

**APPENDIX E.8.3**  
**WSCC INSPECTION REPORTS**

# Inspection Report

## Mining

**Report Reference:**  
Inspection #: 2018-JP-00071

**OPERATOR**

**BAFFINLAND IRON MINES CORPORATION**  
300 - 2275 Upper Middle Road East  
Attn: Annu Sira  
Oakville, Ontario L6H 0C3

**MINE**

**Mary River Mine Site**  
***MINE MANAGER***  
**Sylvain Proulx**

**INSPECTOR**

Jagadish Patel  
jagadish.patel@wscc.nt.ca

**Inspection Date:** January 24, 2018

**Inspection Details:**

## Milne Port

### Mobile Maintenance Shop

I observed that the construction of the tool crib is in progress for better housekeeping. There are no major issues or concern at the maintenance shop.

**Toromont Shop (Contractor - Toromont Canada)**

At the Toromont shop, log book for the crane was available and duly filled up. I have suggested that the log book be modified to ensure that the date and name of the person inspecting the crane be legibly written in the log book. The supervisor shall sign this log book regularly.

Welding shop

The housekeeping at the welding shop is improved since last visit and I do not have any major concern or issue.

### Grease shop

At the grease shop, two employees were working on loader 988. I discussed the safety matters with the employees.

**New workers need to be instructed properly prior to deploying on the job. (Mine regulation # 6.5)**

## Inspection Report

### Mining

**Report Reference:**

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Fixed plant shop

I have no concern or major issue at the fixed plant shop.

25 Jan 2018

Water Treatment Plant (WTP)

I observed that the log book is available in the WTP is filled up regularly.

Waste Treatment Plant

I was informed that the office is relocating to the environmental lab due to excessive noise by compressor at the WTP.

Incinerator Building

No major concern or issues. Good house keeping at this location.

Ore Pad

I observed that the Ore Haul Truck (OHT) was broken in the Ore Pad area. All the travel roads are maintained in good and house keeping is improved since last visit.

I discussed the safety matters with the loader operator (Jeff) and FLRA (Field Level Risk Assessment) card and Pre- Ops check list were duly filled up.

At the Ore pad, warm shack was found to be in good order.

Lube container

I observed that flammable material is kept in the lube container and I recommended that fire extinguisher shall be available at this place.

Batch Plant

I noticed that the ladders are used at the location and suggested to the supervisor that ladders shall not be used without fall arrest or life guard above 3 m height.



## Inspection Report Mining

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### E house and Gen house

I noticed that at the E house # 5, the exit door does not open from inside which can be dangerous in the case of emergency.

Also, I inspected Switch gear house # 1 and Genset # 6 . No major issue or concern.

26 Jan 2018

### Ware House

No major concern or issue at the ware house.



# Inspection Report

## Mining

**Report Reference:**

Inspection #: 2018-JP-00071

<b>Order Number:</b>	2018-JP-00071-002	<b>Status:</b>	Complied With
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**Required Compliance Date: January 24, 2018**

**Sub-Location:** Lube Container

**Observations:** At the lube container, I noticed that fire extinguisher is not available where the flammable material is stored.

**Order:** Ensure that the fuel sources such as combustible materials and liquids be protected from the fire hazard and set out measures to reduce the hazard from fire.

**Legislation:** Mine Health & Safety Regulations(Nunavut)

**Section 12.01.** The manager shall ensure that a fire risk assessment is carried out not later than March 31 in each calendar year for all parts of the mine, both underground and surface, and the assessment shall identify the need for fire protection and the type of fire protection that should be provided; and

# Inspection Report

## Mining

**Report Reference:**  
Inspection #: 2018-JP-00071

**Order Number:** 2018-JP-00071-003      **Status:** Open

**Required Compliance Date: February 24, 2018**

**Sub-Location:** E-House # 5 - Milne Port

**Observations:** I noticed that at the E house # 5; the exit door does not open from inside which can be dangerous in the case of emergency.

**Order:** Ensure that the exit doors can be open from inside to be able to provide prompt evacuation in emergency.

**Legislation:** Mine Health & Safety Regulations(Nunavut)

**Section 8.35:** The manager shall develop and maintain a system acceptable to the chief inspector for warning all employees, whether underground or in buildings on the surface, of an emergency requiring prompt evacuation of their worksites.





# Inspection Report

## Mining

**Report Reference:**

Inspection #: 2018-JP-00071

## Regulatory Requirements

This report has been issued pursuant to Section 26 of the *Mine Health and Safety Act* which states that a closeout meeting will be held with the manager after completing the inspection and that a written report will follow within 72 hours after the last day of the inspection.

Pursuant to section 28 the manager shall post all inspection reports and orders issued by an inspector in a conspicuous place at the mine for at least 30 days after the manager receives the inspection report or order. Furthermore; pursuant to section 29. (1) the manager shall, within 30 days after receiving an inspection report, submit a written report to the Chief Inspector outlining the remedial measures taken and the remedial measures still to be taken in respect of the inspection report.

Pursuant to section 32. (1) A person who is adversely affected by a decision or order issued by an inspector may appeal the decision or order, in writing, to the Chief Inspector within 30 days after its issue.

**Please return a signed copy of this page as confirmation of receipt.**

Received By:

**Employer Representative  
(Print)**

**Signature**

  
Inspector Signature

*Inspector Signature*



# Inspection Report

## Mining

**Report Reference:**

Inspection #: 2018-JP-00075

It was mentioned that some of the room walls were affected by moulds (Penicillin) and it is being treated prior to the allocation for the residential use by the employees.

28 Jan 2018

Ware House

It was observed that FLRA (field level risk assessment cards were completed by each person.

Loading and moving of the material and goods are carried out with the help of fork lift.

**Crown Wave lifting machine is used for loading and off loading lighter weights upto 17 feet height. (safer practice)**

During the discussion, I was informed that currently focus points are house keeping, slip trips and fall ,3 point contact and no reverse parking.

**Incinerator building and Site service building**

**No concern or issues at the time of inspection.**

Tool Box meeting (Mine Ops night shift)

At the tool box meeting , the supervisor discussed about the "Seat belt at all times" and the meeting was attended by 21 employees.

I observed that all employees were filling up FLRA (Field level risk assessment) card .

29 Jan 2018

### Emulsion plant

### Discussion about the unsafe work report

With regards to unsafe work report # 82F3, DNBI (Dyno Noble Baffinland Iron mine ) will

1. Submit the "policy regarding white out conditions"
2. Provided the documents regarding internal training - roles and responsibility with regards to unsafe work.



## Inspection Report Mining

**Report Reference:**

Inspection #: 2018-JP-00075

With regards to the unsafe work report # BEF6  
DNBI will submit the photos and response to the complaint.

The unsafe work report with regards to # 2C77 , I have discussed the matter with Adam Gyorffy  
(manager mines).

It was reported that there are old and damaged explosives being used at the mine site. Manager shall  
compile the report on the disposal/usage plan for the current inventory including the photograph of the  
status of the Chubs in question.

# Inspection Report

## Mining

**Report Reference:**

Inspection #: 2018-JP-00075

**Order Number:** 2018-JP-00075-001

**Status:** Open

Is this a repeat Order? Yes

Repeat Order Number: 2017-JP-00868 #003-3

**Required Compliance Date: March 31, 2018**

**Sub-Location:** Crusher Area - Mary River

**Observations:** During the inspection, I observed excessive dust at all transit point throughout the crusher area. This is the repetition of the order 2017-JP-00868-003

**Order:** Review the policy and procedure regarding the dust mask and ensure that the MHSR are complied with regards to dust hazard at the crusher area.

**Legislation:** Mine Health & Safety Regulations(Nunavut)

**Section 10.62.** The manager shall, in consultation with the Committee, establish a program to monitor respirable combustible dust to ensure that workers are not exposed to concentrations of respirable combustible dust that exceed the allowable limit.

**Section 10.62.** Where the results of the tests undertaken pursuant to subsections (3) and (3.1) show that the concentration of

(4):

- (a) carbon monoxide exceeds 25 ppm,
- (b) nitrogen dioxides exceed 3 ppm, or
- (c) respirable combustible dust exceeds 1.5 mg per m<sup>3</sup>, the manager shall ensure that immediate action is taken to reduce those concentrations below the limits set out in paragraphs (a) to (c).

**Section 10.62.** The results of every test undertaken pursuant to subsections (3) and (3.1) shall be made available to the Committee. R-026-99.s.34.

**Section 9.03. (1):** The manager shall ensure that a hazard analysis is performed at least once every three years and where the analysis shows that it is necessary, the manager shall

- (a) implement measures to reduce the effect at a work site of potentially hazardous agents and conditions on the health and safety of employees;
- (b) institute engineering controls to ensure that employees are not exposed to a level of any physical, chemical or radiation hazard in excess of the limits in the regulations; and
- (c) where the necessary engineering controls required by paragraph (b) cannot be

**THIS REPORT MUST BE POSTED IN A CONSPICUOUS PLACE**



# Inspection Report

## Mining

**Report Reference:**

Inspection #: 2018-JP-00075

## Regulatory Requirements

This report has been issued pursuant to Section 26 of the *Mine Health and Safety Act* which states that a closeout meeting will be held with the manager after completing the inspection and that a written report will follow within 72 hours after the last day of the inspection.

Pursuant to section 28 the manager shall post all inspection reports and orders issued by an inspector in a conspicuous place at the mine for at least 30 days after the manager receives the inspection report or order. Furthermore; pursuant to section 29. (1) the manager shall, within 30 days after receiving an inspection report, submit a written report to the Chief Inspector outlining the remedial measures taken and the remedial measures still to be taken in respect of the inspection report.

Pursuant to section 32. (1) A person who is adversely affected by a decision or order issued by an inspector may appeal the decision or order, in writing, to the Chief Inspector within 30 days after its issue.

