NWB Annual Report **Year being reported:** 2013

License No: 2BB-BOS1217 **Issued Date:** August 2, 2012
Expiry Date: July 31, 2017

Project Name: Boston Advanced Exploration Project

Licensee: TMAC Resources Inc.

Mailing Address:
Suite 901 - 372 Bay Street
Toronto, Ontario
M5H 2W9

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

Licence 2BB-BOS1217 was issued Aug 2, 2012 to Hope Bay Mining Ltd. Effective June 18, 2013, the NWB authorized the assignment of Licence 2BB-BOS1217 from Hope Bay Mining Ltd. to TMAC Resources Inc.

General Background Information on the Project (*optional):

The Boston site supports advanced mineral exploration in the south end of the Hope Bay Greenstone Belt.

Licence Requirements: the licensee must provide the following information in accodance with

Part B Select

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): Aimaokatalok (Spyder) Lake for domestic use and drilling purposes. The total quantity of water allowable by the licence is 36,500 m3/yr or 100 m3/day. There is no differentiation between quantities to be used domestically or for drilling.

Water Quantity:

not specified	Quantity Allowable Domestic (cu.m)
0	Actual Quantity Used Domestic (cu.m)
not specified	Quantity Allowable Drilling (cu.m)
0	Total Quantity Used Drilling (cu.m)

Waste Management and/or Disposal

- [x] Solid Waste Disposal
- [x] Sewage
- [x] Drill Waste
- [x] Greywater
- [x] Hazardous
- [x] Other: Fuel Farm Berm, Containment Pond and Mine Portal discharges

Additional Details:

The Hope Bay Project was placed into Care and Maintenance in October 2012. Activities in 2013 at the Boston Camp were limited to water management and licence compliance.

When the camp is open, the following applies:
Water for domestic use at Boston Camp is obtained from Aimaokatalok Lake via a 2 inch diameter submerged pipe with a DFO compliant fish screen. This intake pipe is linked to a pumphouse located approximately 30 metres from shore. In winter, the pumphouse is moved onto the ice to decrease the length of heat-traced line required to reach the location where the water is open under the ice. Boston camp was not operational in 2013.

Waste produced on site will be treated according to Part D of the licence, and in accordance with the relevant Management Plans *(Incineration Management Plan, Non-Hazardous Waste Management Plan, and Hazardous Waste Management Plan*). Some specifics are as follows:

-Food waste, paper waste and untreated wood waste is burned in the incinerator as per Part D Item 3.
-Solid waste that cannot be burned is transfered to the Roberts Bay waste management facility for packaging and is taken offsite for disposal.
-Drill cuttings produced under this licence are disposed of in depressions as per Part F Item 2.
-Sewage and greywater produced on site is processed in the sewage treatment plant as per Part D Item 11. No Sludge was removed from the sewage treatment plant because it was not operational in 2013.
-Waste hazardous materials such as waste oil, glycol, and contaminated soil are shipped to Doris North either to be reclaimed or shipped offsite for disposal in an approved facility as per Part D Item 6. Contaminated soil is also located at the Boston Landfarm.
-Fuel 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, or it is removed offsite for treatment/disposal. In 2013, approximately 8.1 cu.m. of compliant water was discharged from BOS-5.
-Effluent from the landfarm is sampled in accordance with the licence criteria for discharge - no discharges occurred from the facility in 2013.
- Effluent from the mine portal/decline is sampled in accordance with the criteria specified for Monitoring Station BOS-2 (Containment Pond). Approximately 313 cu.m. of water was pumped from the mine portal to the tundra in 2013 and 20 cu.m. was discharged from BOS-2 to the tundra.

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)

No unauthorized discharges occurred in 2013 under licence 2BB-BOS1217.

Revisions to the Spill Contingency Plan

Other: (see additional details)

Additional Details:

See Item 12 of attached Annual Report Supplement for details.

Revisions to the Abandonment and Restoration Plan

Other: (see additional details)

Additional Details:

See Item 12 of attached Annual Report Supplement for details

Progressive Reclamation Work Undertaken

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

See Item 14 of the attached Annual Report Supplement for details.

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 coordinates for the freshwater intake (BOS-1) are in the attached coordinates file.
Drilling water source coordinates are maintained on file by the Geology Department for all water sources utilized proximal to the drill targets. No drilling occurred in 2013 so there are no drill water sources to report.

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:

The coordinates for waste discharge locations (BOS-2, 3, 4, 5, 6) are in the attached coordinates file.

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

Additional sampling requested by an Inspector or the Board (See below)

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

See 2013 Boston Geochemistry Update submitted concurrently with this annual report.

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 13 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 Annual Report Supplement for additional information requirements set out in Licence No. 2BB-BOS1217.

Date Submitted:	March 31, 2014	
Submitted/Prepared by:	Lea-Marie Bowes-Lyon	
Contact Information:	**Tel:**	(416) 628-0216
	Fax:	
	email:	lea-marie.bowes-lyon@tmacresources.com

GPS Coordinates for water sources utilized

Source Description	Latitude			Longitude		
	Deg °	Min '	Sec "	Deg °	Min '	Sec "
BOS-1 - Raw water supply intake at Spyder Lake	67	39	34.7	106	23	39.9

GPS Locations of areas of waste disposal

Location Description (type)	Latitude			Longitude		
	Deg °	Min '	Sec "	Deg °	Min '	Sec "
BOS-2 - Containment Pond Discharge	67	39	29.3	106	22	58.2
BOS-3 - Sewage Disposal Facility Final Discharge	67	39	33.9	106	23	10.5
BOS-4 - Treated sewage effluent point prior to entry into Aimaokatuk (Spyder) Lake	67	39	41.2	106	23	10.1
BOS-5 - Effluent from the bulk fuel storage facility prior to release	67	39	27.5	106	23	1.2
BOS-6 - Effluent from the landfarm treatment facility prior to release	67	39	29.3	106	23	3.5

2013 2BB-BOS1217 Type B Water Licence Annual Report Supplemental Document

Boston Advanced Exploration Project

Nunavut Water Board

Prepared by
TMAC Resources Inc.
Toronto, ON

Prepared for
Nunavut Water Board
Gjoa Haven, NU

March 2014

Executive Summary
2BB-BOS1217 Annual Report

TMAC Resources Inc. ("TMAC") has filed its Annual Report on its activities during 2013 under Water Licence No. 2BB-BOS1217 issued by the Nunavut Water Board. As set out in Part B, Item 6 of the Licence, the report includes information with respect to the following topics:

- a summary of water use and waste disposal activities
- a summary of data generated under the Monitoring Program
- a list of unauthorized discharges and a summary of follow-up actions taken
- a brief description of follow-up actions taken to address concerns detailed in inspection and compliance reports prepared by the Inspector
- updates or revisions to the Abandonment and Restoration Plan, QA/QC Plan, Waste Rock and Ore Storage Plan, Spill Contingency Plan, and Landfarm Plan
- a description of all progressive and/or final reclamation work undertaken
- a summary of modification and/or major maintenance work carried out on the Water Supply and Waste Disposal facilities, and an outline of any work anticipated for the next year
- a summary of drilling activities and progressive reclamation
- any updates with respect to the Boston restoration liability and any modifications to the site plan
- an estimate of both the current and anticipated volume of waste rock and ore stockpiled on site
- a summary of public consultation/participation with local organizations and residents of nearby communities, if any were conducted
- a summary of abandonment and restoration work completed
- an update on the status of the V-notch weir at Stickleback Lake
- a summary of any specific studies or reports requested by the board, and a brief description of future studies currently planned or proposed
- any other details on water use and waste disposal requested by the board

