NWB Annual Report **Year being reported:** 2014

License No: 2AM-DOH1323 **Issued Date:** August 16, 2013
Expiry Date: August 15, 2023

Project Name: Doris North Project

Licensee: TMAC Resources Inc.

Mailing Address:
95 Wellington St. W.
Suite 1010, PO Box 44
Toronto, Ontario M5J 2N7

Name of Company filing Annual Report (if different from Name of Licensee please clarify relationship between the two entities, if applicable):

Licence 2AM-DOH0713 was assigned from Hope Bay Mining Ltd. to TMAC Resources Inc. on June 18, 2013. This licence was renewed on Aug. 16, 2013 and renamed 2AM-DOH1323.

General Background Information on the Project (*optional):

Doris North facilities have been used to support advanced exploration in the Hope Bay Greenstone Belt until early 2012 when the project was put into Care and Maintenance. The Doris North underground mine development began in October 2010 but was stopped in late 2011. The tailings impoundment facility has not been completed and the mill has not been constructed. The focus of activities in 2014 was water management, environmental compliance, and surface drilling exploration.

Licence Requirements: the licensee must provide the following information in accodance with Part B Item 3

A summary report of water use and waste disposal activities, including, but not limited to: methods of obtaining water; sewage and greywater management; drill waste management; solid and hazardous waste management.

Water Source(s): Doris Lake/Windy Lake

Water Quantity:

480000 cu.m/yr*	Quantity Allowable Domestic (cu.m)
2758 cu. m/yr	Actual Quantity Used Domestic (cu.m)
not specified	Quantity Allowable Drilling (cu.m)
2504 cu. m/yr	Total Quantity Used Drilling (cu.m)

**Part E, Item 1 total volume from "all sources and for all purposes"*

Waste Management and/or Disposal

- [x] Solid Waste Disposal
- [x] Sewage
- [x] Drill Waste
- [x] Greywater
- [x] Hazardous
- [x] Other: Containment Berm and Control Pond Effluent

Additional Details:

Water for domestic use at Doris Camp was obtained from Windy Lake. Water is drawn from the lake at the freshwater intake and trucked to Doris Camp. The Doris Lake pumphouse is not supplying domestic water to Doris Camp at this time.

Waste produced on site is treated according to Part G of the licence, and in accordance with the relevant Management Plans *(Incinerator Management Plan, Non-Hazardous Waste Management Plan, Hazardous Waste Management Plan, Ore and Waste Rock Management Plan, Landfarm Management Plan, Water Management Plan, Waste Water Treatment Management Plan, and Interim Water Management Plan*).

Some specifics are as follows:

-Food waste is burned in the incinerator as per Part G Item 5.
-Paper products, paperboard packing, and untreated wood waste is open burned as per Part G Item 6.
-TMAC is authorized to dispose of all non-hazardous solid waste in a landfill on site as per Part G Item 9. To date, a landfill has not been built as discussions with the landowner, the Kitikmeot Inuit Association, are still ongoing. All waste that cannot be incinerated on site is backhauled to an approved facility off site. No waste was removed from site in 2014.
-Sewage and greywater produced onsite is processed in the sewage treatment plant as per Part G Item 3. Sludge produced by the treatment plant is burned in the incinerator.
-Hazardous materials such as waste oil, glycol, and contaminated soil are shipped offsite for disposal at an approved site as per Part G Item 11.
-All containment berm effluent is sampled for water quality against the discharge criteria of the licence. Effluent that meets the standards for discharge is released in accordance with the licence following a notification to the Inspector; effluent that does not meet the licence criteria is treated onsite until it is remediated to acceptable levels for discharge, and/or it is discharged to the TIA.
-Runoff and contact seepage at site is managed in accordance with the Quarry Management and Monitoring Plan and Interim Water Management Plan.

A list of unauthorized discharges and a summary of follow-up actions taken.

Spill No.: (as reported to the Spill Hot-line)
Date of Spill:
Date of Notification to an Inspector:
Additional Details: (impacts to water, mitigation measures, short/long term monitoring, etc)

Please see Item 9 of the attached Annual Report Supplement for a list, including details, of all unauthorized discharges that occurred in 2014 under licence 2AM-DOH1323.

Revisions to the Spill Contingency Plan

Select

Additional Details:

See attached Annual Report Supplement at Item 8 for details.

Revisions to the Abandonment and Restoration Plan

Other: (see additional details)

Additional Details:

See attached Annual Report Supplement at Item 8 for details.

Progressive Reclamation Work Undertaken

Additional Details (i.e., work completed and future works proposed)

No reclamation work was undertaken in 2014.

Results of the Monitoring Program including:

The GPS Co-ordinates (in degrees, minutes and seconds of latitude and longitude) of each location where sources of water are utilized;

Details attached

Additional Details:

The GPS Co-ordinates (in degrees, minutes and seconds of latitude and longitude) of each location where wastes associated with the licence are deposited;

Details attached

Additional Details:

Results of any additional sampling and/or analysis that was requested by an Inspector

Select

Additional Details: (date of request, analysis of results, data attached, etc)

N/A

Any other details on water use or waste disposal requested by the Board by November 1 of the year being reported.

Select

Additional Details: (Attached or provided below)

N/A

Any responses or follow-up actions on inspection/compliance reports

Inspection Report received by the Licensee (Date):

Additional Details: (Dates of Report, Follow-up by the Licensee)

See Item 18 of attached Annual Report Supplement for details on inspection action items and how these were addressed.

Any additional comments or information for the Board to consider

Please see attached supplement for additional information requirements set out in Licence No. 2AM-DOH1323.

Date Submitted:	March 31, 2015	
Submitted/Prepared by:	John Roberts	
Contact Information:	**Tel:**	(416) 628-0216
	Fax:	
	email:	john.roberts@tmacresources.com

GPS Coordinates for water sources utilized

Source Description	UTM Easting	UTM Northing
ST-7 Doris Freshwater Intake	433598	7558710
ST-7a Windy Freshwater Intake	432529	7550500

GPS Locations of areas of waste disposal

Location Description	UTM Easting	UTM Northing
TL-1 (temp during dewatering)	434401	7559099
ST-4	432450	7559600
ST-5	432960	7559270
ST-6A	432910	7563340
ST-6B	432730	7563200
ST-8 STP Discharge	432933	7559057
ST-9 STP Tundra Discharge	430798	7559290

GPS Locations of Active Monitoring Stations not included above*

Monitoring Station	UTM Easting	UTM Northing
ST-1	7558923	433146
ST-2	7558921	432232
ST-10	various locations as required	
TL-2	434053	7559507
TL-3	434204	7559983
TL-10	434890	7558238

** Thermal monitoring locations are documented in the Annual Geotechnical Report*

2014 2AM-DOH1323 Type A Water Licence Annual Report Supplemental Document

Doris North Project

Nunavut Water Board

Prepared by
TMAC Resources Inc.
Toronto, ON

Prepared for
Nunavut Water Board
Gjoa Haven, NU

March 2015

Executive Summary
2AM-DOH1323 Annual Report

TMAC Resources Inc. ("TMAC") has filed its Annual Report on its activities during 2014 under Water Licence No. 2AM-DOH1323 issued by the Nunavut Water Board on August 16, 2013. Licence 2AM-DOH1323 is a renewal of licence 2AM-DOH0713 first issued to Miramar Hope Bay Mining Ltd. on September 19, 2007, then assigned to Hope Bay Mining Ltd. on January 23, 2008, and finally assigned to TMAC on June 18, 2013.

As set out in Schedule B, Item 1 to 19 of the Licence, the report includes information with respect to the following topics:

- summary of monthly monitoring data
- summary of the Construction Monitoring Report
- information with respect to Geochemical Monitoring and Waste Rock Storage Assessment
- summary of the results of monthly water balance and water quality model assessments
- a summary of the Geotechnical Inspection Report
- update on current capacity of the Tailings Impoundment Area
- a comparison of flows at monitoring stations TL-1, TL-2, TL-3, and TL-4
- annual review and any revisions of management plans and Emergency Response and Contingency Plan
- a list and description of all unauthorized discharges including volumes, spill report line identification number and summaries of follow-up actions taken
- results of the Aquatic Effects Monitoring Program
- annual adjustments to reclamation security
- annual incineration stack testing results
- annual Landfill Management Report
- a summary of modifications and/or major maintenance work carried out on the Water Supply and Waste Disposal Facilities, including all associated structures and an outline of any work anticipated for the next year
- a summary of any closure and reclamation work undertaken and an outline of any work anticipated for next year, including changes to implementation and scheduling
- a summary report describing consultation and participation with local organizations and residents of nearby communities, including a schedule of upcoming events/information sessions
- GPS locations of monitoring stations
- a summary of actions taken to address concerns or deficiencies listed in the inspection reports and/or compliance reports filed by an Inspector any other details on water use and waste disposal requested by the board

Atanguyan Naetomik Okaohen
2AM-DOH1323 Ukeotoagaagan Unipkaak

TMAC Resources Inc.-kon ("TMAC-kon") tunihihimaliktun Ukeotoagaagan Unipkaamik havaamigun 2014-mi ilagagun Imaknik Atogeagani Laeseoyum Napaani 2AM-DOH1323 toniyaohimayum Nunavumi Imalikiyin Katimayin August 16-mi 2013-mi. Laeseoyok 2AM-DOH1323 nutaguktigun laeseoyomik 2AM-DOH0713-mik tunihaolgaktok Miramar-konun September 19-mi 2007-mi, tuniyaovlonilo Hope Bay Mining-konun January 23-mi 2008-mi, kigoani toniyaohimayok TMAC-konun June 18-mi 2013-mi.

Okaotaoyomi Naonaepkotimi B-mi, Okaoheoyun 1-min 9-mun Laeseoyomi, unipkaak ilakaktok hivonikhiyutikhanik ukuniga okaoheoyun:

- naetomik okaohik tatkikheon naatkagan amigiyotinun naonaepkotin
- naetomik okaohik Hanayaolikan Amigiyotinun Unipkaak
- hivonikhiyutikhan Kuvilaaktonun Amigiyotin Ikaguniklo Oyakanik Tutkktigiveon Ihivgeoktaoniga
- naetomik okaohik kanogilinigagun tatkikheon naatkagan imakakniga imagiknigalo ilitokhaknigagun
- naetomik okaohik Nunameotanik Ihivgoekhiyotinik Unipkaak
- kanoginiga taya imiktoktaolaakniganik Atagukveom Nuna
- naonaeyaknigin kukniginik amigivikni TL-1-mi, TL-2-mi, TL-3-mi, TL-4-milo
- ukeotoagaagan ihivgoekniga nutaguktiniglo monagiyotinun oplaogaeyaotini Opaloknaktokageakalo Upiyotin Ihoakhaotilo Opalogaeyaon
- titigaknigin okateaknigilo tamaeta agiktaohimagitun kuktiyotin ila kanogaalok, kuviyomik unipkaak naonaepkun napaanik naetomiklo okaoeoyun kigoagun havaanik
- kanogilinigin Imakmeotan Aktokniginun Amigiyotinik Havaak
- ukeotoagaagan ihoakhakniga nunan otiktitaagani ilitkohenun akileotaoyaakekhimayok
- ukeotoagaagan ikulativikmin poyukniganik ilitokhaotin kanogilinigagun
- ukeotoagaagan Haohivikmik Monagiyotinik Unipkaak
- naetomik okaohik ihoakhakniginik hanaloagutiniklunen Imiktakvikmi Atagukvikmilo Pikotini, ukoalo tamaeta ilaoyun napayun kituniklo havaanik nahugikmagaa atoktukhami ukeomi
- naetomik okaohik hunamiklikaa umiktiknigagun nunalo utiktinigagun ilitkohenun havaan nahogiyaoyun atoktukhami ukeomi, ukoalo aalaguknigin atokpaleanigagun kagugulo pineaknigagun
- naetomik unipkaak okateaknigagun okakatigegutinik ilaoyotiniklo nunagiyaoyoni timeyonin inuknilo kanitomi nunagiyaoyoni, ukoalo pivikhakaknigin tikitukhan hulilogaakven hivonikhiyotiniklo okaohikaklotik katimavikhan
- GPS-mi humenigin amigiyotinun iglukpaen
- naetomik okaohik upiyotinik ihoakhiyaagani ihomalutaoyun ilakoenaelo titigakhimayun ihivgoekhonikun unipkaani maligoaknigagulo unipkaan Ihivgeokhiyomin
- anenik okateakhimayonik imaknik atoknigagun atagukveoyoniklo piyomayaenik katimayin

ᑐᓴᕇᒃᓴᑦ ᓇᐃᓈᖅᓯᒪᔪᑦ
2AM-DOH1323 ᐊᕐᕌᒍᓕᒫᖅᓯᐅᑏᑦ ᑐᓴᕇᒃᓴᑦ

ᐅᑯᐊ TMAC Resources Inc.–ᑯᑦ ᑐᓂᓯᔪᒪᓚ ᑎᑎᕋᖅᓯᒪᔪᓂᒃ ᐊᕐᒍᓕᒫᖅᓯᐅᑎᓂᒃ ᑐᓴᕇᒃᓴᓂᒃ ᐱᔾᔪᑎᓕᖕᓂᒃ ᐊᐅᓚᕐᑲᑦᑕᔪᔪᓂᒃ 2014–ᒥ ᐅᑯᓂᖓ ᒪᓕᒃᓱᑎᒃ ᐱᔪᓐᓇᐅᑎᓂᒃ ᓚᐃᓴᓂᒃ No. 2AM-DOH1323 ᐱᔭᐅᔪᔪᓂᒃ ᓄᓇᕗᑦᒥ ᐃᒥᓕᕆᔩᑦ ᑲᑎᒪᔨᖏᓐᓂᒃ ᐊᐅᒡᒍᓯ 16, 2013–ᒥ. ᓚᐃᓴ 2AM-DOH1323 ᓅᑦᑕᕆᐊᖅᓯᒪᔭᖅ ᓚᐃᓴ 2AM-DOH0713 ᓱᕗᓪᓕᖅ ᑐᓂᔭᐅᔪᔪᖅ ᐅᑯᓄᖓ Miramar Hope Bay Mining Ltd.–ᑯᓐᓄᑦ ᐅᕙᓂ ᓯᑦᑕᕝᕙ 19, 2007–ᒥ, ᑐᕌᔪᔪᑦ Hope Bay Mining Ltd.–ᑯᓐᓄᑦ ᐅᕙᓂ ᔭᓄᐊᕆ 23, 2008–ᒥ, ᐊᓯᐃᓪᓛᒃ ᐋᑐᑎᓕᔪᔭᖓᑦ ᐅᑯᐊ TMAC ᐅᕙᓂ 18, 2013.

ᐋᕿᒃᓯᒪᔭᖅ ᐅᕙᓂ Schedule B–ᒥ, ᐱᔾᔪᑕᐅᔪᖅ 1–ᒥᒃ ᑎᑭᑦᓱᒍ 19–ᒧᑦ ᐊᑐᖅᓱᒍ ᓚᐃᓴᖃᕈᑦ, ᑐᓴᕇᒃᓴᑦ ᑖᒃᑯᖓᖓᔪᓂᒃ ᒪᑯᓂᖓ ᐃᓚᖏᑦ ᑐᓴᕇᒃᓴᓂᒃ:

- ᑐᓴᕇᒃᓴᑦ ᓇᐃᓈᖅᓯᒪᔪᑦ ᑕᕿᑕᒫᑦ ᖃᐅᔨᓴᖅᑕᐅᕙᒃᑐᓂᒃ ᐱᔾᔪᑎᓖᑦ ᓄᐊᑕᐅᕙᒃᑐᓂᒃ
- ᑐᓴᕇᒃᓴᑦ ᓇᐃᓈᖅᓯᒪᔪᑦ ᐱᔾᔪᑎᓖᑦ ᖃᓄᖅ ᓴᓇᔭᐅᓯᒪᓂᖓᓂᒃ ᖃᐅᔨᓴᕈᑎᐅᑉ
- ᑐᓴᕇᒃᓴᑦ ᐱᔾᔪᑎᓖᑦ ᓄᓇᒥᒃ ᖃᐅᔨᓴᕈᑏᑦ ᖃᓄᖅ ᓱᕋᔪᖃᒻᒪᖔᖅ ᐊᒻᒪᓗ ᐊᒃᑕᑯᓂᒃ ᐅᔭᖃᓂᒃ ᖃᐅᔨᓴᕈᑏᑦ
- ᐱᔾᔪᑎᓖᑦ ᖃᓄᐃᑦᑐᑦ ᓱᕋᕙᖓᒫᖓᑕ ᑕᕿᑕᒫᑦ ᐃᒥᐅᑉ ᖃᓄᐃᑦᑑᓂᖓ ᓇᓕᒧᖕᓂᖓ ᐊᒻᒪᓗ ᐃᒥᓕᕆᔾᔪᑎᑦ
- ᓇᐃᓈᖅᓯᒪᔪᑦ ᐱᔾᔪᑎᓖᑦ ᓄᓇᒥᒃ ᕿᒥᕐᕈᒍᑏᑦ ᖃᐅᔨᓴᕈᑏᑦ ᑐᓴᕇᒃᓴᑦ
- ᑐᓴᕇᒃᓴᑦ ᒫᓐᓇᕐᓂᑕᑦ ᖃᓄᐃᓪᓗᐊᖅᑎᕆᔪᑦ ᐊᒃᑕᑯᑦ ᐅᔭᕋᒃᓯᐅᕈᑎᒥᓃᑦ ᐃᓂᒥᓃᑐᑦ
- ᖃᓄᖅ ᓱᕋᖕᒪᖔᖅ ᑰᖓᓂᖓᑕ ᓴᖏᓂᖓ ᖃᐅᔨᓴᖅᑕᑦ ᖃᐅᔨᓴᖅᐸᖕᓂ ᐅᑯᓇᓂ TL-1, TL-2, TL-3, TL-4
- ᐊᕐᕋᖑᑕᒫᑦ ᕿᒥᕐᕈᔭᐅᕙᒃᑐᑦ ᐊᒻᒪᓗ ᖃᓄᐃᓐᓇᖅ ᐋᕿᒋᐊᖅᑕᐅᕙᒃᑐᑦ ᐊᐅᓚᓯᔪᑎᑦ ᐸᕐᓇᐃᒍᑎᑦ, ᑐᐊᕕᕐᓇᕐᑐᕐᑲᓕᕐᓂᐸᓪᓗ ᐋᑐᑕᐅᕙᔭᖅᑐᑦ ᐊᒻᒪᓗ ᓇᓪᓕᐅᒃᑯᒫᑦ
- ᑎᑎᕋᖅᓯᒪᔭᑦ ᐊᒻᒪᓗ ᓇᓗᓇᐃᔭᖅᓯᒪᔭᑦ ᑭᓯᐃᑦ ᐃᔫᓐᓇᑎᒃ ᖃᐅᔨᓴᔭᐅᓯᒪᖓᑦᑐᑦ ᑲᔪᓯᑦᓯᒍᑎᒃᑯᑦ ᒪᑯᐊ ᐃᓚᕆᔭᐅᓪᓗᑎᒃ ᖃᓄᐃᓪᓗᐊᖅᑐᑦ, ᑯᕙᔪᕙᓃᑦ ᑐᓴᕇᒃᓴᑦ ᖃᓄᖅ ᓇᓗᓇᐃᒃᑯᑕᖏᑦ ᓈᓴᐅᑎᖏᑦ ᐊᒻᒪᓗ ᓇᐃᓈᖅᓯᒪᔪᓂᒃ ᐅᓂᒃᑳᑕᖏᑦ ᐱᓕᕆᐊᕐᒍᑎᐊᖏᑦ ᖃᓄᖅ ᐊᐅᓚᑕᐅᓗᑎᒃ
- ᖃᐅᔨᔭᐅᓂᑯᑦ ᑭᒡᒍᖓᒍᑦ ᐃᒪᕐᒥᐅᑕᑦ ᖃᓄᖅ ᓱᕋᒃᓯᒪᔪᓂᒃ ᖃᐅᔨᓴᕈᑏᑦ ᐱᓕᕆᔾᔪᑏᑦ
- ᐊᕐᕌᒍᓕᒫᖅᓯᐅᑎᑦ ᐋᕿᒋᐊᖅᑕᐅᓯᒪᔪᑦ ᓴᓗᒪᖅᓴᐃᒍᑎᑦ ᓇᓪᓕᐅᒃᑯᒫᑦ
- ᐊᕐᕌᒍᓕᒫᖅᓯᐅᑎᑦ ᐃᑭᑦᓯᕕᖕᒥ ᓄᐊᑕᐅᓯᒪᔪᑦ ᖃᐅᔨᓴᖅᑕᐅᓂᑯᑦ ᑭᒡᒍᖓᒍᑦ ᖃᐅᔨᓴᖅᑕᐅᓚᐅᖅᑎᓪᓗᑎᑦ
- ᐊᕐᕌᒍᓕᒫᖅᓯᐅᑎᑦ ᓄᓇᒦᑦᑐᑦ ᐊᒃᑕᑯᑦ ᐊᐅᓚᓯᔪᑎᑦ ᑐᓴᕇᒃᓴᑦ
- ᓇᐃᓈᖅᓯᒪᔪᑦ ᐋᕿᒋᐊᕈᑏᑦ ᐊᒻᒪᓗ ᐅᕙᓗᕿᐊᖅ ᐊᖏᔫᑎᑦ ᐋᕿᒋᐊᖅᑕᐅᓯᒪᔪᑦ ᑲᔪᓯᓯᒪᔪᑦ ᐃᒪᕐᑲᕈᒨᖓᔪᖅ ᐊᒻᒪᓗ ᐊᒃᑕᕕᖔᒦᑦᑐᑦ, ᐃᓚᕐᑲᖅᓱᑎᒃ ᒪᑯᓂᖓ ᐃᔫᓐᓇᑎᒃ ᑖᒃᑯᖓᖓᔪᑦ ᓴᓇᔭᐅᓯᒪᓂᖓᓄᑦ ᐊᒻᒪᓗ ᖃᓄᖅ ᑭᒡᓕᖓᓃᖓᔪᑦ ᖃᓄᑐᐃᓐᓇᖅ ᐱᓕᕆᐊᕐᒍᑎᐊᓖᑦ ᐊᕐᕌᒍᓖᖅᑐᖅ
- ᓇᐃᓈᖅᓯᒪᔪᑦ ᑐᓴᕇᒃᓴᑦ ᖃᓄᑐᐃᑦᑐᑐᐃᓐᓇᐃᑦ ᒪᑐᔭᐅᓂᐊᖅᑐᑦ ᐊᒻᒪᓗ ᓴᓗᒻᒪᓴᖅᑕᐅᕆᐊᓖᑦ ᐱᓕᕆᐊᑦ ᐊᒻᒪᓗ ᖃᐅᔨᒪᔭᐅᕙᑖᖅᑐᑦ ᐱᓕᕆᐊᒃᓴᑦ ᓱᓕ ᖃᓄᑐᐃᓐᓇᖅ ᐊᕐᕌᒍᓖᖅᑐᖅ, ᐃᓚᓖᑦ ᐊᓯᑭᖅᑎᕆᐊᓕᖕᓂᒃ ᐊᒻᒪᓗ ᖃᖓ ᑲᒪᒋᔭᐅᓗᖅᑐᑦ
- ᑐᓴᕇᒃᓴᑦ ᓇᐃᓈᖅᓯᒪᔪᑦ ᐅᓂᒃᑳᑦ ᐱᒃᑯᔾᔭᐅᒍᑕᐅᕙᒃᑐᑦ ᐊᒻᒪᓗ ᐃᓚᐅᔾᔪᑕᐅᕙᒃᑐᑦ ᓄᓇᓖᑦ ᑲᑐᔾᔨᖃᑎᒌᑎᒍᑦ ᐊᒻᒪᓗ ᓄᓇᓕᖕᓂᒃ ᖃᓂᒋᔮᖏᓐᓂᒃ, ᐃᓚᒋᔭᐅᓪᓗᑎᒃ ᖃᖓ ᐱᓕᕆᐊᕐᒍᓰᑦ ᖃᓄᑐᐃᓐᓇᖅ ᐱᔾᔪᑕᐅᒋᐊᓖᑦ ᐋᖏᕈᑕᐅᕙᒃᑐᑦ
- ᑕᒪᓅᒃᑯᑎᒃᑯᑎᑦ (GPS) ᐊᑐᖅᑕᐅᖃᑦᑕᖅᑐᑦ ᓇᒥ ᖃᐅᔨᓴᖅᕕᒃᑕᓖᑦ
- ᑐᓴᕇᒃᓴᑦ ᓇᐃᓈᖅᓯᒪᔪᖅ ᖃᓄᖅ ᐊᐅᓚᑕᐅᖃᑦᑕᖅᓯᒪᔪᑦ ᐃᓱᒫᓗᑎᔭᑦ ᐅᕝᕙᓗᕿᐊᖅ ᑭᖑᓂᖅᑕᓖᑦ ᑎᑎᕋᖅᓯᒪᔭᑦ ᖃᐅᔨᓴᖅᑕᐅᓂᑯᑦ ᑐᓴᕇᒃᓴᓃᑦᑐᑦ ᐅᕝᕙᓗᕿᐊᖅ ᒪᓕᒃᑐᑦ ᒪᓕᒃᑕᐅᕆᐊᓕᖕᓂᒃ ᐱᕐᑯᔭᖅᑎᒍᑦ ᑐᓴᕇᒃᓴᓂᒃ ᑎᑎᕋᖅᕕᕆᓯᒪᔭᖕᕆᑦ ᖃᐅᔨᓴᖅᑎᐅᕐᖃᓄᐃᓐᓇᖅ ᐊᓯᖏᓐᓂᒃ ᐱᔾᔪᑎᓖᑦ ᐃᒥᕐᒥᒃ ᐊᑐᖅᑲᑦᑕᕐᓂᖅ ᐊᒻᒪᓗ ᐊᒃᑕᑯᓕᕆᔪᑦ ᐋᑐᑕᐅᖁᓯᒪᔩᖕᕆᑦ ᑲᑎᒪᔩᑦ

Résumé opérationnel
2AM-DOH1323 Rapport annuel

TMAC Resources Inc. (« TMAC ») a déposé son rapport annuel sur ses activités au cours de l'année 2014 en conformité avec le Permis no 2AM-DOH1323 émis par l'Office des eaux du Nunavut (« Nunavut Water Board ») le 16 août 2013. Le Permis no 2AM-DOH1323 est le renouvellement du Permis 2AM-DOH0713 préalablement émis à Miramar Hope Bay Mining Ltd. le 19 septembre 2007, ce permis a par la suite été attribué à Hope Bay Mining Ltd., le 23 janvier 2008 et finalement cédé à TMAC, le 18 juin 2013.

