

From: [Brash, Jennifer EMPR:EX](#)
To: [Hoffman, Al EMPR:EX](#)
Subject: Automatic reply: Valentine Mountain - Appeal of Orders issued under Mines Act and Health, Safety and Reclamation Code for Mines in British Columbia
Date: December 14, 2018 3:42:37 PM

Hello,

I am out of office until January 2. For urgent queries, please contact Heather Narynski (heather.narynski@gov.bc.ca) or Lowell Constable (lowell.constable@gov.bc.ca).

Thank you,

Jennifer

Brody, Margo X EMPR:EX

From: Dunkley, Jim R EMPR:EX
Sent: December 14, 2018 4:51 PM
To: Hoffman, Al EMPR:EX
Cc: Constable, Lowell EMPR:EX; Narynski, Heather M EMPR:EX; Caughill, David EMPR:EX; Brody, Margo X EMPR:EX; McPherson, Alexis EMPR:EX
Subject: RE: Valentine Mountain - Appeal of Orders issued under Mines Act and Health, Safety and Reclamation Code for Mines in British Columbia
Attachments: EMPR_InspectionReport_108949.pdf

My inspection report is attached. Essentially two orders:

1. A plan and commitment to clean up the site. Plan and commitment to be submitted by January 25, 2019.
2. Collect water samples from the dam pipe, the spillway and the water in the TSF and have them analyzed for total and dissolved metals, etc. Samples to be collected within 15 days of the inspection report (Nov 22, so by Dec 7) and the reports forwarded to the Inspector within 2 business days of receipt.

I have not received any water analyses and strongly suspect that samples have been taken.

Jim Dunkley, P. Geo
Inspector of Mines

300-1810 Blanshard St
Victoria, BC. V8W 9M9

778 698-7294

From: McPherson, Alexis EMPR:EX
Sent: Friday, December 14, 2018 4:14 PM
To: Hoffman, Al EMPR:EX
Cc: Constable, Lowell EMPR:EX; Narynski, Heather M EMPR:EX; Caughill, David EMPR:EX; Dunkley, Jim R EMPR:EX; Brody, Margo X EMPR:EX
Subject: FW: Valentine Mountain - Appeal of Orders issued under Mines Act and Health, Safety and Reclamation Code for Mines in British Columbia

Hello Al,

I issued two orders, one in each inspection report (attached and saved here: ^{s.17}

s.17

s.17 I have also attached the mine manager's reply. Correspondence is saved here: ^{s.17} _

s.17

The orders were pursuant to:

- 1) MA Section 15(5)(a) – "If an inspector is of the opinion that a delay in remedying a hazard would be dangerous to persons or property, the inspector may issue an order for immediate remedial action."

- 2) HSRC Sections 10.1.5, 10.1.7, 10.1.11, 10.1.13, 10.4.1, 10.4.2, 10.4.3, 10.4.4, 10.5.2, and 10.5.3 (EoR, Consequence Classification, Breach and Inundation Study, QPO's, Updated plans, Governance, TSF registrar, annual reporting, OMS manual, and DSI).

Jim Dunkley issued a separate inspection report – Jim, can you please provide a summary of your orders for AI?

Please let me know if you require any additional information.

Best regards,
Alexis

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Subject: Fwd: Valentine Mountain - Appeal of Orders issued under Mines Act and Health, Safety and Reclamation Code for Mines in British Columbia

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Cc: "Brash, Jennifer EMPR:EX" <Jennifer.Brash@gov.bc.ca>, "Narynski, Heather M EMPR:EX" <Heather.Narynski@gov.bc.ca>, "Marques, Victor EMPR:EX" <Victor.Marques@gov.bc.ca>, "Brody, Margo X EMPR:EX" <Margo.Brody@gov.bc.ca>
Subject: FW: Valentine Mountain - Appeal of Orders issued under Mines Act and Health, Safety and Reclamation Code for Mines in British Columbia

Lowell and Heather

Im not sure who issued these orders. It is important to know if these orders were issued pursuant to permit conditions or directed to non compliance with the Code.

Note orders issued pursuant to permit conditions, that is Part 10 of the Act are not appealable because in this case the Inspector is acting as the Chief Inspector.

I will send a preliminary email back to Mr. Wallace.

Heather set up a call after Christmas

Margo
Please set up a file.

Thanks,
AI H

From: glen@wallace.pro [mailto:glen@wallace.pro]
Sent: Friday, December 14, 2018 12:00 PM
To: Hoffman, AI EMPR:EX
Cc: 'Kevin Whelan'

Subject: Valentine Mountain - Appeal of Orders issued under Mines Act and Health, Safety and Reclamation Code for Mines in British Columbia

Please see the attached letter.



Province of British Columbia
MINISTRY OF ENERGY, MINES AND
PETROLEUM RESOURCES

Report of Inspector of Mines
Geotechnical

(Issued pursuant to Section 15 of the *Mines Act*)

Inspection No.: 109087
Mine No.: 0800265
Permit No.: MX-8-21
Total Orders: 1

Mine Name: Valentine Mountain
Location: Sooke, BC
Owner, Manager: Kevin Whelan, Mine Manager
Company: Great Thunder Gold Corp.
Address: 900-570 Granville Street
Vancouver, BC
V6C 3P1

Workers Contacted:
Type of Mining: Exploration - Surface (ES)
Date of Inspection: 2018-11-14
Inspector: Alexis McPherson, M.Sc., P.Eng., Geotechnical Inspector, EMPR Victoria
Accompanying Inspectors: Jim Dunkley, P.Geo., Permitting Inspector, SW Region, EMPR Victoria
In Attendance: Doug Underhill, P.Eng, RPF, Manager, Forest Hydrology and Infrastructure, TimberWest
Jason, Carvalho, Couverdon Real Estate

Copies to: Al Hoffman, Chief Inspector, EMPR Victoria
Diane Howe, Deputy Chief Inspector, Reclamation and Permitting, EMPR Victoria
Tania Demchuk, Deputy Chief Inspector, Compliance and Enforcement, EMPR Victoria
Andrew Rollo, Acting Executive Director, Major Mines, EMPR Victoria
Lowell Constable, Manager, Geotechnical Engineering, EMPR Victoria
Heather Narynski, Manager, Tailings Storage Facilities, EMPR Victoria
Dave Caughill, Regional Director, SW Region, EMPR Victoria
Jim Dunkley, Permitting Inspector, SW Region, EMPR Victoria
John Baldwin, Water Stewardship Officer, Regional Operations Division – Coast Area, FLNRORD
David Robinson, Senior Authorizations Specialist – Water, Regional Operations Division – Coast Area, FLNRORD
Mark Love, Authorization Section Head – Mining Team, Environmental Protection Division, ENV
Glen Wallace, CFO, Great Thunder Gold Corp.
Jacques Houle, P.Eng., Mineral Exploration Consulting

The Mine Manager is required to provide a written response within 15 days of receiving the inspection report. The Manager's response must outline the remedial steps taken by a specified date and the work still outstanding. A copy must be provided to the inspector, and in the case of health and safety matters, the occupational health and safety committee and the local union. In this document, Code means Health, Safety and Reclamation Code for Mines in British Columbia.

Introduction

A geotechnical inspection of the Valentine Mountain Site was conducted on November 14, 2018 by Alexis McPherson, M.Sc., P.Eng., Geotechnical Inspector with the Ministry of Energy, Mines and Petroleum Resources (EMPR), accompanied by Jim Dunkley, P.Geo., Regional Permitting Inspector with EMPR. Mr. Dunkley's report is issued under separate cover. Doug Underhill, Manager, Forest Hydrology and Infrastructure with TimberWest, and Jason Carvalho, Project Manager with Couverdon Real Estate, facilitated the inspection and lead the tour.

Valentine Mountain is an exploration site near Sooke, BC. At least two bulk samples were processed onsite; a ~650 t sample by Valentine Gold in 1988 and a ~65 t sample by Beau Pre in 1998. Geotechnical infrastructure includes a tailings storage facility and bulk sample trenches. The inspection tour included the following locations:

- Tailings Storage Facility (TSF),
- Mill Site, and
- Trenches.

The following documents were referenced as part of the inspection preparation and follow-up:

- “Tailings Impoundment Construction Report – Valentine Mountain Project” dated December 1, 1987 by Peter Peart, P.Eng., Consulting Geotechnical Engineer.
- “Initial Geotechnical Assessment – Tailings Pond, Valentine Mine, Valentine Mountain Au Deposit, Sooke, BC” dated December 23, 2003 by Jacques Whitford Environmental Consulting Limited (Jacques Whitford).
- “Decommissioning and Reclamation Plan – Tailings Pond, Valentine Mine, Valentine Mountain Au Deposit, Sooke, BC” dated January 12, 2004 by Jacques Whitford.
- “Valentine Mountain Property – Preliminary Geotechnical Evaluation of Tailings Dam” dated November 30, 2010 Thurber Engineering Ltd. (Thurber).
- “Valentine Mountain Mine – Tailings Disposal Facility – 2014 Dam Safety Inspection” dated December 1, 2014 by Thurber.

At the time of inspection, the weather was overcast, lightly raining and ~10°C. All areas of interest were visible and accessible.

Preamble

The purpose of this inspection was to:

- Assess whether the Mine is meeting the intent of the geotechnical requirements of the Code;
- Assess whether the Mine is meeting the intent of the geotechnical conditions in its Mine Permit;
- Assess whether geotechnical engineering practices at the Mine are generally consistent with accepted practices at mines in British Columbia; and,
- Provide general comment on geotechnical conditions at the mine.

This report is governed by the conditions and limitations set forth in the Mines Act and Code. This report is based on a review of select reports and work areas at the Mine, and cannot practically cover the entire mine site. Professional reliance has been used throughout this inspection.

Please note EMPR expects that all written recommendations made by a Professional Engineer, relating to geotechnical stability affecting health, safety, or environment, are followed by the Mine unless a suitable alternative written recommendation is provided by a Professional Engineer.

This report summarizes EMPR’s observations, comments, and recommendations based on the Mine site tour, preliminary review of annual geotechnical reports, and technical discussions with Mine staff. If required, inspection orders have been issued. For ease of reference the Mine Manager is asked to respond in red text in the space provided below each inspection order and information request.

Location: Tailings Storage Facility

The TSF is a side-hill impoundment, consisting of a single embankment. The embankment was constructed to its current elevation in 1987. The embankment has not been raised or otherwise modified since its original construction. The embankment has a maximum height of 9 m, crest width of 6 m, downstream slope of ~1.33H:1V and upstream slope of ~2H:1V. The upstream till zone is separated from the supporting downstream rip rap by a geotextile. Rip rap is located along the upstream embankment face and at the embankment crest, extending 0.5 m above the till. There is an underdrain system within the facility consisting of perforated pipe running parallel to the embankment along the upstream toe, connected to a solid pipe passing through the dam at the maximum dam height. The downstream outlet has a cap and the pipe has a pressure gauge at the downstream side.

The 2014 Dam Safety Inspection (DSI) noted that a leak in the underdrain system pressure gauge developed or increased in flowrate between 2010 and 2014. Photos from the 2014 DSI depict a lower flowrate than was observed during the inspection, and it was noted by the inspection facilitators that the underdrain system flowrate had increased since July 2018. A photo of the flow during the inspection is included as Photo 2. Boulders had been placed over the underdrain system outlet pipe, so the condition of the outlet and the source of the flows (pressure gauge, end of pipe, and/or area surrounding the pipe) could not be identified (Photo 3).

The TSF is estimated to have ~ 1 m of freeboard, although there is no measuring device on site to confirm this approximation. Water was discharging through the spillway, and vegetation is growing in the spillway (Photo 4).

A slump in the downstream face of the embankment near the left abutment was documented in 2003, 2010, and 2014 (Jacques Whitford, 2003; Thurber, 2010; Thurber, 2014). The slump did not appear to increase in size between 2010 and 2014 (Thurber, 2014). The slump has not been repaired and was visible during the inspection.

An order under *Mines Act* Section 15(5) was issued November 16, 2018 to address concerns related to the underdrain system and outlet, and spillway. The November 16, 2018 order is attached and must be considered along with this inspection report.

Review of EMPR files indicate the mine is out of compliance with numerous Part 10 Code sections, including the following:

- Section 10.1.5 – Engineer of Record
 - An Engineer of Record (EoR) has not be retained.
- Section 10.1.7 – Consequence Classification
 - The EoR has not confirmed the consequence classification.
- Section 10.1.11 – Breach and Inundation Study/Failure Runout Assessment
 - A breach and inundation study has not been completed.
- Section 10.1.13 – Quantifiable Performance Objectives
 - Quantifiable Performance Objectives have not been determined and reviewed by the EoR and TSF Qualified Person (QP).
- Section 10.4.1 – Updated Plans
 - Mine plans, reclamation and closure plans, and water balance and water management plans have not been updated.
- Section 10.4.2 – Governance
 - The Mine Manager has not
- Section 10.4.3 – Register of Tailings Storage Facilities and Dams
 - The Mine Manager has not:
 - Developed and maintained a Tailings Management System,
 - Designated a TSF QP,
 - Established an Independent Tailings Review Board (ITRB),
 - Completed an annual review of the TSF risk assessment,
 - Maintained TSF emergency preparedness and response plans,

- Section 10.4.4 – Annual Reporting
 - The Mine Manager has not submitted the following annual reporting:
 - DSIs completed,
 - Report of ITRB activities, and
 - Summary of TSF and dam safety recommendations, including a scheduled completion date.
- Section 10.5.2 – Operations, Maintenance and Surveillance (OMS) Manual
 - An OMS manual has not been prepared.
- Section 10.5.3 – Annual Dam Safety Inspection
 - A DSI has not been completed since 2014.

Further, EMPR notes several engineering recommendations provided by Jacques Whitford (2003) and Thurber (2010, 2014) relating to geotechnical stability were not completed. As indicated in the preamble, EMPR expects that all written recommendations made by a Professional Engineer, relating to geotechnical stability affecting health, safety, or environment, are followed by the Mine unless a suitable alternative written recommendation is provided by a Professional Engineer.

Order 1:

Observation of Contravention:

The mine is out of compliance with Sections 10.1.5, 10.1.7, 10.1.11, 10.1.13, 10.4.1, 10.4.2, 10.4.3, 10.4.4, 10.5.2, and 10.5.3 of the Code.

Remedial Action/Results To Be Obtained:

The Mine shall prepare and submit a detailed work plan to address the Code requirements to which the Mine is out of compliance. The work plan shall be completed to the satisfaction of the Chief Inspector. The work plan shall include specific activities, deliverables, timelines and milestones to achieve compliance with the Code.

Rectify By: March 31, 2019

Manager Response:

Location: Mill Site

The mill site includes four shelters/containers in various states of disrepair, a small ball mill and milling supplies (i.e. balls). None of the shelters/containers are locked and all are easily accessible. One container contains core boxes, with open core boxes laid out on the ground in front of the container (Photo 5).

Location: Trenches

The trenches are located east of the Mill Site, along an overgrown road. These linear excavations are overgrown and water has accumulated in the low spots (Photo 6). Some iron staining was visible. The tour facilitators indicated the trenches visited were the largest trenches; there are additional, smaller trenches on site which were not inspected.

