



WATER LICENCE INSPECTION FORM

☒ Original
☐ Follow-Up Report

Licensee	Licensee Representative
TMAC Resources	Sarah Warnock
Licence No. / Expiry	Representative's Title
2BB-BOS1727	Environment Supervisor
Land / Other Authorizations	Land / Other Authorizations
Date of Inspection	Inspector
14/08/2019	Candice Pedersen
Activities Inspected	
<input type="checkbox"/> Camp	<input type="checkbox"/> Drilling
<input type="checkbox"/> Roads/Hauling	<input type="checkbox"/> Mining
	<input type="checkbox"/> Construction
	<input type="checkbox"/> Reclamation
	<input checked="" type="checkbox"/> Fuel Storage
	<input type="checkbox"/> Other:

SECTION 1	<input type="checkbox"/> Comments (s. __)	<input type="checkbox"/> Non-Compliance with Act or Licence (s. __)	<input type="checkbox"/> Action Required (s. __)
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Background:

This licence authorizes TMAC Resources Inc. to use water and deposit waste associated with mining undertaking to the Boston Advanced Exploration Project as outlined in the Water Licence Application, submitted to the Water Board through the regulatory process.

This Type “B” water licence authorizes the use of 100 cubic meters per day.

They are authorized to obtain fresh water from Aimaokalok Lake for domestic purposes. They are also authorized to drill for surface exploration.

For waste disposal they are authorized to incinerate acceptable food waste, paper waste, and untreated wood products. Deposit Effluent at Monitoring Stations BOS-2, BOS-4, BOS-5, BOS-6 and BOS-7. Dispose of treated waste at monitoring station BOS-3. All non-combustible and non-hazardous waste shall be disposed of at the Doris North landfill.

Inspector Notes:

On August 14, 2019 a water licence inspection was conducted at the TMAC Boston camp (2BB-BOS1727) (see photo log #1) by Inspector Candice Pedersen accompanied by Sarah Warnock and Gerry Kane of TMAC. Facilities inspected included, but were not limited to: Waste Management Facility, BOS-3 discharge point, Oil Water Separator System, BOS-9 Discharge Location, The Burn Pan, The Incinerator, Bulk Fuel Storage, BOS-7, Old Land Farm, Fuel Storage at the Runway, Water Treatment Facility, and two reported spills 19-252 and 19-301.

Treated Effluent Discharge Point- BOS-3: The last discharge was mid-July, Inspector notes a couple rolls of coco matting to filter out the treated effluent before it reaches the lake (see photo log #2). Inspector notes that the path from the discharge hose from the effluent is black in colour, the black colour fades as it goes through the coco matting. No concerns where noted with this facility.

Oil Water Separator System: this is a new system of four 45 gallon drums and one pump (see photo log #3) that treats the water that builds up in the berms. The product ‘Metsorb’ is used to treat the water, the water then meets criteria to discharge onto tundra. No concerns where noted with this system.

BOS-9: Bos-9 used to be the portal to access the underground mining from the previous proponents (see photo log #4). This location collects rainwater and meets criteria to discharge, TMAC has been discharging the water over the outcrop. No concerns where noted with his facility.

Burn Pan: The Burn Pan is a recycled sea can that has a portion of the top cut off to allow smoke to come out (see photo log #5). Clean wood and cardboard are burnt at this facility. Inspector notes a few cardboard boxes inside and a bit of ash that has been shoveled to the back of the sea can. No concerns where noted with this facility.

Waste Management Area: During the inspection it was noted that waste is being segregated and disposed of as required by the licence. Such as aerosols, oily rags, paint, oil filters and more (see photo log #6). All to be disposed of at Doris Camp, the waste will get hauled in winter of 2020 at the Doris Waste Management Facility and eventually off site. Before that time, they will store them on Boston site.

Incinerator: The Incinerator appears to be operating as intended (see photo log #7), no debris is seen around the incinerator. A 45 gallon drum is seen in front of the incinerator uncovered filled about one third of burnt ash (see photo log #8). Inspector is concerned this drum is uncovered.

