March 31, 2011 Transmitted via: e-mail and Canada Post

Phyllis Beaulieu, Manager of Licencing
Richard Dwyer, Licencing Administrator
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0B 1J0
Email: licensing@nunavutwaterboard.org

Attention: Mr. Dwyer and Ms. Beaulieu

RE: Submission of 2010 Annual Report to the Nunavut Water Board,
Type B Water Licence #2BB-MRY0710
Mary River Project

Baffinland Iron Mines Corporation (BIM) is pleased to submit, herewith, one copy of the Annual Water Licence Report which is a requirement under Part B, Item 5 of the above referenced water licence. This report has been prepared to summarize the project activities and monitoring undertaken by BIM during 2010.

In accordance with Part B, Item 5 (x) of the water licence, an annual review of the management plans developed under the water licence has been undertaken. Updates to the Abandonment and Reclamation Plan, the Spill Contingency Plan, the Site Water Management Plan, and the QA/QC Plan have been completed and form Appendix F of the subject document. The approved 2009 Wastewater Management Plan is presently in the process of revision and will be submitted at a later date.

This document has been uploaded to our ftp site. The accompanying e-mail provides you with a link to access and download the document files. A hard copy of the document and CD will also be sent to you via Canada Post.

Please do not hesitate to contact jim.millard@baffinland.com should you have any questions regarding this submission or have problems downloading the document.

Yours sincerely,
Baffinland Iron Mines Corporation

James Millard, M.Sc., P.Geo.
Senior Environmental Superintendent

Attach: One hard copy and CD of the 2009 Annual Report to the Nunavut Water Board

cc: Salamonie Shoo, QIA.
Ian Rumbolt, INAC
Matthew Pickard, Bill Napier, Ron Hampton, BIM

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2010 ANNUAL REPORT TO THE NUNAVUT WATER BOARD

Rev. No.	Revision	Date	Approved
0	Final	March 31, 2011	J. Millard

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BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2010 ANNUAL REPORT TO THE NUNAVUT WATER BOARD

EXECUTIVE SUMMARY

This report to the Nunavut Water Board (NWB) has been prepared to summarize the Project activities and monitoring undertaken by Baffinland Iron Mines Corporation (Baffinland) during 2010, in accordance with Part B, Item 5 of Baffinland's water licence for the Mary River Project, #2BB-MRY0710. The licence was amended in 2007 and in 2008. The current licence, as amended, expired on December 31, 2010 and is in the process of renewal. The renewal is expected to be received in the near future.

Baffinland's water licence outlines a monitoring program that involves recording the volume of water extracted for any purpose, testing of any effluents (e.g., treated sewage effluents) discharged to the environment, and monitoring water quality within specific project areas (e.g., runoff from bulk sample pits or water from a lined fuel containment berm). This information is summarized on the completed NWB Annual Report Form and described in more detail in the report, herein.

Key activities associated with the Mary River Project (the Project) in 2010 are summarized as follows:

- Year-round operation of the camps at Mary River and Milne Inlet, and a three-drill exploration and geotechnical program between June and September. The two camps were operated in the off-season (before and after the drilling program) in the interest maintaining site access and security
- A total of 6785 m was drilled in 45 drillholes through the course of the 2010 exploration drilling program, mainly on Deposits Nos. 4 and 5, to define the subsurface trend and characteristics of the deposits, develop resource and reserve classifications, and define geological contacts and the margins of the deposit. Several drillholes were also advanced in Deposit Nos. 1, 2 and 3 for geological and geochemical data infilling purposes.
- A minor geotechnical drilling program was conducted during August 2010 along the Milne Inlet Tote Road in support of the road haulage feasibility study. A total of 345 metres was drilled in 23 drillholes.
- A regional exploration program that involved the staking and surface sampling of four additional iron ore deposits.
- The continued use and maintenance of a rotating biological contactor (RBC) for treatment of sewage from the Mary River camp and the use of three polishing waste storage ponds (PWSPs). No treated sewage stored in the PWSPs at Mary River and Milne Inlet camps were discharged to the receiving environments.
- Follow-up construction and ongoing monitoring activities in accordance with the No Net Loss and Monitoring Plan under the Fisheries Authorization issued in relation to the Tote Road.
- Annual resupply of equipment and consumables on a single sealift that arrived at Milne Inlet.

- Removal of a number of items from site on the same sealift to Milne Inlet, including contractor heavy equipment and hazardous waste destined to licensed recycling/disposal facilities in southern Canada.
- Transport of needed fuel and supplies stored at Milne Inlet to the Mary River camp site over the Milne Inlet Tote Road.
- Operation of helicopter and fixed wing aircraft to service the exploration drilling program and other general site activities, including environmental monitoring.
- Support of ongoing baseline and engineering studies in support of the preparation of the Draft Environmental Impact Statement.

The environmental focus for the Project during 2010 included ongoing compliance with regulatory permits, and continued progressive reclamation. Some of the key environmental-related activities and progressive reclamation projects that were significantly advanced during the field season included the following:

- Spill contingency training was delivered to Baffinland spill response team members and all site staff through classroom and tool box meetings. Three spills were reported to the Nunavut Spill Line and other stakeholders. These spills did not result in any significant impacts to the surrounding land or water.
- Similar to 2008 and 2009, a significant volume of oily stormwater accumulated in the lined bulk fuel storage containment area at Milne Inlet in 2010. During 2010, the treatment system and monitoring program for oily stormwater was enhanced and approximately 1,850 m^3 of treated stormwater was released to the receiving environment (Milne Inlet). The monitoring plan confirmed compliance with water licence effluent criteria. At the Mary River camp, a small volume (50 m^3) of treated stormwater from the lined bulk fuel storage facility was discharged after treatment to the adjacent land surface.
- Select exploration drill cores from the 2010 exploration drill program were sampled and submitted for analytical testing of trace metal parameters that could be of potential concern for nearby receiving waters.
- Monitoring of water quality was conducted in the drainages and Mary River upstream and downstream of exploration drilling activities to ensure that sediment from drilling was being controlled in sumps and salt was not reaching lakes and streams at levels harmful to fish.
- Remedial work at DFO authorized stream crossings associated with the Milne Inlet Tote Road upgrades was completed. Further progress was made in advancing an effective fish habitat compensation plan that will eventually satisfy the requirements of the project.
- The construction of the authorized Mary River Landfill and the subsequent clean up and landfilling of non-hazardous refuse from the Mary River and Milne Inlet Camps.
- Open burning of a small volume of untreated wood in a burn pit established in a borrow area at Milne Inlet.
- Removal of residual Baffinland material from the Pond Inlet HTO cabin area of Milne Inlet.
- A consultant was retained to develop a conceptual design and management plan for a land farming bioremediation facility eventually to be located at Milne Inlet. At the time of this report, the project was still in progress.

In 2009, the Mary River and Milne Inlet camps remained occupied for the entire year, Mid-Rail camp was not occupied, and Steensby Inlet camp was occupied during July and August. Fresh water was withdrawn to sustain two key activities: potable water supply for camp use and water supply for drilling operations. Drilling operations involved exploration drilling and geotechnical drilling.

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An annual review of the management plans developed under the water licence has been undertaken. Updates to the Abandonment and Reclamation Plan, the Spill Contingency Plan, Site Water Management Plan, and QA/QC Plan have been completed and the revised plans are included as Appendix F to this annual report. Revisions to the approved 2009 Waste Water Management Plan are in progress and a revised plan will be submitted for approval at a later date.

In 2010, Baffinland maintained and operated community liaison offices in Iqaluit, Igloolik, and Pond Inlet and resumed a high level of community consultation. Two rounds of public meetings were held in each of the communities (listed alphabetically): Arctic Bay, Cape Dorset, Clyde River, Hall Beach, Igloolik, Kimmirut, and Pond Inlet. Baffinland also brought local community and government representatives to visit the operations at Mary River. These meetings were undertaken in support of both current and proposed activities associated with the Mary River Project.

Baffinland hosted site visits to Mary River with representatives of North Baffin hamlets, a number of government representatives, and local community members including site visits and formal compliance inspections from regulatory authorities including the Qikiqtani Inuit Association (QIA), land inspector from Northern Affairs Canada (INAC), and Fisheries and Oceans Canada (DFO).

The Draft Environmental Impact Statement (DEIS) document was submitted to the Nunavut Impact Review Board (NIRB) in January 2011. The DEIS is currently in the review and information request stage.

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ᐅᓇ ᐅᓂᖏᓕᐊᕐᓕᕆᔨᖅ ᑐᓂᓴᐅᔨᖅ ᓄᓇᕗᑦ ᐃᒥᓕᓂᔅᓯᑦ ᑎᒥᖓᓐᓄᑦ (NWB) ᓴᓇᓴᐅᓕᕆᔨᖅ ᓇᐃᖏᓕᑎᓕᕆᓐᓂᓗᓂ ᑕᒪᑐᒪᖓ ᐱᓕᓂᐊᖅᓯᒪᓄᑐᒍᑦ ᐱᓕᓂᓂᐅᓴᑦ ᐊᑎᒪᓗ ᖃᐅᔨᖏᓂᐅᓴᑦ ᐱᓕᓂᓴᐅᓯᓕᓕᐊᕐᓕᕆᔨᑦ ᑕᕐᔪᓂᖓ ᐸᓴᓪᓯᒃᓯᒪᓂᓴᑦ ᓴᓇᖏᓕᓂᔅᓯᑦ ᐅᓴᕀᓐᓂᐊᖅᑎᑦ ᑯᐊᐳᓂᓴᖓᑦ ᑕᒪᑐᒪᖓ 2010 ᐊᖏᕐᒪᒃ, ᒪᓕᓐᓄᒍ ᑎᑎᕋᕐᓕᕆᔨᖅ ᑕᕐᔪᓂ ᐃᓕᓐᔪᖅᓯᒪᔪᑎ B Γ, ᓇᓴᐅᑎᓕᓐ 5Γ ᐸᓴᓪᓯᒃᔪᓂ ᐃᒥᖏᒍᑦ ᓕᐃᓴᓕᖅᓂᖓ ᑕᕐᔪᓂ ᓄᓇᕗᑦ ᐱᓕᓂᐊᖅᓯᒪᓄᑐᒥ, #2BB-MRY0710. ᑕᓪᓗ ᓕᐃᓴᓕᐅᔨᖅ ᐊᖑᑕᐊᖑᑕᐅᓕᐅᖅᑐᖅ 2007Γ ᐊᓚᓗᓐ 2008Γ. ᒪᓐᓇᐅᔨᖅ ᓕᐃᓴᓕᐅᔨᖅ, ᐊᖑᑕᐊᖑᓕᒪᔨᖅ, ᐃᓕᓴᐊᖏᓴᓕᓐ ᑎᓕᐱᓇ 31, 2010Γ ᐊᓚᓗᓐ ᒪᓐᓇᐅᔨᖅ ᓄᑕᑲᐊᖑᑎᑕᐅᖏᓐᓄᓴᓕᓄᑐᖅ. ᑕᓪᓗ ᓄᑕᑲᐊᖑᓕᒪᑎᓐᓂᔪᑐ ᐱᐅᓄᐊᖑᓕᓴᓕᐅᓕᕆᔨᖅ ᓕᑐᓄᓐᓂᓄᑦ ᑐᓂᓴᖓᑦ.

ᐸᓴᓪᓯᒃᓯᒪᓂᑦ ᐃᒥᖏᒍᑦ ᓕᐃᓴᓕᐅᑎᑐᖅ ᖃᐅᔨᓴᓂᖏᓐᓂᒃ ᐱᓕᓂᐊᖏᓴᒪᒃ ᐊᑐᓕᐊᖃᖅᑎᑎᓕᓐᓂᓗ ᑎᑎᓴᖅᐸᓪᓕᐊᓂᑦ ᐃᒥᐅᑦ ᐊᑐᖅᑕᐅᓯᓪᓕᐊᓂᖓᓄ ᖃᓄᐃᐃᓐᓇᓕᐅᖅᑐᖅ, ᖃᐅᔨᓴᓂᖅᑕᐅᓂᖓᓄ ᓴᓇᓕᖅᓴᐃᓐᓇᕐᓂᐊᓂᖓᓄ (ᓄᖏᓐ, ᓴᓇᓕᖅᓴᖅᑭᖑᓕᕆᔨᖅ ᐊᖏᕐᒪᑦᓴᐃᓐᓇᖅᑐᑦ) ᐃᓄᐃᑦᑐᖅᑐᖅ ᐊᐸᑎᒍᑦ, ᐊᓚᓗᓐ ᖃᐅᔨᓴᓂᐅᔨᖅ ᐃᒥᐅᑦ ᖃᓄᐃᓐᓇᐸᓪᓕᐊᓂᖓᓄᑦ ᐱᓕᓂᐊᖅᑎᑦ ᐊᓚᓐᓇᐅᔨᖅ ᓴᓇᓕᖅᓴᐃᓐᓇᕐᓂᐊᓂᖓᓄᑦ (ᓄᖏᓐ, ᐊᑎᓕᐅᓪᓕᐊᓂᖅ ᑕᒪᓐᓇᑦ ᐊᖏᕐᒪᑦ ᖃᑎᒌᓐᓂᑦ ᐱᓕᓂᐊᖅᓯᒪᓄᑐᒥᓄᑦ ᐊᑐᖅᑕᐅᔨᓕᕆᓂᖓᓄ (ᓄᖏᓐ, ᐊᑎᓕᐅᓪᓕᐊᓂᖅ ᑕᒪᓐᓇᑦ ᐊᖏᕐᒪᑦ ᐅᑎᓕᓐᓂᓐᓂᑦ ᐱᓕᓂᐊᖅᑎᑦ ᐃᓗᓐᓂᐊᖅᑐᑦ ᐃᓄᐃᑦᑐᖅᑐᖅ ᐊᐸᑎᒍᑦ ᐃᓄᐃᑦᑐᖅᑐᖅ ᐊᑐᖅᑕᐅᔨᓕᕆᓂᖓᓄ

- ᐅᓯᖏᕐᓂᓐᖏ ᐊᑐᓚᐊᖏᕐᑐᓐᒃ ᐅᖏᓯᐊᓗᖅᓂᓐᒃ ᐊᒻᒪᓗ ᐱᖏᐊᑎᓐᒃ ᑐᖏᐅᕐᑕᐅᓯᒪᔪᑦ ᖮᖅᖢᐊᓂ ᐅᓯᓴᐅᑦᓗᓂᑎᒃ ᓄᓕᕐᖅᓄᑦ ᑕᒪᐅᓇ ᖮᖅᖢᐊᑎᑦ.
- ᐊᐅᓪᓚᑎᑦᓗᑎᒃ ᖃᓄᐊᓕᖅᓂᓐᒃ ᐊᒻᒪᓗ ᖃᖅᖢᑕᓯᓂᓐ ᐃᑲᔪᑕᐅᖅᑑᓗᑎᒃ ᖃᐅᔨᓴᖏᓂᐅᔪᓄᑦ ᓂᐅᖏᑐᖏᓂᐅᔪᓄᑦ ᐊᒻᒪᓗ ᓄᓇᕗᖅᖃᓄᐅᔪᖅ ᐱᔨᑦᑎᖏᑕᐅᖅᓯᓗᓂ, ᐃᓕᓴᕐᓗᒍ ᐊᔪᑎᑎᒃ ᖃᐅᔨᓴᖏᓂᐅᔪᑦ.
- ᐃᑲᔪᖅᑕᐅᖅᓯᓗᑎᒃ ᖃᐅᔨᓴᖏᓂᐅᔪᑦ ᐊᒻᒪᓗ ᓴᓇᔨᐅᔪᕐᓴᓄᑦ ᖃᐅᔨᓴᖏᓂᐅᔪᑦ ᐃᑲᔪᑎᕐᓴᐅᔪᑦ ᐊᖏᕈᑕᐅᔪᓕᕐᓂᓕᕆᓂᖅ ᐅᓂᒃᓴᓕᕆᓂᖅᖢᖅ ᐊᔪᑎᑎᒃ ᐅᓂᒃᓴᓕᕆᓂᖅᖢᖅ.

ᐊᔪᑎᑎᒃ ᐱᓕᓇᓂᖅ ᑐᕆᖁᖃᓕᐅᖅᓴᖅ ᐱᓕᓇᐊᖏᓚᕐᓗᒍᑦ ᐃᓗᐊᓂ 2010 ᐃᓕᖃᖅᓗᓂᒃ ᑲᔪᓯᐊᒥᒃ ᒪᓕᕐᑎᐊᓂᕐᒥᒃ ᐊᑐᖅᑕᐅᓂᖏᔪᓕᐊᓂᒃ ᐱᓕᓀᑦᑎᓕᓪᓚᖅᓴᖅ, ᐊᒻᒪᓗ ᑕᐃᒪᓐᖏᓪᓚᖅ ᐱᓕᓇᐊᖏᔪᑦᓯᓚᐊᖅ ᐱᐅᓯᐊᖅᑎᑎᓂᓂᖅ. ᐱᓪᓗᐊᑕᐅᔪᑦ ᐊᔪᑎᑎᒃ ᐱᓕᓇᐊᖏᔪᑦ ᐊᒻᒪᓗ ᑕᐃᒪᓐᖏᓪᓚᖅ ᐱᐅᓯᐊᖅᑎᑎᑕᐅᑦᓯᓚᐊᖅ ᐱᓕᓇᐊᖏᕐᓴᐃᑦ ᐅᓪᓴᕐᓇᖅᑐᒥᒃ ᐱᓕᓇᐊᖏᔪᓕᐊᓂᖅᓯᒪᓂ ᐃᓗᐊᓂ ᐃᓕᖃᖅᓗᓂᒃᓴᓕᕆᓂᖅᖢᖅ ᐅᓄᖅᓯᒪᓂ ᐃᓗᐊᓂ ᐃᓕᖃᖅᓗᓂᒃᓴᓕᕆᓂᖅᖢᖅ ᐅᓄᖅᓯᒪᓂ ᐃᓗᐊᓂ ᐃᓕᖃᖅᓗᓂᒃᓴᓕᕆᓂᖅᖢᖅ.

- ᐃᖃᐱᖅᑲᓪᓕᓄᓕᕐᓂᖅ ᐃᓕᓐᓄᐊᕐᓯᑎᑕᐅᓕᐅᖅᓵᖅ ᑕᕆᐃᓄᖅ ᐸᓴᓐᓕᓐᓂᑦ ᐃᖃᐱᓄᑦ ᐱᓕᓀᓴᐅᔪᓄᑦ ᐊᒻᒪᓗ ᐊᑕᖏᖅᓵᓂᒃ ᐃᖅᑲᓇᐃᕐᓂᐅᓕᕆᓂᖅ ᐊᑕᓐᓂᐊᓕᖅᑐᓗᒃ ᑕᒪᐃᓐᓇᖅᑐᒥᒃ ᐃᓕᓐᓄᐊᕐᓯᑎᑕᐅᓕᐅᖅᓵᖅ ᐱᖅᑲᓇᐃᕐᓂᐅᓕᕆᓂᖅᖢᖅ. ᐱᓪᓗᐊᑕᐅᔪᑦ ᐊᑕᖏᖅᓵᓂ (3) ᐅᖅᐅᓯᐅᓕᐅᖅᓯᒃ ᑕᕐᓄᓐᓄ ᐃᖃᐱᓄᑦ ᐅᖅᓴᓕᖅᓴᖅᓯᒪᑦ ᐊᒻᒪᓗ ᐊᖏᔪᑕᐅᔪᓄᑦ ᐱᖅᑲᑎᐅᔪᑦ. ᐃᖃᐱᓄᑦ ᑕᕆᐃᓐᓇᖅᑐᒥᒃ ᐊᑕᖏᖅᓵᓂᒃᓴᓕᕆᓂᖅᖢᖅ ᐱᓕᓀᓴᐅᔪᓄᑦ ᐊᒻᒪᓗ ᐊᖏᔪᑕᐅᔪᓄᑦ ᐱᖅᑲᑎᐅᔪᑦ

<ᕿᓐᓴᕐᓯᒪᔪᑦ ᐱᔾᓇᖅᑕᕐᓯᒪᔨᖅ ᐊᒻᒪᓗ ᐊᖅᑭᓇᐊᕐᑎᓴᐃᑦ <ᕿᓐᓴᕐᓯᒪᔪᑦ ᐃᓕᓴᕐᑎᓯᒪᔨᖅ ᑕᕿᓂᖅ ᐃᓕᓴᐅᖓᒪᔪᑦ ᐅᖃᓕᕐᓂᐊᕐᓂᖅ ᐊᒻᒪᓗ ᐊᖅᑭᒃᑯᑦ ᐅᓂᒃᓴᓕᕐᓂᖅ ᐊᖅᑭᐊᕐᓂᖅ <ᕿᓐᓴᕐᓯᒪᔪᑦ ᐊᖅᑭᐊᕐᓂᖅ ᐅᓂᒃᓴᓕᕐᓂᖅ ᐊᖅᑭᐊᕐᓂᖅ <ᕿᓐᓴᕐᓯᒪᔪᑦ ᐅᓂᐅᕐᓂᐊᖅᑐᓂ ᖃᓄᖅᑕᕐᓇᓱᓗᓂ ᖃᓄᖅᑕᑎᐊᖅᓯᒪᔪᖅ.

2010ᒥ, ᐸᓴᓪᓕᐅᕐᓂᖅ ᐃᖅᑲᓇᐃᔾᖅᑎᖃᓕᕐᖅᓴᑦ ᐊᒻᒪᓗ ᐊᐅᓕᖅᑎᑦᓗᑎᑉ ᓄᓇᕗᓂ ᑐᓴᐅᒪᖅᑎᑦᔨᓂᑉ ᑎᑎᕋᖅᓯᖅᑲᓇᑉ ᐃᖅᓗᓂᖅ, ᐃᒡᓗᓕᕆᒥ, ᐊᒻᒪᓗ ᒥᖅᑎᒪᑕᕆᒥ ᐊᒻᒪ ᓄᓇᕗᐅᔪᓂ ᖃᐅᔨᓴᓇᖅᑐᖅᑲᓇᑉ. ᒪᖅᐃᐃᖅᓯᖅᑲᓇᑉ ᓄᓇᕗᐅᔪᓂ ᖃᓄᑎᑎᕋᖅᓯᖅᑲᓇᑉ ᓄᓇᕗᐅᔪᓂ ᐅᑯᓄᓂ: ᐃᒃᐱᐊᖅᓴᒃ, ᖃᓪᓚᐃᑦ, ᑲᖏᖅᑐᙵᓴᒃ, ᓴᓂᖅᑐᒃ, ᐃᒡᓗᓕᓂᒃ, ᑭᒥᑭᖅ, ᐊᒻᒪᓗ ᒥᖅᑎᒪᑕᓂᒃ. ᐸᓴᓪᓕᐅᕐᓂᖅᑕᕐᖅ ᑎᑭᖅᑎᓂᐅᓂᕐᑦ ᓄᓇᕗᐅᔪᓂ ᐃᓄᖅᓂᒃ ᐊᒻᒪᓗ ᑲᓴᒪᑯᓂᒃ ᑭᓚᑐᖅᑐᑎᐅᔪᓂᒃ ᓄᓇᕗᐅᔪᓂ ᐅᓇᓱᓂᒃ ᐊᒻᒪᓗ ᐊᑐᖅᑕᐅᔪᒪᔪᓂ ᐱᓕᕆᔨᒃᑯᓂᒃ ᓄᓇᓕᖓᓄᑦ. ᑕᒪᒃᑯᐊ ᓄᑎᒪᓂᐅᔪᖅ ᐱᒋᐊᖅᑎᑕᐅᓂᐅᕐᓂᖅᑐᑦ ᐃᓄᕐᕕᐅᓂᓱᓂᒃ ᒪᓕᐅᔪᓕᒪᔪᑦ ᐊᒻᒪᓗ ᐊᑐᖅᑕᐅᔪᒪᔪᑦ ᐱᓕᕆᔨᒃᑯᓂᒃ ᓄᓇᓕᖓᓄᑦ.

ᐸᓴᓪᓕᐅᕐᓂᖅ ᑎᑭᑎᑦᑎᖃᑦᑕᕐᓂᖅᑐᑦ ᓄᓇᕗᓪᓚᓄᑦ ᑭᓪᓕᖅᑐᐃᔪᓄᑦ ᖃᑭᖅᑕᓗᑦ ᐅᐊᖅᓄᓪᓕᐅᓂᑦ ᕼᓘᒪᓕᐅᔪᓂᒃ, ᖃᓄᐃᓕᓴᕐᓂᖅᓯᖅᓱᖅᑐᒃ, ᐊᒻᒪᓗ ᓄᓇᕗᐅᔪᓂ ᑭᓪᓕᖅᑐᐃᔪᓂᒃ ᑕᑯᓄᓗᒃ ᐊᒻᒪᓗ ᐊᑐᖅᑭᑦᑎᓗᐊᖅᓯᒪᓕᖅᑐᑦ ᖃᐅᔨᓴᓇᖅᑎᓄᑦ ᑕᒪᒃᑯᓄᖓ ᐊᑐᐊᓕᕐᑐᖅᑎᓄᑦ ᐃᓕᓴᕐᔨᓪᓚᓄᒃ ᖃᑭᖅᑕᓂ ᐃᓄᐃᑦ ᑲᑐᖅᖃᓄᑎᒋᔭᖅᑐᑦ, ᓄᓇᕗᒻ ᖃᐅᔨᓴᓇᖅᑎᓄᑦ ᑕᒪᒃᑯᓄᖓ (INAC) ᐊᒻᒪᓗ, ᐃᒪᓕᕆᔨᒃᑯᑦ ᑲᓇᑕᒥ (DFO).

ᓯᓚᓕᖅᐸᓯᔨᑎᑎ ᐊᐸᑎᒧᑦ ᐊᑲᐃᐃᓕᓴᒧᑦ ᐅᓂᒃᑲᓕᐊᖅ ᑎᑎᕋᐃᑦ ᑐᓂᐅᓕᕐᓂᖅᑐᑦ ᑕᑯᓄᖓ ᓄᓇᕗᒥ ᐊᒃᑐᐃᐅᔨᓴᒧᑦ ᖃᒥᓕᕆᓄᓕᑦ ᑕᑯᓄᑕᖅᑎᓄᑦ ᑎᒥᖓᓄᑦ ᔭᓐᓄᕐᓂᐊᖅ 2011. ᑕᑯᐊᓗ ᐅᓂᒃᑲᓕᐊᖓᔪᓕᕐᓂ ᑕᑯᓄᕐᑕᐅᒃᑲᓐᓂᖅᐸᓚᐊᖅᑐᑦ ᐊᒻᒪ ᖃᐅᔨᒋᕕᒪᔪᑦ ᐱᓕᒪᔪᓂᒃ ᐃᓂᖅᓱᓂ.

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2010 ANNUAL REPORT TO THE
NUNAVUT WATER BOARD

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BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2010 ANNUAL REPORT TO THE NUNAVUT WATER BOARD

SECTION 1.0 - INTRODUCTION

1.1 GENERAL BACKGROUND

This report to the Nunavut Water Board (NWB) has been prepared to summarize the Project activities and monitoring undertaken by Baffinland Iron Mines Corporation (Baffinland) during 2010, in accordance with Part B, Item 5 of Baffinland's water licence for the Mary River Project, #2BB-MRY0710. The licence has undergone two amendments (2007 and 2008) and expired on December 31, 2010. At the time of this report, the water licence was in the renewal process with renewed licence expected to be received in the near future.

Baffinland's water licence includes a sampling program that involves recording the volume of water extracted for any purpose, testing of any effluents (e.g., treated sewage effluents) discharged to the environment, and monitoring water quality within specific project areas (e.g., runoff from bulk sample pits or storm water from a lined fuel containment berm). This information is summarized on the completed NWB Annual Report Form, included in Appendix A, and described in more detail in the following sections.

Figures 1.1 and 1.2 shows the locations of the key activity areas associated with the Mary River Project. Project activities in 2010 were undertaken at Milne Inlet (Figure 1.3) along the Milne Inlet Tote Road (Figure 1.4) and the Mary River site (Figure 1.5). The Mid-Rail camp site (Figure 1.6), along the proposed rail alignment remained inactive during 2010. The camp at Steensby Inlet (Figure 1.7), the site of the proposed Steensby Port facility, was active for only a short period during 2010 in July and August.

Key activities associated with the Mary River Project (the Project) in 2010 are summarized as follows:

- Year-round operation of the camps at Mary River and Milne Inlet, a focused three-drill exploration program mainly focussed on Deposit Nos. 4 and 5, conducted June to August, and the completion of a regional exploration program that resulted in the staking of claim blocks covering four additional iron ore deposits.
- Completion of a short geotechnical drilling program on and near the Milne Inlet Tote Road.
- Ongoing operation and maintenance of exploration infrastructure.
- Annual resupply of equipment and consumables on a single sealift that arrived at Milne Inlet in August and the backhaul of equipment no longer needed as well as hazardous waste.
- Progressive reclamation of select Project areas, including:

- Removal of residual Baffinland material from the Pond Inlet HTO cabin area of Milne Inlet.
- Construction of Mary River permitted non-hazardous solid waste landfill.
- Disposal of remaining non-hazardous solid waste from the 1960s exploration work and the 2008 Bulk Sample Program.
- Processing and removal off site of 1960s residual and 2010 generated hazardous material inventory. Hazardous material was packaged and shipped south via sealift for disposal in approved recycling or disposal facilities.
- Reclamation of 2010 completed exploration drillhole sites as per regulatory requirements.

The Draft Environmental Impact Statement (DEIS) for Project development was submitted to the Nunavut Impact Review Board (NIRB) in January 2011.

1.2 BRIEF OVERVIEW OF PROJECT ACTIVITIES IN 2010

In 2010, Baffinland continued to undertake programs and activities in support of advancing its Mary River Project. Principal activities involved continued exploration, support of ongoing baseline scientific and engineering studies, as well as ongoing reclamation from the bulk sample program.

The bulk sampling program was successfully completed during 2008 with approximately 113,000 tonnes of direct ship iron ore extracted from Deposit No. 1 and delivered to several European steel companies for consumption in a blast furnace, the initial step in the steel making process. The results from the processing of the bulk sample indicated that the Mary River lump ore was an exceptional blast furnace burden feed due to its outstanding chemical, physical and metallurgical characteristics. The trial cargos have confirmed that once commercial production is achieved, Mary River iron ore will be a sought-after blast furnace feed for many years.

The 2010 field programs were largely executed during the open water season (May to September) with an off season presence kept at the Mary River and Milne Inlet camps in the interest of maintaining site access, security, and ongoing environmental compliance. Mid Rail camp was unoccupied during 2010 and Steensby Inlet camp was occupied for a period in July and August to support the ongoing collection of archaeological, meteorological, terrestrial and marine mammal baseline data. The focus during 2010 included completion of a substantial exploration drilling program and a relatively minor geotechnical drilling program, ongoing compliance with applicable regulatory permits, and continued progressive reclamation of areas of current and past use in association with the exploration, geotechnical, and bulk sample programs. The approved, permitted landfill was constructed at the Mary River camp location and stockpiled historical refuse at both Mary River as well as Milne Inlet were sorted and properly disposed of in the landfill. Site layouts of Milne Inlet, Mary River, Mid Rail and Steensby Inlet are shown on Figures 1.3, 1.5, 1.6, and 1.7, respectively.

Much effort was focussed on the support and execution of the exploration and infill drilling on Deposits Nos. 4 and 5, which had never received drillholes in the past. The purpose of the program was to define the subsurface trend and characteristics of the deposits, develop resource and reserve classifications, and define geological contacts and the margins of the deposit. Several drillholes were also advanced in

Deposit Nos. 1, 2 and 3 for geological and geochemical data infilling purposes. Exploration drilling was initiated on June 20, 2010, and was completed on August 24, 2010. A total of 45 drillholes, with depths ranging between 11 and 299 m, were completed using three LM-55 drill rigs operated by Boart Longyear Inc., A total of 6785 m was drilled through the course of the 2010 exploration drilling program. Drilling was undertaken on mining lease 2483 (Deposit No. 4), mining lease 2484 (Deposit No. 1) and mining lease 2485 (Deposits Nos. 2 and 3). Drilling was also conducted on Deposit No. 5 and vicinity which is located on claims just south and contiguous with mining lease 2483. The exploration drillhole locations and water sources are provided on Figures 1.8 and 1.9 and drillhole details are provided in Table 1.3.

A regional exploration program was conducted that involved staking of claims and surface sampling of four additional iron ore deposits (named Deposits Nos. 6, 7, 8, and 9, refer to Figure 1.2).

A minor geotechnical drilling program was conducted during 2010 along the Milne Inlet Tote Road in support of the road haulage feasibility study. Drilling was completed using an LM-55 drill rig operated by Boart Longyear Inc. The drilling program was initiated on August 17, 2010, and concluded on August 29, 2010, with a total of 345 metres drilled in 23 drillholes. Geotechnical drillhole locations, along with water source locations, are presented in Figure 1.9 and drillhole details are provided in Table 1.4.

Drill cores from the 2010 exploration and geotechnical programs were stored in sea containers, sheltered from the weather, located adjacent to the airstrip in the Mary River camp.

In 2010, the following key activities were undertaken in continued support of the Project:

- Year-round operation of the camps at Mary River and Milne Inlet, and a three-drill exploration and one-drill geotechnical program between June and September. The two camps were operated in the off-season (before and after the drilling program) in the interest of maintaining site access and security.
- The continued use and maintenance of a rotating biological contactor (RBC) for treatment of sewage from the Mary River camp and the use of three polishing waste storage ponds (PWSPs). Treated sewage from the RBC or stored in the PWSPs at Mary River and Milne Inlet camps was not discharged to the receiving environments during 2010.
- Follow-up construction and ongoing monitoring activities in accordance with the No Net Loss and Monitoring Plan under the Fisheries Authorization issued in relation to the Tote Road.
- A regional exploration program that involved the staking and surface sampling of four additional iron ore deposits (Deposit Nos. 6, 7, 8, and 9).
- The construction of the authorized Mary River landfill and the subsequent clean up and landfilling of refuse from the Mary River and Milne Inlet Camps in accordance with the approved landfill operations and maintenance manual.
- The successful treatment and discharge of contaminated water from the Milne Inlet and Mary River bulk fuel storage facilities.
- Annual resupply of equipment and consumables on a single sealift that arrived at Milne Inlet (August 20 to 23).
- Removal of a number of items from site on the backhaul from the above sealift, including contractor heavy equipment and hazardous waste destined to licenced recycling/disposal facilities in Southern Canada.

- Transport of needed fuel and supplies stored at Milne Inlet to the Mary River camp site via the Milne Inlet Tote Road.
- Operation of helicopter and fixed wing aircraft to service the exploration drilling program and other general site activities, including environmental monitoring.

In addition to the above, there was continued progressive reclamation of areas of current and past use in association with the drilling and bulk sample programs. Section 9.0 summarizes the reclamation efforts undertaken during 2010.

In 2010, Baffinland maintained community liaison offices (CLO) in Pond Inlet, Igloolik, and Iqaluit and resumed a high level of community consultation. Two rounds of public meetings were held in each of the communities of (listed alphabetically): Arctic Bay, Cape Dorset, Clyde River, Hall Beach, Igloolik, Kimmirut and Pond Inlet. Baffinland continued with its practice of arranging site visits for community and government representatives. Baffinland also carried out an environmental assessment workshop in partnership with the QIA at the Mary River exploration camp with members of the communities of Pond Inlet, Igloolik, Arctic Bay, Clyde River, and Kimmirut participating.

For the purposes of further context, the Board is directed to an Annual Report submitted to the Nunavut Impact Review Board[1]

1.3 SUMMARY OF PROJECT PLANS FOR 2011

At the present time, Baffinland is in the process of an ownership transition; ArcelorMittal and Nunavut Iron Acquisition currently own 90+% of the Company. Baffinland submitted its Draft Environmental Impact Statement (DEIS) for the Mary River Project to the Nunavut Impact Review Board on January 21, 2011 and the DEIS is currently in the technical review period. Based on the current ownership and review of the Project and commitments made under the DEIS, a work program for 2011 has been developed and is presented below. The program provides for ongoing exploration drilling at Deposits Nos. 1, 3 and 5, continued regional exploration and possible limited exploration drilling at one or more of the newly discovered Deposits Nos. 6 to 9, incl., and environmental compliance and necessary reclamation of the site. To maintain the development schedule presented in the DEIS, geotechnical drilling will resume at the port site(s), along the proposed railway alignment, and at other Project development areas.

Currently, it is anticipated that the 2011 field work program would include the following items:

- Maintenance and continuous improvement of the current site environment, health, and safety programs.
- Continued occupation of the Mary River and Milne Inlet camps throughout 2011 and seasonal occupation of Steensby Inlet and Mid-Rail Camps.

[1] 2010 Annual Report to the Nunavut Impact Review Board (NIRB). Prepared by Baffinland Iron Mine Corporation, submitted January 31, 2011.

- Fixed wing aircraft and helicopter to support general site activities including environmental monitoring and potentially ongoing exploration drilling and regional exploration.
- Exploration drilling at Deposits Nos. 1, 3, and 5, as well as drilling the western extension of Deposit No. 3.
- Ongoing surface exploration on Baffinland's exploration lands including on Deposits Nos. 6 to 9, incl.
- Geotechnical drilling and surveys at project development areas, most notably
    - the rail alignment and bridge crossings, a portion of the drilling for bridge design being on-ice as well as near water bodies,
    - port sites, with both land based and ocean based drilling on sea ice,
    - waste rock and ore disposal areas,
    - Milne Inlet Tote Road and bridge crossings, a portion of the drilling for bridge design being on ice as well as near water bodies,
    - Prospective quarry sites and borrow areas along the proposed rail alignment, along the Milne Inlet Tote Road, and near Steensby Port site.
- Continued upgrade of the Milne Inlet Tote Road for the purpose of improving safety, reducing environmental risk, and to support pre-construction staging efforts.
- Follow-up on the requirements pursuant to the Fisheries Authorization for the Tote Road, No Net Loss and Monitoring Program, and QIA lease and INAC land permit and quarry permit requirements.
- Implementation of a freshet management plan for the Tote Road to minimize associated environmental risks.
- Transport of needed fuel and supplies stored at Milne Inlet to the Mary River Camp using the upgraded Milne Inlet Tote Road.
- Continued progressive reclamation of areas of current and past use in association with drilling and bulk sample programs.
- Sea lift resupply at Milne Port including supplies, equipment, and fuel, to support pre-construction and exploration activities.
- Demobilization of equipment and supplies not required for near term activities, as well as shipping south of the current inventory of hazardous waste and other materials by means of a single sea-lift from Milne Inlet.
- Continued deposition of non-hazardous wastes into the constructed landfill in accordance with the approved landfill operations and maintenance manual.
- Continued refinement/enhancement and implementation of treatment methodologies utilized for the separation of oil and waste from stormwater and residual waste fuel resident in the engineered lined fuel storage containment areas at Milne Inlet and Mary River.
- Discharge of treated sewage stored in PWSPs at Mary River Camp and Milne Inlet after treatment as required. Two periods of discharge are planned, the first corresponding to freshet (May-June), and the second later in the summer if required.
- Upgrades to the Mary River Camp Sewage Treatment Plant to improve performance and to allow for direct discharge to the receiving environment.

- Restart the Sewage Treatment Plant at Milne Inlet camp if camp occupancy is at sufficient occupancy levels.

In addition to the above activities, site maintenance and minor site upgrades will be undertaken to enhance safety and environment, improve and facilitate existing pre-construction operations, and to carry out project pre-construction staging activities.

SECTION 2.0 - WATER USE AND WASTE DISPOSAL ACTIVITIES

2.1 WATER USE

During 2010, fresh water was withdrawn to sustain two key activities: water supply (potable and otherwise) for camp use and water supply for exploration drilling operations. The following sections describe water use and the associated sources thereof.

2.1.1 Methods of Obtaining Freshwater for Potable Use and Quantities of Water Used (Part B, Item 5 [i])

Approved water take locations for the various camps are shown on Figures 1.4, 1.5, 1.6 and 1.7.

Potable water supply for the Mary River camp was obtained using an electric and back-up diesel pumps positioned adjacent to the shoreline of Camp Lake (MRY-1). Water was pumped directly from the lake source to water storage tanks located at the camp. Prior to consumption, potable water at each camp was treated with filtration and UV disinfection. Pump intakes were screened in accordance with the Department of Fisheries and Oceans Freshwater Intake End-of-Pipe Fish Screen Guideline[2] (DFO Guideline) to prevent entrapment of fish as per Part C, Item 5.

In previous years, potable water was supplied to the Milne Inlet camp utilizing a water truck to deliver water to the camp via the Milne Inlet Tote Road from a location at km 32 lake (MRY-3). However, due to reduced occupancy at Milne Inlet camp in 2010, potable water (after treatment) was supplied from the Mary River camp for the entire season.

During 2008, Steensby Inlet camp potable water came from an unnamed lake approximately 3 km east of the camp. In 2010, the camp remained mainly unoccupied with the exception of a period in July and August to support baseline studies in the area. During this period, potable water was supplied to the camp from the above referenced lake by means of helicopter transport and bambi bucket.

Mid Rail camp was unoccupied during 2010. When the camp is occupied, potable water is supplied from an unnamed lake adjacent to the camp.

In 2010, there were no exceedances of the daily water withdrawal limit of 60 m^3/day for camp use. Table 2.1 summarizes daily, monthly and annual volumes of water (potable and otherwise) used in camps during 2010.

[2] Department of Fisheries and Oceans. Freshwater Intake End-of-Pipe Fish Screen Guideline. 1995

2.1.2 Methods of Obtaining Freshwater for Drilling and Quantities of Freshwater Used (Part B, Item 5 [ii])

The 2010 exploration drilling program was focussed mainly on Deposits No. 4 and 5, located approximately 20 km northwest of the Mary River camp site. Baffinland previously carried out extensive surface exploration (sampling) at Deposits No. 4 and 5, but had not yet drilled these deposits. The purpose of the drill program was to initiate delineation, thereby developing confidence levels in resource and reserve classification and to define geological contacts and the margins of the deposits. A minor drill program involving several drill holes was also conducted on Deposits No. 1, 2, and 3 for the purpose of infill geological and geochemical data collection in 2010. Due to the relatively shallow nature of the drill program, drilling was performed without the use of large quantities of salt. The drilling program was initiated on June 20, 2010, and concluded on August 24, 2010, with a total of 6,785 m drilled.

Freshwater for the purpose of drilling was obtained from local surface water bodies near to the respective deposit or drill hole. The water was pumped using John Bean diesel piston pumps and was delivered to the drills via rubber waterlines laid out over the ground surface. Throughout the drilling, the associated water bodies were monitored for any draw down. Freshwater for the purpose of drilling on Deposit 1 was taken from Camp Lake and trucked up to Deposit 1 where it was stored in a temporary lined sump located near the waste ore and waste rock storage area.

Table 2.2 summarizes the monthly and annual quantities of water used for exploration drilling activities. Exceedances of the allowable water consumption of 455 m^3/day for drilling did not occur during 2010.

2.2 SEWAGE, WASTE AND GREYWATER MANAGEMENT

2.2.1 Sewage and Grey Water Management

Mechanical Waste Water Treatment Facilities (WWTFs) service the Mary River and Milne Inlet camps. These pre-engineered and packaged plants utilize fixed-film rotating biological contactor (RBC) technology followed by ultraviolet disinfection to treat the influent domestic waste to criteria stipulated by the water licence and target levels presented in the approved Waste Water Management Plan[3]. At both locations, polishing waste stabilization ponds (PWSPs) are in place to receive treated sewage not meeting criteria for direct discharge to the receiving environment. Only the Mary River WWTF was operational during 2010. There was insufficient camp occupancy at the Milne Inlet camp during 2010 to operate the WWTF there. The Steensby camp was occupied only for brief period in July and August and the Mid Rail camp was not occupied at all. At the Milne and Steensby Inlet camps,

[3] Baffinland Iron Mines Corporation – Mary River Project: Waste Water Management Plan – Revision 1, under Water Licence 2BB-MRY0710, Part D, Item 13, dated March 31, 2009. Plan approved by the NWB on August 10, 2009

latrine toilets were used. Waste from these latrine toilets is either disposed of in the Milne and Steensby camp incinerators, or stored in drums that are shipped South via sealift for disposal.

The RBC system at Milne Inlet was commissioned in October 2007. Treated effluent from this facility first met the water licence discharge requirements in January 2008 and as such was directed to the approved receiving ditch upstream of Milne Inlet. Compliance with water licence criteria enabled direct discharge to receiving environment for the majority of 2008 with intermittent periods where effluent not meeting discharge criteria was directed to the PWSP. As discussed previously, the Milne Inlet WWTF was not operated in 2010, however, treated effluent from 2007 and 2008 remained stored in the Milne PWSP.

The RBC system at Mary River was commissioned in February 2008, concurrent with the commissioning of the new all-season camp. Treated effluent from this facility did not meet the discharge requirements of the water licence until late 2008 and since then treated effluent from the WWTF has typically been in compliance, however, elevated total phosphorus levels have continued to be measured throughout 2009 and 2010. Although effluent produced from the Mary River RBC has been in substantial compliance for water licence criteria, the elevated total phosphorus levels pose a potential risk to the receiving environment. On this basis, Baffinland has recognized the need for conservatism and has discharged all treated effluent to the PWSPs for further testing and treatment as required prior to final discharge to Sheardown Lake. During 2009 an appropriate discharge and monitoring plan for partially treated sewage was developed and implemented for effluent stored in the PWSPs located at the Mary River site. During August 2009, a total of approximately 2290 m^3 of treated effluent was discharged to Sheardown Lake after effluent treatment within the PWSPs so that the effluent met or exceeded Water Licence effluent criteria/target levels and was acutely non-toxic. No discharge to the receiving environment from the PWSPs at Mary River occurred in 2010.

In response to operating experience in 2008, 2009 and 2010, Baffinland continues to review the Mary River WWTFs with the aim of consistently meeting discharge requirements to reduce or eliminate the need for additional treatment within the PWSPs prior to discharge. That being said, it is recognized that an appropriate discharge and monitoring plan for partially treated effluent was effectively developed and executed during 2009 and continuation of this plan into 2011 and beyond may be an appropriate and protective method for ongoing treatment and discharge of treated effluent at the Mary River camp.

Small quantities of grey water were generated at the Milne Inlet camp throughout the year and at the Steensby camp during the July and August period that the camp was occupied. At Milne, grey water was directed to the PWSP from January to September. From September to December, a small leach pit located adjacent to the camp was used for this purpose. The small amount of grey water generated at Steensby camp was also directed to a leach pit located adjacent to the camp during the period of operation in 2010.

2.2.2 Treated Sewage Effluent Discharged at Wastewater Treatment Facilities (WWTFs) and Any Waters Discharged From PWSPs (Part B, Item 5 [iii])

The monthly and annual quantities of treated sewage effluent discharged at the Mary River camp WTTF (Monitoring Station MRY-4) for 2010 are provided in Table 2.3. As noted previously, there was no discharge from the Milne PWSP (Monitoring Station MRY-4a) and Mary River PWSP No. 2 and No. 3 (Monitoring Stations MRY-4b and MRY-4c, respectively), during 2010.

2.2.3 Sludge Removed From WWTFs (Part B, Item 5 [iv])

Sludge was removed periodically from the Mary River WWTF. During 2010, all sludge was transferred to PWSP No. 1. The volumes of removed sludge are provided in Table 2.3.

2.2.4 Solid Non-Hazardous and Hazardous Waste Management

Solid non-hazardous waste such as domestic kitchen refuse and paper was incinerated daily at the Mary River camp and periodically at the Milne Inlet camp in two-stage commercial incinerators. Solid non-hazardous wastes generated from the July and August period of occupancy at Steensby were also incinerated in a two-stage commercial incinerator located at the site.

In November 2007, Baffinland submitted plans for the development of a non-hazardous waste landfill and, in addition, submitted an Addendum on October 27, 2008. Baffinland received approval on January 21st, 2009 from the Nunavut Water Board to proceed with construction of the landfill facility, however, construction was delayed in 2009 due to further concerns from the QIA about the design that were ultimately addressed by Baffinland in the form of responses to various information requests. In the interim, prior to construction, non-hazardous waste was temporarily stored in designated locations at Mary River and Milne Inlet camps. These wastes generally consisted of wood, plastics, metals as well as the bottom ash generated from the camp incinerators and stored in drums.

A major cleanup effort in 2008 and 2009 consolidated various historical waste primarily associated with exploration in the 1960's as part of a commitment to progressive reclamation with the intent of disposing of the wastes in the solid waste landfill when constructed. A waste 'bone-yard' had been established adjacent to the airstrip at the Mary River site.

The construction of the landfill and associated access road commenced in June 2010 and was completed in July 2010 (See Section 3.0, Construction). In July and August, debris consisting of inert materials (mainly metal and wood) that was stockpiled in designated areas in the Mary River and Milne Inlet camps for future disposal was sorted and transported to the approved non-hazardous landfill. These materials originated from the 1960s exploration work and the 2007-2008 Bulk Sample Program. As of October 2010, the in situ volume of waste

deposited in the landfill was approximately 4,200 cubic metres[4]. The landfill is being operated in accordance with the landfill operations manual and regular monitoring of the landfill is conducted to ensure that the operations plan is being followed.

In January 2010, Baffinland received approval from the NWB to open burn untreated wood subject to specified terms and conditions (approval letter provided in Appendix E.1). A burn pit was established in a roadside borrow area for the purpose of burning untreated wood waste that had been stockpiled at Milne Inlet. A standard operating procedure was developed for open burning and is presented in Appendix E.2. Approximately 20 m^3 of untreated scrap wood was disposed utilizing open burning at Milne Inlet in 2010.

As was the case in 2008 and 2009, Baffinland engaged third-party services in 2010 (Qikiqtaaluk Environmental or QE) to provide assistance in the disposal of hazardous and other wastes. Specifically QE assisted efforts to inventory, package, manifest hazardous and other wastes for offsite shipment. Wastes were loaded and shipped off site via sealift from Milne Inlet to approved disposal companies in Quebec in accordance with permits and regulatory requirements. This included the shipment of waste hydrocarbon liquids, crushed fuel drums, contaminated soil, human waste, and batteries. A summary report prepared by QE detailing type of hazardous and other materials disposed of, volumes of shipped hazardous materials, and records of confirmation of proper disposal are provided in Appendix B. Hazardous wastes generated by the Project are temporarily stored in lined containment areas and their transport and disposal to approved recycling and disposal facilities are incorporated into future reclamation plans.

Figures 1.3, 1.5, 1.6, and 1.7 show the location of the following waste management facilities at Milne Inlet, Mary River, Mid-Rail, and Steensby Inlet camps, respectively:

- Historic bulky waste being progressively managed
- Camp incinerators
- Temporary hazardous and non-hazardous waste storage areas
- Landfill and access road
- Lined hazardous waste containment areas
- The historic waste 'bone-yard'

Table 2.4 provides coordinates for various temporary and permanent waste storage areas.

2.2.5 Drill Waste

For exploration drilling activities, natural depressions located in the vicinity of drill holes were utilized to intercept/settle drill wastes including drill cuttings and drill water as needed. Also, the temporary installation of silt fences or berms and the process of natural filtration were also used to intercept drill wastes and settle turbid water. These control measures

[4] Volume estimate is preliminary and to be revised based on an accurate geodetic survey. Current estimate based on a visual estimate.

were employed to allow for the settlement of silt and other solids prior to the water moving further down the watercourse. Once the drill hole was completed, control measures that were employed were removed.

2.3 WATER QUALITY OF WATER LICENCE MONITORING LOCATIONS

Results from the Surveillance Network Program (SNP) were provided in monthly reports to the NWB, in accordance with the terms of the licence. SNP monitoring locations are presented in Figures 1.4 and Table 2.5 and water quality results for these locations are provided in Table 2.6.

2.3.1 Raw Water

In 2010, monitoring station at Mary River camp (MRY-1) for raw water was active. Monitoring stations for raw water at Milne Inlet (MRY-3) and Mid Rail camps were inactive. The monitoring station for raw water at Steensby Inlet camp (Figure 1.7) was active during the months of July and August. Water use for camps was within prescribed licence limit of 60m^3/day.

2.3.2 Sewage Disposal

During 2010, the RBC in Milne Inlet remained non operational and there was no discharge from the Milne Inlet RBC (MRY-5) or from the PWSP (MRY-5a) to the receiving environment (ditch that discharges to Milne Inlet).

At the Mary River camp during 2010, treated sewage effluent from the RBC (MRY-4) was discharged to the PWSP Nos. 2 and 3. As discussed previously, although the treated sewage met the water licence criteria established for direct discharge to the receiving environment (Sheardown Lake) for most of 2010, treated effluent continued to be discharged to PWSPs for several reasons. First, there were periods during high levels of camp occupancy when total phosphorus was elevated above target levels. Although, there is no water licence criterion established for total phosphorus, Baffinland has made commitments in its approved Wastewater Management Plan (WWMP)[3] to limit total phosphorus loadings to Sheardown Lake. Also, during the winter season, with low volumes of effluent being generated, there is potential risk to freezing the effluent discharge line during non-pumping periods. It is also noted that the outfall end of the sewage effluent pipeline to Sheardown Lake was damaged due to ice conditions during the 2010 freshet and will require repair in 2011.

In 2011, the plan is to discharge a large portion of the treated effluent contents of the PWSPs to Sheardown Lake in two stages. The first stage of discharge would be in May and June 2011 when there is likely to be no need of additional treatment, prior to discharge. The second stage of discharge would occur later in the summer and would involve additional treatment steps prior to discharge.

2.3.3 Storm Water from Containment Areas

Prior to its discharge from the lined containment areas servicing the bulk fuel storage facilities at Milne Inlet and Mary River, the water licence requires that any accumulated stormwater from rain and snow meets specified discharge criteria. Criteria have been established in the water licence to protect receiving waters from the discharge of residual hydrocarbons that may be present. The monitoring stations that were established include MRY-6 (for the Mary River fuel storage facility) and MRY-7 (for the Milne Inlet fuel storage facility).

Similar to 2008 and 2009, a large volume of oily stormwater accumulated in the Milne Inlet containment area in 2010 due primarily to snow melt and summer rainfall. During 2010, an estimated volume of approximately 1.4 million litres had collected. The existing stormwater treatment system utilized in 2008 and 2009 was enhanced in 2010 based on recommendations and work completed by AMEC (refer to Appendix E.3). The enhancements consisted of the addition of two additional physical treatment steps (barriers) that included dissolved air filtration/skimming, and nanofiltration. In addition, the clay media treatment trains were increased above what was used in 2008 and 2009 to further reduce the risk of oil and grease breakthrough. Note, there are no chemical reagents introduced into the oily stormwater treatment system. The additional enhancements to the system introduced in 2010 are physical filtration and separation processes.

In early July 2010, the enhanced stormwater treatment system operation at Milne Inlet Camp commenced. The treatment system effectively removed the organic constituents of 'oil and grease' to levels at or below analytical detection levels. A monitoring plan confirmed compliance with the water licence and approximately 1850 m^3 of effluent was released to the receiving environment (a drainage ditch that discharges to Milne Inlet).

The treatment system worked as designed to achieve a very high quality treated effluent. However, the organic "animal/vegetable" hydrocarbon present in the impacted stormwater acted as a foulant on the nanofiltration membranes and reduced the throughput of the nanofiltration system. The foulant became more persistent over the course of the summer as daylight hours and water temperatures increased. The treatment system discharged the impounded melt water from 2010 and managed to treat an additional 450 m^3 of stored stormwater from 2009. The treatment system was shut down on August 11, 2010 due to decreased system throughput and to allow time to disassemble and winterize the system for the following season.

In late 2010, Baffinland retained AMEC to develop an effective method to mitigate the source of membrane fouling. Reduction of the foulant is intended to allow the system to operate at a higher flowrate and effectively treat and discharge the remaining stormwater from 2009 (currently stored in bladders), as well as the new volume of stormwater anticipated for 2011. A project is underway to treat/reuse volume of residual and

concentrated hydrocarbons collected and stored in a number of bladders as part of the separation steps of the enhanced multi-barrier treatment system.

At the Mary River Camp, a relatively small quantity of hydrocarbon impacted water (approximately 50m^3) from the Mary River Bulk Fuel Facility was treated and discharged to the adjacent land. The treatment system utilized a granular clay and activated carbon treatment system. Discharge from the system was released to the adjacent ground surface and infiltrated into the soils. There was no direct discharge or pathway to the receiving environment. The nearest receiving environment was more than one kilometre to the south (Sheardown Lake). One grab sample near to the end of discharge exceeded the water licence criterion for oil and grease (25 mg/L vs. 15 mg/L criterion). Subsequent confirmation samples collected under similar operating conditions (without changing out the filter media) were not able to repeat this exceedance and were below detection. A pre-discharge sample collected after treating 25,000 L was reported at 3 mg/L. There was no detectable odour or sheen associated with the 25 mg/L oil and grease result. This result is therefore considered to be anomalous and not representative of the average effluent stream for the discharge volume.

2.3.4 Seepage

The water licence requires that surface run-off / seepage from the bulk sample pit, waste, and ore stockpiles are monitored monthly during periods of flow and meets specified water quality criteria. In 2010, there was little discernable surface discharge from these areas due to a combination of dry conditions typical for the Project area, porous soils, and the likely cold temperatures within ore and waste rock piles that would tend to freeze infiltrating precipitation. After each major rainfall event in the summer, areas downstream from the pit and ore/waste stockpiles were monitored for potential seepage and runoff flows. Based on observed conditions during the summer of 2010, surface water/seepage discharge was collected at MRY-9 (one sampling event), MRY-10 (three sampling events) and MRY-11 (one sampling event). A summary of observed conditions is provided below:

- Station MRY-9 is meant to represent water flow/seepage from the bulk sample pit/benches. No flow is observed directly from the bulk sample pit due to the slow melt, dry conditions, and rapid infiltration. During high rainfall periods, flow is observed in a natural seep located down slope from the bulk sample pit. One sample was collected in September from this location.
- Station MRY 10 was sampled in July, August, and September, from the weathered ore / waste rock stockpile located adjacent to the bulk sample pit. The stockpile is located near an existing drainage pathway and water naturally collects there. The samples represent surface runoff from the general area with a minor run-off/seepage component from the stockpile.
- Station MRY 11 represents surface runoff from the coarse and fine ore stockpiles at Milne Inlet. Surface water flows were not observed due to dry conditions and rapid

infiltration into coarse soils. The likely cold temperatures within the piles may also play a part in the lack of observable surface flows. One sample was collected in a constructed sump located within the footprint of the pile during a high rainfall period in September.

- Station MRY-12 represents runoff/seepage originating from the Milne ore stockpile. No surface/seepage flows were observed during 2010 due to dry conditions, slow melt, and porous soils.

The results for MRY-9, MRY-10, and MRY-11 met most water licence effluent criteria. An exception was a one-time elevated TSS result for MRY-10 in mid-August of 79 mg/L and an elevated TSS result from MRY-9 of 23 mg/L. Turbid conditions were due to natural high flow conditions and did not represent any risk to the aquatic receiving environment. The drainages in question are not fish habitat and discharge to the nearest aquatic receiver for MRY-9 and MRY-10 are great distances away. Analytical results from sample analyses are found in Table 2.6.

Three rounds of water quality monitoring were conducted at an established location downstream of the constructed landfill. One sampling events were conducted prior to landfill commissioning to establish baseline water quality conditions. Second and third rounds of water quality monitoring were conducted during landfill operations during the open water season. Baffinland will work proactively with the INAC inspector and QIA regarding establishment of future monitoring schedules and requirements.

SECTION 3.0 - CONSTRUCTION ACTIVITIES (PART B, ITEM 5 [V])

Most major infrastructure construction improvements to support Project programs were undertaken during 2007 and 2008, including expansion of the Mary River camp, upgrades to the existing Steensby camp and development of the Mid-Rail camp. As-built plans and drawings for these improvements were presented previously in the 2007 and 2008 Annual Reports to the NWB, submitted in March 2008 and 2009, respectively.

The non-hazardous landfill and access road for the Mary River camp was constructed in June and July of 2010. An as-built report was submitted to the NWB in September 2010 and is presented in Appendix C.1 of this report.

Under Part D, Item 16, of the water licence, there is a requirement to ensure the proper function of earthworks associated with waste disposal facilities at the Mary River and Milne Inlet camps such as the PWSP cells, bulk fuel storage and ancillary fuel facilities. A geotechnical inspection, performed annually, is required to be performed by a geotechnical engineer registered in Nunavut. The annual inspection report was submitted to the NWB in December 2010. A copy of this report along with Baffinland's cover letter are included in Appendix C.2.

SECTION 4.0 - GEOCHEMICAL ANALYSIS OF CORE (PART B, ITEM 2 [VI])

The exploration drilling program during 2010 consisted mainly of drilling on Deposits Nos. 4 and 5, with minor drilling on Deposits Nos. 1, 2, and 3 during the period from June to August. The purpose of the program on Deposit Nos. 4 and 5 was to define the subsurface trend and characteristics of the deposits, develop resource and reserve classifications, and define geological contacts and the margins of the deposit. The several drill holes advanced in Deposits Nos. 1, 2 and 3 were for geological and geochemical data infilling purposes.

Since re-activation of exploration drilling activities at the Mary River iron ore deposits 197 drill holes have been advanced for a total meterage of approximately 37,196 m. Table 1.2 provides a breakdown of meterage by year and deposit as well as details of the number of holes drilled each year. During 2010, the exploration drilling program was focused mainly on Deposits Nos. 4 and 5 with a total of 6,685 m of drilling completed in 45 drill holes. The 2010 exploration drilling program is summarized in Table 1.3 and drillhole locations presented in Figures 1.8 and 1.9. Select exploration drill holes have been sampled and sent for analysis to SGS Lakefield for analytical testing. Included in the suite of analysis are those parameters of potential concern for receiving waters and for which are sampled under the current water licence. These parameters include aluminum as measured by (Al_2O_3), arsenic (As), copper (Cu), lead (Pb), nickel (Ni), and zinc (Zn). Table 4.1 shows the minimum, maximum and median levels for the listed parameters in each drill hole. Samples were broken out into two (2) metre intervals focusing on the iron ore mineralization. All iron formation is sampled along with ten (10) metres of 'waste' on either side of the iron formation contact. Internal waste units were also sampled at the discretion of the geologist. The trace metals tabulated are locked in silicates or other compounds, and are not easily leached out of the iron oxides, based on previously completed acid rock drainage (ARD) and metal leaching (ML) work completed in 2007[5] for Deposit No. 1.

Predictions with regard to ARD/ML of residual waste rock and ore produced during the bulk sampling program were made prior to the initiation of the Bulk Sampling Program and were detailed in the Bulk Sampling Management Plan[6]. Based on the results of that work, the risk of ARD and ML was considered to be very unlikely for the Bulk Sampling Program. To help validate these results, an additional environmental geochemical testing program was conducted in 2008. Based upon the test results from that work, it was concluded that the excavation surfaces and ore form the bulk sample program have a very low potential to produce acid rock drainage. This report was presented in the 2008 annual submission to the NWB[7].

The geotechnical program consisted of a total of 345 m of drilling in 23 drill holes. A summary of the geotechnical drill program is provided in Table 1.4 and drill hole locations are presented in Figure 1.10. Geochemical analyses, and acid rock drainage / metal leaching (ARD/ML) predictions

[5] 2008 Bulk Sample Management Plan. Knight Piesold. March 31, 2008.
[6] 2008 Bulk Sample Management Plan. Knight Piesold. March 31, 2008
[7] Environmental Assessment of Waste Materials Originating from the Bulk Sample Program from Deposit No. 1, Baffinland Mary River Project, Memo from Q. Hamilton, Knight Piesold Consulting to J. Millard and D. Chubb, Baffinland, dated March 12, 2009.

were completed on select samples of the rock cores that were collected and are presented in Appendix E.4. The material was found to have a low potential for ARD/ML.

Exploration and geotechnical drill core from the 2010 program are stored in sea containers adjacent to the north end of the airstrip at the Mary River camp.

SECTION 5.0 - FUEL STORAGE (PART B, ITEM 5 [VII])

Fuel storage infrastructure and handling practices have evolved over the last several years, based on increasing project complexity and level of activities. Prior to the year 2007, all of the fuel used for the Project was supplied in 205 litre drums. Fuel re-supply was accomplished by a combination of airlift directly to the Mary River camp and annual sea-lift re-supply to Milne Inlet. From Milne Inlet, drummed fuel was transported to Mary River by smaller aircraft or via the existing Milne Inlet tote road during frozen conditions in winter. With approval to proceed with the Bulk Sample Program, the years 2007 and 2008 marked a transition to the use of bulk fuel in addition to drummed fuel, to the use of mainly bulk fuel in 2009.

A bulk fuel storage facility and ancillary fuel transfer module, with a total storage capacity of approximately 8.25 million litres was constructed at Milne Inlet camp in 2007. Delivery diesel and Jet-A fuels was received by these facilities in early September 2007 and again in August 2008. There was no fuel delivery received at the Milne facility in 2009 or 2010. Additional fuel delivery to the Milne facility is planned for 2011. The Milne storage facility consists of 74 bladders, each with a rated capacity of 113,500 litres and contained within an impermeable lined earthen berm designed to meet applicable standards and guidelines. In 2008, a bulk fuel storage facility with an approximate capacity of 1.5 million litres (potential capacity of 16 bladders) was completed at the Mary River camp. Throughout 2009, most fuel for use at Mary River and Milne Inlet camps were supplied and distributed via the ancillary fuel transfer modules associated with the bulk fuel facilities. The remaining fuel requirements were supplied via day tanks and 205 L drums. The Mary River bulk fuel facility is supplied by bulk fuel tankers that were transported along the Milne Inlet Tote Road. The as-built reports for the Milne and Mary River bulk fuel facilities and ancillary fuel transfer modules were previously submitted to the NWB in 2007 and 2008.