Photo 1: TSF Pond



Photo 2: Flow from Underdrain System during the Inspection



Photo 3: Boulders Over the Underdrain System Outlet Pipe



Photo 4: Spillway at Invert



Photo 5: Core Shack and Open Core Boxes



Photo 6: Trench





Date: November 16, 2018

To: Kevin Whelan, Mine Manager, Great Thunder Gold Corp.

cc: Al Hoffman, Chief Inspector, EMPR Victoria
Diane Howe, Deputy Chief Inspector, EMPR Victoria
Tania Demchuk, Deputy Chief Inspector, Compliance and Enforcement, EMPR Victoria
Andrew Rollo, Acting Executive Director, Major Mines, EMPR Victoria
Lowell Constable, Manager, Geotechnical Engineering, EMPR Victoria
Heather Narynski, Manager, Tailings Storage Facilities, EMPR Victoria
Dave Caughill, Regional Director, SW Region, EMPR Victoria
Jim Dunkley, Permitting Inspector, SW Region, EMPR Victoria
Glen Wallace, Director, Great Thunder Gold Corp.
Jacques Houle, P.Eng., Mineral Exploration Consulting

Re: Order under *Mines Act* Section 15(5) for the Valentine Mountain Tailings Storage Facility

A geotechnical inspection of the Valentine Mountain Tailings Storage Facility (MX-8-21) was conducted on November 14, 2018 by Alexis McPherson, M.Sc., P.Eng., with the Ministry of Energy and Mines and Petroleum Resources (EMPR), accompanied by Jim Dunkley, P.Geo., Regional Permitting Inspector with EMPR. Doug Underhill, Manager, Forest Hydrology and Infrastructure with TimberWest, and Jason Carvalho, Project Manager with Couverdon Real Estate, facilitated the inspection and lead the tour.

There were two areas of immediate concern identified during the inspection. The first was the rate of discharge for the underdrain system outlet. Photos from the 2014 Dam Safety Inspection (DSI) by Thurber demonstrate a lower flowrate than was observed during the inspection, and it was noted by the inspection facilitators that the underdrain system discharge flowrate has increased since July 2018. Since the 2014 DSI large boulders were placed over the underdrain system outlet pipe, so the condition of the outlet could not be verified. The second was the spillway. The tailings storage facility pond is estimated to have ~1 m of freeboard, although there is no measuring device on site to confirm this approximation. Water was discharging through the spillway, and vegetation growing in the spillway is reducing capacity.

These areas of concerns were identified in the 2014 DSI¹ text and recommendations, as demonstrated by the following excerpts:

“Inclusion of the underdrain system is a serious design flaw in our opinion...Should this pipe rupture or develop a significant leak, it could result in a dam breach by means of a piping failure.”

“Although it does not appear that any leakage is occurring along the underdrain outlet pipe that passes through the dam at its highest point, the pressure gauge located at the outlet is leaking. The

¹ “Valentine Mountain Mine – Tailings Disposal Facility – 2014 Dam Safety Inspection” dated December 1, 2014 by Thurber Engineering Ltd.

development of a significant leak in, or the rupture of, the underdrain pipe probably represents the most likely failure mode for the impoundment. A remediation plan should be developed to address this risk.

"A response plan should be developed to address the possible increase in leakage from the outlet pipe over time."

"Vegetation must not be allowed to become re-established on the dam or along the spillway channel..."

Based on EMPR's recent geotechnical inspection, conditions which were raised as concerns in the 2014 DSI have not been addressed by the Permittee and have worsened since the 2014 DSI report was issued. Please note that EMPR expects all written recommendations made by a Professional Engineer, relating to geotechnical stability affecting health, safety, or environment, are followed by the Mine unless a suitable alternative written recommendation is provided by a Professional Engineer.

EMPR considers these conditions to represent a significant risk, and requires the facility be immediately assessed by a Professional Engineer. EMPR is thereby issuing the following order to take immediate remedial action.

Order 1:

Observation of contravention:

Pursuant to Mines Act Section 15(5)(a):

"If an inspector is of the opinion that a delay in remedying a hazard would be dangerous to persons or property, the inspector may issue an order for immediate remedial action."

Remedial Action/Results to Be Obtained:

The Mine shall engage a Professional Engineer to conduct a risk assessment of the Valentine Mine tailings storage facility and prepare an assessment report containing recommendations for any remedial work required to mitigate the risks and monitoring requirements. The report shall be submitted to the satisfaction of the Chief Inspector and shall be accompanied by a letter of commitment from the Mine Manager to address the recommendations with a proposed schedule. The risk assessment shall include, but not be limited to, the following items of concern:

- *Underdrain system and outlet, and*
- *Spillway.*

Rectify By:

A Professional Engineer shall visit the site by November 21, 2018. The assessment report and accompanying letter of commitment shall be submitted no later than November 26, 2018.

This letter includes the areas of immediate concern identified during the inspection. A complete inspection report will follow.

Please confirm you have received this letter and direct any questions, comments or concerns to Alexis.McPherson@gov.bc.ca.

Regards,

*Alexis McPherson, M.Sc., P.Eng.
Geotechnical Inspector
Ministry of Energy, Mines and Petroleum Resources*

Brody, Margo X EMPR:EX

From: Hoffman, Al EMPR:EX
Sent: December 14, 2018 5:01 PM
To: Dunkley, Jim R EMPR:EX
Cc: Constable, Lowell EMPR:EX; Narynski, Heather M EMPR:EX; Caughill, David EMPR:EX; Brody, Margo X EMPR:EX; McPherson, Alexis EMPR:EX; Howe, Diane J EMPR:EX
Subject: Re: Valentine Mountain - Appeal of Orders issued under Mines Act and Health, Safety and Reclamation Code for Mines in British Columbia

Is there uncertainty whether the current company is responsible

Sent from my iPhone

On Dec 14, 2018, at 4:51 PM, Dunkley, Jim R EMPR:EX <Jim.Dunkley@gov.bc.ca> wrote:

My inspection report is attached. Essentially two orders:

1. A plan and commitment to clean up the site. Plan and commitment to be submitted by January 25, 2019.
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Please let me know if you require any additional information.

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<EMPR_InspectionReport_108949.pdf>

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Subject: Re: Valentine Mountain - Appeal of Orders issued under Mines Act and Health, Safety and Reclamation Code for Mines in British Columbia

Alexis
And Jim
Pull all of the reports and letters together and set up a meeting in early Jan
Is there any danger of an imminent failure
AI

Sent from my iPhone

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<2018 11 14 EMPR Geotechnical Inspection (1) - MX-8-21 Valentine Mountain TSF.pdf>

<2018 11 14 EMPR Geotechnical Inspection (2) - MX-8-21 Valentine Mountain (with attach).pdf>

<Letter to Ministry of Energy Mines and Petroleum Resources - 2018.12.05 (00024577xD3128).PDF>

Brody, Margo X EMPR:EX

From: McPherson, Alexis EMPR:EX
Sent: December 14, 2018 5:30 PM
To: Hoffman, Al EMPR:EX
Cc: Constable, Lowell EMPR:EX; Narynski, Heather M EMPR:EX; Caughill, David EMPR:EX; Dunkley, Jim R EMPR:EX; Brody, Margo X EMPR:EX
Subject: RE: Valentine Mountain - Appeal of Orders issued under Mines Act and Health, Safety and Reclamation Code for Mines in British Columbia

Hello Al,

I will set up a meeting in early January.

The failure mechanism of concern is a piping failure from a pipe rupture or leak in the underdrain system. I did not observe if the discharge is coming from the pipe itself or from around the pipe (a concern for piping failure), as the pipe outlet was not visible. I did not observe sediment in the discharge, a potential indicator of internal erosion. Internal erosion is not something that can generally be observed directly, and I was not able to see the discharge location which would have provided additional information.

Alexis

From: Hoffman, Al EMPR:EX
Sent: Friday, December 14, 2018 5:05 PM
To: McPherson, Alexis EMPR:EX
Cc: Constable, Lowell EMPR:EX; Narynski, Heather M EMPR:EX; Caughill, David EMPR:EX; Dunkley, Jim R EMPR:EX; Brody, Margo X EMPR:EX
Subject: Re: Valentine Mountain - Appeal of Orders issued under Mines Act and Health, Safety and Reclamation Code for Mines in British Columbia

Alexis

And Jim

Pull all of the reports and letters together and set up a meeting in early Jan

Is there any danger of an imminent failure

Al

Sent from my iPhone

On Dec 14, 2018, at 4:13 PM, McPherson, Alexis EMPR:EX <Alexis.McPherson@gov.bc.ca> wrote:

Hello Al,

I issued two orders, one in each inspection report (attached and saved here:^{s.17}
s.17

s.17

mine manager's reply. Correspondence is saved here:^{s.17}

s.17

I have also attached the

The orders were pursuant to:

- 1) MA Section 15(5)(a) – “If an inspector is of the opinion that a delay in remedying a hazard would be dangerous to persons or property, the inspector may issue an order for immediate remedial action.”
- 2) HSRC Sections 10.1.5, 10.1.7, 10.1.11, 10.1.13, 10.4.1, 10.4.2, 10.4.3, 10.4.4, 10.5.2, and 10.5.3 (EoR, Consequence Classification, Breach and Inundation Study, QPO's, Updated plans, Governance, TSF registrar, annual reporting, OMS manual, and DSI).

Jim Dunkley issued a separate inspection report – Jim, can you please provide a summary of your orders for AI?

Please let me know if you require any additional information.

Best regards,
Alexis

From: Constable, Lowell EMPR:EX
Sent: Friday, December 14, 2018 3:50 PM
To: McPherson, Alexis EMPR:EX
Cc: Narynski, Heather M EMPR:EX
Subject: Fwd: Valentine Mountain - Appeal of Orders issued under Mines Act and Health, Safety and Reclamation Code for Mines in British Columbia

Hi Alexis,

Could you provide some insight as AI requests below. I think some at least were Section 18 orders, but some may be otherwise.
Sent from my iPhone

Begin forwarded message:

From: "Hoffman, Al EMPR:EX" <Al.Hoffman@gov.bc.ca<<mailto:Al.Hoffman@gov.bc.ca>>>
To: "Constable, Lowell EMPR:EX" <Lowell.Constable@gov.bc.ca<<mailto:Lowell.Constable@gov.bc.ca>>>
Cc: "Brash, Jennifer EMPR:EX" <Jennifer.Brash@gov.bc.ca<<mailto:Jennifer.Brash@gov.bc.ca>>>, "Narynski, Heather M EMPR:EX" <Heather.Narynski@gov.bc.ca<<mailto:Heather.Narynski@gov.bc.ca>>>, "Marques, Victor EMPR:EX" <Victor.Marques@gov.bc.ca<<mailto:Victor.Marques@gov.bc.ca>>>, "Brody, Margo X EMPR:EX" <Margo.Brody@gov.bc.ca<<mailto:Margo.Brody@gov.bc.ca>>>
Subject: FW: Valentine Mountain - Appeal of Orders issued under Mines Act and Health, Safety and Reclamation Code for Mines in British Columbia

Lowell and Heather

Im not sure who issued these orders. It is important to know if these orders were issued pursuant to permit conditions or directed to non compliance with the Code.
Note orders issued pursuant to permit conditions, that is Part 10 of the Act are not appealable because in this case the Inspector is acting as the Chief Inspector.
I will send a preliminary email back to Mr. Wallace.
Heather set up a call after Christmas

Margo
Please set up a file.

Thanks,
Al H

From: glen@wallace.pro<<mailto:glen@wallace.pro>> [<mailto:glen@wallace.pro>]
Sent: Friday, December 14, 2018 12:00 PM
To: Hoffman, Al EMPR:EX
Cc: 'Kevin Whelan'
Subject: Valentine Mountain - Appeal of Orders issued under Mines Act and Health, Safety and Reclamation Code for Mines in British Columbia

Please see the attached letter.

<2018 11 14 EMPR Geotechnical Inspection (1) - MX-8-21 Valentine Mountain TSF.pdf>

<2018 11 14 EMPR Geotechnical Inspection (2) - MX-8-21 Valentine Mountain (with attach).pdf>

<Letter to Ministry of Energy Mines and Petroleum Resources - 2018.12.05 (00024577xD3128).PDF>

From: [Narynski, Heather M EMPR:EX](#)
To: [Hoffman, AI EMPR:EX](#)
Cc: [Constable, Lowell EMPR:EX](#); [Caughill, David EMPR:EX](#); [Dunkley, Jim R EMPR:EX](#); [Brody, Margo X EMPR:EX](#); [McPherson, Alexis EMPR:EX](#); [Rollo, Andrew EMPR:EX](#); [Narynski, Heather M EMPR:EX](#)
Subject: RE: Valentine Mountain - Appeal of Orders issued under Mines Act and Health, Safety and Reclamation Code for Mines in British Columbia
Date: December 17, 2018 9:32:36 AM
Attachments: [FW Valentine Mountain - Appeal of Orders issued under Mines Act and Health Safety and Reclamation Code for Mines in British Columbia.msg](#)

AI,

Alexis and I will arrange an internal meeting in the new year to discuss the Valentine TSF. ^{s.1}
s.12; s.13

s.13; s.14

Great Thunder has indicated that they do not believe they are responsible for the Valentine site (attached), however, they are willing to carry out an engineering inspection of the TSF (as ordered). They have been unsuccessful, to date, at retaining an engineering firm willing to carry out the work (they have contacted in the order of 8 reputable firms). We will need to have an internal discussion around the immediacy of the concerns and whether EMPR should look at retaining an engineer to carry out the work required.

Heather

From: McPherson, Alexis EMPR:EX
Sent: Friday, December 14, 2018 7:30 PM
To: Hoffman, AI EMPR:EX
Cc: Constable, Lowell EMPR:EX; Narynski, Heather M EMPR:EX; Caughill, David EMPR:EX; Dunkley, Jim R EMPR:EX; Brody, Margo X EMPR:EX
Subject: RE: Valentine Mountain - Appeal of Orders issued under Mines Act and Health, Safety and Reclamation Code for Mines in British Columbia

Hello AI,

I will set up a meeting in early January.

The failure mechanism of concern is a piping failure from a pipe rupture or leak in the underdrain system. I did not observe if the discharge is coming from the pipe itself or from around the pipe (a concern for piping failure), as the pipe outlet was not visible. I did not observe sediment in the discharge, a potential indicator of internal erosion. Internal erosion is not something that can generally be observed directly, and I was not able to see the discharge location which would have provided additional information.

Alexis

From: Hoffman, AI EMPR:EX
Sent: Friday, December 14, 2018 5:05 PM
To: McPherson, Alexis EMPR:EX
Cc: Constable, Lowell EMPR:EX; Narynski, Heather M EMPR:EX; Caughill, David EMPR:EX; Dunkley, Jim R EMPR:EX; Brody, Margo X EMPR:EX
Subject: Re: Valentine Mountain - Appeal of Orders issued under Mines Act and Health, Safety and Reclamation Code for Mines in British Columbia

Great Thunder Gold Corp.

December 14, 2018

BY E-MAIL TO Al.Hoffman@gov.bc.ca

Ministry of Energy, Mines and Petroleum Resources
Mines and Mineral Resources Division
6th Floor, 1810 Blanshard Street
Victoria, BC
V8T 4J1

Attention: Mr. Al Hoffman, Chief Inspector of Mines

Dear Mr. Hoffman:

Re: Valentine Mountain – Appeal of Orders issued under Mines Act and Health, Safety and Reclamation Code for Mines in British Columbia

I write on behalf of Great Thunder Gold Corp. (“Great Thunder”) to appeal the Geotechnical and Permitting Orders issued under the Mines Act, dated November 16, 21 and 22, 2018 (the “Orders”), which require Great Thunder to conduct various assessments, work and reports with respect to the Valentine Mountain pond. For ease of reference, the Orders are attached to this letter, as well as our correspondence with your inspectors.

Relief Sought

Great Thunder respectfully requests that you immediately suspend all of the Orders against Great Thunder. While you consider this appeal, Great Thunder respectfully requests that you stay the Orders pending the outcome of your decision.

Basis for Appeal

Below we briefly lay out the basis for this appeal. On your direction regarding the appeal process, we can provide further submissions to support this appeal.

