincock, Allen & Holt (2008): Technical Report for the Meliadine East Project (NI43-101 report);
- SRK (2006): Report on Tiriganiaq Geochemistry (a geochemical characterisation program on samples from the underground exploration program);
- Preliminary open pit mine plan; and,
- Cross-sections throughout the deposit provided by Comaplex.

1.2 Regional and Site Geology

The following is summarized from the Snowden (2008) report. The Meliadine West project consists of several mesothermal lode gold deposits that include the Tiriganiaq Deposit, which represents the primary mineral resource on the property, and four smaller deposits including the Pump, F, Wolf Main, and Wolf North (that are not part of this assessment).

The Meliadine West property is located in the Rankin Inlet Greenstone Belt of the Churchill Structural Province. This is an Archaen age, polydeformed and metamorphosed sequence of mafic volcanic, felsic pyroclastic, sedimentary rocks and gabbro sills.

The Meliadine trend is defined by the regional Pyke Fault, a prominent high-strain fault zone, as well as northwest trending stratigraphy of the Archean-Age Rankin Inlet Group. The Rankin Inlet Group was subjected to lower to middle greenschist facies metamorphism as well as multiple periods of deformation, including two identified periods in the Archean and Proterozoic. Stratigraphy in the Tiriganiaq deposit area strikes east-west, and dips to the north at inclinations of 60 to 70 degrees. Stratigraphy is interpreted as being overturned.

The principal lithological units associated with the development of the Tiriganiaq deposit include:

1) turbiditic sedimentary rocks of the hanging wall comprising greywacke, siltstone and argillite (Sam Formation) with gabbro dykes;

2) volcanic- and sediment-hosted iron formation including greywacke, siltstone and argillite (Upper Iron Formation) with abundant magnetite and chert layers;

3) sericite altered siltstones and graphitic argillite near the Lower Fault zone contact (Tiriganiaq Formation); and,

4) schistose and carbonate-altered mafic volcanics of the footwall (Wesmeg Formation).

The contact between the Tiriganiaq Formation and the Wesmeg Formation is defined by the Lower Fault. It is a basal detachment surface of unknown age that was the focus of Late Proterozoic shearing and from which listric faults emanate. This results in the repetition of the Tiriganiaq Deposit stratigraphy in multiple sequences above the Lower Fault.

The Tiriganiaq Deposit is hosted in sulphidized iron formation and quartz veins associated with the iron formation, sedimentary units and mafic volcanics. Gold mineralization has been divided into multiple lodes based on structural features, shearing, quartz veining, grade, and the occurrence of coarse arsenopyrite. Of the major lodes, five are parallel to the stratigraphic sequence and the Lower Fault and two are controlled by shear structures associated with the listric faults splays. The two major lodes, the 1000 and 1100 lodes, both have a strike length exceeding 800 metres and are open down-plunge with a down-plunge (easterly) length exceeding 500 metres. Underground mining would target these and other lodes (1150 and 1250) by either bulk or selective narrow vein mining techniques (Snowden, 2008).

Sulphide mineralization in the Tiriganiaq Deposit developed in two distinct generations. Primary sulphides are found parallel to bedding in the oxide iron formations and black argillite and include laminations of pyrrhotite, pyrite, and chalcopyrite. Gold values are low to absent, indicating gold mineralization is not strongly correlated with primary sulphidization (lodes 1100, 1150, 1250). The second phase of sulphidization includes coarse-grained arsenopyrite and pyrrhotite associated with gold-bearing zones and quartz veining (1000 lode). Galena and sphalerite are also present in both sulphide assemblages and associated with gold-bearing zones.

Visible gold is associated with quartz veins, pyrrhotite and arsenopyrite as well as a strong association with sericite alteration in the Tiriganiaq Formation siltstones and volcanics of the Wesmeg Formation.

1.3 Mine Plan

It is currently planned to carry out mining of the Tiriganiaq deposit by open pit to a maximum depth of about 100 metres. It is proposed that the remainder of the deposit be mined by underground mining methods, either concurrently with the development of an open pit, or subsequent to the mining out of the pit.

The current proposed pit extends approximately 650 metres from crest to crest in an east/west direction and a maximum of approximately 250 metres from crest to crest in a north/south direction. The pit crest elevation will be at approximately 70 metres elevation above sea level, with the final pit floor at approximately 30 metres elevation below sea level, if excavated to the full depth of 100 metres.

Access to the proposed underground mining will be via a ramp system from surface with a hanging wall drive in the greywacke. Access to the mineralization will be by crosscut drifts driven in a north/south direction and developed from attack ramps in the hanging wall. Within the mineralised zones, ore drives will be driven generally along strike (east/west).

At the time of writing this report, it was understood from Comaplex that an estimated 4.99 million tonnes (Mt) of waste rock will be produced from the Tiriganiaq open pit, and 1 Mt from underground mining of this deposit. The iron formation is predominantly mineralized and is currently anticipated to report to tailings, thus constituting a minor proportion of waste rock that would report to surface.

Canadian guidelines (INAC, 1992 and Price, 1997) recommend that the number of samples required to afford an appropriate volumetric representation of geochemical characteristic, be based on the quantity of waste rock to be excavated for each lithology disturbed by mining. INAC (1992) recommends a minimum number of as a function of the tonnage of specific rocky types, as presented in Table 1.1. These recommendations are in line with Price (1997) guidelines.

Table 1.1: Minimum Sample Number for Static Testing (INAC, 1992 and Price, 1997)

Mass of Each Separate Rock Type (tonnes)	Minimum Number of Samples
<10,000	3
<100,000	8
<1,000,000	26
10,000,000	80

The scope of the geochemistry work plan may need refining once the mine plan and volumes of waste rock to be generated from each lithology are determined.

1.4 Previous Studies

A preliminary geochemical study was completed by SRK (2006) to evaluate the ARD and metal leaching potential of waste rock generated from the development of an exploration decline for collection of a bulk sample in the Tiriganiaq deposit. This study concluded that most of the collected samples were non acid generating, although some hanging wall samples were potentially acid generating. Buffering capacity (NP) was found to be high in all rock types analyzed. Short term leach testing by shake flask extraction (SFE) found that both the mafic volcanic and greywacke samples tested leached aluminum and arsenic above CEQG for aquatic life (CCME, 2006) and the mafic volcanic sample also leached copper and zinc above CEQG.

This study differs from the Golder geochemical characterization program reported herein by its focused on material from the advanced exploration ramp only. The Golder study characterizes waste material anticipated to be generated from open pit and underground mining of the Tiriganiaq deposit.

2.0 SAMPLE COLLECTION AND TEST METHODS

2.1 Sample Selection and Collection

Documentation review, sample selection and design of the analytical program were completed by Jennifer Cole P.Geo. (ON), geochemist, and Valérie Bertrand, P.Geol. (NU/NT), associate and senior geochemist. Geological cross-sections through the deposit were reviewed by the project geochemists to select sample interval targets that would characterize the spatial and compositional variability of the major rock types to be disturbed by mining. The sampling plan was designed to target waste rock that would be developed from both the open pit outline (OP) and underground (UG) development of the Tiriganiaq deposit. The sampling plan took into consideration the apparent relative quantity of each lithology that would likely report to the waste containment facility(ies). Given that these estimates of relative volume are preliminary and were estimated prior to finalization of a mine plan, the sampling and characterization program may need to be augmented once a mine plan is finalized.

A total of 90 samples of waste rock were collected by the Comaplex geologists from instructions provided by Golder geochemists. Samples were obtained from core of previously drilled exploration and geotechnical boreholes. A total of 74 samples were subjected to static testing, including 22 samples from the underground development and 64 samples from within the proposed open pit outline, as defined by Comaplex (Figure 1.1). A subset of 45 samples was selected based on static test results and submitted for short-term leach tests. Sample locations are shown on cross-sections in Appendix I.

Each sample consisted of a composite of 3 to 5 kilograms of core (whole or split) collected over an interval of up to approximately 5 metres for underground samples and up to 10 metres for open pit samples along selected borehole depth intervals. The length of the sample interval was intended to circumvent the effect of mineral clusters particularly sulphide minerals, which may not be representative of the bulk rock mass along the targeted interval.

Samples were forwarded to Golder for observation by the project geochemists. Sample descriptions provided by Comaplex geologists were verified in terms of rock type, apparent sulphide content and mineralogy, alteration, and staining associated with sulphide mineral oxidation. Samples were then forwarded to SGS Canada Inc. (SGS) of Lakefield, Ontario for geochemical characterization by static testing. A summary of the waste rock samples collected and analyses performed is presented in Table 2.1. Whole rock, trace metals and ABA analyses were completed on all 74 samples and short-term leaching tests were completed on a subset (45) of these samples.

2.2 Analytical Methods

The static testing program includes the following analyses on core samples of waste rock:

- Whole rock and trace element chemistry (ICP) on waste rock;
- ABA by the Modified Sobek method; and,
- Readily leachable metals through short-term metal leach testing by a modified version of the shake flask extraction (SFE; Modified ASTM D3987).

The subset of samples selected for analysis of readily leachable metals is based on the results of static tests performed to date. Geochemical characterization methods are discussed below.

2.2.1 Rock Chemistry

The chemical composition of each sample was determined through whole rock and trace element analysis to determine the content of major rock forming elements and trace metals, respectively. This information is used to assess the variation in chemical composition by lithology and to identify parameters of potential environmental concern. Results are compared to typical crustal abundances (Price, 1997) for similar lithologies. Analytical methods include the determination of the following parameters:

- Metals (including arsenic, and selenium) by inductively coupled plasma mass spectroscopy (ICP-MS), with samples extracted using a concentrated strong acid solution of perchloric, nitric, hydrochloric and hydrofluoric acids;
- Mercury by cold vapour atomic absorption spectroscopy (CVAAS), EPA245.1 methodology; and,
- Whole rock analysis for major metals by borate fusion / x-ray fluorescence (XRF).

2.2.2 Potential for Acid Rock Drainage

The potential of geologic material to oxidize and generate acidic drainage is evaluated through acid-base accounting. This analysis was conducted following the Modified Sobek method (MEND 1991) and included determination of the following parameters:

- Paste pH;
- Total sulphur by LECO furnace, (ASTM E 1915-01 methodology);
- Sulphide and sulphate sulphur (as outlined in Price (1997), based upon EPA-600 methodology (Sobek, 1978)) and acid potential (AP) calculated based on sulphide content;
- Total Carbon (TC) and Total Inorganic Carbon (TIC) by LECO furnace, and Carbonate Neutralization Potential (CaNP) calculated based on TIC content; and,
- Bulk neutralization potential (NP; by the Modified Sobek method (MEND, 1991)).

Values of AP, NP and CaNP are reported as kg equivalent calcium carbonate per tonne of rock.

2.2.2.1 Neutralization Potential (NP)

NP is a bulk measurement of the acid-buffering capacity of a sample provided by various minerals of different reactivities and effective neutralization capacity. It is measured by digestion of a pulverized portion of the sample using a strong acid. This process consumes all minerals affected by the acid, including minerals that are not normally reactive under ambient conditions and minerals that would not neutralize to pH-neutral conditions (such as silicate minerals; Blowes and Ptacek, 1994. Because the type and occurrence of neutralizing minerals present in the sample will have a determining effect on whether the ARD potential of a sample will be realized, NP was evaluated using two different analytical techniques to more accurately determine the amount of available NP:

Modified Sobek NP: Represents the bulk NP of the sample, including contributions from some reactive aluminosilicate minerals, if present. It is calculated from the amount of base consumed to neutralize acid remaining from the acid-digested sample.

Carbonate NP: Represents the NP available from reactive carbonate minerals, including siderite and other divalent metal carbonates (which provide no net neutralization). It is calculated based on the total inorganic carbon content of the sample, assuming all inorganic carbon is in the form of carbonate minerals. Carbonate NP was calculated using half the detection limit value for TIC when TIC was less than detection limit (<0.005 or 0.0025).

2.2.2.2 Acid Potential (AP)

The potential of a material to generate acid (acid potential or AP) is calculated from the sulphide sulphur content of the sample, on the basis that the entire sulphide content of the rock will oxidize to generate acid. The sulphide content of the sample is calculated as the difference between laboratory-measured total sulphur and sulphate sulphur.

2.3 Metal Leaching Potential

Metal leaching tests are used to assess the potential of the waste rock to release readily soluble metals to the receiving environment by simulating interaction between water and solids. A sub-set of samples (45) were subjected to leach testing following a modified version of the shake flask extraction (Modified ASTM D3987). Crushed samples were mixed with distilled water (4:1 ratio) and the pulp was placed in a flask and shaken for 24 hours using a variable speed shaker table. Leachate was collected from the pulp though a 0.45 µm filter and analyzed for pH, alkalinity, acidity, sulphate, chloride, and dissolved metals.

Results of short-term leach tests were screened against Metal Mining Effluent Regulations (MMER, 2006) and Canadian Environmental Quality Guidelines (CEQG) for the Protection of Aquatic Life (CCME, 2006). These comparisons are an initial screening tool in the identification of potential constituents of concern. Short-term leach tests provide an estimate of which metals have a potential to leach from a particular material. However, actual site drainage chemistry will almost certainly differ from short-term leach test results due the inability of short-term leach tests to accurately simulate natural conditions, in particular transient processes such as sulphide oxidation. Leach test results are considered as indicators of potential constituents of concern rather than accurate representations of future drainage compositions.

2.4 Quality Assurance and Quality Control

The objective of a quality assurance/quality control (QA/QC) program is to assess the repeatability of reported analytical results. The sampling of pit rock was performed by Comaplex and therefore is not part of the QA/QC assessment.

Samples were received by Golder in individual bags labelled with the unique sample identification number. All rock samples were shipped to Golder with copies of sample documentation.

To assess laboratory analytical precision, duplicate analyses for SFE were performed on 5 of the 45 samples analyzed for SFE (10%). Results of the duplicate sample were evaluated following EPA Guidelines for Inorganic Data Review (USEPA, 1994). In keeping with this guideline, relative percent difference (RPD) was calculated and compared with an RPD of 20%. RPD values greater than 20% indicate the parameter analytical precision may be low, that reported results may be considered as qualitative rather than quantitative.

2.5 ARD Screening Criteria

The net potential ratio (NPR) is the ratio of NP to AP (or CaNP to AP for CaNPR). NPR data was compared to ARD screening guidelines to assess the potential for materials to generate ARD. For this study, ABA results are compared to *Guidelines for Acid Rock Drainage Prediction in the North (INAC, 1992)*. The suggested screening criteria for inferring ARD potential are summarized in Table 2.2.

Table 2.2: Acid-Base Accounting Screening Criteria (INAC, 1992)

Potential for ARD	Initial Screening Criteria	Description
PAG	NPR<1	Likely to generate acidity
Unknown	1<NPR<3	Neither clearly acid generating nor acid consuming
Non PAG	NPR>4	Acid consuming

Notes: [1]reported as PAG – potentially acid generating
[2]reported as non PAG

Consideration was also given to paste pH and sulphide sulphur content. Price (1997) suggests that material with a sulphide sulphur content of less than 0.3 wt% and a paste pH greater than 5.5 may be classified as non-acid generating (non PAG) except where the rock matrix consists of base poor minerals (e.g. quartz), or where the sulphide minerals contain metals that may leach under weakly acidic to alkaline conditions.

3.0 RESULTS OF GEOCHEMICAL CHARACTERIZATION

Static test results for waste rock samples are discussed in the following sections and laboratory analytical certificates are included in Appendix II. Results for waste rock are reported based on sample location with respect to the open pit and underground development areas as well as by lithology. Greywackes, siltstones, and argillites from the Sam and Tiriganiaq formations are considered together for purposes of data analysis as sample composition is frequently a combination of greywacke and siltstone. Little variation was found between the pure greywacke and siltstone samples in terms of chemical composition or acid rock drainage potential.

3.1 Chemical Composition

The results of the chemical analyses are presented in Table 3.1 where they are compared to typical crustal abundance for comparable rock types (Price, 1997). Summary statistics are provided for each rock type, which include: maximum, minimum, average, median, standard deviation and 75th percentile. Element concentrations that are greater than five times the typical crustal abundance are considered to be significantly enriched compared to typical crustal abundance. These elements are listed in Table 3.2.

Trace metal results are plotted for each lithology in Figures 3.1 to 3.4. For each element, the median concentration is plotted with the minimum and maximum concentrations as error bars. These are plotted with typical crustal abundance concentrations for comparison. Samples with median values less than the detection limit are plotted as the detection limit value and the minimum and maximum values are not plotted.

Table 3.2: Summary of Waste Rock Chemical Composition

Location	Rock type	Number of Samples	Whole Rock Composition	Parameters Greater than Five Times Typical Crustal Abundance (Price, 1997)[1,2]
Open Pit	Mafic Volcanic	8	Major - Si, Al, Ca, Fe, Minor - Mg, Na, K	Ag, **As**, Bi, Se, Zn
	Greywacke/ Siltstone	44	Major - Si and Al Minor Fe, Na, Ca, K, Mg	Ag, **As**, Be, Se[3]
Underground Development	Greywacke/ Siltstone	18	Major - Si and Al Minor Fe, Mg, Na, K, Ca	**Ag**, **As**, Bi, Cu, Pb, Se[3]
	Iron Formation	4	Major - Si, Fe Minor Al, Ca, Mg	**As**, Bi, Se

1- where at least one sample exceeds the crustal abundance by more than one order of magnitude
2- bold values indicate parameters where median concentration exceed times five the stated typical crustal abundance
3- Selenium detection limit is greater than five-times crustal abundance concentration

Within each rock type there was some variation in trace element composition with standard deviation values frequently approximately equal to or greater than median values.

Arsenic was found to be present in all rock types at concentrations exceeding five times typical crustal abundance. Arsenopyrite (FeAsS) is documented to be associated with mineralization; mineralogical examination of various geochemical samples would verify whether arsenopyrite is also pervasive in the waste material as well as determine the approximate content. It is possible that arsenic is also present as a trace constituent of other minerals. There is no correlation between arsenic concentration and depth (R^2 = 0.01).

3.1.1 Acid Base Accounting

Results of the ABA testing are presented with statistical analyses in Table 3.3 and graphically in Figures 3.5 to 3.10. The results provide information on the ARD potential of each sample as determined based on sulphide content, NNP, NPR and CaNPR.