During 2010, fuel for the Project was required to support the following activities:

- Diesel electric power generation and building heat
- Light and heavy vehicle operation
- Fixed-wing aircraft and helicopter movement
- Exploration and geotechnical drill power and water supply

To protect receiving waters, it is Baffinland's practice to endeavour, as practical, to store drummed fuel, petroleum based wastes, and other potentially hazardous products within lined containment areas. Lined containment areas are in place at Mary River, Milne Inlet, Steensby Inlet and Mid Rail camps for the storage of drummed fuel.

For most of 2009, approximately 7,400 - 205 L drums of fuel (3,200 diesel and 4200 jet A-1) were stored at Steensby Inlet. This fuel was originally to be used to support field studies and geotechnical drilling that was originally scheduled for 2009. As a result of the change in schedule and scope of the Project, most of this fuel (approximately 7,200 drums) was removed by sealift from Steensby Inlet in September 2009. The transfer-transport operation was completed without any reportable incidents. The fuel was shipped to the port of Valleyfield for temporary storage. The fuel

was later sold to a third party in Quebec for consumption. Currently, less than 100 drums of fuel currently remain at Steensby within a lined containment area.

Based on the increasing complexity and scope of the Project, a qualitative risk assessment process related to the fuel management system was implemented resulting in the identification and documentation of the risks associated with fuel handling, management, and related tasks. The results of this work helped to facilitate the development and effectiveness of operating procedures, inspection and maintenance requirements, and related record keeping practices. The net result of this work is to reduce the potential occurrence of environmental incidents on the Project such as accidental releases and fuel spills.

It is Baffinland's practice to construct and operate its fuel storage/dispensing facilities and fuel handling/management practices in accordance with applicable guidelines and regulations such as the CCME "Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products (2003)", Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations (Canadian Environmental Protection Act, 1999 SOR/2008-197 June 12, 2008) and National Fire Code of Canada. In December 2007, Baffinland engaged the services of Genivar Engineers (formally B.H. Martin) to investigate fuel facilities at the Mary River and Milne Inlet camps that existed at that time and to determine if these facilities complied with the CCME guidelines. The resulting report, which was included as an Appendix in the 2007 Annual Water Licence Report, concluded that fuel facilities were in compliance.

The fuel storage containment areas continue to be inspected on an annual basis during geotechnical inspections. The geotechnical inspection completed during 2010 is presented in Appendix C.2.

SECTION 6.0 - UNAUTHORIZED DISCHARGES (PART B, ITEM 5 [VIII])

Spill contingency training was delivered to Baffinland spill response team members and all site staff through a combination of classroom and tool box meetings throughout 2010.

Three spills were reported to the Nunavut Spill Line, Water Licence Inspector and QIA Lands in 2010. In addition to the required one page Spill Line reports, more detailed follow-up reports were filed which included descriptions of the events together with immediate causes, corrective and preventive actions, and maps showing the location of the spills. Two of the three spills involved petroleum products, of which both occurred within engineered and lined secondary containment structures. The third spill evolved an all purpose cleaner (non-toxic and biodegradable) that was being stored in a sea container in which the contents froze and ruptured. Prompt remedial actions taken in response to the event that occurred outside of containment structures prevented permanent or material impacts to the environment. Spill sites with obstructed access or proximity to sensitive infrastructure (e.g. within fuel storage facilities) will be assessed and remediated when safe access to the locations become available. Improvements to physical facilities and maintenance practices were also implemented to prevent similar events from occurring.

The list of unauthorized discharges which occurred in 2010 is provided in Table 6.1. Information such as the date of the spill, the product and quantity spilled, cause of the spill, approximate location, proximity to any water body and a summary of follow-up actions taken, are provided in the table.

SECTION 7.0 - INSPECTION AND COMPLIANCE REPORT CONCERNS(PART B, ITEM 5 [IX])

In 2010, Baffinland hosted two inspections from two regulatory authorities, INAC and DFO, as follows:

- An INAC land-use inspector conducted a tour of the Mary River site on July 13, 2010. Transport was not available to the Steensby Inlet camp due to poor weather and the helicopters were grounded. No major concerns were identified during close out meetings and subsequent correspondence. A written inspector's report for the inspection has not yet been received.
- The Department of Fisheries and Oceans (DFO) conducted an inspection of the Tote Road and fisheries crossings covered by authorizations under the Fisheries Act (Harmful Alteration Disruption or Destruction Authorization, Fish Habitat No-Net Loss and Monitoring Plan and Letter of Advice) on August 2 to 5, 2010. A number of follow-up items related to crossing repairs and enhancements, erosion control and monitoring were identified, and the Baffinland has addressed these items. Details of the above items are presented within the 2010 annual report to DFO.

A planned tour and inspection by the INAC Water Resources Inspector was cancelled in July due to lack of helicopter support. The visit to site was rescheduled for late August or early September, but unfortunately that visit was also cancelled.

Baffinland is appreciative of the constructive input provided by inspectors visiting the Project site and have taken and continue to take corrective action, as appropriate, in response to concerns that are raised.

SECTION 8.0 - UPDATES TO PLANS (PART B, ITEM 5 [X])

In accordance with Part B, Item 5 (x) of the water licence, an annual review of the management plans developed under the water licence has been undertaken. Updates to the Abandonment and Reclamation Plan, the Spill Contingency Plan, Site Water Management Plan, QA/QC Plan and Wastewater Management Plan have been completed. Changes to these plans are broadly summarized as follows:

- *Abandonment and Reclamation Plan.* This document is an update to the March 2010 version of the A&R Plan in order to reflect changes in reclamation requirements caused by operations and reclamation activities since the last version and to reflect continued improvement in cost estimation accuracy.
- *Spill Contingency Plan*. This Plan has been updated with only minor changes and to reflect the most current contacts in the event of an incident.
- *Water Management and QA/QC Plan.* This Plan has been updated to include Deposit No. 4 and 5 drilling, geotechnical drilling and other minor updates.

The updated management plans (above) are provided in Appendix F.

The approved 2009 Wastewater Management Plan is in the process of being revised and will be submitted in 2011 at a later date.

SECTION 9.0 - PROGRESSIVE RECLAMATION WORK (PART B, ITEM 5 [XI])

The Project's water licence issued and amended by the NWB, land-use permit issued by INAC, and lease agreement as established by the QIA require that progressive reclamation work be carried out on project components no longer required for project operations, and that restoration work be completed prior to the expiry of these approvals and in accordance with the Project's approved Abandonment and Reclamation Plan. Reclamation progress is monitored through site inspections and annual reporting to the QIA, INAC, and NWB.

Progressive reclamation undertaken in 2010 included:

- The construction and commissioning of the approved landfill facility at Mary River Camp in July. The design of the landfill and its access road was completed and approved by the NWB and QIA in 2009. A Landfill Operations Manual was developed and implemented prior to the commissioning of the facility.
- In July and August, debris consisting of inert materials (mainly metal and wood) that was stockpiled in designated areas in the Mary River and Milne Inlet camps for future disposal was sorted and disposed of in the approved non-hazardous landfill. These materials originated from the 1960s exploration work and the 2007-2008 Bulk Sample Program.
- Removal of residual Baffinland material from the Pond Inlet HTO cabin area of Milne Inlet.
- In July 2010, the enhanced stormwater treatment system for the bulk fuel storage facility at Milne Inlet Camp commenced operation. The multi-barrier treatment system effectively treated hydrocarbon impacted water to levels well below applicable water licence criteria. A monitoring plan confirmed compliance with the water licence and approximately 1850 m^3 of water was released to Milne Inlet.
- At the Mary River Camp, a treatment system utilizing granular clay and activated carbon media was utilized to treat a small quantity of hydrocarbon-impacted water that had accumulated in the Mary River bulk fuel storage facility. Approximately 50 m^3 of water was treated and discharged on to the adjacent land surface.
- EBA Engineering Consultants Ltd. was retained to develop a conceptual design and management plan for a land farming bioremediation facility to be located at Milne Inlet. At the time of this report, the project was still in progress.
- Remedial work at DFO authorized stream crossings associated with the Milne Inlet Tote Road upgrades was completed. Further progress was made in advancing an effective fish habitat compensation plan that will eventually satisfy the requirements of the project. This work was described in the annual report submitted to DFO on December 29, 2010.
- There was no discharge of treated sewage from the Polishing/Waste Stabilization Ponds (PWSPs) contents at Mary River and Milne Inlet camps in 2010.
- Litter and debris were removed, and test pits, channels and water control structures were removed at the completion of the 2010 exploration and geotechnical drilling programs. Additional work to complete reclamation of a number of drill sites from previous years has been inventoried and is ongoing.
- Qikiqtaaluk Environmental (QE) prepared an inventory of hazardous wastes and other materials that had been generated and stored at Mary River within engineered containment for the period since the 2009 sea lift. The waste also included some residual material from the 1960s exploration and more recent 2007-2008 programs. The waste was packaged, manifested, and transported via sea-lift at

Milne Inlet to licensed waste management facilities. Additional hazardous materials that remain or are being generated by ongoing operations will be incorporated into future reclamation plans.

- A field study was initiated in 2009 to establish preliminary closure criteria for the borrow areas located along the Milne Inlet Tote Road and to confirm that as-built conditions are suitable for eventual decommissioning. In 2009, remedial efforts were focussed on locations identified as higher risk with respect to the potential for permafrost degradation. In 2010, the civil work completed on the road consisted primarily of repairing damage caused by the spring freshet. Several areas where with settlement issues were repaired by means of extending an insulating blanket of granular material over the problem areas.

SECTION 10.0 - SUMMARY OF CONSULTATIONS (PART B, ITEM 5 [XIV])

In 2007 and 2008, engagement between the Company and potentially interested stakeholders and communities increased to keep pace with advancement of the Project from exploration to bulk sampling. Socio-economic studies and public consultation have focussed on the five North Baffin communities in closest proximity to the Mary River Project components, and in Iqaluit, the territorial capital. These Communities of Interest were selected based on the guidance presented in "A proponents Guide to Conducting Public Consultation for the NIRB Environmental Assessment Process," (NIRB, 2006) and are most likely to be affected by a future Project.

Over the last several years, consultation with potentially interested stakeholders, including local communities and community groups has been carried out through a variety of means, including:

- Community Liaison Offices
- Public Meetings
- Inuit Knowledge Working Groups
- Community Focus Sessions
- Inuit Knowledge Individual Interviews
- Radio Call-In Shows and Printed Media

Baffinland has also been proactive in bringing community and government representatives to visit the operations at Mary River. As indicated in Table 10.1, in 2010, Baffinland hosted site visits to Mary River with representatives of North Baffin hamlets, a number of government representatives, and local community members including students. For many of the community representatives, it was their first opportunity to see such operations, and the opportunity to see "with their own eyes" was of immeasurable value.

In Mid 2010 the Company re-engaged its community consultation with regular community visits to the communities that are considered to be "affected", as defined by NIRB in relation to the development of the Mary River Project. Those communities are Pond Inlet, Igloolik, Hall Beach, Kimmirut, Cape Dorset, Arctic Bay, and Clyde River. Those communities located the nearest to the Mary River site, such as Pond Inlet, Igloolik, and Hall Beach have been and will be visited on an approximately monthly basis and the remaining communities will be visited approximately every two months. The intent of the regular visits is to provide citizens of the communities an opportunity to attend meetings and voice their comments or concerns about the Mary River Project. As well, the meetings provide an opportunity for Baffinland to communicate any new information that is available and update communities on current work being done by the Company.

TABLES

TABLE 1.1

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2010 ANNUAL REPORT TO THE NUNAVUT WATER BOARD

SUMMARY OF 2010 ACTIVITIES AND SUBMISSIONS

Date	Activity/Submission
January 2011	December monthly water license report submission
January 2010	Acceptance by the NWB of Baffinland's March 2009 Spill Contingency Plan
January 2010	Approval by the NWB for Baffinland's controlled open burning request
January 2010	Resubmission to the NWB of Rotating Biological Contactor (RBC) System Sewage Treatment & Discharge As-Constructed Report at the request of the NWE
February 2010	January monthly water license report submission
March 2010	February monthly water license report submission
March 2010	Submission of 2009 Annual Water Licence Report
March 2010	Submission of update to Abandonment and Reclamation Plan (2009
March 2010	Submission of update to Spill Contingency Plan (2009
March 2010	Submission of update to Site Water Management Plan and Surface Water Sampling Program - Quality Assurance and Quality Control Plan (2009
March 2010	Submission of update to 2009 Wastewater Management Plan
April 2010	March monthly water license report submission
May 2010	April monthly water license report submission
May 2010	Notice to NWB and INAC of commencement of Baffinlanand's summer exploration drilling program including map showing pertinent details, including water sources.
June 2010	May monthly water license report submission
June 2010	Notification to INAC, NWB, and QIA of effluent discharge of treated stormwater from the Milne bulk fuel storage facility, description of enhancements to the existing oily water treatment system, and monitoring program
June 2010	Notification to INAC, NWB and QIA of effluent discharge of treated stormwater from the fuel and drum storage facilities at the Mary River Camp.
June 2010	Commencment of 2010 Exploration Drill Program on Deposits Nos. 4 & 5
July 2010	June monthly water license report submission
July 2010	Commencement of treatment and discharge of stormwater in the fuel and drum storage facilities at the Milne Inlet and Mary River Camps.
July 2010	Completion of construction and commissioning of Non-Hazardous Landfill Facility - Wastes are accepted
July 2010	Land Use Inspector site visit, Water Licence Inspection cancelled
August 2010	July monthly water license report submission
August 2010	Notification to NWB, INAC, and QIA provided for summer geotechnical drilling program including water sources and request to use two rivers as source of water for drilling
August 2010	Letter of errata received from NWB for water licence 2BB-MRY0710 regarding total volume of water authorized
August 2010	Acknowledgement by the NWB of approval of water use from two rivers to support the geotechnical drilling program and start-up of geotechnical drilling program
August 2010	DFO inspection visit and site tour
August 2010	Dry cargo sealift and backhaul at Milne Inle
September 2010	QIA - abandonment and reclamation audit
September 2010	Joint QIA / Baffinland Thematic Workshops involviing communities (35 people), water licence renewa presentation given
August 2010	Completion of the 2010 drilling exploration program and geotechnical drilling program on and near the Tote Road
September 2010	August monthly water license report submission
October 2010	Submission to the NWB and QIA of Non-Hazardous Landfill Facility As-built Report
October 2010	Resubmission to the NWB of Comprehensive Environmental Monitoring Plan at their reques
October 2010	September monthly water license report submission
November 2010	October monthly water license report submission
November 2010	Submission of 2010 Annual Geotechnical Inspection Report
December 2010	Submission of 2010 DFO Annual Report for Tote Road Upgrades
December 2010	November monthly water license report submission

TABLE 1.2
BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2010 ANNUAL REPORT TO THE NUNAVUT WATER BOARD
SUMMARY OF EXPLORATION DRILLING

Deposit No.	2004		2005		2006		2007		2008	
	Number of Holes Drilled	Meterage (m)	Number of Holes Drilled	Meterage (m)	Number of Holes Drilled	Meterage (m)	Number of Holes Drilled	Meterage (m)	Number of Holes Drilled	Meterage (m)
1	14	2691	33	8073	23	4136.5	23	4246.5	27	5071
2	1	122	0	0	7	1195.7	0	0	0	0
3	0	0	0	0	3	642	8	1917	0	0
4										
5										

Deposit No.	2009		2010		Total	
	Number of Holes Drilled	Meterage (m)	Number of Holes Drilled	Meterage (m)	Number of Holes Drilled	Meterage (m)
1	13	2316	3	318	136	26,852.0
2	0	0	3	477	11	1,794.7
3	0	0	2	163	13	2,722.0
4			17	3165	17	3,165.0
5			20	2662	20	2,662.0
				6785		

TABLE 1.3
BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2010 ANNUAL REPORT TO THE NUNAVUT WATER BOARD
EXPLORATION DRILLHOLE DETAILS

Drillhole ID	UTM Coordinates		Elevation	Azimuth	Dip	Depth	Date Started	Date Finished
	Northing (m)	Easting (m)	(m)			(m)		
MR4-10-180	7929250	541363	262	355	-50	299	06/20/2010	06/25/2010
MR4-10-181	7929352	541353	264	355	-50	68	06/23/2010	06/25/2010
MR4-10-184	7929352	541353	264	355	-45	173	06/25/2010	06/28/2010
MR4-10-183	7929360	541053	266	355	-50	170	06/25/2010	06/28/2010
MR4-10-185	7929303	540756	267	355	-50	194	06/29/2010	07/01/2010
MR4-10-186	7929180	540766	281	355	-50	266	06/29/2010	07/03/2010
MR4-10-187	7929286	540456	289	355	-50	227.5	07/01/2010	07/05/2010
MR4-10-189	7929248	540159	301	355	-50	156	07/04/2010	07/06/2010
MR4-10-190	7929110	540169	300	355	-50	221	07/06/2010	07/10/2010
MR4-10-192	7929225	539860	305	355	-50	191	07/06/2010	07/09/2010
MR4-10-194	7929189	539560	306	355	-50	146	07/09/2010	07/11/2010
MR4-10-195	7929109	539568	306	355	-50	248	07/10/2010	07/14/2010
MR4-10-196	7929168	539259	264	355	-50	170	07/11/2010	07/14/2010
MR4-10-197	7929381	541653	271	355	-50	138	07/14/2010	07/18/2010
MR4-10-200	7929463	541955	284	355	-50	104	07/18/2010	07/20/2010
MR4-10-198	7929574	541945	306	355	-50	239	07/15/2010	07/19/2010
MR4-10-201	7929676	542230	326	355	-50	154	07/19/2010	07/22/2010
MR5-10-182	7926375	543331	251	207	-50	149	06/26/2010	07/01/2010
MR5-10-188	7926337	543423	244	207	-50	191	07/02/2010	07/05/2010
MR5-10-191	7926406	543237	256	207	-50	170	07/06/2010	07/09/2010
MR5-10-193	7926452	543368	254	207	-50	206	07/09/2010	07/15/2010
MR5-10-199	7926475	543044	252	207	-50	164	07/17/2010	07/21/2010
MR5-10-202	7926641	542791	234	207	-50	149	07/22/2010	07/25/2010
MR5-10-207	7926827	542495	251	207	-50	56	07/28/2010	07/30/2010
MR5-10-205	7926907	542538	213	207	-50	189	07/27/2010	07/30/2010
MR5-10-203	7926875	542239	230	207	-50	150	07/24/2010	07/24/2010
MR5-10-204	7926609	542944	268	207	-50	149	07/25/2010	07/28/2010
MR5-10-209	7926166	543561	232	207	-50	146	07/30/2010	08/02/2010
MR5-10-208	7926827	542495	251	207	-55	38	07/30/2010	07/31/2010
MR5-10-211	7926803	542537	228	207	-50	95	07/31/2010	08/03/2010
MR5-10-212	7925479	544404	182	245	-50	104	08/03/2010	08/05/2010
MR5-10-213	7925216	544566	186	245	-50	146	08/04/2010	08/09/2010
MR5-10-215	7924918	544623	170	245	-50	13	08/05/2010	08/06/2010
MR5-10-216	7924918	544622	170	254	-50	143	08/06/2010	08/08/2010
MR5-10-218	7924310	544977	147	245	-50	112	08/09/2010	08/10/2010
MR5-10-219	7923739	545532	163	245	-50	143	08/10/2010	08/12/2010
MR5-10-221	7923226	545657	138	245	-50	149	08/12/2010	08/15/2010
MR3-10-206	7913798	566963	546	254	-45	11	07/28/2010	07/30/2010
MR3-10-210	7913798	566963	546	254	-55	152	07/31/2010	08/04/2010
MR2-10-214	7914245	566990	610	29	-50	197	08/04/2010	08/07/2010
MR2-10-217	7914243	566355	630	170	-45	101	08/08/2010	08/11/2010
MR2-10-220	7914243	566355	630	170	-55	179	08/11/2010	08/17/2010
ARD-2B-NW	7915107	563389	635	310	-45	101	08/14/2010	08/19/2010
ARD-2A-NW	7914427	562825	614	294	-55	110	08/20/2010	08/22/2010
ARD-2A-SE	7914427	562825	614	114	-45	107	08/22/2010	08/24/2010
						6784.5		

Note: Excavated sumps were not required for silt control during drilling operations, however, temporary silt fence intstallation, natural depressions and tundra filtration techniques were effectively employed as necessary.

TABLE 1.4
BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2010 NUNAVUT WATER BOARD REPORT
GEOTECHNICAL DRILLHOLE DETAILS

Drillhole ID	Drillhole Coordinates		Water Source Coordinates		Depth	Date Started	Date Finished
	Northing	Easting	Northing	Easting			
	(m)	(m)	(m)	(m)	(m)		
BH10-01	7,975,989	503,772	7,975,975	504,289	15	22-Aug-10	22-Aug-10
BH10-02	7,976,127	503,921	7,976,097	503,941	15	22-Aug-10	22-Aug-10
BH10-03	7,975,758	503,693	7,976,097	503,942	10	17-Aug-10	17-Aug-10
BH10-04	7,975,352	503,969	7,974,495	504,310	15	18-Aug-10	18-Aug-10
BH10-05	7,974,412	504,123	7,974,495	504,310	15	19-Aug-10	19-Aug-10
BH10-06	7,973,659	504,528	7,974,495	504,310	15.5	20-Aug-10	20-Aug-10
BH10-07	7,972,753	505,216	7,974,495	504,310	15.5	21-Aug-10	21-Aug-10
BH10-08	7,972,369	505,883	7,974,495	504,310	15	21-Aug-10	21-Aug-10
BH10-09	7,971,937	506,306	7,974,495	504,310	15	22-Aug-10	22-Aug-10
BH10-10	7,965,955	513,598	7,974,495	504,310	15	24-Aug-10	24-Aug-10
BH10-11	7,965,850	513,542	7,974,495	504,310	15	22-Aug-10	24-Aug-10
BH10-12	7,962,529	516,753	7,974,495	504,310	15.5	24-Aug-10	24-Aug-10
BH10-13	7,947,246	522,846	7,974,495	504,310	16	25-Aug-10	25-Aug-10
BH10-14	7,941,896	524,015	7,974,495	504,310	16	20-Aug-10	20-Aug-10
BH10-15	7,937,592	525,949	7,914,920	557,807	16	28-Aug-10	28-Aug-10
BH10-16	7,927,575	529,333	7,914,920	557,807	15	29-Aug-10	29-Aug-10
BH10-17	7,926,886	529,321	7,914,920	557,807	12	25-Aug-10	25-Aug-10
BH10-18	7,926,803	529,365	7,926,788	529,345	15	25-Aug-10	25-Aug-10
BH10-19	7,922,241	542,169	7,922,217	542,161	21	26-Aug-10	26-Aug-10
BH10-20	7,922,127	542,346	7,922,118	542,337	15	26-Aug-10	26-Aug-10
BH10-21	7,915,012	554,243	7,914,920	557,807	15	26-Aug-10	26-Aug-10
BH10-22	7,914,637	555,665	7,914,623	555,657	15	26-Aug-10	26-Aug-10
BH10-23	7,914,798	555,877	7,914,789	555,881	12	26-Aug-10	26-Aug-10

Note: Excavated sumps were not required for silt control during drilling operations, however, temporary silt fence intstallation, natural depressions and tundra filtration techniques were effectively employed as necessary.

TABLE 2.1
BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2010 ANNUAL REPORT TO THE NUNAVUT WATER BOARD
DAILY, MONTHLY AND ANNUAL QUANTITIES OF WATER FOR CAMPS MARY RIVER PROJECT

Day	January	February	March	April	May			June			July				August				September	October			November			December
	MRY-1	MRY-1	MRY-1	MRY-1	MRY-1	MRY-1 Other	Total	MRY-1	MRY-1 Other	Total	MRY-1	MRY-1 Other	Steensby	Total	MRY-1	MRY-1 Other	Steensby	Total	MRY-1	MRY-1	MRY-1 Other	Total	MRY-1	MRY-1 Other	Total	MRY-1
	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.0	5.1	16.1	27.5	0.0	inactive	27.5	0.0	0.0	0.0	0.0	27.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	inactive	0.0	25.7	0.0	0.0	25.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	3.5	0.0	0.0	inactive	0.0	0.0	0.0	7.1	7.1	22.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	13.0	0.0	0.0	0.0	0.0	0.0	25.0	7.5	32.5	31.2	0.0	inactive	31.2	28.1	4.1	0.0	32.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	23.0	0.0	23.0	0.0	12.5	12.5	0.0	0.0	inactive	0.0	13.6	0.0	0.0	13.6	19.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.0	13.0	28.0	32.6	0.0	inactive	32.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	21.0	0.0	0.0	0.0	0.0	4.0	17.0	21.0	0.0	0.0	inactive	0.0	35.0	0.0	0.0	35.0	20.9	0.0	0.0	0.0	0.0	0.0	0.0	20.0
8	0.0	0.0	0.0	16.0	0.0	0.0	0.0	0.0	20.0	20.0	0.0	0.0	inactive	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.5	18.5	33.0	36.7	5.3	inactive	42.0	26.3	8.0	5.5	39.8	20.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	13.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.0	26.0	15.8	0.0	inactive	15.8	16.8	0.0	0.0	16.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	22.0	0.0	22.0	7.0	22.5	29.5	0.0	0.0	inactive	0.0	0.0	0.0	0.0	0.0	20.8	12.7	3.7*	16.4	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	3.6	3.6	13.6	10.9	24.4	24.2	0.0	inactive	24.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	14.0	0.0	0.0	0.0	0.0	0.0	12.0	12.0	0.0	0.0	5.5	5.5	35.7	0.0	0.0	35.7	23.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.9	10.5	23.4	28.2	0.0	0.0	28.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.0	0.0	22.0	0.0
15	0.0	15.5	0.0	0.0	32.0	1.3	33.3	0.0	10.0	10.0	0.0	0.0	0.0	0.0	34.8	0.0	0.0	34.8	29.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.6	0.0	19.6	20.7	0.0	0.0	20.7	0.0	0.0	2.2	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	13.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.8	8.5	0.0	34.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	7.0	7.0	21.0	9.0	30.0	24.0	0.0	0.0	24.0	0.0	4.4	inactive	4.4	34.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	14.0	14.0	0.0	0.0	0.0	0.0	8.0	0.0	8.0	28.3	0.0	inactive	28.3	0.0	0.0	0.0	0.0	20.0	4.0*	24.0	20.0
20	0.0	0.0	0.0	0.0	24.0	14.0	38.0	19.3	9.7	28.9	25.3	0.0	0.0	25.3	0.0	0.0	inactive	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	24.0	0.0	8.0	8.0	13.6	0.0	13.6	0.0	0.0	0.0	0.0	0.0	0.0	inactive	0.0	0.0	23.0	0.0	23.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	13.0	13.0	0.0	0.0	0.0	24.1	1.0	0.0	25.1	36.5	4.5	inactive	41.0	30.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	5.0	5.0	24.1	0.0	24.1	0.0	0.0	0.0	0.0	0.0	0.0	inactive	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	36.0	5.0	41.0	16.3	0.0	16.3	21.4	0.0	0.0	21.4	0.0	0.0	inactive	0.0	25.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	18.0	0.0	0.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	3.5	3.5	37.7	0.0	inactive	37.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	14.0	0.0	0.0	0.0	6.0	6.0	29.8	0.0	29.8	27.5	0.0	0.0	27.5	0.0	0.0	inactive	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	22.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	6.0	0.0	0.0	0.0	0.0	20.0	0.0	inactive	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	22.0	4.0	26.0	0.0	0.0	0.0	18.8	6.5	0.0	25.3	0.0	0.0	inactive	0.0	21.0	0.0	0.0	0.0	0.0	0.0	0.0	15.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.2	0.0	34.2	22.2	0.0	0.0	22.2	24.4	7.4	inactive	31.8	0.0	0.0	0.0	0.0	20.0	0.0	20.0	0.0
30	0.0		0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.1	0.0	inactive	10.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0		11.0		24.0	5.0	29.0			0.0	16.3	7.2	0.0	23.5	0.0	0.0	inactive	0.0		15.0	0.0	15.0			0.0	8.3
Total	**48.0**	**42.5**	**64.0**	**58.0**	183.0	89.9	**272.9**	280.7	213.5	**494.2**	396.6	28.0	9.0	**433.5**	398.8	36.9	14.8	**450.5**	296.1	50.7	3.7*	**54.4**	62.0	4.0*	**66.0**	**63.3**

Note:

* Fire Bladder

*Milne Inlet

MRY-1 Camp Lake Freshwater Use (Mary River Camp) - Daily Potable Water (m^3) - MRY-1
MRY-1 Other Camp Lake Daily Freshwater Use for Other Purposes (m3) - MRY-1
Steensby Five Km Lake Steensby Inlet Daily Potable Water (m^3)

TABLE 2.2
BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2010 ANNUAL REPORT TO THE NUNAVUT WATER BOARD
DAILY, MONTHLY AND ANNUAL QUANTITIES OF WATER FOR DRILLING

Day	June (m^3)	July (m^3)	August (m^3)
1	0.0	91.6	159.9
2	0.0	259.4	124.7
3	0.0	168.5	144.6
4	0.0	135.2	140.6
5	0.0	130.8	116.9
6	0.0	144.2	124.2
7	0.0	162.8	121.3
8	0.0	159.1	80.5
9	0.0	88.6	130.6
10	0.0	90.0	84.2
11	0.0	131.0	114.4
12	0.0	167.2	111.6
13	0.0	152.3	60.5
14	0.0	156.7	70.0
15	0.0	140.4	77.6
16	0.0	138.9	51.6
17	0.0	180.8	26.0
18	0.0	186.2	0.0
19	0.0	143.5	0.0
20	7.6	130.1	0.0
21	30.3	148.8	0.0
22	56.6	146.5	0.0
23	68.1	139.4	22.8
24	83.6	108.1	0.0
25	24.5	150.1	16.0
26	106.2	173.0	16.0
27	159.4	106.8	14.5
28	114.7	142.6	43.4
29	153.4	156.2	15.0
30	187.3	135.2	0.0
31		137.1	0.0
Total	991.7	4,501.1	1,866.8

Note: Includes water used for both exploration and geotechnical drilling.

TABLE 2.3
BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2010 ANNUAL REPORT TO THE NUNAVUT WATER BOARD
MONTHLY AND ANNUAL QUANTITIES OF TREATED SEWAGE EFFLUENT AND SLUDGE REMOVED

Day	January	February	March	April	May	June	July	August	September	October	November	December
	MRY-4 *	MRY-4 *	MRY-4 *	MRY-4 *	MRY-4 *	MRY-4 *	MRY-4 *	MRY-4 *	MRY-4 *	MRY-4 *	MRY-4 *	MRY-4 *
1	0.0	0.0	0.0	0.0	0.0	11.0	27.5	0.0	27.8	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.7	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.5	0.0	0.0	0.0
4	0.0	13.0	0.0	0.0	0.0	25.0	31.2	28.1	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	23.0	0.0	0.0	13.6	19.1	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	15.0	32.6	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	21.0	0.0	0.0	4.0	0.0	35.0	20.9	0.0	0.0	20.0
8	0.0	0.0	0.0	16.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	14.5	36.7	26.3	20.1	0.0	0.0	0.0
10	13.0	0.0	0.0	0.0	0.0	0.0	15.8	16.8	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	22.0	7.0	0.0	0.0	20.8	12.7	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	13.6	24.2	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	14.0	0.0	0.0	0.0	0.0	35.7	23.6	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	12.9	28.2	0.0	0.0	0.0	22.0	0.0
15	0.0	15.5	0.0	0.0	32.0	0.0	0.0	34.8	29.2	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	19.6	20.7	0.0	0.0	0.0	0.0	0.0
17	13.0	0.0	0.0	0.0	0.0	0.0	0.0	25.8	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	21.0	24.0	0.0	34.4	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.3	0.0	0.0	20.0	20.0
20	0.0	0.0	0.0	0.0	24.0	19.3	25.3	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	24.0	0.0	13.6	0.0	0.0	0.0	23.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	24.1	36.5	30.9	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	24.1	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	36.0	16.3	21.4	0.0	25.8	0.0	0.0	0.0
25	0.0	0.0	18.0	0.0	0.0	0.0	0.0	37.7	0.0	0.0	0.0	0.0
26	0.0	14.0	0.0	0.0	0.0	29.8	27.5	0.0	0.0	0.0	0.0	0.0
27	22.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	22.0	0.0	18.8	0.0	21.0	0.0	0.0	15.0
29	0.0		0.0	0.0	0.0	34.2	22.2	24.4	0.0	0.0	20.0	0.0
30	0.0		0.0	18.0	0.0	0.0	0.0	10.1	0.0	0.0	0.0	0.0
31	0.0		11.0		24.0		16.3	0.0		15.0		8.3
Total	48.0	42.5	64.0	58.0	183.0	280.7	396.6	398.8	296.1	50.7	62.0	63.3

Treated Sewage

* Note - All effluent from MRY-4 (Mary River Waste Water Treatement Facility (WWTF)) discharged to Polishing Waste Stabilization Ponds (PWSPs) Nos. 2 or 3. No MRY-4 effluent discharged to Sheardown Lake during 2010.

Month	MRY-4 Mary River sludge to PWSP (m^3)
January	0.0
February	0.0
March	0.0
April	0.0
May	0.0
June	0.0
July	0.0
August	13.6
September	6.5
October	0.0
November	0.0
December	0.0
Total	20.1

Note: All sludge from WWT F discharged to PWSP No. 1.

TABLE 2.4

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2010 ANNUAL REPORT TO THE NUNAVUT WATER BOARD

LOCATION OF TEMPORARY AND PERMANENT STORAGE AREAS FOR WASTES

Description	UTM Coordinates (NAD83)		Latitude	Longitude
	Easting (m)	Northing (m)		
Milne Inlet				
Temporary empty fuel drum storage area	503,286	7,975,741	71° 52' 54"	80° 54' 19"
Temporary ash storage area	503,618	7,976,226	71° 53' 9"	80° 53' 44"
Temporary non-hazardous waste storage area (cleaned up during 2010)	503,618	7,976,226	71° 53' 9"	80° 53' 44"
Hazardous waste storage area	503,571	7,975,952	71° 52' 1"	80° 53' 49"
Mary River				
Temporary empty fuel drum storage area	558,261	7,914,538	71° 19' 33"	79° 22' 10"
Temporary hazardous materials storage area	558,205	7,914,561	71° 19' 34"	79° 22' 15"
Temporary non-hazardous waste storage area/bone yard (largely cleaned up duri 2010)	559,014	7,914,268	71° 19' 24"	79° 20' 55"
Temporary non-hazardous waste storage area (largely cleaned up duirng 2010)	559,310	7,913,869	71° 19' 11"	79° 20' 27"
Temporary empty fuel drum storage area	559,014	7,914,268	71° 19' 24"	79° 20' 55"
Temporary ash storage area	559,097	7,914,210	71° 19' 22"	79° 20' 46"
Landfill	560,879	7,912,513	71° 18' 26"	79° 17' 52"
Mid-Rail				
Temporary hazardous waste and barrel fuel storage area	595,660	7,876,369	70° 58' 19"	78° 22' 13"
Steensby Inlet				
Temporary hazardous waste and barrel fuel storage area	594,679	7,800,514	70° 17' 35"	78° 29' 1"
Drilling Activities				
Natural depressions / sumps	Located adjacent to drillhole locations; refer to Tables 1.3 and 1.4			

Note:
1. Locations are approximate.

TABLE 2.5

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2010 ANNUAL REPORT TO THE NUNAVUT WATER BOARD

WATER LICENCE WATER QUALITY MONITORING LOCATIONS

Monitoring Station	Description	UTM Coordinates (NAD83)		Latitude	Longitude
		Easting (m)	Northing (m)		
MRY-1	Water Supply for the Mary River Camp at Camp Lake	557,682	7,914,693	71° 19' 39" N	79° 23' 8" W
MRY-2	Summer Water Supply for the Milne Inlet Camp at Phillips Creek	514,503	7,964,579	71° 46' 52" N	80° 35' 4" W
MRY-3	Winter water supply for the Milne Inlet Camp at Km 32 Lake(1)	521,714	7,951,862	71° 39' 60" N	80° 22' 53" W
MRY-4	Mary River Camp sewage discharge at the WWTF	557,920	7,914,372	71° 19' 28" N	79° 22' 45" W
MRY-4a	Mary River Camp sewage discharge from the PWSP	558,706	7,913,930	71° 19' 13" N	79° 21' 27" W
MRY-5	Milne Inlet Camp sewage discharge at the WWTF	503,462	7,975,764	71° 52' 55" N	80° 54' 1" W
MRY-5a	Milne Inlet Camp sewage discharge from the PWSP	503,344	7,976,118	71° 53' 6" N	80° 54' 13" W
MRY-6	Water collected within the Bulk Fuel Storage Facility at Mary River prior to release	558,186	7,914,780	71° 19' 41" N	79° 22' 17" W
MRY-7	Water collected within the Bulk Fuel Storage Facility at Milne Inlet prior to release	503,309	7,976,097	71° 53' 6" N	80° 54' 17" W
MRY-8	Minewater and surface drainage either pumped or released from the Hematite Open Pit	NO LONGER REQUIRED(2)			
MRY-9	Minewater and surface drainage either pumped or released from the Magnetite Open Pit(2)	563,393	7,914,545	71° 19' 29" N	79° 13' 33" W
MRY-10	Surface discharge from the weathered ore stockpile	563,461	7,915,211	71° 19' 50" N	79° 13' 24" W
MRY-11	Surface discharge from the lump ore and fine ore stockpiles at the processing area	560,987	7,913,364	71° 18' 53" N	79° 17' 39" W
MRY-12	Surface discharge from the lump ore and fine ore stockpiles at Milne Inlet	503,357	7,976,453	71° 53' 17" N	80° 54' 11" W
Landfill Downstream Drainage	Surface discharge downstream of landfill	560,756	7,912,496	71° 18' 25" N	79° 18' 4" W
Exploration Drill Monitoring		Various locations upstream / downstream / near-field.			

Notes:
1. This location is actually at Km 32 Lake.
2. There is actually only one bulk sample pit now.

Baffinland Iron Mines Corporation

TABLE 2.6

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2010 ANNUAL REPORT TO THE NUNAVUT WATER BOARD

WATER QUALITY RESULTS FOR WATER LICENCE MONITORING LOCATIONS

Sample Number	Sample ID	Date Sampled	Parameter Name	Result	Unit	Lab	Comments
770430	MRY-4	9-Jan-10	Faecal Coliforms	<10	CFU/100 ml	Exova Accutest	
770435	MRY-4	9-Jan-10	Biological Oxygen Demand	<1	mg/L	Exova Accutest	
770435	MRY-4	9-Jan-10	pH	8.53	pH units	Exova Accutest	
770435	MRY-4	9-Jan-10	Total Suspended Soilds	2	mg/L	Exova Accutest	
770435	MRY-4	9-Jan-10	Oil and Grease	<1	mg/L	Exova Accutest	
774155	MRY-4	29-Jan-10	Faecal Coliforms	<10	CFU/100 ml	Exova Accutest	
774154	MRY-4	29-Jan-10	Biological Oxygen Demand	1	mg/L	Exova Accutest	
774154	MRY-4	29-Jan-10	pH	8.40	pH units	Exova Accutest	
774154	MRY-4	29-Jan-10	Total Suspended Soilds	3	mg/L	Exova Accutest	
774154	MRY-4	29-Jan-10	Oil and Grease	3	mg/L	Exova Accutest	
778012	MRY-4	19-Feb-10	Faecal Coliforms	<10	CFU/100 ml	Exova Accutest	
778010	MRY-4	19-Feb-10	Biological Oxygen Demand	<1	mg/L	Exova Accutest	
778010	MRY-4	19-Feb-10	pH	8.46	pH units	Exova Accutest	
778010	MRY-4	19-Feb-10	Total Suspended Soilds	<2	mg/L	Exova Accutest	
778010	MRY-4	19-Feb-10	Oil and Grease	<1	mg/L	Exova Accutest	
783072	MRY-4	12-Mar-10	Faecal Coliforms	<10	CFU/100 ml	Exova Accutest	
783086	MRY-4	12-Mar-10	Biological Oxygen Demand	<1	mg/L	Exova Accutest	
783086	MRY-4	12-Mar-10	pH	8.50	pH units	Exova Accutest	
783086	MRY-4	12-Mar-10	Total Suspended Soilds	4	mg/L	Exova Accutest	
783086	MRY-4	12-Mar-10	Oil and Grease	2	mg/L	Exova Accutest	
783074	MRY-401	12-Mar-10	Faecal Coliforms	<10	CFU/100 ml	Exova Accutest	QA/QC Field Duplicate
783088	MRY-401	12-Mar-10	Biological Oxygen Demand	<1	mg/L	Exova Accutest	QA/QC Field Duplicate
783088	MRY-401	12-Mar-10	pH	8.47	pH units	Exova Accutest	QA/QC Field Duplicate
783088	MRY-401	12-Mar-10	Total Suspended Soilds	3	mg/L	Exova Accutest	QA/QC Field Duplicate
783088	MRY-401	12-Mar-10	Oil and Grease	3	mg/L	Exova Accutest	QA/QC Field Duplicate
783089	MRY-402	12-Mar-10	Biological Oxygen Demand	6	mg/L	Exova Accutest	QA/QC Field Blank
783089	MRY-402	12-Mar-10	pH	6.45	pH units	Exova Accutest	QA/QC Field Blank
783089	MRY-402	12-Mar-10	Total Suspended Soilds	<2	mg/L	Exova Accutest	QA/QC Field Blank
786974	MRY-4	2-Apr-10	Faecal Coliforms	<10	CFU/100 ml	Exova Accutest	
786976	MRY-4	2-Apr-10	Biological Oxygen Demand	1	mg/L	Exova Accutest	
786976	MRY-4	2-Apr-10	pH	8.57	pH units	Exova Accutest	
786976	MRY-4	2-Apr-10	Total Suspended Soilds	5	mg/L	Exova Accutest	
786976	MRY-4	2-Apr-10	Oil and Grease	2	mg/L	Exova Accutest	
792116	MRY-4	23-Apr-10	Faecal Coliforms	<10	CFU/100 ml	Exova Accutest	
792106	MRY-4	23-Apr-10	Biological Oxygen Demand	5	mg/L	Exova Accutest	
792106	MRY-4	23-Apr-10	pH	8.56	pH units	Exova Accutest	
792106	MRY-4	23-Apr-10	Total Suspended Soilds	4	mg/L	Exova Accutest	
792106	MRY-4	23-Apr-10	Oil and Grease	<1	mg/L	Exova Accutest	
792118	MRY-401	23-Apr-10	Faecal Coliforms	<10	CFU/100 ml	Exova Accutest	QA/QC Field Duplicate
792108	MRY-401	23-Apr-10	Biological Oxygen Demand	6	mg/L	Exova Accutest	QA/QC Field Duplicate
792108	MRY-401	23-Apr-10	pH	8.55	pH units	Exova Accutest	QA/QC Field Duplicate
792108	MRY-401	23-Apr-10	Total Suspended Soilds	<2	mg/L	Exova Accutest	QA/QC Field Duplicate
792108	MRY-401	23-Apr-10	Oil and Grease	<1	mg/L	Exova Accutest	QA/QC Field Duplicate
799561	MRY-4	24-May-10	Faecal Coliforms	10	CFU/100 ml	Exova Accutest	
799555	MRY-4	24-May-10	Biological Oxygen Demand	1	mg/L	Exova Accutest	
799555	MRY-4	24-May-10	Chemical Oxygen Demand	35	mg/L	Exova Accutest	
799555	MRY-4	24-May-10	pH	8.03	pH units	Exova Accutest	
799555	MRY-4	24-May-10	Total Suspended Soilds	<2	mg/L	Exova Accutest	
799555	MRY-4	24-May-10	Oil and Grease	<1	mg/L	Exova Accutest	
799563	MRY-401	24-May-10	Faecal Coliforms	530	CFU/100 ml	Exova Accutest	QA/QC Field Duplicate
799557	MRY-401	24-May-10	Biological Oxygen Demand	5	mg/L	Exova Accutest	QA/QC Field Duplicate
799557	MRY-401	24-May-10	Chemical Oxygen Demand	30	mg/L	Exova Accutest	QA/QC Field Duplicate
799557	MRY-401	24-May-10	pH	8.02	pH units	Exova Accutest	QA/QC Field Duplicate
799557	MRY-401	24-May-10	Total Suspended Soilds	3	mg/L	Exova Accutest	QA/QC Field Duplicate
799557	MRY-401	24-May-10	Oil and Grease	<1	mg/L	Exova Accutest	QA/QC Field Duplicate
807704	MRY-4	22-Jun-10	Faecal Coliforms	0	CFU/100 ml	Exova Accutest	
807724	MRY-4	22-Jun-10	Biological Oxygen Demand	3	mg/L	Exova Accutest	
807724	MRY-4	22-Jun-10	pH	8.15	pH units	Exova Accutest	
807724	MRY-4	22-Jun-10	Total Suspended Soilds	5	mg/L	Exova Accutest	
807724	MRY-4	22-Jun-10	Oil and Grease	<1	mg/L	Exova Accutest	
807705	MRY-401	22-Jun-10	Faecal Coliforms	1	CFU/100 ml	Exova Accutest	QA/QC Field Duplicate
807725	MRY-401	22-Jun-10	Biological Oxygen Demand	3	mg/L	Exova Accutest	QA/QC Field Duplicate
807725	MRY-401	22-Jun-10	pH	8.17	pH units	Exova Accutest	QA/QC Field Duplicate
807725	MRY-401	22-Jun-10	Total Suspended Soilds	5	mg/L	Exova Accutest	QA/QC Field Duplicate
807725	MRY-401	22-Jun-10	Oil and Grease	<1	mg/L	Exova Accutest	QA/QC Field Duplicate
809589	MRY-6-1	29-Jun-10	Benzene	<0.5	ug/L	Exova Accutest	Pre-discharge sample
809589	MRY-6-1	29-Jun-10	Ethylbenzene	<0.5	ug/L	Exova Accutest	Pre-discharge sample
809589	MRY-6-1	29-Jun-10	Toluene	<0.5	ug/L	Exova Accutest	Pre-discharge sample
809589	MRY-6-1	29-Jun-10	Oil and Grease	<1	mg/L	Exova Accutest	Pre-discharge sample
809589	MRY-6-1	29-Jun-10	Lead	<0.001	mg/L	Exova Accutest	Pre-discharge sample
809590	MRY-7-1	29-Jun-10	Benzene	<0.5	ug/L	Exova Accutest	Pre-discharge sample
809590	MRY-7-1	29-Jun-10	Ethylbenzene	<0.5	ug/L	Exova Accutest	Pre-discharge sample
809590	MRY-7-1	29-Jun-10	Toluene	<0.5	ug/L	Exova Accutest	Pre-discharge sample
809590	MRY-7-1	29-Jun-10	Oil and Grease	<1	mg/L	Exova Accutest	Pre-discharge sample
809590	MRY-7-1	29-Jun-10	Lead	<0.001	mg/L	Exova Accutest	Pre-discharge sample
809591	MRY-7-2	29-Jun-10	Benzene	<0.5	ug/L	Exova Accutest	Pre-discharge sample
809591	MRY-7-2	29-Jun-10	Ethylbenzene	<0.5	ug/L	Exova Accutest	Pre-discharge sample
809591	MRY-7-2	29-Jun-10	Toluene	<0.5	ug/L	Exova Accutest	Pre-discharge sample

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TABLE 2.6

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WATER QUALITY RESULTS FOR WATER LICENCE MONITORING LOCATIONS

Sample Number	Sample ID	Date Sampled	Parameter Name	Result	Unit	Lab	Comments
809591	MRY-7-2	29-Jun-10	Oil and Grease	<1	mg/L	Exova Accutest	Pre-discharge sample
809591	MRY-7-2	29-Jun-10	Lead	<0.001	mg/L	Exova Accutest	Pre-discharge sample
809592	MRY-7-3	29-Jun-10	Benzene	<0.5	ug/L	Exova Accutest	Pre-discharge sample
809592	MRY-7-3	29-Jun-10	Ethylbenzene	<0.5	ug/L	Exova Accutest	Pre-discharge sample
809592	MRY-7-3	29-Jun-10	Toluene	<0.5	ug/L	Exova Accutest	Pre-discharge sample
809592	MRY-7-3	29-Jun-10	Oil and Grease	<1	mg/L	Exova Accutest	Pre-discharge sample
809592	MRY-7-3	29-Jun-10	Lead	<0.001	mg/L	Exova Accutest	Pre-discharge sample
809593	MRY-7-4	29-Jun-10	Benzene	<0.5	ug/L	Exova Accutest	Pre-discharge sample
809593	MRY-7-4	29-Jun-10	Ethylbenzene	<0.5	ug/L	Exova Accutest	Pre-discharge sample
809593	MRY-7-4	29-Jun-10	Toluene	<0.5	ug/L	Exova Accutest	Pre-discharge sample
809593	MRY-7-4	29-Jun-10	Oil and Grease	<1	mg/L	Exova Accutest	Pre-discharge sample
809593	MRY-7-4	29-Jun-10	Lead	<0.001	mg/L	Exova Accutest	Pre-discharge sample
809594	MRY-7-5	29-Jun-10	Benzene	<0.5	ug/L	Exova Accutest	Pre-discharge sample
809594	MRY-7-5	29-Jun-10	Ethylbenzene	<0.5	ug/L	Exova Accutest	Pre-discharge sample
809594	MRY-7-5	29-Jun-10	Toluene	<0.5	ug/L	Exova Accutest	Pre-discharge sample
809594	MRY-7-5	29-Jun-10	Oil and Grease	<1	mg/L	Exova Accutest	Pre-discharge sample
809594	MRY-7-5	29-Jun-10	Lead	<0.001	mg/L	Exova Accutest	Pre-discharge sample
810896	MRY-7	6-Jul-10	Benzene	<0.5	ug/L	Exova Accutest	
810896	MRY-7	6-Jul-10	Ethylbenzene	<0.5	ug/L	Exova Accutest	
810896	MRY-7	6-Jul-10	Toluene	<0.5	ug/L	Exova Accutest	
810896	MRY-7	6-Jul-10	Oil and Grease	<1	mg/L	Exova Accutest	
810896	MRY-7	6-Jul-10	Lead	<0.001	mg/L	Exova Accutest	
811578	MRY-7	8-Jul-10	Benzene	<0.5	ug/L	Exova Accutest	
811578	MRY-7	8-Jul-10	Ethylbenzene	<0.5	ug/L	Exova Accutest	
811578	MRY-7	8-Jul-10	Toluene	<0.5	ug/L	Exova Accutest	
811578	MRY-7	8-Jul-10	Oil and Grease	<1	mg/L	Exova Accutest	
811578	MRY-7	8-Jul-10	Lead	<0.001	mg/L	Exova Accutest	
811852	MRY-6-1	8-Jul-10	Benzene	<0.5	ug/L	Exova Accutest	Pre-discharge sample
811852	MRY-6-1	8-Jul-10	Ethylbenzene	<0.5	ug/L	Exova Accutest	Pre-discharge sample
811852	MRY-6-1	8-Jul-10	Toluene	<0.5	ug/L	Exova Accutest	Pre-discharge sample
811852	MRY-6-1	8-Jul-10	Oil and Grease	3	mg/L	Exova Accutest	Pre-discharge sample
811852	MRY-6-1	8-Jul-10	Lead	<0.001	mg/L	Exova Accutest	Pre-discharge sample
811853	MRY-6-2	9-Jul-10	Benzene	<0.5	ug/L	Exova Accutest	Pre-discharge sample
811853	MRY-6-2	9-Jul-10	Ethylbenzene	<0.5	ug/L	Exova Accutest	Pre-discharge sample
811853	MRY-6-2	9-Jul-10	Toluene	<0.5	ug/L	Exova Accutest	Pre-discharge sample
811853	MRY-6-2	9-Jul-10	Oil and Grease	12	mg/L	Exova Accutest	Pre-discharge sample
811853	MRY-6-2	9-Jul-10	Lead	<0.001	mg/L	Exova Accutest	Pre-discharge sample
811854	MRY-6-3	10-Jul-10	Benzene	<0.5	ug/L	Exova Accutest	Pre-discharge sample
811854	MRY-6-3	10-Jul-10	Ethylbenzene	<0.5	ug/L	Exova Accutest	Pre-discharge sample
811854	MRY-6-3	10-Jul-10	Toluene	<0.5	ug/L	Exova Accutest	Pre-discharge sample
811854	MRY-6-3	10-Jul-10	Oil and Grease	11	mg/L	Exova Accutest	Pre-discharge sample
811854	MRY-6-3	10-Jul-10	Lead	<0.001	mg/L	Exova Accutest	Pre-discharge sample
811855	MRY-6-4	10-Jul-10	Benzene	<2	ug/L	Exova Accutest	Pre-discharge sample
811855	MRY-6-4	10-Jul-10	Ethylbenzene	<2	ug/L	Exova Accutest	Pre-discharge sample
811855	MRY-6-4	10-Jul-10	Toluene	<2	ug/L	Exova Accutest	Pre-discharge sample
811855	MRY-6-4	10-Jul-10	Oil and Grease	11	mg/L	Exova Accutest	Pre-discharge sample
811855	MRY-6-4	10-Jul-10	Lead	<0.001	mg/L	Exova Accutest	Pre-discharge sample
812523	MRY-7	12-Jul-10	Benzene	<0.5	ug/L	Exova Accutest	
812523	MRY-7	12-Jul-10	Ethylbenzene	<0.5	ug/L	Exova Accutest	
812523	MRY-7	12-Jul-10	Toluene	<0.5	ug/L	Exova Accutest	
812523	MRY-7	12-Jul-10	Oil and Grease	<1	mg/L	Exova Accutest	
812523	MRY-7	12-Jul-10	Lead	<0.001	mg/L	Exova Accutest	
813775	MRY-10	13-Jul-10	Total Arsenic	0.00024	mg/L	Exova Accutest	
813775	MRY-10	13-Jul-10	Total Copper	0.00361	mg/L	Exova Accutest	
813775	MRY-10	13-Jul-10	Total Lead	0.00298	mg/L	Exova Accutest	
813775	MRY-10	13-Jul-10	Total Nickel	0.00551	mg/L	Exova Accutest	
813775	MRY-10	13-Jul-10	Total Zinc	0.0048	mg/L	Exova Accutest	
813341	MRY-10	13-Jul-10	pH	8.06	pH units	Exova Accutest	
813341	MRY-10	13-Jul-10	Total Suspended Soilds	8	mg/L	Exova Accutest	
	MRY-10	13-Jul-10	Oil and Grease	No Sheen	--	Visible Observation	
813888	MRY-7	17-Jul-10	Benzene	<0.5	ug/L	Exova Accutest	
813888	MRY-7	17-Jul-10	Ethylbenzene	<0.5	ug/L	Exova Accutest	
813888	MRY-7	17-Jul-10	Toluene	<0.5	ug/L	Exova Accutest	
813888	MRY-7	17-Jul-10	Oil and Grease	<1	mg/L	Exova Accutest	
813888	MRY-7	17-Jul-10	Lead	<0.001	mg/L	Exova Accutest	
813997	MRY-6	18-Jul-10	Benzene	<0.5	ug/L	Exova Accutest	
813997	MRY-6	18-Jul-10	Ethylbenzene	<0.5	ug/L	Exova Accutest	
813997	MRY-6	18-Jul-10	Toluene	<0.5	ug/L	Exova Accutest	
813997	MRY-6	18-Jul-10	Oil and Grease	**25**	mg/L	Exova Accutest	
813997	MRY-6	18-Jul-10	Lead	<0.001	mg/L	Exova Accutest	
814450	MRY-4	20-Jul-10	Faecal Coliforms	0	CFU/100 ml	Exova Accutest	
814713	MRY-4	20-Jul-10	Biological Oxygen Demand	5	mg/L	Exova Accutest	
814713	MRY-4	20-Jul-10	pH	8.04	pH units	Exova Accutest	
814713	MRY-4	20-Jul-10	Total Suspended Soilds	3	mg/L	Exova Accutest	
814713	MRY-4	20-Jul-10	Oil and Grease	<1	mg/L	Exova Accutest	
814451	MRY-402	20-Jul-10	Faecal Coliforms	0	CFU/100 ml	Exova Accutest	QA/QC Field Blank
814714	MRY-402	20-Jul-10	Chemical Oxygen Demand	<5	mg/L	Exova Accutest	QA/QC Field Blank
814714	MRY-402	20-Jul-10	Oil and Grease	1	mg/L	Exova Accutest	QA/QC Field Blank

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Sample Number	Sample ID	Date Sampled	Parameter Name	Result	Unit	Lab	Comments
814452	MRY-403	20-Jul-10	Faecal Coliforms	0	CFU/100 ml	Exova Accutest	QA/QC Travel Blank
814715	MRY-403	20-Jul-10	Chemical Oxygen Demand	<5	mg/L	Exova Accutest	QA/QC Travel Blank
814715	MRY-403	20-Jul-10	Oil and Grease	2	mg/L	Exova Accutest	QA/QC Travel Blank
814775	Landfill	20-Jul-10	Biological Oxygen Demand	<1	mg/L	Exova Accutest	Downstream of landfill (baseline)
814775	Landfill	20-Jul-10	pH	8.16	pH units	Exova Accutest	Downstream of landfill (baseline)
814775	Landfill	20-Jul-10	Total Suspended Soilds	<2	mg/L	Exova Accutest	Downstream of landfill (baseline)
814777	Landfill	20-Jul-10	Total Arsenic	0.00013	mg/L	Exova Accutest	Downstream of landfill (baseline)
814777	Landfill	20-Jul-10	Total Copper	0.00105	mg/L	Exova Accutest	Downstream of landfill (baseline)
814777	Landfill	20-Jul-10	Total Lead	<0.00005	mg/L	Exova Accutest	Downstream of landfill (baseline)
814777	Landfill	20-Jul-10	Total Nickel	0.00809	mg/L	Exova Accutest	Downstream of landfill (baseline)
814777	Landfill	20-Jul-10	Total Zinc	0.0013	mg/L	Exova Accutest	Downstream of landfill (baseline)
814776	Landfill Pond	20-Jul-10	Biological Oxygen Demand	7	mg/L	Exova Accutest	Standing water near landfill (baseline)
814776	Landfill Pond	20-Jul-10	pH	8.21	pH units	Exova Accutest	Standing water near landfill (baseline)
814776	Landfill Pond	20-Jul-10	Total Suspended Soilds	11	mg/L	Exova Accutest	Standing water near landfill (baseline)
814777	Landfill Pond	20-Jul-10	Total Arsenic	0.00016	mg/L	Exova Accutest	Standing water near landfill (baseline)
814777	Landfill Pond	20-Jul-10	Total Copper	0.00344	mg/L	Exova Accutest	Standing water near landfill (baseline)
814777	Landfill Pond	20-Jul-10	Total Lead	0.00024	mg/L	Exova Accutest	Standing water near landfill (baseline)
814777	Landfill Pond	20-Jul-10	Total Nickel	0.00881	mg/L	Exova Accutest	Standing water near landfill (baseline)
814777	Landfill Pond	20-Jul-10	Total Zinc	0.0018	mg/L	Exova Accutest	Standing water near landfill (baseline)
815185	MRY-7	21-Jul-10	Benzene	<0.5	ug/L	Exova Accutest	
815185	MRY-7	21-Jul-10	Ethylbenzene	<0.5	ug/L	Exova Accutest	
815185	MRY-7	21-Jul-10	Toluene	<0.5	ug/L	Exova Accutest	
815185	MRY-7	21-Jul-10	Oil and Grease	1	mg/L	Exova Accutest	
815185	MRY-7	21-Jul-10	Lead	<0.001	mg/L	Exova Accutest	
815516	MRY-6	22-Jul-10	Benzene	<0.5	ug/L	Exova Accutest	Verification Sample
815516	MRY-6	22-Jul-10	Ethylbenzene	<0.5	ug/L	Exova Accutest	Verification Sample
815516	MRY-6	22-Jul-10	Toluene	<0.5	ug/L	Exova Accutest	Verification Sample
815516	MRY-6	22-Jul-10	Oil and Grease	<1	mg/L	Exova Accutest	Verification Sample
815516	MRY-6	22-Jul-10	Lead	<0.001	mg/L	Exova Accutest	Verification Sample
815517	MRY-6	22-Jul-10	Benzene	<0.5	ug/L	Exova Accutest	Verification Sample
815517	MRY-6	22-Jul-10	Ethylbenzene	<0.5	ug/L	Exova Accutest	Verification Sample
815517	MRY-6	22-Jul-10	Toluene	<0.5	ug/L	Exova Accutest	Verification Sample
815517	MRY-6	22-Jul-10	Oil and Grease	1	mg/L	Exova Accutest	Verification Sample
815517	MRY-6	22-Jul-10	Lead	<0.001	mg/L	Exova Accutest	Verification Sample
815839	MRY-7	25-Jul-10	Benzene	<0.5	ug/L	Exova Accutest	
815839	MRY-7	25-Jul-10	Ethylbenzene	<0.5	ug/L	Exova Accutest	
815839	MRY-7	25-Jul-10	Toluene	<0.5	ug/L	Exova Accutest	
815839	MRY-7	25-Jul-10	Oil and Grease	1	mg/L	Exova Accutest	
815839	MRY-7	25-Jul-10	Lead	<0.001	mg/L	Exova Accutest	
815840	MRY-701	25-Jul-10	Benzene	<0.5	ug/L	Exova Accutest	QA/QC Field Duplicate
815840	MRY-701	25-Jul-10	Ethylbenzene	<0.5	ug/L	Exova Accutest	QA/QC Field Duplicate
815840	MRY-701	25-Jul-10	Toluene	<0.5	ug/L	Exova Accutest	QA/QC Field Duplicate
815840	MRY-701	25-Jul-10	Oil and Grease	2	mg/L	Exova Accutest	QA/QC Field Duplicate
815840	MRY-701	25-Jul-10	Lead	<0.001	mg/L	Exova Accutest	QA/QC Field Duplicate
817018	MRY-7	29-Jul-10	Benzene	<0.5	ug/L	Exova Accutest	
817018	MRY-7	29-Jul-10	Ethylbenzene	<0.5	ug/L	Exova Accutest	
817018	MRY-7	29-Jul-10	Toluene	<0.5	ug/L	Exova Accutest	
817018	MRY-7	29-Jul-10	Oil and Grease	<1	mg/L	Exova Accutest	
817018	MRY-7	29-Jul-10	Lead	<0.001	mg/L	Exova Accutest	
817022	MRY-701	29-Jul-10	Benzene	<0.5	ug/L	Exova Accutest	QA/QC Field Duplicate
817022	MRY-701	29-Jul-10	Ethylbenzene	<0.5	ug/L	Exova Accutest	QA/QC Field Duplicate
817022	MRY-701	29-Jul-10	Toluene	<0.5	ug/L	Exova Accutest	QA/QC Field Duplicate
817022	MRY-701	29-Jul-10	Oil and Grease	<1	mg/L	Exova Accutest	QA/QC Field Duplicate
817965	MRY-7	3-Aug-10	Benzene	<0.5	ug/L	Exova Accutest	
817965	MRY-7	3-Aug-10	Ethylbenzene	<0.5	ug/L	Exova Accutest	
817965	MRY-7	3-Aug-10	Toluene	<0.5	ug/L	Exova Accutest	
817965	MRY-7	3-Aug-10	Oil and Grease	<1	mg/L	Exova Accutest	
817965	MRY-7	3-Aug-10	Lead	<0.001	mg/L	Exova Accutest	
817966	MRY-701	3-Aug-10	Benzene	<0.5	ug/L	Exova Accutest	QA/QC Field Duplicate
817966	MRY-701	3-Aug-10	Ethylbenzene	<0.5	ug/L	Exova Accutest	QA/QC Field Duplicate
817966	MRY-701	3-Aug-10	Toluene	<0.5	ug/L	Exova Accutest	QA/QC Field Duplicate
817966	MRY-701	3-Aug-10	Oil and Grease	<1	mg/L	Exova Accutest	QA/QC Field Duplicate
817966	MRY-701	3-Aug-10	Lead	<0.001	mg/L	Exova Accutest	QA/QC Field Duplicate
819043	MRY-7	9-Aug-10	Benzene	<0.5	ug/L	Exova Accutest	
819043	MRY-7	9-Aug-10	Ethylbenzene	<0.5	ug/L	Exova Accutest	
819043	MRY-7	9-Aug-10	Toluene	<0.5	ug/L	Exova Accutest	
819043	MRY-7	9-Aug-10	Oil and Grease	<1	mg/L	Exova Accutest	
819043	MRY-7	9-Aug-10	Lead	<0.001	mg/L	Exova Accutest	
819044	MRY-701	9-Aug-10	Benzene	<0.5	ug/L	Exova Accutest	QA/QC Field Duplicate
819044	MRY-701	9-Aug-10	Ethylbenzene	<0.5	ug/L	Exova Accutest	QA/QC Field Duplicate
819044	MRY-701	9-Aug-10	Toluene	<0.5	ug/L	Exova Accutest	QA/QC Field Duplicate
819044	MRY-701	9-Aug-10	Oil and Grease	1	mg/L	Exova Accutest	QA/QC Field Duplicate
819044	MRY-701	9-Aug-10	Lead	<0.001	mg/L	Exova Accutest	QA/QC Field Duplicate
821636	MRY-10	13-Aug-10	Total Arsenic	0.00032	mg/L	Exova Accutest	
821636	MRY-10	13-Aug-10	Total Copper	0.00475	mg/L	Exova Accutest	
821636	MRY-10	13-Aug-10	Total Lead	0.00581	mg/L	Exova Accutest	
821636	MRY-10	13-Aug-10	Total Nickel	0.00742	mg/L	Exova Accutest	
821636	MRY-10	13-Aug-10	Total Zinc	0.0059	mg/L	Exova Accutest	

