APPENDIX E.7.1

AANDC INSPECTION REPORTS AND BAFFINLAND RESPONSE

Aboriginal Affairs and Northern Development Canada | Affaires autochtones et Développement du Nord Canada

WATER LICENCE INSPECTION FORM

☒ Original
☐ Follow-Up Report

Licensee	Licensee Representative
Baffinland Iron Mines Corporation (*BIMC*)	Jim MILLARD/Allan KNIGHT/Trevor MYERS
Licence No. / Expiry	**Representative's Title**
2AM-MRY1325	Environmental Manager
Land / Other Authorizations	**Land / Other Authorizations**
8BC-MRY1416, 2BE-MRY1421	N2014X0012, N2014Q0016, N2014C0013
Date of Inspection	**Inspector**
March 9-12, 2015	Justin HACK

Activities Inspected

☒ Camp ☐ Drilling ☒ Mining ☒ Construction ☐ Reclamation ☒ Fuel Storage
☒ Roads/Hauling ☐ Other: ☐ Other:

Conditions: **A - Acceptable** **C - Concern** **U - Unacceptable** **NA – Not Applicable** **NI – Not Inspected**

Water Use	Condition	Comment	Site Conditions	Condition	Comment	Haz/Mat Management	Condition	Comment
Intake/Screen	NI		Water Management Structures	A		Storage	A	
Flow Measure. Device	NI		Culverts / Bridges	A		Spills	A	
Source:	A		**Drainage**	**C**		Spill Plan	A	
Water Use:	A		Erosion / Sediment	A				
Recirculation (y /n)	NA		**Mitigation Measures**	**C**		**Administrative**		
			Reclamation Activities	A		Records	A	
			Materials Storage	**C**		Reports	A	
Waste Disposal			Signage	A		Plans	A	
Waste Water	A					Notifications	A	
Solid Waste	A		**Monitoring**			**Other**		
Hazardous Waste	A		Sample Collection / Analysis	NA				

**The number in the comments field will correspond with specific comments provided below.*

Samples taken by Inspector:	Location(s): Sewage and Waste Water Treatment Plant at Mine Site and Milne Inlet.
☒ Yes ☐ No	Sample locations: MS-01, and MP-01

SECTION 1 ☒ **Comments** ☐ **Non-Compliance with Act or Licence** ☐ **Action Required**

Inspectors Statement

On March 9-12, a water licence inspection was conducted at the Mary River Project, Qikiqtani Region, Nunavut. Sites inspected included the Mary River Mine Site, the Tote Road, and the Milne Port area.

Background

At the time of inspection, the Licensee was undertaking activities related to the construction and operation of an open-pit iron ore mine at the Milne Port (Milne Inlet), Mine site (Mary River), and Tote Road. Given that different licence conditions apply to the project depending on what Phase the project is in, and that the project is in both construction and operation phases, Aboriginal Affairs and Northern Development Canada's (AANDC) Water Resource Officer's are working with the Licensee to ensure all relevant conditions are being met.

Major construction activities on site included the continued development of the Ore Stockpile conveyor belt system, the construction of the Milne Inlet Ore Dock, the re-grading and/or upgrades of the Tote Road at KM38.

Major activities occurring on site under the scope of the operations phase include the mining, crushing, screening and transportation of ore from Deposit 1 to the Ore Stockpile area at Milne Inlet.

Conditions on Site

All surface water on site was frozen.

SECTION 2 ☒ **Comments** ☐ **Non-Compliance with Act or Licence** ☐ **Action Required**

Mary River Site

Observations:

1. Open Burn Facility
   - No Concerns. The area was free of ash, and waste was contained, such that risk of waste to water was minimized.
2. Landfill
   - No concerns noted.
3. Sewage and Waste Water Treatment Facility

- Samples were taken and results will be provided to BIMC when available.

4. Contractor Lay-Down Area
    - Due to the frozen conditions on site, and the difficulty delineating the exact location of the watercourse, BIMC is reminded to be mindful of equipment storage areas. These areas will be targeted at the next inspection.

Milne Port Site

Observations:

1. Open Burn Facility
    - No concerns. The area was free of ash, and waste was contained, such that risk of waste to water was minimized.
2. Hazardous Waste Berm
    - No concerns with the hazardous waste berms on site.
3. Landfarm and Contaminated Snow Facility
    - Ensure that discarded geotechnical liner is disposed of in the appropriate manner.
4. Sewage and Waste Water Treatment Facility
    - Samples were taken and the results will be provided to BIMC when available.
5. Treated effluent Discharge Location (MP-01)
    - No concerns. Liner was being used to diffuse energy to prevent sedimentation and erosion at discharge location.
6. Ore Stockpile Area
    - No concerns.
7. Milne Dock
    - No concerns.

Sites of Concern Managed by a Compliance Action Plan

1. Drilling/Road Salt (Calcium Chloride)
    - Since the August 21-25 2014 Inspection, BIMC has submitted a plan to address concerns AANDC Water Resource Officers had with the storage of Calcium Chloride near the quarry site at Milne Inlet.
    - As per the plan, BIMC has segregated salt bags and debris that have the potential to become windblown to prevent them from becoming displaced around site. Further work is planned for the 2015 season and AANDC will monitor deliverables as they become due.
2. Surface drainage (yard swale) to Camp Lake near MS-MRY-1.
    - A final design plan was submitted by BIMC, on October 30 2014, to address some concerns identified by AANDC Water Inspector's pertaining to the sediment loading of surface drainage into Camp Lake near MS-MRY-1a.
    - Implementation of the new plan will be monitored by AANDC Water Resource Officer's as they become due.
    - If the plan changes, BIMC will provide justification for modifications to existing plan.
3. Waste Ash in barrels near incinerator
    - On February 2, 2015, BIMC requested an extension to the schedules related to waste ash from the incinerators plan, specifically to extend the disposal of the Category 1 Ash until July 31, 2015 and to extend the due date of the Soil Monitoring Report and Final Summary Report until September 30, 2015.
    - AANDC has approved this request on February 3, 2015 considering BIMC's efforts to minimize risk by containing the ash, their plan to characterize contamination by conducting a soil sampling program of the impacted area, and their positive compliance history.

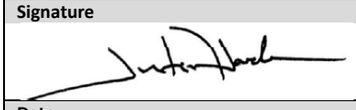
Sites of Concern noted during Inspection:

1. Construction Activities
    - No active construction was occurring at the Mine Site at the time of inspection. However, construction has occurred through the winter and sedimentation and erosion is likely due to activity from these areas. Sites of major concern are the Road to Deposit 1, and the Tote Road.
    - Following the inspection, Jim Millard outlined that there will be rip-rap and other control measures on-site to address any issues of sedimentation during freshet.
2. Debris or Sediment pushed into watercourse at MS-MRY-1.
    - It was observed that snow containing gravel and dirt was pushed into the Camp Lake drainage ditch near MS-MRY-1.
    - After the inspection, Jim Millard proposed to address this concern by conducting the

following:

i. Baffinland Environment division will immediately communicate with Site Services to address their snow removal practices.
ii. The snow will be removed from the drainage ditch by **May 1, 2015**. Photo documentation will be provided.
iii. There was discussion an on-site Snow Removal Management Plan.

3. Spill into Water Course at KM38 of Tote Road
   - A spill (~1L) occurred under equipment that was not in secondary containment on a frozen stream during a culvert installation at KM38.
   - The proper protocol was not in place to prevent that spill from leaking directly on the stream bed.
   - In a follow-up to this spill, BIMC must provide why this spill occurred and measures to be taken to prevent this error from happening again.

Inspector's Name	
Justin Hack	
Signature	
	
Date	
March 17, 2015	

CC: Erik Allain, Manager of Field Operations, AANDC
Phyllis Beaulieu, Manager of Licensing, Nunavut Water Board

Baffinland

April 10, 2015

Resource Management Officer
Nunavut Field Operations
Aboriginal Affairs and Northern Development Canada
PO Box 219
Box 100
Iqaluit, NU X0A 0H0
Justin.Hack@aandc-aancd.cg.ca

Re: Follow up March 9-12, 2015 AANDC Water Licence Inspection
Mary River Project – Water Licence No. 2AM-MRY1325

During the Water Licence inspection conducted from March 9 to 12, 2015, by the Aboriginal Affairs and Northern Development Canada (AANDC) Water Resource officer, a few minor concerns pertaining to drainage, materials storage and mitigation measures were identified. Baffinland's responses, below, focus on the AANDC identified areas of concern. This letter provides the following attachments:

- AANDC Water Licence Inspection March 9-12, 2015 (three pages)
- Table A.1: Provides a table that summarizes the Inspector's key observations and concerns along with Baffinland's responses (one page)
- Baffinland Spill Report and Follow-Up Report regarding spill of engine oil on a frozen streambed at Km 38 along the Tote Road on March 11(five pages).
- Photos showing drainage to Camp Lake subsequent to the clean-up of the sediment laden snow that was unintentionally deposited within the drainage (one page).

Should you require further information on the above, please feel free to contact the undersigned at (647) 253-0596 Ext. 6010 or Jim Millard at (902) 403-1337.

Prepared by:

Allan Knight, B.Sc.
Environmental Superintendent

Reviewed by:

James Millard, M.Sc, P.Geo..
Environmental Manager

cc. Jim Millard, Trevor Myers, Oliver Curran, Erik Madsen, Michael Anderson, Baffinland.
Robert Savard, Erik Allain, AANDC

WATER LICENCE INSPECTION FORM

☒ Original
☐ Follow-Up Report

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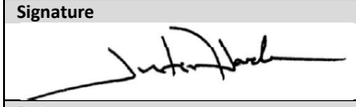
Inspector's Name	
Justin Hack	
Signature	
	
Date	
March 17, 2015	

CC: Erik Allain, Manager of Field Operations, AANDC
Phyllis Beaulieu, Manager of Licensing, Nunavut Water Board

Table A.1 - Response to AANDC Water Licence Inspection - March 9 to 12, 2015

ITEM No.[1]	Observation or Item of Concern	Baffinland Response
	Mary River Mine Site - Observations	
4	*Contractor Lay-Down Area - BIM is reminded to be mindful of equipment storage areas and their proximity to watercourses.*	Baffinland Response: Proximity of equipment to watercourses is being evaluated and equipment will be moved as appropriate. Further discussion with the Inspector is required on this item.
	Milne Port Site - Observations	
3	*Landfarm and Contaminated Snow Facility - Ensure that discarded geotechnical liner is disposed of in the appropriate manner.*	Efforts will be made to remove most of the liner from the landfarm and have it shipped south for proper disposal. The remaining pieces of liner will be removed as exposed during normal operation of the landfarm. This work will be undertaken when soils are sufficiently thawed.
	Sites of Concern Managed by Existing Response Action Plans	
1	*Drilling /Road Salt (Calcium Chloride) - Further work is planned for the 2015 season and AANDC will monitor deliverables as they become due.*	Further work is planned for the 2015 season and AANDC will monitor deliverables as they become due. Refer to letter to AANDC dated September 12 on the clean-up plans and schedule for the calcium chloride storage area at Milne Port. The plan involves identifying and containing compromised salt packages by July 1, 2015.
2	*Surface Drainage (yard swale) to Camp Lake near MS-MRY-1 - Implementation of the Plan will be monitored by AANDC Water Resource Officer's as the Plan is implemented according to schedule.*	Refer to letters to AANDC dated September 8 and October 30 on the sediment control plan to be implemented for surface drainage to Camp Lake. A Schedule was proposed in the letters and will be subject to freshet timing and conditions. A silt curtain will be installed at the outlet of the drainage discharge and will be maintained during the 2015 open water season as an additional control while the effectiveness of the control plan is evaluated.
3	*Waste Ash in barrels near incinerator - Disposal of Category 1 Ash by July 31, 2015. Soil Monitoring Report and Final Summary Report due September 30, 2015.*	Refer to letter to AANDC dated July 4 regarding the ash management and disposal plan. Also refer to follow-up questions and responses in e-mails. Implementation of items identified in the Plan will be communicated to AANDC Water Inspector when completed.
	Locations of Concern noted during Inspection	
1	*Construction Activities - Some sedimentation and erosion are likely to occur due to winter construction, particularly, the Road to Deposit 1, and the Tote Road.*	Baffinland agrees that there is a likelihood for some erosion and sedimentation during freshet which is typical the first year after construction, however, diligent efforts will be made to minimize this potential by means of implementation of the current Aquatic Ecosystems and Surface Water Management Plan.
2	*Debris or Sediment pushed into drainage at MS-MRY-1. Snow containing gravel and dirt was pushed into the Camp Lake drainage ditch near MS-MRY-1*	We note that this is a non-fisheries drainage. Baffinland Environment immediately communicated the issue with the Site Services Department to address their snow removal practices. The snow was subsequently removed from the drainage ditch and photo documentation from April 8, 2015, is attached. Consideration will be given to developing a Site Snow Management Guideline for the Winter 2015/2016.
3	*Spill into Water Course at KM38 of Tote Road - A minor engine oil spill was observed under equipment that was not in secondary containment on a frozen stream during a culvert installation at Km 38 on the Tote Road.*	A Spill Report was submitted to the Spill Line and a follow up report provided to the Inspector and others that provides information as to why the spill occurred and the measures to be taken to prevent this error from reoccurring. The Spill Report and Follow-up Reports are attached.