Tel qu'énoncé à l'annexe B (« Schedule B »), point 1 à 19 du Permis no 2AM-DOH1323, le rapport comprend des renseignements sur les sujets suivants:

- un résumé des résultats mensuels du programme de surveillance
- un résumé du rapport de la surveillance des travaux de construction « Construction Monitoring Report »
- des renseignements sur les résultats du programme de surveillance géochimique et de la gestion de stockage des déchets rocheux
- un résumé des résultats mensuels du bilan hydrique et des modèles des évaluations de la qualité de l'eau et des modèles d'analyse de l'utilisation des eaux
- un résumé du rapport d'inspection géotechnique « Geotechnical Inspection Report »
- une mise à jour de la capacité de la zone du bassin d'accumulation de résidus de mine
- une comparaison des débits d'eau aux postes de surveillance TL-1, TL-2, TL-3 et TL-4
- une revue annuelle ainsi que tous ajustements des plans de gestion ainsi que du plan d'intervention en cas d'urgence et mesures exceptionnelles
- une liste et une description de tous les rejets non autorisés, y compris les volumes des rejets, les numéros de dossier attribués, ainsi que des résumés des mesures de suivi prises à la suite de ces incidents
- les résultats du programme de surveillance des répercussions sur le milieu aquatique
- l'ajustement annuel du dépôt de garantie relatif à la remise en état
- les résultats annuels de l'analyse des émissions de l'incinérateur
- un rapport annuel de gestion d'enfouissement
- un résumé des travaux d'entretien mineurs ou majeurs effectués sur les réserves d'eau potable et les installations d'élimination des déchets et de toutes leurs composantes s'y rattachant, ainsi qu'un aperçu des travaux prévus l'année suivante
- un résumé de toute fermeture et de travaux de remise en état entrepris ainsi qu'un aperçu des travaux prévus l'année suivante, y compris les modifications apportées à l'échéancier et la mise en œuvre de cette remise en état
- un aperçu décrivant la participation et la réalisation de consultations avec les organisations locales et les habitants des communautés voisines, y compris un calendrier des forums de discussion et séances d'information à venir
- les coordonnées GPS des stations de surveillance
- un résumé des mesures de suivi prises pour régler les problèmes décrits dans les rapports d'inspection et de conformité établies par l'inspecteur
- tout autre détail en lien avec l'utilisation et du traitement de l'eau et de l'évacuation des rejets, tel que demandé par l'Office

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1. Summary of monthly monitoring reporting [see Part J Item 21]

Doris Camp was open throughout 2014 under a Care and Maintenance status with water management and environmental compliance as the focus of activities. Some deposit definition drilling in support of the Doris North Mine was conducted and Regional exploration activities, permitted under 2BE-HOP1222, were also based out of Doris Camp in 2014. Early in the year and late fall/early winter when surface drilling is not occurring, the camp was staffed with minimal personnel to maintain essential services.

During 2014, TMAC collected data from the following active or seasonally active monitoring stations: ST-1, ST-2, ST-4, ST-5, ST-6a, ST-6b, ST-7, ST-7a, ST-8, and ST-9. Site runoff from sediment controls (ST-10) was not monitored as no construction occurred and no turbid runoff was observed.

Monitoring station ST-3 (Landfill Sump) was not sampled as this facility was not constructed as of 2014.

Monitoring station ST-11 (Reagent and Cyanide Storage Facility Sumps) was not sampled as this facility was not constructed as of 2014.

Dewatering of the Tailings Impoundment Area (TIA) occurred between June 19 and September 25, 2014. Monitoring was undertaken at the following TIA stations: TL-1, TL-2, TL-3, TL-4, and TL-10. In 2014, the mill had not yet been constructed so no ore processing occurred and no tailings were produced. As described in the Doris North Project Interim Water Management Plan, dated February 2012, the sedimentation pond (ST-1) was used as a collection pond for the water that accumulated in the pollution control pond (ST-2) and the two underflow sumps (ST2-S1 and ST2-S2). The water collected in ST-1 was then transferred to the TIA by pipeline. Sampling for criteria specified under 2AM-DOH1323 was conducted prior to and during all dewatering activities.

Monitoring associated with the mill and tailings discharge stations (TL-5 through TL-9) and underground seepage and minewater stations (TL-11 and TL-12) was not conducted as these activities did not occur or the facilities have not been constructed. Station TL-10 (water column in deepest past of the TIA) was sampled once in 2014, though sampling at this station is not required during Care and Maintenance.

All monitoring was conducted in accordance with the Hope Bay Mining Ltd. Quality Assurance and Quality Control Plan 2AM-DOH0713, 2BB-BOS1217, 2BE-HOP1222 HB-QA-ENV-MP-001, November 2012 (REV 7.1) that was found to be acceptable to an Analyst by letter dated November 27, 2012.

TMAC uses an external certified laboratory to carry out all analyses reported in the monthly and annual reports. The QA/QC data produced by ALS Canada Ltd. are used to determine the accuracy and precision of results in these reports.

Thermal monitoring was undertaken in 2014 at active ground temperature monitoring stations. Results of this monitoring are included in the annual Geotechnical Inspection report.

During open water season, visual assessments were made of suspended sediment along the perimeter of the TIA shoreline while carrying out inspections during Care and Maintenance.

Conditions of the Doris North Diversion Berm's effectiveness during spring freshet, major rain events, and periods of sustained (non-frozen) precipitation were monitored and documented.

Details of all monitoring follows.

ST-1 Sedimentation Pond

This facility was constructed and first used in 2011. In 2014, during open water season, all discharges from the facility were made directly to the TIA via pipeline. All discharges from the facility were metered. Water quality samples were collected from an outlet on the discharge pump with the intake on the pump submerged approximately 0.25m below the water surface in the Sedimentation Pond. Samples were taken prior to discharge, as per Part G Item 23b, and then monthly thereafter during periods of discharge for internal monitoring purposes.

Water was transferred from ST-1 to the TIA beginning in May and continued into September. The final day of discharge from the Sedimentation Pond was September 25, 2014.

Volumes transferred to the TIA from ST-1 are summarized in Table 1. This includes water transferred from ST-2, ST2-S1, and ST2-S2 to ST-1, as described above. Results of water quality samples, collected monthly from ST-1, are summarized in Table 2. The water was found to be elevated for two parameters: ammonia, as well as zinc, which is a normally elevated background parameter within the Doris North project hydrological system. Because the water was discharged to the TIA and not to the tundra, the compliance criteria for ST-1 are not applicable; the elevated parameters are highlighted bold in Table 2 for information only.

Table 1 – Summary of Monthly Water Management Volumes for Monitoring Station ST-1, June to October 2014

Month	Monthly Volume (m^3)	Cumulative Volume (m^3)*
May	111	111
June	4834	4945
July	4855	9800
August	3441	13241
September	3226	16467
Total Volume of Water Transferred from ST-1 (includes water from ST-2, ST2-S1, and ST2-S2) to TIA in 2014		**16,467**

**values rounded to nearest whole cubic meter*

Table 2 – Water quality monitoring program results for ST-1, May to September, 2014, in mg/L, unless specified otherwise

TMAC Sample ID		ST1-29MAY14	ST1-30JUN14	ST1-28JUL14	ST1-18AUG14	ST1-15SEP14	Part G Item 23(a)	
ALS ID		L1463182-4	L1481623-1	L1494367-1	L1504869-1	L1518737-1	Maximum Average Concentration (mg/L)	Max Conc. in any Grab Sample (mg/L)
Sample Date/Time		5/29/2014 11:11	6/30/2014 15:50	7/27/2014 10:30	8/18/2014 16:45	9/15/2014 12:00		
Parameters	**Units**	**Results**						
Hardness (as CaCO3)	mg/L	705	1110	952	1220	1080		
pH	pH	7.64	7.91	7.93	8.01	7.95	6.0 - 9.0	9
Total Suspended Solids	mg/L	11	9.2	8.4	5	10.6	15.0	30.0
Alkalinity, Total (as CaCO3)	mg/L	-	90	113	126	128		
Ammonia, Total (as N)	mg/L	**10.4**	**16.9**	**15.7**	**15.5**	**14.9**	2.0	4.0
Bromide (Br)	mg/L	-	1.7	1.4	1.7	1.7		
Chloride (Cl)	mg/L	-	1160	1030	1220	1030		
Fluoride (F)	mg/L	-	<0.40 *	<0.40 *	0.49	<0.40 *		
Nitrate (as N)	mg/L	32.7	64.3	55.7	58.9	49.9		
Nitrite (as N)	mg/L	0.205	0.714	0.485	0.485	0.276		
Sulfate (SO4)	mg/L	54.6	126	159	188	153		
Cyanide, Total	mg/L	<0.0050	0.0076	<0.0050	<0.0050	<0.0050	1.0	2.0
Aluminum (Al)-Total	mg/L	0.34	0.06	0.0519	0.0477	0.15	1.0	2.0
Antimony (Sb)-Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050		
Arsenic (As)-Total	mg/L	0.0006	0.00092	0.0009	0.00082	0.00112	0.05	0.1
Barium (Ba)-Total	mg/L	0.0522	0.061	0.052	0.068	0.102		
Beryllium (Be)-Total	mg/L	<0.0025	<0.0010	<0.0010	<0.0010	<0.0010		
Boron (B)-Total	mg/L	0.102	0.37	0.38	0.42	0.36		
Cadmium (Cd)-Total	mg/L	0.000073	0.000109	0.000131	0.000141	0.000122		
Calcium (Ca)-Total	mg/L	249	365	308	395	354		
Chromium (Cr)-Total	mg/L	0.0025	<0.0010	<0.0010	<0.0010	<0.0010		
Cobalt (Co)-Total	mg/L	<0.0020	0.00197	0.00198	0.00248	0.00257		
Copper (Cu)-Total	mg/L	0.0057	0.0064	0.0067	0.006	0.0074	0.02	0.3
Iron (Fe)-Total	mg/L	0.594	0.175	0.269	0.258	0.316	0.3	0.6
Lead (Pb)-Total	mg/L	0.00027	<0.00050	<0.00050	<0.00050	<0.00050	0.01	0.02
Lithium (Li)-Total	mg/L	0.032	0.0497	0.0448	0.0439	0.0458		
Magnesium (Mg)-Total	mg/L	34.2	49.1	44.4	57.6	47.9		
Manganese (Mn)-Total	mg/L	0.556	0.458	0.535	0.708	0.667		
Molybdenum (Mo)-Total	mg/L	<0.0050	0.0039	0.0045	0.0053	0.0048		
Nickel (Ni)-Total	mg/L	0.0036	0.0022	0.0026	0.0035	0.0038	0.05	0.1
Potassium (K)-Total	mg/L	13.2	24.3	20.9	23.8	19.5		
Selenium (Se)-Total	mg/L	0.00074	0.0018	0.00211	0.00219	0.00191		
Silver (Ag)-Total	mg/L	<0.000050	<0.000020	<0.000020	<0.000020	<0.000020		
Sodium (Na)-Total	mg/L	197	392	332	413	330		
Thallium (Tl)-Total	mg/L	<0.00025	<0.00020	<0.00020	<0.00020	<0.00020		
Tin (Sn)-Total	mg/L	<0.050	<0.00050	<0.00050	<0.00050	<0.00050		
Titanium (Ti)-Total	mg/L	0.0091	0.024	0.02	0.025	0.029		
Uranium (U)-Total	mg/L	0.00057	0.00093	0.00099	0.0013	0.0012		
Vanadium (V)-Total	mg/L	0.0016	<0.0020 ^	<0.0020 ^	<0.0020 *	<0.0020 ^		
Zinc (Zn)-Total	mg/L	**0.06**	**0.0469**	**0.0783**	**0.111**	**0.101**	0.01	0.02
Oil and Grease	mg/L	<1.0	<5.0	<5.0	<5.0	<5.0	5	10
Oil And Grease (Visible Sheen)		No	No	No	No	No	no visible sheen	no visible sheen

Note: Bold text indicates that the value is above criteria for discharge to the tundra. All water from ST-1 was discharged to the TIA in 2014
** Detection limit adjusted due to sample matrix effects*
^ Detection limit adjusted for required dilution

ST-2 Pollution Control Pond

This facility was constructed in 2011. In 2014, it was active between June and September. Samples from ST-2 were collected from a depth of 0.25 m below the water surface. All water from the Pollution Control Pond was directed to the Sedimentation Pond.

Monthly water quality monitoring sampling at ST-2 occurred from June to September 2014, as per Schedule J of the water licence. Results of the sampling are presented in Table 3.

Table 3 - Water quality monitoring program results for ST-2, June to September 2014, in mg/L, unless specified otherwise

		TMAC Sample ID	ST2-30JUN14	ST2-18JUL14	ST2-18AUG14	ST2-16SEP14A	ST2-16SEP14B
		ALS ID	L1481623-2	L1490791-1	L1504869-2	L1518737-2	L1518737-3
		Sample Date/Time	6/30/2014 13:40	7/18/2014 12:05	8/18/2014 18:05	9/16/2014 12:00	9/16/2014 12:00
Parameter	**Unit**		**Results**				
Hardness (as CaCO3)	mg/L		1130	1210	1420	2440	2600
pH	pH		7.93	7.79	7.81	7.62	7.63
Total Suspended Solids	mg/L		4.9	25	6.1	20.4	24.3
Alkalinity, Total (as CaCO3)	mg/L		133	91	132	122	122
Ammonia, Total (as N)	mg/L		14.2	13.8	13.7	23.1	22.6
Bromide (Br)	mg/L		1.6	1.61	<2.5 *	<2.5 *	<2.5 *
Chloride (Cl)	mg/L		1110	1170	1680	1340	1370
Fluoride (F)	mg/L		<0.40 *	0.126	<1.0 *	<1.0 *	<1.0 *
Nitrate (as N)	mg/L		66.3	61.1	87.2	41.5	42.6
Nitrite (as N)	mg/L		0.734	0.504	0.509	0.134	0.117
Sulfate (SO4)	mg/L		228	124	215	94	95
Cyanide, Total	mg/L		0.0052	0.0117	<0.0050	0.0069	0.007
Aluminum (Al)-Total	mg/L		0.247	0.917	0.13	0.239	0.123
Antimony (Sb)-Total	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Arsenic (As)-Total	mg/L		0.00125	0.00131	0.00088	0.00133	0.00143
Barium (Ba)-Total	mg/L		0.059	0.072	0.076	0.748	0.746
Beryllium (Be)-Total	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron (B)-Total	mg/L		0.45	0.3	0.43	0.42	0.45
Cadmium (Cd)-Total	mg/L		0.000126	0.000162	0.000189	0.000305	0.000323
Calcium (Ca)-Total	mg/L		355	404	456	860	914
Chromium (Cr)-Total	mg/L		0.0015	0.0028	<0.0010	0.001	<0.0010
Cobalt (Co)-Total	mg/L		0.00304	0.00286	0.00423	0.00517	0.0053
Copper (Cu)-Total	mg/L		0.007	0.0071	0.0076	0.0099	0.0093
Iron (Fe)-Total	mg/L		0.573	1.34	0.404	0.768	0.603
Lead (Pb)-Total	mg/L		<0.00050	0.00054	<0.00050	0.00053	0.00051
Lithium (Li)-Total	mg/L		0.05	0.0598	0.0531	0.0643	0.0678
Magnesium (Mg)-Total	mg/L		58.3	49.5	69	70.5	76
Manganese (Mn)-Total	mg/L		0.709	0.862	1.04	1.11	1.16
Molybdenum (Mo)-Total	mg/L		0.0065	0.0035	0.0064	0.0078	0.0082
Nickel (Ni)-Total	mg/L		0.0039	0.0034	0.0057	0.0077	0.0078
Potassium (K)-Total	mg/L		24.1	20.6	25.9	33.5	35.2
Selenium (Se)-Total	mg/L		0.00328	0.00181	0.00257	0.00229	0.00233
Silver (Ag)-Total	mg/L		<0.000020	0.000672	<0.000020	<0.000050 ^	<0.000050 ^
Sodium (Na)-Total	mg/L		395	358	453	459	476
Thallium (Tl)-Total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Tin (Sn)-Total	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Titanium (Ti)-Total	mg/L		0.031	0.042	0.03	0.045	0.028
Uranium (U)-Total	mg/L		0.00197	0.00075	0.00189	0.00164	0.00167
Vanadium (V)-Total	mg/L		<0.0020 ^	0.0034	<0.0020 *	<0.0050 ^	<0.0050 ^
Zinc (Zn)-Total	mg/L		<0.0050	0.0084	0.0057	0.0074	0.0059
Oil and Grease	mg/L		<5.0	<5.0	<5.0	<5.0	<5.0
Oil And Grease (Visible Sheen)			No	No	No	No	No

** Detection limit adjusted due to sample matrix effects*
^ Detection limit adjusted for required dilution

ST-4 Landfarm

Water from the Landfarm (ST-4) was sampled on June 9, 2014. The results were compliant with the water licence discharge criteria of Part G Item 24(c). A discharge notification was provided to the inspector May 24, 2014, and on July 8, 2014 56 m^3 of water was removed by truck and recycled to tanks supporting surface drills operating near the Doris Camp. Water from the Landfarm was not discharged to tundra. Results of Landfarm water sampling is presented in Table 4**.**

Table 4 - Water quality monitoring program results for ST-4, June 2014, pre-discharge, in mg/L, unless specified otherwise

Sample ID		ST4-09JUN14	Part G Item 24(c)	
ALS ID		L1468655-1	Maximum Average Concentration (mg/L)	Maximum Concentration in any Grab Sample (mg/L)
Sample Date/Time		6/9/2014 8:38		
Parameter	Unit	Results		
pH	pH	8.05	6 - 9	9
Total Suspended Solids	mg/L	<3.0	15.0	30.0
Total Oil and Grease	mg/L	<5.0	5	10
Oil And Grease (Visible Sheen)		No	No Visible Sheen	No Visible Sheen
Total Ammonia - N	mg/L	0.0149	2.0	4.0
Total Lead	mg/L	0.000069	0.01	0.02
Benzene	mg/L	<0.00050	0.37	-
Toluene	mg/L	<0.00050	0.002	-
Ethylbenzene	mg/L	<0.00050	0.090	-

ST-5 Doris Plant Site Fuel Storage and Containment

Water from the Doris tank farm (ST-5) was sampled on May 28, 2014. The water was compliant with discharge criteria. A discharge notification was provided to the Inspector May 24, 2014. A total of 743 m^3 of water was discharged during June, July and September to a location just north of the berm (13W 432960 7559270) as approved by the inspector. Daily samples were collected during discharge and results of pre-discharge and daily discharge sampling are presented in Table 5 and Table 6.

ST-6a Roberts Bay Bulk Fuel Storage Facility

Water from the Roberts Bay 5ML tank farm (ST-6A) was sampled on May 30, 2014 and was found to be compliant with discharge criteria for all parameters except TSS. A discharge notification was provided to the Inspector May 24, 2014. Discharge from the facility began in June and all water was applied to road surfaces for dust suppression (as previously approved) or recycled for use in surface drilling. A total of 1,020 m^3 of water was discharged from the facility with the majority occurring in June and subsequent smaller discharges in July, August and September. During discharge on June 9, 2014 a single anomalous result of pH 2.2 was recorded. This result is attributed to analytical or sampling error; pH results throughout the discharge remained complaint with criteria for all other samples. Results of pre-discharge and daily water quality monitoring during discharge are presented in Table 7 and Table 8.

ST-6b Roberts Bay Bulk Fuel Storage Facility

Water from the Roberts Bay 3x5ML tank farm (ST-6B) was sampled on May 29, 2014 and was found to be compliant with discharge criteria. A discharge notification was provided to the Inspector May 24, 2014. Discharge from the facility began in June with minor additional discharges in July, August and September. A total of 825 m^3 of water was discharged to the southwest of the berm onto a rock outcrop (13W 432730 7563200). Results of pre-discharge and daily discharge monitoring are presented in Table 9 through Table 11.