Atanguyan Naetomik Okaohen
2BB-BOS1217 Ukeotoagaagan Unipkaak

TMAC-kon Oyagakheoktin ("TMAC-kon") titigakhimaliktun Ukeotoagaagan Unipkaamik havaamigun 2013-mi ilagani Imaknik Atoknigagun laeseoyum Napaa 2BB-BOS1217 tuniyaohimayok Nunavumi Imalikiyin Katimayenin. Okaotaoyomi Ilagani B, Okaohik 6 Laeseoyomi, unipkaak ilakaktok hivonikhiyutikhanik ukuniga okaoheoyonik:

- naetomik okaohik imaknik atoknigagun atakugutiniklo
- naetomik okaohik naonaepkotink pihimayonik ilagani Amigiyotinun Havaani
- titigaknigin agiktaohimagitun kuvigaeyotinik naetomilo okaohik kigoagun havaanik
- naetomik okateagun kigoagun havaanik ihoakhiyaagani ihomalutaoyun okateakhimayun ihivgeokhikmata maligoateakmagalo unipkaagini Ihivgeokhiyum
- kanogilivaleanigin nutaguktiknigilo Kimaktaokpan Utiktitaaganilo Ilitkoheanun Opalogaeyaon, Haohiven Opalogaeyagaoyok okateagun tamaenik atoenaktun kiguliklunen nunan utiktitaagani ilitkohenun havaagiyaoyun
- naetomik okaohik ihoakhakniginik hanakiyotiloalunen Imiktakviknik Anagukvikniklo, kanoklo havaohikhaenik nahogiyaoyonik atoktukhami ukeomi
- naetomik okaohik ikutaktun havaaginik atoenaktomiklo nunan utiktitaagani ilitkohenun
- kanogilivaleayotin Boston-mi nunan utiktiniganik ilitkohenun maneyaotaoyok ihoakhaotikakalunelo iglukpakakvikmi opalogaeyaon
- nalaotaknigin tamaknik taya nahogiyaoyulo ikagun oyakan oyagaktaaniklo katitigivik iglukpakakvikmi
- naetomik okaohik kitulikaa okakatiginikun nahogiyaoyulunen nunagiyaoyoni timeoyonik inukniklo kanitoani nunagiyaoyoni, pihimanikata
- naetomik okaohik kimaliktaokpan nunalo utiktiniginik ilitkohenun havaan inikhiayun
- kanogiliniganik V-tun itomik hapotinik Stickleback-mi Tatimi
- naetomik okaohik hunaniklikaa ilitokhaotinik unipkaaniklo tukhigaoyun katimayinin, naetomik okateagun hivunikhami ilitokhaotikhanik taya opalogaeyagaoyonik atoktaoyomayoniklo
- ahenik okateagutinik imaknik atoknigagun atakuknikulo tukhigaoyun katimayinin

ᑐᓴᕋᒃᓴᑦ ᓇᐃᓈᖅᓯᒪᔪᑦ
2BB-BOS1217 ᐊᕐᕌᒍᑕᒫᑦ ᑐᓴᕋᒃᓴᑦ

ᐅᑯᐊ TMAC Resources Inc.−ᑯᑦ (“TMAC”) ᑎᑎᕋᖅᓯᒪᓕᖅᑐᑦ ᐊᕐᕌᒍᓕᒫᖅᓯᐅᑎᒥᓂᒃ ᐊᐅᓚᑕᒥᓃᑦ ᐅᕙᓂ 2013 ᐊᑑᑎᑎᓪᓗᒋᑦ ᐃᒪᓕᕆᔾᔪᑖ ᓚᐃᓴᑦ No. 2BB-BOS1217 ᑐᓂᔭᐅᔪᔪᑦ ᓄᓇᕗᑦ ᐃᒪᓕᕆᔩᑦ ᑲᑎᒪᔨᖏᑦᑕ. ᐅᑯᐊ ᐃᓚᖓᓅᖓᔪᑦ B, ᐱᔾᔪᑦ 6 ᓚᐃᓴᕐᑲᕈᑎᖓᑦ, ᑐᓴᕋᒃᓴᑦ ᒪᑯᓂᖓ ᐃᓚᖃᑦ:

- ᑐᓴᕋᒃᓴᑦ ᐃᒥᖅ ᖃᓄᖅ ᐊᑐᖅᑕᐅᖃᑦᑕᕐᓂᖓ ᐊᒻᒪᓗ ᐊᒃᑐᖅᑕᐅᖃᑦᑕᕐᓂᖓ ᐊᐅᓚᑦᓯᔪᓄᑦ
- ᑐᓴᕋᒃᓴᑦ ᓇᐃᓈᖅᓯᒪᔪᑦ ᑎᑎᖅᑕᐅᕙᒃᑐᑦ ᖃᐅᔨᒪᔾᔪᑕᐅᓂᐊᕐᒪᑕ ᓄᐊᑕᐅᓪᓗᑎᒃ ᒪᓕᒃᑐᑦ ᖃᐅᔨᓴᕈᑎᓂᒃ ᐱᓕᕆᔾᔪᑎᓂᒃ
- ᐊᑑᑎᒍᑎᖃᓐᓂᖏᑦᑐᑦ ᐱᔪᓐᓇᐅᕈᑎᓂᒃ ᐊᓯᐊᓅᖅᐸᒃᑐᑦ ᐱᔾᔪᑕᐅᓪᓗᑎᒃ ᐊᒻᒪᓗ ᓇᐃᓈᖅᓯᒪᔪᑦ ᑐᓴᕋᒃᓴᑦ ᖃᓄᖅ ᐊᑑᑕᐅᕐᑯᔭᑦ ᑲᒪᕐᑯᔭᐅᓪᓗᑎᒃ
- ᐅᓂᒃᑳᑦ ᓇᐃᑦᑑᒐᓗᐊᑦ ᖃᓄᖅ ᐊᑑᑕᐅᕐᑯᔭᓂᒃ ᒪᓕᒃᑐᑦ ᐅᔾᔨᑐᑦᓯᐊᕐᑯᔭᐅᓪᓗᑎᒃ ᐃᓱᒫᓗᖓᖅᑐᓂᒃ ᖃᐅᔨᓴᖅᑕᒥᓂᕐᓂᒃ ᐊᒻᒪᓗ ᒪᓕᒃᑐᑦ ᐊᑑᑕᐅᕐᑯᔭᐅᓯᒪᔪᓂᒃ ᐱᕐᑯᔭᖅᑎᒍᑦ ᑐᓴᕋᒃᓴᑦ ᐋᕿᒃᓯᒪᔭᖏᑦ ᖃᐅᔨᓴᖅᑎᐅᐸ ᓇᐅᑦᓯᑐᖅᑎᐅᐸ
- ᒫᓇᕐᓂᑕᑦ ᑐᓴᕋᒃᓴᑦ ᐅᕙᓗᑭᐊᖅ ᐋᕿᖏᐊᖅᓯᒪᔭᑦ ᕿᒪᒃᑕᐅᓖᑦ ᐊᒻᒪᓗ ᓴᓗᒪᖅᓴᐃᒍᑎᑦ, ᕿᑭᖅᑕᓂ ᑲᑐᔾᔨᕐᑲᑎᖅᑦ/ᕿᑭᖅᑕᓂ ᑯᐊᐳᓖᓴᓐ, ᐅᔭᕐᑲᑦ ᐊᒃᑕᑯᑦ ᐊᒻᒪᓗ ᓯᕐᓗᐊᖅ ᓄᐊᑕᒥᓂᖅᑕᓕᒃ ᐅᔭᕐᑲᓂᒃ, ᓄᓇᓕᕆᕕᕕᓂᖅ ᖃᓄᖅ ᐊᐅᓚᑕᐅᒐᔭᕐᓂᖏᑦ ᐅᓂᒃᑳᑦ ᐃᓘᓐᓇᐃᓐᓂᒃ ᐱᔾᔪᑎᓖᑦ ᐱᕙᓪᓕᐊᔭᓕᒫᓂᒃ ᐅᕙᓗᑭᐊᖅ ᑭᖑᓪᓕᖅᐸᓂ ᓴᓗᒪᖅᓴᖃᒃᓴᑦ ᐱᓕᕆᐊᕐᒍᓕᖅᑐᑦ
- ᑐᓴᕋᒃᓴᑦ ᓇᐃᓈᖅᓯᒪᔪᑦ ᐱᔾᔪᑎᓕᒃ ᖃᓄᖅ ᐋᕿᒋᐊᕆᐊᓕᖓᓂᒃ ᐅᕙᓗᑭᐊᖅ ᐊᖏᕚᑎᓂᒃ ᓴᓇᔭᑦ ᐃᒪᕐᑲᕈᒻᒨᖓᔪᑦ ᐊᒻᒪᓗ ᐊᒃᑕᑯᓄᑦ ᐃᒥᕐᒨᖓᔪᑦ, ᓇᓗᓇᐃᔭᖅᓯᒪᔭᑦ ᖃᓄᐃᑦᑐᑦ ᓱᓕ ᑲᒪᒋᔭᐅᒋᐊᓖᑦ ᐊᕐᕌᒍᓖᖅᑐᑦ
- ᑐᓴᕋᒃᓴᑦ ᓇᐃᓈᖅᓯᒪᔪᑦ ᐃᑰᑕᕐᓂᓕᕆᔪᑦ ᐊᐅᓚᑕᑦ, ᐱᕙᓪᓕᐊᔭᑦ ᓴᓗᒪᓴᖅᑕᐅᒋᐊᓖᓪᓗ
- ᖃᓄᑐᐃᓐᓇᖅ ᒫᓇᕐᓂᑕᑦ ᑐᓴᕋᒃᓴᑦ ᐅᕗᖓᖓᔪᑦ Boston ᓴᓇᒋᐊᕈᑏᑦ ᐱᕐᑯᑎᒋᔭᒥᒃ ᐊᒻᒪᓗ ᐋᕿᒃᑕᐅᒋᐊᕈᑎᖏᑦ ᓄᓇᐅᑉ ᖃᓄᐃᓕᖓᓂᖓᑕ
- ᒥᒃᓴᐅᓴᒃᑐᑦ ᑕᒪᒃᑮᓐᓃᖓᔪᑦ ᒫᓇ ᐊᒻᒪᓗ ᖃᓄᐃᓕᖓᓖᖅᑐᑦ ᐅᔭᕐᑲᑦ ᐊᑐᖅᑕᐅᓂᐊᖏᑦᑐᑦ ᐊᒃᑕᑯᑦ ᐊᒻᒪᓗ ᐅᔭᕋᓐᓂᐊᖅᑕᒥᓃᑦ ᓄᐊᑕᐅᓯᒪᔪᑦ ᐃᓂᒥᓐᓃᑦᑐᑦ
- ᑐᓴᕋᒃᓴᑦ ᓇᐃᓈᖅᓯᒪᔪᑦ ᐅᖃᖃᑕᐅᕙᖓᓂᖏᑦ ᐃᓄᐃᑦ ᑲᑎᒪᑎᑕᐅᓪᓗᑎᒃ ᐃᓚᐅᔪᓪᓗ ᓄᓇᓕᖓᓂ ᑲᑐᔾᔨᕐᑲᑎᖅᑦ ᐊᒻᒪᓗ ᓄᓇᓖᑦ ᖃᓂᒋᔭᖏᑦ, ᐱᑕᖃᐸᑕ ᖃᓄᖅ ᐊᐅᓚᑕᓂᒃ
- ᑐᓴᕋᒃᓴᑦ ᓇᐃᓈᖅᓯᒪᔪᑦ ᕿᒪᒃᑕᐅᓕᖅᐸᑦ ᐊᒻᒪᓗ ᓄᓇ ᐅᑎᖅᑎᑕᐅᓕᖅᐸᑦ ᓴᓗᒪᓴᖅᑕᐅᓗᓂ ᐃᖃᓇᐃᔮᑦ ᐱᔭᕇᐸᑕ
- ᒫᓇᕐᓂᑕᑦ ᑐᓴᕋᒃᓴᑦ ᐱᔾᔪᑎᓖᑦ ᐃᖃᓗᓕᖕᒥᒃ ᓴᐳᑏᑦ ᑕᓯᖓᓂ Stickleback Lake−ᒥ
- ᑐᓴᕋᒃᓴᑦ ᓇᐃᓈᖅᓯᒪᔪᑦ ᖃᓄᑐᐃᓐᓇᖅ ᐃᓕᓴᕆᑕᐅᓯᓐᓈᑦ ᖃᐅᔨᓴᖅᑕᑦ ᐅᕙᓗᑭᐊᖅ ᑐᓴᕋᒃᓴᑦ ᑐᒃᓯᕋᕆᓯᒪᔭᖏᑦ ᑲᑎᒪᔩᑦ, ᐊᒻᒪᓗ ᐅᓂᒃᑳᑦ ᐱᔾᔪᑎᓖᑦ ᓇᐃᓈᖅᓯᒪᔪᓂᒃ ᓯᕗᓂᒃᓴᒧᑦ ᐊᑑᑕᐅᖃᑦᑕᓖᖅᑐᑦ ᐃᓕᓐᓂᐊᕈᑕᐅᓯᓐᓇᖅᓱᑎᒃ ᒫᓇ ᐸᕐᓇᑕᑦ ᐅᕙᓗᑭᐊᖅ ᑐᒃᓯᕌᖑᓯᒪᔪᑦ
- ᖃᓄᑐᐃᓐᓇᖅ ᐊᓯᖏᑦ ᐅᓂᒃᑳᑦ ᐱᔾᔪᑎᓖᑦ ᐃᒥᖅ ᖃᓄᖅ ᐊᑐᖅᑕᐅᖃᑦᑕᕐᓂᖓᓂᒃ ᐊᒻᒪᓗ ᐊᒃᑕᖅᑕᐅᖃᑦᑕᕐᓂᖓ ᐊᑐᖅᑕᐅᓂᑯ ᑐᒃᓯᕋᖏᑦ ᑲᑎᒪᔩᑦ

Résumé opérationnel
2BB-BOS1217 Rapport annuel

TMAC Resources Inc. (« TMAC ») a déposé son rapport annuel sur ses activités au cours de l'année 2013 en conformité avec le Permis no 2BB-BOS1217 émis par l'Office des eaux du Nunavut (Nunavut Water Board), tel qu'énoncé dans la partie B, point 6, du permis. Le rapport comprend des renseignements sur les sujets suivants :