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Sample Number	Sample ID	Date Sampled	Parameter Name	Result	Unit	Lab	Comments
821625	MRY-10	13-Aug-10	pH	7.60	pH units	Exova Accutest	
821625	MRY-10	13-Aug-10	Total Suspended Soilds	79	mg/L	Exova Accutest	
	MRY-10	13-Aug-10	Oil and Grease	No Sheen	--	Visible Observation	
821626	Landfill	13-Aug-10	Biological Oxygen Demand	<1	mg/L	Exova Accutest	Landfill downstream
821626	Landfill	13-Aug-10	pH	8.03	pH units	Exova Accutest	Landfill downstream
821626	Landfill	13-Aug-10	Total Suspended Soilds	<2	mg/L	Exova Accutest	Landfill downstream
821637	Landfill	13-Aug-10	Total Arsenic	0.00023	mg/L	Exova Accutest	Landfill downstream
821637	Landfill	13-Aug-10	Total Copper	0.00106	mg/L	Exova Accutest	Landfill downstream
821637	Landfill	13-Aug-10	Total Lead	<0.00005	mg/L	Exova Accutest	Landfill downstream
821637	Landfill	13-Aug-10	Total Nickel	0.00918	mg/L	Exova Accutest	Landfill downstream
821637	Landfill	13-Aug-10	Total Zinc	0.0023	mg/L	Exova Accutest	Landfill downstream
822593	MRY-4	23-Aug-10	Faecal Coliforms	0	CFU/100 ml	Exova Accutest	
822543	MRY-4	23-Aug-10	Biological Oxygen Demand	3	mg/L	Exova Accutest	
822543	MRY-4	23-Aug-10	pH	7.61	pH units	Exova Accutest	
822543	MRY-4	23-Aug-10	Total Suspended Soilds	4	mg/L	Exova Accutest	
822543	MRY-4	23-Aug-10	Oil and Grease	n/a	mg/L	Exova Accutest	
822594	MRY-401	23-Aug-10	Faecal Coliforms	1	CFU/100 ml	Exova Accutest	QA/QC Field Duplicate
822544	MRY-401	23-Aug-10	Biological Oxygen Demand	3	mg/L	Exova Accutest	QA/QC Field Duplicate
822544	MRY-401	23-Aug-10	pH	7.63	pH units	Exova Accutest	QA/QC Field Duplicate
822544	MRY-401	23-Aug-10	Total Suspended Soilds	4	mg/L	Exova Accutest	QA/QC Field Duplicate
822544	MRY-401	23-Aug-10	Oil and Grease	n/a	mg/L	Exova Accutest	QA/QC Field Duplicate
827276	MRY-9	7-Sep-10	Total Arsenic	<0.0001	mg/L	Exova Accutest	
827276	MRY-9	7-Sep-10	Total Copper	0.00083	mg/L	Exova Accutest	
827276	MRY-9	7-Sep-10	Total Lead	0.00033	mg/L	Exova Accutest	
827276	MRY-9	7-Sep-10	Total Nickel	0.00101	mg/L	Exova Accutest	
827276	MRY-9	7-Sep-10	Total Zinc	0.0014	mg/L	Exova Accutest	
827283	MRY-9	7-Sep-10	pH	7.57	pH units	Exova Accutest	
827283	MRY-9	7-Sep-10	Total Suspended Soilds	23	mg/L	Exova Accutest	
	MRY-9	7-Sep-10	Oil and Grease	No Sheen	--	Visible Observation	
827277	MRY-10	7-Sep-10	Total Arsenic	<0.0001	mg/L	Exova Accutest	
827277	MRY-10	7-Sep-10	Total Copper	0.00154	mg/L	Exova Accutest	
827277	MRY-10	7-Sep-10	Total Lead	0.00067	mg/L	Exova Accutest	
827277	MRY-10	7-Sep-10	Total Nickel	0.00146	mg/L	Exova Accutest	
827277	MRY-10	7-Sep-10	Total Zinc	0.0030	mg/L	Exova Accutest	
827284	MRY-10	7-Sep-10	pH	7.68	pH units	Exova Accutest	
827284	MRY-10	7-Sep-10	Total Suspended Soilds	3	mg/L	Exova Accutest	
	MRY-10	7-Sep-10	Oil and Grease	No Sheen	--	Visible Observation	
827278	MRY-11	7-Sep-10	Total Arsenic	<0.0001	mg/L	Exova Accutest	
827278	MRY-11	7-Sep-10	Total Copper	0.00151	mg/L	Exova Accutest	
827278	MRY-11	7-Sep-10	Total Lead	0.00129	mg/L	Exova Accutest	
827278	MRY-11	7-Sep-10	Total Nickel	0.00196	mg/L	Exova Accutest	
827278	MRY-11	7-Sep-10	Total Zinc	0.0029	mg/L	Exova Accutest	
827285	MRY-11	7-Sep-10	pH	7.58	pH units	Exova Accutest	
827285	MRY-11	7-Sep-10	Total Suspended Soilds	5	mg/L	Exova Accutest	
	MRY-11	7-Sep-10	Oil and Grease	No Sheen	--	Visible Observation	
821626	Landfill	7-Sep-10	Biological Oxygen Demand	<1	mg/L	Exova Accutest	
821626	Landfill	7-Sep-10	pH	8.03	pH units	Exova Accutest	
821626	Landfill	7-Sep-10	Total Suspended Soilds	<2	mg/L	Exova Accutest	
821637	Landfill	7-Sep-10	Total Arsenic	0.00023	mg/L	Exova Accutest	
821637	Landfill	7-Sep-10	Total Copper	0.00106	mg/L	Exova Accutest	
821637	Landfill	7-Sep-10	Total Lead	<0.00005	mg/L	Exova Accutest	
821637	Landfill	7-Sep-10	Total Nickel	0.00918	mg/L	Exova Accutest	
821637	Landfill	7-Sep-10	Total Zinc	0.0023	mg/L	Exova Accutest	
830874	MRY-4	20-Sep-10	Faecal Coliforms	4	CFU/100 ml	Exova Accutest	
830896	MRY-4	20-Sep-10	Biological Oxygen Demand	10	mg/L	Exova Accutest	
830896	MRY-4	20-Sep-10	pH	7.66	pH units	Exova Accutest	
830896	MRY-4	20-Sep-10	Total Suspended Soilds	9	mg/L	Exova Accutest	
830896	MRY-4	20-Sep-10	Oil and Grease	2	mg/L	Exova Accutest	
830875	MRY-401	20-Sep-10	Faecal Coliforms	3	CFU/100 ml	Exova Accutest	QA/QC Field Duplicate
830897	MRY-401	20-Sep-10	Biological Oxygen Demand	10.00	mg/L	Exova Accutest	QA/QC Field Duplicate
830897	MRY-401	20-Sep-10	pH	7.60	pH units	Exova Accutest	QA/QC Field Duplicate
830897	MRY-401	20-Sep-10	Total Suspended Soilds	9	mg/L	Exova Accutest	QA/QC Field Duplicate
830897	MRY-401	20-Sep-10	Oil and Grease	7	mg/L	Exova Accutest	QA/QC Field Duplicate
840962	MRY-4	28-Oct-10	Faecal Coliforms	0	CFU/100 ml	Exova Accutest	
840962	MRY-4	28-Oct-10	Biological Oxygen Demand	7	mg/L	Exova Accutest	
840962	MRY-4	28-Oct-10	pH	8.22	pH units	Exova Accutest	
840962	MRY-4	28-Oct-10	Total Suspended Soilds	<2	mg/L	Exova Accutest	
840962	MRY-4	28-Oct-10	Oil and Grease	<1	mg/L	Exova Accutest	
840963	MRY-401	28-Oct-10	Faecal Coliforms	0	CFU/100 ml	Exova Accutest	QA/QC Field Duplicate
840963	MRY-401	28-Oct-10	Biological Oxygen Demand	<1	mg/L	Exova Accutest	QA/QC Field Duplicate
840963	MRY-401	28-Oct-10	pH	8.22	pH units	Exova Accutest	QA/QC Field Duplicate
840963	MRY-401	28-Oct-10	Total Suspended Soilds	3	mg/L	Exova Accutest	QA/QC Field Duplicate
840963	MRY-401	28-Oct-10	Oil and Grease	<1	mg/L	Exova Accutest	QA/QC Field Duplicate
MRY-4 2010/10/28	MRY-4	28-Oct-10	Toxicity*	Non-lethal		Exova	
846957	MRY-4	18-Nov-10	Faecal Coliforms	0	CFU/100 ml	Exova Accutest	
846963	MRY-4	18-Nov-10	Biological Oxygen Demand	1	mg/L	Exova Accutest	
846963	MRY-4	18-Nov-10	pH	8.13	pH units	Exova Accutest	
846963	MRY-4	18-Nov-10	Total Suspended Soilds	<2	mg/L	Exova Accutest	

Baffinland Iron Mines Corporation

TABLE 2.6

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2010 ANNUAL REPORT TO THE NUNAVUT WATER BOARD

WATER QUALITY RESULTS FOR WATER LICENCE MONITORING LOCATIONS

Sample Number	Sample ID	Date Sampled	Parameter Name	Result	Unit	Lab	Comments
846963	MRY-4	18-Nov-10	Oil and Grease	2	mg/L	Exova Accutest	
846959	MRY-402	18-Nov-10	Faecal Coliforms	0	CFU/100 ml	Exova Accutest	QA/QC Field Blank
846965	MRY-402	18-Nov-10	Biological Oxygen Demand	5	mg/L	Exova Accutest	QA/QC Field Blank
846965	MRY-402	18-Nov-10	pH	5.61	pH units	Exova Accutest	QA/QC Field Blank
846965	MRY-402	18-Nov-10	Total Suspended Soilds	<2	mg/L	Exova Accutest	QA/QC Field Blank
846965	MRY-402	18-Nov-10	Oil and Grease	<1	mg/L	Exova Accutest	QA/QC Field Blank
846960	MRY-403	18-Nov-10	Faecal Coliforms	40	CFU/100 ml	Exova Accutest	QA/QC Travel Blank
846966	MRY-403	18-Nov-10	Biological Oxygen Demand	<1	mg/L	Exova Accutest	QA/QC Travel Blank
846966	MRY-403	18-Nov-10	pH	5.80	pH units	Exova Accutest	QA/QC Travel Blank
846966	MRY-403	18-Nov-10	Total Suspended Soilds	<2	mg/L	Exova Accutest	QA/QC Travel Blank
846966	MRY-403	18-Nov-10	Oil and Grease	<1	mg/L	Exova Accutest	QA/QC Travel Blank
851892	MRY-4	9-Dec-10	Faecal Coliforms	<10	CFU/100 ml	Exova Accutest	
851898	MRY-4	9-Dec-10	Biological Oxygen Demand	1	mg/L	Exova Accutest	
851898	MRY-4	9-Dec-10	pH	7.93	pH units	Exova Accutest	
851898	MRY-4	9-Dec-10	Total Suspended Soilds	5	mg/L	Exova Accutest	
851898	MRY-4	9-Dec-10	Oil and Grease	<1	mg/L	Exova Accutest	
851893	MRY-402	9-Dec-10	Faecal Coliforms	<10	CFU/100 ml	Exova Accutest	QA/QC Field Blank
851900	MRY-402	9-Dec-10	Biological Oxygen Demand	<1	mg/L	Exova Accutest	QA/QC Field Blank
851900	MRY-402	9-Dec-10	pH	7.20	pH units	Exova Accutest	QA/QC Field Blank
851900	MRY-402	9-Dec-10	Total Suspended Soilds	<2	mg/L	Exova Accutest	QA/QC Field Blank
851900	MRY-402	9-Dec-10	Oil and Grease	<1	mg/L	Exova Accutest	QA/QC Field Blank
851894	MRY-403	9-Dec-10	Faecal Coliforms	<10	CFU/100 ml	Exova Accutest	QA/QC Travel Blank
851901	MRY-403	9-Dec-10	Biological Oxygen Demand	<1	mg/L	Exova Accutest	QA/QC Travel Blank
851901	MRY-403	9-Dec-10	pH	7.08	pH units	Exova Accutest	QA/QC Travel Blank
851901	MRY-403	9-Dec-10	Total Suspended Soilds	<2	mg/L	Exova Accutest	QA/QC Travel Blank
851901	MRY-403	9-Dec-10	Oil and Grease	<1	mg/L	Exova Accutest	QA/QC Travel Blank
855748	MRY-4	30-Dec-10	Faecal Coliforms	<10	CFU/100 ml	Exova Accutest	
855745	MRY-4	30-Dec-10	Biological Oxygen Demand	<1	mg/L	Exova Accutest	
855745	MRY-4	30-Dec-10	pH	8.11	pH units	Exova Accutest	
855745	MRY-4	30-Dec-10	Total Suspended Soilds	<2	mg/L	Exova Accutest	
855745	MRY-4	30-Dec-10	Oil and Grease	<1	mg/L	Exova Accutest	
855749	MRY-401	30-Dec-10	Faecal Coliforms	<10	CFU/100 ml	Exova Accutest	QA/QC Field Duplicate
855746	MRY-401	30-Dec-10	Biological Oxygen Demand	<1	mg/L	Exova Accutest	QA/QC Field Duplicate
855746	MRY-401	30-Dec-10	pH	8.15	pH units	Exova Accutest	QA/QC Field Duplicate
855746	MRY-401	30-Dec-10	Total Suspended Soilds	<2	mg/L	Exova Accutest	QA/QC Field Duplicate
855746	MRY-401	30-Dec-10	Oil and Grease	<1	mg/L	Exova Accutest	QA/QC Field Duplicate

Notes: MRY-401 is a field duplicate of MRY-4
MRY-701 is a field duplicate of MRY-7
* Acute lethality to Rainbow Trout, Oncorhynchus mykiss (as per Environment Canada's Environmental Protection Series Method EPS/1/RM/13).
Acute lethality to Daphnia magna (as per Environment Canada's Environmental Protection Series Biological Test Method EPS/1/RM/14).

Baffinland Iron Mines Corporation

TABLE 4.1

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2010 ANNUAL REPORT TO THE NUNAVUT WATER BOARD
DRILL CORE ANALYTICAL DATA

Hole ID	UTM Coordinates		Depth	Number of Samples	(Total) Arsenic (As)			Copper (Cu)			Nickel (Ni)			Lead (Pb)			Zinc (Zn)			Alumina (Al_2O_3)		
	Northing	Easting			Min.	Max.	Med.	Min.	Max.	Med.	Min.	Max.	Med.	Min.	Max.	Med.	Min.	Max.	Med.	Min.	Max.	Med.
	(m)	(m)	(m)		(g/t)			(g/t)			(g/t)			(g/t)			(g/t)			(%)		
MR4-10-180	7929250	541363	299	6	40	740	40	4.8	150	43	19	380	85	30	30	30	50	730	87	0.51	16.2	10.9
MR4-10-181	7929352	541353	68	no samples																		
MR4-10-184	7929352	541353	173	31	40	160	40	1.5	820	49	12	540	85	30	30	30	50	570	71	0.23	18.5	5.21
MR4-10-183	7929360	541053	170	48	40	210	40	2.3	410	59	20	670	88.5	30	46	30	50	450	63.5	0.11	18.2	7.13
MR4-10-185	7929303	540756	194	63	40	63	40	8.4	200	69	24	450	120	30	88	30	50	330	90	0.47	30.7	13.3
MR4-10-186	7929180	540766	266	38	40	120	40	2.3	490	44	20	860	73.5	30	30	30	50	240	63.5	0.8	26.6	10.7
MR4-10-187	7929286	540456	227.5	53	40	1200	40	1.6	660	26	10	1200	89	30	30	30	50	130	50	0.2	17.9	11
MR4-10-189	7929248	540159	156	65	40	220	40	2.6	410	19	10	900	33	30	34	30	50	190	50	0.11	20.7	9.47
MR4-10-190	7929110	540169	221	11	40	40	40	1.8	110	4.6	10	110	26	30	30	30	50	110	50	0.45	16.7	5.08
MR4-10-192	7929225	539860	191	33	40	330	40	0.9	930	37	10	740	26	30	30	30	50	200	50	0.25	19.2	2.975
MR4-10-194	7929189	539560	146	35	40	40	40	9.3	270	32	10	760	50	30	30	30	50	150	50	0.38	17.5	6.18
MR4-10-195	7929109	539568	248	31	40	40	40	2	310	21	10	320	35	30	110	30	50	190	50	0.14	19.4	2.77
MR4-10-196	7929168	539259	170	11	40	40	40	3.7	99	13	10	44	13	30	30	30	50	74	50	0.12	10.2	2.05
MR4-10-197	7929381	541653	138	18	40	300	40	4.9	210	95.5	10	910	94.5	30	30	30	50	230	77	0.2	17	11.7
MR4-10-200	7929463	541955	104	4	40	311	40	5.8	420	92	14	650	130	30	30	30	50	200	50	0.47	21.1	8.67
MR4-10-198	7929574	541945	239	19	40	130	40	1.6	450	85	24	710	140	30	30	30	50	1200	86	0.11	19.7	10
MR4-10-201	7929676	542230	154	15	40	40	40	15	370	95	18	340	99	30	30	30	50	110	81	0.54	16.3	11.1
MR5-10-182	7926375	543331	149	77	40	40	40	0.5	68	3.2	10	200	19	30	91	30	50	80	50	0.15	14.6	0.65
MR5-10-188	7926337	543423	191	81	40	40	40	0.5	190	3	10	870	34	30	30	30	50	150	50	0.17	23.5	1.2
MR5-10-191	7926406	543237	170	74	40	40	40	0.9	240	3.2	10	800	14.5	30	30	30	50	140	50	0.04	14.9	0.63
MR5-10-193	7926452	543368	206	52	40	140	40	0.5	270	2.35	10	1100	24	30	73	30	50	99	50	0.23	18.8	1.99
MR5-10-199	7926475	543044	164	70	40	40	40	0.5	110	3.55	10	1100	11.5	30	30	30	50	130	50	0.09	16	0.41
MR5-10-202	7926641	542791	149	28	40	40	40	1.8	85	5.25	10	110	10	30	210	30	50	150	50	0.06	18.8	0.265
MR5-10-207	7926827	542495	56	19	40	40	40	2.6	17	5.6	10	95	10	30	62	30	50	50	50	0.06	7.34	0.25
MR5-10-205	7926907	542538	189	21	40	40	40	1.7	180	4.5	10	260	33	30	30	30	50	136	50	0.03	15.8	0.45
MR5-10-203	7926875	542239	150	17	40	40	40	2.9	16	7.4	10	37	12	30	30	30	50	50	50	0.12	0.88	0.34
MR5-10-204	7926609	542944	149	16	40	40	40	1.7	15	3.35	10	120	30	30	51	30	50	148	50	0.15	18.4	0.655
MR5-10-209	7926166	543561	146	no samples																		
MR5-10-208	7926827	542495	38	no samples																		
MR5-10-211	7926803	542537	95	25	40	40	40	1.4	72	4.1	10	310	17	30	30	30	50	120	50	0.11	22.1	0.95
MR5-10-212	7925479	544404	104	13	40	40	40	4.4	35	9.5	10	26	10	30	30	30	50	50	50	0.27	5.67	0.55
MR5-10-213	7925216	544566	146	30	40	40	40	1.5	200	8.3	10	67	10	30	42	30	50	100	50	0.04	16.8	0.385
MR5-10-215	7924918	544623	13	no samples																		
MR5-10-216	7924918	544622	143	15	40	40	40	8.2	380	36	21	140	44	30	30	30	50	58	50	0.21	15.9	0.53
MR5-10-218	7924310	544977	112	22	40	40	40	1.4	650	5.25	10	200	20	30	30	30	50	100	50	0.09	14.3	0.365
MR5-10-219	7923739	545532	143	54	40	40	40	0.5	75	4.8	10	93	22.5	30	30	30	50	160	50	0.05	15.1	0.835
MR5-10-221	7923226	545657	149	44	40	40	40	0.9	88	3.3	10	220	14	30	30	30	50	78	50	0.01	16.7	0.425
MR3-10-206	7913798	566963	11	no samples																		
MR3-10-210	7913798	566963	152	33	40	40	40	2.3	270	12	16	2100	93	30	30	30	50	170	50	0.08	19	4.34
MR2-10-214	7914245	566990	197	51	40	40	40	5.3	1500	46	10	4200	130	30	30	30	50	300	62	0.15	26	5.95
MR2-10-217	7914243	566355	101	35	40	40	40	1.6	110	4.2	10	480	33	30	30	30	50	190	50	0.02	20	0.19
MR2-10-220	7914243	566355	179	70	40	40	40	1.5	160	6.7	10	720	35	30	30	30	50	180	50	0.04	19.7	0.425

Hole ID	UTM Coordinates		Depth	Number of Samples	(Total) Arsenic (As)			Copper (Cu)			Nickel (Ni)			Lead (Pb)			Zinc (Zn)			Alumina (Al_2O_3)		
	Northing	Easting			Min.	Max.	Med.	Min.	Max.	Med.	Min.	Max.	Med.	Min.	Max.	Med.	Min.	Max.	Med.	Min.	Max.	Med.
	(m)	(m)	(m)		(µg/g)			(µg/g)			(µg/g)			(µg/g)			(µg/g)			(%)		
ARD-2B-NW	7915107	563389	101	16																12.7	25.7	18.4
ARD-2A-NW	7914427	562825	110	16	0.5	0.5	0.5	6.2	260	30	4.9	110	8.55	3.4	120	6.85	61	350	98.5			
ARD-2A-SE	7914427	562825	107	17																12	16.1	13.8

NOTES:

1. MEDIAN VALUES FOR SAMPLES WITH CONTENT OF LESS THAN A CERTAIN VALUE ARE CALCULATED ASSUMING THAT VALUE TO BE THE MAXIMUM (I.E. ALL "< 40" VALUES WERE CHANGED TO "40" IN ORDER TO CALCULATE THE MEDIAN).

TABLE 6.1

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2010 ANNUAL REPORT TO THE NUNAVUT WATER BOARD

SUMMARY OF UNAUTHORIZED DISCHARGES

Date of Occurrence	Quantity	Product Spilled	Cause of Spill	Approximate Location	Proximity to any Water body?	Actions Taken (Summarized)	Spill no.
1-May-10	2.1 m³	P50 Diesel and water	A 5 cm tear in the storage bladder containing a misture of P50 and water that is thought to have been cause by an ice protusion inside the bladder that punctured the bladder as a result of personnel working on the surface of the bladder.	Within Engineered Contaminment at the Milne Inlet Tank Farm	None	None. Soil will be remediated when the Tank Farm is decommissioned.	2010-001
16-Jul-10	<200L	P50 diesel	Caused by leaking couplings in the fuel transfer system.	Within Engineered Contaminment at the Milne Inlet Tank Farm	None	Faulty couplings have been replaced. Soil will be remediated when the Tank Farm is decommissioned.	2010-002
31-Aug-09	600L	Hertel - All Purpose Cleaner	A pallet containg ~ 200 - 4 L containers was frozen, then thawed and concequently roughly 170 of the jugs ruptured.	LAT: 71°19'32", LONG: 79°22'24"	None	The remaining product was moved to a heated environment. The contaminated soil was excavated and is stored in lined containment awaiting eventual disposal.	2010-003

TABLE 10.1

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2010 ANNUAL REPORT TO THE NUNAVUT WATER BOARD

MEETINGS WITH PUBLIC, GOVERNMENT AND INUIT ORGANIZATIONS

Date	Group	Location	Description
April 22, 2010	Public Meeting Arctic Bay Hunters and Trapper Association Arctic Bay Hamlet Council	Arctic Bay	Project updates and present preliminary findings on Impact assessment provided
April 19, 2010	Puplic Meeting - HTA Cape Dorset Hamlet Council	Cape Dorset	Project updates and present preliminary findings on Impact assessment provided
April 4-5, 2010	Invited persons	Cape Dorset	Baffinland consultants hosted workshops on marine mammals, land use and caribou
April 24, 2010	Public Meeting Clyde River Hamlet Council	Clyde River	Project updates and present preliminary findings on Impact assessment provided
September 30, 2010	Public Meeting High School Students	Clyde River	Project update
September 29, 2010	Public Meeting High School Students	Hall Beach	Project update, included water licence renewal presentation
April 21, 2010	Public Meeting -HTA/CLARC Igloolik Hamlet Council	Igloolik	Project updates and present preliminary findings on Impact assessment provided, Project update included water licence renewal presentation
September 28, 2010	Public Meeting High School Students	Igloolik	Project update
April 26, 2010	Public Meeting - HTA Kimmirut Hamlet Council	Kimmirut	Project updates and present preliminary findings on Impact assessment provided
June 21-23, 2010	Public Meeting Invited persons	Kimmirut	Baffinland consultants hosted a workshops on marine mammals, land use and caribou
April 23, 2010	Public Meeting Pond Inlet Hamlet Inlet Mitimatillik Hunters and Trappers Organization	Pond Inlet	Project updates and present preliminary findings on Impact assessment provided, Project update included water licence renewal presentation
August 18, 2010	Public Meeting Pond Inlet Hamlet Inlet Mitimatillik Hunters and Trappers Organization	Pond Inlet	Open House to provide updates and present preliminary findings on impact assessment
October 5, 2010	Public Meeting Pond Inlet Hamlet Inlet Mitimatillik Hunters and Trappers Organization	Pond Inlet	Project update (included water licence renewal presentation)
September 13-17, 2010	Invited Persons from Tier 1 and 2 Communities	Mary River Site	Thematic workshops held to present baseline results and preliminary impact assessment conclusions to representatives of potentially affected communities and seek input on both potential effects as well as the potential significance of these effects, also presentation given on water licence renewal.

TABLE 10.2

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

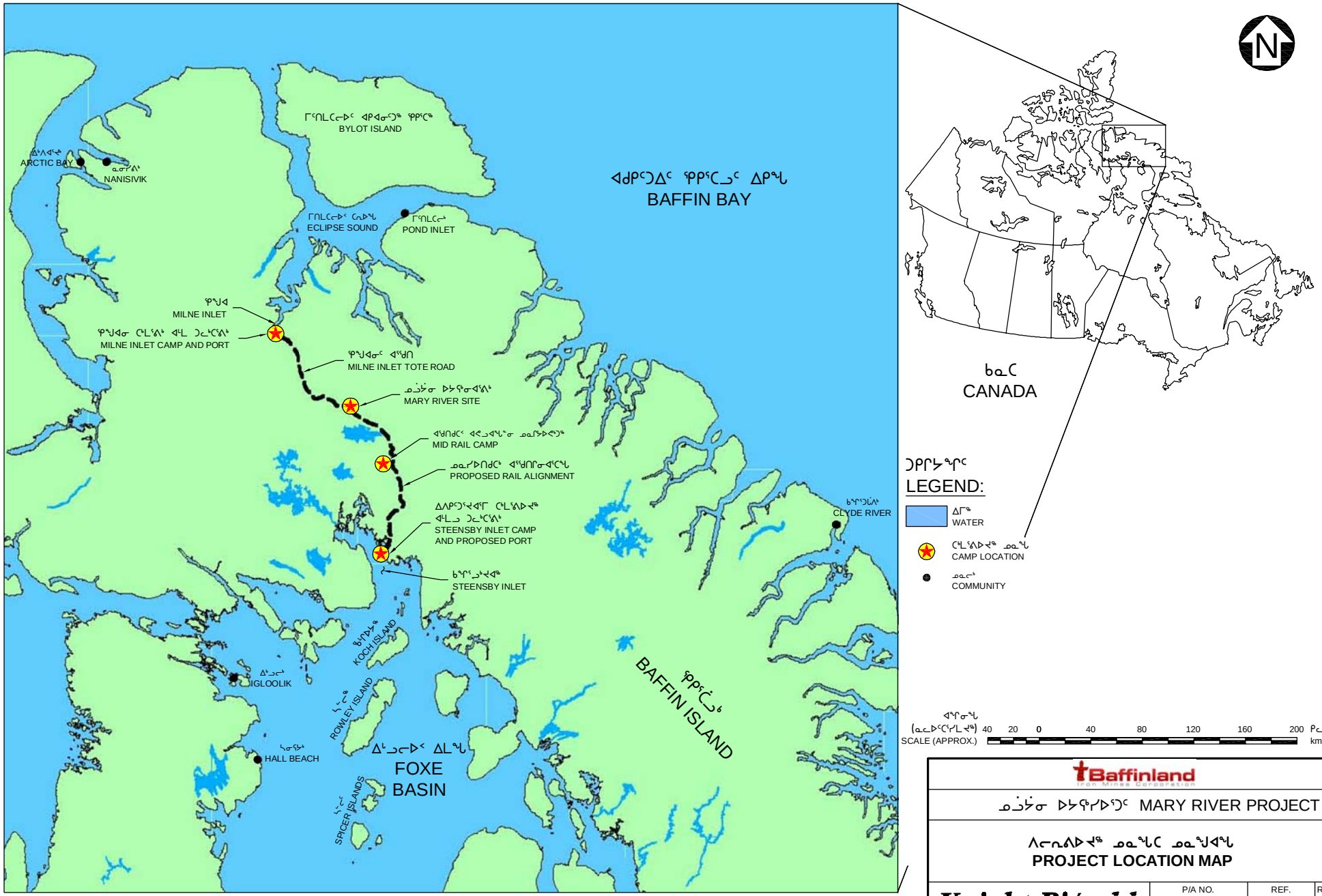
2010 ANNUAL REPORT TO THE NUNAVUT WATER BOARD

STAKEHOLDER SITE VISITS TO MARY RIVER

Date	Organization or Group
May 12-13, 2010	Workers Compensation Board Mines Inspector
July 23-26, 2010	Government Of Nunavut
Aug 2-5, 2010	DFO
Aug 4-6, 2010	Workers Compensation Board Mines Inspector
July 13, 2010	INAC Land Inspector
Sept 1-3, 2010	DFO & INAC
Sept 3-6, 2010	QIA - A&R audit
Sept 6-8, 2010	Government Of Nunavut
Sept 10-17, 2010	Thematic Training Group (35 People)

FIGURES

XREF FILE(S): IMAGE FILE(S): 4 Baffinland logo-big corp Baffinland logo_new logo-big corp NORTH BAFFINLAND



Baffinland Iron Mines Corporation

ᓄᓇᕗᑦ ᐅᕆᖅᓂᐅᑐᑎᑦ MARY RIVER PROJECT

ᐱᓕᕆᓂᐊᕐᓂᖅ ᓄᓇᖃᖅ ᓄᓇᖅᓯᐊᖅᖃᖅ
PROJECT LOCATION MAP

Knight Piésold CONSULTING

P/A NO.	REF.	REV.
NB102-00181/27	NB11-00165	0

ᑎᑎᕋᐅᓵᕐᒪᔭᖅ FIGURE **1.1**

NORTH BAY ON, SAVED: I:\1\02\00181\27\VA\Acad\Fig\A08_r0 . 3/25/2011 2:48:19 PM PRINTED: 3/25/2011 2:48:31 PM . A_Landscape . amoore

SAVED: I:\1\02\00181\27\A\Acad\Figs\B50_r0 , 3/30/2011 9:59:30 AM , AMOORE PRINTED: 3/30/2011 10:01:04 AM , Layout1 , AMOORE
XREF FILE(S): TOPO - 01 - MAR 06 2009; INUIT OWNED LANDS - SURFACE AND SUBSERFACE - 01 - MAR 05 2009; RAILWAY ALIGNMENT - MARY RIVER STEENSBY - OCT 07 2008; ROAD EXISTING - 01 - MAR 05 2009; ROAD TOTE AS-CONSTRUCTED - 01 - JAN 29 2008; RAILWAY CONSTRUCTION ACCESS ROAD -01 - OCT 15 2008; ClaimBlocks IMAGE FILE(S): Baffinland logo-big corp

500000 E
550000 E
600000 E
650000 E
8000000 N
7950000 N
7900000 N
7850000 N
7800000 N
7750000 N
N

MILNE INLET
MILNE INLET CAMP
PHILLIPS CREEK
PI-19
PI-20
PI-14
PI-12
PI-13
PI-15
PI-17
PI-16
CROWN MINERAL CLAIMS
MILNE INLET TOTE ROAD
KATIKTOK LAKE
MCOUAT LAKE BLOCK
(18 CLAIMS) DEPOSIT NO. 5
DEPOSIT NO. 1 MINING LEASE 2484
DEPOSIT NO. 4 MINING LEASE 2483
DEPOSIT NO. 5
DEPOSIT NO. 1
TURNER RIVER BLOCK
(9 CLAIMS) DEPOSIT NO. 7
QIA SURFACE COMMERCIAL LEASE BOUNDARY
GLACIER LAKES CLAIMS
(20 CLAIMS) DEPOSIT NO. 6
RAVN RIVER
NTI BAFFINLAND JOINT VENTURE AREA 16,695 HA
MARY RIVER CAMP
DEPOSIT NOS. 2, AND 3
MINING LEASE 2485
SOUTHERN BOUNDARY OF NORTH BAFFIN
PLANNING REGION
ANGAJURJUALUK LAKE
NORTH COCKBURN RIVER (8 CLAIMS) DEPOSIT
NO. 8
NORTH ROWLEY RIVER
(4 CLAIMS) DEPOSIT NO. 9
MID-RAIL CAMP (UNOCCUPIED IN 2010)
QUARTZ LAKE
NINA BANG LAKE
COCKBURN RIVER
ROWLEY RIVER
PROPOSED RAILWAY
CONSTRUCTION ACCESS ROAD
ERICHSEN LAKE
RAVN RIVER
TARUJAQ ARM
STEENSBY INLET CAMP
STEENSBY INLET

LEGEND:

- WATER
- INUIT OWNED LAND - SURFACE ONLY EXCLUDING MINERALS
- INUIT OWNED LAND - SURFACE AND SUBSURFACE INCLUDING MINERALS
- MINERAL LEASE BOUNDARY
- CROWN LAND
- EXISTING BORROW AREA (IOL COMMERCIAL LEASE)
- EXISTING ROCK QUARRY (IOL COMMERCIAL LEASE)
- NTI EXPLORATION AREA
- CROWN MINERAL CLAIMS
- MILNE INLET TOTE ROAD
- PROPOSED RAIL ALIGNMENT
- PROPOSED CONSTRUCTION ACCESS ROAD
- RIVER/STREAM/DRAINAGE
- CONTOUR

NOTES:

1. BASE MAP: © HER MAJESTY THE QUEEN IN RIGHTS OF CANADA, DEPARTMENT OF NATURAL RESOURCES (2004). ALL RIGHTS RESERVED.
2. COORDINATE GRID IS SHOWN IN UTM (NAD83) ZONE 17 AND IS IN METRES.
3. CONTOURS ARE IN METRES. CONTOUR INTERVAL VARIES.
4. PROPOSED RAIL ALIGNMENT PROVIDED BY CANARAIL CONSULTANTS INC.

SCALE A 8 4 0 10 20 30 40 km

Baffinland Iron Mines Corporation

MARY RIVER PROJECT

LOCATION OF PROJECT ACTIVITIES

Knight Piésold CONSULTING

P/A NO. NB102-181/27 | REF NO. NB11-00169 | FIGURE 1.2 | REV 0

501500 E
502000 E
502500 E
503000 E
503500 E
504000 E
504500 E
505000 E
7977000 N
7976500 N
7976000 N
7975500 N
7975000 N

ᖃᓐᓇᒧᐊ
MILNE INLET

ᐃᓚᒋᑦ ᓱᓕᔪᓚᐅᒻ ᐃᓕᑐᐃᓐ
EFFLUENT DISCHARGE LOCATION TO RECEIVING ENVIRONMENT

ᐃᓄᑦᑐᓄᖅ ᓱᓕᔪᓚᐅᒻ ᐃᓕᑐᐃᓐᓄᑦ ᐊᑭᓚᖅᑐᑦ ᓴᓇᔨᓕᕆᔨᒃᑯᑦ ᐊᑭᓕᓯᓗᓂᑦ ᓄᓇᕗᑦ (ᐱᑎᑕᓇᑦᑐᑦ ᑲᒪᒋᔭᐅᓂᖅ 2008)
TEMPORARY SPUD BARGE ARRANGEMENT (REMOVED OCTOBER 2008)

ᓴᖅᑭᑐᖅ ᐊᒪᓗ ᓴᖅᑭᑐᖅ ᐅᑭᐅᓂᒃ ᐃᑎᓐᓄᑦ
ORE PAD AND RESIDUAL ORE

ᓴᓇᓯᒪᓕᖅᐸᑦ ᐃᓅᓯᕕᒃᓴᖅᑎᑦᑎᓂᒃ
POLISHING/WASTE STABILIZATION POND

ᐃᓄᖅᑑᖅ
LAYDOWN AREA

ᐅᑭᐅᖅ
INCINERATOR

ᐅᑭᐅᖅᑑᑎᒃ ᐃᓅᓯᕕᒃᓴᖅᑎᑦᑎᓂᒃ ᐊᓯᔪᓚᖅᑐᑦ
HAZARDOUS WASTE BERM

ᐅᖃᐅᓯᖅᑐᑦ ᑕᒪᓐᓇᒪᑦ
TENT CAMP (2010)

ᓴᓇᔨᓕᕆᔨᒃᑯᑦ ᐃᓄᖅᑑᖅ
TRAILER CAMP (CLOSED)

ᐅᖃᐅᓯᖅᑐᑦ ᐃᓅᓯᕕᒃᓴᖅᑎᑦᑎᓂᒃ
WASTE WATER TREATMENT FACILITY (NOT OPERATIONAL IN 2010)

ᐃᓕᓴᕐᓂᐊᕐᓂᖅ ᐃᓅᓯᕕᒃᓴᖅᑎᑦᑎᓂᒃ
FUEL STORAGE

ᐃᓕᓴᕐᓂᐊᕐᓂᖅ ᓄᓇᕗᒻᒥ
FUEL FARM

ᐊᐃᓕᖅᓯᒪᓕᒃ ᐃᓕᓴᕐᓂᐊᕐᓂᖅ
OWS AREA

ᐃᓄᓕᕐᓂᐊᖅᑐᑦ ᐃᓄᐃᑦᑐᓄᖅ
LINED STORAGE AREA

ᐃᓕᓴᕐᓂᐊᕐᓂᑦ ᐃᓅᓯᓪᓚᐃᓂᖅ
BULK FUEL LOAD OUT AREA

ᓱᓇᐅᒋᔭᐃᓂᖅ ᐃᓅᓂᖅᑐᑦ
LINED STORAGE

ᓇᓗᓇᖅ
GARAGE

ᐃᓄᖅᑑᖅ
LAYDOWN AREA

ᒥᑦᑕᐃᓇᖅ
AIRSTRIP

ᐃᓚᖓᑕᐅᓂᖅ ᐅᖃᐅᓯᖅ
MILNE INLET TOTE ROAD

ᐊᑐᐊᓘᓐᓃᑦ 1
ROCK QUARRY NO. 1

ᐊᓯᖏᓐᓄᑦ ᐃᓚᔨᓕᒋᓂᖅ ᐃᓅᖅᑎᓂᖅ
PERMITTED OPEN BURN PIT AREA

ᐊᓯᖏᓐᓄᑦ
BORROW PITS

ᐃᓚᔨᖅᑕᐅᓂᖅ ᐊᓯᖏᓐᓄᑦ 1
BORROW SOURCE NO. 1

ᐃᓄᖅᑑᖅ ᐅᖃᐅᓯᖅ ᐊᑭᓚᖅᑐᑦ ᐃᓚᖓᑕᐅᓂᖅ ᐱᓕᕆᔨᒃᑯᑦ ᐃᓅᓯᕕᒃᓴᖅᑎᑦᑎᓂᒃ
HTO CABIN

ᑕᒪᓐᓇᒪᑦ ᐊᑐᐊᓘᓐᓃᑦ ᐊᑭᓚᖅᑐᑦ ᐃᓅᓯᕕᒃᓴᖅᑎᑦᑎᓂᒃ
TENT CAMP (2010)

ᐃᓅᓯᕕᒃᓴᖅᑎᑦᑎᓂᒃ ᐊᑭᓚᖅᑐᑦ
WASTE WATER TREATMENT FACILITY (NOT OPERATIONAL IN 2010)

ᐃᓅᓯᕕᒃᓴᖅᑎᑦᑎᓂᒃ ᐊᑭᓚᖅᑐᑦ
FUEL STORAGE

ᐃᓅᓯᕕᒃᓴᖅᑎᑦᑎᓂᒃ ᐊᑭᓚᖅᑐᑦ
FUEL FARM

ᐃᓅᓯᕕᒃᓴᖅᑎᑦᑎᓂᒃ ᐊᑭᓚᖅᑐᑦ
OWS AREA

ᐃᓅᓯᕕᒃᓴᖅᑎᑦᑎᓂᒃ ᐊᑭᓚᖅᑐᑦ
WASTE WATER TREATMENT FACILITY (NOT OPERATIONAL IN 2010)

ᐃᓅᓯᕕᒃᓴᖅᑎᑦᑎᓂᒃ ᐊᑭᓚᖅᑐᑦ
HAZARDOUS WASTE BERM

ᐃᓅᓯᕕᒃᓴᖅᑎᑦᑎᓂᒃ ᐊᑭᓚᖅᑐᑦ
PERMITTED OPEN BURN PIT AREA

ᐃᓅᓯᕕᒃᓴᖅᑎᑦᑎᓂᒃ ᐊᑭᓚᖅᑐᑦ
INCINERATOR

ᐃᓅᓯᕕᒃᓴᖅᑎᑦᑎᓂᒃ ᐊᑭᓚᖅᑐᑦ
LAYDOWN AREA

ᐃᓅᓯᕕᒃᓴᖅᑎᑦᑎᓂᒃ ᐊᑭᓚᖅᑐᑦ
TROTE ROAD

ᐃᓅᓯᕕᒃᓴᖅᑎᑦᑎᓂᒃ ᐊᑭᓚᖅᑐᑦ
ROCK QUARRY NO. 1

ᐃᓅᓯᕕᒃᓴᖅᑎᑦᑎᓂᒃ ᐊᑭᓚᖅᑐᑦ
PERMITTED OPEN BURN PIT AREA

ᐃᓅᓯᕕᒃᓴᖅᑎᑦᑎᓂᒃ ᐊᑭᓚᖅᑐᑦ
BORROW PITS

ᐃᓅᓯᕕᒃᓴᖅᑎᑦᑎᓂᒃ ᐊᑭᓚᖅᑐᑦ
BORROW SOURCE NO. 1

ᐃᓅᓯᕕᒃᓴᖅᑎᑦᑎᓂᒃ ᐊᑭᓚᖅᑐᑦ
HAZARDOUS WASTE BERM

ᐃᓅᓯᕕᒃᓴᖅᑎᑦᑎᓂᒃ ᐊᑭᓚᖅᑐᑦ
TENT CAMP (2010)

ᐃᓅᓯᕕᒃᓴᖅᑎᑦᑎᓂᒃ ᐊᑭᓚᖅᑐᑦ
TRAILER CAMP (CLOSED)

ᐃᓅᓯᕕᒃᓴᖅᑎᑦᑎᓂᒃ ᐊᑭᓚᖅᑐᑦ
WASTE WATER TREATMENT FACILITY (NOT OPERATIONAL IN 2010)

ᐃᓅᓯᕕᒃᓴᖅᑎᑦᑎᓂᒃ ᐊᑭᓚᖅᑐᑦ
GARAGE

ᐃᓅᓯᕕᒃᓴᖅᑎᑦᑎᓂᒃ ᐊᑭᓚᖅᑐᑦ
LAYDOWN AREA

ᐃᓅᓯᕕᒃᓴᖅᑎᑦᑎᓂᒃ ᐊᑭᓚᖅᑐᑦ
MILNE INLET TOTE ROAD

ᐃᓅᓯᕕᒃᓴᖅᑎᑦᑎᓂᒃ ᐊᑭᓚᖅᑐᑦ
ROCK QUARRY NO. 1

ᐃᓅᓯᕕᒃᓴᖅᑎᑦᑎᓂᒃ ᐊᑭᓚᖅᑐᑦ
PERMITTED OPEN BURN PIT AREA

ᐃᓅᓯᕕᒃᓴᖅᑎᑦᑎᓂᒃ ᐊᑭᓚᖅᑐᑦ
BORROW PITS

ᐃᓅᓯᕕᒃᓴᖅᑎᑦᑎᓂᒃ ᐊᑭᓚᖅᑐᑦ
BORROW SOURCE NO. 1

25
50
75
100

ᐃᓕᓴᕐᓂᐊᕐᓂᖅ ᐅᖃᐅᓯᖅ ᐊᑭᓚᖅᑐᑦ ᐃᓅᓯᕕᒃᓴᖅᑎᑦᑎᓂᒃ
ᐃᓅᓯᕕᒃᓴᖅᑎᑦᑎᓂᒃ ᐊᑭᓚᖅᑐᑦ

N

ᓄᓇᕗᑦ ᐅᒪᔨᐱᑦ ᐊᒪᓗᓯᑎᒃᓴᓂᖅ
MILNE INLET CAMP AND PORT

MRY-1
MRY-2
MRY-3
MRY-4
MRY-4A
MRY-5
MRY-6
MRY-7
MRY-9
MRY-10
MRY-11
MRY-12

ᒪᓂᕐᓂᖅ ᐅᒪᔨᐱᑦ ᐊᓯᔾᔨᖅᑕᐅᓂᖅ
MARY RIVER CAMP

ᑲᓇᕐᓂᖅ ᐅᒪᔨᐱᑦ ᐊᓯᔾᔨᖅᑕᐅᓂᖅ
MILNE INLET TOTE ROAD

LANDFILL MONITORING LOCATION

ᐊᒪᓗᓯᑎᒃᓴᓂᖅ ᐅᒪᔨᐱᑦ ᐊᓯᔾᔨᖅᑕᐅᓂᖅ
STOCKPILES

ᐊᓂᕐᓇᖅ
LAYDOWN AREA

ᐅᕙᓪᓕᐊᓂᖅ
FUEL STORAGE

ᐅᕙᓪᓕᐊᓂᖅ ᐊᓂᕐᓇᖅ ᓴᖅᑭᑎᒃᓴᖅ
POLISHING WASTE STABILIZATION POND (PWSP)

ᐅᕙᓪᓕᐊᓂᖅ ᓄᓇᖓ
FUEL FARM

ᕿᓚᒻᒥᑦ
AIRSTRIP

ᖃᓄᐃᓕᖅᑐᑦ ᓄᓇᖓ
SHANCO CAMP

ᐊᓂᕐᓇᖅ ᓴᐃᓕᓴᕐᓂᐊᕐᓂᖅ
HAZARDOUS WASTE STORAGE

ᐊᓂᕐᓇᖅ
LAYDOWN AREA

ᐊᒪᓗᓯᑎᒃᓴᓂᖅ ᐅᒪᔨᐱᑦ ᐊᓯᔾᔨᖅᑕᐅᓂᖅ
DEPOSIT NOS. 2, 3, AND 3B
MINING LEASE 2485

ᐊᒪᓗᓯᑎᒃᓴᓂᖅ ᐅᒪᔨᐱᑦ ᐊᓯᔾᔨᖅᑕᐅᓂᖅ
DEPOSIT NO. 1
MINING LEASE 2484

ᑲᑎᕐᓂᖅ ᐅᒪᔨᐱᑦ ᐃᓕᓴᕐᓂᐊᕐᓂᖅ
BULK SAMPLE PIT

ᐊᒪᓗᓯᑎᒃᓴᓂᖅ ᐅᒪᔨᐱᑦ ᐊᓯᔾᔨᖅᑕᐅᓂᖅ
DEPOSIT NO. 4
MINING LEASE 2483

ᑲᑎᕐᓂᖅ ᐃᓄᖓ ᓇᓕᐅᑎᓕᒃ 5ᒥᑦ
DEPOSIT NO. 5
(APPROXIMATE LOCATION)

ᒪᓂᕐᓂᖅ ᐅᒪᔨᐱᑦ ᐊᓯᔾᔨᖅᑕᐅᓂᖅ
MARY RIVER SITE

Milne Inlet

Angajurjualuk Lake

500000
550000
7950000
8000000

SCALE 5 2.5 0 5 10 15 20 Km

ᑐᑭᓯᐅᖏᑦ LEGEND:

- ᐃᒥᖅ WATER
- ᑲᑎᕋᖓᓕᒃ ᐊᑐᖅᑐᐊᕐᑎᐅᓂᒃ ᒪᓕᓂᕋᖓᓕᒃ MINERAL LEASE BOUNDARY
- ᑲᑎᕐᓂᖅ ᐃᓄᖓ ᓇᓕᐅᑎᓕᒃ 5ᒥᑦ DEPOSIT NO. 5 (APPROXIMATE LOCATION)
- ᓄᑖᖅ/ᑯᓚᓐᖅ/ᑯᐃᓇᐅᑎᒃ RIVER/STREAM/DRAINAGE
- ᖃᖅᓴᐊᓂ ᐊᖏᔪᑎ ᐅᓪᓚᕆᒡᒐᓇᑦ MILNE INLET TOTE ROAD
- ᓄᓇᓕᐅᑎᑯᑦ ᐊᖏᑎᑐᓂᐊᕐᑕᖓ PROPOSED RAIL ALIGNMENT
- ᐊᖏᔪᑎ ᐃᑯᑦᓄᓂ ᐊᖏᔪᓂᓇᑦ EXISTING TRAILS FOR DRILLS
- ᐃᓚᒥᑦ ᖃᐅᔨᓴᓇᑦ WATER LICENCE MONITORING LOCATION

NOTES:

1. BASE MAP: © HER MAJESTY THE QUEEN IN RIGHTS OF CANADA, DEPARTMENT OF NATURAL RESOURCES, (2004). ALL RIGHTS RESERVED.
2. COORDINATE GRID IS SHOWN IN UTM (NAD83) ZONE 17 AND IS IN METRES.
3. CONTOURS ARE IN METRES. CONTOUR INTERVAL VARIES.
4. PROPOSED RAIL ALIGNMENT PROVIDED BY CANARAIL CONSULTANTS INC.
5. INFRASTRUCTURE, AND WATER LICENCE, MONITORING LOCATIONS PROVIDED BY BAFFINLAND.
6. INFRASTRUCTURE AT MILNE INLET AND MARY RIVER NOT SHOWN FOR CLARITY.

ᖃᖅᑐᓵᓚᖓᔪᓐᓇᖅ

1. ᓄᓇᕗᒻᒥᐅᑦ ᐊᑐᐊᔪᓐᓇᖅᑐᑦ ᑯᐃᐸ ᖃᓄᐃᓕᖅᑐᑦ
2. ᓄᓇᕗᑦ ᑎᑎᕋᒪᓂᖅ ᒪᓕᓪᔨᖅ !+ᓕ ᑭᓇᐅᔨᖅᑕᐅ ᒪᓕᓚᐋ ᖃᓄ
3. ᑎᑎᕋᒪᓕᒃᓴ ᒥᑦ: ᐊᖏᔪᓂᓪᓕᑦ ᐅᖅᓯᓚᑎᑎᕋᔨᑦ ᐊᑦᔨᑎᓐᓂᔨᑦ
4. ᓄᓇᕗᑦᑎᐊᑦ ᐊᖏᔪᑎᓚᖅᑐᓂ CANARAIL CONSULTANTS INC.
5. ᐃᓕᓴᕐᓂᐊᕐᓂᑦ ᐊᒪᓗ ᐃᓕᖅᑐᑎᒍᑦ ᓇᐃᒪᓚᐅᖅᑐᑦ ᐃᓕᖅᑎᑦ ᖃᐅᔨᓴᓇᖅᑎᑦ ᐊᖏᔪᑎᐅᓂᒃᑯᓐᓂᖅ ᐊᐅᓚᓂᓕᓪᓗᓂᑦ
6. ᐃᓕᓴᕐᓂᐊᕐᓂᑦ ᖃᖅᓴᐊᓂ ᐊᒪᓗ ᓄᓇᕗᑦᓂ ᑕᒪᓐᓇᐅᑉᓂᑦ ᓂᕆᐊᐃᓇᑎᐊᖏᓚᐅᖅ ᐊᐅᓚᓂᓕᓪᓗᓂᑦ

Baffinland
Iron Mines Corporation

ᓄᓇᕗᑦ ᐅᓪᓚᕆᒡᒐᓇᑦ MARY RIVER PROJECT

ᖃᖅᓴᐊᓂ ᐊᖏᔪᑎ ᐅᓪᓚᕆᒡᒐᓇᑦ ᐊᒪᓗ ᐃᓕᓴᕐᓂᖅ ᓇᓕᓪᓚᕆᒡᒐᓗ
MILNE INLET TOTE ROAD AND WATER LICENCE MONITORING LOCATIONS

Knight Piésold CONSULTING

P/A NO.	REF	REV
NB102-181/27	NB11-00169	0

FIGURE 1.4

NORTH BAY, ON. SAVED: I:\1102\00181\27\AIG\SArcView\figures\B31_r0.mxd; Mar 30, 2011 9:55 AM; amoore

7917494 N
7916250 N
7915000 N
7913750 N
7912500 N
7911250 N
558750 E
560000 E
561250 E
562500 E
563750 E
565000 E

ᐃᓄᐃᑦ
STORAGE AREA

ᐊᖏᔪᓂᖅ ᐊᒥᓱᓕᕆᔨᒃᑯᑦ ᐊᒥᓱᓕᕆᓂᖅ
INCINERATOR

ᐅᓪᓗᒥᑦ ᐃᓕᓴᕐᓂᖅ ᐅᖃᓕᒫᒃᑯᑦ
PORTABLE WATER PUMP HOUSE

ᑲᒪᓂᖅ ᓄᓇᕗᑦ
CAMP LAKE

ᓄᓇᕗᑦ ᑐᓴᕐᓂ
ORIGINAL CAMP

ᐊᑕᐅᓯᒪᓂᖅ ᑐᓴᕐᓂ
EXISTING CAMP

ᐃᓚᖓᑕᐅᓯᒪᓂᖅ ᐱᖓᓱᓂᒃ
EXISTING POLISHING WASTE STABILIZATION PONDS (PWSPs)

ᐅᑎᕐᓂᖅ ᐃᓕᓴᕐᓂᖅ
BULK FUEL STORAGE FACILITY

ᐅᖃᓕᒫᒃᑯᑦ ᐃᓕᓴᕐᓂᖅ
SEALIFT LAYDOWN AREA

ᐃᓕᓴᕐᓂᖅ
LAYDOWN AREA

ᐱᓕᕆᔨᒃᑯᑦ ᐊᖏᔪᓂᖅ ᐅᓇᓱᓕᓂᖅ
HAZARDOUS WASTE CONTAINMENT BERM

ᐅᑉᐱᓕᒫᓂᖅ ᐊᑦᑕᓂ ᐃᓂᒃᐃᓐᓇᓕᓂᖅ
BARRELED FUEL LINED CONTAINMENT

ᐱᓕᕆᔨᒃᑯᑦ ᐊᑦᑕᓂ ᐃᓂᒃᐃᓐᓇᓕᓂᖅ
HELIPAD

ᑎᓕᓵᕆᔨᒃᑯᑦ ᑐᑭᓯᐅᓂᖅ
AIRSTRIP

ᐱᓕᕆᔨᒃᑯᑦ ᐃᓚᖓᑕᐅᓯᒪᓂᖅ
HTO CABIN

ᐱᓕᕆᔨᒃᑯᑦ ᓄᓇᕗᑦ ᐅᓪᓗᒥᑦ ᐃᓕᓴᕐᓂᖅ
MILNE INLET TOTE ROAD

ᓄᓇᕗᑦ ᑕᓪᓕᐊᓂᖅ
SEWAGE DISCHARGE PIPELINE

ᐱᓕᕆᔨᒃᑯᑦ ᓄᓇᕗᑦ ᑕᓪᓕᐊᓂᖅ
SHEARDOWN LAKE

ᐱᓕᕆᔨᒃᑯᑦ ᐅᖃᓕᒫᒃᑯᑦ ᐅᓪᓗᒥᑦ ᐃᓕᓴᕐᓂᖅ
WESTERN BOUNDARY OF BAFFINLAND NTI MOU - EXPLORATION LANDS

ᐊᓯᖏᓐᓂᖅ ᐃᓚᖓᑕᐅᓯᒪᓂᖅ
CRUSHER AND STOCKPILE PAD

ᑐᓴᕐᓂᖅ 2
ROCK QUARRY NO. 2

ᑲᑎᒪᓂᖅ ᐊᑦᑕᓂ ᐃᓂᒃᐃᓐᓇᓕᓂᖅ
LANDFILL AND ACCESS ROAD

ᑲᑎᒪᓂᖅ ᖃᐅᔨᓂᖅ (ᑲᑎᒪᓂᖅ ᐱᒃᑐᒃᓂᖅ ᐊᓚᓐ ᑐᓂᑦᑕᓐᓂ, ᐋᑐᒍ, 2010)
EXPLOSIVES MAGAZINE (RESIDUAL EXPLOSIVES REMOVED AND DISPOSED, AUGUST 2010)

ᐱᓕᕆᔨᒃᑯᑦ ᓄᓇᕗᑦ ᐅᓪᓗᒥᑦ ᐃᓕᓴᕐᓂᖅ
PROPOSED OPEN PIT OUTLINE

ᓄᓇᕗᒻᒥᓕᖅ 1 ᐅᑉᐱᓕᒫᓂᓕᒃ ᐱᕐᓇᐅᑎ 2484
DEPOSIT NO. 1 MINING LEASE 2484

ᓄᓇᕗᒻᒥᓕᖅ 2, 3 ᐊᒪ 3B ᐅᑉᐱᓕᒫᓂᓕᒃ ᐱᕐᓇᐅᑎ 2485
DEPOSIT NOS. 2, 3 AND 3B MINING LEASE 2485

ᓇᐃᔭᖅᑎᑦᓂᖅ ᐊᒥᓱᓕᕆᓂᖅ ᐊᓯᖏᓐᓂᖅ ᐅᓪᓗᒥᑦ
WEATHERED ORE STOCKPILE

ᐅᖃᖅᑎᑦᓂᒃ ᐊᒃᓱᑎ
HAUL ROAD

ᓇᐃᔭᖅᑎᑦᓂᒃ ᑲᓇᑕᒥ ᐅᓪᓗᒥᑦ
BULK SAMPLE PIT

ᐃᓄᐃᑦ
N

ᑐᑭᓯᐅᓂᖅ
CONTOUR

ᐃᓄᐃᑦ ᑲᑎᒪᓂᖅ ᐱᖓᓱᓂᒃᑯᑦ (ᐃᓄᐃᑦ ᓄᓇᕗᑦ ᑭᓇᐅᔭᖏᑦᑐᒃᑯᑦ)
BAFFINLAND'S COMMERCIAL LEASE ON INUIT OWNED LAND

ᓇᓕᖁᓪᓚᒃᑯᑦ ᐊᑐᐃᓐᓇᑎᒃᑯᑦ ᐅᖃᓕᒫᒃᑯᑦ
MINING LEASE BOUNDARY

ᐅᓪᓗᒥᑦ ᐅᓇᓱᓕᕆᔨᒃᑯᑦ ᐊᑦᑕᓂ ᐃᓚᖓᑕᐅᓯᒪᓂᖅ - ᓄᓇᕗᑦ ᑲᑎᒪᓂᖅ ᐅᓪᓗᒥᑦ ᐃᓕᓴᕐᓂᖅ
WESTERN BOUNDARY OF BAFFINLAND NTI MOU - EXPLORATION LANDS

NOTES:

1. COORDINATE GRID IS UTM (NAD83) ZONE 17 AND IS IN METRES.
2. CONTOUR INTERVAL IS 10 METRES.
3. TOPOGRAPHY PROVIDED BY EAGLE MAPPING (2005).
4. MINE SITE INFORMATION PROVIDED BY GENIVAR DECEMBER 9, 2008.
5. REFER TO PHOTO SHEETS FOR ADDITIONAL DETAIL OF CAMP AREA.

ᖃᐅᔨᓴᖅᓱᒃᑲᓐᓂᖅ

1. ᓄᓇᕗᒻᒥ ᑎᑎᕋᓂᖓ ᓴᓇᔨᓐ UTM (NAD83) Zone 17
2. ᑎᑎᕋᓕᒃ ᒥᑦ: ᐊᒃᓱᓐᓂᑦ ᐅᖃᓕᓐᓂᑦᓴ 10 ᒥᑦ
3. ᓄᓇᕗᑦᓂᓄᑦ Eagle Mapping (2005)
4. ᐅᑉᐱᓕᒫᓂᓕᒃ ᑎᑎᕋᐅᔾᔨᓂᖓ Genivar
5. ᑕᒪᓐᓇᐅᓕᓂᒃ ᖃᐅᔨᓴᖅᓱᓕᓄᑦ ᐊᒃᑐᐊᒥᑦ ᑕᓇᓐᓄᑦ

SCALE 250 125 0 250 500 750 1000 1250 ᒥᑦ m

Baffinland IRON MINES CORPORATION

ᓄᓇᕗᑦ ᐅᑉᐳᖅᓯᐅᑎᑦ — MARY RIVER PROJECT

ᒪᑐᓇ ᓄᓇᕗᒃ ᖃᓄᐃᓕᖓᓐᓂᖓ
EXISTING SITE LAYOUT AT MARY RIVER

Knight Piésold CONSULTING

P/A NO.	REF NO.
NB102-181/27	NB11-00165

ᑎᑎᕋᐅᔾᔨᒪᓂᖅ **1.5** — REV 0

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XREF FILES: Mine_Site_Water Hatch PROJECT SITE PLAN 2m INTERVAL REV2 Haul Roads Jan082009, GENIVAR_MARY RIVER_JAN10 IMAGE1.EPS (20100311 Mary River Aerial Baffinland topo.dog.cow 1b431 topo.corp

N

7,878,000
7,876,000
7,874,000
7,872,000
7,870,000

594,000
596,000
598,000
600,000
602,000
604,000

52+000
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63+500

ᓄᓇᕗᑦᓯᓚᐅᑉ ᐊᒃᓚᐅᒃ
ANGAJURJUALUK LAKE

ᑲᒃᑭᑎᓂᖅ ᒪᓕᒃ
COCKBURN LAKE

ᐃᑎᕐᓯᓂᕐᒥᐅᖅ
STEENSBY INLET

ᐅᒪᐃᓕᓂᖅ ᑲᑎᒪᔨᖅ ᐊᑐᓕᕆᔨᒃᑯᑦ
PROPOSED RAILWAY ALIGNMENT

ᐊᑐᓕᕆᔨᒃᑯᑦ ᐃᓕᓴᕐᓂᖅ ᑲᑎᒪᔨᖅ ᐅᖃᐅᓯᖅ
MID-RAIL DRILL CAMP LOCATION

ᓄᓇᕗᑦᑐᓂᒃ ᐃᓗᐱᒋᔭᐅᓂᖏᓐᓄᑦ
2008 WATER SUPPLY INTAKE

ᐃᓕᓐᓂᐊᒃᓴᖅ ᐃᓕᑎᒋᓐᓂᖏᓐᓄᑦ 10.5 ᒥᑦ
MAX. DEPTH 10.5m

ᑐᑭᓯᐊᖅᑕᐅᓂᖅ
LEGEND:

- ᐃᒥᖅ WATER
- ᓄᓇᕗᑦ/ᑲᓚᕐᒧᑦ/ᐊᓘᐃᑉᐯᓄᖅ RIVER/STREAM/DRAINAGE
- ᓄᓇᕗᑦᑐᑎᑦᑕᑦ ᐊᑐᓕᕆᔨᒃᑯᑦ PROPOSED RAIL ALIGNMENT
- ᐱᒋᖏᓐᓄᑦᑎᒍᑦ ᑕᖃᒪᓕᐊᑉᐯᓄᖅ EXISTING CAMP (CAMP NOT OCCUPIED DURING 2010)

ᖃᐅᔨᓴᓕᖅᑎᓪᓗᑎᑦ
NOTES:

1. TOPOGRAPHY PROVIDED BY EAGLE MAPPING (2005).
   ᓄᓇᕗᑦᐊᓂᓕᔅᑕᑦ EAGLE MAPPING (2005)
2. COORDINATE GRID IS SHOWN IN UTM (NAD83) ZONE 17 AND IS IN METRES.
   ᓄᓇᕗᑦ ᑎᑎᕋᒪᓂᖏᓐᓄᑦ ᒪᓂᓪᓗᖅ UTM (NAD83) ZONE 17
3. CONTOUR INVTERVAL IS IN METRES. CONTOUR INTERVAL IS 2.5 METRES.
   ᑎᑎᕋᒪᓕᑦ ᒥᑦ ᐊᖏᓂᖅᑎᑦ ᑲᖏᓐᓂᑎᑎᓂᑦ 2.5 ᒥᑦ
4. PROPOSED RAIL ALIGNMENT PROVIDED BY CAINARAIL CONSULTANTS INC.
   ᓄᓇᕗᑦᑐᑎᑦᑕᑦ ᐊᖏᓂᖅᓴᖏᓐᓄᑦ CANARAIL CONSULTANTS INC

ᐊᖑᓂᖏᓐᓄᑦ SCALE 500 250 0 500 1,000 1,500 2,000 ᒥᑦ m

Baffinland
IRON MINES CORPORATION

ᓄᓕᒋᑐᓂ ᑲᓴᖏᓱᐅᑲᑎᑦ MARY RIVER PROJECT

ᒪᑐᓇ ᖃᓄᐃᓕᖏᓐᓂᖏᓐᓄᑦ ᐊᖏᓂᑎᑦᑕᑦ ᐊᐅᓚᐊᖏᓐᓂ ᓄᓇᕗᑦᑲᑲᑎᑦ
EXISTING SITE LAYOUT AT MID RAIL CAMP

Knight Piésold CONSULTING

P/A NO.	REF NO.
NB102-181/27	NB11-00165

ᑎᑎᕋᐅᓵᖅᓯᒪᔪᖅ FIGURE 1.6 REV 0

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ᑲᖏᕐᓗᓵᕆᔨᖅ
STEENSBY INLET

L-ᓪ ᐃᐱᑭᑐᕆᔨᐊᖏᑦ ᓄᓇᑦᑎᓂᖅ ᖃᓄᖅ ᐊᖏᖏᓂᖅ (ᑕᐃᓚᓪᓕᐊᓕᒃ)
EXISTING STEENSBY INLET CAMP LIMITS (APPROX.)