In short, Great Thunder has been adversely affected by the Orders, which should not have been issued to Great Thunder because Great Thunder is not responsible for the Valentine Mountain pond.

Great Thunder Did Not Construct the Valentine Mountain Pond

Great Thunder did not construct the Valentine Mountain pond. The Valentine Mountain pond was constructed long before Great Thunder commenced its exploration at the site. Further, Great Thunder

has never conducted any bulk sampling at the Valentine Mountain site, nor has it ever manipulated or added anything to the Valentine Mountain pond. Put simply, Great Thunder's activities at the Valentine Mountain site have been and are limited to those authorized pursuant to its exploration permit.

Great Thunder's Exploration Permit Does Not Impose Responsibility for the Valentine Mountain Pond
Great Thunder's mine permit authorizes Great Thunder's limited exploration activities at the site, but does not impose any responsibility for the Valentine Mountain pond.

In 2010, Mill Bay Ventures Inc. (Great Thunder's name before 2013), acquired mine permit MX-8-21, which covers the Valentine Mountain exploration project. There are no conditions under the original version of MX-8-21, or in any subsequent amendments, that place any responsibility over the Valentine Mountain pond on the MX-8-21 permit holder. Concurrently, Mill Bay did not accept any responsibility for the Valentine Mountain pond when it acquired the mine permit.

Great Thunder is Not the Subject Land Owner and Great Thunder Does Not Hold the Water Licence
Great Thunder does not own the subject land, nor does Great Thunder hold a water licence for the Valentine Mountain pond. Conversely, TimberWest owns the land and holds the sole water licence issued for the Valentine Mountain pond (i.e. Conditional Water Licence C72277).

Importantly, TimberWest's water licence includes the following conditions:

- "The works authorized to be constructed are dam and reservoir, which shall be located approximately as shown on the attached plan." (h)
- "The dam and reservoir authorized under clause (h) of this licence shall be maintained to the satisfaction of the Engineer under the Water Act." (i)
- "The construction of the said works has been completed and the water is being beneficially used." (j)

In addition to owning the subject lands and holding the only water licence for the Valentine Mountain pond, TimberWest is an "owner" under the Dam Safety Regulation. As an "owner" under that Regulation, TimberWest is subject to certain requirements, such as maintaining and exercising reasonable care to avoid the risk of significant harm at the Valentine Mountain pond.

Notably, TimberWest recently dumped boulders on the underdrain system outlet pipe of the Valentine Mountain pond, which created the current conditions identified in the geotechnical inspections associated with the Orders. TimberWest carried out these activities on its own accord, without any involvement of Great Thunder.

Closing

In sum, Great Thunder should not be the subject of the Orders.

Great Thunder's mine permit MX-8-21 authorizes Great Thunder's limited exploration efforts, but does not impose responsibility for the Valentine Mountain pond. Further, Great Thunder:

- did not construct, manipulate or add anything to the Valentine Mountain pond;
- has never held any authorization for the Valentine Mountain pond;
- does not and has never owned the land on which the Valentine Mountain pond is located; and

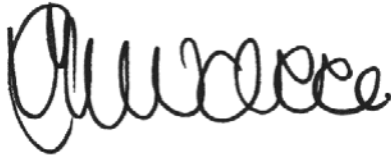
- is not a party responsible for carrying out any repair, maintenance or removal of the Valentine Mountain pond pursuant to the applicable legislation.

As such, Great Thunder respectfully requests that you exercise your powers under section 33 of the Mines Act and immediately suspend the operation of all of the Orders. While you consider this appeal, Great Thunder respectfully requests that you stay the Orders pursuant to your powers under section 33 of the Mines Act.

We appreciate your prompt consideration of this appeal. Please let us know if you require more information or if you have further direction on the process for hearing this appeal.

Yours truly,

GREAT THUNDER GOLD CORP.

A handwritten signature in black ink, appearing to read 'Glen Wallace', written in a cursive style.

per Glen Wallace, MBA, CPA, CGA
Chief Financial Officer



Date: November 16, 2018

To: Kevin Whelan, Mine Manager, Great Thunder Gold Corp.

cc: Al Hoffman, Chief Inspector, EMPR Victoria
Diane Howe, Deputy Chief Inspector, EMPR Victoria
Tania Demchuk, Deputy Chief Inspector, Compliance and Enforcement, EMPR Victoria
Andrew Rollo, Acting Executive Director, Major Mines, EMPR Victoria
Lowell Constable, Manager, Geotechnical Engineering, EMPR Victoria
Heather Narynski, Manager, Tailings Storage Facilities, EMPR Victoria
Dave Caughill, Regional Director, SW Region, EMPR Victoria
Jim Dunkley, Permitting Inspector, SW Region, EMPR Victoria
Glen Wallace, Director, Great Thunder Gold Corp.
Jacques Houle, P.Eng., Mineral Exploration Consulting

Re: Order under *Mines Act* Section 15(5) for the Valentine Mountain Tailings Storage Facility

A geotechnical inspection of the Valentine Mountain Tailings Storage Facility (MX-8-21) was conducted on November 14, 2018 by Alexis McPherson, M.Sc., P.Eng., with the Ministry of Energy and Mines and Petroleum Resources (EMPR), accompanied by Jim Dunkley, P.Geo., Regional Permitting Inspector with EMPR. Doug Underhill, Manager, Forest Hydrology and Infrastructure with TimberWest, and Jason Carvalho, Project Manager with Couverdon Real Estate, facilitated the inspection and lead the tour.

There were two areas of immediate concern identified during the inspection. The first was the rate of discharge for the underdrain system outlet. Photos from the 2014 Dam Safety Inspection (DSI) by Thurber demonstrate a lower flowrate than was observed during the inspection, and it was noted by the inspection facilitators that the underdrain system discharge flowrate has increased since July 2018. Since the 2014 DSI large boulders were placed over the underdrain system outlet pipe, so the condition of the outlet could not be verified. The second was the spillway. The tailings storage facility pond is estimated to have ~1 m of freeboard, although there is no measuring device on site to confirm this approximation. Water was discharging through the spillway, and vegetation growing in the spillway is reducing capacity.

These areas of concerns were identified in the 2014 DSI¹ text and recommendations, as demonstrated by the following excerpts:

“Inclusion of the underdrain system is a serious design flaw in our opinion...Should this pipe rupture or develop a significant leak, it could result in a dam breach by means of a piping failure.”

“Although it does not appear that any leakage is occurring along the underdrain outlet pipe that passes through the dam at its highest point, the pressure gauge located at the outlet is leaking. The

¹ “Valentine Mountain Mine – Tailings Disposal Facility – 2014 Dam Safety Inspection” dated December 1, 2014 by Thurber Engineering Ltd.

development of a significant leak in, or the rupture of, the underdrain pipe probably represents the most likely failure mode for the impoundment. A remediation plan should be developed to address this risk.

"A response plan should be developed to address the possible increase in leakage from the outlet pipe over time."

"Vegetation must not be allowed to become re-established on the dam or along the spillway channel..."

Based on EMPR's recent geotechnical inspection, conditions which were raised as concerns in the 2014 DSI have not been addressed by the Permittee and have worsened since the 2014 DSI report was issued. Please note that EMPR expects all written recommendations made by a Professional Engineer, relating to geotechnical stability affecting health, safety, or environment, are followed by the Mine unless a suitable alternative written recommendation is provided by a Professional Engineer.

EMPR considers these conditions to represent a significant risk, and requires the facility be immediately assessed by a Professional Engineer. EMPR is thereby issuing the following order to take immediate remedial action.

Order 1:

Observation of contravention:

Pursuant to Mines Act Section 15(5)(a):

"If an inspector is of the opinion that a delay in remedying a hazard would be dangerous to persons or property, the inspector may issue an order for immediate remedial action."

Remedial Action/Results to Be Obtained:

The Mine shall engage a Professional Engineer to conduct a risk assessment of the Valentine Mine tailings storage facility and prepare an assessment report containing recommendations for any remedial work required to mitigate the risks and monitoring requirements. The report shall be submitted to the satisfaction of the Chief Inspector and shall be accompanied by a letter of commitment from the Mine Manager to address the recommendations with a proposed schedule. The risk assessment shall include, but not be limited to, the following items of concern:

- *Underdrain system and outlet, and*
- *Spillway.*

Rectify By:

A Professional Engineer shall visit the site by November 21, 2018. The assessment report and accompanying letter of commitment shall be submitted no later than November 26, 2018.

This letter includes the areas of immediate concern identified during the inspection. A complete inspection report will follow.

Please confirm you have received this letter and direct any questions, comments or concerns to Alexis.McPherson@gov.bc.ca.

Regards,

*Alexis McPherson, M.Sc., P.Eng.
Geotechnical Inspector
Ministry of Energy, Mines and Petroleum Resources*

Great Thunder Gold Corp.

November 20, 2018

Ministry of Energy, Mines and Petroleum Resources
Mines and Mineral Resources Division
6th Floor, 1810 Blanshard Street
Victoria, BC
V8T 4J1

BY E-MAIL

Attention: Ms. Alexis McPherson, M.Sc., P.Eng.
Geotechnical Inspector

Dear Ms. McPherson:

**Re: Order under Mines Act Section 15(5)
Valentine Mountain Tailings Storage Facility**

I write on behalf of Great Thunder Gold Corp. and to respond to your letter received late in the afternoon on Friday, November 16, 2018.

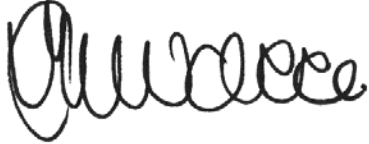
Your letter was the first time Great Thunder was informed of the November 14, 2018 inspection at the Valentine Mountain Tailings Storage Facility. As a matter of courtesy, we would expect the Ministry of Energy, Mines and Petroleum Resources (“EMPR”) to notify Great Thunder of the inspection, which we now know was attended by EMPR, TimberWest and Couverdon Real Estate representatives. Great Thunder is also surprised to learn that based on this inspection, EMPR is ordering Great Thunder to have a Professional Engineer visit the site by November 21, 2018 (tomorrow) and prepare an assessment report and accompanying letter of commitment by November 26, 2018. Logistically, there is simply not enough time for Great Thunder to retain and arrange access for a Professional Engineer to attend the site by tomorrow and subsequently prepare an assessment report and letter of commitment by November 26, 2018.

Although Great Thunder is fully committed to complying with its Mines Act permits, Great Thunder needs time to consider its legal obligations and we request that EMPR provide us further information and rationale for issuing the order against Great Thunder. We also understand from Mr. Dunkley’s email yesterday that EMPR is considering further orders against Great Thunder. Respectfully, we request that EMPR hold off from issuing these orders until after we have a chance to discuss these matters with you.

I am available for a phone call or an in person meeting at your convenience. Please let me know a time that works for you.

Yours truly,

GREAT THUNDER GOLD CORP.

A handwritten signature in black ink, appearing to read "Glen Wallace". The signature is fluid and cursive, with the first name "Glen" being more prominent than the last name "Wallace".

per Glen Wallace, MBA, CPA, CGA
Chief Financial Officer



Province of British Columbia
MINISTRY OF ENERGY, MINES AND
PETROLEUM RESOURCES

Report of Inspector of Mines
Geotechnical

(Issued pursuant to Section 15 of the *Mines Act*)

Inspection No.: 109087
Mine No.: 0800265
Permit No.: MX-8-21
Total Orders: 1

Mine Name: Valentine Mountain
Location: Sooke, BC
Owner, Manager: Kevin Whelan, Mine Manager
Company: Great Thunder Gold Corp.
Address: 900-570 Granville Street
Vancouver, BC
V6C 3P1

Workers Contacted:
Type of Mining: Exploration - Surface (ES)
Date of Inspection: 2018-11-14
Inspector: Alexis McPherson, M.Sc., P.Eng., Geotechnical Inspector, EMPR Victoria
Accompanying Inspectors: Jim Dunkley, P.Geo., Permitting Inspector, SW Region, EMPR Victoria
In Attendance: Doug Underhill, P.Eng, RPF, Manager, Forest Hydrology and Infrastructure, TimberWest
Jason, Carvalho, Couverdon Real Estate

Copies to: Al Hoffman, Chief Inspector, EMPR Victoria
Diane Howe, Deputy Chief Inspector, Reclamation and Permitting, EMPR Victoria
Tania Demchuk, Deputy Chief Inspector, Compliance and Enforcement, EMPR Victoria
Andrew Rollo, Acting Executive Director, Major Mines, EMPR Victoria
Lowell Constable, Manager, Geotechnical Engineering, EMPR Victoria
Heather Narynski, Manager, Tailings Storage Facilities, EMPR Victoria
Dave Caughill, Regional Director, SW Region, EMPR Victoria
Jim Dunkley, Permitting Inspector, SW Region, EMPR Victoria
John Baldwin, Water Stewardship Officer, Regional Operations Division – Coast Area, FLNRORD
David Robinson, Senior Authorizations Specialist – Water, Regional Operations Division – Coast Area, FLNRORD
Mark Love, Authorization Section Head – Mining Team, Environmental Protection Division, ENV
Glen Wallace, CFO, Great Thunder Gold Corp.
Jacques Houle, P.Eng., Mineral Exploration Consulting

The Mine Manager is required to provide a written response within 15 days of receiving the inspection report. The Manager's response must outline the remedial steps taken by a specified date and the work still outstanding. A copy must be provided to the inspector, and in the case of health and safety matters, the occupational health and safety committee and the local union. In this document, Code means Health, Safety and Reclamation Code for Mines in British Columbia.

Introduction

A geotechnical inspection of the Valentine Mountain Site was conducted on November 14, 2018 by Alexis McPherson, M.Sc., P.Eng., Geotechnical Inspector with the Ministry of Energy, Mines and Petroleum Resources (EMPR), accompanied by Jim Dunkley, P.Geo., Regional Permitting Inspector with EMPR. Mr. Dunkley's report is issued under separate cover. Doug Underhill, Manager, Forest Hydrology and Infrastructure with TimberWest, and Jason Carvalho, Project Manager with Couverdon Real Estate, facilitated the inspection and lead the tour.

- Tailings Storage Facility (TSF),
- Mill Site, and
- Trenches.

- “Tailings Impoundment Construction Report – Valentine Mountain Project” dated December 1, 1987 by Peter Peart, P.Eng., Consulting Geotechnical Engineer.
- “Initial Geotechnical Assessment – Tailings Pond, Valentine Mine, Valentine Mountain Au Deposit, Sooke, BC” dated December 23, 2003 by Jacques Whitford Environmental Consulting Limited (Jacques Whitford).
- “Decommissioning and Reclamation Plan – Tailings Pond, Valentine Mine, Valentine Mountain Au Deposit, Sooke, BC” dated January 12, 2004 by Jacques Whitford.
- “Valentine Mountain Property – Preliminary Geotechnical Evaluation of Tailings Dam” dated November 30, 2010 Thurber Engineering Ltd. (Thurber).
- “Valentine Mountain Mine – Tailings Disposal Facility – 2014 Dam Safety Inspection” dated December 1, 2014 by Thurber.

At the time of inspection, the weather was overcast, lightly raining and ~10°C. All areas of interest were visible and accessible.

The purpose of this inspection was to:

- Assess whether the Mine is meeting the intent of the geotechnical requirements of the Code;
- Assess whether the Mine is meeting the intent of the geotechnical conditions in its Mine Permit;
- Assess whether geotechnical engineering practices at the Mine are generally consistent with accepted practices at mines in British Columbia; and,
- Provide general comment on geotechnical conditions at the mine.

This report is governed by the conditions and limitations set forth in the Mines Act and Code. This report is based on a review of select reports and work areas at the Mine, and cannot practically cover the entire mine site. Professional reliance has been used throughout this inspection.

