

December 16, 2011

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David Hohnstein
Director Technical Services
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Dear Andrew and David,

RE: Use of Blue Ice Dye for compliance with Transport Canada's Ice Aerodrome Development – Guidelines and Recommended Practices

Hope Bay Mining Ltd. ("HBML") is writing to inform the Nunavut Water Board of its plans to use blue ice dye on the Doris Lake ice airstrip during operating periods. HBML intends to use FD&C BLUE NO 2 (CAS Number 860-22-0) which is a food-grade colorant used for drug dosage forms such as tablets and capsules.

This dye has not been applied to the Doris North airstrip in previous years, but the use of blue or purple dye is now recommended by Transport Canada for use on airstrips in order to enhance visibility and safety. In November 2011, Transport Canada released an Advisory Circular for Ice Aerodrome Development – Guidelines and Recommended Practices. This document states that:

- 4.4 (1) In addition to visual aid regulatory requirements for aerodrome markers, markings, signage, wind direction indicators and runway lighting addressed by Subpart 301 of the CARs, the following guidance is provided:
 - (a) Markers should be used and installed to delineate the usable limits of ploughed or levelled ice runway surfaces. Surface markings could also be used to supplement the markers.
- 7.1 (1) When conducting planning, development, and operational activities, the following information is provided to assist the aerodrome operator in dealing with various issues such as:

(b) Centreline and threshold markings can be made with blue or purple dye for ease of identification.

(c) Confirm that all markers used to outline the runway and taxiways dimensions are:

- (i) lightweight;
- (ii) frangible;
- (iii) of a contrasting colour;
- (iv) clearly recognizable on the surface and from the air at a height of 300 m above ground level and at distance of one mile; and
- (v) uniformly spaced at longitudinal intervals not exceeding 90 m with one or more markers at each corner of an ice runway, at 90 degrees to the centreline.

(2) Due to the nature of an ice aerodrome, closed markings and unserviceable areas are difficult to properly identify to air operators. TCCA acknowledges the challenges that face ice aerodrome operators and that different methods may be needed to properly identify any closed or unserviceable areas of the aerodrome movement surfaces around which aircraft are permitted to operate. Subsection 301.04(8) of the CARs states:

*“Where the surface of a manoeuvring area or part thereof is snow-covered or otherwise unsuitable for painting or where the closure is not permanent, **closed markings may be applied by means of a conspicuously coloured dye or may be constructed from a suitable coloured material or product.**”*

HBML has reviewed product literature to confirm that use of this product will not deposit waste into or otherwise harm humans or the environment. FD&C BLUE NO 2 (CAS Number 860-22-0) is on the *Canadian Environmental Protection Act* (“CEPA”) Domestic Substances List (DSL). According to the CEPA DSL, FD&C Blue NO 2 does not present human or environmental health hazards, and the product is not bioaccumulative or inherently toxic to aquatic organisms (see webpage http://www.ec.gc.ca/lcpe-cepa/eng/subs_list/DSL/DSLsearch.cfm?critSearch=ALL&critChemicalName=&DisplayStartRow=12001&PageNumber=13).

HBML will purchase and ship FD&C Blue NO 2 as a powder, which will be mixed with water in low concentrations to create the dye for application to the ice. HBML will minimize the concentration of the dye, as well as the application of the dye, to produce and maintain the desired effect for safe aircraft operation.

Please do not hesitate to contact me (Angela.Holzapfel@Newmont.com or 604-345-3122) or Chris Hanks (Chris.Hanks@Newmont.com or 720-917-4489) if you have any questions.

Sincerely,

Angela Holzapfel
Manager of Environmental Compliance
Environmental and Social Responsibility

Attachments:

Jet Ice (Blue Dye) MSDS

Transport Canada Advisory Circular for Ice Aerodrome Development – Guidelines and Recommended Practices

cc. Li Wan, Nunavut Impact Review Board; Stanley Anablak, KIA