- un aperçu de l'utilisation et du traitement de l'eau et de l'évacuation des rejets
- un aperçu des données générées dans le cadre du programme de surveillance
- une liste des déversements non autorisés et un résumé des mesures de suivi prises à la suite de ces incidents
- une brève description des mesures de suivi prises pour régler les problèmes décrits dans les rapports d'inspection et de conformité établies par l'inspecteur
- des mises à jour et révisions du plan d'abandon et de restauration « Abandonment and Restoration Plan », du plan d'assurance/contrôle de la qualité (AQ/CQ), du plan de gérance des haldes de stériles et des piles de stockage de minerai « Waste Rock and Ore Storage Plan », plan d'urgence en cas de déversement « Spill Contingency Plan » et du plan de restauration du site par bio-remédiation « Landfarm Plan »
- une description des travaux de remise en état progressive et des travaux de remise en état terminé
- un aperçu des travaux d'entretien mineurs ou des travaux majeurs effectués sur les réserves d'eau potable, les installations de l'évacuation des rejets et de toutes leurs composantes s'y rattachant, ainsi qu'un aperçu des travaux prévus l'année suivante
- un aperçu des activités de forage et des travaux de remise en état progressive
- toute mise à jour du dépôt de garantie relatif aux travaux de remise en état en accord avec le « Boston restoration liability » et toute modification effectuée au plan du site
- une estimation du volume actuel et prévu des haldes de stériles et piles de stockage de minerai sur le site
- un aperçu décrivant la participation et la réalisation de consultations avec les organisations locales et les habitants des communautés voisines, si elles ont été menées
- un aperçu des travaux d'abandon et de restauration effectués
- une mise à jour sur l'état de la barrière de dénombrement (V-notch weir) au Lac de l'épinoche « Stickleback Lake »
- un aperçu des rapports ou études scientifiques exigés par l'Office et une brève description des éventuelles recherches ou celles prévues par l'Office
- tout autre détail en lien avec l'utilisation et du traitement de l'eau et de l'évacuation des rejets

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1. The monthly and annual quantities in cubic meters of all freshwater obtained from Aimaokatalok (Spyder) Lake at Monitoring Station BOS-1 [as per Part B Item 6 (a)]

Boston Camp was not open during 2013. No water was obtained from monitoring station BOS-1 in Aimaokatalok (Spyder) Lake for domestic or drilling use.

2. The monthly and annual quantities in cubic meters of Mine water pumped from the underground [as per Part B Item 6 (b)]

No minewater was pumped from the underground in 2013.

3. The monthly and annual quantities in cubic meters of treated Mine water and surface drainage discharged at Monitoring Station Number BOS-2 [as per Part B Item 6 (c)]

A total of 313 m^3 of surface water accumulation was discharged from the Boston portal in 2013 (255 m^3 in June, 14 m^3 in July, 20 m^3 in August, and 24 m^3 in September). The water was discharged onto the tundra to the west of the portal at UTM 7505312 N, 441358 E as approved by the Inspector. Prior notification of the planned discharge was provided May 27, 2013.

Approximately 20 m^3 of water was discharged in June from BOS-2 to the tundra. No water was transferred into the BOS-2 Containment Pond during 2013. Historically, the BOS-2 Containment Pond has been used to contain water pumped from the Bulk Fuel Storage Facility BOS-5 as a water management strategy pending analytical water quality results. In June 2013, results from BOS-5 were shown to be compliant with the effluent discharge requirements of the licence and approximately 8.1 m^3 was discharged from the facility direct to the tundra at a location approved by the Inspector. Transfer of water from BOS-5 to BOS-2 was not required in 2013. Prior notification for all planned discharges was provided May 27, 2013.

4. The monthly and annual quantities in cubic meters of treated Sewage effluent discharged at Monitoring Station Number BOS-3 [as per Part B Item 6 (d)]

Boston Camp was not open during 2013. No treated sewage effluent was discharged at monitoring station BOS-3.

5. The monthly and annual quantities in cubic meters of Sludge removed from the Sewage Disposal Facility [as per Part B Item 6 (e)]

No sludge was removed from the sewage disposal facility during 2013.

6. The annual quantities in cubic meters of all soil and types of contaminants from all locations that are placed within the Land farm facility [as per Part B Item 6 (f)]

In 2013, no new material was deposited in the Landfarm facility at Boston Camp.

7. Report all artesian flow occurrences as identified under Part F, Item 3 [as per Part B Item 6 (g)]

No artesian flow occurrences were encountered in 2013 as no drilling occurred pertaining to the Licence.

8. Report all drilling activity that has penetrated below the permafrost as identified under Part F, Item 4 [as per Part B Item 6 (h)]

Drilling activity did not occur in 2013 in the Boston area. For areas where exploration is carried out, depth of permafrost is calculated using thermistor strings that measure ground temperature, installed in geotechnical drill holes (thermistor strings are not installed in all drill holes). The thermistor stings are used because it is not possible to visually assess when a drill hole has passed through the permafrost layer. Results obtained from the thermistor strings are used to extrapolate the lower depth of permafrost using thermal gradient. There are several such thermistor strings throughout the Hope Bay Belt and measurements are taken on an on-going basis. The depth of permafrost extrapolated from data collected at thermistor string SRK-50 (200 m in length) is 570 m. The depth of permafrost extrapolated from data collected at thermistor string 08TDD632 (350 m in length) is 435 m. Results collected from all thermistor strings are presented in the 2013 Annual Geotechnical Inspection Report filed with the 2013 Annual Report for 2AM-DOH1323.

9. Tabular summary of all data generated under the Monitoring Program [as per Part B Item 6 (i) and Part J Item 21]

Tables setting out data generated under the Monitoring Program appear at Appendix A of this document.

10. A summary of modifications and/or major 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 [as per Part B Item 6 (j)]

No changes were made to the water supply or waste disposal facilities in 2013. No work is anticipated for 2014.

11. A list of unauthorized discharges and follow-up action taken [as per Part B Item 6 (k)]

No incidents occurred pertaining to this licence in 2013.

12. Updates or revisions to the Abandonment and Restoration Plan, QA/QC, Waste Rock and Ore Storage Plan, Spill Contingency Plan, and Landfarm Plan [as per Part B Item 6 (l)]

The Abandonment and Restoration Plan has been revised to take into consideration comments received on the last version of the report and to update the plan to reflect new Project ownership. This plan is being submitted concurrently to this annual report.

The 2012 revision of the Hope Bay Mining Ltd., Quality Assurance and Quality Control Plan, 2AM-DOH0713, 2BB-BOS1217, 2BE-HOP1222, HB-QA-ENV-MP-001 (rev. 7.1), acceptable to an Analyst, was submitted to the NWB in November 2012. This QA/QC Plan, applicable to the Boston monitoring program during the Care and Maintenance phase, is still operationally valid.

The Water and Ore/Waste Rock Management Plan for the Boston Site (SRK, 2009) was not updated in 2013.

The Hope Bay Project Spill Contingency Plan has been revised to appropriately reflect the Care and Maintenance phase of the project under the new Project ownership and to update all contact information. The revised Plan was submitted to the NWB on February 5, 2014.

During 2013, no changes were made to the Boston Land Treatment Area Management and Monitoring Plan, SRK Consulting (Canada) Inc., January 2012.

13. A brief description of follow-up action taken to address concerns detailed in inspection and compliance reports prepared by the Inspector [as per Part B Item 6 (m)]

An inspection of Boston Camp and area was conducted by AANDC July 8, 2013. General comments from the Inspector indicated the Boston site was clean and in good condition, with regular monitoring occurring. The contaminated soil remains in the Landfarm facility and management of this material will be in accordance with the Boston Land Treatment Area Management and Monitoring Plan and Boston Camp Revised Interim Closure Plan as applicable. It was noted that as per Part I, Item 10 of 2BB-BOS1217, restoration of drill holes and disturbed areas to a natural condition immediately upon completion of drilling has not yet been completed. Drilling did not occur in 2013, and action required to reclaim all historical drill holes throughout the project is on-going with activities and progress reported in the Annual Reports. The focus of drill site restoration in 2013 was in the north end of the belt with approximately 50 sites addressed by cutting down casings, removing debris and assessing requirements for backfill and re-contouring material. One depression at a historical drill site near the road in Boston was back-filled.

14. A summary of drilling activities and progressive reclamation of drill sites [as per Part B Item 6 (n)]

No drilling activities occurred in 2013. Progressive reclamation activities involved opportunistic filling of a depression at one historic site near the road. As noted at item 13, progressive reclamation of drill sites in 2013 was focused on the North end of the belt.