Notes:

1 Item No. as referenced in AANDC Water Licence Inspection Report March 9-12, 2015

Baffinland

April 3, 2015

Resource Management Officer
Nunavut Field Operations
Aboriginal Affairs and Northern Development Canada
Box 100
Iqaluit, NU X0A 0H0
Justin.Hack@aandc-aadnc.gc.ca

Manager, Major Projects
Qikiqtani Inuit Association
P.O. Box 219
Iqaluit, NU X0A 0H0
swbathory@qia.ca

Re: Follow-up to Spill #15-089, Reported on March 12th, 2015
Mary River Project - Water Licence No. 2AM-MRY1325

Summary:

On March 11, 2015 at 17:00, a leak was observed under a ground thawing unit located at Km 38 of the Tote Road. The unit was positioned on the frozen stream at crossing CV099. Approximately 1L of engine oil escaped from an improperly positioned dip stick and was released onto the frozen stream ice surface. There was no spill tray in place to prevent the oil from leaking directly onto the stream bed.

Immediate and Follow-Up Action:

Upon discovery, a spill tray and absorbent material was put underneath the leak to prevent further release to the receiving environment. Repairs were then made to the unit to stop the leak. Approximately 0.2 m^3 of impacted snow and gravel was recovered and transported/disposed of in the landfarm facility at Milne Port. The ground thawing unit was subsequently inspected, found to be in good working order with no further leaks, and put back into service by the maintenance department. A large spill tray was installed to protect the ground / stream bed under the unit. The Operations Group, who are responsible for the operation of the ground thaw unit, were reminded that ongoing utilization of spill trays and monitoring of same are key requirements of our environmental permits.

Recommendations:

Baffinland have previously developed and implemented a site wide document for the use of spill trays. The requirement for the use of spill trays and spill response material on hand has been communicated by means of the 2014 Environmental Protection Plan training (a requirement for all supervisory personnel on site), routine tool box meetings, and other forms of communication, see attached Spill Tray Use Guidelines document which is routinely communicated to site personnel. Ongoing inspections and monitoring of the use of spill trays is standard practice at site.

Current Status:

The Ground Thaw Unit is back in service. Regular inspections are conducted on the ground thawing unit and other equipment to check for leakage and to ensure spill tray use.

Should you require further information or clarification on the above noted spill, please feel free to contact Trevor Myers / Allan Knight at (647) 253-0596 x6010 or Jim Millard at (902) 403-1337.

Prepared By:

Nicolas Kuzyk,
Environmental Coordinator

Reviewed by:

Allan Knight, B.Sc.
Environmental Superintendent

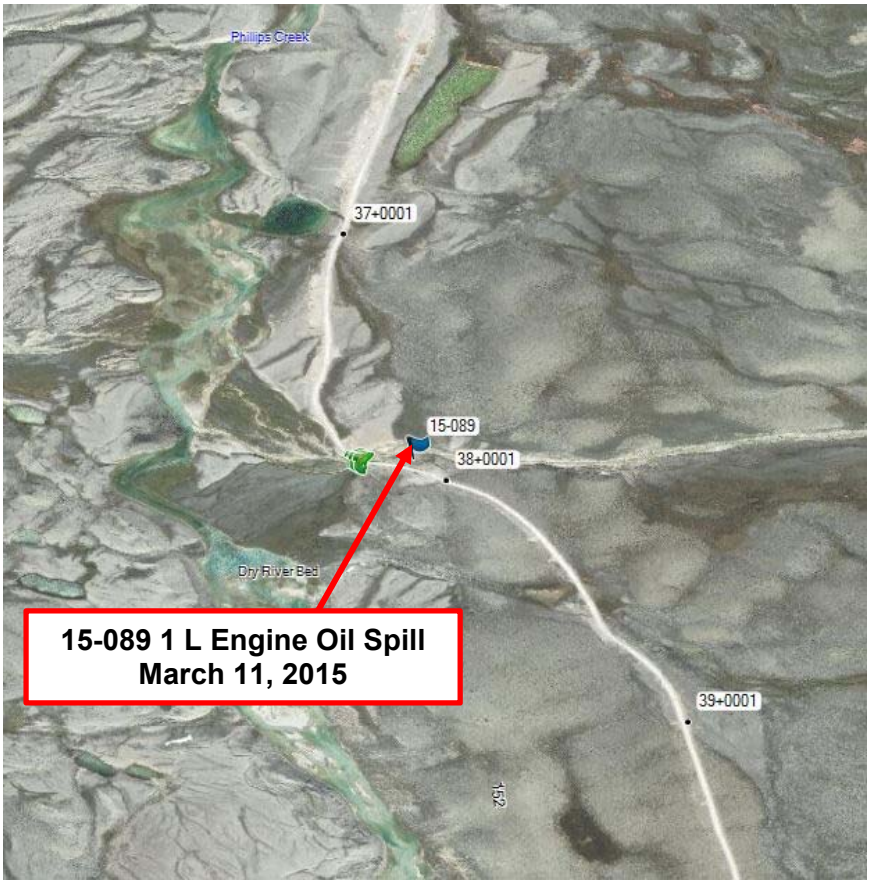
Attach: Photos, Map, NT-NU Spill Report, Spill Tray Use Guidelines

cc. Michael Anderson, Erik Madsen, Jim Millard, Trevor Myers, Lea Willemse (Baffinland), Robert Savard, Erik Allain, (AANDC), Manager of Licencing (NWB)

Photo 1 - Spill location- Oil dripping from the unit (left)

Photo 2 – Engine oil onto ground – less than 1L

Photo 3 – Spill location post clean up



Map of Spill Location

Baffinland

Northwest Territories | Nunavut | Canada

NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

NT-NU 24-HOUR SPILL REPORT LINE
TEL: (867) 920-8130
FAX: (867) 873-6924
EMAIL: spills@gov.nt.ca

REPORT LINE USE ONLY

A	REPORT DATE: MONTH – DAY – YEAR: 03-12-2015	REPORT TIME: 14:30	X ORIGINAL SPILL REPORT, OR ☐ UPDATE # _____ TO THE ORIGINAL SPILL REPORT	REPORT NUMBER: 15 - 089
B	OCCURRENCE DATE: MONTH – DAY – YEAR: 03-11-2015	OCCURRENCE TIME: 17:00		
C	LAND USE PERMIT NUMBER (IF APPLICABLE): IOL - Commercial Lease No.: Q13C301	WATER LICENCE NUMBER (IF APPLICABLE): 2AM-MRY1325 Type "A"		
D	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM NAMED LOCATION: Mary River Project Milne Port Site, Baffin Island, NU	REGION: ☐ NWT X NUNAVUT ☐ ADJACENT JURISDICTION OR OCEAN		
E	LATITUDE: DEGREES 71 MINUTES 38 SECONDS 22	LONGITUDE: DEGREES 80 MINUTES 22 SECONDS 37		
F	RESPONSIBLE PARTY OR VESSEL NAME: Baffinland Iron Mines Corp.	RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION: 2275 Middle Road East, Suite 300, Oakville, ON L6H 0C3		
G	ANY CONTRACTOR INVOLVED: N/A	CONTRACTOR ADDRESS OR OFFICE LOCATION: N/A		
H	PRODUCT SPILLED: Engine Oil	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES: Approx. 1 Litres	U.N. NUMBER:	
	SECOND PRODUCT SPILLED (IF APPLICABLE): N/A	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES: N/A	U.N. NUMBER:	
I	SPILL SOURCE: Ground Thawing Unit	SPILL CAUSE: Oil Leak	AREA OF CONTAMINATION IN SQUARE METRES: Approx.1 square meters	
J	FACTORS AFFECTING SPILL OR RECOVERY: Cold/Freezing Condition	DESCRIBE ANY ASSISTANCE REQUIRED: N/A	HAZARDS TO PERSONS, PROPERTY OR ENVIRONMENT: N/A	

K — ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS

During an inspection of the culvert installation at KM 38 on the Tote Road, a worker discovered oil dripping from the Ground Thawing Unit onto the ground below, which was in fact a frozen stream bed. The supervisor overseeing the culvert installation as well as the maintenance department were notified immediately. A spill tray was put underneath the leak right away to prevent further impact to the receiving environment until the leak could be stopped. The spill has been cleaned up and the investigation is currently ongoing. It is estimated that less than 1 litre of engine oil spilled onto the stream bed and further details will be provided in the follow-up report.

L	REPORTED TO SPILL LINE BY: Trevor Myers	POSITION: Enviro Superintendent	EMPLOYER: Baffinland	LOCATION CALLING FROM: Mine Site	TELEPHONE: 647-253-0596
M	ANY ALTERNATE CONTACT: Jim Millard	POSITION: Enviro Manager	EMPLOYER: Baffinland	ALTERNATE CONTACT LOCATION: Off Site	ALTERNATE TELEPHONE: 902-403-1337

REPORT LINE USE ONLY

N	RECEIVED AT SPILL LINE BY:	POSITION: STATION OPERATOR	EMPLOYER:	LOCATION CALLED: YELLOWKNIFE, NT	REPORT LINE NUMBER: (867) 920-8130

LEAD AGENCY ☐ EC ☐ CCG ☐ GNWT ☐ GN ☐ ILA ☐ INAC ☐ NEB ☐ TC | SIGNIFICANCE ☐ MINOR ☐ MAJOR ☐ UNKNOWN | FILE STATUS ☐ OPEN ☐ CLOSED

AGENCY	CONTACT NAME	CONTACT TIME	REMARKS
LEAD AGENCY			
FIRST SUPPORT AGENCY			
SECOND SUPPORT AGENCY			
THIRD SUPPORT AGENCY			

PAGE 1 OF 1

Baffinland

ENVIRONMENTAL BULLETIN NO. 4

USE OF SPILL TRAYS AT SITE

Introduction

Minor spills from mobile vehicles and equipment in use will be identified and controlled by ensuring pre-use inspections are implemented *without exception*. The implementation of robust and effective preventive maintenance programs and daily equipment checks are best protective measures that can be taken with regard to spills originating from mobile vehicles and equipment that are in service. When issues (non-conformances) are identified, immediate action shall be completed to correct any non-conformance (i.e., use of proper spill tray and/or spill tray repair).

Despite the enforcement and use of pre-use operations inspections, small hydrocarbon leaks/spills are still highly probable. In an effort to minimize or eliminate environmental impact from these spills, the Spill Tray Use Standard has been implemented and will be enforced at both the Milne Port and Mary River sites.

Spill Tray Use Requirements

- Spill trays shall be used under vehicles that are in mid- and long-term storage (i.e., more than one week). Specific positioning of spill trays under vehicles will be based on an analysis of the most likely sites for hydrocarbon leaks from the subject vehicle.
- Spill trays shall be used under temporary equipment such as portable generators, frost fighters, and light plants to capture any overflow during refueling or spillage resulting from other causes.
- Spill trays shall be used routinely outside and inside the mechanics shops prior to, and subsequent to maintaining vehicles and equipment to contain any residual drips originating from all repairs.
- While vehicles and equipment are being fueled or serviced, spill trays shall be placed under nozzles and work locations to capture any dripping.
- All hazardous materials and wastes are to be stored in secondary containment. Spill trays are ideal for storing small volumes (i.e., <205 L) of hazardous material and hazardous waste. Other alternatives for storage of both small and larger quantities of hazardous materials and waste include:
  - designated lined and contained areas; or
  - Shipping containers located at the laydown areas.

Should you have any questions or concerns, please do not hesitate to contact BIM Environment.

April 8, Drainage to Camp Lake, lookng east and upstream toward airstrip.

April 8, Drainage to Camp Lake, looking west and downstream toward Camp Lake.

Aboriginal Affairs and Northern Development Canada | Affaires autochtones et Développement du Nord Canada

WATER LICENCE INSPECTION FORM

☒ Original
☐ Follow-Up Report

Licensee	Licensee Representative
Baffinland Iron Mines Corporation (BIMC)	Jim MILLARD/Allan KNIGHT/Trevor MYERS
Licence No. / Expiry	**Representative's Title**
2AM-MRY1325	Environmental Manager
Land / Other Authorizations	**Land / Other Authorizations**
8BC-MRY1416, 2BE-MRY1421	N2014X0012, N2014Q0016, N2014C0013
Date of Inspection	**Inspector**
June 16-17, 2015	Justin HACK

Activities Inspected

☒ Camp ☐ Drilling ☒ Mining ☒ Construction ☐ Reclamation ☒ Fuel Storage
☒ Roads/Hauling ☐ Other: ☐ Other:

Conditions: **A - Acceptable** **C - Concern** **U - Unacceptable** **NA – Not Applicable** **NI – Not Inspected**

Water Use	Condition	Comment	Site Conditions	Condition	Comment	Haz/Mat Management	Condition	Comment
Intake/Screen	NI		**Water Management Structures**	**C**	1,2,3	Storage	NI	
Flow Measure. Device	NI		**Culverts / Bridges**	**C**	7	Spills	A	
Source:	A		Drainage	A		Spill Plan	A	
Water Use:	A		**Erosion / Sediment**	**U**	8,9,10, 11			
Recirculation (y /n)	NA		**Mitigation Measures**	**C**	4	**Administrative**		
			Reclamation Activities	A		Records	A	
			Materials Storage	**C**	5,6	Reports	A	
Waste Disposal			Signage	A		**Plans**	**A**	12,13
Waste Water	A					Notifications	A	
Solid Waste	A		**Monitoring**			**Other**		
Hazardous Waste	A		Sample Collection / Analysis	NI		**Follow-up from previous inspection**	**A**	14, 15 16

**The number in the comments field will correspond with specific comments provided below.*

Samples taken by Inspector:	Location(s):
☐ Yes ☒ No	

SECTION 1 ☒ **Comments** ☐ **Non-Compliance with Act or Licence** ☐ **Action Required**

Inspectors Statement

On June 16-17 2015, a water licence inspection was conducted at the Mary River Project, Qikiqtani Region, Nunavut. Sites inspected included the Mary River Mine Site, the Tote Road, and the Milne Port area.