Table 5 - Water quality monitoring program results for ST-5, pre-discharge (May) and daily discharge in June 2014, in mg/L, unless specified otherwise

TMAC Sample ID		ST5-28MAY14	ST5-08JUN14	ST5-09JUN14	ST5-13JUN14	ST5-18JUN14	ST5-22JUN14	Part G Item 24(e)	
ALS ID		L1463182-1	L1468638-6	L1468638-7	L1470658-1	L1473811-1	L1476318-1	Maximum Average Concentration (mg/L)	Maximum Concentration in any Grab Sample (mg/L)
Sample Date/Time		5/28/2014 18:35	6/8/2014 8:18	6/9/2014 7:56	6/13/2014 7:33	6/18/2014 17:15	6/22/2014 13:20		
Parameter	**Unit**	**Results**							
pH	pH	7.9	8.11	8.12	8.15	8.17	8.26	6.0 – 9.0	9
Total Suspended Solids	mg/L	11	<3.0	4.9	<3.0	<3.0	4.1	15	30
Lead (Pb)-Total	mg/L	0.000393	0.0001	0.00016	0.000059	<0.000050	<0.000050	0.01	0.02
Oil and Grease	mg/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5	10
Benzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.37	-
Ethylbenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.09	-
Toluene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.002	

Table 6 - Water quality monitoring program results for ST-5, daily discharge in July and September 2014, in mg/L, unless specified otherwise

TMAC Sample ID		ST5-19JUL14	ST5-31JUL14	ST5-08SEPT14	ST5-13SEP14	Part G Item 24(e)	
ALS ID		L1490803-1	L1496389-2	L1515182-1	L1518746-1	Maximum Average Concentration (mg/L)	Maximum Concentration in any Grab Sample (mg/L)
Sample Date/Time		7/19/2014 9:20:00 AM	7/31/2014 9:25:00 AM	9/8/2014 8:41:00 PM	9/13/2014 4:00:00 PM		
Parameter	**Unit**	**Results**					
pH	pH	8.17	8.23	8.2	8.21	6.0 – 9.0	9
Total Suspended Solids	mg/L	<3.0	<3.0	<3.0	<3.0	15	30
Lead (Pb)-Total	mg/L	0.000069	<0.00010 *	<0.000050	<0.000050	0.01	0.02
Oil and Grease	mg/L	<5.0	<5.0	<5.0	<5.0	5	10
Benzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.37	-
Ethylbenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.09	-
Toluene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.002	

** Detection Limit was raised due to detection of analyte at comparable level in Method Blank.*

Table 7 - Water quality monitoring program results for ST-6a, pre-discharge (May) and daily discharge in June 2014, in mg/L, unless specified otherwise

TMAC Sample ID		ST6A-30MAY14	ST6A-07JUN14	ST6A-08JUN14	ST6A-09JUN14	ST6A-10JUN14	ST6A-11JUN14	ST6A-13JUN14	ST6A-19JUN14	ST6A-20JUN14	Part G Item 24(e)	
ALS ID		L1463182-2	L1468638-3	L1468638-5	L1468638-8	L1470658-2	L1470658-3	L1470658-5	L1473811-3	L1476318-2	Maximum Average Concentration (mg/L)	Maximum Concentration in any Grab Sample (mg/L)
Sample Date/Time		5/30/2014 7:55	6/7/2014 12:45	6/8/2014 7:50	6/9/2014 8:15	6/10/2014 9:28	6/11/2014 7:35	6/13/2014 15:38	6/19/2014 9:45	6/20/2014 11:45		
Parameter	**Units**	**Results**										
pH	pH	7.93	8.21	8.21	2.2*	8.14	8.13	8.07	8.08	8.19	6.0 - 9.0	9
Total Suspended Solids	mg/L	18.5	**30.3**	15.3	7.6	**133**	<3.0	10.4	9.9	**169**	15	30
Lead (Pb)-Total	mg/L	0.000477	0.00144	0.000138	0.000141	0.00135	0.000188	0.000684	0.00027	0.00154	0.01	0.02
Oil and Grease	mg/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5	10
Benzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.37	-
Ethylbenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.09	-
Toluene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.002	-

Bold indicates exceedance of Part G Item 24(e) Maximum Concentration in a Grab Sample. Water discharged to roads (as approved), or supplied for surface drilling.
** Anomalous result attributed to analytical or sampling error*

Table 8 - Water quality monitoring program results for ST-6a, daily discharge in June, July and August 2014, in mg/L, unless specified otherwise

TMAC Sample ID		ST6A-21JUN14	ST6A-23JUN14	ST6A-25JUN14	ST6A-29JUN14	ST6A-17JUL14	ST6A-22JUL14	ST6A-31JUL14	ST6A-09AUG14	ST6A-08SEPT14	ST6A-13SEP14	Part G Item 24(e)	
ALS ID		L1476318-3	L1476318-4	L1478581-1	L1481613-1	L1489327-1	L1490803-3	L1496389-1	L1501181-1	L1515182-2	L1518746-2	Maximum Average Concentration (mg/L)	Maximum Concentration in any Grab Sample (mg/L)
Sample Date/Time		6/21/2014 13:15	6/23/2014 8:30	6/25/2014 9:45	6/29/2014 9:00	7/17/2014 9:25	7/22/2014 8:45	7/31/2014 9:45	8/9/2014 17:55	9/8/2014 20:07	9/13/2014 15:45		
Parameter	**Units**	**Results**											
pH	pH	8.23	8.36	8.12	8.26	8.21	8.29	8.08	8.26	8.18	8.24	6.0 - 9.0	9
Total Suspended Solids	mg/L	24.3	<3.0	13.4	9.6	**36.8**	6.3	**33**	<3.0	21.1	22.3	15	30
Lead (Pb)-Total	mg/L	0.000405	<0.000050	0.000187	0.000271	0.00045	0.000105	0.000803	<0.000050	0.00028	0.00045	0.01	0.02
Oil and Grease	mg/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5	10
Benzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.37	-
Ethylbenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.09	-
Toluene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.002	-

Bold indicates exceedance of Part G Item 24(e) Maximum Concentration in a Grab Sample. Water discharged to roads (as approved), or supplied for surface drilling.

Table 9 - Water quality monitoring program results for ST-6b, pre-discharge (May) and daily discharge in June 2014, in mg/L, unless specified otherwise

Sample ID		ST6B-29MAY14	ST6B-06JUN14	ST6B-07JUN14	ST6B-08JUN14	ST6B-12JUN14	ST6B-18JUN14	Part G Item 24(e)	
ALS ID		L1463182-3	L1468638-1	L1468638-2	L1468638-4	L1470658-4	L1473811-2	Maximum Average Concentration (mg/L)	Maximum Concentration in any Grab Sample (mg/L)
Sample Date/Time		5/29/2014 10:45	6/6/2014 17:17	6/7/2014 7:47	6/8/2014 7:45	6/12/2014 7:40	6/18/2014 12:15		
Parameter	Unit	Results							
pH	pH	7.84	8.12	8.15	8.18	8.18	8.12	6.0 - 9.0	9
Total Suspended Solids	mg/L	4.1	12.9	19.8	7.8	<3.0	13.9	15	30
Lead (Pb)-Total	mg/L	0.000152	0.000329	0.00028	0.000233	0.000066	0.000373	0.01	0.02
Oil and Grease	mg/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5	10
Benzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.37	-
Ethylbenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.09	-
Toluene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.002	-

Table 10 - Water quality monitoring program results for ST-6b, daily discharge in June and July 2014, in mg/L, unless specified otherwise

Sample ID		ST6B-19JUN14	ST6B-20JUN14	ST6B-23JUN14	ST6B-24JUN14	ST6B-29JUN14	ST6B-21JUL14	Part G Item 24(e)	
ALS ID		L1473811-4	L1476318-5	L1476318-6	L1478581-2	L1481613-2	L1490803-2	Maximum Average Concentration (mg/L)	Maximum Concentration in any Grab Sample (mg/L)
Sample Date/Time		6/19/2014 9:50	6/20/2014 11:55	6/23/2014 10:45	6/24/2014 11:45	6/29/2014 11:34	7/21/2014 1:45		
Parameter	Unit	Results							
pH	pH	8.14	8.29	8.28	8.17	8.4	8.33	6.0 - 9.0	9
Total Suspended Solids	mg/L	<3.0	<3.0	8.6	<3.0	<3.0	<3.0	15	30
Lead (Pb)-Total	mg/L	0.000112	0.000125	0.000269	<0.000050	<0.000050	<0.000050	0.01	0.02
Oil and Grease	mg/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5	10
Benzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.37	-
Ethylbenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.09	-
Toluene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.002	-

Table 11 - Water quality monitoring program results for ST-6b, daily discharge in August and September 2014, in mg/L, unless specified otherwise

Sample ID		ST6B-1AUG14	ST6B-09AUG14	ST6B-08SEPT14	ST6B-13SEP14	Part G Item 24(e)	
ALS ID		L1496389-3	L1501181-2	L1515182-3	L1518746-3	Maximum Average Concentration (mg/L)	Maximum Concentration in any Grab Sample (mg/L)
Sample Date/Time		8/1/2014 9:55	8/9/2014 11:40	9/8/2014 20:22	9/13/2014 15:30		
Parameter	Unit	Results					
pH	pH	8.25	8.35	8.26	8.3	6.0 - 9.0	9
Total Suspended Solids	mg/L	4.5	15.3	<3.0	4.1	15	30
Lead (Pb)-Total	mg/L	<0.00020 *	<0.000050	0.000055	0.000094	0.01	0.02
Oil and Grease	mg/L	<5.0	<5.0	<5.0	<5.0	5	10
Benzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.37	-
Ethylbenzene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.09	-
Toluene	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.002	-

** Detection Limit was raised due to detection of analyte at comparable level in Method Blank.*

ST-7 and ST-7a Freshwater Usage from Doris and Windy Lakes

Table 12 provides the volumes of water usage at the Doris North project area as required under Part E Item 1 of water licence 2AM-DOH1323. The water extraction pump for Doris operations is located off the northwest shoreline of Doris Lake and the sampling station ST-7 is located within the Doris Lake pump house. In 2014, water from Doris Lake was not used for domestic consumption; all water for domestic consumption was obtained from Windy Lake at ST-7a (under the Regional Exploration Licence 2BE-HOP1222, station HOP-1 is the freshwater intake monitoring station – monitoring samples collected early in 2014 were coded as HOP-1). Water for dust suppression in 2014 was obtained from freshwater from Doris Lake and from containment berm effluent when found to be compliant for discharge to the environment under the criteria established in Part G of Licence 2AM-DOH1323, and on approval of the Inspector. Surface drilling occurred in support of the Doris North mine; water was sourced from Doris Lake, and compliant berm water was also recycled for drilling use. Table 12 provides only water volumes used from lake sources and does not include water recycled from berms that would otherwise have been discharged to tundra as effluent.

Table 12 – Doris North water usage in 2014, in cubic metres (m^3)*

Month	Domestic Use from Windy Lake ST-7a/HOP-1 (m^3)	Drill Water Usage from Doris Lake (m^3)	Dust Suppression from Doris Lake (m^3)	Cumulative Usage (m^3)
January	44	-	-	44
February	38	-	-	82
March	56	-	-	138
April	88	-	-	226
May	325	-	-	551
June	395	642	67	1654
July	387	509	56	2605
August	415	621	168	3809
September	327	377	2	4515
October	353	354	-	5222
November	241	2	-	5464
December	91	0	-	5555

**values rounded to nearest whole cubic meter*

Additionally, a total of 1,885m^3 was used from Doris Lake and/or Windy Lake for seasonal ice road construction in January, February, April and November of 2014.

Table 13 and Table 14 provide the results of water quality sampling for monitoring station ST-7a (HOP-1) at Windy Lake in compliance with the requirements set out in Schedule J of water licence 2AM-DOH1323. The Doris Lake pumphouse was only operational for non-domestic use in January and February 2014; samples were collected from ST-7 during those months. Results of sampling at ST-7 are provided in Table 15.

Table 13 - Water sampling monitoring program results for January to July, 2014 taken from ST-7a (HOP-1), in mg/L, unless otherwise specified

TMAC Sample ID		HOP1-03JAN14/ HOP1-24JAN14	HOP1-07FEB14	ST7A-08MAR14	ST7A-04APR14	ST7A-09MAY14	ST7A-03JUN14	ST7A-08JUL14	ST7A-17JUL14
ALS ID		L1408499-1/ L1415837-1	L1420282-1	L1430069-1	L1440118-1	L1453345-1	L1464793-1	L1483329-1	L1489318-1
Sample Date/Time		03-01-14 12:00/ 24-01-14 10:15	02-07-2014 9:34	03-08-2014 11:28	4/4/2014 11:10	5/9/2014 9:30	6/3/2014 11:04	7/8/2014 8:25	7/17/2014 13:45
Parameter	**Unit**	**Results**							
Hardness (as CaCO3)	mg/L	74.6	85.6	89.6	84.7	91.9	49.8	27.2	53.1
pH	pH	7.61	7.64	7.66	8	7.93	7.65	7.94	7.82
Total Suspended Solids	mg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Ammonia, Total (as N)	mg/L	<0.050	<0.050	<0.050	<0.050	<0.0050	0.0065	<0.0050	<0.0050
Nitrate (as N)	mg/L	<0.050	<0.050	<0.050	<0.050	<0.0050	0.124	<0.0050	<0.0050
Nitrite (as N)	mg/L	<0.050	<0.050	<0.050	<0.050	<0.0010	0.0017	<0.0010	<0.0010
Orthophosphate-Dissolved (as P)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010 ^	<0.0010	<0.0010	<0.0010
Phosphorus (P)-Total	mg/L	<0.020	<0.020	<0.020	<0.020	0.0044	0.0092	0.0062	0.0045
Cyanide, Total	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cyanide, Free	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fecal Coliforms	CFU/100mL	<1	<1	<1	<1	<1	<1	2	<1
Anabaena (Cyanophyceae)	cells/mL							2	<1
Aphanizomenon (Cyanophyceae)	cells/mL	-	-	120	-			1	25
Aphanocapsa (Cyanophyceae)	cells/mL							185	-
Total cyanobacterial cell count	cells/mL	<1	<1	130	2	3	<1	-	170
Gomphosphaeria (Cyanophyceae)	cells/mL							209	1770
Oscillatoria (Cyanophyceae)	cells/mL							-	124
Planktolyngbya (Cyanophyceae)	cells/mL	-	-	-	-			-	236
Planktothrix (Cyanophyceae)	cells/mL	-	-	-	-			-	1130
Pseudoanabaena (Cyanophyceae)	cells/mL	-	-	10	2			23	-
Unidentified	cells/mL							-	12
Aluminum (Al)-Total	mg/L	0.0100	<0.0050	0.0105	<0.0050	<0.0050	0.0525	0.0751	0.0488
Antimony (Sb)-Total	mg/L	<0.00040	<0.00040	<0.00040	<0.00040	<0.00050	<0.00050	<0.00050	<0.00050
Arsenic (As)-Total	mg/L	<0.00040	<0.00040	<0.00040	<0.00040	<0.00050	<0.00050	<0.00050	<0.00050
Barium (Ba)-Total	mg/L	<0.0030	<0.0030	<0.0030	<0.0030	<0.020	<0.020	<0.020	<0.020
Beryllium (Be)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron (B)-Total	mg/L	0.128	0.052	0.387	0	<0.10	<0.10	<0.10	<0.10
Cadmium (Cd)-Total	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000035	<0.000010	0.00015
Calcium (Ca)-Total	mg/L	14.4	15.7	16.6	15	15.7	8.94	4.8	9.18
Chromium (Cr)-Total	mg/L	<0.0010	<0.0010	0.0021	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.00030	<0.00030	<0.00030	<0.00030
Copper (Cu)-Total	mg/L	0.0011	<0.0010	0.0026	<0.0010	<0.0010	0.0012	<0.0010	<0.0010
Iron (Fe)-Total	mg/L	0.014	<0.010	0.066	<0.010	<0.030	0.07	0.071	0.048
Lead (Pb)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<0.00050
Lithium (Li)-Total	mg/L	<0.010	<0.010	<0.010	<0.010	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Total	mg/L	11.8	11.4	12.9	12	12.8	6.66	3.69	7.33
Manganese (Mn)-Total	mg/L	0.0027	<0.0020	0.0072	<0.0020	0.00078	0.00631	0.00229	0.00387
Mercury (Hg)-Total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)-Total	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0010	<0.0010	<0.0010	<0.0010
Nickel (Ni)-Total	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010
Potassium (K)-Total	mg/L	4.75	4.82	5.51	5	4.9	2.9	<2.0	2.9
Selenium (Se)-Total	mg/L	<0.00040	<0.00040	<0.00040	<0.00040	<0.00010	<0.00010	<0.00010	<0.00010
Silver (Ag)-Total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Sodium (Na)-Total	mg/L	60.6	63.1	72.9	66	70.3	35.8	19.7	40.4

TMAC Sample ID		HOP1-03JAN14/ HOP1-24JAN14	HOP1-07FEB14	ST7A-08MAR14	ST7A-04APR14	ST7A-09MAY14	ST7A-03JUN14	ST7A-08JUL14	ST7A-17JUL14
ALS ID		L1408499-1/ L1415837-1	L1420282-1	L1430069-1	L1440118-1	L1453345-1	L1464793-1	L1483329-1	L1489318-1
Sample Date/Time		03-01-14 12:00/ 24-01-14 10:15	02-07-2014 9:34	03-08-2014 11:28	4/4/2014 11:10	5/9/2014 9:30	6/3/2014 11:04	7/8/2014 8:25	7/17/2014 13:45
Parameter	**Unit**	**Results**							
Thallium (Tl)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	<0.00020	<0.00020	<0.00020
Tin (Sn)-Total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.00050	<0.00050	<0.00050	<0.00050
Titanium (Ti)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total	mg/L	0.00019	0.00019	0.00021	0	0.0002	<0.00020	<0.00020	<0.00020
Vanadium (V)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	0.0092	<0.0040	0.0434	<0.0040	<0.0050	<0.0050	<0.0050	<0.0050
Biochemical Oxygen Demand	mg/L	<2	<2	<2.0	<2.0	4	5	<2**	***
Oil and Grease	mg/L	<1.0*	<1.0	1.1	0	<5.0	<5.0	<5.0	<5.0
Oil And Grease (Visible Sheen)		No*	No	No	No	No	No	No	No
Microcystin	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

^ *Parameter Exceeded Recommended Holding Time Prior to Analysis*

**Oil and Grease Bottle broken in transit, resampled Jan 24/14 Lab Workorder L1415837-1*

***Laboratory erroneously analyzed for Carbonaceous Biochemical Oxygen Demand instead of Biochemical Oxygen Demand*

****Laboratory failed to analyse for requested parameter, station could not be re-sampled before month-end*

Table 14 - Water sampling monitoring program results for August to December 2014, taken from ST-7a (HOP-1), in mg/L, unless otherwise specified

TMAC Sample ID		ST7A-08AUG14	ST7A-02SEP14	ST7A-07OCT14A	ST7A-04NOV14	ST7A-16DEC14
ALS ID		L1499519-1	L1511577-1	L1529155-1	L1542569-1	L1559280-1
Sample Date/Time		8/8/2014 8:50	9/2/2014 8:30	10/7/2014 10:55	04/11/2014 9:30	12/16/2014 10:45
Parameter	**Unit**	**Results**				
Hardness (as CaCO3)	mg/L	75.1	72	78.7	77.3	84.7
pH	pH	7.91	8.01	7.99	7.95	8.01
Total Suspended Solids	mg/L	3	<3.0	<3.0	<3.0	<3.0
Ammonia, Total (as N)	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	0.0116
Nitrate (as N)	mg/L	<0.0050	<0.0050	0.0127	<0.0050	<0.0050
Nitrite (as N)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Orthophosphate-Dissolved (as P)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0016
Phosphorus (P)-Total	mg/L	0.0064	0.0064	0.0056	0.0037	0.0061
Cyanide, Total	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cyanide, Free	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fecal Coliforms	CFU/100mL	15	<1	<1	<1	<1
Aphanizomenon (Cyanophyceae)	cells/mL	56	11	4	-	-
Total cyanobacterial cell count	cells/mL	56	19	16	<1	<1
Pseudoanabaena (Cyanophyceae)	cells/mL	-	8	12	-	-
Aluminum (Al)-Total	mg/L	0.163	0.0292	0.094	0.0277	0.0142
Antimony (Sb)-Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Arsenic (As)-Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Barium (Ba)-Total	mg/L	<0.020	<0.020	<0.020	<0.020	<0.020
Beryllium (Be)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron (B)-Total	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Cadmium (Cd)-Total	mg/L	<0.000010	<0.000010	0.000019	<0.000010	<0.000010
Calcium (Ca)-Total	mg/L	13	12.4	13.6	13.4	14.7
Chromium (Cr)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Copper (Cu)-Total	mg/L	0.0012	<0.0010	0.0011	<0.0010	<0.0010
Iron (Fe)-Total	mg/L	0.162	<0.030	0.112	<0.030	<0.030
Lead (Pb)-Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Lithium (Li)-Total	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Total	mg/L	10.3	9.97	10.9	10.6	11.6
Manganese (Mn)-Total	mg/L	0.00696	0.00206	0.00306	0.00124	0.00084
Mercury (Hg)-Total	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

TMAC Sample ID		ST7A-08AUG14	ST7A-02SEP14	ST7A-07OCT14A	ST7A-04NOV14	ST7A-16DEC14
ALS ID		L1499519-1	L1511577-1	L1529155-1	L1542569-1	L1559280-1
Sample Date/Time		8/8/2014 8:50	9/2/2014 8:30	10/7/2014 10:55	04/11/2014 9:30	12/16/2014 10:45
Parameter	**Unit**	**Results**				
Nickel (Ni)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Potassium (K)-Total	mg/L	4.4	4	4.2	4.2	4.6
Selenium (Se)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Silver (Ag)-Total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Sodium (Na)-Total	mg/L	52.2	53.2	60.1	59.5	64.5
Thallium (Tl)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Tin (Sn)-Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Titanium (Ti)-Total	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Vanadium (V)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Biochemical Oxygen Demand	mg/L	<2	2	<2.0	3	2
Oil and Grease	mg/L	<5.0	5	<5.0	<5.0	<5.0
Oil And Grease (Visible Sheen)		No	n/a	No	No	No
Microcystin	ug/L	<0.20	0.2	<0.20	<0.20	<0.20*

** Results on Lab Work Order L1559322 for Station PDC10 (Windy Lake Potable Drinking Water Sampling Station)*

Table 15 - Water sampling monitoring program results for January and February, 2014 taken from ST-7, in mg/L, unless otherwise specified

TMAC Sample ID		ST7-03JAN14	ST7-07FEB14
ALS ID		L1408499-2	L1420282-2
Sample Date/Time		1/3/2014	02-07-2014 10:04
Parameter	**Unit**	**Results**	
Conductivity (EC)	uS/cm	337	526
Hardness (as CaCO3)	mg/L	55.2	85.6
pH	pH	7.3	7.64
Total Suspended Solids	mg/L	<3.0	<3.0
Ammonia, Total (as N)	mg/L	<0.050	<0.050
Nitrate (as N)	mg/L	<0.050	<0.050
Nitrite (as N)	mg/L	<0.050	<0.050
Orthophosphate-Dissolved (as P)	mg/L	<0.0010	<0.0010
Phosphorus (P)-Total	mg/L	0.029	<0.020
Cyanide, Total	mg/L	<0.0050	<0.0050
Cyanide, Free	mg/L	<0.0050	<0.0050
Fecal Coliforms	CFU/100mL	<1	<1
Aphanizomenon (Cyanophyceae)	cells/mL	21500	-
Total cyanobacterial cell count	cells/mL	27300	<1
Limnothrix (Cyanophyceae)	cells/mL	1540	-
Planktolyngbya (Cyanophyceae)	cells/mL	3460	-
Pseudoanabaena (Cyanophyceae)	cells/mL	768	-
Aluminum (Al)-Total	mg/L	0.0095	<0.0050
Antimony (Sb)-Total	mg/L	<0.00040	<0.00040
Arsenic (As)-Total	mg/L	<0.00040	<0.00040
Barium (Ba)-Total	mg/L	0.0032	<0.0030
Beryllium (Be)-Total	mg/L	<0.0010	<0.0010
Boron (B)-Total	mg/L	<0.050	0.052
Cadmium (Cd)-Total	mg/L	<0.000010	<0.000010
Calcium (Ca)-Total	mg/L	11.1	15.7
Chromium (Cr)-Total	mg/L	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L	<0.0020	<0.0020
Copper (Cu)-Total	mg/L	0.0018	<0.0010
Iron (Fe)-Total	mg/L	0.020	<0.010
Lead (Pb)-Total	mg/L	<0.00010	<0.00010
Lithium (Li)-Total	mg/L	<0.010	<0.010
Magnesium (Mg)-Total	mg/L	8.19	11.4
Manganese (Mn)-Total	mg/L	0.0074	<0.0020
Mercury (Hg)-Total	mg/L	<0.000020	<0.000020
Molybdenum (Mo)-Total	mg/L	<0.0050	<0.0050
Nickel (Ni)-Total	mg/L	<0.0020	<0.0020
Potassium (K)-Total	mg/L	2.71	4.82
Selenium (Se)-Total	mg/L	<0.00040	<0.00040
Silver (Ag)-Total	mg/L	<0.000020	<0.000020
Sodium (Na)-Total	mg/L	38.5	63.1
Thallium (Tl)-Total	mg/L	<0.00010	<0.00010
Tin (Sn)-Total	mg/L	<0.050	<0.050
Titanium (Ti)-Total	mg/L	<0.0010	<0.0010
Uranium (U)-Total	mg/L	<0.00010	0.00019
Vanadium (V)-Total	mg/L	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	<0.0040	<0.0040

TMAC Sample ID		ST7-03JAN14	ST7-07FEB14
ALS ID		L1408499-2	L1420282-2
Sample Date/Time		1/3/2014	02-07-2014 10:04
Parameter	**Unit**	**Results**	
Calcium (Ca)-Dissolved	mg/L	10.7	15.4
Magnesium (Mg)-Dissolved	mg/L	6.89	11.4
Biochemical Oxygen Demand	mg/L	<2.0	<2
Oil and Grease	mg/L	<1.0	<1.0
Oil And Grease (Visible Sheen)		No	No
Microcystin	ug/L	<0.20	<0.20

ST-8 Discharge from Sewage Treatment Plant Bio-Membrane

During 2014, TMAC operated only one of the tandem sewage treatment plants to support the Doris North camp facility. The plant has the capacity to treat wastewater for up to 180 personnel. Treated effluent samples were collected from a sampling port inside the plant (ST-8B) to test the quality of the effluent to be discharged to the tundra, in accordance with Part G, Item 3(b) of the Licence. In-plant sampling facilitates year-round compliance evaluation of plant performance.

