McCann, Meghan MEM:EX

From: McKnight, Elaine L MEM:EX
Sent: Tuesday, April 25, 2017 12:14 PM
To: Robb, Peter L. MEM:EX; Shoemaker, Wes ENV:EX
Subject: FW: Black Loon Metals and Tulsequah Chief Project
Attachments: Ltr Louise Gordon DM McKnight 25 April 2017.pdf

FYI

Elaine

From: Melissa Santagato [mailto:melissa@blackloongroup.com]
Sent: Tuesday, April 25, 2017 12:12 PM
To: govern.spokesperson@gov.trtfn.com; McKnight, Elaine L MEM:EX
Cc: spoke.assist@gov.trtfn.com
Subject: Black Loon Metals and Tulsequah Chief Project

Dear Ms. Gordon,

On behalf of Mr. Gordon Bogden, Executive Chairman of Black Loon Metals Inc. please see the letter attached regarding the Tulsequah Chief project.

Melissa Santagato

BLACK LOON

401 Bay Street
Suite 1600
Toronto, ON M5H 2Y4
T +1 416 646 1046
melissa@blackloonmetals.com

BLACK LOON METALS INC

DELIVERED BY EMAIL

April 25, 2017

Ms. Louise Gordon
Spokesperson
Taku River, Tlingit First Nation
P.O. Box 132
Atlin, BC V0W 1A0

Ms. Elaine McKnight
Deputy Minister
British Columbia – Ministry of Mines & Energy
1820 Blanshard Street, 8th Floor
Victoria, BC V8W 9N3

Dear Ms. Gordon and Ms. McKnight,

I would like to take the opportunity to reiterate to you that Black Loon Metals remains sincerely interested in, and committed to, working in full partnership with the Taku River Tlingit First Nation (TRTFN) to explore a win-win opportunity concerning the Tulsequah Chief project.

Unlike some projects that may require a *choice* between environmental impacts and economic opportunity, in this case the best and most affordable solution to the environmental problems we believe, is to complete the mining operation and ensure appropriate closure. We would like to play a role in that, in full partnership with the TRTFN, as noted in my October 17, 2016, letter. That partnership would not be limited to an economic interest, rather it would also include a meaningful role in project planning and governance.

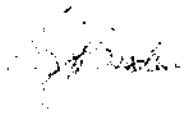
Given the status of the court proceedings concerning the Chieftain receivership, we believe a window of opportunity exists and we would very much welcome the opportunity to sit down in a tripartite manner to discuss these issues and hopefully chart a common path forward. We would be happy to do so completely without prejudice to the TRTFN position on the project, and would not in any way hold out such a meeting as indicating support for even constituting consultation in respect of the proposed project. We just want to ensure that the TRTFN is able to hear from us directly as to the different approach that we are prepared to offer as compared to other companies. As I hope is clear, we want to work with government and the TRTFN on this project because we believe it could be a win-win opportunity for the TRTFN and the province as a whole, as well as our company. More specifically, we think it could become a prime example of how, when companies, First Nations and governments work together through honest and candid discussions that major successes can be found where others have yet to find them.

We do appreciate that a provincial election campaign is ongoing and that government agencies may have limited ability to address certain matters at this point, but we would nonetheless welcome the opportunity to meet with each of you, or those that you may designate, as soon as possible.

Thank you again for your consideration and please let me know if you would be able and willing to meet in person or speak by telephone sometime during the week of May 1st to 6th . In the meanwhile, please do not hesitate to call me directly on (416) 646-1047, if you would like to speak.

Sincerely,

BLACK LOON METALS INC.



Gordon J. Bogden
Executive Chairman

cc: Wes Shoemaker, Deputy Minister, British Columbia – Ministry of Environment

Doug Caul, Deputy Minister, British Columbia – Ministry of Aboriginal Relations and Reconciliation

Page 04 to/à Page 10

Withheld pursuant to/removed as

DUPLICATE

Page 11 to/à Page 24

Withheld pursuant to/removed as

s.14

McCann, Meghan MEM:EX

From: Daniella Dimitrov <daniella@blackloonmetals.com>
Sent: Friday, April 7, 2017 1:51 PM
To: Crozier, Bev ENV:EX
Cc: Robin Junger; McCann, Meghan MEM:EX; McKnight, Elaine L MEM:EX; Gordon Bogden; Shane Uren
Subject: Re: Tulsequah Chief - Black Loon - Follow Up

Hello - thank you - we confirm.
Regards - Daniella

On Apr 7, 2017, at 4:18 PM, Crozier, Bev ENV:EX <Bev.Crozier@gov.bc.ca> wrote:

> **Daniella – would it be possible to do the April 12 3:00 – 4:00 time slot to accommodate a couple other meetings that need to occur?**
> **Bev**
>
> **From:** Daniella Dimitrov [mailto:daniella@blackloonmetals.com]
> **Sent:** Friday, April 7, 2017 11:59 AM
> **To:** Robin Junger
> **Cc:** McCann, Meghan MEM:EX; Crozier, Bev ENV:EX; McKnight, Elaine L MEM:EX; Gordon Bogden; Shane Uren
> **Subject:** Re: Tulsequah Chief - Black Loon - Follow Up
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> Good afternoon,
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> Thank you again for making yourselves available.
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> We will take Monday April 10 at 10 30am PST.
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> We can use the following number:
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> 1-866-305-1460
> s.17
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> Thank you
> Daniella
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Partner/National Co-chair, Aboriginal and First Nations Law Group, Environmental Law Group and Oil & Gas (B.C.) Group
d 778.329.7523 | f 604.685.7084
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McMillan LLP
Lawyers | Patent & Trademark Agents
Royal Centre, 1055 W. Georgia Street, Suite 1500
PO Box 11117
Vancouver, BC V6E 4N7
mcmillan.ca

*Law Corporation

From: McCann, Meghan MEM:EX [mailto:Meghan.McCann@gov.bc.ca]
Sent: Thursday, April 06, 2017 4:19 PM
To: Crozier, Bev ENV:EX; 'Daniella Dimitrov'
Cc: McKnight, Elaine L MEM:EX; Gordon Bogden; Shane Uren; Robin Junger
Subject: RE: Tulsequah Chief - Black Loon - Follow Up

Please see Elaine's availability highlighted below.

From: Crozier, Bev ENV:EX
Sent: Thursday, April 6, 2017 4:17 PM
To: 'Daniella Dimitrov'
Cc: McKnight, Elaine L MEM:EX; Gordon Bogden; Shane Uren; Robin Junger; McCann, Meghan MEM:EX; Crozier, Bev ENV:EX
Subject: RE: Tulsequah Chief - Black Loon - Follow Up

Good afternoon everyone

Further to the email below, Wes Shoemaker is available next week as follows for a meeting in Victoria:

April 10	Between 9:00 – 12:00 10:30-12
April 10	Between 1:00 – 3:00 no
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Please let me know what date / time works with your calendars and I will send a meeting invitation.

Thank you,

<image003.jpg> | Beverley Crozier
Senior Executive Assistant to Wes Shoemaker
Deputy Minister

Ministry of Environment
☎ 250-387-5429 | 🖷 250-387-6003 |

From: Daniella Dimitrov [mailto:daniella@blackloonmetals.com]
Sent: Thursday, April 6, 2017 1:19 PM
To: Shoemaker, Wes ENV:EX
Cc: McKnight, Elaine L MEM:EX; Crozier, Bev ENV:EX; Gordon Bogden; Shane Uren; Robin Junger
Subject: Re: Tulsequah Chief - Black Loon - Follow Up

Thank you very much Wes - much appreciated !!
DD

On Apr 6, 2017, at 1:01 PM, Shoemaker, Wes ENV:EX <Wes.Shoemaker@gov.bc.ca> wrote:

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> **From:** Daniella Dimitrov [mailto:daniella@blackloonmetals.com]
> **Sent:** Thursday, April 6, 2017 3:58 AM
> **To:** McKnight, Elaine L MEM:EX; Shoemaker, Wes ENV:EX
> **Cc:** Gordon Bogden; Shane Uren; Robin Junger
> **Subject:** Tulsequah Chief - Black Loon - Follow Up
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> > Good morning Elaine and Wes,
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416-317-7776

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To: 'Daniella Dimitrov'; Robin Junger
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s.17

Thank you
Daniella

On Apr 6, 2017, at 7:23 PM, Robin Junger <Robin.Junger@mcmillan.ca> wrote:

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*Law Corporation

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<image003.jpg>

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Senior Executive Assistant to Wes Shoemaker
Deputy Minister
Ministry of Environment
☎ 250-387-5429 | 250-387-6003 |

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Cc: McKnight, Elaine L MEM:EX; Crozier, Bev ENV:EX; Gordon Bogden; Shane Uren; Robin Junger
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Thank you very much Wes - much appreciated !!
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> > Daniella Dimitrov
> > daniella@blackloonmetals.com
> > 416-317-7776

McCann, Meghan MEM:EX

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Sent:	Friday, April 7, 2017 11:59 AM
To:	Robin Junger
Cc:	McCann, Meghan MEM:EX; Crozier, Bev ENV:EX; McKnight, Elaine L MEM:EX; Gordon Bogden; Shane Uren
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From: Robb, Peter L. MEM:EX
Sent: Thursday, April 6, 2017 1:40 PM
To: Shoemaker, Wes ENV:EX; McKnight, Elaine L MEM:EX
Cc: Eichenberger, Kathy MEM:EX
Subject: Fwd: Tulsequah Chief - Black Loon - Follow Up

Elaine/Wes

We are meeting early next week internally and have you something ahead of a follow up meeting with Blackloon.

Begin forwarded message:

> **From:** "Shoemaker, Wes ENV:EX" <Wes.Shoemaker@gov.bc.ca>
> **Date:** April 6, 2017 at 10:01:07 AM PDT
> **To:** 'Daniella Dimitrov' <daniella@blackloonmetals.com>, "McKnight, Elaine L MEM:EX" <Elaine.McKnight@gov.bc.ca>, "Crozier, Bev ENV:EX" <Bev.Crozier@gov.bc.ca>
> **Cc:** Gordon Bogden <gordon@blackloonmetals.com>, Shane Uren <shaneu@greenwoodenvironmental.ca>, Robin Junger <Robin.Junger@mcmillan.ca>
> **Subject: RE: Tulsequah Chief - Black Loon - Follow Up**
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We understand that our colleague Shane Uren had a good discussion with Diane Howe yesterday and that Diane provided some good questions and helpful information that may warrant further discussion. We understand that there is a related internal meeting of government staff tomorrow.

May we suggest that our teams hold a small group discussion to further canvass a number of the issues before you respond to our recent letter? We think such a discussion could be beneficial for all concerned.

We would be happy to have the meeting early next week, and on our end it would be Shane and Robin (and potentially me by phone). We would of course be happy to have your teams involve whomever you wish on your end.

Thanks you in advance and warm regards,
Daniella

Daniella Dimitrov
daniella@blackloonmetals.com
416-317-7776

McCann, Meghan MEM:EX

From: Robb, Peter L. MEM:EX
Sent: Thursday, March 30, 2017 4:15 PM
To: Zacharias, Mark ENV:EX; Shoemaker, Wes ENV:EX
Cc: McKnight, Elaine L MEM:EX
Subject: RE: Tulsequah Project

I will have a chat with my folks and then Mark and I will arrange a call to see what any potential path couple look like.

Do we know what sort of timing for an answer they are looking for?

Peter Robb
Assistant Deputy Minister
Ministry of Energy and Mines
Cell: 250 812 7392

From: Zacharias, Mark ENV:EX
Sent: Thursday, March 30, 2017 3:12 PM
To: Shoemaker, Wes ENV:EX; Robb, Peter L. MEM:EX
Subject: RE: Tulsequah Project

Thx Wes:

If read this right they want a guarantee from us that we will not create any additional financial obligations on them for a three year period and after the three years they have the right to avoid their creditors and instead surrender the entire project/problem to government. This will be interesting to navigate...

Regards, MZ

From: Shoemaker, Wes ENV:EX
Sent: Thursday, March 30, 2017 3:02 PM
To: Zacharias, Mark ENV:EX; Robb, Peter L. MEM:EX
Subject: FW: Tulsequah Project

In case their letter did not come with my previous message.

Wes

From: Gordon Bogden [mailto:gordon@blackloonmetals.com]
Sent: Thursday, March 30, 2017 2:34 PM
To: McKnight, Elaine L MEM:EX; Shoemaker, Wes ENV:EX
Cc: Robin Junger; Daniella Dimitrov; Shane Uren (shaneu@greenwoodenvironmental.ca)
Subject: Tulsequah Project

Dear Elaine and Wes,

Please see the attached letter regarding Black Loon's potential interest in the Tulsequah Project.

Kind regards,

Gord

Gordon J. Bogden
Executive Chairman

BLACK LOON
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M +1 416 587-5177
Suite 1600, 401 Bay Street
Toronto, ON M5H 2Y4

McCann, Meghan MEM:EX

From:	Shoemaker, Wes ENV:EX
Sent:	Thursday, March 30, 2017 3:01 PM
To:	'Gordon Bogden'; McKnight, Elaine L MEM:EX
Cc:	Robin Junger; Daniella Dimitrov; Shane Uren (shaneu@greenwoodenvironmental.ca); Crozier, Bev ENV:EX
Subject:	RE: Tulsequah Project

Thanks for your letter Gordon. Elaine and I will discuss with staff and get back to you as soon as we can.

Wes

From: Gordon Bogden [mailto:gordon@blackloonmetals.com]
Sent: Thursday, March 30, 2017 2:34 PM
To: McKnight, Elaine L MEM:EX; Shoemaker, Wes ENV:EX
Cc: Robin Junger; Daniella Dimitrov; Shane Uren (shaneu@greenwoodenvironmental.ca)
Subject: Tulsequah Project

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Sent: Thursday, March 30, 2017 2:34 PM
To: McKnight, Elaine L MEM:EX; Shoemaker, Wes ENV:EX
Cc: Robin Junger; Daniella Dimitrov; Shane Ureh (shaneu@greenwoodenvironmental.ca)
Subject: Tulsequah Project
Attachments: Ltr DM McKnight and DM Shoemaker 30 March 2017.pdf

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Kind regards,

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Executive Chairman

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Suite 1600, 401 Bay Street
Toronto, ON M5H 2Y4

BLACK LOON METALS INC.

DELIVERED BY EMAIL

March 30, 2017

Ms. Elaine McKnight
Deputy Minister
British Columbia – Ministry of Mines & Energy
1810 Blanshard Street, 8th Floor
Victoria, BC V8W 9N3

Mr. Wes Shoemaker
Deputy Minister
British Columbia – Ministry of Environment
2975 Jutland Road, 5th Floor
Victoria, BC V8W 9M1

Dear Ms. McKnight and Mr. Shoemaker,

I would like to again thank you and your colleagues for taking the time to speak with us last Friday to discuss our potential interest in acquiring the Tulsequah Chief Mine from the Chieftain Metals receivership.

As I mentioned in our meeting, we believe that our approach to the project -- and in particular our strong desire to explore a meaningful partnership with the Taku River Tlingit First Nation -- presents a greater potential for success (broadly defined) than may have ever existed in the past, as well as a potential to advance the clean-up of the site and water treatment necessitated by past activities.

At the same time, we understand that there is no guarantee the TRTFN will come to support the project and partner with us. It will take us some time and a serious commitment to determine whether this is possible. We do not want to get ahead of our potential partners.

In all the circumstances, if we were to proceed with the acquisition, our plan would be to undertake an initial phase which would consist of:

- Physical clean-up of the site (debris removal etc.) and upgrade and restart water treatment plant;
- Discussions and negotiations with the TRTFN on social, economic and environmental matters, which we hope could include both a Cooperation and Benefits Agreement and a separate Environmental Cooperation Agreement to supplement provincial permitting (like we negotiated with the Nisga'a Nation in respect of the Kitsault project when I was CEO of Alloycorp Mining);
- Information gathering, including updating of technical studies and assessment of financing alternatives, to help confirm whether and on what terms the project could feasibly proceed;
- Updating permits, including seeking amendments to the environmental assessment certificate to enable barging and use of airships rather than road construction, and seeking any additional permits as necessary with implementation of certain monitoring; and
- Potentially initiating some of the previously approved construction activities.

We anticipate this phase could take up to three years, although, we do hope to reach a positive determination to proceed sooner. During this period, we would be prepared to upgrade and then restart the approved water treatment system and run it at our expense. This would include a capital expenditure of approximately $1 million to optimize the system. Based on the necessary work, we would expect the restart to take place in 2018.

In order to help us make a decision whether or not to proceed, we are seeking confirmation of two things by the Province:

1. The Province will continue to hold and apply toward the project the $1.2M in bonding held under the permits and is not (within the next three years) planning to impose any material amendments to the existing permits (including in respect of bonding) under the Mines Act and Environmental Management Act in relation to activities presently permitted; and
2. If Black Loon decides at the end of a three-year period that it does not intend to proceed further with the project it will be permitted (if it chooses) to surrender its claims, leases and permits to the Province without any further obligation to continue operating the water treatment system or execute on the closure plan.

We appreciate that additional reclamation bonding will be required if and as any further activities are sought to be permitted, and we also appreciate that Black Loon would be responsible for any environmental impacts it may cause (though we expect the environmental impacts of this phase to be only positive).

In addition to the above, we would greatly appreciate receiving a copy of the EY reclamation bonding analysis, the recent provincial risk assessments and the updated closure plan being completed by the province that were mentioned in our meeting. We would be willing to sign a confidentiality agreement.

We believe that this represents a tremendous opportunity that has no downside for any party, and has significant potential upsides for everyone including the Province, our company, and the TRTFN.

At minimum, it would ensure the site is cleaned and that the water treatment system is improved and operated for several years without taxpayer expense.

In a best case scenario, it will see a long term, environmentally sustainable development of this project with the partnership and support of the TRTFN. That is, of course, a matter for the TRTFN to decide, but we are committed to doing everything we can to show we are serious about working with them and that we recognize how significant this proposed project has been for that community (going right back to the historic 2004 Supreme Court of Canada *Taku* decision, from which the duty to consult sprang forth).

Sincerely,

BLACK LOON METALS INC.

Gordon J. Bogden
Executive Chairman

cc: Robin Junger, McMillan LLP
Daniella Dimitrov, Black Loon Metals Inc.
Shane Uren, Black Loon Metals Inc.