Conditions on Site

Freshet conditions: Snow around site has melted due to dust effects; however, there were still significant amounts of snow further from the impacted areas.

Background

At the time of inspection, the Licensee was undertaking activities related to the construction and operation of an open-pit iron ore mine at the Milne Port (Milne Inlet), Mine site (Mary River), and Tote Road. Given that different licence conditions apply to the project depending on what Phase the project is in, and that the project is in both construction and operation phases, Aboriginal Affairs and Northern Development Canada's (AANDC) Water Resource Officer's are working with the Licensee to ensure all relevant water licence conditions are being met.

Major construction activities on site included the construction of the Milne Inlet Ore Dock, the re-grading and/or upgrades of the Tote Road, the construction of the ore crushing area sedimentation ponds, and construction of the Mine Road.

Major activities occurring on site under the scope of the operations phase include the mining, crushing, screening and transportation of ore from Deposit 1 to the Ore Stockpile area at Milne Inlet. Shipping of ore has not yet occurred.

Due to freshet conditions on site and lack of snow cover, this site inspection has revealed concerns not apparent during winter months while there was snow cover. Freshet presents an operationally demanding time of year for BIMC to manage water licence related issues. For the most part, BIMC has handled the risks of freshet successfully; however, areas of concern exist and certain operations can be further improved. BIMC Environment division has a history of working positively with Water Inspectors at AANDC to address issues of concern, and we continue to work towards achieving compliance. No major issues of non-compliance exist on site.

Canada

SECTION 2	☐ Comments	☐ Non-Compliance with Act or Licence	☒ Action Required

Water Management Structures:

1. Silt fences
    - Many silt fences at site appear to be unmaintained and collapsed in areas. Maintain where still required and remove where no longer required.
2. Ore Stockpile Pad at Milne Inlet
    - Proper diversion ditches have not been installed around the Ore Stockpile Pad. BIMC has agreed to follow-up with the responsible party and will provide a date for implementation in a response to this report. In the meantime, BIMC will be monitoring and sampling run-off from this facility weekly in the interim.
3. Ore Stockpile Settling Pond at Milne Inlet
    - The lip of the settling pond liner was exposed at the entrance to the western ore stockpile settling pond at Milne Inlet. The lip of the liner should be buried according to engineered drawings. Again, BIMC will be following up with the responsible party and will provide a date for implementation in a response to this report.

Mitigation Measures:

4. Application of Calcium Carbonate on roads
    - It was observed that calcium carbonate (salt) was being applied to the road without a water truck applying water to the salt.
    - It is recommended that a water truck and the salt truck operate in tandem to prevent the potential for salt to become windblown.

Materials Storage:

5. Storage of materials and equipment within 31m above the ordinary High Water Mark of any water body
    - Storage of sealift crates at explosives magazine storage on Mine Road is within 31m of a Mary River tributary. It was agreed that a plan would be provided to Water Inspector Hack to deal with this. A date was not provided; however, the Inspector requests this plan to be provided before the next scheduled inspection of July 30th, 2015.
6. Deposition of snow containing debris and sediment within 31m of water
    - It is recognized that snow removal and snow management is a significant obstacle for a mine operating in the Arctic; however, the deposition of large quantities of snow containing high levels of sediment and debris near water is unacceptable.
    - BIMC has recognized the need for a Snow Management Plan to prevent potentially contaminated snow from affecting sensitive areas and has agreed to develop and implement this plan by November 30, 2015.
    - Due to the soft ground conditions, the snow containing sediment and debris located near the Aerodrome apron will be difficult to remove, so it was decided an action plan is to be developed for its removal by July 15, 2015.
    - The snow containing sediment and debris near the hazardous waste berm at Milne Inlet is to be removed by July 1, 2015. Photo documentation to be provided.
    - The deposition of sand containing debris, as a result of snow disposal, at edge of lay-down area near Site Services Building (Mary River) is within 31m of a Sheardown Lake tributary (71°19’43”N, 79°22’07”W). It was agreed that this material would be appropriately moved by July 15, 2015.

Culverts/Bridges:

7. Culvert installations and extensions are still ongoing throughout the site
    - Now that freshet is happening, BIMC is reminded to implement sediment and erosion control measures, prior to and during their construction to prevent and minimize sediment loading into water.

Erosion/Sedimentation:

8. Construction on the Tote Road at KM76.5
    - During construction of this part of the Tote Road, best management practices were not implemented and this resulted in water flowing through an improperly constructed berm, onto the Tote Road, and into a tributary. Erosion and sedimentation control measures were not in place to minimize the effects of this event and caused significant sedimentation into the stream.
9. Pumping of water over Tote Road at KM6
    - Water was pumped over the Tote Road at KM6 because the culvert was frozen preventing the free passage of water underneath the road. At the time of inspection, the pump was not discharging; however, erosion and sediment loaded water was noted downstream of the pump. There was a suitable location for the discharge approximately 5 metres from the discharge location.
10. It is understood that project infrastructure and activities have the potential to influence watercourses. BIMC

has a *Surface Water and Aquatic Ecosystems Management Plan, 2015* in place outlining their commitment and plan to prevent the deposition of sediment into a water body. Preventative measures are a significant part of this plan and must be implemented throughout the life of the project, consistent with conditions of their water licences. BIMC has taken steps to address identified sites of specific concern (Yard Swale near MS-MRY-1) and has a history of willing to work towards preventing sedimentation and erosion.

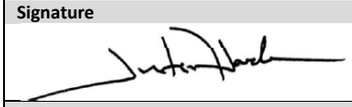
11. However, activities continue to occur on the site where best practices have not been implemented, as outlined in their *Surface Water and Aquatic Ecosystems Management Plan, 2015.* To manage this issue of concern, BIMC Environment has committed to conduct inspections of sedimentation and erosion control measures related to construction, and will be ensuring that the Project Manager of road construction and his/her staff are educated on proper procedures. This is a major concern for the inspector and will be a point of focus during the next inspection.

Sites of Concern Managed by a Compliance Action Plan:

12. Drilling/Road Salt (Calcium Chloride)
    - Since the August 21-25 2014 Inspection, BIMC has submitted a plan to address concerns AANDC Water Resource Officers had with the storage of Calcium Chloride near the quarry site at Milne Inlet.
    - As per the plan, BIMC has segregated salt bags and debris that have the potential to become windblown to prevent them from becoming displaced around site.
    - On June 30, 2015 BIMC requested an extension of their July 1, 2015 deadline to July 31, 2015 for the clean-up of compromised salt bags due to unforeseen delays as a result of reallocations of manpower resources.
    - During the inspection on site, it was observed that BIMC has made significant progress towards their meeting their deadline of July 1, 2015. By way of this report, I recognize this is a reasonable request and recognize July 31, 2015 as the new deadline.
13. Waste Ash in barrels near incinerator
    - During the inspection on site, it was observed that BIMC continues to work towards meeting the deadlines of disposing the Category 1 Ash by July 31, 2015.
    - The Soil Monitoring Report and Final Summary Report of this activity are due September 30, 2015.
    - AANDC Water Inspector will monitor these deliverables as they become due.

Sites of Concern noted from previous Inspection:

14. Erosion and Sedimentation from construction activities
    - This concern has been observed again during this inspection and is addressed in the erosion/sedimentation section above.
15. Debris or Sediment pushed into watercourse at MS-MRY-1.
    - BIMC removed the snow of concern from the watercourse near MS-MRY-1 and has provided documentation to prove this.
    - Snow management continues to be a concern at site and BIMC has committed to a Snow Management Plan by November 30, 2015.
16. Spill into Water Course at KM38 of Tote Road
    - BIMC has filed a spill report about this spill.
    - It was noted on site that spill trays were being used on equipment stored or used near a watercourse.

Inspector's Name	
Justin Hack	
Signature	
	
Date	
July 2, 2015	

July 29, 2015

Resource Management Officer
Nunavut Field Operations
Aboriginal Affairs and Northern Development Canada
PO Box 219
Box 100
Iqaluit, NU X0A 0H0
Justin.Hack@aandc-aancd.cg.ca

Re: Follow up June 16-17, 2015 AANDC Water Licence Inspections - Water Licences Nos. 2AM-MRY1325, 8BC-MRY1416, 2BE-MRY1421 - Mary River Project

A Water Licence Inspection was conducted on June 16-17, 2015, on Baffinalnd's Mary River Project, by the Aboriginal Affairs and Northern Development Canada (AANDC) Water Resource officer. During the inspection, some concerns were identified and these concerns are outlined in the attached Inspection Report.

The attached Table A.1 provides a table that summarizes the Inspector's key observations and concerns along with Baffinland's responses.

Should you require further information on the above, please feel free to contact the undersigned at (647) 253-0596 Ext. 6010 or Jim Millard at (902) 403-1337.

Prepared by:

Trevor Myers.
Environmental Superintendent

Reviewed by:

James Millard, M.Sc, P.Geo..
Environmental Manager

Attachments: AANDC Water Licence Inspection Report, dated July 2, 2015 (3 pages).
Table A.1 (2 pages)

cc. Allan Knight, Oliver Curran, Erik Madsen, Michael Anderson (Baffinland).

Erik Allain, Scott Burgess, AANDC

Aboriginal Affairs and Northern Development Canada | Affaires autochtones et Développement du Nord Canada

WATER LICENCE INSPECTION FORM

☒ Original
☐ Follow-Up Report

Licensee	Licensee Representative
Baffinland Iron Mines Corporation (BIMC)	Jim MILLARD/Allan KNIGHT/Trevor MYERS
Licence No. / Expiry	**Representative's Title**
2AM-MRY1325	Environmental Manager
Land / Other Authorizations	**Land / Other Authorizations**
8BC-MRY1416, 2BE-MRY1421	N2014X0012, N2014Q0016, N2014C0013
Date of Inspection	**Inspector**
June 16-17, 2015	Justin HACK

Activities Inspected

☒ Camp ☐ Drilling ☒ Mining ☒ Construction ☐ Reclamation ☒ Fuel Storage
☒ Roads/Hauling ☐ Other: ☐ Other:

Conditions: **A - Acceptable** **C - Concern** **U - Unacceptable** **NA – Not Applicable** **NI – Not Inspected**

Water Use	Condition	Comment	Site Conditions	Condition	Comment	Haz/Mat Management	Condition	Comment
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Flow Measure. Device	NI		**Culverts / Bridges**	**C**	7	Spills	A	
Source:	A		Drainage	A		Spill Plan	A	
Water Use:	A		**Erosion / Sediment**	**U**	8,9,10, 11			
Recirculation (y /n)	NA		**Mitigation Measures**	**C**	4	**Administrative**		
			Reclamation Activities	A		Records	A	
			Materials Storage	**C**	5,6	Reports	A	
Waste Disposal			Signage	A		**Plans**	**A**	12,13
Waste Water	A					Notifications	A	
Solid Waste	A		**Monitoring**			**Other**		
Hazardous Waste	A		Sample Collection / Analysis	NI		**Follow-up from previous inspection**	**A**	14, 15 16

**The number in the comments field will correspond with specific comments provided below.*

Samples taken by Inspector:	Location(s):
☐ Yes ☒ No	

SECTION 1 ☒ **Comments** ☐ **Non-Compliance with Act or Licence** ☐ **Action Required**

Inspectors Statement

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Canada

SECTION 2	☐ Comments	☐ Non-Compliance with Act or Licence	☒ Action Required

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    - Proper diversion ditches have not been installed around the Ore Stockpile Pad. BIMC has agreed to follow-up with the responsible party and will provide a date for implementation in a response to this report. In the meantime, BIMC will be monitoring and sampling run-off from this facility weekly in the interim.
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    - The lip of the settling pond liner was exposed at the entrance to the western ore stockpile settling pond at Milne Inlet. The lip of the liner should be buried according to engineered drawings. Again, BIMC will be following up with the responsible party and will provide a date for implementation in a response to this report.

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4. Application of Calcium Carbonate on roads
    - It was observed that calcium carbonate (salt) was being applied to the road without a water truck applying water to the salt.
    - It is recommended that a water truck and the salt truck operate in tandem to prevent the potential for salt to become windblown.

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7. Culvert installations and extensions are still ongoing throughout the site
    - Now that freshet is happening, BIMC is reminded to implement sediment and erosion control measures, prior to and during their construction to prevent and minimize sediment loading into water.

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10. It is understood that project infrastructure and activities have the potential to influence watercourses. BIMC

has a *Surface Water and Aquatic Ecosystems Management Plan, 2015* in place outlining their commitment and plan to prevent the deposition of sediment into a water body. Preventative measures are a significant part of this plan and must be implemented throughout the life of the project, consistent with conditions of their water licences. BIMC has taken steps to address identified sites of specific concern (Yard Swale near MS-MRY-1) and has a history of willing to work towards preventing sedimentation and erosion.

11. However, activities continue to occur on the site where best practices have not been implemented, as outlined in their *Surface Water and Aquatic Ecosystems Management Plan, 2015.* To manage this issue of concern, BIMC Environment has committed to conduct inspections of sedimentation and erosion control measures related to construction, and will be ensuring that the Project Manager of road construction and his/her staff are educated on proper procedures. This is a major concern for the inspector and will be a point of focus during the next inspection.

