

October
2019

Report Title: The 2019 Site Visit Report for the Nunavut Impact Review Board's Monitoring of the Jericho Diamond Mine Project

Project: Jericho Diamond Mine

Project Location: Kitikmeot Region, Nunavut

Land Tenure: Inuit Owned and Crown Land

NIRB File No.: 00MN059
Jericho Diamond Mine Project Certificate No. 002

Project Owner: Shear Diamonds (Nunavut) Corp.

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Site visit date: June 19, 2019
Previous site visit: June 6, 2018

Photos by: Keith Morrison, Technical Advisor II

Cover photo: Panoramic view of the Jericho Diamond Mine Project open pit.

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1. Introduction

The Nunavut Impact Review Board (NIRB or Board) was established through Articles 10 and 12 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada (Nunavut Agreement)* and is responsible for post environmental assessment monitoring of projects in accordance with Part 7 of Article 12 of the *Nunavut Agreement*.

The findings provided in this report resulted from NIRB's site visit of the Jericho Diamond Mine on June 19, 2019 that took place as part of the NIRB's monitoring program.

2. Project Description and Ownership

The Jericho Diamond Mine Project is a diamond mine situated in the Kitikmeot region of Nunavut, approximately 430 kilometres (km) southwest of Cambridge Bay and 240 km southeast of Kugluktuk. The site consists of:

- a single open pit mine,
- processing facility,
- processed kimberlite containment areas (PKCA) and stockpiles,
- camp and support buildings to house approximately 200 persons,
- explosives storage and emulsion plant,
- decommissioned fuel tank farm,
- airstrip, and
- roads connecting site infrastructure.

2.1 Project History

On July 14, 2004, pursuant to Section 12.5.12, Article 12 of the *Nunavut Agreement*, the NIRB issued the Jericho Diamond Mine Project Certificate No. 002 (Project Certificate No. 002) to Tahera Corporation Limited (Tahera) following the environmental assessment of the Jericho Diamond Mine Project (Jericho Project or the Project). In 2008 after commencing construction, Tahera filed for creditor protection and the mine was managed by Indian and Northern Affairs Canada and placed in temporary closure until the site was purchased. Shear Diamonds (Nunavut) Corp. (Shear) purchased of the Jericho Diamond Mine in August 2010 and on August 23, 2011 the NIRB issued Amendment #2 to the Project Certificate No. 002 in the name of Shear Diamonds (Nunavut) Corp.

On January 22, 2014 the then Minister of Aboriginal Affairs and Northern Development declared the Jericho Diamond Mine Site abandoned by Shear and assumed control of the site as per the Nunavut Waters and Nunavut Surface Rights Tribunal Act and the Territorial Land Use Regulations. The Jericho Mine site remains in temporary closure under the management of Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) who conducted remediation and stabilization activities at the site in 2017 and 2018 under NIRB File No. 16UN058.

The Project is currently under surveillance and monitoring by CIRNAC in accordance with their Operation, Maintenance and Surveillance plan (OMS). The plan involves three (3) years of monitoring the effectiveness of the site stabilization work. Further OMS will be defined by the results of the initial three (3) year program. It should be noted that even though the site has been abandoned the Jericho Project still remains subject to the conditions of Project Certificate No. 002 assigned to Shear.

For further information on the site history, please see [Appendix I](#).

2.2 Jericho Diamond Mine Site Stabilization Project Overview

The project proposed remediation and stabilization works at the Jericho Diamond Mine site with the goal of restoring the abandoned site to an environmentally safe condition, stabilizing the area to prevent water accumulation, and preventing the environmental migration of contaminants into surrounding ecosystems. Stabilization activities were carried out in the summer of 2017 and completed in the summer of 2018. The Project is under surveillance and monitored by CIRNAC in accordance with the Operation, Maintenance and Surveillance plan (OMS), with 2018 being the first year of monitoring. The current plan involves three (3) years of monitoring the effectiveness of the site stabilization work. Further OMS will be defined by the results of the initial three (3) year program.