McCann, Meghan MEM:EX

From: Shoemaker, Wes ENV:EX
Sent: Monday, March 27, 2017 2:33 PM
To: 'Gordon Bogden'; McKnight, Elaine L MEM:EX
Cc: Zacharias, Mark ENV:EX; Trumpy, Chris MEM:EX; Love, Mark P ENV:EX; McGuire, Jennifer ENV:EX; Eichenberger, Kathy MEM:EX; Robin Junger; Shane Uren (shaneu@greenwoodenvironmental.ca); Daniella Dimitrov
Subject: RE: Thank you again and follow-up

Thank you Gordon. We trust that Daniella and you had a safe journey back to Toronto. We await hearing from you regarding specifics on the Tulsequah Chief project.

Wes

From: Gordon Bogden [mailto:gordon@blackloonmetals.com]
Sent: Monday, March 27, 2017 2:31 PM
To: Shoemaker, Wes ENV:EX; McKnight, Elaine L MEM:EX
Cc: Zacharias, Mark ENV:EX; Trumpy, Chris MEM:EX; Love, Mark P ENV:EX; McGuire, Jennifer ENV:EX; Eichenberger, Kathy MEM:EX; Robin Junger; Shane Uren (shaneu@greenwoodenvironmental.ca); Daniella Dimitrov
Subject: Thank you again and follow-up

Dear Wes & Elaine,

Many thanks again to you and your respective colleagues for providing me and my colleagues at Black Loon, with the opportunity to share with you our strategy for the development of the Tulsequah project should we consummate a transaction with the Receiver. We appreciate your warm welcome, candor and transparency. As we mentioned in closing, we will summarize our understanding of the complex compliance issues and the support we would ask from you to allow us to conclude our deliberations on the possible acquisition and operation of the project.

Kind regards,

Gordon

Gordon J. Bogden
Executive Chairman

BLACK LOON
O +1 416 646-1047
M +1 416 587-5177
Suite 1600, 401 Bay Street
Toronto, ON M5H 2Y4

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Sent: Monday, March 27, 2017 2:31 PM
To: Shoemaker, Wes ENV:EX; McKnight, Elaine L MEM:EX
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Executive Chairman

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Toronto, ON M5H 2Y4

McCann, Meghan MEM:EX

From: McKnight, Elaine L MEM:EX
Sent: Monday, March 13, 2017 10:25 AM
To: McCann, Meghan MEM:EX
Subject: RE: ACTION REQUIRED TODAY: Potential Interest in the Tulsequah Chief Project

I think the deputies should meet.

Elaine

From: McCann, Meghan MEM:EX
Sent: Monday, March 13, 2017 10:24 AM
To: McKnight, Elaine L MEM:EX
Subject: ACTION REQUIRED TODAY: Potential Interest in the Tulsequah Chief Project

Elaine, ENV DMO is asking about this – they're looking for a response today please.

From: Shoemaker, Wes ENV:EX
Sent: Thursday, February 16, 2017 11:05 AM
To: McKnight, Elaine L MEM:EX; Kapac de Frias, Martina E ENV:EX
Cc: Robb, Peter L. MEM:EX; Zacharias, Mark ENV:EX; Crozier, Bev ENV:EX
Subject: FW: Potential Interest in the Tulsequah Chief Project

Elaine,

My Minister thought that this request might be something best dealt with by Deputies (as opposed to Ministers). Do you have any sense of your Minister's thoughts? If he agrees with MMP, then why don't we arrange a joint meeting between the two of us and company representatives?

Wes

From: Gordon Bogden [mailto:gordon@blackloonmetals.com]
Sent: Thursday, February 9, 2017 12:26 PM
To: Shoemaker, Wes ENV:EX
Subject: FW: Potential Interest in the Tulsequah Chief Project

Wes,

Keeping you copied.

Cheers,

Gord

From: Gordon Bogden
Sent: February 9, 2017 1:59 PM
To: Honourable Bill Bennett MLA - Government of British Columbia (Bill.Bennett@gov.bc.ca) <Bill.Bennett@gov.bc.ca>; Honourable Mary Polak(Mary.Polak@gov.bc.ca) <Mary.Polak@gov.bc.ca>
Cc: Honourable John Rustad (ABR.Minister@gov.bc.ca) <ABR.Minister@gov.bc.ca>; Elaine McKnight (elaine.mcknight@gov.bc.ca) <elaine.mcknight@gov.bc.ca>; Doug Caul (Doug.caul@gov.bc.ca) <Doug.caul@gov.bc.ca>
Subject: Potential Interest in the Tulsequah Chief Project

Dear Minister Bennett and Minister Polak,

Please see the attached letter that describes Black Loon Metals's interest in the potential acquisition and development of the Tulsequah Chief project including our request for a meeting with you to discuss our proposed development plans.

Many thanks.

Kind regards,

Gordon J. Bogden
Executive Chairman

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Toronto, ON M5H 2Y4

McCann, Meghan MEM:EX

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Sent:	Monday, March 13, 2017 10:24 AM
To:	McKnight, Elaine L MEM:EX
Subject:	ACTION REQUIRED TODAY: Potential Interest in the Tulsequah Chief Project
Attachments:	Ltr Minister Bennett and Minister Polak 8 February 2017.pdf; Ltr Louise Gordon 17 October 2016.pdf

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Subject: FW: Potential Interest in the Tulsequah Chief Project

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Cc: Honourable John Rustad (ABR.Minister@gov.bc.ca) <ABR.Minister@gov.bc.ca>; Elaine McKnight (elaine.mcknight@gov.bc.ca) <elaine.mcknight@gov.bc.ca>; Doug Caul (Doug.caul@gov.bc.ca) <Doug.caul@gov.bc.ca>
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Many thanks.

Kind regards,

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Executive Chairman

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Toronto, ON M5H 2Y4

DELIVERED BY EMAIL

February 8, 2017

Minister Bill Bennett
Ministry of Energy and Mines
PO Box 9060 Stn Prov Govt
Parliament Buildings
Victoria BC, V8W 9E2

Email: Bill.Bennett@gov.bc.ca

Minister Mary Polak
Ministry of Environment
PO Box 9047 Stn Pov Govt
Rm 112, Parliament Buildings
Victoria BC, V8W 9E2

Email: Mary.Polak@gov.bc.ca

Dear Minister Bennett and Minister Polak,

As you are aware, Chieftain Metals has entered into bankruptcy proceedings and a process is presently underway to determine whether and how the Tulsequah Chief project will move forward. Our company, Black Loon Metals Inc., has recently established a role as the leading potential proponent (working closely with Chieftain's largest creditor and other potential investors) and I am writing you today to provide an update on our plans.

Black Loon is Canadian private company with the strategy of becoming a multi-mine metals producer. The management of Black Loon is comprised of a committed team of experienced mining executives, with extensive capital markets and direct operating. In particular, the majority of the management team of Black Loon were part of Alloycorp Mining Inc., which from April, 2014 to September, 2015, successfully pre-developed the Avanti-Kitsault project near Terrace, B.C.

We believe that the present situation is one that is perfectly suited to our company. We have a very strong record of working successfully with First Nations to jointly overcome complex and long-standing environmental issues in the mining sector. As you may recall, I was CEO of Alloycorp Mining Inc. during the period of time that we successfully negotiated a Comprehensive Benefit Agreement with the Nisga'a Nation and a corresponding Environmental Agreement, which put to an end many years of rancor and discord. I am proud to say that the Nisga'a leadership repeatedly commented on the different approach taken once I became head of that company, and Alloycorp as a result had the honour of being the first company to attend the Wilp Si'aynukhl Nisga'a as a guest of the Nisga'a Lisims Government.

Suite 1600, 401 Bay Street, Toronto, ON, M5H 2Y4

We see many environmental and First Nation parallels between the Kitsault and Tulsequah Chief mine projects and we are committed to unlocking value through cooperation and partnership with the local community. To that end, I have also sent the enclosed letter to Louise Gordon which outlines our commitment to partnership and respectful engagement.

We would very much appreciate the opportunity to meet with you both to discuss our plans at your earliest convenience. In particular, we would like to discuss our thoughts and options regarding potentially restarting the water treatment plant while some additional exploration work is undertaken. We would also be interested in hearing your perspectives on the project generally and the status of relations between the province and the Taku River Tlingit.

Please let us know if you might have some time to meet with us in the next few weeks. I would be happy to make myself available in either Vancouver or Victoria as best suits your schedules.

Thank you in advance for your consideration.

Sincerely,

BLACK LOON METALS INC.

Gordon J. Bogden
Executive Chairman

Encl:

cc: Honourable John Rustad, Minister of Aboriginal Relations
Elaine McKnight, Deputy Minister, Energy and Mines
Wes Shoemaker, Deputy Minister, Environment
Doug Caul, Deputy Minister, Aboriginal Relations and Reconciliation

Suite 1600, 401 Bay Street, Toronto, ON, M5H 2Y4

DELIVERED BY EMAIL

October 17, 2016

Ms. Louise Gordon
Spokesperson
TAKU RIVER, TLINGIT FIRST NATION
P.O. Box 132
Atlin, BC V0W 1A0

Dear Ms. Gordon,

As you are likely aware, in September 2016, the owner of the Tuslequah Chief project, Chieftain Metals Corp., was placed into receivership and a court-appointed Receiver was appointed to sell the company's assets. In light of that development, I am writing today to introduce our company, Black Loon Metals ("Black Loon"), and to explore the potential for working in partnership with the Taku River Tlingit First Nation ("TRTFN") as we evaluate pursuing this opportunity.

We are fully aware of the long history of this project, going right back to the historic legal fight brought by the TRTFN all the way to the Supreme Court of Canada. That 2004 decision (along with the *Haida* decision released the same day) was a major advancement and provided the basis for all subsequent law on the Crown's duty to consult.

We believe the present circumstances present another historic opportunity whereby the right proponent can strengthen the relationship with the TRTFN, and find a way of going forward that addresses your community's economic social, cultural and environmental interests.

Black Loon is Canadian private company with the strategy of becoming a multi-mine metals producer. The management and Board of Directors of Black Loon is comprised of a committed team of experienced mining executives, with extensive capital markets and direct operating experience including recent experience in managing and moving mining assets through pre-development in B.C. Our webpage is www.blackloonmetals.com. In particular, the majority of the management team of Black Loon were part of Alloycorp Mining Inc., which from April, 2014 to September, 2015, successfully pre-developed the $1-billion Avanti-Kitsault project near Terrace, B.C.

By way of background, I would like to share with you a bit of my own story. I have been a mining and banking executive for several decades. In 2014, I was appointed President and CEO of Alloycorp Mining, the owner of the Avanti-Kitsault Mine; that project had been the subject of very significant discord between the company and the Nisga'a Nation for years, resulting in two court proceedings and the first ever invocation of the Nisga'a Treaty dispute settlement provisions. My first step as CEO was to meet with the Nisga'a leadership to state clearly that my intention was to work together not in opposition. To make a long story short, we were able to achieve a comprehensive benefits agreement, and a corresponding environmental side agreement, within 31 days. Many of the members of my team at Alloycorp Mining are now members of my team at Black Loon. We are very proud of the work we accomplished with the Nisga'a Nation and we would very much like the chance to explore a similar cooperative engagement with you.

Suite 1600, 401 Bay Street, Toronto, ON, M5H 2Y4

At the present time, our company has not made any decisions or commitments regarding acquiring this project. We would however, like to meet with you at your earliest convenience to discuss if there is, or is not, an interest in working together to pursue the collaborative development of this project, should we be the new owners of the project. If there is such an interest, we are open to discussing various arrangements, including options such as:

- TRTFN membership on the Tulsequah Board of Directors;
- An environmental committee, comprised 50% of TRTFN members, that would provide advice to the board on all aspects of exploration, project design and operations;
- TRTFN equity in the project (at no cost to the TRTFN); and
- TRTFN training, employment and contracting.

We expect that we will need to decide in the relatively near future whether this is a project that we wish to pursue, and the potential to do so in partnership with your community would be an important part of our decision-making. As such, we would be very interested in meeting with you (and the Clan Directors if you wish).

I, along with members of my executive team, would be happy to make ourselves available to meet with you in the coming weeks at any location you may prefer to discuss these thoughts of a collaborative approach to development of the project.

Many thanks in advance for your consideration.

Sincerely,

BLACK LOON METALS INC.

Gordon J. Bogden
Executive Chairman

Suite 1600, 401 Bay Street, Toronto, ON. M5H 2Y4

McCann, Meghan MEM:EX

From: Gordon Bogden <gordon@blackloonmetals.com>
Sent: Thursday, March 9, 2017 7:52 AM
To: Bennett, Bill MEM:EX
Cc: McKnight, Elaine L MEM:EX; Henderson, Kim N PREM:EX; Robin Junger
Subject: Meeting next week
Attachments: Ltr Minister Bennett and Minister Polak 8 February 2017.pdf

Dear Minister Bennett,

I am following up on the note below and letter attached to see if you might have 30 minutes next week to meet in Victoria to discuss this matter. We believe there is a window of tremendous opportunity here that is in the interests of all parties, including the province, but the matter is somewhat time sensitive as we are at the point of having to make important decisions regarding our potential investment in this project.

I would be happy to travel to Victoria to meet with you anytime next week if you might be able to find 30 minutes in your schedule.

Many thanks in advance.

Kind regards,

Gord

Gordon J. Bogden
Executive Chairman

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Toronto, ON M5H 2Y4

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To: Honourable Bill Bennett MLA - Government of British Columbia (Bill.Bennett@gov.bc.ca); Honourable Mary Polak(Mary.Polak@gov.bc.ca)
Cc: Honourable John Rustad (ABR.Minister@gov.bc.ca); Elaine McKnight (elaine.mcknight@gov.bc.ca); Doug Caul (Doug.caul@gov.bc.ca)
Subject: Potential Interest in the Tulsequah Chief Project

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Many thanks.

Kind regards,

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Executive Chairman

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McMillan s'engage à vous envoyer des communications électroniques appropriées pour vous et votre entreprise. Pour vous abonner et recevoir des communications électroniques de notre part, ou pour vous désabonner et ne plus recevoir de telles communications, veuillez visiter le centre d'abonnement en ligne de McMillan.

Page 60 to/à Page 61

Withheld pursuant to/removed as

DUPLICATE

McCann, Meghan MEM:EX

From:	Shoemaker, Wes ENV:EX
Sent:	Thursday, February 16, 2017 11:05 AM
To:	McKnight, Elaine L MEM:EX; Kapac de Frias, Martina E ENV:EX
Cc:	Robb, Peter L. MEM:EX; Zacharias, Mark ENV:EX; Crozier, Bev ENV:EX
Subject:	FW: Potential Interest in the Tulsequah Chief Project
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Cc: Honourable John Rustad (ABR.Minister@gov.bc.ca) <ABR.Minister@gov.bc.ca>; Elaine McKnight (elaine.mcknight@gov.bc.ca) <elaine.mcknight@gov.bc.ca>; Doug Caul (Doug.caul@gov.bc.ca) <Doug.caul@gov.bc.ca>
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Toronto, ON M5H 2Y4

Page 64 to/à Page 78

Withheld pursuant to/removed as

DUPLICATE

Eichenberger, Kathy MEM:EX

From: Hill, Douglas J ENV:EX
Sent: Monday, April 3, 2017 10:53 AM
To: Eichenberger, Kathy MEM:EX
Cc: McGuire, Jennifer ENV:EX; Love, Mark P ENV:EX; Howe, Diane J MEM:EX
Subject: Re: Black Loon

Kathy
If Jennifer agrees we can find out s.13,s.14
s.13,s.14

In theory the CSR catches mines subject to provisions about "core" areas at mine sites.

Not sure about the indemnity part as we likely don't want to fetter future decision makers regarding ongoing site care and maintenance. There is some guidance on indemnification under the Financial Administration Act.

Sent from my iPhone

On Apr 3, 2017, at 9:44 AM, Eichenberger, Kathy MEM:EX <Kathy.Eichenberger@gov.bc.ca> wrote:

> Just left mtg with Peter Robb and mining staff. WE would like to do 3 things:
>
> - s.13,s.14
>
> - MEM to follow up with Black Loon to determine whether they have an understanding of the scope of the work to "clean up" the site and operate the treatment plant
> - Ask MOE about the likelihood of granting an indemnification for liability
> - Set up a MEM-MOE call on Thursday to discuss advice to our DMs on how to respond to Black Loon's letter.
>
> Happy to have a conf call to discuss further, including MEM's thoughts on this.
> Thanks
> Kathy

Page 002 to/à Page 016

Withheld pursuant to/removed as

DUPLICATE

DELIVERED BY EMAIL

March 30, 2017

Ms. Elaine McKnight
Deputy Minister
British Columbia – Ministry of Mines & Energy
1810 Blanshard Street, 8th Floor
Victoria, BC V8W 9N3

Mr. Wes Shoemaker
Deputy Minister
British Columbia – Ministry of Environment
2975 Jutland Road, 5th Floor
Victoria, BC V8W 9M1

Dear Ms. McKnight and Mr. Shoemaker,

I would like to again thank you and your colleagues for taking the time to speak with us last Friday to discuss our potential interest in acquiring the Tulsequah Chief Mine from the Chieftain Metals receivership.

As I mentioned in our meeting, we believe that our approach to the project -- and in particular our strong desire to explore a meaningful partnership with the Taku River Tlingit First Nation – presents a greater potential for success (broadly defined) than may have ever existed in the past, as well as a potential to advance the clean-up of the site and water treatment necessitated by past activities.

At the same time, we understand that there is no guarantee the TRTFN will come to support the project and partner with us. It will take us some time and a serious commitment to determine whether this is possible. We do not want to get ahead of our potential partners.

In all the circumstances, if we were to proceed with the acquisition, our plan would be to undertake an initial phase which would consist of:

- Physical clean-up of the site (debris removal etc.) and upgrade and restart water treatment plant;
- Discussions and negotiations with the TRTFN on social, economic and environmental matters, which we hope could include both a Cooperation and Benefits Agreement and a separate Environmental Cooperation Agreement to supplement provincial permitting (like we negotiated with the Nisga'a Nation in respect of the Kitsault project when I was CEO of Alloycorp Mining);
- Information gathering, including updating of technical studies and assessment of financing alternatives, to help confirm whether and on what terms the project could feasibly proceed;
- Updating permits, including seeking amendments to the environmental assessment certificate to enable barging and use of airships rather than road construction, and seeking any additional permits as necessary with implementation of certain monitoring; and
- Potentially initiating some of the previously approved construction activities.

We anticipate this phase could take up to three years, although, we do hope to reach a positive determination to proceed sooner. During this period, we would be prepared to upgrade and then restart the approved water treatment system and run it at our expense. This would include a capital expenditure of approximately $1 million to optimize the system. Based on the necessary work, we would expect the restart to take place in 2018.