Sites of Concern Managed by a Compliance Action Plan:

12. Drilling/Road Salt (Calcium Chloride)
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    - As per the plan, BIMC has segregated salt bags and debris that have the potential to become windblown to prevent them from becoming displaced around site.
    - On June 30, 2015 BIMC requested an extension of their July 1, 2015 deadline to July 31, 2015 for the clean-up of compromised salt bags due to unforeseen delays as a result of reallocations of manpower resources.
    - During the inspection on site, it was observed that BIMC has made significant progress towards their meeting their deadline of July 1, 2015. By way of this report, I recognize this is a reasonable request and recognize July 31, 2015 as the new deadline.
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    - During the inspection on site, it was observed that BIMC continues to work towards meeting the deadlines of disposing the Category 1 Ash by July 31, 2015.
    - The Soil Monitoring Report and Final Summary Report of this activity are due September 30, 2015.
    - AANDC Water Inspector will monitor these deliverables as they become due.

Sites of Concern noted from previous Inspection:

14. Erosion and Sedimentation from construction activities
    - This concern has been observed again during this inspection and is addressed in the erosion/sedimentation section above.
15. Debris or Sediment pushed into watercourse at MS-MRY-1.
    - BIMC removed the snow of concern from the watercourse near MS-MRY-1 and has provided documentation to prove this.
    - Snow management continues to be a concern at site and BIMC has committed to a Snow Management Plan by November 30, 2015.
16. Spill into Water Course at KM38 of Tote Road
    - BIMC has filed a spill report about this spill.
    - It was noted on site that spill trays were being used on equipment stored or used near a watercourse.

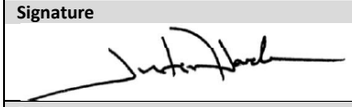
Inspector's Name	
Justin Hack	
Signature	
	
Date	
July 2, 2015	

Table A.1 - Response to AANDC Water Licence Inspection - June 16-17, 2015		
ITEM No.[1]	**Observation or Item of Concern**	**Baffinland Response**
Waste Management Structures		
1	*Silt fences - many silt fences at site appear to be unmaintained and collapsed in areas. Maintain where still required and remove where no longer required.*	It is typical for silt fences to fill full of silt and sand and collapse once they have reached capacity. During the 2015 open water season, collapsed fences will be removed and landfilled. This will be substantially completed by September 15.
2	*Ore Stockpile Pad at Milne Inlet - proper diversion ditches have not been installed around the Ore Stockpile Pad.* *- Implementation date required.* *- Monitoring and sampling run-off from this facility weekly in the interim.*	Ditching system cannot be constructed until ore stockpile reaches its full areal extent. Also there is infrastrcture that is currently impeding this effort. The infrastructure will be removed and the ditching system will be in place for freshet 2016.
3	*Ore Stockpile Settling Pond at Milne Inlet - the lip of the settling pond liner was exposed at the entrance to the western ore stockpile settling pond at Milne Inlet.* *- Implementation date required.*	This will be addressed by freshet 2016.
Mitigation Measures		
4	*Application of Salt on roads - salt was being applied to the road without a water truck applying water to the salt. Inspectors recommendation that a water truck and the salt truck operate in tandem to prevent the potential for salt to become wind blown. What are the future plans for the use and application of dust suppression on the project?*	Baffinalnd excepts this recommendation, however, there may be times when there is a short interval where the water truck follows at some distance after the calcium chloride ($CaCl_2$) is applied. Baffinalnd does not consider this to be a problem so long as the $CaCl_2$ does not become windblown. The plan is to continue to utilize granular $CaCl_2$ stored at the Mine Site and at Milne Port. The $CaCl_2$has to date been applied in granular form. Howeveer, there are plans to commence applying the $CaCl_2$ as a brine. Flake $CaCl_2$ has been ordered for this year's sealift which is better suited for application as a brine. EK35, a non toxic and aircraft approved dust suppressent is to be applied to the airstrip this summer.
Materials Storage		
5	*Storage of materials and equipment within 31m above the ordinary High Water Mark of any water body.* *- sealift crates at explosives magazine storage on Mine Road is within 31m of a Mary River tributary, Inspector requests plan to be provided before the next Inspection -* ***July 30, 2015*** *.*	The sealift crates have been moved as requested. The explosive magazines remain in place.
6	*Deposition of snow containing debris and sediment within 31m of water. Deposition of large quantities of snow containing high levels of sediment and debris near water is unacceptable.* *- develop and implement a Snow Management Plan by* ***November 30, 2015*** *.* *- develop action plan for removal of sediments located near the Aerodrome drainage by* ***July 15, 2015*** *.* *- Snow containing sediment and debris near the hazardous waste berm at Milne Inlet to be removed by* ***July 1, 2015*** *.* *- the deposition of sand containing debris, as a result of snow disposal, at edge of '07 Laydown is within 31m of tributary needs to be removed by* ***July 15, 2015***	- Baffinland will develop a Snow Management Plan by November 30, 2015. - With regard to the sediments located near the Aearodrome drainage, our plan is to access the area during September or early October once the ground surface is adequately frozen. In the meantime, silt fences have been installed around the sediment pile to reduce the likelihood of sediment release to the stream. - Snow containing sediment and debris near the hazardous waste berm at Milne Inlet twas removed prior to July 1, 2015. - the material at the edge of '07 Laydown was removed as requested before July 15, 2015.
Culverts/Bridges		
7	*Culvert installations and extensions are still ongoing throughout the site* *- reminder to implement sediment and erosion control measures, prior to and during their construction to prevent and minimize sediment loading into the water.*	Noted.

Erosion and Sedimentation		
8	*Construction on the Tote Road at KM76.5* *- best management practices not implemented during construction which resulted in water flowing through an improperly constructed berm, onto the road, and into a tributary. Erosion and sedimentation control measures were not in place to minimize the effects of this event and caused significant sedimentation into the stream.*	The situation has since been rectified with the installation of numerous silt fences, rock berms, and other structures.
9	*Pumping of water over Tote Road at KM6* *Water was being pumped over the Tote Road at KM6 because the culvert was frozen preventing the free passage of water underneath the road. At the time of the Inspection, the pump was not dicharging,; however, erorsion and sediment loaded water was noted downstream of the pump. There was a suitable location for the discharge approximately 5 metres from the discharge location.*	Tote road freshet crews were warned about this practice and correct procedures are now being followed.
10	*It is understood that project infrastructure and activities have the potential to influence watercourses. The Surface Water and Aquatic Ecosystems Management Plan, 2015 is in place outlining commitments and plans to prevent the deposition of sediment into a water body.Preventative measures are a significant part of this plan and must be implemented throughout the life of the project, consistent with the conditions of the Water Licience. There have been steps taken to address identified sites of specific concern and work undertaken to prevent sedimentation and erosion.*	Agreed.
11	*However, activities continue to occur on the site where best practices have not been implemented, as outlined in the SW&AEMP, 2015.* *To manage this issue of concern, Environment has committed to conduct inspections of sedimentation and erosion control measures related to construction, and ensuring that the Project Manager(s) of road construction and staff are educated on proper procedures.This is a major concern for the Inspector and will be a point of focus during the next inspection.*	Noted. A concerted effort has been undertaken to improve sediment control practices at the referenced locations as well as at othe locations along the road.
Sites of Concern Managed by a Compliance Action Plan		
12	*Drilling/Road Salt (Calcium chloride)* *- Cleanup of compromized salt bags by ~~July 1, 2015~~* ***July 31, 2015.***	The clean-up is now substantially complete for the historical debris and compromized salt bags.
13	*Waste Ash in barrels near incinerator* *- deadline of* ***July 31, 2015*** *to dispose of Category 1 Ash - (landfill)* *- soil monitoring and final summary report due* ***September 30, 2015***	Category 1 Ash has been transported to the landfill. Soil monitoring and final summary to be completed by September 30.
Sites of Concern noted from previous inspection		
14	*Erosion and Sedimentation from construction activities* *- concern observed again and is addressed in the erosion/sedimentation section above*	Noted.
15	*Debris or Sediment pushed into watercourse at MS-MRY-1* *- snow of concern removed and documentation provided* *- Snow management continues to be a concern of the Inspector and a Snow Management Plan has been committed to by* ***November 30, 2015***	Noted.
16	*Spill into Water Course at KM38 of Tote Road* *- Spill report filed* *- Inspector noted spill trays were being used on equipment stored or used near a watercourse.*	Noted.

Notes:

[1] Item No. as referenced in AANDC Water Licence Inspection Report June 16-17, 2015

Aboriginal Affairs and Northern Development Canada | Affaires autochtones et Développement du Nord Canada

WATER LICENCE INSPECTION FORM

☒ Original
☐ Follow-Up Report

Licensee	Licensee Representative
Baffinland Iron Mines Corporation (BIMC)	Jim MILLARD/Allan KNIGHT/Trevor MYERS
Licence No. / Expiry	**Representative's Title**
2AM-MRY1325	Environmental Manager
Land / Other Authorizations	**Land / Other Authorizations**
8BC-MRY1416, 2BE-MRY1421	N2014X0012, N2014Q0016, N2014C0013
Date of Inspection	**Inspector**
July 30 – August 3, 2015	Justin HACK

Activities Inspected

☒ Camp ☐ Drilling ☒ Mining ☒ Construction ☐ Reclamation ☒ Fuel Storage
☒ Roads/Hauling ☐ Other: ☐ Other:

Conditions: **A - Acceptable** **C - Concern** **U - Unacceptable** **NA – Not Applicable** **NI – Not Inspected**

Water Use	Condition	Comment	Site Conditions	Condition	Comment	Haz/Mat Management	Condition	Comment
Intake/Screen	NI		**Water Management Structures**	**C**		**Storage**	**C**	
Flow Measure. Device	NI		Culverts / Bridges	A		Spills	A	
Source:	A		Drainage	A		Spill Plan	A	
Water Use:	A		**Erosion / Sediment**	**C**				
Recirculation (y /n)	NA		**Mitigation Measures**	**C**		**Administrative**		
			Reclamation Activities	A		Records	A	
			Materials Storage	A		Reports	A	
Waste Disposal			Signage	A		Plans	A	
Waste Water	A					Notifications	A	
Solid Waste	A		**Monitoring**			**Other**		
Hazardous Waste	**C**		Sample Collection / Analysis	NI		Follow-up from previous inspection	A	

**The number in the comments field will correspond with specific comments provided below.*

Samples taken by Inspector:	Location(s):
☐ Yes ☒ No	

SECTION 1 ☒ **Comments** ☐ **Non-Compliance with Act or Licence** ☐ **Action Required**

Inspectors Statement

On July 30 to August 3 2015, a water licence inspection was conducted at the Mary River Project, Qikiqtani Region, Nunavut. All observations concerning geotechnical earthworks were verified by a third party Geotechnical Engineer that accompanied the Inspector for the Water Licence Inspection.

Sites inspected included the Mary River Mine Site, the Tote Road, the Milne Port area, Steensby Inlet, and Mid-Rail Camp.

Background

At the time of inspection, the Licensee was undertaking activities related to the construction and operation of an open-pit iron ore mine at the Milne Port (Milne Inlet), Mine site (Mary River), Tote Road. Mid-Rail Camp and Steensby Inlet were inactive at the time of inspection.

Given that different licence conditions apply to the project depending on what Phase the project is in, and that the project is in both construction and operation phases, Aboriginal Affairs and Northern Development Canada's (AANDC) Water Resource Officer's are working with the Licensee to ensure all relevant water licence conditions are being met.

Major construction activities on site included the re-grading and/or upgrades of the Tote Road, and upgrades to the Mine Haul Road.

Major activities occurring on site under the scope of the operations phase include the mining, crushing, screening and transportation of ore from Deposit 1 to the Ore Stockpile area at Milne Inlet. Shipping of ore began on August 6, 2015.

No major issues of non-compliance exist on site.

Canada

SECTION 2 ☐ **Comments** ☐ **Non-Compliance with Act or Licence** ☒ **Action Required**

Water Management Structures:

Mine Site

1. Concrete Batch Plant water storage area
    - A temporary water storage berm was constructed for the deposit of by-product from the concrete batch plant. By-product is still contained within this facility.
    - The geotechnical engineer determined that the liner performance was satisfactory.
2. Ore Crushing Sedimentation Pond and Laydown Area
    - The ore crushing and loading pad is a levelled area, followed by a side ditch with a rip-rap lining for erosion control. The ditch has an inlet to the lined sedimentation pond downstream.
    - Two sides of the sedimentation pond follow the natural drainage edge of the area and require erosion protection.
    - The liner had minor tears and punctures which need immediate repairs.
3. Jet Fuel Tank Farm Containment at Aerodrome
    - The crest and profile of the embankments are not being maintained.
    - It is recommended that the containment berms/embankments be treated as structures and their crest width and slopes and all surfaces be maintained to the design profile.
    - It is suggested that a policy preventing mobile equipment access over the crest of any embankments, berms or other lined facilities be developed, communicated to site workers and posted.
4. Bladder Tank Farm Containment
    - This is an old facility and is being decommissioned, the lined containment appears functional. No indications of water seepages were evident on the slopes or in its vicinity.
5. Bulk Fuel Storage Facility Containment
    - No indication of overflow and the geotechnical engineer confirmed there did not appear to be any structural weakness.
    - The embankment crest and some side slopes were not maintained to the design profile as required.
6. Hazardous Waste Containment
    - All of the hazardous waste containment facilities on site are lined.
    - It was noted that the crest width and profiles of some of these facilities near the aerodrome were not in good shape. There were indications of manoeuvring of tracked machinery over the embankment resulting in a disturbed embankment profile. It is recommended these containments receive maintenance.
    - It is suggested that a policy preventing mobile access over the crest of any embankments, berms or other lined facilities be developed, communicated to site workers and posted.
7. Mine Pit and Waste Rock Storage Containment Pond
    - Mine operations have started with excavation into the hill side. A pit is not yet formed.
    - A small waste rock storage pile has been created and a temporary lined collection pond placed immediately downstream of it. Unlined side ditching also directs water to the pond.
    - Excess water in the pond, once tested, is being discharged into the Mary River catchment drainage.
8. Polishing Waste and Stabilization Pond
    - The three pond system appears to perform satisfactory. No drainage or leaks were observed outside containment.
    - The geotechnical engineer highlighted that air bubbles, causing doming of the liner within the facility should be addressed.
9. Jetty at Camp Lake
    - Earth work appears to perform satisfactory.
    - The geotechnical engineer has observed no slope instability, ground instability, or bearing capacity issues.