During 2014, there were 6 water sampling occasions where the plant did not meet discharge criteria for pH. Subsequent to receiving the analytical results, the plant operators made adjustments, and repeat samples were collected within the same month when possible to verify discharge was meeting compliance criteria. It is important to note that pH water quality samples cannot be collected and submitted to the lab to meet the required hold times (0.25 hour), and manual sampling is recommended. pH is a monitored value in the diagnostic system of the plant and is read and recorded daily by the operator. Over the course of 365 days in 2014, the plant-monitored pH was below compliance criteria of 6 on only 8 days, and the monthly averages during the year are all compliant with discharge criteria. The plant-monitored pH monthly averages are provided in Table 16.

Table 16 – Plant-monitored Monthly average pH for ST-8B (Sewage Treatment Plant ST-8), January to December 2014

Month	Average pH
Jan	6.537
Feb	6.801
Mar	6.670
Apr	6.404
May	6.513
Jun	6.727
Jul	6.913
Aug	6.863
Sep	6.764
Oct	6.947
Nov	6.792
Dec	6.992

The plant remained in compliance with all other parameters for discharges throughout the year. All water quality monitoring results for ST-8B are provided in Table 18 and Table 18.

Table 17 - Water quality monitoring program results for ST-8B (Sewage Treatment Plant ST-8), January to June 2014, in mg/L, unless otherwise specified

	TMAC ID	ST8-03JAN14	ST8-24JAN14	ST8B-07FEB14	ST8-21FEB14	ST8-08MAR14	ST8-04APR14	ST8B-08MAY14	ST8B-03JUN14	Part G Item 3 (b)	
	ALS ID	L1408499-3	L1415837-2	L1420282-3	L1425021-3	L1430069-2	L1440118-2	L1453285-1	L1454791-1	Maximum Average Concentration	Maximum Allowable Grab Sample Concentration
	Sample Date/Time	03-01-14 12:00	24-01-14 10:15	02-07-2014 8:23	02-21-14 11:58	02-21-14 8:28	4/4/2014 10:27	5/8/2014 19:30	6/3/2014 11:15		
Parameters	**Units**	**Results**									
pH	pH	**5.98**	7.22	**5.93**	6.26	6.53	6	7.47	6.34	6-9	9
Total Suspended Solids	mg/L	<3.0	-	<3.0	-	<3.0	<3.0	<3.0	<3.0	100 mg/L	100 mg/L
Biochemical Oxygen Demand	mg/L	<2	-	<2.0*	<2.0	<2.0	<2.0	<2	4	80 mg/L	80 mg/L
Oil and Grease	mg/L	1.2	-	<1	-	<1.0	<1.0	<5.0	<5.0	5	10
Oil And Grease (Visible Sheen)		No	-	No	-	No	No	No	No	No Visible Sheen	No Visible Sheen
Fecal Coliform	CFU/100mL	<1	-	<1	-	<1	<1	<1	<1	10,000 CFU/100mL	10,000 CFU/100mL

Bold *indicates pH less than average concentration range (Part G Item 3(b) for monthly grab samples collected.*

Table 18 - Water quality monitoring program results for ST-8B (Sewage Treatment Plant ST-8), July to December 2014, in mg/L, unless otherwise specified

	TMAC ID	ST8B-08JUL14	ST8B-08AUG14A	ST8B-08AUG14B	ST8B-29AUG14	ST8B-5SEPT14	ST8B-14OCT14	ST8B-22OCT14	ST8B-11NOV14	ST8B-0 2DEC14	Part G Item 3 (b)	
	ALS ID	L1483329-2	L1499519-2	L1499519-4	L1510515-1	L1513588-1	L1532512-1	L1536877-1	L1545274-1	L1553772-1	Maximum Average Concentration	Maximum Allowable Grab Sample Concentration
	Sample Date/Time	7/8/2014 11:00	8/8/2014 9:40	8/8/2014 9:45	8/29/2014 10:15	09/05/2014 8:35	10/14/2014 9:55	10/22/2014 10:10	11/11/2014 9:10	12/02/2014 10:00		
Parameters	**Units**	**Results**										
pH	pH	**4.8**	**5.29**	**5.31**	7.36	7.38	**4.99**	7.23	6.63	7.91	6-9	9
Total Suspended Solids	mg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	100 mg/L	100 mg/L
Biochemical Oxygen Demand	mg/L	<2*	<2	<2	2	9	5	2	<2.0	<2.0	80 mg/L	80 mg/L
Oil and Grease	mg/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5	10
Oil And Grease (Visible Sheen)		No	No	No	No	No	No	No	No	No	No Visible Sheen	No Visible Sheen
Fecal Coliform	CFU/100mL	<1	<1	<1	<1	<1	<1	<1	<1	<1	10,000 CFU/100mL	10,000 CFU/100mL

Bold *indicates pH less than average concentration range (Part G Item 3(b) for monthly grab samples collected.*

Treated effluent volumes released from ST-8 are metered daily and summary volumes reported in the monthly monitoring reports. The monthly volumes discharged in 2014 are presented in Table 19.

Table 19 – Treated effluent released from the Doris sewage treatment plant (ST-8), 2014, in cubic meters (m^3)

Month	Monthly Volume (m^3)*	Cumulative Volume (m^3)*
January	46	46
February	38	84
March	52	136
April	70	206
May	271	477
June	321	798
July	393	1191
August	373	1564
September	326	1890
October	372	2262
November	234	2496
December	69	2565
Total Volume of Treated Effluent Released 2014 (m^3)		**2,565**

**values rounded to nearest whole cubic meter*

The sludge produced at the sewage treatment plant is pressed regularly to remove processed solids and to allow for proper functioning of the plant. Each press produces approximately 0.11 m^3 of sludge. In 2014, pressed sludge was sent to the incinerator for disposal. The volume of pressed sludge produced in 2014 is presented in Table 20.

Table 20 – Volume of pressed sludge removed from the Doris sewage treatment plant, 2014, in cubic meters (m^3)

Month	Monthly Volume (m^3)	Cumulative Volume (m^3)
January	0.11328	0.11328
February	0.45312	0.56640
March	0.22656	0.79296
April	0.11328	0.90624
May	1.01952	1.92576
June	2.49216	4.41792
July	2.15232	6.57024
August	2.60544	9.17568
September	2.03904	11.21472
October	2.60544	13.82016
November	1.58592	15.40608
December	0.67968	16.08576
Total Volume of Sludge Produced in 2014 (m^3)		**16.1**

ST-9 Runoff from Sewage Treatment Plant Discharge

In consultation with (then) INAC during the 2009 inspection tour, the location of sampling point ST-9 was set at geographical coordinates 68°8'20" N, 106°39'55" W. This point is east of Glenn Lake and down slope from the ST-8 tundra discharge location. Monthly monitoring was conducted at ST-9 June through September in 2014 in accordance with Schedule J of 2AM-DOH1323. The station is frozen during the remainder of the year. There is no water quality criteria specified in the licence for this monitoring station. High fecal coliform counts were present at the monitoring station in September, possibly due to entrainment of fecal matter from wildlife on land in proximity to the sampling location (e.g. waterfowl or terrestrial mammals); fecal coliforms were not detected in the samples for the STP discharge at ST-8, thus the treated effluent runoff from the Doris STP is likely not the source of the high fecal coliforms detected at ST-9. Table 21 provides results of the 2014 seasonal monitoring.

Table 21 - Water quality monitoring program results for ST-9, June to September 2014, in mg/L, unless otherwise specified

TMAC Sample ID		ST9-10JUN14	ST9-07JUL14	ST9-08AUG14	ST9-5SEPT14
ALS ID		L1468516-1	L1483329-3	L1499519-3	L1513588-2
Sample Date/Time		6/10/2014 8:10:00 AM	7/7/2014 5:55:00 PM	8/8/2014 7:40:00 AM	9/5/2014 8:10:00 AM
Parameters	**Units**	**Results**			
pH	pH	7.82	7.91	7.83	7.85
Total Suspended Solids	mg/L	<3.0	<3.0	<3.0	147
Biochemical Oxygen Demand (BOD_5)	mg/L	2	<2*	<2	8
Oil and Grease	mg/L	<5.0	<5.0	<5.0	<5.0
Oil And Grease (Visible Sheen)		No	No	No	No
Fecal Coliform	CFU/ 100mL	<1	1	3	TNTC**

**Laboratory erroneously analyzed for Carbonaceous Biochemical Oxygen Demand instead of Biochemical Oxygen Demand*
***TNTC = Too Numerous To Count.*

ST-10 Site Runoff from Sediment Controls

Site runoff from sediment controls (ST-10) was not monitored as no construction occurred and no turbid runoff was observed.

TIA Dewatering and Doris Creek Monitoring - TL-1, TL-2, TL-3, TL-4 and TL-10

This section presents the results of the dewatering monitoring of the Tailings Impoundment Area (TIA) as per the applicable sections of Part G (Conditions Applying to Waste Management and Waste Management Plans) and Part J (Conditions Applying to General and Aquatic Effects Monitoring) of the water licence as they pertain to the Care and Maintenance phase and sampling prior to Operations.

- **TL-1 – TIA at the Reclaim Pump Barge:** The reclaim pump barge did not exist at the TIA during 2014 but representative monitoring for TL-1 was undertaken pre-discharge commencing in June from the lakeshore adjacent to the intake pump at the North Dam on the TIA and throughout the discharge season from the same location. The intake of the discharge pipeline at the TIA is submerged to a depth of 1.5m below the surface.
- **TL-2 – Doris Outflow Creek Upstream at the Flow Monitoring Station:** Monitoring during 2014 was undertaken from a point on Doris Creek established at UTM 7559507 N, 434053 E
- **TL-3 – Doris Outflow Creek 80m Downstream of Base of Waterfall:** Monitoring during 2014 was undertaken from a point on Doris Creek established at UTM 7559985 N, 434204 E
- **TL-4 – TIA Discharge End-Of-Pipe:** Monitoring during 2014 was undertaken from a valve established in the dewatering discharge line to Doris Creek at end-of-pipe.
- **TL-10 – Water Column in Deepest Portion of the TIA and at a Location Away from the TIA Reclaim Water Floating Pump House, Sampled at Surface, Mid-depth and Near Bottom:** Monitoring was undertaken from a point established at UTM 7558239 N, 434914 E.

Seasonal dewatering of the Tailing Impoundment Area began June 19, 2014. Prior to the initiation of the discharge, samples were first collected at TL-1, TL-2, and TL-3 at the end of May. A sudden freeze-up temporarily prevented the commencement of discharge, and sample collection re-started in early June, with samples collected 3 times per week one week prior to discharge at station TL-1 starting June 9, and one duplicate set of samples collected at each of stations TL-2 and TL-3 prior to discharge collected on June 16. For two weeks after discharge started, samples were collected twice per week at TL-1, TL-2 and TL-3, reducing to once per week in the third week. Weekly sampling commenced at TL-4 June 23 and continued throughout the discharge period.

During the period June 19 to September 25, the total discharge from the TIA to Doris Creek, as measured at TL-1 and TL-4, was 675,034 m^3 and 663,057 m^3, respectively. Table 22 shows the monthly and annual volumes discharged. On August 18, one line was shut down on the TL-4 discharge system due to suspected meter issues. The higher volumes metered at TL-1 were utilized to compare with the daily allowable discharge volume into Doris Creek.

During the discharge period, there were two occurrences where the discharge exceeded 10% of the volume of Doris Creek as measured at TL-2. These occurred on September 9 and 21, but the volume discharged was never greater than 11% of Doris Creek discharge. A comparison of flows between TL-1, TL-2, TL-3 and TL-4 is provided in Table 35 and discussed in section 7 of this report.

In compliance with the requirements of Part G Item 29, acute lethality testing conducted at TL-1 once prior to the initiation of discharge (on June 2) indicated that this water was non-acutely toxic to trout and daphnia. Water collected from TL-4 mid-way through discharge on August 11 was also shown to be non-acutely toxic to trout and daphnia. All sampling results are provided in Table 23.

Monitoring results for TL-1 are provided in Table 24 and Table 25 and TL-4 monitoring results compared with discharge criteria at Part G Item 28 of Licence 2AM-DOH1323 are provided in Table 26 to Table 27. As expected, discharged water was compliant with the discharge criteria.

Sample results for TL-2 (Doris Creek upstream) are presented in Table 28 and Table 29 and are compared to the discharge criteria for TL-3. Sample results for TL-3 (Doris Creek downstream) are presented in Table 30 and Table 31. As expected, the TL-3 water quality was similar to the TL-2 water quality. Water samples at TL-3 occasionally exceeded the discharge criteria for aluminium and iron (highlighted in the tables); these parameters were also shown to be elevated in samples of background water at TL-2 upstream, but were not elevated in the end-of-pipe discharge at TL-4. On July 14, water quality measured at TL-3 exceeded discharge criteria for pH and TSS, though this was not reflected either upstream at TL-2 or in the discharge at TL-4. This is the only sampling event during the discharge period where this type of exceedance occurred and is possibly attributable to sample collection and/or sample preservation error. All other samples for these parameters were within normal ranges and complaint with licence criteria.

One annual sample was collected at TL-10 (deepest portion of the TIA) in August to supplement information for the water quality model. Table 32 presents the sampling results.

Table 22 - Monthly and annual volumes discharged from the TIA, at TL-1 and TL-4, June to September 2014, in m^3*

Month	Monthly Volume TL-1**	Monthly Volume TL-4**
June	104634	105363
July	257778	259965
August	194405	191928
September	118218	105800
Total Volume Dewatered from the TIA 2014	**675,034**	**663,057^**

**Volumes rounded to the nearest cubic meter*
*** TL-1 and TL-4 are opposite ends of the same pipeline: TL-1 is the intake, TL-4 is the discharge*
^ Suspected meter error on TL-4 discharge line may have contributed to differences in total volume discharged as measured on the TL-1 line – the higher volumes recorded were used to compare to allowable discharge to Doris Creek.

Table 23 - Acute Toxicity Bioassay at sampling stations TL-1 (June) and TL-4 (August), 2014

TMAC Sample ID	TL1-02JUN14	TL4-11AUG14
ALS ID	L1464762-1	L1501189-4
Sample Date/Time	6/2/2014 15:34	8/11/2014 16:15
Trout		
96-h LC50 Rainbow Trout Acute Toxicity EPS 1/RM/13	>100%	>100%
Daphnia		
48-h LC50 Daphnia magna Acute Toxicity EPS 1/RM/14	>100%	>100%

Note: LC50 = lethal concentration that results in mortality of 50% of the test organisms; a result of 100% indicates all organisms survived

TL-1 TIA at the Reclaim Pump Barge

Table 24 - Water Quality from the Tailings Impoundment Area (TL-1), May to July, 2014

TMAC Sample ID		TL1-29MAY14	TL1-09JUN14	TL1-12JUN14	TL1-16JUN14	TL1-19JUN14	TL1-23JUN14	TL1-26JUN14	TL1-30JUN14	TL1-03JUL14	TL1-07JUL14	TL1-14JUL14	TL1-21JUL14	TL1-28JUL14
ALS ID		L1463166-1	L1468523-1	L1470655-1	L1472482-1	L1473846-1	L1476338-1	L1478465-1	L1481648-1	L1481650-1	L1483353-1	L1487129-1	L1490760-1	L1494360-1
Sample Date/Time		5/29/2014 14:30	6/9/2014 16:41	6/12/2014 18:35	6/16/2014 15:34	6/19/2014 11:25	6/23/2014 14:45	6/26/2014 18:55	6/30/2014 14:35	7/3/2014 15:50	7/7/2014 14:00	7/14/2014 9:10	7/21/2014 15:05	7/28/2014 11:40
Parameter	Units	Results												
Hardness (as CaCO3)	mg/L	20.5	43.4	43.1	45.7	42.9	48.7	57.8	42.1	57.4	56.8	61.5	59.9	56.5
pH	pH	7.33	7.68	7.57	7.66	7.79	7.82	7.86	7.69	7.99	7.92	7.7	7.97	7.79
Total Suspended Solids	mg/L	6.4	<3.0	<3.0	<3.0	4	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Total Dissolved Solids	mg/L	75	101	115	117	105	114	136	111	134	140	131	145	134
Ammonia, Total (as N)	mg/L	0.0731	0.0157	0.0071	0.0696	0.005	0.0122	0.007	0.0174	0.0126	0.005	0.009	0.0125	0.0325
Bromide (Br)	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.075	0.055	0.064	0.077	0.066	0.082	0.069
Chloride (Cl)	mg/L	8.97	31	32.7	32.2	28.2	35.2	43.1	31.2	41.3	42	42.2	44.9	42.6
Fluoride (F)	mg/L	0.023	0.049	0.054	0.048	0.046	0.051	0.06	0.046	0.057	0.062	0.058	0.059	0.06
Nitrate (as N)	mg/L	0.196	0.0067	<0.0050	<0.0050	0.01	0.0535	0.0509	0.0514	0.0208	<0.0050	<0.0050	0.116	0.115
Nitrite (as N)	mg/L	0.0013	<0.0010	<0.0010	<0.0010	<0.0010	0.0016	0.0013	<0.0010	<0.0010	<0.0010	<0.0010	0.0019	0.0021
Orthophosphate-Dissolved (as P)	mg/L	0.0021	0.0046	0.0021 *	<0.0010	0.0015	0.0016	<0.0010	0.0012	<0.0010	0.0011	0.0013	<0.0010	0.0013
Phosphorus (P)-Total	mg/L	0.0302	0.0424	0.0512	0.0252	0.0413	0.0347	0.0194	0.0214	0.0199	0.0162	0.0202	0.0177	0.0244
Sulphate (SO_4)	mg/L	2.65	2.07	2.15	1.97	1.84	2.98	2.98	2.1	2.85	2.09	2.05	3.72	2.67
Cyanide, Total	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cyanide, Free	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Aluminum (Al)-Total	mg/L	0.175	0.0102	0.0191	0.0421	0.0543	0.0178	0.0491	0.0162	0.011	0.0246	0.0075	0.0454	0.0205
Antimony (Sb)-Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Arsenic (As)-Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Barium (Ba)-Total	mg/L	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Beryllium (Be)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron (B)-Total	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Cadmium (Cd)-Total	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Calcium (Ca)-Total	mg/L	4.9	9.61	9.57	10	9.66	11.1	13.3	9.46	13.1	12.4	13.8	13.5	12.7
Chromium (Cr)-Total	mg/L	0.0015	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L	0.00069	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Copper (Cu)-Total	mg/L	0.003	<0.0010	0.0014	0.0014	0.0014	0.0013	0.0018	<0.0010	0.0012	<0.0010	<0.0010	0.0012	0.001
Iron (Fe)-Total	mg/L	0.859	0.477	0.333	0.253	0.289	0.164	0.234	0.114	0.143	0.17	0.172	0.19	0.22
Lead (Pb)-Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Lithium (Li)-Total	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Total	mg/L	2	4.71	4.67	5.02	4.56	5.06	6	4.5	6	6.27	6.55	6.36	6.05
Manganese (Mn)-Total	mg/L	0.301	0.0373	0.0204	0.0312	0.0263	0.0139	0.0161	0.00941	0.01	0.0292	0.017	0.019	0.0281
Mercury (Hg)-Total	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Nickel (Ni)-Total	mg/L	0.0012	<0.0010	0.0012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Potassium (K)-Total	mg/L	<2.0	2.1	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.1	<2.0	2.1	2.1	2.1
Selenium (Se)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Silver (Ag)-Total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Sodium (Na)-Total	mg/L	6.2	16.7	15.6	16.5	14.7	17.1	19.5	15.5	20.6	20.5	20.7	22	20
Thallium (Tl)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Tin (Sn)-Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Titanium (Ti)-Total	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Vanadium (V)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	0.0129	0.0071	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Dissolved Oxygen	mg/L	-	-	-	-	-	-	-	-	-	13.70**	-	-	-

TMAC Sample ID		TL1-29MAY14	TL1-09JUN14	TL1-12JUN14	TL1-16JUN14	TL1-19JUN14	TL1-23JUN14	TL1-26JUN14	TL1-30JUN14	TL1-03JUL14	TL1-07JUL14	TL1-14JUL14	TL1-21JUL14	TL1-28JUL14
ALS ID		L1463166-1	L1468523-1	L1470655-1	L1472482-1	L1473846-1	L1476338-1	L1478465-1	L1481648-1	L1481650-1	L1483353-1	L1487129-1	L1490760-1	L1494360-1
Sample Date/Time		5/29/2014 14:30	6/9/2014 16:41	6/12/2014 18:35	6/16/2014 15:34	6/19/2014 11:25	6/23/2014 14:45	6/26/2014 18:55	6/30/2014 14:35	7/3/2014 15:50	7/7/2014 14:00	7/14/2014 9:10	7/21/2014 15:05	7/28/2014 11:40
Parameter	Units	Results												
Redox Potential	mV	-	-	-	-	-	-	-	-	-	144	276	-	-

**Parameter Exceeded Recommended Holding Time Prior to Analysis*
*** Field Measurement*

Table 25 - Water Quality from the Tailings Impoundment Area (TL-1), August to September 2014