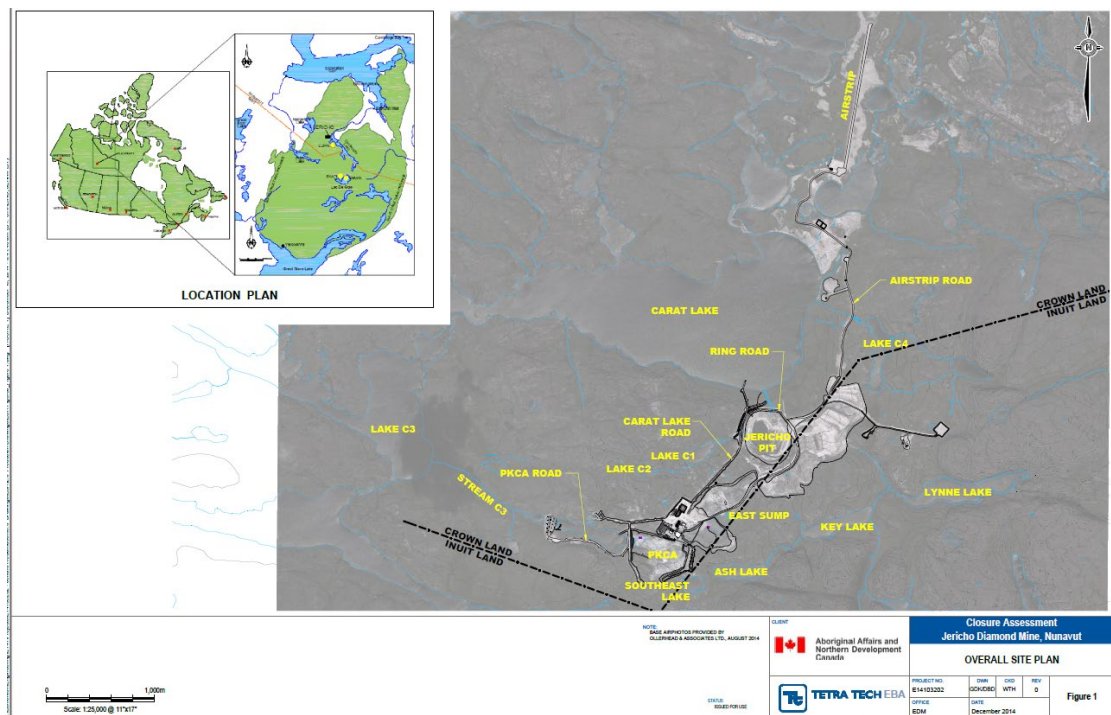


Figure 1: General Site Plan Map

3. Objectives and Purpose of Site Visit

The objective of the NIRB's site visit was to determine whether, and to what extent the land or resource use in question, is being carried out within the predetermined Terms and Conditions as set out in the Project Certificate as issued for the Jericho Diamond Mine Project Certificate, in accordance with Section 12.7.2(b) of the *Nunavut Agreement*. An additional objective of the site visit was to assess the status of the remediation and stabilization works as approved under NIRB File No. 16UN058. Where possible, observations made from the site visit shall be incorporated into the measurement of relevant project effects.

Prior to the 2019 site visit, the NIRB's staff read previous project-specific and related correspondence, plans, and reports, which specifically included consideration of the following documents:

- NIRB Project Certificate No. 002, 2018 Board Recommendations, and 2018 Monitoring and Site Visit Reports;
- Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) annual submissions, including the 2018 Annual Report for the Jericho Diamond Mine Site Stabilization Project.
- Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) response to the NIRB's 2018 Board Recommendations;
- Fisheries and Oceans Canada's (DFO) response to the NIRB's 2018 Board Recommendations; and
- NIRB's Screening Decision Reports for NIRB File No. 16UN058 and related documentation.

4. 2019 Site Visit

On June 19, 2019 Keith Morrison, Technical Advisor II (NIRB staff), accompanied the CIRNAC Mine Inspector, Kitikmeot Inuit Association representative and their consultant on a day trip from Yellowknife, Northwest Territories to the Jericho Mine site. The group was met by the CIRNAC contaminated sites team representatives who were on-site monitoring the status and results of the stabilization and remediation activities that had occurred.

The NIRB's assessment of the site focused on general site conditions, the status of stabilization activities under NIRB File No. 16UN058, observations related to compliance with the NIRB Project Certificate No. 002, and included visual observation of the following features:

- airstrip and roads;
- dams and water diversion structures;
 - West dam breach,
 - Divider dyke A breach,
 - C-1 Channel, and
 - Pit Outflow Channel.
- processed kimberlite containment area (PKCA);

- petroleum hydrocarbon containment cell (PHC);
- decommissioned fuel storage areas and berms;
- mine pit;
 - open pit water level, and
 - berms.
- sumps and waste areas;
- stockpiles and waste rock piles;
- explosives storage and emulsion plant; and
- deficiencies noted in 2018
 - fold in PHC
 - stains in soils from former camp area
 - waste (wires, tarp, and other debris)

4.1 Summary of Site Visit Observations

The stabilization and remediation activities at the site are considered complete. Areas of concern identified in the past particularly with regard to fuel and/or chemical contamination have been remediated and hazardous materials have been transported off site. The contractor returned to site in the summer of 2018 to repair the fold in the petroleum hydrocarbon containment cell liner; complete the above ground storage tank and halocarbon decommissioning; and excavated the 11 stained soil spots in addition to removing all wires, tarps and other debris in the former contractor camp area discussed in the NIRB's 2018 site visit report.¹

The Processed Kimberlite Containment Area (PKCA) was capped with course tailings in 2017 to prevent erosion; however, during the 2019 site visit it was observed that there are some surface melt erosion channels, potholes, and a large ponded area before Divider Dyke A. Also in 2017, Divider Dyke A and the West Dam were breached to allow free flow of water, some erosion was observed on the bank of the West Dam. Further that year the C1 Diversion around the pit was re-routed into the open pit and an outflow was created for the pit lake that will flow into Carat Lake restoring the original natural flow of surface water. During the 2019 site visit there was noticeable erosion and a waterfall cascading into pit from the C1 Channel. The water level in the pit has risen half a bench level (1.5 to 2 metre (m) based on visual estimate)² from the previous year 2018.