Milne Port Site

10. Snowmelt Pond and Landfarm Water Containment Facility
    - This is a lined pond and the performance of the berms and liner appeared satisfactory. No bearing capacity, settlement or slope instability, seepage or its manifestations were visible.
11. Ore Stockpile Runoff Collection and Settling Pond (West)
    - Embankments and liner performance appeared satisfactory. No manifestations of settlement, slope instability or seepage were noted.
    - Catchment drainages into the pond should be armored with rip-rap.
12. Ore Stockpile Runoff Collection and Settling Pond (East)
    - Embankments and liner performance appeared satisfactory. No manifestations of settlement, slope instability or seepage were noted.
    - Catchment drainages into the pond should be armored with rip-rap.
    - At the time of the inspection, wind was entering below the liner and allowing it to move. This should be secured to prevent it being lifted and windblown.

- There were indications of active erosion on the terrace edge from run-off close to the Ore Settling Pond. It these are not attended to, it may lead to instability of the pond embankment.

13. Fuel Tank farm Containment
    - This is a lined and fenced facility. Water was collecting in the facility as designed.
    - The embankments and liner performance appeared satisfactory. No bearing capacity, settlement or slope instability, seepage or and its manifestations were visible.
14. Bladder Containment Area
    - This old bladder tankfarm is being decommissioned; the liner appears to be functional.
    - No sign of water seepage was evident on the downstream side of the bladder tankfarm berms.
15. Polishing Waste and Stabilization Pond
    - A lined facility. The liner and embankment performance appeared satisfactory.
    - No drainage or leakages were observed outside the containment and no signs of slope instability or excessive settlement or bearing capacity issues were identified.
16. Hazardous Waste Containment Facility
    - A lined facility. Some of the berm crest widths and profiles were not in good shape and there were indications of manoeuvring of tracked machinery over the berms.
    - It is suggested that these containments be sign-posted warning of the shallow cover material thickness over the liner. Caution should be exercised when placing heavy, sharp, or other large objects which may have the potential to puncture the liner.
    - It is suggested that a policy preventing mobile equipment access over the crest of any embankments, berms or other lined facilities be developed, communicated to site workers and posted.

Steensby Port

17. Fuel Storage Berm
    - The containment berms at Steensby Camp site were in good condition.

Mid-Rail Camp

18. No issues with water management structures present at Mid-Rail camp.

Infrastructure in the Marine Environment:

19. Ore Dock
    - No signs of surface run-off erosion/sedimentation were occurring.

Waste Water:

20. Water discharge locations
    - All discharge locations that were inspected were equipped with appropriate measures to limit erosion from the point of discharge.
    - Reports related to disposal of waste to water were not inspected.

Water Crossings and Culverts:

21. Bridges
    - The geotechnical engineer reported that all bridges and abutments appeared to be in a stable condition.
22. Culverts
    - Installations and extensions are still ongoing throughout the site.
    - All culverts inspected on site were functioning as intended.

Mitigation Measures:

23. Quarry QMR2
    - It was noted that QMR2 had locally thicker overburden and BIMC should consider additional erosion protection measures if Total Suspended Solids exceeds water licence limits.
24. Mine Haul Road
    - In general, the mine haul road surface, ditches, culverts, and runoff collection/sedimentation control ponds, silt fences along the disturbed drainage areas and side slopes appear relatively trouble-free and functional. However, there are limited sections of the haul road where soil conditions are prone to excessive wetness and silt loading which need more attention than other areas.
    - It is noted that remedial work continues to be done on this road to prevent excessive sediment loading; however, it is recommended that BIMC proactively identify areas that are more prone to silt-loading and implement appropriate sedimentation mitigation measures before disturbance occurs.
    - It was observed that significant levels of dust were created from vehicular travel on the road and deposited into water. Calcium chloride is being applied to the road to reduce this effect. Effects of this dust on water are being monitored by BIMC to prevent exceedances of water licensing criteria.
25. Tote Road
    - In general the road surfaces, ditches, culverts, and sedimentation control ponds, silt fences along the disturbed drainage and side slopes all along the road appear to be relatively trouble-free and functional.
    - However, there are some localised sections of the road where perhaps soil conditions are prone to sloughing, excessive wetness and silt loading. In particular, the location near to David Lake (KM78 to 86).

- Again, it is recommended that BIMC proactively identify areas that are more prone to silt-loading and implement appropriate sedimentation mitigation measures before disturbance occurs.
- As well, it was observed that significant levels of dust were created from vehicular travel on the road and deposited into water. Calcium chloride was being applied to the road to reduce this effect. Effects of this dust on water are being monitored by BIMC to prevent exceedances of water licensing criteria

26. Mid-Rail Camp
    - There was some damage to the tent structures from snow load and/or wind damage. Ensure that materials be secured before further wind events blow debris outside of the tents.

Materials Storage:

27. Landfill
    - It was noted that the landfill was compacted well and the surface and side slopes appear to maintain appropriate profiles.
    - There was no indication of any excessive settlements or side buldges or any seepage or slope instability or bearing capacity distress.
28. Calcium Chloride Storage Area
    - Dust suppressant salt bags are stored in large-size sacks located on a hill side near the Q1 Quarry. There were no signs of slope instability, seepage or its manifestations.
    - It is recommended that a perimeter berm/drainage ditch be installed to route the runoff away from the storage and down the slope hill to the drainage ditch along the Tote Road as a preventative measure.
29. Ore Stockpile
    - No accumulation of water was evident on site.
    - No further concerns other than the ditching concern outlined below (#36).

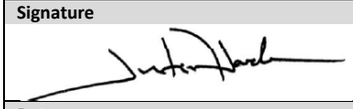
Erosion/Sedimentation:

Sites of Concern noted from previous Inspections:

30. Application of Calcium Chloride on roads not occurring in tandem with Water
    - At the time of the inspection, BIMC was premixing the calcium chloride and water before application.
    - This satisfies my earlier concern.
31. Storage of materials and equipment within 31m above the ordinary High Water Mark of any water body
    - BIMC has satisfied this concern. Shipping containers and crates, used for explosives storage has stopped, and excess containers have been removed from the unauthorized area.
32. Deposition of snow containing debris and sediment within 31m of water
    - All concerns relating to the snow containing debris have been addressed through an action or development of a Plan.
    - The snow containing debris near a watercourse was cleaned up at Milne Port.
    - The snow containing debris at edge of the laydown area near Site Services Building (Mary River) within 31m of a Sheardown Lake tributary has been addressed by BIMC on July 28, 2015.
        i. Silt fences have been installed around this pile and BIMC's plan is to remove this sediment when the ground is adequately frozen.
33. Construction on the Tote Road at KM76.5
    - BIMC has installed silt fences, rock berms and other structures to mitigate further releases of sediment into water at this location.
34. Pumping of water over Tote Road at KM6 causing sedimentation
    - BIMC has warned road crews about this practice during freshet events. Other water discharge locations had appropriate mitigative measures in place.
35. Erosion and Sedimentation from Construction Activities
    - Due to the size of the impacted area, erosion and sedimentation continue to be an issue during the open water season. It is recommended that a BIMC identify areas prone to siltation and implement sedimentation and erosion measures before work begins.
36. Silt fences
    - Silt fences have been addressed as requested in the previous inspection, prior to BIMC's commitment of September 15, 2015.
37. Ore Stockpile Pad Diversion Ditches at Milne Inlet
    - In the previous inspection it was noted that diversion ditches were not installed around the Ore Stockpile Pad.
    - BIMC has identified that this work will be completed by freshet 2016.
38. Ore Stockpile Settling Pond at Milne Inlet
    - In the previous inspection report, it was noted that the liner was not properly keyed-in.
    - The geotechnical engineer confirmed that the catchment drainages needed to be secured with rip-rap and the edges properly keyed-in.
    - BIMC has identified this work will be completed by freshet 2016.

Sites of Concern Managed by a Compliance Action Plan:

39. Drilling/Road Salt (Calcium Chloride)
    - Since the August 21-25 2014 Inspection, BIMC has submitted a plan to address concerns AANDC Water Resource Officers had with the storage of Calcium Chloride near the quarry site at Milne Inlet.
    - BIMC has met the deliverables as set forth in their plan.
40. Waste Ash in barrels near incinerator
    - Since the August 21-25 2014 Inspection, BIMC has submitted a plan to address concerns AANDC Water Resource Officers had with the storage of Waste Ash.
    - As of July 31, 2015 BIMC has met the deadline of disposing of the Category 1 Ash.
    - The Soil Monitoring Report and Final Summary Report of this activity are due September 30, 2015.

Inspector's Name	
Justin Hack	
Signature	
	
Date	
September 25, 2015	

October 23, 2015

Resource Management Officer
Nunavut Field Operations
Aboriginal Affairs and Northern Development Canada
PO Box 219
Box 100
Iqaluit, NU X0A 0H0
Justin.Hack@aandc-aancd.cg.ca

Re: Follow up July 30 – August 3, 2015 AANDC Water Licence Inspections - Water Licences Nos. 2AM-MRY1325, 8BC-MRY1416, 2BE-MRY1421 - Mary River Project

A Water Licence Inspection was conducted on July 30th to August 3rd, 2015, at Baffinland's Mary River Project by the Aboriginal Affairs and Northern Development Canada (AANDC) Water Resource Officers. During the inspection, some concerns were identified and these concerns are outlined in the attached Inspection Report that was received September 25th, 2015.

The attached Table A.1 provides a table that summarizes the Inspector's key observations and concerns along with Baffinland's responses.

Should you require further information on the above, please feel free to contact the undersigned or Allan Knight at (647) 253-0596 Ext. 6010 or Jim Millard at (902) 403-1337.

Prepared by:

Trevor Myers, B.A.(Hon.), M.Sc.
Environmental Superintendent

Reviewed by:

James Millard, M.Sc, P.Geo.
Environmental Manager

Attachments: - AANDC Water Licence Inspection Report, dated July 2, 2015 (5 pages).
- Table A.1 (3 pages)

cc. Bernard Laflamme, Erik Madsen, Tony Woodfine, Bikash Paul, Oliver Curran, Allan Knight, Jennifer St. Paul-Butler (Baffinland).
Erik Allain, Scott Burgess (AANDC)

Aboriginal Affairs and Northern Development Canada | Affaires autochtones et Développement du Nord Canada

WATER LICENCE INSPECTION FORM

☒ Original
☐ Follow-Up Report

Licensee	Licensee Representative
Baffinland Iron Mines Corporation (BIMC)	Jim MILLARD/Allan KNIGHT/Trevor MYERS
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Land / Other Authorizations	**Land / Other Authorizations**
8BC-MRY1416, 2BE-MRY1421	N2014X0012, N2014Q0016, N2014C0013
Date of Inspection	**Inspector**
July 30 – August 3, 2015	Justin HACK

Activities Inspected

☒ Camp ☐ Drilling ☒ Mining ☒ Construction ☐ Reclamation ☒ Fuel Storage
☒ Roads/Hauling ☐ Other: ☐ Other:

Conditions: **A - Acceptable** **C - Concern** **U - Unacceptable** **NA – Not Applicable** **NI – Not Inspected**

Water Use	Condition	Comment	Site Conditions	Condition	Comment	Haz/Mat Management	Condition	Comment
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Flow Measure. Device	NI		Culverts / Bridges	A		Spills	A	
Source:	A		Drainage	A		Spill Plan	A	
Water Use:	A		**Erosion / Sediment**	**C**				
Recirculation (y /n)	NA		**Mitigation Measures**	**C**		**Administrative**		
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Waste Disposal			Signage	A		Plans	A	
Waste Water	A					Notifications	A	
Solid Waste	A		**Monitoring**			**Other**		
Hazardous Waste	**C**		Sample Collection / Analysis	NI		Follow-up from previous inspection	A	

**The number in the comments field will correspond with specific comments provided below.*

Samples taken by Inspector:	Location(s):
☐ Yes ☒ No	

SECTION 1 ☒ **Comments** ☐ **Non-Compliance with Act or Licence** ☐ **Action Required**

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Canada

SECTION 2 ☐ **Comments** ☐ **Non-Compliance with Act or Licence** ☒ **Action Required**

Water Management Structures:

Mine Site

1. Concrete Batch Plant water storage area
    - A temporary water storage berm was constructed for the deposit of by-product from the concrete batch plant. By-product is still contained within this facility.
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    - No indication of overflow and the geotechnical engineer confirmed there did not appear to be any structural weakness.
    - The embankment crest and some side slopes were not maintained to the design profile as required.
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    - It was noted that the crest width and profiles of some of these facilities near the aerodrome were not in good shape. There were indications of manoeuvring of tracked machinery over the embankment resulting in a disturbed embankment profile. It is recommended these containments receive maintenance.
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9. Jetty at Camp Lake
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    - The geotechnical engineer has observed no slope instability, ground instability, or bearing capacity issues.

Milne Port Site

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    - It is suggested that a policy preventing mobile equipment access over the crest of any embankments, berms or other lined facilities be developed, communicated to site workers and posted.