A summary of the overall rating of ARD potential for each lithology is provided in Table 3.4. Samples that have a potential to generate ARD are referred to as “potentially acid generating” (PAG), while those that are acid-buffering are referred to as non PAG. Samples and lithologies falling in the “uncertain” category are referred to as uncertain as they are neither clearly acid generating nor clearly net acid producing and may have insufficient NP (buffering capacity) to overcome all the potential acidity.

Table 3.4: Summary of ARD Potential

Location	Rock type	Number of Samples	Non PAG	Uncertain PAG	PAG	ARD Designation of Lithology
Open Pit	Mafic Volcanic	8	8	0	0	non PAG
	Greywacke/ Siltstone	44	44	0	0	non PAG
Underground Development	Greywacke/ Siltstone	18	18	0	0	non PAG
	Iron Formation	4	4	0	0	non PAG

PAG: potential for acid generation

Samples from all lithologies produced alkaline paste pH values. Sulphide content is low and although the highest median sulphide value (IF=0.32%) for all rock types is up to five times that of other rock types, the IF formation is still non PAG (Figure 3.6). Total inorganic carbon (TIC) content is high (median content up to 3.4%) and carbonate NP (CaNP) is similar to bulk NP values (Figure 3.7) suggesting that most of the buffering capacity is provided by reactive carbonate minerals. Neutralization potential shows little variability with respect to sulphide content (Figure 3.8). Buffering capacity is high in all rock types with high median net NP and NPR for all rock types suggesting that sufficient buffering capacity is present to neutralize acid generation, provided the buffering minerals remain available in the long term.

3.1.2 Metal-Leaching Potential

Leachate quality results are presented in Table 3.5 and compared with MMER (2006) Regulations and CEQG guidelines (CCME, 2006) for the protection of aquatic life. These comparisons are considered initial screening tools in the identification of potential constituents of concern. Short-term leach tests provide an estimate of which metals have a potential to leach from a particular material. However, actual site drainage chemistry will differ from short-term leach test results due the inability of short-term leach tests to accurately simulate natural conditions, and changes in chemical composition due to mixing of runoff and receiving water. Leach testing results are therefore only considered as indicators of potential constituents of concern, rather than accurate representations of future drainage compositions.

A summary of parameters not meeting screening criteria is provided in Table 3.6.

Table 3.6: Summary of Waste Rock Water Leach (SFE) Constituent Exceedances to Screening Criteria

Location	Rock type	MMER Effluent Regulation	CEQG Surface Water Quality Guidelines (aquatic life)
Open Pit	Mafic Volcanic	n.e.	Al, As, Cd
	Greywacke/ Siltstone	n.e.	Ag, Al, As, Cd
Underground Development	Greywacke/ Siltstone	n.e.	Al, As
	Iron Formation	n.e.	Ag, Al, As, Cd

n.e. no exceedances

The final pH values of the leachates are alkaline with median values for all rock types approximately 8.2. These alkaline pH values corroborate the available buffering capacity of the samples as demonstrated by high TIC (inferred carbonate content) and NP values.

Most leachates have constituent concentrations below CEQG guidelines for the protection of aquatic life (CCME, 2006) with the exception of aluminum, arsenic, cadmium and silver. Arsenic and aluminum, which consistently exceed these guidelines, are, consequently, constituents of interest. Arsenic is also of interest due to the occurrence of arsenopyrite in the deposit (Snowden, 2008). The SFE leachate arsenic and aluminum concentrations do not correlate with their respective total solid-phase concentrations, sulphide content, or sample depth (Table 3.7 and figures 3.10, 3.11, 3.12). Solid phase aluminum correlates well with total potassium, while total arsenic concentration correlates well with sulphide, cadmium and zinc contents (Figure 3.12; R^2 0.8 based on data from all rock types). Notwithstanding the good correlation between total arsenic and sulphide content, the low degree of correlation between total and leachable arsenic (Figure 3.11) suggests that arsenopyrite may not be the only source of labile arsenic and, as such, further investigation is warranted to assess likely mineral sources and identify possible arsenic loading to the environment form the waste rock.

Leachate from Iron Formation rock samples has slightly higher concentrations of aluminum, arsenic and antimony than the other rock types. Other than this, there is little variation in leachate concentrations for samples of different rock types with values frequently below detection limit for most parameters. Leachate concentrations for all samples are below MMER effluent criteria.

3.2 Quality Assurance/Quality Control

All QA/QC analytical results are presented in Appendix III. Relative percent differences (RPD) were calculated following USEPA Guidelines for Inorganic Data Review (USEPA, 1994). In keeping with this guidance, results for aqueous material were compared to 20%.

Duplicate analyses completed on the leach test chemical analyses (SFE) are presented in Table III-1. Parameters with median RPD values exceeding 20% RPD include tin.

Results suggest that the precision of the analytical results for constituents of environmental interest is acceptable for the purpose of evaluating potential environmental impacts. Although several parameters have RPD values greater than 20% for one or two samples (aluminum and arsenic in one sample each), none of the parameters had consistently elevated RPD values, and therefore no systematic error is suspected. The analytical data from SFE tests is therefore considered to have adequate repeatability.

4.0 SUMMARY OF ENVIRONMENTAL CHARACTERISTICS

The geochemical characterization program conducted to date is limited to the use of static tests. With these results, it is possible to develop screening-level observations with regard to the general chemical characteristics of the major rock types. The following mine waste management considerations are preliminary and are subject to re-evaluation upon completion of additional studies. Further, the characterization program was designed prior to the development of a finalized mine plan and additional sampling may be required related to better defined waste tonnage, relative proportion of rock types, and/or mining technique.

The environmental characteristics pertaining to acid generation potential and leachability of the various waste rock types analyzed are summarized in Table 4.1.

Table 4.1: Summary of Environmental Characteristics of Major Waste Rock Types

Location	Rock Type	ARD Potential		Leachate Chemistry (SFE)	
		Median NPR	ARD Designation	CEQG[1]	MMER[2]
Open Pit	Mafic Volcanic	47	non PAG	Al, As, Cd	n.e.
Open Pit	Greywacke/ Siltstone	19	non PAG	Ag, Al, As, Cd	n.e.
Underground	Greywacke/ Siltstone	26	non PAG	Al, As	n.e.
Underground	Iron Formation	10	non PAG	Ag, Al, As, Cd	n.e.

n.e. no exceedances
1- Canadian Environmental Quality Guidelines for the protection of aquatic life
2- Metal Mining Effluent Regulations (DFO, 2006)

<u>ARD Potential</u>

Based on testing done on samples collected to date, all rock types are non PAG. The sulphide content is generally low in waste rock material from the Tiriganiaq deposit and buffering capacity is high, of which a significant portion is inferred to consist of reactive carbonate minerals, based on the elevated inorganic carbon content.

There does not appear to be any variation in sulphide content or buffering capacity (NP) with respect to open pit versus underground development samples collected from the greywacke/siltstone material. Buffering content is highest in the mafic volcanic material collected from the open pit area, while the sulphide content is generally higher in iron formation rock, although buffering capacity of this rock is also high.

<u>Leaching Potential</u>

Arsenic and aluminum are the principal constituents of interest due to their leachability under SFE leaching conditions and the documented occurrence of arsenopyrite (FeAsS). The source of aluminum in leachates is suspected to come from the dissolution of fine grain size particles of aluminosilicate minerals. Arsenic is mobile under neutral conditions, which are likely to prevail in drainage water contacting Tiriganiaq waste rock given the neutral to alkaline pH values obtained (from leachate and paste) and the unlikely acidification of drainage given the excess buffering capacity of all waste rock types. The concentration of leached arsenic is not proportional to the total arsenic content of the rock, sulphur content or sample depth. However, total arsenic concentrations do correlate with sulphide, cadmium and zinc contents. The source of both arsenic and aluminum and the form in which they are present in water (including possible aluminum colloids) merits further investigation.

4.1 Mine Waste Management Considerations

Based on waste rock samples tested to date, there is no ARD potential in waste rock produced from the Tiriganiaq deposit (open pit and hanging wall underground development). However, samples tested to date show leachability for arsenic and aluminum above receiving water guidelines (CCME, 2006) in all waste rock types. These results do not necessarily imply non compliance of mine waste rock contact water, but rather, provide an indication of the constituents of interest to site water quality. Additional investigations on long-term leaching characteristics are warranted to assess the likely long-term leaching characteristics of mine development rock.

Based on the leaching potential of arsenic and aluminum in waste rock, it is recommended that a geochemistry investigation be completed on tailings samples from bench-scale testing and/or pilot plant tests.

5.0 RECOMMENDATIONS

Upon finalization of the mine plan, the geochemical characterization program results should be re-evaluated according to the chosen mining technique and development sequence. The number of samples that constitute the Tiriganiaq geochemistry database should be reviewed for adequacy based on final waste rock tonnage estimates to verify representativity of the database.

Selected samples should be subjected to further testing to investigate the source and occurrence of the constituents of interest and define long-term weathering and leaching characteristics. Test methods that should be considered include kinetic testing, mineralogical investigation, NAG leachate chemistry testing and/or selective mineral extractions.

6.0 LIMITATIONS AND USE OF THE REPORT

This report was prepared for the exclusive use of Comaplex Minerals Corporation. The report, which specifically includes all tables, figures and appendices, is based on data and information collected by Comaplex under the direction of Golder Associates Ltd. Golder associates did not supervise sample collection nor have the authors visited the project site at the time of writing of this report. Conclusions are based solely on the samples collected by Comaplex, on Golder viewing of samples collected, on historical information reviewed by Golder as stated in this report and on the condition of the property at the time of sample collection.

Except where specifically stated to the contrary, the information contained in these reports was provided to Golder Associates Ltd. by others and has not been independently verified or otherwise examined by Golder Associates Ltd. to determine its accuracy or completeness. Golder Associates Ltd. has relied in good faith on this information and does not accept responsibility for any deficiency, misstatements, or inaccuracies contained in the reports as a result of omissions, misinterpretation, fraudulent acts or the persons interviewed or contacted or errors or omissions in the reviewed documentation.

The assessment of waste rock geochemical characteristics of this project has been made using the results of chemical analysis of discrete rock samples from a limited number of locations. The geochemical characteristics between sampling locations have been inferred based on geological information described in documents by others. Subsurface conditions may vary between these sample locations. Additional study, including further subsurface investigation, can reduce the inherent uncertainties associated with this type of study. However, it is never possible, even with exhaustive sampling and testing, to dismiss the possibility that part of a site may have considerably different characteristics.

The services performed as described in this report were conducted in a manner consistent with that level of care and skill normally exercised by other members of the geoscience profession currently practising under similar conditions, subject to the time limits and financial and physical constraints applicable to the services. Third party reliance on the data and/or documents is at the sole risk of the third party. The reports are not for publishing or to be presented in part or in whole in a public context or for the purposes of investing, as such certification of the reports under NI 43-101 is not included. Should certification of the reports be required then a written request is necessary and additional scope and budget would be required. Golder Associates Ltd. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

The content of this report is based on information collected during our investigation, our present understanding of the site conditions, and our professional judgement in light of such information at the time of this report. This report provides a professional opinion and therefore no warranty is either expressed, implied, or made as to the conclusions, advice and recommendations offered in this report. This report does not provide a legal opinion regarding compliance with applicable laws. With respect to regulatory compliance issues, it should be noted that regulatory statutes and the interpretation of regulatory statutes are subject to change.

The findings and conclusions of this report are valid only as of the date of this report. If new information is discovered in future work, including excavations, borings, or other studies, Golder Associates Ltd. should be requested to re-evaluate the conclusions of this report, and to provide amendments as required.

Report Signature Page

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Table 2.1. Description of Waste Rock Samples and Analytical Program
Tiriganiaq Deposit Meliadine West Property, Nunavut
Comaplex Minerals Corporation

Sample Number	Interval		Lithology		Location	Whole Rock[1]	Trace Metals[2]	ABA[3]	TIC[4]	SFE[5]
	from	to	code	Name						
GT08-04-01	97	102	Mv'ca'c	mafic volcanic	PIT	x	x	x	x	
GT08-04-02	80	84	Mv'ser'ca	mafic volcanic	PIT	x	x	x	x	x
GT08-04-03	69	73	Mv'ak'ser'po	mafic volcanic	PIT	x	x	x	x	x
M99-340-01	103	108	Mv'ak'ca	mafic volcanic	PIT	x	x	x	x	x
M99-341-01	81	84	Mv'qak	mafic volcanic	PIT	x	x	x	x	x
M00-474-01	110	114	Mv'ca	mafic volcanic	PIT	x	x	x	x	x
M98-297-01	111	114	Mv'ak'as	mafic volcanic	PIT	x	x	x	x	
M07-678-01	47	52	Mv'ak	mafic volcanic	PIT	x	x	x	x	x
GT08-01-01	50	54	Kwa	greywacke/siltstone	PIT	x	x	x	x	
GT08-01-02	25	29	Kwa-s	greywacke/siltstone	PIT	x	x	x	x	x
GT08-02-01	65	70	Kwa-s'ser'ak	greywacke/siltstone	PIT	x	x	x	x	x
M07-704-01	41	46	Kwa-s	greywacke/siltstone	PIT	x	x	x	x	x
M07-704-02	25	25	Kwa-s	greywacke/siltstone	PIT	x	x	x	x	x
M03-513-01	20	25	Kwa	greywacke/siltstone	PIT	x	x	x	x	
M07-705-01	46	50	Kwa	greywacke/siltstone	PIT	x	x	x	x	
M98-316-01	25	29	Kwa	greywacke/siltstone	PIT	x	x	x	x	
M99-339-01	55	59	Kwa-s'ak'as	greywacke/siltstone	PIT	x	x	x	x	x
M99-340-03	26	30	Kwa	greywacke/siltstone	PIT	x	x	x	x	x
M99-341-02	30	35	Kwa'ak	greywacke/siltstone	PIT	x	x	x	x	x
M99-345-01	81	85	Kwa'ak	greywacke/siltstone	PIT	x	x	x	x	
M99-346-02	70	75	Kwa	greywacke/siltstone	PIT	x	x	x	x	x
M99-349-01	65	70	Kwa'ak	greywacke/siltstone	PIT	x	x	x	x	x
M99-349-02	40	45	Kwa-s'c	greywacke/siltstone	PIT	x	x	x	x	x
M99-350-02	50	55	Kwa	greywacke/siltstone	PIT	x	x	x	x	
M95-17-01	61	66	Kwa	greywacke/siltstone	PIT	x	x	x	x	x
M95-17-02	30	35	Kwa'ak	greywacke/siltstone	PIT	x	x	x	x	x
M99-403-01	75	80	Kwa'ak	greywacke/siltstone	PIT	x	x	x	x	
M99-403-02	70	75	Ks'c	greywacke/siltstone	PIT	x	x	x	x	x
M99-403-03	51	54	Kwa'ak'as	greywacke/siltstone	PIT	x	x	x	x	x
M99-403-04	25	29	Kwa	greywacke/siltstone	PIT	x	x	x	x	
M99-404-01	101	105	Ks-wa	greywacke/siltstone	PIT	x	x	x	x	
M99-404-02	80	84	Kwa'ak	greywacke/siltstone	PIT	x	x	x	x	
M99-404-04	30	34	Kwa	greywacke/siltstone	PIT	x	x	x	x	x
M07-710-02	26	30	Kwa-s'c	greywacke/siltstone	PIT	x	x	x	x	x
M00-474-02	80	85	Kwa'ak'as	greywacke/siltstone	PIT	x	x	x	x	
M00-474-04	45	50	Kwa-s'c	greywacke/siltstone	PIT	x	x	x	x	x
M00-474-05	21	25	Kwa'c'ca	greywacke/siltstone	PIT	x	x	x	x	
M98-297-02	76	80	Ks-wa	greywacke/siltstone	PIT	x	x	x	x	
M98-297-04	25	29	Ks-wa	greywacke/siltstone	PIT	x	x	x	x	
M07-711-01	25	30	Kwa-s-l-j	greywacke/siltstone	PIT	x	x	x	x	
M07-660-01	81	85	Kwa-s	greywacke/siltstone	PIT	x	x	x	x	
M07-660-02	56	60	Ks-wa	greywacke/siltstone	PIT	x	x	x	x	x
M98-194-01	70	75	Kwa-s'ak	greywacke/siltstone	PIT	x	x	x	x	x
M98-194-02	55	59	Kwa-m-j	greywacke/siltstone	PIT	x	x	x	x	x
M98-194-03	26	29	Kwa	greywacke/siltstone	PIT	x	x	x	x	x
M07-678-02	36	40	Kwa-s'ak	greywacke/siltstone	PIT	x	x	x	x	
M07-678-03	25	30	Kwa-s'ak'as	greywacke/siltstone	PIT	x	x	x	x	
M98-269-01	66	70	Kwa-s'ak	greywacke/siltstone	PIT	x	x	x	x	
M98-269-02	46	50	Kwa	greywacke/siltstone	PIT	x	x	x	x	
M98-269-03	20	24	Kwa-s	greywacke/siltstone	PIT	x	x	x	x	
M07-713-01	80	86	Kwa-s'c	greywacke/siltstone	PIT	x	x	x	x	x
M07-713-02	45	49	Kwa-s	greywacke/siltstone	PIT	x	x	x	x	x
M04-527-01	270	280	Kwa-s'ak	greywacke/siltstone	UG	x	x	x	x	x
M05-559A-02	180	190	Kwa-s	greywacke/siltstone	UG	x	x	x	x	x
M04-533-01	380	390	Ks-wa'ser	greywacke/siltstone	UG	x	x	x	x	x
M04-533-02	297	307	Ks-wa'ca	greywacke/siltstone	UG	x	x	x	x	x
M07-719-01	351	360	Kwa-s	greywacke/siltstone	UG	x	x	x	x	
M99-327-01	195	205	Kwa'ak	greywacke/siltstone	UG	x	x	x	x	
M07-645-01	250	260	Kwa-s	greywacke/siltstone	UG	x	x	x	x	x
M98-313-01	305	315	Ks-wa	greywacke/siltstone	UG	x	x	x	x	x
M98-313-02	272	280	Kwa	greywacke/siltstone	UG	x	x	x	x	
M07-663-01	417	427	Ks'ak	greywacke/siltstone	UG	x	x	x	x	x
M07-663-02	351	357	Kwa'ak'po	greywacke/siltstone	UG	x	x	x	x	x
M07-663-03	280	289	Kwa-s	greywacke/siltstone	UG	x	x	x	x	x
M03-496-01	360	370	Ks-l-j'ak'as	greywacke/siltstone	UG	x	x	x	x	
M06-604-01	336	344	Ks	greywacke/siltstone	UG	x	x	x	x	x
M06-604-02	286	295	Kwa-s'c	greywacke/siltstone	UG	x	x	x	x	x
M06-604-03	245	255	Kwa	greywacke/siltstone	UG	x	x	x	x	
M05-571A-01	435	445	Ks-wa	greywacke/siltstone	UG	x	x	x	x	
M05-571A-02	335	344	Kwa-s'ak	greywacke/siltstone	UG	x	x	x	x	x
M03-496-02	281	290	Nl-m-wa	iron formation	UG	x	x	x	x	x
M04-526-01	216	225	Nm-l-j	iron formation	UG	x	x	x	x	x
M07-649-01	280	290	Nm-l	iron formation	UG	x	x	x	x	x
M99-280-01	189	197	Nj-m	iron formation	UG	x	x	x	x	x
					90	74	74	74	74	45