15. An updated estimate of the current Boston restoration liability based upon the results of the restoration research, project development monitoring, and any modifications to the site plan [as per Part B Item 6 (o)]

A per the revised Boston Closure Plan, to be submitted to the NWB concurrently with the annual report, the current closure cost estimate is $5,988,000. This amount includes cost escalation, management of mineralized rock, reclaiming drill sites and other areas of permafrost degradation, remediation of hydrocarbon contaminated soils, indirect costs, and a contingency.

16. An estimate of both the current and anticipated volume of waste rock and ore stockpiled on site [as per Part B Item 6 (p)]

It is estimated that there are approximately 47,400 m^3 of ore stockpiled on site at Boston Camp based on digital models of the ore removed historically from the underground workings at Boston. There is no estimate for the anticipated waste rock and ore to be stockpiled, because there is no mining activity occurring or currently planned for Boston.

17. A public consultation/participation report describing consultation with local organizations and residents of the nearby communities, if any were conducted [as per Part B Item 6 (q)]

Community consultations in 2013 continued in accordance with the Community Relations Plan, which is a responsibility of the TMAC Environment and Social Responsibility department.

Alex Buchan, Director of Community and External Relations based in Cambridge Bay is primarily responsible for implementing this Plan, supported by Ikey Evalik, Inuit Impact and Benefit Agreement Coordinator. During the first 3 quarters of the year, Community Relations staff worked under secondment from Hope Bay Mining Ltd. on behalf of TMAC. Staff then transitioned to new positions working directly for the new company.

Community relations in 2013 focused on introducing TMAC to stakeholders as the new owner and operator for the Hope Bay project. Later in the year, focus shifted to communications related to permitting and future project plans.

Throughout 2013, HBML, then TMAC, maintained occupation and use of the Community Relations Storefront in downtown Cambridge Bay.

TMAC has established relations with key Nunavut organizations aligned to support

community relations functions including the NWT/Nunavut Chamber of Mines, the Nunavut Mine Training Roundtable, and the Cambridge Bay Canadian High Arctic Research Station Committee.

Cambridge Bay Logistics Hub

Cambridge Bay continued to serve as a logistics hub for TMAC in the Kitikmeot. Employees from across the region were flown to Cambridge Bay via commercial airline service, and were transported to and from site utilizing a charter aircraft stationed at Cambridge Bay. During the latter part of 2013, during several crew change shifts, TMAC could not guarantee enough flights for the air charter company to position aircraft in Cambridge Bay. As a result, a small number of TMAC employees were routed through Yellowknife. TMAC understands this is not ideal and will work with our logistics staff to limit staff movement through Yellowknife in the future.

Other Communications

In 2013, TMAC continued the practice of providing email notifications of company updates amongst key Nunavut stakeholders including elected representatives and municipal governments. Under Care and Maintenance, there were few notifications to make due to reduced project activity.

Community Relations Monthly Summary

January

- Several teleconference and planning meetings were held to prepare for a Nunavut Diamond Drilling workshop to be held in Toronto sponsored by the Nunavut/NWT Chamber of Mines. The purpose of this workshop was to develop common best practices in diamond drilling in permafrost conditions, and establish a working group to look at alternatives to using brine for drill water.
- An introductory meeting took place between TMAC senior management and the NIRB and the NWB in Cambridge Bay, facilitated by community relations staff. The purpose of this meeting was to review licence and permit conditions, discuss future permitting steps for Hope Bay, and review a draft TMAC Care and Maintenance work plan.
- During the Cordilleran Roundup held in Vancouver, community relations staff facilitated a number of meetings between TMAC and stakeholders including Mines Minister Peter Taptuna in order to introduce key company staff and discuss TMAC plans for Hope Bay.

February

- A meeting was held mid-month between TMAC community relations staff and the new GN Wildlife Biologist during the Kitikmeot Regional Wildlife Board (KRWB) meetings held in Cambridge Bay. The purpose of this meeting was to brief the new incumbent on the Doris North Wildlife Monitoring and Mitigation Program to set the stage for future MOU discussions.

- TMAC Community Relations staff audited the KRWB meetings held in Cambridge Bay in order to learn about any particular wildlife concerns or issues that may be associated with the Hope Bay Project. At that time, short discussions occurred with each of the HTO representatives present.
- An IIBA Procurement teleconference was organized by Community Relations staff to review IIBA Schedule F and J contracting procedures for the TMAC Executive. The purpose of this meeting was to familiarize TMAC with these contractual obligations.
- Work proceeded on the Nunavut Mining Symposium Program Committee in preparation for this conference to be held in April.
- Also in February, Alex Buchan attended the last GEM Northern Advisory Group initiative meeting held in Ottawa as this NRCan program entered its final year of funding.

March

- During this month, the acquisition of the Hope Bay Project by TMAC was finalized. A number of communication activities centered on this project milestone:
    - Facilitating a meeting with the KIA Board of Directors immediately after the transaction was complete;
    - Updating the Hope Bay Stakeholder contact directory to disseminate this project news;
    - Organizing and conducting a Kitikmeot regional community tour to discuss the changeover in project ownership and introduce the new owners to stakeholders. All Kitikmeot communities were visited except for Gjoa Haven that could not be reached due to weather.

April

- With the opening of Doris Camp, efforts began in April to hire TMAC seasonal staff from within the Kitikmeot for available positions. From a number of submitted resumes, candidates were selected for initial positions.
- TMAC attended the Nunavut Mining Symposium. A delegation of four attended this event in Iqaluit. Concurrent meetings with the NIRB, NWB, KIA, Nunavut Mine Training Roundtable, AANDC, DFO and Nunavut Leadership Forum were attended. A presentation was given at the symposium and can be viewed at: http://www.nunavutminingsymposium.ca/wp-content/uploads/2013/04/8-Farrow-TMAC.pdf
- TMAC began the publication of a monthly investor newsletter. As a courtesy, this newsletter was also distributed to northern stakeholders for their information.

May

- At the beginning of the month, TMAC held a recruitment open house at the Cambridge Bay office. The purpose of this event was to allow persons interested in working at Hope Bay to hear about job opportunities and meet visiting TMAC executives including our VP of Human Resources. The event was attended by close to 20 Cambridge Bay residents.
- TMAC began surface access negotiations with the KIA this month. A meeting facilitated by community relations staff was held in Cambridge Bay to begin these talks. At the same time,

TMAC executives visiting Cambridge Bay had the opportunity to participate in the 2013 Omingmak Frolics event with Cambridge Bay residents.

- TMAC formalized recruitment and interview processes for onboarding staff with input from community relations staff.
- The NIRB appointed a new monitoring officer for the Doris North project certificate. A short meeting was held with the new staff to brief them on the project.
- Community Relations staff began to be active in managing Nunavut crew changes in cooperation with our Yellowknife logistics office. This work continued throughout the 2013 field season with informing Kitikmeot employees of travel dates, making travel and accommodation arrangements, scheduling charter flights and manifests, and moving workers from town to airport.
- TMAC responded to 2 northern media requests for information on the re-opening of the Hope Bay project.

June

- Community Relations staff assisted TMAC Human Resources in explaining and confirming the opting in or out of overtime averaging for Nunavut seasonal workers. Nunavut Labour law allows for workers to choose whether to have wages for non-traditional working hours averaged for overtime worked.
- During the first TMAC Board of Directors meeting held in Toronto, Community Relations staff delivered background information on Nunavut, Inuit Organizations and communities to the Board to familiarize them with the Hope Bay operating environment.
- Community Relations staff worked with the Ekaluktutiak Hunters and Trappers Organization to finalize approval of the Hope Bay Wildlife Research permit for 2013.
- TMAC attended the KIA Board of Directors meeting held in Gjoa Haven. A presentation was given to the Board that included a project update, and review of TMAC plans to develop the Hope Bay project. The Nunavut Water Board office was also visited at that time.
- A KIA lands inspection site visit was facilitated.
- Community Relations staff also participated in the June NWB Doris North water license renewal technical hearing made via teleconference.