4.2 Project Certificate Terms and Conditions

Sections 4.2.1 through 4.2.10 of this report relate to the monitoring of specific components as required by the Jericho Diamond Mine Project Certificate. The following discussion of terms and

¹ Appendix I of the Nunavut Impact Review Board's 2017-2018 Annual Monitoring Report for the Jericho Diamond Mine Project (NIRB File No. 00MN059) ; Public Registry ID No.:320976

² Jericho Mine Site – Operation, Maintenance and Surveillance Program 2018 Report; Appendix C of 2018 Annual Report Public Registry ID No.:320976

conditions within the Project Certificate No. 002 are those which could be verified by direct observation due to the absence of Shear staff at the Jericho site and as no active mining operations were being undertaken when the NIRB 2019 site visit occurred. At the time of the site visit, the NIRB had received no correspondence from the Proponent during the annual monitoring period.

4.2.1 Atmospheric Monitoring

Condition 5 of the Jericho Project Certificate states:

The installation of an atmospheric monitoring station to be funded and installed by Tahera, to obtain site-specific meteorological data. This station shall meet the requirements of Environment Canada air quality experts and focus if possible on dust from roads and blasting, and windblown dust from stockpiles.

During the 2019 site visit the NIRB staff observed no dustfall monitoring stations. It was evident from visible dust traces in the snow that fine dust particles from the PKCA do not remain entirely within the containment facility. The tire berm (Photo 1) is used to mitigate dust deposition from the PKCA. CIRNAC does not have any formal dustfall monitoring as part of their OMS Plan; however, CIRNAC will be installing a camera facing the PKCA (Photo 1) with a satellite uplink that will monitor the location in real time to ensure that the PKCA course cover has stabilized the area as it was designed to.



Photo 1: Camera-1 View of Tire Berm at PKCA

The Monitoring Officer continues to have concerns about future dust dispersion as “*Processed kimberlite tailings weather when exposed to air and break down into finer particle sizes over time. This has implications for revegetation – first moisture retention capacity on tailings is increased, and second reduced resistance of establishing plants to wind and water erosion. Tailings are also highly susceptible to erosion by water, and where the water from side drainages flows across the*

surface erosion is “rapid and progressive”.³ Further observations will be required to ensure short and long-term effectiveness of the coarse kimberlite cover (Photo 2).

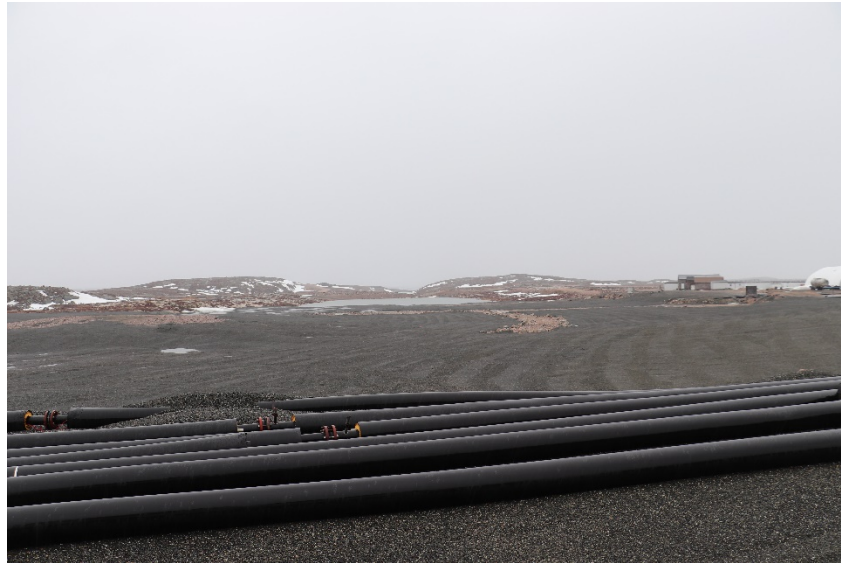


Photo 2: Coarse kimberlite cover on PKSA

4.2.2 Noise Monitoring and Mitigation

Term and Condition 8 of the Jericho Project Certificate states:

For noise abatement, Tahera shall employ industry best practices to protect people and wildlife from mine activity noise, including vehicles and aircraft. The final noise abatement plan shall be filed with NIRB’s Monitoring Agent. Industry requirements for low-level flying should be maintained.

As the site is non-operational, there were no observed noise monitoring or mitigation activities being undertaken related to mining-specific activities. The potential impacts from noise disturbance at the site is low, and in the future will be mainly from aircraft travel to the site for monitoring. The majority of heavy equipment has been removed from the site and only a few working vehicles remain (Photo 3).