Steensby Port

17. Fuel Storage Berm
    - The containment berms at Steensby Camp site were in good condition.

Mid-Rail Camp

18. No issues with water management structures present at Mid-Rail camp.

Infrastructure in the Marine Environment:

19. Ore Dock
    - No signs of surface run-off erosion/sedimentation were occurring.

Waste Water:

20. Water discharge locations
    - All discharge locations that were inspected were equipped with appropriate measures to limit erosion from the point of discharge.
    - Reports related to disposal of waste to water were not inspected.

Water Crossings and Culverts:

21. Bridges
    - The geotechnical engineer reported that all bridges and abutments appeared to be in a stable condition.
22. Culverts
    - Installations and extensions are still ongoing throughout the site.
    - All culverts inspected on site were functioning as intended.

Mitigation Measures:

23. Quarry QMR2
    - It was noted that QMR2 had locally thicker overburden and BIMC should consider additional erosion protection measures if Total Suspended Solids exceeds water licence limits.
24. Mine Haul Road
    - In general, the mine haul road surface, ditches, culverts, and runoff collection/sedimentation control ponds, silt fences along the disturbed drainage areas and side slopes appear relatively trouble-free and functional. However, there are limited sections of the haul road where soil conditions are prone to excessive wetness and silt loading which need more attention than other areas.
    - It is noted that remedial work continues to be done on this road to prevent excessive sediment loading; however, it is recommended that BIMC proactively identify areas that are more prone to silt-loading and implement appropriate sedimentation mitigation measures before disturbance occurs.
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    - In general the road surfaces, ditches, culverts, and sedimentation control ponds, silt fences along the disturbed drainage and side slopes all along the road appear to be relatively trouble-free and functional.
    - However, there are some localised sections of the road where perhaps soil conditions are prone to sloughing, excessive wetness and silt loading. In particular, the location near to David Lake (KM78 to 86).

- Again, it is recommended that BIMC proactively identify areas that are more prone to silt-loading and implement appropriate sedimentation mitigation measures before disturbance occurs.
- As well, it was observed that significant levels of dust were created from vehicular travel on the road and deposited into water. Calcium chloride was being applied to the road to reduce this effect. Effects of this dust on water are being monitored by BIMC to prevent exceedances of water licensing criteria

26. Mid-Rail Camp
    - There was some damage to the tent structures from snow load and/or wind damage. Ensure that materials be secured before further wind events blow debris outside of the tents.

Materials Storage:

27. Landfill
    - It was noted that the landfill was compacted well and the surface and side slopes appear to maintain appropriate profiles.
    - There was no indication of any excessive settlements or side buldges or any seepage or slope instability or bearing capacity distress.
28. Calcium Chloride Storage Area
    - Dust suppressant salt bags are stored in large-size sacks located on a hill side near the Q1 Quarry. There were no signs of slope instability, seepage or its manifestations.
    - It is recommended that a perimeter berm/drainage ditch be installed to route the runoff away from the storage and down the slope hill to the drainage ditch along the Tote Road as a preventative measure.
29. Ore Stockpile
    - No accumulation of water was evident on site.
    - No further concerns other than the ditching concern outlined below (#36).

Erosion/Sedimentation:

Sites of Concern noted from previous Inspections:

30. Application of Calcium Chloride on roads not occurring in tandem with Water
    - At the time of the inspection, BIMC was premixing the calcium chloride and water before application.
    - This satisfies my earlier concern.
31. Storage of materials and equipment within 31m above the ordinary High Water Mark of any water body
    - BIMC has satisfied this concern. Shipping containers and crates, used for explosives storage has stopped, and excess containers have been removed from the unauthorized area.
32. Deposition of snow containing debris and sediment within 31m of water
    - All concerns relating to the snow containing debris have been addressed through an action or development of a Plan.
    - The snow containing debris near a watercourse was cleaned up at Milne Port.
    - The snow containing debris at edge of the laydown area near Site Services Building (Mary River) within 31m of a Sheardown Lake tributary has been addressed by BIMC on July 28, 2015.
        i. Silt fences have been installed around this pile and BIMC's plan is to remove this sediment when the ground is adequately frozen.
33. Construction on the Tote Road at KM76.5
    - BIMC has installed silt fences, rock berms and other structures to mitigate further releases of sediment into water at this location.
34. Pumping of water over Tote Road at KM6 causing sedimentation
    - BIMC has warned road crews about this practice during freshet events. Other water discharge locations had appropriate mitigative measures in place.
35. Erosion and Sedimentation from Construction Activities
    - Due to the size of the impacted area, erosion and sedimentation continue to be an issue during the open water season. It is recommended that a BIMC identify areas prone to siltation and implement sedimentation and erosion measures before work begins.
36. Silt fences
    - Silt fences have been addressed as requested in the previous inspection, prior to BIMC's commitment of September 15, 2015.
37. Ore Stockpile Pad Diversion Ditches at Milne Inlet
    - In the previous inspection it was noted that diversion ditches were not installed around the Ore Stockpile Pad.
    - BIMC has identified that this work will be completed by freshet 2016.
38. Ore Stockpile Settling Pond at Milne Inlet
    - In the previous inspection report, it was noted that the liner was not properly keyed-in.
    - The geotechnical engineer confirmed that the catchment drainages needed to be secured with rip-rap and the edges properly keyed-in.
    - BIMC has identified this work will be completed by freshet 2016.

Sites of Concern Managed by a Compliance Action Plan:

39. Drilling/Road Salt (Calcium Chloride)
    - Since the August 21-25 2014 Inspection, BIMC has submitted a plan to address concerns AANDC Water Resource Officers had with the storage of Calcium Chloride near the quarry site at Milne Inlet.
    - BIMC has met the deliverables as set forth in their plan.
40. Waste Ash in barrels near incinerator
    - Since the August 21-25 2014 Inspection, BIMC has submitted a plan to address concerns AANDC Water Resource Officers had with the storage of Waste Ash.
    - As of July 31, 2015 BIMC has met the deadline of disposing of the Category 1 Ash.
    - The Soil Monitoring Report and Final Summary Report of this activity are due September 30, 2015.

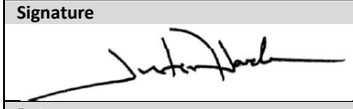
Inspector's Name	
Justin Hack	
Signature	
	
Date	
September 25, 2015	

Table A.1 - Response to AANDC Water Licence Inspection - July 30 - August 3, 2015

ITEM No.[1]	Observation or Item of Concern	Baffinland Responses
Waste Management Structures		
Mine Site		
2	***Ore Crushing Sedimentation Pond*** *- Two sides follow the natural drainage of the area and require erosion protection. Liner had minor tears and punctures which need immediate repairs*	The design engineers for these facilities and our geotechnical inspector have been notified of these observations and have been asked to develop an action plan to address the issues. Action plans will be presented in the cover letter that will accompany the second 2015 geotechnical inspection report to be provided in November 2015.
3	***Jet A Fuel Tank Containment*** *- crest and profile embankments are not being maintained.*	This issue has been brought up by supervisors to their team members and the berms are being monitored to ensure no further disturbance. Consideration is being given to the strategic installation of barriers and/or signs.
5	***Bulk Fuel Storage Facility*** *embankment crest and some side slopes were not maintained to the design profile as required.*	
6	***Hazardous Waste Containment*** *- crest width and profiles of some of these facilities near the Areodrome were not in good shape. Indications of manoeuvering of tracked machinery over the embankment resulting in a disturbed embankment profile.*	
8	***Polishing Waste Stabilizing Pond*** *- The geothechnical engineer highlighted that air bubbles, causing doming of the liner within the facility should be addressed.*	Our geotechnical Engineer has stated that there is no easy way of removing these "bubbles" and they should readily disappear when more effluent is discharged to the containment. In addition, he has stated that they are not likely a cause for concern. Therefore, at this time, there is no further action planned other than to continue to visually observe.
Milne Port Site		
11	***Ore Stockpile Runoff Collection and Settling Ponds*** *catchment drainages into the pond should be armoured with rip-rap.*	Once the drainages for the pond are fully constructed, the armouring will be installed as necessary.
12	***East Ore Stockpile Settling Pond*** *wind entering below the liner and allowing it to move. Indications of active erosion on the terrace edge from run-off close to the Ore Settling Pond.*	More soil ballast will be added on the south edge over the liner which appears subject to impacts from wind. Used tires may be used for this purpose as well.
16	***Hazardous Waste Containment Facility*** *crest widths and profiles were not in good shape and there were indications of manoeuvering of tracked machinery over the berms. It is suggested that these containments be sign posted warning of the shallow cover material thickness over the liner. Caution should be exercized when placing heavy , sharp, or other large objects which may have the potetial to puncture the liner.*	This issue has been brought up by supervisors to their team members and the berms are being monitored to ensure no further disturbance. Consideration is being given to the strategic installation of barriers and/or signs.

Mitigation Measures		
23	***QMR2*** *locally thicker overburden and install additional erosion protection measures if Total Suspended Solids exceed water licence limits.*	The quarry is still active and the unstable area noted in the inspection had already been identified and measures are planned for stabilizing. The QMR2 Quarry Management Plan and Interim Closure and Reclamation Plan includes requirements to ensure for long term stability at the time of closure. Runoff quality is monitored regularly through through the open water season for this area and sedimentation measures are implimented proactively and as required.
24	***Mine Haul Road*** *limited sections of the road are prone to excessive wetness and silt loading which need more attention than other areas.* *It is noted that remedial work continues to be done on this road to prevent excessive sediment loading; however, it is recommended that BIMC proactively identify areas that are more prone to silt loading and implement appropriate sedimentation mitigation measures before disturbance occurs.*	Noted and agreed.
25	***Tote Road*** *localised sections of the road are prone to sloughing, excessive wetness and silt loading. Inparticular, the location near to David Lake (Km78 to 86).*	Further installation of culverts and the use of armour stone in ditches that receive high levels of flow will be completed prior to Freshet 2016.
26	***Mid-Rail Camp*** *damage to the tent structures from snow load and/or wind damage. Ensure that materials be secured before further wind events blow debris outside of the tents.*	This task is scheduled to be completed during the summer, 2016, once the helicopter returns to site.
Materials Storage		
28	***Calcium chloride storage area at Q1*** *perimeter berm/drainage ditch be installed to route the runoff away from the storage and down the slope hill to the drainage along the Tote Road as a preventative measure.*	Visual monitoring and flow mapping of this area will be undertaken during Freshet 2016. Drainage measures will be implimented as appropriate.
Erosion and Sedimentation		
Sites of Concern noted from previous inspection		
30	*Application of Salt on roads - salt was being applied to the road without a water truck applying water to the salt.*	Noted.
31	*Storage of materials and equipment within 31m above the ordinary High Water Mark of any water body.* *- sealift crates at explosives magazine storage on Mine Road is within 31m of a Mary River tributary, Inspector requests plan to be provided before the next Inspection - July 30, 2015.*	This concern has been addressed.
32	*Deposition of snow containing debris and sediment within 31m of water. Deposition of large quantities of snow containing high levels of sediment and debris near water is unacceptable.* *- develop and implement a Snow Management Plan by* ***November 30, 2015*** *.* *- develop action plan for removal of sediments located near the Aerodrome drainage by* ***July 15, 2015 - remove sediments when adequately frozen.*** *- Snow containing sediment and debris near the hazardous waste berm at Milne Inlet to be removed by July 1, 2015 .* *- the deposition of sand containing debris, as a result of snow disposal, at edge of '07 Laydown is within 31m of tributary needs to be removed by July 15, 2015*	A Snow Management Plan will be developed by Nov 30, 2015. Silt fences have installed near Aerodrome drainage to prevent siltation and the sediments will be removed when conditions allow. Snow containing debris near watercourse was removed at Milne Port. Sand containing debris at edge of '07 laydown has also been addressed and erosin control measure installed as a safeguard.

35	***Construction Activities*** *- erosion and sedimentation continue to be an issue during the open water season. Areas prone to siltation need to be identified, and sedimentation and erosion measures implemented before work begins.*	Prior to the commencent of the open water season 2016, sediment and erosion contol measures will be reviewed with departments undertaking construction activities.
37	***Ore Stockpile Pad Diversion Ditches at Milne Inlet*** *- diversion ditches will be installed around the Ore Stockpile Pad completed before* ***freshet 2016.***	Drainage ditches will be constructed prior to freshet 2016
38	***Ore Stockpile Settling Pond at Milne Inlet*** *- catchment drainages need to be secured with rip-rap and the edges properly key-in completed before* ***freshet 2016*** *.*	Erosion protection measures will be implimented prior to freshet 2016.
Sites of Concern Managed by a Compliance Action Plan		
39	***Drilling/Road Salt*** *(Calcium chloride)* *- Cleanup of compromized salt bags by July 31, 2015*	It is Baffinland's understandign that all applicable deliverables have now been met as set forward in plan.
40	***Waste Ash*** *in barrels near incinerator* *- soil monitoring and final summary report due* ***September 30, 2015***	The final summary report was submitted Sept 30, 2015.