ᖃᑕᐅᑦᔨᐊᓴᐃᓐ
FUEL DRUM STORAGE

ᐃᓕᓐᓴᖅ
LAYDOWN AREA

ᑕᓂᖅ ᐃᒥᑦᑕᕐᐱᑦ ᑕᑭᓚᑐᖅ 3 ᑭᓪᒥᑕ
3 Km LAKE WATER SOURCE

25 50 75 25 50 75

7803750 N
7802500 N
7801250 N
7800000 N
7798750 N

593750 E
595000 E
596250 E
597500 E
598750 E

ᑐᑭᓯᐊᖅᑕᐅᓂᖅ
LEGEND:

ᐃᒥᓐ
WATER

ᐊᑐᓕᓕᒫᑦᑐᖅᑕᐅᓂᖅ
RIVER/STREAM/DRAINAGE

ᓴᖅᑭᓂᖅ ᓄᓇ
WETLAND

NOTES:

1. COORDINATE GRID IS UTM (NAD83) ZONE 17 AND IS IN METRES.
2. CONTOUR INTERVAL IS 5 METRES.
3. TOPOGRAPHY PROVIDED BY EAGLE MAPPING (2005).
4. PROPOSED RAIL ALIGNMENT PROVIDED BY CANARAIL CONSULTANTS INC. OCTOBER 7, 2008.
5. STEENSBY INLET INFRASTRUCTURE PROVIDED BY GENIVAR. DECEMBER 9, 2008.

ᖃᐅᔨᒪᔭᕐᓂᐊᕆᑦ

1. ᓄᓇᕗᑦ ᑎᑎᕋᓚᓂᖓ ᒪᓕᒐᓐᖅ UTM (NAD83) Zone 17
2. ᑎᑎᕋᒪᓕᒃᑯ ᒥᑦ: ᐊᖏᔪᓂᕐᑯᑦ ᐅᖓᓃᑎᑎᕐᒋᑦ 5 ᒥᑦ
3. ᓄᓇᕗᐊᓕᓚᓵᓱᑦ Eagle Mapping (2005)
4. ᓄᓇᕋᐅᑎᓄᑦ ᑕᕐᐊᑎᖓᓂᖓ Canarail Consultants Inc
5. ᐅᖅᑎᑦᑎᐊᐅᓇᖅ ᑎᑎᕋᐅᖅᔪᒪᓂᖓ Genivar

ᓇᕐᓂᖓ SCALE 250 12.5 0 250 500 750 1000 1250 ᒥᑦ m

Baffinland
IRON ORE COMPANY

ᓄᓇᕗᑦ ᐅᒃᖏᕐᕈᐅᑎᒋᑦ MARY RIVER PROJECT

L-ᓪ ᐃᑲᐱᑕᑦᔨᐊᖏᑦ ᖃᓄᖅ ᐊᖏᔪᓚᓂᖓ
EXISTING SITE LAYOUT AT STEENSBY INLET

Knight Piésold CONSULTING

P/A NO.	REF NO.
NB102-181/27	NB11-00165

ᑎᑎᕋᐅᖅᔪᒪᓂᖅ FIGURE 1.7 REV 0

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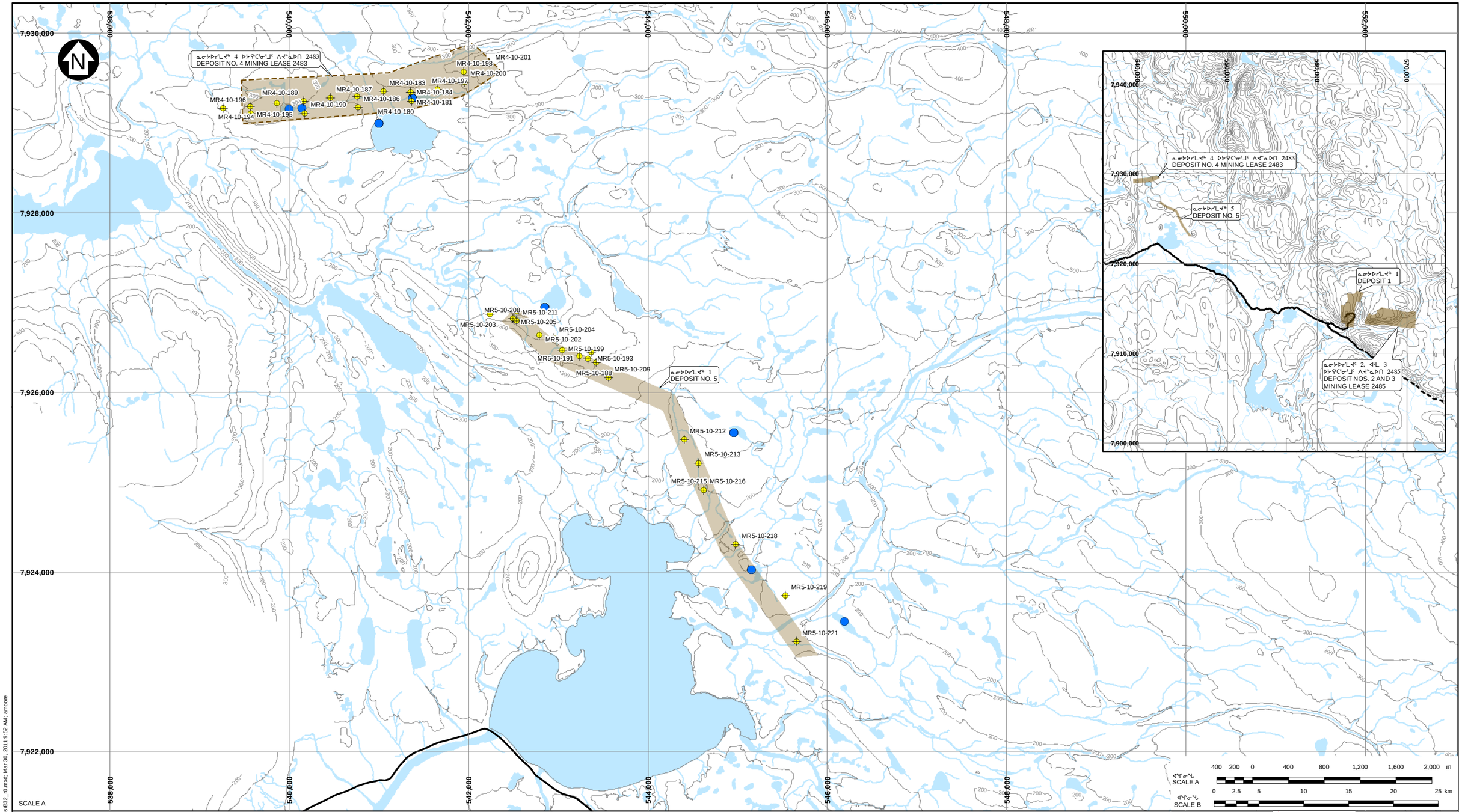
XREF FILES: STEENSBY POINT AREA_01APR6_22 2008, steensby lakes 1MAGE FILES: 20D09G3steensby Area1bwtexturepopcorn.jpg

561000 E
562500 E
564000 E
565500 E
567000 E
568500 E
570000 E
571500 E
7917000 N
7915500 N
7914000 N
7912500 N
7911000 N
C0-04
L0-01
C0-10
E0-03
F0-02
MR2-10-220
MR2-10-214
MR3-10-210
G0-03
G0-01
G6-01
G0-09
ᐊᐃᓚᒃᑐᑦ ᐊᒥᓱ ᐅᓴᐅᒃᑐᓂᒃ
PROPOSED OPEN PIT OUTLINE
ᓴᑐᐃᓂᒃ ᑲᐅᑎᓂᒃ
STOCKPILE
ARD-2B-NW
BULK SAMPLE PIT
ᐅᓪᓗᑎᒃᑐᓂᒃ ᐋᒋᐊᓂ
HAUL ROAD
ARD-2A-SE
ᒪᐃᓕᓐ ᐃᓗᐊᓂᒃ ᐋᒋᐊᓂ
MILNE INLET TOTE ROAD
ᒪᐅᓂᒃᑕᕐᒪᑦ ᐊᒪᓗ ᐊᒋᐊᓂ
LANDFILL AND ACCESS ROAD
ᓱᓇᐅᑏᐊᓐ ᒪᐃᒃᓗᐊᖅ
SHEARDOWN LAKE
ᒪᐃᕕᓕ ᑕᕐᓗᓂ
MARY RIVER
E4-01
E3-01
G0-10
E0-10
F0-01
G0-01
7913000 N
Mary River
564000 E
564500 E
680
690
700
710
720
730
740
750
760
770
780
790
800
810
820
830
840
850
860
870
880
890
900
910
920
930
940
950
960
970
980
990
1000
1010
1020
1030
1040
1050
1060
1070



LEGEND:

- CONTOUR
- MILNE INLET TOTE ROAD
- PROPOSED RAILWAY ALIGNMENT
- RIVER/STREAM/DRAINAGE
- WATER
- MINE LEASE BOUNDARY
- 2010 DRILLHOLE COMPLETED IN 2010
- 2010 WATER SOURCE LOCATION

UTM (NAD83) ZONE 17

NOTES:

1. CO-ORDINATE GRID IS IN METRES.
   DATUM: NAD83
   PROJECTION: UTM ZONE 17
2. CONTOUR INTERVAL IS 10 METRES.
3. TOPOGRAPHY PROVIDED BY EAGLE MAPPING (2005).

Baffinland
IRON MINES CORPORATION

MARY RIVER PROJECT

2010 ᓴᐃᓴᕐᓂᐅᔨᓗᒃ ᐃᑯᑦᑕᐅᓂᑯ ᓇᓴᐅᑎᓕᒃ 4 ᐊᒪᓗ 5
2010 EXPLORATION DRILLHOLES FOR DEPOSITS 4 & 5

Knight Piésold CONSULTING

P/A NO. NB102-181/27
REF NO. NB11-00169
FIGURE 1.9
REV 0

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510,000
520,000
530,000
540,000
550,000
560,000
7,980,000
7,970,000
7,960,000
7,950,000
7,940,000
7,930,000
7,920,000
7,910,000
7,900,000
N
ᑭᓱᓪᓗᓂ ᑕᒪᓐᓇᑦ ᐊᒪᓗᓃ ᑐᓴᕐᑕᕐᓂᑦ
MILNE INLET CAMP AND PORT
BH10-01
BH10-02
BH10-03
BH10-04
BH10-05
BH10-06
BH10-07
BH10-08
BH10-09
BH10-10
BH10-11
BH10-12
BH10-13
BH10-14
BH10-15
BH10-16
BH10-17
BH10-18
BH10-19
BH10-20
BH10-21
BH10-22
BH10-23
ᒪᓕᕐᓂ ᐅᕙᖅᓂ ᐊᖏᓂ
MARY RIVER SITE
2 1 0 2 4 6 8 10 km
SCALE

LEGEND:

- ᖃᐅᔨᖑᒪᓕᓂᖅ CONTOUR
- ᑭᓱᓪᓗᓂ ᐊᖏᔪᑎ ᐅᓗᖓᑦᑐᓘᑦ MILNE INLET TOTE ROAD
- ᓄᓇᓕᐅᑎᓯᑦ ᐊᖏᑎᒋᓂᕐᓂᖅ PROPOSED RAILWAY ALIGNMENT
- ᓄᑖᖅ/ᑯᒃᓴᓪᓗᖅ/ᑯᓘᐃᐅᔨᓂᖅ RIVER/STREAM/DRAINAGE
- ᐃᒥᖅ WATER
- 2010 ᐱᖓᓱᐊᕐᓯᖏᑦᑑᓂᖅ ᓄᓕᓪᓕᖅ 2010 WATER SOURCE LOCATION
- ᐅᕙᕐᓴᐸᑦ ᐸᑦᑎᒋᑦ ᐱᓕᕆᖓᓯᓯᓕᑦ ᐱᐸᓪᓕᐊᕐᓯᓗᖅ 2010 GEOTECHNICAL DRILLHOLE COMPLETED IN 2010

ᕿᓐᓄᓕᕆᓂᐊᕐᓂᑦ

ᐅᓇᔨᖅ ᐸᒋᓘ 1:250,000 ?ᓇᕆ! ᐅᓇᔨᓕᓪᓚᖅᓯᓕᑦ ᓄᓇᕗᐅᓘ/ (2009)

ᐅᓇᔨᑦ ++ᑦ_ᓕᓘ ᓕᓂᖅᖃᖅ UTM (NAD83) ZONE 17

++ᑦ_ᓕᓵᑦ IH: ᐸᖏᓕᒋᑦ ᐅᖓ_ᖅ+ᒋᖅᑭᑦ 20 IH

NOTES:

1. BASE MAP: © HER MAJESTY THE QUEEN IN RIGHTS OF CANADA DEPARTMENT OF NATURAL RESOURCES (2009.) ALL RIGHTS RESERVED.
2. CO-ORDINATE GRID IS IN METRES.
   DATUM: NAD83
   PROJECTION: UTM ZONE 17
3. CONTOUR INTERVAL IS 20 METRES.

Baffinland Iron Mines Corporation

ᓄᑖᖅᓂ ᐅᕙᖅᓂᓯᐅᖅᑐᑦ MARY RIVER PROJECT

2010 ᐅᕙᖅᓂ ᐊᖏᔪᒥᒃᓂ ᓂᐅᑎᕐᓇᑦ

2010 GEOTECHNICAL DRILLHOLES

Knight Piésold CONSULTING

P/A NO. NB102-181/27

REF NO. NB11-00169

ᑎᑎᕋᕐᓯᒪᔪᖅ FIGURE **1.10**

REV 0

SAVED: I:\1\02\00181\27\A\GIS\ArcView\figures\B30_r0.mxd; Mar 30, 2011 11:17 AM; amoore

APPENDIX

APPENDIX A – NWB ANNUAL REPORT FORM

NWB Annual Report **Year being reported:** 2010

License No: 2BB-MRY0710 **Issued Date:** July 27, 2007
Expiry Date: December 31, 2010

Project Name: Mary River Project

Licensee: Baffinland Iron Mines Corporation

Mailing Address:
Suite 1016, 120 Adelaide Street West
Toronto, Ontario
M5H 1T1

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

General Background Information on the Project (*optional):
Refer to Section 1.0 of the 2010 Annual Report to the Nunavut Water Board (NWB)

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): Various (refer to Section 2.1 of the 2010 Annual Report)

Water Quantity:	
60	Quantity Allowable Domestic (cu.m)
Varies	Actual Quantity Used Domestic (cu.m)
455	Quantity Allowable Drilling (cu.m)
Varies	Total Quantity Used Drilling (cu.m)

Waste Management and/or Disposal
- [x] Solid Waste Disposal
- [x] Sewage
- [x] Drill Waste
- [x] Greywater
- [x] Hazardous
- [ ] Other:

Additional Details:
Refer to Section 2.0 of the 2010 Annual Report to the NWB

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

Spill No.: See Table 6.1 (as reported to the Spill Hot-line)
Date of Spill: See Table 6.1
Date of Notification to an Inspector: See Table 6.1
Additional Details: (impacts to water, mitigation measures, short/long term monitoring, etc)

See Table 6.1 and Section 6.0 of the 2010 Annual Report to the NWB.

Revisions to the Spill Contingency Plan

Other: (see additional details)

Additional Details:

Refer to the Summary Table which accompanies the revised Spill Contingency Plan in Appendix F.2.

Revisions to the Abandonment and Restoration Plan

Other: (see additional details)

Additional Details:

Refer to the Summary Table which accompanies the revised Abandonment and Reclamation Plan in Appendix F.1.

Progressive Reclamation Work Undertaken

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

See Section 9.0 of the 2010 Annual Report to the NWB.

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:

Refer to Table 2.5 and Figures 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9 and 1.10 of the 2010 Annual Report to the NWB.

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:

Refer to Table Table 2.3 and 2.4, Figures 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, and 1.10 of the 2010 Annual Report to the NWB.

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

No additional sampling requested by an Inspector or the Board

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

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

No additional sampling requested by an Inspector or the Board

Additional Details: (Attached or provided below)

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

No inspection report issued by INAC

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

Any additional comments or information for the Board to consider

The 2010 Annual Report provides further details on water use and waste disposal, construction activities, geochemical analysis of core, fuel storage, unauthorized discharges, updates to plans, progressive reclamation work and consultations.

Date Submitted:	March 31, 2011	
Submitted/Prepared by:	James Millard	
Contact Information:	**Tel:**	site 403-450-8843 cell 902-403-1337
	Fax:	403-451-0513
	email:	jim.millard@baffinland.com

APPENDIX B – WASTE MANAGEMENT SUMMARY 2010

ᖁᑭᖅᑕᐃᓗᒃ ᐊᔾᔨᑎᓕᕐᓂᖅ
QIKIQTAALUK ENVIRONMENTAL

WASTE MANAGEMENT REPORT
SUMMARY 2010

MARY RIVER & MILNE INLET SITE

Priviledged and confidential document presented to :

Baffinland
Iron Mines Corporation

Jim Millard
Senior Environmental Superintendant

Suite 1016
120 Adelaide Street West
Toronto, Ontario
Canada M5H 1T1

FINAL REPORT

March 2011

WASTE MANAGEMENT REPORT
SUMMARY 2010

MARY RIVER & MILNE INLET SITE

Priviledged and confidential document presented to :

BAFFINLAND IRON MINES CORPORATION

Written by :

Benoit Dion, B. Sc., M. Env.
Project manager

Revised by :

Philippe Simon, Ph.D., P.Eng.
Engineering Director

SANEXEN
SERVICES ENVIRONNEMENTAUX INC.

FINAL REPORT

MARCH 2011

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2. TRANSPORT TO DISPOSAL FACILITIES 2
3. INFORMATION ON DISPOSAL FACILITIES 3

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SCHEDULE B: Site Photographs

SCHEDULE C: Transport Manifests and Receiving Slips

1. INTRODUCTION

Baffinland Iron Mines Corporation (Baffinland) is committed to remediating areas impacted by former, as well as current, exploration activities at their sites on Baffin Island. In order to comply with this objective, Qikiqtaaluk Environmental Inc. (QE) was contracted to provide on-site repackaging and off-site disposal of hazardous waste from Mary River and Milne Inlet for the season 2010. From August 12th to August 16th 2010, QE provided Environmental Quality Assurance Specialists ensured that the proper on-site repackaging, identification, labelling and documentation of hazardous waste for off-site shipment met regulatory requirements. M. Yvon Beaudoin from Sanexen Environmental Services Inc. (Sanexen) was the on-site project manager. Mr Beaudoin has more than 20 years of experience in the hazardous waste management.

Most of the hazardous materials removed from the sites were waste fuel, contaminated water, waste calcium chloride, used batteries and hydrocarbon contaminated soils. The table located at Schedule A presents the types of materials removed from the sites, their approximate volumes and the designated disposal facilities.

2. TRANSPORT TO DISPOSAL FACILITIES

Materials from the Baffinland sites were shipped via 1 sea-lift, by Nunavut Eastern Arctic Shipping Inc. (NEAS) (vessel Qamutik), on August 22, 2010 from Milne Inlet, Nunavut. The shipment arrived on September 22' 2010 at the Port of Valleyfield. Hazardous material was managed at the port by QE on behalf of Baffinland and then transported to authorized disposal facilities.

Waste materials were transported to 4 registered disposal facilities located in Quebec.

Most of the waste materials were processed at Veolia Environmental Service (Veolia), except for the crushed drums and batteries, the contaminated soils and the inorganic substances. Veolia is specialized in the collection and recycling of used oils. Veolia. operates the largest used-oil storage facility in Quebec with a holding capacity of 2.4 million liters. Used-oil processed at this facility is filtered and analyzed prior to the storage of the product. This processed waste oil is then sold to companies for use in their waste-oil burners. Companies purchasing waste-oil from Veolia are registered with the Quebec *ministère du Développement durable, de l'Environnement et des Parcs (MDDEP)* as authorized waste-oil burners.

Hydrocarbon contaminated soils were disposed at Horizon Environnement Inc. located in Grand-Piles, Quebec. Contaminated soils were analyzed to ensure that hydrocarbon concentration met provincial standards for disposal of the material in an engineered landfill.

All inorganic hazardous waste were disposed of to a treatment facility call Stablex Canada Inc. (Stablex) located at Blainville, Canada. Using a unique technology, Stablex characterizes treats and stabilizes inorganic industrial wastes and contaminated soils before disposing of the now benign product in a dedicated secure placement landfill cell. Finally, contaminated crushed drums and batteries removed from Baffinland sites were recycled by American Iron and Metal Company Inc. Shipping documentation is presented in schedule C.

3. INFORMATION ON DISPOSAL FACILITIES

1. **Véolia SE (plant of Montreal East)**
   1705, 3th avenue,
   Montreal, Qc, H1B 5M9
   Tel : (514) 645-4242

2. **Stablex Inc.**
   760, Industriel bouevard
   Blainville, Quebec
   J7C 3V4

3. **Horizon Environnement Inc.**
   120, Route 155,
   Grandes-Piles, Qc., GOX 1HO

4. **American Iron and Metal**
   9100 Henri-Bourassa East
   Montreal, H1E 2S4

SCHEDULE A

INVENTORY REMOVED IN 2010
FROM MARY RIVER AND MILNE INLET

Description of waste	Transportation of dangerous goods	Unit	Quantity	Approximate volume (m^3)	Designated disposal facilities
Human waste	Not TDG regulated	Oversize	2	0.568	Véolia SE
Human waste	Not TDG regulated	Quatrex	2	2	Véolia SE
Contaminated water	Not TDG regulated	Drum	51	10.46	Véolia SE
Kitchen grease (in pails)	Not TDG regulated	Quatrex	12	12	Véolia SE
Waste Hydrated lime	Not TDG regulated	Quatrex	5	5	Stablex
Waste Polymers	Not TDG regulated	Quatrex	4	4	Stablex
Waste uncharged fire extinguisher	Not TDG regulated	Quatrex	2	2	Véolia SE
Contaminated soil	Not TDG regulated	Quatrex	24	24	Horizon Environnement
Contaminated soil	Not TDG regulated	Overpack	8	2,27	Horizon Environnement
Waste oil (in pails)	Not TDG regulated	Quatrex	5	5	Véolia SE
Residual waste oil (in pails)	Not TDG regulated	Quatrex	81	81	Véolia SE
Waste aerosols	Not TDG regulated	Oversize	4	1.14	Véolia SE
Waste batteries	Corrosive substance, class 8	Quatrex	2	2	Véolia SE
Waste calcium chloride	Not TDG regulated	Quatrex	8	8	Stablex
Waste fuel	Not TDG regulated	Drum	3	0.615	Véolia SE
Waste oil	Not TDG regulated	Tote	9	9	Véolia SE
Waste oil filters	Not TDG regulated	Oversize	1	0.284	Véolia SE
Waste oily crushed drums	Not TDG regulated	Pallet	22	22	Véolia SE
Waste oily plastic cans	Not TDG regulated	Quatrex	2	2	Véolia SE
Waste oily products	Not TDG regulated	Quatrex	3	3	Véolia SE
Waste oily rags	Not TDG regulated	Quatrex	7	7	Véolia SE
Waste potassium chloride	Not TDG regulated	Quatrex	11	11	Stablex
Waste empty totes of oil	Not TDG regulated	Quatrex	1	1	Véolia SE
Waste oily activated carbon	Not TDG regulated	Oversize	5	1,42	Horizon Environnement
Waste oily activated carbon	Not TDG regulated	Quatrex	2	2	Horizon Environnement
Total	N/A	N/A	N/A	**205,69**	N/A

SCHEDULE B

SITE PHOTOGRAPHS

Photo 1

Quatrex bags ready for shipment, Milne Inlet.

Photo 2

Quatrex bags ready for shipment, Milne Inlet.

Photo 3

Quatrex of batteries ready for shipment, Milne Inlet.

Photo 4

Hazardous waste packaged in drums, *Mary River*.

Photo 5

Gas cylinders ready for shipment, *Mary River*.

Photo 6

Compressed, flammable gas, *Mary River*.

SCHEDULE C

TRANSPORT MANIFESTS AND RECEIVING SLIPS

IMDG DECLARATION

Shipper/consignor QIKIQTAALUK ENVIRONMENTAL INC. 3333, CH, QUEEN MARY, MONTREAL, QC, H3V1A2 FOR: BAFFINLAND IRON MINES (B.I.M.)	Reference number(s) 1 Page 2 of 2 Pages
Consignee VEOLIA E S CANADA 11455 ONTARIO-EST MONTREAL-EST, QC, H1C 5J3	Carrier NEAS
CONTAINER/VEHICLE PACKING CERTIFICATE **DECLARATION** It is declared that the packing of the goods into the container/vehicle has been carried out in accordance with the applicable provisions. **TO BE COMPLETED FOR SHIPMENTS IN CONTAINERS OR VEHICLES** Container/Vehicle #:	Name/status, company/organization of signatory YVON BEAUDOIN / PROJECT MANAGER / Q.E. FOR B.I.M. Place and date MARY RIVER AUGUST 15TH 2010 Signature on behalf of packer
Vessel No. and Date Port of loading MILNE INLET Port of discharge VALLEYFIELD	(Reserved for text, instructions or other matter)

No. & Kind of Packages	DESCRIPTION OF GOODS (UN Number, PSN, Hazard Class, Packing Group, Flash Point, Marine Pollutant)	QUANTITY Gross mass (kg)	Net mass (kg)	Cube (m^3)
1 OVERSIZE DRUM	WASTE, OIL FILTERS, N/R	300Kg		
22 PALLETS	WASTE, OILY CRUSHED DRUMS, N/R	8800Kg		
2 QUATREX	WASTE, OILY EMPTY SMALL PLASTICS CANS, N/R	300Kg		
3 QUATREX	WASTE, OILY PRODUCTS N/R	450Kg		
7 QUATREX	WASTE, OILY RAGS	2100Kg		
2 OPEN WOODEN CRATE	UN 1072, OXYGEN, COMPRESSED CLASS 2.2 (5.1) (38 CYLINDERS TOTAL)	1600Kg		
1 OPEN-TOP SEACAN	UN 1954, COMPRESSED GASES, FLAMMABLE CLASS 2.1 (CONTAINER # NOSU 2403687 SG 2210 108 CYLINDERS)	5400	3200	33.1
11 QUATREX	WASTE, POTASSIUM CHLORIDE N/R	11000		
1 CUBETANK	WASTE, USED OIL EMPTY CUBE	100		
5 OVERSIZE DRUM	WASTE, USED OILY WATER ACTIVATED CARBON, N/R	1500		
2 QUATREX	WASTE, USED OILY WATER ACTIVATED CARBON, N/R	2000		

Additional Information / Seal Number(s):

Emergency Telephone No. / 24-Hour Number: 1-514-940-1230 OR 1-613-996-6666

SHIPPER'S DECLARATION I hereby declare that the contents of this consignment are fully and accurately described above by the Proper Shipping Name, and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national government regulations.	Name/status of declarant YVON BEAUDOIN / PROJECT MANAGER Q.E. Place and date MARY RIVER / AUGUST 15TH 2010 Signature on behalf of shipper

IMDG DECLARATION

Shipper/consignor
QIKIQTAALUK ENVIRONMENTAL INC,
3333, QUEEN-MARY, MONTREAL, QC, H3V1A2
FOR: BAFFINLAND IRON MINES (B.I.M.)

Reference number(s): 1

Page 1 of Pages 2

Consignee VEOLIA ES CANADA
11455 RUE ONTARIO-EST, Montreal-EST,
QC H1C 5J3

Carrier NEAS

CONTAINER/VEHICLE PACKING CERTIFICATE
SEACAN#: NOSU 2403687 562210
DECLARATION

It is declared that the packing of the goods into the container/vehicle has been carried out in accordance with the applicable provisions.

TO BE COMPLETED FOR SHIPMENTS IN CONTAINERS OR VEHICLES

Container/Vehicle #:

Name/status, company/organization of signatory
Q.E. FOR B.I.M.

Place and date
MARY RIVER 15TH AUGUST 2010

Signature on behalf of packer

Vessel No. and Date

Port of loading
MINE INLET

Port of discharge
VALLEY FIELD

(Reserved for text, instructions or other matter)

No. & Kind of Packages	DESCRIPTION OF GOODS (UN Number, PSN, Hazard Class, Packing Group, Flash Point, Marine Pollutant)	QUANTITY Gross mass (kg)	Net mass (kg)	Cube (m3)
2 OVERSIZE DRUM	HUMAN WASTE, N/R *	500Kg		
2 QUATREX	HUMAN WASTE, N/R	600Kg		
12 QUATREX	KITCHEN GREASE, N/R	6000Kg		
5 QUATREX	WASTE HYDRATED LIME, N/R	5000Kg		
4 QUATREX	WASTE POLYMER EMPTY PAILS, N/R	1600Kg		
2 QUATREX	WASTE UNCHARGED FIRE EXTINGUISHER, N/R	2000Kg		
50 DRUM	WASTE, (HC) CONTAMINATED WATER, N/R	12500Kg		
5 QUATREX	WASTE, 20L USED OIL PAILS, N/R	1250		
81 QUATREX	WASTE, 20L USED OIL EMPTY PAILS, N/R	12150		
4 OVERSIZE DRUM	UN1950, WASTE, AEROSOL, FLAMMABLE CLASS 2,1	400		
2 QUATREX	UN2794, WASTE, BATTERIES, WET, FILLED WITH ACID CLASS 8, P.G. III	1200		
8 QUATREX	WASTE, CALCIUM CHLORIDE, N/R	6400		
6 QUATREX	WASTE, CONTAMINATED FUEL BERM LINER, N/R	1500		
17 QUATREX	WASTE, CONTAMINATED SOIL (HC), N/R	17000		
9 CUBE TANK	WASTE, OIL, N/R	9000		

Additional Information / Seal Number(s): * N/R : NOT REGULATED UNDER TDGA

Emergency Telephone No. / 24-Hour Number: 1-514-940-1230 OR 1-613-996-6666

SHIPPER'S DECLARATION

I hereby declare that the contents of this consignment are fully and accurately described above by the Proper Shipping Name, and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national government regulations.

Name/status of declarant
QIKIQTAALUK ENV. / YVON BEAUDOIN

Place and date
MARY RIVER / AUGUST 15TH 2010

Signature on behalf of shipper

MOVEMENT DOCUMENT / MANIFEST
DOCUMENT DE MOUVEMENT / MANIFESTE

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

GF74333-5-1

GF74333-5

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

A Generator / consignor — Producteur / expéditeur

Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: 102118619RT0001

Company name / Nom de l'entreprise: BAFFINLAND IRON MINES

Mailing address / Adresse postale: FROM: MILNE INLET | City / Ville: NUNAVUT | Province | Postal code / Code postal

E-mail / Courrier électronique: ATT: BENOIT DION (Q.E.) | Tel. No. / N° de tél.: 514 940 3332

Shipping site address / Adresse de lieu de l'expédition: MILNE INLET

City / Ville: MILNE INLET | Province: NUNAVUT | Postal code / Code postal

Intended Receiver / consignee — Réceptionnaire / destinataire prévu 2: VEOLIA ES CANADA

Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: 116487 5917

Mailing address / Adresse postale: 11455 ONTARIO-EST | City / Ville: MONTREAL-EST | Province: QC | Postal code / Code postal: H1C 5J3

E-mail / Courrier électronique: JSCLOUTIER@VEOLIASE.com | Tel. No. / N° de tél.: 514 645-4942

Receiving site address / Addresse de lieu de l'expédition: 11455 ONTARIO-EST

City / Ville: MONTREAL-EST | Province: QC | Postal code / Code postal: H1C 5J3

B Carrier — Transporteur

Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial 23

Company name / Nom de l'entreprise: NUNAVUT EASTERN ARTIC SHIPPING (NEAS)

Mailing address / Adresse postale: WING NO. 2 SUITE 2060 | City / Ville: CITE DU HAVRE MONTREAL | Province: QC | Postal code / Code postal: H3C 3R5

E-mail / Courrier électronique: WWW.NEAS.CA | Tel. No. / N° de tél.: 514 597-0186

Vehicle / Véhicule	Registration No. / N° d'immatriculation	Prov. 24
Trailer - Rail car No. 1 / 1re remorque - wagon		
Trailer - Rail car No. 2 / 2e remorque - wagon		

Port of entry / Point d'entrée: international use only | Port of exit / Point de sortie: international use only 25

Carrier Certification : *I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct.* **Attestation du transporteur :** *J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.* 26

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): | Tel. No. / N° de tél.: ( )

Year / Année | Month / Mois | Day / Jour | Signature :

C Receiver / consignee — Réceptionnaire / destinataire

Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial 28

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: IMOG 1 27

Receiver / consignee information same as in Part A
Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A
☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise

Mailing address / Adresse postale

City / Ville | Province | Postal code / Code postal

E-mail / Courrier électronique | Tel. No. / N° de tél.: ( )

Receiving site address / Addresse de lieu de destination

Date received / Date de réception: Year / Année | Month / Mois | Day / Jour — Time / Heure 29 ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les dechets ou matières recyclables doivent être transférés, préciser le nom du destinataire 30 | Registration No /Provincial ID No. N° d'immatriculation/d'id provincial

(i)	Prov. code / Code prov. 3	Shipping name / Appellation réglementaire 4	Class / Classe 5 Sub. class(es) / Classe(s) sub.	UN No. / N° NU 6	Packing / risk gr. / Gr. d'emballage / de risque 7	Quantity shipped / Quantité expédiée	Units 8 L or / ou Kg Unités	Packaging / Contenant 9 No. / N°	Codes Int. – ext	Phys. state / État phys. 10	Quantity received / Quantité reçue	Units 31 L or / ou kg Unités	Comments / Commentaires 32	Handling Code / Code de manutention 33	Shipment / Envoi 34 Accepted / Accepté	Refused / Refusé	Decont. 35 Pack. / Cont	Veh. / Véh.
(i)		SEE ATTACHED ANNEXE																
(ii)																		
(iii)																		
(iv)																		

	Notice No. / N° de notification 11	Notice Line No / N° de ligne de la notification	Shipment / Envoi 12	Of / De	D or R code / Code É ou R 13	C code / Code C 14	Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE 15	H code / Code H 16	Y code / Code Y 17	National code in country of / Code du pays 18 Export / Exportation	Import / Importation	Customs code(s) / Code(s) de douanes 19
(i)												
(ii)												
(iii)												
(iv)												

international use only

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier) 36

Receiver / consignee certification : *I certify that the information contained in Part C is correct and complete.* / **Attestation du réceptionnaire / destinataire :** *J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie) 37

Signature | Tel. No. / N° de tél.: ( )

Generator / consignor certification: *I certify that the information contained in Part A is correct and complete.*
Attestation du producteur / expéditeur: *J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): YVON BEAUDOIN | Signature | Tel. No. / N° de tél.: 514 444-9512 20

Special handling / Manutention spéciale 22
☐ Attached / Ci-joint: ☐ As follows / Ci-contre: WEATHER EMERGENCY 24 HRS: CANUTEC 1-613-996-6666

21 Date shipped / Date d'expédition: Year / Année 10 | Month / Mois 09 | Day / Jour — Time / Heure ☐ A.M. ☐ P.M. | Scheduled arrival date / Date d'arrivée prévue: Year / Année 10 | Month / Mois 09 | Day / Jour 30

MOE 04-1917 (06/05)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

Copy / Copie 1 (white / blanche)

line	Prov. Code	SHIPPING NAME	CLASS	UN	P.G	QUANT. SHIPPED (Kg)	PACKAGING No.	PACKAGING TYPE	Phys. State
a.	N-A	HUMAN WASTE	N/R			500	2	OVERSIZE 250 L DRUM	L/S
b.	N-A	HUMAN WASTE	N/R			600	2	QUATREX BAG	L/S
c.	N-A	KITCHEN GREASE	N/R			6000	12	QUATREX BAG	Sludge
d.	E06	WASTE, HYDRATED LIME	N/R			5000	5	QUATREX BAG	S
e.	L02	WASTE, POLYMER EMPTY PAILS	N/R			1600	4	QUATREX BAG	S
f.	L02	WASTE, UNCHARGED FIRE EXTINGUISHER	N/R			2000	2	QUATREX BAG	S
g.	B05	WASTE, (HC) CONTAMINATED WATER	N/R			12500	50	205 L DRUM	L
h.	A01	WASTE, 20 L USED OIL PAILS	N/R			1250	5	QUATREX BAG	L
i.	L02	WASTE, 20 L USED OIL EMPTY PAILS	N/R			12150	81	QUATREX BAG	S
j.	L02	WASTE, AEROSOL, FLAMMABLE	2.1	1950		400	4	OVERSIZE 55 GLS DRUM	G/L
k.	E15	WASTE, BATTERIES, WET, FILLED WITH ACID	8	2794	III	1200	2	QUATREX BAG	S/L
l.	E06	WASTE, CALCIUM CHLORIDE	N/R			6400	8	QUATREX BAG	S
m.	L03	WASTE, CONTAMINATED FUEL BERM LINER (HC)	N/R			1500	6	QUATREX BAG	S
n.	B13	WASTE, CONTAMINATED SOIL (HC)	N/R			17000	17	QUATREX BAG	S
o.	A01	WASTE, OIL	N/R			9000	9	CUBE 1000 L PLASTIC TOTE TANK	L
p.	A05	WASTE, OIL FILTERS	N/R			300	1	OVERSIZE 55 GLS DRUM	S/L
q.	L03	WASTE, OILY CRUSHED DRUMS	N/R			8800	22	PALLET	S
r.	L02	WASTE, OILY EMPTY SMALL PLASTIC CANS	N/R			300	2	QUATREX BAG	S
s.	A01	WASTE, OILY PRODUCTS	N/R			450	3 2	QUATREX BAG	S/L
t.	A01	WASTE, OILY RAGS	N/R			2100	7	QUATREX BAG	S
u.	L02	OXYGEN *(18 CYLINDERS INSIDE)*	2.2(5.1)	1072		750	1	OPEN WOODEN CRATE	G
v.	L02	OXYGEN *(20 CYLINDERS INSIDE)*	2.2(5.1)	1072		850	1	OPEN WOODEN CRATE	G
w.	L02	COMPRESSED GASES, FLAMMABLE *(108 CYLINDERS INSIDE CONTAINER # : NOSU2403687 SG2210 G.W. 5400 Kg N.W. 3200 Kg CU. CAP. 33.1 M^3)*	2.1	1954		5400	1	OPEN TOP SEACAN	G/L
x.	E06	WASTE, POTASSIUM CHLORIDE *(POTASH)*	N/R			11000	11	QUATREX BAG	S
y.	A01	WASTE, USED OIL EMPTY CUBE	N/R			100	1	TOTE-TANK	S
z.	B05	WASTE, USED OILY WATER ACTIVATED CARBON	N/R			1500	5	OVERSIZE 55 GLS DRUM	S
aa.	B05	WASTE, USED OILY WATER ACTIVATED CARBON	N/R			2000	2	QUATREX BAG	S
				TOTAL		**110650**	**266**		

VEOLIA
SERVICES
À L'ENVIRONNEMENT

Client : BAFFINLAND IRON MINES
950, BOUL GERARD-CADIEUX
VALLEYFIELD, QC

J6T 6L4

Lieu de disposition : VEOLIA ES CANADA SERV. INDUSTRIELS INC.
2630, BOUL. INDUSTRIEL
CHAMBLY QC

J3L 4V2

Date arrivage : 0000-00-00 **No. de connaissement :** 6091-246684

Certificat d'élimination de Matières dangereuses résiduelles

VEOLIA ES CANADA certifie par la présente avoir reçu et fait ou fera détruire les résidus suivants dans un délai raisonnable, en conformité avec toutes les lois et règlements en vigueur aux niveaux municipal, provincial et fédéral.

VEOLIA ES CANADA guarantee by the present having received and made, or will make, destroy the following residues within a reasonable period, in accordance with all current laws and regulations at the municipal, provincial and federal levels.

UNCHARGED FIRE EXTINGUISHER EXCEPT HALON(NORTHERN)	2	QUAT
WASTE CONTAMINATED FUEL BERM LINER (HC) (NORTHERN)	3	QUAT
OILY PRODUCTS (1L, 4L, 20L) (NORTHERN MDR)	3	QUAT
OILY RAGS (ABSORBANT PADS) (NORTHERN MDR)	2	QUAT

Mathieu Gosselin
Service à la clientèle

Date : vendredi le 18 mars 2011

No. de certificat : 110318133538

18-03-2011 13:04 VEOLIA ES MDR 514 645 0762 P.01/01

NBRE DE PAGES 01

VEOLIA
SERVICES
À L'ENVIRONNEMENT

Client : BAFFINLAND IRON MINES
950, BOUL GERARD-CADIEUX
VALLEYFIELD, QC

J6T 6L4

Lieu de disposition : VEOLIA ES CANADA SERV. INDUSTRIELS INC.
2630, BOUL. INDUSTRIEL
CHAMBLY QC

J3L 4V2

Date arrivage : 0000-00-00 **No. de connaissement :** 6091-246685

Certificat d'élimination de Matières dangereuses résiduelles

VEOLIA ES CANADA certifie par la présente avoir reçu et fait ou fera détruire les résidus suivants dans un délai raisonnable, en conformité avec toutes les lois et règlements en vigueur aux niveaux municipal, provincial et fédéral.

VEOLIA ES CANADA guarantee by the present having received and made, or will make, destroy the following residues within a reasonable period, in accordance with all current laws and regulations at the municipal, provincial and federal levels.

EMPTY 5 G. (WASTE OIL / GREASE) (NORTHERN MDR)	9	QUAT
OILY PRODUCTS (1L, 4L, 20L) (NORTHERN MDR)	3	QUAT

Mathieu Gosselin
Service à la clientèle

Date : vendredi le 18 mars 2011

No. de certificat : 110318133603

514 645 0762 P.01/01
18-03-2011 13:04 VEOLIA ES MDR
NBRE DE PAGES 01

VEOLIA
SERVICES
À L'ENVIRONNEMENT

Client : BAFFINLAND IRON MINES
950, BOUL GERARD-CADIEUX
VALLEYFIELD, QC

J6T 6L4

Lieu de disposition : VEOLIA ES CANADA SERV. INDUSTRIELS INC.
2630, BOUL. INDUSTRIEL
CHAMBLY QC

J3L 4V2

Date arrivage : 2010-10-22 **No. de connaissement :** 6091-246686

Certificat d'élimination de Matières dangereuses résiduelles

VEOLIA ES CANADA certifie par la présente avoir reçu et fait ou fera détruire les résidus suivants dans un délai raisonnable, en conformité avec toutes les lois et règlements en vigueur aux niveaux municipal, provincial et fédéral.

VEOLIA ES CANADA guarantee by the present having received and made, or will make, destroy the following residues within a reasonable period, in accordance with all current laws and regulations at the municipal, provincial and federal levels.

SANITARY WASTE (NORTHERN MDR)	2	60G
AEROSOLS (NORTHERN)	4	60G
OILY WATER ACTIVATED CARBON (NORTHERN MDR)	5	BAR

Mathieu Gosselin
Service à la clientèle

Date : vendredi le 18 mars 2011

No. de certificat : 110318133626

514 645 0762 P.01/01
VEOLIA ES MDR
18-03-2011 13:12
NBRE DE PAGES 01

VEOLIA
SERVICES
À L'ENVIRONNEMENT

Client : BAFFINLAND IRON MINES
950, BOUL GERARD-CADIEUX
VALLEYFIELD, QC

J6T 6L4

Lieu de disposition : VEOLIA ES CANADA SERV. INDUSTRIELS INC.
2630, BOUL. INDUSTRIEL
CHAMBLY QC

J3L 4V2

Date arrivage : 2010-11-05 **No. de connaissement :** 6094-188840

Certificat d'élimination de Matières dangereuses résiduelles

VEOLIA ES CANADA certifie par la présente avoir reçu et fait ou fera détruire les résidus suivants dans un délai raisonnable, en conformité avec toutes les lois et règlements en vigueur aux niveaux municipal, provincial et fédéral.

VEOLIA ES CANADA guarantee by the present having received and made, or will make, destroy the following residues within a reasonable period, in accordance with all current laws and regulations at the municipal, provincial and federal levels.

WASTE OIL (IN QUATREX) (NORTHERN MDR)	5	QUAT
EMPTY 5 G. (WASTE OIL / GREASE) (NORTHERN MDR)	38	QUAT
CONTAMINATED WATER (OILY) (NORTHERN MDR)	34	BAR

Mathieu Gosselin
Service à la clientèle

Date : vendredi le 18 mars 2011

No. de certificat : 110318134125

514 645 0762 P.01/01
VEOLIA ES MDR
18-03-2011 13:12
NBRE DE PAGES 01

VEOLIA
SERVICES
À L'ENVIRONNEMENT

Client : BAFFINLAND IRON MINES
950, BOUL GERARD-CADIEUX
VALLEYFIELD, QC

J6T 6L4

Lieu de disposition : VEOLIA ES CANADA SERV. INDUSTRIELS INC.
2630, BOUL. INDUSTRIEL
CHAMBLY QC

J3L 4V2

Date arrivage : 2010-11-05 **No. de connaissement :** 6094-188844

Certificat d'élimination de Matières dangereuses résiduelles

VEOLIA ES CANADA certifie par la présente avoir reçu et fait ou fera détruire les résidus suivants dans un délai raisonnable, en conformité avec toutes les lois et règlements en vigueur aux niveaux municipal, provincial et fédéral.

VEOLIA ES CANADA guarantee by the present having received and made, or will make, destroy the following residues within a reasonable period, in accordance with all current laws and regulations at the municipal, provincial and federal levels.

OIL FILTER (NORTHERN)	1	60G
OILY EMPTY SMALL PLASTIC CANS (NORTHERN MDR)	1	QUAT
OILY PRODUCTS (NORTHERN MDR)	1	QUAT
EMPTY 5 G. (WASTE OIL / GREASE) (NORTHERN MDR)	13	QUAT
FLAMMABLE LIQUID,N.O.S.(POLYMER)(EMPTY PAILS)(MDR)	4	QUAT

Mathieu Gosselin
Service à la clientèle

Date : vendredi le 18 mars 2011

No. de certificat : 110318134143

514 645 0762 P.01/01
18-03-2011 13:12 VEOLIA ES MDR
NBRE DE PAGES 01

VEOLIA
SERVICES
À L'ENVIRONNEMENT

Client : BAFFINLAND IRON MINES
950, BOUL GERARD-CADIEUX
VALLEYFIELD, QC

J6T 6L4

Lieu de disposition : VEOLIA ES CANADA SERV. INDUSTRIELS INC.
2630, BOUL. INDUSTRIEL
CHAMBLY QC

J3L 4V2

Date arrivage : 2010-11-17 **No. de connaissement :** 6094-191639

Certificat d'élimination de Matières dangereuses résiduelles

VEOLIA ES CANADA certifie par la présente avoir reçu et fait ou fera détruire les résidus suivants dans un délai raisonnable, en conformité avec toutes les lois et règlements en vigueur aux niveaux municipal, provincial et fédéral.

VEOLIA ES CANADA guarantee by the present having received and made, or will make, destroy the following residues within a reasonable period, in accordance with all current laws and regulations at the municipal, provincial and federal levels.

(HC) CONTAMINATED WATER (NORTHERN MDR)	1	60G
WASTE FUEL (NORTHERN MDR)	3	60G

Mathieu Gosselin
Service à la clientèle

Date : vendredi le 18 mars 2011

No. de certificat : 110318134223

Téléphone: (514) 648-8602

R-369256

MÉTAUX DÉPOT

Date _____

IDENTIFICATION

Copie pas payer

POIDS

02:38 PM 056840 lb lbs **BRUT**
11-30-10

03:12 PM 038100 lb lbs **TARE**
11-30-10

SANEXEN Reid VOIR Cly #2424 18740 lbs ~~NET~~

Type de matériel BATTERIE — AJUSTEMENT

Déchets / autre 13 skids — **NET FINAL**

#1 _____ MIX _____ FONTE DISC & DRUMS _____

#1 O/S _____ TOLE _____ FONTE #1 _____

1 O/S TORCH _____ AUTO _____ FONTE #2 _____

RIPE D'ACIER _____ RE-ROD / BRUSH _____ BUSH #1 _____ BUSH #2 _____

MOTOR BLOCKS _____ MOTEUR ÉLECTRIQUE _____ PASSAGER _____

Fer & Métaux Américains S.E.C.
American Iron & Metal LP

December 9th 2010

M. Benoit Dion
Sanexen
1471 Boulevard Lionel-Boulet, suite 32
Varennes, Québec
J3x 1p7

Dear M. Dion,

This letter is a confirmation that AIM did receive a load of crushed drums from your company.

We can assure you and certify that this material as been treated and destructed according to the regulations of the Ministère de L'Environnement of the province of Quebec.

AIM has all of the necessary permits to proceed.

I hope this information is satisfactory.

Sincerely,

Lafontaine

Sebastien Lafontaine

Fer & Métaux Américains S.E.C.
American Iron & Metal LP

December 9th 2010

M. Benoit Dion
Sanexen
1471 Boulevard Lionel-Boulet, suite 32
Varennes, Québec
J3x 1p7

Dear M. Dion,

This letter is a confirmation that AIM did receive a load of transformers from your company.

We can assure you and certify that this material as been treated and destructed according to the regulations of the Ministère de L'Environnement of the province of Quebec.

AIM has all of the necessary permits to proceed.

I hope this information is satisfactory.

Sincerely,

Lafontaine

Sebastien Lafontaine

9100, boul. Henri-Bourassa Est, Montréal (Québec) H1E 2S4 Téléphone : (514) 494-2000 Télécopieur : (514) 494-8358
www.aimsolder.com • www.scrapmetal.net

Grandes-Piles, January 21th

Att: Benoit Dion
Qikiqtaaluk Environmental
3333 Queen-Mary, suite 580
Montreal, Quebec

Project name : Baffinland Iron Mines
Generator : Baffinland Iron Mines corp.
Represented by : Jim Millard, Senior Environmental Superintendent
Location: Mary River & Milne Inlet sites

Adjusted inventory (per volume)

Item	Type of Package & QTY	Volume estimated (m3)
HC contaminated soil	Quatrex (24)	24
HC contaminated soil	Oversize (8)	2,27

If you have any questions, Mr. Dion, feel free to contact us.
Regards,

Éric Paquin
Vice-president

one: (514) 648-8602

R-369256

MÉTAUX DÉPÔT

Date _____

IDENTIFICATION

Copie pas payer OK

SANEXEN Reid Voir Cle #2424

POIDS

02:38 PM 056840 lb lbs **BRUT**
11-30-10

03:12 PM 038100 lb lbs **TARE**
11-30-10

18740 lbs ~~NET~~

de matériel BATTERIE AJUSTEMENT

ets / autre 13 skids **NET FINAL**

MIX _____ FONTE DISC & DRUMS _____

D/S _____ TOLE _____ FONTE #1 _____

/S RCH _____ AUTO _____ FONTE #2 _____

E CIER _____ RE-ROD / BRUSH _____ BUSH #1 _____ BUSH #2 _____

TOR OCKS _____ MOTEUR ÉLECTRIQUE _____ PASSAGER _____

SANEXEN
SERVICES ENVIRONNEMENTAUX INC.

1471, boulevard Lionel-Boulet, bureau 32
Varennes (Québec) J3X 1P7
Tél. : 450 652-9[illegible]
Téléc. : 450 652-2290

REÇU LE 07 JAN. 2011

BON D'EXPÉDITION ET DE TRAVAIL

BE- 0139

120106

DB 1189

Expéditeur	Transporteur NIR : R508875-3	Destinataire ID prov : 1143649946
Nom : BAFFINLAND IRON MINES - Mary River	Nom : TRANSPORT ROLLEX INC.	Nom : STABLEX CANADA INC.
Prénom : Projet - Port of Valleyfield	Prénom :	Prénom :
950 Boul. Gerard Cadieux	910 Boul. Lionel-Boulet	760 Boul. Industriel
Ville : Salaberry-de-Valleyfield QC J6T 6L4	Ville : Varennes, QC, J3X 1P7	Ville : Blainville QC J7C 3V4
Téléphone : 514-444-9512 Code postal :	Téléphone : 450-652-4282 Code postal :	Téléphone : 450-430-9030 Code postal :
Responsable : Yvon Beaudoin	Responsable : Louis Lafontaine	Responsable : Richard Robert
	Trailer : 9865201 RM73079 QC	

Date	N° de B.C. Sanexen	N° de B.C. Client	Client	N° de projet	Responsable
01/11/2010	22599		SANEXEN	RQ10-110-1	Yvon Beaudoin

Qté comm.	B / O	U / M	Description	Poids / Prix	Poids total Prix total
5		T/SAC	WASTE, HYDRATED LIME, N/R QC CODE: E06	2000 Kg	
			STABLEX CODE: 021323 ALCALIN SOLIDE		
9		T/SAC	WASTE, CALCIUM CHLORIDE, N/R QC CODE: E06	2700 Kg	
			STABLEX CODE: 021323 ALCALIN SOLIDE		
9		T/SAC	WASTE, POTASSIUM CHLORIDE, N/R, QC CODE: E06	2700 Kg	
			STABLEX CODE: 021323 ALCALIN SOLIDE		
TOTAL	23	UNIT			
			IN CASE OF EMERGENCY 24/7/365 : 1-613-996-6666 CANUTEC		

Marchandise dangereuse ☐ Placard classé : NO placards requis → Total

À recevoir ☐ Payé d'avance ☐ P.S.L. - C.O.D. ($) _____ ☐

Espace utilisé : 1/4 1/2 3/4 Plein | Nombre de mcx : | Valeur déclarée ($) :

TOUTE RÉCLAMATION DEVRA ÊTRE FAITE DANS LES 5 JOURS SUIVANT LA RÉCEPTION

Expéditeur	Transporteur	Destinataire
B.I.M.	Rollex	STABLEX
Signature	Signature	Signature
Date	Date 01-11-2010	Date 01-11-10

F-15728

STABLEX CANADA INC.
760, boul. Industriel, Blainville (Québec) Canada J7C 3V4
Téléphone : 450-430-9230 - Télécopieur: 450-430-4642
www.stablex.com

DISPOSAL CERTIFICATE

BAFFINLAND IRON MINES
Mr. Benoit Dion /Sanexen
Mary River
Nunavut, Québec, H1H 0H0

Date received	Order No.	Total quantity received	Manifest No.
2010/11/02	120106	23.00 T SAC	BE-0139

"We hereby acknowledge that, as of March 11th 2011, the above-listed wastes and/or contaminated soils have been received, analyzed and accepted for treatment and will be disposed by Stablex within one year of receipt, in accordance with provincial regulations, the Certificate of Authorization and the Operating Permit granted to Stablex Canada Inc., Blainville, Québec, by the Québec Ministry of Environment, in force at this date."

Pierre Légo
Manager, Prevention and compliance

SCI-1100-15/AOU03

APPENDIX C – AS-BUILT REPORT AND PHOTOGRAPHIC RECORDS

APPENDIX C.1 – LANDFILL AS-BUILT REPORT

GENIVAR

834 Mountjoy Street South
P.O. Box 120
Timmins, Ontario P4N 7C5
Tel. (705) 264-9413
Fax. (705) 267-2725

September 2, 2010

Jim Millard, M. Sc., P. Geo.
Environmental Superintendent
Mary River Project
Baffinland Iron Mines Corporation
Suite 1016, 120 Adelaide Street West
Toronto, Ontario M5H 1T1

Dear Jim,

RE:

MARY RIVER PROJECT
MARY RIVER LANDFILL
QA/QC REPORT (As-Built Report)
OUR REFERENCE NO. 09-162

Genivar Consultants LP (Genivar) was retained by Baffinland Iron Mines Corporation (BIMC) to design the Solid Waste Landfill and its associated access road in Nunavut, provide QA/QC services during construction and subsequently to compile the required documentation of as-built conditions of the facility.

BACKGROUND

Part J, Part J (3), of the Water Licence (#2BB-MRY0710) for the Mary River Project issued by the Nunavut Water Board (NWB) states that:

> *"The Licensee shall provide as-built plans and drawings, stamped and sealed by a professional Engineer registered in Nunavut, within ninety (90) days of completion of all construction works, …"*

Additionally, Qikiqtani Inuit Association (QIA) in their letter of August 27, 2009 entitled "QIA Response, BIMC Request to Commence Inert Landfill Construction and Operation" have made some requirements for As-Built conditions of the landfill which is the subject of this report.

The Construction of the Access Road and the landfill commenced in the first week of July 2010 and was completed within 3 weeks.

PROPOSED DESIGN OF THE ACCESS ROAD AND LANDSFILL

Figure 1 shows the site map indicating the Mary River Project sites from Steensby in the south to Mary River Camp in the north and Milne Inlet Camp in the north. Figure 2 shows the site plan arrangements of the Acess Road and Landfill at Mary River Site.

As shown in the related drawings in Appendix 1, the Access Road was designed to take off from the existing Explosives Magazines Road. This access road crosses two low areas where culverts were needed to allow for drainage. The Access Road was designed to be constructed of granular material from the nearby borrow pits and the quality of the granular material were to be observed visually by the site engineer performing QA/QC during construction.

The landfill was designed to have containment berms constructed of geanular material. The containment berms are approximately 2-m in height with 3:1 inside slopes and 2:1 outside slopes.

AS-CONSTRUCTED CONDITIONS OF THE FACILITY

Genivar provided full-time QA/QC inspection of the construction activities for the Access Road and the Landfill containment berms. Attached in Appendix 2 are the As-Constructed Drawings and photographs of construction activities.

Access Road construction

The Access Road was constructed in general conformance to the design. Granular material was brought in from nearby borrow pits and placed and compacted. Two culverts at station 0+118 and at station 0+383 were constructed. It should be noted that from Station 0+500 to station 0+600, the road was constructed of blasted inert waste rock for better compaction and drainage. For details on the as-built profile and sections of the Access Road, please refer to drawings AC1 and AC2 in Appendix 2.

Containment construction

The containment for the Landfill Facility was constructed in general conformance with the design. For details on the plans and sections of the containment construction, please refer to drawings AC1 and AC2 in Appendix 2.

The material used for the containment berms and base was obtained from nearby borrow sources. The material was free of any deleterious substances and was reviewed by Genivar QA/QC inspector.

It is our opinion that the Landfill Facility containment was designed and built in general conformance with our original design.

We trust this report is satisfactory and meets your requirements. However, should you have any questions, please do not hesitate to contact the undersigned for further discussion.

Yours truly,

Genivar Consultants LP

F. G. Kord

Marz G. Kord, P. Eng., M.Sc., MBA

APPENDIX 1

- **DESIGN BRIEFS**
- **DESIGN DRAWINGS**

GENIVAR

834 Mountjoy Street South
P.O. Box 120
Timmins, Ontario P4N 7C5
Tel. (705) 264-9413
Fax. (705) 267-2725

August 7, 2009

Dick Matthews
Director, Technical Services
Baffinland Iron Mines Corporation
Suite 1016, 120 Adelaide Street West
Toronto, Ontario M5H 1T1

Dear Dick,

RE:

MARY RIVER PROJECT
ACCESS ROAD TO SOLID WASTE DISPOSAL SITE
DESIGN REPORT
OUR REFERENCE NO. 09-162

Genivar Consultants LP (Genivar) has been retained by Baffinland Iron Mines Corporation (BIMC) to design the access road to the solid waste disposal site at their Mary River Camp site in Nunavut. The purpose of this report is to provide you with the design parameters as well as the methodology in the construction of the access road.

PROPOSED DESIGN OF THE FACILITIES AT MARY RIVER CAMP SITE

Figure C01 shows the site plan including a key map indicating the access road to the proposed solid waste disposal site. Figures C02 to C05 show the plan, profiles and sections of the road including the culverts associated with our design.

The access road shall be built over relatively flat stony surfaced areas of the tundra with two lower areas where water may migrate under the road.

The intent is not to excavate into the tundra but to build on top of the stony surface on the flat areas and the minor organics in the depressed areas.

This should minimize to the melting of wedge ice or tabular ice below the surface of the road if it should exist in the permafrost.

Although there is no specification available for the select granular fill, the Contractors have been constructing roads on site with this material including the road to the bulk sample pit on top of the ore body as well as roads about the site.

There are two types of fill found in the borrow pits that have been used in construction in the past. One is a sandy fill with little gravel and the other is a well graded gravel with just adequate fines to construct a stable base that packs readily with the travel from the bulldozers and trucks. This material is what we term as select granular fill and it was identified in the nearby designated borrow pit to mine personnel and was approved by the engineer to be used on the road base and wearing surface.

As shown in the related drawings in Appendix 1, the access road requires two culverts to be installed at two locations to ensure proper drainage away from the road. These culverts were sized based on the precipitation information provided from the nearest measuring station (Pond Inlet) and the availability of culverts at the site. We enclose our design basis for the calculation of culverts to this letter.

The following is a summary of the required material for the proposed access road:

Road Length:	660 meters
Culverts:	1 @ 1-m dia. CSP culverts 11 meters
	1 @ 0.3 m dia. CSP culvert 10 meters
Cut:	0 C.M.
Fill (Road base aggregate)	2332 C.M. select granular fill.

The 1.0m culvert being utilized is considerably larger than required but is used due to availability on site.

An explosive magazine designed for 20,000 kg of explosive is located approximately 70 meters from the proposed access road to the solid waste disposal (SWD) site.

Although a majority of the 20,000 kg of explosives were used during the bulk sampling program in 2008, we have ensured that the access road to the SWD site meets the guidelines for Quality Distance to Explosives storage as set out by Natural Resources Canada (NRC).

We trust this report is satisfactory and meets your requirements. However, should you have any questions, please do not hesitate to contact the undersigned for further discussion.

Yours truly,

Genivar Consultants LP

Barry H. Martin, P. Eng., MRAIC
BHM/jw
c.c. Derek Chubb
Dave McCann

This Drawing is an instrument of service and shall remain the property of GENIVAR. It may not be reproduced or copied in any form. It shall not be used for the construction, enlargement or alteration of a building other than the said project without the authorization of the CONSULTANTS.

Contractors shall verify and be responsible for all dimensions and conditions on the job and report any discrepancies to the Consultant before proceeding with the work.

Drawings shall not be scaled.

Description	Date	No.
Revisions and Issues		

EXISTING ROAD TO MAGAZINE

PLACE CULVERT IN EXISTING RECESS

CSP 2 @ 0+450:
DIAMETER= 300mm
LENGTH= 10.0m
CENTERLINE ELEV= 186.46
INLET ELEV= 185.70
OUTLET ELEV= 185.60

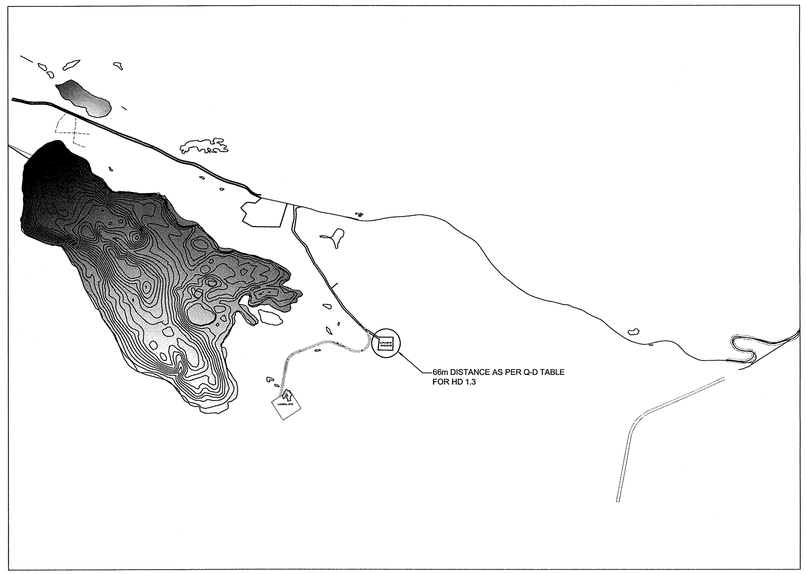
CSP 1 @ 0+145:
DIAMETER= 1.0m
LENGTH= 11.0m
CENTERLINE ELEV= 187.71
INLET ELEV= 185.85
OUTLET ELEV= 185.74

MATCH TO BOTTOM OF CHANNEL

LOCATE CULVERT AT CHANNEL

GRADE MAY BE ADJUSTED IN FUTURE AS LANDFILL SITE DEVELOPS.

