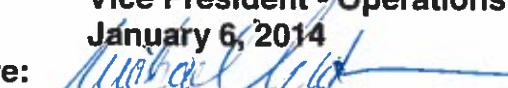
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# Baffinland Iron Mines Corporation

## Open Burning of Untreated Wood, Cardboard and Paper Products Procedure

**BAF-PH1-300-PRO-0001**


**Rev 0**

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## DOCUMENT REVISION RECORD

Issue Date MM/DD/YY	Revision	Prepared By	Approved By	Issue Purpose
01/06/14	0	MA 	EM 	Use

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## 1 PURPOSE AND SCOPE

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

## 2 REQUIREMENTS

### 2.1 PERMITS/ ADDITIONAL PERSONAL PROTECTIVE EQUIPMENT/ SPECIAL EQUIPMENT

#### Hazards

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

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

#### Personal Protective Equipment Requirements

- Wear Standard P.P.E. - Safety glasses, hard hat with reflective tape, safety boots, reflective vest, clothing in good condition, gloves or mitts in good condition
- Do not wear loose flammable clothing such as an unbuttoned work shirt when working around the burn container

#### Safety Equipment Requirements

- Skid Steer/Bob Cat will be used to stockpile the clean wood and cardboard in the burn container
- A spade or shovel should be used to turn over & inspect the residual ash.

### 2.2 TRAINING AND/ OR QUALIFICATION REQUIREMENTS

Any person who may be burning untreated wood at a Baffinland work site shall complete documented training in of this procedure and demonstrate their understanding of the hazards and controls.

## 3 DEFINITIONS

MSC: Mine Site Complex


PSC: Port Site Complex

SOP: Standard Operating Procedure

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Open Burning: Burning of any material or substance in the ambient air in an open topped burn container.

Permit: A paper or electronic form that documents the approval of open burning at one of the two approved open burn sites. This permit will cover a specified period when open burning would be allowed under the conditions specified in this SOP.

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

Cardboard, Paper Products and other packaging: Clean paper products and paperboard packing material including boxboard and cardboard, as well as natural fibre textiles (i.e. cotton, wool).

## 4 RESPONSIBILITIES

The following roles have specific accountabilities that must be met to ensure the **Mine Site Complex (MSC)** and **Port Site Complex (PSC)** clean wood waste open burnings are operated in compliance with this procedure and its permit. The following roles and responsibilities shall be followed to safely and successfully operate the open burns. Area Superintendents/Supervisors are responsible for ensuring that all personnel are fully trained and competent to meet the expectations of this procedure.

### 4.1 MSC/PSC MANAGER OR HIS DESIGNATE

The Site Services Manager or designate is accountable for the overall operation of the open burning. Specifically, he or she shall:

Organize, oversee and administer the operation of the burn in accordance with current permits, regulations and this procedure.

Evaluate the burn permit requirements and monitor and direct the wood and cardboard waste open burn activities

### 4.2 MSC/PSC SITE SERVICES SUPERVISOR

The Site Services Supervisor, under general supervision of the Site Services Manager or designate, is responsible for supervising the operation of the open burning in accordance with this procedure. Specifically, the Site Services Supervisor shall:

Supervise the Open Burn Operator in the safe execution of this procedure

Inspect the burn container residual ash to ensure it contains no hot embers prior to transport to the landfill

### 4.3 SITE SERVICES OPERATOR

The Site Services Operator, under the general supervision of the Site Services Supervisor is responsible for executing the following tasks at the burn container. Specifically the Operator shall:


Work in conjunction with the Site Services Supervisor in executing this procedure.

Conduct the burn in compliance with this procedure.

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Know how to respond appropriately to all emergencies described in this procedure.

Complete report forms as required. The approximate quantity and general types of waste (based on visual estimation of volume to nearest cubic meter) will be noted on a form to be filled out daily whenever open burning occurs. The completed forms are to be submitted to the Environment Department on a monthly basis.

#### 4.4 ENVIRONMENTAL MANAGER OR DESIGNATE

The Environmental Manager or Designate will issue the approval to open burn (Open Burn Permit) for a specified period and will work with Site Services Manager, Supervisors, and Operators to ensure that the open burn activities are comply with applicable environmental permits and in accordance with directives provided by responsible regulators and agencies. Environmental monitors, under the direction of the Environmental Manager or Designate will conduct periodic inspections of the designated open burn areas and operations to ensure compliance with permits and this SOP. If environmental non-compliances are identified, the Open Burn Permit can be revoked and a request for specified corrective actions to be implemented. The quantity and types of waste being open burned are summarized and reported in the Annual NWB and QIA Reports submitted by March 31 of each year.