Notes:

[1] Item No. as referenced in AANDC Water Licence Inspection Report July 30 to August 3, 2015

Aboriginal Affairs and Northern Development Canada | Affaires autochtones et Développement du Nord Canada

WATER LICENCE INSPECTION FORM

☒ Original
☐ Follow-Up Report

Licensee	Licensee Representative
Baffinland Iron Mines Corporation (BIMC)	Jim MILLARD/Allan KNIGHT/Trevor MYERS
Licence No. / Expiry	**Representative's Title**
2AM-MRY1325	Environmental Manager
Land / Other Authorizations	**Land / Other Authorizations**
8BC-MRY1416, 2BE-MRY1421	N2014X0012, N2014Q0016, N2014C0013
Date of Inspection	**Inspector**
October 6-8, 2015	Justin HACK

Activities Inspected

☒ Camp ☐ Drilling ☒ Mining ☒ Construction ☐ Reclamation ☒ Fuel Storage
☒ Roads/Hauling ☐ Other: ☐ Other:

Conditions: **A - Acceptable** **C - Concern** **U - Unacceptable** **NA – Not Applicable** **NI – Not Inspected**

Water Use	Condition	Comment	Site Conditions	Condition	Comment	Haz/Mat Management	Condition	Comment
Intake/Screen	NI		**Water Management Structures**	**C**	**1, 8-16**	Storage	NI	
Flow Measure. Device	NI		Culverts / Bridges	A		**Spills**	**C**	**6**
Source:	A		Drainage	A		Spill Plan	A	
Water Use:	A		**Erosion / Sediment**	**C**				
Recirculation (y /n)	NA		**Mitigation Measures**	**C**	**17-20**	**Administrative**		
			Reclamation Activities	A		Records	A	
			Materials Storage	A		Reports	A	
Waste Disposal			Signage	A		Plans	A	22
Waste Water	**C**	**7**				Notifications	A	
Solid Waste	A		**Monitoring**			**Other**		
Hazardous Waste	A		Sample Collection / Analysis	NI		Follow-up from previous inspection	A	

**The number in the comments field will correspond with specific comments provided below.*

Samples taken by Inspector:	Location(s):
☐ Yes ☒ No	

SECTION 1 ☒ **Comments** ☐ **Non-Compliance with Act or Licence** ☐ **Action Required**

Inspectors Statement

On October 6-8 2015, a water licence inspection was conducted at the Mary River Project, Qikiqtani Region, Nunavut. Sites inspected included the Mary River Mine Site, the Tote Toad and related infrastructure, and the Milne Port area.

Conditions on Site

Snow cover and frozen conditions throughout the site. No running water evident on the project except at treated sewage effluent discharge locations.

Background

At the time of inspection, the Licensee was undertaking activities related to the construction and operation of an open-pit iron ore mine at the Milne Port (Milne Inlet), Mine site (Mary River), Tote Road. Given that different licence conditions apply to the project depending on what Phase the project is in, and that the project is in both construction and operation phases, Aboriginal Affairs and Northern Development Canada's (AANDC) Water Resource Officer's are working with the Licensee to ensure all relevant water licence conditions are being met.

Most major construction activities have finished; however, upgrades to the Tote Road were still progressing.

Major activities occurring on site under the scope of the operations phase include the mining, crushing, screening and transportation of ore from Deposit 1 to the Ore Stockpile area at Milne Inlet. Shipping of ore began on August 6, 2015.

No major issues of non-compliance exist on site.

Canada

SECTION 2 ☐ **Comments** ☐ **Non-Compliance with Act or Licence** ☒ **Action Required**

Water Management Structures:

1. Jetty at Camp Lake
    a. Significant erosion has occurred at the Jetty at Camp Lake. Further erosion and sedimentation is likely to occur if this issue is not addressed. See **Photo 1**.
    b. BIMC has agreed to provide a schedule and plan on timelines to address this concern by November 15, 2015.
2. No other issues related to Water Management Structures were noted during this site inspection.
3. Water Management Structures were thoroughly inspected during the July 30-August 4 Inspection whereas all earthwork determinations were verified by a third-party geotechnical engineer. BIMC has responded to any concerns related to Water (and waste) Management Structures in their response on October 23, 2015. Issues related to Water Management Structures from previous inspections will be documented below in the section, "Sites of Concern noted from previous Inspection." They will remain in that section until resolved.

Equipment and Materials Storage:

4. In 2014, historical waste ash was noted as a concern related to water.
    a. BIMC developed an action plan to deal with this waste ash.
    b. As confirmed during the inspection, this plan has been successfully completed and a follow-up letter will be issued to BIMC confirming this.

Spills:

5. All spills from August 25, 2014 to October 6, 2015 were visually inspected to ensure sufficient clean-up to prevent waste from entering any water.
    a. A letter to the Spill Line is attached to this report outlining which spills can be closed.
6. Twenty-two of the thirty spills that occurred at Mary River Project involved sewage. Sewage spills continually to be an issue for BIMC and they are regularly occurring on the lay-down areas surrounding the Camp facilities at both Mary River and Milne Port.
    a. BIMC continues to develop solutions to address the underlying problems causing these spills.
    b. Daily monitoring of the sewage lines and the lift stations is requested until this problem is resolved. These reports will be inspected at the next inspection.

Waste Water:

7. Accumulated Water at the new maintenance building at KM60 on the Tote Road
    a. A new maintenance facility for the maintenance of haul-trucks was constructed at KM60 of the Tote Road.
    b. Due to the nature of this building, contaminated water will likely accumulate within this structure.
    c. Since there is no discharge criteria for water related to this activity, I request that BIMC explain how water will be treated within the current scope of their 2AM-MRY1325 Water Licence. Please provide this information by November 30, 2015.

<u>Sites of Concern noted from Previous Inspections:</u>

Water Management Structures:

Mine Site

8. Ore Crushing Sedimentation Pond and Laydown Area
    - Erosion protection needed along the natural drainage edge and minor tear/punctures in the liner require repairs.
    - BIMC outlined an action plan to address this will be presented in the cover letter of the 2nd Geotechnical Inspection Report.
9. Jet Fuel Tank Farm Containment at Aerodrome
    - The crest and profile of the embankments are not being maintained.
    - It is recommended that the containment berms/embankments be treated as structures and their crest width and slopes and all surface be maintained to the design profile.
10. Bulk Fuel Storage Facility Containment
    - The embankment crest and some side slopes were not maintained to the design profile as required.
11. Hazardous Waste Containment
    - It was noted that the crest width and profiles of some of these facilities near the aerodrome were not in good shape. There were indications of manoeuvring of tracked machinery over the embankment resulting in a disturbed embankment profile. It is recommended these containments receive maintenance.
12. Polishing Waste and Stabilization Pond
    - The AANDC geotechnical engineer highlighted that the air bubbles within the facility need to be addressed during a drain-out phase.
    - BIMC has responded and stated that these concerns should readily disappear when more effluent is discharged into the containment.

- These facilities will be monitored.

Milne Port Site

13. Ore Stockpile Runoff Collection and Settling Pond (West)
    - Catchment drainages into the pond should be armored with rip-rap.
    - BIMC indicated that once the pond is fully constructed, rip-rap will be installed as necessary.
14. Ore Stockpile Runoff Collection and Settling Pond (East)
    - Catchment drainages into the pond should be armored with rip-rap.
    - At the time of the inspection, wind was entering below the liner and allowing it to move. This should be secured to prevent it being lifted and windblown.
    - There were indications of active erosion on the terrace edge from run-off close to the Ore Settling Pond. It these are not attended to, it may lead to instability of the pond embankment.
    - BIMC has addressed this issue and indicated more soil ballast will be added on the south edge over the liner.
15. Ore Stockpile Pad Diversion Ditches at Milne Inlet
    - In the previous inspection it was noted that diversion ditches were not installed around the Ore Stockpile Pad.
    - BIMC has identified that this work will be completed by freshet 2016.
16. Hazardous Waste Containment Facility
    - Some of the berm crest widths and profiles were not in good shape and there were indications or manoeuvring of tracked machinery over the berms.
    - It is suggested that these containments be sign-posted warning of the shallow cover material thickness over the liner limiting traffic movements and caution when placing heavy, sharp, or other large objects which may have the potential to puncture the liner.
    - BIMC has addressed this and said consideration is being given to the strategic installation of barriers and/or signs.

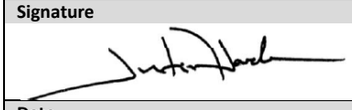
Mitigation Measures:

17. Quarry QMR2
    - It was noted that QMR2 had locally thicker overburden and BIMC should consider additional erosion protection measures if Total Suspended Solids exceeds water licence limits.
    - BIMC has identified this concern and has developed measures for stabilization.
    - It is requested these plans be forwarded to the Inspector.
18. Mine Haul Road
    - Limited sections of the haul road where soil conditions are prone to excessive wetness and silt loading need attention.
    - It is requested that BIMC proactively identify areas that are more prone to silt-loading and implement appropriate sedimentation mitigation measures before disturbance occurs.
19. Tote Road
    - There are some localised sections of the road where perhaps soil conditions are prone to sloughing, excessive wetness and silt loading. In particular, the location near to David Lake (KM78 to 86).
    - Again, it is recommended that BIMC proactively identify areas that are more prone to silt-loading and implement appropriate sedimentation mitigation measures before disturbance occurs.
    - BIMC committed to installing armour stone in ditches that receive high levels of flow prior to Freshet 2016.
20. Mid-Rail Camp
    a. Ensure that materials be secured before further wind events blow debris outside of tents.
    b. BIMC has committed to completing this task in summer 2016 when the helicopter returns to site.

Materials Storage:

21. Calcium Chloride Storage Area
    - It is recommended that a perimeter berm/drainage ditch be installed to route the runoff away from the storage and down the slope hill to the drainage ditch along the Tote Road as a preventative measure.
    - BIMC has committed to visual monitoring and flow mapping of the area during Freshet 2016 and that drainage measures will be implemented as appropriate.
22. Deposition of snow containing debris and sediment within 31m of water
    - All concerns relating to the snow containing debris have been addressed through an action or development of a Plan.
    - The snow containing debris near a watercourse was cleaned up at Milne Port.

Inspector's Name	
Justin Hack	

Signature	
	
Date	
November 9, 2015	

Justin Hack
Water Resource Officer
Iqaluit, NU
PH: 867-975-4517
Email: Justin.hack@aandc.gc.ca

Photo Log #	Location
Photo 1	Camp Lake Jetty

Description: Erosion occurring at Camp Lake jetty

Baffinland

November 15, 2015

Resource Management Officer
Nunavut Field Operations
Aboriginal Affairs and Northern Development Canada
PO Box 219
Box 100
Iqaluit, NU X0A 0H0
Justin.Hack@aandc-aancd.cg.ca

Re: Follow up October 6 to 8, 2015 AANDC Water Licence Inspections - Water Licences Nos. 2AM-MRY1325, 8BC-MRY1416, 2BE-MRY1421 - Mary River Project

A Water Licence Inspection was conducted on October 6th to 8th, 2015, at Baffinalnd's Mary River Project by the Aboriginal Affairs and Northern Development Canada (AANDC) Water Resource officers. During the inspection, some concerns were identified and these concerns are outlined in the attached Inspection Report that was received November 9th.

The attached Table A.1 provides a table that summarizes the Inspector's key observations and concerns along with Baffinland's responses.

Should you require further information on the above, please feel free to contact the undersigned / Allan Knight at (647) 253-0596 Ext. 6010 or Jim Millard at (902) 403-1337.

Prepared by:

Trevor Myers, B.A.(Hon.), M.Sc.
Environmental Superintendent

Reviewed by:

James Millard, M.Sc, P.Geo.
Environmental Manager

Attachments: - AANDC Water Licence Inspection Report, November 9th, 2015 (4 pages).
- Table A.1

cc. Bernard Laflamme, Erik Madsen, Tony Woodfine, Bikash Paul, Oliver Curran, Allan Knight, Jennifer St. Paul-Butler (Baffinland).
Erik Allain, Scott Burgess (AANDC)

Table A.1 - Actions Required to AANDC Water Licence Inspection - October 6th-8th, 2015

ITEM No.[1]	Observation or Item of Concern	Baffinland Responses
Water Management Structures		
1	**Jetty at Camp Lake** a. Significant erosion has occurred at the Jetty at Camp Lake. Further erosion and sedimentation is likely to occur if this issue is not addressed. See Photo 1. b. BIMC has agreed to provide a schedule and plan on timelines to address this concern by November 15, 2015.	The Camp Lake jetty structure has been stable since the erosional event and no further erosion can be expected during iced over conditions, which would typically extend until late June or early July. Construction specialists and the design engineers for this facility have been notified of the problem. The cause of the erosion was due to high winds and wave action during a storm with winds originating from an unusual southwest direction. The existing rip rap / armouring that was installed on the west side of the jetty structure failed. The solution will be to reinstall armouring stone and to increase the size of the rock to be used for that purpose. This effort will require the working surface of the jetty to be widened for stability so that the material placed in-water below the surface of the lake can be safely placed using an excavator. A preliminary action plan with schedule has been developed as follows: a. Winter 2016. Planning and Notifications. Determine whether proposed improvements to the jetty are in accordance with the original IFC design and whether the footprint of the modifications is in conformance with the IFCs and Letter of Advice received from DFO. Contact DFO and other agencies prior to the commencement of work. b. Late June 2016. Preparation. Stockpile clean rock in preparation for the repairs near the work site. Install silt curtains as required around the work area. Locate an alternate intake location in Camp for water supply prior to commencing the repairs. c. July 2016. Complete Repairs. Using an excavator, located on the jetty surface, place clean material so as to increase jetty width and provide a widened jetty traffic surface. Once the jetty is wide enough to support the excavator, rip rap / armour stone will be placed as required. Monitoring: The equipment used for this project will be clean and daily inspections will be undertaken to ensure there are no hydrocarbon leaks. Mobile fuelling will be conducted 31 m from the high water mark of the nearest water body. During the course of the repair turbidity and TSS monitoring in Camp Lake will be undertaken within 30 m of the work activity. If TSS levels increase to levels greater than 100 mg/L within 30 m of the work activity, the work activity will be suspended and additional silt curtains installed as necessary. At the completion of the repairs, post-construction turbidity and TSS monitoring will be undertaken to ensure that the sediment levels return to background concentrations.