TMAC Sample ID		TL1-04AUG14	TL1-11AUG14	TL1-18AUG14	TL1-25AUG14	TL1-01SEP14	TL1-09SEPT14	TL1-15SEP14	TL1-22SEP14A	TL1-22SEP14B
ALS ID		L1497306-1	L1501189-1	L1504905-1	L1509318-1	L1511567-1	L1515164-1	L1518740-1	L1523154-1	L1523154-5
Sample Date/Time		8/4/2014 7:55	08/11/2014 15:45	8/18/2014 13:30	8/25/2014 13:35	9/1/2014 7:55	9/9/2014 9:45	9/15/2014 9:25	9/22/2014 13:42	9/22/2014 13:42
Parameter	Units									
Hardness (as CaCO3)	mg/L	63.3	66	62.9	74.6	70.5	66.3	65.3	72.9	74.8
pH	pH	7.75	8.09	7.91	7.78	7.79	8	8.16	8	7.98
Total Suspended Solids	mg/L	<3.0	3.3	<3.0	<3.0	<3.0	<3.0	3.2	<3.0	<3.0
Total Dissolved Solids	mg/L	158	172	162	176	174	149	170	185	194
Ammonia, Total (as N)	mg/L	0.0525	0.0377	0.0112	0.0632	0.0333	0.06	0.0462	0.0216	0.0224
Bromide (Br)	mg/L	0.073	0.093	0.082	0.093	0.096	0.101	0.112	0.111	0.113
Chloride (Cl)	mg/L	45.4	50.4	49	53.2	50.9	49.5	52.1	59.2	59.9
Fluoride (F)	mg/L	0.06	0.064	0.069	0.067	0.071	0.063	0.059	0.073	0.073
Nitrate (as N)	mg/L	0.196	0.0915	0.0299	0.0096	0.0117	0.282	0.182	0.0522	0.0496
Nitrite (as N)	mg/L	0.0043	0.0024	<0.0010	<0.0010	<0.0010	0.0036	0.002	<0.0010	<0.0010
Orthophosphate-Dissolved (as P)	mg/L	<0.0010	0.0014	<0.0010	0.0023	0.001	<0.0010	<0.0010	0.0023	<0.0010
Phosphorus (P)-Total	mg/L	0.0225	0.0305	0.023	0.0254	0.0253	0.012	0.0136	0.0175	0.0152
Sulphate (SO_4)	mg/L	4.04	5.72	4.46	4.17	4	4.45	4.9	4.61	4.77
Cyanide, Total	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cyanide, Free	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Aluminum (Al)-Total	mg/L	0.0146	0.0109	0.009	0.0062	0.008	0.0119	0.0154	0.0306	0.0322
Antimony (Sb)-Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Arsenic (As)-Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Barium (Ba)-Total	mg/L	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Beryllium (Be)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron (B)-Total	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Cadmium (Cd)-Total	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Calcium (Ca)-Total	mg/L	14.5	15.2	14	17	16	15.3	15	16.2	16.6
Chromium (Cr)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Copper (Cu)-Total	mg/L	0.0013	0.0012	<0.0010	0.0012	0.0012	0.001	<0.0010	0.0026	0.0016
Iron (Fe)-Total	mg/L	0.204	0.275	0.201	0.494	0.406	0.204	0.205	0.194	0.194
Lead (Pb)-Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Lithium (Li)-Total	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Total	mg/L	6.59	6.8	6.81	7.83	7.41	6.81	6.76	7.89	8.11
Manganese (Mn)-Total	mg/L	0.0236	0.0246	0.0215	0.0807	0.0581	0.0279	0.025	0.0255	0.0229
Mercury (Hg)-Total	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Nickel (Ni)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Potassium (K)-Total	mg/L	2.1	2.2	2.1	2.3	2.4	2.2	2	2.4	2.5
Selenium (Se)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

TMAC Sample ID		TL1-04AUG14	TL1-11AUG14	TL1-18AUG14	TL1-25AUG14	TL1-01SEP14	TL1-09SEPT14	TL1-15SEP14	TL1-22SEP14A	TL1-22SEP14B
ALS ID		L1497306-1	L1501189-1	L1504905-1	L1509318-1	L1511567-1	L1515164-1	L1518740-1	L1523154-1	L1523154-5
Sample Date/Time		8/4/2014 7:55	08/11/2014 15:45	8/18/2014 13:30	8/25/2014 13:35	9/1/2014 7:55	9/9/2014 9:45	9/15/2014 9:25	9/22/2014 13:42	9/22/2014 13:42
Parameter	**Units**									
Silver (Ag)-Total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Sodium (Na)-Total	mg/L	21.8	25.7	24.1	26.6	24.8	23.6	23.8	27.2	27.4
Thallium (Tl)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Tin (Sn)-Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Titanium (Ti)-Total	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Vanadium (V)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	<0.0050	0.0055	<0.0050	0.0062	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Dissolved Oxygen	mg/L								17.61*	
Redox Potential	mV					-	-	-	209	182

** Field Measurement - Suspected DO meter error*

TL-4 TIA Discharge End-Of-Pipe

Table 26 - Water Quality from the Tailings Impoundment Area Discharge End-of-Pipe (TL-4), June to July 2014, in mg/L unless otherwise specified

	Sample ID	TL4-23JUN14	TL4-26JUN14	TL4-30JUN14	TL4-07JUL14	TL4-14JUL14	TL4-21JUL14	TL4-22JUL14	TL4-28JUL14	Part G Item 28	
	ALS ID	L1476338-4	L1478465-4	L1481648-4	L1483353-4	L1487129-4	L1490760-4	L1490760-5	L1494360-4	TL-4 Max Average (mg/L)	TL-4 Max Grab (mg/L)
	Sample Date/Time	6/23/2014 14:30	6/26/2014 18:45	6/30/2014 14:25	7/7/2014 15:30	7/14/2014 9:35	7/21/2014 14:50	7/22/2014 9:05	7/28/2014 12:30		
Parameter	Units	Results									
Hardness (as CaCO3)	mg/L	44	50.5	44.8	55	56.2	55.9	-	59.7		
pH	pH	7.75	7.75	7.77	7.87	8.02	7.77	-	7.72	Between 6.0-9.5	Between 6.0-9.5
Total Suspended Solids	mg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	-	4.1	15.00	30.00
Total Dissolved Solids	mg/L	106	120	115	134	118	130	-	148		
Ammonia, Total (as N)	mg/L	0.0097	0.0133	0.0331	0.0106	0.0105	0.0227	-	0.0846	6	
Bromide (Br)	mg/L	<0.050	0.065	0.057	0.079	0.075	0.081	-	0.078		
Chloride (Cl)	mg/L	31.3	39	33.3	41.4	41.7	42.1	-	45.8		
Fluoride (F)	mg/L	0.046	0.056	0.046	0.063	0.057	0.058	-	0.061		
Nitrate (as N)	mg/L	0.016	0.0388	0.14	<0.0050	0.0703	0.108	-	0.325		
Nitrite (as N)	mg/L	<0.0010	<0.0010	0.0016	<0.0010	0.0015	0.0016	-	0.0043		
Orthophosphate-Dissolved (as P)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010		
Phosphorus (P)-Total	mg/L	0.0254	0.0185	0.0157	0.014	0.017	0.0128	-	0.0131		
Sulphate (SO_4)	mg/L	1.9	2.14	1.86	1.96	2.06	2.43	-	2.97		
Cyanide, Total	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-	<0.0050	1.00	2.00
Cyanide, Free	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-	<0.0050		
Aluminum (Al)-Total	mg/L	0.0133	0.0091	0.0115	0.0068	0.0115	0.023	-	0.0257		
Antimony (Sb)-Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-	<0.00050		
Arsenic (As)-Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-	<0.00050	0.50	1.00
Barium (Ba)-Total	mg/L	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	-	<0.020		
Beryllium (Be)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010		
Boron (B)-Total	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-	<0.10		
Cadmium (Cd)-Total	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	-	<0.000010		
Calcium (Ca)-Total	mg/L	9.95	11.5	10.1	11.9	12.5	12.6	-	13.7		
Chromium (Cr)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010		
Cobalt (Co)-Total	mg/L	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	-	<0.00030		
Copper (Cu)-Total	mg/L	0.001	0.0012	<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010	0.30	0.60
Iron (Fe)-Total	mg/L	0.107	0.118	0.123	0.211	0.217	0.266	-	0.448		
Lead (Pb)-Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-	<0.00050	0.20	0.40
Lithium (Li)-Total	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-	<0.0050		
Magnesium (Mg)-Total	mg/L	4.66	5.32	4.72	6.12	6.05	5.96	-	6.19		
Manganese (Mn)-Total	mg/L	0.0126	0.0133	0.0155	0.0427	0.0244	0.0205	-	0.0373		
Mercury (Hg)-Total	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	-	<0.000010		
Molybdenum (Mo)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010		
Nickel (Ni)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010	0.50	1.00
Potassium (K)-Total	mg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	2.8		
Selenium (Se)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	-	<0.00010		
Silver (Ag)-Total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	-	<0.000020		
Sodium (Na)-Total	mg/L	15.3	17.2	16.1	19.9	19.4	19.7	-	21.5		
Thallium (Tl)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	-	<0.00020		
Tin (Sn)-Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-	<0.00050		
Titanium (Ti)-Total	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-	<0.010		
Uranium (U)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	-	<0.00020		
Vanadium (V)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010		
Zinc (Zn)-Total	mg/L	<0.0050	0.0086	0.0089	0.0087	0.0105	0.0188	-	0.0217	0.50	1.00
Radium 226	Bq/L	<0.0037	<0.0037	<0.0056	<0.0046	0.0137	<0.0015		<0.0039	0.37 Bq/L	1.11 Bq/L
BOD	mg/L		5					4		80	160
Fecal Coliform	CFU/mL		<1					<1		10,000 CFU/100mL	10,000 CFU/100mL

Table 27 - Water Quality from the Tailings Impoundment Area Discharge End-of-Pipe (TL-4), August and September 2014, in mg/L unless otherwise specified

Sample ID		TL4-4AUG14	TL4-11AUG14	TL4-18AUG14	TL4-19AUG14	TL4-25AUG14	TL4-01SEP14	TL4-09SEPT14	TL4-15SEP14	TL4-22SEP14A	TL4-22SEP14B	Part G Item 28	
ALS ID		L1497306-4	L1501189-4	L1504905-4	L1504905-5	L1509318-4	L1511567-4	L1515164-4	L1518740-4	L1523154-4	L1523154-8	TL-4 Max Average (mg/L)	TL-4 Max Grab (mg/L)
Sample Date/Time		8/4/2014 8:20	8/11/2014 16:15	8/18/2014 14:00	8/19/2014 9:35	8/25/2014 14:50	9/1/2014 8:30	9/9/2014 9:15	9/15/2014 9:50	9/22/2014 14:17	9/22/2014 14:17		
Parameter	Units	Results											
Hardness (as CaCO3)	mg/L	58.4	58.2	57.7	-	61.8	60.5	60.2	59.3	56	55.8		
pH	pH	7.81	7.86	7.8	-	7.69	7.8	7.73	8.07	7.06	7.36	Between 6.0-9.5	Between 6.0-9.5
Total Suspended Solids	mg/L	4.1	3.3	<3.0	-	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	15.00	30.00
Total Dissolved Solids	mg/L	148	150	137	-	152	155	145	157	146	146		
Ammonia, Total (as N)	mg/L	0.0559	0.044	0.132	-	1.07	0.0222	0.0571	0.0707	0.0197	0.0191	6	
Bromide (Br)	mg/L	0.076	0.087	0.079	-	0.087	0.098	0.09	0.103	0.096	0.091		
Chloride (Cl)	mg/L	44.7	44.2	42	-	43.2	44.5	46.5	47.1	44.7	44.8		
Fluoride (F)	mg/L	0.059	0.061	0.063	-	0.066	0.066	0.061	0.057	0.065	0.065		
Nitrate (as N)	mg/L	0.222	0.152	0.0249	-	<0.0050	0.0531	0.226	0.242	0.0636	0.0643		
Nitrite (as N)	mg/L	0.0035	0.0024	0.0076	-	<0.0010	0.0014	0.0028	0.0028	0.0011	0.0012		
Orthophosphate-Dissolved (as P)	mg/L	<0.0010	0.0016	0.0026	-	0.0118	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		
Phosphorus (P)-Total	mg/L	0.0156	0.022	0.0235	-	0.0165	0.0244	0.0106	0.016	0.0182	0.0187		
Sulphate (SO_4)	mg/L	3.06	2.74	2.44	-	2.67	2.55	3.13	3.33	2.54	2.55		
Cyanide, Total	mg/L	<0.0050	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	1.00	2.00
Cyanide, Free	mg/L	<0.0050	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050		
Aluminum (Al)-Total	mg/L	0.0161	0.0126	0.0096	-	0.0053	0.0141	0.015	0.0179	0.0243	0.0224		
Antimony (Sb)-Total	mg/L	<0.00050	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050		
Arsenic (As)-Total	mg/L	<0.00050	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.50	1.00
Barium (Ba)-Total	mg/L	<0.020	<0.020	<0.020	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020		
Beryllium (Be)-Total	mg/L	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		
Boron (B)-Total	mg/L	<0.10	<0.10	<0.10	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10		
Cadmium (Cd)-Total	mg/L	<0.000010	<0.000010	<0.000010	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010		
Calcium (Ca)-Total	mg/L	13.4	13.3	12.8	-	14.3	13.6	13.9	13.7	12.5	12.5		
Chromium (Cr)-Total	mg/L	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		
Cobalt (Co)-Total	mg/L	<0.00030	<0.00030	<0.00030	-	0.00071	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030		
Copper (Cu)-Total	mg/L	<0.0010	<0.0010	<0.0010	-	0.0012	<0.0010	<0.0010	<0.0010	0.001	<0.0010	0.30	0.60
Iron (Fe)-Total	mg/L	0.222	0.204	0.156	-	0.092	0.219	0.179	0.128	0.144	0.131		
Lead (Pb)-Total	mg/L	<0.00050	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.20	0.40
Lithium (Li)-Total	mg/L	<0.0050	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050		
Magnesium (Mg)-Total	mg/L	6.08	6.09	6.23	-	6.37	6.46	6.21	6.07	6	5.96		
Manganese (Mn)-Total	mg/L	0.0242	0.0195	0.00908	-	4.24	0.0252	0.0214	0.0111	0.0135	0.0132		
Mercury (Hg)-Total	mg/L	<0.000010	<0.000010	<0.000010	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010		
Molybdenum (Mo)-Total	mg/L	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		
Nickel (Ni)-Total	mg/L	<0.0010	<0.0010	<0.0010	-	0.0011	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.50	1.00
Potassium (K)-Total	mg/L	2	2	2.1	-	2.3	2.1	2	<2.0	<2.0	<2.0		
Selenium (Se)-Total	mg/L	<0.00010	<0.00010	<0.00010	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010		
Silver (Ag)-Total	mg/L	<0.000020	<0.000020	<0.000020	-	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020		
Sodium (Na)-Total	mg/L	20	21.5	20.8	-	20.2	20.7	20.6	20.8	19.7	19.4		
Thallium (Tl)-Total	mg/L	<0.00020	<0.00020	<0.00020	-	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020		
Tin (Sn)-Total	mg/L	<0.00050	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050		
Titanium (Ti)-Total	mg/L	<0.010	<0.010	<0.010	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010		
Uranium (U)-Total	mg/L	<0.00020	<0.00020	<0.00020	-	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020		
Vanadium (V)-Total	mg/L	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		
Zinc (Zn)-Total	mg/L	0.0161	0.007	0.0317	-	0.15	<0.0050	<0.0050	<0.0050	0.0229	0.0267	0.50	1.00
Radium 226	Bq/L	<0.0100	<0.010	<0.01	-	< 0.01	< 0.01	<0.01	<0.01	< 0.01	<0.01	0.37 Bq/L	1.11 Bq/L
BOD	mg/L	-	-	-	2	-	-	4	-	-	-	80	160
Fecal Coliform	CFU/mL	-	-	-	<1	-	-	<1	-	-	-	10,000 CFU/100mL	10,000 CFU/100mL

TL-2 Doris Outflow Creek Upstream at the Flow Monitoring Station

Table 28 - Water Quality from Doris Outflow Creek (TL-2), May to July 2014, in mg/L unless otherwise specified

TMAC Sample ID		TL2-29MAY14	TL2-16JUN16A	TL2-16JUN16B	TL2-19JUN14	TL2-23JUN14	TL2-26JUN14	TL2-30JUN14	TL2-03JUL14	TL2-07JUL14	TL2-14JUL14	TL2-21JUL14	TL2-28JUL14	Part G Item 30
ALS ID		L1463166-2	L1472482-4	L1472482-5	L1473846-2	L1476338-2	L1478465-2	L1481648-2	L1481650-2	L1483353-2	L1487129-2	L1490760-2	L1494360-2	Max Grab Sample (mg/L)
Sample Date/Time		5/29/2014 11:35	6/16/2014 14:40	6/16/2014 14:44	6/19/2014 11:15	6/23/2014 14:00	6/26/2014 18:25	6/30/2014 14:05	7/3/2014 15:40	7/7/2014 14:35	7/14/2014 9:25	7/21/2014 14:25	7/28/2014 12:05	
Parameter	**Units**	**Results**												
Hardness (as CaCO3)	mg/L	26.1	52.4	52.9	41	25.3	28.6	23	35.7	58.2	46.3	50.8	47.8	
pH	pH	7.46	7.75	7.76	7.68	7.38	7.39	7.39	7.64	7.82	7.68	7.71	7.67	6.0 – 9.0
Total Suspended Solids	mg/L	5.7	<3.0	<3.0	5.8	<3.0	<3.0	<3.0	<3.0	5.9	5.1	5.4	4.5	15
Total Dissolved Solids	mg/L	73	167	182	155	94	100	101	118	204	151	164	170	
Ammonia, Total (as N)	mg/L	0.16	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0053	0.0349	<0.0050	<0.0050	<0.0050	1.54 **
Bromide (Br)	mg/L	<0.050	0.231	0.23	0.183	0.117	0.126	0.105	0.146	0.261	0.206	0.247	0.228	
Chloride (Cl)	mg/L	7.13	67.5	67.6	56.2	35.1	37.7	30.5	44.1	76.1	59.9	65.6	65.6	150
Fluoride (F)	mg/L	<0.020	0.057	0.057	0.047	0.034	0.036	0.031	0.04	0.066	0.055	0.061	0.057	
Nitrate (as N)	mg/L	0.296	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	2.9
Nitrite (as N)	mg/L	0.0034	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.060
Orthophosphate-Dissolved (as P)	mg/L	0.0157	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0011	<0.0010	<0.0010	<0.0010	
Phosphorus (P)-Total	mg/L	0.0793	0.0325	0.0207	0.0318	0.0224	0.0185	0.0128	0.0169	0.0276	0.0148	0.019	0.0242	
Sulphate (SO_4)	mg/L	4.17	3.05	3.06	2.15	1.4	1.59	1.34	1.91	3.26	2.51	2.79	2.8	
Cyanide, Total	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.01
Cyanide, Free	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.005
Aluminum (Al)-Total	mg/L	0.427	0.0359	0.0327	**0.343**	**0.24**	**0.16**	**0.122**	0.005	0.0905	0.0546	0.094	0.0713	0.100
Antimony (Sb)-Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	
Arsenic (As)-Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	0.0050
Barium (Ba)-Total	mg/L	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.02	<0.020	<0.020	<0.020	<0.020	
Beryllium (Be)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.001	<0.0010	<0.0010	<0.0010	<0.0010	
Boron (B)-Total	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.1	<0.10	<0.10	<0.10	<0.10	
Cadmium (Cd)-Total	mg/L	0.000011	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	0.000017
Calcium (Ca)-Total	mg/L	6.72	9.7	9.77	6.68	3.95	4.91	4.03	0.1	6.39	10.4	8.24	9.17	
Chromium (Cr)-Total	mg/L	0.0023	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.001	<0.0010	<0.0010	<0.0010	<0.0010	
Cobalt (Co)-Total	mg/L	0.0005	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	0.0003	<0.00030	<0.00030	<0.00030	<0.00030	
Copper (Cu)-Total	mg/L	0.0067	0.0014	0.0014	0.0015	0.0012	0.0015	<0.0010	0.001	0.0011	0.0014	0.0015	0.0013	0.002
Iron (Fe)-Total	mg/L	0.678	0.068	0.089	**0.492**	**0.387**	0.276	0.192	0.03	0.182	0.137	0.168	0.172	0.300
Lead (Pb)-Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	0.001
Lithium (Li)-Total	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.005	<0.0050	<0.0050	<0.0050	<0.0050	
Magnesium (Mg)-Total	mg/L	2.26	6.84	6.93	5.9	3.74	3.96	3.15	0.1	4.79	7.8	6.25	6.77	
Manganese (Mn)-Total	mg/L	0.0575	0.0106	0.0257	0.0861	0.0442	0.0341	0.0212	0.0003	0.0279	0.0225	0.0218	0.0206	
Mercury (Hg)-Total	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	0.000026
Molybdenum (Mo)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.001	<0.0010	<0.0010	<0.0010	<0.0010	0.073
Nickel (Ni)-Total	mg/L	0.0018	<0.0010	<0.0010	0.0011	<0.0010	<0.0010	<0.0010	0.001	<0.0010	<0.0010	<0.0010	<0.0010	0.025
Potassium (K)-Total	mg/L	3.2	2.5	2.6	2.7	<2.0	<2.0	<2.0	2	<2.0	2.8	2.2	2.4	
Selenium (Se)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	0.0010
Silver (Ag)-Total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	0.0001
Sodium (Na)-Total	mg/L	6.4	34.2	34.7	29.1	19.3	19.3	15.8	2	23.4	37.1	30.5	33.2	
Thallium (Tl)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	0.0008
Tin (Sn)-Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	
Titanium (Ti)-Total	mg/L	0.014	<0.010	<0.010	0.015	<0.010	<0.010	<0.010	0.01	<0.010	<0.010	<0.010	<0.010	
Uranium (U)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	
Vanadium (V)-Total	mg/L	0.0016	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.001	<0.0010	<0.0010	<0.0010	<0.0010	
Zinc (Zn)-Total	mg/L	0.0052	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.005	<0.0050	<0.0050	<0.0050	<0.0050	0.030

Note: Bold text indicates exceedence of TL-3 (downstream) criteria at TL-2 (upstream).
** Ammonia maximum criteria based on pH 7 at 20°C.*

Table 29 - Water Quality from Doris Outflow Creek (TL-2), August to September, 2014, in mg/L unless otherwise specified