Notes:

1 - whole rock by borate fusion

2 - trace metals with mercury (ICP-MS/OES)

3 - ABA by modified Sobek (include total sulphur, sulphate and sulphide by difference)

4 - TIC by LECO furnace

5 - 4:1; include pH, conductivity, alkalinity, sulphate, chloride, arsenic, mercury and metals by ICP

6 - duplicate analysis on trace metals, NP, total sulphur, TIC, SFE

Table 3.1. Waste Rock Chemical Composition
Tiriganiaq Deposit, Meliadine West Property, Nunavut
Comaplex Minerals Corporation

Typical Crustal Abundance (ug/g)						NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.075	82300	1.8	425	3	0.009	41500	0.15
Sample	Interval		Lithology		Location	SiO_2	Al_2O_3	Fe_2O_3	MgO	CaO	Na_2O	K_2O	TiO_2	P_2O_5	MnO	Cr_2O_3	V_2O_5	LOI	Sum	Ag	Al	As	Ba	Be	Bi	Ca	Cd
Number	from	to	code	Name		%	%	%	%	%	%	%	%	%	%	%	%	%	%	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
GT08-04-01	97	102	Mv'ca'c	mafic volcanic	OP	43	13	12	4.5	12	2.4	0.3	0.89	0.06	0.22	0.02	0.05	11	100	**0.15**	70,000	**31**	34	0.2	**< 0.09**	**77,000**	**0.20**
GT08-04-02	80	84	Mv'ser'ca	mafic volcanic	OP	43	12	8.3	4.0	13	1.8	1.0	0.71	0.06	0.24	0.02	0.04	16	100	**0.14**	63,000	**91**	140	0.4	**< 0.09**	**86,000**	**0.17**
GT08-04-03	69	73	Mv'ak'ser'po	mafic volcanic	OP	34	11	16	3.6	13	1.1	1.3	0.61	0.07	0.53	0.02	0.04	14	95	**0.49**	54,000	**8000**	250	0.6	**0.28**	**80,000**	**1.30**
M00-474-01	110	114	Mv'ca	mafic volcanic	OP	41	13	10	3.7	14	2.7	0.4	0.75	0.05	0.29	0.02	0.05	14	99	**0.15**	70,000	**65**	160	0.2	**< 0.09**	**99,000**	0.14
M07-678-01	47	52	Mv'ak	mafic volcanic	OP	42	12	11	5.9	9.4	1.8	0.8	0.78	0.06	0.17	0.02	0.05	15	99	**0.13**	61,000	**120**	100	0.3	**< 0.09**	**60,000**	0.15
M98-297-01	111	114	Mv'ak'as	mafic volcanic	OP	39	13	10	3.8	12	1.5	2.0	0.86	0.07	0.29	0.03	0.05	15	98	**0.11**	69,000	**1000**	**430**	0.6	**< 0.09**	**80,000**	**0.27**
M99-340-01	103	108	Mv'ak'ca	mafic volcanic	OP	43	13	10	3.9	11	1.9	1.3	0.86	0.08	0.20	0.03	0.05	14	100	**0.14**	67,000	**73**	170	0.4	**< 0.09**	**68,000**	0.15
M99-341-01	81	84	Mv'qak	mafic volcanic	OP	41	12	10	4.4	12	1.4	1.4	0.82	0.08	0.18	0.03	0.04	15	99	**0.24**	66,000	**250**	120	0.5	**< 0.09**	**79,000**	0.12
minimum						34	11	8.3	3.6	9.4	1.1	0.3	0.61	0.05	0.17	0.02	0.04	11	95	0.11	54,000	31	34	0.2	<0.09	60,000	0.12
maximum						43	13	16	5.9	14	2.7	2.0	0.89	0.08	0.53	0.03	0.05	16	100	0.49	70,000	8000	430	0.6	0.28	99,000	1.30
median						42	13	10	3.9	12	1.8	1.2	0.80	0.07	0.23	0.02	0.05	14	99	0.15	66,500	106	150	0.4	nc	79,500	0.16
average						41	12	11	4.2	12	1.8	1.1	0.79	0.07	0.27	0.02	0.05	14	99	0.19	65,000	1204	176	0.4	nc	78,625	0.31
standard deviation						3.0	0.9	2.4	0.7	1.4	0.5	0.6	0.09	0.01	0.12	0.01	0.01	1.4	1.6	0.13	5,503	2765	120	0.2	nc	11,563	0.40
75^{th} percentile						43	13	11	4.4	13	2.0	1.3	0.86	0.07	0.29	0.03	0.05	15	100	0.17	69,250	438	190	0.5	nc	81,500	0.22
GT08-01-01	50	54	Kwa	greywacke/siltstone	OP	66	15	5.1	2.0	1.9	3.4	2.2	0.51	0.10	0.04	0.01	0.02	3.8	100	**0.38**	80,000	**17**	**790**	0.9	**0.23**	13,000	**0.25**
GT08-01-02	25	29	Kwa-s	greywacke/siltstone	OP	66	15	4.6	2.0	1.7	3.8	2.0	0.53	0.10	0.04	0.01	0.02	3.5	99	**0.30**	80,000	**200**	**670**	1.0	**< 0.09**	11,000	**0.23**
GT08-02-01	65	70	Kwa-s'ser'ak	greywacke/siltstone	OP	62	15	7.4	1.6	2.8	4.1	2.0	0.44	0.10	0.05	< 0.01	0.02	4.6	100	**0.27**	77,000	**180**	**450**	1.0	**0.09**	19,000	**0.28**
M00-474-02	80	85	Kwa'ak'as	greywacke/siltstone	OP	41	12	10	4.5	11	1.6	1.4	0.79	0.07	0.26	0.02	0.04	14.8	98	**0.23**	71,000	**2100**	330	0.5	**< 0.09**	**79,000**	**0.24**
M00-474-04	45	50	Kwa-s'c	greywacke/siltstone	OP	62	13	8.9	1.1	3.9	3.6	1.3	0.27	0.08	0.04	< 0.01	0.01	4.4	98	**0.21**	69,000	**89**	360	0.8	**< 0.09**	27,000	**0.16**
M00-474-05	21	25	Kwa'c'ca	greywacke/siltstone	OP	62	16	6.4	2.3	2.2	2.6	2.6	0.60	0.12	0.05	0.03	0.02	3.8	98	**0.35**	**85,000**	**51**	**710**	1.0	**0.11**	15,000	**0.25**
M03-513-01	20	25	Kwa	greywacke/siltstone	OP	63	15	5.7	2.0	2.2	3.1	2.6	0.57	0.11	0.04	0.02	0.02	4.4	99	**0.33**	82,000	**24**	**610**	1.0	**< 0.09**	16,000	**0.23**
M07-660-01	81	85	Kwa-s	greywacke/siltstone	OP	65	13	5.5	1.2	3.3	3.4	2.3	0.38	0.10	0.04	< 0.01	0.01	4.6	99	**0.10**	71,000	**23**	**1500**	1.2	**< 0.09**	23,000	**0.18**
M07-660-02	56	60	Ks-wa	greywacke/siltstone	OP	59	16	8.6	2.8	2.4	2.2	2.5	0.68	0.15	0.06	0.02	0.02	4.3	99	**0.08**	**85,000**	**40**	**710**	1.1	**0.15**	16,000	**0.22**
M07-678-02	36	40	Kwa-s'ak	greywacke/siltstone	OP	61	14	8.6	1.8	3.6	3.6	2.2	0.45	0.12	0.05	< 0.01	0.02	5.6	101	0.07	72,000	**240**	**620**	1.1	**< 0.09**	24,000	**0.33**
M07-678-03	25	30	Kwa-s'ak'as	greywacke/siltstone	OP	65	15	6.0	1.2	2.0	4.2	2.0	0.29	0.09	0.03	< 0.01	< 0.01	3.7	99	0.06	75,000	**1200**	**440**	1.0	**< 0.09**	14,000	**0.18**
M07-704-01	41	46	Kwa-s	greywacke/siltstone	OP	58	17	6.8	2.5	3.5	2.3	2.9	0.63	0.13	0.08	0.02	0.02	5.5	99	**0.40**	**85,000**	**150**	**730**	1.2	**0.24**	23,000	**0.31**
M07-704-02	25	25	Kwa-s	greywacke/siltstone	OP	62	16	5.6	2.3	1.7	2.7	2.7	0.61	0.12	0.04	0.02	0.02	4.1	99	**0.66**	**84,000**	**270**	**670**	1.0	**0.31**	11,000	**0.27**
M07-705-01	46	50	Kwa	greywacke/siltstone	OP	66	14	4.8	1.8	2.4	3.2	2.3	0.54	0.12	0.04	0.02	0.02	3.9	99	**0.51**	73,000	**11**	**750**	1.0	**0.25**	16,000	**0.25**
M07-710-02	26	30	Kwa-s'c	greywacke/siltstone	OP	61	13	8.8	1.1	4.4	3.4	1.5	0.31	0.13	0.04	< 0.01	< 0.01	5.3	99	**0.23**	75,000	**71**	420	0.9	**< 0.09**	32,000	**0.17**
M07-711-01	25	30	Kwa-s-l-j	greywacke/siltstone	OP	60	12	13	1.4	3.6	2.3	1.5	0.28	0.10	0.04	< 0.01	< 0.01	4.7	99	**0.09**	61,000	**190**	340	0.7	**0.11**	23,000	**0.17**
M07-713-01	80	86	Kwa-s'c	greywacke/siltstone	OP	63	15	7.6	1.4	2.6	3.5	2.3	0.39	0.08	0.04	< 0.01	< 0.01	4.7	100	**0.09**	71,000	**130**	**600**	1.1	**< 0.09**	16,000	**0.19**
M07-713-02	45	49	Kwa-s	greywacke/siltstone	OP	60	16	8.3	2.8	1.6	2.5	2.6	0.65	0.14	0.05	0.02	0.02	3.8	99	**0.13**	**84,000**	**61**	**620**	1.0	**0.18**	10,000	**0.22**
M95-17-01	61	66	Kwa	greywacke/siltstone	OP	63	16	6.8	2.5	1.9	2.4	2.4	0.58	0.12	0.05	0.02	0.03	3.7	99	**0.37**	**89,000**	**32**	**790**	1.0	**0.20**	13,000	**0.27**
M95-17-02	30	35	Kwa'ak	greywacke/siltstone	OP	64	16	5.2	2.4	1.7	3.1	2.2	0.60	0.12	0.05	0.02	0.02	3.4	99	**0.41**	82,000	**37**	**580**	0.9	**0.33**	11,000	**0.27**
M98-194-01	70	75	Kwa-s'ak	greywacke/siltstone	OP	63	14	8.3	1.3	3.2	4.1	1.8	0.35	0.11	0.04	< 0.01	0.01	5.0	101	**0.09**	67,000	**830**	**710**	1.0	**0.09**	20,000	**0.20**
M98-194-02	55	59	Kwa-m-j	greywacke/siltstone	OP	65	13	8.2	1.0	3.1	3.2	1.9	0.31	0.09	0.04	< 0.01	< 0.01	4.4	100	**0.13**	63,000	**83**	**650**	0.9	**< 0.09**	20,000	**0.16**
M98-194-03	26	29	Kwa	greywacke/siltstone	OP	61	16	6.8	2.6	1.6	2.3	2.9	0.62	0.13	0.04	0.01	0.02	4.2	99	0.06	**86,000**	**99**	**2000**	1.2	**0.12**	11,000	**0.22**
M98-269-01	66	70	Kwa-s'ak	greywacke/siltstone	OP	61	15	7.8	1.5	2.6	3.8	2.1	0.40	0.10	0.05	< 0.01	< 0.01	4.7	99	0.07	75,000	**340**	**520**	1.1	**< 0.09**	17,000	**0.25**
M98-269-02	46	50	Kwa	greywacke/siltstone	OP	61	13	11	1.3	3.2	2.9	1.7	0.26	0.10	0.03	< 0.01	< 0.01	4.2	98	**0.12**	68,000	**18**	390	0.9	**< 0.09**	22,000	0.15
M98-269-03	20	24	Kwa-s	greywacke/siltstone	OP	62	16	6.5	2.3	2.6	3.2	2.2	0.58	0.13	0.05	0.02	0.02	4.0	99	**0.09**	77,000	**31**	**560**	0.9	**0.14**	16,000	**0.20**
M98-297-02	76	80	Ks-wa	greywacke/siltstone	OP	64	15	6.6	1.1	2.6	4.1	2.0	0.34	0.11	0.03	< 0.01	< 0.01	3.6	100	**0.09**	76,000	**25**	**540**	0.9	**0.11**	17,000	0.15
M98-297-04	25	29	Ks-wa	greywacke/siltstone	OP	62	17	6.4	2.8	1.7	2.4	2.5	0.66	0.13	0.04	0.02	0.02	3.7	99	**0.11**	**83,000**	**27**	**820**	0.9	**0.15**	11,000	**0.23**
M98-316-01	25	29	Kwa	greywacke/siltstone	OP	64	14	4.8	1.9	2.6	3.3	2.3	0.52	0.09	0.05	0.02	0.02	4.6	98	**0.50**	75,000	**2100**	**550**	1.0	**0.37**	18,000	**0.28**
M99-339-01	55	59	Kwa-s'ak'as	greywacke/siltstone	OP	64	13	10	1.6	2.3	2.9	1.6	0.35	0.11	0.04	< 0.01	0.01	4.3	100	**0.31**	71,000	**540**	390	0.9	**0.41**	16,000	**0.18**
M99-340-03	26	30	Kwa	greywacke/siltstone	OP	65	16	5.2	2.3	1.9	3.2	2.2	0.57	0.11	0.05	0.01	0.02	3.5	100	**0.38**	**83,000**	**28**	**820**	1.0	**0.15**	13,000	**0.26**
M99-341-02	30	35	Kwa'ak	greywacke/siltstone	OP	63	15	4.9	1.8	3.2	3.8	2.2	0.58	0.17	0.05	0.01	0.02	4.7	99	**0.36**	78,000	**460**	**580**	1.0	**0.17**	22,000	**0.30**
M99-345-01	81	85	Kwa'ak	greywacke/siltstone	OP	61	15	6.7	1.5	2.9	3.7	2.4	0.41	0.08	0.06	< 0.01	0.01	5.0	99	**0.33**	78,000	**860**	**550**	1.0	**0.33**	20,000	**0.16**
M99-346-02	70	75	Kwa	greywacke/siltstone	OP	64	16	5.7	2.5	1.6	3.0	2.5	0.61	0.12	0.05	0.02	0.02	3.8	100	**0.35**	**85,000**	**70**	**570**	0.9	**0.11**	11,000	**0.25**
M99-349-01	65	70	Kwa'ak	greywacke/siltstone	OP	61	14	9.0	1.6	2.6	4.1	1.6	0.40	0.13	0.04	< 0.01	< 0.01	3.9	99	**0.26**	73,000	**320**	390	0.8	**< 0.09**	17,000	**0.18**
M99-349-02	40	45	Kwa-s'c	greywacke/siltstone	OP	60	14	7.8	1.3	3.8	3.5	2.2	0.40	0.16	0.05	< 0.01	0.01	5.9	99	**0.22**	73,000	**50**	**580**	1.0	**< 0.09**	25,000	**0.19**
M99-350-02	50	55	Kwa	greywacke/siltstone	OP	63	16	5.7	2.4	1.7	2.6	2.8	0.60	0.13	0.04	0.02	0.03	3.9	99	**0.32**	**89,000**	**26**	**720**	1.0	**0.14**	12,000	**0.23**
M99-403-01	75	80	Kwa'ak	greywacke/siltstone	OP	48	11	10	3.4	10	0.9	1.9	0.64	0.08	0.17	0.02	0.04	12.7	98	**0.16**	64,000	**1300**	370	0.7	**< 0.09**	**67,000**	**0.49**
M99-403-02	70	75	Ks'c	greywacke/siltstone	OP	61	14	8.1	1.7	2.8	4.1	1.5	0.43	0.11	0.05	< 0.01	0.01	4.6	98	**0.24**	78,000	**900**	**460**	1.0	**< 0.09**	19,000	**0.18**
M99-403-03	51	54	Kwa'ak'as	greywacke/siltstone	OP	62	13	10	1.7	2.4	2.4	2.0	0.34	0.09	0.04	< 0.01	0.01	4.5	99	**0.30**	73,000	**1300**	**450**	1.0	**< 0.09**	16,000	**0.19**
M99-403-04	25	29	Kwa	greywacke/siltstone	OP	65	16	5.4	1.9	2.6	3.3	2.5	0.59	0.12	0.04	0.02	0.02	4.1	101	**0.36**	**85,000**	**18**	**570**	0.9	**< 0.09**	18,000	**0.24**
M99-404-01	101	105	Ks-wa	greywacke/siltstone	OP	62	15	7.3	1.3	3.4	3.9	1.9	0.42	0.09	0.04	< 0.01	< 0.01	4.3	100	**0.28**	76,000	**21**	**430**	0.8	**< 0.09**	23,000	**0.21**
M99-404-02	80	84	Kwa'ak	greywacke/siltstone	OP	65	15	5.8	2.0	2.2	3.4	2.2	0.57	0.12	0.04	0.02	0.02	3.9	100	**0.41**	78,000	**250**	**520**	1.0	**0.17**	15,000	**0.26**
M99-404-04	30	34	Kwa	greywacke/siltstone	OP	62	17	6.0	2.6	2.1	2.9	2.5	0.64	0.13	0.05	0.02	0.02	3.8	99	**0.39**	**89,000**	**95**	**610**	1.0	**0.20**	14,000	**0.30**
minimum						41	11	4.6	1.0	1.6	0.9	1.3	0.26	0.07	0.03	<0.01	<0.01	3.4	98	0.06	61,000	11.0	330	0.5	<0.09	10,000	0.15
maximum						66	17	13	4.5	11	4.2	2.9	0.79	0.17	0.26	0.03	0.04	15	101	0.66	89,000	2100	2000	1.2	0.41	79,000	0.49
median						62	15	6.8	1.8	2.6	3.2	2.2	0.53	0.11	0.04	0.02	0.02	4.3	99	0.27	77,000	92	580	1.0	0.17	16,500	0.23
average						62	15	7.2	1.9	2.9	3.1	2.2	0.49	0.11	0.05	0.02	0.02	4.7	99	0.25	77,136	339	624	1.0	0.19	19,818	0.23
standard deviation						4.3	1.4	1.9	0.7	1.8	0.7	0.4	0.14	0.02	0.04	0.00	0.01	2.1	0.7	0.14	7,138	527	288	0.1	0.09	12,790	0.06
75^{th} percentile						64	16	8.4	2.4	3.2	3.6	2.5	0.60	0.13	0.05	0.02	0.02	4.7	100	0.36	83,250	325	710	1.0	0.24	22,000	0.26

