



Water Resources
Nunavut Regional Office
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April 3, 2018

Karén Kharatyan
A/Manager of Licencing
Nunavut Water Board
Gjoa Haven, NU, X0E 1J0

INAC reference
CIDM# 1213875

NWB reference
#2BE-KDP1722

**Re: Indigenous and Northern Affairs Technical Review of Dunnedin Ventures
Inc. Kahuna Diamond Project Type 'B' Water Licence Amendment
Application 2BE-KDP1722.**

Dear Mr. Kharatyan,

Thank you for the email received on March 5, 2018 from the Nunavut Water Board concerning the above mentioned water licence application process. A technical memorandum is provided for the Nunavut Water Board's consideration. Comments have been provided pursuant to the Department's mandated responsibilities under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Department of Indian Affairs and Northern Development Act*.

Please do not hesitate to contact me by telephone at 867-975-4568 or email at Lisa.Bachellier@aandc-aadnc.gc.ca for further comments or any questions.

Sincerely,

Lisa Bachellier
Water Resource Technician

c.c.: Ian Parsons A/Manager, Water Resources, INAC
Erik Allain, Director, Lands, INAC



Technical Memorandum

Re: Indigenous and Northern Affairs Technical Review of Dunnedin Ventures Inc. Kahuna Diamond Project Type 'B' Water Licence Amendment Application 2BE-KDP1722.

Applicant: Dunnedin Ventures Inc.
Project: Kahuna Diamond Project
Region: Kivalliq Region

A. BACKGROUND

On March 5, 2018 the Nunavut Water Board (NWB or Board) provided notification to interested parties that Dunnedin Ventures Inc.(Licensee) had submitted a Type "B" amendment water licence application for # 2BE-KDP1722 for the Kahuna Diamond Project.

The Kahuna diamond project at N63°06'49" W90°13'57" is located in a remote area 37km to the southwest of Chesterfield Inlet and 54km to the northeast of Rankin Inlet

The Licensee has submitted an amendment Type 'B' water licence application. Dunnedin Ventures Inc. conducted exploration work during the summer of 2015; the bases of operations were located in Rankin Inlet; at this point Dunnedin Ventures Inc. was not requesting a camp and no camp were established. Dunnedin personnel accessed the property by helicopter during the work day and were picked up in the evening and returned to Rankin Inlet. The field work consisted of prospecting, till sampling and the collection of two mini bulk samples by hand tools.

On February 9, 2017 Dunnedin Ventures Inc. sent an amendment application for the Kahuna Property for a 'Temporary Field Camp' and an additional fuel cache for the 2018 exploration season.

All interested parties were asked to review the new water licence application and provide technical comments by March 26, 2018.



B. RESULTS OF REVIEW

INAC Water Resource Division submits the following comments to the Nunavut Water Board for consideration:

1. Dunnedin Cover Letter

Source:

Amendment Application Cover Letter Dated February 9, 2017

In the cover letter submitted to the Nunavut Water Board it states that the Kahuna Diamond Project will operate seasonally and will include: 1 Kitchen tent, 1 office tent, 1 dry tent, 1 utility tent, 1 core logging tent, 7 supplementary sleeping tents, a portable latrine facility, a small generator shed, an incinerator and 2 'arctic grade' containment fuel berms. The field camp will be fully closed and dismantled completely upon completion of exploration activities and the site will be reclaimed and restored to its original state. Dunnedin Ventures Inc. as stated in the Amendment Cover Letter has permits and licences that include 3 authorized fuel caches that together contain 75 drums (205L each) of jet fuel and 120 drums of diesel fuel. Dunnedin Ventures Inc. is now requesting an increase amount of fuel to be then cached at the Kahuna Diamond project for the 'temporary field camp' for the 2018 winter drill program and summer 2018 exploration program. Fuel cached at the Kahuna Diamond project will include 150 drums (205L each) of diesel fuel, 150 drums of Jet fuel, 10 drums of gasoline and 20 cylinders of propane. (100 lbs each)

Comment:

INAC would like clarification that the proposed 'temporary field camp' is proposed for the duration of the water licence or just the 2018 field season.

2. Spill Contingency Plan

Source:

Spill Prevention and Response Plan: Kahuna Property Dunnedin Ventures Inc.
Revised February 13, 2018

1.4.2 Fuel Storage

Dunnedin Ventures Inc. as stated in the Amendment Cover Letter has permits and licences for 3 authorized fuel caches that together contain 75 drums (205L each) jet fuel and 120 drums of diesel fuel.