TMAC Sample ID		TL2-4AUG14	TL2-11AUG14	TL2-18AUG14	TL2-25AUG14	TL2-01SEP14	TL2-09SEPT14	TL2-15SEP14	TL2-22SEP14	Part G Item 30
ALS ID		L1497306-2	L1501189-2	L1504905-2	L1509318-2	L1511567-2	L1515164-2	L1518740-2	L1523154-2	Max Grab Sample (mg/L)
Sample Date/Time		8/4/2014 8:10	8/11/2014 16:00	8/18/2014 13:40	8/25/2014 14:25	9/1/2014 8:10	9/9/2014 9:00	9/15/2014 9:35	9/22/2014 14:05	
Parameter	**Units**	**Results**								
Hardness (as CaCO3)	mg/L	49.4	50.6	48.5	49.2	50.5	52.2	48.2	48	
pH	pH	7.74	7.78	7.83	7.72	7.8	7.98	8.16	8	6.0 – 9.0
Total Suspended Solids	mg/L	5.6	5.1	11.8	5.3	5	4.2	6.6	11.5	15
Total Dissolved Solids	mg/L	174	158	170	171	175	164	173	152	
Ammonia, Total (as N)	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	0.0502	<0.0050	<0.0050	<0.0050	1.54 **
Bromide (Br)	mg/L	0.206	0.219	0.219	0.22	0.228	0.214	0.22	0.217	
Chloride (Cl)	mg/L	64.8	65.9	64.7	65.7	64.9	65.5	65.8	65.2	150
Fluoride (F)	mg/L	0.057	0.056	0.059	0.057	0.061	0.057	0.053	0.056	
Nitrate (as N)	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	2.9
Nitrite (as N)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.060
Orthophosphate-Dissolved (as P)	mg/L	<0.0010	0.0013	<0.0010	0.0012	0.0016	<0.0010	<0.0010	<0.0010	
Phosphorus (P)-Total	mg/L	0.0231	0.0245	0.0282	0.0249	0.0281	0.0163	0.0298	0.0317	
Sulphate (SO_4)	mg/L	2.79	2.82	3	2.77	2.8	3.08	2.9	2.83	
Cyanide, Total	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.01
Cyanide, Free	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.005
Aluminum (Al)-Total	mg/L	0.068	0.0673	0.0874	0.0432	0.0459	0.049	0.0452	**0.166**	0.100
Antimony (Sb)-Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Arsenic (As)-Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.0050
Barium (Ba)-Total	mg/L	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	
Beryllium (Be)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Boron (B)-Total	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
Cadmium (Cd)-Total	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000017
Calcium (Ca)-Total	mg/L	8.88	9.05	8.68	8.83	9.06	9.55	8.85	8.55	
Chromium (Cr)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Cobalt (Co)-Total	mg/L	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	
Copper (Cu)-Total	mg/L	0.0015	0.0013	0.0013	0.0013	0.0014	0.0014	0.0013	0.0015	0.002
Iron (Fe)-Total	mg/L	0.167	0.138	0.148	0.083	0.075	0.081	0.069	0.264	0.300
Lead (Pb)-Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.001
Lithium (Li)-Total	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Magnesium (Mg)-Total	mg/L	6.61	6.79	6.5	6.59	6.77	6.89	6.33	6.47	
Manganese (Mn)-Total	mg/L	0.0241	0.0263	0.0188	0.0149	0.0136	0.0155	0.013	0.0248	
Mercury (Hg)-Total	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000026
Molybdenum (Mo)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.073
Nickel (Ni)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.025
Potassium (K)-Total	mg/L	2.3	2.5	2.4	2.4	2.4	2.5	2.2	2.3	
Selenium (Se)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.0010
Silver (Ag)-Total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.0001
Sodium (Na)-Total	mg/L	32.2	33.3	33.4	32.5	33.5	34	32.6	32.2	
Thallium (Tl)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.0008
Tin (Sn)-Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Titanium (Ti)-Total	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	
Uranium (U)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Vanadium (V)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Zinc (Zn)-Total	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.030

Note: Bold text indicates exceedence of TL-3 (downstream) criteria at TL-2 (upstream).
** Ammonia maximum criteria based on pH 7 at 20°C.*

TL-3 Doris Outflow Creek 80m Downstream of Base of Waterfall

Table 30 - Water Quality from Doris Outflow Creek (TL-3), May to July, 2014, in mg/L unless otherwise specified

TMAC Sample ID		TL3-29MAY14	TL3-16JUN14A	TL3-16JUN14B	TL3-19JUN14	TL3-23JUN14	TL3-26JUN14	TL3-30JUN14	TL3-03JUL14	TL3-07JUL14	TL3-14JUL14	TL3-21JUL14	TL3-28JUL14	Part G Item 30
ALS ID		L14463166-3	L1472482-2	L1472482-3	L1473846-3	L1476338-3	L1478465-3	L1481648-3	L1481650-3	L1483353-3	L1487129-3	L1490760-3	L1494360-3	Max Grab Sample (mg/L)
Sample Date/Time		5/29/2014	6/16/2014	6/16/2014	6/19/2014	6/23/2014	6/26/2014	6/30/2014	7/3/2014	7/7/2014	7/14/2014	7/21/2014	7/28/2014	
Parameter	**Units**	**Results**												
Hardness (as CaCO3)	mg/L	18.4	52.8	53.6	41.6	26.3	27.3	25.4	34.1	58.5	47.2	53.6	51.2	
pH	pH	7.32	7.75	7.74	6.83	7.43	7.4	7.55	7.62	7.86	**11.58**	7.69	7.65	6.0 – 9.0
Total Suspended Solids	mg/L	6.6	3.2	<3.0	6.5	3.7	<3.0	3.7	4.4	6.1	**24.9**	3.7	5.3	15
Total Dissolved Solids	mg/L	74	174	178	152	93	96	95	116	193	787	160	169	
Ammonia, Total (as N)	mg/L	0.0334	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0066	0.0082 ^	<0.0050	0.0069	0.0122	0.015	1.54 **
Bromide (Br)	mg/L	<0.050	0.232	0.222	0.19	0.112	0.121	0.104	0.136	0.25	<1.0 *	0.221	0.205	
Chloride (Cl)	mg/L	10.7	65.9	65.6	56.4	34	36.1	31.9	41.4	73.9	59	64	63.9	150
Fluoride (F)	mg/L	0.047	0.056	0.056	0.048	0.034	0.037	0.033	0.039	0.065	<0.40 *	0.055	0.058	
Nitrate (as N)	mg/L	0.0372	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.10 *	<0.0050	<0.0050	2.9
Nitrite (as N)	mg/L	0.0021	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.020 *	<0.0010	<0.0010	0.060
Orthophosphate-Dissolved (as P)	mg/L	0.0514	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Phosphorus (P)-Total	mg/L	0.167	0.022	0.0257	0.0335	0.0182	0.0147	0.0132	0.0204 ^	0.0173	0.0161	0.0173	0.0193	
Sulphate (SO_4)	mg/L	1.98	3.03	3.02	2.17	1.47	1.57	1.42	1.83	3.18	<10 *	2.77	2.76	
Cyanide, Total	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.01
Cyanide, Free	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.005
Aluminum (Al)-Total	mg/L	0.122	0.0568	0.0328	**0.373**	0.221	0.15	**0.179**	**0.111**	0.0483	0.0834	0.0574	**0.144**	0.100
Antimony (Sb)-Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Arsenic (As)-Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.0050
Barium (Ba)-Total	mg/L	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	
Beryllium (Be)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Boron (B)-Total	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
Cadmium (Cd)-Total	mg/L	0.000032	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000017
Calcium (Ca)-Total	mg/L	4.49	9.81	9.91	6.8	4.44	4.86	4.52	6.23	10.6	8.61	9.87	9.38	
Chromium (Cr)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Cobalt (Co)-Total	mg/L	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	
Copper (Cu)-Total	mg/L	0.0024	0.0014	0.0013	0.0015	0.0012	0.0013	<0.0010	0.001	0.0013	0.0012	0.0014	0.0019	0.002
Iron (Fe)-Total	mg/L	0.095	0.101	0.078	**0.522**	0.329	0.255	0.249	0.182	0.129	0.164	0.169	0.211	0.300
Lead (Pb)-Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.001
Lithium (Li)-Total	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Magnesium (Mg)-Total	mg/L	1.74	6.87	7.01	5.99	3.71	3.69	3.43	4.51	7.77	6.25	7.03	6.76	
Manganese (Mn)-Total	mg/L	0.00299	0.0127	0.0135	0.0794	0.0345	0.0262	0.0203	0.0221	0.0217	0.0201	0.0218	0.015	
Mercury (Hg)-Total	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000026
Molybdenum (Mo)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.073
Nickel (Ni)-Total	mg/L	<0.0010	<0.0010	<0.0010	0.0012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.025
Potassium (K)-Total	mg/L	3.1	2.5	2.6	2.7	<2.0	<2.0	<2.0	<2.0	2.7	2.2	2.4	3.6	
Selenium (Se)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.0010
Silver (Ag)-Total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.0001
Sodium (Na)-Total	mg/L	6.8	33.2	35.7	29.8	18.6	17.6	16.9	21.7	38.2	29.7	33.6	32.4	
Thallium (Tl)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.0008
Tin (Sn)-Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Titanium (Ti)-Total	mg/L	<0.010	<0.010	<0.010	0.017	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	
Uranium (U)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Vanadium (V)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Zinc (Zn)-Total	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.030
Hexavalent Chromium	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010
Oil and Grease	mg/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5
Oil and Grease (visible sheen)		No	No	No	No	No	No	No	No	No	No	No	No	

**Ammonia maximum criteria based on pH 7 at 20°C.*

Notes: Bold text indicates over licence discharge criteria. Bold text and shaded cell indicates TL-3 was above discharge criteria and above background at TL-2 during the same sampling event.

Table 31 - Water Quality from Doris Outflow Creek (TL-3), August to September, 2014, in mg/L unless otherwise specified

TMAC Sample ID		TL3-4AUG14	TL3-11AUG14	TL3-18AUG14	TL3-19AUG14	TL3-25AUG14	TL3-01SEP14	TL3-09SEP14	TL3-15SEP14	TL3-22SEP14	Part G Item 30
ALS ID		L1497306-3	L1501189-3	L1504905-3	L1504905-6	L1509318-3	L1511567-3	L1515164-3	L1518740-3	L1523154-3	Max Grab Sample (mg/L)
Sample Date/Time		8/4/2014 8:30:00	8/11/2014	8/18/2014	8/19/2014	8/25/2014	9/1/2014 8:20:00	9/9/2014 9:30:00	9/15/2014	9/22/2014	
Parameter	**Units**	**Results**									
Hardness (as CaCO3)	mg/L	51.3	51.5	52.3	-	49.2	51.7	54.7	48.3	48.5	
pH	pH	7.76	7.79	7.81	-	7.73	7.79	7.08	8.11	7.98	6.0 – 9.0
Total Suspended Solids	mg/L	3.3	6.1	3.3	-	4.1	3.4	4.8	6.5	8.2	15
Total Dissolved Solids	mg/L	173	165	166	-	169	175	162	170	172	
Ammonia, Total (as N)	mg/L	0.01	0.01	0.005	-	0.0067	0.0064	<0.0050	<0.0050	<0.0050	1.54 **
Bromide (Br)	mg/L	0.198	0.209	0.209	-	0.207	0.219	0.203	0.214	0.205	
Chloride (Cl)	mg/L	63.6	64.2	62.5	-	64.1	63.4	63.8	64.3	63.8	150
Fluoride (F)	mg/L	0.056	0.056	0.059	-	0.058	0.063	0.058	0.053	0.058	
Nitrate (as N)	mg/L	<0.0050	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	2.9
Nitrite (as N)	mg/L	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.060
Orthophosphate-Dissolved (as P)	mg/L	<0.0010	0.0012	<0.0010	-	0.0013	<0.0010	<0.0010	<0.0010	<0.0010	
Phosphorus (P)-Total	mg/L	0.0267	0.0226	0.0272	-	0.0229	0.0207	0.0167	0.0321	0.0333	
Sulphate (SO_4)	mg/L	2.86	2.8	2.74	-	2.73	2.8	3.14	2.94	2.83	
Cyanide, Total	mg/L	<0.0050	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.01
Cyanide, Free	mg/L	<0.0050	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.005
Aluminum (Al)-Total	mg/L	**0.115**	0.0648	0.0623	-	0.0351	0.0423	0.0412	0.0569	**0.134**	0.100
Antimony (Sb)-Total	mg/L	<0.00050	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Arsenic (As)-Total	mg/L	<0.00050	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.0050
Barium (Ba)-Total	mg/L	<0.020	<0.020	<0.020	-	<0.020	<0.020	<0.020	<0.020	<0.020	
Beryllium (Be)-Total	mg/L	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Boron (B)-Total	mg/L	<0.10	<0.10	<0.10	-	<0.10	<0.10	<0.10	<0.10	<0.10	
Cadmium (Cd)-Total	mg/L	<0.000010	<0.000010	<0.000010	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000017
Calcium (Ca)-Total	mg/L	9.47	9.42	9.54	-	9.05	9.47	10.3	9.09	8.85	
Chromium (Cr)-Total	mg/L	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Cobalt (Co)-Total	mg/L	<0.00030	<0.00030	<0.00030	-	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	
Copper (Cu)-Total	mg/L	0.0015	0.0012	0.0013	-	0.0013	0.0014	0.0013	0.0013	0.0013	0.002
Iron (Fe)-Total	mg/L	0.23	0.148	0.132	-	0.093	0.096	0.1	0.095	0.206	0.300
Lead (Pb)-Total	mg/L	<0.00050	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.001
Lithium (Li)-Total	mg/L	<0.0050	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Magnesium (Mg)-Total	mg/L	6.71	6.8	6.91	-	6.46	6.81	7.02	6.21	6.41	
Manganese (Mn)-Total	mg/L	0.0255	0.0255	0.0188	-	0.0166	0.0163	0.0175	0.0168	0.0189	
Mercury (Hg)-Total	mg/L	<0.000010	<0.000010	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000026
Molybdenum (Mo)-Total	mg/L	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.073
Nickel (Ni)-Total	mg/L	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.025
Potassium (K)-Total	mg/L	2.4	2.5	2.5	-	2.3	2.4	2.5	2.1	2.3	
Selenium (Se)-Total	mg/L	<0.00010	<0.00010	<0.00010	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.0010
Silver (Ag)-Total	mg/L	<0.000020	<0.000020	<0.000020	-	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.0001
Sodium (Na)-Total	mg/L	31.7	32.9	35.1	-	31.1	32.8	33.3	30.8	31.1	
Thallium (Tl)-Total	mg/L	<0.00020	<0.00020	<0.00020	-	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.0008
Tin (Sn)-Total	mg/L	<0.00050	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Titanium (Ti)-Total	mg/L	<0.010	<0.010	<0.010	-	<0.010	<0.010	<0.010	<0.010	<0.010	
Uranium (U)-Total	mg/L	<0.00020	<0.00020	<0.00020	-	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Vanadium (V)-Total	mg/L	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Zinc (Zn)-Total	mg/L	<0.0050	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.030
Hexavalent Chromium	mg/L	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010
Oil and Grease	mg/L	<5.0	<5.0	<5.0	-	<5.0	<5.0	<5.0	<5.0	<5.0	5
Oil and Grease (visible sheen)		No	No	No	-	No	No	No	No	No	

**Ammonia maximum criteria based on pH 7 at 20°C. ** Due to an error, Oil and Grease results are not available.*

Notes: Bold text indicates over licence discharge criteria. Bold text and shaded cell indicates TL-3 was above discharge criteria and above background at TL-2 during the same sampling event.

TL-10 Water Column in Deepest Portion of the TIA and at a Location Away from the TIA Reclaim Water Floating Pump House, Sampled at Surface, Mid-depth and Near Bottom

Table 32 - Water Column Sampling in the TIA (TL-10), August 2014, in mg/L unless otherwise specified

TMAC Sample ID		TL10-18AUG14S*	TL10-18AUG14M*	TL10-18AUG14D*
ALS ID		L1504883-1	L1504883-2	L1504883-3
Sample Date/Time		8/18/2014 18:15	8/18/2014 18:20	8/18/2014 18:30
Parameter	**Units**	**Results**		
Hardness (as CaCO3)	mg/L	54	52.4	52.3
pH	pH	7.79	7.84	7.84
Redox Potential	mV	199	199	196
Dissolved Oxygen	mg/L	11.25	11.25	11.22
Total Suspended Solids	mg/L	3.1	<3.0	<3.0
Total Dissolved Solids	mg/L	147	136	133
Ammonia, Total (as N)	mg/L	<0.0050	<0.0050	<0.0050
Bromide (Br)	mg/L	0.085	0.087	0.088
Chloride (Cl)	mg/L	39.4	39.3	39.3
Fluoride (F)	mg/L	0.061	0.067	0.071
Nitrate (as N)	mg/L	<0.0050	<0.0050	<0.0050
Nitrite (as N)	mg/L	<0.0010	<0.0010	<0.0010
Orthophosphate-Dissolved (as P)	mg/L	0.0013	0.0011	0.001
Phosphorus (P)-Total	mg/L	0.0206	0.0189	0.0183
Sulfate (SO4)	mg/L	2.05	2.04	2.05
Cyanide, Total	mg/L	<0.0050	<0.0050	<0.0050
Cyanide, Free	mg/L	<0.0050	<0.0050	<0.0050
Aluminum (Al)-Total	mg/L	0.0204	0.0198	0.0204
Antimony (Sb)-Total	mg/L	<0.00050	<0.00050	<0.00050
Arsenic (As)-Total	mg/L	<0.00050	<0.00050	<0.00050
Barium (Ba)-Total	mg/L	<0.020	<0.020	<0.020
Beryllium (Be)-Total	mg/L	<0.0010	<0.0010	<0.0010
Boron (B)-Total	mg/L	<0.10	<0.10	<0.10
Cadmium (Cd)-Total	mg/L	<0.000010	<0.000010	<0.000010
Calcium (Ca)-Total	mg/L	11.7	11.4	11.3
Chromium (Cr)-Total	mg/L	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L	<0.00030	<0.00030	<0.00030
Copper (Cu)-Total	mg/L	0.0011	<0.0010	<0.0010
Iron (Fe)-Total	mg/L	0.116	0.114	0.114
Lead (Pb)-Total	mg/L	<0.00050	<0.00050	<0.00050
Lithium (Li)-Total	mg/L	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Total	mg/L	6.01	5.83	5.83
Manganese (Mn)-Total	mg/L	0.0152	0.0146	0.015
Mercury (Hg)-Total	mg/L	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)-Total	mg/L	<0.0010	<0.0010	<0.0010
Nickel (Ni)-Total	mg/L	<0.0010	<0.0010	<0.0010
Potassium (K)-Total	mg/L	2	<2.0	<2.0
Selenium (Se)-Total	mg/L	<0.00010	<0.00010	<0.00010
Silver (Ag)-Total	mg/L	<0.000020	<0.000020	<0.000020
Sodium (Na)-Total	mg/L	19.7	19.1	19.1
Thallium (Tl)-Total	mg/L	<0.00020	<0.00020	<0.00020

TMAC Sample ID		TL10-18AUG14S*	TL10-18AUG14M*	TL10-18AUG14D*
ALS ID		L1504883-1	L1504883-2	L1504883-3
Sample Date/Time		8/18/2014 18:15	8/18/2014 18:20	8/18/2014 18:30
Parameter	**Units**	**Results**		
Tin (Sn)-Total	mg/L	<0.00050	<0.00050	<0.00050
Titanium (Ti)-Total	mg/L	<0.010	<0.010	<0.010
Uranium (U)-Total	mg/L	<0.00020	<0.00020	<0.00020
Vanadium (V)-Total	mg/L	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	<0.0050	<0.0050	<0.0050

** S = Shallow, M = Mid-depth, D = Deep*

Measurement of Ice Thickness on the TIA

Ice thickness measurement is not required on the TIA during Care and Maintenance.

Visual Assessment of Suspended Sediment along Perimeter of TIA Shoreline

During weekly inspections at the North Dam and during water quality monitoring activities, a visual assessment of suspended sediment along perimeter of the TIA shoreline was conducted in accordance with Part J, Item 21(e). No shoreline-specific turbidity was noted.

Doris North Camp Diversion Berm Effectiveness

The Diversion Berm north of the camp and mine infrastructure appears to effectively route surface runoff away from the camp pads. The berm is monitored during spring melt and in association with heavy or sustained rainfall events and is included in the routine inspection of all site water management structures.

2. Summary of the Construction Monitoring Report [see Part D, Item 8 and outlined in Schedule D]

In 2014, no construction activities took place at the Doris North site because the project was under Care and Maintenance. Armouring of the jetty sides was completed as a follow-up to storm damage repairs in 2013, at the recommendation of the Geotechnical Engineer. Repairs were also made to the bulk fuel storage tank pedestals in the Roberts Bay 20 ML Tank farm to correct and prevent minor erosion noted on the gravel footings.

3. Summary of Geochemical Monitoring and Waste Rock Storage Assessment [see Schedule B Item 3]

The only section of Schedule B, Item 3 reporting relevant to Doris North at this time is Part (c) pertaining to waste rock; Geochemical Monitoring pertaining to Parts (a), (b), (d) and (e) do not apply. There was no underground development in 2014. The status remained the same as at the end of 2011.

In 2014, the monitoring program was limited to the seepage survey as there was no development of the underground mine or at any of the quarries. The results of the 2014 sampling program indicated that there are no issues with respect to metal leaching or acid rock drainage (ML/ARD) in seepage associated with the infrastructure at Hope Bay. Results were comparable to historical data. Seepage from waste rock influenced areas had elevated levels of ammonia, chloride and nitrate compared to water quality guidelines though levels have decreased since 2013, suggesting that active flushing of drilling brines and blasting residues from the waste rock pile is ongoing. The majority of this seepage is captured in the water management system implemented at Doris North. Continued management of seepage from the waste rock pile is recommended.

4. Summary of the results of the monthly water balance and water quality model assessments referred to in Part G, Item 33 and any re-calibrations that have been carried out [see Schedule B, Item 4]

The TIA has not yet been commissioned. The Doris North mine plan is currently being re-evaluated and new modelling will be developed to incorporate planned changes. Updates to the water balance and water quality model will be provided to the NWB once complete.

5. Summary of the Geotechnical Inspection Report referred to in Part J, Item 18 [see Schedule B, Item 5]

TMAC contracted SRK Consulting (Canada) Inc. (SRK) to conduct the annual geotechnical site inspection of the Doris North Project in accordance with the stipulated license conditions. This investigation was carried out from July 15 – 22, 2014. TMAC submitted full reports for the 2014 Annual Geotechnical Inspection of Doris North and 2014 Annual Geotechnical Inspection of the North Dam Tailings Impoundment Area, together with a cover letter and implementation plan for the recommendations to the NWB on February 2, 2015. Table 33 and Table 34 below provide a

summary of the inspection components and the primary recommendations stemming from the inspection.

Table 33 – Geotechnical Inspection Recommendations – Doris North

Inspection Item	2013 Recommendations	2014 Recommendations
Thermistors	• Re-evaluate thermistor requirements taking into considering the surface infrastructure elements currently on site. Where appropriate, inactive thermistors should be inspected and where practical they should be repaired and re-commissioned for the collection of baseline data. • Inspect and evaluate if the thermistors marked as "Status Unknown" are active. • Include Westbay Well thermistors in monitoring program. • The thermistor monitoring frequency was reduced under Care and Maintenance with a couple sets of readings taken around the maximum thermal activity expected in the area, i.e. in July or August (maximum thaw depth). This should continue until the project is started up again. • North Dam thermistor data must continue to be collected in accordance with the monitoring recommendations provided in Section 7 of the North Dam As-Built Report (SRK 2012b) and Section 3 of the North Dam Monitoring Standard Operating Procedures Report (2013b).	• Repair thermistor installations identified in Appendix E. • Include the Westbay Well thermistors as part of the monitoring program. • The thermistor string monitoring frequency was reduced under Care and Maintenance with readings of a couple sets taken around the maximum thermal activity expected in the area, i.e., in July or August (maximum thaw depth). This should continue until the Project is started up again.
Old Beach Laydown Area	• Relocate two of the explosives magazines to an area where they are on the sandy beach as opposed to partially on the tundra vegetation.	• No action required.
Roberts Bay Jetty	• Continue monitoring the jetty thermistor in accordance with the protocols stipulated in Section 3.2. • If the Project moves beyond Care and Maintenance, repair or replace the damaged thermistor SRK-JT2-12. • Follow the recommendations for construction and monitoring provided by PND (2013).	• Continue to collect monthly thermistor string data as a minimum (July to August). • Follow the recommendations for settlement monitoring provided in Section 7.0 of PND (2013). • Remind operational staff annually about the operational limitations of the jetty as provided in Section 4.0 of PND (2013).
Shoreline Laydown Area	• Inspect pad perimeter during freshet and immediately following significant or prolonged rainfall events. Pump out ponded water to prevent onset of thermal erosion.	• No action required.
5 ML Roberts Bay Tank Farm	• Backfill the trenches excavated to confirm liner elevation. • Should the facility be re-commissioned, the liner repairs should be completed to ensure design capacity and consider the installation of settlement beacons along the fuel transfer station and on sections of the secondary containment facility not constructed on bedrock.	• Backfill the trenches excavated to confirm liner elevation. • Should the facility be re-commissioned, the extension of the liner should be completed to ensure design capacity and consider the installation of settlement beacons along the fuel transfer station and on sections of the secondary containment facility not constructed on bedrock.