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**Employer Representative**  
(Print)

**Signature**

*Signature*

*Inspector Signature*

# Inspection Report

## Industrial

**Report Reference:**

Inspection #: To be assigned  
Provisional #: PR-2018-BH-200

**EMPLOYER**

**BAFFINLAND IRON MINES CORPORATION**  
300 - 2275 Upper Middle Road East  
Attn: Annu Sira  
Oakville, Ontario L6H 0C3

**INSPECTION LOCATION**

**Mary River Mine Site  
Baffin Island  
MINE/QUARRY - Qikiqtaaluk Region,  
Nunavut**

**OFFICER**

**BarbHeming**  
**[Barb.Heming@wscc.nu.ca](mailto:Barb.Heming@wscc.nu.ca)**  
**Phone: 1-867-979-8524**

**Inspection Date:** March 28, 2018**Accompanied By:**

<u>Role</u>	<u>Name</u>	<u>Phone</u>	<u>Email/Fax</u>
Officer/Inspector	Barb Heming	1-867-979-8524	<a href="mailto:Barb.Heming@wscc.nu.ca">Barb.Heming@wscc.nu.ca</a>
Employer Representative	Shawn Stevens	1-647-253-0596 ext 6006	<a href="mailto:Shawn.Stevens@baffinland.com">Shawn.Stevens@baffinland.com</a>
Employer Representative	Steve Janknegt		

**Inspection Details:**

An inspection was completed at the Baffinland Mary River Mine site on March 28th, 2018 throughout the day by Industrial Senior Safety Officer Barb Heming. The inspection covered a number of buildings and areas within the mine camp including the medical facilities, the camp main building, the main camp kitchen, the fire hall, the new dormitory construction, and the mobile maintenance shop. Additionally I was toured to the mine excavation site, the crusher area, and the explosives area. In attendance during these inspections was Shawn Stevens, Health and Safety Superintendent who provided great assistance and key information throughout the inspection. Additionally I was also accompanied at various times by the Emergency Response Coordinator, Steve Janknegt.

**A number of very positive items were observed during the inspection including:**

Key safety protocols were being observed throughout each facility including the appropriate use of lock out/tag out equipment and tags, critical communications were completed including contact while driving on roadways, prior to accessing certain facilities or contact with heavy equipment operators prior to





## Inspection Report Industrial

**Report Reference:**

Inspection #: To be assigned

Provisional #: PR-2018-BH-200

driving near or behind them, and the activation of emergency response in the event of severe or possibly dangerous weather.

Facility and equipment inspections are being completed, deficiencies notes and corrective actions taken. This was observed in several areas such as the kitchen (broken freezers pending arrival of parts and service technicians, locked out breaker panels in the new construction, recent inspection and re-certification of both the Jordair machine in the fire hall and the 3 ton hoist in the shop and pre use inspections were observed both in the pickup truck we were using and a mobile crane inspected in the Mobile Maintenance shop.

There were a few additional items noted that will require attention.

In the Medical Center:

It was unclear if the Haier Pharmaceutical Refrigerator (Model HYC- had been calibrated as per the manufactures requirements.

In the main camp kitchen:

A Cleveland Manitowoc Convotharm Oven (model OES-20.20, serial number 1305230000451) was found to not be in proper working order and was not locked or tagged out of service.

In the fire hall:

Two electrical units had equipment stacked in front of them blocking access.

In the New Camp Construction Area:

Temporary anchor points installed throughout the facility were not secured in accordance with the manufacturers specifications. These were being used at the tops of the stairwells for access to loading/unloading equipment from the outside.

Additionally, we had a conversation regarding a visible tiger torch that was not in use at the time but present at the work site and what would be required on this site for all hot work.

Lastly, one of the stairwells had no installed hand rails.

In the Mobile Maintenance shop a sling that was damaged and that had no visible tag from the manufacturer indicating load ratings etc was in use with a 3 ton hoist.

A mobile crane (Model IC-08-3G, Serial Number 538260) was observed to be in use however was not in proper working condition with several noted deficiencies appearing in the vehicle inspection book going back to Feb 11, 2018 (start of the book) including broken glass, issues with the exhaust, and a broken door latch. The door latch was tested on site and was confirmed to be not in proper working order.

A log book was not available for review up on request for this unit.

I am issuing directions as part of this report. Procedures for informing the WSCC of compliance with the issued directions, or appealing of one or more of those directions, can be found on the last pages of this report. The employer shall ensure the Record of Compliance (last page of this inspection report) is submitted to me on or before the assigned date.



## Inspection Report Industrial

**Report Reference:**

Inspection #: To be assigned

Provisional #: PR-2018-BH-200





## Inspection Report Industrial

**Report Reference:**

Inspection #: To be assigned

Provisional #: PR-2018-BH-200

Direction Number:

2018-BH-00200-002

Status:

Open

**Required Compliance Date: March 31, 2018**

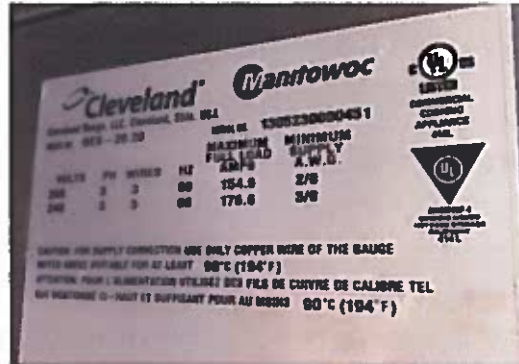
- Observations:** In the main camp kitchen:  
A Cleveland Manitowoc Convotharm Oven (model OES-20.20, serial number 1305230000451) was found to not be in proper working order and was not locked or tagged out of service.
- Direction:** The Employer shall ensure that any equipment that is not in proper working order is removed from service and de-energized until it is fixed/replaced/or discarded.
- Legislation:** Occupational Health and Safety Regulations(Nunavut)
- Section 141:** An employer or supplier shall ensure that machines or other equipment under this Part are constructed, repaired, inspected, tested, maintained and operated in accordance with the manufacturer's specifications or an approved standard.
- Section 22.(2):** An employer shall, as soon as is reasonably possible, correct an unsafe condition found in a plant and take reasonable steps, until the unsafe condition is corrected, to protect the health and safety of workers who could be endangered.

## Inspection Report Industrial

**Report Reference:**

Inspection #: To be assigned

Provisional #: PR-2018-BH-200



# Inspection Report

## Industrial

**Report Reference:**

Inspection #: To be assigned  
Provisional #: PR-2018-BH-200

**Direction Number:** 2018-BH-00200-003      **Status:** Complied With

**Required Compliance Date: March 28, 2018**

**Observations:** In the fire hall:  
Two electrical units had equipment stacked in front of them blocking access.

**Direction:** The Employer shall ensure that all electrical equipment is kept clear of debris and has clear access at all times.  
This item was corrected while on site.

**Legislation:** Occupational Health and Safety Regulations(Nunavut)

**Section 457.(1):** An employer shall ensure that a place where electrical switchgear or transformers operating at high voltage are housed is (a) guarded; (b) kept free of extraneous material; and (c) adequately ventilated.



## Inspection Report Industrial

**Report Reference:**

Inspection #: To be assigned

Provisional #: PR-2018-BH-200







# Inspection Report

## Industrial

**Report Reference:**

**Inspection #:** To be assigned

Provisional #: PR-2018-BH-200

**Direction Number:**

2018-BH-00200-005

**Status:**

Open

**Required Compliance Date: April 04, 2018**

**Observations:** At the New Camp Construction:  
A stairwell had no installed hand rails.

**Direction:** The employer shall ensure all stairwells have appropriate hand railing installed as required.

**Legislation:** Occupational Health and Safety Regulations(Nunavut)

**Section 127.(1):** An employer shall ensure that a stairway with five or more treads (a) is equipped with a handrail that (i) extends the entire length of the stairway, (ii) is adequately secured to the structure, (iii) is installed on the stairway at a height of (A) between 760 mm and 860 mm above the stair tread, measured vertically from the nose of the tread, in the case of a stairway installed before the coming into force of this section, and (B) between 800 mm and 920 mm above the front edge of the treads, in the case of a stairway installed on or after the coming into force of this section, and (iv) is strong enough to support a worker who falls on the stairway; and (b) on an open side, is equipped with both a handrail and an intermediate rail or equivalent safeguard.

Inspection #: To be assigned  
Provisional #: PR-2018-BH-200

**Direction Number:**

2018-BH-00200-006

**Status:**

**Complied With**

**Required Compliance Date: March 28, 2018**

**Observations:** In the Mobile Maintenance shop:  
A sling that was damaged and that had no visible tag from the manufacturer indicating load ratings etc was in use with a 3 ton hoist.

**Direction:** The employer shall ensure that inspections of all hoisting equipment is completed on a regular basis as well as pre use and any non conforming equipment be immediately removed from service until repaired or replaced. This sling was immediately removed from service and destroyed.

**Legislation:** Occupational Health and Safety Regulations(Nunavut)

**Section 234:** An employer shall ensure that (a) rigging is assembled, used, maintained and dismantled under the supervision of a competent worker and in accordance with the manufacturer's specifications; and (b) a worker who is required or permitted to assemble, use, maintain or dismantle rigging is trained in safe rigging practices.

**Section 235:** An employer shall ensure that rigging and components of rigging safely perform their intended function by (a) inspecting them thoroughly at appropriate intervals; and (b) visually inspecting them before each use.

**Section 237.(2):** An employer or supplier shall ensure that a sling is (a) clearly labelled to indicate the sling's maximum load, or the sling's maximum load is made readily available to workers at the work site; and (b) not used if the sling has been or could be damaged.