LANDFILL SITE



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Project

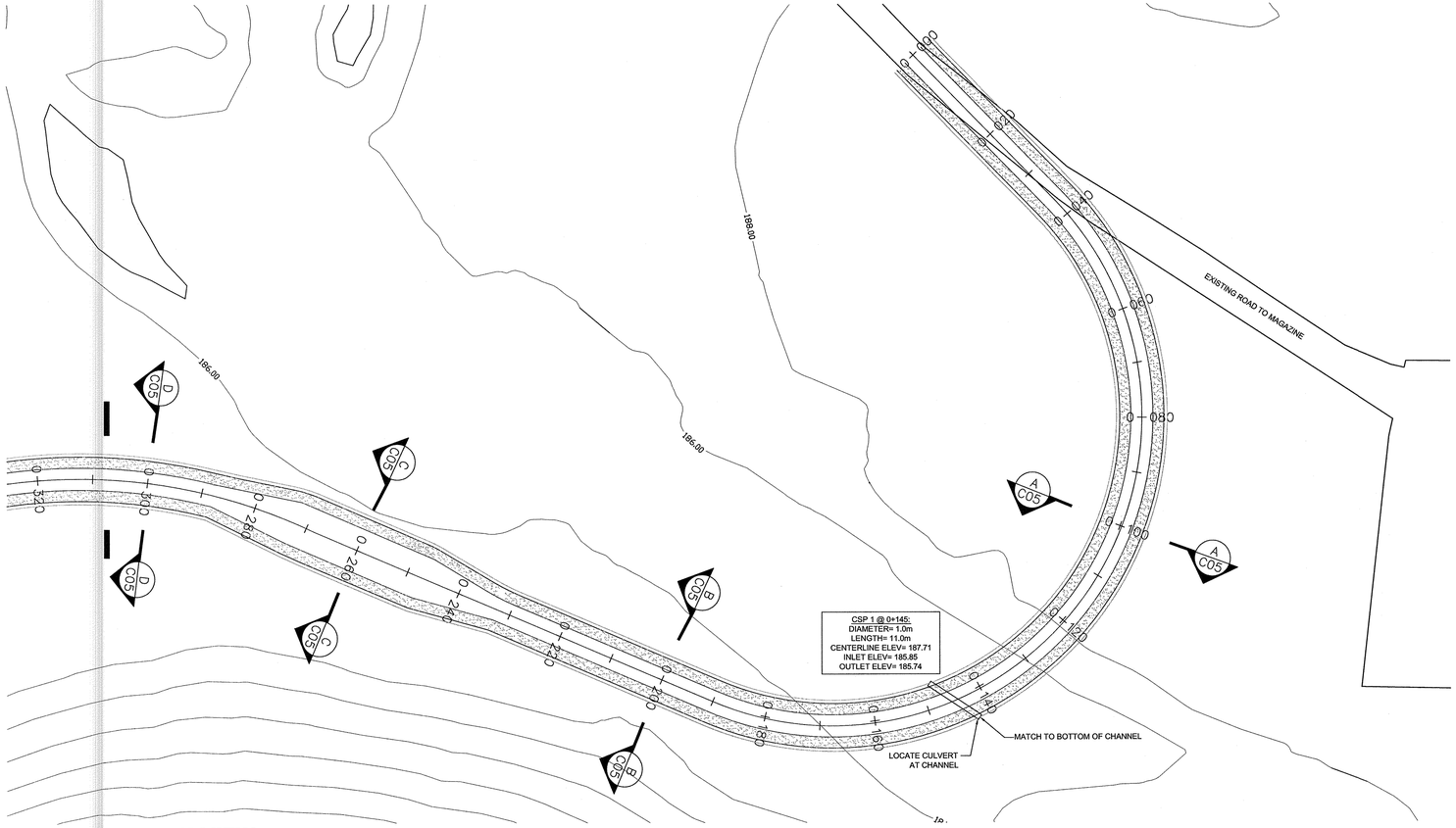
MARY RIVER PROJECT
BAFFINLAND IRON MINES CORPORATION

BAFFINLAND NUNAVUT

Drawing

NEW ROAD TO LANDFILL SITE PLAN VIEW

Date: JUNE 2009	CADD File Number: design\new road sections.dwg
Scale: AS NOTED	Job Number: **09-162**
Drawn: S.S.	
Checked: B.M.	Drawing Number: **C01**
Approved: B.M.	



NEW ROAD- PLAN VIEW

SCALE 1:125

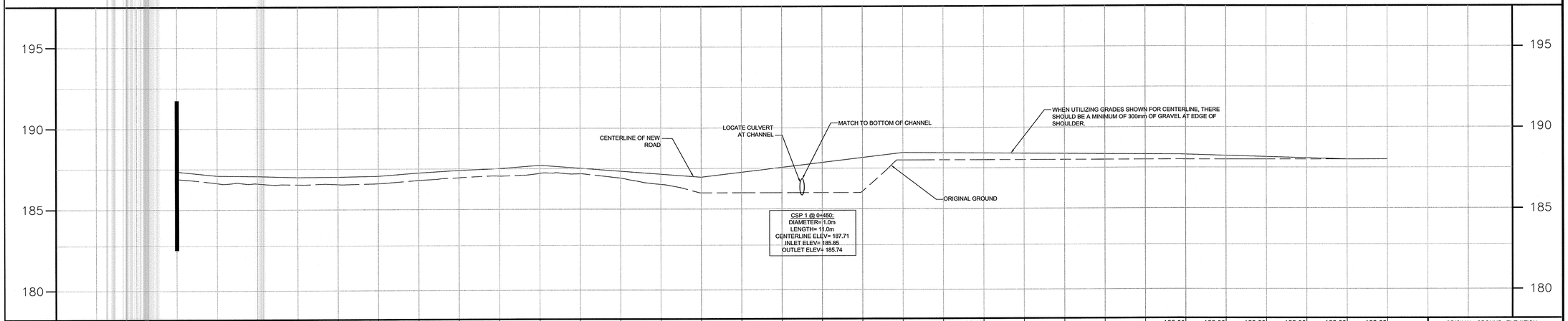
SCALES

20m 0 20m

Horizontal

5m 0 5m

Vertical



STATION	0+300	0+290	0+280	0+270	0+260	0+250	0+240	0+230	0+220	0+210	0+200	0+190	0+180	0+170	0+160	0+150	0+140	0+130	0+120	0+110	0+100	0+090	0+080	0+070	0+060	0+050	0+040	0+030	0+020	0+010	0+000	STATION
ORIGINAL GROUND ELEVATION	186.90	186.64	186.60	186.53	186.55	186.60	186.79	186.95	187.05	187.21	187.18	186.92	186.52	186.00	186.00	186.00	186.00	186.00	186.00	188.00	188.00	188.00	188.00	188.00	188.00	188.00	188.00	188.00	188.00	188.00	188.00	ORIGINAL GROUND ELEVATION
CENTERLINE ELEVATION	187.36	187.10	187.06	186.99	187.01	187.06	187.25	187.41	187.51	187.71	187.52	187.34	187.15	186.96	187.26	187.56	187.86	188.16	188.46	188.44	188.42	188.39	188.37	188.35	188.32	188.30	188.23	188.15	188.08	188.00	188.00	CENTERLINE ELEVATION
CENTERLINE GRADE	+0.7%	+2.6%	+0.4%	+0.7%	−0.2%	−0.5%	−1.9%	−1.6%	−1.0%	−2.0%	+1.9%	+1.8%	+1.9%	+1.9%	−3.0%	−3.0%	−3/0%	−3.0%	−3.0%	+2.0%	+2.0%	+3.0%	+2.0%	+2.0%	+3.0%	+0.2%	+0.7%	+0.8%	+0.7%	+0.8%	0.%	CENTERLINE GRADE
AS CONSTRUCTED NOTES																																AS CONSTRUCTED NOTES

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MECHANICAL ELECTRICAL

Project

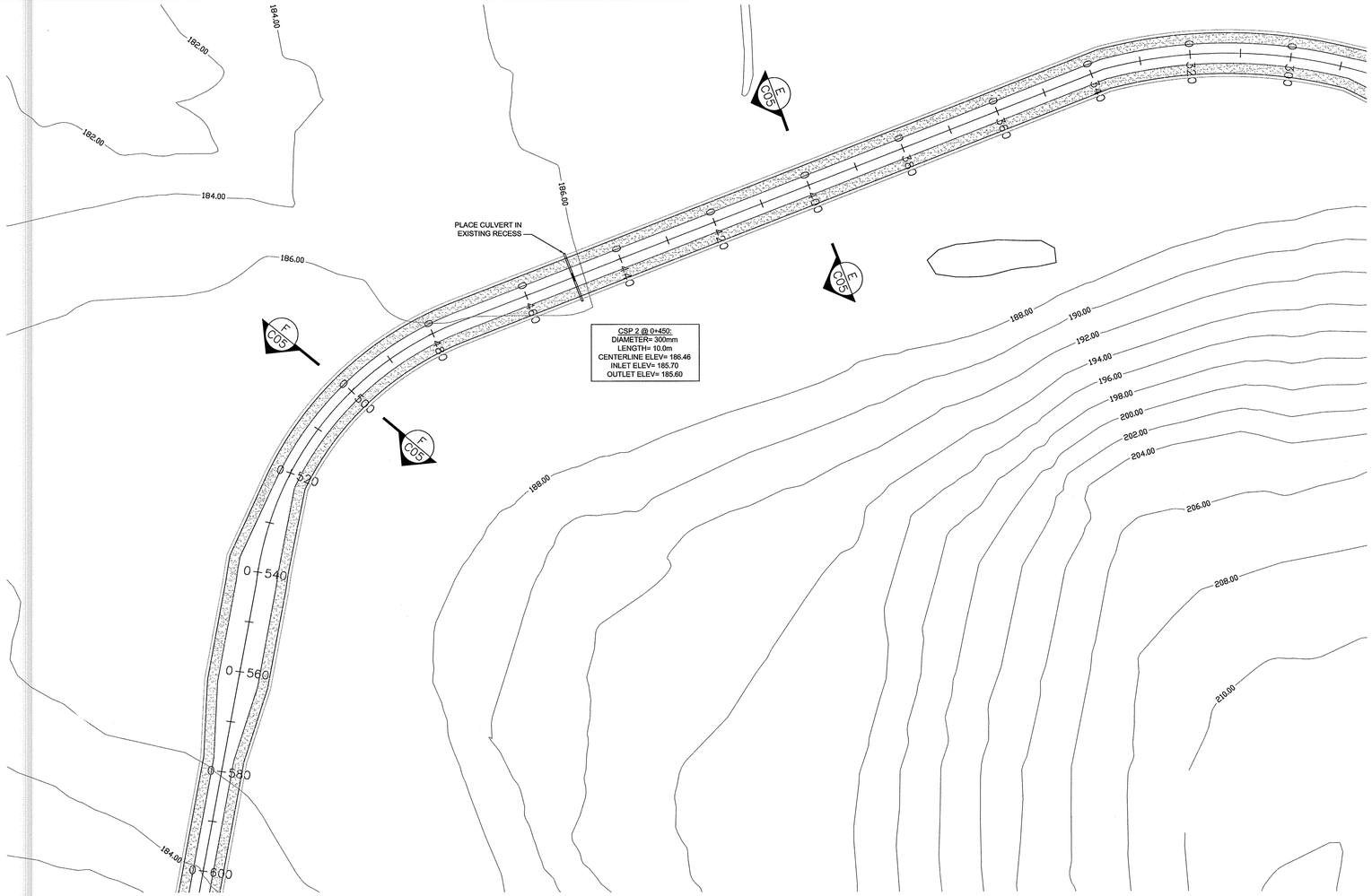
MARY RIVER PROJECT
BAFFINLAND IRON MINES CORPORATION

BAFFINLAND NUNAVUT

Drawing

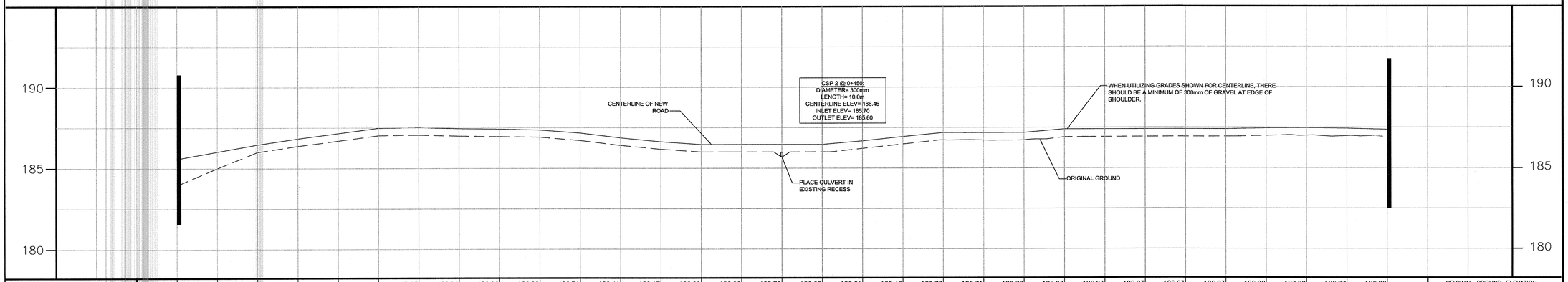
PLAN AND PROFILE
STA. 0+000 to 0+300

Date JUNE 2009	CADD File Number civil\design\plan and profile
Scale AS NOTED	Job Number **09-162**
Drawn S.S.	
Checked B.M.	Drawing Number **C02**
Approved B.M.	



NEW ROAD- PLAN VIEW

SCALE 1:125



STATION	0+600	0+590	0+580	0+570	0+560	0+550	0+540	0+530	0+520	0+510	0+500	0+490	0+480	0+470	0+460	0+450	0+440	0+430	0+420	0+410	0+400	0+390	0+380	0+370	0+360	0+350	0+340	0+330	0+320	0+310	0+300	STATION
ORIGINAL GROUND ELEVATION	183.95	185.00	186.00	186.37	186.66	187.02	187.05	186.99	186.96	186.90	186.71	186.41	186.17	186.00	186.00	185.70	186.00	186.21	186.48	186.72	186.71	186.72	186.93	186.93	186.93	186.93	186.93	186.98	187.00	186.97	186.90	ORIGINAL GROUND ELEVATION
CENTERLINE ELEVATION	185.58	186.02	186.46	186.83	187.12	187.48	187.51	187.45	187.42	187.36	187.17	186.87	186.63	186.46	186.46	186.46	186.46	186.67	186.94	187.18	187.17	187.18	187.36	187.36	187.36	187.36	187.36	187.44	187.46	187.43	187.36	CENTERLINE ELEVATION
CENTERLINE GRADE	−4.4%	−4.4%	−4.4%	−3.7%	−2.9%	−3.6%	−0.3%	+0.6%	+0.3%	+0.6%	+1.9%	+3.0%	+2.4%	+1.7%	0%	0%	0%	−2.1%	−2.7%	−2.4%	+0.1%	−0.1%	−1.8%	0%	0%	0%	0%	−0.8%	−0.2%	+0.3%	+0.7%	CENTERLINE GRADE
AS CONSTRUCTED NOTES																																AS CONSTRUCTED NOTES

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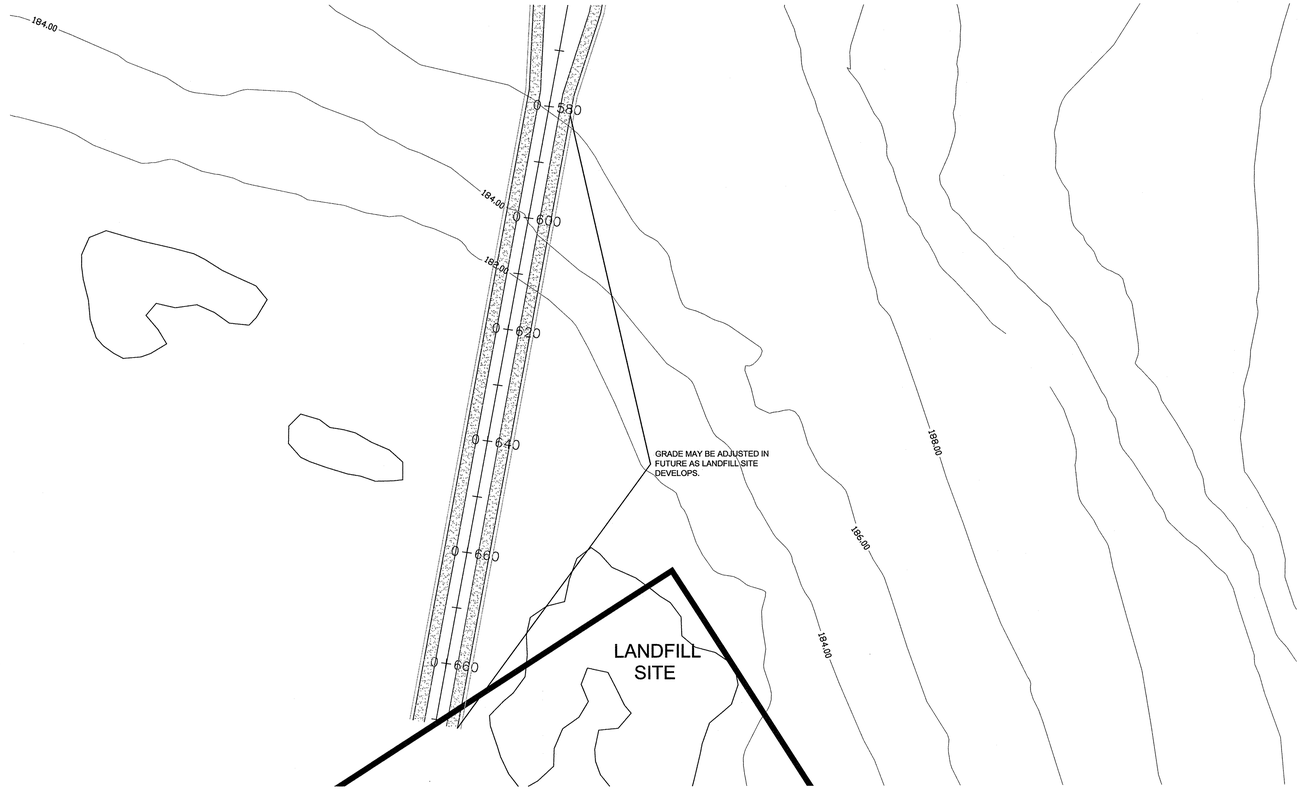
MARY RIVER PROJECT
BAFFINLAND IRON MINES CORPORATION

BAFFINLAND NUNAVUT

Drawing

PLAN AND PROFILE
STA. 0+300 to 0+600

Date	CADD File Number
JUNE 2009	civil\design\plan and profile
Scale: AS NOTED	Job Number: **09-162**
Drawn: S.S.	
Checked	Drawing Number: **C03**
Approved	



NEW ROAD- PLAN VIEW

SCALE 1:125

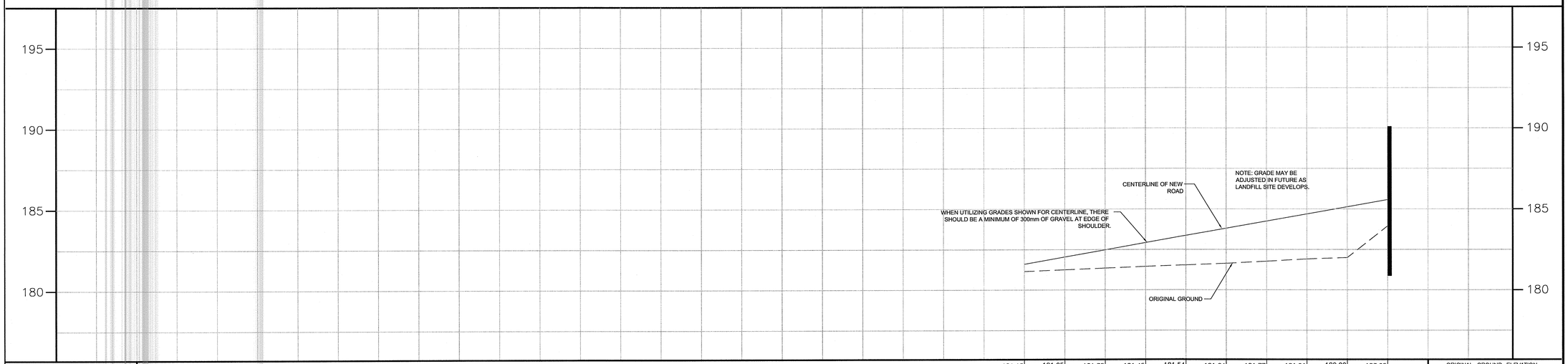
SCALES

20m 0 20m

Horizontal

5m 0 5m

Vertical



ORIGINAL GROUND ELEVATION	181.15	181.25	181.35	181.45	181.54	181.64	181.77	181.91	182.00	183.95
CENTERLINE ELEVATION	181.60	182.04	182.50	182.92	183.37	183.81	184.25	184.70	185.14	185.58
CENTERLINE GRADE		−4.4%	−4.6%	−4.2%	−4.5%	−4.4%	−4.4%	−4.5%	−4.4%	−4.4%
STATION	0+690	0+680	0+670	0+660	0+650	0+640	0+630	0+620	0+610	0+600
AS CONSTRUCTED NOTES										

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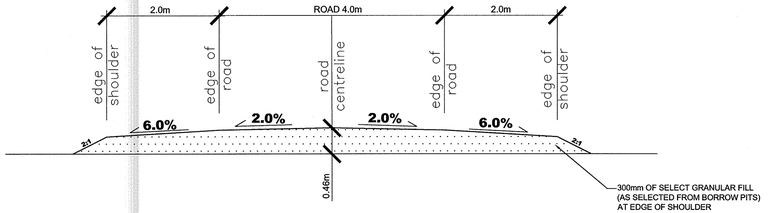
MARY RIVER PROJECT
BAFFINLAND IRON MINES CORPORATION

BAFFINLAND NUNAVUT

Drawing

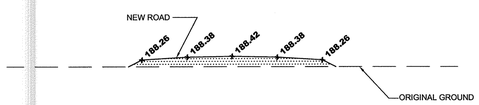
PLAN AND PROFILE
STA. 0+600 to 0+690

Date	CADD File Number
JUNE 2009	civil\design\plan and profile
Scale: AS NOTED	Job Number: **09-162**
Drawn: S.S.	
Checked	Drawing Number: **C04**
Approved	



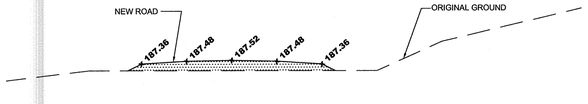
NEW ROAD SECTION TYPICAL

SCALE 1:100 — 1 / C05



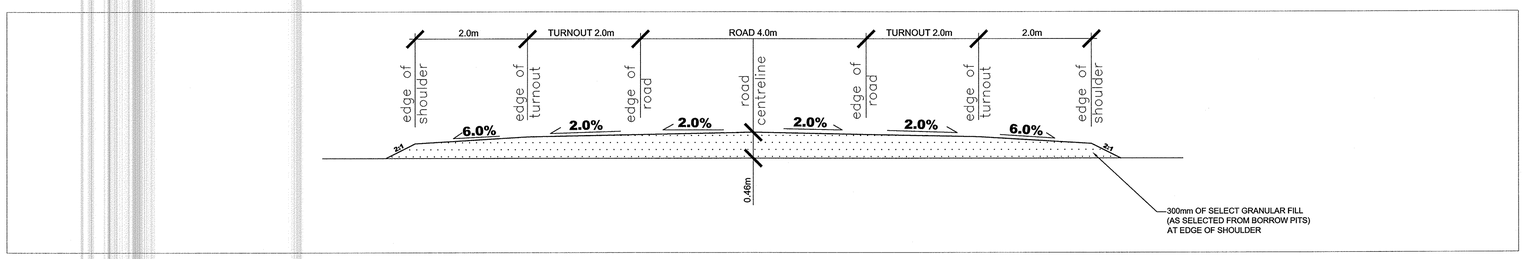
STATION 0+100

SCALE 1:125 — A / C05



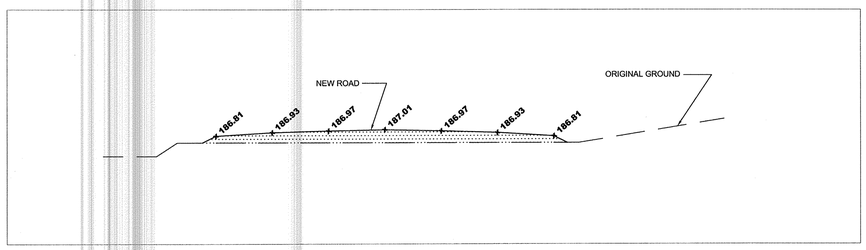
STATION 0+200

SCALE 1:125 — B / C05



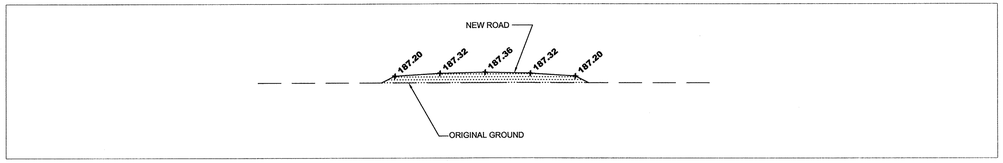
NEW ROAD SECTION W/ TURNOUT TYPICAL

SCALE 1:100 — 2 / C05



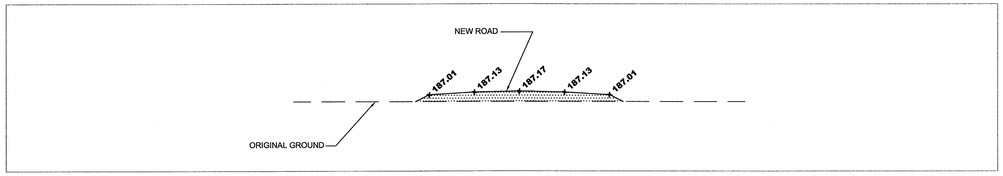
STATION 0+260 W/ TURNOUT

SCALE 1:100 — C / C05



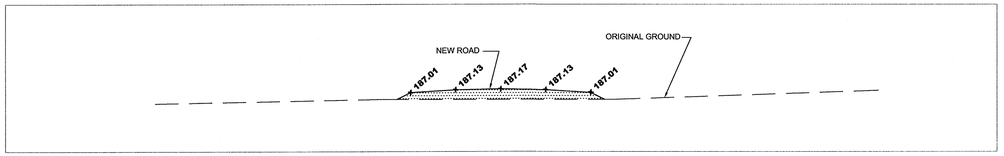
STATION 0+300

SCALE 1:125 — D / C05



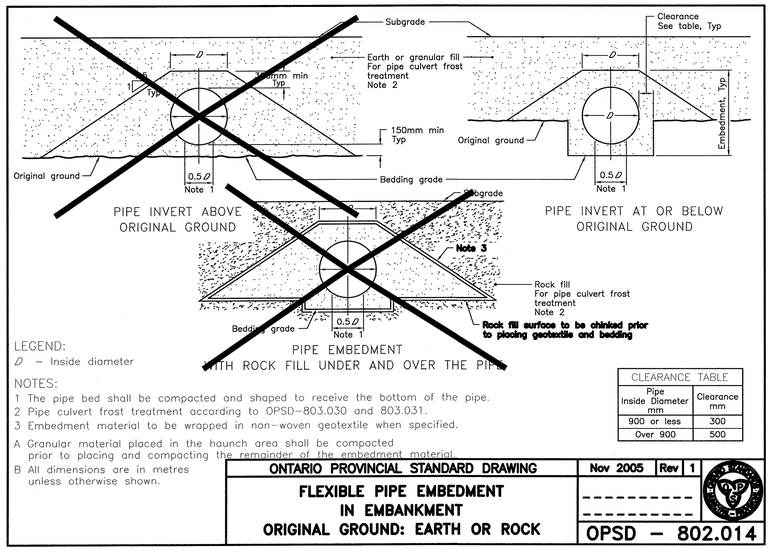
STATION 0+400

SCALE 1:125 — E / C05



STATION 0+500

SCALE 1:125 — F / C05



LEGEND:
∅ – Inside diameter

NOTES:
1 The pipe bed shall be compacted and shaped to receive the bottom of the pipe.
2 Pipe culvert frost treatment according to OPSD–803.030 and 803.031.
3 Embedment material to be wrapped in non–woven geotextile when specified.

A Granular material placed in the haunch area shall be compacted prior to placing and compacting the remainder of the embedment material.
B All dimensions are in metres unless otherwise shown.

CLEARANCE TABLE	
Pipe Inside Diameter mm	Clearance mm
900 or less	300
Over 900	500

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2005	Rev 1
FLEXIBLE PIPE EMBEDMENT IN EMBANKMENT ORIGINAL GROUND: EARTH OR ROCK		OPSD – 802.014

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BAFFINLAND IRON MINES CORPORATION
BAFFINLAND — NUNAVUT

Drawing
CROSS SECTIONS & CULVERT DETAIL

Date	CADD File Number
JUNE 2009	design\new road sections.dwg
Scale: AS NOTED	Job Number: **09-162**
Drawn: S.S.	
Checked	Drawing Number: **C05**
Approved	

Design Chart 1.07: Runoff Coefficients (Continued)

- Rural

Land Use & Topography[3]	Soil Texture		
	Open Sand Loam	Loam or Silt Loam	Clay Loam or Clay
CULTIVATED			
Flat 0 - 5% Slopes	0.22	0.35	0.55
Rolling 5 - 10% Slopes	0.30	0.45	0.60
Hilly 10- 30% Slopes	0.40	0.65	0.70
PASTURE			
Flat 0 - 5% Slopes	0.10	0.28	0.40
Rolling 5 - 10% Slopes	0.15	0.35	0.45
Hilly 10- 30% Slopes	0.22	0.40	0.55
WOODLAND OR CUTOVER			
Flat 0 - 5% Slopes	0.08	0.25	0.35
Rolling 5 - 10% Slopes	0.12	0.30	0.42
Hilly 10- 30% Slopes	0.18	0.35	0.52
BARE ROCK	COVERAGE[3]		
	30%	50%	70%
Flat 0 - 5% Slopes	0.40	0.55	0.75
Rolling 5 - 10% Slopes	0.50	0.65	0.80
Hilly 10- 30% Slopes	0.55	0.70	0.85
LAKES AND WETLANDS	0.05		

[2] Terrain Slopes

[3] Interpolate for other values of % imperviousness

Sources: American Society of Civil Engineers - ASCE (1960)
U.S. Department of Agriculture (1972)

CULVERT @ STATION 0+145

Total Area= 4.85 ha

Two Areas

Area 1 (A1)= 2.40 ha
Area 2 (A2)= 2.45 ha

Flow Line

A1= 172m
A2= 224m

A1 Slope (Equivalent Slope Method):

Elevation	Fall (m)	Length (m)	Sn (m/m)	Sn^-0.5
212.00	1.22	43	0.028	5.98
210.78	4.07	43	0.095	3.24
206.71	17.89	43	0.416	1.55
188.82	2.82	43	0.066	3.89
186.00				
Total	**26.00**	**172**		**14.66**

Sw:

= 100 (n/Sn_{total}^-0.5)^2
= 100 x (4 / 14.66)^2
= 7.45%

Time of Concentration (tc):

= (0.057 x L) / (S^0.2 x A^0.1)
= (0.057 x 172) / (7.45^0.2 x 2.40^0.1)
= 6.01 minutes

A2 Slope (Equivalent Slope Method):

Elevation	Fall (m)	Length (m)	Sn (m/m)	Sn^-0.5
190.00	0.58	56	0.010	10.00
189.42	0.66	56	0.012	9.13
188.76	0.76	56	0.014	8.45
188.00	2.00	56	0.036	5.27
186.00				
Total	**4.00**	**224**		**32.85**

Sw:

= 100 (n/Sn_{total}^-0.5)^2
= 100 x (4 / 32.85)^2

= 1.48%

Time of Concentration (tc):

= (0.057 x L) / (S^0.2 x A^0.1)
= (0.057 x 224) / (1.48^0.2 x 2.45^0.1)
= 10.79 minutes

Weighted Average tc:

= [(2.40 x 6.01) + (2.45 x 10.79)] / (2.40 + 2.45)
= 8.43 minutes

Using IDF Curve, Rainfall Intensity= 9.6 mm/hr

Flow, Q: = 2.78 x At x I x C
= 2.78 x 4.85 x 9.6mm/hr x 0.22
= 28.48 L/s
= 0.029 m^3/s

Culvert Calculator @ Station 0+145

All calculator output should be verified prior to design use

Entered Data:

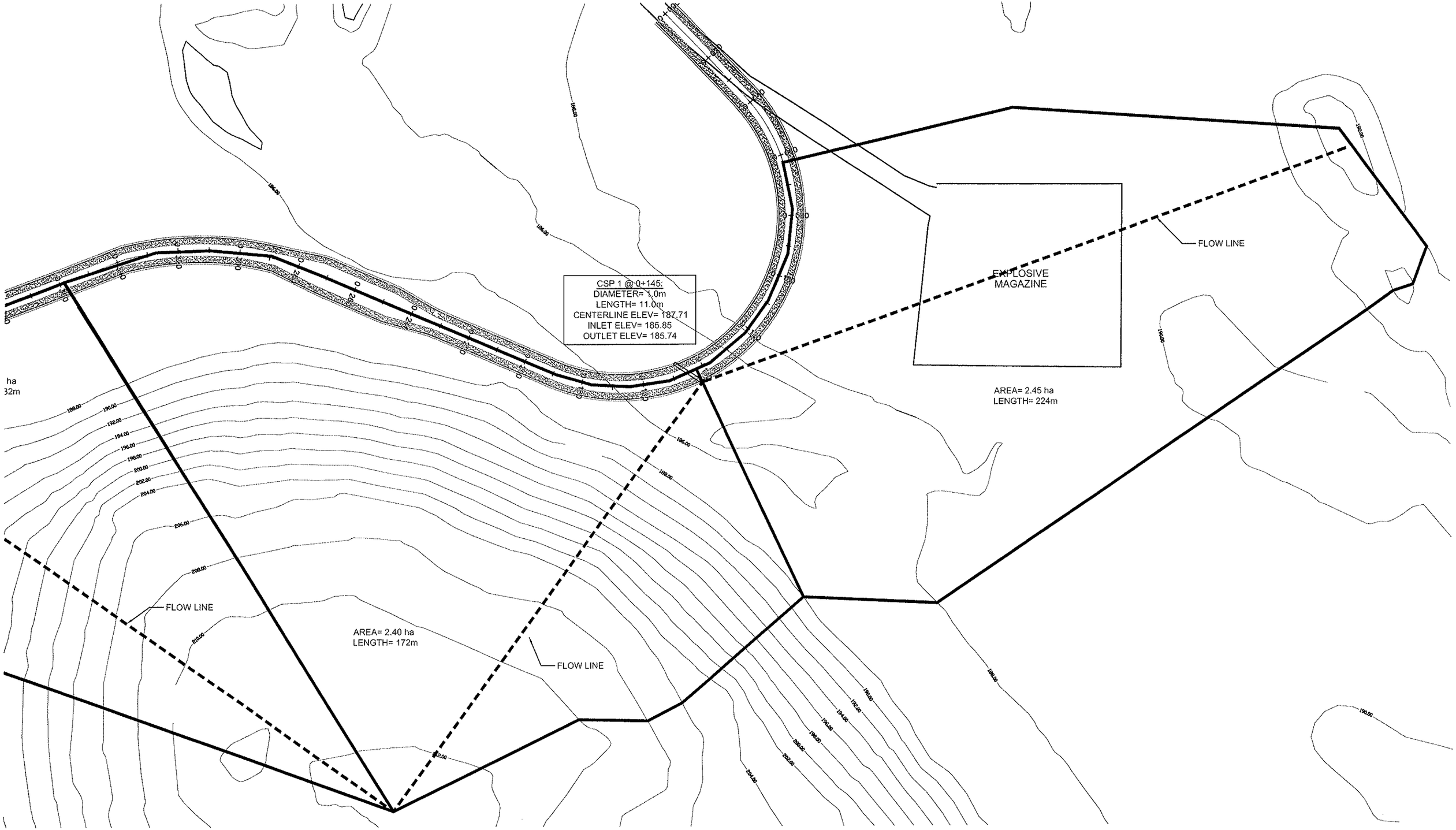
Shape	Circular
Number of Barrels	1
Solving for	Headwater
Chart Number	2
Scale Number	3
Chart Description	CORRUGATED METAL PIPE CULVERT
Scale Description	PIPE PROJECTING FROM FILL
Overtopping	Off
Flowrate	0.0290 cms
Manning's n	0.2600
Roadway Elevation	187.7100 m
Inlet Elevation	185.8500 m
Outlet Elevation	185.7400 m
Diameter	1000.0000 mm
Length	11.0000 m
Entrance Loss	0.0000
Tailwater	1.0000 m

Computed Results:

Headwater	186.7465 m Outlet Control
Slope	0.0100 m/m
Velocity	0.0369 mps

Messages:

Outlet head > Inlet head.
Computing Outlet Control headwater.
Outlet submerged.
Full flow.
Headwater depth computed using FHWA equation.
Headwater: 186.7465 m


CSP 1 @ 0+145:
DIAMETER= 1.0m
LENGTH= 11.0m
CENTERLINE ELEV= 187.71
INLET ELEV= 185.85
OUTLET ELEV= 185.74
EXPLOSIVE MAGAZINE
FLOW LINE
AREA= 2.45 ha
LENGTH= 224m
AREA= 2.40 ha
LENGTH= 172m
FLOW LINE
FLOW LINE
ha
32m

CULVERT @ STATION 0+450

Total Area= 1.84 ha

Flow Line= 232m

Slope (Equivalent Slope Method):

Elevation	Fall (m)	Length (m)	Sn (m/m)	Sn^-0.5
212.00	1.5	58	0.026	6.20
210.50	5.5	58	0.095	3.24
205.00	12.5	58	0.216	2.15
192.50	4.9	58	0.085	3.43
187.60				
Total	**24.40**	**232**		**15.02**

Sw:

= 100 (n/Sn_{total}^-0.5)^2
= 100 x (4 / 15.02)^2
= 7.09%

Time of Concentration (tc):

= (0.057 x L) / (S^0.2 x A^0.1)
= (0.057 x 232) / (7.09^0.2 x 1.84^0.1)
= 8.41 minutes

Using IDF Curve, Rainfall Intensity= 9.6 mm/hr

Flow, Q: = 2.78 x At x I x C
= 2.78 x 1.84x9.6mm/hr x 0.22
= 10.80 L/s
= 0.011m^3/s

Culvert Calculator @ Station 0+450

All calculator output should be verified prior to design use

Entered Data:

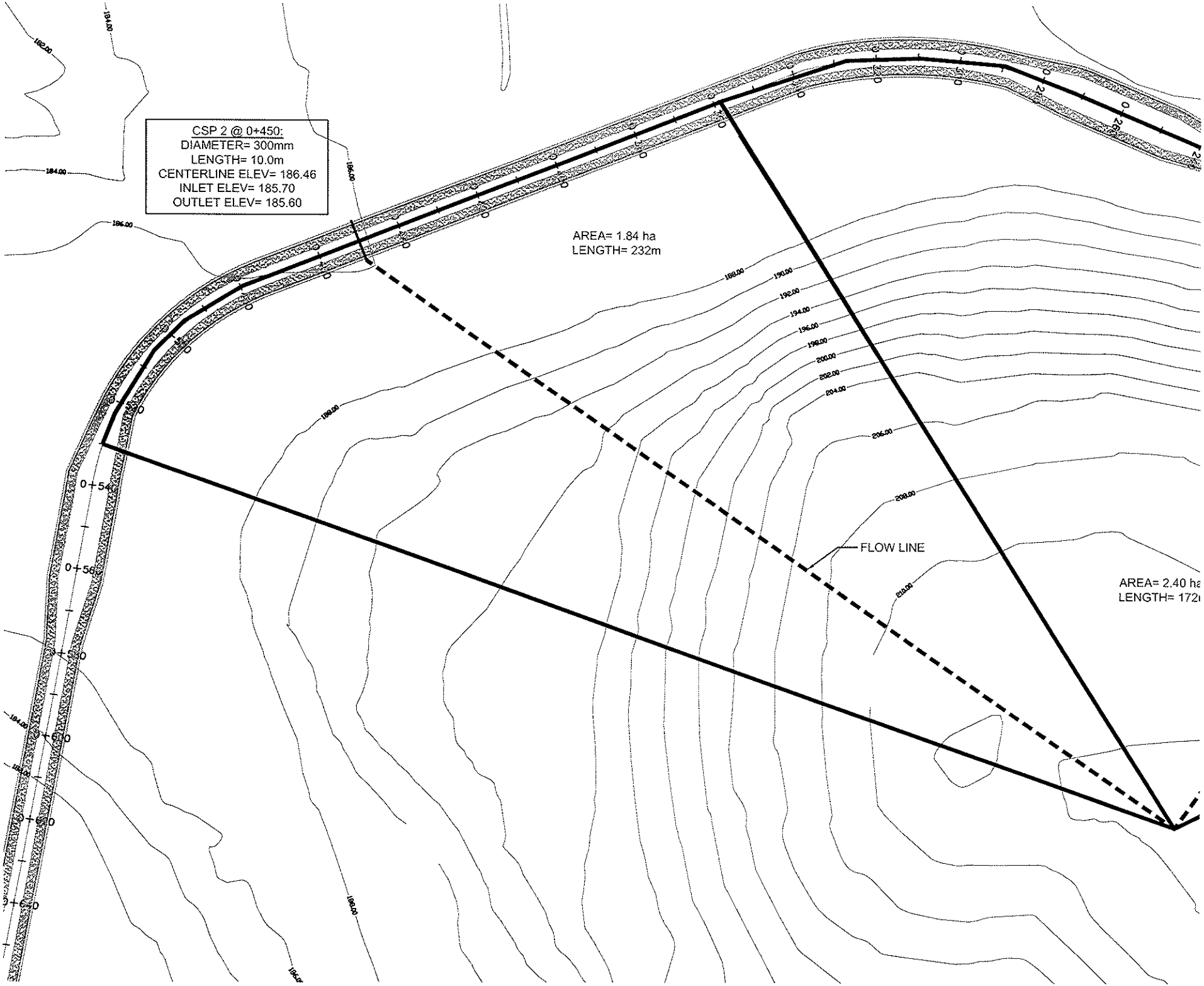
Shape	Circular
Number of Barrels	1
Solving for	Headwater
Chart Number	2
Scale Number	3
Chart Description	CORRUGATED METAL PIPE CULVERT
Scale Description	PIPE PROJECTING FROM FILL
Overtopping	Off
Flowrate	0.0110 cms
Manning's n	0.2600
Roadway Elevation	186.4600 m
Inlet Elevation	185.7000 m
Outlet Elevation	185.6000 m
Diameter	300.0000 mm
Length	10.0000 m
Entrance Loss	0.0000
Tailwater	0.3000 m

Computed Results:

Headwater	186.4163 m Outlet Control
Slope	0.0100 m/m
Velocity	0.1556 mps

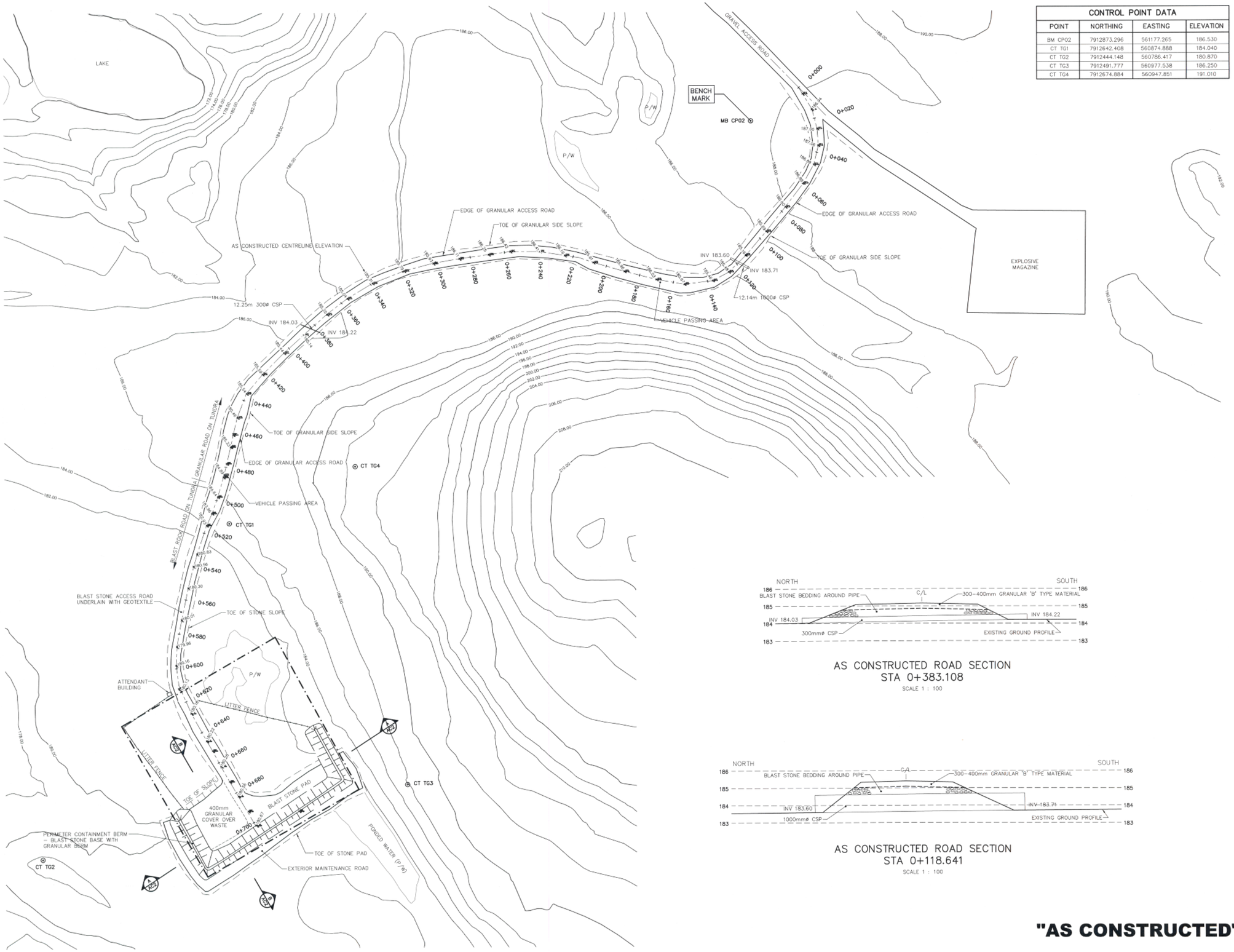
Messages:

- Outlet head > Inlet head.
- Computing Outlet Control headwater.
- Outlet submerged.
- Full flow.
- Headwater depth computed using FHWA equation.
- Headwater: 186.4163 m


CSP 2 @ 0+450:
DIAMETER= 300mm
LENGTH= 10.0m
CENTERLINE ELEV= 186.46
INLET ELEV= 185.70
OUTLET ELEV= 185.60
AREA= 1.84 ha
LENGTH= 232m
FLOW LINE
AREA= 2.40 ha
LENGTH= 172
0+540
0+560
0+580
0+600
0+620
0+640
0+660

➢ APPENDIX 2

- **AS-CON STRUCTED DRAWINGS**
- **CONSTRUCTION PHOTOGRAPHS**



CONTROL POINT DATA			
POINT	NORTHING	EASTING	ELEVATION
BM CP02	7912873.296	561177.265	186.530
CT TG1	7912642.408	560874.888	184.040
CT TG2	7912444.148	560786.417	180.870
CT TG3	7912491.777	560977.538	186.250
CT TG4	7912674.884	560947.851	191.010

AS CONSTRUCTED ROAD SECTION
STA 0+383.108
SCALE 1 : 100

AS CONSTRUCTED ROAD SECTION
STA 0+118.641
SCALE 1 : 100

"AS CONSTRUCTED"

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Drawings shall not be scaled.

Description	Date	No.
Revisions and Issues		

NORTH

Date Printed

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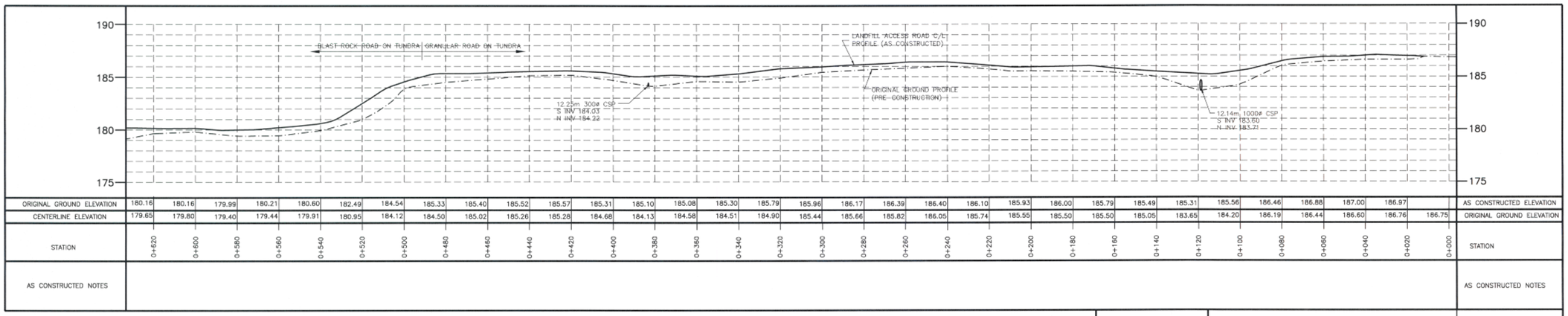
ARCHITECT | STRUCTURAL/CIVIL

MECHANICAL | ELECTRICAL

Project
MARY RIVER PROJECT
NUNAVUT, CANADA

Drawing
LANDFILL
ACCESS ROAD AND CONTAINMENT

Date: AUG 20, 2010	CADD File Number: 0916200-AC1
Scale: 1 : 1000	Job Number: **09-162**
Drawn: T.C.G.	
Checked:	Drawing Number: **AC1**
Approved: B.H.M.	



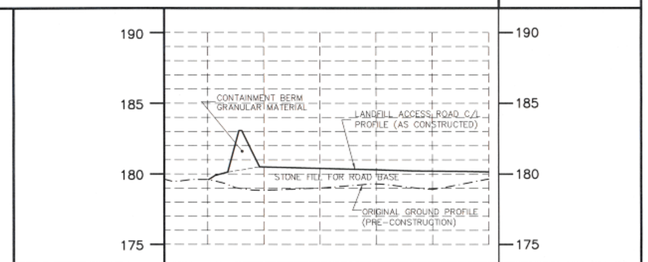
ORIGINAL GROUND ELEVATION	180.16	180.16	179.99	180.21	180.60	182.49	184.54	185.33	185.40	185.52	185.57	185.31	185.10	185.08	185.30	185.79	185.96	186.17	186.39	186.40	186.10	185.93	186.00	185.79	185.49	185.31	185.56	186.46	186.88	187.00	186.97		AS CONSTRUCTED ELEVATION
CENTERLINE ELEVATION	179.65	179.80	179.40	179.44	179.91	180.95	184.12	184.50	185.02	185.26	185.28	184.68	184.13	184.58	184.51	184.90	185.44	185.66	185.82	186.05	185.74	185.55	185.50	185.50	185.05	183.65	184.20	186.19	186.44	186.60	186.76	186.75	ORIGINAL GROUND ELEVATION
STATION	0+620	0+600	0+580	0+560	0+540	0+520	0+500	0+480	0+460	0+440	0+420	0+400	0+380	0+360	0+340	0+320	0+300	0+280	0+260	0+240	0+220	0+200	0+180	0+160	0+140	0+120	0+100	0+080	0+060	0+040	0+020	0+000	STATION
AS CONSTRUCTED NOTES																																	AS CONSTRUCTED NOTES

LANDFILL ACCESS ROAD PROFILE

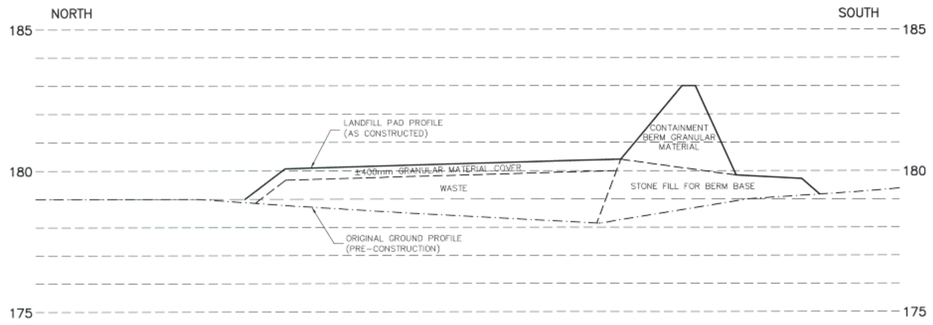
SCALES

40m 0 40m
Horizontal

5m 0 5m
Vertical

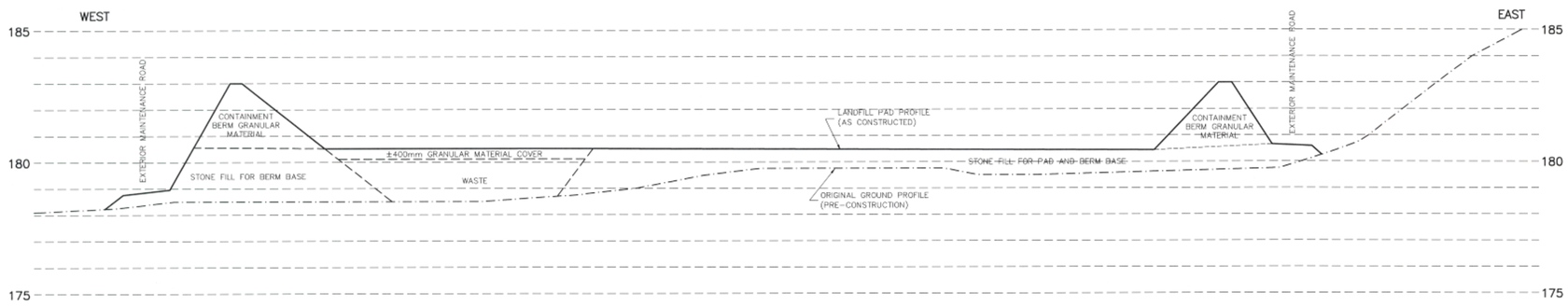


ORIGINAL GROUND ELEVATION		180.50	180.40	180.27	180.21	180.15	AS CONSTRUCTED ELEVATION
CENTERLINE ELEVATION		178.85	179.00	179.33	178.87	179.65	ORIGINAL GROUND ELEVATION
STATION	0+720	0+700	0+680	0+660	0+640	0+620	STATION
AS CONSTRUCTED NOTES							AS CONSTRUCTED NOTES



LANDFILL CONTAINMENT BERM SECTION B/AS1

1 : 250 HORIZONTAL
1 : 100 VERTICAL



LANDFILL CONTAINMENT BERM SECTION A/AS1

1 : 250 HORIZONTAL
1 : 100 VERTICAL

"AS CONSTRUCTED"

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Description	Date	No.
Revisions and Issues		

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ARCHITECT STRUCTURAL/CIVIL

B.H. MARTIN
PROFESSIONAL ENGINEER
ONTARIO

MECHANICAL ELECTRICAL

Project
MARY RIVER PROJECT
NUNAVUT, CANADA

Drawing
LANDFILL
ACCESS ROAD PROFILE
CONTAINMENT SECTIONS

Date: AUG 20, 2010	CADD File Number: 0916200-AC1
Scale: 1 : 1000	Job Number: **09-162**
Drawn: T.C.G.	
Checked:	Drawing Number: **AC2**
Approved: B.H.M.	

Photo 1: Access Road to landfill from the existing Explosive Magazine

Photo 2: Access Road at the landfill, landfill containment berm seen in background

Photo 3: Access Road at the landfill. The containment berm is seen in the back.

Photo 4: Another view of the completed Access Road

Photo 5: Completed Access Road to landfill, the attendant shack can be seen.

Photo 6: small Culvert at Station 0+118

Photo 7: Large culvert at Station 0+500

Photo 8: Large Culvert at Station 0+500

Photo 9: Inside the landfill containment

Photo 10: Landfill access and fence

APPENDIX C.2 – ANNUAL GEOTECHNICAL INSPECTION

December 3, 2010

Phyllis Beaulieu, Manager of Licensing
Richard Dwyer, Licensing Administrator
Nunavut Water Board
P.O. Box 119, Gjoa Haven NU X0B 1J0

Dear Ms. Beaulieau / Mr. Dwyer:

Re: Baffinland Iron Mines Corporation (BIM) - Submission of an Annual Geotechnical Inspection, NWB File: 2BB-MRY0710

1.0 INTRODUCTION

Under Part D, Item 16, of Baffinland Iron Mines Corporation (BIM) Water Licence 2BB-MRY0710, there is a requirement to ensure the proper function of earthworks associated with waste disposal facilities at its Mary River Project. This requirement is detailed in Part D, Item 16, which states that:

> *"An inspection of the earthworks, geological regime, and the hydrological regime of the Project is to be carried out during the summer of 2008, by a Geotechnical Engineer. The Geotechnical Engineer's report shall be submitted to the Board within sixty (60) days of the inspection, with a covering letter from the Licensee outlining an implementation plan to respond to the Engineer's recommendations."*

During 2008, 2009, and 2010, BIM retained GENIVAR Consultants (Genivar) to complete the annual water license geotechnical inspection of the on-site waste containment structures located at its two main camp sites, known as the Mary River Camp and Milne Inlet Camp. The water and fuel containment structures reviewed at the respective camps included the following:

Mary River Mine Camp

- Bulk Fuel Storage Facility Containment,
- Generator Fuel Storage Facility Containment,
- Polishing/Waste Stabilization Pond No. 1, and
- Polishing/Waste Stabilization Pond No. 2
- Helicopter Fuel Tank Containment
- Barrel Fuel Containment
- Hazardous Waste Storage
- Enviro Tank Storage

Milne Inlet Site

- Bulk Fuel Storage Facility Containment, and
- Polishing/Waste Stabilization Pond.
- Barrel Fuel Storage
- Hazardous Waste Storage

The 2008 and 2009 geotechnical reports, completed by Genivar, and recommendations were submitted to the Nunavut Water Board (NWB) in November 2008 and 2009, respectively. Attached, herewith, is Genivar's 2010 geotechnical report which presents the 2010 findings and recommendations for the aforementioned structures. Sections 2.0 and 3.0 of this letter summarize BIM's plan for implementing Genivar's recommendations. Recommendations for 2010 were similar to those provided for the 2008 and 2009 annual geotechnical inspection reports.

2.0 MARY RIVER MINE CAMP RECOMMENDATIONS

2.1. Bulk Fuel Storage Facility Containment

There were no recommendations made at this time.

2.2. Generator Fuel Storage Facility Containment

Recommendation MR1: Based on the need to contain 110 % of the bladder volume in the event of a fuel spill, the maximum volume of fuel permitted to be stored in the bladder in this facility as it is constructed, is 77,376 litres. BIM will continue to control the amount of fuel to the stated volume as per current practice.

BIM Response: This recommendation has and continues to be implemented.

2.3. Polishing/Waste Stabilization Pond No. 1

Recommendation MR1: An elevation monitoring program established on the exterior dyke structure to measure the potential for settlement due to permafrost melting to continue to be implemented.

BIM Response: The monthly elevation monitoring program should continue to be conducted throughout the 2011 open water season.

2.4. Polishing/Waste Stabilization Pond Nos. 2 and 3

Recommendation MR6: An elevation monitoring program established on the exterior dyke structure to measure the potential for settlement due to permafrost melting to continue to be implemented.

BIM Response: The monthly elevation monitoring program should continue to be conducted throughout the 2011 open water season.

2.5. Helicopter Fuel Tank Containment, Barrel Fuel Containment, Hazardous Waste Storage, and Enviro Tank Storage

There were no recommendations made at this time.

3.0 Milne Inlet Camp

3.1. Bulk Fuel Storage Facility Containment

There were no recommendations made at this time.

3.2. Polishing/Waste Stabilization Pond.

There were no recommendations made at this time.

3.3. Barrel Fuel Storage and Hazardous Waste Storage

There were no recommendations made at this time.

We trust that this submittal satisfies your current requirements. Should you have any questions, please do not hesitate to contact Jim Millard, Senior Environmental Superintendent at 902-403-1337 or by e-mail at jim.millard@baffinland.com.

Best Regards,
Baffinland Iron Mines Corporation

Jim Millard, M.Sc., P.Geo.
Senior Environmental Superintendent

cc. David McCann (BIM); Stephen Bathory (QIA); Bryan Raynor (INAC)

Attach: Annual Geotechnical Inspection 2010, prepared by GENIVAR Consultants for Baffinland Iron Mines Corporation, dated November 3, 2010.

.

GENIVAR

November 3, 2010

Baffinland Iron Mines Corporation
120 Adelaide Street West, Suite 1016
Toronto , Ontario M5T 1T1

Attention: Dave McCann
dave.mccann@baffinland.com

RE: ANNUAL GEOTECHNICAL INSPECTION 2010
BAFFINLAND IRON MINES CORPORATION
OUR REFERENCE NO. 10-098

1.0 Introduction

GENIVAR Consultants L P completed the 3rd annual water license geotechnical inspection of the on-site containment structures at Baffinland Iron Mines Corporation (BIM) Mary River Project. The containment structures for the operation are located at two main camp sites known as the Mary River Project.

The soil structures reviewed are as follows:

Mary River Mine Site

- Bulk Fuel Storage Facility Containment
- Generator Fuel Storage Facility Containment
- Polishing/Waste Stabilization Pond No. 1
- Polishing/Waste Stabilization Ponds No. 2 and No. 3 (constructed as a 2 cell structure)
- Helicopter Fuel tank Containment
- Barrel Fuel Containment (constructed as a 2 cell structure)
- Hazardous Waste Storage
- Enviro Tank Storage (constructed contiguous with hazardous waste storage)

834 Mountjoy St. South, P. O. Box 120, Timmins, Ontario CANADA P4N 7C5
Telephone: 705-264-9413 ~ Fax: 705-267-2725 ~ www.genivar.com

Milne Inlet Site

- Bulk Fuel Storage Facility Containment
- Polishing Waste Stabilization Pond
- Barrel Fuel Storage (constructed as a 2 cell structure)
- Hazardous Waste Storage (constructed as a 2 cell structure)

This report presents the findings and recommendations with respect to the aforementioned structures. We understand that this report shall be used by BIM to fulfill the requirements of the Nunavut Water Board for an annual geotechnical investigation of on-site water and fuel retaining structures under water license 2BB-MRY0710.

2.0 Methodology for Inspection

The geotechnical inspector was Mr. Barry H. Martin, P. Eng., who reviewed the sites on August 25, 26, 27, 2010. The inspections were focused principally on the following aspects.

1. The structures were inspected for conformance with the design basis as presented in as-constructed and as-built drawings (provided in the first report).

2. The structures were specifically inspected for settlement, cracking, and seepage through the berms .

3. The areas around the sites were examined for evidence of seepage.

Photographs were taken to document observations made during the inspection and are attached.

3.0 Mary River Camp

3.1 Bulk Fuel Storage Facility Containment

General Conditions

The containment structure has not varied from its use as noted in the 2009 report. Some bladders are empty and some bladders are currently full.

Stability

At the time of our review, there were localized shallow areas of water within the containment structure that originated from recent rain and earlier snow melt.

The localized ponds are an indication of membrane integrity.

The structure was visually inspected for any signs of cracking or subsidence. There was no indication of any settlements, seepage or cracking in the soil structures that formed the dykes. As well, there was no indication of seepage at the base of the structure around the exterior. The soil structure is considered to be stable in the present condition and is in conformance with the design basis for the facility.

Recommendations

There are no recommendations to be made at this time.

3.2 Generator Fuel Storage Facility Containment

General Conditions

The containment structure has not varied from its use following our 2009 inspection. At that time our recommendation was to limit the fuel contained in this containment facility to 77,376 litres.

There is currently one bladder in this containment facility that has a capacity when full of 120,000 litres. This particular bladder contains 77,376 litres of fuel when the bladder is 32" high. The guideline for BIM is to fill this bladder to no more than 76 cm (30") which represents 70,097 litres of fuel.

At the time of our visit, the bladder height was measured at29" representing approximately 68,000 litres of fuel.

Stability

The structure was visually inspected for any signs of cracking or subsidence. There was no indication of settlements, seepage or cracking in the structure. Also, there was no sign of seepage at the base of the structure. The soil structure is considered to be stable in its present condition and is in conformance with our design principles.

Recommendation

We recommend that BIM continue to control the amount of fuel in the bladder at 70,097 litres as per their present policy.

3.2 Polishing/Waste Stabilization Pond No. 1

General Conditions

PWSP No. 1 continues to be used as a holding facility for sewage plant effluent that does not meet water license effluent quality criteria. As has been the case in the past, once the treated sewage effluent meets water license effluent quality criteria, the plan is to release treated effluent directly to the receiving environment (Sheardown Lake). The residual sewage and sludge left in the pond shall be treated as is necessary and shall be released to the environment or disposed of.

The structure currently conforms to its design intent.

Stability

Our inspection of the area around the pond at the base of the slopes showed no sign of seepage and hence we conclude that there are no tears or ruptures in the membrane.

A review of the exterior and the top of the dykes showed no indication of cracking or settlement which would indicate stresses within the structure.

Tears that had occurred in the top of the berm have been patched (between 2008 and 2009) and the patches are holding well.

Monitoring points have been set up and the berm and monitoring of the elevation of the top of the berm has been done since June 2009. Settlements in the order of 5 cm to 9 cm have occurred since this time. These settlements have not led to any stress cracks in the structure.

The structure is considered to be stable in the present condition.

Recommendations

We recommend that the monitoring of the top of the berms continue for the remainder of 2010 and through the May to October season in 2011.

3.3 Polishing/Waste Stabilization Ponds #2 and #3.

General Conditions

This structure was designed and constructed as a 2 cell structure.

There is no change in this structure since the last inspection . This structure currently conforms to its design intent.

Stability

Our review of the area around the pond at the base of the slopes showed no sign of seepage and hence we conclude that the liner has been effective in containing the sewage and here are no tears or ruptures in the membrane.

Minor longitudinal cracks under the west berm of PWSP #3 that were noted during our last inspection in 2009 have not reoccurred this season. The structure is considered to be stable in its present condition.

Monitoring points have been set up on top of the berm and monitoring of the elevation of these points on top of the berm has been done since that time. Settlements in the order of 6 to 9 cm have occurred since this time. These settlements have not led to any stress cracks in the structure.

The structure is considered to be stable in the present condition.