Photo 3: Abandoned light duty vehicles (2018)

³ Independent Environmental Monitoring Agency Technical Annual Report 2007-2008, p.10

4.2.3 Wildlife Monitoring and Mitigation

Term and Conditions 3 and 9 through 18 of the Project Certificate No. 002 outline operational and monitoring requirements with regards to wildlife and birds. No active wildlife monitoring was being undertaken on-site and was only observational when personnel were present on site. No wildlife, outside of various migratory bird species, were observed by NIRB staff during the site visit. CIRNAC reported in their annual report that no wildlife was seen on site by contactors during the summer of 2018.⁴

The NIRB did not receive any wildlife-related monitoring data from Shear during the 2018-2019 reporting period.

Condition 13 of the Jericho Project Certificate states:

Tahera shall submit plans to regulatory authorities to include measures that will ensure caribou are not harmed, entrapped, or frightened by any project activity. Tahera shall do everything it can to ensure that caribou do not fall into pits, or slip on roads; this includes the requirement that Tahera use whatever means it finds necessary including ramps and crossings to assist in the free movement of caribou and construction of berms or fences where appropriate to prevent accidents involving wildlife.

Although the alteration of site features could alter the navigable landscape through the area, NIRB staff did not identify any constraint to movement related to site infrastructure with the exception of the pit. The berm surrounding the pit was intact except for in areas where water management features were being rerouted during stabilization activities ([Photo 4](#)).

The berm area was not very high or wide and the Monitoring Officer had some concern that there are no caribou deterrent features such as Enokhuk to divert caribou away from the pit area or around the mine site in general.

⁴ Public Registry ID: 325374



Photo 4: Berms surrounding Open Pit

Term and Condition 14 of the Jericho Project Certificate states:

Tahera shall take special care to avoid disturbing nesting sites of any species in the Project area. Sites within 500 meters of the Project area should be also located, marked, and reported by Tahera to NIRB's Monitoring Agent.

During the site visit the NIRB staff did not observe any raptors or nests. There were no raptors or nests observed or reported in 2018 on the pit walls or other project areas.

4.2.4 Blasting Activities and Impacts Mitigation

Term and Conditions 9 and 26 through 28 of the Project Certificate No. 002 outline requirements for activities relating to blasting activity and to the use and storage of explosives on-site.

Term and Condition 27 of the Jericho Project Certificate states:

All blasting constituents (dynamite, ammonium nitrate, or other components), and any accelerants besides fuel, shall be stored in covered and isolated buildings, well marked as being dangerous. Blasting materials buildings shall be protected according to industry standards. Ammonium nitrate that is spilled must be cleaned up immediately.

Mining-related blasting activities are not currently being undertaken on-site. During the 2019 site visit the NIRB staff was able to visit the, emulsion plant ([Photo 5](#)) and the magazine ([Photo 6](#)) which are located on Inuit Owned Lands, and that the site did not contain any blasting materials.



Photo 5: Fuel Tank at Emulsion Plant



Photo 6: Magazine Storage

4.2.5 Winter/Seasonal Roads

Term and Conditions 32 and 33 of the Project Certificate No. 002 outline requirements in relation to winter roads and the movement of materials across winter or other roads. Since Shear last indicated that it had no plans to construct any winter or ice roads, the NIRB has received no further plans from the Proponent for such an activity. CIRNAC had originally proposed to mobilize and demobilize equipment and material for the site stabilization activities using the Joint Venture winter road extension from Ekati to Jericho; however, the road was never constructed due to contracting timeline so equipment and material were removed using various types of aircraft. As

the Jericho Mine site is currently non-operational and the Proponent does not currently occupy the site, no movement of materials along a winter road is expected.

4.2.6 Fuel Storage

Term and Condition 34 of the Jericho Project Certificate states:

All fuel storage areas shall be bermed and meet regulatory requirements.

As part of the stabilization activities being undertaken by CIRNAC under NIRB File No. 16UN058, contractors on-site conducted substantial works related to fuel storage areas. Fuel tanks within the Phase I and Phase II fuel tank farm have been purged, cleaned, removed, and are being stored on-site ([Photo 7](#) and [Photo 8](#)).



Photo 7: Phase II Remediated Fuel Tanks and Sump



Photo 8: Phase I Remediated Fuel Tanks

The majority of the berms have been breached to avoid seasonal water accumulation ([Photo 9](#)).



Photo 9: Phase II fuel tanks with breach in berm

All remaining fuel on-site has been purged and burned off using an on-site incinerator, except for a few drums which are being stored in truck shop building for use when CIRNAC is on site. All drums have been emptied, cleaned, and stacked (*Photo 10*).



Photo 10: Cleaned fuel drums

The contaminated soils, identified through past and ongoing testing at various locations on-site, have been collected, covered with a liner, and capped with coarse processed kimberlite for long-term storage. In the summer of 2018 the contractor complete the task by fixing the fold in the top liner.

4.2.7 Water Quality and Aquatic Monitoring

Term and Conditions 6, 29, and 30 of the Project Certificate No. 002 require the Proponent to establish and participate in a water quality monitoring program. Term and Condition 6 of the Jericho Project Certificate states:

Tahera shall implement a site-specific ecosystem based water monitoring program, which it will fund. Tahera will also meet the requirements of regulators including the Nunavut Water Board and take advice from KIA as to site selection of this ecosystem based water quality monitoring program.