BLACK LOON METALS INC.

In order to help us make a decision whether or not to proceed, we are seeking confirmation of two things by the Province:

1. The Province will continue to hold and apply toward the project the $1.2M in bonding held under the permits and is not (within the next three years) planning to impose any material amendments to the existing permits (including in respect of bonding) under the Mines Act and Environmental Management Act in relation to activities presently permitted; and
2. If Black Loon decides at the end of a three-year period that it does not intend to proceed further with the project it will be permitted (if it chooses) to surrender its claims, leases and permits to the Province without any further obligation to continue operating the water treatment system or execute on the closure plan.

We appreciate that additional reclamation bonding will be required if and as any further activities are sought to be permitted, and we also appreciate that Black Loon would be responsible for any environmental impacts it may cause (though we expect the environmental impacts of this phase to be only positive).

In addition to the above, we would greatly appreciate receiving a copy of the EY reclamation bonding analysis, the recent provincial risk assessments and the updated closure plan being completed by the province that were mentioned in our meeting. We would be willing to sign a confidentiality agreement.

We believe that this represents a tremendous opportunity that has no downside for any party, and has significant potential upsides for everyone including the Province, our company, and the TRTFN.

At minimum, it would ensure the site is cleaned and that the water treatment system is improved and operated for several years without taxpayer expense.

In a best case scenario, it will see a long term, environmentally sustainable development of this project with the partnership and support of the TRTFN. That is, of course, a matter for the TRTFN to decide, but we are committed to doing everything we can to show we are serious about working with them and that we recognize how significant this proposed project has been for that community (going right back to the historic 2004 Supreme Court of Canada *Taku* decision, from which the duty to consult sprang forth).

Sincerely,

BLACK LOON METALS INC.

Gordon J. Bogden
Executive Chairman

cc: Robin Junger, McMillan LLP
Daniella Dimitrov, Black Loon Metals Inc.
Shane Uren, Black Loon Metals Inc.

Suite 1600, 401 Bay Street, Toronto, Ontario, M5H 2Y4

DELIVERED BY EMAIL

October 17, 2016

Ms. Louise Gordon
Spokesperson
TAKU RIVER, TLINGIT FIRST NATION
P.O. Box 132
Atlin, BC V0W 1A0

Dear Ms. Gordon,

As you are likely aware, in September 2016, the owner of the Tuslequah Chief project, Chieftain Metals Corp., was placed into receivership and a court-appointed Receiver was appointed to sell the company's assets. In light of that development, I am writing today to introduce our company, Black Loon Metals ("Black Loon"), and to explore the potential for working in partnership with the Taku River Tlingit First Nation ("TRTFN") as we evaluate pursuing this opportunity.

We are fully aware of the long history of this project, going right back to the historic legal fight brought by the TRTFN all the way to the Supreme Court of Canada. That 2004 decision (along with the *Haida* decision released the same day) was a major advancement and provided the basis for all subsequent law on the Crown's duty to consult.

We believe the present circumstances present another historic opportunity whereby the right proponent can strengthen the relationship with the TRTFN, and find a way of going forward that addresses your community's economic social, cultural and environmental interests.

Black Loon is Canadian private company with the strategy of becoming a multi-mine metals producer. The management and Board of Directors of Black Loon is comprised of a committed team of experienced mining executives, with extensive capital markets and direct operating experience including recent experience in managing and moving mining assets through pre-development in B.C. Our webpage is www.blackloonmetals.com. In particular, the majority of the management team of Black Loon were part of Alloycorp Mining Inc., which from April, 2014 to September, 2015, successfully pre-developed the $1-billion Avanti-Kitsault project near Terrace, B.C.

By way of background, I would like to share with you a bit of my own story. I have been a mining and banking executive for several decades. In 2014, I was appointed President and CEO of Alloycorp Mining, the owner of the Avanti-Kitsault Mine; that project had been the subject of very significant discord between the company and the Nisga'a Nation for years, resulting in two court proceedings and the first ever invocation of the Nisga'a Treaty dispute settlement provisions. My first step as CEO was to meet with the Nisga'a leadership to state clearly that my intention was to work together not in opposition. To make a long story short, we were able to achieve a comprehensive benefits agreement, and a corresponding environmental side agreement, within 31 days. Many of the members of my team at Alloycorp Mining are now members of my team at Black Loon. We are very proud of the work we accomplished with the Nisga'a Nation and we would very much like the chance to explore a similar cooperative engagement with you.

Suite 1600, 401 Bay Street, Toronto, ON, M5H 2Y4

BLACK LOON METALS INC.

At the present time, our company has not made any decisions or commitments regarding acquiring this project. We would however, like to meet with you at your earliest convenience to discuss if there is, or is not, an interest in working together to pursue the collaborative development of this project, should we be the new owners of the project. If there is such an interest, we are open to discussing various arrangements, including options such as:

- TRTFN membership on the Tulsequah Board of Directors;
- An environmental committee, comprised 50% of TRTFN members, that would provide advice to the board on all aspects of exploration, project design and operations;
- TRTFN equity in the project (at no cost to the TRTFN); and
- TRTFN training, employment and contracting

We expect that we will need to decide in the relatively near future whether this is a project that we wish to pursue, and the potential to do so in partnership with your community would be an important part of our decision-making. As such, we would be very interested in meeting with you (and the Clan Directors if you wish).

I, along with members of my executive team, would be happy to make ourselves available to meet with you in the coming weeks at any location you may prefer to discuss these thoughts of a collaborative approach to development of the project.

Many thanks in advance for your consideration.

Sincerely,

BLACK LOON METALS INC.

Gordon J. Bogden
Executive Chairman

Suite 1600, 401 Bay Street, Toronto, ON, M5H 2Y4

DELIVERED BY EMAIL

February 8, 2017

Minister Bill Bennett
Ministry of Energy and Mines
PO Box 9060 Stn Prov Govt
Parliament Buildings
Victoria BC, V8W 9E2

Email: Bill.Bennett@gov.bc.ca

Minister Mary Polak
Ministry of Environment
PO Box 9047 Stn Pov Govt
Rm 112, Parliament Buildings
Victoria BC, V8W 9E2

Email: Mary.Polak@gov.bc.ca

Dear Minister Bennett and Minister Polak,

As you are aware, Chieftain Metals has entered into bankruptcy proceedings and a process is presently underway to determine whether and how the Tulsequah Chief project will move forward. Our company, Black Loon Metals Inc., has recently established a role as the leading potential proponent (working closely with Chieftain's largest creditor and other potential investors) and I am writing you today to provide an update on our plans.

Black Loon is Canadian private company with the strategy of becoming a multi-mine metals producer. The management of Black Loon is comprised of a committed team of experienced mining executives, with extensive capital markets and direct operating. In particular, the majority of the management team of Black Loon were part of Alloycorp Mining Inc., which from April, 2014 to September, 2015, successfully pre-developed the Avanti-Kitsault project near Terrace, B.C.

We believe that the present situation is one that is perfectly suited to our company. We have a very strong record of working successfully with First Nations to jointly overcome complex and long-standing environmental issues in the mining sector. As you may recall, I was CEO of Alloycorp Mining Inc. during the period of time that we successfully negotiated a Comprehensive Benefit Agreement with the Nisga'a Nation and a corresponding Environmental Agreement, which put to an end many years of rancor and discord. I am proud to say that the Nisga'a leadership repeatedly commented on the different approach taken once I became head of that company, and Alloycorp as a result had the honour of being the first company to attend the Wilp Si'ayuukhl Nisga'a as a guest of the Nisga'a Lisims Government.

Suite 1600, 401 Bay Street, Toronto, ON, M5H 2Y4

We see many environmental and First Nation parallels between the Kitsault and Tulsequah Chief mine projects and we are committed to unlocking value through cooperation and partnership with the local community. To that end, I have also sent the enclosed letter to Louise Gordon which outlines our commitment to partnership and respectful engagement.

We would very much appreciate the opportunity to meet with you both to discuss our plans at your earliest convenience. In particular, we would like to discuss our thoughts and options regarding potentially restarting the water treatment plant while some additional exploration work is undertaken. We would also be interested in hearing your perspectives on the project generally and the status of relations between the province and the Taku River Tlingit.

Please let us know if you might have some time to meet with us in the next few weeks. I would be happy to make myself available in either Vancouver or Victoria as best suits your schedules.

Thank you in advance for your consideration.

Sincerely,

BLACK LOON METALS INC.

Gordon J. Bogden
Executive Chairman

Encl:

cc: Honourable John Rustad, Minister of Aboriginal Relations
Elaine McKnight, Deputy Minister, Energy and Mines
Wes Shoemaker, Deputy Minister, Environment
Doug Caul, Deputy Minister, Aboriginal Relations and Reconciliation

Suite 1600, 401 Bay Street, Toronto, ON, M5H 2Y4

Extract from 2016 Aquatic Ecological Risk Assessment, Tulsequah Chief Mine, Skeena Region

SLR Consulting (Canada) Ltd. (SLR) was retained by BC Ministry of Environment to complete water sampling, sediment sampling and a fisheries habitat assessment at the Tulsequah Chief Mine Site in the fall of 2016; and to prepare this aquatic ecological risk assessment (AERA) based on the 2016 results. The purpose of the 2016 AERA was to provide a current state assessment of potential impacts to aquatic receptors within the Tulsequah River, including the mainstem, braided channels and tributaries surrounding the Site.

The main difference in the 2016 sampling program were the areas where samples were collected compared to historical sampling programs. The 2016 program focused on collecting samples from areas exposed to historic mine input sources and/or in areas where aquatic receptors (fish and invertebrates) potentially reside. The 2016 program included an aquatic habitat assessment to identify fish habitat features and fish utilization within these sampling areas. The historical sampling program was designed for environmental monitoring and permitting purposes.

The 2016 AERA study area was divided into four exposure units referred to as "zones"; with each zone having unique mine-related input sources and fish habitat features. A total of 20 surface water, five porewater and six sediment samples were collected within the four zones. Zone 1 was a reference zone while Zones 2 to 4 were impacted by mine-related sources. The 2016 AERA calculated risk estimates (HQs) for fish, fish eggs, and aquatic invertebrates using maximum concentrations for Contaminants of Potential Concern (COPCs) that were specific to each of the four zones. Three types of media were used to represent exposure sources to the five receptor groups. Surface water concentrations were used for resident and migratory fish, porewater concentrations were used for fish eggs and pelagic invertebrates, and sediment was used for benthic invertebrates. Fish HQ results were further evaluated within the context of what fish species would be present, when they would be present, and their exposure duration within each zone.

HQs were highest in Zone 2. This is likely because multiple undiluted and untreated sources of historic mine waste are discharging into the Tulsequah mainstem and side channels from surface water and groundwater inputs.

Within Zone 2 metal concentrations pose unacceptable risks to fish, fish eggs and pelagic invertebrates. The highest HQ values were cadmium, copper, and zinc HQs for fish, fish eggs and pelagic invertebrates and the aluminum HQ for fish eggs. There also was potential risk identified from aluminum, iron and lead for both fish and pelagic invertebrates, cobalt for pelagic invertebrates, and lead, iron and sulphate for fish eggs. For benthic invertebrates copper was the only elevated HQ identified with potential risk. Based on the SEM/AVS results copper has a high bioavailability to invertebrates within sediments from this zone.

The 2016 habitat assessment identified that it is unlikely that fish and aquatic invertebrates would spend a significant amount of time within Zone 2. This is due to a combination of high turbidity, and low pH input from mine sources documented during the 2016 field program.

HQs were lower in Zone 3 than in Zone 2. HQs were greater in Zone 3 than in Zone 4. Within Zone 3 copper and lead HQs for resident and migratory fish, zinc HQs for resident fish, and the iron HQ for pelagic invertebrates were associated with the highest potential risk. There also was potential risk identified from cadmium for fish, aluminum for pelagic invertebrates, and aluminum, copper and iron HQs for fish eggs. For benthic invertebrates arsenic was the only elevated HQ identified with potential risk. A moderate level of uncertainty is associated with Zone 3 risk estimates because although maximum concentrations were used it is unclear whether they represent the worst case scenario exposure conditions.

Zone 3 has the potential for the largest number of receptors to be exposed to Tulsequah Chief Mine sources within the study area, although concentrations were not the highest. Elevated HQs identified potential risk for both fish and aquatic invertebrates which were slightly lower than risk levels in Zone 2. The main difference between Zones 2 and 3 are the number of areas with high quality habitat features in Zone 3 compared to Zone 2. As a result both fish and aquatic invertebrates receive constant exposure to mine-related COPCs because they have a high potential to spend a significant amount of time within Zone 3.

Historically samples were not collected within Zone 3 despite containing mine-related sources and high quality fish habitat. Although migratory fish would not spend their entire life cycle within this zone, Zone 3 provides high quality habitat for migratory salmonids. Zone 3 also provides high quality habitat for resident fish such as Trout and Dolly Varden to spawn, rear, and for overwintering juveniles. Exposure would be highest for resident fish such as Stickleback, Sculpin, and sub-adult Dolly Varden. Almost all habitat requirements are met for residents which would allow them to spend all of their life cycle within this Zone, and receive year-round lifelong exposure to mine-related COPCs.

Within Zone 4 all calculated HQs for fish and benthic invertebrates indicated acceptable risk. Porewater was not collected within Zone 4 and therefore HQs weren't calculated for fish eggs and pelagic invertebrates. A high level of exposure is associated with the resident and migratory fish HQs because the amount of time that these fish would spend within this area is substantial.

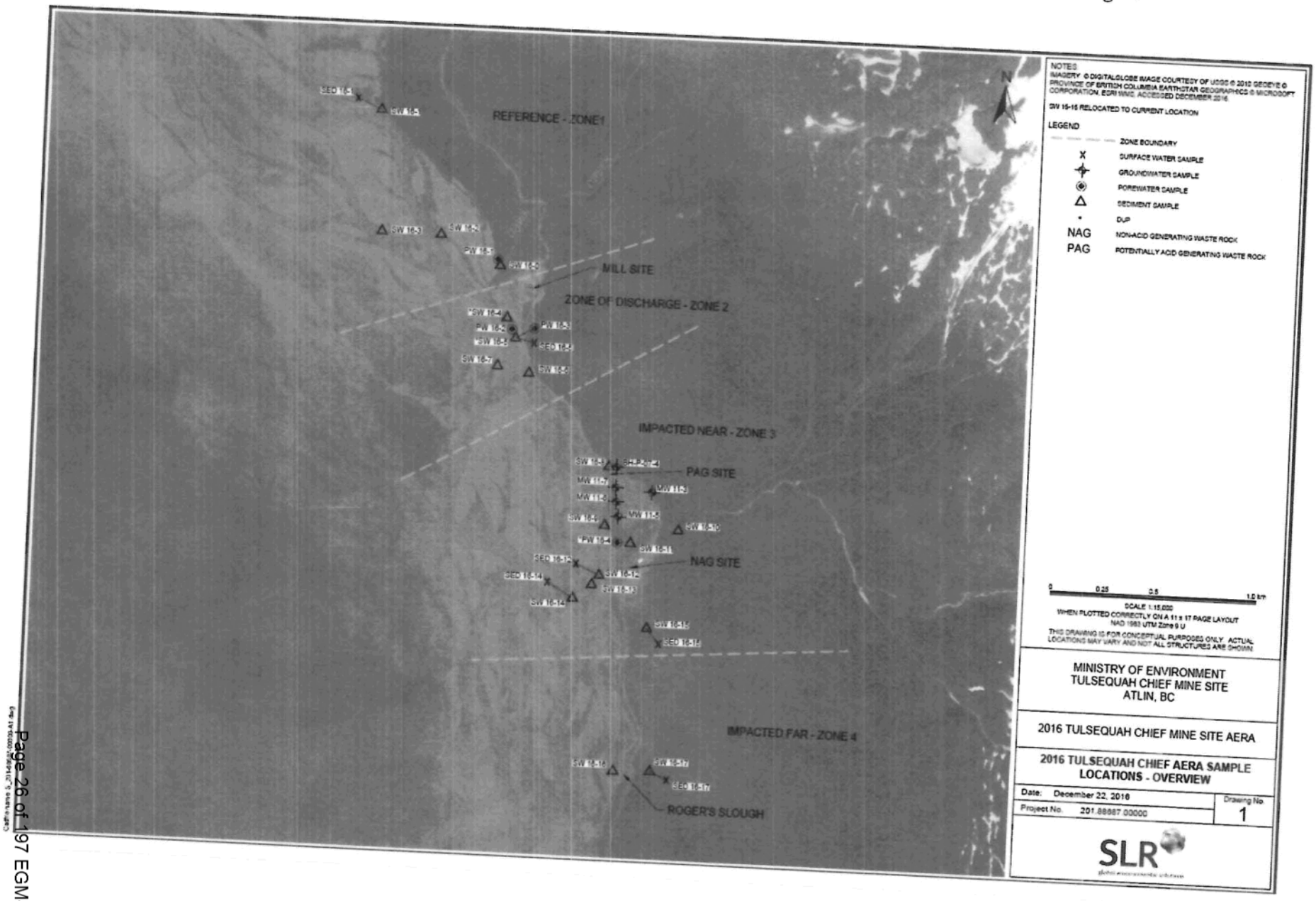
A moderate level of uncertainty is associated with the 2016 AERA risk estimates because although maximum concentrations were used it is unclear whether they represent the worst case scenario exposure conditions.