Recommendations

We recommend that the monitoring of the elevations of the top of the berms continue for the remainder of 2010 and through the May to October season in 2011.

3.4 Helicopter Fuel Tank Containment

General Conditions

This structure was designed and constructed as a single cell structure that contains a 1000 gallon fuel storage tank.

This structure has not been reported on prior to this particular review.

This structure was constructed in accordance with standardized drawings provided by our office.

This structure currently conforms to its design intent.

Stability

Our review of the area around the pond at the base of the slopes showed no sign of seepage. Water has ponded just slightly higher than the gravel liner over the membrane liner.

This indicates that there are no tears or ruptures in the membrane liner.

A review of the exterior and the top of the berms showed no indication of cracking or settlement which would indicate stress within the structure.

The structure is considered to be stable in its present conditions.

Recommendations

We have no recommendations with respect to this structure.

3.5 Barrel Fuel Containment

General Conditions

This structure was designed and constructed as a 2 cell structure with one piece membrane liners. These two cells contain pallets of 45 gallon drums of fuel which fill both cells.

A lack of ponding of water in the cells over the gravel liner as with other fuel containment cells was investigated. It was found that due to the fact that the cells were filled with 45 gallon drums, there was not the collection of winter snow that led to snow melt as there was in other cells.

As well, we note that the liners are one piece liners and the structure was constructed in accordance with standardized drawings provided by this office.

Stability

Our review of the area around this containment structure showed no sign of seepage. This shows that there is little chance of tearing or rupture of the membrane.

A review of the exterior and top of the berms showed no sign of cracking or settlement which would indicate stresses within the structure.

The structure is considered to be stable in its present condition.

Recommendations

We have no recommendations with respect to this structure.

3.6 Hazardous Waste Storage

General Conditions

This particular cell was constructed contiguous with an existing cell which is referred to on site as the Enviro Tank Storage. This cell was only just recently constructed from drawings provide by our office and the structure conforms to our drawings.

This structure has not yet been put into use.

This cell has not been reported on prior to this review.

Stability

Our review of the area around this cell at the base of the slopes showed no sign of seepage. Water has ponded just slightly higher then the gravel liner over the membrane liner.

This indicates no sign of tears or rupture in the membrane.

The structure is stable in its present condition.

Recommendations

There are no recommendations at this time.

3.7 Enviro Tank Storage

This particular structure is constructed contiguous with the new Hazardous Waste Storage.

General Conditions

Our review of the area around this cell at the base of the slopes showed no sign of seepage. Water here has also ponded just above the gravel over the membrane liner in this cell.

This indicates no sign of tears or rupture in the membrane.

The structure is stable in its present conditions.

Recommendations

There are no recommendations at this time.

The additional cells that have been constructed have been constructed from standardized drawings provided to Baffinland Iron Mines by our office.

4.0 Milne Inlet

4.1 Bulk Fuel Containment Facility

General Conditions

The structure around the fuel farm currently conforms to the design basis of the facility. A review of the interior of the dyke indicated that the water that existed on the interior of the dyke as viewed during the annual review last year was essentially gone and the treatment facility used to treat water that was removed was still in place. The ponding of water continues to confirm the integrity of the liner.

Stability

Our review of the area around the ponds at the base of the slopes showed no signs of oil, water or oil water mixtures and hence we conclude that the integrity of the liner has been maintained. Tears or ruptures in the membrane were not observed.

There was no indication of any settlements, seepage, or cracking at the soil structures forming the dykes.

The structure is considered to be stable in its present condition.

Recommendations

The performance of the structure has been recently tested with ponded water within the enclosure. The observations noted during our recent visits support the conservative design of the structure. We have no recommendations at this time.

4.2 Polishing/Waste Stabilization Pond

General Conditions

PWSP was originally designed as storage for sewage effluent from the RBC sewage plant installed at the site during the start-up phase of the operation. At the time of this inspection, the camp was shut down and only a small camp of temporary structures was in place and in use by 2 to 5 men.

The water in the structure was approximately 3 to 4' below the top of the berm.

The exterior slopes of the dykes were observed to be at 4:1. The interior slope of the dykes appeared to be 2:1.

Currently, the Milne PWSP structure conforms to the design basis of the facility.

Stability

With the interior slope at 2:1 and the exterior slope at 4:1 we find the dykes to be stable for long term use.

Based on the observed 4:1 dyke exterior slopes, the structure appears stable at current condition. There was no sign of effluent break-out or seepage at any location along the bottom of the dyke. The high effluent levels which were observed at the time of the 2008 visits had been lowered to less than design criteria.

Recommendations

Currently the Milne PWSP conforms to the design intent and we have no recommendation.

4.3 Barrel Fuel Storage

This particular structure is constructed as a double cell facility.

General Conditions

The structure around these two cells conforms to standardized drawings prepared by our office for such a facility.

A review of the interior of the dyke indicates that water is ponding slightly above the gravel liner over the membrane liner.

The ponding of water confirms the integrity of the liner.

Stability

Our review of the area around the ponds at the base of the slopes showed no signs of seepage.

A review of the dykes shoed no sign of cracks or settlements.

The structures are considered stable in their present condition.

Recommendations

There are no recommendations to be made with respect to this structure at this time.

4.4 Hazardous Waste Storage

This particular structure is constructed as a double cell facility.

General Conditions

The structure around these two cells conforms to standardized drawings prepared by our office for such a facility.

A review of the interior of the dyke indicates that water is ponding slightly above the gravel liner over the membrane liner.

The ponding of water confirms the integrity of the liner.

Stability

Our review of the area around the ponds at the base of the slopes showed no signs of seepage.

A review of the dykes shoed no sign of cracks or settlements.

The structures are considered stable in their present condition.

Recommendations

There are no recommendations to be made with respect to this structure at this time.

Annual Geotechnical Report
Baffinland Iron Mines

We hope that the above report is satisfactory to Baffinland Iron Mines for inclusion into the annual geotechnical report of Nunavut Water Board. If you have any questions, please do not hesitate to contact the undersigned.

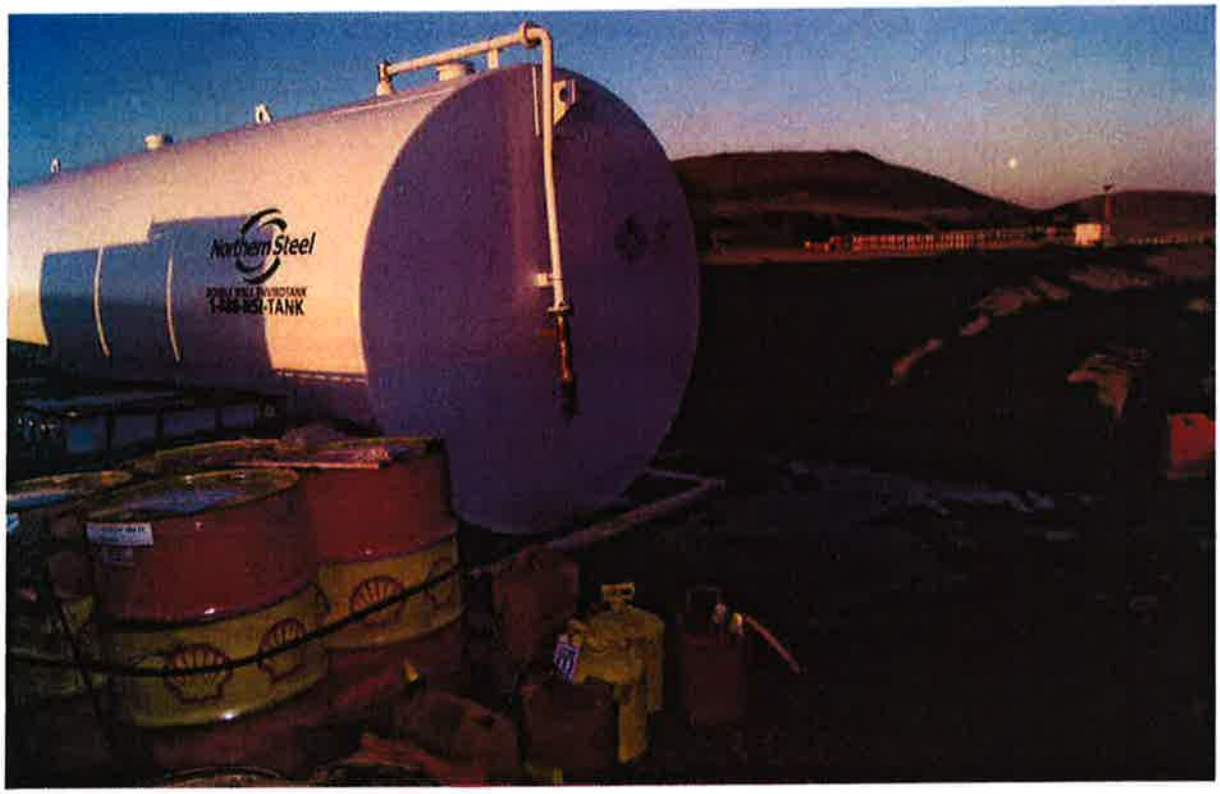
Respectfully submitted,

GENIVAR

Barry H. Martin, P . Eng.,
BHM/jw

c.c. Jim Millard

Generator Fuel Storage Facility – Mary River.



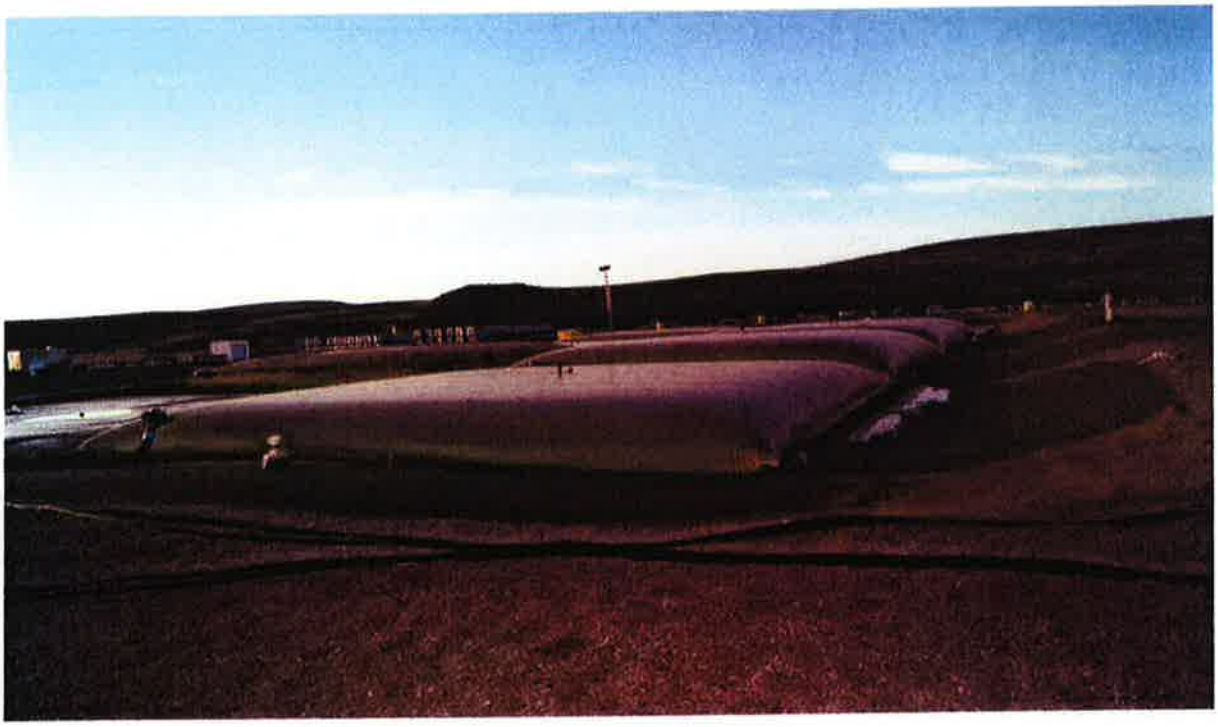
Environ tank Storage – Mary River

Polishing Ponds #2 and #3 – Mary River.

Polishing Pond #1 – Mary River.

Typical dyke polishing pond #2 – Mary River

Helicopter Fuel Tank Containment – Mary River



Bulk Fuel Storage Facility Containment – Mary River

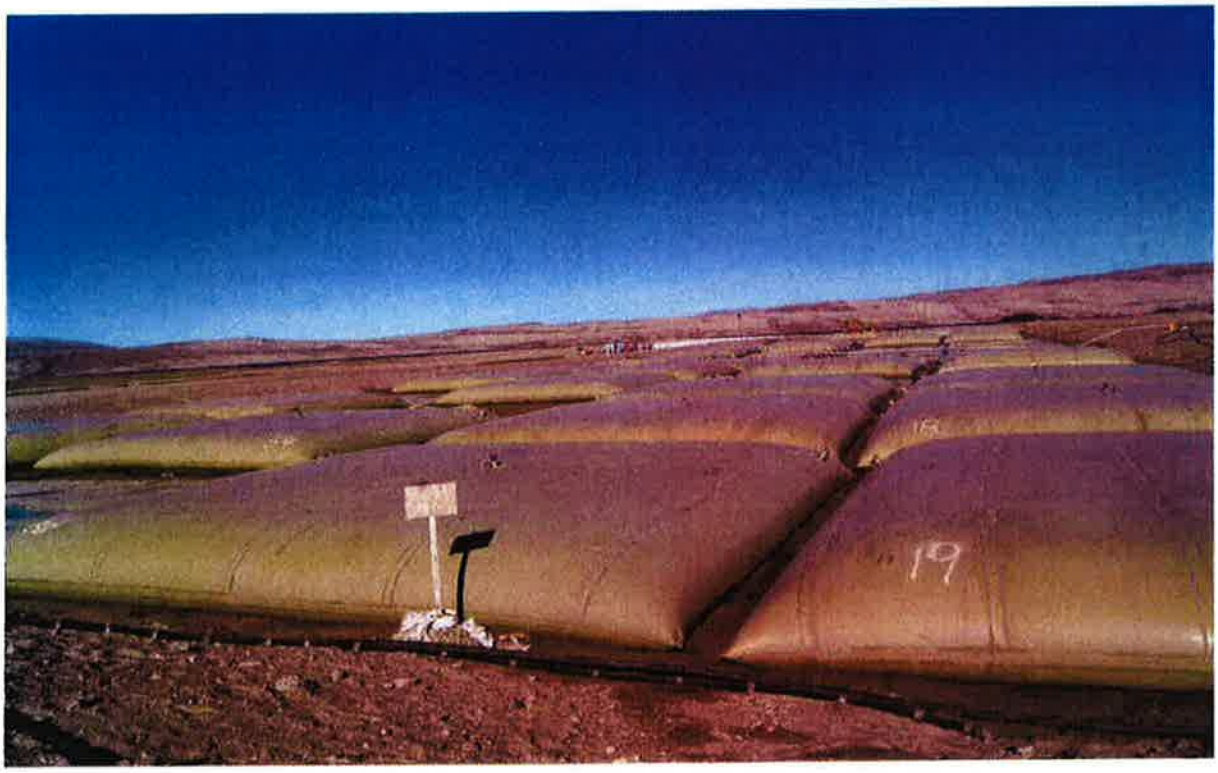
Barrel Fuel Containment – Mary River

Barrel Fuel Containment – Mary River

Hazardous Waste Storage – Mary River

Polishing/Waste Stabilization Pond – Milne Inlet.

Bulk Fuel Storage Facility – Milne Inlet.



Bulk Fuel Storage Facility – Milne Inlet

Barrel Fuel storage – Milne Inlet

Hazardous Waste Storage – Milne Inlet

Hazardous Waste Storage – Milne Inlet

APPENDIX C.3 – PHOTOGRAPHIC RECORDS

Photo 1: Mary River Camp Overview.

ᐊᕐᓵᖅᐊᓂᖅ 1: ᓂᓗᒍᕐ ᓂᓇᐹᕐᖏᑦ ᑕᐃᑐᖅ

Photo 2: Mary River Camp Overview.

ᐊᕐᓵᖅᐊᓂᖅ 2: ᓂᓗᒍᕐ ᓂᓇᐹᕐᖏᑦ ᑕᐃᑐᖅ

Photo 3: Mary River Camp Overview.

ᐊᕐᓵᖅᐊᓂᖅ 3: ᓂᓗᒍᕐ ᓂᓇᐹᕐᖏᑦ ᑕᐃᑐᖅ

Photo 4: Newly contructed landfill site

ᐊᕐᓵᖅᐊᓂᖅ 4: ᓄᑦᖃᖅ ᓴᓇᐅᑦᓴᓐᖅ ᑐᐊᐸᓯᕐᔪᐊᑦ

Photo 5: Storm water management in the Mary River bulk fuel storage facility

ᐊᕐᓵᖅᐊᓂᖅ 5: ᓂᓗᒍᖏᓂ ᐅᓴᓱᐊᓗᕆᐅᑎᑦ ᐃᓐᓂᖏᑦ

Photo 6: EIS Thematic Workshop

ᐊᕐᓵᖅᐊᓂᖅ 6: ᐊᐅᑎᓚᓗᑎᑦ ᑲᑎᒪᔨᐊᓂᕐᒥᑦ

Baffinland Iron Mines Corporation

ᓂᓗᒍᖏᓂ ᓴᓇᔨᓂᐊᕐᔪᐊᑦ

MARY RIVER SITE PHOTOS
ᓂᓗᒍᖏᓂ ᐊᕐᓵᖅᐊᓂ

(SHEET 1 OF 1)

P/A NO.	REF.	REV.
NB102-00181/11	1	0

FIGURE C.3.1

Photo 1: Milne Inlet Overview.

ᐊᕐᕕᖓᐊᖅ 1: ᑭᖓᔪᐊᓘᓂ ᖃᓄᖅ ᐊᑭᑦᓯᒪᔨᓗᐊᖏᖓ

Photo 2: OWS System for treating contaminated storm water

ᐊᕐᕕᖓᐊᖅ 2: ᐃᒪᖏᑦ ᐊᑐᕐᕆᓂᓕᒫᑦ ᓴᓗᒪᖏᓪᓗᐃᓕᑦ

Photo 3: Historical refuse storage area after clean up

ᐊᕐᕕᖓᐊᖅ 3: ᑕᐃᓯᒪᓂᓂ ᓴᓂᐅᕐᓯᒪᓂᑦᓄ ᓴᓗᒪᖏᑦᑎᐅᕐᓯᒪᓕᕐᓗᓂᓂ

Photo 4: Bulk Fuel Storage Facility

ᐊᕐᕕᖓᐊᖅ 4: ᐅᖏᓯᐊᓗᖅᑐᑦ

Photo 5: Milne Inlet Dry Cargo Sealift

ᐊᕐᕕᖓᐊᖅ 5: ᑭᖓᔪᐊᓘᓂ ᓂᐅᕋᐃᓕᓴᑦ

Photo 6: Milne Inlet Dry Cargo Sealift

ᐊᕐᕕᖓᐊᖅ 6: ᑭᖓᔪᐊᓘᓂ ᓂᐅᕋᐃᓕᓴᑦ

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ᓄᓇᕗᖅᓂ ᓴᓇᖃᓴᕋᐊᕐᓱᓴᑦ

MILNE INLET SITE PHOTOS
ᐊᕐᕕᖓᐊᓕ ᒥᑎᒪᑕᓂᐅᓕ ᑭᖓᔪᐊᓘᓂ

(SHEET 1 OF 1)

REF. 1

REV. 0

FIGURE C.3.2

Photo 1: Steensby Camp Aerial View

ᐊᕐᕆᖏᐊᖅ 1: ᐃᒃᐱᑭᑐᕋᐊᓗᒥ ᓄᓇᖏᓐ ᕿᓚᖅᓂᑦ

Photo 2: Steensby Camp Aerial View

ᐊᕐᕆᖏᐊᖅ 2: ᐃᒃᐱᑭᑐᕋᐊᓗᒥ ᓄᓇᖏᓐ ᕿᓚᖅᓂᑦ

Photo 3: Clean up of Barreled Fuel containment berms

ᐊᕐᕆᖏᐊᖅ 3: ᓴᓗᒪᕐᓴᐃᓂᖅ ᖃᑕᐅᓯᕋᐊᑦ ᐅᕐᓯᐊᓗᖃᐅᑎᑦ ᑕᒪᐅᖏᑐᐃᓇᖅ ᐅᐱᕐᐃᓗᑎᓕᖅᓂᒃ

Photo 4: Laydown Area and Barreled Fuel Lined Containment Storage Area

ᐊᕐᕆᖏᐊᖅ 4: ᓄᖅᓇ ᓯᓇᔨᑕᖃᕐᓴᒃ ᐊᒪᓗ ᖃᑕᐅᓯᕋᐊᑦ ᐅᕐᓯᐊᓗᖃᐅᑎᑦ

Photo 5: Archaeological work at Steensby

ᐊᕐᕆᖏᐊᖅ 5: ᐃᒃᐱᑭᑐᕋᐊᓗᒥ ᐃᑦᑕᕐᓂᓴᐃᑦ

Photo 6: Archaeological work at Steensby

ᐊᕐᕆᖏᐊᖅ 6: ᐃᒃᐱᑭᑐᕋᐊᓗᒥ ᐃᑦᑕᕐᓂᓴᐃᑦ

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ᓄᓇᕗᒻᒥ ᓴᐃᒃᓴᕐᓂᐊᕐᓴᒃ

STEENSBY INLET PHOTOS
ᐃᒃᐱᑭᑐᕋᐊᓗᒥ ᐊᕐᕆᖏᐊᑦ

(SHEET 1 OF 1)

REF. 1 | REV. 0

FIGURE C.3.3

Photo 7: Deposit 4 - East.

ᐊᕐᕕᖓᐊᖅ **7**: ᓴᓇᖅᓴᓕᒃ 4 - ᑲᓇᖏᓇᖏᑦᓂ

Photo 8: Portable Fuel Containment Berm for Drill 3 - August 5, 2010.

ᐊᕐᕕᖓᐊᖅ **8**: ᓄᑎᕋᐅᔨᓇᓐᖓᑦ ᐅᕋᓱᐊᓂᖏᓪᓗᕋ ᑕᒪᐅᖏᑐᐃᓇᓐᖓᑦ ᐃᓚᐅᐃᓂᑎ ᓂᐅᕋᑐᕆᒃ 3 - ᐊᐅᔪᓂ 5, 2010

Photo 9: Drill 3 - July 30, 2010.

ᐊᕐᕕᖓᐊᖅ **9**: ᐃᓂᑕᕆᒃ 3 - ᔪᓚᐃ 30, 2010

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MARY RIVER PROJECT

EXPLORATION DRILLING PHOTOS
ᖃᐅᔨᓴᓂᓂᓕᒫᑦ ᐃᓂᑕᕆᓂᖅ

(SHEET 2 OF 2)

REF. 1

REV. 0

FIGURE C.3.4

Photo 7: Repairs at KM78.

ᐊᕐᕆᔭᐊᖅ 7: ᐊᖏᒃᓯᐅᔪᑦ ᐅᓪᓗᓂ ᑐᓪᓕᒃ.

Photo 8: Repairs at KM78.

ᐊᕐᕆᔭᐊᖅ 8: ᐊᖏᒃᓯᐅᔪᑦ ᐅᓪᓗᓂ ᑐᓪᓕᒃ.

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Iron Mines Corporation

MARY RIVER PROJECT

MILNE INLET TOTE ROAD PHOTOS
ᐊᖑᔭᓂᒃ ᐅᓱᒃᑕᕐᔪᐊᑦ

(SHEET 2 OF 2)

REF. 1

REV. 0

FIGURE C.3.5

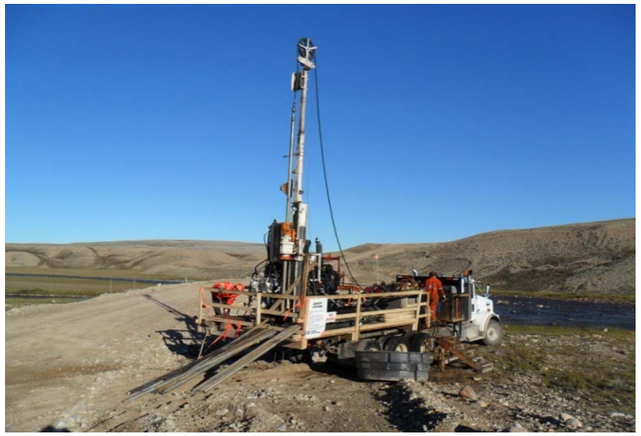

Photo 1: Drill Hole BH10-18 During Drilling.

ᐊᕐᕆᖃᐊᖅ 1: ᐃᓄᑦᔪᐅᓪᓗᒥ ᖃᐅᔨᓴᕐᔪᐊᖅ ᐃᓄᑦᔪᓐᓇᐅᑎᓪᓗᒍ

Photo 2: Drill Hole BH10-10 During Drilling.

ᐊᕐᕆᖃᐊᖅ 2: ᐃᓄᑦᔪᐅᓪᓗᒥ ᖃᐅᔨᓴᕐᔪᐊᖅ ᐃᓄᑦᔪᓐᓇᐅᑎᓪᓗᒍ

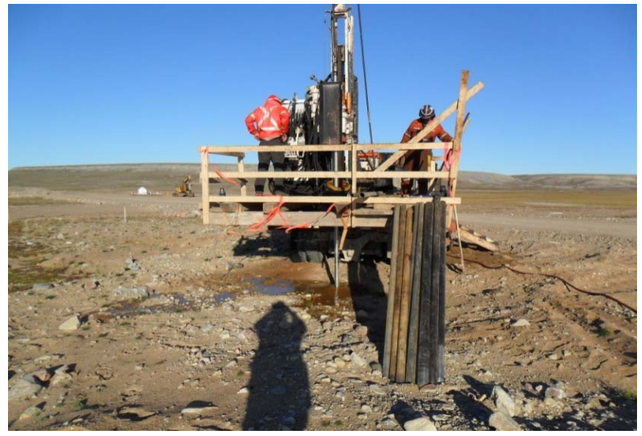

Photo 3: Drill Hole BH10-19 During Drilling.

ᐊᕐᕆᖃᐊᖅ 3: ᐃᓄᑦᔪᐅᓪᓗᒥ ᖃᐅᔨᓴᕐᔪᐊᖅ ᐃᓄᑦᔪᓐᓇᐅᑎᓪᓗᒍ

Photo 4: Digging Test Pit TP10-09.

ᐊᕐᕆᖃᐊᖅ 4: ᐊᓚᑲᑕᐅᓪᓗᓂ ᖃᐅᔨᓴᕐᑕᐅᔪᖅ ᐸᓐᓇᐅᖅᑕᓂ.

Photo 5: Test Pit TP10-02.

ᐊᕐᕆᖃᐊᖅ 5: ᐊᓚᑲᓂᒪᔪᖅ ᖃᐅᔨᓴᕐᓂᓕᑲ ᐸᓐᓇᐅᖅᑕᓂ.

Photo 6: Material Removed From Test Pit TP10-10.

ᐊᕐᕆᖃᐊᖅ 6: ᓯᓚᐅᑎᑦ ᐱᔨᕐᑕᐅᔪᑦ ᐊᓚᑲᓂᒪᔪᓪᓗᒥ ᖃᐅᔨᓴᕐᓂᓕᕆᑦ ᐸᓐᓇᐅᖅᑕᓂ.

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MARY RIVER PROJECT

GEOTECHNICAL DRILLING AND TEST PITTING PHOTOS
ᖃᐅᔨᓴᕐᓪᓗᒥ ᐃᓄᑦᔪᓂᖅ

(SHEET 1 OF 1)

REF. 1 | REV. 0

FIGURE C.3.6

APPENDIX D – DRILL WATER MONITORING SUMMARY

2010 Drill Water Summary
2011/03/29

Date: 2011 March 29

To: Note for Record

From: Jim Millard

Subject: 2010 Drill Water Summary

Taken from the 2010 NIRB Annual Report

- Exploration Drill Monitoring

Since 2005, the exploration drilling program focussed primarily on Deposits Nos. 1 through 3 where deep drilling has been necessary and the addition of high concentration calcium chloride brines to depress drilling water below the freezing point have been required. The use of brines, helps to prevent the loss of drill holes due to freezing of rods in the holes. Due to the addition of relatively large quantities of salt at high concentrations in drill water, Environment Canada expressed concerns about the potential of major ion impacts to receiving waters from drill return water. As a response to this concern in 2008 and 2009, Baffinland presented a high level of detail concerning the effectiveness of drill water management and monitoring programs.

There were some major changes to the exploration drill program for 2010 as compared to previous years that has affected drill water monitoring requirements. Firstly, during 2010, the exploration drill program focussed mainly on Deposits Nos. 4 and 5 with only a minor amount of drilling on Deposits Nos. 1, 2, and 3. Secondly, the quantity of calcium chloride was sharply reduced during the 2010 program, due to the relatively short drill holes and correspondingly reduced risk of losing drill holes due to freezing. Therefore, the exploration drilling program was considered to be more routine or low impact during 2010, as compared to previous years, with correspondingly reduced concerns for potential major ion or sediment impacts to the receiving environment.

- Background

During 2010, the exploration drilling water quality monitoring program was focussed on two areas. Since the drilling program was conducted primarily at Deposits Nos. 4 and 5, this is where most of the monitoring activities were concentrated with approximately weekly to biweekly sampling events during the late June to early August period. The second area of drilling water quality monitoring was upstream and downstream of Deposits 1, 2, and 3, where only a minor amount of drilling was conducted, as compared to previous years.

The main concern to the receiving environment originating from the 2010 program was suspended solids from sediment laden drill water. To minimize this risk to downstream receiving waters, two silt control measures were successfully employed. The first measure involved the use of silt fences and natural

depressions in the vicinity of the drill sites to intercept drill cuttings and residual drill water. Silt fences were strategically placed, monitored, and maintained to minimize the transport of sediment downstream. The second sediment control measure utilized was to intercept drill return water at the drill head and redirect the water to areas of relatively flat tundra. The tundra combined with the low gradients acted as an effective filtering mechanism for silty drill water. As the filtering capacity of the tundra at a given location was reached, the drill water discharge was simply directed to other areas of tundra that had not yet been utilized for this purpose.

Each year, the water quality monitoring program has been modified as needed to address any changes to the annual drill program work scopes.

- Deposits Nos. 4 and 5 Monitoring Program

Drilling water monitoring samples were collected weekly to biweekly, upstream and downstream as well as proximal to drill set ups at various locations at Deposits Nos. 4 and 5 from mid June to early August. Samples were collected and sent to an independent laboratory for analyses of routine parameters, plus total and dissolved metals. The analytical results were compared to Water Licence Effluent Criteria.

The water monitoring results show some elevated total suspended solids (TSS), proximal and downstream to the drilling activities for some drill holes. However, TSS was observed to decline rapidly downstream with results below Water Licence Effluent Criteria at the point of discharge to the aquatic receiving environment. Associated with elevated TSS are elevated turbidity, aluminum, and iron which also show rapid decrease downstream from the drill sites. The results indicate that the siltation measures were largely effective in mitigating against downstream TSS, turbidity, and associated metals.

- Deposits Nos. 1, 2, and 3

An exploration drilling water quality monitoring program has been undertaken since 2005 at selected locations upstream (reference), downstream along Mary River (potentially affected), and along steep seasonal flow channels that drain the rugged topographic terrain that characterizes the land surface in the vicinity of Deposits Nos. 1, 2, and 3. The main objective of the monitoring programs was to identify and measure major ions, as well as TSS/turbidity in Mary River, both upstream at locations unaffected by drilling activities, and downstream at locations that may be potentially affected by drilling activities. Historical and 2010 monitoring sample locations are presented on Figure 2.6.

During 2010, there was only a small amount of drilling conducted at Deposits Nos. 1, 2, and 3 from late July to mid-August, as compared to previous years. Considering the scale of the program and the very small volumes of salt used for these drill holes, there was little concern with respect to major ions and siltation effects to Mary River, considered to be the aquatic receiving environment. A scaled down program was conducted during 2010 that involved three rounds of drilling water quality monitoring. Samples were collected upstream of potential drilling effects (reference stations) and at downstream stations (potentially affected) in late July, mid-August, and mid-September. One sample was collected at a station proximal to Deposit No. 1 in mid-September.

The rationale for the groupings and selection of active sampling stations for the 2010 monitoring program at Deposit Nos. 1 to 3 is summarized below:

- Reference Stations - Mary River upstream of Deposits Nos. 1, 2 and 3: **G0-09;** and**,** Mary River upstream of Deposits Nos. 1 and 2: **G0-03**.

- Proximal Stations Deposit No. 1 - steep drainage pathways close to drilling operations (not fish habitat): **E4-01**.

- Potentially Affected Stations Mary River - downstream of Deposit No. 1: **E0-10 and C0-10**.

Tables 2.5, 2.6 & 2.7 present the results of the Deposit Nos. 1 to 3 water quality monitoring program for 2010 as well as for previous years. These tables include all water quality monitoring stations where data is available, regardless of whether the stations were sampled in 2010 or in previous years. Drilling water quality sampling locations are shown on Figure 2.6. The results show generally similar TSS and turbidity results for both reference and potentially affected locations as compared to previous years. Major ions concentrations generally show a slight decline for potentially affected stations relative to previous years. These results are expected in consideration of the much lower volumes of salt used for the 2010 drill program. Note the high TSS and turbidity results for the mid-August sampling event for both upstream and downstream locations. This is typical for Mary River where there is abundant siltation of the watershed resulting from natural causes.

Baffinland Iron Mines Corporation

TABLE 2.5

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2010 ANNUAL REPORT TO THE NUNAVUT IMPACT REVIEW BOARD

EXPLORATION DRILLING WATER QUALITY MONITORING PROGRAM - SELECTED PARAMETERS
UPSTREAM REFERENCE STATIONS (NO INFLUENCE FROM DEPOSIT NO. 1)

Site ID (date)	Turbidity (NTU)	TSS (mg/L)	TDS (mg/L)	Chloride (mg/L)	Total Calcium (mg/L)	Alkalinity (mg/L as $CaCO_3$)
H0-01 (Mary River - upstream of Deposit Nos. 1, 2, and 3)						
12-Aug-05	8.5	-	34	1	6	30
9-Sep-05	2.1	-	<30	3	13	55
04-Aug-06	14.4	-	41	1	6	31
01-Sep-06	-	-	81	4	15	57
16-Jun-07	1.7	<2	38	2	7	29
29-Jul-07	15.5	8	45	1	6	32
31-Aug-07	15.1	6	95	6	14	61
09-Jun-08	0.9	<2	30	1	4	23
13-Jul-08	26.9	23	23	<1	4	18
28-Aug-08	3.5	<2	112	5	16	75
G6-01 (Mary River - upstream of Deposit Nos. 1, 2, and 3)						
04-Aug-06	2.3	-	79	<1	14	64
01-Sep-06		-	105	<1	18	83
15-Jun-07	1.0	<2	29	2	5	22
23-Jul-07	0.5	<2	95	1	16	73
31-Aug-07	0.6	<2	127	3	22	95
09-Jun-08	0.8	<2	16	1	2	11
10-Jul-08	0.5	<2	60	<1	10	46
28-Aug-08	1.6	<2	116	3	19	86
G0-09 (Mary River - upstream of Deposit Nos. 1, 2, and 3)						
18-Jun-06	1.2	-	14	<1	2	8
26-Jun-06	2.1	-	13	<1	2	8
02-Jul-06	2.7	-	7	<1	1	<5
10-Jul-06	2.0	-	15	<1	2	11
19-Jul-06	6.4	-	19	<1	3	14
31-Jul-06	20.3	-	38	<1	6	29
06-Aug-06	10.5	-	53	1	8	39
14-Aug-06	-	-	60	1	9	44
20-Aug-06	6.7	-	77	3	11	56
01-Sep-06	-	-	85	3	13	63
20-Sep-06	-	-	98	3	15	70
18-Jun-07	2.3	<2	34	2	6	26
24-Jun-07	2.7	<2	30	1	4	23
01-Jul-07	1.7	<2	16	<1	2	10
07-Jul-07	5.1	<2	29	<1	4	26
17-Jul-07	11.0	3	36	<1	5	28
22-Jul-07	33.6	18	35	1	5	26
28-Jul-07	10.5	<2	53	2	8	39
05-Aug-07	30.3	31	60	2	9	43
12-Aug-07	34.6	36	69	3	12	50
19-Aug-07	21.1	4	87	5	14	58
27-Aug-07	24.5	10	97	4	15	68
03-Sep-07	4.2	<2	111	6	18	77
09-Sep-07	2.2	<2	116	5	19	82
18-Sep-07	1.2	<2	138	7	15	93
23-Sep-07	0.7	<2	150	8	16	102

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TABLE 2.5

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2010 ANNUAL REPORT TO THE NUNAVUT IMPACT REVIEW BOARD

EXPLORATION DRILLING WATER QUALITY MONITORING PROGRAM - SELECTED PARAMETERS
UPSTREAM REFERENCE STATIONS (NO INFLUENCE FROM DEPOSIT NO. 1)

Site ID (date)	Turbidity (NTU)	TSS (mg/L)	TDS (mg/L)	Chloride (mg/L)	Total Calcium (mg/L)	Alkalinity (mg/L as $CaCO_3$)
23-Jun-08	1.5	6	8	<1	1	8
02-Jul-08	1.5	<2	23	<1	4	18
08-Jul-08	1.0	<2	51	1	7	40
14-Jul-08	6.4	<2	46	1	7	34
21-Jul-08	6.9	<2	68	2	11	50
01-Aug-08	6.6	<2	74	2	11	55
05-Aug-08	0.6	<2	105	<1	13	86
11-Aug-08	3.5	5	107	3	18	79
18-Aug-08	3.0	<2	112	4	18	80
26-Aug-08	2.6	<2	111	4	18	79
01-Sep-08	1.5	<2	77	1	13	59
08-Sep-08	2.8	<2	100	4	16	73
29-Jun-09	1.5	<2	12	<1	2	12
06-Jul-09	1.3	6	21	1	3	14
20-Jul-09	9.6	2	37	<1	6	28
04-Aug-09	13.1	7	77	3	11	54
02-Sep-09	6.1	<2	117	9	18	76
14-Sep-09	1.6	2	137	7	21	94
21-Jul-10	**8.1**	**<2**	**35**	**1**	**5**	**27**
13-Aug-10	**20.4**	**8**	**60**	**5**	**9.62**	**39**
15-Sep-10	**1.3**	**<2**	**137**	**7**	**21.6**	**93**
G0-03 (Mary River, upstream of Deposit Nos. 1 and 2)						
11-Jun-05	0.3	-	<30	1	2	9
8-Aug-05	4.9	-	40	<1	6	36
10-Sep-05	1.6	<2	51	2	13	57
17-Jun-06	0.4	-	18	<1	2	9
04-Aug-06	9.8	-	49	1	7	39
04-Sep-06	6.7	-	88	8	13	55
18-Jun-07	1.6	<2	29	1	5	23
22-Jul-07	11.4	<2	44	<1	6	32
09-Sep-07	2.5	<2	112	7	18	76
23-Jun-08	2.1	7	9	<1	1	<5
02-Jul-08	2.4	2	17	<1	3	11
08-Jul-08	7.0	5	27	1	4	22
14-Jul-08	7.2	<2	38	2	5	28
21-Jul-08	8.5	2	68	7	13	42
01-Aug-08	9.4	5	87	13	12	46
05-Aug-08	20.7	6	86	10	13	51
11-Aug-08	14.1	8	106	12	16	61
18-Aug-08	5.3	<2	101	5	16	66
26-Aug-08	1.7	6	106	4	16	73
01-Sep-08	5.8	3	71	3	11	49
08-Sep-08	4.5	<2	89	6	14	62
16-Sep-08	2.7	<2	102	5	16	71
29-Jun-09	1.7	<2	12	<1	2	8
06-Jul-09	0.4	<2	56	6	9	35
20-Jul-09	7.6	<2	34	<1	5	27

TABLE 2.5

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2010 ANNUAL REPORT TO THE NUNAVUT IMPACT REVIEW BOARD

EXPLORATION DRILLING WATER QUALITY MONITORING PROGRAM - SELECTED PARAMETERS
UPSTREAM REFERENCE STATIONS (NO INFLUENCE FROM DEPOSIT NO. 1)

Site ID (date)	Turbidity (NTU)	TSS (mg/L)	TDS (mg/L)	Chloride (mg/L)	Total Calcium (mg/L)	Alkalinity (mg/L as $CaCO_3$)
04-Aug-09	14.3	14	81	7	12	51
02-Sep-09	3.3	<2	252	31	23	153
14-Sep-09	1.4	<2	131	8	21	88
21-Jul-10	**5.1**	**<2**	**38**	**1**	**6**	**29**
13-Aug-10	**15.1**	**8**	**75**	**7**	**12**	**49**
15-Sep-10	**1.5**	**<2**	**128**	**9**	**19.3**	**81**
G0-05 (Mary River, upstream of Deposit Nos. 1 and 2)						
04-Aug-06	6.0	-	48	<1	7	38
04-Sep-06	6.0	-	66	1	10	50
13-Jun-07	1.5	<2	29	2	4	23
23-Jul-07	30.7	20	48	<1	7	38
31-Aug-07	6.2	<2	93	4	15	65
09-Jul-08	6.2	2	36	<1	5	28
28-Aug-08	2.3	<2	88	2	14	63
G0-01 (Mary River, upstream of Deposit No. 1 and 2)						
9-Jun-05	0.6	-	31	1	4	17
8-Aug-05	4.8	-	49	<1	6	34
10-Sep-05	1.4	-	63	2	14	60
12-Jun-06	0.6	-	42	<1	6	32
18-Jun-06	1.0	-	19	1	2	10
26-Jun-06	2.6	-	15	2	2	8
10-Jul-06	2.5	-	15	<1	2	12
19-Jul-06	4.5	-	19	<1	3	13
31-Jul-06	17.8	-	38	1	6	28
06-Aug-06	5.3	-	62	2	9	45
14-Aug-06	-	-	66	2	11	50
20-Aug-06	6.1	-	36	2	11	56
29-Aug-06	-	-	68	2	11	50
20-Sep-06	-	-	105	5	16	75
19-Jun-07	1.5	2	33	4	5	21
24-Jun-07	1.2	<2	38	3	5	27
01-Jul-07	2.4	<2	20	<1	2	15
07-Jul-07	5.7	<2	24	<1	4	22
17-Jul-07	9.1	<2	36	1	5	28
24-Jul-07	8.7	2	55	2	8	40
28-Jul-07	8.9	<2	55	2	9	40
05-Aug-07	11.5	3	70	3	11	49
12-Aug-07	7.2	4	81	4	14	57
19-Aug-07	20.9	3	85	5	13	58
27-Aug-07	11.0	6	94	5	15	64
01-Sep-07	9.3	<2	106	7	16	69
08-Sep-07	2.6	<2	115	8	19	78
18-Sep-07	0.8	<2	152	14	24	92
01-Jul-08	3.1	4	18	<1	3	13
08-Jul-08	4.9	2	29	1	4	24
14-Jul-08	7.4	3	36	1	5	28

TABLE 2.5

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2010 ANNUAL REPORT TO THE NUNAVUT IMPACT REVIEW BOARD

EXPLORATION DRILLING WATER QUALITY MONITORING PROGRAM - SELECTED PARAMETERS
UPSTREAM REFERENCE STATIONS (NO INFLUENCE FROM DEPOSIT NO. 1)

Site ID (date)	Turbidity (NTU)	TSS (mg/L)	TDS (mg/L)	Chloride (mg/L)	Total Calcium (mg/L)	Alkalinity (mg/L as $CaCO_3$)
21-Jul-08	6.1	<2	62	4	9	43
01-Aug-08	7.4	6	72	4	11	49
05-Aug-08	19.2	6	81	5	13	55
11-Aug-08	11.5	5	95	6	14	63
18-Aug-08	5.4	<2	106	7	16	69
26-Aug-08	2.5	<2	116	7	18	75
01-Sep-08	5.9	2	79	5	12	53
08-Sep-08	3.9	<2	99	6	15	66
16-Sep-08	1.9	<2	112	7	17	75
F0-05 (Mary River - upstream of steep drainage pathways near Deposit No. 1)						
4-Aug-06	0.2	-	89	<1	15	72
4-Sep-06	0.3	-	101	<1	17	82
23-Jul-07	0.1	<2	90	<1	15	70
1-Sep-07	0.2	<2	125	<1	22	99
2-Jul-08	0.4	<2	29	<1	5	26
8-Jul-08	0.2	<2	60	<1	9	48
14-Jul-08	0.3	<2	68	<1	11	54
21-Jul-08	0.1	<2	89	<1	15	71
1-Aug-08	0.4	<2	95	<1	16	77
5-Aug-08	18.1	6	82	3	19	60
11-Aug-08	0.3	<2	112	<1	20	90
18-Aug-08	0.6	7	116	<1	20	92
26-Aug-08	0.4	<2	123	<1	21	99
1-Sep-08	0.2	<2	76	<1	13	61
8-Sep-08	0.2	<2	107	<1	18	84

Note: Bolded dates indicate sampling events during 2010.

TABLE 2.6

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2010 ANNUAL REPORT TO THE NUNAVUT IMPACT REVIEW BOARD

EXPLORATION DRILLING WATER QUALITY MONITORING PROGRAM - SELECTED PARAMETERS
PROXIMAL STATIONS (TO DEPOSIT NO. 1)

Site ID (date)	Turbidity (NTU)	TSS (mg/L)	TDS (mg/L)	Chloride (mg/L)	Total Calcium (mg/L)	Alkalinity (mg/L as $CaCO_3$)
F0-01						
9-Jun-05	0.9	-	<30	1	6	28
8-Aug-05	0.3	-	63	1	15	68
10-Sep-05	<0.1	-	40	2	22	96
12-Jun-06	0.5	-	68	<1	10	51
18-Jun-06	0.7	-	31	<1	5	25
26-Jun-06	1.0	-	66	20	10	13
02-Jul-06	1.7	-	14	1	2	7
10-Jul-06	0.5	-	29	<1	4	23
19-Jul-06	0.6	-	43	<1	7	36
31-Jul-06	0.4	-	90	3	14	68
06-Aug-06	0.8	-	114	3	18	86
14-Aug-06	-	-	101	3	17	76
20-Aug-06	0.3	-	126	4	19	94
29-Aug-06	-	-	111	2	19	88
20-Sep-06	-	-	153	8	25	109
19-Jun-07	1.1	<2	59	2	10	45
24-Jun-07	1.4	<2	33	2	5	25
01-Jul-07	1.5	<2	25	<1	4	19
07-Jul-07	0.6	<2	48	<1	7	40
17-Jul-07	0.4	<2	87	1	14	68
24-Jul-07	0.3	<2	98	1	16	75
28-Jul-07	0.2	<2	109	2	18	84
05-Aug-07	0.2	<2	102	1	17	79
12-Aug-07	0.1	<2	125	3	22	95
19-Aug-07	0.2	<2	135	5	23	102
27-Aug-07	0.1	<2	129	3	21	98
01-Sep-07	0.2	<2	145	5	24	107
08-Sep-07	0.2	<2	137	4	24	106
18-Sep-07	<0.1	<2	166	8	16	119
24-Sep-07	0.1	<2	178	9	29	127
01-Jul-08	0.8	3	31	<1	5	27
08-Jul-08	0.5	<2	55	<1	8	43
14-Jul-08	0.4	<2	77	<1	13	61
21-Jul-08	0.3	<2	99	2	16	76
01-Aug-08	0.9	<2	137	14	22	87
05-Aug-08	0.7	<2	144	11	24	97
11-Aug-08	0.9	2	166	22	30	94
18-Aug-08	1.9	3	176	24	31	98
26-Aug-08	1.0	<2	186	21	30	111
01-Sep-08	0.7	4	112	12	19	68
08-Sep-08	0.4	<2	157	18	25	95
16-Sep-08	0.9	<2	176	21	31	105
F0-02						

TABLE 2.6

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2010 ANNUAL REPORT TO THE NUNAVUT IMPACT REVIEW BOARD

EXPLORATION DRILLING WATER QUALITY MONITORING PROGRAM - SELECTED PARAMETERS
PROXIMAL STATIONS (TO DEPOSIT NO. 1)

Site ID (date)	Turbidity (NTU)	TSS (mg/L)	TDS (mg/L)	Chloride (mg/L)	Total Calcium (mg/L)	Alkalinity (mg/L as $CaCO_3$)
23-Jun-08	4.7	10	11	<1	2	7
2-Jul-08	0.5	3	33	<1	5	30
8-Jul-08	0.4	<2	57	<1	9	45
14-Jul-08	7.1	<2	75	<1	12	58
21-Jul-08	0.4	<2	97	1	16	75
1-Aug-08	0.7	<2	125	11	21	83
5-Aug-08	0.8	<2	129	8	22	91
11-Aug-08	0.9	<2	157	19	29	92
18-Aug-08	0.4	3	162	19	30	95
26-Aug-08	0.4	<2	167	17	28	104
1-Sep-08	0.6	<2	110	12	19	66
8-Sep-08	0.4	<2	153	18	25	91
16-Sep-08	0.2	<2	166	19	31	99
E4-01						
9-Jun-05	0.4	-	51	2.1	6	24
8-Aug-05	0.2	-	926	250	138	93
10-Sep-05	<0.1	-	1270	480	256	128
17-Jun-06	0.7	-	37	4	6	26
28-Jul-06	1.1	-	229	51	41	93
29-Aug-06	-	-	428	120	93	136
13-Jun-07	0.9	<2	59	2	9	45
24-Jul-07	0.3	<2	1380	585	340	116
19-Aug-07	0.1	<2	1830	804	319	136
27-Aug-07	0.2	<2	1700	710	370	137
01-Sep-07	0.1	4	2020	905	481	139
08-Sep-07	0.1	<2	1980	892	496	139
16-Sep-07	0.3	<2	1380	575	217	143
01-Jul-08	0.8	2	70	10	12	38
08-Jul-08	2.5	4	115	17	19	59
14-Jul-08	0.4	<2	216	49	45	87
21-Jul-08	0.2	<2	322	82	67	119
01-Aug-08	0.3	<2	306	69	63	129
05-Aug-08	0.2	<2	355	90	78	135
11-Aug-08	0.2	<2	374	92	81	145
18-Aug-08	0.3	6	326	67	66	146
26-Aug-08	0.2	<2	280	52	56	135
01-Sep-08	0.2	<2	272	48	53	135
08-Sep-08	0.6	87	296	57	63	140
29-Jun-09	0.3	<2	74	4	13	51
06-Jul-09	0.3	<2	94	7	17	61
20-Jul-09	0.9	<2	144	14	25	91
04-Aug-09	0.2	<2	255	38	51	139
02-Sep-09	0.2	<2	252	31	50	153
14-Sep-09	0.3	6	260	30	49	157

Baffinland Iron Mines Corporation

TABLE 2.6

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2010 ANNUAL REPORT TO THE NUNAVUT IMPACT REVIEW BOARD

EXPLORATION DRILLING WATER QUALITY MONITORING PROGRAM - SELECTED PARAMETERS
PROXIMAL STATIONS (TO DEPOSIT NO. 1)

Site ID (date)	Turbidity (NTU)	TSS (mg/L)	TDS (mg/L)	Chloride (mg/L)	Total Calcium (mg/L)	Alkalinity (mg/L as $CaCO_3$)
15-Sep-10	**0.3**	**2**	**210**	**14**	**35.5**	**136**
E3-01						
9-Jun-05	21.2	-	586	180	80	28
8-Aug-05	0.1	-	2770	1200	449	60
10-Sep-05	0.1	-	5050	2600	1130	65
17-Jun-06	>100	-	359	139	72	31
28-Jul-06	1.9	-	1970	922	406	51
29-Aug-06	-	-	2390	1105	500	68
13-Jun-07	0.5	<2	735	322	145	45
24-Jul-07	1.2	8	5910	2890	1600	58
19-Aug-07	2.2	13	5540	2790	1380	64
27-Aug-07	1.3	9	5300	2650	1190	62
01-Sep-07	0.9	9	5130	2490	1150	66
08-Sep-07	1.9	4	4590	2210	1050	68
16-Sep-07	1.3	4	4430	2160	806	66
01-Jul-08	8.8	51	607	243	127	60
08-Jul-08	>100	2080	708	278	166	61
14-Jul-08	3.0	<2	1180	502	261	87
21-Jul-08	2.5	5	1380	607	310	90
01-Aug-08	7.6	16	3270	1470	785	83
05-Aug-08	6.6	25	4950	2300	1300	88
11-Aug-08	0.9	7	2330	1120	520	83
18-Aug-08	44.6	88	1940	904	394	89
26-Aug-08	1.7	54	1650	727	344	89
01-Sep-08	1.1	104	1740	795	364	79
08-Sep-08	23.4	87	3240	1580	777	83
29-Jun-09	7.9	171	360	126	78	40
06-Jul-09	7.8	15	96	1050	601	63
20-Jul-09	0.5	<2	1700	779	402	77
04-Aug-09	6.2	81	1750	751	343	93
18-Aug-09	18.5	1580	1010	421	212	85
02-Sep-09	3.0	7	722	279	121	89
14-Sep-09	5.4	52	1160	474	214	94

Baffinland Iron Mines Corporation

TABLE 2.7

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2010 ANNUAL REPORT TO THE NUNAVUT IMPACT REVIEW BOARD

EXPLORATION DRILLING WATER QUALITY MONITORING PROGRAM - SELECTED PARAMETERS
POTENTIALLY AFFECTED STATIONS

Site ID (date)	Turbidity (NTU)	TSS (mg/L)	TDS (mg/L)	Chloride (mg/L)	Total Calcium (mg/L)	Alkalinity (mg/L as $CaCO_3$)
E0-10						
12-Jun-06	0.5	-	43	<1	6	32
19-Jun-06	1.0	-	24	<1	3	16
26-Jun-06	1.6	-	38	9	6	11
02-Jul-06	3.0	-	11	<1	2	5
10-Jul-06	1.9	-	17	<1	2	13
19-Jul-06	3.4	-	23	<1	4	18
31-Jul-06	17.6	-	39	1	6	31
06-Aug-06	5.4	-	62	2	9	47
14-Aug-06	-	-	67	2	11	50
20-Aug-06	5.8	-	77	2	12	57
29-Aug-06	-	-	76	2	12	57
20-Sep-06	-	-	114	5	18	81
19-Jun-07	1.8	<2	35	4	5	20
24-Jun-07	0.7	<2	62	4	9	42
01-Jul-07	1.2	<2	25	<1	4	17
07-Jul-07	3.8	<2	31	1	5	26
17-Jul-07	9.3	<2	40	1	6	30
24-Jul-07	8.6	<2	55	2	8	40
28-Jul-07	6.9	<2	61	2	9	45
05-Aug-07	3.0	<2	94	2	15	71
13-Aug-07	6.9	<2	85	4	15	60
19-Aug-07	17.9	4	87	5	13	59
27-Aug-07	9.0	7	100	5	16	69
01-Sep-07	7.6	4	108	7	17	72
08-Sep-07	2.3	<2	117	7	19	81
18-Sep-07	0.8	<2	152	13	13	94
01-Jul-08	3.0	4	20	<1	3	14
08-Jul-08	4.1	2	32	1	5	25
14-Jul-08	0.3	<2	79	<1	13	61
21-Jul-08	5.5	<2	68	3	11	48
01-Aug-08	7.1	<2	74	4	11	50
05-Aug-08	18.2	5	83	5	13	56
11-Aug-08	10.4	6	100	7	16	65
26-Aug-08	2.2	<2	118	8	18	76
01-Sep-08	6.8	3	75	4	11	51
29-Jun-09	2.2	3	18	1	2	13
20-Jul-09	7.0	<2	34	1	6	32
04-Aug-09	10.4	6	111	9	17	73
02-Sep-09	5.4	<2	117	7	19	80
14-Sep-09	0.1	2	196	19	34	125
G0-10						
08-Jul-08	6.4	<2	34	3	5	24
14-Jul-08	9.1	5	39	3	6	28

TABLE 2.7

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2010 ANNUAL REPORT TO THE NUNAVUT IMPACT REVIEW BOARD

EXPLORATION DRILLING WATER QUALITY MONITORING PROGRAM - SELECTED PARAMETERS
POTENTIALLY AFFECTED STATIONS

Site ID (date)	Turbidity (NTU)	TSS (mg/L)	TDS (mg/L)	Chloride (mg/L)	Total Calcium (mg/L)	Alkalinity (mg/L as $CaCO_3$)
21-Jul-08	14	47	72	7	11	43
1-Aug-08	5.3	4	111	20	19	51
5-Aug-08	15	6	156	38	33	58
11-Aug-08	12.4	8	120	16	21	65
1-Sep-08	6.1	7	88	8	14	53
29-Jun-09	3.2	35	75	22	14	17
6-Jul-09	2.8	9	109	6	5	58
20-Jul-09	6	2	49	5	8	32
18-Aug-09	14.3	52	180	50	33	52
2-Sep-09	0.7	2	1270	544	269	100
14-Sep-09	1	<2	148	12	23	94
E0-03						
09-Jun-05	0.9	-	69	11	8	21
9-Aug-05	4.1	-	40	4	9	34
12-Sep-05	0.6	-	130	42	35	70
12-Jun-06	4.2	-	71	13	11	31
18-Jun-06	2.3	-	28	4	5	14
26-Jun-06	2.6	-	27	6	4	10
02-Jul-06	4.9	-	8	<1	1	<5
10-Jul-06	2.6	-	16	<1	2	10
19-Jul-06	4.2	-	22	1	3	15
30-Jul-06	15.1	-	47	4	7	30
06-Aug-06	5.8	-	75	7	12	46
14-Aug-06	-	-	78	7	13	49
20-Aug-06	5.3	-	90	8	14	58
29-Aug-06	-	-	73	4	12	50
19-Sep-06	-	-	126	13	22	77
18-Jun-07	1.4	<2	51	8	9	27
24-Jun-07	1.6	<2	31	<1	4	25
01-Jul-07	2.3	<2	17	1	3	10
07-Jul-07	0.6	<2	45	<1	7	37
16-Jul-07	10.4	2	40	3	6	28
22-Jul-07	12.7	5	59	6	9	35
28-Jul-07	8.4	<2	76	11	13	41
05-Aug-07	9.6	3	100	14	17	53
13-Aug-07	12.9	10	104	15	19	54
19-Aug-07	14.6	3	114	17	19	60
27-Aug-07	10.5	5	109	11	18	65
01-Sep-07	10.0	<2	134	19	22	70
09-Sep-07	1.9	<2	161	25	30	82
16-Sep-07	1.1	<2	287	73	50	95
24-Sep-07	0.3	<2	300	73	44	107
23-Jun-08	2.8	11	12	<1	2	8
01-Jul-08	2.9	4	20	<1	3	15

TABLE 2.7

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2010 ANNUAL REPORT TO THE NUNAVUT IMPACT REVIEW BOARD

EXPLORATION DRILLING WATER QUALITY MONITORING PROGRAM - SELECTED PARAMETERS
POTENTIALLY AFFECTED STATIONS

Site ID (date)	Turbidity (NTU)	TSS (mg/L)	TDS (mg/L)	Chloride (mg/L)	Total Calcium (mg/L)	Alkalinity (mg/L as $CaCO_3$)
08-Jul-08	4.5	2	29	1	4	23
14-Jul-08	9.3	3	38	2	5	27
21-Jul-08	7.2	<2	74	8	12	45
01-Aug-08	10.7	5	85	10	13	48
05-Aug-08	27.0	<2	99	13	16	55
11-Aug-08	14.8	8	111	12	17	64
18-Aug-08	3.1	<2	120	14	20	71
26-Aug-08	2.5	<2	144	20	23	76
01-Sep-08	5.9	3	85	8	13	51
08-Sep-08	3.9	<2	148	27	26	66
15-Sep-08	1.9	<2	150	21	25	78
29-Jun-09	2.0	4	18	2	3	8
06-Jul-09	4.6	13	19	1	3	12
20-Jul-09	8.0	<2	40	3	6	29
04-Aug-09	15.5	17	95	10	15	55
02-Sep-09	6.0	<2	117	9	19	76
14-Sep-09	1.1	<2	147	11	23	94
21-Jul-10	**5.0**	**<2**	**43**	**2**	**7**	**33**
13-Aug-10	**22.3**	**7**	**71**	**7**	**11**	**47**
15-Sep-10	**3**	**<2**	**144**	**13**	**21.8**	**85**
C0-10						
11-Jun-05	0.6	-	57	6	10	37
9-Aug-05	4.7	-	<30	3	8	36
12-Sep-05	0.7	-	91	23	25	68
12-Jun-06	0.6	-	62	4	9	41
18-Jun-06	1.1	-	43	4	7	29
26-Jun-06	2.1	-	33	6	5	13
02-Jul-06	5.4	-	10	<1	2	5
10-Jul-06	2.4	-	18	<1	3	12
19-Jul-06	3.9	-	23	1	4	16
30-Jul-06	6.7	-	53	4	8	37
06-Aug-06	6.6	-	72	6	12	47
14-Aug-06	-	-	77	5	13	53
20-Aug-06	4.9	-	90	7	14	59
30-Aug-06	-	-	84	5	13	58
19-Sep-06	-		122	12	21	73
18-Jun-07	0.8	<2	59	6	9	36
24-Jun-07	0.9	<2	74	16	13	30
01-Jul-07	1.9	<2	19	<1	3	11
08-Jul-07	5.5	<2	27	<1	4	21
16-Jul-07	10.4	9	44	2	7	32
22-Jul-07	25.6	6	51	4	8	33
28-Jul-07	8.1	<2	70	8	11	42
05-Aug-07	8.2	2	101	14	17	54

TABLE 2.7

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2010 ANNUAL REPORT TO THE NUNAVUT IMPACT REVIEW BOARD

EXPLORATION DRILLING WATER QUALITY MONITORING PROGRAM - SELECTED PARAMETERS
POTENTIALLY AFFECTED STATIONS

Site ID (date)	Turbidity (NTU)	TSS (mg/L)	TDS (mg/L)	Chloride (mg/L)	Total Calcium (mg/L)	Alkalinity (mg/L as $CaCO_3$)
13-Aug-07	6.0	<2	104	13	19	59
19-Aug-07	9.1	2	103	13	19	58
28-Aug-07	8.4	<2	100	9	16	60
03-Sep-07	3.2	<2	137	18	23	75
09-Sep-07	1.9	<2	152	21	26	82
18-Sep-07	0.7	<2	157	21	31	64
24-Sep-07	0.3	<2	194	34	23	90
30-Sep-07	0.2	<2	241	53	45	104
23-Jun-08	2.4	6	15	<1	2	7
01-Jul-08	2.9	3	19	<1	3	15
08-Jul-08	4.4	<2	29	1	4	22
14-Jul-08	11.3	4	38	2	6	29
21-Jul-08	3.8	<2	74	7	12	47
01-Aug-08	11.3	6	81	8	12	49
05-Aug-08	14.9	3	105	14	18	58
11-Aug-08	17.3	9	110	12	18	64
18-Aug-08	3.6	<2	127	15	20	72
26-Aug-08	1.7	<2	130	13	21	76
01-Sep-08	5.7	<2	84	8	13	52
08-Sep-08	3.5	<2	129	19	22	66
15-Sep-08	1.5	<2	138	17	22	76
29-Jun-09	1.9	<2	21	2	3	14
06-Jul-09	5.5	10	20	1	4	13
20-Jul-09	8.7	<2	40	2	7	29
04-Aug-09	13.9	7	97	9	15	58
02-Sep-09	5.5	<2	118	8	19	80
14-Sep-09	1.1	2	142	10	23	93
21-Jul-10	**4.7**	**<2**	**44**	**1**	**7**	**33**
13-Aug-10	**18.6**	**6**	**74**	**6**	**11.9**	**50**
15-Sep-10	**2.3**	**<2**	**131**	**9**	**20.2**	**82**
L0-01						
10-Jun-05	0.5	-	31	1	5	24
9-Aug-05	0.2	-	86	0	15	70
9-Sep-05	0.2	-	74	1	21	99
12-Jun-06	0.4	-	53	<1	8	40
18-Jun-06	0.5	-	46	<1	7	36
26-Jun-06	0.6	-	27	<1	4	21
02-Jul-06	0.5	-	30	<1	4	24
10-Jul-06	0.3	-	53	<1	7	41
19-Jul-06	0.3	-	56	<1	8	45
30-Jul-06	0.6	-	98	<1	16	77
06-Aug-06	1.1	-	118	1	18	93
14-Aug-06	-	-	105	<1	17	84
20-Aug-06	0.7	-	125	2	19	99

Baffinland Iron Mines Corporation

TABLE 2.7

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2010 ANNUAL REPORT TO THE NUNAVUT IMPACT REVIEW BOARD

EXPLORATION DRILLING WATER QUALITY MONITORING PROGRAM - SELECTED PARAMETERS
POTENTIALLY AFFECTED STATIONS

Site ID (date)	Turbidity (NTU)	TSS (mg/L)	TDS (mg/L)	Chloride (mg/L)	Total Calcium (mg/L)	Alkalinity (mg/L as $CaCO_3$)
29-Aug-06	-	-	118	2	19	91
19-Sep-06	-	-	144	3	24	110
19-Jun-07	0.5	<2	53	1	8	41
24-Jun-07	1.1	<2	50	1	7	37
01-Jul-07	1.6	<2	55	<1	7	42
08-Jul-07	0.3	<2	58	<1	9	46
16-Jul-07	0.4	<2	79	<1	12	62
23-Jul-07	0.7	<2	88	3	17	68
28-Jul-07	0.3	<2	109	2	17	85
05-Aug-07	0.9	4	96	2	15	72
12-Aug-07	0.3	<2	129	3	22	100
19-Aug-07	0.3	<2	140	3	23	107
27-Aug-07	0.4	2	134	4	21	100
02-Sep-07	0.3	5	147	5	23	108
10-Sep-07	0.4	<2	151	5	24	111
19-Sep-07	0.3	<2	163	6	26	123
22-Jun-08	0.9	<2	40	2	6	31
02-Jul-08	0.3	<2	63	<1	10	48
08-Jul-08	0.6	<2	70	2	10	52
14-Jul-08	0.2	<2	103	4	16	75
21-Jul-08	0.5	<2	120	9	20	86
01-Aug-08	0.5	<2	131	8	21	91
05-Aug-08	0.7	<2	151	11	25	104
11-Aug-08	0.4	<2	152	11	24	103
27-Aug-08	0.6	<2	157	11	25	105
01-Sep-08	0.6	<2	123	9	20	82
08-Sep-08	0.8	<2	157	16	25	101
16-Sep-08	0.9	<2	174	16	30	111
I0-04						
17-Jun-06	0.7	-	35	<1	5	26
28-Jul-06	10.7	-	61	<1	10	49
23-Aug-06	1.6	-	108	2	17	83
20-Jun-07	4.6	2	51	2	8	37
19-Jul-07	1.8	3	67	2	10	52
10-Sep-07	0.5	<2	148	7	24	103
06-Jun-08	0.8	<2	37	1	6	27
14-Jul-08	0.7	<2	55	1	9	43
01-Sep-08	0.8	<2	89	1	15	69

Notes: Bolded dates indicate sampling events during 2010

561000 E
562500 E
564000 E
565500 E
567000 E
568500 E
570000 E
571500 E
7917000 N
7915500 N
7914000 N
7912500 N
7911000 N

N

G0-09

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ᐅᑦᕿᓐᓂᐊᕐᐅᓚᓴᐅ ᖃᓄᐃᑎ ᐊᕐᓇᑎᓂᐅᓴᖏᓐᓄᑦ
PROPOSED OPEN PIT OUTLINE

ᓴᐃᖏᑦᓗᓐᓂ ᐲᑎᑦᓂᖅ
STOCKPILE

ARD-2B-NW

BULK SAMPLE PIT

ᐅᓱᑲᑦᓗᓐᓂ ᐊᒃᑐᓂ
HAUL ROAD

ARD-2A-SE

MR2-10-220
MR2-10-214
MR3-10-210

ᒪᐃᓐ ᐃᓕᓴᕐᓂ
MILNE INLET TOTE ROAD

E4-01
E3-01
G0-10
E0-10
E0-03
G0-03

ᐅᓄᕐᑕᑦᑎᓐ ᐊᒪᓗ ᐊᖏᔪᑎ
LANDFILL AND ACCESS ROAD

ᒪᐃᓐ ᑭᕐᓗᓂ
MARY RIVER

ᔪᓚᐃᓐ ᑕᓯᓗᓂ
SHEARDOWN LAKE

C0-10

ᑐᑭᓯᐊᖅᑕᐅᓂᖅ

LEGEND:

- ᐃᑎᖅ WATER
- ᐊᑐᕐᓇᓚᐅᖅᑎᓂᖅ RIVER/STREAM/DRAINAGE
- ᓴᐅᓂᖅ ᓂᓪ WETLAND
- 2010 ᐊᖏᔪᓚᐅᓂᓪ ᐃᓇᑦᑎᐃᓕ ᐱᐊᓂᖅᑕᓪᓚᕆᔨᒪᓕᖅ DRILLHOLE COMPLETED IN 2010
- 2010 ᒥᐃᒪᑎᓂᖅ ᖃᐅᔨᓴᓕᐃᓕ 2010 SAMPLE SITES
- ᐃᓇᑦᑎᐃᓕᐅᖅ ᐱᐊᓂᖅᑕᐅᓂᓪ 2010 2010 WATER SOURCE LOCATION

NOTES:

1. COORDINATE GRID IS UTM (NAD83) ZONE 17 AND IS IN METRES.
2. CONTOUR INTERVAL IS 10 METRES.
3. TOPOGRAPHY PROVIDED BY EAGLE MAPPING (2005).