As observed during previous site visits, the water within the open pit continues to rise annually (*Photo 11*). The water level in the pit has risen half a bench level (1.5 to 2 metre (m) based on visual estimate)⁵ from the previous year 2018. As part of the stabilization activities the C1 stream diversion was removed and plugged, the pit side wall was breached and a channel was restored to allow the original natural water flow back to the pit area which would accelerate the pit infill (*Photo 12*). During the site visit there was noticeable erosion of the C1 channel and a waterfall was cascading into pit. Water quality samples are being from the pit but the only water quality parameter being monitored as part of the OMS plan is uranium.



Photo 11: Open Pit



Photo 12: C1 Diversion and waterfall

⁵ Public Registry ID: 325374

A breach was also made in the north side of the open pit side wall to restore the natural flow of water back into Carat Lake once the pit reaches its final elevation (*Photo 13*).



Photo 13: Outflow channel into Carrat Lake

4.2.8 Water Diversion and Impacts to Fish Populations

Term and Conditions 4, 7, 19, and 20 through 25 of the Project Certificate No. 002 outline requirements of the Proponent in relation to site water management and recommendations for reducing impacts to fish populations in areas surrounding project activities. Divider Dyke A as well as the West Dam are breached in order to promote water flow through the respective containment (*Photo 14* and *Photo 15*). It was observed that there was a large amount of ponding in Cell A on the upstream side of Divider Dyke A. It is expected that this water will likely filter through to Cell B/C as it travels downstream. No fish sampling had taken place during the past year and is not part of the OMS Plan.



Photo 14: Breach in Divider Dyke A



Photo 15: West Dam breach to receiving environment

As part of the stabilization activities approved under NIRB File No. 16UN058, the C1 stream diversion was plugged and removed and the channel was restored to allow the natural water flow back to the pit area ([Photo 4](#) and [Photo 12](#)). This was not a fish bearing stream.

As reported in 2017 under the revised scope of activities approved under NIRB File No. 16UN058, CIRNAC intended to remove the water intake jetty in Carat Lake on behalf of Fisheries and Oceans Canada (DFO) to create additional fish habitat in the area. To date, the jetty has not been altered and the proposed activities will not be undertaken as per the direction from DFO ([Photo 16](#)).



Photo 16: Jetty and water intake in Carrat Lake

4.2.9 Processed Kimberlite Containment Area

Term and Condition 31 of the Jericho Project Certificate states:

Further detailed study by Tahera to ensure that water quality exiting the PKCA meets receiving water standards, including further study on the option of a divider/barrier or dyke in the PKCA to improve water quality. This information is to be provided to NIRB's Monitoring Agent, DFO, NWB and EC.

Due to the absence of mining operations and the production of wastewater, the PKCA remains mostly dry. A large pond was observed at the west side of Cell A ([Photo 17](#)) from snowmelt; however, Divider Dyke A is still functioning as a filtration dyke and very little water is expected to flow through the PKCA containment cells B/C into the receiving environment by the West Dam ([Photo 18](#)). Previous water quality testing indicated the water quality met discharge criteria and did not need to be treated. The OMS plan has no future water quality monitoring planned at the West Dam prior to water being allowed to discharge into the receiving environment.



Photo 17: Cell A standing on Dyke A



Photo 18: West Dam Cell B/C looking east toward process plant

As observed during previous site visits, the NIRB staff observed visible dust traces in the snow and that fine dust particles from the PKCA do not remain entirely within the containment facility ([Photo 1](#)). The course cover material applied over the fine processed kimberlite appears to contain some of the dust, and the containment structures (e.g., tire berm) previously installed were still in place in order to capture more of the dust.

As previously noted in section 4.2.1, CIRNAC does not have any formal dustfall monitoring as part of their OMS Plan; however, CIRNAC will be installing a camera facing the PKCA ([Photo 1](#)) with a satellite uplink that will monitor the location in real time to ensure that the PKCA course cover has stabilized the area as it was designed to.

The Monitoring Officer still has concerns about future wind-blown dust as the course material will break down with time and will require further observation to ensure short- and long-term effectiveness (See Section 4.2.1) but is encouraged by the camera monitoring program.

4.2.10 Waste Management

Term and Condition 35 of the Jericho Project Certificate states:

Waste management must be controlled in such a way that reduces or eliminates the attraction to carnivores or raptors. Fencing and other suitable deterrents shall be employed in all landfills and waste storage areas. A final waste management plan shall be filed with regulatory authorities including the NWB and NIRB's Monitoring Agent.

Term and Condition 40 of the Jericho Project Certificate states:

Tahera shall enter into written arrangements with its contractors to ensure all site debris is cleaned up off the lands including wind-blown debris.