Dunnedin Ventures Inc. is requesting an increase to the amount of fuel to be then cached at the Kahuna Diamond project for the 'temporary field camp' for the 2018 winter drill program and summer 2018 exploration program. Fuel cached at the Kahuna Diamond project will include 150 drums (205L each) of diesel fuel, 150 drums of Jet fuel, 10 drums of gasoline and 20 cylinders of propane (100 lbs each).

Comment:

INAC would like clarification from the licensee if the fuel caches will be increased by 150 – 205 L drums for diesel and jet fuel, 10 – 205 L drums of gasoline and 20 – 100 lb. cylinders of propane or that it will also include what is already located at the Kahuna Diamond Project as stated in Kahuna Diamond Project detailed description and work plan Dated: January 21, 2016

Comment:

Spill Prevention and Response Plan: Kahuna Property Dunnedin Ventures Inc.
Revised February 13, 2018

- Appendix A Maps

No maps were shown in Appendix A - Maps

Recommendation:

INAC recommends the Licensee have maps included in the Spill Prevention and Response Plan of the Kahuna Diamond Project that includes location of fuel caches, fuel, storage areas, offices, kitchen, sleeping shelters, generators, drilling sites, surrounding water bodies with direction of water flow, utility tent, core logging tent, incinerator, to also include spill kit locations and hazardous materials.

Coordinates of the drilling sites, drill location, bulk sampling locations and the location of the nine fuel drums at the drill site

INAC recommends that portable drip trays and appropriately sized fuel transfer hoses with pumps used when refueling any equipment used at the Kahuna Diamond Project.

Table 4.3 Spill Response/ reporting contact information

Does not include the On-site coordinator, in case of a spill as stated in 3.3 of the Petroleum Product transport. INAC recommends having the On-site coordinator included in this table in case of an incident.



Comment:

Spill Prevention and Response Plan: Kahuna Property Dunnedin Ventures Inc.
Revised February 13, 2018

- Appendix C MSDS Sheets

No MSDS sheets found in this section

Recommendation

INAC recommends MSDS sheets to be included in this Plan

Comment:

Spill Prevention and Response Plan: Kahuna Property Dunnedin Ventures Inc.
Revised February 13, 2018

Last page "Contents" In the Spill and Prevention and Response Plan under contents

Recommendation:

INAC recommends that the Licensee include in this section the amount of hazardous materials and fuel on site and include the location of each on the map provided in section Appendix A Maps.

3. Waste Management Plan

Source:

Waste Management Plan Kahuna Property Dunnedin Ventures Inc. Dated November 8, 2017

Comment:

Section 3.1.7 Used Rags and Sorbents states "Used rages and sorbent pads will be incinerated on site in a duel chamber, forced air- incinerator".

Recommendation:

INAC recommends that the Licensee not incinerate used rags or sorbent pads but to be placed in empty fuel drums and removed off site to an authorized disposal facility.



Item # 6 of the Waste Management plan:

Inspection and Monitoring

Comment:

Water running off of the bulk sample locations should be analyzed for quality against any water quality criteria set in the water licence.

Reclamation to excavations/bulk sample locations should be completed within the year of sampling to make sure the permafrost layer is insulated properly (e.g. water isn't accumulating in the hole and the ground is contoured properly to protect against permafrost degradation)

Recommendation

INAC recommends that the water running off the bulk sampling sites should be sampled and analyzed for quality.

As well in the Inspection and Monitoring plan there is no clear indication in the Kahuna Diamond Project if there will be any inspection or monitoring of any or all fuel caches or hazardous waste materials if they will be left on site or after the camp is fully closed and dismantled completely when the once exploration activities are ceased or what will continue after 2018 exploration season.

4. Work Plan

Source:

Kahuna Property 2018 Work Plan Dunnedin Ventures Inc. Submitted November 22, 2017

6.1.2.1 Camp Fuel Cache

In this section of the Work plan it is stated that Caterpillar Challenger and cargo sleds will transport the majority of the fuel during the winter months over a winter trail.

Comment:

INAC would like clarification from the Licensee if water will be used to make a winter trail. If so, then this water use would have to be included in the water licence.



5. Annual Report

Only the 2017 Annual Report was submitted to the Nunavut Water Board

No annual reports were submitted for the 2015 and 2016 programs.

Recommendation: INAC recommends that the applicant submit annual report for 2015 and 2016

Prepared by Lisa Bachellier