July

- At the invitation of the Hamlet of Cambridge Bay, TMAC delivered a project update presentation to Hamlet Council.
- With the decommissioning of Windy Camp facilities, a number of shelters became available for surplus sale in July. In consultation with the KIA, these items were advertised for sale to Kitikmeot HTOs, and then more generally throughout the region.
- A tour of Hope Bay by Nunavut Resources Corporation directors was facilitated by community relations staff. The purpose of this tour was to investigate potential infrastructure projects with the mining industry.
- A firearms safety course was organized this month for delivery at Doris Camp. George Hakongak of Cambridge Bay was brought to Hope Bay to deliver this course to 8 individuals in order for them to obtain Firearms licences. This effort was made based on an identified need for Inuit workers who could participate in the Hope Bay Wildlife Response Team.

- Community Relations staff also facilitated discussions between TMAC and the KIA on renewing the Doris North commercial lease.
- A tour of Hope Bay was organized for a CBC North reporter. The purpose of this visit was to obtain stock footage of the Hope Bay project for future CBC North television stories.
- A number of site signs were changed to reflect the new ownership and translate key messages into Inuinnaqtun and Inuktitut.
- At the end of the month, a group from the Government of Nunavut Department of Economic Development and Transportation investigating potential soapstone deposits was hosted at Doris for a day. Several local potential soapstone deposits were investigated. All stone sampled at Hope Bay proved to be too hard to be considered commercially valuable soapstone.

August

- A Bear and Wildlife Safety Audit was completed for the Hope Bay project by community relations staff. Potential hazards to wildlife and attractants to bears were identified and corrective measures implemented.
- The TMAC Board of Directors visited Doris Site. At that time, a delegation from the Hamlet of Cambridge Bay, the KIA and also Minister Peterson travelled down to Doris to meet informally with our Board. This visit was facilitated by the Cambridge Bay TMAC Office.
- A number of TMAC policies were developed.

September

- At the beginning of the month, TMAC established a Facebook page as an avenue to share project news and happenings with our stakeholders. To date, site visitation and comments from the Kitikmeot continue to grow. Much of the comments or inquiries generated from this community relations effort is in regards to employment and training. TMAC postings are also shared on appropriate Kitikmeot community Facebook groups. The Facebook page can be viewed at: http://www.facebook.com/tmacresources
- TMAC participated in the Nunavut Planning Commissions "Filling the Gaps" Land Use Planning workshop held in Cambridge Bay. The purpose of this workshop was to identify missing technical aspects to the draft Nunavut General Land Use Plan. TMAC provided input into criteria for selecting lands zoned for economic development, transportation corridors and protection measures for various environmentally sensitive areas in the Kitikmeot region.
- Community Relations staff participated and provided input into the creation of the new TMAC website. The website went "live" at the end of the month and can be seen at the following link: www.tmacresources.com
- TMAC participated in a Community Readiness workshop in Cambridge Bay. The purpose of this workshop was to describe the Community Readiness program delivered by Can-Nor, describe the role that KIA will perform as the regional project sponsor, and gain community involvement through Hamlet representation. TMAC provided a project update during this workshop.
- Community Relations staff helped respond to an alcohol related incident at Doris camp this month. Several small empty alcoholic beverage containers were found by housekeeping staff in a non-beneficiary contract worker's bedroom. The contracting company was told about the incident and requested that they replace the worker at site, which they did the following day.

Community Relations staff lead a short on-site staff discussion on zero tolerance to alcohol during this incident.

October

- Work began this month to prepare the 2012/13 Socio-Economic Monitoring Report as required under Condition 28 of the Doris North project certificate. Work included collecting company generated data and directing consultants to obtain data from government sources.
- A reporter for UpHere Business Magazine (Ashleigh Gaul) was provided a site tour this month. The purpose of this visit was to gather story content for articles related to Inuit involvement in mining. Stories from this visit are to be published in the UpHere Business magazine over the course of 2014.
- TMAC audited the KIA Annual General Meeting and component presentations to be aware of any project related concerns or issues that may have been brought up by beneficiaries or beneficiary organizations regarding the Hope Bay project. No TMAC presentation was given.
- TMAC Community Relations staff supported and provided input into several key documents including the Project Certificate Amendment/Water Licence Amendment package, the Preliminary Economic Assessment (PEA) and Wildlife Mitigation and Monitoring Report responses.
- TMAC participated in a Community Readiness program follow-up teleconference this month with KIA, CanNor, and community representatives.
- TMAC community relations managed some communications related to the Patch Brine Spill discovered this month.

November

- The Kitikmeot Socio-Economic Monitoring Committee and Doris North Socio-Economic Monitoring committee met in Cambridge Bay. TMAC participated in these meetings and presented our annual report. The report and presentation can be viewed online at: http://nunavutsemc.com/kitikmeot.
- TMAC met with KIA Lands Division and Executive in Toronto to discuss surface land tenure issues. Community Relations staff prepared for and responded to action items from this meeting. During that time, Community Relations staff also delivered a cross cultural awareness presentation to TMAC Senior Management.
- TMAC met with the new GN Community Minerals Advisor in order to brief the incumbent on the Hope Bay project and scope future collaborative efforts.
- Some follow-up work was done to liaise with former seasonal workers to provide accurate Records of Employment for Employment Insurance purposes.
- TMAC worked with KIA Lands Division to finalize the 2014 Capacity Agreement workplan and overall renewal of this Agreement.
- TMAC Community Relations staff delivered an IIBA contracting and procurement presentation to new TMAC managers to ensure that both Schedule F and J procedures were known and could be adhered to.

December

- Some work was done to prepare for meetings early on in the new year including scheduling TMAC meetings with stakeholders to take place during the Cordilleran Roundup in January 2014.
- The completed TMAC Community Complaints Procedure generated during earlier policy development work in 2013 was circulated widely to Nunavut and Kitikmeot stakeholders in order to ensure that all were aware that TMAC would handle complaints in a fair and transparent manner.

18. Summary of any abandonment and restoration work completed during the year and an outline of any work anticipated for the next year [as per Part B Item 6 (r)]

No abandonment or restoration work was completed in 2013 at Boston aside from the reclamation of one historic drill hole as described at items 13 and 14. No work is planned for 2014, aside from opportunistic reclamation of historic drill holes.

19. An update on the status of the v-notch weir located at Stickleback Lake, an item transferred through the amalgamation of Licence NWB4WEI0002 with 2BB-BOS0106 (now the current Licence) and addressed through Part E, Item 9 [as per Part B Item 6 (s)]

The v-notch weir at Stickleback Lake was removed on August 9, 2012. A report on the removal of the weir was submitted to the NWB on September 6, 2012.

20. Summary of any specific studies or reports requested by the Board, and a brief description of any future studies planned or proposed [see Part B Item 6 (t)]

No specific studies or reports were requested by the Board in 2013.

21. Any other details on Water use or Waste disposal requested by the Board by November 1st of the year being reported [see Part B Item 6 (u)]

No other details on water use or waste disposal were requested by the Board by November 1, 2013.

Appendix A

Annual Monitoring Report – 2BB-BOS1217

a) Tabular Summary of Monitoring Information

The following section summarizes the results of sampling undertaken in 2013 as part of the monitoring program detailed in Part J of licence 2BB-BOS1217.