Please note EMPR expects that all written recommendations made by a Professional Engineer, relating to geotechnical stability affecting health, safety, or environment, are followed by the Mine unless a suitable alternative written recommendation is provided by a Professional Engineer.

This report summarizes EMPR's observations, comments, and recommendations based on the Mine site tour, preliminary review of annual geotechnical reports, and technical discussions with Mine staff. If required, inspection orders have been issued. For ease of reference the Mine Manager is asked to respond in red text in the space provided below each inspection order and information request.

Location: Tailings Storage Facility

The TSF is a side-hill impoundment, consisting of a single embankment. The embankment was constructed to its current elevation in 1987. The embankment has not been raised or otherwise modified since its original construction. The embankment has a maximum height of 9 m, crest width of 6 m, downstream slope of ~1.33H:1V and upstream slope of ~2H:1V. The upstream till zone is separated from the supporting downstream rip rap by a geotextile. Rip rap is located along the upstream embankment face and at the embankment crest, extending 0.5 m above the till. There is an underdrain system within the facility consisting of perforated pipe running parallel to the embankment along the upstream toe, connected to a solid pipe passing through the dam at the maximum dam height. The downstream outlet has a cap and the pipe has a pressure gauge at the downstream side.

The 2014 Dam Safety Inspection (DSI) noted that a leak in the underdrain system pressure gauge developed or increased in flowrate between 2010 and 2014. Photos from the 2014 DSI depict a lower flowrate than was observed during the inspection, and it was noted by the inspection facilitators that the underdrain system flowrate had increased since July 2018. A photo of the flow during the inspection is included as Photo 2. Boulders had been placed over the underdrain system outlet pipe, so the condition of the outlet and the source of the flows (pressure gauge, end of pipe, and/or area surrounding the pipe) could not be identified (Photo 3).

The TSF is estimated to have ~ 1 m of freeboard, although there is no measuring device on site to confirm this approximation. Water was discharging through the spillway, and vegetation is growing in the spillway (Photo 4).

A slump in the downstream face of the embankment near the left abutment was documented in 2003, 2010, and 2014 (Jacques Whitford, 2003; Thurber, 2010; Thurber, 2014). The slump did not appear to increase in size between 2010 and 2014 (Thurber, 2014). The slump has not been repaired and was visible during the inspection.

An order under *Mines Act* Section 15(5) was issued November 16, 2018 to address concerns related to the underdrain system and outlet, and spillway. The November 16, 2018 order is attached and must be considered along with this inspection report.

Review of EMPR files indicate the mine is out of compliance with numerous Part 10 Code sections, including the following:

- Section 10.1.5 – Engineer of Record
 - An Engineer of Record (EoR) has not be retained.
- Section 10.1.7 – Consequence Classification
 - The EoR has not confirmed the consequence classification.
- Section 10.1.11 – Breach and Inundation Study/Failure Runout Assessment
 - A breach and inundation study has not been completed.
- Section 10.1.13 – Quantifiable Performance Objectives
 - Quantifiable Performance Objectives have not been determined and reviewed by the EoR and TSF Qualified Person (QP).
- Section 10.4.1 – Updated Plans
 - Mine plans, reclamation and closure plans, and water balance and water management plans have not been updated.
- Section 10.4.2 – Governance
 - The Mine Manager has not
- Section 10.4.3 – Register of Tailings Storage Facilities and Dams
 - The Mine Manager has not:
 - Developed and maintained a Tailings Management System,
 - Designated a TSF QP,
 - Established an Independent Tailings Review Board (ITRB),
 - Completed an annual review of the TSF risk assessment,
 - Maintained TSF emergency preparedness and response plans,

- Section 10.4.4 – Annual Reporting
 - The Mine Manager has not submitted the following annual reporting:
 - DSIs completed,
 - Report of ITRB activities, and
 - Summary of TSF and dam safety recommendations, including a scheduled completion date.
- Section 10.5.2 – Operations, Maintenance and Surveillance (OMS) Manual
 - An OMS manual has not been prepared.
- Section 10.5.3 – Annual Dam Safety Inspection
 - A DSI has not been completed since 2014.

Further, EMPR notes several engineering recommendations provided by Jacques Whitford (2003) and Thurber (2010, 2014) relating to geotechnical stability were not completed. As indicated in the preamble, EMPR expects that all written recommendations made by a Professional Engineer, relating to geotechnical stability affecting health, safety, or environment, are followed by the Mine unless a suitable alternative written recommendation is provided by a Professional Engineer.

Order 1:

Observation of Contravention:

The mine is out of compliance with Sections 10.1.5, 10.1.7, 10.1.11, 10.1.13, 10.4.1, 10.4.2, 10.4.3, 10.4.4, 10.5.2, and 10.5.3 of the Code.

Remedial Action/Results To Be Obtained:

The Mine shall prepare and submit a detailed work plan to address the Code requirements to which the Mine is out of compliance. The work plan shall be completed to the satisfaction of the Chief Inspector. The work plan shall include specific activities, deliverables, timelines and milestones to achieve compliance with the Code.

Rectify By: March 31, 2019

Manager Response:

Location: Mill Site

The mill site includes four shelters/containers in various states of disrepair, a small ball mill and milling supplies (i.e. balls). None of the shelters/containers are locked and all are easily accessible. One container contains core boxes, with open core boxes laid out on the ground in front of the container (Photo 5).

Location: Trenches

The trenches are located east of the Mill Site, along an overgrown road. These linear excavations are overgrown and water has accumulated in the low spots (Photo 6). Some iron staining was visible. The tour facilitators indicated the trenches visited were the largest trenches; there are additional, smaller trenches on site which were not inspected.

Closure

Please address the response to Alexis McPherson, Geotechnical Inspector at Alexis.McPherson@gov.bc.ca.

You are reminded that, as per Section 15(6) of the Mines Act, your response is required within 15 days of the days of receiving this report. In addition, Section 30 (1) of the Mines Act requires this Inspection Report to be posted in a conspicuous location at the mine site for 30 days.

Please feel free to contact Alexis McPherson with any questions or comments.

Received by _____ on _____
[Mine Manager Name, Title] [Date]

Signature: _____

Attachment:

2018 11 14 EMPR Geotechnical Inspection (1) – MX-8-21 Valentine Mountain TSF

Photo 1: TSF Pond



Photo 2: Flow from Underdrain System during the Inspection



Photo 3: Boulders Over the Underdrain System Outlet Pipe



Photo 4: Spillway at Invert



Photo 5: Core Shack and Open Core Boxes



Photo 6: Trench



Inspection Number: 108949
File Number:
Permit Number: MX-8-21
Total Orders: 2

Report of Inspector of Mines - Permitting

Issued pursuant to Section 15 of the Mines Act

Mine Name/Number	Valentine Mountain 0800265	Visit Date	2018-11-14
Type of Mining	ES. EXPLORATION - SURFACE	Location	
Latitude/Longitude	48.51639, -123.88417	Northing/Easting/Zone	434706, 5374075, 10U
Manager	Jacques Houle	Permittee	Great Thunder Gold Corp.
Phone Numbers	(604) 682 3701	Address	900 - 570 Granville Street Vancouver BC V6C 3P1
Email			
Inspector	Jim Dunkley, INSPECTOR	Accompanying Inspector	Alexis McPherson, Inspector;
Address	PO Box 9395, STN PROV GOVT Victoria, B.C. V8W 9M9		
In Attendance	Doug Underhill, TimberWest; Jason Carvalho, TimberWest		
Copies to			

The Mine Manager is required to provide a written response within 15 days of receiving the inspection report. The Manager's response must outline the remedial steps taken by a specified date and the work still outstanding. A copy must be provided to the inspector, and in the case of health and safety matters, the occupational health and safety committee and the local union. In this document, Code means Health, Safety and Reclamation Code for Mines in British Columbia.

General Observation: The Tailings Storage Facility dam, the structures including the drill core storage C-can, the mill

Latitude/Longitude:

Northing/Easting/Zone:

There are concerns relating to the TSF dam that are addressed under separate cover. The rest of the site, including the mill and the various structures and trailers, is run down and not serviceable. Site clean up is required.

Order 1 (Inspection Mines):

Status: Open

Issued Pursuant To: Mines Act Section 15(4)

Permit Conditions:

Section 7d) Processing

Observation of Contravention:

The mill site has a number of structures in disrepair that are required to be removed.

Remedial Action/Results To Be Obtained:

A plan to remove the structures and the remains of the mill shall be submitted to the Inspector by January 25, 2019. This plan will include a hard deadline for when all structures are to be removed, where disposal of structures and the mill will be, as well as a commitment to work with the land owner to co-ordinate land access and industrial road usage for the time period required to remove the debris.

Rectify By/Completion Date: 2019-01-25

Manager Response:

Order 2 (Inspection Mines):

Status: Open

Issued Pursuant To: Mines Act Section 15(4)

Section 10.4.4, Health, Safety and Reclamation Code for Mines in BC (MA), Annual Reporting

Observation of Contravention:

Water coming from the drain in the TSF appears to be acidic based on the apparent precipitation of iron on the rocks the outflow water flows over. The water from the drainpipe, the constructed outflow channel and the water within the TSF require testing.

Remedial Action/Results To Be Obtained:

10.4.4 (g) states "other information required by the chief inspector." The requirement is for water from the drainpipe, the spillway and the water within the TSF to be sampled and analysis conducted for total and dissolved metals using low level detection, pH, and general ions. Sampling is to be conducted within 15 days: samples are to be sent to an accredited lab for analysis. Copies of the results are to be sent to the

Inspector

Manager Initials

Report Date: 2018-11-22

Valentine Mountain 0800265

Jim Dunkley

Inspector within 2 business days of their receipt by the permit holder.

Rectify By/Completion Date: 2018-12-07

Manager Response:

Received by _____ on _____
[Mine Manager Name, Title] [Date]

Signature: _____

Great Thunder Gold Corp.

November 26, 2018

Ministry of Energy, Mines and Petroleum Resources
Mines and Mineral Resources Division
6th Floor, 1810 Blanshard Street
Victoria, BC
V8T 4J1

BY E-MAIL

Attention: Ms. Alexis McPherson, M.Sc., P.Eng.
Geotechnical Inspector

Dear Ms. McPherson:

**Re: Order under Mines Act Section 15(5)
Valentine Mountain Tailings Storage Facility**

We write in response to your letter and order received on November 16, 2018 and to the geotechnical and permitting inspection reports received on November 22, 2018 and in furtherance to our telephone meeting of November 22, 2018.

As discussed in our meeting and addressed in our letter dated November 21, 2018, Great Thunder Gold Corp. ("Great Thunder") cannot meet the timelines issued under the November 16, 2018 order. We understand from our meeting that the Ministry of Energy, Mines and Petroleum Resources ("EMPR") acknowledges the difficulty posed by these extremely tight timelines, and that EMPR is willing to work with Great Thunder to determine an appropriate schedule for the assessment contemplated under the order. We also understand from our meeting that the priority focus for EMPR is to have an engineer assess the water flowing from the underdrain system outlet. As discussed in the meeting, Great Thunder cannot have an engineer assess this area until we secure access from TimberWest and TimberWest removes the boulders that they placed over the outlet. We understand that TimberWest would like to have Great Thunder's engineer present for the boulder removal. This will of course depend on when TimberWest plans to do this work and whether Great Thunder can find and retain an appropriate engineer in time. In that regard, Great Thunder has already contacted a few engineers to see if they have the requisite expertise and capacity to conduct an assessment of the underdrain system and is now waiting to hear back about their schedules. We expect to have more information regarding timing today or in the coming days. In the interim, please confirm that the dates contemplated under the November 16, 2018 order are

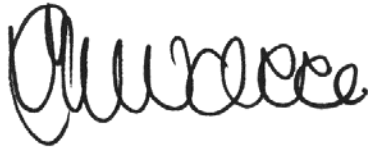
under review pending the above and that Great Thunder will not be deemed non-compliant for not meeting the November 26, 2018 deadline (the original deadline for Great Thunder to submit the assessment report and accompanying letter of commitment).

As indicated above, given EMPR's immediate concerns regarding the underdrain system outlet, Great Thunder is committed to conducting the above noted assessment on a good faith basis. This, however, cannot be taken as an acknowledgment by Great Thunder that Great Thunder holds primary or any responsibility for the dam or tailings facility. As indicated in the meeting, we remain concerned regarding EMPR's expectations of Great Thunder pursuant to its exploration permit MX-8-21. Prior to making any further commitments to undertake work at the dam or tailings facility, Great Thunder requests EMPR provide its position and support thereof regarding Great Thunder's responsibilities under its exploration permit and the interplay between that permit, TimberWest's Conditional Water Licence C72277 and any other authorization obtained for the actual construction of the dam and tailings facility (if any). As EMPR is aware, Great Thunder's involvement with the site began in 2008 and has been limited to very minor exploration activities. At no time did Great Thunder use, add to or manipulate the dam or tailings facility in any way. Accordingly, Great Thunder would appreciate some clarity from EMPR as to who is responsible for the various past, current and future activities involving the dam and tailings facility. Until this threshold issue is resolved, Great Thunder requests that EMPR confirm in writing that it will place the less immediate requirements under the orders on hold.

We appreciate your consideration of the above.

Yours truly,

GREAT THUNDER GOLD CORP.

A handwritten signature in black ink, appearing to read 'Glen Wallace', is written over the company name.

per Glen Wallace, MBA, CPA, CGA
Chief Financial Officer

From: Glen Wallace <glen@wallace.pro>
Sent: Friday November 30, 2018 9:26 AM
To: 'McPherson, Alexis EMPR:EX'
Cc: Kevin Whelan (kcwhelan@shaw.ca)
Subject: RE: EMPR_InspectionReport_108949.pdf

Follow Up Flag: Copied to Worldox (Client Files\GTG\CLAIMS-VMORD\00024624.MSG)

Alexis:

Thank you for your emails. We continue to look for an engineer to attend the site to assess the underdrain system to address EMPR's immediate concerns at the site. To date, we have contacted four engineers, three of whom (including Thurber Engineering) have stated that they will not or cannot do the work under the deadlines. One is reviewing the various reports and we expect to hear early next week whether they can assist. In addition, we have reached out to two other engineers. We will continue to update you regarding our search.

As a general comment, your responses from your email of 3:39 p.m. Wednesday (below) do not satisfy our inquiries and we would appreciate further consideration of our November 26, 2018 letter given the scope and deadlines imposed in EMPR's orders.

More specifically, in response to items #2, 3 and 4 (below), Jim Dunkley provided only one letter since our last meeting. That February 11, 2010 letter does not address our concerns. That letter simply states that Great Thunder "... is responsible for all milling equipment, etc. located on the said tenure [506801]." This does not address who is responsible for the separate dam and tailings facility located on tenures 549331 and 549333, nor does it clarify EMPR's position regarding Great Thunder's responsibilities under its exploration permit. Further, it does not respond to our request for EMPR's position regarding the interplay between Great Thunder's exploration permit, TimberWest's water licence and any other authorization issued for the actual construction of the dam and tailings facility.

As you know, TimberWest holds the water licence, which authorized the construction of the dam and reservoir and required TimberWest to maintain same. TimberWest is also the land owner. Both of these facts make TimberWest an "owner" under the Dam Safety Regulations, which makes TimberWest subject to the requirements of an "owner" thereunder including the maintenance and exercise of reasonable care to avoid the risk of significant harm. Of course, part of these responsibilities includes removing the boulders that were placed on the underdrain system by TimberWest. In this regard, we trust that you are in constant contact with FLNRO with respect to these matters that fall within FLNRO's jurisdiction. Accordingly, we would appreciate an update with regards to the FLNRO/EMPR coordinated approach to the site, which would help to clarify our inquiries.