Based on the AERA conclusions SLR provides the following recommendations to address site risks and uncertainties, and to provide input into remediation planning:

- Restricting overland flow would reduce exposure and thereby reduce risk to aquatic receptors. Overland discharge of untreated mine source waters from the exfiltration pond and portals into the Tulsequah River are sources of contamination to Tulsequah River and aquatic receptors;
- Full characterization of the spatial extent and contaminant concentrations in all relevant media has not been conducted. Complete follow-up assessment that includes concurrent groundwater, porewater, and surface water sampling in all four zones;
    - Porewater concentrations indicate that groundwater is a source of contamination into the Tulsequah River. Groundwater was not a media evaluated under the current AERA. Trends between groundwater and porewater need to be evaluated to confirm mine sourced COPCs into receiving waters within Zones 2 and 3. An evaluation of groundwater concentrations for current wells surrounding the Non Acid Generating (NAG) and Potentially Acid Generating (PAG) piles relative to porewater would reduce the uncertainty associated with porewater data relied upon in the assessment;
    - Concurrent water sampling should be repeated so that seasonal and temporal variation can be captured under exposure conditions involving both high and low source input;
    - Quantify total and speciated chromium to confirm the contribution of chromium VI vs. III to total chromium within all three media; and
    - Incorporate all historical information into a follow-up risk assessment.
- Aquatic habitat assessment was limited in 2016 due to the fall/winter season. Complete a follow-up aquatic habitat assessment to confirm:

  - Presence/absence of dominant macrophytes in areas receiving groundwater input and downgradient of NAG/PAG;
  - Presence/absence of resident and migratory fish when the spring (Sockeye, Cutthroat Trout) and fall (Coho, Dolly Varden) migratory fish will be present using capture techniques between Zones 1 to 3; and
  - Changes from the original aquatic habitat assessment.
- Geochemical assessment of NAG and PAG waste rock areas would confirm the acid/metal leaching potential of the piles. Complete a geochemical assessment of future metal availability and loading from source materials into groundwater and surface water; and
- Complete an update of the 2016 AERA to incorporate the above recommendations and once steady-state COPC concentrations have been identified to aid remediation option analysis for reducing the risks to aquatic receptors.

Extract from 2016 Aquatic Ecological Risk Assessment, Tulsequah Chief Mine, Skeena Region



Eichenberger, Kathy MEM:EX

From: Eichenberger, Kathy MEM:EX
Sent: Wednesday, May 3, 2017 4:01 PM
To: 'Shane Uren'
Subject: EMA and Mines Act Compliance Issues - Tulsequah Chief
Attachments: Tulsequah Chieft Mine Inspection Record 30389; Tulsequah Chief Mine Inspection Report 2016 09 26.pdf

Hi Shane,
Attached are compliance issues raised as a result of the latest inspections last fall.

Summary of MOE compliance history

- Advisory issued October 15, 2015 for an unauthorized bypass of the authorized works (IR# 23226).
- Advisory issued January 16, 2013 requiring permittee to follow monitoring requirements laid out in the Discharge and Receiving Environment Authorization Amendment - specifically the weekly metals sampling required at W10 and W32 (IR# 7795).
- Notice of non-compliance issued December 6, 2012 for sludge pond seep (IR# 7973).
- Warning issued July 24, 2012 as Written Approval for the bypass of the water treatment plant was not obtained and the discharge did not meet the conditions specified in Section 3.6. As a result, Chieftain Metals Inc. was in violation of Section 2.1 ___Bypasses___ of Permit 105719 (IR# 3204).
- Advisory issued May 11, 2012 for accidental release of mine water (IR# 1991).

More dated inspections can be provided if needed.

Please let me know if you have any questions,
Regards,
Kathy

Kathy Eichenberger, P.Eng.
Executive Director, Strategic Initiatives
Mines and Mineral Resources Division
Ministry of Energy and Mines
Office: 250 953-3368
Cell: 250 886-1253

Eichenberger, Kathy MEM:EX

From: Eichenberger, Kathy MEM:EX
Sent: Wednesday, May 3, 2017 10:19 AM
To: 'DD'
Subject: RE: Black Loon Meeting today

Hi Daniella,

Meeting is confirmed. Thank you for sending your list of attendees. Our list of participants as follows:

Mark Zacharias, ADM, Environmental Protection Division, Ministry of Environment (MOE) - in person Peter Robb, ADM, Mining and Mineral Resources Division, Ministry of Energy and Mines (MEM) - in person Diane Howe, Deputy Chief Inspector of Mines, MEM - in person Chris Trumpy, Executive Director, Policy, Legislation and Issue Resolution, MEM - in person Kathy Eichenberger, Executive Director, Strategic Initiatives, MEM Jennifer McGuire, Executive Director, Regional Operations MOE - by phone Douglas Hill, Director, Mining Operations MOE - by phone Elizabeth Rowbotham, Legal Counsel, Justice and Attorney General - by phone

See you soon.
Kathy

-----Original Message-----
From: DD s.22
Sent: Wednesday, May 3, 2017 9:51 AM
To: Eichenberger, Kathy MEM:EX
Cc: Daniella Dimitrov
Subject: Black Loon Meeting today

Hello Kathy,

I would like to confirm our meeting today along with our attendees:
- Daniella Dimitrov - Black Loon in person
- Shane Uren - Black Loon - in person
- Gord Bogden - Black Loon - in person
- Robin Junger - counsel to Black Loon, by phone
- Peter Fraser - West Face (secured creditor) - by phone
- Graeme McLellan - West Face - by phone
- Philip Panet - West Face (in-house) - by phone
- Mark Wheeler - BLG - corporate counsel to West Face - by phone
- Dino Rossi - BLG - environmental counsel for West Face - by phone
- Jay Kellerman - corporate counsel for Black Loon - by phone
- Kevin Smyth - corporate counsel for Black Loon - by phone

We propose to use our dial in number

1-866-305-1460
s.17

If there are any changes in your list attendees, please let me know.

We look forward to seeing you at 13:00.

Warm regards
Daniella

Eichenberger, Kathy MEM:EX

From: Bailey, Neil ENV:EX
Sent: Monday, October 24, 2016 9:49 AM
To: 'Keith Boyle'
Cc: Hebert, David ENV:EX; COS North Coast Zone ENV:EX; Payette, Leslie ENV:EX; Nelless, Brady ENV:EX; Janfada, Arash ENV:EX; Love, Mark P ENV:EX; 'Joline Widmeyer'; Jackson, Vickie ENV:EX; Eichenberger, Kathy MEM:EX; Cousins, Autumn EAO:EX; Flynn, Doug MEM:EX; Hill, Douglas J ENV:EX; Howe, Diane J MEM:EX
Subject: Tulsequah Chieft Mine Inspection Record 30389
Attachments: 2016-09-26 Tulsequah 105719 photo log.pdf; 2016-09-26 Chieftain Metals Inc. 105719.pdf; L1835091_COA.PDF; L1835118_COA.PDF

Hello Mr. Boyle,

On September 26, 2016 Staff from the Ministry of Environment inspected the Chieftain Metals Inc. (Chieftain) Tulsequah Chief mine to verify compliance with its effluent discharge permit 105719 (Permit).
Attached are Inspection Record 30389, photo log and sample results from that inspection.

Chieftain was found to be in non-compliance with the Permit. Please see the attached Inspection Record for additional details regarding this non-compliance.

As a result of this non-compliance and the potential for a moderate, temporary impact to the environment, Inspection Record 30389 is being referred to the Conservation Officer Service (COS) for investigation.

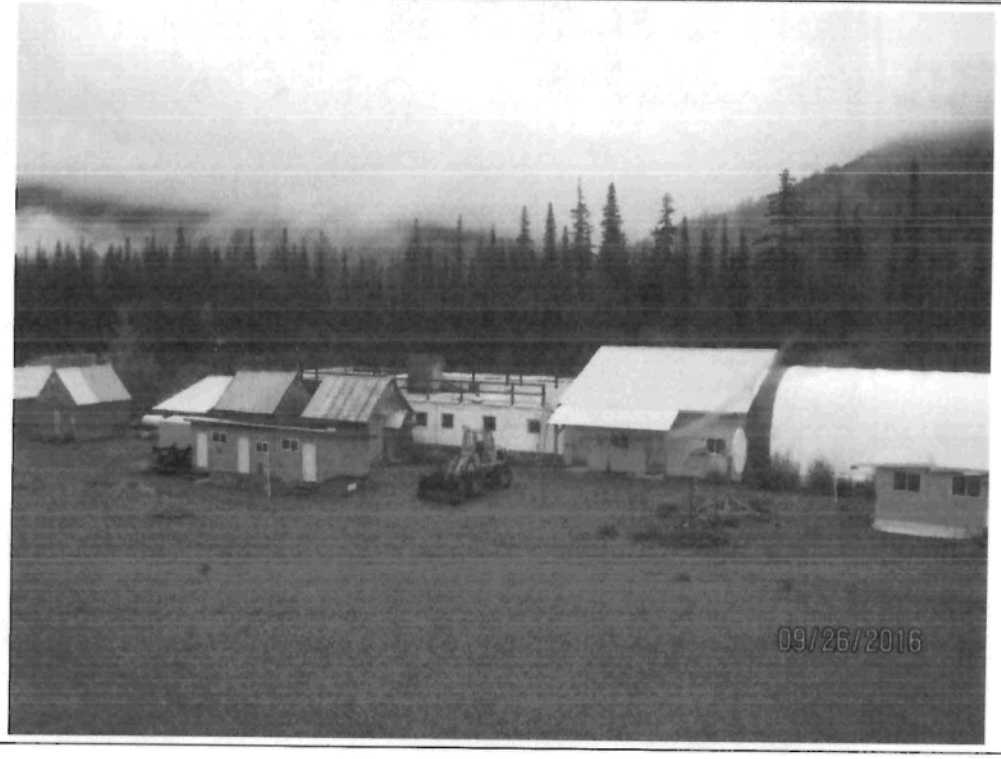
Please contact me if you have any questions.
Regards,
Neil Bailey

Neil Bailey *P.Eng.*
Senior Environmental Protection Officer
Compliance Section

Regional Operations Branch
Environmental Protection Division
Ministry of Environment
Office: 250 847 7456

24-hour Spill/Environmental Emergency Reporting: 1-800-663-3456 (Provincial Emergency Program)
24-hour RAPP (Report All Poachers and Polluters) tip-line: 1-877-952-7277 (Conservation Officer Service)
www.gov.bc.ca/env

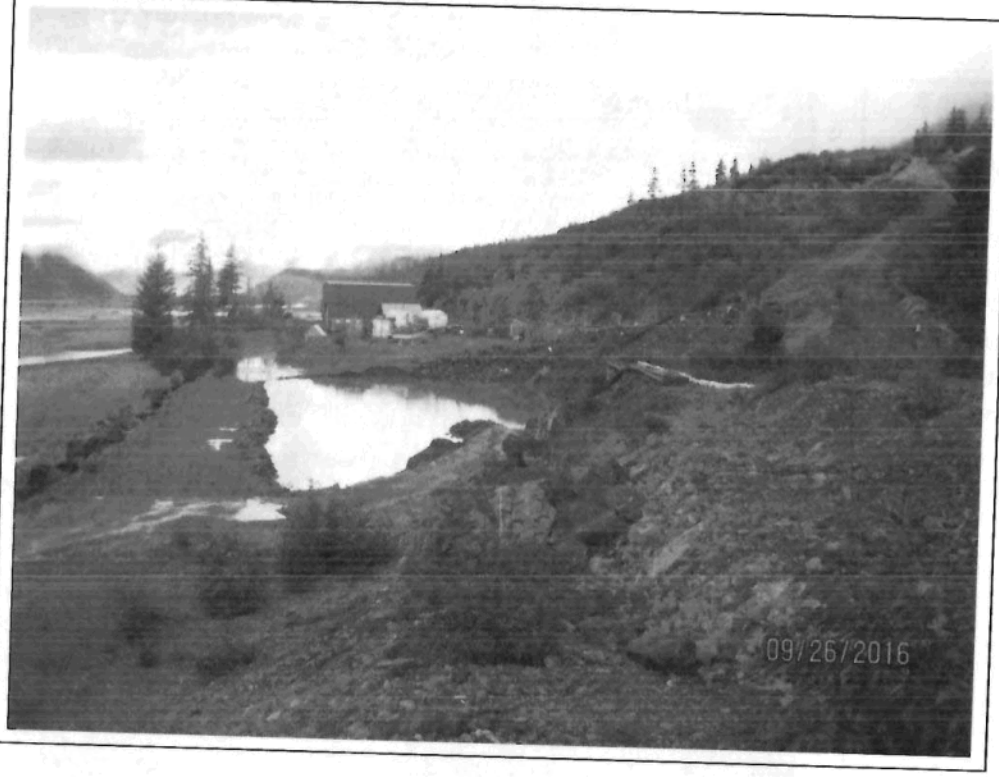
Authorization: 105719	Client Name: Chieftain Minerals Inc.
CVIS IR #: 30389	(Date) Site Inspection Photos: September 26, 2016

Photo 1 Site viewed from the air.	
Photo 2 Shazah Camp	

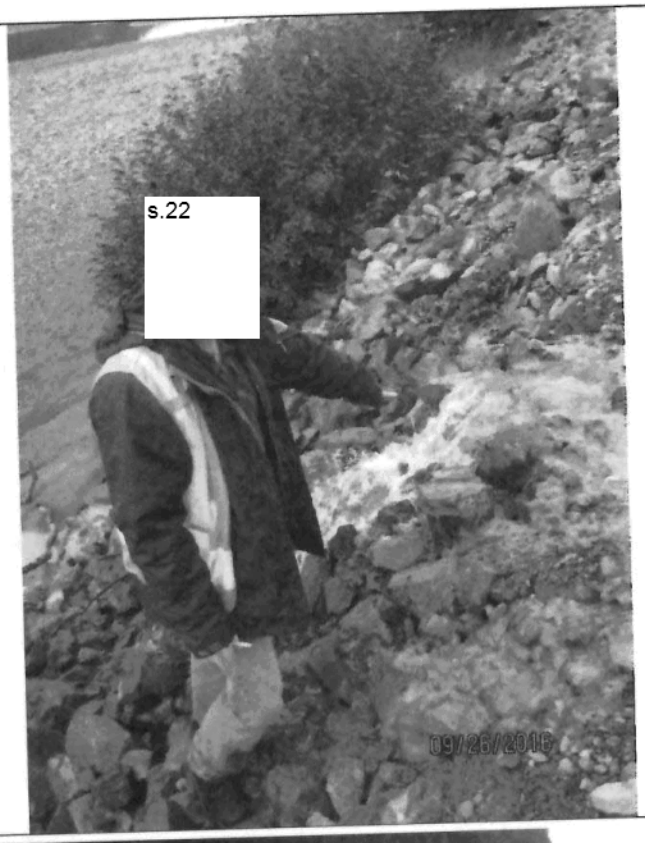
Authorization: 105719	Client Name: Chieftain Minerals Inc.
CVIS IR #: 30389	(Date) Site Inspection Photos: September 26, 2016

Photo 3 Batteries stored without weather protection at Shazah Camp.	
Photo 4 Sludge pit, near the air strip.	

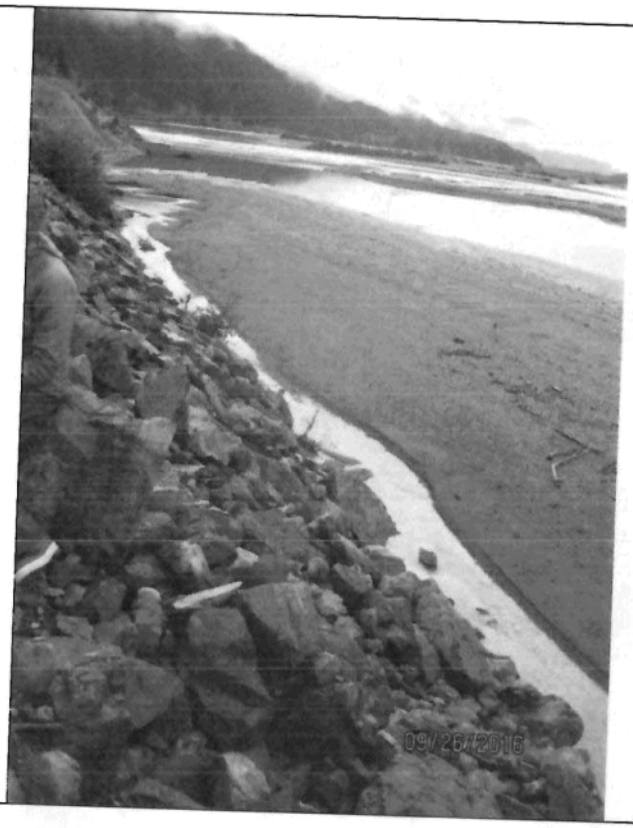
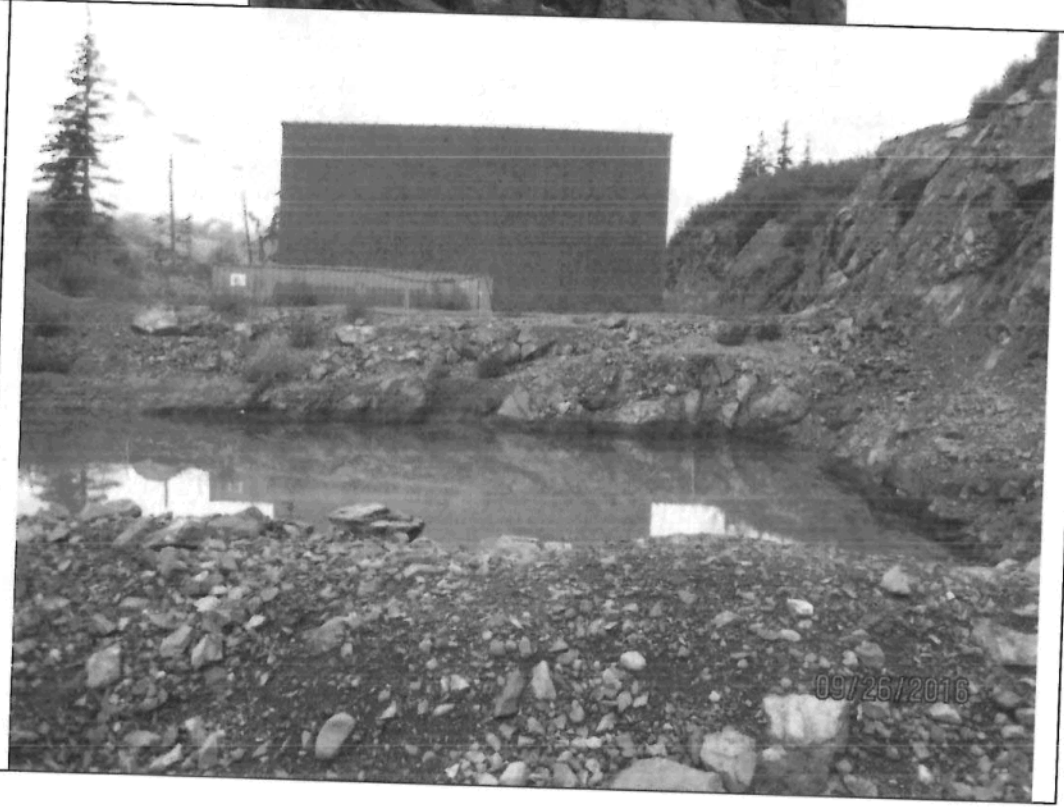
Authorization: 105719	Client Name: Chieftain Minerals Inc.
CVIS IR #: 30389	(Date) Site Inspection Photos: September 26, 2016

Photo 5 5200 level adit.	
Photo 6 Exfiltration pond and IAWTP viewed to the northwest.	