### 5 PROTOCOL

#### 5.1 SOURCE SEGREGATION AND WASTE MANAGEMENT PROGRAMS

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

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

- Ensure hazardous material is segregated, packaged and shipped to licensed facilities in the South
- Promote the diversion of waste away from the non-hazardous solid waste landfill
- Direct domestic kitchen, office and camp waste to incinerators
- Reduce, reuse and recycle wood products to the extent practicable
- Divert non-reusable/non-recyclable clean wood waste and cardboard from the non-hazardous solid waste landfill for open burning

#### 5.2 CLEAN WOOD AND CARDBOARD OPEN BURNING OPERATIONS


**Open burning shall strictly be operated in an open top sea container.** This shall help to prevent waste and ash from blowing around and allow easy removal and disposal of ash.

##### 5.2.1 OPEN BURNING CONTAINER LOCATIONS AND ACCESS CONTROL

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

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- MSC: N 71° 19' 56.4" W 79° 24' 33.2"
- PSC: N 71° 52' 30.571" W 80° 53' 27.874"

The burn area will be restricted access. The burn area locations are located a distance greater than 30 metres from any water body and are far enough from camp facilities to prevent impact to personnel from airborne emissions.

### 5.2.2 ACCEPTABLE CLEAN WOOD WASTE

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

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

Non-clean wood wastes are **not permitted** for open burning. This includes the following wood products:

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

### 5.2.3 OPEN BURN PERMIT

Prior to ignition of the wood pile the Open Burn Operator shall ensure that all conditions of this SOP are met that the Burn Permit for the dedicated burn locations is in good standing.

Open burning shall occur only with a permit that is current and in good standing and that covers the period required. In the event of non-compliance of this SOP or in the event of an environmental or safety infraction, the permit may be revoked for a specified period of time until corrective action is implemented to the satisfaction of the Site Services and Environmental Managers. The Open Burn Permit is provided by the Environmental Manager or his designate and will be valid for a set period of time.

### 5.2.4 WEATHER CONDITIONS

Mild to moderate winds provide for the best smoke dispersal. Extreme winds create a potential uncontrollable fire condition. Ignition of waste pile is not permitted in winds greater than 20 km/h


The burn shall be temporarily stopped if the burn has the potential to:

- Create a condition in which a fire hazard is created or a condition in which the open burning can cause a fire to spread beyond its initial area
- Cause air pollution that creates a health hazard, a public nuisance or directly impacts wildlife

To ensure a "hot burn" is maintained to create an efficient burn, start the fire during dry conditions (ie. Not during wet, rain conditions).

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### 5.2.5 OPEN BURN SUPERVISION

The designated MSC/PSC Manager is responsible for ensuring the conditions as required by this procedure are complied with.

### 5.2.6 BURNING GUIDELINES

The wood will be kept as dry as possible before burning.

The primary goal in operating the open burn pit is to maintain a “hot burn” to create an efficient burn. To that end, the burning shall be managed as follows:

- The size of the burn pile will be contained within the container using consistent/constant feed rates to avoid over feeding and damping the fire
- A “hot burn” should be maintained to create an efficient burn using consistent/constant feed rates to avoid over-feeding and damping the fire.
- Construct piles loosely, with spaces to allow adequate oxygen to reach the burning material. Create a “heart” of fine, flammable paper or fine wood waste and light it down low on the side the wind is coming from
- Construct piles in a dome or teepee shape that allows heat to build so that flames can be maintained and the wood can be consumed rapidly. Flat, sprawling piles rarely burn well.
- Make sure your pile is clean, the arch enemy of a good burn pile is dirt
- The Open Burn Operator shall stay with the pile to make sure it burns hot and clean.

### 5.2.7 IGNITION

The only authorized methods for igniting the wood waste in the open burning container are:

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

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

### 5.2.8 EXTINGUISHING REQUIREMENTS

Fires will be extinguished under the following conditions:

- When any condition as required by this procedure is not met
- To ensure smouldering of material does not persist upon completion of the open burn.

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

### 5.2.9 DISPOSAL OF OPEN BURN ASH

All residual waste and ash will be collected and disposed of in the MSP approved non-hazardous material solid waste landfill or a designated area approved by the Inspector. The following conditions must be met prior loading and transport of the ash to the landfill:


- Upon completion of the open burn and subsequent extinguishing, ash will be allowed to cool for 48 hours.
- The Site personnel shall stir up and inspect the ash to confirm there are no remaining hot embers.

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- Fill shall be mixed with the ash in the burn container to confirm the ash is extinguished and to prevent loss of ash during transport to the landfill.

## 6 REFERENCES AND RECORDS

Nunavut Mine Health and Safety Act and Regulations

Canadian Standards Association

Nunavut Water Board Type A Water Licence No: 2AM-MRY1325

Commercial Lease No.: Q13C301

Baffinland Iron Mines Corporation Mary River Project Waste Management Plan for Construction, Operation and Closure, dated April 19, 2013

Form for recording approximate volumes and types of wastes to be open burned.