# Inspection Report

## Industrial

**Report Reference:**

**Inspection #: To be assigned**

Provisional #: PR-2018-BH-200

**Direction Number:**

2018-BH-00200-007

**Status:**

Open

**Required Compliance Date: April 30, 2018**

- |                         |   |
|-------------------------|---|
| <b>Observations:</b>    | <p>In the Mobile Maintenance shop:<br/>A mobile crane (Model IC-08-3G, Serial Number 538260) was observed to be in use however was not in proper working condition with several noted deficiencies appearing in the vehicle inspection book going back to Feb 11, 2018 (start of the book) including broken glass, issues with the exhaust, and a broken door latch. The door latch was tested on site and was confirmed to be not in proper working order.</p> |
| <b>Direction:</b>       | <p>The Employer shall ensure that all equipment is used, inspected, and maintained as per the manufacturers specifications or an approved standard. Any equipment found to be not in safe operating condition shall be locked out and not be used until fixed or replaced.</p>  |
| <b>Legislation:</b>     | <p>Occupational Health and Safety Regulations(Nunavut)</p>  |
| <b>Section 207.(1):</b> | <p>An employer shall ensure that every hoist, crane and lifting device, including rigging, used at a work site is designed, constructed, installed, maintained and operated to perform safely those tasks for which it is used.</p>   |
| <b>Section 222.(2):</b> | <p>If a defect or unsafe condition that could endanger a worker is found in a hoist, crane, lifting device or rigging, an employer or supplier shall (a) take immediate steps to protect the health and safety of a worker who could be endangered until the defect is repaired or the condition is corrected; and (b) as soon as is reasonably possible, repair the defect or correct the condition.</p>   |
| <b>Section 223.(1):</b> | <p>If an inspection of a hoist, crane or lifting device reveals a condition that might render the hoist, crane or lifting device unsafe or incapable of raising a rated load in accordance with section 212, an employer or supplier shall not require or permit the use of the hoist, crane or lifting device until the condition is remedied.</p>   |

## Inspection Report Industrial

**Report Reference:**

Inspection #: To be assigned

Provisional #: PR-2018-BH-200



**Report Reference:**  
Inspection #: To be assigned  
Provisional #: PR-2018-BH-200

**Direction Number:** 2018-BH-00200-008      **Status:** Open

**Required Compliance Date: April 04, 2018**

<b>Observations:</b>	<p>In the Mobile Maintenance shop: A log book for mobile crane Model IC-08-3G, Serial Number 538260 was not available for review upon request for this unit.</p>
<b>Direction:</b>	<p>The Employer shall ensure that this crane has a log book and that it contains all of the required information specific to unit and is available for review by all workers upon request.</p>
<b>Legislation:</b>	<p>Occupational Health and Safety Regulations(Nunavut)</p>
<b>Section 221.(1):</b>	<p>An employer shall (a) provide a log book for each hoist and crane with a rated load exceeding 5 t; (b) ensure that the log book is kept readily available; (c) provide a copy of the log book to the operator on request; (d) ensure that the hours of service of each hoist or crane and details of inspections, maintenance or calibrations required by this Part are recorded in the log book; (e) ensure that each entry in the log book is signed by the individual who performs the inspection, maintenance or calibration; and (f) review and sign the log book at regular intervals.</p>

Inspection #: To be assigned  
Provisional #: PR-2018-BH-200

Pursuant to section 12 and 14 of the Safety Act if a direction given by a safety officer is not complied with, and the safety officer is satisfied that any place, matter or thing which is the subject of the direction may be a source of potential or imminent danger to the health or safety of persons in an establishment, the safety officer may give a further direction that the place, matter or thing shall not be used until the direction is complied with.

Failure to comply with a direction made by a safety officer is an offence under section 22(1)(b) of the Safety Act which may result in charges under section 22(2) of that Act.

Pursuant to section 16 of the Safety Act, if you disagree with a direction or decision of a safety officer you are entitled to appeal to the Chief Safety Officer within 30 days.

**Please return a signed copy of this page as confirmation of receipt.**

Received By:

SHAWN STEVENS  
Employer Representative  
(Print)

Then the

**Signature**

Bab Hing  
Officer Signature

**Officer Signature**



## Inspection Report Industrial

**Report Reference:**

Inspection #: To be assigned

Provisional #: PR-2018-BH-200

### *Record of Compliance*

1. For each direction, once it is complied with, the Employer must:
  - a. Write in the actions taken towards complying with the direction given;
  - b. Initial the line; and
  - c. Fax or e-mail this page to the Safety Officer on or before the listed compliance date.
2. Once all directions are complied with, sign the Record of Compliance and fax or e-mail this page to the Safety Officer.

Direction Number	Compliance Required By	Compliance Status	Date	Initials
2018-BH-00200-001	April 30, 2018			
2018-BH-00200-002	March 31, 2018			
2018-BH-00200-002	March 31, 2018			
2018-BH-00200-003	March 28, 2018			
2018-BH-00200-004	April 20, 2018			
2018-BH-00200-004	April 20, 2018			
2018-BH-00200-005	April 04, 2018			
2018-BH-00200-006	March 28, 2018			
2018-BH-00200-006	March 28, 2018			
2018-BH-00200-006	March 28, 2018			
2018-BH-00200-007	April 30, 2018			
2018-BH-00200-007	April 30, 2018			
2018-BH-00200-007	April 30, 2018			
2018-BH-00200-008	April 04, 2018			

**THIS REPORT MUST BE POSTED IN A CONSPICUOUS PLACE**



Workers' Safety  
& Compensation Commission

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## Inspection Report Industrial

**Report Reference:**

Inspection #: To be assigned

Provisional #: PR-2018-BH-200

Verified by:

\_\_\_\_\_  
Employer Representative  
(Print)

\_\_\_\_\_  
Signature

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# Inspection Report

## Industrial

**Report Reference:**  
Inspection #: 2018-BH-00234

**EMPLOYER**

**BAFFINLAND IRON MINES CORPORATION**  
300 - 2275 Upper Middle Road East  
Attn: Annu Sira  
Oakville, Ontario L6H 0C3

**INSPECTION LOCATION**

**Mary River Mine Site  
Baffin Island  
MINE/QUARRY - Qikiqtaaluk Region,  
Nunavut**

**OFFICER**

**BarbHeming**  
**[Barb.Heming@wscc.nu.ca](mailto:Barb.Heming@wscc.nu.ca)**  
**Phone: 1-867-979-8524**

**Inspection Date:** March 29, 2018

**Accompanied By:**

<b><u>Role</u></b>	<b><u>Name</u></b>	<b><u>Phone</u></b>	<b><u>Email/Fax</u></b>
Officer/Inspector	Barb Heming	1-867-979-8524	<a href="mailto:Barb.Heming@wscc.nu.ca">Barb.Heming@wscc.nu.ca</a>
Employer Representative	Mario Vottero		

**Inspection Details:**

An inspection was conducted on the Mary River Mine at the Port site on March 29, 2018 at approximately 1:30PM by Senior Industrial Safety Officer Barb Heming and Baffinland Safety Coordinator Mario Vottero. During this inspection Mr. Vottero was instrumental in providing critical information regarding the site operations.

During this inspection we visited both the Warehouse and Mobile Machine Shop. Overall I found these facilities to be well run and employees were observed to be working safely, wearing appropriate PPE, as well as complying with site requirements and documented procedures.

Additionally, the following were observed:

### Port - Warehouse

**A damaged strap was observed hanging in the Warehouse. This sling was immediately removed from service.**

An overhead light in one of the isles in was missing the guard to protect it from breaking.



## Inspection Report Industrial

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A conversation was also had between Mr. Vottero, Mr Kevin Rideout, who was working in the warehouse at the time of the inspection, and Myself regarding the need for sufficient eyewash considering there were large batteries on site that have the potential to splash up or otherwise transfer into the face or eyes of a worker. We discussed the proximity of eyewash stations and the abundance of eyewash bottles on the job site.

### Port - Mobile Machine Shop

A sling was observed to be in service hanging on the wall by the tool crib. This sling was immediately removed from service.

I am issuing directions as part of this report. Procedures for information the WSCC of compliance with the issued directions, or appealing of one or more of those directions, can be found on the last pages of this report. The employer shall ensure the record of Compliance (last page of this inspection report) is submitted to me on or before the assigned date.

**Report Reference:**  
Inspection #: 2018-BH-00234

**Direction Number:** 2018-BH-00234-001      **Status:** Open

**Required Compliance Date: April 20, 2018**

**Observations:** In both the Port Warehouse and the Mobile Machine Shop, tow straps or slings/straps were observed to be in service, however both were damaged.

**Direction:** The Employer shall ensure that there is a process in place for the regular inspection of equipment and that any equipment found to be not in proper working order according to the manufacturers specifications be immediately removed from service until it is fixed or replaced. Additionally, all workers must be trained in this process.

**Legislation:** Occupational Health and Safety Regulations(Nunavut)

**Section 18.(2)(e):** The training required by subsection (1) must include procedures, plans, policies and programs that apply to work at the work site; and

**Section 24.(1):** An employer shall ensure that equipment is maintained at intervals that are sufficient to ensure the safe functioning of the equipment.

**Section 24.(2):** If a defect is found in equipment, an employer shall ensure that, as soon as is reasonably possible, (a) steps are taken, until the defect is corrected, to protect the health and safety of workers who could be endangered; and (b) the defect is corrected by a competent worker or the equipment is replaced.