Notes:

* Price (1997)

Bolded values indicate values above typical crustal abundance

Shaded values indicate values above five times typical crustal abundance

Table 3.1. Waste Rock Chemical Composition
Tiriganiaq Deposit, Meliadine West Property, Nunavut
Comaplex Minerals Corporation

Sample Number	Interval from	Interval to	Lithology code	Lithology Name	Location	Co	Cr	Cu	Fe	Hg	K	Li	Mg	Mn	Mo	Na	Ni	Pb	Sb	Se	Sn	Sr	Ti	Tl	U	V	Y	Zn
Typical Crustal Abundance (ug/g)						25	102	60	56300	0.085	20850	20	23300	950	1.2	23550	84	14	0.20	0.05	2.3	370	5650	0.85	2.7	120	33	70
						µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
GT08-04-01	97	102	Mv'ca'c	mafic volcanic	OP	**40**	**140**	**110**	**79,000**	**< 0.1**	2,900	**56**	**25,000**	**1,400**	1.0	16,000	**96**	3.3	**< 0.8**	**< 0.7**	< 0.9	110	2,800	0.09	0.08	**220**	8.0	**100**
GT08-04-02	80	84	Mv'ser'ca	mafic volcanic	OP	**31**	**150**	**67**	**57,000**	**< 0.1**	11,000	**34**	22,000	**1,500**	0.2	11,000	**87**	7.4	**< 0.8**	**< 0.7**	< 0.9	120	1,900	0.36	0.09	**190**	5.3	64
GT08-04-03	69	73	Mv'ak'ser'po	mafic volcanic	OP	**52**	**110**	**280**	**110,000**	**< 0.1**	13,000	**26**	18,000	**3,200**	**4.0**	6,500	**88**	**28**	**1.4**	**3.1**	< 0.9	140	1,800	0.58	0.64	**140**	6.2	**410**
M00-474-01	110	114	Mv'ca	mafic volcanic	OP	**45**	**160**	**130**	**74,000**	**< 0.1**	4,700	**45**	23,000	**1,900**	0.2	18,000	**120**	4.2	**< 0.8**	**< 0.7**	< 0.9	96	2,800	0.12	0.05	**210**	9.1	**82**
M07-678-01	47	52	Mv'ak	mafic volcanic	OP	**36**	**110**	**100**	**72,000**	**< 0.1**	7,200	**46**	**32,000**	**960**	0.2	11,000	80	9.3	**< 0.8**	**< 0.7**	< 0.9	170	1,200	0.24	0.10	**160**	4.2	**89**
M98-297-01	111	114	Mv'ak'as	mafic volcanic	OP	**37**	**150**	**81**	**64,000**	**< 0.1**	20,000	**26**	22,000	**1,700**	0.2	9,700	**95**	**16**	**< 0.8**	**< 0.7**	< 0.9	160	2,300	0.69	0.15	**180**	8.1	**100**
M99-340-01	103	108	Mv'ak'ca	mafic volcanic	OP	**36**	**180**	**68**	**64,000**	**< 0.1**	14,000	**47**	21,000	**1,200**	0.4	12,000	**95**	7.5	**< 0.8**	**< 0.7**	< 0.9	160	3,000	0.55	0.10	**220**	6.5	**110**
M99-341-01	81	84	Mv'qak	mafic volcanic	OP	**41**	**170**	**62**	**72,000**	**< 0.1**	14,000	**36**	**27,000**	**1,100**	0.5	8,800	**85**	11	**< 0.8**	**< 0.7**	< 0.9	180	2,500	0.52	0.19	**190**	5.6	**99**
minimum						31	110	62	57,000	<0.1	2,900	26	18,000	960	0.2	6,500	80	3.3	<0.8	<0.7	<0.9	96	1,200	0.09	0.05	140	4.2	64
maximum						52	180	280	110,000	<0.1	20,000	56	32,000	3,200	4.0	18,000	120	28	1.4	3.1	<0.9	180	3,000	0.69	0.64	220	9.1	410
median						39	150	91	72,000	nc	12,000	41	22,500	1,450	0.3	11,000	92	8.4	nc	nc	nc	150	2,400	0.44	0.10	190	6.4	100
average						40	146	112	74,000	nc	10,850	40	23,750	1,620	0.8	11,625	93	11	nc	nc	nc	142	2,288	0.39	0.17	189	6.6	132
standard deviation						6.5	26	72	16,116	nc	5,639	11	4,268	710	1.3	3,754	12	8.0	nc	nc	nc	30	615	0.23	0.19	29	1.7	113
75th percentile						42	163	115	75,250	nc	14,000	46	25,500	1,750	0.6	13,000	95	12	nc	nc	nc	163	2,800	0.56	0.16	213	8.0	103
GT08-01-01	50	54	Kwa	greywacke/siltstone	OP	17	94	42	36,000	**< 0.1**	**22,000**	**22**	11,000	260	**1.4**	21,000	53	**19**	**< 0.8**	**< 0.7**	1.0	**460**	1,900	0.45	1.60	68	7.3	65
GT08-01-02	25	29	Kwa-s	greywacke/siltstone	OP	16	100	33	32,000	**< 0.1**	**21,000**	**22**	11,000	220	1.2	**24,000**	52	11	**< 0.8**	**< 0.7**	< 0.9	350	1,400	0.42	1.50	71	6.6	63
GT08-02-01	65	70	Kwa-s'ser'ak	greywacke/siltstone	OP	12	41	29	50,000	**< 0.1**	20,000	16	9,000	330	0.7	**26,000**	31	**16**	**< 0.8**	**< 0.7**	< 0.9	240	2,200	0.31	1.30	52	6.3	**75**
M00-474-02	80	85	Kwa'ak'as	greywacke/siltstone	OP	**33**	**150**	**130**	**75,000**	**< 0.1**	15,000	**37**	**28,000**	**1800**	0.5	11,000	74	**18**	**< 0.8**	**< 0.7**	1.6	160	2,400	0.53	0.17	**210**	7.0	**130**
M00-474-04	45	50	Kwa-s'c	greywacke/siltstone	OP	7.5	21	28	**64,000**	**< 0.1**	13,000	20	7,100	280	0.6	16,000	12	7.8	**< 0.8**	**< 0.7**	< 0.9	370	1,400	0.18	0.61	33	4.1	42
M00-474-05	21	25	Kwa'c'ca	greywacke/siltstone	OP	17	**110**	43	46,000	**< 0.1**	**26,000**	**35**	14,000	360	1.2	17,000	56	**31**	**< 0.8**	**< 0.7**	1.0	290	2,400	0.42	1.70	91	7.8	**71**
M03-513-01	20	25	Kwa	greywacke/siltstone	OP	18	**120**	36	41,000	**< 0.1**	**28,000**	**22**	12,000	310	**1.6**	19,000	61	8.6	**< 0.8**	**< 0.7**	< 0.9	270	2,800	0.53	1.70	85	8.1	67
M07-660-01	81	85	Kwa-s	greywacke/siltstone	OP	7.2	30	21	40,000	**< 0.1**	**23,000**	18	7,100	280	0.7	21,000	16	14	**< 0.8**	**< 0.7**	< 0.9	360	1,900	0.38	0.99	40	5.9	39
M07-660-02	56	60	Ks-wa	greywacke/siltstone	OP	**26**	**120**	38	**58,000**	**< 0.1**	**25,000**	**38**	16,000	380	0.9	14,000	70	6.6	**< 0.8**	**< 0.7**	0.9	260	3,000	0.41	1.60	100	8.4	69
M07-678-02	36	40	Kwa-s'ak	greywacke/siltstone	OP	12	70	**200**	**58,000**	**< 0.1**	**21,000**	14	10,000	350	0.7	18,000	34	13	**< 0.8**	**< 0.7**	1.9	260	1,900	0.48	1.20	54	6.3	64
M07-678-03	25	30	Kwa-s'ak'as	greywacke/siltstone	OP	4.8	17	26	41,000	**< 0.1**	20,000	15	6,500	180	**1.5**	20,000	9	**17**	**< 0.8**	**< 0.7**	< 0.9	250	1,400	0.30	0.86	32	3.7	45
M07-704-01	41	46	Kwa-s	greywacke/siltstone	OP	20	**110**	50	45,000	**< 0.1**	**29,000**	**32**	14,000	490	**1.5**	15,000	64	**17**	**< 0.8**	**< 0.7**	< 0.9	360	2,300	0.54	2.10	97	8.2	**82**
M07-704-02	25	25	Kwa-s	greywacke/siltstone	OP	19	**120**	50	38,000	**< 0.1**	**27,000**	**31**	13,000	280	**1.4**	17,000	66	14	**< 0.8**	**< 0.7**	< 0.9	310	1,900	0.53	1.80	94	7.4	**81**
M07-705-01	46	50	Kwa	greywacke/siltstone	OP	18	**110**	31	32,000	**< 0.1**	**23,000**	**23**	9,600	280	**1.6**	18,000	56	**29**	**< 0.8**	**< 0.7**	< 0.9	370	2,500	0.45	1.90	73	7.8	64
M07-710-02	26	30	Kwa-s'c	greywacke/siltstone	OP	6.7	24	24	**66,000**	**< 0.1**	16,000	**21**	7,400	280	0.8	21,000	13	8.6	**< 0.8**	**< 0.7**	< 0.9	**520**	1,600	0.20	0.86	30	5.8	43
M07-711-01	25	30	Kwa-s-l-j	greywacke/siltstone	OP	6.0	21	27	**86,000**	**< 0.1**	14,000	20	7,500	320	0.7	13,000	13	5.6	**< 0.8**	**< 0.7**	< 0.9	290	1,500	0.19	0.66	31	4.7	51
M07-713-01	80	86	Kwa-s'c	greywacke/siltstone	OP	9.2	47	**62**	49,000	**< 0.1**	**22,000**	16	7,600	280	0.5	18,000	21	**23**	**< 0.8**	**< 0.7**	< 0.9	210	1,900	0.32	0.90	40	4.6	45
M07-713-02	45	49	Kwa-s	greywacke/siltstone	OP	21	**130**	52	55,000	**< 0.1**	**26,000**	**34**	16,000	320	0.8	16,000	66	10	**< 0.8**	**< 0.7**	< 0.9	220	2,800	0.46	2.10	100	7.3	**72**
M95-17-01	61	66	Kwa	greywacke/siltstone	OP	19	**120**	47	51,000	**< 0.1**	**25,000**	**40**	16,000	310	1.2	16,000	58	11	**< 0.8**	**< 0.7**	< 0.9	260	1,400	0.40	1.60	88	6.8	**75**
M95-17-02	30	35	Kwa'ak	greywacke/siltstone	OP	17	**120**	44	36,000	**< 0.1**	**22,000**	**35**	14,000	310	1.2	19,000	58	14	**< 0.8**	**< 0.7**	< 0.9	290	790	0.38	1.50	84	6.8	69
M98-194-01	70	75	Kwa-s'ak	greywacke/siltstone	OP	8.0	33	22	53,000	**< 0.1**	17,000	15	7,200	270	0.6	19,000	18	11	**< 0.8**	**< 0.7**	< 0.9	310	1,700	0.30	0.92	38	5.3	47
M98-194-02	55	59	Kwa-m-j	greywacke/siltstone	OP	5.9	27	20	54,000	**< 0.1**	18,000	15	5,600	290	0.4	16,000	12	7.8	**< 0.8**	**< 0.7**	< 0.9	290	1,600	0.27	0.65	32	4.3	36
M98-194-03	26	29	Kwa	greywacke/siltstone	OP	17	**110**	46	47,000	**< 0.1**	**29,000**	**38**	16,000	310	0.9	15,000	59	**15**	**< 0.8**	**< 0.7**	0.9	360	2,600	0.51	1.50	93	7.5	**75**
M98-269-01	66	70	Kwa-s'ak	greywacke/siltstone	OP	8.0	50	**97**	52,000	**< 0.1**	**21,000**	17	8,300	330	0.4	20,000	21	10	**< 0.8**	**< 0.7**	< 0.9	200	2,000	0.30	1.10	43	6.3	61
M98-269-02	46	50	Kwa	greywacke/siltstone	OP	6.9	19	20	**77,000**	**< 0.1**	17,000	**26**	7,500	250	0.7	14,000	10	5.9	**< 0.8**	**< 0.7**	< 0.9	330	1,300	0.27	0.77	27	4.3	47
M98-269-03	20	24	Kwa-s	greywacke/siltstone	OP	16	**110**	28	43,000	**< 0.1**	**21,000**	**29**	13,000	290	1.0	19,000	58	10	**< 0.8**	**< 0.7**	< 0.9	290	2,200	0.37	1.40	84	7.3	57
M98-297-02	76	80	Ks-wa	greywacke/siltstone	OP	6.6	24	18	44,000	**< 0.1**	20,000	18	6,600	230	0.7	18,000	13	8.2	**< 0.8**	**< 0.7**	< 0.9	370	1,600	0.26	0.82	36	4.7	45
M98-297-04	25	29	Ks-wa	greywacke/siltstone	OP	19	**120**	37	42,000	**< 0.1**	**25,000**	**40**	16,000	290	**1.3**	15,000	67	**15**	**< 0.8**	**< 0.7**	< 0.9	270	770	0.44	1.60	89	7.0	**84**
M98-316-01	25	29	Kwa	greywacke/siltstone	OP	17	**110**	47	33,000	**< 0.1**	**24,000**	14	10,000	320	**2.4**	20,000	55	**15**	**1.0**	**< 0.7**	< 0.9	270	2,500	0.46	1.80	75	7.5	58
M99-339-01	55	59	Kwa-s'ak'as	greywacke/siltstone	OP	9.2	40	21	**68,000**	**< 0.1**	17,000	**26**	9,900	260	0.6	16,000	25	**43**	**< 0.8**	**< 0.7**	< 0.9	190	1,800	0.27	1.30	44	5.3	70
M99-340-03	26	30	Kwa	greywacke/siltstone	OP	18	**120**	49	36,000	**< 0.1**	**23,000**	**36**	13,000	290	1.2	19,000	56	13	**< 0.8**	**< 0.7**	< 0.9	370	1,000	0.45	1.90	84	9.0	**83**
M99-341-02	30	35	Kwa'ak	greywacke/siltstone	OP	16	95	33	35,000	**< 0.1**	**23,000**	17	11,000	360	0.8	22,000	41	8.7	**< 0.8**	**< 0.7**	< 0.9	330	2,600	0.40	1.90	77	7.8	55
M99-345-01	81	85	Kwa'ak	greywacke/siltstone	OP	8.6	33	17	48,000	**< 0.1**	**24,000**	20	8,600	400	0.7	23,000	18	**45**	**< 0.8**	**< 0.7**	< 0.9	210	2,000	0.36	1.30	45	6.2	43
M99-346-02	70	75	Kwa	greywacke/siltstone	OP	21	**120**	45	40,000	**< 0.1**	**25,000**	**36**	15,000	290	1.2	19,000	59	11	**< 0.8**	**< 0.7**	< 0.9	250	1,200	0.44	1.60	90	7.4	70
M99-349-01	65	70	Kwa'ak	greywacke/siltstone	OP	10	36	47	**61,000**	**< 0.1**	15,000	17	9,700	270	1.0	20,000	19	**17**	**< 0.8**	**< 0.7**	< 0.9	240	1,900	0.27	1.10	45	5.3	**92**
M99-349-02	40	45	Kwa-s'c	greywacke/siltstone	OP	7.1	20	16	54,000	**< 0.1**	**22,000**	15	7,800	330	0.5	19,000	11	8.7	**< 0.8**	**< 0.7**	< 0.9	**450**	1,900	0.32	1.10	40	5.7	39
M99-350-02	50	55	Kwa	greywacke/siltstone	OP	17	**120**	29	42,000	**< 0.1**	**29,000**	**32**	15,000	280	**1.3**	18,000	57	7.4	**< 0.8**	**< 0.7**	< 0.9	270	1,800	0.45	1.50	93	7.1	60
M99-403-01	75	80	Kwa'ak	greywacke/siltstone	OP	**27**	**140**	**76**	**71,000**	**< 0.1**	20,000	**22**	21,000	**1100**	0.3	6,000	70	**69**	**< 0.8**	**< 0.7**	< 0.9	170	2,800	0.68	0.51	**160**	6.5	**170**
M99-403-02	70	75	Ks'c	greywacke/siltstone	OP	10	56	17	**58,000**	**< 0.1**	16,000	16	10,000	320	0.7	18,000	27	**16**	**< 0.8**	**< 0.7**	< 0.9	160	2,000	0.33	1.30	56	6.9	54
M99-403-03	51	54	Kwa'ak'as	greywacke/siltstone	OP	7.6	34	13	**71,000**	**< 0.1**	20,000	**26**	11,000	250	0.6	16,000	19	8.8	**< 0.8**	**< 0.7**	< 0.9	190	1,700	0.28	1.10	43	5.2	55
M99-403-04	25	29	Kwa	greywacke/siltstone	OP	19	**130**	50	39,000	**< 0.1**	**26,000**	**30**	12,000	250	**1.5**	21,000	57	13	**< 0.8**	**< 0.7**	< 0.9	250	2,800	0.46	1.80	87	7.3	56
M99-404-01	101	105	Ks-wa	greywacke/siltstone	OP	9.4	33	23	51,000	**< 0.1**	19,000	**22**	7,600	270	0.5	19,000	19	5.6	**< 0.8**	**< 0.7**	< 0.9	290	2,200	0.26	0.92	43	6.0	50
M99-404-02	80	84	Kwa'ak	greywacke/siltstone	OP	18	**130**	50	40,000	**< 0.1**	**22,000**	**22**	11,000	270	0.9	20,000	53	9.4	**< 0.8**	**< 0.7**	< 0.9	250	2,600	0.36	1.70	80	7.1	52
M99-404-04	30	34	Kwa	greywacke/siltstone	OP	19	**130**	47	43,000	**< 0.1**	**25,000**	**40**	16,000	340	1.0	19,000	60	14	**< 0.8**	**< 0.7**	< 0.9	280	930	0.44	1.60	94	7.3	**77**
minimum						4.8	17	13	32,000	<0.1	13,000	14	5,600	180	0.3	6,000	8.7	5.6	<0.8	<0.7	<0.9	160	770	0.18	0.17	27	3.7	36
maximum						33	150	200	86,000	<0.1	29,000	40	28,000	1800	2.4	26,000	74	69	1.0	<0.7	1.9	520	3,000	0.68	2.10	210	9	170
median						16	98	37	47,500	nc	22,000	22	11,000	290	0.9	18,500	53	13	nc	nc	1.0	275	1,900	0.39	1.35	72	6.8	62
average						14	80	43	50,023	nc	21,727	25	11,491	352	1.0	17,977	41	15	nc	nc	1.2	288	1,929	0.38	1.31	70	6.5	65
standard deviation						6.5	45	33	13,195	nc	4,173	8.6	4,342	259	0.4	3,440	22	12	nc	nc	0.4	79	575	0.11	0.46	36	1.3	24
75th percentile						18	120	48	58,000	nc	25,000	33	14,000	330	1.2	20,000	58	16	nc	nc	1.5	335	2,400	0.45	1.63	89	7.3	73