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1. ᓄᓇᕗᑦ ᑎᑎᕋᓚᒃᖃᓗ ᒪᓕᒐᓐᓇ ᑲᓇᑕᒥᓐ ᐅᓕᓴᐸᓐ ᓴᓕ
2. ᑎᑎᕋᒪᓕ ᒥᑕ ᐊᖏᓂᑦᑎᐊᑦ ᐅᖃᓕᑎᑎᒍᑦ 5 ᒥᑕ
3. ᓄᓇᕗᑦᓂᓕᕆᓂᑦ ᓇᔨᔪᓂᓕᒃ ᓂᐲᑦᑐ

REV	DATE	DESCRIPTION	DESIGNED	DRAWN	CHK'D	APP'D
0	31JAN'11	ISSUED WITH NIRB ANNUAL REPORT	JM	ASM	TM	JM

SCALE 0 150 300 500 1000 1500 m

Baffinland IRON MINES CORPORATION

ᓄᓕᒋᓐ ᐅᑉᐳᖅᑭᑦ MARY RIVER PROJECT

2010 ᓴᓇᓴᖅᑭᑦᓯᓂᖅ ᐃᓇᑦᑎᐃᓕᐅᓂᓪ ᐊᒪᓗ ᖃᐅᔨᓴᓕᐃᓂᓪ ᓴᓇᓴᖅᑭᑦ ᐃᑐᑦᑕᓴᑦ 1, 2 ᐊᒪᓗ 3

2010 EXPLORATION DRILLHOLES AND WATER QUALITY SAMPLE LOCATIONS FOR DEPOSITS 1,2 & 3

Knight Piésold CONSULTING

P/A NO. NB102-181/27 | REF NO. NB11-00026

ᑎᑎᕋᐅᓚᓴᐅᓗᒃ FIGURE: **2.6** | REV 0

SAVED: I:\VO2600\181\27\A\Acad\Figs\R2\2.6_rD_1JUL2011 8:35:20 AM_AMOORE PRINTED: 1/31/2011 8:36:25 AM_AMOORE
XREF FILES: Mine_Site_Water\Water PROJECT SITE PLAN 2m INTERVAL REV2 Haul Roads Jan26\2009_2010 DRILLHOLE LOCATION - JAN 27 2011-2010 Water Source Locations IMAGE FILES: Baffland\topo\topo070820_Sheardown_Lake_North Bluff\Layout\Layout15431 topo.bmp

APPENDIX E – OTHER SUPPORTING DOCUMENTS

APPENDIX E.1 – LETTER OF APPROVAL – OPEN BURNING OF UNTREATED WOOD WASTE

1P.O. Box 119
Gjoa Haven, NU X0B 1J0
Tel: (867) 360-6338
Fax: (867) 360-6369

ᓄᓇᕗᑦ ᐃᒪᓕᕆᔨᒃᑯᑦ ᑲᑎᒪᔨᖏᑦ
NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

File: 2BB-MRY0710/D2

January 25, 2010

By Email and Regular Mail

Jim Millard, M.Sc., P.Geo.
Senior Environmental Superintendent
Mary River Project
Baffinland Iron Mines Corporation
Suite 1016, 120 Adelaide Street West
Toronto, ON M5H 1T1
Email: Jim.Millard@baffinland.com

Subject: Baffinland Iron Mines Corporation; Submission of a request for approval of controlled open burning for the Mary River Project; Licence 2BB-MRY0710

Dear Mr. Millard;

The Nunavut Water Board ("NWB") would like to acknowledge the receipt of your letter on March 28, 2008 with a request for approval under Part D, Item 2[1] of Licence 2BB-MRY0710 to allow for open burning of selected waste at the Mary River Project, Baffinland Iron Mines Corporation (BMI). The request was distributed for review to interested parties on April 24, 2008. Environment Canada provided expert advice with respect to the request on April 25, 2008, the Government of Nunavut Department of Environment on May 1, 2008 and Indian and Northern Affairs Canada on May 7, 2008. Taking into consideration the information submitted and the comments received by interested parties, the NWB hereby accepts and approves the request for carrying out open burning at the Mary River Project under **Motion 2009-18-L10,** dated **January 25, 2010,** subject to the conditions and restrictions below.

The NWB has noted that the request included the following key operational conditions to be undertaken by the Licensee in carrying out the activity:

a. Establishment of two (2) small burn pits for the periodic burning of suitable wastes in accordance with established Government of Nunavut Regulations[2,3];
b. that the request was for the approval of controlled burning of untreated wood waste at the Mary River Project;
c. that no treated wood, plywood, or petroleum-based materials, including materials contaminated with petroleum or petroleum derivatives will be burned or used as accelerants;
d. the wood will be kept as dry as possible before burning;
e. the size of the burn pile will be minimized, and a "hot burn" maintained to create an efficient burn using consistent/constant feed rates to avoid over-feeding and damping the fire;

[1]Unless otherwise approved by the Board, the Licensee shall not practice open burning or on-site landfilling of domestic waste.
[2]Guidelines for the Planning, Design, Operations and Maintenance of Modified Solid Waste Sites in the NWT, Ferguson Simek Clark Engineers & Architects, FSC Project No: 2001-1330, April 21, 2003
[3] http://www.gov.nu.ca/env/Open%20burning.pdf

f. burning will only be undertaken during favorable weather conditions (ie will not be undertaken during periods of extreme wind or during wet rain conditions); and
g. fires will be completely extinguished to ensure that any smoldering of material does not persist;

In addition to the above, the NWB would like to highlight several key items of this approval for carrying out of the activities, which include:

a. The Licensee follow the Government of Nunavut's policy on the open burning of segregated wastes, and shall not allow the open burning of plastics, wood treated with preservatives, electrical wire, Styrofoam, asbestos or painted wood;
b. Municipal solid wastes that are conditionally suitable for open burning are paper products, paperboard packaging and untreated wood wastes only;
c. The Burn pits are to be located on appropriate surfaces (bedrock, gravel or sand) and in areas such that impacts to surface water and groundwater drainage does not occur;
d. The Burn pits are constructed, operated and maintained so that any materials to be disposed of are contained during the process, including ashes;
e. Any residual waste and ashes be collected and disposed of in an appropriate, approved facility; and
f. Surface water runoff from the Burn pit areas shall be managed to prevent any direct or indirect flow into a water body and that no additional impacts to water are created.

The NWB would like to take this opportunity to remind the Licensee of Part A, Item 1(ii) of Licence 2BB-MRY0710, which states that "compliance with the terms and conditions of this Licence does not absolve the Licensee from responsibility for compliance with the requirements of all applicable Federal, Territorial and Municipal legislation. Additional permits/licences may be required from other authorizing agencies (ie burn permit). Where practical, the NWB encourages the use of a waste management strategy that focuses on waste segregation and is designed to reduce, re-use and recycle in order to control the volumes of waste produced, transported and/or disposed of, thereby limiting the activities' affect on surrounding water bodies and resulting water quality.

In reporting of the activities, the Licensee shall provide in the annual report, the location of the designated burn pits identified on appropriately scaled map(s) and inclusion of photographs, a description/inventory and summary of materials disposed of during the activity, along with an update of the required revisions made where necessary to plans, in the form of an addendum to the plan(s) where required for the Site Water Management Plan, Abandonment and Restoration Plan, Spill Contingency Plan and O&M Manuals currently on file with the NWB.

Should you have any further questions, please feel free to contact the undersigned at (780) 443-4406, at your earliest convenience, or the Manager of Licensing at licensing@nunavutwaterboard.org .

Yours truly,

Original signed by:

David Hohnstein, C.E.T.
Director Technical Services

Cc: Qikiqtani Distribution list

APPENDIX E.2 – STANDARD OPERATING PROCEDURE – OPEN BURNING OF UNTREATED WOOD WASTE

BAFFINLAND IRON MINES STANDARD OPERATING PROCEDURE			
Procedure Name:	Open Burning of Untreated Wood Waste		
Procedure No:			
Revision:	0	**Date Revision Effective:**	June 2, 2010
Date Reviewed:			

1. PURPOSE AND SCOPE

The purpose of this procedure is to provide a set of operational requirements for the safe controlled burning of untreated clean wood waste in an environmentally-acceptable manner at the Mary River Project. The open burning of untreated wood waste is one of a number of elements of the Mary River source segregation and waste management program.

2. RESPONSIBILITIES

The following roles have specific accountabilities that must be met to ensure the Mary River clean wood waste open burn pit is operated in compliance with this procedure and its permit. The following roles and responsibilities shall be followed to safely and successfully operate the burn pit.

1. Mary River/Milne Inlet Camp Manager

The Mary River/Milne Inlet Camp Manager is accountable for the overall operation of the open burn pit. Specifically, he/she is shall:

a. Organize, oversee and administer the operation of the burn pit in accordance with current permits, regulations and this procedures,
b. Evaluate the burn permit requirements and issue the wood waste open burn permit
c. The camp manager may also be required to complete the accountabilities in the absence of the site services supervisor

2. Mary River/Milne Site Services Supervisor

The Site Services Supervisor, under the general supervision of the Mary River/Milne Inlet camp manager, is responsible for supervising the operation of the open burn pit in accordance with this procedure. Specifically, the Site Services Supervisor shall:

a. Supervise the burn pit operator in the safe execution of this procedure.
b. Inspect the burn pit residual ash to ensure it contains no hot embers prior to transport to the landfill.
c. Perform all the duties of the burn pit Operator in his absence.

3. Burn Pit Operator

The burn pit operator, under the general supervision of Site Services Supervisor, is responsible for executing the following tasks at the Burn pit. Specifically the Operator/Labourer shall:

a. Obtain a waste wood open burn permit prior to conducting the burn
b. Work in conjunction with the Site Services Supervisor in executing this procedure
c. Conduct the burn in compliance with this procedure
d. Complete daily report forms as required, know how to respond appropriately to all emergencies described in this procedure,

3. DEFINITIONS

Open Burning: Burning of any material or substance in the ambient air, other than a properly designed furnace, such as an incinerator or equipment connected to a stack or chimney.

Permit: shall mean any paper or electronic form to document the approval of open burning at one of the two approved open burn sites.

Clean Untreated Wood Waste: Clean untreated wood waste includes wood or timber not suitable for recycling or reuse that is free of glue, petroleum based materials, other chemicals or contains other non-wood products

4. PROCEDURE

Preparation

Hazards

There are numerous specific hazards associated with the management of the open burn pit. They include:

- Punctures or slivers from handling broken wood or wood containing nails & screws
- Smoke inhalation from working in the smoke plume of the fire
- Burns from direct contact with the flames or indirect burns from clothing coming in to contact with flames
- Burns from handling embers (un-combusted wood) in the ash

PPE Requirements

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- Wear Standard P.P.E. - Safety glasses; hard hat with reflective tape; safety boots; reflective vest, clothing in good condition; glove/mitts in good condition; hearing protection if required

- Do not wear loose flammable clothing such as an unbuttoned work shirt when working around the burn pit

Safety Equipment Requirements

- Heavy equipment will be used to stockpile the clean wood in the burn pit
- A spade or shovel shall be used to turn over & inspect the residual ash.

5. SOURCE SEGREGATION AND WASTE MANAGEMENT PROGRAMS

It is Baffinland's policy to minimize material & packaging purchased and shipped to the Mary River Project, to reduce the amount of waste produced at site, to reuse and recycle whatever waste can be and maximize diversion from the landfill.

The Mary River source separation program consists of a series of ongoing activities to separate reusable and recyclable waste materials from other wastes at the point of generation. The purpose of the source separation program is to separate the waste into its material categories as well as from other wastes so that the wastes that can be reused or recycled, are diverted from the landfill.

The execution of the source segregation program at the Mary River Project serves to:

1. Ensure hazardous material is segregated, packaged and shipped to licensed facilities in the South.
2. Promote the diversion of waste away from the Mary River non-hazardous solid waste landfill
3. Direct domestic kitchen, office and camp waste to incinerators
4. Reduce, reuse and recycle wood products to reduce the volume of material required to be purchased and shipped to site
5. Open burn non-reusable/non-recyclable clean wood waste to divert waste from the non-hazardous solid waste landfill

6. CLEAN WOOD OPEN BURN PIT OPERATIONS

The clean wood open burn pit (burn pit) will be operated as follows:

1. <u>Open Burn Pit Location and Access Control</u>

   There are only two approved open burn pit locations at the Mary River Project. Both sites are signed and as identified at the following locations:

   Mary River: Designated area at the Mary River Borrow Area
   Milne Inlet: Designated area at Milne Inlet

Access Control

- Each load of clean untreated wood destined for the burn pit will be inspected by the site services supervisor or his designate to ensure only untreated wood is deposited in the pit.
- The burn pit operator will monitor the progress of the burn and limit access to the pit.

2. Acceptable Clean Wood Waste

Acceptable clean wood waste permitted for open burning includes the following products that are not suitable for re-use or recycling:

- Lumber
- Timber
- Pallets
- Paper products & paperboard packaging

Non-clean wood wastes are not permitted for open burning; this includes the following wood products:

- Treated or painted wood
- Plywood
- Petroleum-based materials
- Materials contaminated with petroleum or petroleum derivatives
- Petroleum products used as accelerants
- Plastics, electrical wire, Styrofoam or asbestos,

3. Open Burn Permit

Prior to ignition of the wood pile the burn pit operator shall obtain a clean wood waste open burn permit from the designated camp manager.

No burn shall occur without a permit having been issued

4. Weather Conditions

Mild to moderate winds provide for the best smoke dispersal. Extreme winds create a potential uncontrollable fire condition. No permit shall be issued or the burn stopped if the wind exceeds 20 knots (37 km/hr)

A permit shall not be issued or the burn shall be stopped if the burn has the potential

a. To create a condition in which a fire hazard is created or a condition in which the open burning can cause a fire to spread beyond its initial area
b. Causes air pollution that creates a health hazard, a public nuisance or directly impacts wildlife

To ensure a “hot burn” is maintained to create an efficient burn, a permit shall only be issued during dry conditions (i.e. Not during wet, rain conditions).

5. Open Burn Supervision

The designated camp manager is accountable for completing, approving and issuing the open burn permit and ensuring the conditions as required by this procedure are completely met.

6. Burning Guidelines

a. The wood will be kept as dry as possible before burning
b. The burn pits are constructed and maintained so that any material & all the ash are contained during the burn process. Burn pits shall be constructed approximately 8 meter in diameter.
c. The primary goal in operating the open burn pit is to maintain a “hot burn” to create an efficient burn. To that end, the burn pit shall be managed as follows:
    i. The size of the burn pile will be minimized within the burn pit using consistent/constant feed rates to avoid over feeding and damping the fire
    ii. A “hot burn” will be maintained to create an efficient burn using consistent/constant feed rates to avoid over-feeding and damping the fire.
    iii. Construct piles loosely, with spaces to allow adequate oxygen to reach the burning material. Create a “heart” of fine, flammable paper or fine wood waste and light it down low on the side the wind is coming from
    iv. Construct piles intelligently, in a dome or teepee shape that allows heat to build so that flames can be maintained and the wood can be consumed rapidly. Flat, sprawling piles rarely burn well.
    v. Make sure your pile is clean; the archenemy of a good burn pile is dirt
    vi. The burn pit operator shall stay with the pile to make sure it burns hot and clean

7. Ignition

The only authorized methods for igniting the wood waste in the open burn pit are:

a. Propane burners provide a safe ignition. All propane bottles are to be stored in the vehicle when not immediately being used for ignition and are to be disposed of in an authorized recycling container for pressurized or hazardous material.
b. Paper and matches can be used as a safe method of ignition.

No fuel or other petroleum based product or other chemical is permitted as an accelerant

8. Extinguishing Requirements

Open burn fires will be extinguished under the following conditions:

a. When any conditions as required by this procedure is not met
b. To ensure smoldering of material does not persist upon completion of the open burn.

Appropriate quantities of water or heavy equipment access to fill will be available for extinguishing open burn fires when required.

9. Disposal of Open Burn Ash

All residual waste and ash will be collected and disposed of in the Mary River approved non-hazardous material solid waste landfill. The following conditions must be met prior loading and transport of the ash to the landfill:

a. Upon completion of the open burn and subsequent extinguishing, ash will be allowed to cool for 48 hours.
b. The camp manager or site services supervisor shall stir up and inspect the ash to confirm there are no remaining hot embers.
c. Fill shall be mixed with the ash in the burn pit to confirm the ash is extinguished and to prevent loss of ash during transport to the landfill. The fill/ash blend will be used as a primary cover for the landfill.

7. DOCUMENT CHANGE SHEET

Record any replacement, addition or cancellation of sections of this Operating Procedure, or the entire procedure, in the table below

Date	Nature of Change	Page Inserted, Replaced, Revised or Cancelled	Author

APPENDIX E.3 – LETTER OF NOTIFICATION – OILY STORM WATER TREATMENT – MILNE INLET

June 18, 2010 Transmitted via e-mail.

Bryan Rayner
Water Resource Officer
Indian & Northern Affairs Canada NRO
PO Box 100, Iqaluit, NU X0A 0H0

Dear Mr. Rayner:

RE: Summer 2010 Oily Storm Water Treatment Strategy for Milne Bulk Fuel Storage Facility, Baffinland Iron Mines Corporation (BIM) – Mary River Project

The attached documents developed by AMEC Earth and Enviromental (AMEC) provide the design basis overview for the upgrades to the oily water treatment system for the Milne Inlet bulk fuel storage facility.

The treatment process utilized in 2008 and 2009 involved oil water separation and treatment using adsorbent clay and granular activated carbon media. As you are aware, during 2009, the existing treatment system was overloaded by the degree of contamination in the stormwater, inefficient oil water separation and insufficient media capacity.

In response to this situation, AMEC was retained late last year to study and improve the existing system so that that it would provide sufficient pretreatment upstream of the treatment system. The overall goal was to improve the pre-treatment aspect of the system so that the final treated effluent would be suitable for direct discharge to the environment. The enhanced treatment system incorporates two additional pretreatment steps after the oil water separation step, and prior to the contact media step. The new steps include dissolved air floatation (DAF) and filtration utilizing fine-pore membranes (nanofiltraiton). The DAF and nanofiltration steps are physical in nature and do not involve the addition of any chemical reagents.

The enhanced system for 2010 consists of portable components and does not include any permanent infrastructure. A small temporary lined area has been constructed to ensure that any overflow from the process ends up back in the contained area of the facility. This liner and other components can be removed at the conclusion of the program.

To treat the large volume of oily water contained in the facility (estimated 3.5 million litres), a direct discharge configuration to Milne Inlet is necessary. A robust field and laboratory monitoring and sampling system will be implemented that will provide early warning of a potential upset condition that could lead to an environmental non-compliance. Two field screening processes (field infrared (IR) instrument and chemical oxygen demand (COD)) have been established and tested in the laboratory, determined to be effective, and will therefore be utilized for ongoing process monitoring.

In consideration of the anticipated actual flow rate (average of 60-70 L/min) and total volume to be pumped of around 3.5 million litres, a regulatory effluent discharge sampling frequency of one representative sample per 200,000 L of released effluent is proposed. The regulatory effluent discharge samples will be submitted to an external laboratory (Exova Accutest in Ottawa) for analyses of parameters as outlined in the water licence for MRY-7 including benzene, toluene, ethylbenzenes, lead, and oil & grease. QA/QC samples will be collected in accordance with our QA/QC water sampling plan.

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In addition to the above, operating process control samples will be collected and analyzed on-site utilizing our IR and COD field instrumentation system. The samples will be collected at the following locations and scheduled intervals (refer to attached PDF):

- four hours - NF effluent tank and final discharge,
- 12 hours - O/W Exit – Equalization Tank, NF feed tank, clay exit, DAF effluent),
- three days – Clay trains 1 through 4, drum 1 outlet
- weekly – GAC trains 1 through 4, drum 1 outlet

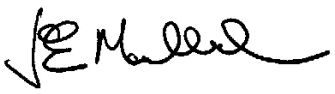
The monitoring frequency has been established based on conservative estimates of breakthrough times developed by means of bench scale testing, scale up tests, and on-site experience from 2008 and 2009. The monitoring strategy will minimize the risk of non-compliant water from being discharged. The schedule is subject to minor revision based on ongoing system process performance. The field monitoring schedule may be reduced somewhat based on consistent and acceptable process control results.

During system startup, an increased number of samples will be collected and analyzed to confirm correlation between the field and laboratory analytical results prior to starting continuous discharge. Samples would be collected every four hours for the first two or three days. Once the system has stabilized and consistently meets regulatory requirements for water licence parameters, notification would be provided, and direct discharge would commence. An AMEC EIT will be on site during the treatment program to ensure that the system is operating properly and that compliance of final effluent is met.

Start-up of the treatment system is anticipated as early as June 28. **This letter fulfills the requirement for notification of effluent discharge from the Milne bulk fuel storage facility as stated in Part D, Section 7 of our Water Licence 2BB-MRY0710.**

We trust that the information provided herewith is sufficient to support our intention to direct discharge treated stormwater effluent from the Milne bulk fuel storage area. Please do not hesitate to contact the undersigned by e-mail at jim.millard@baffinland.com should you have any questions or require any additional information.

Yours truly,
Baffinland Iron Mines Corporation



James Millard, M.Sc., P.Geo.
Senior Environmental Superintendent

Attach: Design Basis Overview of oily water treatment system, by AMEC, dated May 2010.
Process Flow Diagram for oily water treatment system by AMEC, dated May 2010.

cc: Richard Dwyer, NWB
Stephen Bathory, QIA

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TITLE:	DESIGN BASIS - OVERVIEW	DOC. NO.:	PJM-FOR-000003	REV.	0

PROJECT NAME:	Baffinland Oily Water 2010	PROJECT NO.:	TR1643
CLIENT:	Baffinland Iron Mines	AREA NO.:	Milne Inlet

DESIGN BASIS

1.0 INTRODUCTION

This document summarizes the design basis for the upgrades to the oily water treatment system at Baffinland Iron Mines Milne Inlet facility.

2.0 OBJECTIVES OF THE PROJECT DESIGN BASIS

This project design basis describes the criteria by which the oily water treatment system will be designed and constructed, including:

- Process description
- Necessary basic material and chemical data
- Necessary environmental and site conditions to be met
- Major unit operations
- System infrastructure
- Operational Philosophy

3.0 PROJECT DESCRIPTION

Milne Inlet has a fuel dump for Jet A aviation fuel and P50 diesel fuel which are stored in flexible polymeric bladders. The bladders are arranged inside an earthen bermed area with a synthetic liner. The bermed area has collected seasonal stormwater and meltwater.

This stormwater is contaminated with some small amount of spilled fuels, and minor seepage from the bladders themselves. The contaminated stormwater must be treated prior to discharge to the natural environment.

In previous years, the existing treatment system was overloaded by the degree of contamination in the stormwater. This project is to provide sufficient pretreatment upstream of the existing treatment system so that the final treated water is suitable for discharge to the environment.

4.0 PROJECT OBJECTIVES

The successful design will satisfy the following requirements

- Total treatable volume 3,500,000 L
- Design flow of 30 USGPM / 114 L/min with 75% actual capacity
- 24/7 operation with 75% uptime
- Treated water must satisfy the following criteria:

Parameter	units	Regulatory Limit	Design Influent Concentration
Benzene	**ug/L**	**370**	Influent below regulatory limit
Toluene	**ug/L**	**2**	15 to 225
Ethylbenzene	**ug/L**	**90**	10 to 160
Lead	**ug/L**	**1**	influent not tested
Oil & Grease	**mg/L**	**15**	200

5.0 PROCESS DESCRIPTION

The treatment process will consist of the following general unit operations:

- Oil/Water Separator
- Dissolved Air Flotation
- Nano-filtration
- Clay adsorption
- Granular activated carbon adsorption

The overall treatment process is shown in the attached drawing, *PFD-01 Process Flow Diagram, Oily Water System*, and briefly described in the following sections.

Oil/Water Separator

Feed water will be from one of two sources: a) remaining untreated water from the 2009 season which is contained in bladders, and b) 2010 melt water from the berm area.

Feed water will be pumped to an oil/water separator to effect the first separation of the hydrocarbon and water phases. The separator will operate under gravity with a manual overflow weir. Any free-floating will accumulate at the top of the separator tank and removed to a small tank. The decanted fuel will be pumped from the intermediate tank to a storage bladder. The water phase will flow under baffles to a small tank before being pumped to the dissolved air flotation (DAF) system.

Dissolved Air Flotation (DAF)

The existing DAF at the Mary River site, that was used for PWSP polishing during the 2009 season will be redeployed to Milne Inlet to further affect free oil and grease removal from the contaminated stormwater. At Mary River, the DAF performance was improved through the use of aluminum sulphate (“alum”) as a coagulant and a polymer flocculant. The use of chemical coagulants and flocculants at Milne Inlet is not expected, although the system will have provision for chemical addition if needed.

The skimmed DAF float sludge will consist of a low-density, oil-rich foam phase that will be manually skimmed off the DAF surface to a small holding tank. The accumulated float material will be pumped to a storage bladder.

The DAF treated water will flow by gravity to the nano-filtration (NF) feed tank.

Nanofiltration (NF) Treatment

Three modular nano-filtration skids are being provided to removed emulsified oil and grease from the DAF treated water. These NF units are being provided by Techsolutions Environnement of Québec. The NF treatment is achieved through the use of a fine-pore membrane filtration process within each NF skid.

The NF units are fed at a high flow rate of approximately 40 usgpm each, producing a treated permeate of 10 usgpm each. The remaining 30 usgpm from each unit is returned to the NF feed tank. This recirculation causes the concentration of oil and grease in the NF feed tank to increase, and this tank must be constantly blown-down to avoid over-concentrating the oil and grease in the feed tank and risk compromising the membranes. This controlled blow-down is achieved using a "reject" pump and flowmeter.

The NF reject is pumped to a small tank before being pumped to a storage bladder.

The NF treated permeate water is discharged to the NF Effluent Tank. The tank's principal function is to act as a break tank prior to the adsorption treatment train, which are fed by a submersible pump in the tank.

Adsorbent Clay Media Bank

The existing adsorbent clay hydrocarbon treatment system will be upgraded and expanded to accommodate the volume of stormwater to be treated during the 2010 operating season. The option exists to utilize a combination of Organite and PM100 clay media. The clay media is effective at adsorbing heavy hydrocarbons such as oils and greases.

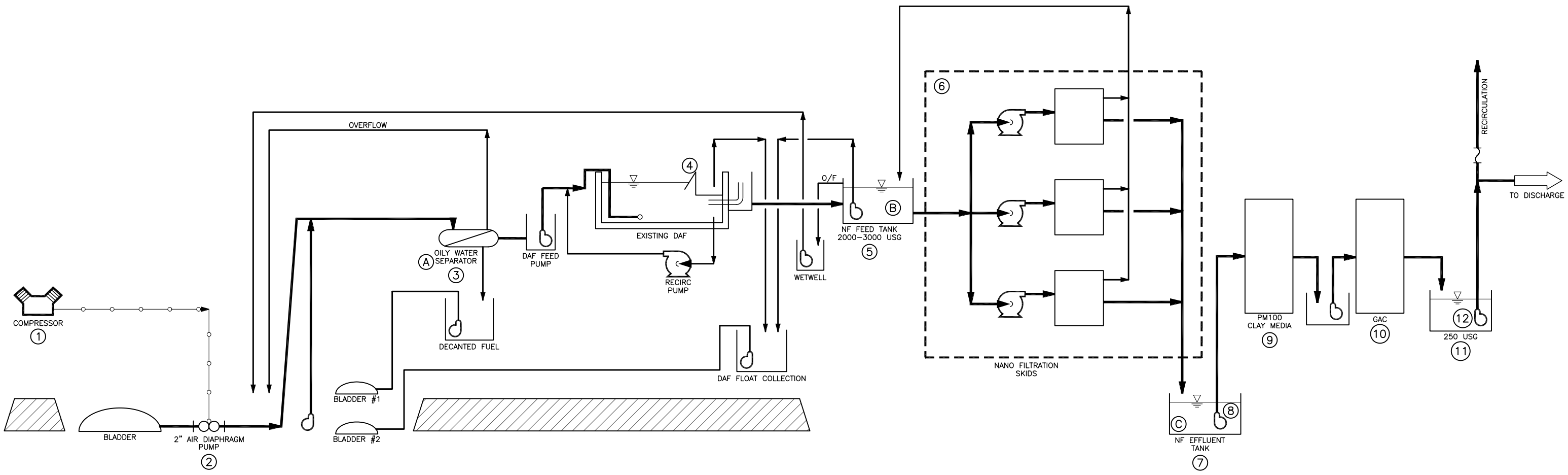
Granular Activated Carbon (GAC) Media Bank

The existing granular activated carbon (GAC) adsorption system will be upgraded and expanded to accommodate the volume of stormwater to be treated during the 2010 operating season. The GAC media is effective at adsorbing light hydrocarbons such as benzene and toluene.

Final Effluent Tank

The discharge from the GAC treatment will be directed to a final effluent tank prior to being pumped to the discharge point near Milne Inlet. This will be the sampling point for compliance purposes.

NUMBER	DESCRIPTION	FLOW (USGPM)		TEMP. (°C)		PRESS (PSI)		POWER (VOLTS)	POWER (AMPS)	COMMENTS
		MIN	MAX	MIN	MAX	MIN	MAX			
1	COMPRESSOR			0	20		125	115	15	
2	AIR DIAPHRAGM PUMP	20	40	0	20		20			
3	DAF FEED/EQ TANK	18	36	0	20		10			
4	DAF SUMP PUMP	5	10	0	20		10	115	15	
5	NF FEED TANK			0	20					
6	NANO FILTRATION SKIDS	90	120	0	20		200	600	20	
7	NF EFFLUENT TANK			0	20					
8	NF EFFLUENT SUMP PUMP	20	30	0	20		10	115	15	
9	PM100 CLAY MEDIA	20	30	0	20		5			
10	GAC	20	30	0	20		5			
11	250 USG TANK			0	20					
12	250 USG SUMP PUMP	20	30	0	20		10	115	15	



CAUTION: THIS PLAN MAY BE REDUCED 0 25mm 50mm ORIGINAL SCALE

NO.	REVISION	DATE	APRVD
2	ISSUED TO CLIENT	MAY 14/10	LD
0	PRELIMINARY	APR 30/10	JM

DRAWN	JR	MAY 2010
DESIGNED	JM	MAY 2010
CHECKED	LD	MAY 2010
REVIEWED	DE	MAY 2010

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PROCESS FLOW DIAGRAM

OILY WATER SYSTEM

BAFFINLAND IRON MINES 2010

DATE:	MAY 2010
SCALE:	N.T.S.
SHEET:	1 OF 1 SHEETS
PROJ No: TR1643	PFD–01

Filepath: I:\Peth\Geomatrix\2010\102371-D Baffinland Iron Mines (TR1643)\TR1640-PFDs.dwg
Plot Time: May 14, 2010 - 2:08pm, Plotted By: Dell Survey2

APPENDIX E.4 – GEOCHEMICAL EVALUATION OF TOTE ROAD AGGREGATE MATERIALS

TECHNICAL MEMORANDUM

To	**Greg Wortman, AMEC** **Doron Golan, AMEC**	Project No. File No.	**TC101510** **017**
From	**Catherine Daniels, AMEC** **Steve Walker, AMEC**	cc	**Brian Lapos – AMEC** **Stephan Theben - AMEC** **Steve Sibbick – AMEC**
Tel	**905-568-2929 x 4104**		
Email	steve.walker@amec.com		
Date	**December 10, 2010**		

Subject **Baffinland Mary River Project – Trucking Feasibility Study**
Interim ML/ARD Assessment of Tote Road Quarry and Borrow Pit Samples
Rev1 – Issued for DEIS

1.0 INTRODUCTION

AMEC was retained by Baffinland Iron Mines Corporation (Baffinland) to conduct environmental studies in support of an environmental impact assessment (EIA). As part of the supporting environmental studies, AMEC assessed the metal leaching and acid rock drainage (ML/ARD) characteristics of rock samples to support future borrow pit and quarry development along the proposed Milne Inlet Tote Road alignment upgrade.

Drill core and unconsolidated surficial materials were collected from potential quarry and borrow pit locations along the Tote Road alignment during a geotechnical investigation aggregate sourcing program. AMEC submitted selected samples to SGS Mineral Services (SGS) of Lakefield for geochemical analyses on the potential quarry and borrow pit materials. This memo reports on a screening level ML/ARD assessment of these materials.

2.0 SITE DESCRIPTION

The Mary River Project is located in the northern region of Baffin Island in Nunavut territory, Canada. This area experiences a mean annual temperature of approximately -12^{o}C and monthly averages below -20^{o}C from December to March. Above freezing temperatures occur only from June to August, with an average high of 4.4^{o}C in July.

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Canada's Top 100 Employers 2011

The existing all-season Milne Inlet Tote Road (Tote Road) is currently undergoing design for the purpose of upgrades for the transportation of ore from the mine site to Milne Inlet. The road was originally established in the 1960's and runs approximately 107 km from the Mary River exploration camp to Milne Inlet.

The majority of the Tote Road alignment follows the valley of Phillips Creek which is bounded by steep ridges located on either side of the road corridor.

Regional geologic mapping is available for the entire route of the Tote Road (Scott and de Kemp, 1998). Approximately the first 20 km of the Tote Road from Milne Inlet passes through Precambrian terrane. The middle 73 km of the road travels across relatively flat lying Paleozoic rocks and the final 14 km of the road to the Mary River site again passes through Precambrian terrane near the boundary with the Paleozoic units.

Paleozoic rocks along the route include the Cambrian-Ordovician age Gallery and Turner Cliffs Formations, the Ordovician age Ship Point Formation, and the Ordovician Sillurian age Baillarge Formation. The Gallery Formation is ~340 m thick medium to coarse grained quartzose sandstone with minor siltstone, conglomerate and shale, and rare breccia, dolomitic sandstone and dolostone. The Turner Cliffs Formation is an approximately 310 m thick shaly to pure dolostone unit with intra-beds of dolomitic clastic sedimentary rocks. The Ship Point Formation is a 50 to 275 m thick finely crystalline dolostone that is commonly silty or sandy and interbedded with clastic dolomitic rocks. The formation is resistate and forms prominent cliffs in the area. The Baillarge Formation is an ~490 m thick unit of fine-grained limestones interbedded with minor dolostone, breccia, conglomerate, sandstone and cherty beds, and is often fossiliferous.

The Precambrian rocks are interpreted to be Archean age migmatitic gneisses in the region between Milne Inlet and the Paleozoic rocks and again between the Paleozoic sediments and the Mary River site. The migmatitic gneisses are heterogeneous commonly with inclusions and bands of mafic, metasedimentary and other granitic rocks. Archean Mary River Group rocks are present in close proximity to the migmatites along the route near the Mary River site. Mary River Group rocks consist mainly of siliciclastic sedimentary and mafic volcanic rocks. The Mary River Group hosts the Algoman-type iron formation deposits at the site.

3.0 METHODS

3.1 Sampling

During the autumn of 2010, AMEC conducted a geotechnical investigation of proposed quarry and borrow pit locations along the Tote Road alignment. The investigation included the collection of drill core from the quarry locations and the collection of unconsolidated material from borrow pit locations. .

3.2 Sample Selection for Testing

The objective in sample selection for ML/ARD characterization was to collect a set of samples for analysis which are representative of the geochemical variation of the different soil and rock types that will be used as quarry and borrow material for the Tote Road upgrade . Samples were selected from drill core and from the collected borrow pit material.

Intervals for rock sample selection were identified by AMEC after reviewing available drill logs, photographs and following direct inspection of the core. The strategy for sample selection and collection was based upon the guidance found within the document *Prediction Manual for Drainage Chemistry from Sulphidic Geologic Materials* (MEND 2009). Borehole locations and observed rock types are tabulated below.

Regional Mapped Geology and Borehole Rock Type

Regional Mapped Geology*	Borehole Number	Approximate Tote Road Chainage	Rock Type
Archean Migmatitic Gneiss	BH-10-04	2+100	Granitic Gneiss
	BH-10-05	3+100	Granitic Gneiss
	BH-10-06	4+100	Granitic Gneiss
	BH-10-07	5+000	Granitic Gneiss
	BH-10-08	6+000	Granitic Gneiss
	BH-10-09	7+000	Granitic Gneiss
	BH-10-12	22+000	Granitic Gneiss
Cambrian-Ordovician Gallery or Turner Cliffs Formation	BH-10-13	39+100	Carbonate bound quartz sandstone with silty interlayers
	BH-10-14	45+200	Sandy carbonate
	BH-10-15	50+000	Carbonate with minor shale and mudstone
	BH-10-16	61+500	Carbonate
Archean Migmatitic Gneiss	BH-10-21	85+000	Schist with pegmatite veining

* Scott and de Kemp, 1998

The drill core and material from 14 of the 15 borrow pits were shipped from the site to AMEC offices in Hamilton Ontario where the samples were split for ML/ARD analyses and aggregate testing. For the purposes of ML/ARD characterization, three sections of 1 m lengths of drill core

were selected from each of the 12 boreholes. The 1 m lengths of core were split in half with half retained and half submitted for geochemical analysis.

Borrow pit material was crushed and screened to <20 mm. The unconsolidated material from the borrow pits was then split such that approximately two kilograms of each sample was sent for geochemical analyses. The remainder of the borrow pit material and the remainder of quarry material will be used for aggregate source material testing presently underway.

The drill core samples selected represented 21 samples of gneiss and three samples of schist from the Precambrian units, and 12 samples of clastic and carbonate sedimentary rocks from the Paleozoic units. The borrow pit materials were typically sand or silty sand with varying quantities of gravel cobbles and boulders. Some had finer grained material as well as occasional small boulders. Cobbles and boulders in the samples generally consisted of carbonate or gneiss.

Visual inspection of the Precambrian core during the sample collection indicated the rare presence of sulphide minerals, primarily on fractured surfaces. No visible sulphide minerals were observed during inspection of the Paleozoic rock core samples at the time of sample selection. However, there was some iron staining noted in some samples.

3.3 Testing Methods

Split samples were shipped to SGS Lakefield for analysis. Testing methodologies followed those described in MEND (2009).

Analytical tests conducted included:

- Acid base accounting (ABA), including paste pH, modified Sobek neutralization potential (NP), total sulphur, sulphate sulphur, sulphide sulphur by difference, total carbon (TC) and total inorganic carbon (TIC);
- Total metals analysis by aqua regia digestion with ICP-MS finish;
- Leachable metals by shake flask extraction (SFE); and
- Mineralogy by X-ray diffraction (XRD) with Rietveld refinement.

Each sample was analysed for ABA and total metals. Testing by SFE and XRD were performed on a subset of samples, selected from the initial sample set. Considering project time-lines, the subset was selected prior to completion of the ABA and metals analyses. The subset was selected to best represent the entire sample set using the data available at the time.

4.0 GEOCHEMICAL TESTING RESULTS

4.1 Acid Base Accounting (ABA)

Results of ABA testing are summarized in Figures 1 and 2, with complete results presented in Table 1. A statistical summary of the results presented in Table 2. Results for rock samples are subdivided by lithology.

Figure 1 shows the relationship between modified Sobek NP and carbonate NP (CaNP) and indicates that carbonate minerals are the main source of NP in the sedimentary rocks and unconsolidated borrow pit materials. Non-carbonate minerals appear to be the primary source of NP for the schist and gneiss samples (Figure 1).

For the purposes of this screening level assessment, the calculated acid potential of the samples has been conservatively based on the total sulphur content, and is referred to as the maximum potential acidity (MPA) (Figure 2).

Overall findings of the results are summarized as follows:

- Paste pH of all samples were weakly alkaline. Carbonate rocks had a median paste pH of 8.3), whereas the schist and gneiss samples had the higher paste pH with a median of 9.8). Borrow pit materials reported a median paste pH of 8.9.
- Sulphide content of all samples was very low with the maximum concentrations ranging from 0.04% in carbonate sedimentary rocks to 0.02% in schist and 0.01% in gneiss and unconsolidated borrow pit materials.
- All samples had neutralization potential ratios (NPR) well in excess of 2 based on the more conservative MPA (Figure 2). These materials are considered non potentially acid generating (non-PAG).
- Gneiss and schist samples exhibited low NP values (median 8 and 10 kg $CaCO_3$/t respectively).
- Carbonate rich sedimentary rocks exhibited high NP (median carbonate NP of 890 kg $CaCO_3$/t).
- Unconsolidated materials had a generally high NP with most samples reporting >100 kg $CaCO_3$/t (median CaNP of 218 kg $CaCO_3$/t). However, the lowest NP of the sample set (5 kg $CaCO_3$/t) was from an unconsolidated borrow pit sample.

4.2 Metals Analyses

4.2.1 Total Metals

In order to identify metals of potential environmental significance, total metals results were compared to average continental crustal abundances (Price 1997). For screening purposes the concentration of an element was considered enriched if concentrations were greater than ten times the average crustal abundance. Metal results are presented in Table 3 and a statistical summary is provided in Table 4. It should be noted that the total concentration of an element does not determine the metal leaching potential of that element.

In general, the quarry and borrow pit samples demonstrated no notable elevation of elements relative to the average composition of the continental crust. However, the MDL values for bismuth and selenium were greater than ten times the average continental crust values. Therefore, any detectable values for bismuth or selenium were above ten times the average continental concentration.

4.2.2 Shake Flask Extraction Test

Eleven samples representing the three different rock types and four samples of unconsolidated borrow material underwent Shake Flask Extraction (SFE) testing. The SFE testing (Table 5) were compared to Metal Mining Effluent Regulation values (MMER, 2002). More stringent guideline values are also provided for reference purposes only. Guidelines for the protection of aquatic life and the drinking water guidelines (CWQG-PAL and CDWG guidelines in Table 5), which are focused on the preservation of water quality in the receiving waterbody for specific receptors (i.e., aquatic life, drinking water) are conservative since these values represent concentrations at point of use or exposure, not point of discharge. These guidelines are useful to identify parameters of interest when evaluating final discharge to receiving waters.

Results of SFE analyses (Table 5) for all samples, had a final pH that was neutral to alkaline with generally low concentrations of metals and no exceedances of MMER limits. The pH in SFE leachates for a number of these samples exceeded the MMER limit of 9.5. This is not unexpected for freshly exposed rock materials under agitation and at the high solid-solution ratios of the test. The high pH (and corresponding elevated aluminum concentrations) were likely related to the weak alkalinity associated with aluminosilicate mineral dissolution. It is unlikely the elevated pH (and associated aluminum) will be observed under field conditions. A single borrow material sample had an elevated copper concentration in comparison to the rest of the sample set. However, the concentration was an order of magnitude lower than the MMER limit.

4.3 Mineralogy

Rietveld XRD analysis was completed on 15 selected quarry and unconsolidated borrow pit samples. Results are presented in Table 6. The Rietveld method is effective at identifying crystalline phases present in abundance greater than a few weight percent. Lower abundances can be quantified where favourable scattering properties exist.

There were no acid producing sulphide minerals identified by XRD in the quarry or borrow pit samples, which is consistent with the low AP of all samples analysed. There were carbonate minerals identified in most of the samples.

Calcite was identified at low weight percent to trace values (<1.2%) in all but one of the granitic gneiss samples. Trace amounts of dolomite and rhodocrosite were also identified in a single granitic gneiss sample along with similarly low calcite. No carbonates were identified in one granitic gneiss sample and the single schist sample analysed.

Calcite was the dominant mineral (>98 wt.%) identified in the three carbonate samples. Trace dolomite and ankerite were also identified in these samples. In the carbonate cemented sandstone, dolomite (approximately 26%) was the only carbonate mineral identified.

Calcite, dolomite and ankerite were identified in most of the borrow material samples. Rhodocrosite was also identified in one sample. In the fourth sample the only carbonate mineral identified was calcite at very low weight percent (0.2%).

Calcite and dolomite have effective acid neutralizing properties, while the neutralizing ability of iron and manganese bearing carbonate minerals such as ankerite and rhodocrosite is uncertain. Dissolution rates of these minerals may be slower and under oxidizing conditions, hydrolysis of the iron and manganese released leads to no net neutralization. However, for this sample set the iron and manganese carbonates, when present, are always in low abundance compared to calcite and dolomite. Therefore, the presence of these minerals in this case will have only a minor influence on the neutralization potential of the materials.

5.0 CONCLUSIONS

Lithologically-based ML/ARD assessments have been completed on selected quarry and borrow materials along the Tote Road. Based on the results of this assessment, the following conclusions are made:

- The materials investigated in the proposed quarries and borrow pits along the Tote Road route appear to have a low potential for ML/ARD and are expected to be suitable as quarry or borrow sources. However, individual quarry and borrow sites should be

subjected to additional site specific ML/ARD characterization with consideration given for additional assessment depending upon the tonnages to be used and anticipated geological variability.

- The relatively low NP in the Precambrian rocks suggests that the presence of low contents of sulphide could potentially result in ML/ARD conditions. Diligence through adequate levels of sampling and monitoring during extraction operations will be necessary to ensure that the low concentrations of sulphide observed in this study are confirmed elsewhere.
- Paleozoic sedimentary rocks selected as potential quarry sources in this study are all carbonate rich and pose no ML/ARD risk. However, other non-carbonate sedimentary rocks are present in the region, so caution should be exercised should other quarry locations in the Paleozoic region be selected.
- Rietveld XRD results are consistent with ABA data for the rock-types analysed. Calcite or dolomite is confirmed to be in abundance in all carbonate rich samples and low to trace carbonate minerals are present in the granitic gneiss samples. For the gneiss samples neutralization from silicate minerals present in greater abundance than the carbonates is inferred.
- Borrow materials tested have high NPR values and pose no apparent ML/ARD risk.
- Carbonate as calcite and dolomite appear to be common components in most borrow materials tested; however, one sample was identified that was carbonate poor and quartz rich, thus having very low NP and suggesting not all borrow sources will have high carbonate NP.
- Ankerite and rhodocrosite were sometimes identified in carbonate-bearing samples, suggesting a portion of the carbonate content may not contribute to neutralization under oxidizing conditions. However, these carbonate forms were always subordinate to calcite or dolomite.

6.0 FUTURE WORK

The following work is planned and proposed.

- Continued collection and analysis of material from any future drilling or excavation programs along the Tote Road alignment to the extent necessary to minimize risk of ML/ARD.

7.0 REFERENCES

Canadian Council of Ministers of the Environment. 2007, Canadian Water Quality Guidelines for the Protection of Aquatic Life.

Health Canada. 2008, Guidelines for Canadian Drinking Water Quality.

MMER. 2002. Metal Mine Effluent Regulations SOR/2002-222.

MEND 2009, Prediction Manual for Drainage Chemistry from Sulphidic Geologic Materials. Natural Resources Canada.

Price, W.A., 1997. Draft Guidelines and Recommended Methods for the Prediction of Metal Leaching and Acid Rock Drainage at Minesites in British Columbia.

Scott, D.J. and de Kemp, E.A. Bedrock geology compilation, northern Baffin Island and northern Melville Peninsula, North West Territories; Geological Survey of Canada, Open File, 3633, scale 1:500,000.

CMD/SW/SS/vc

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Attachments:
Table 1 — Acid Base Accounting Results
Table 2 — Acid Base Accounting Statistics
Table 3 — Total Metals Results
Table 4 — Total Metals Statistics
Table 5 — Shake Flask Analysis Results
Table 6 — Rietveld Quantitative Analysis X-ray Diffraction Results
Figure 1 — ABA Results - CaNP vs. NP
Figure 2 — ABA Results – NP vs. MPA

TABLES

Baffinland Iron Mines Corporation

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Table 1 Acid Base Accounting Results

Sample ID	Drill Log Lithology	Sample weight(g)	HCl added mL	HCl Normality	NaOH Normality	NaOH to pH=8.3 mL	Final pH units	Fizz Rate ---	Paste pH units
10-TR-001 BH10-04	gneiss	2.05	20.00	0.10	0.10	16.77	1.36	1	9.56
10-TR-002 BH10-04	gneiss	2.01	20.00	0.10	0.10	16.75	1.39	1	9.92
10-TR-003 BH10-04	gneiss	1.98	20.00	0.10	0.10	16.50	1.39	1	9.58
10-TR-004 BH10-05	gneiss	2.03	20.00	0.10	0.10	17.00	1.40	1	9.79
10-TR-005 BH10-05	gneiss	1.97	20.00	0.10	0.10	17.41	1.38	1	9.76
10-TR-006 BH10-05	gneiss	2.03	20.00	0.10	0.10	17.48	1.38	1	9.73
10-TR-007 BH10-06	gneiss	1.98	20.00	0.10	0.10	17.03	1.39	1	9.78
10-TR-008 BH10-06	gneiss	2.01	20.00	0.10	0.10	17.05	1.42	1	9.65
10-TR-009 BH10-06	gneiss	1.98	20.00	0.10	0.10	16.95	1.41	1	9.90
10-TR-010 BH10-07	gneiss	2.00	20.00	0.10	0.10	16.18	1.46	1	9.98
10-TR-011 BH10-07	gneiss	1.98	20.00	0.10	0.10	15.37	1.50	1	9.66
10-TR-012 BH10-07	gneiss	1.96	20.00	0.10	0.10	15.48	1.43	1	9.90
10-TR-013 BH10-08	gneiss	2.00	20.00	0.10	0.10	17.47	1.38	1	9.68
10-TR-014 BH10-08	gneiss	2.04	20.00	0.10	0.10	16.10	1.44	1	9.46
10-TR-015 BH10-08	gneiss	2.04	20.00	0.10	0.10	15.75	1.46	1	9.52
10-TR-016 BH10-09	gneiss	1.98	20.00	0.10	0.10	17.53	1.40	1	10.00
10-TR-017 BH10-09	gneiss	2.04	20.00	0.10	0.10	17.10	1.41	1	9.91
10-TR-018 BH10-09	gneiss	1.99	20.00	0.10	0.10	17.36	1.37	1	9.99
10-TR-019 BH10-12	gneiss	2.05	20.00	0.10	0.10	16.74	1.42	1	9.94
10-TR-020 BH10-12	gneiss	1.98	20.00	0.10	0.10	15.89	1.44	1	9.93
10-TR-021 BH10-12	gneiss	2.04	20.00	0.10	0.10	16.43	1.42	1	9.84
10-TR-034 BH10-21	schist	1.97	20.00	0.10	0.10	15.09	1.26	2	9.97
10-TR-035 BH10-12	schist	2.02	20.00	0.10	0.10	15.86	1.26	1	9.80
10-TR-036 BH10-12	schist	2.03	20.00	0.10	0.10	15.76	1.17	1	9.67
10-TR-022 BH10-13	sandstone	2.01	118.20	0.10	0.10	26.10	1.70	3	9.43
10-TR-023 BH10-13	sandstone	2.00	127.75	0.10	0.10	27.00	1.76	3	9.34
10-TR-024 BH10-13	sandstone	1.95	135.60	0.10	0.10	29.10	1.75	3	9.38
10-TR-025 BH10-14	sandy carbonate	2.03	589.90	0.10	0.10	200	1.51	4	8.27
10-TR-026 BH10-14	sandy carbonate	2.02	643.90	0.10	0.10	268	1.52	4	8.07
10-TR-027 BH10-14	sandy carbonate	2.00	641.20	0.10	0.10	259	1.50	4	8.22
10-TR-028 BH10-15	carbonate	1.97	685.90	0.10	0.10	301	1.50	4	8.22
10-TR-029 BH10-15	carbonate	1.96	640.00	0.10	0.10	266	1.50	4	8.38
10-TR-030 BH10-15	carbonate	1.98	490.00	0.10	0.10	116	1.71	4	8.23
10-TR-031 BH10-16	carbonate	1.99	490.00	0.10	0.10	106	1.74	4	8.23
10-TR-032 BH10-16	carbonate	1.98	474.20	0.10	0.10	93.80	1.78	4	8.27
10-TR-033 BH10-16	carbonate	1.96	470.00	0.10	0.10	96.20	1.76	4	8.26
S449-10	sand/gravel	2.00	393.20	0.10	0.10	122	1.60	4	8.75
S450-10	sand/gravel	2.01	338.10	0.10	0.10	57.00	1.85	4	8.38
S451-10	sand/gravel	1.97	131.70	0.10	0.10	38.20	1.55	4	8.55
S452-10	sand/gravel	1.97	146.40	0.10	0.10	48.00	1.59	4	8.97
S453-10	sand/gravel	1.99	135.30	0.10	0.10	29.10	1.69	4	8.87
S454-10	sand/gravel	1.95	20.00	0.10	0.10	17.94	1.11	1	8.42
S455-10	sand/gravel	1.96	26.00	0.10	0.10	11.31	1.57	1	9.51
S456-10	sand/gravel	1.97	79.10	0.10	0.10	20.21	1.75	3	8.99
S457-10	sand/gravel	2.00	83.90	0.10	0.10	15.24	1.85	3	9.07
S458-10	sand/gravel	1.97	55.40	0.10	0.10	21.25	1.58	3	9.24
S459-10	sand/gravel	2.03	154.20	0.10	0.10	28.60	1.83	4	8.86
S460-10	sand/gravel	1.96	77.40	0.10	0.10	23.81	1.65	4	8.93
S461-10	sand/gravel	1.99	97.90	0.10	0.10	21.30	1.78	3	9.14
S462-10	sand/gravel	2.01	153.10	0.10	0.10	28.40	1.82	3	8.95

Table 1 Acid Base Accounting Results (Continued)

Sample ID	Drill Log Lithology	Total Carbon	CO3	Total Sulphur	Sulphate Sulphur	Sulphide Sulphur	Neutralization Potential	Acid Potential
		%	%	%	%	%	kg $CaCO_3$/t	kg $CaCO_3$/t
10-TR-001 BH10-04	gneiss	0.059	0.103	0.014	0.01	<0.01	7.9	0.31
10-TR-002 BH10-04	gneiss	0.050	0.101	<0.005	<0.01	<0.01	8.1	0.31
10-TR-003 BH10-04	gneiss	0.064	0.137	<0.005	<0.01	<0.01	8.8	0.31
10-TR-004 BH10-05	gneiss	0.041	0.059	0.020	0.02	<0.01	7.4	0.31
10-TR-005 BH10-05	gneiss	0.032	0.033	0.015	0.01	<0.01	6.6	0.31
10-TR-006 BH10-05	gneiss	0.029	0.028	0.038	0.02	0.01	6.2	0.44
10-TR-007 BH10-06	gneiss	0.036	0.048	<0.005	<0.01	<0.01	7.5	0.31
10-TR-008 BH10-06	gneiss	0.028	0.025	0.008	<0.01	<0.01	7.3	0.31
10-TR-009 BH10-06	gneiss	0.035	0.075	0.006	<0.01	<0.01	7.7	0.31
10-TR-010 BH10-07	gneiss	0.027	0.014	0.035	0.02	0.01	9.5	0.36
10-TR-011 BH10-07	gneiss	0.038	0.027	0.036	0.04	<0.01	11.7	0.31
10-TR-012 BH10-07	gneiss	0.036	0.052	0.019	0.02	<0.01	11.5	0.31
10-TR-013 BH10-08	gneiss	0.028	0.035	<0.005	<0.01	<0.01	6.3	0.31
10-TR-014 BH10-08	gneiss	0.044	0.380	0.020	0.02	<0.01	9.6	0.31
10-TR-015 BH10-08	gneiss	0.043	0.062	0.028	0.03	<0.01	10.4	0.31
10-TR-016 BH10-09	gneiss	0.020	0.034	0.012	0.01	<0.01	6.2	0.31
10-TR-017 BH10-09	gneiss	0.070	0.048	0.012	0.01	<0.01	7.1	0.31
10-TR-018 BH10-09	gneiss	0.023	<0.005	0.038	0.04	<0.01	6.6	0.31
10-TR-019 BH10-12	gneiss	0.035	0.018	0.029	0.03	<0.01	8.0	0.31
10-TR-020 BH10-12	gneiss	0.051	0.071	0.028	0.02	0.01	10.4	0.40
10-TR-021 BH10-12	gneiss	0.046	0.065	0.006	<0.01	<0.01	8.8	0.31
10-TR-034 BH10-21	schist	0.096	0.282	0.015	0.02	<0.01	12.5	0.31
10-TR-035 BH10-12	schist	0.052	0.054	0.060	0.04	0.02	10.2	0.77
10-TR-036 BH10-12	schist	0.049	0.023	0.023	0.01	0.01	10.4	0.41
10-TR-022 BH10-13	sandstone	2.77	12.0	<0.005	<0.01	<0.01	229	0.31
10-TR-023 BH10-13	sandstone	2.98	12.5	<0.005	<0.01	<0.01	252	0.31
10-TR-024 BH10-13	sandstone	3.25	14.0	<0.005	<0.01	<0.01	273	0.31
10-TR-025 BH10-14	sandy carbonate	11.1	54.3	<0.005	<0.01	<0.01	959	0.31
10-TR-026 BH10-14	sandy carbonate	10.8	52.3	<0.005	<0.01	<0.01	930	0.31
10-TR-027 BH10-14	sandy carbonate	11.2	54.0	0.071	0.03	0.04	956	1.29
10-TR-028 BH10-15	carbonate	10.9	53.2	0.014	0.01	<0.01	978	0.31
10-TR-029 BH10-15	carbonate	10.7	51.3	0.041	0.02	0.02	953	0.77
10-TR-030 BH10-15	carbonate	10.7	51.5	0.020	<0.01	0.01	945	0.34
10-TR-031 BH10-16	carbonate	10.8	53.5	<0.005	<0.01	<0.01	965	0.31
10-TR-032 BH10-16	carbonate	10.7	52.9	<0.005	<0.01	<0.01	961	0.31
10-TR-033 BH10-16	carbonate	10.7	52.1	<0.005	<0.01	<0.01	954	0.31
S449-10	sand/gravel	7.86	33.9	0.011	0.01	<0.01	678	0.31
S450-10	sand/gravel	8.02	36.0	<0.005	<0.01	<0.01	699	0.31
S451-10	sand/gravel	2.92	11.7	<0.005	<0.01	<0.01	237	0.31
S452-10	sand/gravel	2.89	12.4	0.014	0.01	<0.01	250	0.31
S453-10	sand/gravel	3.22	13.9	<0.005	<0.01	<0.01	267	0.31
S454-10	sand/gravel	0.061	0.016	<0.005	<0.01	<0.01	5.3	0.31
S455-10	sand/gravel	0.410	0.255	<0.005	<0.01	<0.01	37.5	0.31
S456-10	sand/gravel	1.82	6.20	0.007	<0.01	<0.01	150	0.31
S457-10	sand/gravel	1.44	5.37	<0.005	<0.01	<0.01	172	0.31
S458-10	sand/gravel	1.12	4.17	0.007	<0.01	<0.01	86.7	0.31
S459-10	sand/gravel	3.87	16.2	<0.005	<0.01	<0.01	309	0.31
S460-10	sand/gravel	1.71	7.29	<0.005	<0.01	<0.01	137	0.31
S461-10	sand/gravel	2.33	10.2	0.005	<0.01	<0.01	192	0.31
S462-10	sand/gravel	3.75	16.7	0.007	<0.01	<0.01	310	0.31

Table 1 Acid Base Accounting Results (Continued)

Sample ID	Drill Log Lithology	Maximum Potential Acidity	Carbonate Neutralization Potential	Ratio NP/AP	Ratio NP/MPA	Ratio CaNP/AP	Net NP
		kg $CaCO_3$/t	kg $CaCO_3$/t	ratio	ratio	ratio	kg $CaCO_3$/t
10-TR-001 BH10-04	gneiss	0.44	4.92	25.5	18.1	15.9	7.59
10-TR-002 BH10-04	gneiss	0.16	4.17	26.1	51.8	13.4	7.79
10-TR-003 BH10-04	gneiss	0.16	5.33	28.4	56.3	17.2	8.49
10-TR-004 BH10-05	gneiss	0.63	3.42	23.9	11.8	11.0	7.09
10-TR-005 BH10-05	gneiss	0.47	2.67	21.3	14.1	8.6	6.29
10-TR-006 BH10-05	gneiss	1.19	2.42	14.2	5.2	5.5	5.76
10-TR-007 BH10-06	gneiss	0.16	3.00	24.2	48.0	9.7	7.19
10-TR-008 BH10-06	gneiss	0.25	2.33	23.5	29.2	7.5	6.99
10-TR-009 BH10-06	gneiss	0.19	2.92	24.8	41.1	9.4	7.39
10-TR-010 BH10-07	gneiss	1.09	2.25	26.2	8.7	6.3	9.14
10-TR-011 BH10-07	gneiss	1.13	3.17	37.7	10.4	10.2	11.4
10-TR-012 BH10-07	gneiss	0.59	3.00	37.1	19.4	9.7	11.2
10-TR-013 BH10-08	gneiss	0.16	2.33	20.3	40.3	7.5	5.99
10-TR-014 BH10-08	gneiss	0.63	3.67	31.0	15.4	11.8	9.29
10-TR-015 BH10-08	gneiss	0.88	3.58	33.5	11.9	11.6	10.1
10-TR-016 BH10-09	gneiss	0.38	1.67	20.0	16.5	5.4	5.89
10-TR-017 BH10-09	gneiss	0.38	5.83	22.9	18.9	18.8	6.79
10-TR-018 BH10-09	gneiss	1.19	1.92	21.3	5.6	6.2	6.29
10-TR-019 BH10-12	gneiss	0.91	2.92	25.8	8.8	9.4	7.69
10-TR-020 BH10-12	gneiss	0.88	4.25	26.0	11.9	10.6	10.0
10-TR-021 BH10-12	gneiss	0.19	3.83	28.4	46.9	12.4	8.49
10-TR-034 BH10-21	schist	0.47	8.00	40.3	26.7	25.8	12.2
10-TR-035 BH10-12	schist	1.88	4.33	13.3	5.4	5.6	9.43
10-TR-036 BH10-12	schist	0.72	4.08	25.6	14.5	10.0	9.99
10-TR-022 BH10-13	sandstone	0.16	230.85	739	1465.6	744.7	229
10-TR-023 BH10-13	sandstone	0.16	248.35	813	1612.8	801.1	252
10-TR-024 BH10-13	sandstone	0.16	270.85	881	1747.2	873.7	273
10-TR-025 BH10-14	sandy carbonate	0.16	925.06	3095	6137.6	2984.1	959
10-TR-026 BH10-14	sandy carbonate	0.16	900.06	2998	5952.0	2903.4	929
10-TR-027 BH10-14	sandy carbonate	2.22	933.40	742	430.9	723.6	955
10-TR-028 BH10-15	carbonate	0.44	908.39	3155	2235.4	2930.3	978
10-TR-029 BH10-15	carbonate	1.28	891.73	1245	743.8	1158.1	952
10-TR-030 BH10-15	carbonate	0.63	891.73	2749	1512.0	2622.7	945
10-TR-031 BH10-16	carbonate	0.16	900.06	3114	6176.0	2903.4	965
10-TR-032 BH10-16	carbonate	0.16	891.73	3099	6150.4	2876.5	960
10-TR-033 BH10-16	carbonate	0.16	891.73	3076	6105.6	2876.5	953
S449-10	sand/gravel	0.34	655.04	2185	1972.4	2113.0	677
S450-10	sand/gravel	0.16	668.38	2256	4473.6	2156.1	699
S451-10	sand/gravel	0.16	243.35	765	1516.8	785.0	237
S452-10	sand/gravel	0.44	240.85	805	571.4	776.9	249
S453-10	sand/gravel	0.16	268.35	861	1708.8	865.6	266
S454-10	sand/gravel	0.16	5.08	17.1	33.9	16.4	4.99
S455-10	sand/gravel	0.16	34.17	121	240.0	110.2	37.2
S456-10	sand/gravel	0.22	151.68	482	685.7	489.3	149
S457-10	sand/gravel	0.16	120.01	554	1100.8	387.1	171
S458-10	sand/gravel	0.22	93.34	280	396.3	301.1	86.4
S459-10	sand/gravel	0.16	322.52	998	1977.6	1040.4	309
S460-10	sand/gravel	0.16	142.51	441	876.8	459.7	136
S461-10	sand/gravel	0.16	194.18	621	1228.8	626.4	192
S462-10	sand/gravel	0.22	312.52	1001	1417.1	1008.1	310