## Inspection Report Industrial

**Report Reference:**  
Inspection #: 2018-BH-00234



## Inspection Report Industrial

Report Reference:  
Inspection #: 2018-BH-00234

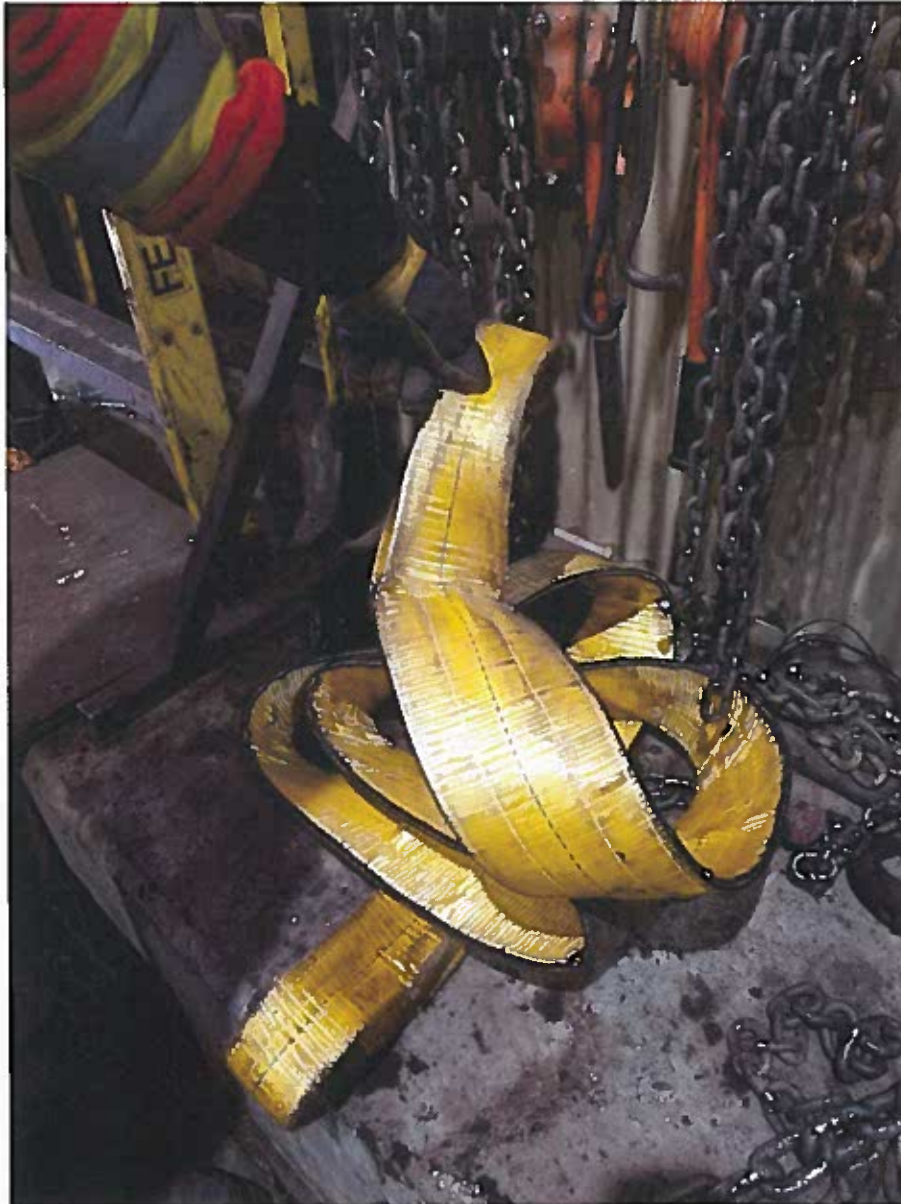


Photo depicts damaged strap however the specific area of damage is not noted in this photo.



# Inspection Report

## Industrial

**Report Reference:**  
Inspection #: 2018-BH-00234

<b>Direction Number:</b>	<b>2018-BH-00234-002</b>	<b>Status:</b>	<b>Open</b>
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**Required Compliance Date: April 13, 2018**

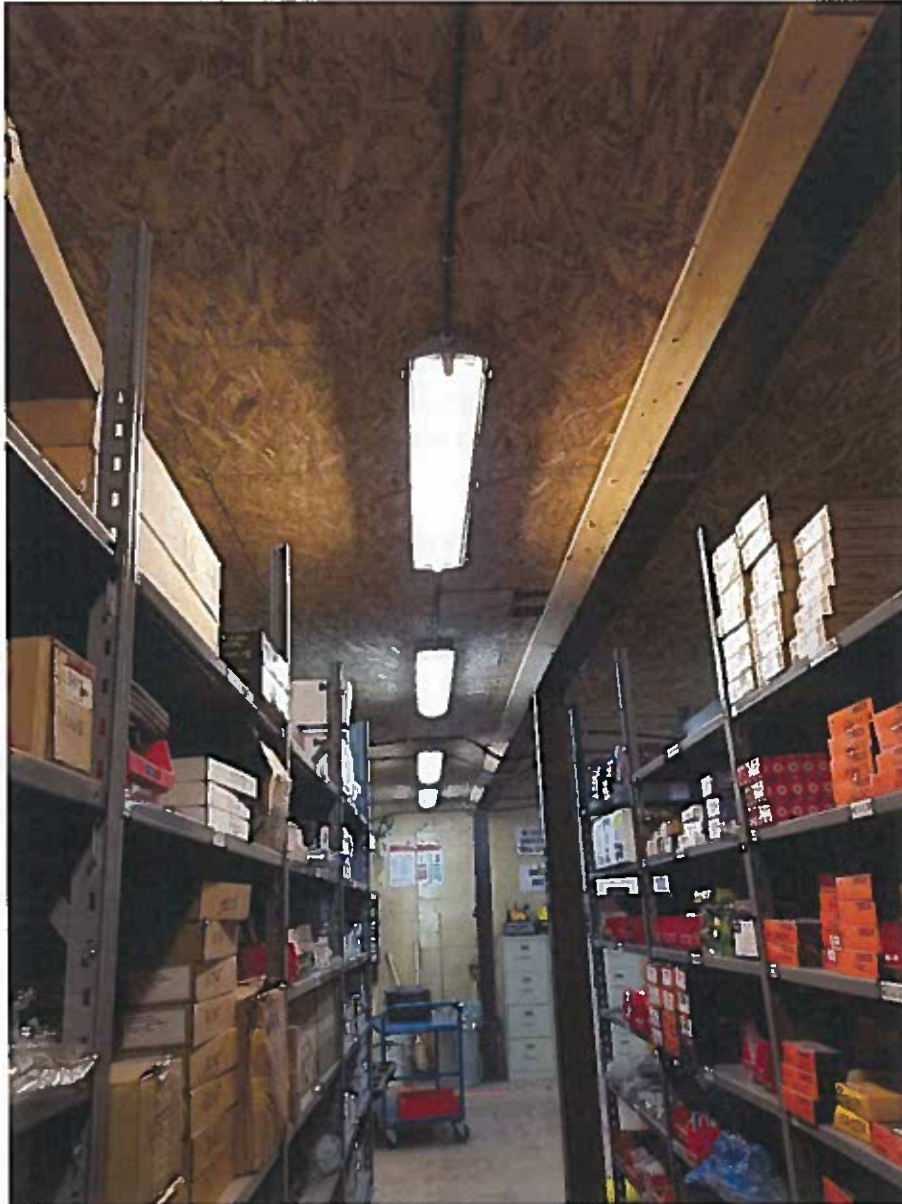
<b>Observations:</b>	<p>Port Warehouse:</p> <p>An overhead light in one of the isles in was missing the guard to protect it from damage.</p>
<b>Direction:</b>	<b>The Employer shall ensure that lights have appropriate guards installed.</b>
<b>Legislation:</b>	Occupational Health and Safety Regulations(Nunavut)
<b>Section 450:</b>	An employer shall ensure that a luminaire that is located at a height of less than 2.1 m above a working or walking surface, is protected against physical or mechanical damage.

## Inspection Report

### Industrial

**Report Reference:**

Inspection #: 2018-BH-00234







## Inspection Report Industrial

**Report Reference:**

Inspection #: 2018-BH-00234

### **Regulatory Requirements**

Pursuant to section 12 and 14 of the Safety Act if a direction given by a safety officer is not complied with, and the safety officer is satisfied that any place, matter or thing which is the subject of the direction may be a source of potential or imminent danger to the health or safety of persons in an establishment, the safety officer may give a further direction that the place, matter or thing shall not be used until the direction is complied with.

Failure to comply with a direction made by a safety officer is an offence under section 22(1)(b) of the Safety Act which may result in charges under section 22(2) of that Act.

Pursuant to section 16 of the Safety Act, if you disagree with a direction or decision of a safety officer you are entitled to appeal to the Chief Safety Officer within 30 days.

Please return a signed copy of this page as confirmation of receipt.

**Received By:**

\_\_\_\_\_  
Employer Representative  
(Print)

\_\_\_\_\_  
Signature

*Bawo H...*  
\_\_\_\_\_  
Officer Signature



## Inspection Report Industrial

**Report Reference:**

Inspection #: 2018-BH-00234

### *Record of Compliance*

1. For each direction, once it is complied with, the Employer must:
  - a. Write in the actions taken towards complying with the direction given;
  - b. Initial the line; and
  - c. Fax or e-mail this page to the Safety Officer on or before the listed compliance date.
2. Once all directions are complied with, sign the Record of Compliance and fax or e-mail this page to the Safety Officer.

Direction Number	Compliance Required By	Compliance Status	Date	Initials
2018-BH-00234-001	April 20, 2018			
2018-BH-00234-002	April 13, 2018			

**Verified by:**

\_\_\_\_\_  
Employer Representative  
(Print)

\_\_\_\_\_  
Signature







# Inspection Report

## Mining

## Report Reference:

Inspection #: 2018-LL-00655

## Regulatory Requirements

This report has been issued pursuant to Section 26 of the *Mine Health and Safety Act* which states that a closeout meeting will be held with the manager after completing the inspection and that a written report will follow within 72 hours after the last day of the inspection.

Pursuant to section 28 the manager shall post all inspection reports and orders issued by an inspector in a conspicuous place at the mine for at least 30 days after the manager receives the inspection report or order. Furthermore; pursuant to section 29. (1) the manager shall, within 30 days after receiving an inspection report, submit a written report to the Chief Inspector outlining the remedial measures taken and the remedial measures still to be taken in respect of the inspection report.

Pursuant to section 32. (1) A person who is adversely affected by a decision or order issued by an inspector may appeal the decision or order, in writing, to the Chief Inspector within 30 days after its issue.

**Please return a signed copy of this page as confirmation of receipt.**

Received By:

*Employer Representative*  
(Print)

*Signature*

*Inspector Signature*

### Translation Requests

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**Una titiraq piinnarialik Inuinnaqtun piyumayaukpat.**

**Ce document est disponible en français sur demande.**

690 Pine Cone Road  
Skead, ON P0M 2Y0  
mobile (705) 929-9467  
[jfuller@xplornet.com](mailto:jfuller@xplornet.com)

Workers' Safety and Compensation Commission  
PO Box 8888  
Yellowknife, NT  
X1A 2R3

August 31, 2018

Attn: Fred Bailey P.Eng., Chief Inspector of Mines

**Subject: Electrical Review of Baffinland Iron Mines: August 29 - 30, 2018**

## **Introduction**

As requested by the Workers Safety and Compensation Commission (WSCC) J.A. FULLER ENGINEERING LTD completed an electrical review of BIM's Mary River Mine Site and Milne Inlet Port Site on August 29<sup>th</sup> and 30<sup>th</sup>, 2018. The purpose of this review was as follows:

1. To visually assess electrical systems and equipment for compliance with the Mine Health and Safety Regulations (MHSR) Section 13.01.
2. To provide general comment on electrical systems and equipment at the mine that may affect health and safety.
3. To provide direction to the WSCC Inspectors on electrical issues affecting health and safety.

This report has been prepared in a manner consistent with the level of care and skill ordinarily exercised for such work. This report is based on visual assessment of electrical systems and equipment to the extent possible without interference to operating or energized equipment. Professional reliance has been used throughout.