Authorization: 105719	Client Name: Chieftain Minerals Inc.
CVIS IR #: 30389	(Date) Site Inspection Photos: September 26, 2016

Photo 7 Exfiltration pond discharge, water samples taken at this location.	
Photo 8 Exfiltration pond overflow, overland flow viewed to the southeast.	

Authorization: 105719	Client Name: Chieftain Minerals Inc.
CVIS IR #: 30389	(Date) Site Inspection Photos: September 26, 2016

Photo 9 Flow path of exfiltration pond overflow to Tulsequah River viewed to the south.	
Photo 10 IAWTP and site collection pond viewed to the north.	

Authorization: 105719	Client Name: Chieftain Minerals Inc.
CVIS IR #: 30389	(Date) Site Inspection Photos: September 26, 2016

Photo 11

Interim Acid Water Treatment Plant Sludge Storage Pond, located north of the IAWTP.

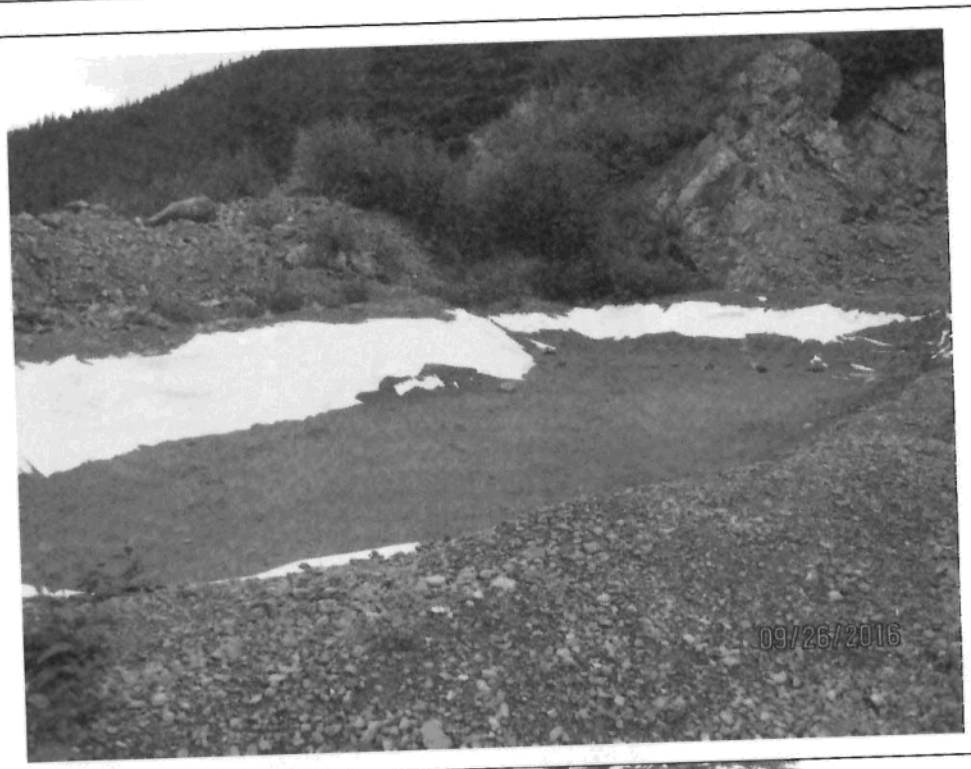


Photo 12

IAWTP discharge pipe.

BC MINISTRY OF ENVIRONMENT -
Compliance - Surrey
ATTN: Neil Bailey
200-10470 152 Street
Surrev BC V3R 0Y3

Date Received: 27-SEP-16
Report Date: 05-OCT-16 13:24 (MT)
Version: FINAL

Client Phone: 604-582-5216

Certificate of Analysis

Lab Work Order #: L1835091
Project P.O. #: 50227365
Job Reference: TULSEQUAH CHIEF MINE A
C of C Numbers:
Legal Site Desc:

Other Information:
Client: CL
EMS ID: E304170
Project: N/A

Dean Watt, B.Sc.
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID					
	Description					
	Sampled Date					
	Sampled Time					
	Client ID					
Grouping	Analyte					

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location

Chain of Custody Numbers:

Additional Information:

Average Cooler Temperature (Deg Celsius): 3.6

Sampling Agency Code: 60

Project: N/A

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.
mg/kg - milligrams per kilogram based on dry weight of sample.
mg/kg wwt - milligrams per kilogram based on wet weight of sample.
mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.
mg/L - milligrams per litre.
< - Less than.
D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

ALS Environmental

Quality Control Report

Workorder: L1835091 Report Date: 05-OCT-16

Client: BC MINISTRY OF ENVIRONMENT - Compliance - Surrey
200-10470 152 Street
Surrey BC V3R 0Y3

Contact: Neil Bailey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

Nautilus Environmental

ALS Environmental
ATTN: Dean Watt
Suite 100-8081 Lougheed Hwy.
Burnaby, BC
V5A 1W9

Report Date: October 5, 2016
Work Order: 161029

Data Report

Species: **Rainbow trout (*Oncorhynchus mykiss*)**
Protocol: **EPS 1/RM/13 (Second Ed. 2000 with 2007 & 2016 amendments)**

Table 1. Results for the 96-h rainbow trout acute LC50 toxicity test.

Sample ID	Collection Date and Time	96-h LC50 (%v/v)
L1835091-1 E304170_ALQ	September 26, 2016 @ N/A	<6.25

N/A = Not Available.

The test met performance criterion and there were no deviations from the test method. The results relate only to the sample tested.

Yvonne Lam, B.Sc.
Laboratory Biologist

Reviewed By:
Julianna Kalocai, M.Sc., R.P.Bio
QA Officer

Rainbow Trout Summary Sheet

Client: ALS (BC Ministry of Environment) Start Date/Time: Sept 30 /16 @ 1130 h

Work Order No.: 161029. Test Species: *Oncorhynchus mykiss*

Sample Information:

Sample ID: L1835091-1 E304170-ALQ
Sample Date: Sept 26 /16
Date Received: Sept 27 /16
Sample Volume: 2 x 21 L
Other:

Test Validity Criteria:
≥ 90% control survival
WQ Ranges:
T (°C) = 15 ± 1; DO (mg/L) = 7.0 to 10.3; pH = 5.5 to 8.5

Dilution Water:

Type: Dechlorinated Municipal Tap Water
Hardness (mg/L $CaCO_3$): 10
Alkalinity (mg/L $CaCO_3$): 11

Test Organism Information:

Batch No.: 091416
Source: Miracle Springs
No. Fish/Volume (L): 10/12L
Loading Density (g/L): 0.29
Mean Length ± SD (mm): 28 ± 3 Range: 21 - 31
Mean Weight ± SD (g): 0.35 ± 0.10 Range: 0.19 - 0.51

Zinc Reference Toxicant Results:

Reference Toxicant ID: RTZn50
Stock Solution ID: 16Zn02
Date Initiated: Sept 28/16
96-h LC50 (95% CL): 70.7 (52.0 - 96.3) mg/L Zn

Reference Toxicant Mean and Historical Range: 63.9 (25.2 - 162.1) mg/L Zn
Reference Toxicant CV (%): 59 %

Test Results: The 96h LC50 is estimated to be < 6.25 % (v/v).

Reviewed by: JGL Date reviewed: Oct - 5/16

96-Hour Rainbow Trout Toxicity Test Data Sheet

Client/Project#: ALS (BC Ministry of Environment)
Sample I.D. L1835091-1 E304170-ALQ
W.O. # 161029
RBT Batch #: 091416
Date Collected/Time: Sept 26/16 @ Not available
Date Setup/Time: Sept 30/16 @ 1130h
Sample Setup By: EC

Number Fish/Volume: 10/12 L
7-d % Mortality: 1.5
Total Pre-aeration Time (mins): 30
Aeration rate adjusted to 6.5 ± 1 mL/min/L? (Y/N): Y

Thermometer: CER#2 **D.O. meter:** 2
Cond./Salinity: 2 **pH meter:** 1

Undiluted Sample WQ			
Parameters	Initial WQ	Adjustment	30 min WQ
Temp °C	15.0		15.0
pH	3.0		3.0
D.O. (mg/L)	9.8		9.8
Cond. (µS/cm)	857		857
Salinity (ppt)	0.4		0.4

Concentration	# Survivors							Temperature (°C)					Dissolved Oxygen (mg/L)					pH					Conductivity (µS/cm)	
(% v/v)	1	2	4	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	96
CTL				10	10	10	10	15.0	15.0	15.0	15.0	15.0	9.8	9.8	9.8	9.9	9.8	7.0	6.9	7.0	7.0	7.0	32	38
6.25				0				15.0	15.0				9.9	9.8				5.4	5.9				81	
12.5				0				15.0	15.0				9.9	9.9				4.9	4.8				132	
25				0				15.0	15.0				9.8	9.8				3.9	4.0				285	
50				0				15.0	15.0				9.8	9.9				3.4	3.2				469	
100				0				15.0	15.0				9.8	9.9				3.0	2.9				857	
Initials				AM	AM	EL	EL	EC	AM	AM	EL	EL	EC	AM	AM	EL	EL	EC	AM	AM	EL	EL	EC	EL

Sample Description/Comments: Yellow, turbid, Odourless, Some particulates

Fish Description at 96 h All control fish appear normal **Number of Stressed Fish at 96 h** 0

Other Observations:

Reviewed by: JOH **Date Reviewed:** Oct. 5/16

VANCOUVER

ALS Environmental

Subcontract Request Form

Subcontract To:

NAUTILUS ENVIRONMENTAL
8664 COMMERCE COURT
BURNABY,BC V5A 4N7

NOTES: Please reference on final report and invoice: PO# *L1835091*
ALS requires QC data to be provided with your final results.
wo# 161029
96 HR LC50 Rainbow Trout.

Please see enclosed 1 sample(s) in 2 Container(s)

SAMPLE NUMBER	ANALYTICAL REQUIRED	DATE SAMPLED / DUE DATE	Priority Flag
L1835091-1 E304170_ALQ	Special Request- Nautilus Environmental (SPECIAL REQUEST-NL 14)	9/26/2016 10/11/2016	

Subcontract Info Contact: Walter Lin (604) 253-4188
Analysis and reporting info contact: Dean Watt, B.Sc.
8081 LOUGHEED HWY
SUITE 100
BURNABY,BC V5A 1W9
Phone: (604) 253-4188 Email: dean.watt@alsglobal.com

Please email confirmation of receipt to: **dean.watt@alsglobal.com**

Shipped By: [illegible] Date Shipped: Sep 27 2016
Received By: Nautilus Date Received: Sept 27/16 @ 15:40
Verified By: NY - Nan Yamamoto Date Verified:
Temperature: 9.0°C
Sample Integrity Issues: 2x20L

BIOLOGICAL ANALYSES REQUISITION

ALS Global

Province of British Columbia
Ministry of Environment

Req # 50227365

Urgent?		**Csr No.**	**Office** 60	**Client** CL	
Project	N/A				
Lab	ALS Global				
Ministry Contact	NBAILEY Neil Bailey				
Sampler	Neil Bailey				
Signature					
EMS Id	E304170				
Location	TULSEQUAH CHIEF MINE A...				

Sampling Agency

Code 60	**Name** Skeena
Address	3726 Alfred Avenue, Bag 5000
City	Smithers
Postal Code	V0J2N0 **Phone** (250)847-7260

Number of Containers 2

Instructions To Lab

State: WW | Descriptor: MS | Collection Method: GRB | Disinfectant Type:

No.	Class	Collection Start YYYY-MM-DD HH:MI	Collection End YYYY-MM-DD HH:MI	Depth (meters) Upper	Lower	Tide	Comments
1	ALQ	2016-09-26 11:55	2016-09-26 12:00				Exfiltration pond at Flow
2							
3							
4							
5							
6							

	Species	Life Stage	Sex	Tissue Type	Size From	Size To	Size Units	Weight From	Weight To	Weight Units	Volume/ Wght/Area	Units
1												
2												
3												
4												
5												
6												

Taxonomic Identification Preservatives:

Dom. Id	Dom. Ct.	Test	Non. Id	Non. Ct.
		Kingdom		
		Phylum		
		Class		
		Order		
		Family		
		Genus		
		Species		
		Variety (or lowest possible)		

Metals Med'n: Pres'n:

High	Low	
		Arsenic
		Lead
		Mercury
	■	Metals Pkg

Bioassay

		Conc.
	48HRLC50 Daphnia	
	48HRLC50 Daphnia single conc. p/f	
X	96HRLC50 Fish	
	96HRLC50 Fish single conc. p/f	
	algae-Selenastrum	
	chironomids	
	daphnia IQ	
	21 daphnia life cycle	
	fish early life stage	
	Hyalella azteca (4d)	
	macoma	
	microtox 5/15 (liquid)	
	microtox chronic	
	microtox spt	
	mutatox	
	Mytilus edulis	
	root tip elongation-lettuce seed	
	various marine amphipods	
	Permit Pass/Fail compliance Pkg	

Bacteriology

	Med'm	Pres'n		Med'm	Pres'n
	31	01	E. COLI - MF		
	31	01	ENTEROCOCCI - MF		
	31	01	FECAL COLIFORM - MF		
	31	01	FECAL COLIFORM - MPN		
	31	01	FECAL STREPTOC - MF		
	31	01	TOTAL COLIFORM - MF		
	29	01	TOTAL COLIFORM - MPN		

Other

Med'm	Pres'n	Low	Parameter Dictionary Code or Package

Field Test Details

No.	Parameter	Method	Results	Units

JC 27/9/16 14:50 3,6C

Report ID: EMSR0800
Date: 2016-09-19 15:20

Short Holding Time Rush Processing

L1835091-COFC

BC MINISTRY OF ENVIRONMENT -
Compliance - Surrey
ATTN: Neil Bailey
200-10470 152 Street
Surrey BC V3R 0Y3

Date Received: 27-SEP-16
Report Date: 06-OCT-16 16:39 (MT)
Version: FINAL

Client Phone: 604-582-5216

Certificate of Analysis

Lab Work Order #: L1835118
Project P.O. #: 50227364
Job Reference: TULSEQUAH CHIEF MINE A
C of C Numbers:
Legal Site Desc:

Other Information: Client: CL
EMS ID: E304170
Project: N/A

Dean Watt, B.Sc.
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	Sample ID: L1835118-1 Description: WATER Sampled Date: 26-SEP-16 Sampled Time: 12:02 Client ID: E304170_ALQ	Sample ID: L1835118-2 Description: WATER Sampled Date: 26-SEP-16 Sampled Time: 12:10 Client ID: E304170_ALQ	Sample ID: L1835118-3 Description: WATER Sampled Date: 26-SEP-16 Sampled Time: 12:10 Client ID: E304170_ALQ	Sample ID: L1835118-4 Description: WATER Sampled Date: 26-SEP-16 Sampled Time: 12:10 Client ID: E304170_ALQ	
WATER						
Physical Tests	Conductivity (uS/cm)	854				
	Hardness (as CaCO3) (mg/L)		213 HTC	206	216 HTC	
	pH (pH)	3.37				
	Total Suspended Solids (mg/L)	15.8				
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	195				
	Alkalinity, Bicarbonate (as CaCO3) (mg/L)	<1.0				
	Alkalinity, Carbonate (as CaCO3) (mg/L)	<1.0				
	Alkalinity, Hydroxide (as CaCO3) (mg/L)	<1.0				
	Alkalinity, Phenolphthalein (as CaCO3) (mg/L)	<2.0				
	Alkalinity, Total (as CaCO3) (mg/L)	<1.0				
	Sulfate (SO4) (mg/L)	409				
Total Metals	Aluminum (Al)-Total (mg/L)		9.52		9.25	
	Antimony (Sb)-Total (mg/L)		0.00214		0.00222	
	Arsenic (As)-Total (mg/L)		0.0433		0.0462	
	Barium (Ba)-Total (mg/L)		0.0271		0.0265	
	Beryllium (Be)-Total (mg/L)		<0.00050 DLA		<0.00050 DLA	
	Bismuth (Bi)-Total (mg/L)		<0.00025 DLA		<0.00025 DLA	
	Boron (B)-Total (mg/L)		<0.050 DLA		<0.050 DLA	
	Cadmium (Cd)-Total (mg/L)		0.195		0.201	
	Calcium (Ca)-Total (mg/L)		73.1		74.6	
	Chromium (Cr)-Total (mg/L)		0.00122		0.00140	
	Cobalt (Co)-Total (mg/L)		0.00845		0.00825	
	Copper (Cu)-Total (mg/L)		10.1		10.3	
	Iron (Fe)-Total (mg/L)		12.3		12.3	
	Lead (Pb)-Total (mg/L)		0.160		0.164	
	Magnesium (Mg)-Total (mg/L)		7.40		7.32	
	Manganese (Mn)-Total (mg/L)		0.436		0.423	
	Molybdenum (Mo)-Total (mg/L)		<0.00025 DLA		0.00025	
	Nickel (Ni)-Total (mg/L)		0.0093		0.0095	
	Phosphorus (P)-Total (mg/L)		<0.15 DLA		<0.15 DLA	
	Potassium (K)-Total (mg/L)		0.90		0.86	
	Selenium (Se)-Total (mg/L)		<0.00025 DLA		0.00027	
	Silicon (Si)-Total (mg/L)		7.72		7.64	
	Silver (Ag)-Total (mg/L)		0.000137		0.000136	
	Sodium (Na)-Total (mg/L)		3.06		3.02	
	Strontium (Sr)-Total (mg/L)		0.339		0.349	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1835118-1 WATER 26-SEP-16 12:02 E304170_ALQ	L1835118-2 WATER 26-SEP-16 12:10 E304170_ALQ	L1835118-3 WATER 26-SEP-16 12:10 E304170_ALQ	L1835118-4 WATER 26-SEP-16 12:10 E304170_ALQ	
WATER						
Total Metals	Sulfur (S)-Total (mg/L)		124		131	
	Thallium (Tl)-Total (mg/L)		0.000408		0.000417	
	Tin (Sn)-Total (mg/L)		<0.00050 DLA		<0.00050 DLA	
	Titanium (Ti)-Total (mg/L)		<0.0015 DLA		<0.0015 DLA	
	Uranium (U)-Total (mg/L)		0.00657		0.00677	
	Vanadium (V)-Total (mg/L)		<0.0025 DLA		<0.0025 DLA	
	Zinc (Zn)-Total (mg/L)		43.8		44.1	
Dissolved Metals	Dissolved Metals Filtration Location			FIELD		
	Aluminum (Al)-Dissolved (mg/L)			8.90		
	Antimony (Sb)-Dissolved (mg/L)			0.00063		
	Arsenic (As)-Dissolved (mg/L)			0.00310		
	Barium (Ba)-Dissolved (mg/L)			0.0248		
	Beryllium (Be)-Dissolved (mg/L)			<0.00050 DLA		
	Bismuth (Bi)-Dissolved (mg/L)			<0.00025 DLA		
	Boron (B)-Dissolved (mg/L)			<0.050 DLA		
	Cadmium (Cd)-Dissolved (mg/L)			0.185		
	Calcium (Ca)-Dissolved (mg/L)			71.1		
	Chromium (Cr)-Dissolved (mg/L)			0.00110		
	Cobalt (Co)-Dissolved (mg/L)			0.00800		
	Copper (Cu)-Dissolved (mg/L)			9.54		
	Iron (Fe)-Dissolved (mg/L)			7.40		
	Lead (Pb)-Dissolved (mg/L)			0.156		
	Magnesium (Mg)-Dissolved (mg/L)			6.89		
	Manganese (Mn)-Dissolved (mg/L)			0.417		
	Molybdenum (Mo)-Dissolved (mg/L)			<0.00025 DLA		
	Nickel (Ni)-Dissolved (mg/L)			0.0086		
	Phosphorus (P)-Dissolved (mg/L)			<0.050 DLA		
	Potassium (K)-Dissolved (mg/L)			0.84		
	Selenium (Se)-Dissolved (mg/L)			<0.00025 DLA		
	Silicon (Si)-Dissolved (mg/L)			7.59		
	Silver (Ag)-Dissolved (mg/L)			0.000101		
	Sodium (Na)-Dissolved (mg/L)			2.87		
	Strontium (Sr)-Dissolved (mg/L)			0.332		
	Sulfur (S)-Dissolved (mg/L)			120		
	Thallium (Tl)-Dissolved (mg/L)			0.000408		
	Tin (Sn)-Dissolved (mg/L)			<0.00050 DLA		
	Titanium (Ti)-Dissolved (mg/L)			<0.0015 DLA		