Inspection Item	2013 Recommendations	2014 Recommendations
20 ML Roberts Bay Tank Farm	• In the areas were there has been potential for the liner to be compromised, it should be exposed and evaluated by a qualified person to confirm the integrity of the bunded area before the facility is refilled. • Prior to refilling the fuel tanks the pedestals and area of the bunded area need to be reconstructed. Under Care and Maintenance, no action is required (unless further erosion continues). • Maintain improved water management practices to prevent the ponding of water and further erosion of the interior on the containment facility. • Additional high wall stabilization and management practices should be considered.	• In the areas where the liner has been exposed and potentially damaged, the liner should be inspected and repaired, as required, by a qualified person to confirm the integrity of the bunded area before the facility is refilled. • The exposed grounding cable behind Fuel Tank #1 should be evaluated by a qualified person to confirm it is still functioning as designed. • Prior to refilling the fuel tanks the pedestals and areas of the bunded area need to be reconstructed. Under Care and Maintenance no action is required (unless further erosion continues). • Maintain improved water management practices to prevent the ponding of water and further erosion of the interior of the containment facility. • A review of the high wall by a qualified rock mechanics expert is recommended to confirm whether additional stabilization is required.
Roberts Bay Laydown Area	• Inspect pad perimeter during freshet and immediately following significant or prolonged rainfall events. Pump out ponded water to prevent onset of thermal erosion. • Monitor flow from drainage channels beneath pad. If flow stops, the blockage must be traced to prevent onset of thermal erosion. • Monitor areas where rock was relocated from the tundra for signs of thermal erosion.	• Monitor areas where rock was relocated from the tundra for signs of thermal erosion.
Quarry #1 Overburden Dump	• Monitor surface runoff and consider requirement for alternate sedimentation control measures. • If the surface is used as a laydown area appropriate management protocols must be put in place taking into consideration the propensity for sinkhole development and overall differential settlement.	• Monitor surface runoff and consider requirement for alternate sedimentation control measures.
Airstrip	• Monitor areas where rock was relocated from the tundra for signs of thermal erosion. • Maintain practice of inspecting the runway toe line during freshet and after significant or prolonged rainfall events. Pump ponded water to prevent onset of thermal erosion. • Conduct inspections of the airstrip shoulder and aprons to monitor the tension cracks prior to each use.	• Monitor areas where rock was relocated from the tundra for signs of thermal erosion. • Repair the tension cracks and erosion gullies on the north apron behind the control tower.

Inspection Item	2013 Recommendations	2014 Recommendations
All Weather Roads (Doris Site)	• Inspect road toe lines during freshet and immediately following significant or prolonged rainfall events. Pump out ponded water to prevent onset of thermal erosion. • Monitor areas where rock was relocated from the tundra for signs of thermal erosion. • The buttress recommended for the Secondary Road should be constructed, and until such time as the buttress is constructed a visual monitoring system should be put in place and warning signs posted along the section in question.	• Monitor areas where rock was relocated from the tundra for signs of thermal erosion. • The buttress recommended for the Secondary Road should be constructed; and until such time, a visual monitoring system should be put in place and warning signs posted along the section in question.
Doris Creek Bridge	• Ensure the correct thermistor reader, set to the correct thermistor bead resistivity, is used for each thermistor cable as listed on the Doris Thermistor Data Field Sheet. • Continue monitoring the thermistor strings with the recommendations set out in Section 3.2. • Monitor and ultimately replace the rock gabions.	• Ensure the correct thermistor reader, set to the correct thermistor bead resistivity, is used for each thermistor cable as listed on the Doris Thermistor Data Field Sheet. • Monitor and ultimately replace the rock gabions.
Wash Bay/Explosives Mixing Plant	• Inspect pad perimeter during freshet and immediately following significant or prolonged rainfall events. Pump out ponded water to prevent onset of thermal erosion.	• No action required.
Upper and Lower Reagent Pads	• Inspect pad perimeter during freshet and immediately following significant or prolonged rainfall events. Ponded water should be pumped to prevent onset of thermal erosion.	• No action required.
Quarry #2 and Crusher Area	• Continue to follow the Quarry Management Plan. • A barricade at the Quarry entrance is recommended.	• A barricade at the Quarry #2 entrance is recommended.
Batch Plant Pad (Previously Crusher Pad)	• Inspect pad perimeter during freshet and immediately following significant or prolonged rainfall events. Pump out ponded water to prevent onset of thermal erosion.	• No action required.
Upper Reagent Pad AN Storage	• Should the facility be used to provide secondary containment, the design criteria must be confirmed and appropriate remedial measures must be implemented. Under Care and Maintenance no action is required.	• Should the facility be used to provide secondary containment, the design criteria must be confirmed and appropriate remedial measures must be implemented. Under Care and Maintenance no action is required.
Landfarm	• TMAC to continue to follow the designated Landfarm Management Plan. • Conduct regular visual inspections to monitor for signs of settlement. • Repair the sinkhole along the outside berm face of the Soil Containment Pond and the pothole in the access ramp into Snow Containment Pond.	• Conduct regular visual inspections to monitor for signs of differential settlement. • Repair the sinkhole along the outside berm face of the Soil Containment Pond. • Repair the pothole and depressions in the access ramp into Snow Containment Pond. • Discharges into the Snow Containment Pond should be onto a protective barrier to prevent erosion.
Sewage Treatment Plant Outfall	• Monitor for permafrost degradation at old outfall location. • No action required at new outfall location.	• Monitor for permafrost degradation at old outfall location. • No action is required for the new diffuser system, at this time.

Inspection Item	2013 Recommendations	2014 Recommendations
Quarry # 2 Overburden Dump	• No action required.	• No action required.
Doris North Camp Pads	• Inspect pad perimeter during freshet and immediately following significant or prolonged rainfall events. Pump out ponded water to prevent onset of thermal erosion. • Construct a catch berm at the toe of the high wall, along Pad D and install appropriate signage and barricades to warn people of the danger. • High wall stabilization measures designed for the mill pad should be installed as planned if the project moves beyond Care and Maintenance. • Develop and implement a differential settlement monitoring protocol for heated buildings constructed directly onto the thermal rock fill pads.	• Install appropriate signage and barricades to warn people of the high wall danger on Pads D and X. • High wall stabilization measures designed for the mill pad should be installed as planned if the project moves beyond Care and Maintenance. • Develop and implement a differential settlement monitoring protocol for the heated buildings (the geotechnical core cutting building and the warehouse building (on Pad Y) as well as the old underground maintenance shop (on Pad E/P)) constructed directly onto the thermal rock fill pads.
7.5 ML Doris North Camp Tank Farm	• High wall stabilization measures designed for the 7.5 ML Tank Farm should be installed as planned (SRK 2011d).	• High wall stabilization measures designed for the 7.5 ML Tank Farm should be installed as planned (SRK 2011d).
Power Generation Station (Pad B)	• Monitor the survey monuments on Pad B to allow for tracking and advance notice of any deformations as part of the annual survey.	• Monitor the survey monuments on Pad B to allow for tracking and advance notice of any deformations as part of the annual survey.
Other Site Wide Fuel Storage	• No action required.	• No action required.
Sedimentation and Pollution Control Ponds	• The Sedimentation and Pollution Control ponds should be kept free of standing water, as this will lead to permafrost degradation. • Remove the large rocks and over liner material from the exposed liner within the Sedimentation Pond. • Keep a close watch on the Pollution Control Pond thermistor data as well as the sump water quality and flow. • Carry out a comprehensive review of the ground conditions below the ponds to evaluate whether there is a further evidence of leakage.	• Remove the large rocks and over liner material from the exposed liner within the Sedimentation Control Pond. • Conduct regular monitoring of the thermal data for the Pollution Control Pond.
Sumps #1 and #2	• Both sumps should be kept free of standing water as this will lead to permafrost degradation. • Inspect sump perimeter during freshet and immediately following significant or prolonged rainfall events. Pump out ponded water to prevent onset of thermal erosion. • The depression around Sump #1 must be backfilled with overburden to prevent further permafrost degradation.	• Backfill the depression around Sump #1 with overburden to prevent further permafrost degradation.
Doris North Portal	• No action required.	• No action required.
Waste Rock Pile	• Once underground development resumes, TMAC should continue to follow the designated Waste Rock Management Plan.	• Once underground development resumes, TMAC should continue to follow the designated Waste Rock Management Plan (SRK 2014f).
Temporary Pond	• No action required.	• No action required.

Inspection Item	2013 Recommendations	2014 Recommendations
Doris Fresh Water Intake	• Inspect pad perimeter during freshet and immediately following significant or prolonged rainfall events. Pump out ponded water to prevent onset of thermal erosion.	• No action required.
Doris Primary Vent Raise Pad	• Install catch berm and appropriate signage along high wall. • Inspect pad perimeter during freshet and immediately following significant or prolonged rainfall events. Pump out ponded water to prevent onset of thermal erosion. • Remove metal debris from fuel transfer station.	• Install catch berm and appropriate signage along high wall.
Frozen Core Plant Pad	• Inspect pad perimeter during freshet and immediately following significant or prolonged rainfall events. Pump out ponded water to prevent onset of thermal erosion.	• No action required.
North Dam	• Increase frequency of surveying North Dam monitoring points in accordance with the recommendations by the Engineer-of-Record in Section 7 of the North Dam As-built Report (SRK 2012b) and Section 3 of the North Dam Monitoring Standard Operating Procedures Report (SRK 2013b). This needs to be implemented immediately. • Survey and monitor the two depressions on the upstream face of the dam in conjunction with the instrumentation monitoring program. • Backfill the erosion around Deep Settling Monitoring Point ND-DSP-100. • Repair the contact thermistor bead on the North #2 thermosyphon and test the functionality of the thermosyphon and re-charge the thermosyphon if required.	• North Dam recommendations are reported separately. See SRK (2014c).
Shoreline Erosion	• Continue to implement measures to maintain the water level in Tail Lake at 28.2 masl to prevent onset of permafrost degradation.	• North Dam recommendations are reported separately. See SRK (2014c).
Doris North Diversion Berm	• Repair area of exposed liner next to where the water line passes over the berm.	• Repair area of exposed liner next to where the water line passes over the berm.
Doris-Windy All Weather Road	• Inspect road toe lines during freshet and immediately following significant or prolonged rainfall events. Pump out ponded water to prevent onset of thermal erosion. • Monitor areas where rock was relocated from the tundra for signs of thermal erosion. • Implement inspection protocol to monitor shoulder cracks and potholes. • Backfill the dip in the road by the helipad.	• Monitor areas where rock was relocated from the tundra for signs of thermal erosion.

Inspection Item	2013 Recommendations	2014 Recommendations
Doris-Windy All Weather Road Stream Crossings	• Ensure the correct thermistor reader is used for each thermistor cable as listed on the Doris Thermistor Data Field Sheet. • Continue monitoring the thermistor strings in accordance with recommendations in Section 3.2. • Install additional railings between the two bridge superstructures. • The depressions and ponded water against the thermal pad abutments should be covered with rock fill to prevent thermal degradation of the permafrost.	• Ensure the correct thermistor reader, set to the correct thermistor bead resistivity, is used for each thermistor cable as listed on the Doris Thermistor Data Field Sheet. • Install additional railings between the two bridge superstructures at Stream Crossings #2 and #3. • The depressions and ponded water against the thermal pad abutments at Stream Crossing #3 should be covered with rock fill to prevent thermal degradation of the permafrost. • Inspection of the bridge over Stream Crossing #3, by a qualified structural engineer should be conducted. Any repairs/remediation to the bridge should be completed under the supervision of a qualified person.
Quarry A	• Continue to follow the Quarry Management Plan.	• No action required.
Quarry B	• Continue to follow the Quarry Management Plan.	• No action required.
Quarry D	• Continue to follow the Quarry Management Plan.	• Should the bunded and lined facility, within Quarry D, be used to provide secondary containment, the design criteria must be confirmed and appropriate remedial measures must be implemented. Under Care and Maintenance no action is required.

Table 34 – Geotechnical Inspection Recommendations –North Dam Tailings Impoundment Area

Inspection Item	2013 Recommendations	2014 Recommendations
Compliance with Monitoring Requirements		• Perform monitoring of the North Dam at the frequency described in the North Dam Monitoring Standard Operating Procedures (SRK 2013b). • Update the North Dam monitoring standard operating procedures to clarify inconsistencies and address winter versus summer monitoring.
Ground Temperature Cables (GTCs)	• North Dam ground temperature cable data must continue to be collected in accordance with the monitoring recommendations provided in Section 7 of the North Dam As-built report (SRK 2012b) and Section 3 of the North Dam Monitoring Standard Operating Procedures Report (SRK 2013b)	• Collect and review GTC data in accordance with the North Dam Monitoring SOP (SRK 2013b). • Have the dataloggers serviced by a qualified person and manually download data from June 14 to July 9, 2014 from dataloggers CR1000 #1 and CR1000 #2, and data from August 6 to 31, 2014 from CR1000 #1. • Ensure all field staff are properly trained and following the North Dam Monitoring SOP (SRK 2013b) to prevent card reader errors in the future. • Play close attention to the temperatures recorded by ND-VTS-130-DS and if temperature spikes are noted in the fall of 2015 additional investigation should be conducted.
Thermosyphons	• Backfill the erosion around Deep Settlement Monitoring Point ND-DSP-100. • Repair the thermistor bead on the North 2 thermosyphon and test the functionality of the thermosyphon and recharge if required.	• Bring Arctic Foundations Inc. to site to inspect why thermosyphon North 2 is not working, and carry out the necessary repairs. • While Arctic Foundations Inc. is on-site have them inspect all thermosyphons, and carry out any maintenance they recommend.
CR1000 Datalogger Battery Voltage		• The SOP for the North Dam monitoring should be revised to include a procedure to test and recharge or replace the batteries annually.
Inclinometers		• Conduct monthly survey of all survey monitoring points, in accordance with the North Dam Monitoring SOP (SRK 2013b). • Ensure site personnel are properly trained to acquiring readings from the inclinometers.
Survey Monitoring Points	• Increase frequency of surveying North Dam monitoring points in accordance with the recommendations made by the Engineer-of-Record in in Section 7 of the North Dam As-built report (SRK 2012b) and Section 3 of the North Dam Monitoring Standard Operating Procedures (SRK 2013b). This needs to be implemented immediately.	• Conduct monthly survey of all survey monitoring points, in accordance with the North Dam Monitoring SOP (SRK 2013b).
Walkover Surveys		• Perform walkover surveys in accordance with the monitoring SOP

Inspection Item	2013 Recommendations	2014 Recommendations
		requirements (SRK 2013b). • During the walkover survey, pay particular attention to the exposed GTC and datalogger boxes so any issues (disconnected cables etc.) can be addressed promptly.
North Dam Upstream Face		• Survey the locations of the three anomalies (U1, U2 and U3), after which they should be backfilled, compacted, and graded.
North Dam Downstream Face	• Survey and monitor the two depressions on the downstream face of the dam in conjunction with the instrumentation monitoring program.	• Backfill the erosion around the Deep Settlement Monitoring Point ND-DSP-100. • Establish a SOP for tracking and monitoring growth of the depressions, which should include regular survey of the depressions when snow is not on the ground. • Collect water quality samples, to be submitted for laboratory analysis, along the north dam downstream north dam toe and in the original Tail Lake outflow channel to confirm the source of the observed water.
TIA Water Level and Shoreline Erosion	• Continue to implement measures to maintain the water level in Tail Lake at 28.3 m to prevent onset of permafrost degradation.	• Install a new water level datalogger in the TIA at the start of the 2015 open water season and monitor monthly, in accordance with the North Dam Monitoring SOP (SRK 2013b). • Establish a new benchmark elevation to geodetically reference the new water level gauge measurements. • Implement measures to maintain the water level in the pond at 28.3 masl to prevent onset of permafrost degradation.

6. An update on the current capacity of the Tailings Impoundment Area [See Schedule B, Item 6]

The North Dam which ensures containment of the TIA was completed in 2012 but no tailings have been deposited to date. The available capacity is 100%.

7. A comparison of the flows (m^3/day) at monitoring stations TL-1, TL-2, TL-3, and TL-4 [See Schedule B, Item 7]

TL-1 is the intake for the pump used to dewater the TIA and TL-4 is the discharge end of the same pipe. TL-2 is the background Doris Creek flow (upstream of TL-4), and TL-3 is the flow measured just downstream of TL-4 in Doris Creek. Table 35 presents a flow comparison between the four monitoring stations. The total volume of water discharged from the TIA to Doris Creek in 2014 is presented above in Table 22.

Table 35 – Comparison of Flows between Monitoring Stations TL-1, TL-2, TL-3, and TL-4, in cubic metres (m^3) for 2014, when discharge occurred.

Date	TL-1 Flows	TL-4 Flows	TL-2 Flows	TL-3 Flows
June-20-14	9013	9223	207709	242387
June-21-14	9694	9852	208384	253214
June-22-14	9792	9813	205801	253972
June-23-14	9605	9643	201017	251578
June-24-14	9587	9659	195090	246930
June-25-14	9558	9632	189087	240668
June-26-14	9544	9620	182876	232927
June-27-14	9470	9497	175348	224226
June-28-14	9471	9468	170577	213668
June-29-14	9441	9450	165615	207417
June-30-14	9459	9506	159534	199670
July-01-14	9393	9482	153619	190284
July-02-14	9315	9427	148333	181180
July-03-14	9355	9182	143025	173353
July-04-14	9301	9625	138594	164532
July-05-14	6361	6435	134061	155496
July-06-14	9277	9375	130292	144991
July-07-14	9251	9352	126560	140270
July-08-14	9039	9158	123116	132824
July-09-14	8610	8744	119620	126031
July-10-14	8480	8597	116066	119884
July-11-14	7777	7902	112204	114989
July-12-14	7561	7622	109288	108492
July-13-14	8806	9038	109487	104314
July-14-14	8983	9188	103429	105782
July-15-14	8886	9092	100083	98748
July-16-14	8832	9038	97817	95411

Date	TL-1 Flows	TL-4 Flows	TL-2 Flows	TL-3 Flows
July-17-14	8949	9134	95362	93576
July-18-14	8528	8511	99845	91264
July-19-14	4673	4654	107552	99053
July-20-14	8031	7848	109403	104115
July-21-14	8075	8119	110894	109727
July-22-14	8079	8112	111327	111107
July-23-14	8004	7999	111562	111605
July-24-14	8031	8047	111761	112011
July-25-14	7948	7994	110250	111965
July-26-14	8017	8035	108411	110674
July-27-14	8033	8058	105939	109218
July-28-14	8048	8069	104759	106908
July-29-14	8016	8021	103134	105815
July-30-14	8070	8065	101286	104412
July-31-14	8050	8041	102500	102468
August-01-14	8066	8052	102673	104793
August-02-14	8050	8041	101448	104899
August-03-14	8065	8059	101815	102857
August-04-14	8084	8072	101427	103249
August-05-14	8075	8077	99639	102832
August-06-14	8074	8074	97695	100795
August-07-14	8078	8078	95675	98616
August-08-14	8083	8088	93354	96419
August-09-14	8091	8083	91401	93831
August-10-14	7987	7983	88889	91920
August-11-14	7695	7673	86409	89135
August-12-14	7684	7665	83960	86462
August-13-14	7666	7657	81248	83957
August-14-14	7147	7089	78587	80963
August-15-14	6696	6639	76668	77905
August-16-14	6251	6191	74279	75503
August-17-14	6274	4489	70054	73257
August-18-14	5104	5046	68350	68225
August-19-14	5218	5246	66318	66088
August-20-14	4741	4756	63817	64138
August-21-14	4495	4585	61864	61244
August-22-14	4203	4173	59977	58884
August-23-14	4992	4948	58803	56968
August-24-14	4949	4892	56858	55934
August-25-14	4913	4870	55528	53953
August-26-14	4711	4648	55367	52641
August-27-14	4303	4231	53850	52224
August-28-14	3605	3596	51662	50476
August-29-14	4458	4397	50791	47959
August-30-14	4460	4374	50069	47532
August-31-14	4187	4159	49046	46667
September-01-14	4395	4402	48101	45318
September-02-14	4170	4146	47805	44630
September-03-14	4145	4143	48366	44446

Date	TL-1 Flows	TL-4 Flows	TL-2 Flows	TL-3 Flows
September-04-14	4289	4285	48646	45167
September-05-14	4365	4421	50555	46125
September-06-14	4491	4524	52791	48716
September-07-14	4904	4846	53388	51586
September-08-14	5186	5143	54569	52468
September-09-14	**5542**	5489	55273	53359
September-10-14	4750	4728	55739	53930
September-11-14	4757	4743	56640	53644
September-12-14	4674	4667	56338	54591
September-13-14	4771	4755	56383	54141
September-14-14	4742	4736	55313	54195
September-15-14	4693	4313	54926	53125
September-16-14	4937	*3301*	55121	52713
September-17-14	4857	*3282*	55658	53068
September-18-14	4820	*3693*	54645	53695
September-19-14	5144	*5009*	54500	52550
September-20-14	5341	*4508*	53431	52519
September-21-14	**5592**	*3796*	53266	51813
September-22-14	4277	*2894*	53064	51419
September-23-14	4454	*3917*	50411	50156
September-24-14	4450	*3440*	47758	46630
September-25-14	4472	*2620*	45105	44055

Note: Figures in bold show when metered discharge to Doris Creek exceeded 10% of flow measured at TL-2; italicized figures show the period when issues were suspected with the meter installed on line 3 of the TL-4 discharge system. Values metered at TL-1 were used for comparison to allowable discharge.

8. Annual review and any revisions submitted in the form of addendums to the Management Plans or Emergency Response and Contingency Plan [See Schedule B, Item 8]

In early 2014, TMAC revised the following plans:

- Spill Contingency Plan
- Closure Plan
- Waste Water Treatment Management Plan
- Landfarm Management Plan

In January 2014, TMAC submitted the revised Spill Contingency Plan as per Part I Item 1 of the licence. This most recent revision updates the plan to reflect the Care and Maintenance phase of the project under the ownership of TMAC as well as to update roles and responsibilities, contact information, fuel storage, and to update spill response procedures.

In early April 2014, TMAC submitted the revised Doris North Closure Plan as per Part L Item 5 of the licence. This most recent revision updates the plan to reflect technical comments received in February 2013 from the previous version of the plan submitted in August 2012, it reflects the new ownership of the project by TMAC, and it also presents the reclamation work required for the full project as permitted by 2AM-DOH1323, including facilities not yet constructed.

Also in early April 2014, the revised Waste Water Treatment Management Plan and Landfarm Management Plan were submitted. These were revised as per Part G Item 4 and Item 13, respectively. This most recent revision updates the plans to address the requirements set out in the above mentioned clauses of the renewed water licence. The revisions also reflect the new ownership of the project by TMAC.