A site tour was made of randomly selected E-houses, Generators, power houses, fixed plant shops, Mary River WTP, waste rock dump WTP, Mary River new camp, Mary River Crushers, Crusher Maintenance Shop, Old Camp Pump House, Milne Ore Pad Feeder Generator #416, and Milne Fixed Plant Shop.

## **Observations and Recommendations for Mary River Powerhouses**

1. Not all HV protective relays have been tested within the last three years. This was an item on last year's report. Some protective relays were last checked in April 2014 and some show no evidence of testing. Each protective device for an installation operating at a voltage exceeding 750V shall be tested to confirm that the device prevents the equipment from being operated in excess of its rating before initial use and after every three years of use, and the results shall be documented. Refer to CSA M421-16 Clause 4.5.5. Have the relays checked and the results documented
2. Insulating gloves were last tested in January 2018. ASTM Standard F496 *Standard Specification for In-Service Care of Insulating Gloves and Sleeves* Clause 7.1 states that

the interval between date of issue and electrical retest shall not exceed 6 months for gloves and 12 months for sleeves. Establish a testing schedule such that insulating gloves are electrically retested within 6 months of being issued for service. Gloves or sleeves that have been electrically tested but not issued for service shall not be placed into service unless they have been electrically tested within the previous twelve months.

3. Communication and power cables on the outside wall of the Mary River Powerhouse supervisors shack have not been secured to the wall as required by CEC Rule 12-618 which states that armoured cables shall be supported between boxes and fittings in accordance with Rule 12-510. Secure cables to ensure that no strain may be placed on the cables where they enter enclosures or pass through the wall.

### **Observations and Recommendations for Mary River Fixed Plant Shop**

Satisfactory

### **Observations and Recommendations for Mary River E-house 5**

Satisfactory

### **Observations and Recommendations for Mary River WTP**

Spare fiber optic cable with exposed fibers was left in the plant. Exposed fibers are a hazard. Glass slivers won't degrade like wood. Cap ends of fiber optic cables. Do not leave optical fibers exposed.

### **Observations and Recommendations for Mary River E-house 3**

Satisfactory

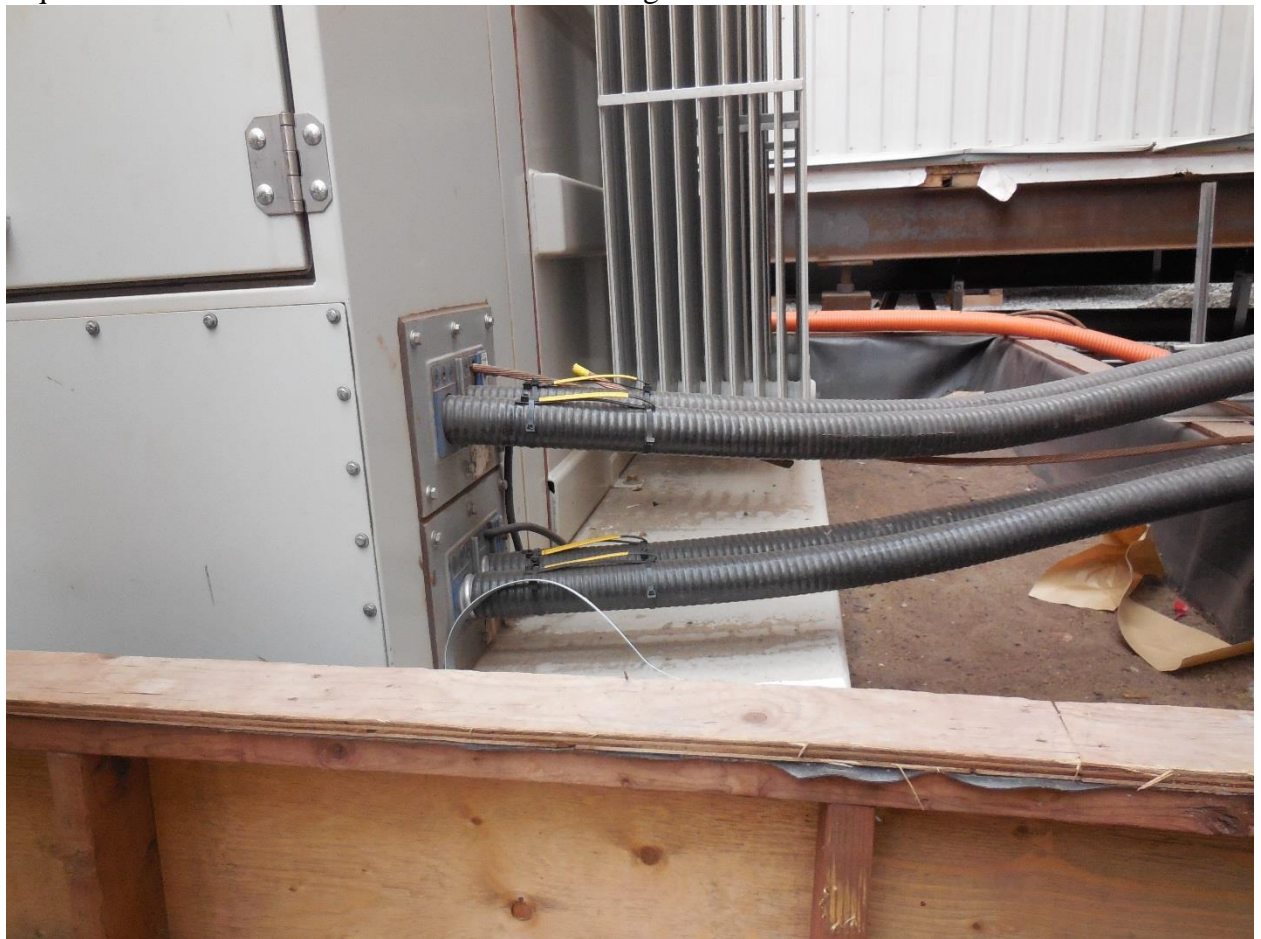
### **Observations and Recommendations for Mary River New Camp**

1. E-house 1611-SUB-001 has a molded case circuit breaker labelled only as SST. This breaker is not on the single line diagram. CSA Standard M421 Clause 4.2.1.1 states, Each mine in which electricity is used shall have a plan or single-line diagram showing the (a) relative location of all fixed electrical distribution equipment; (b) routes, properly noted and referenced, of all fixed power distribution feeders; and (c) rating of all fixed electrical distribution equipment. CSA Standard M421 Clause 4.2.1.2 states, The plans and diagrams specified in Clause 4.2.1.1 shall be regularly reviewed and updated at a frequency not less than that required by the authority having jurisdiction. The Mine Health and Safety Regulations Section 1.117.(1) (b) requires such plans to be revised at suitable intervals not exceeding three months. CEC item 2-100 (3) (a) requires that at each distribution point, circuit breakers, fuses, and switches, shall be marked, adjacent thereto, in a conspicuous and legible manner to indicate clearly which installation or



portion of installation they protect or control. Revise the single line to show the circuit breaker and identify the breaker to clearly indicate what it feeds.

2. Submersible pumps fed with SOW cable were noticed disconnected and lying on the ground beside one of the lift stations. CSA M421 Clause 4.4.1.4 states, Submersible pumps operating at voltages exceeding 150 V to ground shall be supplied by shielded portable power cable and have ground-fault protection and ground-conductor monitoring. Depending on the usage submersible pumps may or may not fall under this requirement. Ensure that submersible pumps are suitable for their intended purpose.
3. Containment for pad mount transformer 1611-SUB-002 is higher than the low voltage cable entries. Review the certified design for containment, revise and re-certify as required such that cable breakouts are not submerged.



4. Ensure that the pad mount transformer and containment is installed in accordance with a certified design and that clearances are in accordance with the CEC Sub-Rule 26-242 (2) which states, Dielectric liquid filled pad-mounted distribution transformers shall be installed at least 3m from any combustible surface or material on a building and at least 6m from any window, door, or ventilation inlet or outlet on a building,

- except where (a) a wall or barrier with non-combustible surfaces or material is constructed between the transformer and any door, window, ventilation opening, or combustible surface; or (b) the transformer is protected by an internal current-limiting fuse and equipped with a pressure relief device, with working spaces around the transformer of at least 3m on the access side and on all other sides: (i) 1m for three-phase transformers; and (ii) 0.6m for single-phase transformers.
5. Local ground electrodes and a perimeter ground loop did not appear to have been installed for the pad mounted transformer. Install the station ground electrode and loop in accordance with the certified design and in accordance with CEC 36-302.
  6. The Mine Health and Safety Regulations Section 13.01.(1) (b) requires that, The electrical system and electrical equipment at a mine shall be constructed in accordance with a design and plans that have been certified by a professional engineer. Submit the certified drawings for the oil filled pad mounted transformer installation for review by the WSCC. The drawings should include: plans and sections detailing the location of the transformer in relationship to buildings, doors, windows, ventilation openings, and/or combustible materials; plans and sections detailing the construction and location of the containment area, grounding plans and details; and 4160V and 600V single line diagrams.
  7. Most existing signage is in French only. Install English language legend plates and signage for all equipment.
  8. Warning notices are to state the highest voltage present and restrict access to authorized personnel only as per CSA M421 Clause 4.2.7.

### **Observations and Recommendations for Mary River Waste Rock Dump WTP**

1. Unit heaters are sitting on pallets. Unit heaters are not identified. Teck cables are not secured. CEC Subrule 62-102 (1) states, electric heating devices shall be assembled and installed in accordance with the manufacturer's instructions and applicable rules of this section. Teck cables must be secured adjacent to connections to boxes and fittings in accordance with CEC Rule 12-618 which references Rule 12-510. Provide proper support for the heaters, provide identification, and secure the cables to relieve strain on the cable connectors.
2. The Teck cable connected to the 150kW generator is not secured. Teck cables must be secured to relieve strain on connectors and terminals in accordance with CEC 12-618 which references Rule 12-510. Attach the Teck cable securely to the generator unit to prevent strain on terminations.
3. The armour of the Teck cable connected to the 150kW generator is not grounded at the generator end. CEC Rule 12-608 states, Armoured cable shall be run in a manner such that the mechanical and electrical continuity of the armour is maintained throughout the run, and the armour of cables shall be mechanically and electrically

secured to all equipment to which it is attached. Install a Teck connector and grounding bushing and bond the Teck armour to the generator ground.