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	Sample ID: L1835118-1 Description: WATER Sampled Date: 26-SEP-16 Sampled Time: 12:02 Client ID: E304170_ALQ	Sample ID: L1835118-2 Description: WATER Sampled Date: 26-SEP-16 Sampled Time: 12:10 Client ID: E304170_ALQ	Sample ID: L1835118-3 Description: WATER Sampled Date: 26-SEP-16 Sampled Time: 12:10 Client ID: E304170_ALQ	Sample ID: L1835118-4 Description: WATER Sampled Date: 26-SEP-16 Sampled Time: 12:10 Client ID: E304170_ALQ	
WATER						
Dissolved Metals	Uranium (U)-Dissolved (mg/L)			0.00640		
	Vanadium (V)-Dissolved (mg/L)			<0.0025 DLA		
	Zinc (Zn)-Dissolved (mg/L)			41.4		

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Matrix Spike	Arsenic (As)-Dissolved	MS-B	L1835118-3
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L1835118-3
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L1835118-3
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L1835118-3
Matrix Spike	Boron (B)-Dissolved	MS-B	L1835118-3
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1835118-3
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1835118-3
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1835118-3
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1835118-3
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1835118-3
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1835118-3
Matrix Spike	Cobalt (Co)-Dissolved	MS-B	L1835118-3
Matrix Spike	Lead (Pb)-Dissolved	MS-B	L1835118-3
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1835118-3
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1835118-3
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1835118-3
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1835118-3
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1835118-3
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L1835118-3
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L1835118-3
Matrix Spike	Nickel (Ni)-Dissolved	MS-B	L1835118-3
Matrix Spike	Potassium (K)-Dissolved	MS-B	L1835118-3
Matrix Spike	Potassium (K)-Dissolved	MS-B	L1835118-3
Matrix Spike	Potassium (K)-Dissolved	MS-B	L1835118-3
Matrix Spike	Silicon (Si)-Dissolved	MS-B	L1835118-3
Matrix Spike	Silicon (Si)-Dissolved	MS-B	L1835118-3
Matrix Spike	Silicon (Si)-Dissolved	MS-B	L1835118-3
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1835118-3
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1835118-3
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1835118-3
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1835118-3
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1835118-3
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1835118-3
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1835118-3
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1835118-3
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1835118-3
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1835118-3
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1835118-3
Matrix Spike	Sulfur (S)-Dissolved	MS-B	L1835118-3
Matrix Spike	Sulfur (S)-Dissolved	MS-B	L1835118-3
Matrix Spike	Sulfur (S)-Dissolved	MS-B	L1835118-3
Matrix Spike	Sulfur (S)-Dissolved	MS-B	L1835118-3
Matrix Spike	Uranium (U)-Dissolved	MS-B	L1835118-3
Matrix Spike	Uranium (U)-Dissolved	MS-B	L1835118-3
Matrix Spike	Uranium (U)-Dissolved	MS-B	L1835118-3
Matrix Spike	Zinc (Zn)-Dissolved	MS-B	L1835118-3

Qualifiers for Individual Parameters Listed:

Qualifier	Description
DLA	Detection Limit adjusted for required dilution
HTC	Hardness was calculated from Total Ca and/or Mg concentrations and may be biased high (dissolved Ca/Mg results unavailable).
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ACY-PCT-VA	Water	Acidity by Automatic Titration	APHA 2310 "Acidity"

This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.

Samples of industrial wastes, acid mine drainage, or other solutions that contain appreciable amounts of hydrolyzable metal ions such as aluminum, iron, and manganese may require hot peroxide treatment to ensure oxidation and hydrolysis of reduced forms of polyvalent cations. Acidity results may be highly variable if this procedure is not followed. Results in this report for 'Acidity (as CaCO3)' have not been peroxide treated.

ACY-PCT-VA	Water	Acidity by Automatic Titration	APHA 2310 Acidity

This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.

Samples of industrial wastes, acid mine drainage, or other solutions that contain appreciable amounts of hydrolyzable metal ions such as aluminum, iron, and manganese may require hot peroxide treatment to ensure oxidation and hydrolysis of reduced forms of polyvalent cations. Acidity results may be highly variable if this procedure is not followed. Results in this report for 'Acidity (as CaCO3)' have not been peroxide treated.

ALK-TITR-VA	Water	Alkalinity Species by Titration	APHA 2320 Alkalinity

This analysis is carried out using procedures adapted from APHA Method 2320 "Alkalinity". Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.

EC-PCT-VA	Water	Conductivity (Automated)	APHA 2510 Auto. Conduc.

This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.

HARDNESS-CALC-VA	Water	Hardness	APHA 2340B

Hardness (also known as Total Hardness) is calculated from the sum of Calcium and Magnesium concentrations, expressed in CaCO3 equivalents. Dissolved Calcium and Magnesium concentrations are preferentially used for the hardness calculation.

MET-D-CCMS-VA	Water	Dissolved Metals in Water by CRC ICPMS	APHA 3030B/6020A (mod)

Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by CRC ICPMS.

Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.

MET-DIS-ULTRA-MS-VA	Water	Diss. Metals in Water by ICPMS (Ultra)	EPA SW-846 3005A/6020A

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures involves preliminary sample treatment by filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).

MET-T-CCMS-VA	Water	Total Metals in Water by CRC ICPMS	EPA 200.2/6020A (mod)

Water samples are digested with nitric and hydrochloric acids, and analyzed by CRC ICPMS.

Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.

MET-TOT-ULTRA-MS-VA	Water	Total Metals in Water by ICPMS (Ultra)	EPA SW-846 3005A/6020A

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by acid digestion, using either hotblock or microwave oven, or filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).

PH-PCT-VA	Water	pH by Meter (Automated)	APHA 4500-H "pH Value"

This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode

It is recommended that this analysis be conducted in the field.

PH-PCT-VA	Water	pH by Meter (Automated)	APHA 4500-H pH Value

This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode

It is recommended that this analysis be conducted in the field.

SO4-IC-N-VA	Water	Sulfate in Water by IC	EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

TSS-VA	Water	Total Suspended Solids by Gravimetric	APHA 2540 D - GRAVIMETRIC

This analysis is carried out using procedures adapted from APHA Method 2540 "Solids". Solids are determined gravimetrically. Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, TSS is determined by drying the filter at 104 degrees celsius. Samples containing very high dissolved solid content (i.e. seawaters, brackish waters) may produce a positive bias by this method. Alternate analysis methods are available for these types of samples.

Reference Information

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

Additional Information:

Average Cooler Temperature (Deg Celsius): 3.6

Sampling Agency Code: 60

Project: N/A

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.
mg/kg - milligrams per kilogram based on dry weight of sample.
mg/kg wwt - milligrams per kilogram based on wet weight of sample.
mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.
mg/L - milligrams per litre.
< - Less than.
D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

ALS Environmental

Quality Control Report

Workorder: L1835118 Report Date: 06-OCT-16

Client: BC MINISTRY OF ENVIRONMENT - Compliance - Surrey
200-10470 152 Street
Surrey BC V3R 0Y3

Contact: Neil Bailey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ACY-PCT-VA	Water							
Batch R3564475								
WG2403240-13 CRM		**VA-ACY-CONTROL**						
Acidity (as CaCO3)			99.7		%		85-115	04-OCT-16
WG2403240-11 MB								
Acidity (as CaCO3)			1.0		mg/L		2	04-OCT-16
ALK-TITR-VA	Water							
Batch R3563822								
WG2402507-23 CRM		**VA-ALK-TITR-CONTROL**						
Alkalinity, Total (as CaCO3)			100.4		%		85-115	04-OCT-16
Alkalinity, Phenolphthalein (as CaCO3)			88.3		%		85-115	04-OCT-16
WG2402507-21 MB								
Alkalinity, Total (as CaCO3)			<1.0		mg/L		1	04-OCT-16
Alkalinity, Phenolphthalein (as CaCO3)			<2.0		mg/L		2	04-OCT-16
EC-PCT-VA	Water							
Batch R3564475								
WG2403240-14 CRM		**VA-EC-PCT-CONTROL**						
Conductivity			100.7		%		90-110	04-OCT-16
WG2403240-11 MB								
Conductivity			<2.0		uS/cm		2	04-OCT-16
MET-D-CCMS-VA	Water							
Batch R3558938								
WG2398468-2 LCS								
Aluminum (Al)-Dissolved			102.0		%		80-120	28-SEP-16
Antimony (Sb)-Dissolved			96.4		%		80-120	28-SEP-16
Arsenic (As)-Dissolved			99.7		%		80-120	28-SEP-16
Barium (Ba)-Dissolved			101.7		%		80-120	28-SEP-16
Beryllium (Be)-Dissolved			103.3		%		80-120	28-SEP-16
Bismuth (Bi)-Dissolved			103.7		%		80-120	28-SEP-16
Boron (B)-Dissolved			97.4		%		80-120	28-SEP-16
Cadmium (Cd)-Dissolved			99.6		%		80-120	28-SEP-16
Calcium (Ca)-Dissolved			100.9		%		80-120	28-SEP-16
Chromium (Cr)-Dissolved			99.4		%		80-120	28-SEP-16
Cobalt (Co)-Dissolved			100.6		%		80-120	28-SEP-16
Copper (Cu)-Dissolved			97.0		%		80-120	28-SEP-16
Lead (Pb)-Dissolved			99.99		%		80-120	28-SEP-16
Magnesium (Mg)-Dissolved			103.2		%		80-120	28-SEP-16
Manganese (Mn)-Dissolved			101.9		%		80-120	28-SEP-16

ALS Environmental

Quality Control Report

Workorder: L1835118 Report Date: 06-OCT-16

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-VA	Water							
Batch R3558938								
WG2398468-2 LCS								
Molybdenum (Mo)-Dissolved			103.8		%		80-120	28-SEP-16
Nickel (Ni)-Dissolved			99.9		%		80-120	28-SEP-16
Potassium (K)-Dissolved			105.7		%		80-120	28-SEP-16
Selenium (Se)-Dissolved			98.4		%		80-120	28-SEP-16
Silicon (Si)-Dissolved			109.0		%		80-120	28-SEP-16
Silver (Ag)-Dissolved			92.8		%		80-120	28-SEP-16
Sodium (Na)-Dissolved			101.8		%		80-120	28-SEP-16
Strontium (Sr)-Dissolved			96.6		%		80-120	28-SEP-16
Sulfur (S)-Dissolved			105.9		%		80-120	28-SEP-16
Thallium (Tl)-Dissolved			105.5		%		80-120	28-SEP-16
Tin (Sn)-Dissolved			90.8		%		80-120	28-SEP-16
Titanium (Ti)-Dissolved			98.1		%		80-120	28-SEP-16
Uranium (U)-Dissolved			98.2		%		80-120	28-SEP-16
Vanadium (V)-Dissolved			100.1		%		80-120	28-SEP-16
Zinc (Zn)-Dissolved			95.2		%		80-120	28-SEP-16
WG2398468-1 MB		**NP**						
Aluminum (Al)-Dissolved			<0.0010		mg/L		0.001	28-SEP-16
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	28-SEP-16
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	28-SEP-16
Barium (Ba)-Dissolved			<0.000050		mg/L		0.00005	28-SEP-16
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	28-SEP-16
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	28-SEP-16
Boron (B)-Dissolved			<0.010		mg/L		0.01	28-SEP-16
Cadmium (Cd)-Dissolved			<0.000005(		mg/L		0.000005	28-SEP-16
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	28-SEP-16
Chromium (Cr)-Dissolved			<0.00010		mg/L		0.0001	28-SEP-16
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	28-SEP-16
Copper (Cu)-Dissolved			<0.00020		mg/L		0.0002	28-SEP-16
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	28-SEP-16
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	28-SEP-16
Manganese (Mn)-Dissolved			<0.00010		mg/L		0.0001	28-SEP-16
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	28-SEP-16
Nickel (Ni)-Dissolved			<0.00050		mg/L		0.0005	28-SEP-16
Potassium (K)-Dissolved			<0.050		mg/L		0.05	28-SEP-16

ALS Environmental

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-VA	Water							
Batch R3558938								
WG2398468-1 MB		**NP**						
Selenium (Se)-Dissolved			<0.000050		mg/L		0.00005	28-SEP-16
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	28-SEP-16
Silver (Ag)-Dissolved			<0.000010		mg/L		0.00001	28-SEP-16
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	28-SEP-16
Strontium (Sr)-Dissolved			<0.00020		mg/L		0.0002	28-SEP-16
Sulfur (S)-Dissolved			<0.50		mg/L		0.5	28-SEP-16
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	28-SEP-16
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	28-SEP-16
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	28-SEP-16
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	28-SEP-16
Vanadium (V)-Dissolved			<0.00050		mg/L		0.0005	28-SEP-16
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	28-SEP-16
MET-DIS-ULTRA-MS-VA	Water							
Batch R3558938								
WG2398468-2 LCS								
Iron (Fe)-Dissolved			98.4		%		80-120	28-SEP-16
Phosphorus (P)-Dissolved			93.8		%		80-120	28-SEP-16
WG2398468-1 MB		**NP**						
Iron (Fe)-Dissolved			<0.0050		mg/L		0.005	28-SEP-16
Phosphorus (P)-Dissolved			<0.010		mg/L		0.01	28-SEP-16
MET-T-CCMS-VA	Water							
Batch R3560634								
WG2400505-1 MB								
Aluminum (Al)-Total			<0.0030		mg/L		0.003	30-SEP-16
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	30-SEP-16
Arsenic (As)-Total			<0.00010		mg/L		0.0001	30-SEP-16
Barium (Ba)-Total			<0.000050		mg/L		0.00005	30-SEP-16
Beryllium (Be)-Total			<0.00010		mg/L		0.0001	30-SEP-16
Bismuth (Bi)-Total			<0.000050		mg/L		0.00005	30-SEP-16
Boron (B)-Total			<0.010		mg/L		0.01	30-SEP-16
Cadmium (Cd)-Total			<0.000005(		mg/L		0.000005	30-SEP-16
Calcium (Ca)-Total			<0.050		mg/L		0.05	30-SEP-16
Chromium (Cr)-Total			<0.00010		mg/L		0.0001	30-SEP-16
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	30-SEP-16
Copper (Cu)-Total			<0.00050		mg/L		0.0005	30-SEP-16

ALS Environmental

Quality Control Report

Workorder: L1835118 Report Date: 06-OCT-16

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-VA	Water							
Batch R3560634								
WG2400505-1 MB								
Lead (Pb)-Total			<0.000050		mg/L		0.00005	30-SEP-16
Magnesium (Mg)-Total			<0.0050		mg/L		0.005	30-SEP-16
Manganese (Mn)-Total			<0.00010		mg/L		0.0001	30-SEP-16
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	30-SEP-16
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	30-SEP-16
Potassium (K)-Total			<0.050		mg/L		0.05	30-SEP-16
Selenium (Se)-Total			<0.000050		mg/L		0.00005	30-SEP-16
Silicon (Si)-Total			<0.050		mg/L		0.05	30-SEP-16
Silver (Ag)-Total			<0.000010		mg/L		0.00001	30-SEP-16
Sodium (Na)-Total			<0.050		mg/L		0.05	30-SEP-16
Strontium (Sr)-Total			<0.00020		mg/L		0.0002	30-SEP-16
Sulfur (S)-Total			<0.50		mg/L		0.5	30-SEP-16
Thallium (Tl)-Total			<0.000010		mg/L		0.00001	30-SEP-16
Tin (Sn)-Total			<0.00010		mg/L		0.0001	30-SEP-16
Titanium (Ti)-Total			<0.00030		mg/L		0.0003	30-SEP-16
Uranium (U)-Total			<0.000010		mg/L		0.00001	30-SEP-16
Vanadium (V)-Total			<0.00050		mg/L		0.0005	30-SEP-16
Zinc (Zn)-Total			<0.0030		mg/L		0.003	30-SEP-16
Batch R3562782								
WG2400505-2 LCS								
Aluminum (Al)-Total			103.8		%		80-120	30-SEP-16
Antimony (Sb)-Total			102.2		%		80-120	30-SEP-16
Arsenic (As)-Total			101.5		%		80-120	30-SEP-16
Barium (Ba)-Total			100.7		%		80-120	30-SEP-16
Beryllium (Be)-Total			102.5		%		80-120	30-SEP-16
Bismuth (Bi)-Total			105.2		%		80-120	30-SEP-16
Boron (B)-Total			99.9		%		80-120	30-SEP-16
Cadmium (Cd)-Total			98.9		%		80-120	30-SEP-16
Calcium (Ca)-Total			102.5		%		80-120	30-SEP-16
Chromium (Cr)-Total			102.1		%		80-120	30-SEP-16
Cobalt (Co)-Total			99.6		%		80-120	30-SEP-16
Copper (Cu)-Total			99.0		%		80-120	30-SEP-16
Lead (Pb)-Total			103.6		%		80-120	30-SEP-16
Magnesium (Mg)-Total			99.5		%		80-120	30-SEP-16