Waste Water		
7	**Accumulated Water at the new maintenance building at KM60 on the Tote Road** a. A new maintenance facility for the maintenance of haul-trucks was constructed at KM60 of the Tote Road. b. Due to the nature of this building, contaminated water will likely accumulate within this structure. c. Since there is no discharge criteria for water related to this activity, I request that BIMC explain how water will be treated within the current scope of their 2AM-MRY1325 Water Licence. Please provide this information by November 30, 2015..	a) The facility referred to is a temporary tent structure and pad located at Km 60 of the Tote Road within 30 m of the road alignment. The facility is located near the midpoint of the road between the Mine Site and MIlne Port and is to be used for several purposes. These purposes include: an area of the road that ore truck drivers can pull off for their mobile maintenance requirements (out of the weather); a staging / drop off location for drivers at the start / end of their shifts; and, an emergency shelter location for stranded operators and drivers during inclement weather. The type of work undertaken at this location would be the same type of work undertaken by mobile maintenance crews along the road and would include greasing, tire checks and replacements, and minor repairs. All major repairs would continue to be undertaken at the Milne Port and Mine Site Camps' Maintenance Shops. b) The types of repairs that would be conducted in the tent structure would be the same as those conducted by mobile maintenance vehicles/crews at various locations along the Tote Road. However, maintaining a dedicated location for this type of work improves safety and environmental performance. A welded HDPE liner was installed under the tent structure and the liner was covered with about a 0.2 m thickness of clean soils. Any spill, leak, or meltwater from the trucks within the tent would be effectively contained by the liner and the overlying thickness of soils. The heat within the building would tend to promote active evaporation. It is unlikely that there will be any contaminated water building up within the structure and/or migrating from the structure. c) In consideration of the factors stated above, it is not expected that there would be a water accumulation problem within or from this tent facility. Once use of the tent facility commences, the situation will be monitored to confirm the aforementioned expectations.

Notes:

[1] Item No. as referenced in AANDC Water Licence Inspection Report October 6-8, 2015

Aboriginal Affairs and Northern Development Canada | Affaires autochtones et Développement du Nord Canada

WATER LICENCE INSPECTION FORM

☒ Original
☐ Follow-Up Report

Licensee	Licensee Representative
Baffinland Iron Mines Corporation (BIMC)	Jim MILLARD/Allan KNIGHT/Trevor MYERS
Licence No. / Expiry	**Representative's Title**
2AM-MRY1325	Environmental Manager
Land / Other Authorizations	**Land / Other Authorizations**
8BC-MRY1416, 2BE-MRY1421	N2014X0012, N2014Q0016, N2014C0013
Date of Inspection	**Inspector**
October 6-8, 2015	Justin HACK

Activities Inspected

☒ Camp ☐ Drilling ☒ Mining ☒ Construction ☐ Reclamation ☒ Fuel Storage
☒ Roads/Hauling ☐ Other: ☐ Other:

Conditions: **A - Acceptable** **C - Concern** **U - Unacceptable** **NA – Not Applicable** **NI – Not Inspected**

Water Use	Condition	Comment	Site Conditions	Condition	Comment	Haz/Mat Management	Condition	Comment
Intake/Screen	NI		**Water Management Structures**	**C**	**1, 8-16**	Storage	NI	
Flow Measure. Device	NI		Culverts / Bridges	A		**Spills**	**C**	**6**
Source:	A		Drainage	A		Spill Plan	A	
Water Use:	A		**Erosion / Sediment**	**C**				
Recirculation (y /n)	NA		**Mitigation Measures**	**C**	**17-20**	**Administrative**		
			Reclamation Activities	A		Records	A	
			Materials Storage	A		Reports	A	
Waste Disposal			Signage	A		Plans	A	22
Waste Water	**C**	**7**				Notifications	A	
Solid Waste	A		**Monitoring**			**Other**		
Hazardous Waste	A		Sample Collection / Analysis	NI		Follow-up from previous inspection	A	

**The number in the comments field will correspond with specific comments provided below.*

Samples taken by Inspector:	Location(s):
☐ Yes ☒ No	

SECTION 1 ☒ **Comments** ☐ **Non-Compliance with Act or Licence** ☐ **Action Required**

Inspectors Statement

On October 6-8 2015, a water licence inspection was conducted at the Mary River Project, Qikiqtani Region, Nunavut. Sites inspected included the Mary River Mine Site, the Tote Toad and related infrastructure, and the Milne Port area.

Conditions on Site

Snow cover and frozen conditions throughout the site. No running water evident on the project except at treated sewage effluent discharge locations.

Background

At the time of inspection, the Licensee was undertaking activities related to the construction and operation of an open-pit iron ore mine at the Milne Port (Milne Inlet), Mine site (Mary River), Tote Road. Given that different licence conditions apply to the project depending on what Phase the project is in, and that the project is in both construction and operation phases, Aboriginal Affairs and Northern Development Canada's (AANDC) Water Resource Officer's are working with the Licensee to ensure all relevant water licence conditions are being met.

Most major construction activities have finished; however, upgrades to the Tote Road were still progressing.

Major activities occurring on site under the scope of the operations phase include the mining, crushing, screening and transportation of ore from Deposit 1 to the Ore Stockpile area at Milne Inlet. Shipping of ore began on August 6, 2015.

No major issues of non-compliance exist on site.

Canada

SECTION 2 ☐ **Comments** ☐ **Non-Compliance with Act or Licence** ☒ **Action Required**

Water Management Structures:

1. Jetty at Camp Lake
    a. Significant erosion has occurred at the Jetty at Camp Lake. Further erosion and sedimentation is likely to occur if this issue is not addressed. See **Photo 1**.
    b. BIMC has agreed to provide a schedule and plan on timelines to address this concern by November 15, 2015.
2. No other issues related to Water Management Structures were noted during this site inspection.
3. Water Management Structures were thoroughly inspected during the July 30-August 4 Inspection whereas all earthwork determinations were verified by a third-party geotechnical engineer. BIMC has responded to any concerns related to Water (and waste) Management Structures in their response on October 23, 2015. Issues related to Water Management Structures from previous inspections will be documented below in the section, "Sites of Concern noted from previous Inspection." They will remain in that section until resolved.

Equipment and Materials Storage:

4. In 2014, historical waste ash was noted as a concern related to water.
    a. BIMC developed an action plan to deal with this waste ash.
    b. As confirmed during the inspection, this plan has been successfully completed and a follow-up letter will be issued to BIMC confirming this.

Spills:

5. All spills from August 25, 2014 to October 6, 2015 were visually inspected to ensure sufficient clean-up to prevent waste from entering any water.
    a. A letter to the Spill Line is attached to this report outlining which spills can be closed.
6. Twenty-two of the thirty spills that occurred at Mary River Project involved sewage. Sewage spills continually to be an issue for BIMC and they are regularly occurring on the lay-down areas surrounding the Camp facilities at both Mary River and Milne Port.
    a. BIMC continues to develop solutions to address the underlying problems causing these spills.
    b. Daily monitoring of the sewage lines and the lift stations is requested until this problem is resolved. These reports will be inspected at the next inspection.

Waste Water:

7. Accumulated Water at the new maintenance building at KM60 on the Tote Road
    a. A new maintenance facility for the maintenance of haul-trucks was constructed at KM60 of the Tote Road.
    b. Due to the nature of this building, contaminated water will likely accumulate within this structure.
    c. Since there is no discharge criteria for water related to this activity, I request that BIMC explain how water will be treated within the current scope of their 2AM-MRY1325 Water Licence. Please provide this information by November 30, 2015.

<u>Sites of Concern noted from Previous Inspections:</u>

Water Management Structures:

Mine Site

8. Ore Crushing Sedimentation Pond and Laydown Area
    - Erosion protection needed along the natural drainage edge and minor tear/punctures in the liner require repairs.
    - BIMC outlined an action plan to address this will be presented in the cover letter of the 2nd Geotechnical Inspection Report.
9. Jet Fuel Tank Farm Containment at Aerodrome
    - The crest and profile of the embankments are not being maintained.
    - It is recommended that the containment berms/embankments be treated as structures and their crest width and slopes and all surface be maintained to the design profile.
10. Bulk Fuel Storage Facility Containment
    - The embankment crest and some side slopes were not maintained to the design profile as required.
11. Hazardous Waste Containment
    - It was noted that the crest width and profiles of some of these facilities near the aerodrome were not in good shape. There were indications of manoeuvring of tracked machinery over the embankment resulting in a disturbed embankment profile. It is recommended these containments receive maintenance.
12. Polishing Waste and Stabilization Pond
    - The AANDC geotechnical engineer highlighted that the air bubbles within the facility need to be addressed during a drain-out phase.
    - BIMC has responded and stated that these concerns should readily disappear when more effluent is discharged into the containment.

- These facilities will be monitored.

Milne Port Site

13. Ore Stockpile Runoff Collection and Settling Pond (West)
    - Catchment drainages into the pond should be armored with rip-rap.
    - BIMC indicated that once the pond is fully constructed, rip-rap will be installed as necessary.
14. Ore Stockpile Runoff Collection and Settling Pond (East)
    - Catchment drainages into the pond should be armored with rip-rap.
    - At the time of the inspection, wind was entering below the liner and allowing it to move. This should be secured to prevent it being lifted and windblown.
    - There were indications of active erosion on the terrace edge from run-off close to the Ore Settling Pond. It these are not attended to, it may lead to instability of the pond embankment.
    - BIMC has addressed this issue and indicated more soil ballast will be added on the south edge over the liner.
15. Ore Stockpile Pad Diversion Ditches at Milne Inlet
    - In the previous inspection it was noted that diversion ditches were not installed around the Ore Stockpile Pad.
    - BIMC has identified that this work will be completed by freshet 2016.
16. Hazardous Waste Containment Facility
    - Some of the berm crest widths and profiles were not in good shape and there were indications or manoeuvring of tracked machinery over the berms.
    - It is suggested that these containments be sign-posted warning of the shallow cover material thickness over the liner limiting traffic movements and caution when placing heavy, sharp, or other large objects which may have the potential to puncture the liner.
    - BIMC has addressed this and said consideration is being given to the strategic installation of barriers and/or signs.

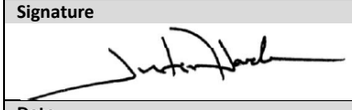
Mitigation Measures:

17. Quarry QMR2
    - It was noted that QMR2 had locally thicker overburden and BIMC should consider additional erosion protection measures if Total Suspended Solids exceeds water licence limits.
    - BIMC has identified this concern and has developed measures for stabilization.
    - It is requested these plans be forwarded to the Inspector.
18. Mine Haul Road
    - Limited sections of the haul road where soil conditions are prone to excessive wetness and silt loading need attention.
    - It is requested that BIMC proactively identify areas that are more prone to silt-loading and implement appropriate sedimentation mitigation measures before disturbance occurs.
19. Tote Road
    - There are some localised sections of the road where perhaps soil conditions are prone to sloughing, excessive wetness and silt loading. In particular, the location near to David Lake (KM78 to 86).
    - Again, it is recommended that BIMC proactively identify areas that are more prone to silt-loading and implement appropriate sedimentation mitigation measures before disturbance occurs.
    - BIMC committed to installing armour stone in ditches that receive high levels of flow prior to Freshet 2016.
20. Mid-Rail Camp
    a. Ensure that materials be secured before further wind events blow debris outside of tents.
    b. BIMC has committed to completing this task in summer 2016 when the helicopter returns to site.

Materials Storage:

21. Calcium Chloride Storage Area
    - It is recommended that a perimeter berm/drainage ditch be installed to route the runoff away from the storage and down the slope hill to the drainage ditch along the Tote Road as a preventative measure.
    - BIMC has committed to visual monitoring and flow mapping of the area during Freshet 2016 and that drainage measures will be implemented as appropriate.
22. Deposition of snow containing debris and sediment within 31m of water
    - All concerns relating to the snow containing debris have been addressed through an action or development of a Plan.
    - The snow containing debris near a watercourse was cleaned up at Milne Port.

Inspector's Name	
Justin Hack	

Signature	
	
Date	
November 9, 2015	

Justin Hack
Water Resource Officer
Iqaluit, NU
PH: 867-975-4517
Email: Justin.hack@aandc.gc.ca

Photo Log #	Location
Photo 1	Camp Lake Jetty

Description: Erosion occurring at Camp Lake jetty

Indigenous and Northern Affairs Canada | Affaires autochtones et du Nord Canada

March 9, 2016

Jim Millard
Baffinland Iron Mines Corporation
2275 Upper Middle Road East
Oakville, ON
Canada L6H 0C3

Re: 2AM-MRY1325 – Visit to Site, December 6-8, 2015

Dear Mr Millard:

On December 6-8, 2015 Indigenous Affairs and Northern Affairs Canada *(INAC)* visited Baffinland Iron Mines Corporation (*BIMC*) for the purpose of completing an inspection related to BIMC's water licence 2AM-MRY1325 and other related INAC Territorial Land permits.

Unfortunately, due to incremental weather, an inspection was not completed on site and therefore no inspection report will be generated.

Sincerely,

Justin Hack
Water Resource Officer
Aboriginal Affairs and Northern Development Canada
Iqaluit, NU
Justin.hack@aandc.gc.ca

cc. Erik Allain, AANDC
Scott Burgess, AANDC