Monitoring was not undertaken at the following stations because the camp was not operational in 2013: BOS-1 (raw water supply intake at Aimaokatalok Lake), BOS-3 (sewage disposal facility final discharge), and BOS-4 (treated sewage effluent point prior to entry to Aimaokatalok Lake).

Water from the Containment Pond (BOS-2) was sampled in June before and after treatment through an oil/water separator and found to be compliant for discharge. Analytical results are provided in Table 1. Samples were analyzed for the criteria for both BOS-2 and BOS-5 due to the fact that water from the smaller fuel containment berms has been transferred into the Containment Pond to facilitate sampling and discharge.

Mine water was not pumped from underground during 2013. The surface water accumulated at the portal was sampled against criteria for BOS-2 (Containment Pond) discharged directly to the tundra at UTM 7505312 N, 441358 E as approved by the AANDC Inspector. Table 2 shows the sampling results for this effluent. A notification of the discharge was provided to the Inspector May 27, 2013.

Water from BOS-5 (effluent from the bulk fuel storage facility) was discharged directly to the tundra on June 27 after compliant results were received from water quality samples obtained in June. Table 3 shows the sampling results for this effluent.

Water was not discharged from BOS-6 (Landfarm) in 2013 because there was no water to sample at this location.

No landfill exists at Boston and the status of monitoring station BOS-7 is in-active.

During June 2013, TMAC opportunistically sampled at a location where seepage was observed during periods of runoff near the waste rock and ore storage pad (BOS-8). Table 4 shows sampling results of this effluent.

Table 1 - Results of 2013 water quality sampling from containment pond monitoring station BOS-2, in mg/L, unless specified otherwise

TMAC Sample ID		BOS2C-12JUN13A Pre-Treatment	BOS2C-12JUN13B Post-Treatment	BOS-2 Part D Item 9		BOS-5 Part D Item 19
ALS ID		L1317160-2	L1317160-3	Maximum Average Concentration (mg/L)	Maximum Concentration of any Grab Sample (mg/L)	Maximum Concentration of any Grab Sample (mg/L)
Sample Date/Time		6/12/2013 12:40	6/12/2013 12:50			
Parameter	Units	Results				
Hardness (as CaCO3)	mg/L	243	218			
Total Suspended Solids	mg/L	8	-	25	50	
Alkalinity, Total (as CaCO3)	mg/L	57.5	63.8			
Conductivity (EC)	uS/cm	476	492			
Nitrate and Nitrite (as N)	mg/L	<0.071	<0.071			
Nitrate (as N)	mg/L	<0.050	<0.050			
Nitrite (as N)	mg/L	<0.050	<0.050			
pH	pH	7.88	8.01		6.0-9.5	
Sulfate (SO4)	mg/L	134	133			
Arsenic (As)-Total	mg/L	0.046	0.0168	0.5	1.00	
Cadmium (Cd)-Total	mg/L	0.00001	<0.000010			
Chromium (Cr)-Total	mg/L	0.0025	<0.0010			
Copper (Cu)-Total	mg/L	0.0088	<0.0010	0.30	0.60	
Iron (Fe)-Total	mg/L	0.838	0.117			
Lead (Pb)-Total	mg/L	0.00055	0.00015	0.20	0.40	0.001
Mercury (Hg)-Total	mg/L	<0.000020	<0.000020			
Nickel (Ni)-Total	mg/L	0.0308	0.01	0.50	1.00	
Zinc (Zn)-Total	mg/L	0.0066	0.0052	0.50	1.00	
Calcium (Ca)-Dissolved	mg/L	57.9	59.2			
Magnesium (Mg)-Dissolved	mg/L	17.5	17.3			
Potassium (K)-Dissolved	mg/L	4.74	5.1			
Sodium (Na)-Dissolved	mg/L	7.3	7.8			
Oil and Grease	mg/L	<1.0	<1.0			15 and no visible sheen
Oil And Grease (Visible Sheen)		No visible sheen	No visible sheen	No visible sheen	No visible sheen	
Benzene	mg/L	<0.00050	<0.00050			0.370
Ethylbenzene	mg/L	<0.00050	<0.00050			0.002
Toluene	mg/L	0.00168	<0.00050			0.09
Phenols (4AAP)	mg/L	<0.0010	<0.0010			
Benzene	mg/L	<0.00050	<0.00050			
Ethylbenzene	mg/L	<0.00050	<0.00050			

TMAC Sample ID		BOS2C-12JUN13A Pre-Treatment	BOS2C-12JUN13B Post-Treatment	BOS-2 Part D Item 9		BOS-5 Part D Item 19
ALS ID		L1317160-2	L1317160-3	Maximum Average Concentration (mg/L)	Maximum Concentration of any Grab Sample (mg/L)	Maximum Concentration of any Grab Sample (mg/L)
Sample Date/Time		6/12/2013 12:40	6/12/2013 12:50			
Parameter	Units	Results				
Toluene	mg/L	0.00168	<0.00050			
o-Xylene	mg/L	<0.00050	<0.00050			
m+p-Xylene	mg/L	0.00055	<0.00050			
Xylenes	mg/L	<0.00071	<0.00071			
F1(C6-C10)	mg/L	<0.10	<0.10			
F1-BTEX	mg/L	<0.10	<0.10			
F2 (>C10-C16)	mg/L	<0.25	<0.25			
F3 (C16-C34)	mg/L	<0.25	<0.25			
F4 (C34-C50)	mg/L	<0.25	<0.25			
2-Bromobenzotrifluoride	%	98.2	99			
Acenaphthene	mg/L	<0.000020	<0.000020			
Acridine	mg/L	<0.000020	<0.000020			
Anthracene	mg/L	<0.000010	<0.000010			
Benzo(a)anthracene	mg/L	<0.000010	<0.000010			
Benzo(a)pyrene	mg/L	<0.0000050	<0.0000050			
Benzo(b&j)fluoranthene	mg/L	<0.000010	<0.000010			
Benzo(g,h,i)perylene	mg/L	<0.000020	<0.000020			
Benzo(k)fluoranthene	mg/L	<0.000010	<0.000010			
Chrysene	mg/L	<0.000020	<0.000020			
Dibenzo(a,h)anthracene	mg/L	<0.0000050	<0.0000050			
Fluoranthene	mg/L	<0.000020	<0.000020			
Fluorene	mg/L	<0.000020	<0.000020			
Indeno(1,2,3-cd)pyrene	mg/L	<0.000010	<0.000010			
Naphthalene	mg/L	<0.000050	<0.000050			
Phenanthrene	mg/L	<0.000050	<0.000050			
Pyrene	mg/L	<0.000020	<0.000020			
Quinoline	mg/L	<0.000020	<0.000020			
2-Fluorobiphenyl	%	88	66.7			
Nitrobenzene d5	%	85.6	66.6			
p-Terphenyl d14	%	109.8	92.2			
B(A)P Total Potency Equivalent	mg/L	<0.000010	<0.000010			

Table 2 - Results of 2013 water quality sampling from Boston Portal, in mg/L, unless specified otherwise