4. Air pumps for the inflatable building are fed with SOW cord. The Canadian Electrical Code Item 4-012 (3) (a) states that, "Flexible cord and cord sets shall not be used as a substitute for the fixed wiring of structures and shall not be (i) permanently secured to any structural member; (ii) run through holes in walls, ceilings, or floors; or (iii) run through doorways, windows, or similar openings." Replace the SOW with Teck cables.

### **Observations and Recommendations for Mary River Crusher Pad**

1. At Crusher C MCC a Category 5 cable is inserted through the access opening on an LB fitting such that the cover cannot be closed.



The CEC Rule 2-112 requires the mechanical arrangement and execution of the work in connection with any electrical installation to be acceptable. Reroute this cable through a proper cable connector or conduit.

2. At Crusher C MCC a Category 5 cable is run through an opening in the ventilation duct such that the cover cannot be installed.



The CEC Rule 2-112 requires the mechanical arrangement and execution of the work in connection with any electrical installation to be acceptable. Also, CEC 60-314 states that communication conductors shall not be placed in ducts or plenum chambers except as permitted by Rules 2-130 and 12-010.

Reroute cable such that it does not interfere with ventilation equipment.



3. At the secondary chassis, sections of cable tray are not supported or bonded. These trays are carrying energized cables.



CEC Subrule 12-2200 (5) states, “Cable trays shall be adequately supported by non-combustible supports”. CEC Subrule 12-2208 (1) states, “Except as provided for in Subrules (2) and (3), metal cable tray shall be bonded at intervals not exceeding 15 m and the size of bonding conductors shall be based on the ampacity of the largest ungrounded conductor as specified in Rule 10-814 in the circuits carried by the cable tray. Provide support for and bond the cable tray.

4. The hydraulic and lube pump motors for Crushers B & C require strain relief connectors at the motor JB's.



Subrule 12-3022 (1) states, “Where conductors pass through the walls of boxes, cabinets, or fittings, provision shall be made to (a) protect the insulation on the conductors from damage; (b) protect terminal connections from external strain; (c) provide electrical continuity between a metal box, cabinet, or fitting and conduit, armour, or metal sheathing of conductors, whether or not the armour or metal sheathing is to be used as a grounding conductor; (d) prevent damage to a non-metallic sheath applied over armour or metal sheathing for protection against moisture or corrosion; and (e) close the openings through which the conductors pass in such a manner that any remaining opening will not permit entrance of a test rod 6.75 mm in diameter.

Re-serve cables into motors using appropriate connectors



5. Noticed a receptacle with the cover missing at crusher B jaw discharge.



CEC Subrule 2-300 (1) states that, “All operating electrical equipment shall be kept in safe and proper working condition.  
Replace the cover.

6. The crusher B control panel door has been damaged and will not close. One of the door fasteners is missing.



CEC Subrule 2-300 (1) states that, "All operating electrical equipment shall be kept in safe and proper working condition.

Repair or replace such that the cover closes tightly and replace the missing fastener.



7. The crusher B control panel has uncapped cable stubs protruding from it.



CSA M421 Clause 4.2.4.1 requires damaged or out of service wiring to have its bare conductors guarded. The cable stubs have been taped.

8. At the crusher B tower control room circuit breaker openings have been left in lighting panel LP-1 interior cover. CEC Rule 12-3024 requires unused openings in boxes, cabinets, and fittings to be effectively closed by plugs or plates affording protection substantially equivalent to that of the wall of the box, cabinet, or fitting. Install approved blank covers.
9. At the crusher B MCC tape has been used to close an opening in the out of service cone crusher #2 starter bucket door. CEC Rule 12-3024 requires unused openings in boxes, cabinets, and fittings to be effectively closed by plugs or plates affording protection substantially equivalent to that of the wall of the box, cabinet, or fitting. Install a steel cover plate.

10. The crusher A control panel door has been damaged in exactly the same way as the crusher B panel in Item 6 above.



CEC Subrule 2-300 (1) states that, “All operating electrical equipment shall be kept in safe and proper working condition.

Repair or replace such that the cover closes tightly and replace the missing fastener. Take measures to avoid this same damage from occurring again.



11. At crusher A electrical cables are hanging in the way of clean up activities.



The CEC Rule 2-112 requires the mechanical arrangement and execution of the work in connection with any electrical installation to be acceptable. Properly support the cables such that they are protected from physical damage during clean up operations.

12. At the crusher maintenance shop a spare feeder cable has been left in place for future use. The conductors are taped but there is no identification on the cable. CSA M421 Clause 4.2.4.1 requires wiring left in place to be identified as out of service and to have its bare conductors guarded. Identify the cable as to its purpose.

13. At the crusher maintenance shop lunch room extension cords have been run through a hole in the wall of the sea can. A power bar was used to feed miscellaneous loads in the lunchroom. The power bar had been damaged by heat from welding on the outside of the sea can.



The Canadian Electrical Code Item 4-012 (3) (a) states that, “Flexible cord and cord sets shall not be used as a substitute for the fixed wiring of structures and shall not be (i) permanently secured to any structural member; (ii) run through holes in walls, ceilings, or floors: or (iii) run through doorways, windows, or similar openings.” The CEC Subrule 2-300 (4) requires defective equipment to be put in good order or permanently disconnected.

The damaged power bar was removed from service.

Install permanent receptacles in the lunchroom as required to eliminate the need for extension cords.

### **Observations and Recommendations for Mary River Old Camp Pump House**

1. The old camp pump house is no longer energized and pump controllers have been removed. Pumps are left in place. These pumps are cabled with G-GC portable power cable which



does not meet the CSA M421 requirements for submersible pumps. Do not re-use these pumps unless they are refurbished with SHD-GC cable.

### **Observations and Recommendations for Milne E-House 5**

1. Lockout adapters for MCB's are required. The E-Houses visited at Mary River were equipped with these lockout devices. Ensure that all E-Houses with molded case circuit breakers are equipped with the required lockout devices

### **Observations and Recommendations for Milne Power House 1**

1. When the stoop at the maintenance door was removed the cadwelded bond was cut and replaced with a bolted connection. The bolted connection was loose and made to a painted surface. The Mine Health and Safety Regulations section 13.01. (1) (b) requires the electrical systems and electrical equipment at a mine to be constructed in accordance with a design and plans that have been certified by a professional engineer.



Reinstall the stair bonds in accordance with the approved design.

2. Not all HV protective relays have been tested within the last three years. This was an item on last year's report. Some protective relays were last checked in April 2014 and some show no evidence of testing. Each protective device for an installation operating at a voltage exceeding 750V shall be tested to confirm that the device prevents the equipment from being operated in excess of its rating before initial use and after every three years of use, and the results shall be documented. Refer to CSA M421-16 Clause 4.5.5. Have the relays checked and the results documented.
3. A circuit was added to the load bank for the power house to provide for load testing of other generators outdoors. The posted single line did not reflect the addition of this potential back-feed into the power house bus. There was also a potential for back-feeding the load side of the disconnect bare conductors outside left in place for connecting to generators. Locks and tags had been placed on the load bank feeder breaker and on the disconnect switch outside in recognition of the potential hazard. The Mine Health and Safety Regulations section 13.01. (1) (b) requires the electrical systems and electrical equipment at a mine to be constructed in accordance with a design and plans that have been certified by a professional engineer. Disconnect and remove the outdoor switch and cabling for testing of other generators using the power house load bank.



**Observations and Recommendations for Milne Power House 2**

1. When the stoop at the maintenance door was removed the cadwelded bond was cut and replaced with a bolted connection. The bolted connection was loose and made to a painted surface. The Mine Health and Safety Regulations section 13.01. (1) (b) requires the electrical systems and electrical equipment at a mine to be constructed in accordance with a design and plans that have been certified by a professional engineer. Reinstall the stair bonds in accordance with the approved design.
2. Not all HV protective relays have been tested within the last three years. This was an item on last year's report. Some protective relays were last checked in April 2014 and some show no evidence of testing. Each protective device for an installation operating at a voltage exceeding 750V shall be tested to confirm that the device prevents the equipment from being operated in excess of its rating before initial use and after every three years of use, and the results shall be documented. Refer to CSA M421-16 Clause 4.5.5. Have the relays checked and the results documented.
3. Folding tables are stored behind switchgear. CEC Rule 2-312 states, Passageways and working space around electrical equipment shall not be used for storage and shall be kept clear of obstruction and arranged to give authorized persons ready access to all parts requiring attention. Relocate the folding tables to another building.

**Observations and Recommendations for Milne Generator 207**

1. The unit heater has been replaced and the replacement unit is sitting on the floor connected with a loop of Teck cable. CEC Subrule 62-102 (1) states, electric heating devices shall be assembled and installed in accordance with the manufacturer's instructions and applicable rules of this section. Complete the permanent installation of the heater.

**Observations and Recommendations for Milne Generators 201 - 206**

Satisfactory – good housekeeping



**Observations and Recommendations for Milne Main Conveyor**

1. The VFD for the sample hammer is mounted on the outside wall of the walkway. The height necessitates an access platform. The foldable access platform provided only extends approximately 0.5 m from the face of the VFD enclosure.

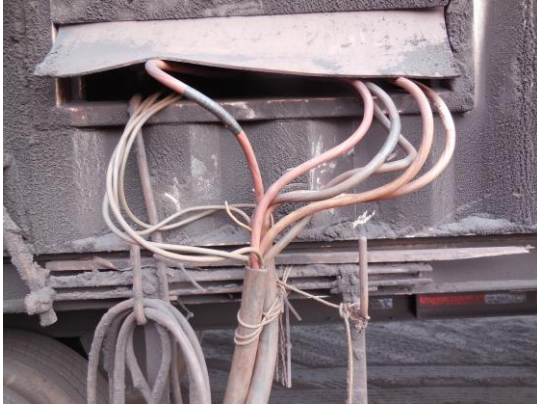


CEC Subrule 2-308 (1) requires a minimum working space of 1 m with secure footing about this type of electrical equipment. Modify the design of the platform to provide 1 m working space. A suggestion was made to add a removable railing on the downhill side as the platform doesn't extend much past the edge of the enclosure and an electrician attempting to use the left hand rule for switching would be well over to that side.