Notes:
* Price (1997)
Bolded values indicate values above typical crustal abundance
Shaded values indicate values above five times typical crustal abundance

Table 3.1. Waste Rock Chemical Composition
Tiriganiaq Deposit, Meliadine West Property, Nunavut
Comaplex Minerals Corporation

Typical Crustal Abundance (ug/g)						NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.075	82300	1.8	425	3	0.009	41500	0.15
Sample	Interval		Lithology		Location	SiO_2	Al_2O_3	Fe_2O_3	MgO	CaO	Na_2O	K_2O	TiO_2	P_2O_5	MnO	Cr_2O_3	V_2O_5	LOI	Sum	Ag	Al	As	Ba	Be	Bi	Ca	Cd
Number	from	to	code	Name		%	%	%	%	%	%	%	%	%	%	%	%	%	%	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
M03-496-01	360	370	Ks-l-j'ak'as	greywacke/siltstone	UG	56	10	17	1.5	3.1	1.6	1.7	0.29	0.13	0.05	< 0.01	0.01	6.3	97	**0.52**	54,000	**200**	**460**	0.9	**< 0.09**	21,000	0.07
M04-527-01	270	280	Kwa-s'ak	greywacke/siltstone	UG	64	16	5.4	2.2	1.7	3.2	2.4	0.59	0.12	0.04	0.03	0.02	3.9	99	**0.89**	**84,000**	**100**	**530**	1.0	**0.30**	12,000	**0.18**
M04-533-01	380	390	Ks-wa'ser	greywacke/siltstone	UG	55	17	8.1	3.3	2.9	2.4	3.8	0.72	0.18	0.07	0.02	0.03	5.4	98	**0.58**	**89,000**	**130**	**3100**	**3.5**	**0.54**	20,000	**0.22**
M04-533-02	297	307	Ks-wa'ca	greywacke/siltstone	UG	60	17	5.7	2.5	2.5	2.8	3.0	0.69	0.13	0.05	0.03	0.02	4.2	99	**0.40**	**93,000**	**250**	**790**	1.1	**0.13**	18,000	**0.43**
M05-559A-02	180	190	Kwa-s	greywacke/siltstone	UG	61	17	6.2	2.8	1.7	2.6	2.7	0.68	0.13	0.05	0.03	0.02	4.1	100	**0.64**	**92,000**	**31**	**580**	1.0	**0.13**	11,000	0.14
M05-571A-01	435	445	Ks-wa	greywacke/siltstone	UG	61	15	7.8	2.0	2.5	2.3	2.7	0.46	0.11	0.04	< 0.01	0.01	4.6	99	**0.25**	82,000	**380**	**710**	1.4	**< 0.09**	17,000	**0.21**
M05-571A-02	335	344	Kwa-s'ak	greywacke/siltstone	UG	60	17	7.8	2.6	1.5	2.4	2.9	0.67	0.12	0.05	0.02	0.02	4.3	99	**0.30**	**89,000**	**46**	**670**	1.2	**< 0.09**	9,700	**0.24**
M06-604-01	336	344	Ks	greywacke/siltstone	UG	61	18	6.9	2.8	1.1	3.1	2.7	0.69	0.13	0.04	0.02	0.03	3.8	100	**0.37**	**98,000**	**41**	**570**	1.1	**0.21**	7,600	**0.24**
M06-604-02	286	295	Kwa-s'c	greywacke/siltstone	UG	59	15	9.3	2.1	2.8	2.2	2.4	0.49	0.10	0.05	0.01	0.02	5.0	98	**0.28**	82,000	**50**	**640**	1.0	**0.10**	19,000	**0.22**
M06-604-03	245	255	Kwa	greywacke/siltstone	UG	65	15	4.6	1.9	2.6	3.5	2.0	0.52	0.10	0.05	0.02	0.02	3.8	98	**0.41**	76,000	**8.6**	420	0.9	**0.40**	17,000	**0.30**
M07-645-01	250	260	Kwa-s	greywacke/siltstone	UG	61	17	6.6	2.8	1.6	2.7	2.6	0.69	0.13	0.05	0.02	0.02	4.1	100	**0.39**	**89,000**	**140**	**620**	1.0	**0.19**	11,000	0.12
M07-663-01	417	427	Ks'ak	greywacke/siltstone	UG	59	17	8.8	2.8	1.7	2.6	2.7	0.70	0.13	0.06	0.02	0.02	4.2	99	**0.37**	**85,000**	**1500**	**720**	1.2	**0.15**	11,000	**0.16**
M07-663-02	351	357	Kwa'ak'po	greywacke/siltstone	UG	58	17	7.7	2.7	1.8	2.3	3.0	0.72	0.12	0.04	0.02	0.03	4.7	98	**0.45**	**88,000**	**110**	**1600**	1.6	**0.30**	12,000	0.15
M07-663-03	280	289	Kwa-s	greywacke/siltstone	UG	60	15	7.7	2.8	2.5	2.8	2.2	0.68	0.13	0.07	0.01	0.02	4.8	99	**0.38**	80,000	**51**	**630**	1.0	**0.15**	16,000	0.13
M07-719-01	351	360	Kwa-s	greywacke/siltstone	UG	64	15	4.8	1.9	2.8	2.9	2.6	0.55	0.11	0.03	0.04	0.02	4.7	99	**0.37**	78,000	**28**	**630**	1.0	**0.15**	19,000	0.12
M98-313-01	305	315	Ks-wa	greywacke/siltstone	UG	63	16	6.5	2.3	2.1	2.7	2.4	0.65	0.12	0.04	0.02	0.02	4.4	100	**0.38**	**83,000**	**84**	**660**	1.1	**0.21**	14,000	0.08
M98-313-02	272	280	Kwa	greywacke/siltstone	UG	60	17	8.2	2.8	1.3	2.2	3.1	0.71	0.14	0.05	0.02	0.03	3.9	99	**0.38**	**94,000**	**25**	**1200**	1.2	**0.13**	8,800	0.15
M99-327-01	195	205	Kwa'ak	greywacke/siltstone	UG	64	15	5.6	2.2	2.3	2.7	2.6	0.55	0.11	0.05	0.02	0.02	4.3	99	**0.40**	80,000	**44**	**570**	1.1	**0.20**	16,000	0.09
minimum						55	10	4.6	1.5	1.1	1.6	1.7	0.29	0.10	0.03	<0.01	0.01	3.8	97	0.25	54,000	8.6	420	0.9	<0.09	7,600	0.07
maximum						65	18	17	3.3	3.1	3.5	3.8	0.72	0.18	0.07	0.04	0.03	6.3	100	0.89	98,000	1500	3100	3.5	0.54	21,000	0.43
median						60	16	7.3	2.6	2.2	2.6	2.6	0.68	0.13	0.05	0.02	0.02	4.3	99	0.39	84,500	68	635	1.1	0.19	15,000	0.16
average						60	16	7.4	2.4	2.1	2.6	2.6	0.61	0.12	0.05	0.02	0.02	4.5	99	0.43	84,222	179	839	1.2	0.22	14,450	0.18
standard deviation						2.7	1.8	2.6	0.5	0.6	0.4	0.5	0.12	0.02	0.01	0.01	0.01	0.6	0.7	0.15	9,620	343	629	0.6	0.12	4,165	0.09
75^{th} percentile						62	17	8.0	2.8	2.6	2.8	2.8	0.69	0.13	0.05	0.02	0.02	4.7	99	0.44	89,000	138	718	1.2	0.26	17,750	0.22
M03-496-02	281	290	Nl-m-wa	iron formation	UG	57	11	15	1.8	4.4	0.96	1.4	0.36	0.12	0.05	< 0.01	0.02	6.2	99	**0.25**	59,000	**220**	**430**	1.0	**< 0.09**	30,000	0.04
M04-526-01	216	225	Nm-l-j	iron formation	UG	55	5.6	24	1.3	6.7	< 0.01	0.2	0.13	0.17	0.06	< 0.01	< 0.01	5.5	99	**0.16**	30,000	**210**	66	0.4	**0.13**	**46,000**	0.15
M07-649-01	280	290	Nm-l	iron formation	UG	50	5.3	27	1.3	3.9	0.54	0.2	0.11	0.18	0.07	< 0.01	0.01	10	98	**0.16**	27,000	**330**	73	0.3	**< 0.09**	27,000	**0.33**
M99-280-01	189	197	Nj-m	iron formation	UG	50	5.9	36	1.6	3.2	0.04	0.6	0.16	0.19	0.05	< 0.01	< 0.01	2.5	100	**0.13**	31,000	**150**	200	0.7	**< 0.09**	21,000	0.13
minimum						50	5.3	15	1.3	3.2	<0.01	0.2	0.11	0.12	0.05	<0.01	<0.01	2.5	98	0.13	27,000	150	66	0.3	<0.09	21,000	0.04
maximum						57	11	36	1.8	6.7	0.96	1.4	0.36	0.19	0.07	<0.01	0.02	10	100	0.25	59,000	330	430	1.0	0.13	46,000	0.33
median						52	5.7	26	1.5	4.2	0.54	0.4	0.15	0.18	0.06	nc	nc	5.9	99	0.16	30,500	215	137	0.5	nc	28,500	0.14
average						53	7.0	26	1.5	4.5	0.51	0.6	0.19	0.17	0.06	nc	nc	6.0	99	0.18	36,750	228	192	0.6	nc	31,000	0.16
standard deviation						3.7	2.8	8.7	0.2	1.5	0.46	0.6	0.12	0.03	0.01	nc	nc	3.0	0.9	0.05	14,930	75	170	0.3	nc	10,677	0.12
75^{th} percentile						55	7.2	29	1.6	5.0	0.75	0.8	0.21	0.18	0.06	nc	nc	7.1	99	0.18	38,000	248	258	0.7	nc	34,000	0.20

Notes:
* Price (1997)
Bolded values indicate values above typical crustal abundance
Shaded values indicate values above five times typical crustal abundance

Table 3.1. Waste Rock Chemical Composition
Tiriganiaq Deposit, Meliadine West Property, Nunavut
Comaplex Minerals Corporation

Typical Crustal Abundance (ug/g)						25	102	60	56300	0.085	20850	20	23300	950	1.2	23550	84	14	0.20	0.05	2.3	370	5650	0.85	2.7	120	33	70
Sample	Interval		Lithology		Location	Co	Cr	Cu	Fe	Hg	K	Li	Mg	Mn	Mo	Na	Ni	Pb	Sb	Se	Sn	Sr	Ti	Tl	U	V	Y	Zn
Number	from	to	code	Name		μg/g	μg/g	μg/g	μg/g	μg/g	μg/g	μg/g	μg/g	μg/g	μg/g	μg/g	μg/g	μg/g	μg/g	μg/g	μg/g	μg/g	μg/g	μg/g	μg/g	μg/g	μg/g	μg/g
M03-496-01	360	370	Ks-l-j'ak'as	greywacke/siltstone	UG	8.1	35	27	**110,000**	**< 0.1**	17,000	19	8,400	340	0.5	9,900	22	**22**	**< 0.8**	**< 0.7**	< 0.9	220	1,400	0.31	1.00	37	6.0	64
M04-527-01	270	280	Kwa-s'ak	greywacke/siltstone	UG	19	**150**	**86**	39,000	**< 0.1**	**25,000**	**28**	14,000	320	**2.0**	21,000	82	14	**< 0.8**	**< 0.7**	< 0.9	330	2,300	0.49	2.10	84	8.3	**83**
M04-533-01	380	390	Ks-wa'ser	greywacke/siltstone	UG	23	**130**	43	**58,000**	**< 0.1**	**37,000**	**40**	19,000	480	1.2	16,000	81	**130**	**< 0.8**	**< 0.7**	< 0.9	**690**	3,700	**1.20**	1.90	120	11	**130**
M04-533-02	297	307	Ks-wa'ca	greywacke/siltstone	UG	21	**160**	**700**	40,000	**< 0.1**	**32,000**	**35**	15,000	350	**1.7**	19,000	**88**	8.7	**< 0.8**	**< 0.7**	1.3	240	3,400	0.49	2.00	110	10	**110**
M05-559A-02	180	190	Kwa-s	greywacke/siltstone	UG	20	**160**	**68**	44,000	**< 0.1**	**28,000**	**47**	17,000	330	**1.5**	17,000	71	12	**< 0.8**	**< 0.7**	< 0.9	300	1,100	0.52	1.80	100	8.3	**88**
M05-571A-01	435	445	Ks-wa	greywacke/siltstone	UG	13	63	22	55,000	**< 0.1**	**28,000**	**28**	12,000	300	0.9	15,000	41	8.4	**< 0.8**	**< 0.7**	< 0.9	220	2,200	0.47	1.80	66	7.1	56
M05-571A-02	335	344	Kwa-s'ak	greywacke/siltstone	UG	20	**120**	28	53,000	**< 0.1**	**30,000**	**33**	15,000	290	**1.5**	15,000	72	7.5	**< 0.8**	**< 0.7**	< 0.9	210	3,200	0.50	1.80	110	7.6	**75**
M06-604-01	336	344	Ks	greywacke/siltstone	UG	20	**120**	43	50,000	**< 0.1**	**29,000**	**33**	17,000	280	**1.4**	21,000	70	14	**< 0.8**	**< 0.7**	1.3	230	3,000	0.46	1.80	110	8.1	**85**
M06-604-02	286	295	Kwa-s'c	greywacke/siltstone	UG	13	72	35	**64,000**	**< 0.1**	**25,000**	**25**	12,000	310	0.9	14,000	45	8.2	**< 0.8**	**< 0.7**	< 0.9	330	2,500	0.39	1.30	72	6.4	59
M06-604-03	245	255	Kwa	greywacke/siltstone	UG	18	**110**	48	32,000	**< 0.1**	20,000	**21**	10,000	320	1.2	21,000	57	**16**	**< 0.8**	**< 0.7**	< 0.9	350	1,900	0.36	1.80	72	7.7	68
M07-645-01	250	260	Kwa-s	greywacke/siltstone	UG	20	**130**	54	45,000	**< 0.1**	**27,000**	**41**	16,000	310	**1.5**	17,000	71	13	**< 0.8**	**< 0.7**	< 0.9	310	2,200	0.50	1.90	110	8.5	**89**
M07-663-01	417	427	Ks'ak	greywacke/siltstone	UG	20	**120**	**63**	**59,000**	**< 0.1**	**27,000**	**34**	16,000	360	**1.4**	16,000	69	8.7	**0.9**	**< 0.7**	< 0.9	210	3,300	0.47	1.70	110	9.5	**86**
M07-663-02	351	357	Kwa'ak'po	greywacke/siltstone	UG	20	**130**	41	52,000	**< 0.1**	**30,000**	**39**	15,000	300	**1.3**	15,000	71	**36**	**< 0.8**	**< 0.7**	< 0.9	310	3,500	0.57	1.80	120	8.8	**90**
M07-663-03	280	289	Kwa-s	greywacke/siltstone	UG	22	**110**	59	53,000	**< 0.1**	**23,000**	**38**	16,000	420	1.0	17,000	64	12	**< 0.8**	**< 0.7**	< 0.9	270	3,300	0.37	1.60	120	8.4	**84**
M07-719-01	351	360	Kwa-s	greywacke/siltstone	UG	19	**120**	33	33,000	**< 0.1**	**27,000**	19	11,000	220	1.2	18,000	58	13	**< 0.8**	**< 0.7**	< 0.9	330	2,700	0.59	1.80	81	8.7	51
M98-313-01	305	315	Ks-wa	greywacke/siltstone	UG	18	**120**	25	46,000	**< 0.1**	**25,000**	**32**	14,000	260	1.2	18,000	65	14	**< 0.8**	**< 0.7**	< 0.9	290	3,200	0.48	1.60	110	7.4	67
M98-313-02	272	280	Kwa	greywacke/siltstone	UG	20	**160**	**66**	45,000	**< 0.1**	**33,000**	**44**	16,000	300	**1.9**	14,000	76	**15**	**< 0.8**	**< 0.7**	< 0.9	340	2,500	0.53	1.90	110	9.8	**97**
M99-327-01	195	205	Kwa'ak	greywacke/siltstone	UG	17	**120**	**70**	40,000	**< 0.1**	**27,000**	**26**	12,000	310	1.1	17,000	69	11	**< 0.8**	**< 0.7**	< 0.9	260	2,600	0.52	1.60	87	7.8	62
minimum						8.1	35	22	32,000	<0.1	17,000	19	8,400	220	0.5	9,900	22	7.5	<0.8	<0.7	<0.9	210	1,100	0.31	1.00	37	6.0	51
maximum						23	160	700	110,000	<0.1	37,000	47	19,000	480	2.0	21,000	88	130	0.9	<0.7	1.3	690	3,700	1.20	2.10	120	11	130
median						20	120	46	48,000	nc	27,000	33	15,000	310	1.3	17,000	70	13	nc	nc	nc	295	2,650	0.49	1.80	110	8.3	84
average						18	118	84	51,000	nc	27,222	32	14,189	322	1.3	16,717	65	20	nc	nc	nc	302	2,667	0.51	1.73	96	8.3	80
standard deviation						3.6	33	155	17,160	nc	4,609	8.4	2,762	57	0.4	2,818	16	28	nc	nc	nc	108	730	0.19	0.25	23	1.3	20
75th percentile						20	130	65	54,500	nc	29,750	39	16,000	338	1.5	18,000	72	15	nc	nc	nc	330	3,275	0.52	1.88	110	8.8	89
M03-496-02	281	290	Nl-m-wa	iron formation	UG	13	55	15	**100,000**	**< 0.1**	14,000	**28**	10,000	340	**3.6**	5,800	33	12	**< 0.8**	**< 0.7**	< 0.9	210	1,800	0.26	1.40	51	7.1	63
M04-526-01	216	225	Nm-l-j	iron formation	UG	6.4	25	31	**160,000**	**< 0.1**	1,600	4.0	7,300	330	0.4	62	13	11	**< 0.8**	**0.7**	< 0.9	270	690	0.04	0.55	16	6.0	41
M07-649-01	280	290	Nm-l	iron formation	UG	5.1	19	41	**180,000**	**< 0.1**	2,400	6.0	7,600	460	0.6	3,300	8.3	4.6	**< 0.8**	**1.0**	< 0.9	170	570	0.05	0.40	21	4.4	37
M99-280-01	189	197	Nj-m	iron formation	UG	4.4	77	11	**230,000**	**< 0.1**	5,900	5.0	8,900	310	0.8	330	15	7.3	**< 0.8**	**< 0.7**	< 0.9	150	790	0.12	0.71	19	5.5	41
minimum						4.4	19	11	100,000	<0.1	1,600	4.0	7,300	310	0.4	62	8.3	4.6	<0.8	<0.7	<0.9	150	570	0.04	0.40	16	4.4	37
maximum						13	77	41	230,000	<0.1	14,000	28	10,000	460	3.6	5,800	33	12	<0.8	1.0	<0.9	270	1,800	0.26	1.40	51	7.1	63
median						5.8	40	23	170,000	nc	4,150	5.5	8,250	335	0.7	1,815	14	9.2	nc	nc	nc	190	740	0.09	0.63	20	5.8	41
average						7.2	44	25	167,500	nc	5,975	11	8,450	360	1.4	2,373	17	8.7	nc	nc	nc	200	963	0.12	0.77	27	5.8	46
standard deviation						3.9	27	14	53,774	nc	5,666	12	1,245	68	1.5	2,715	11	3.4	nc	nc	nc	53	566	0.10	0.44	16	1.1	12
75th percentile						8.1	61	34	192,500	nc	7,925	12	9,175	370	1.5	3,925	20	11	nc	nc	nc	225	1,043	0.16	0.88	29	6.3	47