We would appreciate a prompt response to the aforementioned and our November 26, 2018 letter given the scope and deadlines imposed in EMPR's orders.

Regards.

From: McPherson, Alexis EMPR:EX <Alexis.McPherson@gov.bc.ca>
Sent: November 29, 2018 3:08 PM
To: 'Glen Wallace' <glen@wallace.pro>
Subject: FW: EMPR_InspectionReport_108949.pdf

Hello Glen,

Can you please provide an update re. your search for an engineer?

And can you send over your phone number? I searched quickly through our correspondence and am unable to locate it.

Thanks,
Alexis

From: McPherson, Alexis EMPR:EX
Sent: Wednesday, November 28, 2018 3:39 PM
To: 'Glen Wallace'; Dunkley, Jim R EMPR:EX
Cc: Kevin Whelan; Constable, Lowell EMPR:EX
Subject: RE: EMPR_InspectionReport_108949.pdf

Hello Glen,

Thank you for your email.

Please note the boulders do not have to be relocated by TimberWest; Great Thunder Gold can retain a contractor to complete this work if the engineer would like the boulders removed as part of the risk assessment.

I have included a summary of the issues raised in your November 26, 2018 below to outline what has and a has not been addressed. Please provide additions/clarification as required in green text.

1. "please confirm the dates contemplated under the November 16, 2018 order are under review pending the above and that Great Thunder will not be deemed non-compliant for not meeting the November 26, 2018 deadline (the original deadline for Great Thunder to submit the assessment report and accompanying letter of commitment)"

EMPR acknowledges that Great Thunder is working to retain an engineer and has not been able to meet the deadlines outlined in the order. While I cannot rescind or change the order, I do not anticipate taking further action to escalate the order as you continue to search for an engineer.

2. "Prior to making any further commitments to undertake work at the dam or tailings facility, Great Thunder requests EMPR provide its position and support thereof regarding Great Thunder's responsibilities under its exploration permit and the interplay between that permit, TimberWest's Conditional Water Licence C72277 and any other authorization obtained for the actual construction of the dam and tailings facility (if any)."

Jim Dunkely has provided a number of documents since our meeting last week; do these documents address your concerns or is further follow-up required?

3. "Great Thunder would appreciate some clarity from EMPR as to who is responsible for the various past, current and future activities involving the dam and tailings facility."

Jim Dunkely has provided a number of documents since our meeting last week; do these documents address your concerns or is further follow-up required?

4. "Until this threshold issue is resolved, Great Thunder requests that EMPR confirm in writing that it will place the less immediate requirements under the orders on hold."

We cannot place the orders on hold. EMPR will continue to work with Great Thunder to provide supporting documentation as required.

Regards,
Alexis

From: Glen Wallace [<mailto:glen@wallace.pro>]
Sent: Tuesday, November 27, 2018 5:18 PM
To: McPherson, Alexis EMPR:EX; Dunkley, Jim R EMPR:EX
Cc: Kevin Whelan
Subject: RE: EMPR_InspectionReport_108949.pdf

Alexis and Jim:

We're at a standstill with TimberWest because of their requirement that our engineer be present for the removal of the boulders that TimberWest themselves placed over the underdrain system outlet pipe. Obviously, our engineer cannot inspect the system with the boulders in place and TimberWest's availability is now weather-dependent. We would note that an engineer's presence is not a pre-condition – or an EMPR condition – to TimberWest removing their boulders.

We have contacted several engineers so far without success: Either they're too busy at this time of the year to commit or they're not prepared to take on the project. We're now reaching out to our other business contacts for possible referrals. We still fully intend to fulfill our commitment to carry out the assessment.

Can you offer some direction?

We are increasingly concerned about the deadlines imposed under your orders and we'd appreciate knowing when we can expect a response to the issues we raised in our November 26 letter.

Thanks.

From: Doug Underhill <Doug.Underhill@TimberWest.com>
Sent: November 27, 2018 9:17 AM
To: Glen Wallace <glen@wallace.pro>
Cc: Kevin Whelan <kcwhelan@shaw.ca>; 'McPherson, Alexis EMPR:EX' <Alexis.McPherson@gov.bc.ca>; 'Constable, Lowell EMPR:EX' <Lowell.Constable@gov.bc.ca>; 'Dunkley, Jim R EMPR:EX' <Jim.Dunkley@gov.bc.ca>; Jason Carvalho <jason.carvalho@couverdon.com>
Subject: RE: EMPR_InspectionReport_108949.pdf

Hi Glen

We don't want to do anything without your representative onsite. The weather forecast looks favorable into next week so let me know when you have arranged for someone to meet us onsite.

Thanks



Doug Underhill P.Eng. RPF Manager of Forest Hydrology and Infrastructure
T 250 716 3721 C: 250-619-6794 E Doug.Underhill@TimberWest.com



Facebook.com/TimberWest-Forest-Corp

@TimberWest

TimberWest.com/news

From: Glen Wallace [<mailto:glen@wallace.pro>]

Sent: November 26, 2018 1:41 PM

To: Doug Underhill <Doug.Underhill@TimberWest.com>

Cc: Kevin Whelan <kcwhelan@shaw.ca>; 'McPherson, Alexis EMPR:EX' <Alexis.McPherson@gov.bc.ca>; 'Constable, Lowell EMPR:EX' <Lowell.Constable@gov.bc.ca>; 'Dunkley, Jim R EMPR:EX' <Jim.Dunkley@gov.bc.ca>

Subject: RE: EMPR_InspectionReport_108949.pdf

Doug:

I wanted to reach out to you as early in the week as possible, but it is seeming unlikely we'll be able to get an engineer on site before your roadbuilding contractor leaves on Friday. We've been in contact with three engineers so far and we're contacting a fourth, but so far none can meet your contractor's timeline.

Please instruct your contractor to carefully remove his boulders from the underdrain system outlet pipe before he leaves and kindly confirm when it has been done. If by chance we can arrange for an engineer to attend in time, we'll be in contact.

Thanks.

Glen Wallace, MBA, CPA, CGA
Chief Financial Officer
Great Thunder Gold Corp.

From: Dunkley, Jim R EMPR:EX <Jim.Dunkley@gov.bc.ca>

Sent: November 23, 2018 1:42 PM

To: 'Glen Wallace' <glen@wallace.pro>

Cc: McPherson, Alexis EMPR:EX <Alexis.McPherson@gov.bc.ca>; Kevin Whelan <kcwhelan@shaw.ca>; 'doug.underhill@timberwest.com' <doug.underhill@timberwest.com>; Constable, Lowell EMPR:EX <Lowell.Constable@gov.bc.ca>

Subject: RE: EMPR_InspectionReport_108949.pdf

Hi Glen,

TimberWest feels that given the elevation, the work needs to be completed by Nov.30. I expect that their contractor may be pulling out after that.

I don't have a contact for the contractor but the TW contact is Doug Underhill who is copied on this email. TW also states that they would like 2 days' notice to coordinate the excavator being on site.

Jim

From: Glen Wallace [<mailto:glen@wallace.pro>]
Sent: Friday, November 23, 2018 12:17 PM
To: Dunkley, Jim R EMPR:EX
Cc: McPherson, Alexis EMPR:EX; Kevin Whelan
Subject: RE: EMPR_InspectionReport_108949.pdf

Thanks Jim.

We are considering TimberWest's request. When you speak with TimberWest, would you kindly clarify if they are available on fairly short notice to do the work to coincide with our engineer's schedule? If not, please ask TimberWest to give us several specific dates and times to choose from. Also, the contact information for their contractor would be helpful so the engineer and contractor can coordinate the final details.

Regards.

From: Dunkley, Jim R EMPR:EX <Jim.Dunkley@gov.bc.ca>
Sent: November 23, 2018 11:19 AM
To: s.22 'glen@wallace.pro' <glen@wallace.pro>
Cc: McPherson, Alexis EMPR:EX <Alexis.McPherson@gov.bc.ca>
Subject: RE: EMPR_InspectionReport_108949.pdf

Attached is the letter from Mill Bay Ventures that I missed attaching yesterday. Thanks Glen.

I have spoken with Doug Underhill of TimberWest about removing the boulders around the pipe so that the pipe and outflow can be properly assessed. He agreed to have this done but wants it done under the supervision of the consulting engineer. This is a reasonable request on his part. He is going to speak with TimberWest's contractor in the area to find out how long they plan to be working in the vicinity. Alexis or I will let you know as soon as I have that information (I will be out of the office next week.)

Jim Dunkley, P. Geo
Inspector of Mines

300-1810 Blanshard St
Victoria, BC. V8W 9M9

778 698-7294

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Great Thunder Gold Corp.

December 5, 2018

Ministry of Energy, Mines and Petroleum Resources
Mines and Mineral Resources Division
6th Floor, 1810 Blanshard Street
Victoria, BC
V8T 4J1

BY E-MAIL

Attention: Ms. Alexis McPherson, Geotechnical Inspector
and Mr. Jim Dunkley, Permitting Inspector

Dear Ms. McPherson and Mr. Dunkley:

**Re: Orders under Mines Act and Health, Safety and Reclamation Code for Mines
Valentine Mountain**

We acknowledge receipt on November 22, 2018 of your Reports of Inspector of Mines dated November 14, 2018. Following is our response, as required:

Report of Inspector of Mines – Permitting

Order 1: Removal of Mill Site Equipment

We have attached a Mill Site Remediation Plan prepared by Mr. John Moraal, P.Eng., a principal of LamSar Engineers & Contractors and a director of Great Thunder Gold Corp. (the “Company”). Mr. Moraal’s plan proposes removal of the mill equipment by May 31, 2019, demolition and removal of the wooden storage shed and debris by November 29, 2019 and final site clean-up by December 6, 2019. As you are aware, we are constrained by winter weather at that elevation and summer fire closures.

Report of Inspector of Mines – Permitting

Order 2: Tailings Facility Water Sampling

We understand from our November 22, 2018 telephone meeting that the Ministry of Energy, Mines and Petroleum Resources (“EMPR”) acknowledges the difficulty posed by the tight timeline set out in the order, and that EMPR is willing to work with us to determine an appropriate schedule for the assessment contemplated under the order.

We also understand from our meeting that the priority focus for EMPR is to have an engineer assess the water flowing from the underdrain system outlet and that EMPR does not anticipate taking further action to escalate your orders as we search for an engineer qualified to evaluate the underdrain system.

Report of Inspector of Mines – Geotechnical

Order 1: Tailings Storage Facility Compliance

We acknowledge EMPR's order to prepare and submit a detailed work plan by March 31, 2019 to address the deficiencies identified relating to the tailings storage facility.

In our November 30, 2018 e-mail to Ms. McPherson, we summarized our progress on our search for an engineer qualified to assess the underdrain system outlet. As a further update, we advise that we have now contacted eight engineers on Vancouver Island and in Vancouver: four of whom have declined due to full schedules or because they are not qualified; one is still reviewing our materials; one indicated he is too busy but promised to speak with us tomorrow; and two have yet to return our e-mails and calls.

Report of Inspector of Mines – Geotechnical

Order 1: Mill Site Compliance

We acknowledge EMPR's order to prepare and submit a detailed work plan by March 31, 2019 to address the deficiencies identified relating to the Mill Site.

Thank you for bringing to our attention the condition of the storage shed and container on site. It appears that the site was vandalized since our last site inspection and clean-up on June 29, 2018. We have attached a photograph from that site inspection; all structures were securely locked on departure. As this is private property, the Company cannot control access and has only a limited ability to prevent vandalism.

In any event, we believe the Mill Site Remediation Plan referred to above addresses these concerns.

Report of Inspector of Mines – Geotechnical

Order 1: Trench Compliance

We acknowledge EMPR's order to prepare and submit a detailed work plan by March 31, 2019 to address the deficiencies identified relating to the trench.

The Mill Site Remediation Plan referred to above addresses these concerns.

November 16, 2018 Order – Geotechnical

Order 1: Assessment Report of the Tailings Storage Facility

We understand from the Report of Inspector Mines – Geotechnical dated November 14, 2018 and received by the Company on November 22, 2018, that the November 16, 2018 order issued by Ms. McPherson must also be considered along with said Report of Inspector Mines. As indicated above, we understand from our November 22, 2018 telephone meeting that EMPR acknowledges

the difficulty posed by the tight timeline set out in the order, and that EMPR is willing to work with us to determine an appropriate schedule for the assessment contemplated under the order.

Again we confirm that the priority focus for EMPR is to have an engineer assess the water flowing from the underdrain system outlet and that EMPR does not anticipate taking further action to escalate your orders as we search for an engineer qualified to evaluate the underdrain system. We also summarized above our progress on our search for an engineer qualified to assess the underdrain system outlet.

We will continue to update you on our search for engineers to conduct this work.

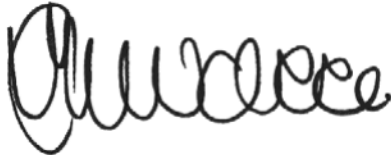
Closing

As a final comment, we would appreciate a response to our November 26, 2018 letter and November 30, 2018 follow up email to Ms. McPherson as it relates to the Company's overall responsibilities under its exploration permit MX-8-21.

We trust this is the information you require; however, if you have any questions or require additional information, please do not hesitate to contact us.

Yours truly,

GREAT THUNDER GOLD CORP.

A handwritten signature in black ink, appearing to read 'Glen Wallace', written in a cursive style.

per Glen Wallace, MBA, CPA, CGA
Chief Financial Officer

Great Thunder Gold Corp.

(the “Company”)

Valentine Mountain Mill Site Remediation Plan

December 5, 2018

Copyright; s.21

Page 53 of 87

Withheld pursuant to/removed as

Copyright

From: glen@wallace.pro
Sent: Monday December 10, 2018 12:57 PM
To: 'Dunkley, Jim R EMPR:EX'
Cc: 'Constable, Lowell EMPR:EX'; 'McPherson, Alexis EMPR:EX'; 'Kevin Whelan (kcwhelan@shaw.ca)'
Subject: RE: EMPR_InspectionReport_108949.pdf

Thank you for your Friday email, Jim.

Respectfully, your email contains errors and does not support EMPR's position that Great Thunder is responsible for the tailings pond. First, you referred to "activities ... detailed in the Notice of Work dated July 1, 2002" as a source for imposing liability on Great Thunder through MBV. That Notice of Work, however, was about proposed activities (as you acknowledge later in your email). Importantly, you overlooked that those proposed activities were never in fact conducted (as confirmed by our geologist who has been involved with the Valentine Mine project since 2003). As such, the Notice of Work was merely about a proposal that never took place and thus has no effect in the circumstances.

Second, your conclusion that Great Thunder is responsible for the tailings pond is premised on the mistaken fact that tailings from that proposed bulk sampling were deposited in the tailings pond. As indicated above, that proposal never took place. In fact, Great Thunder has never conducted any bulk sampling at the mine and has never deposited any materials or waste water in the tailings pond. As previously indicated to EMPR, since it acquired the claims in 2008, Great Thunder's work at Valentine Mountain has been limited to three small drilling programs between 2009 and 2011 totalling 21 holes and 3,783 metres on mineral tenure 506801, and soil geochemistry sampling and prospecting across the 25-claim parcel. Put simply, Great Thunder has never conducted any activities related to the tailings pond nor has it ever accepted responsibility for the tailings pond.

We are surprised that after repeated requests, your last email and attachments, and February 11, 2010 letter you sent are the extent of the support for EMPR's position. In contrast, and with all respect, you overlook the clear importance of BC legislation – the Water Sustainability Act and the Dam Safety Regulation – which expressly places responsibility for dam safety on, as in this case, the holder of the applicable water licence and on the owner of the land. That licensee/landowner is TimberWest. Your documents do not show any efforts by EMPR to ensure that FLNRO, the regulator under that legislation, has taken the requisite steps to compel TimberWest to take appropriate actions.