### **Observations and Recommendations for Milne Feeder Conveyor Generator 416**

1. Energized 600V connections are within easy reach of the ground. A rubber flap is draped over the connection area. As can be seen in the pictures below there is nothing preventing contact with the energized terminals. We were told that this arrangement is common to all the feeder conveyor generators.



The CEC Subrule 2-202 (1) states, Bare live parts shall be guarded against accidental contact by means of approved cabinets or other forms of approved enclosures except where the bare live parts are (a) located in a suitable room, vault, or similar enclosed area that is accessible only to qualified persons; or (b) as permitted elsewhere by this Code.

Install a suitable junction box to enclose the energized connections. Use approved strain relief connectors and Kellems grips to connect and support the cables. Areas around the cable terminations were to be barricaded immediately and signage placed to restrict access to authorized personnel and to warn of the 600 V potential.

### **Observations and Recommendations for Milne Fixed Plant Shop**

1. Two disconnect switches not identified. CEC Item 2-100 (3) (a) states, At each distribution point, circuit breakers, fuses, and switches shall be marked, adjacent thereto, in a conspicuous and legible manner to indicate clearly which installation or portion of installation they protect or control. Identify the switches.
2. One of the unidentified switches has an open hole in the bottom of the enclosure. CEC Rule 12-3024 requires unused openings in boxes, cabinets, and fittings to be effectively closed by plugs or plates affording protection substantially equivalent to that of the wall of the box, cabinet, or fitting. Plug the hole with a suitable knock-out plug.
3. Distribution Panel A had the interior covers removed leaving access to energized terminals when the door of the panel was opened. The CEC Subrule 2-202 (1) states, Bare live parts shall be guarded against accidental contact by means of approved cabinets or other forms of approved enclosures except where the bare live parts are (a) located in a suitable room, vault, or similar enclosed area that is accessible only to qualified persons; or (b) as permitted elsewhere by this Code. Reinstall the interior covers.

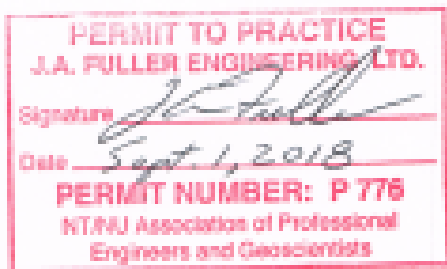
4. Housekeeping in front of the distribution rack was poor with stored material and clutter present. CEC Rule 2-312 states, Passageways and working space around electrical equipment shall not be used for storage and shall be kept clear of obstruction and arranged to give authorized persons ready access to all parts requiring attention. Remove stored materials impeding access to the switch rack and clean up the working space immediately in front of the rack.

### **Limitations and Closure**

This report was prepared by J.A. FULLER ENGINEERING LTD for the use of the WSCC. This report provides comments and opinions only based on limited observations, and review of work completed by others; it is not intended to be used in engineering design. J.A. FULLER ENGINEERING LTD does not accept responsibility for damages suffered by any third-party reliance or use of this report. A record copy of this document is on file at J.A. FULLER ENGINEERING LTD which takes precedence over any other copy or reproduction of this document.

Sincerely

Jeffrey A. Fuller, P.Eng.  
President  
J.A. FULLER ENGINEERING LTD



Cc Viktor Mubili, Lex Lovatt

# Inspection Report

## Industrial

**Report Reference:**

Inspection #: To be assigned  
Provisional #: PR-2018-BH-793

**EMPLOYER**

BAFFINLAND IRON MINES CORPORATION  
300 - 2275 Upper Middle Road East  
Attn: Annu Sira  
Oakville, Ontario L6H 0C3

### ***INSPECTION LOCATION***

Mary River Mine Site  
2275 Upper Middle Road East  
Oakville,  
Ontario  
L6H 0C3

**OFFICER**

BarbHeming  
[Barb.Heming@wscc.nu.ca](mailto:Barb.Heming@wscc.nu.ca)  
Phone: 1-867-979-8524

**Inspection Date:** October 17, 2018

***Accompanied By:***

<u><b>Role</b></u>	<u><b>Name</b></u>	<u><b>Phone</b></u>	<u><b>Email/Fax</b></u>
Officer/Inspector	Barb Heming	1-867-979-8524	<a href="mailto:Barb.Heming@wscc.nu.ca">Barb.Heming@wscc.nu.ca</a>
Employer Representative	Doug Sulliman		
Employer Representative	Dafydd Williams-Jones		

**Inspection Details:**

An inspection was performed October 17, 2018 at approximately 8:35AM at the Baffinland Iron Mine Mary River Main camp site. During this inspection I was joined by both the Kitchen Manager and the OHS Coordinator, both of whom provided important information regarding both the regular operations of the site and policies and procedures of relevant operations.

The main camp area provides a variety of services to workers including kitchen facilities to store, prepare and feed all Baffinland Iron Mine personnel, laundry facilities to manage several types of laundry including both bedding and Personal Protective Equipment (vests, coveralls, warm weather gear, etc), and custodial areas where chemical is mixed and stored for use in regular janitorial work of the facility. The camp runs 24 hrs per day and accommodates both a day shift and a night shift and is complete with sleeping quarters, recreational facilities (workout room, tv/moving room, and games room) as well as general office and security areas.



## Inspection Report Industrial

**Report Reference:**

Inspection #: To be assigned

Provisional #: PR-2018-BH-793

The following positive items were identified:

- Lock out/Tag out systems were observed both on the meat slicer and the main electrical panel. For both the Kitchen manager was able to clearly articulate why these systems were in use, how the locks worked and how to safely remove the locks. In one case the lock was to prevent energization of an oven and the other to prevent unauthorized access.
- WHMIS stations were observed throughout the facility in areas readily available to workers. WHMIS Binders were complete with SDS or MSDS sheets appropriate to the work being completed in these areas. Conversation confirmed that workers are regularly trained on WHMIS and refresher training is also being held via toolbox meetings, etc.
- Conversation with the Kitchen Manager confirmed that workers receive training not simply on the difference between a class K fire extinguisher and class ABC but that many workers also have the ability to practice using a fire extinguisher in a simulated training event.

The following non-conformances were identified that require attention:

- Some SDS Sheets were well out of date and require updating to the WHMIS 2015 standard.
- A broken pallet jack was observed to be stored along side of several working pallet jacks. The broken equipment was not tagged to easily and clearly communicate that it was not in proper working order.
- Chemical goggles were not available to workers in the janitorial room where workers mix chemical products.

Directions have been issued as a result of this inspection. Procedures for informing the WSSCC of compliance with issued direction, or appealing of one or more of those directions, can be found on the last pages of this report. The employer shall ensure the Record of Compliance (last page of this inspection report) is submitted to me before the assigned date.



# Inspection Report

## Industrial

**Report Reference:**

Inspection #: To be assigned  
Provisional #: PR-2018-BH-793

**Direction Number:** 2018-BH-00793-002      **Status:** Open

**Required Compliance Date:** October 31, 2018

**Observations:** A broken pallet jack was observed to be stored alongside of several working pallet jacks. The broken equipment was not tagged to easily and clearly communicate that it was not in proper working order.

**Direction:** The Employer shall remove from service any equipment that is not in proper working order until such time as it can be fixed or replaced. Once removed from service, equipment shall be managed as per the companies lock out/tag out process until it can be repair or properly discarded.

**Legislation:** Occupational Health and Safety Regulations(Nunavut)

**Section 24.(1):** An employer shall ensure that equipment is maintained at intervals that are sufficient to ensure the safe functioning of the equipment.

**Section 24.(3):** A worker who knows or has reason to believe that equipment under his or her control is in an unsafe condition shall, as soon as is reasonably possible, (a) report the condition of the equipment to the employer; and (b) repair the equipment, if the worker is authorized and competent to do so, or replace the equipment or remove the equipment from service.

# Inspection Report

## Industrial

**Report Reference:**

Inspection #: To be assigned  
Provisional #: PR-2018-BH-793

**Direction Number:** 2018-BH-00793-003      **Status:** Open

**Required Compliance Date:** October 24, 2018

**Observations:** Chemical goggles were not available to workers in the janitorial room where workers mix chemical products.

**Direction:** The employer shall provide, and require the use of, safety goggles. The employer shall ensure workers are trained on the selection, care, and use of this PPE.

**Legislation:** Occupational Health and Safety Regulations(Nunavut)

**Section 90.(1):** An employer who is required by these regulations to provide personal protective equipment to a worker shall (a) provide approved personal protective equipment for use by the worker at no cost to the worker; (b) ensure that the personal protective equipment is used by the worker; (c) ensure that the personal protective equipment is at the work site before work begins; (d) ensure that the personal protective equipment is stored in a clean, secure location that is readily accessible to the worker; (e) ensure that the worker is (i) aware of the location of the personal protective equipment, and (ii) trained in its use; (f) inform the worker of the reasons why the personal protective equipment is required to be used and of the limitations of its protection; and (g) ensure that personal protective equipment provided to the worker is (i) suitable and adequate and a proper fit for the worker, (ii) maintained and kept in a sanitary condition, and (iii) removed from use or service when damaged.



# Inspection Report

## Industrial

**Report Reference:**

Inspection #: To be assigned  
Provisional #: PR-2018-BH-793

## Regulatory Requirements

Pursuant to section 12 and 14 of the Safety Act if a direction given by a safety officer is not complied with, and the safety officer is satisfied that any place, matter or thing which is the subject of the direction may be a source of potential or imminent danger to the health or safety of persons in an establishment, the safety officer may give a further direction that the place, matter or thing shall not be used until the direction is complied with.

Failure to comply with a direction made by a safety officer is an offence under section 22(1)(b) of the Safety Act which may result in charges under section 22(2) of that Act.

Pursuant to section 16 of the Safety Act, if you disagree with a direction or decision of a safety officer you are entitled to appeal to the Chief Safety Officer within 30 days.

**Please return a signed copy of this page as confirmation of receipt.**

**Received By:**

*Employer Representative*  
(Print)

*Signature*

Signature  
Babs Heming  
Officer Signature

### Translation Requests

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**Ce document est disponible en français sur demande.**





## Inspection Report Industrial

**Report Reference:**

Inspection #: To be assigned

Provisional #: PR-2018-BH-793

### Record of Compliance

1. For each direction, once it is complied with, the Employer must:
  - a. Write in the actions taken towards complying with the direction given;
  - b. Initial the line; and
  - c. Fax or e-mail this page to the Safety Officer on or before the listed compliance date.
2. Once all directions are complied with, sign the Record of Compliance and fax or e-mail this page to the Safety Officer.