Sample ID		BOS2P-12JUN13	BOS2P-25JUL13	BOS2P-04SEP13	BOS-2 Part D Item 9	
ALS ID		L1317160-1	L1340951-5	L1359284-1		
Sample Date/Time		6/12/2013 10:00	7/25/2013 8:05	9/4/2013 8:45	Maximum Average Concentration (mg/L)	Maximum Concentration of any Grab Sample (mg/L)
Parameter	**Units**	**Results**				
pH	pH	7.32	7.64	8.02		6.0-9.0
Total Suspended Solids	mg/L	<3.0	<3.0	<3.0	25	50
Arsenic (As)-Total	mg/L	0.0371	0.0855	0.295	0.5	1.00
Copper (Cu)-Total	mg/L	0.0022	0.0052	0.0258	0.30	0.60
Iron (Fe)-Total	mg/L	0.513	0.152	0.31		
Lead (Pb)-Total	mg/L	0.00147	<0.00010	<0.00050	0.20	0.40
Nickel (Ni)-Total	mg/L	0.0154	0.285	**1.09***	0.50	1.00
Zinc (Zn)-Total	mg/L	0.0103	0.0367	0.038	0.50	1.00
Oil And Grease (Visible Sheen)		No visible sheen	No visible sheen	No visible sheen		No visible sheen

**Results are marginally higher than the maximum concentration of any grab sample.*

Table 3 - Results of 2013 water quality sampling from Bulk Fuel Storage Facility BOS-5, in mg/L, unless specified otherwise

Sample ID		BOS5-02JUN13 Pre-Treatment	BOS5-12JUN13 Post-Treatment	Maximum Allowable Grab Sample Concentration (mg/L)
ALS ID		L1311314-9	L1317160-4	
Sample Date/Time		6/2/2013 17:00	6/12/2013 17:45	
Parameter	Units	Results		
Hardness (as CaCO3)	mg/L	753	696	
Alkalinity, Total (as CaCO3)	mg/L	65.5	57.2	
Conductivity (EC)	uS/cm	1290	1210	
Hardness (as CaCO3)	mg/L	734	673	
Nitrate and Nitrite (as N)	mg/L	<0.071	<0.071	
Nitrate (as N)	mg/L	<0.050	<0.050	
Nitrite (as N)	mg/L	<0.050	<0.050	
pH	pH	7.7	8	
Sulfate (SO4)	mg/L	618	570	
Arsenic (As)-Total	mg/L	0.358	0.217	
Cadmium (Cd)-Total	mg/L	0.000078	0.000024	
Chromium (Cr)-Total	mg/L	<0.0010	<0.0010	
Copper (Cu)-Total	mg/L	0.0194	0.001	
Iron (Fe)-Total	mg/L	0.272	0.443	
Lead (Pb)-Total	mg/L	0.025	0.0288	1
Mercury (Hg)-Total	mg/L	<0.000020	<0.000020	
Nickel (Ni)-Total	mg/L	0.232	0.0556	
Calcium (Ca)-Dissolved	mg/L	190	175	
Magnesium (Mg)-Dissolved	mg/L	63.1	57.3	
Potassium (K)-Dissolved	mg/L	11.6	9.9	
Sodium (Na)-Dissolved	mg/L	12.6	11.4	
Oil and Grease	mg/L	<1.0	<1.0	15.0
Oil And Grease (Visible Sheen)		No visible sheen	No visible sheen	No visible sheen
Phenols (4AAP)	mg/L	0.0095	0.0025	
Benzene	mg/L	<0.00050	<0.00050	370
Ethylbenzene	mg/L	<0.00050	<0.00050	90
Toluene	mg/L	<0.00050	<0.00050	2
o-Xylene	mg/L	<0.00050	<0.00050	
m+p-Xylene	mg/L	<0.00050	<0.00050	
Xylenes	mg/L	<0.00071	<0.00071	
F1(C6-C10)	mg/L	<0.10	<0.10	
F1-BTEX	mg/L	<0.10	<0.10	
F2 (>C10-C16)	mg/L	<0.25	<0.25	
F3 (C16-C34)	mg/L	<0.25	<0.25	
F4 (C34-C50)	mg/L	<0.25	<0.25	
2-Bromobenzotrifluoride	%	104.4	98.6	
Acenaphthene	mg/L	<0.000020	<0.000020	
Acridine	mg/L	<0.000020	<0.000020	
Anthracene	mg/L	<0.000010	<0.000010	
Benzo(a)anthracene	mg/L	<0.000010	<0.000010	
Benzo(a)pyrene	mg/L	<0.0000050	<0.0000050	
Benzo(b&j)fluoranthene	mg/L	<0.000010	<0.000010	
Benzo(g,h,i)perylene	mg/L	<0.000020	<0.000020	
Benzo(k)fluoranthene	mg/L	<0.000010	<0.000010	
Chrysene	mg/L	<0.000020	<0.000020	

Sample ID		BOS5-02JUN13 Pre-Treatment	BOS5-12JUN13 Post-Treatment	Maximum Allowable Grab Sample Concentration (mg/L)
ALS ID		L1311314-9	L1317160-4	
Sample Date/Time		6/2/2013 17:00	6/12/2013 17:45	
Parameter	**Units**	**Results**		
Dibenzo(a,h)anthracene	mg/L	<0.0000050	<0.0000050	
Fluoranthene	mg/L	<0.000020	<0.000020	
Fluorene	mg/L	<0.000020	<0.000020	
Indeno(1,2,3-cd)pyrene	mg/L	<0.000010	<0.000010	
Naphthalene	mg/L	<0.000050	<0.000050	
Phenanthrene	mg/L	<0.000050	<0.000050	
Pyrene	mg/L	<0.000020	<0.000020	
Quinoline	mg/L	<0.000020	<0.000020	
2-Fluorobiphenyl	%	73.3	79.5	
Nitrobenzene d5	%	69.5	75.3	
p-Terphenyl d14	%	93.5	104.6	
B(A)P Total Potency Equivalent	mg/L	<0.000010	<0.000010	

Table 4 - Results of opportunistic sampling at the Boston waste rock and ore storage pad monitoring station BOS-8, where flow was observed in 2013, in mg/L, unless specified otherwise

Sample ID		BOS8-21JUN13
ALS ID		L1322373-7
Sample Date/Time		6/21/2013 10:42
Parameter	**Units**	**Results**
Conductivity (EC)	uS/cm	1320
Hardness (as CaCO3)	mg/L	687
pH	pH	8.28
Total Suspended Solids	mg/L	15
Ammonia, Total (as N)	mg/L	<0.050
Sulfate (SO4)	mg/L	387
Aluminum (Al)-Total	mg/L	0.292
Antimony (Sb)-Total	mg/L	0.00322
Arsenic (As)-Total	mg/L	0.359
Barium (Ba)-Total	mg/L	0.0355
Beryllium (Be)-Total	mg/L	<0.0010
Boron (B)-Total	mg/L	0.118
Cadmium (Cd)-Total	mg/L	0.000052
Calcium (Ca)-Total	mg/L	157
Chromium (Cr)-Total	mg/L	0.0041
Cobalt (Co)-Total	mg/L	0.114
Copper (Cu)-Total	mg/L	0.0085
Iron (Fe)-Total	mg/L	7.04
Lead (Pb)-Total	mg/L	0.00137
Lithium (Li)-Total	mg/L	<0.010
Magnesium (Mg)-Total	mg/L	57.6
Manganese (Mn)-Total	mg/L	0.695
Mercury (Hg)-Total	mg/L	<0.000020
Molybdenum (Mo)-Total	mg/L	<0.0050
Nickel (Ni)-Total	mg/L	0.239
Potassium (K)-Total	mg/L	10.4
Selenium (Se)-Total	mg/L	0.00062
Silver (Ag)-Total	mg/L	0.000066
Sodium (Na)-Total	mg/L	40.5
Thallium (Tl)-Total	mg/L	<0.00010
Tin (Sn)-Total	mg/L	<0.050
Titanium (Ti)-Total	mg/L	0.0036
Uranium (U)-Total	mg/L	0.00058
Vanadium (V)-Total	mg/L	0.0021
Zinc (Zn)-Total	mg/L	0.0079
Calcium (Ca)-Dissolved	mg/L	178
Magnesium (Mg)-Dissolved	mg/L	58.7