During the site stabilization activities all camp waste was incinerated using the existing Mine Site incinerator, except for the final garbage which was brought off-site for disposal. All greywater was transferred to the Open Pit. During the 2019 site visit, there were only a small group on site staying in the airport building for a few days and they were backhauling all their waste

CIRNAC reported that all hazardous waste was collected, packaged, and back-hauled off site to licenced facilities in 2017 and that wash water from the cleaning operations was treated on-site and/or shipped off-site for disposal. In 2018 all halocarbons were decommissioned; the remaining hydrocarbon contaminated soils were buried; and the partially buried electrical and data lines associated with the temporary contractor camp were transported offsite for re-use or disposal. The tarp associated with the greywater sumps was also rolled and removed from site for re-use. Inert and non-hazardous materials, including structures, clean tanks, clean barrels and miscellaneous equipment, are to remain on-site. The NIRB staff observed that the structures remaining on site are deteriorating.

In 2018 at the contractor's temporary camp location, the Monitoring Officer observed a trail of 11 spills of unknown origin, electrical cords, and miscellaneous materials left behind. During the

summer of 2018 the spills cleaned up ([Photo 19](#)) and any remaining materials were removed and this was confirmed by NIRB staff in 2019.



Photo 19: before (2018) and after (2019) clean up of spill

5. Public Information Session

Pursuant to the *Nunavut Agreement* and the Jericho Diamond Mine Project Certificate No. 002; the NIRB monitoring responsibilities include providing periodic updates regarding its Monitoring Program for the communities most affected by the Jericho Mine Project. To further ensure ongoing awareness of Project-specific terms and conditions, and encourage effective participation throughout the Board's monitoring process, the NIRB scheduled a community information session in Cambridge Bay on August 22, 2019 in conjunction with the update for the Doris North Gold Mine Project (05MN047), Phase 2 Hope Bay Belt (12MN001), and the Back River Project (12MN036).

For a summary of the NIRB's Public information session and questions that were asked, please refer to [Appendix II](#). These comments help the Board identify items that need to be addressed or considered throughout the NIRB's monitoring program for the Jericho Diamond Mine Project.

6. Recommendations and Direction

The Jericho Project Certificate No. 002 terms and conditions require the Proponent to meet operational and maintenance requirements; however, due to the absence of Shear staff at site since the last site visit, the majority of these requirements still have not been met. Additionally, the NIRB staff observed no evidence of monitoring activities being undertaken by the Proponent at the Jericho site during the 2019 visit. As such, the Proponent remains in non-compliance with the terms and conditions, consistent with findings from past site visits.

Based on the observations made during this current site visit, the “Jericho Mine Site Stabilization Project” (NIRB File No. 16UN058) appears to have now been completed by CIRNAC. The project was designed to stabilize the site which has now been abandoned by Shear and is under official custodial stewardship of CIRNAC. A three (3) year Operation, Maintenance and Surveillance (OMS) Plan has been developed that includes:

- A list of residual risks following stabilization of the site;
- No planned operational activities;
- No planned preventative maintenance; however, reactive-based maintenance if stabilization components fail their specific design intent;
- Surveillance activities focused on mitigating the residual risks;
 - In general, to have the site remain in physical and environmentally stable condition, and
- Outline of OMS parameters and triggers, for actions and closure.⁶

The first year of surveillance and monitoring was in 2018 and visual inspections of stability of the physical features was conducted. There was some notable erosion at some features and it was recommended in the Jericho Mine Site – Operation, Maintenance and Surveillance Program 2018 Report prepared for Public Services and Procurement Canada that continued surveillance and monitoring for years two (2) and three (3), with no further actions. The final outcome of the stabilization works, their effectiveness, and long-term maintenance and monitoring requirements are not known at this time. Further OMS will be determined after the initial three (3) year program.

The Monitoring Officer is encouraged by additional monitoring with cameras at the PKCA and the Open Pit to observe if the stabilization of these features is functioning as designed and looks forward to future updates. However, the Monitoring Officer has concerns with the OMS Plan is that the only water quality monitoring aspect of the OMS Plan is for the analysis of total uranium in the Open Pit water. Many of the water management structures have now been breached and water flow is now connected to the receiving environment, and while CIRNAC has reported that initial water quality testing was done prior to breaching the dyke and dams this does not preclude changes to water quality over time from the break down of kimberlite in the PKCA. There is also concern that the drainage / seepage from the waste rock piles or pit walls will affect the water quality of the pit water.

The Monitoring Officer also notes that there continues to be no monitoring of the waste rock piles which are on Inuit Owned Land. Seepage from waste rock piles into the receiving environment could possibly be a concern if left unmonitored and the open pit that is filling with water is not being tested for any parameter other than uranium.

⁶ Public Registry ID:325374

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Date: September 5, 2019

Reviewed by: Kelli Gillard, PAg
Title: Manager, Project Monitoring
Date: September 30, 2019

Signature:

A handwritten signature in blue ink, appearing to read "Jaida Ohokannoak", with a long horizontal flourish extending to the right.

Signature:

A handwritten signature in blue ink, appearing to read "Kelli Gillard", with a large, stylized initial "K" and a horizontal flourish.