ALS Environmental

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-VA	Water							
Batch R3562782								
WG2400505-2 LCS								
Manganese (Mn)-Total			105.4		%		80-120	30-SEP-16
Molybdenum (Mo)-Total			108.2		%		80-120	30-SEP-16
Nickel (Ni)-Total			100.8		%		80-120	30-SEP-16
Potassium (K)-Total			102.0		%		80-120	30-SEP-16
Selenium (Se)-Total			99.9		%		80-120	30-SEP-16
Silicon (Si)-Total			112.3		%		80-120	30-SEP-16
Silver (Ag)-Total			103.6		%		80-120	30-SEP-16
Sodium (Na)-Total			102.1		%		80-120	30-SEP-16
Strontium (Sr)-Total			102.1		%		80-120	30-SEP-16
Sulfur (S)-Total			101.8		%		80-120	30-SEP-16
Thallium (Tl)-Total			103.8		%		80-120	30-SEP-16
Tin (Sn)-Total			100.9		%		80-120	30-SEP-16
Titanium (Ti)-Total			100.3		%		80-120	30-SEP-16
Uranium (U)-Total			105.1		%		80-120	30-SEP-16
Vanadium (V)-Total			101.3		%		80-120	30-SEP-16
Zinc (Zn)-Total			93.3		%		80-120	30-SEP-16
MET-TOT-ULTRA-MS-VA	Water							
Batch R3560634								
WG2400505-1 MB								
Iron (Fe)-Total			<0.0050		mg/L		0.005	30-SEP-16
Phosphorus (P)-Total			<0.030		mg/L		0.03	30-SEP-16
Batch R3562782								
WG2400505-2 LCS								
Iron (Fe)-Total			101.0		%		80-120	30-SEP-16
Phosphorus (P)-Total			107.0		%		80-120	30-SEP-16
PH-PCT-VA	Water							
Batch R3564475								
WG2403240-12 CRM		**VA-PH7-BUF**						
pH			7.01		pH		6.9-7.1	04-OCT-16
SO4-IC-N-VA	Water							
Batch R3565731								
WG2404651-2 LCS								
Sulfate (SO4)			101.1		%		90-110	05-OCT-16
WG2404651-1 MB								

ALS Environmental

Quality Control Report

Workorder: L1835118 Report Date: 06-OCT-16

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SO4-IC-N-VA	Water							
Batch R3565731								
WG2404651-1 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	05-OCT-16
TSS-VA	Water							
Batch R3562420								
WG2401629-2 LCS								
Total Suspended Solids			96.3		%		85-115	01-OCT-16
WG2401629-1 MB								
Total Suspended Solids			<3.0		mg/L		3	01-OCT-16

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
LCS-L	Lab Control Sample recovery was below ALS DQO. Reference Material and/or Matrix Spike results were acceptable. Non-detected sample results are considered reliable. Other results, if reported, have been qualified.

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
pH by Meter (Automated)							
	1	26-SEP-16 12:02	04-OCT-16 18:30	0.25	198	hours	EHTR-FM

Legend & Qualifier Definitions:

EHTR-FM:	Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended.
EHTR:	Exceeded ALS recommended hold time prior to sample receipt.
EHTL:	Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.
EHT:	Exceeded ALS recommended hold time prior to analysis.
Rec. HT:	ALS recommended hold time (see units).

Notes*:
Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.
Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L1835118 were received on 27-SEP-16 14:50.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

WATER & GENERAL CHEMISTRY REQUISITION

Province Of British Columbia

Ministry of Environment

ALS Global

Req # 50227364

Urgent?		Csr No.	Office 60 Client CL
Study		Project	N/A
Lab	ALS Global		
Ministry Contact	NBAILEY Neil Bailey		
Sampler	Neil Bailey		
Signature			
EMS Id	E304170	Well Plate #	
Location	TULSEQUAH CHIEF MINE A		

Sampling Agency	
Code 60	Name Skeena
Address	3726 Alfred Avenue, Bag 5000
City	Smithers
Postal Code	V0J2N0 Phone (250)847-7260
Number of Containers	4

Instructions To Lab

State WW Descriptor MS Collection Method GRB

No.	Class	Collection Start YYYY-MM-DD HH:MI	Collection End YYYY-MM-DD HH:MI	Depth Upper	Depth Lower	Tide	Comment
1	ALQ	2016-09-26 12:02					TSS
2	ALQ	2016-09-26 12:10					Tot. metals
3	ALQ	2016-09-26 12:30					Dissolved metals filtered
4	ALQ	2016-09-26 12:40					Tot. Metals Dup
5							
6							

GENERAL (1 L PLASTIC)	Med'm		Pres'n	
X	Acidity pH 8.3			
X	Alkalinity: Phenolphthalein			
X	Alkalinity: Total: pH 4.5			
	Biochemical Oxygen Demand (BOD)			
	Bromide			
	Carb. Biochem. Oxygen Demand (CBOD)			
	Chloride			
	Colour: True			
	Fluoride			
	Nitrogen: Nitrate			
	Nitrogen: Nitrate and Nitrite			
	Nitrogen: Nitrite			
X	pH			
	Phosphorus: Diss. ortho-phosphate			
	Residue: Filterable (TDS)			
X	Residue: Nonfilterable (TSS) -Subsample			
	Residue: Nonfilterable, Fixed			
	Residue: Total			
	Silica, Reactive			
X	Specific Conductance			
X	Sulphate			
	Turbidity			

GENERAL (250 mL AMBER GLASS	Med'm		Pres'n	
	Carbon: TOC (H2SO4)			
	Chem. Oxygen Demand (COD) (H2SO4)			
	Nitrogen: Ammonia (H2SO4)			
	Nitrogen: Total (H2SO4)			
	Nitrogen: Total Kjeldahl (Calc) (H2SO4)			
	Nitrogen: Total Organic (H2SO4)			
	Phosphorus: Total (H2SO4)			

GENERAL (125 mL AMBER GLAS	Med'm		Pres'n	
	Carbon: DOC (FF, H2SO4)			
	Nitrogen: Total Dissolved (FF,H2SO4)			
	Nitrogen:Diss Kjeldahl(Calc)(FF,H2SO4)			
	Phosphorus: Total Dissolved (FF,H2SO4)			

METALS: TOTAL		Med'm	Pres'n	Med'm	Pres'n
High	Low				
X		Metal Pkg. (ICPMS) - HIGH (250 mL Plastic) - HNO3			
	X	Metal Pkg. (ICPMS) - LOW (250 mL Plastic) - HNO3			
		Mercury - 40mL Glass, HCl			
X	X	Hardness (250 mL Plastic) - HNO3			

METALS: DISSOLVED		Med'm	Pres'n	Med'm	Pres'n
High	Low				
X		Metal Pkg (ICPMS) - HIGH (250 mL Plastic)-Field Filter, HNO3			
	X	Metal Pkg. (ICPMS) - LOW (250 mL Plastic)-Field Filter, HNO3			
		Mercury - 40mL Glass, Field Filter, HCl			
X	X	Hardness (250 mL Plastic) - Field Filter, HNO3			

SPECIFIC	Test	Med'm	Pres'n	Med'm	Pres'n
	1 Obs Well Package				
	2 Cyanide: SAD				
	3 Cyanide: WAD				
	4 Sulphide: Total				
	5 Residue: Nonfilterable (TSS) - Whole Bottle				
	6 Carbon: TIC (H2SO4)				
	7 Carbon: DIC (FF, H2SO4)				
	8 Chlorophyll "a"				
	9 Phaeophytin				

ORGANICS		Med'm	Pres'n
	1 BTEX		
	2 VOC Full List		
	3 Volatile Hydrocarbons (VH)		
	4 Trihalomethanes (THM)		
	5 VPH		
	6 EPH		
	7 PAH		
	8 LEPH/HEPH (Calc)		
	9 Oil and Grease		
	10 Mineral Oil & Grease		
	11 Organochlorine Pesticides (OCP)		
	12 Organophosphorus Pesticides (OPP)		
	13 Polychlorinated Biphenyls (PCB)		
	14 Chlorophenols (Tri, Tetra & Penta)		
	15 Phenolics, Chlorinated		
	16 Phenolics, Non-Chlorinated		
	17 Phenols: Colorimetric		
	18 Acid Extractable Herbicides		
	19 Resin Acids		
	20 Fatty Acids		

OTHER	Med'm	Pres'n	Test

FIELD TEST DETAILS	No.	Parameter	Method	Results	Units

E JC 27/9/16 14:50 3/6E

Report ID: EMSR0900

Date: 2016-09-19 15:15

L1835118-COFC

Short Holding Time
Rush Processing

Short Holding Time — Rush Processing

ALS — Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

L1835118-COFC

COC Number: 14 - 470974

Page ___ of ___

Report To	Neil Bailey
Company:	Ministry of Environment
Contact:	Neil Bailey
Address:	Bag 5000 Smithers, BC V0J 2N0
Phone:	250 - 847- 7456

Invoice To

Same as Report To ☑ Yes ☐ No

Copy of Invoice with Report ☑ Yes ☐ No

Company:

Contact:

Project Information

ALS Quote #:

Job #:

PO / AFE:

LSD:

ALS Lab Work Order # (lab use only)

Report Format / Distribution

Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)

Quality Control (QC) Report with Report ☑ Yes ☐ No

☐ Criteria on Report - provide details below if box checked

Select Distribution: ☐ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax neil.bailey@gov.bc.ca

Email 2

Invoice Distribution

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax

Email 2

[redacted] Oil and Gas Required Fields (client use)

Approver ID:	Cost Center:
GL Account:	Routing Code:
Activity Code:	
Location:	
ALS Contact:	Sampler:

Select Service Level Below (Rush Turnaround Time (TAT) is not available for all tests)

- R ☑ Regular (Standard TAT if received by 3pm)
- P ☐ Priority (2-4 business days if received by 3pm)
- E ☐ Emergency (1-2 business days if received by 3pm)
- E2 ☐ Same day or weekend emergency if received by 10am – contact ALS for surcharge.

Specify Date Required for E2,E or P:

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	LC50 96HR Fish	TSS, pH, EC, [illegible]	Metals Total (High)	Metals Dissolved (High)	Number of Containers
	Tulsequah #1 toxicity REQ 50227365	26-09-2016	11:55	Water	✓				2
	Tulseqhuah #1 TSS	26-09-2016	12:02	Water		✓			1
	Tulsequah #1 Total	26-09-2016	12:10	Water			✓		1
	Tulsequah #1 Total - Duplicate	26-09-2016	12:10	Water			✓		1
	Tulsequh #1 Dissolved	26-09-2016	12:10	Water				✓	1

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ Yes ☑ No

Are samples for human drinking water use? ☐ Yes ☐ No

Special Instructions / Specify Criteria to add on report (client Use)

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ SIF Observations Yes ☐ No ☐

Ice packs Yes ☑ No ☐ Custody seal intact Yes ☐ No ☐

Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C: 9.6°

FINAL COOLER TEMPERATURES °C: 3 6

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by:	Date:	Time:	Received by: [signature]	Date: Sept-26th	Time: 4:55pm	Received by: JC	Date: 27/9/16	Time: 14:50

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

Ministry of Environment

Inspection Record

Environmental Protection Division

Inspection Number: *30389*	**Inspection Status:** *FINAL*
EP System: AMS	Inspection Date: 2016-09-26
EP System Number: 105719	EP System Status: Active
Region: Skeena	Office: Smithers
Trigger: Planned	**Incidents of Non-Compliance Observed: Yes**
Non-Compliance Decision Matrix Level: Level 3	Non-Compliance Decision Matrix Category: Category B
Inspector Name(s): Neil Bailey, Dave Hebert	CPIX: 0 to 1 = Low
Audit:	Total Non-Compliance(s): 1

Regulated Party:
CHIEFTAIN METALS INC.

Regulated Party Contact(s):
Keith Boyle

Legal Address:
Chieftain Metals Inc. c/o Keith Boyle P.Eng., Chief Operating Officer, 2 Bloor Street W, Suite 2510, Toronto ON, M5W 3E2

Phone No: (604)836-7559	Fax No: (416)479-5420

Contact Email: boyle.mining@outlook.com

Location Description or Site Address:
Tulsequah Chief Mine Site mine located approximately 100 kilometers south of Atlin, BC and 64 kilometers northeast of Juneau, Alaska on the east bank of Tulsequah River in northwest British Columbia.

Latitude: 58.71666 N	Longitude: 133.5833 W

Receiving Environment(s): Surfacewater

Summary

MONITORING AND REPORTING REQUIREMENTS

Inspection Period:
From: 2016-09-26 **To:** 2016-09-26

Requirement Source:
Permit

Activity: On Site | Waste Type: Effluent

Inspection Summary:

On September 26, 2016 at approximately 10:30 am Officers Bailey and Hebert along with Diane Howe of the Ministry of Energy and Mines (MEM), Doug Flynn (MEM), Rory Cumming (MEM) and Trevor Williams, Land Guardian for the Taku River Tlingit (TRT) First Nation, conducted a planned inspection of Chieftain Metals Inc.'s Tulsequah Chief mine facility to verify compliance with its effluent discharge permit 105719 (Permit) under the Environmental management Act (EMA).

The Permit was issued on April 27, 2012 and most recently amended on September 12, 2016.

The following non-compliance was noted during this inspection:
- A non-compliance with section 2.1 - Bypasses as approval for the bypass of the water treatment plant has not been given and the discharge does not meet the conditions specified in Section 3.6 for an approved bypass of neutral pH water.

A acute toxicity (Rainbow Trout 96hr LC50) sample was taken from the exfiltration pond outflow (EMS ID E304170). The effluent was found to be acutely toxic, with a 96 hr LC50 estimated to be less than 6.25 percent (v/v).

This non-compliance poses a potential moderate, temporary impact to the environment, and has been assessed as a Level 3 on the Levels of Escalating Environmental, Human Health or Safety Impacts on the Non-compliance Decision Matrix. The Category of Likelihood of Compliance was assessed as Category B - as indications of future and ongoing compliance are uncertain.

As a result of the above noted non-compliance and the potential for a moderate, temporary impact to the environment, this Inspection Record is being referred to the COS for investigation.

Response:
Investigation

ACTIONS REQUIRED BY REGULATED PARTY:

ADDITIONAL COMMENTS:

Compliance History:

Advisory issued October 15, 2015 for an unauthorized bypass of the authorized works (IR# 23226).

Advisory issued January 16, 2013 requiring permittee to follow monitoring requirements laid out in the Discharge and Receiving Environment Authorization Amendment - specifically the weekly metals sampling required at W10 and W32 (IR# 7795).

Notice of non-compliance issued December 6, 2012 for sludge pond seep (IR# 7973).

Warning issued July 24, 2012 as Written Approval for the bypass of the water treatment plant was not obtained and the discharge did not meet the conditions specified in Section 3.6. As a result, Chieftain Metals Inc. was in violation of Section 2.1 ___Bypasses___ of Permit 105719 (IR# 3204).

Advisory issued May 11, 2012 for accidental release of mine water (IR# 1991).

Compliance Summary	In	Out	N/A	N/D
Operations	0	1	0	0
Reporting	1	0	0	0
Monitoring	0	0	1	1

Inspection Details

Requirement Type: Monitoring

Requirement Description:

Section 1.1.3 Interim Acid Water Treatment Plant (IAWTP) discharge characteristics:

Maximum allowable concentration in any grab sample
0.5 mg/L for Aluminum(dissolved),
0.05 mg/L for Arsenic(dissolved), Copper(dissolved) and Lead(dissolved)
0.2 mg/L for Zinc(dissolved)
30 mg/L for TSS, 6.0-9.5 pH units
50 Percent Survival in 100 Percent Concentration, Minimum - Rainbow Trout 96 hr Acute Lethality, Single Concentration

These limits apply to treated effluent discharge from the IAWTP and the Neutral pH Mine Water (NMW).

Details/Findings:

The IAWTP has been shut down since June 22, 2012. There was no discharge of treated mine effluent from the plant at the time of the inspection.

Compliance: Not Applicable

Requirement Type: Operations

Requirement Description:

Section 2.1 Bypasses

Any bypass of the authorized works is prohibited unless the approval of the Director is obtained and confirmed in writing.

Details/Findings:

The authorized works include, but are not limited to, a water collection and conveyance system, pumps, an acid water treatment plant which includes a neutralization chamber, rapid mix tank, flocculent tank, inclined plate-type separator/thickener, filters and holding tanks, a discharge line, outfall to the Tulsequah River, and related appurtenances as listed in section 1.1.5.

Approval for the bypass of the water treatment plant has not been given and the discharge does not meet the conditions specified in Section 3.6 approving a bypass for neutral pH water. As a result, Chieftain Metals Inc. is in non-compliance with Section 2.1 Bypasses.

A acute toxicity (Rainbow Trout 96hr LC50) sample was taken from the exfiltration pond outflow (EMS ID E304170). The effluent was found to be acutely toxic, with a 96 hr LC50 estimated to be less than 6.25 percent (v/v).

Compliance: Out

Requirement Type: Monitoring

Requirement Description:

4.1 Discharge and Receiving Environment Water Monitoring Program

The Permittee must undertake the following meteorological, hydrometric and water quality measurements, samples and analyses:

Location	Frequency
Shazah Camp	April, August and October - download dataloggers; replenish glycol
Chasm Creek and Creek	April or May, August and October _ download dataloggers Shazah (including barologger), record staff gauge reading; take manual flow measurements
NMW Discharge E277509	April/May/August/October: Field parameters, flow, Discharge general chemistry total and dissolved metals
SE-2	April/May/August/October: total and dissolved metals, general chemistry
P-07-03 MW11-3 and MW11-5 to MW11-7	Download datalogger and record water levels at least once per year
MW11-9 to -10	Record water levels at least once per year
SP11-01 to -03 E287309 E287310 E287311	April/May/August/October - water levels; April and October: groundwater field parameters, dissolved metals, general chemistry
W10 -E272544	April/May/August/October: field parameters, total and dissolved metals, general chemistry
W32 E272546	April/May/August/October (in duplicate): field parameters total and dissolved metals, general chemistry
W51 E272547	April/May/August/October: field parameters, total and dissolved metals,
Borrow Pit	April, measure Dissolved Oxygen if ice cover present

Taku River downstream of the Tulsequah River confluence	Once per year in October: field parameters, total and dissolved metals, general chemistry

Details/Findings:

Section 4 - Monitoring Requirements of Permit 105719 was amended on September 12, 2016. Compliance with this requirement was not determined as part of this inspection.