9. A list and description of all unauthorized discharges including volumes, spill report line identification number and summaries of follow-up action taken [See Schedule B, Item 9]

Date of Spill: January 8, 2014
Spill No: 14-009
Date of Notification to an Inspector: January 9, 2014
Product Spilled: Greywater
Details of Spill: A leak of an estimated 250L of greywater was detected beneath Doris Camp Kitchen (kitchen sink, steamer, dishwasher) from cracks in the PVC piping. The root cause was attributed to pipe expansion and contraction from freezing and/or possibly camp settlement. The spilled greywater was removed by heating the ice around the pipes and the electrical cables in the affected area and allowing the melted grey water to drip into buckets. The bulk of the ice removal was performed by chipping it away, placing it into buckets, and placing it in the Waste Water Treatment Plant for processing. Pipe repairs were effected, the area was reinsulated and a system of periodic checks beneath the camp instituted to prevent further occurrences.

Date of Spill: May 31, 2014
Spill No: 14-187
Date of Notification to an Inspector: June 1, 2014
Product Spilled: Turbid Meltwater Runoff
Details of Spill: Approximately $10m^3$ of meltwater was pumped out onto the tundra adjacent to Sump #1. Sump #1, designed to catch runoff water, was plugged with ice and the automated pumping system was not operating. In order to commission the automated system approximately $10m^3$ of turbid water was pumped out on the tundra to allow for connections to be made on the automated pump system. This water should have been hauled with the vacuum truck to the TIA rather than being discharged to the environment. Pumping was ceased shortly after initiation and water management procedures were reviewed with the contractor.

Date of Spill: October 8, 2014
Spill No: 14-363
Date of Notification to an Inspector: October 9, 2014
Product Spilled: High Conductivity Water
Details of Spill: A sinkhole developed beneath a drill operating on Doris Camp Pad G. Drilling was halted due to concerns of ground stability issues of the camp pad and the drill was removed from this location. Conductivity measurements in surface water flow indicate that brine water may have migrated south from the drill hole under Doris Road and onto the surrounding tundra near Sump #1. The volume released in unknown. Water was pumped from the drill hole and

Sump #1 and routed to the water management system. A snow berm was constructed between Sump #1 and Doris Lake to capture spring meltwater and monitoring of surface flow in the area will determine if further water management is required.

10. The results of the Aquatic Effects Monitoring Program in accordance with Part J, Item 3 [See Schedule B, Item 10]

The executive summary of the 2014 Aquatic Effects Monitoring Program Report is presented below. The complete report will be submitted to the NWB.

The 2014 Aquatic Effects Monitoring Plan Compliance Monitoring Program (the Program) was conducted in accordance with the approved *Doris North Gold Mine Project: Aquatics Effects Monitoring Plan* (the Plan; Rescan 2010c). The Program represents the fifth year of monitoring. No adverse Project-related effects were detected at stream, lake, or marine exposure sites with respect to dissolved oxygen (DO) concentrations, Secchi depths, water quality, sediment quality, periphyton or phytoplankton biomass, or benthic invertebrate communities in 2014.

Three stream sites (Doris Outflow, Roberts Outflow, and Little Roberts Outflow), three lake sites (Doris Lake North, Doris Lake South, and Little Roberts Lake), and two marine exposure sites (Roberts Bay East and Roberts Bay West) were monitored in addition to two reference stream sites (Reference B Outflow and Reference D Outflow), two reference lake sites (Reference B Lake and Reference D Lake), and one marine reference site (REF-Marine 1). Aquatic components evaluated in 2014 included lake and marine under-ice DO concentrations; lake Secchi depth; stream, lake, and marine water and sediment quality; stream periphyton biomass; lake and marine phytoplankton biomass; stream, lake, and marine benthic invertebrate community density, taxa richness, evenness, diversity, and Bray-Curtis Index. Lake and marine fish communities were last surveyed in 2010 (Rescan 2011) and were not surveyed in 2014, in accordance with the Plan.

Statistical and/or graphical analyses were performed to determine whether Project activities might have affected exposure sites in 2014. The analyses included comparisons of baseline data to current (2014) data and/or comparisons of reference sites to exposure sites through time. Data were considered to be from the baseline period if they were collected prior to 2010, except in the case of under-ice DO for which 2010 data were also considered baseline.

DO concentrations were greater than Canadian Council of Ministers of the Environment (CCME) guidelines for the protection of aquatic life at all marine sites and in all lakes except Little Roberts Lake. In Little Roberts Lake, DO concentrations were within the range of concentrations observed in baseline years.

Mean 2014 water quality concentrations were less than CCME guidelines at stream, lake, and marine exposure sites with two exceptions. First, total aluminum concentrations were greater than CCME guidelines in many exposure streams in 2014. However, total aluminum

concentrations also exceeded CCME guidelines in baseline years. Second, in Little Roberts Lake the mean 2014 total iron concentration was greater than the CCME guideline, which was likely related to sample contamination during under-ice sampling. Open-water total iron concentrations in Little Roberts Lake were less than the CCME guideline.

No significant differences in water quality concentrations were found between baseline and 2014 concentrations at any of the stream or marine exposure sites. In lakes, significant differences in concentrations were observed between baseline years and 2014 in water hardness (increase) in Doris Lake South and in total arsenic (decrease) and total molybdenum (increase) at Doris Lake North. However, these differences were also observed in reference lakes. A significant increase in under-ice water hardness concentrations was also observed in Little Roberts Lake. Although comparisons to trends in reference lakes were not possible because no baseline data was available for Reference Lake D, open-water season concentrations were within the range of baseline means in Little Roberts Lake.

Mean 2014 sediment quality concentrations were less than CCME Interim Sediment Quality Guidelines (ISQGs) and Probable Effects Levels (PELs) at all exposure stream, lake, and marine sites with four exceptions. In lakes, total arsenic at Doris Lake South, total chromium at all exposure and reference sites, and total copper at Doris Lake North and Doris Lake South exceeded the ISQG. The mean total arsenic concentration also exceeded the PEL at Doris Lake South. The total copper concentration at Roberts Bay West (RBW) was greater than the ISQG, but less than the PEL.

Some differences in sediment particle size composition were observed at Doris and Little Roberts Outflow and at Doris Lake South and Little Roberts Lake, which likely reflect natural spatial heterogeneity in stream and lake sediments and are unrelated to Project activities. A shift toward finer sediments was also observed at site RBW and REF-Marine 1. Shifts toward finer sediments likely explain observed increases in some sediment quality variables at some sites in 2014 compared to baseline years, including Total Organic Carbon (TOC) content and lead and mercury concentrations in Little Roberts Outflow; TOC levels at Doris Lake North; arsenic and zinc concentrations in Little Roberts Lake; TOC content and arsenic, chromium and copper concentrations at sites RBW and REF-Marine 1; and significantly increased mercury and zinc concentrations at REF-Marine-1. The similarity in changes in silt-content, TOC, and metal concentrations from baseline years to 2014 at sites RBW and REF-Marine 1 suggests that the observed changes at RBW were naturally occurring and unrelated to damage to the jetty that occurred in 2013, jetty repair that took place in the winter of 2013/2014, or other Project activities. Copper concentrations were significantly lower in 2014, compared to baseline years, at Doris Lake North and Doris Lake South.

There was no evidence of Project-related effects on periphyton or phytoplankton biomass or benthos community density, richness, evenness, diversity, or the Bray-Curtis index at stream, lake, or marine exposure sites. Though some significant differences were found between baseline and 2014 benthic community metrics when comparing exposure and reference sites, the

lack of Project-related changes in water quality, sediment quality, and primary producer biomass suggests that these differences likely resulted from natural variability rather than Project-related effects.

Mitigation measures aimed at reducing potential adverse effects on stream, lake, and marine habitats in the Project area included surface water runoff management, dust abatement measures, site water management, quarry and waste rock management, and waste management. Results of the Program indicate that these mitigation measures were effective in preventing adverse effects on aquatic communities.

11. Annual adjustments to reclamation security including any additional security that may be required [See Schedule B, Item 11]

With the submission of the revised Doris North Closure Plan in early April 2014, TMAC included a revised securities estimate to the NWB for review. The revised closure cost estimate for Doris is $21,660,000. The licence is currently bonded for $13,090,000 which covers the extent of facilities currently built at the project site. The bonding would only increase as additional facilities are constructed and the project enters the Operations phase to eventually reach the revised closure cost estimate of $21,660,000.

12. Annual Incineration stack testing results [See Schedule B, Item 12]

In 2014, no incinerator stack emissions testing program was conducted. As discussed with the NIRB and Environment Canada in spring 2013, stack testing is only required for incinerators burning greater than 26 tonnes of waste per year. In situations where less than 26 tonnes of waste are being incinerated, no stack test is required, as long as a determined effort is made to achieve emissions standards. In 2012, a successful stack test at Doris North demonstrated that, with the waste management practices in place at the site, the Canada Wide Standards for dioxins/furans and mercury could be met at the Doris North incinerator. Results of the successful stack test conducted in 2012 are presented in Table 36. In 2014, with the project in Care and Maintenance, a total of 24 tonnes of waste was incinerated so no stack test was performed. As per the direction received from the NIRB and Environment Canada, the waste management practices put in place in previous years at Doris North were continued in 2014 so it is reasonable to expect that TMAC made a determined effort to achieve emissions standards.

Table 36 – Comparison of stack emissions test results for 2009, 2011, and 2012

Parameter	CWS Standard	2009	2011	2012
Mercury (ug/Rm^3 @ 11% O_2)	20	1.0	0.61	1.2
Dioxin/Furan (pg/Rm^3 TEQ @ 11% O_2)	80	**2,170***	**128***	29

**bold indicates results are non-compliant*

13. Annual Landfill Management Report [See Schedule B, Item 13]

TMAC is authorized to dispose of all non-hazardous solid waste in a landfill on site as per Part G Item 9. To date, a landfill has not been built as discussions with the landowner, the Kitikmeot Inuit Association, are still ongoing. All waste that cannot be incinerated on site is backhauled to an approved facility off site. Because a landfill has not been constructed, no landfill management report has been prepared. TMAC will continue to manage solid waste produced in Hope Bay according to three waste management plans:

- Interim Non-Hazardous Waste Management Plan
- Hazardous Waste Management Plan
- Incinerator Management Plan

These plans describe how various streams of waste are managed. See Item 8 of this supplement for details on any revisions to these plans.

14. A summary of modifications and/or maintenance work carried out on the Water Supply and the Waste Disposal Facilities, including all associated structures, and an outline of any work anticipated for the next year [See Schedule B, Item 14]

In 2014, no modifications were made to the water supply. Domestic water was obtained from Windy Lake as permitted by the licence. Waste disposal facilities were also not modified.

15. A summary of any closure and reclamation work undertaken and an outline of any work anticipated for the next year, including any changes to implementation and scheduling [See Schedule B, Item 15]

No closure and reclamation work was undertaken in 2014 at the Doris North project, though progressive reclamation of surface exploration drill sites associated with the Doris North mine occurred. Work to reclaim and remediate track depressions to the west of Doris camp near the lower reagent pad and Quarry 2 where historical tundra vehicle trials occurred is scheduled for early 2015.

16. A summary report describing public consultation and participation with local organizations and the residents of the nearby communities, including a schedule of upcoming community events/information sessions [See Schedule B, Item 16]

Community consultations continued in accordance with the Community Relations Plan, which is a responsibility of the Cambridge Bay office of TMAC Resources Inc.

Alex Buchan, Director of Community Relations, based in Cambridge Bay is primarily responsible for implementing this Plan, with support from Julia Micks, VP of Human Resources, and supported by Ikey Evalik, Inuit Impact and Benefit Agreement Coordinator. As the Doris North IIBA has been held in abeyance during Care and Maintenance, Mr. Evalik's interim role has been expanded to include support to Site Environmental Compliance monitoring.

Community relations in 2014 focused providing information to the public on Doris North Care and Maintenance activities, Advanced Exploration activities, supporting the TMAC/KIA/NTI Inuit Land Tenure negotiations, and explaining Hope Bay permitting efforts.

TMAC vacated the storefront office at #4 Omingmak Street in Cambridge Bay during the 2nd Quarter of 2014. The TMAC Office was moved to vacant office space on the 2nd floor of the Kitikmeot Center, above the Northern Store at #18 Mitik Street. This new location provides greater public exposure and easier access for walk-in traffic. TMAC maintains an open door policy and Cambridge Bay residents and Beneficiaries regularly visit the TMAC office for their own interest.

TMAC continues to participate in key Nunavut, regional and community organizations and groups aligned to support community relations and consultation efforts. These groups include the NWT/Nunavut Chamber of Mines, the Nunavut Mining Symposium Society, the Nunavut Mine Training Roundtable, the KIA regional ASETS Stakeholder group, Cambridge Bay Community Readiness Committee, and the Cambridge Bay Canadian High Arctic Research Station Committee.

TMAC involvement in the Chamber of Mines and Mining Symposium promotes industry awareness and advocacy and mine focused dialogue at a territorial level. Participation in the Mine Training Roundtable and ASETS Stakeholder group promotes understanding and coordination of training and education initiatives in the region and territory. Involvement of in Community Readiness and CHARS committees supports sustaining community development and planning.

Cambridge Bay Logistics Hub

Cambridge Bay continues to be the logistics hub for HBML in the Kitikmeot. Employees from across the region are flown to Cambridge Bay via commercial airline service, and are transported to and from Site utilizing a charter aircraft stationed at Cambridge Bay. Use of locally available aircraft has supported the continued positioning of these assets in Cambridge Bay.

Other Communications

In 2014, TMAC continued the use of a project/company Facebook page to provide information on Hope Bay primarily to northern stakeholders. Content of this page includes permitting information, meeting notices, and pictures of site activities linked to Kitikmeot community news pages. Use of and exposure for the TMAC Facebook page typically runs in the range of 2-300 views per post. Some feedback is received through the Page, including employment inquiries. The page can be viewed at the following link: https://www.facebook.com/tmacresources.

TMAC periodically generates Newsletters that provide for company and project updates. These publications are directed primarily to the investor community. However copies are made available to our northern stakeholder contacts.

TMAC continues to respond to various media requests. In 2014, Nunatsiaq News, News North, Up Here Business Magazine and CBC North all ran stories related to Hope Bay for primarily northern stakeholders.

Community Relations Monthly Summary

January

- A number of activities were conducted this month towards supporting the negotiation of a Mineral Exploration Agreement for the Hope Bay project with NTI Lands Division.
- A surface tenure negotiation session was held between TMAC and KIA in Toronto this month, supported by TMAC Cambridge Bay staff.
- TMAC attended a KIA ASETS program Kitikmeot Stakeholder Working Group training planning meeting in Cambridge Bay this month.
- At the end of the month, TMAC attended the Cordilleran Roundup in Vancouver. Meetings were held with the KIA on surface access matters, several Kitikmeot Corporation affiliated contractors, and the new Nunavut Mines Minister Kuksuk.

February

- The 2013 Doris North Socio-Economic Monitoring Report was finalized and submitted this month to the NIRB and Kitikmeot Socio-Economic Monitoring Committee.
- Several comments received from the KIA on the previously circulated TMAC Community Complaints Policy were responded to this month.
- Various communications were handled through the TMAC Cambridge Bay office related to the definition of Water Use under Nunavut Water Board guidelines and as interpreted in Federal Nunavut legislation. This legal interpretation was understood to affect planned 2014 diamond drilling activities in the Hope Bay belt.
- TMAC submitted specific comments to the Nunavut Planning Commission on the draft

Nunavut General Land Use Plan this month related to Land Use designations in the central Kitikmeot area.

- At the end of the month, TMAC Cambridge Bay staff attended the 2014 PDAC conference in Toronto. During this event, a KIA negotiation session was conducted.
- TMAC worked with the Ekaluktutiak Hunters and Trappers Organization this month to renew the Hope Bay Wildlife Research license to allow for 2014 planned activities under the Wildlife Mitigation and Monitoring Program.

March

- The month work was conducted to respond to socio-economic Information Requests made by interveners related to the 2013 submission of a Project Certificate Amendment application.
- The TMAC Cambridge Bay office assisted in returning a husky dog to its owner that wandered into Doris Camp this month.
- The TMAC office at #4 Omingmak was packed up this month and re-established at #18 Mitik Street.

April

- TMAC attended the 2014 Nunavut Mining Symposium in Iqaluit this month. A number of meetings with regulators were held during this event, and a project update provided to delegates.
- A deceased red fox found on Hope Bay infrastructure was turned over to the GN-DOE wildlife office in Cambridge Bay this month for analysis.
- Seasonal Staff recruitment began this month for the 2014 field program. Hiring focused on Environmental Field Assistants and Geo-technician Assistants.
- In April, TMAC consulted with the KIA on Inuit Hope Bay staff requests to be allowed to subsistence fish at site during work rotations.
- A project update was provided to the KIA Board of Directors and Kitikmeot Corporation in Cambridge Bay during their regularly scheduled meetings.
- At the end of the month, TMAC attended a NIRB Kitikmeot Community consultation tour aimed at soliciting feedback on our Project Certificate amendment application.

May

- Logistical work began this month to facilitate regular crew changes for Kitikmeot workers conducting seasonal field work at Hope Bay. This work continued throughout the summer and fall, ending in November.

June

- In June, TMAC attended another KIA ASETS Stakeholder Working Group meeting to discuss regional training needs.
- TMAC facilitated a KIA Lands Site inspection this month.
- A project briefing was held in Cambridge Bay to CanNor senior management this month.

- TMAC attended the 2014 Nunasi Corporation Kitikmeot Tour this month with Inuk NHL player Jordin Tootoo. The purpose of this tour was to encourage Kitikmeot youth to stay in school and lead healthy productive lives. TMAC role during this tour was to highlight future careers in mining in the region.
- TMAC supported a site wildlife response with the GN-DOE Wildlife in Cambridge Bay this month in relation to deterring a herd of Muskox from the vicinity of the Doris Helipad. The muskox were deterred successfully.

July

- TMAC facilitated a community visit this month with a number of stakeholder groups with a Conference Board of Canada representative interested in conducting Community Readiness work in Cambridge Bay.
- Work began this month to support the submission of a Type B Water Licence application to allow for a Bulk Sample of the Madrid Deposit. The community consultation and socio-economic sections of this application was the focus of this work. The completed application was subsequently submitted in December 2014.
- TMAC provided support to the Canada/Nunavut Geoscience Office conducting geological research in the Elu Inlet basin this month with camp and helicopter support.
- Progress was made this month on securing mineral tenure through NTI lands with the receipt and review of a revised MEA document.
- The annual NIRB Site Visit pursuant to the Doris North Project Certificate monitoring requirements was facilitated this month.

August

- TMAC supported a Television production crew undertaking filming in the Hope Bay area this month. "Canada Over the Edge" series helicopter flew to Doris Camp to capture video footage of our operation. Results of this filming will be shown late March on the TVO television channel.
- In August, TMAC initiated the KIA Traditional Knowledge Study agreement in support of future environmental assessments in the Hope Bay district. It is anticipated that in 2015 traditional knowledge collected under this agreement will be incorporated in the Phase II project design.

September

- A negotiation session in Cambridge Bay was held this month between TMAC and KIA furthering talks on surface land access. During this session, TMAC representatives presented to the KIA and Kitikmeot Corporation Board of Directors.
- The second annual KIA Site Inspection made by KIA Lands staff was facilitated this month.

October

- During this month, a number of key negotiation documents between TMAC and KIA were traded and reviewed related to reaching an agreement in principle on a future Framework Agreement that would govern future surface access to the Hope Bay project area. A face to face meeting was held with KIA negotiators early in the month. Additionally, a counterproposal to the NTI Mineral Exploration Agreement was developed and provided to the NTI Lands Department.
- A presentation was prepared this month for the annual Kitikmeot Mayor`s meeting. However, due to weather problems, the meeting was postponed until 2015.
- TMAC communicated with a number of Kitikmeot Businesses and stakeholders this month regarding the status of the NTCL Barge containing community shipments that subsequently was iced in at Roberts Bay jetty due to the lateness of the season.

November

- TMAC representatives attended the 2014 Geoscience Forum conference in Yellowknife this month. In addition to providing a project update as part of the general sessions, a regulatory presentation was made at the Can-Nor Yellowknife offices with a number of agencies attending.
- An additional session in Toronto was held this month between TMAC and KIA furthering talks on surface land access.

December

- TMAC conducted a Kitikmeot Community Tour this month. The primary purpose of this tour was to conduct public meetings in all Kitikmeot communities to provide information on the Hope Bay project, 2014 activities, 2015 plans, and in particular, information on the planned Madrid Bulk Sample. All Kitikmeot communities were visited during this tour.

17. GPS locations of monitoring stations as confirmed with the Inspector Part J, Item 5 [See Schedule B, Item 17]

Please refer to the Annual Report Form for the GPS locations of the monitoring stations.

18. A summary of actions taken to address concerns or deficiencies listed in the inspection reports and/or compliance reports filed by an Inspector [See Schedule B, Item 18]

The AANDC Inspector visited site April 22-23, 2014, accompanied by two additional AANDC personnel. Action items resulting from the visit included: 1) demonstrating methods that would be employed to minimize water from drilling, and 2) clarification that drilling is authorized under the 2AM-DOH1323 Type A Licence. Item 1 was responded to April 28, 2014 with a

description of the water storage tank/closed-loop recirculation system that would be employed on the drills to minimize freshwater use, and on May 29, 2014 TMAC received a confirmation from the NWB that exploration drilling is authorized within the scope of the 2AM-DOH1323 licence as an activity integrally associated with the mining and milling undertaking (Item 2). To date, water minimization using the closed-loop methods proposed at the drills has been highly successful.

The inspection report also detailed a non-compliance of Act or Licence re: Part I: Item 3 of 2AM-DOH1323, "*The Licencee shall provide adequate secondary containment*". Three action items were provided with respect to 3) maintaining fuel berms free of snow, 4) keeping fuel lines, nozzles and valves within secondary containment, or over drip trays and ensuring all fuelling activities occur over drip trays, and 5) keeping hazardous waste at the waste management area in secondary containment. With respect to item 3, the fuel berms are routinely maintained snow-free to the extent practicable, and this is an on-going task over the winter season. With respect to item 4, while small fuel storage tanks were found to be in containment, there were occurrences where lines or nozzles were not, for instance between a fly tank fuel source and an exploration drill. A program was commenced to provide spill control for these lines using a secondary, larger diameter hose as containment, and nozzles and other fueling apparatus were mounted or maintained over spill or containment trays. One partially full fuel drum was noted outside of containment (item 5) at the waste management area, and this was rectified immediately.

Item 6 noted in the inspection report pertained to the Patch Laydown Cuttings Sump and providing a management and mitigation plan for the area. This Patch Lake laydown is regulated under the Hope Bay Regional Exploration Licence 2BE-HOP1222, and a mitigation plan was provided to AANDC under that licence on May 29, 2014.

General comments pertaining to the visit included were that the site remains clean and well-organized, and that waste segregation practices are excellent.

During a second site inspection July 17, 2014, no non-compliances were noted. Two action items were included: 1) to provide updated water records to the inspector from May – July reflecting any water used from sources other than Windy or Doris Lakes, and 2) to maintain a spill log at site with coordinates to facilitate future inspections. All water records are up to date and included in the monthly SNP reporting and summarized in this annual report, and the spill log at site maintains the coordinates of any spills.

19. Any other details on Water use or Waste Disposal requested by the Board [See Schedule B, Item 19]

No additional details on water use or waste disposal were requested by the Board in 2014.