Notes:

* Price (1997)

Bolded values indicate values above typical crustal abundance

Shaded values indicate values above five times typical crustal abundance

Table 3.3 Waste Rock ABA Testing Results
Tiriganiaq Deposit, Meliadine West Property, Nunavut
Comaplex Minerals Corporation

Sample Number	Interval from	Interval to	Lithology code[1]	Lithology Name	Location	Paste pH	S(T) %	S(SO4) %	S(S2-) %	TC %	CO_3 %	TIC %	CaNP	NP	AP	Net NP	NPR	ARD POTENTIAL[2]
GT08-04-01	97	102	Mv'ca'c	mafic volcanic	OP	8.9	0.36	0.17	0.19	2.5	12	2.4	203	202	6.0	196	34	non PAG
GT08-04-02	80	84	Mv'ser'ca	mafic volcanic	OP	9.0	0.05	0.02	0.03	3.9	19	3.9	322	289	0.9	288	306	non PAG
GT08-04-03	69	73	Mv'ak'ser'po	mafic volcanic	OP	8.4	3.23	0.80	2.43	4.1	18	3.6	299	281	76	205	4	non PAG
M00-474-01	110	114	Mv'ca	mafic volcanic	OP	9.0	0.12	0.02	0.10	3.1	15	3.0	253	251	3.2	248	78	non PAG
M07-678-01	47	52	Mv'ak	mafic volcanic	OP	8.8	0.10	0.05	0.05	3.5	17	3.3	275	245	1.5	244	161	non PAG
M98-297-01	111	114	Mv'ak'as	mafic volcanic	OP	8.8	0.46	0.19	0.27	3.9	19	3.8	315	360	8.4	351	43	non PAG
M99-340-01	103	108	Mv'ak'ca	mafic volcanic	OP	9.0	0.33	0.19	0.14	3.5	16	3.2	268	198	4.5	193	44	non PAG
M99-341-01	81	84	Mv'qak	mafic volcanic	OP	9.0	0.55	0.36	0.18	4.0	18	3.6	303	282	5.7	276	49	non PAG
			minimum			8.4	0.05	0.02	0.03	2.5	12	2.4	203	198	0.9	193	4	
			maximum			9.0	3.23	0.80	2.43	4.1	19	3.9	322	360	76	351	306	
			median			8.9	0.35	0.18	0.16	3.7	17	3.4	287	266	5.1	246	47	
			average			8.8	0.65	0.23	0.42	3.6	17	3.4	280	264	13	250	90	
			standard deviation			0.2	1.06	0.26	0.81	0.5	2.4	0.5	39	52	25	54	99	
			75th percentile			9.0	0.48	0.23	0.21	3.9	18	3.7	306	284	6.6	279	99	
GT08-01-01	50	54	Kwa	greywacke/siltstone	OP	9.3	0.15	0.06	0.08	0.6	2.3	0.5	39	42	2.6	40	16	non PAG
GT08-01-02	25	29	Kwa-s	greywacke/siltstone	OP	9.1	0.20	0.11	0.09	0.6	2.3	0.5	38	38	2.9	35	13	non PAG
GT08-02-01	65	70	Kwa-s'ser'ak	greywacke/siltstone	OP	9.1	0.17	0.09	0.08	1.0	3.8	0.8	64	65	2.6	62	25	non PAG
M00-474-02	80	85	Kwa'ak'as	greywacke/siltstone	OP	9.0	0.40	0.16	0.24	3.9	18	3.7	307	392	7.4	384	53	non PAG
M00-474-04	45	50	Kwa-s'c	greywacke/siltstone	OP	9.2	0.09	0.04	0.05	1.0	4.4	0.9	74	75	1.5	73	49	non PAG
M00-474-05	21	25	Kwa'c'ca	greywacke/siltstone	OP	9.0	0.26	0.09	0.16	0.6	2.1	0.4	35	42	5.1	37	8.2	non PAG
M03-513-01	20	25	Kwa	greywacke/siltstone	OP	9.4	0.19	0.09	0.10	0.9	3.4	0.7	57	55	3.1	52	18	non PAG
M07-660-01	81	85	Kwa-s	greywacke/siltstone	OP	8.9	0.24	0.13	0.11	1.1	4.7	0.9	78	75	3.5	72	22	non PAG
M07-660-02	56	60	Ks-wa	greywacke/siltstone	OP	9.1	0.18	0.06	0.12	0.5	2.1	0.4	35	41	3.9	37	11	non PAG
M07-678-02	36	40	Kwa-s'ak	greywacke/siltstone	OP	9.0	0.17	0.07	0.10	1.3	5.7	1.1	95	87	3.0	84	29	non PAG
M07-678-03	25	30	Kwa-s'ak'as	greywacke/siltstone	OP	9.0	0.20	0.08	0.12	0.7	3.2	0.6	54	46	3.8	42	12	non PAG
M07-704-01	41	46	Kwa-s	greywacke/siltstone	OP	9.2	0.22	0.04	0.18	1.0	4.2	0.8	70	65	5.8	59	11	non PAG
M07-704-02	25	25	Kwa-s	greywacke/siltstone	OP	9.4	0.18	0.12	0.06	0.6	2.5	0.5	42	41	1.8	39	22	non PAG
M07-705-01	46	50	Kwa	greywacke/siltstone	OP	9.6	0.32	0.18	0.14	0.7	2.9	0.6	49	50	4.4	45	11	non PAG
M07-710-02	26	30	Kwa-s'c	greywacke/siltstone	OP	9.2	0.06	0.01	0.05	1.1	4.8	1.0	80	82	1.6	80	52	non PAG
M07-711-01	25	30	Kwa-s-l-j	greywacke/siltstone	OP	8.8	0.20	0.08	0.11	1.0	4.4	0.9	73	74	3.6	70	21	non PAG
M07-713-01	80	86	Kwa-s'c	greywacke/siltstone	OP	9.0	0.15	0.09	0.06	1.0	4.1	0.8	69	62	1.9	60	32	non PAG
M07-713-02	45	49	Kwa-s	greywacke/siltstone	OP	9.1	0.31	0.19	0.11	0.5	1.9	0.4	32	36	3.5	32	10	non PAG
M95-17-01	61	66	Kwa	greywacke/siltstone	OP	9.5	0.20	0.16	0.04	0.5	1.9	0.4	31	30	1.2	29	26	non PAG
M95-17-02	30	35	Kwa'ak	greywacke/siltstone	OP	9.6	0.20	0.16	0.03	0.5	1.7	0.3	29	32	1.0	31	33	non PAG
M98-194-01	70	75	Kwa-s'ak	greywacke/siltstone	OP	8.9	0.23	0.11	0.13	1.2	5.0	1.0	84	75	3.9	72	19	non PAG
M98-194-02	55	59	Kwa-m-j	greywacke/siltstone	OP	8.9	0.15	0.07	0.08	1.0	4.1	0.8	69	66	2.6	63	25	non PAG
M98-194-03	26	29	Kwa	greywacke/siltstone	OP	9.2	0.21	0.11	0.10	0.5	1.9	0.4	32	35	3.2	32	11	non PAG
M98-269-01	66	70	Kwa-s'ak	greywacke/siltstone	OP	8.9	0.10	0.04	0.06	0.9	3.9	0.8	66	62	1.9	60	33	non PAG
M98-269-02	46	50	Kwa	greywacke/siltstone	OP	9.1	0.07	0.06	< 0.01	0.7	3.3	0.7	56	56	0.3	55	179	non PAG
M98-269-03	20	24	Kwa-s	greywacke/siltstone	OP	9.2	0.25	0.16	0.09	0.6	2.7	0.5	45	48	2.7	45	18	non PAG
M98-297-02	76	80	Ks-wa	greywacke/siltstone	OP	9.2	0.05	< 0.01	0.04	0.6	2.8	0.6	47	48	1.3	47	37	non PAG
M98-297-04	25	29	Ks-wa	greywacke/siltstone	OP	9.1	0.23	0.18	0.05	0.4	1.6	0.3	27	30	1.6	29	20	non PAG
M98-316-01	25	29	Kwa	greywacke/siltstone	OP	9.5	0.39	0.22	0.17	1.0	4.4	0.9	74	68	5.5	62	12	non PAG
M99-339-01	55	59	Kwa-s'ak'as	greywacke/siltstone	OP	9.2	0.19	0.10	0.09	0.9	3.3	0.7	55	104	2.9	101	36	non PAG
M99-340-03	26	30	Kwa	greywacke/siltstone	OP	9.5	0.21	0.15	0.06	0.5	1.7	0.3	29	33	1.9	31	17	non PAG
M99-341-02	30	35	Kwa'ak	greywacke/siltstone	OP	9.3	0.39	0.10	0.29	1.1	4.6	0.9	77	75	9.0	66	8.4	non PAG
M99-345-01	81	85	Kwa'ak	greywacke/siltstone	OP	9.0	0.34	0.15	0.19	1.1	4.7	0.9	78	71	5.9	66	12	non PAG
M99-346-02	70	75	Kwa	greywacke/siltstone	OP	9.6	0.23	0.15	0.08	0.5	1.9	0.4	31	32	2.6	29	12	non PAG
M99-349-01	65	70	Kwa'ak	greywacke/siltstone	OP	9.2	0.66	0.38	0.27	0.9	3.2	0.6	54	58	8.5	50	7	non PAG
M99-349-02	40	45	Kwa-s'c	greywacke/siltstone	OP	9.1	0.11	0.03	0.08	1.4	5.5	1.1	93	86	2.4	84	36	non PAG
M99-350-02	50	55	Kwa	greywacke/siltstone	OP	9.5	0.19	0.12	0.07	0.5	2.1	0.4	35	31	2.1	29	15	non PAG
M99-403-01	75	80	Kwa'ak	greywacke/siltstone	OP	9.0	0.55	0.18	0.38	3.3	16	3.2	263	242	12	231	21	non PAG
M99-403-02	70	75	Ks'c	greywacke/siltstone	OP	9.2	0.21	0.04	0.17	1.0	4.2	0.8	71	64	5.3	58	12	non PAG
M99-403-03	51	54	Kwa'ak'as	greywacke/siltstone	OP	9.3	0.13	0.06	0.06	0.8	3.6	0.7	60	49	1.9	47	26	non PAG
M99-403-04	25	29	Kwa	greywacke/siltstone	OP	9.5	0.23	0.10	0.13	0.7	2.8	0.6	47	49	4.1	45	12	non PAG
M99-404-01	101	105	Ks-wa	greywacke/siltstone	OP	9.4	0.10	0.04	0.06	0.9	3.8	0.8	63	60	1.8	58	34	non PAG
M99-404-02	80	84	Kwa'ak	greywacke/siltstone	OP	9.5	0.29	0.07	0.22	0.7	2.9	0.6	48	49	6.9	42	7.0	non PAG
M99-404-04	30	34	Kwa	greywacke/siltstone	OP	9.5	0.20	0.08	0.11	0.5	2.1	0.4	36	37	3.5	33	11	non PAG
			minimum			8.8	0.05	0.01	0.03	0.4	1.6	0.3	27	30	0.3	29	7	
			maximum			9.6	0.66	0.38	0.38	3.9	18	3.7	307	392	12	384	179	
			median			9.2	0.20	0.10	0.10	0.8	3.3	0.7	55	55	3.0	51	19	
			average			9.2	0.22	0.11	0.12	0.9	3.9	0.8	66	67	3.6	64	25	
			standard deviation			0.2	0.12	0.07	0.07	0.6	3.1	0.6	52	60	2.3	59	27	
			75th percentile			9.4	0.24	0.15	0.14	1.0	4.4	0.9	73	72	4.2	66	30	

Notes:

carbonate neutralization potential (CaNP), neutralization potential (NP) acid potential (AP), and Net NP reported in t $CaCO^3$ per 1000 t

S(T)=total sulphur; S(SO4)=sulphate sulphur; S(S2-)=sulphide sulphur; TIC=total inorganic carbon

1- lithology code provided by Comaplex

2- ARD potential based on INAC (1992)

Table 3.3 Waste Rock ABA Testing Results
Tiriganiaq Deposit, Meliadine West Property, Nunavut
Comaplex Minerals Corporation

Sample Number	Interval		Lithology		Location	Paste pH	S(T)	S(SO4)	S(S2-)	TC	CO_3	TIC	CaNP	NP	AP	Net NP	NPR	ARD POTENTIAL[2]
	from	to	code[1]	Name			%	%	%	%	%	%						
M03-496-01	360	370	Ks-l-j'ak'as	greywacke/siltstone	UG	8.7	0.82	0.25	0.56	1.8	3.9	0.8	65	66	18	49	4	non PAG
M04-527-01	270	280	Kwa-s'ak	greywacke/siltstone	UG	9.2	0.24	0.16	0.08	0.6	2.2	0.4	37	45	2.5	42	18	non PAG
M04-533-01	380	390	Ks-wa'ser	greywacke/siltstone	UG	9.4	0.18	0.11	0.06	1.1	4.8	1.0	81	76	2.0	74	38	non PAG
M04-533-02	297	307	Ks-wa'ca	greywacke/siltstone	UG	9.0	0.17	0.12	0.05	0.5	2.3	0.5	38	43	1.7	41	26	non PAG
M05-559A-02	180	190	Kwa-s	greywacke/siltstone	UG	9.4	0.14	0.09	0.05	0.4	1.7	0.3	28	37	1.5	35	25	non PAG
M05-571A-01	435	445	Ks-wa	greywacke/siltstone	UG	9.3	0.09	0.05	0.04	0.8	3.1	0.6	52	54	1.3	52	42	non PAG
M05-571A-02	335	344	Kwa-s'ak	greywacke/siltstone	UG	9.3	0.03	0.03	< 0.01	0.5	2.2	0.4	37	30	0.3	30	97	non PAG
M06-604-01	336	344	Ks	greywacke/siltstone	UG	9.2	0.07	0.05	0.02	0.4	1.5	0.3	24	20	0.7	19	31	non PAG
M06-604-02	286	295	Kwa-s'c	greywacke/siltstone	UG	9.1	0.17	0.11	0.06	0.9	3.9	0.8	65	60	1.9	58	31	non PAG
M06-604-03	245	255	Kwa	greywacke/siltstone	UG	9.3	0.32	0.24	0.08	0.8	3.1	0.6	52	56	2.5	53	22	non PAG
M07-645-01	250	260	Kwa-s	greywacke/siltstone	UG	9.2	0.16	0.12	0.05	0.5	2.1	0.4	35	36	1.5	35	24	non PAG
M07-663-01	417	427	Ks'ak	greywacke/siltstone	UG	9.2	0.31	0.19	0.12	0.6	2.3	0.5	38	36	3.9	32	9.3	non PAG
M07-663-02	351	357	Kwa'ak'po	greywacke/siltstone	UG	9.1	0.11	0.07	0.04	0.7	2.9	0.6	48	44	1.3	42	34	non PAG
M07-663-03	280	289	Kwa-s	greywacke/siltstone	UG	9.1	0.21	0.14	0.06	0.9	3.5	0.7	59	60	1.9	58	31	non PAG
M07-719-01	351	360	Kwa-s	greywacke/siltstone	UG	9.2	0.23	0.14	0.08	1.0	4.4	0.9	73	70	2.6	68	27	non PAG
M98-313-01	305	315	Ks-wa	greywacke/siltstone	UG	9.1	0.10	0.07	0.02	0.7	3.1	0.6	52	47	0.8	46	62	non PAG
M98-313-02	272	280	Kwa	greywacke/siltstone	UG	9.4	0.17	0.12	0.05	0.4	1.3	0.3	22	26	1.5	25	18	non PAG
M99-327-01	195	205	Kwa'ak	greywacke/siltstone	UG	9.2	0.31	0.22	0.09	0.9	3.5	0.7	58	56	3.0	53	19	non PAG
minimum						8.7	0.03	0.03	<0.01	0.4	1.3	0.3	22	20	0.3	19	4	
maximum						9.4	0.82	0.25	0.56	1.8	4.8	1.0	81	76	18	74	97	
median						9.2	0.17	0.12	0.06	0.7	3.0	0.6	50	46	1.8	44	26	
average						9.1	0.21	0.13	0.09	0.8	2.9	0.6	48	48	2.7	45	31	
standard deviation						0.2	0.17	0.06	0.12	0.3	1.0	0.2	17	16	3.8	15	21	
75^{th} percentile						9.3	0.23	0.16	0.08	0.9	3.5	0.7	59	59	2.5	53	33	
M03-496-02	281	290	Nl-m-wa	iron formation	UG	8.6	0.34	0.12	0.22	1.5	5.3	1.1	89	86	7.0	79	12	non PAG
M04-526-01	216	225	Nm-l-j	iron formation	UG	8.4	0.78	0.29	0.49	1.8	7.4	1.5	123	115	15	99	7	non PAG
M07-649-01	280	290	Nm-l	iron formation	UG	8.3	0.85	0.42	0.42	3.2	4.8	1.0	81	80	13	67	6	non PAG
M99-280-01	189	197	Nj-m	iron formation	UG	8.8	0.21	0.11	0.10	1.0	3.8	0.8	63	49	3.2	46	15	non PAG
minimum						8.3	0.21	0.11	0.10	1.0	3.8	0.8	63	49	3.2	46	6	
maximum						8.8	0.85	0.42	0.49	3.2	7.4	1.5	123	115	15	99	15	
median						8.5	0.56	0.21	0.32	1.6	5.1	1.0	85	83	10	73	10	
average						8.5	0.55	0.24	0.31	1.9	5.3	1.1	89	82	10	73	10	
standard deviation						0.2	0.32	0.15	0.18	0.9	1.5	0.3	25	27	5.6	22	4	
75^{th} percentile						8.6	0.80	0.32	0.44	2.2	5.8	1.2	98	93	14	84	13	