Bulk Fuel Storage (BOS-5): The Bulk Fuel Storage is comprised of 7 tanks (see photo log #9), Inspector is informed the fuel is old so they have a filter that pumps fuel from the tanks into the filter then to a double walled holding tank (see photo log #10). The pump is in a lined area and spill kits are seen in the vicinity. A bag of absorbent pads it seen near the



holding tank. The tank farm itself has some water collection, the last pump out of this facility was during freshed. Inspector is informed that they will be conducting another test before freeze up to discharge the remaining water. The bottom of the tanks are starting to rust. No concerns where noted with this facility.

BOS-7: This Facility used to be the burn pit from the previous proponent. It has no liner, and because of that it is not being used by TMAC. Inspector notes some debris such as wood and a bit of scrap liner in this facility (*see photo log #11*). Inspector was informed that this facility is having run off issues as it has no liner, however, the runoff is just rainwater. No concerns where noted with this facility.

BOS-2: This Facility used to be the Contaminated Pond. Because the liner is compromised (*see photo log #12*) TMAC has not been using it and plans to decommission it. Inspector notes some water has built up in the berm. No concerns were noted.

Temporary Effluent Management Pond: This facility was built in 2017 to hold non-compliant effluent from the Sewage Treatment Plant, it needed additional work to get it running. The proponent couldn't discharge sewage from the Sewage Treatment Facility (STP) and it was getting full so they built this temporary berm to hold the non-compliant effluent and once the STP was running they ran it thought the plant. It now sits empty. No concerns were noted.

Old Land farm: Inspector sees what used to be the land farm (*see photo log #13*), the Old Land Farm was remediated in 2017 and everything was hauled to the Doris Camp for proper disposal in 2019 via ice road. A new berm was placed by the contractors and TMAC is currently using it to temporary store empty Jet A fuel drums.

On the way to the runway Inspector notes a few drill casings sticking out of the ground (*see photo log #14-16*) varying from one foot to about three feet. When questioned about the drill casings Inspector is informed, they are historic drill casings from the previous proponent, TMAC has plans to cap and shorten them, Inspector was not given a date as to when this is planned to occur.

Fuel Storage at the Runway: Inspector notes many 45-gallon barrels in a yellow berm on the side of the runway used to fuel planes (*see photo log #17*). A spill kit is noted near a pump. Three drums are on a "spill tray" that can be used as hold and transport up to four drums closer to the planes when filling. Inspector asks if a spill tray is used and informed that the transportable spill tray can be used as a spill tray. No concerns where noted with this facility.

Water Treatment Plant: the flow meter at the Water Treatment Plant is at 9600 square meters (*see photo log #18*), Inspector is informed that the old water meter broke this spring, and that this is the replacement. No concerns where noted with his facility.

Spills:

19-252: 100L of grey water spilled when a pipe lift station dropped causing this pipe to separate at the connectors. The camp just opened leading to a smaller spill. Inspector checks area and doesn't notice any impacts to the environment (*see photo log #19*). Post-incident water quality samples where conducted at the shoreline of Aimaokatalok Lake approximately 80 m downstream and compared them to samples taken on July 17, 2019 and found no impacts or changes.

19-301: Approximately 7000L of sewage spilled when the spill was discovered, it was discovered that a Fernco fitting on the main sewage line had disconnected at some point, possibly from improper installation and from the freeze/thaw movement. A small pump was used to recover pooled waste under the building and on the tundra and placed into plastic totes and sent for treatment at the Sewage Treatment Plant. Lime was placed under the building. The proponent didn't want to place too much line on the tundra as it may kill the plants. The sewage is thought to have been absorbed into the tundra and dried up before it can reach the lake. The proponent did not want to remediate the site with heavy equipment as that would cause more damage. (*see photo log #20*) Inspector sees no visible damage to the tundra and considers the spill closed.