Note:

CaNP = Carbonate neutralization potential was calculated based on total carbon content (%C)

MPA = Maximum potential acidity was calculated based on total sulphur content (%S)

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Table 2 Statistical Summary of Acid Base Accounting Results

	Paste pH	Total Carbon %	Total Sulphur %	Sulphate Sulphur %	Sulphide Sulphur %	Neutral-ization Potential kg $CaCO_3$/t	Acid Potential kg $CaCO_3$/t	CaNP kg $CaCO_3$/t	Maximum Potential Acidity kg $CaCO_3$/t	Ratio NP/AP (NPR) calculated ratio	Ratio NP/MPA calculated ratio	Ratio CaNP/AP calculated ratio
All Quarry Pit Rock (gneiss, schist, carbonate rocks)												
Min	8.1	0.02	<0.005	<0.01	<0.01	6.2	0.31	1.7	0.16	13	5.2	5.4
Max	10	11	0.071	0.04	0.04	978	1.29	933	2.2	3155	6176	2984
Mean	-	2.99	0.019	0.02	0.01	266	0.37	249	0.58	710	458	666
Median	9.7	0.1	<0.014	<0.01	<0.01	10.3	0.31	4.2	0.44	33	24	13.6
Standard Deviation	0.7	4.7	0.016	0.01	0.01	410	0.19	389	0.51	1191	2111	1130
No. of Samples	36	36	36	36	36	36	36	36	36	36	36	36
5th Percentile	8.2	0.026	0.005	0.01	0.01	6.3	0.31	2.2	0.16	19	5.5	5.6
25th Percentile	9.1	0.036	0.005	0.01	0.01	7.7	0.31	3.0	0.16	24	14	9.4
75th Percentile	9.9	5.1	0.028	0.02	0.01	437	0.31	426	0.88	830	1477	819
95th Percentile	10	11	0.046	0.04	0.02	962	0.77	913	1.43	3103	6141	2910
Gneiss												
Min	9.5	0.02	<0.005	<0.01	<0.01	6.2	0.31	1.7	0.16	14	5.2	5.4
Max	10	0.07	0.038	0.04	0.01	11.7	0.44	5.8	1.19	38	56	19
Mean	-	0.04	0.018	0.02	0.01	8.3	0.32	3.3	0.57	26	14	10
Median	9.8	0.04	0.015	<0.01	<0.01	7.9	0.31	3.0	0.47	25	17	9.7
Standard Deviation	0.17	0.01	0.012	0.01	0.00	1.7	0.03	1.1	0.38	5.6	17	3.7
No. of Samples	21	21	21	21	21	21	21	21	21	21	21	21
5th Percentile	9.5	0.02	0.005	0.01	0.01	6.2	0.31	1.9	0.16	20	5.6	5.5
25th Percentile	9.7	0.03	0.006	0.01	0.01	7.1	0.31	2.4	0.19	23	12	7.5
75th Percentile	9.9	0.05	0.028	0.02	0.01	9.5	0.31	3.8	0.88	28	40	12
95th Percentile	10	0.06	0.038	0.04	0.01	12	0.40	5.3	1.19	37	52	17
Schist												
Min	9.7	0.05	0.015	<0.01	<0.01	10	0.31	4.1	0.47	13.3	5.4	5.6
Max	10	0.10	0.060	0.04	0.02	13	0.77	8.0	1.88	40	27	26
Median	9.8	0.05	0.023	0.02	0.01	10	0.41	4.3	0.72	26	14	10
No. of Samples	3	3	3	3	3	3	3.00	3	3.00	3	3	3

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Table 2 Statistical Summary of Acid Base Accounting Results (Continued)

	Paste pH	Total Carbon %	Total Sulphur %	Sulphate Sulphur %	Sulphide Sulphur %	Neutral-ization Potential kg $CaCO_3$/t	Acid Potential kg $CaCO_3$/t	CaNP kg $CaCO_3$/t	Maximum Potential Acidity kg $CaCO_3$/t	Ratio NP/AP (NPR)	Ratio NP/MPA	Ratio CaNP/AP
										calculated ratio		
Carbonate Rocks												
Min	8.1	2.8	<0.005	<0.01	<0.01	229	0.31	231	0.16	739	431	724
Max	9.4	11	0.071	0.03	0.04	978	1.29	933	2.2	3155	6176	2984
Mean	-	8.9	0.016	0.01	0.01	780	0.43	740	0.48	1803	1609	1712
Median	8.3	11	<0.005	<0.01	<0.01	954	0.31	892	0.16	3076	6102	2877
Standard Deviation	0.5	3.6	0.021	0.01	0.01	319	0.30	296	0.64	1122	2469	1044
No. of Samples	12	12	12	12	12	12	12	12	12	12	12	12
5th Percentile	8.2	2.9	0.005	0.01	0.01	242	0.31	240	0.16	741	603	735
25th Percentile	8.2	8.8	0.005	0.01	0.01	766	0.31	737	0.16	864	1500	856
75th Percentile	8.2	11	0.005	0.01	0.01	932	0.31	892	0.16	930	1526	912
95th Percentile	9.4	11	0.055	0.02	0.03	971	1.00	929	1.70	3132	6162	2954
Unconsolidated Borrow Material												
Min	8.4	0.1	<0.005	<0.01	<0.01	5.3	0.31	5.1	0.16	17	34	16
Max	9.5	8.0	0.014	0.01	0.01	699	0.31	668	0.44	2256	4474	2156
Mean	-	3.0	0.0065	0.01	0.01	252	0.31	247	0.20	813	1241	795
Median	8.9	2.6	<0.005	<0.01	<0.01	215	0.31	218	0.16	692	1373	702
Standard Deviation	0.3	2.4	0	0	0	207	0	200	0.09	667	1105	646
No. of Samples	14	14	14	14	14	14	14	14	14	14	14	14
5th Percentile	8.4	0.3	0.005	0.01	0.01	26	0.31	24	0.16	85	168	77
25th Percentile	8.8	1.5	0.005	0.01	0.01	140	0.31	126	0.16	451	600	405
75th Percentile	8.9	2.2	0.005	0.01	0.01	185	0.31	180	0.16	598	1024	579
95th Percentile	9.3	7.9	0.012	0.01	0.01	685	0.31	660	0.38	2210	2851	2128

Note:

CaNP = Carbonate neutralization potential was calculated based on total carbon content (%C)

MPA = Maximum potential acidity was calculated based on total sulphur content (%S)

Table 3 Results of Metals Analyses

Sample ID	Drill Log Lithology	Al %	As µg/g	Ba µg/g	Be µg/g	Bi µg/g	Ca %	Cd µg/g	Co µg/g	Cr µg/g	Cu µg/g
Average Crustal Abundance		8.23	1.8	425	3	0.0085	4.15	0.15	25	102	60
10x Average Crustal Abundance		82.3	18	4250	30	0.085	41.5	1.5	250	1020	600
10-TR-001 BH10-04	gneiss	0.33	<0.5	21	0.13	<0.09	0.12	<0.02	1.2	100	18
10-TR-002 BH10-04	gneiss	0.36	<0.5	23	0.15	<0.09	0.13	<0.02	1.1	99	5.0
10-TR-003 BH10-04	gneiss	0.35	<0.5	24	0.13	<0.09	0.14	<0.02	1.1	110	8.5
10-TR-004 BH10-05	gneiss	0.41	<0.5	23	0.17	<0.09	0.11	<0.02	1.5	91	2.9
10-TR-005 BH10-05	gneiss	0.39	<0.5	27	0.15	<0.09	0.07	<0.02	1.3	110	8.1
10-TR-006 BH10-05	gneiss	0.37	<0.5	20	0.18	<0.09	0.06	<0.02	1.3	87	3.2
10-TR-007 BH10-06	gneiss	0.43	<0.5	23	0.20	<0.09	0.10	<0.02	2.0	110	5.2
10-TR-008 BH10-06	gneiss	0.50	<0.5	25	0.29	<0.09	0.10	<0.02	2.3	110	6.6
10-TR-009 BH10-06	gneiss	0.49	<0.5	39	0.19	<0.09	0.14	<0.02	2.5	94	8.4
10-TR-010 BH10-07	gneiss	0.78	<0.5	68	0.25	<0.09	0.29	<0.02	5.2	92	17
10-TR-011 BH10-07	gneiss	1.20	<0.5	110	0.40	0.09	0.36	<0.02	8.0	75	17
10-TR-012 BH10-07	gneiss	1.10	<0.5	57	0.27	0.10	0.36	<0.02	9.9	110	16
10-TR-013 BH10-08	gneiss	0.32	<0.5	23	0.16	<0.09	0.07	<0.02	1.4	110	5.3
10-TR-014 BH10-08	gneiss	0.85	<0.5	64	0.49	<0.09	0.21	<0.02	4.4	79	10
10-TR-015 BH10-08	gneiss	1.00	<0.5	78	0.48	<0.09	0.23	<0.02	5.9	78	12
10-TR-016 BH10-09	gneiss	0.43	<0.5	33	0.14	<0.09	0.09	<0.02	2.4	82	4.3
10-TR-017 BH10-09	gneiss	0.45	<0.5	33	0.17	<0.09	0.14	<0.02	2.6	100	7.2
10-TR-018 BH10-09	gneiss	0.39	<0.5	32	0.14	0.13	0.11	0.05	4.9	81	12
10-TR-019 BH10-12	gneiss	0.59	<0.5	30	0.17	<0.09	0.26	<0.02	5.7	100	28
10-TR-020 BH10-12	gneiss	0.83	<0.5	51	0.18	<0.09	0.23	<0.02	6.1	100	14
10-TR-021 BH10-12	gneiss	0.49	<0.5	24	0.15	<0.09	0.19	<0.02	2.8	100	8.8
10-TR-034 BH10-21	schist	0.74	<0.5	36	0.17	<0.09	0.30	<0.02	2.2	67	6.3
10-TR-035 BH10-12	schist	1.10	<0.5	35	0.27	0.09	0.18	0.03	3.6	69	13
10-TR-036 BH10-12	schist	1.30	1.1	37	0.41	<0.09	0.14	<0.02	3.6	70	8.0
10-TR-022 BH10-13	carbonate rocks	0.05	<0.5	5.5	0.06	<0.09	3.9	<0.02	1.3	99	5.0
10-TR-023 BH10-13	carbonate rocks	0.31	<0.5	16	0.32	<0.09	4.1	0.03	2.1	96	6.1
10-TR-024 BH10-13	carbonate rocks	0.23	<0.5	13	0.22	<0.09	4.8	0.02	1.5	82	2.0
10-TR-025 BH10-14	carbonate rocks	0.08	<0.5	3.0	0.06	<0.09	28.8	<0.02	1.6	2.2	4.0
10-TR-026 BH10-14	carbonate rocks	0.16	0.7	5.3	0.14	<0.09	28.3	0.06	2.1	3.4	3.9
10-TR-027 BH10-14	carbonate rocks	0.08	0.5	2.7	0.06	<0.09	27.0	<0.02	1.6	2.6	4.3
10-TR-028 BH10-15	carbonate rocks	0.08	0.6	3.4	0.07	<0.09	28.2	<0.02	1.7	4.1	2.2
10-TR-029 BH10-15	carbonate rocks	0.12	1.8	4.5	0.08	<0.09	26.7	<0.02	1.9	2.2	4.5
10-TR-030 BH10-15	carbonate rocks	0.13	1.2	4.2	0.08	<0.09	28.4	<0.02	2.0	2.6	5.4
10-TR-031 BH10-16	carbonate rocks	0.08	<0.5	3.2	0.06	<0.09	27.4	<0.02	1.7	2.1	2.0
10-TR-032 BH10-16	carbonate rocks	0.08	1.2	3.1	0.07	<0.09	27.3	<0.02	1.7	2.2	3.9
10-TR-033 BH10-16	carbonate rocks	0.13	1.1	3.9	0.07	<0.09	27.5	<0.02	1.9	2.6	2.4
S449-10	borrow pit material	0.26	1.7	11	0.18	<0.09	13.4	0.03	2.9	39	8.1
S450-10	borrow pit material	0.12	<0.5	6.7	0.09	<0.09	17.2	<0.02	1.9	30	3.5
S451-10	borrow pit material	0.29	0.8	16	0.20	<0.09	4.0	0.03	3.0	89	12
S452-10	borrow pit material	0.39	<0.5	29	0.18	<0.09	5.0	<0.02	3.2	64	8.3
S453-10	borrow pit material	0.20	1.2	16	0.27	<0.09	4.8	0.02	3.4	79	7.5
S454-10	borrow pit material	0.08	<0.5	5.0	0.03	<0.09	0.1	<0.02	0.73	110	2.0
S455-10	borrow pit material	0.24	<0.5	20	0.12	<0.09	0.6	0.02	7.0	170	10
S456-10	borrow pit material	0.35	<0.5	16	0.21	<0.09	3.6	<0.02	2.0	75	6.9
S457-10	borrow pit material	0.39	<0.5	25	0.25	<0.09	2.4	<0.02	2.5	90	4.3
S458-10	borrow pit material	0.38	0.7	25	0.21	<0.09	1.8	<0.02	2.0	82	6.7
S459-10	borrow pit material	0.18	<0.5	9.6	0.14	<0.09	7.4	<0.02	1.7	68	4.2
S460-10	borrow pit material	0.20	<0.5	12	0.13	<0.09	3.6	<0.02	1.5	93	19
S461-10	borrow pit material	0.29	<0.5	15	0.17	<0.09	3.6	<0.02	1.8	74	38
S462-10	borrow pit material	0.25	<0.5	14	0.19	<0.09	6.2	<0.02	1.8	73	8.7

Table 3 Results of Metals Analyses (Continued)

Sample ID	Drill Log Lithology	Fe %	K %	Li µg/g	Mg %	Mn µg/g	Mo µg/g	Na %	Ni µg/g	P µg/g	Pb µg/g
Average Crustal Abundance		5.63	2.085	20	2.33	950	1.2	2.355	84	1050	14
10x Average Crustal Abundance		56.3	20.85	200	23.3	9500	12	23.55	840	10500	140
10-TR-001 BH10-04	gneiss	0.71	0.15	15	0.12	150	0.4	0.05	3.9	25	11
10-TR-002 BH10-04	gneiss	0.66	0.17	18	0.13	180	0.4	0.05	4.1	28	9.3
10-TR-003 BH10-04	gneiss	0.76	0.17	14	0.13	160	0.4	0.05	3.9	47	7.1
10-TR-004 BH10-05	gneiss	0.88	0.17	13	0.20	200	0.4	0.05	3.8	140	5.4
10-TR-005 BH10-05	gneiss	0.82	0.16	11	0.16	190	0.3	0.05	4.3	67	4.1
10-TR-006 BH10-05	gneiss	0.75	0.11	10	0.16	170	0.6	0.05	3.7	61	4.0
10-TR-007 BH10-06	gneiss	0.88	0.24	15	0.22	140	0.3	0.05	3.8	210	4.2
10-TR-008 BH10-06	gneiss	0.93	0.19	15	0.29	160	0.2	0.05	3.7	230	3.8
10-TR-009 BH10-06	gneiss	1.20	0.33	19	0.24	160	0.2	0.05	4.3	270	6.5
10-TR-010 BH10-07	gneiss	1.90	0.56	23	0.50	280	0.4	0.06	5.6	630	9.3
10-TR-011 BH10-07	gneiss	2.60	0.71	36	0.93	300	0.5	0.05	7.1	1000	2.8
10-TR-012 BH10-07	gneiss	1.86	0.72	34	1.10	290	2.1	0.06	25	440	3.2
10-TR-013 BH10-08	gneiss	0.83	0.17	11	0.16	150	0.3	0.05	3.4	92	5.3
10-TR-014 BH10-08	gneiss	1.40	0.49	26	0.59	240	0.4	0.04	4.9	490	2.5
10-TR-015 BH10-08	gneiss	1.70	0.70	29	0.76	320	0.2	0.04	5.3	670	2.0
10-TR-016 BH10-09	gneiss	1.00	0.28	17	0.23	150	2.5	0.05	3.2	230	6.6
10-TR-017 BH10-09	gneiss	1.20	0.30	20	0.25	180	1.1	0.05	4.2	260	5.8
10-TR-018 BH10-09	gneiss	0.95	0.28	13	0.20	140	1.5	0.05	3.4	220	29
10-TR-019 BH10-12	gneiss	1.10	0.35	10	0.46	180	1.0	0.06	20	160	5.0
10-TR-020 BH10-12	gneiss	1.90	0.54	20	0.64	280	6.8	0.05	15	220	6.8
10-TR-021 BH10-12	gneiss	1.40	0.27	9	0.30	140	3.4	0.05	5.0	250	12
10-TR-034 BH10-21	schist	1.10	0.54	8	0.41	250	0.4	0.03	2.9	120	3.2
10-TR-035 BH10-12	schist	1.60	0.60	12	0.74	280	0.2	0.03	3.1	260	3.3
10-TR-036 BH10-12	schist	1.80	0.50	17	1.00	280	0.4	0.03	3.8	120	1.7
10-TR-022 BH10-13	carbonate rocks	0.40	0.04	<2	2.20	270	0.5	0.01	5.0	370	0.83
10-TR-023 BH10-13	carbonate rocks	0.73	0.17	18	2.60	280	0.4	0.01	8.9	540	0.98
10-TR-024 BH10-13	carbonate rocks	0.58	0.14	13	2.80	340	<0.1	0.02	7.0	1090	0.89
10-TR-025 BH10-14	carbonate rocks	0.16	0.03	<2	0.65	70	<0.1	0.02	14	21	1.0
10-TR-026 BH10-14	carbonate rocks	0.28	0.04	<2	0.41	120	<0.1	0.01	15	43	1.6
10-TR-027 BH10-14	carbonate rocks	0.17	0.03	<2	1.30	71	<0.1	0.01	14	42	1.1
10-TR-028 BH10-15	carbonate rocks	0.19	0.03	<2	0.95	77	<0.1	0.02	14	78	1.3
10-TR-029 BH10-15	carbonate rocks	0.25	0.04	2	0.57	170	<0.1	0.02	15	85	2.0
10-TR-030 BH10-15	carbonate rocks	0.25	0.04	3	0.66	120	<0.1	0.02	15	86	1.6
10-TR-031 BH10-16	carbonate rocks	0.17	0.03	<2	0.98	66	<0.1	0.02	14	57	1.2
10-TR-032 BH10-16	carbonate rocks	0.18	0.03	<2	0.98	62	<0.1	0.02	14	70	1.4
10-TR-033 BH10-16	carbonate rocks	0.26	0.05	3	0.86	89	<0.1	0.02	15	92	1.8
S449-10	borrow pit material	0.59	0.18	24	4.90	140	0.5	0.02	11	130	4.3
S450-10	borrow pit material	0.34	0.07	<2	2.90	100	0.2	0.02	10	120	1.9
S451-10	borrow pit material	0.74	0.12	5	2.50	130	0.3	0.02	10	230	7.0
S452-10	borrow pit material	0.99	0.24	10	2.10	140	0.2	0.03	6.9	200	3.8
S453-10	borrow pit material	0.89	0.09	4	2.80	270	0.1	0.02	8.6	830	2.1
S454-10	borrow pit material	0.30	0.03	<2	0.03	25	0.4	0.01	3.4	16	0.75
S455-10	borrow pit material	1.10	0.09	2	1.20	120	0.3	0.02	110	130	2.7
S456-10	borrow pit material	0.79	0.13	9	1.10	140	0.5	0.03	5.2	140	3.5
S457-10	borrow pit material	0.81	0.15	11	1.20	130	0.2	0.03	5.7	140	3.7
S458-10	borrow pit material	0.87	0.16	9	1.00	130	0.4	0.03	5.1	240	4.5
S459-10	borrow pit material	0.50	0.07	5	2.00	94	0.3	0.02	6.3	120	2.2
S460-10	borrow pit material	0.53	0.09	3	0.77	74	0.6	0.02	5.5	140	2.0
S461-10	borrow pit material	0.70	0.12	8	1.90	130	0.3	0.03	4.6	170	3.8
S462-10	borrow pit material	0.63	0.11	7	2.70	100	0.3	0.02	6.6	110	3.3

Table 3 Results of Metals Analyses (Continued)

Sample ID	Drill Log Lithology	Sb µg/g	Se µg/g	Si µg/g	Sn µg/g	Sr µg/g	Ti %	Tl µg/g	U µg/g	V µg/g	Y µg/g	Zn µg/g
Average Crustal Abundance		0.2	0.05	281500	2.3	370	0.565	0.85	2.7	120	33	70
10x Average Crustal Abundance		2	0.5	2815000	23	3700	5.65	8.5	27	1200	330	700
10-TR-001 BH10-04	gneiss	<0.8	0.8	530	<0.5	6.6	0.02	0.07	4.8	3	2.0	20
10-TR-002 BH10-04	gneiss	<0.8	<0.7	450	<0.5	6.6	0.02	0.09	5.2	3	2.2	20
10-TR-003 BH10-04	gneiss	<0.8	<0.7	480	<0.5	6.2	0.02	0.08	4.4	3	2.4	21
10-TR-004 BH10-05	gneiss	<0.8	<0.7	440	<0.5	5.6	0.02	0.10	5.2	5	4.1	21
10-TR-005 BH10-05	gneiss	<0.8	<0.7	460	<0.5	6.3	0.02	0.07	2.8	3	2.7	22
10-TR-006 BH10-05	gneiss	<0.8	<0.7	440	<0.5	5.6	0.01	0.06	13	3	3.9	18
10-TR-007 BH10-06	gneiss	<0.8	<0.7	490	<0.5	6.5	0.04	0.12	2.1	9	4.1	24
10-TR-008 BH10-06	gneiss	<0.8	<0.7	560	<0.5	6.2	0.03	0.10	2.7	10	4.9	27
10-TR-009 BH10-06	gneiss	<0.8	<0.7	530	0.6	7.6	0.06	0.23	6.0	14	6.7	31
10-TR-010 BH10-07	gneiss	<0.8	<0.7	700	1.2	13	0.17	0.38	4.5	32	16	46
10-TR-011 BH10-07	gneiss	<0.8	<0.7	650	0.8	14	0.19	0.44	4.0	48	14	49
10-TR-012 BH10-07	gneiss	<0.8	<0.7	780	<0.5	7.3	0.14	0.48	3.5	43	9.8	36
10-TR-013 BH10-08	gneiss	<0.8	<0.7	500	<0.5	6.6	0.03	0.07	2.5	5	3.3	19
10-TR-014 BH10-08	gneiss	<0.8	<0.7	690	<0.5	8.5	0.09	0.31	4.7	22	7.1	34
10-TR-015 BH10-08	gneiss	<0.8	<0.7	610	<0.5	8.2	0.13	0.46	3.1	28	8.2	50
10-TR-016 BH10-09	gneiss	<0.8	<0.7	470	<0.5	6.6	0.06	0.17	2.6	13	3.7	23
10-TR-017 BH10-09	gneiss	<0.8	<0.7	460	0.6	7.1	0.07	0.19	4.2	15	4.7	31
10-TR-018 BH10-09	gneiss	<0.8	<0.7	520	<0.5	8.1	0.06	0.22	9.6	12	5.5	29
10-TR-019 BH10-12	gneiss	<0.8	<0.7	470	<0.5	6.8	0.08	0.19	2.9	19	3.5	24
10-TR-020 BH10-12	gneiss	<0.8	<0.7	600	1.2	9.7	0.12	0.31	4.0	30	3.4	38
10-TR-021 BH10-12	gneiss	<0.8	<0.7	600	0.8	17	0.07	0.13	4.9	12	8.2	31
10-TR-034 BH10-21	schist	<0.8	1.5	540	<0.5	5.8	0.06	0.21	2.2	6	3.9	23
10-TR-035 BH10-12	schist	<0.8	2.2	590	<0.5	4.8	0.06	0.21	2.3	6	7.4	26
10-TR-036 BH10-12	schist	<0.8	0.9	630	<0.5	3.4	0.03	0.15	2.2	7	5.2	28
10-TR-022 BH10-13	carbonate rocks	<0.8	<0.7	270	<0.5	14	0.00	0.02	0.31	7	2.3	2.2
10-TR-023 BH10-13	carbonate rocks	<0.8	<0.7	590	<0.5	24	0.02	0.04	0.40	11	5.0	9.9
10-TR-024 BH10-13	carbonate rocks	<0.8	1.0	450	<0.5	22	0.01	0.02	0.41	7	9.1	5.8
10-TR-025 BH10-14	carbonate rocks	<0.8	<0.7	390	<0.5	290	0.00	<0.02	0.30	4	1.5	4.0
10-TR-026 BH10-14	carbonate rocks	<0.8	<0.7	420	<0.5	300	0.00	<0.02	0.34	5	4.0	6.4
10-TR-027 BH10-14	carbonate rocks	<0.8	0.9	350	<0.5	280	0.00	<0.02	0.34	4	1.6	4.5
10-TR-028 BH10-15	carbonate rocks	<0.8	0.9	530	<0.5	270	0.00	<0.02	0.34	4	2.2	3.3
10-TR-029 BH10-15	carbonate rocks	<0.8	1.0	340	<0.5	240	0.00	<0.02	0.39	5	2.8	6.1
10-TR-030 BH10-15	carbonate rocks	<0.8	1.0	430	<0.5	290	0.00	<0.02	0.33	5	2.9	6.2
10-TR-031 BH10-16	carbonate rocks	<0.8	1.5	440	<0.5	270	0.00	<0.02	0.28	4	1.8	3.0
10-TR-032 BH10-16	carbonate rocks	<0.8	1.8	400	<0.5	260	0.00	<0.02	0.32	4	2.2	5.0
10-TR-033 BH10-16	carbonate rocks	<0.8	1.0	420	<0.5	270	0.00	<0.02	0.34	5	2.7	3.9
S449-10	borrow pit material	<0.8	2.1	520	<0.5	85	0.01	0.05	0.37	12	3.5	9.6
S450-10	borrow pit material	<0.8	0.9	350	<0.5	130	0.01	0.03	0.36	7	2.1	4.4
S451-10	borrow pit material	<0.8	1.2	470	<0.5	18	0.03	0.07	0.47	13	4.4	14
S452-10	borrow pit material	<0.8	1.1	530	0.7	31	0.05	0.11	1.2	15	3.2	18
S453-10	borrow pit material	<0.8	1.7	430	<0.5	21	0.01	<0.02	0.57	10	3.4	7.7
S454-10	borrow pit material	<0.8	1.9	310	<0.5	2.2	0.00	<0.02	0.24	1	0.60	1.7
S455-10	borrow pit material	<0.8	2.0	610	<0.5	5.3	0.02	0.03	0.71	8	2.2	13
S456-10	borrow pit material	<0.8	1.8	370	0.6	27	0.02	0.06	1.7	9	3.8	17
S457-10	borrow pit material	<0.8	1.4	440	<0.5	18	0.02	0.07	2.3	10	4.3	14
S458-10	borrow pit material	<0.8	2.0	520	0.6	13	0.03	0.08	2.6	9	4.8	18
S459-10	borrow pit material	<0.8	2.0	380	<0.5	47	0.01	<0.02	0.68	7	2.4	6.9
S460-10	borrow pit material	<0.8	1.7	370	<0.5	27	0.01	<0.02	0.62	6	2.0	12
S461-10	borrow pit material	<0.8	1.9	400	0.8	21	0.02	0.04	1.8	8	3.4	20
S462-10	borrow pit material	<0.8	1.8	400	<0.5	36	0.02	0.03	1.3	8	2.8	13

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Table 4 Statistical Summary of Metals Analyses

	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Li	Mg	Mn
	%	µg/g	µg/g	µg/g	µg/g	%	µg/g	µg/g	µg/g	µg/g	%	%	µg/g	%	µg/g
Average Concentration (Continental Crust)*	8.2	1.8	425	3	0.0085	4.15	0.15	25	102	60	5.63	2.09	20	2.33	950
Ten Times Average Concentration (Continental Crust)*	82	18	4250	30	0.085	42	1.5	250	1020	600	56	21	200	23.3	9500
All Quarry Pit Rock (gneiss, schist, carbonate rocks)															
Min	0.05	0.50	2.7	0.1	0.09	0.06	0.02	1.1	2.1	2.0	0.16	0.03	2.0	0.12	62
Max	1.30	1.8	110	0.5	0.13	29	0.06	9.9	110	28	2.60	0.72	36	2.80	340
Mean	0.46	0.62	28	0.2	0.09	7.40	0.02	2.9	70	8.1	0.93	0.26	13	0.69	186
Median	0.39	0.50	24	0.2	0.09	0.23	0.02	2.1	85	6.2	0.86	0.17	13	0.54	170
Standard Deviation	0.35	0.29	24	0.1	0.01	12	0.01	2.1	41	5.7	0.62	0.22	9.2	0.66	80
No. of Samples	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
5th Percentile	0.08	0.5	3.1	0.06	0.09	0.07	0.02	1.2	2.2	2.2	0.17	0.03	2.0	0.13	69
25th Percentile	0.15	0.5	5.5	0.12	0.09	0.13	0.02	1.6	51	4.2	0.37	0.05	3.0	0.23	140
75th Percentile	0.63	0.5	35	0.23	0.09	10	0.02	3.6	100	11	1.25	0.39	18	0.94	273
95th Percentile	1.13	1.2	71	0.43	0.09	28	0.04	6.6	110	17	1.90	0.70	30	2.30	305
Gneiss															
Min	0.32	0.5	20	0.13	0.09	0.06	0.02	1.1	75	2.9	0.66	0.11	9.0	0.12	140
Max	1.20	0.5	110	0.49	0.13	0.36	0.1	9.9	110	28	2.60	0.72	36	1.10	320
Mean	0.57	0.5	39	0.22	0.09	0.17	0.02	3.5	96	10	1.21	0.34	18	0.37	198
Median	0.45	0.5	30	0.17	0.09	0.14	0.02	2.5	100	8.5	1.00	0.28	15	0.24	180
Standard Deviation	0.27	0.0	24	0.11	0.01	0.09	0.01	2.5	12	6.2	0.51	0.20	7.7	0.28	60
No. of Samples	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21
5th Percentile	0.33	0.5	21	0.13	0.09	0.07	0.02	1.1	78	3.2	0.71	0.15	10	0.13	140
25th Percentile	0.39	0.5	23	0.15	0.09	0.10	0.02	1.4	87	5.3	0.83	0.17	13	0.16	150
75th Percentile	0.78	0.5	51	0.25	0.09	0.23	0.02	5.2	110	14	1.40	0.49	20	0.50	240
95th Percentile	1.10	0.5	78	0.48	0.10	0.36	0.02	8.0	110	18	1.90	0.71	34	0.93	300
Schist															
Min	0.74	0.5	35	0.2	0.09	0.14	0.02	2.2	67	6.3	1.10	0.50	8.0	0.41	250
Max	1.30	1.1	37	0.4	0.09	0.30	0.03	3.6	70	13	1.80	0.60	17.0	1.00	280
Median	1.10	0.5	36	0.3	0.09	0.18	0.02	3.6	69	8.0	1.60	0.54	12.0	0.74	280
No. of Samples	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

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Table 4 Statistical Summary of Metals Analyses (Continued)

	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Li	Mg	Mn
	%	µg/g	µg/g	µg/g	µg/g	%	µg/g	µg/g	µg/g	µg/g	%	%	µg/g	%	µg/g
Average Concentration (Continental Crust)*	8.2	1.8	425	3	0.0085	4.15	0.15	25	102	60	5.63	2.09	20	2.33	950
Ten Times Average Concentration (Continental Crust)*	82	18	4250	30	0.085	42	1.5	250	1020	600	56	21	200	23.3	9500
Carbonate Rocks															
Min	0.05	0.5	2.7	0.06	0.09	3.90	0.02	1.3	2.1	2.0	0.16	0.03	2.0	0.41	62
Max	0.31	1.8	16	0.32	0.09	29	0.06	2.1	99	6.1	0.73	0.17	18	2.80	340
Mean	0.13	0.8	5.7	0.11	0.09	22	0.02	1.8	25	3.8	0.30	0.06	4.4	1.25	145
Median	0.10	0.6	4.1	0.07	0.09	27	0.02	1.7	2.6	4.0	0.25	0.04	2.0	0.97	105
Standard Deviation	0.08	0.4	4.3	0.08	0	11	0.01	0.2	41	1.4	0.18	0.05	5.3	0.82	98
No. of Samples	12.0	12	12	12	12	12	12	12	12	12	12	12	12	12	12
5th Percentile	0.07	0.5	2.9	0.06	0.09	4.01	0.02	1.4	2.2	2.0	0.17	0.03	2.0	0.50	64
25th Percentile	0.08	0.5	3.2	0.06	0.09	21	0.02	1.6	2.2	2.4	0.18	0.03	2.0	0.66	71
75th Percentile	0.14	1.1	5.4	0.10	0.09	28	0.02	1.9	24	4.6	0.31	0.04	3.0	1.53	195
95th Percentile	0.27	1.5	14	0.27	0.09	29	0.04	2.1	97	5.7	0.65	0.15	15	2.69	307
Unconsolidated Borrow Material															
Min	0.08	0.5	5.0	0.03	0.09	0.05	0.02	0.7	30	2.0	0.30	0.03	2.0	0.03	25
Max	0.39	1.7	29	0.27	0.09	17	0.03	7.0	170	38.0	1.10	0.24	24	4.90	270
Mean	0.26	0.7	16	0.17	0.09	5.3	0.02	2.5	81	9.9	0.70	0.12	7.2	1.94	123
Median	0.26	0.5	16	0.18	0.09	3.8	0.02	2.0	77	7.8	0.72	0.12	6.0	1.95	130
Standard Deviation	0.10	0.4	7.0	0.06	0	4.8	0.004	1.5	33	9.1	0.23	0.05	5.8	1.21	53
No. of Samples	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
5th Percentile	0.11	0.5	6.1	0.07	0.09	0.41	0.02	1.2	36	3.0	0.33	0.05	2.0	0.51	57
25th Percentile	0.20	0.5	11	0.13	0.09	2.7	0.02	1.8	69	4.9	0.55	0.09	3.3	1.13	100
75th Percentile	0.34	0.7	19	0.21	0.09	5.9	0.02	3.0	90	9.7	0.86	0.15	9.0	2.65	138
95th Percentile	0.39	1.4	26	0.26	0.09	15	0.03	4.7	131	26	1.03	0.20	16	3.60	186

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Table 4 Statistical Summary of Metals Analyses (Continued)

	Mo	Na	Ni	P	Pb	Sb	Se	Si	Sn	Sr	Ti	Tl	U	V	Y	Zn
	µg/g	%	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	%	µg/g	µg/g	µg/g	µg/g	µg/g
Average Concentration (Continental Crust)*	1.2	2.4	84	1050	14	0.2	0.05	281500	2.3	370	0.57	0.85	2.7	120	33	70
Ten Times Average Concentration (Continental Crust)*	12	24	840	10500	140	2	0.5	2815000	23	3700	5.7	8.5	27	1200	330	700
All Quarry Pit Rock (gneiss, sch																
Min	0.10	0.012	2.9	21	0.8	0.8	0.7	270	0.5	3.4	0.001	0.02	0.3	3.0	1.5	2.2
Max	6.8	0.062	25	1090	29.0	0.8	2.2	780	1.2	300	0.19	0.48	13.0	48.0	16	50.0
Mean	0.73	0.038	8.3	245	4.7	0.8	0.9	506	0.6	75.4	0.05	0.14	3.0	11.6	4.9	20.9
Median	0.40	0.047	5.0	150	3.3	0.8	0.7	485	0.5	8.2	0.03	0.10	2.7	6.5	3.9	21.5
Standard Deviation	1.3	0.017	5.8	261	5.1	0.0	0.3	108	0.2	117	0.05	0.14	2.8	11	3.3	14
No. of Samples	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
5th Percentile	0.10	0.014	3.2	27	1.0	0.8	0.7	348	0.5	5.4	0.001	0.02	0.3	3.0	1.8	3.2
25th Percentile	0.10	0.016	3.8	69	1.6	0.8	0.7	440	0.5	6.6	0.002	0.02	0.4	4.0	2.6	6.2
75th Percentile	0.50	0.052	14	263	6.0	0.8	0.9	590	0.5	78	0.06	0.21	4.4	13.3	5.8	29.5
95th Percentile	2.7	0.056	16	753	11.3	0.8	1.6	693	0.9	290	0.15	0.45	6.9	34.8	10.9	46.8
Gneiss																
Min	0.20	0.040	3.2	25	2.0	0.8	0.7	440	0.5	5.6	0.01	0.06	2.1	3.0	2.0	18.0
Max	6.8	0.062	25	1000	29.0	0.8	0.8	780	1.2	17	0.19	0.48	13.0	48.0	16	50.0
Mean	1.1	0.051	6.6	273	6.9	0.8	0.7	544	0.6	8.1	0.07	0.20	4.6	15.8	5.7	29.2
Median	0.40	0.051	4.2	220	5.4	0.8	0.7	520	0.5	6.8	0.06	0.17	4.2	12.0	4.1	27.0
Standard Deviation	1.6	0.005	5.9	248	5.7	0.0	0.0	97	0.2	3.0	0.05	0.14	2.5	13.4	3.8	9.9
No. of Samples	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21
5th Percentile	0.20	0.042	3.4	28	2.5	0.8	0.7	440	0.5	5.6	0.02	0.07	2.5	3.0	2.2	19.0
25th Percentile	0.30	0.049	3.8	92	4.0	0.8	0.7	470	0.5	6.5	0.02	0.09	2.9	5.0	3.4	21.0
75th Percentile	1.1	0.053	5.3	270	7.1	0.8	0.7	600	0.6	8.2	0.09	0.31	4.9	22.0	7.1	34.0
95th Percentile	3.4	0.056	20	670	12.0	0.8	0.7	700	1.2	14	0.17	0.46	9.6	43.0	14.0	49.0
Schist																
Min	0.20	0.031	2.9	120	1.7	0.8	0.9	540	0.5	3.4	0.03	0.2	2.2	6.0	3.9	23.0
Max	0.40	0.033	3.8	260	3.3	0.8	2.2	630	0.5	5.8	0.06	0.2	2.3	7.0	7.4	28.0
Median	0.40	0.033	3.1	120	3.2	0.8	1.5	590	0.5	4.8	0.06	0.2	2.2	6.0	5.2	26
No. of Samples	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

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Table 4 Statistical Summary of Metals Analyses (Continued)

	Mo	Na	Ni	P	Pb	Sb	Se	Si	Sn	Sr	Ti	Tl	U	V	Y	Zn
	µg/g	%	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	%	µg/g	µg/g	µg/g	µg/g	µg/g
Average Concentration (Continental Crust)*	1.2	2.4	84	1050	14	0.2	0.05	281500	2.3	370	0.57	0.85	2.7	120	33	70
Ten Times Average Concentration (Continental Crust)*	12	24	840	10500	140	2	0.5	2815000	23	3700	5.7	8.5	27	1200	330	700
Carbonate Rocks																
Min	0.10	0.012	5	21	0.8	0.8	0.7	270	0.5	14	0.001	0.02	0.3	4.0	1.5	2.2
Max	0.50	0.018	15	1090	2.0	0.8	1.8	590	0.5	300	0.02	0.04	0.4	11.0	9.1	9.9
Mean	0.16	0.015	13	215	1.3	0.8	1.0	419	0.5	211	0.004	0.02	0.3	5.4	3.2	5.0
Median	0.10	0.015	14	82	1.3	0.8	1.0	420	0.5	270	0.001	0.02	0.3	5.0	2.5	4.8
Standard Deviation	0.14	0.002	3.5	317	0.4	0	0.3	84	0	116	0.01	0.01	0.0	2.1	2.1	2.1
No. of Samples	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
5th Percentile	0.10	0.013	6.1	33	0.9	0.8	0.7	309	0.5	18	0.001	0.02	0.3	4.0	1.6	2.6
25th Percentile	0.10	0.014	13	54	1.0	0.8	0.7	380	0.5	186	0.001	0.02	0.3	4.0	2.1	3.8
75th Percentile	0.10	0.016	15	162	1.6	0.8	1.0	443	0.5	283	0.002	0.02	0.4	5.5	3.2	6.1
95th Percentile	0.45	0.017	15	788	1.9	0.8	1.6	557	0.5	295	0.02	0.03	0.4	8.8	6.8	8.0
Unconsolidated Borrow Materia																
Min	0.10	0.011	3.4	16	0.8	0.8	0.9	310	0.5	2.2	0.004	0.02	0.2	1.0	0.6	1.7
Max	0.60	0.031	110	830	7.0	0.8	2.1	610	0.8	130	0.05	0.11	2.6	15.0	4.8	20.0
Mean	0.33	0.021	14	194	3.3	0.8	1.7	436	0.6	34	0.02	0.05	1.1	8.8	3.1	12.1
Median	0.30	0.020	6.5	140	3.4	0.8	1.8	415	0.5	24	0.02	0.04	0.7	8.5	3.3	13.0
Standard Deviation	0.14	0.006	28	191	1.5	0.0	0.4	84	0.1	34	0.01	0.03	0.8	3.4	1.1	5.4
No. of Samples	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
5th Percentile	0.17	0.014	4.2	77	1.5	0.8	1.0	336	0.5	4.2	0.01	0.02	0.3	4.3	1.5	3.5
25th Percentile	0.23	0.017	5.3	123	2.1	0.8	1.5	373	0.5	18	0.01	0.02	0.5	7.3	2.3	8.2
75th Percentile	0.40	0.026	9.7	193	3.8	0.8	2.0	508	0.6	35	0.02	0.07	1.6	10.0	3.7	16.3
95th Percentile	0.54	0.030	46	447	5.4	0.8	2.0	558	0.7	101	0.03	0.09	2.4	13.7	4.5	18.7

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Table 5 Results of Shake Flask Extraction Test

	Units	MMER	CWQG (PAL)	CDWQ	10-TR-001 BH10-04	10-TR-005 BH10-05	10-TR-009 BH10-06	10-TR-014 BH10-08	10-TR-017 BH10-09	10-TR-019 BH10-12	10-TR-035 BH10-12
					Gneiss	Gneiss	Gneiss	Gneiss	Gneiss	Gneiss	Schist
Sample Weight	g				250	250	250	250	250	250	250
Volume mL	D.I. H_2O				750	750	750	750	750	750	750
InitialpH	units				9.51	9.41	9.63	9.63	9.59	9.58	9.74
Final pH	units	6.0 - 9.5	6.5 - 9.0	6.5 - 8.5	9.45	**9.64**	**9.73**	**9.67**	**9.69**	**9.73**	**9.67**
Mercury (Hg)	mg/L	-	0.026	0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Aluminum (Al)	mg/L	-	0.005-0.1[a]	-	0.97	0.84	0.98	0.58	0.91	0.75	1.42
Arsenic (As)	mg/L	0.5	0.005	0.005	0.0013	0.0004	0.0009	0.0005	0.0005	<0.0002	0.0012
Barium (Ba)	mg/L	-	-	1	0.00450	0.00444	0.00438	0.00420	0.00340	0.00309	0.00449
Beryllium (Be)	mg/L	-	-	-	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Bismuth (Bi)	mg/L	-	-	-	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium (Ca)	mg/L	-	-	-	2.95	3.01	2.86	2.96	2.59	2.25	1.29
Cadmium (Cd)	mg/L	-	0.000017	0.005	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003
Cobalt (Co)	mg/L	-	-	-	0.000028	0.000030	0.000049	0.000060	0.000053	0.000122	0.000062
Chromium (Cr)	mg/L	-	0.001	0.051	<0.0005	0.0009	0.0010	<0.0005	0.0011	0.0013	0.0010
Copper (Cu)	mg/L	0.3	0.002-0.004[b]	≤1.0[c]	0.0009	<0.0005	<0.0005	<0.0005	<0.0005	0.0005	<0.0005
Iron (Fe)	mg/L	-	0.3	<0.3[c]	0.069	0.094	0.115	0.127	0.116	0.186	0.233
Potassium (K)	mg/L	-	-	-	6.75	6.51	8.50	8.88	7.66	8.41	13.8
Lithium (Li)	mg/L	-	-	-	0.006	0.006	0.011	0.016	0.012	0.010	0.003
Magnesium (Mg)	mg/L	-	-	-	0.245	0.477	0.370	0.788	0.345	0.422	0.321
Manganese (Mn)	mg/L	-	-	≤0.05	0.00225	0.00268	0.00279	0.00265	0.00308	0.00364	0.00330
Molybdenum (Mo)	mg/L	-	0.073	-	0.00125	0.00096	0.00039	0.00084	0.00073	0.00432	0.00118
Sodium (Na)	mg/L	-	-	-	5.94	5.21	5.39	6.26	5.53	3.75	11.7
Nickel (Ni)	mg/L	0.5	0.025-0.15[b]	-	0.0001	< 0.0001	0.0002	0.0002	0.0002	0.0006	0.0003
Lead (Pb)	mg/L	0.2	0.001-0.007[b]	0.01	0.00083	0.00029	0.00043	0.00013	0.00053	0.00046	0.00032
Antimony (Sb)	mg/L	-	-	0.006	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0003
Selenium (Se)	mg/L	-	0.001	-	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tin (Sn)	mg/L	-	-	-	0.00003	0.00004	0.00003	0.00003	0.00004	0.00002	< 0.00001
Strontium (Sr)	mg/L	-	-	-	0.0105	0.0109	0.0123	0.0190	0.0109	0.0077	0.0037
Titanium (Ti)	mg/L	-	-	-	0.0037	0.0047	0.0118	0.0138	0.0134	0.0185	0.0126
Thallium (Tl)	mg/L	-	-	-	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Uranium (U)	mg/L	-	-	-	0.00940	0.00860	0.00817	0.00277	0.00528	0.00242	0.00143
Vanadium (V)	mg/L	-	-	-	0.00200	0.00268	0.00547	0.0111	0.00557	0.0129	0.00299
Zinc (Zn)	mg/L	0.5	0.03	≤5.0	< 0.001	< 0.001	< 0.001	0.002	< 0.001	0.001	< 0.001

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Table 5 Results of Shake Flask Extraction Test (Continued)

	Units	MMER	CWQG (PAL)	CDWQ	10-TR-024 BH10-13 Sand-stone	10-TR-025 BH10-14 Sandy Carbonate	10-TR-029 BH10-15 Carb-onate	10-TR-033 BH10-16 Carb-onate	S449-10 Sand/ Gravel	S454-10 Sand/ Gravel	S458-10 Sand/ Gravel	S461-10 Sand/ Gravel
Sample Weight	g				250	250	250	250	250	250	250	250
Volume mL	D.I. H_2O				750	750	750	750	750	750	750	750
InitialpH	units				9.66	9.52	9.60	9.64	9.46	7.44	9.53	9.31
Final pH	units	6.0 - 9.5	6.5 - 9.0	6.5 - 8.5	9.38	9.11	8.95	9.03	8.94	7.90	9.30	9.27
Mercury (Hg)	mg/L	-	0.026	0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Aluminum (Al)	mg/L	-	0.005-0.1[a]	-	0.04	0.23	0.16	0.10	0.04	0.50	0.21	0.25
Arsenic (As)	mg/L	0.5	0.005	0.005	0.0013	0.0003	0.0004	<0.0002	0.0008	0.0003	0.0014	0.0007
Barium (Ba)	mg/L	-	-	1	0.00385	0.00167	0.00170	0.00144	0.00376	0.00406	0.00324	0.00388
Beryllium (Be)	mg/L	-	-	-	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Bismuth (Bi)	mg/L	-	-	-	< 0.00001	< 0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium (Ca)	mg/L	-	-	-	8.32	10.8	12.2	11.4	11.3	4.61	9.28	13.0
Cadmium (Cd)	mg/L	-	0.000017	0.005	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003
Cobalt (Co)	mg/L	-	-	-	0.000039	0.000051	0.000059	0.000054	0.000080	0.000137	0.000045	0.000099
Chromium (Cr)	mg/L	-	0.001	0.051	0.0013	0.0007	0.0006	0.0006	0.0027	0.0014	0.0006	0.0008
Copper (Cu)	mg/L	0.3	0.002-0.004[b]	≤1.0[c]	<0.0005	<0.0005	<0.0005	<0.0005	0.0011	0.0023	0.0015	0.0484
Iron (Fe)	mg/L	-	0.3	<0.3[c]	< 0.002	< 0.002	< 0.002	< 0.002	0.010	0.169	0.004	0.059
Potassium (K)	mg/L	-	-	-	8.56	2.03	2.27	2.51	6.90	0.818	7.14	4.94
Lithium (Li)	mg/L	-	-	-	0.009	0.004	0.005	0.006	0.028	< 0.001	0.004	0.010
Magnesium (Mg)	mg/L	-	-	-	7.40	2.55	2.74	3.71	11.3	1.73	3.42	3.83
Manganese (Mn)	mg/L	-	-	≤0.05	0.00037	0.00030	0.00065	0.00023	0.00064	0.00898	0.00024	0.00165
Molybdenum (Mo)	mg/L	-	0.073	-	0.00073	0.00048	0.00207	0.00069	0.00390	0.00053	0.00177	0.00226
Sodium (Na)	mg/L	-	-	-	0.94	1.38	1.82	1.65	1.85	0.15	4.06	2.35
Nickel (Ni)	mg/L	0.5	0.025-0.15[b]	-	0.0001	< 0.0001	0.0002	0.0001	0.0004	0.0006	0.0002	0.0004
Lead (Pb)	mg/L	0.2	0.001-0.007[b]	0.01	< 0.00002	0.00002	< 0.00002	< 0.00002	< 0.00002	0.00079	< 0.00002	0.00015
Antimony (Sb)	mg/L	-	-	0.006	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0013
Selenium (Se)	mg/L	-	0.001	-	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tin (Sn)	mg/L	-	-	-	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.00001	< 0.00001	0.00006
Strontium (Sr)	mg/L	-	-	-	0.0224	0.139	0.121	0.120	0.0422	0.0073	0.0217	0.0202
Titanium (Ti)	mg/L	-	-	-	0.0003	< 0.0001	0.0003	0.0001	0.0008	0.0111	0.0001	0.0037
Thallium (Tl)	mg/L	-	-	-	< 0.00002	< 0.00002	0.00006	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Uranium (U)	mg/L	-	-	-	0.000234	0.000071	0.000095	0.000107	0.000486	0.000243	0.000974	0.00225
Vanadium (V)	mg/L	-	-	-	0.00494	0.00084	0.00068	0.00042	0.00112	0.00109	0.00456	0.00417
Zinc (Zn)	mg/L	0.5	0.03	≤5.0	< 0.001	< 0.001	< 0.001	0.001	< 0.001	0.001	< 0.001	0.001

Note:

MMER = Metals, Mining Effluent (SOR 2002 - 222)

Bold values indicate parameters above the MMER value.

** Lab data reported for total chromium.

CWQG (PAL) and CDWQ provided for reference only (see text)

CWQG (PAL) = Canadian Water Quality Guidelines Protection of Aquatic Life, 2007

CDWQ = Health Canada - Canadian Drinking Water Guideline

a) varies with pH

b) varies with hardness

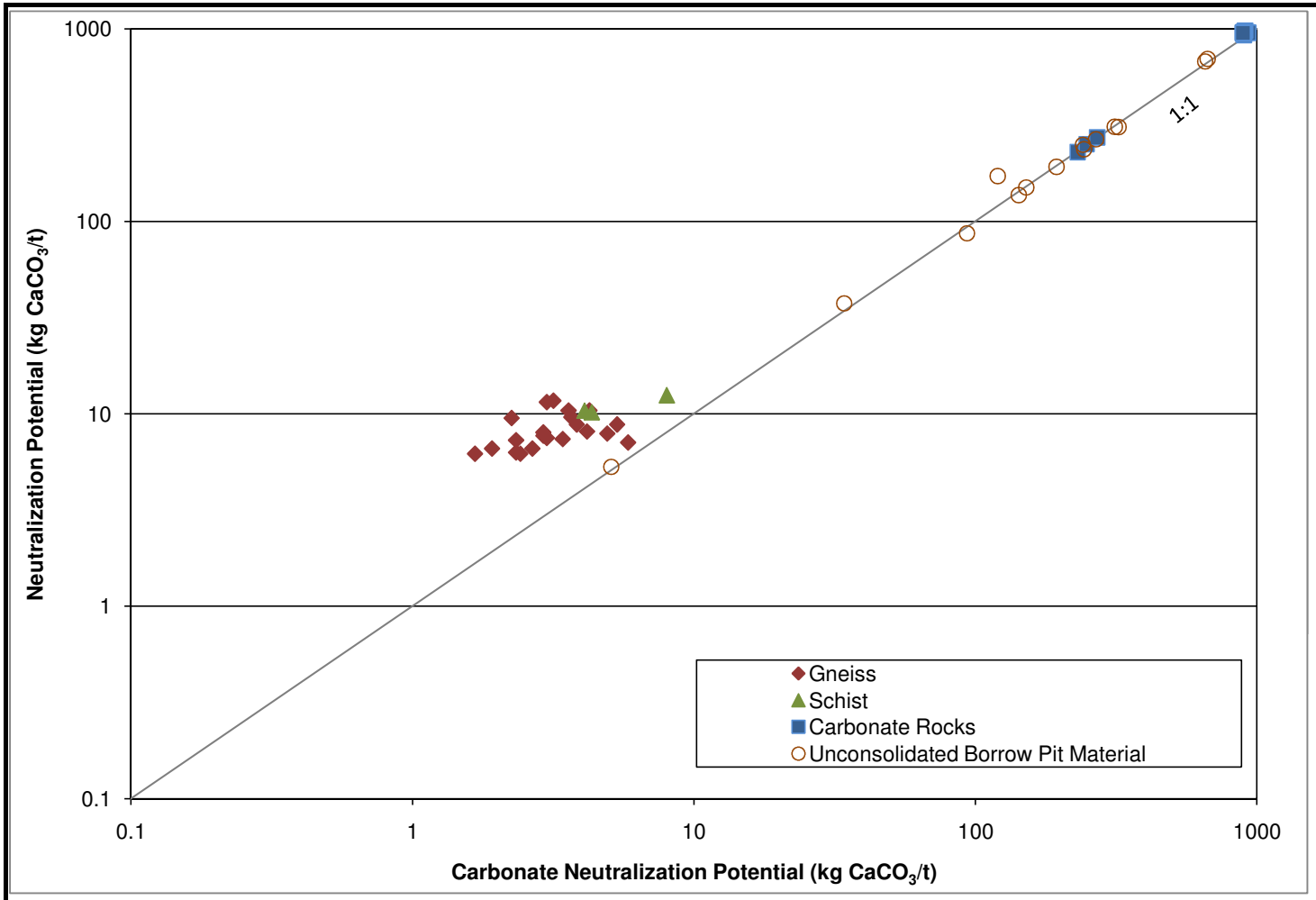
c) Aesthetic objective

Table 6 - Rietveld Quantitative Analysis X-ray Diffraction Results

Mineral/Compound		Ideal Formula	10-TR-001 BH10-4 *granitic gneiss* (wt %)	10-TR-005 BH10-5 *granitic gneiss* (wt %)	10-TR-009 BH10-6 *granitic gneiss* (wt %)	10-TR-014 BH10-8 *granitic gneiss* (wt %)	10-TR-017 BH10-9 *granitic gneiss* (wt %)	10-TR-019 BH10-12 *granitic gneiss* (wt %)	10-TR-035 BH10-12 *schist* (wt %)
Calcite	Carbonates	$CaCO_3$	1.2	0.6	0.1	--	0.3	0.2	--
Rhodochrosite	Carbonates	$MnCO_3$	--	--	--	--	--	0.7	--
Dolomite	Carbonates	$CaMg(CO_3)_2$	--	--	--	--	--	0.5	--
Ankerite	Carbonates	$Ca(Mg, Fe)(CO_3)_2$	--	--	--	--	--	--	--
Quartz		SiO_2	34.4	38.1	34.2	33.6	32.5	30.4	42.6
Albite	Feldspars	$NaAlSi_3O_8$	33.4	30.9	35.0	29.7	36.6	27.7	12.4
Anorthite	Feldspars	$CaAl_2Si_2O_8$	4.2	4.7	5.7	7.4	5.4	8.4	5.7
Orthoclase	Feldspars	$KAlSi_3O_8$	2.5	1.8	1.6	4.5	1.8	2.6	4.1
Microcline	Feldspars	$KAlSi_3O_8$	21.8	20.7	16.5	16.8	16.2	10.8	19.5
Diopside (clinopyroxene)		$CaMgSi_2O_6$	--	--	2.9	2.8	3.1	3.0	4.3
Actinolite (amphibole)		$Ca_2(Mg,Fe)_5Si_8O_{22}(OH)_2$	--	--	--	--	--	9.5	--
Phlogopite	Phyllo-silicates	$KMg_3(AlSi_3O_{10})(OH)_2$	0.4	0.8	3.1	4.3	3.1	5.2	3.4
Biotite	Phyllo-silicates	$K(Mg,Fe)_3(AlSi_3O_{10})(OH)_2$	--	--	--	--	--	--	3.9
Clinochlore (chlorite)	Phyllo-silicates	$(Mg, Fe)_5 (Si_3Al)O_{10}(OH)_8$	1.3	1.4	0.01	0.01	0.01	0.9	4.1
Magnetite		Fe_3O_4	0.8	0.9	0.9	0.9	0.9	--	0.1
TOTAL			100	100	100	100	100	100	100

Mineral/Compound		Ideal Formula	10-TR-024 BH10-13 *carbonate cemented sandstone* (wt %)	10-TR-025 BH10-14 *carbonate* (wt %)	10-TR-029 BH10-15 *carbonate* (wt %)	10-TR-033 BH10-16 *carbonate* (wt %)	S449-10 *borrow material* (wt %)	S454-10 *borrow material* (wt %)	S458-10 *borrow material* (wt %)	S461-10 *borrow material* (wt %)
Calcite	Carbonates	$CaCO_3$	--	99.3	98.9	98.3	22.6	0.2	0.1	2.2
Rhodochrosite	Carbonates	$MnCO_3$	--	--	--	--	--	--	--	0.6
Dolomite	Carbonates	$CaMg(CO_3)_2$	25.9	0.3	0.3	0.6	46.4	--	6.2	11.5
Ankerite	Carbonates	$Ca(Mg, Fe)(CO_3)_2$	--	0.1	0.1	0.3	11.7	--	3.3	3.0
Quartz		SiO_2	56.3	0.3	0.7	0.8	9.7	98.8	33.0	28.5
Albite	Feldspars	$NaAlSi_3O_8$	1.2	--	--	--	1.1	0.7	22.7	25.2
Anorthite	Feldspars	$CaAl_2Si_2O_8$	--	--	--	--	--	--	5.1	3.5
Orthoclase	Feldspars	$KAlSi_3O_8$	1.4	--	--	--	1.3	--	3.9	4.1
Microcline	Feldspars	$KAlSi_3O_8$	15.2	--	--	--	4.6	--	18.3	12.8
Diopside (clinopyroxene)		$CaMgSi_2O_6$	--	--	--	--	--	--	2.8	3.1
Actinolite (amphibole)		$Ca_2(Mg,Fe)_5Si_8O_{22}(OH)_2$	--	--	--	--	--	--	--	--
Phlogopite	Phyllo-silicates	$KMg_3(AlSi_3O_{10})(OH)_2$	--	--	--	--	--	--	3.7	3.4
Biotite	Phyllo-silicates	$K(Mg,Fe)_3(AlSi_3O_{10})(OH)_2$	--	--	--	--	--	--	--	--
Clinochlore (chlorite)	Phyllo-silicates	$(Mg, Fe)_5 (Si_3Al)O_{10}(OH)_8$	--	--	--	--	2.6	0.3	0.5	1.6
Magnetite		Fe_3O_4	--	--	--	--	--	--	0.4	0.5
TOTAL			100	100	100	100	100	100	100	100

FIGURES



Aggregate Source Material CaNP vs. NP Milne Inlet Tote Road	
Baffinland Iron Mine Corporation	
December 2010	FIGURE 1

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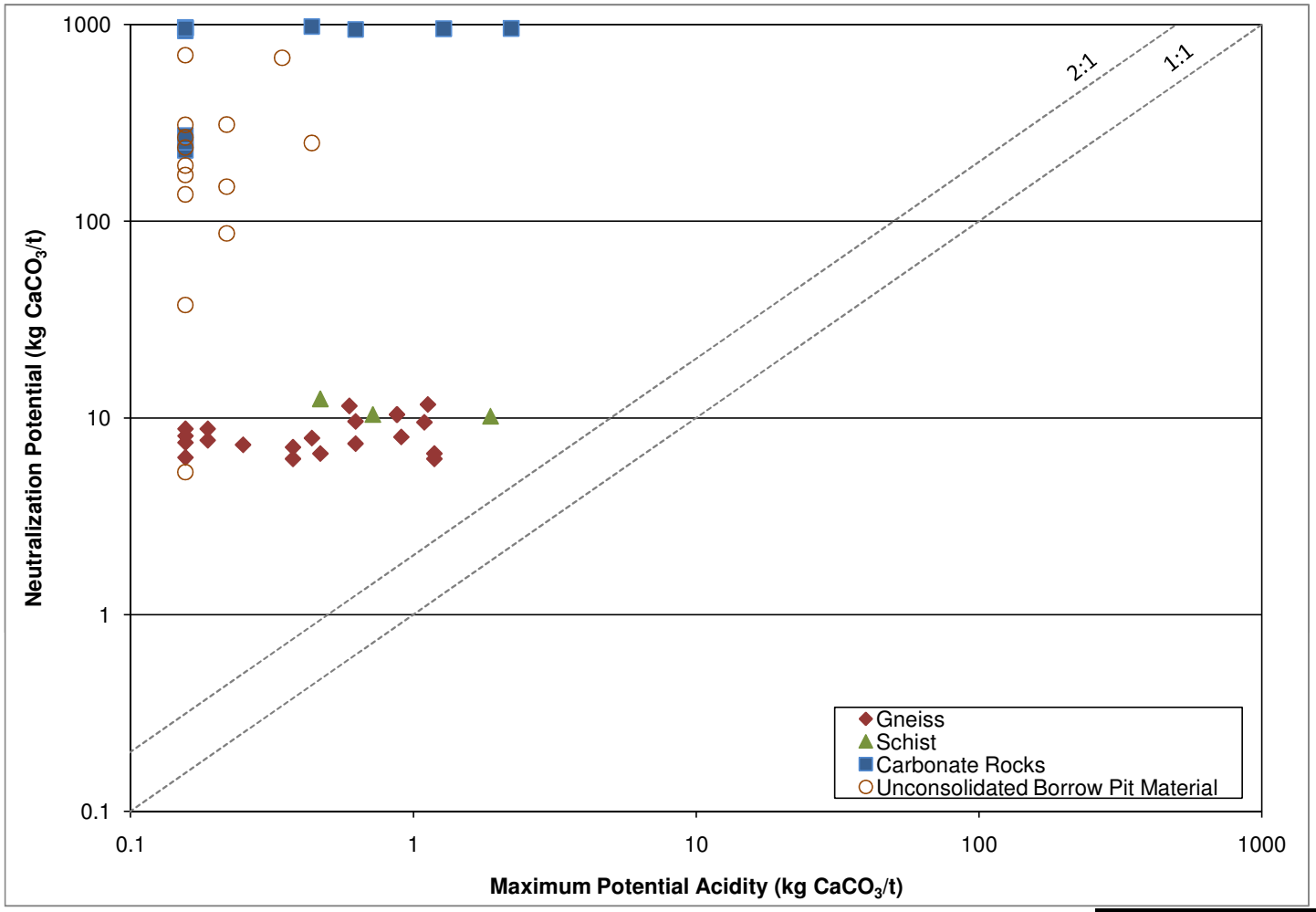

Aggregate Source Material NP vs. MPA Milne Inlet Tote Road	
Baffinland Iron Mine Corporation	
December 2010	FIGURE 2

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