If you have additional information supporting your position, kindly send it to us at your earliest convenience.

Regards,

Glen

From: Dunkley, Jim R EMPR:EX <Jim.Dunkley@gov.bc.ca>
Sent: Friday December 7, 2018 3:05 PM
To: 'Glen Wallace' <glen@wallace.pro>
Cc: Constable, Lowell EMPR:EX <Lowell.Constable@gov.bc.ca>; McPherson, Alexis EMPR:EX <Alexis.McPherson@gov.bc.ca>
Subject: RE: EMPR_InspectionReport_108949.pdf

Hello Glen,

Further to your claim that GTG does not have responsibility for the tailings facility, see the attached permit issued to MBV in 2010. The permit cover letter clearly states that the activities are those detailed in the Notice of Work dated July 1, 2002. That NoW is attached. The NoW states that tailings from the proposed bulk sample will be sent to the pond (tailings facility). Permit condition 4 d) states that test pit and mill area drainage shall go to the tailings facility. Permit condition 8 a) relates to under what conditions the tailings facility is to be used for the disposal of tailings.

It is the Ministry's position that the tailings facility is clearly the responsibility of GTG through its predecessor MBV.

Jim Dunkley, P. Geo
Inspector of Mines

300-1810 Blanshard St
Victoria, BC. V8W 9M9

778 698-7294

From: McPherson, Alexis EMPR:EX
Sent: Wednesday, December 5, 2018 12:56 PM
To: 'Glen Wallace'
Cc: Dunkley, Jim R EMPR:EX; Constable, Lowell EMPR:EX
Subject: RE: EMPR_InspectionReport_108949.pdf

Hello Glen,

Can you please provide an update re. your search for an engineer? And please send over your phone number.

I have forwarded your email below to Jim Dunkley to respond to your permitting questions.

Thanks,
Alexis

From: Glen Wallace [<mailto:glen@wallace.pro>]
Sent: Friday, November 30, 2018 9:26 AM
To: McPherson, Alexis EMPR:EX
Cc: Kevin Whelan
Subject: RE: EMPR_InspectionReport_108949.pdf

Alexis:

Thank you for your emails. We continue to look for an engineer to attend the site to assess the underdrain system to address EMPR's immediate concerns at the site. To date, we have contacted four engineers, three of whom (including Thurber Engineering) have stated that they will not or cannot do the work under the deadlines. One is reviewing the various reports and we expect to hear early next week whether they can assist. In addition, we have reached out to two other engineers. We will continue to update you regarding our search.

As a general comment, your responses from your email of 3:39 p.m. Wednesday (below) do not satisfy our inquiries and we would appreciate further consideration of our November 26, 2018 letter given the scope and deadlines imposed in EMPR's orders.

Alexis

And Jim

Pull all of the reports and letters together and set up a meeting in early Jan

Is there any danger of an imminent failure

Al

Sent from my iPhone

On Dec 14, 2018, at 4:13 PM, McPherson, Alexis EMPR:EX

<Alexis.McPherson@gov.bc.ca> wrote:

Hello Al,

I issued two orders, one in each inspection report (attached and saved here:

s.17

s.17

s.17 I have also attached the mine manager's reply.

Correspondence is saved here: s.17

s.17

The orders were pursuant to:

1) MA Section 15(5)(a) – “If an inspector is of the opinion that a delay in remedying a hazard would be dangerous to persons or property, the inspector may issue an order for immediate remedial action.”

2) HSRC Sections 10.1.5, 10.1.7, 10.1.11, 10.1.13, 10.4.1, 10.4.2, 10.4.3, 10.4.4, 10.5.2, and 10.5.3 (EoR, Consequence Classification, Breach and Inundation Study, QPO's, Updated plans, Governance, TSF registrar, annual reporting, OMS manual, and DSI).

Jim Dunkley issued a separate inspection report – Jim, can you please provide a summary of your orders for Al?

Please let me know if you require any additional information.

Best regards,
Alexis

From: Constable, Lowell EMPR:EX

Sent: Friday, December 14, 2018 3:50 PM

To: McPherson, Alexis EMPR:EX

Cc: Narynski, Heather M EMPR:EX

Subject: Fwd: Valentine Mountain - Appeal of Orders issued under Mines Act and Health, Safety and Reclamation Code for Mines in British Columbia

Hi Alexis,

Could you provide some insight as AI requests below. I think some at least were Section 18 orders, but some may be otherwise.

Sent from my iPhone

Begin forwarded message:

From: "Hoffman, Al EMPR:EX"

<Al.Hoffman@gov.bc.ca<<mailto:Al.Hoffman@gov.bc.ca>>>

To: "Constable, Lowell EMPR:EX"

<Lowell.Constable@gov.bc.ca<<mailto:Lowell.Constable@gov.bc.ca>>>

Cc: "Brash, Jennifer EMPR:EX"

<Jennifer.Brash@gov.bc.ca<<mailto:Jennifer.Brash@gov.bc.ca>>>, "Narynski, Heather M EMPR:EX"

<Heather.Narynski@gov.bc.ca<<mailto:Heather.Narynski@gov.bc.ca>>>, "Marques, Victor EMPR:EX"

<Victor.Marques@gov.bc.ca<<mailto:Victor.Marques@gov.bc.ca>>>, "Brody, Margo X EMPR:EX"

<Margo.Brody@gov.bc.ca<<mailto:Margo.Brody@gov.bc.ca>>>

Subject: FW: Valentine Mountain - Appeal of Orders issued under Mines Act and Health, Safety and Reclamation Code for Mines in British Columbia

Lowell and Heather

Im not sure who issued these orders. It is important to know if these orders were issued pursuant to permit conditions or directed to non compliance with the Code.

Note orders issued pursuant to permit conditions, that is Part 10 of the Act are not appealable because in this case the Inspector is acting as the Chief Inspector.

I will send a preliminary email back to Mr. Wallace.

Heather set up a call after Christmas

Margo

Please set up a file.

Thanks,

Al H

From: glen@wallace.pro<<mailto:glen@wallace.pro>> [<mailto:glen@wallace.pro>]

Sent: Friday, December 14, 2018 12:00 PM

To: Hoffman, Al EMPR:EX

Cc: 'Kevin Whelan'

Subject: Valentine Mountain - Appeal of Orders issued under Mines Act and Health, Safety and Reclamation Code for Mines in British Columbia

Please see the attached letter.

<2018 11 14 EMPR Geotechnical Inspection (1) - MX-8-21 Valentine Mountain TSF.pdf>

<2018 11 14 EMPR Geotechnical Inspection (2) - MX-8-21 Valentine Mountain (with attach).pdf>

<Letter to Ministry of Energy Mines and Petroleum Resources - 2018.12.05 (00024577xD3128).PDF>

From: Hoffman, Al EMPR:EX
Sent: December 14, 2018 3:43 PM
To: Constable, Lowell EMPR:EX
Cc: Brash, Jennifer EMPR:EX; Narynski, Heather M EMPR:EX; Marques, Victor EMPR:EX; Brody, Margo X EMPR:EX
Subject: FW: Valentine Mountain - Appeal of Orders issued under Mines Act and Health, Safety and Reclamation Code for Mines in British Columbia
Attachments: Letter to Ministry of Energy Mines and Petroleum Resources - 2018.12.14 (00024662xD3128).PDF

Lowell and Heather

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I will send a preliminary email back to Mr. Wallace.
Heather set up a call after Christmas

Margo
Please set up a file.

Thanks,
Al H

From: glen@wallace.pro [mailto:glen@wallace.pro]
Sent: Friday, December 14, 2018 12:00 PM
To: Hoffman, Al EMPR:EX
Cc: 'Kevin Whelan'
Subject: Valentine Mountain - Appeal of Orders issued under Mines Act and Health, Safety and Reclamation Code for Mines in British Columbia

Please see the attached letter.

Great Thunder Gold Corp.

December 5, 2018

Ministry of Energy, Mines and Petroleum Resources
Mines and Mineral Resources Division
6th Floor, 1810 Blanshard Street
Victoria, BC
V8T 4J1

BY E-MAIL

Attention: Ms. Alexis McPherson, Geotechnical Inspector
and Mr. Jim Dunkley, Permitting Inspector

Dear Ms. McPherson and Mr. Dunkley:

**Re: Orders under Mines Act and Health, Safety and Reclamation Code for Mines
Valentine Mountain**

We acknowledge receipt on November 22, 2018 of your Reports of Inspector of Mines dated November 14, 2018. Following is our response, as required:

Report of Inspector of Mines – Permitting

Order 1: Removal of Mill Site Equipment

We have attached a Mill Site Remediation Plan prepared by Mr. John Moraal, P.Eng., a principal of LamSar Engineers & Contractors and a director of Great Thunder Gold Corp. (the “Company”). Mr. Moraal’s plan proposes removal of the mill equipment by May 31, 2019, demolition and removal of the wooden storage shed and debris by November 29, 2019 and final site clean-up by December 6, 2019. As you are aware, we are constrained by winter weather at that elevation and summer fire closures.

Report of Inspector of Mines – Permitting

Order 2: Tailings Facility Water Sampling

We understand from our November 22, 2018 telephone meeting that the Ministry of Energy, Mines and Petroleum Resources (“EMPR”) acknowledges the difficulty posed by the tight timeline set out in the order, and that EMPR is willing to work with us to determine an appropriate schedule for the assessment contemplated under the order.

We also understand from our meeting that the priority focus for EMPR is to have an engineer assess the water flowing from the underdrain system outlet and that EMPR does not anticipate taking further action to escalate your orders as we search for an engineer qualified to evaluate the underdrain system.

Report of Inspector of Mines – Geotechnical

Order 1: Tailings Storage Facility Compliance

We acknowledge EMPR's order to prepare and submit a detailed work plan by March 31, 2019 to address the deficiencies identified relating to the tailings storage facility.

In our November 30, 2018 e-mail to Ms. McPherson, we summarized our progress on our search for an engineer qualified to assess the underdrain system outlet. As a further update, we advise that we have now contacted eight engineers on Vancouver Island and in Vancouver: four of whom have declined due to full schedules or because they are not qualified; one is still reviewing our materials; one indicated he is too busy but promised to speak with us tomorrow; and two have yet to return our e-mails and calls.

Report of Inspector of Mines – Geotechnical

Order 1: Mill Site Compliance

We acknowledge EMPR's order to prepare and submit a detailed work plan by March 31, 2019 to address the deficiencies identified relating to the Mill Site.

Thank you for bringing to our attention the condition of the storage shed and container on site. It appears that the site was vandalized since our last site inspection and clean-up on June 29, 2018. We have attached a photograph from that site inspection; all structures were securely locked on departure. As this is private property, the Company cannot control access and has only a limited ability to prevent vandalism.

In any event, we believe the Mill Site Remediation Plan referred to above addresses these concerns.

Report of Inspector of Mines – Geotechnical

Order 1: Trench Compliance

We acknowledge EMPR's order to prepare and submit a detailed work plan by March 31, 2019 to address the deficiencies identified relating to the trench.

The Mill Site Remediation Plan referred to above addresses these concerns.

November 16, 2018 Order – Geotechnical

Order 1: Assessment Report of the Tailings Storage Facility

We understand from the Report of Inspector Mines – Geotechnical dated November 14, 2018 and received by the Company on November 22, 2018, that the November 16, 2018 order issued by Ms. McPherson must also be considered along with said Report of Inspector Mines. As indicated above, we understand from our November 22, 2018 telephone meeting that EMPR acknowledges

the difficulty posed by the tight timeline set out in the order, and that EMPR is willing to work with us to determine an appropriate schedule for the assessment contemplated under the order.

Again we confirm that the priority focus for EMPR is to have an engineer assess the water flowing from the underdrain system outlet and that EMPR does not anticipate taking further action to escalate your orders as we search for an engineer qualified to evaluate the underdrain system. We also summarized above our progress on our search for an engineer qualified to assess the underdrain system outlet.

We will continue to update you on our search for engineers to conduct this work.

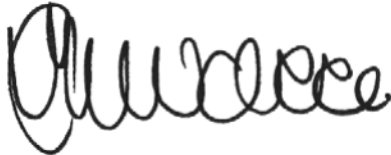
Closing

As a final comment, we would appreciate a response to our November 26, 2018 letter and November 30, 2018 follow up email to Ms. McPherson as it relates to the Company's overall responsibilities under its exploration permit MX-8-21.

We trust this is the information you require; however, if you have any questions or require additional information, please do not hesitate to contact us.

Yours truly,

GREAT THUNDER GOLD CORP.

A handwritten signature in black ink, appearing to read 'Glen Wallace', written in a cursive style.

per Glen Wallace, MBA, CPA, CGA
Chief Financial Officer

Great Thunder Gold Corp.

(the “Company”)

Valentine Mountain Mill Site Remediation Plan

December 5, 2018

Copyright; s.21

Page 63 of 87

Withheld pursuant to/removed as

Copyright

Brody, Margo X EMPR:EX

From: Narynski, Heather M EMPR:EX
Sent: December 17, 2018 9:33 AM
To: Hoffman, Al EMPR:EX
Cc: Constable, Lowell EMPR:EX; Caughill, David EMPR:EX; Dunkley, Jim R EMPR:EX; Brody, Margo X EMPR:EX; McPherson, Alexis EMPR:EX; Rollo, Andrew EMPR:EX; Narynski, Heather M EMPR:EX
Subject: RE: Valentine Mountain - Appeal of Orders issued under Mines Act and Health, Safety and Reclamation Code for Mines in British Columbia
Attachments: FW: Valentine Mountain - Appeal of Orders issued under Mines Act and Health, Safety and Reclamation Code for Mines in British Columbia

Al,

Alexis and I will arrange an internal meeting in the new year to discuss the Valentine TSF, s.13; s.14

s.13; s.14

s.13; s.14

Great Thunder has indicated that they do not believe they are responsible for the Valentine site (attached), however, they are willing to carry out an engineering inspection of the TSF (as ordered). They have been unsuccessful, to date, at retaining an engineering firm willing to carry out the work (they have contacted in the order of 8 reputable firms). We will need to have an internal discussion around the immediacy of the concerns and whether EMPR should look at retaining an engineer to carry out the work required.

Heather

From: McPherson, Alexis EMPR:EX
Sent: Friday, December 14, 2018 7:30 PM
To: Hoffman, Al EMPR:EX
Cc: Constable, Lowell EMPR:EX; Narynski, Heather M EMPR:EX; Caughill, David EMPR:EX; Dunkley, Jim R EMPR:EX; Brody, Margo X EMPR:EX
Subject: RE: Valentine Mountain - Appeal of Orders issued under Mines Act and Health, Safety and Reclamation Code for Mines in British Columbia

Hello Al,

I will set up a meeting in early January.

The failure mechanism of concern is a piping failure from a pipe rupture or leak in the underdrain system. I did not observe if the discharge is coming from the pipe itself or from around the pipe (a concern for piping failure), as the pipe outlet was not visible. I did not observe sediment in the discharge, a potential indicator of internal erosion. Internal erosion is not something that can generally be observed directly, and I was not able to see the discharge location which would have provided additional information.