Direction Number	Compliance Required By	Compliance Status	Date	Initials
2018-BH-00793-001	November 30, 2018			
2018-BH-00793-001	November 30, 2018			
2018-BH-00793-002	October 31, 2018			
2018-BH-00793-002	October 31, 2018			
2018-BH-00793-003	October 24, 2018			

**Verified by:**

\_\_\_\_\_  
Employer Representative  
(Print)

\_\_\_\_\_  
Signature

# Inspection Report

## Mining

**Report Reference:**

**Inspection #: 2018-FB-00929**

**OPERATOR**

**BAFFINLAND IRON MINES CORPORATION**  
**300 - 2275 Upper Middle Road East**  
**Attn: Annu Sira**  
**Oakville, Ontario L6H 0C3**

**MINE**

**Mary River Mine Site**  
**MINE MANAGER**  
**Francois Gaudreau**

**INSPECTOR**

**Fred Bailey**

**Inspection Date:** November 8, 2018

### Inspection Details:

**A general inspection of the Mary River Mine Site was carried out on November 8th 2018. Areas visited included the mining area, mobile shop, crusher area including the shop, warehouse and other outbuildings. A review of the revised mining plan was presented prior to the pit inspection where it was reiterated that the revised mining plan will be required for review from a design/geotechnical perspective.**

The focus on the pit inspection was to view the pit walls which appear to be performing well. The Mobile Maintenance Shop was in good general order given the recent influx of sealift supplies. A general overview of the crusher area was conducted with no concerns being noted. At the Crusher shop the new tag in system was noted as a positive addition to the daily lineup to ensure all are accounted for. In the work area of the shop it was noted that the gravel floor poses a number of issues with regard to slips and trips as well as general housekeeping; this requires attention and orders have been issued. The warehouse was also visited and the positive attention to safety by workers and supervisors was noted and reflected in that no safety concerns were noted.

**A general orientation tour took place on November 7th in order to provide Bert Hausauer, Acting Chief Inspector of Mines WSCC a general overview of the operation. This included a trip to the Milne Inlet Port, the mine and the crusher area and the new camp building. No concerns were noted in the areas visited.**

# Inspection Report

## Mining

**Report Reference:**  
**Inspection #: 2018-FB-00929**

**Order Number:** 2018-FB-00929-001 **Status:** Open

**Required Compliance Date: February 08, 2019**

**Observations:** The dirt floor in the crusher shop poses a number of hazards including slips and trips that require attention. The floor is not level due to ruts caused by heavy loads being pushed in and out which also causes loose material of various sizes to accumulate on the floor. It is also obvious that the dirt floor causes issues with general housekeeping as a noticeable amount of material such as cut off disks, scraps of metal and general garbage are on the floor. It was noted that work is in progress on organizing the shop and this must be prioritized as an improvement in general housekeeping is required.

**Order:** Investigate alternatives for improving the floor of the shop and finalize the organization of materials into the ancillary storage areas that are available for use.

**Legislation:** Mine Health & Safety Act(Nunavut)

**Section 10. (1):** The manager shall take every reasonable measure and precaution to protect the health and safety of employees and other persons at a mine.

# Inspection Report

## Mining

**Report Reference:**

**Inspection #: 2018-FB-00929**

## Regulatory Requirements

**This report has been issued pursuant to Section 26 of the *Mine Health and Safety Act* which states that a closeout meeting will be held with the manager after completing the inspection and that a written report will follow within 72 hours after the last day of the inspection.**

Pursuant to section 28 the manager shall post all inspection reports and orders issued by an inspector in a conspicuous place at the mine for at least 30 days after the manager receives the inspection report or order. Furthermore; pursuant to section 29. (1) the manager shall, within 30 days after receiving an inspection report, submit a written report to the Chief Inspector outlining the remedial measures taken and the remedial measures still to be taken in respect of the inspection report.

**Pursuant to section 32. (1) A person who is adversely affected by a decision or order issued by an inspector may appeal the decision or order, in writing, to the Chief Inspector within 30 days after its issue.**

**Please return a signed copy of this page as confirmation of receipt.**

Received By:

Keith Worship  
Employer Representative  
(Print)

Signature

### Translation Requests

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# Inspection Report

## Mining

**Report Reference:**

Inspection #: 2018-VM-01060

**OPERATOR**

BAFFINLAND IRON MINES CORPORATION

300 - 2275 Upper Middle Road East

Attn: Annu Sira

Oakville, Ontario L6H 0C3

**MINE**

## Mary River Mine Site

## MINE MANAGER

## Simon Fleury

**Inspection Date:** December 16, 2018

**INSPECTOR**

**Viktor Mubili**

**Accompanied By:**

<u>Role</u>	<u>Name</u>
Officer/Inspector	Viktor Mubili
Secondary Officer/Secondary Inspector	Cary Ingram

**Inspection Details:**

Mr. Anthony Anker fatality investigation was conducted at the KM107-105 stretch of the haul road where he rolled over the berm and plunged 53m over a distance of 165m. Mr. Anker had radioed loss of brakes moments before he lost control of the 745C Rock Truck causing the unit to breach the berm resulting in a fatality. Inspectors also reviewed accident pictures with the RCMP, training records, 745C articulated truck manual, safety checklists and documents, safe work procedures and witness statements. A total of eight workers were interviewed, including the deceased's supervisor.

Present on the investigation tour were Cary Ingram (WSCC), the RCMP, Simon Fleury (BIM Mine Manager), Sylvain Proulx (BIM Chief Operating Officer), Keith Winship (BIM HS&S Superintendent), Shawn Parry (BIM Road Maintenance Manager), Connor Devereaux (BIM Environmental Superintendent) and Blaine Taylor (BIM H&S Coordinator).

During the investigation, several deficiencies were identified and orders issued to fulfil conditions for resuming haulage on the mine haul road while investigations continued. BIM, in its letter dated December 19, 2018, undertook to address these deficiencies within the agreed timelines.

**THIS REPORT MUST BE POSTED IN A CONSPICUOUS PLACE**

**Report Reference:**  
Inspection #: 2018-VM-01060





# Inspection Report

## Mining

**Report Reference:**

Inspection #: 2018-VM-01060

**Order Number:** 2018-VM-01060-003      **Status:** Open

**Required Compliance Date:** December 26, 2018

**Sub-Location:** KM107-105 Haul Road

**Observations:** No gear selection or speed limit signage was found on the haul road.

**Order:** Install signage on the haul road to indicate what gear haul truck operators must select when hauling downhill and what speed they must be going.

**Legislation:** Mine Health & Safety Regulations(Nunavut)

**Section 10.50:** The manager shall establish the following restrictions for each unit of mobile equipment travelling on a haulage road or ramp:

- (a) the maximum load that can safely be carried;
- (b) the maximum downgrade speed for that unit;
- (c) the gear selection to be used.

**Section 17.01.** The plan shall include for surface mines, a traffic control plan showing the maximum allowable speeds for the vehicles in use, rules for passing, "stop" and "yield" locations, priority rules for various vehicles, rules for night operation, maximum operating grades, emergency run-off protection, shoulder barriers; and



## Inspection Report Mining

Report Reference:  
Inspection #: 2018-VM-01060

Order Number: 2018-VM-01060-004 Status: Open

**Required Compliance Date:** December 26, 2018

**Sub-Location:** KM107-105 Haul Road

**Observations:** Haul trucks have no payload labels in the cab indicating maximum payload that can be safely hauled.

**Order:** Install labels in each haul truck indicating maximum load that can safely be carried.

**Legislation:** Mine Health & Safety Regulations(Nunavut)

**Section 10.50:** The manager shall establish the following restrictions for each unit of mobile equipment travelling on a haulage road or ramp:  
(a) the maximum load that can safely be carried;  
(b) the maximum downgrade speed for that unit;  
(c) the gear selection to be used.

# Inspection Report

## Mining

**Report Reference:**  
Inspection #: 2018-VM-01060

**Order Number:** 2018-VM-01060-005 **Status:** Open

**Required Compliance Date: January 31, 2019**

**Sub-Location:** Site-wide

**Observations:** There is no evidence that the injured person had a seatbelt on while operating the 745C haul truck. The seatbelt was checked and found to be in good working order.

**Order:** Ensure seatbelts are mandatory on all mobile equipment.

**Legislation:** Mine Health & Safety Regulations(Nunavut)

**Section 10.48:** Seat belts of a type conforming with the recommended practice of the Society of Automotive Engineers' Standard SAE J-386, Operator Restraint Systems for Off-Road Work Machines shall be installed in all mobile equipment and the operator of the equipment shall wear the seat-belt when operating the equipment.

**Report Reference:**  
Inspection #: 2018-VM-01060

**Order Number:** 2018-VM-01060-006 **Status:** Open

**Required Compliance Date: January 31, 2019**

**Sub-Location:** KM 107-105 Haul Road

**Observations:** The haul road appears to be banking the wrong way at the bends, which potentially increases the risk of rollover.

**Order:** Review haul road IFC design to ensure it is in line with what the design envisioned.

**Legislation:** Mine Health & Safety Regulations(Nunavut)

**Section 1.142:** The manager shall prepare a plan which shows the type and method of construction for surface haulage roads that are to be constructed at the mine site.

**Section 1.159.** The manager shall prepare a procedure for the examination of worksites that provides for examination of the condition of access routes, haulage roads and travelways;

Inspection #: 2018-VM-01060

This report has been issued pursuant to Section 26 of the *Mine Health and Safety Act* which states that a closeout meeting will be held with the manager after completing the inspection and that a written report will follow within 72 hours after the last day of the inspection.

Pursuant to section 28 the manager shall post all inspection reports and orders issued by an inspector in a conspicuous place at the mine for at least 30 days after the manager receives the inspection report or order. Furthermore; pursuant to section 29. (1) the manager shall, within 30 days after receiving an inspection report, submit a written report to the Chief Inspector outlining the remedial measures taken and the remedial measures still to be taken in respect of the inspection report.


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Sylvain Proulx  
Employer Representative  
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as confirmation of receipt.

  
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*Signature*

Digitally signed by Viktor Mubli

Viktor Mubili

*Inspector Signature*

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