APPENDIX I: FILE HISTORY

DATE	
July 14, 2004	NIRB issued the Jericho Diamond Mine Project Certificate No. 002, pursuant to Article 12, Section 12.5.12 of the <i>Nunavut Agreement</i> , to Tahera Corporation Limited (Tahera).
December 2004	Tahera requested that the Project Certificate be reissued to reflect the updated project ownership.
January 19, 2005	NIRB issued Amendment #1 of the Project Certificate No. 002 in the name of Benachee Resources Inc., a wholly owned subsidiary of Tahera ⁷ .
2005	Tahera commenced construction of the mine
July 2006	Jericho Diamond Mine fully operational
October 3, 2006	NIRB issued Appendix D to the Jericho Project, which sets out the responsibilities of the Proponent in carrying out project-specific monitoring, as well as the responsibilities of relevant territorial and federal agencies.
November 20, 2007	Appendix D revised and re-issued.
January 16, 2008	Tahera filed for creditor protection, citing insufficient funds to operate and the Jericho Mine was placed into care and maintenance.
December 12, 2008	Indian and Northern Affairs Canada (INAC) ⁸ intervened and assumed control of the Jericho Mine site pursuant to Section 89 of the <i>Nunavut Waters and Nunavut Surface Rights Tribunal Act</i> in order to maintain existing environmental protection measures. The site was temporarily closed until it was purchased. ⁹
August 2010	Shear Diamonds (Nunavut) Corp. (Shear) purchased the Jericho Diamond Mine and requested that the NIRB reassign the Project Certificate to reflect the new ownership. ¹⁰
2011	The site remained under care and maintenance as Shear evaluated the site mineral resources. Shear worked to update its permits and bring the site back into compliance with the intent of resuming mining operations within the following two (2) years.

⁷ Public Registry ID: 288095 and 280750

⁸ Indian and Northern Affairs Canada (INAC) Aboriginal Affairs and Northern Development Canada (AANDC) was renamed Indigenous and Northern Affairs Canada (INAC) and then subsequently again re-named to Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC)

⁹ Court File No. 08-CL7355, Court Order of Justice Morawetz, dated December 12, 2008 available at: http://www.farberfinancialgroup.com/services/a_farber_partners_inc/corporate_insolvency_restructuring/engagements_current.php?id=36

¹⁰ Public Registry ID: 288072

August 23, 2011	NIRB issued Amendment #2 to the Project Certificate No. 002 in the name of Shear Diamonds (Nunavut) Corp. ¹¹
December 21, 2011	The Nunavut Water Board (NWB) issued a renewed Type “A” Water Licence to Shear for the Jericho Mine site on December 21, 2011. Within the NWB’s Reasons for Decision issued to the Minister of Aboriginal Affairs and Northern Development, Shear was required to provide securities totaling \$3,389,074 to Aboriginal Affairs and Northern Development Canada (AANDC) to be held in trust. ¹²
September 2012	Shear issued notice that due to the low diamond prices the site would be minimally staffed, stockpile re-evaluation suspended, and discontinued exploration at the site.
October 2012	Site was placed into temporary closure by Shear. Shear issued a Temporary Shutdown Plan to the NWB and AANDC outlining: procedures completed for site shutdown; potential risks at site; a site visit schedule to address the risks; and notice that ongoing monitoring would be discontinued.
December 2012	A Compliance Plan for the Jericho site was posted on the NWB’s public registry site at the end of 2012 which noted that it was not in a financial position to provide the outstanding securities amount of \$321,074. ¹³
March 8, 2013	AANDC issued notice to Shear that due to continued failure to manage specific environmental issues on-site, AANDC’s Contaminated Sites Program would be conducting periodic work at the Jericho Mine site to manage the specific issues noted.
December 2013	Shear’s Chief Restructuring Officer provided notification of its plans regarding refinancing of the project with the goal of re-opening the Jericho Mine.
December 19, 2013	AANDC provided additional detail on the status of the securities, indicating that: <i>...the Department currently has \$6,618,556 in cash-equivalent and \$1,701,858 in debentured security under the Crown land lease and type A water license for the Jericho mine site. The work done on-site by the Department from June to October 2013 to manage water levels and ensure tailings management is maintained has cost approximately \$232,000.¹⁴</i>

¹¹ Public Registry ID: 288034 and 288075

¹² Public Registry ID: 288124

¹³ Author unknown, 2AM-JER1119 Compliance Plan. September 30, 2012.

¹⁴ Public Registry ID: 288610

January 22, 2014	Minister of Aboriginal Affairs and Northern Development declared the site abandoned by Shear and assumed control of the site as per the <i>Nunavut Waters and Nunavut Surface Rights Tribunal Act and the Territorial Land Use Regulations</i> . ¹⁵
November 2014	NIRB received notification of resignation of the last remaining Shear Director.
September 30, 2016	NIRB received a referral to screen Indigenous and Northern Affairs Canada's (INAC) "Jericho Mine Site Stabilization Project" from the Nunavut Planning Commission. NIRB File No. 16UN058
December 22, 2016	NIRB issued its Screening Decision Report for the project, approving the stabilization activities as proposed.
April 21, 2017	NIRB received a revised summary of stabilization works to be conducted at the Jericho site which were considered to be within the original scope as assessed.
July 24, 2017	NIRB issued a Screening Decision Report for INAC's "Jericho Site Stabilization - Amendment", approving additional works and activities proposed as part of the overall stabilization undertaking. ¹⁶