Alexis

From: Hoffman, Al EMPR:EX
Sent: Friday, December 14, 2018 5:05 PM
To: McPherson, Alexis EMPR:EX
Cc: Constable, Lowell EMPR:EX; Narynski, Heather M EMPR:EX; Caughill, David EMPR:EX; Dunkley, Jim R EMPR:EX; Brody, Margo X EMPR:EX
Subject: Re: Valentine Mountain - Appeal of Orders issued under Mines Act and Health, Safety and Reclamation Code for Mines in British Columbia

Alexis
And Jim
Pull all of the reports and letters together and set up a meeting in early Jan
Is there any danger of an imminent failure
Al

Sent from my iPhone

On Dec 14, 2018, at 4:13 PM, McPherson, Alexis EMPR:EX <Alexis.McPherson@gov.bc.ca> wrote:

Hello Al,

I issued two orders, one in each inspection report (attached and saved here:^{s.17}
s.17

s.17 I have also attached the
mine manager's reply. Correspondence is saved here: s.17
s.17

The orders were pursuant to:

- 1) MA Section 15(5)(a) – “If an inspector is of the opinion that a delay in remedying a hazard would be dangerous to persons or property, the inspector may issue an order for immediate remedial action.”
- 2) HSRC Sections 10.1.5, 10.1.7, 10.1.11, 10.1.13, 10.4.1, 10.4.2, 10.4.3, 10.4.4, 10.5.2, and 10.5.3 (EoR, Consequence Classification, Breach and Inundation Study, QPO's, Updated plans, Governance, TSF registrar, annual reporting, OMS manual, and DSI).

Jim Dunkley issued a separate inspection report – Jim, can you please provide a summary of your orders for Al?

Please let me know if you require any additional information.

Best regards,
Alexis

From: Constable, Lowell EMPR:EX
Sent: Friday, December 14, 2018 3:50 PM
To: McPherson, Alexis EMPR:EX
Cc: Narynski, Heather M EMPR:EX
Subject: Fwd: Valentine Mountain - Appeal of Orders issued under Mines Act and Health, Safety and Reclamation Code for Mines in British Columbia

Hi Alexis,

Could you provide some insight as Al requests below. I think some at least were Section 18 orders, but some may be otherwise.
Sent from my iPhone

Begin forwarded message:

From: "Hoffman, Al EMPR:EX" <Al.Hoffman@gov.bc.ca<[<mailto:Al.Hoffman@gov.bc.ca>>](mailto:Al.Hoffman@gov.bc.ca)>>
To: "Constable, Lowell EMPR:EX"
<Lowell.Constable@gov.bc.ca<[<mailto:Lowell.Constable@gov.bc.ca>>](mailto:Lowell.Constable@gov.bc.ca)>>
Cc: "Brash, Jennifer EMPR:EX"
<Jennifer.Brash@gov.bc.ca<[<mailto:Jennifer.Brash@gov.bc.ca>>](mailto:Jennifer.Brash@gov.bc.ca)>>, "Narynski, Heather M
EMPR:EX" <Heather.Narynski@gov.bc.ca<[<mailto:Heather.Narynski@gov.bc.ca>>](mailto:Heather.Narynski@gov.bc.ca)>>, "Marques,
Victor EMPR:EX" <Victor.Marques@gov.bc.ca<[<mailto:Victor.Marques@gov.bc.ca>>](mailto:Victor.Marques@gov.bc.ca)>>, "Brody,
Margo X EMPR:EX" <Margo.Brody@gov.bc.ca<[<mailto:Margo.Brody@gov.bc.ca>>](mailto:Margo.Brody@gov.bc.ca)>>
Subject: FW: Valentine Mountain - Appeal of Orders issued under Mines Act and Health, Safety
and Reclamation Code for Mines in British Columbia
Lowell and Heather

Im not sure who issued these orders. It is important to know if these orders were issued pursuant
to permit conditions or directed to non compliance with the Code.
Note orders issued pursuant to permit conditions, that is Part 10 of the Act are not appealable
because in this case the Inspector is acting as the Chief Inspector.
I will send a preliminary email back to Mr. Wallace.
Heather set up a call after Christmas

Margo
Please set up a file.

Thanks,
Al H

From: glen@wallace.pro<<mailto:glen@wallace.pro>> [<mailto:glen@wallace.pro>]
Sent: Friday, December 14, 2018 12:00 PM
To: Hoffman, Al EMPR:EX
Cc: 'Kevin Whelan'
Subject: Valentine Mountain - Appeal of Orders issued under Mines Act and Health, Safety and
Reclamation Code for Mines in British Columbia

Please see the attached letter.

<2018 11 14 EMPR Geotechnical Inspection (1) - MX-8-21 Valentine Mountain TSF.pdf>
<2018 11 14 EMPR Geotechnical Inspection (2) - MX-8-21 Valentine Mountain (with
attach).pdf>
<Letter to Ministry of Energy Mines and Petroleum Resources - 2018.12.05
(00024577xD3128).PDF>

Brody, Margo X EMPR:EX

From: glen@wallace.pro
Sent: December 17, 2018 11:40 AM
To: Hoffman, Al EMPR:EX
Cc: 'Kevin Whelan'
Subject: RE: Valentine Mountain - Appeal of Orders issued under Mines Act and Health, Safety and Reclamation Code for Mines in British Columbia

Mr. Hoffman:

I'm following up on our December 14 letter regarding suspension of all of the orders against Great Thunder.

Would you kindly give us direction as soon as possible regarding the requested stay while you consider the appeal. Further, we found no regulatory guidance regarding the process of such an appeal, so we ask that you outline the process and timelines for us so we can provide the necessary supplementary evidence and submissions in accordance with your process deadlines.

Regards,

Glen Wallace, MBA, CPA, CGA
Chief Financial Officer

From: glen@wallace.pro <glen@wallace.pro>
Sent: Friday December 14, 2018 12:00 PM
To: 'Al.Hoffman@gov.bc.ca' <Al.Hoffman@gov.bc.ca>
Cc: 'Kevin Whelan's.22
Subject: Valentine Mountain – Appeal of Orders issued under Mines Act and Health, Safety and Reclamation Code for Mines in British Columbia

Please see the attached letter.

From: glen@wallace.pro
To: [Hoffman, Al EMPR:EX](#)
Cc: "[Kevin Whelan](#)"
Subject: RE: Valentine Mountain - Appeal of Orders issued under Mines Act and Health, Safety and Reclamation Code for Mines in British Columbia
Date: December 17, 2018 11:40:15 AM

Mr. Hoffman:

I'm following up on our December 14 letter regarding suspension of all of the orders against Great Thunder.

Would you kindly give us direction as soon as possible regarding the requested stay while you consider the appeal. Further, we found no regulatory guidance regarding the process of such an appeal, so we ask that you outline the process and timelines for us so we can provide the necessary supplementary evidence and submissions in accordance with your process deadlines.

Regards,

Glen Wallace, MBA, CPA, CGA
Chief Financial Officer

From: glen@wallace.pro <glen@wallace.pro>
Sent: Friday December 14, 2018 12:00 PM
To: 'Al.Hoffman@gov.bc.ca' <Al.Hoffman@gov.bc.ca>
Cc: 'Kevin Whelan'^{s.22}
Subject: Valentine Mountain – Appeal of Orders issued under Mines Act and Health, Safety and Reclamation Code for Mines in British Columbia

Please see the attached letter.

Brody, Margo X EMPR:EX

From: Hoffman, Al EMPR:EX
Sent: December 17, 2018 12:14 PM
To: glen@wallace.pro
Cc: Kevin Whelan; Narynski, Heather M EMPR:EX; Dunkley, Jim R EMPR:EX; Rollo, Andrew EMPR:EX; Caughill, David EMPR:EX
Subject: Re: Valentine Mountain - Appeal of Orders issued under Mines Act and Health, Safety and Reclamation Code for Mines in British Columbia

Thank you for your email
This matter is under review. s.22

I will be unable to respond until early in January 19

Al Hoffman

Sent from my iPhone

On Dec 17, 2018, at 11:40 AM, "glen@wallace.pro" <glen@wallace.pro> wrote:

Mr. Hoffman:

I'm following up on our December 14 letter regarding suspension of all of the orders against Great Thunder.

Would you kindly give us direction as soon as possible regarding the requested stay while you consider the appeal. Further, we found no regulatory guidance regarding the process of such an appeal, so we ask that you outline the process and timelines for us so we can provide the necessary supplementary evidence and submissions in accordance with your process deadlines.

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Chief Financial Officer

From: glen@wallace.pro <glen@wallace.pro>
Sent: Friday December 14, 2018 12:00 PM
To: 'Al.Hoffman@gov.bc.ca' <Al.Hoffman@gov.bc.ca>
Cc: 'Kevin Whelan' s.22
Subject: Valentine Mountain – Appeal of Orders issued under Mines Act and Health, Safety and Reclamation Code for Mines in British Columbia

Please see the attached letter.

From: [McPherson, Alexis EMPR:EX](#)
To: [Hoffman, AI EMPR:EX](#)
Cc: [Dunkley, Jim R EMPR:EX](#); [Constable, Lowell EMPR:EX](#); [Narynski, Heather M EMPR:EX](#)
Subject: RE: Valentine Mt TSF - Orders and Ownership
Date: December 17, 2018 1:36:39 PM

Hi Al,

s.13; s.21

And can you please call Heather by Wednesday to discuss your final question? She will link me in and we'll provide some additional information over the phone.

Best regards,
Alexis

From: Hoffman, AI EMPR:EX
Sent: Monday, December 17, 2018 12:24 PM
To: McPherson, Alexis EMPR:EX
Cc: Dunkley, Jim R EMPR:EX; Constable, Lowell EMPR:EX; Narynski, Heather M EMPR:EX
Subject: Re: Valentine Mt TSF - Orders and Ownership

s.13; s.21

Where is this mine?
Do we have to act before Jan 7?

Thx

Al

Sent from my iPhone

On Dec 17, 2018, at 12:21 PM, McPherson, Alexis EMPR:EX
<Alexis.McPherson@gov.bc.ca> wrote:

Hello Al,

I've set up meeting for Monday January 7th; please let me know if you would like me to change the date/time. I've made some notes regarding schedules and available information below.

s.22

s.13; s.14

s.13; s.21

Please let me know if you have any questions.

Alexis

<meeting.ics>

Brody, Margo X EMPR:EX

From: Hoffman, Al EMPR:EX
Sent: December 18, 2018 9:28 AM
To: glen@wallace.pro
Cc: Narynski, Heather M EMPR:EX; Caughill, David EMPR:EX; Dunkley, Jim R EMPR:EX; Harrison, Donald EMPR:EX
Subject: Re: Valentine Mountain - Appeal of Orders issued under Mines Act and Health, Safety and Reclamation Code for Mines in British Columbia

s.13; s.14

Al Hoffman

Sent from my iPhone

On Dec 17, 2018, at 5:38 PM, "glen@wallace.pro" <glen@wallace.pro> wrote:

Thank you for your reply, Al. Since we're heading into the holiday period, we respectfully request some clarification. Does this mean that Great Thunder has been granted a temporary stay of the orders until you and your staff are able to consider our appeal in January?

Best of the season.

-----Original Message-----

From: Hoffman, Al EMPR:EX <Al.Hoffman@gov.bc.ca>
Sent: Monday December 17, 2018 12:14 PM
To: glen@wallace.pro
Cc: Kevin Whelan s.22; Narynski, Heather M EMPR:EX <Heather.Narynski@gov.bc.ca>; Dunkley, Jim R EMPR:EX <Jim.Dunkley@gov.bc.ca>; Rollo, Andrew EMPR:EX <Andrew.Rollo@gov.bc.ca>; Caughill, David EMPR:EX <David.Caughill@gov.bc.ca>
Subject: Re: Valentine Mountain - Appeal of Orders issued under Mines Act and Health, Safety and Reclamation Code for Mines in British Columbia

Thank you for your email

This matter is under review. Due to staff holidays, I will be unable to respond until early in January 19

Al Hoffman

Sent from my iPhone

On Dec 17, 2018, at 11:40 AM, "glen@wallace.pro<<mailto:glen@wallace.pro>>" <glen@wallace.pro<<mailto:glen@wallace.pro>>> wrote:

Mr. Hoffman:

I'm following up on our December 14 letter regarding suspension of all of the orders against Great Thunder.

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Regards,

Glen Wallace, MBA, CPA, CGA
Chief Financial Officer

From: glen@wallace.pro<<mailto:glen@wallace.pro>> <glen@wallace.pro<<mailto:glen@wallace.pro>>>

Sent: Friday December 14, 2018 12:00 PM

To: 'Al.Hoffman@gov.bc.ca<<mailto:Al.Hoffman@gov.bc.ca>>'<Al.Hoffman@gov.bc.ca<<mailto:Al.Hoffman@gov.bc.ca>>>

Cc: 'Kevin Whelans'.22

s.22

Subject: Valentine Mountain – Appeal of Orders issued under Mines Act and Health, Safety and Reclamation Code for Mines in British Columbia

Please see the attached letter.

From: McPherson, Alexis EMPR:EX
To: Hoffman, Al EMPR:EX
Subject: Automatic reply: Valentine Mt TSF - Orders and Ownership
Date: January 1, 2019 4:02:00 PM

Hello,

I will be out of the office until Monday January 7th, 2019. Please contact Heather Narynski (Heather.Narynski@gov.bc.ca) if you require immediate assistance.

Best regards,
Alexis

Brody, Margo X EMPR:EX

From: Hoffman, AI EMPR:EX
Sent: January 6, 2019 3:39 PM
To: McPherson, Alexis EMPR:EX
Subject: Tentative: Valentine Mt TSF - Orders and Ownership

We should meet briefly Monday. I think we have a response from the co and some advice from Karen Tannas.

AI

From: [McPherson, Alexis EMPR:EX](#)
To: [Hoffman, AI EMPR:EX](#); [Constable, Lowell EMPR:EX](#)
Cc: [Nakatsuka, Caroline M EMPR:EX](#)
Subject: RE: Valentine Mt TSF - Orders and Ownership
Date: January 7, 2019 2:54:52 PM

Sounds great.

-----Original Appointment-----

From: Hoffman, AI EMPR:EX
Sent: Monday, January 7, 2019 2:54 PM
To: McPherson, Alexis EMPR:EX
Cc: Nakatsuka, Caroline M EMPR:EX
Subject: Tentative: Valentine Mt TSF - Orders and Ownership
When: Monday, January 7, 2019 3:00 PM-4:00 PM (UTC-08:00) Pacific Time (US & Canada).
Where: AI's office

Can we meeting Caroline's office on third floor.

le Caroline Nakatsuka

AI

From: McPherson, Alexis EMPR:EX
To: "glen@wallace.pro"
Cc: Hoffman, Al EMPR:EX; Constable, Lowell EMPR:EX; Rollo, Andrew EMPR:EX; Dunkley, Jim R EMPR:EX; Caughill, David EMPR:EX; Narvinski, Heather M EMPR:EX
Subject: Valentine Mountain - Appeal of Orders
Date: January 7, 2019 4:42:36 PM

Hello Mr. Wallace,

I am sending this email on behalf of Al Hoffman, P.Eng., Chief Inspector of Mines.

Please be advised that your letter "Valentine Mountain – Appeal of Orders issued Under *Mines* Act and Health, Safety and Reclamation Code for Mines in British Columbia" dated December 14, 2018 has been received and Great Thunder Gold Corp.'s appeal of orders is currently under review. This is a complex matter, and EMPR is working internally and with other ministries to provide a response to your appeal.

Regards

Alexis McPherson, M.Sc., P.Eng.
Geotechnical Inspector
Ministry of Energy, Mines and Petroleum Resources
1810 Blanshard Street | Victoria BC | V8W 9N3
778-698-4779 (office) | 250-360-7371 (cell)

Brody, Margo X EMPR:EX

From: Hoffman, Al EMPR:EX
Sent: March 1, 2019 10:37 AM
To: McPherson, Alexis EMPR:EX
Cc: Caughill, David EMPR:EX
Subject: RE: Valentine Mountain - Appeal of Orders

Did you send the original order?

What research has been done on the history of the site and the permits to determine who is responsible?