Notes:

carbonate neutralization potential (CaNP), neutralization potential (NP) acid potential (AP), and Net NP reported in t $CaCO^3$ per 1000 t

S(T)=total sulphur; S(SO4)=sulphate sulphur; S(S2-)=sulphide sulphur; TIC=total inorganic carbon

1- lithology code provided by Comaplex

2- ARD potential based on INAC (1992)

Table 3.5 Waste Rock SFE Leach Test Results
Tiriganiaq Deposit, Meliadine West Property, Nunavut
Comaplex Minerals Corporation

Sample Number	Interval from	Interval to	Lithology code	Lithology Name	Location	pH	Alkalinity	Conductivity	Hardness	Cl	SO4	Ag	Al	As	B	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg
CCME (CEQG) (freshwater aquatic life)[1] (mg/L)						**6.5 - 9.0**						**0.0001**	**0.005 - 0.1[4]**	**0.005**					**0.000017**		**0.001 / 0.0089[5]**	**0.002 - 0.004[6]**	**0.3**	**0.000026**
Metal Mine Effluent Regulation (MMER)[2] (mg/L)						**6.0 - 9.5**								**0.50**								**0.30**		
							mg/L (CaCO$_3$)	uS/cm	mg/L	mg/L	mg/L	mg/L	mg/L[4]	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L[6]	mg/L	mg/L	mg/L[6]	mg/L	mg/L
GT08-04-02	80	84	Mv'ser'ca	mafic volcanic	OP	8.4	78	188	52	11	2.5	0.00003	**0.69**	**0.033**	0.02	0.00003	0.00002	11	**0.000021**	0.00011	< 0.0005	< 0.0005	< 0.01	< 0.0001
GT08-04-03	69	73	Mv'ak'ser'po	mafic volcanic	OP	8.3	106	357	121	23	19	0.00002	**0.21**	**0.113**	0.03	0.00002	0.00002	31	0.000014	0.00016	< 0.0005	< 0.0005	< 0.01	< 0.0001
M00-474-01	110	114	Mv'ca	mafic volcanic	OP	8.2	40	77	31	0.8	0.7	0.00001	**1.00**	**0.011**	0.01	< 0.00002	0.00001	9.8	0.000006	0.00005	< 0.0005	< 0.0005	< 0.01	< 0.0001
M07-678-01	47	52	Mv'ak	mafic volcanic	OP	8.2	50	100	62	2.3	0.9	< 0.00001	**0.51**	**0.021**	0.01	< 0.00002	< 0.00001	12	< 0.000003	0.00010	< 0.0005	0.0005	< 0.01	< 0.0001
M99-340-01	103	108	Mv'ak'ca	mafic volcanic	OP	8.4	77	143	58	0.5	1.2	< 0.00001	**0.65**	**0.013**	0.01	< 0.00002	< 0.00001	13	< 0.000003	0.00006	< 0.0005	< 0.0005	< 0.01	< 0.0001
M99-341-01	81	84	Mv'qak	mafic volcanic	OP	8.4	77	160	62	1.0	1.7	< 0.00001	**0.64**	**0.025**	0.01	< 0.00002	< 0.00001	14	< 0.000003	0.00009	< 0.0005	< 0.0005	< 0.01	< 0.0001
minimum						8.2	40	77	31	0.5	0.7	< 0.00001	0.21	0.011	0.01	< 0.00002	< 0.00001	9.8	< 0.000003	0.00005	< 0.0005	< 0.0005	< 0.01	<0.0001
maximum						8.4	106	357	121	23	19	0.00003	1.00	0.113	0.03	0.00003	0.00002	31	0.000021	0.00016	< 0.0005	0.0005	< 0.01	<0.0001
median						8.3	77	152	60	1.7	1.5	0.00002	0.65	0.023	0.01	nc	0.00002	12	0.000014	0.00010	nc	nc	nc	nc
average						8.3	71	171	64	6.4	4.3	0.00002	0.62	0.036	0.02	nc	0.00002	15	0.000014	0.00009	nc	nc	nc	nc
standard deviation						0.1	23	100	30	9.0	7.2	0.00001	0.26	0.039	0.01	nc	0.00001	7.9	0.000008	0.00004	nc	nc	nc	nc
75th percentile						8.4	78	181	62	8.8	2.3	0.00003	0.68	0.031	0.02	nc	0.00002	13	0.000018	0.00011	nc	nc	nc	nc
GT08-01-02	25	29	Kwa-s	greywacke/siltstone	OP	8.1	48	201	41	33	4.6	0.00008	**0.54**	**0.083**	0.10	0.00008	0.00007	11	**0.000067**	0.00017	< 0.0005	< 0.0005	< 0.01	< 0.0001
GT08-02-01	65	70	Kwa-s'ser'ak	greywacke/siltstone	OP	8.3	57	184	37	20	5.2	0.00005	**0.56**	**0.021**	0.10	0.00006	0.00005	10	**0.000042**	0.00009	< 0.0005	< 0.0005	< 0.01	< 0.0001
M00-474-04	45	50	Kwa-s'c	greywacke/siltstone	OP	8.3	39	88	30	1.1	2.0	< 0.00001	**0.71**	**0.009**	0.08	< 0.00002	< 0.00001	9.9	0.000006	0.00004	< 0.0005	< 0.0005	0.01	< 0.0001
M07-660-02	56	60	Ks-wa	greywacke/siltstone	OP	8.3	56	118	23	1.5	2.0	< 0.00001	**1.33**	**0.008**	0.01	< 0.00002	< 0.00001	7.9	0.000003	0.00004	< 0.0005	< 0.0005	< 0.01	< 0.0001
M07-704-01	41	46	Kwa-s	greywacke/siltstone	OP	8.3	50	140	27	5.9	5.4	0.00001	**0.87**	**0.122**	0.09	< 0.00002	< 0.00001	8.4	0.000008	0.00005	< 0.0005	< 0.0005	< 0.01	< 0.0001
M07-704-02	25	25	Kwa-s	greywacke/siltstone	OP	8.3	51	132	28	7.5	4.4	< 0.00001	**0.76**	**0.141**	0.10	< 0.00002	< 0.00001	7.6	0.000003	0.00007	< 0.0005	< 0.0005	< 0.01	< 0.0001
M07-710-02	26	30	Kwa-s'c	greywacke/siltstone	OP	8.2	51	110	35	3.4	2.4	0.00002	**0.74**	**0.007**	0.07	0.00003	0.00002	12	0.000016	0.00005	< 0.0005	< 0.0005	< 0.01	< 0.0001
M07-713-01	80	86	Kwa-s'c	greywacke/siltstone	OP	8.3	58	120	37	2.9	1.2	< 0.00001	**0.87**	**0.020**	0.01	< 0.00002	< 0.00001	11	< 0.000003	0.00004	< 0.0005	< 0.0005	< 0.01	< 0.0001
M07-713-02	45	49	Kwa-s	greywacke/siltstone	OP	8.3	42	93	24	3.4	1.2	< 0.00001	**1.17**	**0.009**	0.01	< 0.00002	< 0.00001	7.1	< 0.000003	0.00003	< 0.0005	< 0.0005	0.01	< 0.0001
M95-17-01	61	66	Kwa	greywacke/siltstone	OP	8.2	45	104	26	0.8	4.2	< 0.00001	**0.83**	**0.019**	0.17	< 0.00002	< 0.00001	8.5	< 0.000003	0.00005	< 0.0005	< 0.0005	< 0.01	< 0.0001
M95-17-02	30	35	Kwa'ak	greywacke/siltstone	OP	8.0	44	101	24	0.6	5.7	< 0.00001	**0.60**	**0.032**	0.17	< 0.00002	< 0.00001	7.8	< 0.000003	0.00006	< 0.0005	< 0.0005	< 0.01	< 0.0001
M98-194-01	70	75	Kwa-s'ak	greywacke/siltstone	OP	8.2	54	109	42	1.2	3.2	< 0.00001	**0.95**	**0.070**	0.01	< 0.00002	< 0.00001	13	0.000004	0.00007	< 0.0005	< 0.0005	< 0.01	< 0.0001
M98-194-02	55	59	Kwa-m-j	greywacke/siltstone	OP	8.1	51	104	39	1.3	1.6	< 0.00001	**0.81**	**0.011**	0.01	< 0.00002	< 0.00001	13	< 0.000003	0.00004	< 0.0005	< 0.0005	0.01	< 0.0001
M98-194-03	26	29	Kwa	greywacke/siltstone	OP	8.5	79	149	28	1.1	3.2	< 0.00001	**1.05**	**0.149**	0.01	< 0.00002	< 0.00001	8.7	< 0.000003	0.00005	< 0.0005	< 0.0005	< 0.01	< 0.0001
M99-339-01	55	59	Kwa-s'ak'as	greywacke/siltstone	OP	8.2	61	124	43	1.3	2.2	< 0.00001	**0.58**	**0.028**	0.09	< 0.00002	< 0.00001	13	< 0.000003	0.00004	< 0.0005	< 0.0005	< 0.01	< 0.0001
M99-340-03	26	30	Kwa	greywacke/siltstone	OP	8.2	43	92	25	0.4	3.1	< 0.00001	**0.88**	**0.219**	0.09	< 0.00002	< 0.00001	8.1	< 0.000003	0.00005	< 0.0005	< 0.0005	0.01	< 0.0001
M99-341-02	30	35	Kwa'ak	greywacke/siltstone	OP	8.4	53	116	36	0.6	3.6	< 0.00001	**0.64**	**0.173**	0.09	< 0.00002	< 0.00001	10	< 0.000003	0.00007	< 0.0005	< 0.0005	< 0.01	< 0.0001
M99-346-02	70	75	Kwa	greywacke/siltstone	OP	8.0	49	109	26	0.8	5.0	< 0.00001	**0.45**	**0.032**	0.22	< 0.00002	< 0.00001	7.8	< 0.000003	0.00008	0.00050	0.0009	0.02	< 0.0001
M99-349-01	65	70	Kwa'ak	greywacke/siltstone	OP	8.2	61	146	50	1.0	5.2	0.00001	**0.50**	**0.017**	0.09	< 0.00002	0.00001	15	0.000012	0.00005	< 0.0005	< 0.0005	< 0.01	< 0.0001
M99-349-02	40	45	Kwa-s'c	greywacke/siltstone	OP	8.3	68	145	50	1.7	4.2	< 0.00001	**0.47**	0.004	0.09	< 0.00002	< 0.00001	14	< 0.000003	0.00005	< 0.0005	< 0.0005	< 0.01	< 0.0001
M99-403-02	70	75	Ks'c	greywacke/siltstone	OP	8.2	56	116	38	1.4	2.6	**0.00016**	**0.57**	**0.071**	0.07	0.00016	0.00014	11	**0.000139**	0.00018	< 0.0005	< 0.0005	< 0.01	< 0.0001
M99-403-03	51	54	Kwa'ak'as	greywacke/siltstone	OP	8.2	55	118	36	1.2	1.8	0.00004	**0.68**	**0.051**	0.09	0.00006	0.00004	11	**0.000041**	0.00007	< 0.0005	< 0.0005	< 0.01	< 0.0001
M99-404-04	30	34	Kwa	greywacke/siltstone	OP	8.2	42	92	26	0.7	3.8	0.00004	**0.94**	**0.033**	0.08	0.00005	0.00004	8.2	**0.000032**	0.00008	< 0.0005	< 0.0005	< 0.01	< 0.0001
minimum						8.0	39	88	23	0.4	1.2	< 0.00001	0.45	0.004	0.01	< 0.00002	< 0.00001	7.1	< 0.000003	0.00003	< 0.0005	< 0.0005	< 0.01	<0.0001
maximum						8.5	79	201	50	33	5.7	0.00016	1.33	0.219	0.22	0.00016	0.00014	15	0.000139	0.00018	0.00050	0.0009	0.02	<0.0001
median						8.2	51	116	35	1.3	3.2	0.00004	0.74	0.032	0.09	0.00006	0.00004	10	0.000014	0.00005	nc	nc	0.01	nc
average						8.2	53	122	33	4.0	3.4	0.00005	0.76	0.058	0.08	0.00007	0.00005	10	0.000031	0.00007	nc	nc	0.01	nc
standard deviation						0.1	9	28	8	7.6	1.4	0.00005	0.23	0.062	0.05	0.00005	0.00004	2.3	0.000040	0.00004	nc	nc	0.00	nc
75th percentile						8.3	57	136	39	3.2	4.5	0.00006	0.88	0.077	0.09	0.00008	0.00006	11	0.000041	0.00007	nc	nc	0.01	nc

Notes:

nc: not calculated

1. CEQG (2002) freshwater guidelines and MMER criteria are based on total metal concentrations.
2. MMER 2006 update. Maximum authorized monthly mean concentration.
3. Exceedances to freshwater CEQG's shown in bold type.
4. Freshwater aquatic life criterion for aluminum depends on pH, [Ca2+] and DOC. In this table, only the pH criterion has been applied to highlight exceedances.
5. Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
6. Freshwater aquatic life criterion or guideline is hardness dependant.

Table 3.5 Waste Rock SFE Leach Test Results
Tiriganiaq Deposit, Meliadine West Property, Nunavut
Comaplex Minerals Corporation