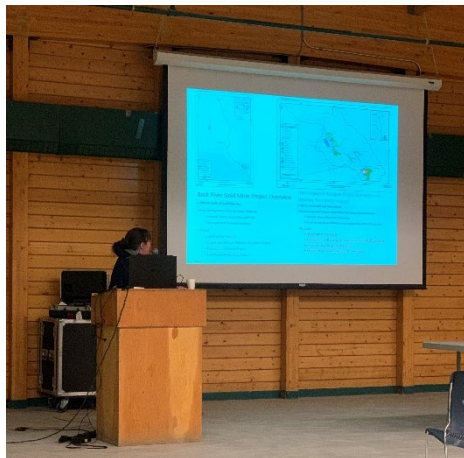
¹⁵ Public Registry ID: 288611

¹⁶ Public Registry: www.nirb.ca/project/125012

APPENDIX II: NIRB PUBLIC INFORMATION MEETING

To further ensure ongoing awareness of Project-specific terms and conditions, and encourage effective participation throughout the Board's monitoring process, the NIRB scheduled a community information session for TMAC's Doris North Gold Mine Project (05MN047) and Phase 2 Hope Bay Belt Project (12MN001), Sabina's Back River Project (12MN036) and an update on the Jericho Diamond Mine (00MN059) site stabilization and remediation activities. The sessions consisted of an afternoon open house (2:00-4:00pm) and an evening update meeting (7:00pm-9:00pm) at the Luke Noviligak Community Hall in Cambridge Bay on August 29, 2019 and were open to all members of the public. Refreshments and snacks were provided.

All in attendance, including government, industry representatives and media, were asked to sign in and identify the community or organization they represented. The afternoon session recorded attendance of 3 people and the evening session 5 people. Consecutive interpretation was available in Inuinnaqtun. The NIRB Staff in attendance included Jaida Ohokannoak, Technical Advisor II/Monitoring Officer for the Back River Project and Jericho, Keith Morrison, Technical Advisor II/Monitoring Officer for Doris North and Phase 2 Hope Bay, Kelli Gillard, Manager Project Monitoring and Francis Emingak, Jr. Technical Advisor.



The NIRB Monitoring Officers made PowerPoint presentations for each Project providing a general update of the NIRB's Monitoring Process, with a focus on update on the project, including an overview of project activities and key components, and issues identified through the project specific monitoring programs. The presentations also outlined the ways in which the public can participate in the Board's monitoring process. The public was encouraged to comment and ask questions relating to the NIRB's process, activities undertaken, project effects, and any concerns related to the Project. Both written and verbal comments were accepted and verbal comments were recorded by NIRB staff members.

1.1 Meeting Materials

At the public meeting, the following materials were provided by the NIRB:

- The NIRB's PowerPoint presentation (in English and Inuinnaqtun)
- Comment Forms (in English and Inuinnaqtun)

All document received and pertaining to this project, including copies of consultation materials, the presentation, advertisements and sign-in sheets, can be accessed from the NIRB's online public registry at:

Doris North Gold Mine: www.nirb.ca/project/123632

Phase 2 Hope Bay: www.nirb.ca/project/124148

Back River Project: www.nirb.ca/project/124149.

Jericho Diamond Mine: www.nirb.ca/project/123035

1.2 Advertisements

The NIRB advertised the meeting through radio, poster, and online through Facebook in Cambridge Bay both in English and Inuktitut in the month prior to the meeting.

1.3 Meeting Notes

The following sections summarize the comments and concerns that were raised both verbally and in writing at the community information sessions. The comments help the Board identify items that need to be addressed or considered throughout the NIRB's monitoring program for each.

Doris North / Hope Bay Belt

General:

- Why does Phase 2 Hope Bay Belt Project have more terms and conditions?
- What is the NIRB website?

Operations:

- How deep is the crown pillar at Madrid?
- Will Windy Lake Camp be opening again?
- Are they shutting down the road to Windy Camp?
- What was the Windy Lake Camp?

Wildlife:

- What did they do to prevent small animals from getting stuck in the sumps?
- Were any caribou seen in the area?

Back River Gold Mine

Wildlife:

- Were there other caribou seen around camp or in the area of the mine?

Closure:

- When the mine is shut down, is there a requirement to make the mine look like it was never there? Is there a plan?

Socio-Economic

- Inuit employment numbers should be increased.
- Sabina should have Inuit people who have worked in the mines do presentations in schools.

Jericho Diamond Mine

Water Management:

- Are the kimberlite tailings filled with water?
- What do you mean by cutting a hole (breaching) the dam?
- Are they testing the water in the Open Pit?

General:

- Where was the waste shipped to?
- Is the Kitikmeot Inuit Association (KIA) going to clean up Inuit Owned Land?
- Will KIA be monitoring the waste rock piles for Acid Rock Drainage?
- Are the barrels being left on site?
- Was money put aside to clean up the site?
- Would like to see elders be brought to the site for monitoring.