Al

From: McPherson, Alexis EMPR:EX
Sent: Monday, January 7, 2019 4:43 PM
To: 'glen@wallace.pro'
Cc: Hoffman, Al EMPR:EX; Constable, Lowell EMPR:EX; Rollo, Andrew EMPR:EX; Dunkley, Jim R EMPR:EX; Caughill, David EMPR:EX; Narynski, Heather M EMPR:EX
Subject: Valentine Mountain - Appeal of Orders

Hello Mr. Wallace,

I am sending this email on behalf of Al Hoffman, P.Eng., Chief Inspector of Mines.

Please be advised that your letter "Valentine Mountain – Appeal of Orders issued Under *Mines* Act and Health, Safety and Reclamation Code for Mines in British Columbia" dated December 14, 2018 has been received and Great Thunder Gold Corp.'s appeal of orders is currently under review. This is a complex matter, and EMPR is working internally and with other ministries to provide a response to your appeal.

Regards

Alexis McPherson, M.Sc., P.Eng.
Geotechnical Inspector
Ministry of Energy, Mines and Petroleum Resources
1810 Blanshard Street | Victoria BC | V8W 9N3
778-698-4779 (office) | 250-360-7371 (cell)

Brody, Margo X EMPR:EX

From: McPherson, Alexis EMPR:EX
Sent: March 1, 2019 12:08 PM
To: Hoffman, AI EMPR:EX
Cc: Caughill, David EMPR:EX; Dunkley, Jim R EMPR:EX; Narynski, Heather M EMPR:EX; Constable, Lowell EMPR:EX
Subject: RE: Valentine Mountain - Appeal of Orders
Attachments: RE: Valentine Mountain TSF - EMPR Inspection Order and 2014 DSI

Hello AI,

s.13; s.14

Please let me know if you have any additional questions.

Best regards,
Alexis

From: Hoffman, AI EMPR:EX
Sent: Friday, March 1, 2019 10:37 AM
To: McPherson, Alexis EMPR:EX
Cc: Caughill, David EMPR:EX
Subject: RE: Valentine Mountain - Appeal of Orders

Did you send the original order?
What research has been done on the history of the site and the permits to determine who is responsible?

AI

From: McPherson, Alexis EMPR:EX
Sent: Monday, January 7, 2019 4:43 PM
To: 'glen@wallace.pro'
Cc: Hoffman, AI EMPR:EX; Constable, Lowell EMPR:EX; Rollo, Andrew EMPR:EX; Dunkley, Jim R EMPR:EX; Caughill, David EMPR:EX; Narynski, Heather M EMPR:EX
Subject: Valentine Mountain - Appeal of Orders

Hello Mr. Wallace,

I am sending this email on behalf of Al Hoffman, P.Eng., Chief Inspector of Mines.

Please be advised that your letter “Valentine Mountain – Appeal of Orders issued Under *Mines* Act and Health, Safety and Reclamation Code for Mines in British Columbia” dated December 14, 2018 has been received and Great Thunder Gold Corp.’s appeal of orders is currently under review. This is a complex matter, and EMPR is working internally and with other ministries to provide a response to your appeal.

Regards

Alexis McPherson, M.Sc., P.Eng.
Geotechnical Inspector
Ministry of Energy, Mines and Petroleum Resources
1810 Blanshard Street | Victoria BC | V8W 9N3
778-698-4779 (office) | 250-360-7371 (cell)

Brody, Margo X EMPR:EX

From: Hoffman, AI EMPR:EX
Sent: March 1, 2019 1:03 PM
To: Brody, Margo X EMPR:EX
Subject: Fwd: Valentine Mountain TSF - EMPR Inspection Order and 2014 DSI

Please add to valentine file that I've asked you to start

Sent from my iPhone

Begin forwarded message:

Alexis – this is a follow up to our conference call today (Feb 1st 2019) regarding next steps on the Valentine structure.

This office understands:

1. that EMPR is working on the Great Thunder appeal of the EMPR November 16th 2018 Mines Act Order which may take same time to complete. Great Thunder Gold Corp (Great Thunder) is appealing on the grounds that they do not own the Valentine structure.
2. Mosaic (TimberWest - Jason Carvalho) has contacted EMPR requesting information about the Great Thunder appeal – EMPR is still to respond to this Mosaic request.

This office confirms that the BC Water Sustainability Act (WSA) water licence (C072277 on water file 1001142) associated with the Valentine structure held by TimberWest (Mosaic) is still current and identifies TimberWest as the owner of the Valentine structure. Regulation of the works authorized under the WSA still applies.

Due to the fact that the Valentine structure was constructed and maintained under the EMPR Mine Act permit and for **administrative clarity**, this office has supported the EMPR November 16 2018 Mines Act Order to Great Thunder for a risk assessment to be completed on the Valentine Structure. It was understood that TimberWest and Great Thunder were working together to complete the ordered risk assessment. This office understands that Great Thunder has appealed this Order on the grounds that Great Thunder does not own Valentine Structure. **This office would prefer for the EMPR Mines Act Order and appeal to be concluded before undertaking any further regulation action on the Valentine structure under the WSA with TimberWest.**

Please keep this office informed on the appeal.

John Baldwin

Assistant Water Manager

From: Baldwin, John FLNR:EX

Sent: Tuesday, January 29, 2019 2:01 PM

To: McPherson, Alexis EMPR:EX

Cc: Narynski, Heather M EMPR:EX; Constable, Lowell EMPR:EX; Dunkley, Jim R EMPR:EX; Robinson, David FLNR:EX; Johnson, David A FLNR:EX; Lapcevic, Pat FLNR:EX

Subject: RE: Valentine Mountain TSF - EMPR Inspection Order and 2014 DSI

Alexis – I have contacted Doug Underhill (250-619-6794) at Mosaic (TimberWest and Island Timberland have joined) today regarding the Valentine structure.

Doug will review options within Mosaic for the dam. Mosaic does not want the dam and is prepared to remove the dam. Any mining tailings within the dam reservoir will need to be addressed. Abandoned mining debris/equipment on the site is a concern to the landowner.

Doug will contact Jim Dunkley regarding Energy and Mines' position on the Great Thunder Gold Corp's risk assessment order and ownership of the structure appeal.

Mosaic has not been in contact with Great Thunder since mid December 2018 on this matter.

Doug confirmed that the site is accessible at this time.

This office is prepared to work with Mosaic to remove Valentine Creek Dam under the WSA.

John Baldwin

Dam Safety Officer

From: McPherson, Alexis EMPR:EX

Sent: Friday, January 18, 2019 3:10 PM

To: Baldwin, John FLNR:EX

Cc: Narynski, Heather M EMPR:EX; Constable, Lowell EMPR:EX; Dunkley, Jim R EMPR:EX; Robinson, David FLNR:EX; Johnson, David A FLNR:EX

Subject: RE: Valentine Mountain TSF - EMPR Inspection Order and 2014 DSI

Hello John,

Thank you for participating in the meeting today, and providing the summary and contact below. I will pass Bruce's information on to GTG. I have attached the email correspondence which lists the consultants GTG has contacted and the associated responses for your reference

I'm looking forward to the update on TimberWest's position on this structure in the next week or so.

Best regards,

Alexis

From: Baldwin, John FLNR:EX

Sent: Friday, January 18, 2019 2:47 PM

To: McPherson, Alexis EMPR:EX

Cc: Narynski, Heather M EMPR:EX; Constable, Lowell EMPR:EX; Dunkley, Jim R EMPR:EX; Robinson, David FLNR:EX; Johnson, David A FLNR:EX

Subject: RE: Valentine Mountain TSF - EMPR Inspection Order and 2014 DSI

Alexis – this is a follow up to our conference call today regarding Valentine Creek Dam/Valentine Mountain Tailings Storage Facility (structure).

This office understands that Great Thunder Gold Corp (Great Thunder) has appealed the Mines Act Orders issued in November 2018 and has not complete the ordered risk assessment of the structure that was due by November 26th 2018. The appeal is being adjudicated by the Chief Inspector of Mines at this time.

Great Thunder has indicated that they are experiencing difficulties in hiring a qualified engineering company to complete the ordered risk assessment.

This office does not normally recommend engineering companies but in this case will suggest

Bruce Musgrave, BMA
Engineering (dam engineer)

Valentine Mountain Gold (mining company) built the structure on TimberWest private land. It is reported that Great Thunder removed the vegetation off the structure and TimberWest placed the rocks at the outlet of the low level pipe in this storage structure in the last few years.

The structure is holding water and tailings material at this time. The structure has two consequence classifications – significant under Mines Act and low under WSA. The difference is the impact of the tailings material in the reservoir if the structure should fail.

Both Great Thunder (current mine permit holder under Mines Act) and TimberWest (current water licence holder under Water Sustainability Act (WSA)) claim that they do not own the structure. The relationship between these companies is unknown to this office. TimberWest did confirm that they were prepared to provide equipment to complete any risk assessment studies, and are in contact with Great Thunder. This office has had no direct contact with Great Thunder on this matter.

There is typical winter weather conditions at the site at this time – full storage with saturated embankments. Access and snow conditions is unknown. This office is concerned about any major investigative digging on or near the structure at this time. Increased monitoring with emergency plan is recommended to allow for conditions to improve before undertaking any major invasive investigations of the structure.

This office will be contacting Doug Underhill and/or Steve Adams (TimberWest staff) regarding TimberWest's current position on this structure.

John Baldwin
Dam Safety Officer

From: McPherson, Alexis EMPR:EX

Sent: Thursday, January 10, 2019 3:43 PM

To: Baldwin, John FLNR:EX

Cc: Narynski, Heather M EMPR:EX; Constable, Lowell EMPR:EX; Dunkley, Jim R EMPR:EX; Robinson, David FLNR:EX

Subject: RE: Valentine Mountain TSF - EMPR Inspection Order and 2014 DSI

Hello John,

EMPR has continued correspondence with Great Thunder since I sent the December 11, 2018 email (below); Great Thunder still indicates they are continuing to search for an engineer to address the immediate order, yet maintains they are not responsible for the tailings facility, and on December 14th they submitted a letter of appeal for all orders to the Chief Inspector. I've attached the letter of appeal for your reference.

We would like to discuss the possible paths forward with yourself and David, next week if it works with your schedules. I'll follow this email up with a meeting invitation.

Thanks and best regards,

Alexis

From: Baldwin, John FLNR:EX

Sent: Wednesday, December 12, 2018 11:22 AM

To: McPherson, Alexis EMPR:EX

Cc: Narynski, Heather M EMPR:EX; Constable, Lowell EMPR:EX; Dunkley, Jim R EMPR:EX; Robinson, David FLNR:EX

Subject: RE: Valentine Mountain TSF - EMPR Inspection Order and 2014 DSI

Alexis

FLNRORD Dam Safety has been in contact with TimberWest regarding EMPR's November 16th 2018 Risk Assessment Order to Great Thunder Gold Corp (GTGC), and understand that TimberWest and GTGC are working together to complete the work required to satisfy the EMPR Order. This office is waiting for a copy of the final GTGC risk assessment report and any remedial work recommendations for the Valentine Mine tailings storage facility/Valentine Creek Dam.

Once the GTGC assessment report has been received then FLNRORD and EMPR staff need to review next steps.

John B

From: McPherson, Alexis EMPR:EX

Sent: Tuesday, December 11, 2018 10:49 AM

To: Baldwin, John FLNR:EX; Robinson, David FLNR:EX

Cc: Narynski, Heather M EMPR:EX; Constable, Lowell EMPR:EX; Dunkley, Jim R EMPR:EX

Subject: FW: Valentine Mountain TSF - EMPR Inspection Order and 2014 DSI

Hello John and David,

Can you please provide an update re. Valentine Mountain and TimberWest? EMPR has continued correspondence with Great Thunder over the past weeks. Great Thunder indicates that they are continuing to look for an engineer to address then immediate order yet maintains they are not responsible for the tailings facility. We're working to figure out a path forward and would appreciate an update from FLNRORD.

Thanks and best regards,

Alexis

From: McPherson, Alexis EMPR:EX

Sent: Tuesday, November 20, 2018 12:43 PM

To: Baldwin, John FLNR:EX; Robinson, David FLNR:EX

Cc: Narynski, Heather M EMPR:EX; Constable, Lowell EMPR:EX; Dunkley, Jim R EMPR:EX; Howe, Diane J

EMPR:EX

Subject: Valentine Mountain TSF - EMPR Inspection Order and 2014 DSI

Hello John and David,

Thank you for the call this morning. I expect will be having additional discussions in the coming days and weeks.

I have attached two documents as follows:

1. 2018 11 14 EMPR Geotechnical Inspection (1)
 - Order for immediate remedial action
 - We will cc both of you on the upcoming inspection reports
2. 2014 DSI cover letter
3. 2014 DSI Report
 - Please refer to the figure on pg 131 of the pdf which shown the proximity of the TSF to Bear Creek Reservoir, and the main gully leading to the reservoir.

Please let me know if you have questions.

Best regards,

Alexis

Alexis McPherson, M.Sc., P.Eng.

Geotechnical Inspector

Ministry of Energy, Mines and Petroleum Resources

1810 Blanshard Street | Victoria BC | V8W 9N3

778-698-4779 (office) | 250-360-7371 (cell)

Brody, Margo X EMPR:EX

From: Brody, Margo X EMPR:EX
Sent: March 1, 2019 3:10 PM
To: Hoffman, Al EMPR:EX
Cc: McPherson, Alexis EMPR:EX; Baldwin, John FLNR:EX; Narynski, Heather M EMPR:EX; Constable, Lowell EMPR:EX; Dunkley, Jim R EMPR:EX; Robinson, David FLNR:EX; Bell, Justyn A EMPR:EX; Demchuk, Tania EMPR:EX
Subject: Internal only: Valentine Mountain Appeal Documents gathered as of March 1 2019
Attachments: March 1 2019.pdf; Documents as of March 1 2019.pdf

Al,
I have these documents is a paper file and stored in the G drive under the CIM restricted folder for CI Correspondence Mines/Appeals
If there are other documents, Inspection reports/emails etc., we may want to complete the file so let me know if there is any more to add.
Thank you,

Margo Brody

Branch Coordinator/Assistant to the Chief Inspector of Mines
Mines Health and Safety Branch
Mines Health, Safety and Enforcement Division
250 952 0793



Brody, Margo X EMPR:EX

From: Hoffman, AI EMPR:EX
Sent: March 1, 2019 3:32 PM
To: Brody, Margo X EMPR:EX
Cc: McPherson, Alexis EMPR:EX; Baldwin, John FLNR:EX; Narynski, Heather M EMPR:EX; Constable, Lowell EMPR:EX; Dunkley, Jim R EMPR:EX; Robinson, David FLNR:EX; Bell, Justyn A EMPR:EX; Demchuk, Tania EMPR:EX
Subject: Re: Internal only: Valentine Mountain Appeal Documents gathered as of March 1 2019

Alexis
Please provide

Sent from my iPhone

On Mar 1, 2019, at 3:09 PM, Brody, Margo X EMPR:EX <Margo.Brody@gov.bc.ca> wrote:

AI,
I have these documents is a paper file and stored in the G drive under the CIM restricted folder for CI Correspondence Mines/Appeals
If there are other documents, Inspection reports/emails etc., we may want to complete the file so let me know if there is any more to add.
Thank you,

Margo Brody
Branch Coordinator/Assistant to the Chief Inspector of Mines
Mines Health and Safety Branch
Mines Health, Safety and Enforcement Division
250 952 0793
[BC_EMPR_H_CMYK_pos]

<March 1 2019.pdf>

<Documents as of March 1 2019.pdf>

<image001.jpg>

From: Hoffman, Al EMPR:EX
To: McPherson, Alexis EMPR:EX
Subject: Accepted: Valentine Mt TSF - Orders and Ownership