SECTION 2	<input type="checkbox"/> Comments	<input type="checkbox"/> Non-Compliance with Act or Licence	<input type="checkbox"/> Action Required
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Licensee or Representative	Inspector's Name
Sarah Warnock	Candice Pedersen
Signature	Signature
Date	Date



2019-09-20

2019-09-19

Office Use Only: Follow-up report to be issued by Inspector

☐ Yes ☒ No

CC: Licensing Department, NWB
Justin Hack, Manager of Field Operations, CIRNAC

PHOTO LOG

Date	Camera	Inspector	Authorization
August 14, 2019	Sony Cyber-shot	Candice Pedersen	
Photo Log # 1	Location (NAD 83 DD MM SS.SS)		
Photo #1	N	W	
			
Description: Aerial photo of Boston Camp			

Photo Log # 2	Location (NAD 83 DD MM SS.SS)		
Photo #2	N	W	
			
Description: Coco matting at the BOS-3			

Photo Log # 3	Location (NAD 83 DD MM SS.SS)		
Photo #3	N	W	



Description: Oil Water Separator System

Photo Log # 4

Location (NAD 83 DD MM SS.SS)

Photo #4

N W



Description: BOS-9

Photo Log # 5

Location (NAD 83 DD MM SS.SS)

Photo #5

N W



Description: Burn Pan

Photo Log # 6

Location (NAD 83 DD MM SS.SS)

Photo #6

N W



Description: Waste Management Area, segregation




Photo Log # 7		Location (NAD 83 DD MM SS.SS)	
Photo #7		N	W
			
Description: Incinerator			


Photo Log # 8		Location (NAD 83 DD MM SS.SS)	
Photo #8		N	W
			
Description: Uncovered incinerator ash			



Photo Log # 9		Location (NAD 83 DD MM SS.SS)	
Photo #9		N	W
			
Description: Bulk Fuel Storage			

Photo Log # 10		Location (NAD 83 DD MM SS.SS)	
Photo #10		N	W
			



Description: Doubled walled fuel holding tank

Photo Log # 11

Location (NAD 83 DD MM SS.SS)

Photo #11

N

W



Description: BOS-7

Photo Log # 12

Location (NAD 83 DD MM SS.SS)

Photo #12

N

W



Description: BOS-2

Photo Log # 13

Location (NAD 83 DD MM SS.SS)

Photo #13

N

W



Description: Old Land Farm

Photo Log # 14

Location (NAD 83 DD MM SS.SS)

Photo #14

N

W





Description: Old Drill Casings

Photo Log # 15

Location (NAD 83 DD MM SS.SS)

Photo #15

N

W



Description: Old Drill Casings

Photo Log # 16

Location (NAD 83 DD MM SS.SS)

Photo #16

N

W



Description: Old Drill Casings

Photo Log # 17

Location (NAD 83 DD MM SS.SS)

Photo #17

N

W



Description: Fuel storage at the Runway

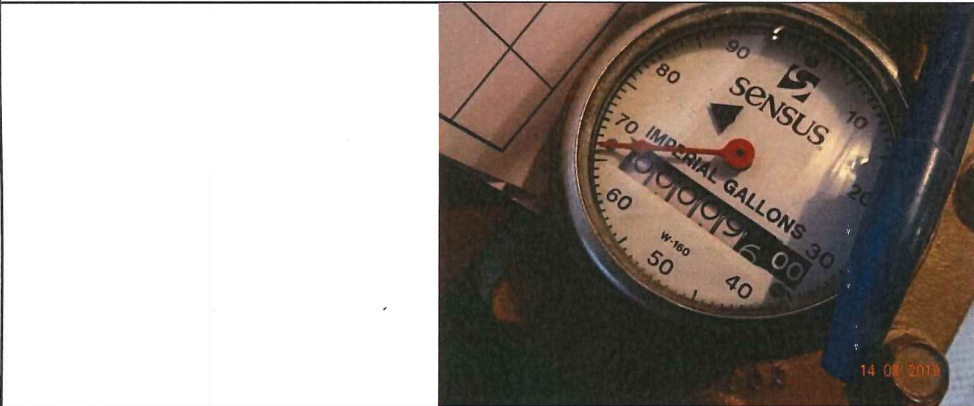
Photo Log # 18

Location (NAD 83 DD MM SS.SS)

Photo #18

N

W



Description: New Flow Meter at the Water Treatment Facility



Photo Log # 19

Location (NAD 83 DD MM SS.SS)

Photo #19

N

W



Description: Spill 19-252

Photo Log # 20

Location (NAD 83 DD MM SS.SS)

Photo #20

N

W



Description: Spill 19-301