Sample Number	Interval from	Interval to	Lithology code	Lithology Name	Location	K	Li	Mg	Mn	Mo	Na	Ni	Pb	Sb	Se	Sn	Sr	Ti	Tl	U	V	W	Y	Zn
CCME (CEQG) (freshwater aquatic life)[1] (mg/L)										**0.073**		**0.025 - 0.15[6]**	**0.001 - 0.007[6]**		**0.001**				**0.0008**					**0.03**
Metal Mine Effluent Regulation (MMER)[2] (mg/L)												**0.50**	**0.20**											**0.50**
						mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L[6]	mg/L[6]	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
GT08-04-02	80	84	Mv'ser'ca	mafic volcanic	OP	4.5	0.004	5.8	0.0039	0.0004	17	0.0011	0.00005	0.0026	< 0.001	0.00007	0.021	< 0.0001	0.00003	0.00004	0.0009	0.00087	0.000024	< 0.001
GT08-04-03	69	73	Mv'ak'ser'po	mafic volcanic	OP	8.8	0.005	10	0.0399	0.0007	18	0.0015	0.00004	0.0040	< 0.001	0.00010	0.058	0.0005	< 0.00002	0.00008	0.0003	0.00071	0.000015	< 0.001
M00-474-01	110	114	Mv'ca	mafic volcanic	OP	2.2	< 0.001	1.5	0.0042	0.0001	3.0	0.0005	0.00002	0.0017	< 0.001	0.00011	0.030	< 0.0001	< 0.00002	0.00002	0.0008	0.00053	0.000011	< 0.001
M07-678-01	47	52	Mv'ak	mafic volcanic	OP	3.7	0.001	7.9	0.0018	0.0001	7.3	0.0011	0.00003	0.0011	< 0.001	0.00018	0.035	0.0001	< 0.00002	0.00004	0.0005	0.00035	0.000003	< 0.001
M99-340-01	103	108	Mv'ak'ca	mafic volcanic	OP	5.8	0.003	6.0	0.0037	0.0002	6.1	0.0004	< 0.00002	0.0052	< 0.001	0.00003	0.028	< 0.0001	< 0.00002	0.00002	0.0006	0.00053	0.000008	< 0.001
M99-341-01	81	84	Mv'qak	mafic volcanic	OP	6.0	0.003	6.7	0.0035	0.0003	6.7	0.0008	< 0.00002	0.0051	< 0.001	0.00002	0.030	0.0001	< 0.00002	0.00002	0.0007	0.00059	0.000003	< 0.001
			minimum			2.2	< 0.001	1.5	0.0018	0.0001	3.0	0.0004	< 0.00002	0.0011	< 0.001	0.00002	0.021	< 0.0001	< 0.00002	0.00002	0.0003	0.00035	0.000003	< 0.001
			maximum			8.8	0.005	10	0.0399	0.0007	18	0.0015	0.00005	0.0052	< 0.001	0.00018	0.058	0.0005	0.00003	0.00008	0.0009	0.00087	0.000024	< 0.001
			median			5.1	0.003	6.4	0.0038	0.0002	7.0	0.0010	0.00004	0.0033	nc	0.00009	0.030	0.0001	nc	0.00003	0.0006	0.00056	0.000010	nc
			average			5.2	0.003	6.4	0.0095	0.0003	9.7	0.0009	0.00004	0.0033	nc	0.00009	0.034	0.0002	nc	0.00004	0.0006	0.00060	0.000011	nc
			standard deviation			2.3	0.001	2.9	0.0149	0.0002	6.3	0.0004	0.00001	0.0017	nc	0.00006	0.013	0.0002	nc	0.00002	0.0002	0.00018	0.000008	nc
			75th percentile			6.0	0.004	7.6	0.0042	0.0004	14	0.0011	0.00004	0.0048	nc	0.00011	0.034	0.0003	nc	0.00004	0.0008	0.00068	0.000014	nc
GT08-01-02	25	29	Kwa-s	greywacke/siltstone	OP	11	0.003	3.2	0.0020	0.0006	19	0.0012	0.00009	0.0029	< 0.001	0.00006	0.071	0.0006	0.00007	0.00023	0.0024	0.00756	0.000077	0.007
GT08-02-01	65	70	Kwa-s'ser'ak	greywacke/siltstone	OP	11	0.002	2.7	0.0020	0.0007	17	0.0006	0.00011	0.0009	< 0.001	0.00011	0.053	0.0004	0.00005	0.00012	0.0006	0.00090	0.000056	0.008
M00-474-04	45	50	Kwa-s'c	greywacke/siltstone	OP	6.2	< 0.001	1.2	0.0015	0.0004	5.9	0.0003	0.00003	0.0014	< 0.001	0.00006	0.103	0.0003	< 0.00002	0.00006	0.0003	0.00059	0.000014	0.009
M07-660-02	56	60	Ks-wa	greywacke/siltstone	OP	9.4	< 0.001	0.8	0.0005	0.0005	3.4	0.0003	< 0.00002	0.0046	< 0.001	0.00003	0.039	0.0002	< 0.00002	0.00013	0.0017	0.00066	0.000007	< 0.001
M07-704-01	41	46	Kwa-s	greywacke/siltstone	OP	11	0.002	1.5	0.0020	0.0029	10	0.0008	0.00005	0.0042	< 0.001	0.00007	0.049	0.0004	< 0.00002	0.00016	0.0022	0.00064	0.000023	0.006
M07-704-02	25	25	Kwa-s	greywacke/siltstone	OP	11	0.002	2.1	0.0011	0.0010	11	0.0006	0.00003	0.0044	< 0.001	0.00003	0.041	0.0007	< 0.00002	0.00015	0.0026	0.00069	0.000022	0.006
M07-710-02	26	30	Kwa-s'c	greywacke/siltstone	OP	7.3	< 0.001	1.3	0.0017	0.0004	5.9	0.0003	0.00009	0.0017	< 0.001	0.00013	0.160	0.0001	< 0.00002	0.00007	0.0002	0.00067	0.000028	0.010
M07-713-01	80	86	Kwa-s'c	greywacke/siltstone	OP	11	0.001	2.4	0.0011	0.0004	5.3	0.0004	0.00004	0.0019	< 0.001	0.00003	0.044	0.0002	< 0.00002	0.00024	0.0005	0.00080	0.000007	< 0.001
M07-713-02	45	49	Kwa-s	greywacke/siltstone	OP	11	< 0.001	1.4	0.0005	0.0005	4.7	0.0002	0.00076	0.0044	< 0.001	0.00003	0.028	0.0005	< 0.00002	0.00011	0.0017	0.00050	0.000009	< 0.001
M95-17-01	61	66	Kwa	greywacke/siltstone	OP	7.1	0.001	1.0	0.0010	0.0006	6.6	0.0004	0.00002	0.0034	< 0.001	0.00009	0.052	0.0005	< 0.00002	0.00010	0.0018	0.00114	0.000014	0.007
M95-17-02	30	35	Kwa'ak	greywacke/siltstone	OP	6.6	0.002	1.2	0.0012	0.0006	7.4	0.0004	0.00004	0.0040	< 0.001	0.00004	0.050	0.0002	< 0.00002	0.00017	0.0036	0.00682	0.000020	0.007
M98-194-01	70	75	Kwa-s'ak	greywacke/siltstone	OP	9.7	0.002	2.4	0.0019	0.0006	3.8	0.0005	0.00004	0.0013	< 0.001	0.00004	0.057	0.0001	< 0.00002	0.00040	0.0009	0.00112	0.000007	< 0.001
M98-194-02	55	59	Kwa-m-j	greywacke/siltstone	OP	8.2	0.001	1.9	0.0018	0.0004	3.5	0.0003	0.00006	0.0012	< 0.001	0.00003	0.080	0.0001	< 0.00002	0.00024	0.0003	0.00073	0.000005	< 0.001
M98-194-03	26	29	Kwa	greywacke/siltstone	OP	11	< 0.001	1.5	0.0007	0.0014	3.2	0.0013	0.00004	0.0063	< 0.001	0.00030	0.052	< 0.0001	< 0.00002	0.00029	0.0026	0.00097	0.000007	< 0.001
M99-339-01	55	59	Kwa-s'ak'as	greywacke/siltstone	OP	7.4	0.002	2.6	0.0013	0.0006	5.5	0.0003	0.00005	0.0016	< 0.001	0.00003	0.053	0.0002	< 0.00002	0.00005	0.0004	0.00079	0.000017	0.011
M99-340-03	26	30	Kwa	greywacke/siltstone	OP	7.6	0.002	1.1	0.0011	0.0009	5.4	0.0008	0.00003	0.0049	< 0.001	0.00004	0.042	0.0006	< 0.00002	0.00050	0.0045	0.00046	0.000025	0.005
M99-341-02	30	35	Kwa'ak	greywacke/siltstone	OP	7.7	0.002	2.5	0.0019	0.0005	6.0	0.0008	0.00004	0.0041	< 0.001	0.00004	0.048	0.0001	< 0.00002	0.00088	0.0033	0.00068	0.000009	0.006
M99-346-02	70	75	Kwa	greywacke/siltstone	OP	7.8	0.002	1.4	0.0012	0.0005	8.1	0.0005	0.00006	0.0053	< 0.001	0.00035	0.049	0.0008	< 0.00002	0.00014	0.0029	0.00044	0.000029	0.011
M99-349-01	65	70	Kwa'ak	greywacke/siltstone	OP	8.4	0.002	3.0	0.0017	0.0003	5.4	0.0002	0.00003	0.0021	< 0.001	0.00003	0.057	0.0002	< 0.00002	0.00005	0.0003	0.00111	0.000016	0.013
M99-349-02	40	45	Kwa-s'c	greywacke/siltstone	OP	10	0.002	3.2	0.0029	0.0008	5.8	0.0003	< 0.00002	0.0024	< 0.001	0.00004	0.117	0.0003	< 0.00002	0.00015	0.0003	0.00096	0.000017	0.013
M99-403-02	70	75	Ks'c	greywacke/siltstone	OP	7.5	0.001	2.5	0.0019	0.0008	6.2	0.0006	0.00017	0.0012	< 0.001	0.00004	0.041	0.0004	0.00014	0.00022	0.0007	0.00111	0.000151	0.009
M99-403-03	51	54	Kwa'ak'as	greywacke/siltstone	OP	8.2	< 0.001	2.0	0.0014	0.0006	4.8	0.0003	0.00005	0.0014	< 0.001	0.00006	0.068	0.0001	0.00004	0.00007	0.0004	0.00082	0.000050	0.010
M99-404-04	30	34	Kwa	greywacke/siltstone	OP	8.7	< 0.001	1.3	0.0013	0.0005	5.1	0.0006	0.00008	0.0036	< 0.001	0.00008	0.039	0.0005	0.00003	0.00020	0.0030	0.00035	0.000050	0.006
			minimum			6.2	< 0.001	0.8	0.0005	0.0003	3.2	0.0002	< 0.00002	0.0009	< 0.001	0.00003	0.028	< 0.0001	< 0.00002	0.00005	0.0002	0.00035	0.000005	< 0.001
			maximum			11	0.003	3.2	0.0029	0.0029	19	0.0013	0.00076	0.0063	< 0.001	0.00035	0.160	0.0008	0.00014	0.00088	0.0045	0.00756	0.000151	0.013
			median			8.4	0.002	1.9	0.0014	0.0006	5.8	0.0004	0.00005	0.0029	nc	0.00004	0.052	0.0003	0.00005	0.00015	0.0017	0.00079	0.000017	0.008
			average			8.8	0.002	1.9	0.0015	0.0007	6.9	0.0005	0.00009	0.0030	nc	0.00008	0.061	0.0003	0.00007	0.00021	0.0016	0.00133	0.000029	0.008
			standard deviation			1.6	0.001	0.8	0.0006	0.0005	3.9	0.0003	0.00016	0.0016	nc	0.00008	0.030	0.0002	0.00004	0.00018	0.0013	0.00187	0.000032	0.003
			75th percentile			11	0.002	2.5	0.0019	0.0007	7.0	0.0006	0.00008	0.0043	nc	0.00008	0.062	0.0005	0.00007	0.00023	0.0026	0.00104	0.000029	0.010

Notes:

nc: not calculated

1. CEQG (2002) freshwater guidelines and MMER criteria are based on total metal concentrations.
2. MMER 2006 update. Maximum authorized monthly mean concentration.
3. Exceedances to freshwater CEQG's shown in bold type.
4. Freshwater aquatic life criterion for aluminum depends on pH, [Ca2+] and DOC. In this table, only the pH criterion has been applied to highlight exceedances.
5. Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
6. Freshwater aquatic life criterion or guideline is hardness dependant.

Table 3.5 Waste Rock SFE Leach Test Results
Tiriganiaq Deposit, Meliadine West Property, Nunavut
Comaplex Minerals Corporation

CCME (CEQG) (freshwater aquatic life)[1] (mg/L)						6.5 - 9.0						0.0001	0.005 - 0.1[4]	0.005					0.000017		0.001 / 0.0089[5]	0.002 - 0.004[6]	0.3	0.000026
Metal Mine Effluent Regulation (MMER)[2] (mg/L)						6.0 - 9.5								0.50								0.30		
Sample Number	Interval		Lithology		Location	pH	Alkalinity	Conductivity	Hardness	Cl	SO4	Ag	Al	As	B	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg
	from	to	code	Name			mg/L ($CaCO_3$)	uS/cm	mg/L	mg/L	mg/L	mg/L	mg/L[4]	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L[6]	mg/L	mg/L	mg/L[6]	mg/L	mg/L
M04-527-01	270	280	Kwa-s'ak	greywacke/siltstone	UG	8.0	48	113	25	1.2	4.9	< 0.00001	**0.25**	**0.074**	0.19	< 0.00002	< 0.00001	7.2	< 0.000003	0.00007	< 0.0005	< 0.0005	< 0.01	< 0.0001
M04-533-01	380	390	Ks-wa'ser	greywacke/siltstone	UG	8.2	59	124	27	1.0	3.0	< 0.00001	**0.46**	**0.043**	0.14	< 0.00002	< 0.00001	7.7	< 0.000003	0.00007	< 0.0005	< 0.0005	< 0.01	< 0.0001
M04-533-02	297	307	Ks-wa'ca	greywacke/siltstone	UG	8.1	42	93	17	1.3	3.6	< 0.00001	**0.81**	**0.144**	0.15	< 0.00002	< 0.00001	5.8	< 0.000003	0.00005	< 0.0005	< 0.0005	< 0.01	< 0.0001
M05-559A-02	180	190	Kwa-s	greywacke/siltstone	UG	8.0	45	101	21	0.9	3.3	< 0.00001	**0.81**	**0.022**	0.14	< 0.00002	< 0.00001	6.6	0.000006	0.00006	< 0.0005	< 0.0005	< 0.01	< 0.0001
M05-571A-02	335	344	Kwa-s'ak	greywacke/siltstone	UG	8.2	54	120	28	0.9	4.6	< 0.00001	**0.36**	**0.031**	0.20	< 0.00002	< 0.00001	8.1	< 0.000003	0.00007	0.0005	< 0.0005	< 0.01	< 0.0001
M06-604-01	336	344	Ks	greywacke/siltstone	UG	8.1	48	113	23	1.8	6.3	< 0.00001	**0.27**	**0.029**	0.26	< 0.00002	< 0.00001	7.0	< 0.000003	0.00007	0.0007	< 0.0005	0.01	0.0001
M06-604-02	286	295	Kwa-s'c	greywacke/siltstone	UG	8.2	55	118	33	1.3	3.6	< 0.00001	**0.47**	**0.008**	0.17	< 0.00002	< 0.00001	10	< 0.000003	0.00004	< 0.0005	< 0.0005	< 0.01	< 0.0001
M07-645-01	250	260	Kwa-s	greywacke/siltstone	UG	8.2	50	110	23	1.8	5.3	< 0.00001	**0.37**	**0.026**	0.22	< 0.00002	< 0.00001	7.0	0.000003	0.00007	< 0.0005	< 0.0005	< 0.01	< 0.0001
M07-663-01	417	427	Ks'ak	greywacke/siltstone	UG	8.2	52	113	27	1.6	3.4	< 0.00001	**0.45**	**0.107**	0.17	< 0.00002	< 0.00001	8.2	< 0.000003	0.00015	< 0.0005	< 0.0005	< 0.01	< 0.0001
M07-663-02	351	357	Kwa'ak'po	greywacke/siltstone	UG	8.2	51	140	31	9.0	5.6	< 0.00001	**0.45**	**0.026**	0.15	< 0.00002	< 0.00001	8.8	< 0.000003	0.00014	< 0.0005	< 0.0005	< 0.01	< 0.0001
M07-663-03	280	289	Kwa-s	greywacke/siltstone	UG	8.2	50	108	30	2.4	2.3	< 0.00001	**0.62**	**0.009**	0.09	< 0.00002	< 0.00001	8.4	< 0.000003	0.00007	< 0.0005	< 0.0005	< 0.01	< 0.0001
M98-313-01	305	315	Ks-wa	greywacke/siltstone	UG	8.2	51	107	28	0.5	3.1	< 0.00001	**0.54**	**0.036**	0.13	< 0.00002	< 0.00001	8.4	< 0.000003	0.00006	< 0.0005	< 0.0005	< 0.01	< 0.0001
minimum						8.0	42	93	17	0.5	2.3	< 0.00001	0.25	0.008	0.09	< 0.00002	< 0.00001	5.8	< 0.000003	0.00004	< 0.0005	< 0.0005	< 0.01	<0.0001
maximum						8.2	59	140	33	9.0	6.3	< 0.00001	0.81	0.144	0.26	< 0.00002	< 0.00001	10	0.000006	0.00015	0.00070	< 0.0005	0.01	0.0001
median						8.2	51	113	27	1.3	3.6	nc	0.46	0.030	0.16	nc	nc	7.9	nc	0.00007	nc	nc	nc	nc
average						8.1	50	113	26	2.0	4.1	nc	0.49	0.046	0.17	nc	nc	7.8	nc	0.00008	nc	nc	nc	nc
standard deviation						0.1	5	12	4	2.3	1.2	nc	0.18	0.041	0.04	nc	nc	1.2	nc	0.00003	nc	nc	nc	nc
75^{th} percentile						8.2	53	119	29	1.8	5.0	nc	0.56	0.051	0.19	nc	nc	8.4	nc	0.00007	nc	nc	nc	nc
M03-496-02	281	290	Nl-m-wa	iron formation	UG	8.3	67	134	57	0.9	0.7	< 0.00001	**0.49**	0.003	0.01	< 0.00002	< 0.00001	18	< 0.000003	0.00004	< 0.0005	< 0.0005	< 0.01	< 0.0001
M04-526-01	216	225	Nm-l-j	iron formation	UG	8.1	53	117	55	1.8	2.6	**0.00014**	**0.32**	**0.006**	0.09	0.00014	0.00013	19	**0.000130**	0.00016	< 0.0005	< 0.0005	< 0.01	< 0.0001
M07-649-01	280	290	Nm-l	iron formation	UG	8.4	126	239	124	1.2	2.4	< 0.00001	**0.01**	**0.005**	0.10	< 0.00002	< 0.00001	41	< 0.000003	0.00006	< 0.0005	< 0.0005	< 0.01	< 0.0001
M99-280-01	189	197	Nj-m	iron formation	UG	8.0	52	114	41	1.5	2.1	< 0.00001	**0.45**	0.003	0.11	< 0.00002	< 0.00001	14	< 0.000003	0.00003	< 0.0005	< 0.0005	< 0.01	< 0.0001
minimum						8.0	52	114	41	0.9	0.7	< 0.00001	0.01	0.003	0.01	< 0.00002	< 0.00001	14	< 0.000003	0.00003	< 0.0005	< 0.0005	< 0.01	<0.0001
maximum						8.4	126	239	124	1.8	2.6	0.00014	0.49	0.006	0.11	0.00014	0.00013	41	0.000130	0.00016	< 0.0005	< 0.0005	< 0.01	<0.0001
median						8.2	60	126	56	1.4	2.3	nc	0.39	0.004	0.09	nc	nc	19	nc	0.00005	nc	nc	nc	nc
average						8.2	75	151	69	1.4	2.0	nc	0.32	0.004	0.08	nc	nc	23	nc	0.00007	nc	nc	nc	nc
standard deviation						0.2	35	59	37	0.4	0.9	nc	0.22	0.001	0.05	nc	nc	12	nc	0.00006	nc	nc	nc	nc
75^{th} percentile						8.3	82	160	73	1.6	2.5	nc	0.46	0.005	0.10	nc	nc	25	nc	0.00009	nc	nc	nc	nc

Notes:

nc: not calculated

1. CEQG (2002) freshwater guidelines and MMER criteria are based on total metal concentrations.
2. MMER 2006 update. Maximum authorized monthly mean concentration.
3. Exceedances to freshwater CEQG's shown in bold type.
4. Freshwater aquatic life criterion for aluminum depends on pH, [Ca2+] and DOC. In this table, only the pH criterion has been applied to highlight exceedances.
5. Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
6. Freshwater aquatic life criterion or guideline is hardness dependant.