Compliance: Not Determined

Requirement Type: Reporting

Requirement Description:

5.7 Annual Report

The Permittee shall submit an annual report by March 31st of each year, with the first report submitted on March 31, 2013.

Details/Findings:

The 2015 Annual Monitoring Report was submitted on March 30, 2016.

Compliance: In

Were the following collected during inspection:

Samples? ☐ Photos? ☑	EMS Number

Other (please specify)

Is the Inspection related to an EA Project? ☐	EA Project Certificate Number:

INSPECTION CONDUCTED BY:

Signature	*Date Signed*
Neil Bailey	2016-10-24

ENCLOSURE(S) TO REGULATED PARTY & DESCRIPTION:

2016-09-26 Tulsequah Chief Photo Log

CVIS Archives

REGULATORY CONSIDERATIONS:

DISCLAIMER:

Please note that sections of the permit, regulation or code of practice referenced in this inspection record are for guidance and are not the official version. Please refer to the original permit, regulation or code of practice.

To see the most up to date version of regulations and codes of practices please visit: http://www.bclaws.ca/

If you require a copy of the original permit, please contact the inspector noted on this inspection record or visit: http://www2.gov.bc.ca/gov/topic.page?id=DF89089126D042FD96DF5D8C1D8B1E41&title=Publicly%20Viewable%20Authorizations

It is also important to note that this inspection record does not necessarily reflect each requirement or condition of the authorization therefore compliance is noted only for the requirements or conditions listed in the inspection record.

Ministry of Environment	**Skeena Region** Environmental Protection Division	Mailing Address: Bag 5000, 3726 Alfred St Smithers, BC V0J 2N0	Phone: (250) 847-7260 Fax: (250) 847-7591 Website: http://www.gov.bc.ca/env

Eichenberger, Kathy MEM:EX

From: Eichenberger, Kathy MEM:EX
Sent: Monday, May 1, 2017 8:39 AM
To: 'daniella@blackloonmetals.com'
Subject: FW: Tulsequah Chief - Verbal Technical Briefing
Attachments: EMA Auth105719 signed 2012-04-27.pdf; 2016-09-12 monitoring amendment.pdf

Hi Daniella,
This should clarify which permits are currently in force.
Regards,
Kathy

From: Hill, Douglas J ENV:EX
Sent: Monday, May 1, 2017 8:36 AM
To: Eichenberger, Kathy MEM:EX
Subject: RE: Tulsequah Chief - Verbal Technical Briefing

Kathy,

The attached documents are the currently in force permit requirements.

The history of permit amendments is as follows:
2012-04-03 permit issued
2012-04-27 permit amended
2012-07-24 monitoring amended
2012-08-07 monitoring amended
2013-08-12 risk assessment required
2014-06-12 monitoring amended
2016-09-12 monitoring amended

The highlighted jobs represent the currently in effect permit and monitoring requirements, with other documents superceded (or completed in the case of the risk assessment). I have made all of the above documents publicly available so the parties can access them and see the history.

doug

From: Eichenberger, Kathy MEM:EX
Sent: Tuesday, April 25, 2017 2:07 PM
To: Hill, Douglas J ENV:EX
Subject: FW: Tulsequah Chief - Verbal Technical Briefing

I went fishing but got skunked. Could only find the April 2012 amendment.
Can you help?
Thanks
Kathy

From: Daniella Dimitrov [s.22]
Sent: Tuesday, April 25, 2017 1:55 PM
To: Eichenberger, Kathy MEM:EX

Cc: 'Shane Uren'; 'daniella@blackloonmetals.com'
Subject: Re: Tulsequah Chief - Verbal Technical Briefing

Hello Kathy,

Thank you very much for this. We were not aware of the Sep 2016 amendment.

We do have in our possession this Aug 2012 amendment which also refers to a July 2012 amendment which we do not have. We wanted to make you aware of the August amendment and inquire as to whether we can obtain the July 2012 amendment to which the August letter refers.

Thanks,
Daniella

Daniella Dimitrov s.22 416-317-7776

From: "Eichenberger, Kathy MEM:EX" <Kathy.Eichenberger@gov.bc.ca>
To: 'Daniella Dimitrov' s.22
Cc: 'Shane Uren' <shaneu@greenwoodenvironmental.ca>; '"daniella@blackloonmetals.com"' <daniella@blackloonmetals.com>
Sent: Monday, April 24, 2017 7:10 PM
Subject: RE: Tulsequah Chief - Verbal Technical Briefing

Hi Daniella,
Every week end is a nice week end!
I've contacted the technical team and am waiting for a response for dates and times.
Attached is the EMA permit and amendment. I'm still waiting for the Mines act permit- to follow shortly.
Regards
Kathy

Kathy Eichenberger, P.Eng.
Executive Director, Strategic Initiatives
Mines and Mineral Resources Division
Ministry of Energy and Mines
Office: 250 953-3368
Cell: 250 886-1253

From: Daniella Dimitrov s.22
Sent: Monday, April 24, 2017 1:39 PM
To: Eichenberger, Kathy MEM:EX
Cc: Shane Uren; Daniella Dimitrov; daniella@blackloonmetals.com
Subject: Tulsequah Chief - Verbal Technical Briefing

Hello Kathy,

I hope you had an enjoyable weekend. It was a wonderful sunny day here yesterday and it was fantastic to get some fresh air and sun.

I am following up on our call of last week. We appreciate the opportunity to have a pre-call with the technical team from the two ministries along with the consultants from SLR to obtain the verbal technical briefing on the conclusions and recommendations of the ERA noted in the previous communications in order to allow for productive preparation for the May 3 meeting.

BRITISH COLUMBIA
The Best Place on Earth

April 27, 2012 Authorization Number: 105719

REGISTERED MAIL

Chieftain Metals Inc.
2200 - 1055 West Hastings St.
Vancouver BC V6E 2E9

Dear Permittee:

Enclosed is Amended Permit 105719 issued under the provisions of the *Environmental Management Act*. Your attention is respectfully directed to the terms and conditions outlined in the permit. An annual fee will be determined according to the Permit Fees Regulation.

This permit does not authorize entry upon, crossing over, or use for any purpose of private or Crown lands or works, unless and except as authorized by the owner of such lands or works. The responsibility for obtaining such authority rests with the permittee. This permit is issued pursuant to the provisions of the *Environmental Management Act* to ensure compliance with Section 120(3) of that statute, which makes it an offence to discharge waste, from a prescribed industry or activity, without proper authorization. It is also the responsibility of the permittee to ensure that all activities conducted under this authorization are carried out with regard to the rights of third parties, and comply with other applicable legislation that may be in force.

This decision may be appealed to the Environmental Appeal Board in accordance with Part 8 of the *Environmental Management Act*. An appeal must be delivered within 30 days from the date that notice of this decision is given. For further information, please contact the Environmental Appeal Board at (250) 387-3464.

Administration of this permit will be carried out by staff from the Northern Region - Skeena. Plans, data and reports pertinent to the permit are to be submitted to the Regional Manager, Environmental Protection, at Ministry of Environment, Regional Operations, Northern Region - Skeena, Bag 5000, Smithers, BC V0J 2N0.

Yours truly,

M. Love

Mark P. Love P.Ag.
for Director, *Environmental Management Act*
Northern Region - Skeena

Ministry of Environment
Environmental Protection Division
Bag 5000
Smithers, BC V0J 2N0
Northern Region - Skeena
Telephone: (250) 847-7260
Facsimile: (250) 847-7591

Enclosure

cc: Taku River Tlingit First Nation
Ministry of Energy and Mines, Smithers
Environment Canada

BRITISH COLUMBIA
The Best Place on Earth

MINISTRY OF ENVIRONMENT

PERMIT

105719

Under the Provisions of the Environmental Management Act

Chieftain Metals Inc.

Unit 118, 1515 Broadway St
Port Coquitlam BC V3C 6M2

is authorized to discharge site runoff and effluent from the Tulsequah Chief Mine Site in the Tulsequah River Valley, British Columbia, subject to the conditions listed below. Contravention of any of these conditions is a violation of the *Environmental Management Act* and may result in prosecution.

1. AUTHORIZED DISCHARGES

1.1. Interim Acid Water Treatment Plant

This section applies to the discharge of treated effluent from an interim acid water treatment plant. The site reference number for this discharge is E287049.

1.1.1 The maximum authorized rate of discharge is 2640 m^3/day. The average rate of discharge is 1200 m^3/day.

1.1.2 The authorized discharge period is continuous.

1.1.3 The characteristics of the discharge shall not exceed:

Date issued: April 3, 2012
Date amended: April 10, 2012
(most recent)

M. Love

Mark P. Love P.Ag.
for Director, *Environmental Management Act*
Northern Region - Skeena

Parameter	Limit*
Aluminum$_{(dissolved)}$	**0.5 mg/L**
Arsenic$_{(dissolved)}$	**0.05 mg/L**
Copper$_{(dissolved)}$	**0.05 mg/L**
Lead$_{(dissolved)}$	**0.05 mg/L**
Zinc$_{(dissolved)}$	**0.2 mg/L**
Total Suspended Solids	**30.0 mg/L**
pH	**6.0 to 9.5 pH units**
Rainbow Trout 96 hr Acute Lethality, Single Concentration	**50% Survival in 100% Concentration, Minimum**

*Maximum allowable concentration in any grab sample

1.1.4 The sources of effluent include:

- Mine drainage from the 5200, 5400 and 5900 level portals
- Site runoff, including drainage from the HPAG/OPAG facilities once waste rock relocation has commenced.

1.1.5 The authorized works include, but are not limited to, a water collection and conveyance system, pumps, an acid water treatment plant which includes a neutralization chamber, rapid mix tank, flocculant tank, inclined plate-type separator/thickener, filters and holding tanks, a discharge line, outfall to the Tulsequah River, and related appurtenances approximately located as shown on Site Plan A.

1.1.6 The location from which the discharge originates is on mineral tenures 513812 and 513813.

1.1.7 The location of the point of discharge is approximately 58° 43' 33" N 133° 35' 53" W.

1.2. Interim Acid Water Treatment Plant Sludge Storage Pond

This section applies to the discharge of effluent to the ground from the treatment plant sludge storage pond. The site reference number for this discharge is E272523.

Date issued: April 3, 2012
Date amended: April 10, 2012
(most recent)

M. Love

Mark P. Love P.Ag.
for Director, *Environmental Management Act*
Northern Region - Skeena

1.2.1 The maximum authorized rate of discharge of effluent to the ground from exfiltration is indeterminate. The average rate of discharge of water treatment plant sludge to the pond is 2000 m^3/year (normal plant operations with 5% solids sludge quality).

1.2.2 The characteristics of the effluent discharge shall be typical of filtrate from stable high density water treatment plant sludge.

1.2.3 The authorized works include an exfiltration storage pond that is lined with a filter cloth, adjacent to the airstrip, and related appurtenances.

1.2.4 The location from which the discharge originates is on mineral tenures 513812 and 513813.

1.2.5 The location of the point of discharge is approximately 58° 44' 4" N, 133° 36' 6" W.

2. GENERAL REQUIREMENTS

2.1. Bypasses

Any bypass of the authorized works is prohibited unless the approval of the Director is obtained and confirmed in writing.

2.2. Process Modifications

The Director shall be notified prior to implementing changes to any process that may adversely affect the quality and/or quantity of the discharge. Despite notification under this section, permitted levels must not be exceeded.

2.3. Maintenance of Works and Emergency Procedures

The authorized works must be inspected regularly and maintained in good working order. In the event of an emergency or condition beyond the control of the Permittee which prevents effective operation of the authorized works or leads to an unauthorized discharge, the Permittee must take appropriate remedial action and notify the Director immediately. The Director may reduce or suspend operations to protect the environment until the authorized works have been restored, and/or corrective steps taken to prevent unauthorized discharges.

Date issued: April 3, 2012
Date amended: April 10, 2012
(most recent)

M. Love

Mark P. Love P.Ag.
for Director, *Environmental Management Act*
Northern Region - Skeena

2.4. Construction of Water Management and Pollution Control Works

The water management and pollution control works, including ditches, sediment control works, and ponds shall be designed, constructed, maintained and modified (as necessary) by a qualified professional who is knowledgeable in water management and pond construction/maintenance techniques. Ditches and structures shall be armoured or designed to prevent erosion of sediment into the environment / water course.

2.5. Construction of Treatment Plant Sludge Storage Pond

The treatment plant sludge pond shall be designed, constructed, maintained and modified (as necessary) by a qualified professional who is knowledgeable in mine water treatment plant sludge management. The works shall be located at least one metre above the high water table, 30 m from the nearest water body and constructed in a manner that prevents the escape of sludge.

2.6. Other Agency Requirements

This permit does not relieve the Permittee from complying with requirements of federal, provincial, regional district or municipal authorities.

2.7. Transfer of Authorization

A transfer of a permit is without effect unless the Director has consented in writing to the transfer.

3. OPERATIONAL REQUIREMENTS

3.1. Operating Plans and Procedures

Detailed operating plans for the water treatment plant and for sludge management shall be completed and retained on site for inspection. The operating plan shall be prepared by a qualified professional who is has expertise in mine water treatment systems. The operating plan shall include but not be limited to: the proper operation and maintenance of the facilities, emergency procedures (including procedures that should be enacted during and after Jokulhlaup events), facility monitoring, operator training requirements and sludge handling.

Date issued: April 3, 2012
Date amended: April 10, 2012
(most recent)

M. Love

Mark P. Love P.Ag.
for Director, *Environmental Management Act*
Northern Region - Skeena

3.2. Flow Measurement

Provide and maintain a suitable flow measuring device and record daily the effluent volume discharged over a 24-hour period to the outfall.

3.3. Sludge Storage Pond

The pond must be operated such that:

- There is no overflow from the ponds to the surrounding environment,
- Surface drainage is diverted away from the ponds,
- The sludge is handled in accordance with the sludge management plan required under section 3.1.

3.4. Sludge Pond Quantity

Provide and maintain suitable measuring devices and record the sludge volume discharged on a monthly basis, in cubic metres per month.

3.5. Sludge Pond Quality

The Permittee shall undertake a sludge characterization program that is to the satisfaction of the Director, Environmental Protection. The characterization program shall be submitted to the Director within 30 days of issuance of the permit. The Permittee monitoring requirements may be extended or altered by the Director based on results of the monitoring program as well as any other data obtained by Ministry of Environment – Environmental Protection in connection with this site.

3.6. Neutral pH Water Diversion from the Underground

3.6.1 Uncontaminated groundwater from underground drill holes with characteristics better than or equal to that specified in section 1.1.3, may bypass the treatment plant and be diverted to Portal Creek.

3.6.2 Should water quality monitoring indicate that limits in section 1.1.3 are exceeded; the flows must be directed to the water treatment system. The diversion may recommence once there are three consecutive water quality sampling results below limits specified in section 1.1.3.

Date issued: April 3, 2012
Date amended: April 10, 2012
(most recent)

M. Love

Mark P. Love P.Ag.
for Director, *Environmental Management Act*
Northern Region - Skeena

3.7. Groundwater Monitoring

The Permittee shall install groundwater wells and monitor groundwater quality in the vicinity of the sludge disposal area. The well locations and monitoring frequency are subject to approval by the Director. The Permittee monitoring requirements may be extended or altered by the Director based on results of the monitoring program as well as any other data obtained by Ministry of Environment – Environmental Protection in connection with this site.

3.8. Groundwater Quality

In the event that measured groundwater quality in the vicinity of the sludge ponds exceed standards in Schedule 6 of the Contaminated Sites Regulation and in consideration of the monitoring results established for a background groundwater wells, the Director may require the submission of an impact assessment report and/or the implementation of mitigation measures by the Permittee.

4. MONITORING REQUIREMENTS

4.1. Discharge and Receiving Environment Water Monitoring Program

The Permittee shall undertake the following water quality and quantity sampling and analyses:

Location	*Site I.D.*	*Parameter*	*Frequency*
Neutral pH Mine Water	**E277509**	**Field: pH, Conductivity, Turbidity, Temperature,**	**Daily**
		Lab: Total and Dissolved Metals (ICP/ICPMS) including Mercury*	**Weekly for first 5 weeks, then monthly**
		Lab: pH, Conductivity, Turbidity, Total Suspended Solids, Hardness, Alkalinity	**Monthly**
		Flow	**Continuous Data-logger[1] (hourly sampling interval)**
		Toxicity: Rainbow Trout 96 hr LC 50	**Monthly for three months (first sample within 24 hours of commencement of discharge), then quarterly.**

Date issued: April 3, 2012
Date amended: April 10, 2012
(most recent)

M. Love

Mark P. Love P.Ag.
for Director, *Environmental Management Act*
Northern Region - Skeena

Location	*Site I.D.*	*Parameter*	*Frequency*
Water Treatment Plant Discharge	**E272507**	**Field: pH, Conductivity, Turbidity, Temperature,**	**Daily**
		Lab: Total and Dissolved Metals (ICP/ICPMS) including Mercury*	**Weekly for first 5 weeks, then monthly**
		Lab: pH, Conductivity, Turbidity, Total Suspended Solids, Hardness, Alkalinity	**Monthly**
		Flow	**Continuous Data-logger (hourly sampling interval)[1]**
		Toxicity:	**Monthly for three months (first sample within 24 hours of commencement of discharge), then quarterly.**
		Rainbow Trout 96 hr LC 50	
		***Ceriodaphnia dubia* reproduction and survival test** (Reference Method EPS 1/RM/21)	**Annually**
		Rainbow Trout (Oncorhynchus mykiss) Embryo development Test (Reference Method EPS 1/RM/28)	**Annually**
		Algal growth inhibition test using Pseudokirchneriella subcapitata (Reference Method EPS 1/RM/25)	**Annually**
		Macrophyte growth inhibition test using Lemna minor (Reference Method EPS 1/RM/37)	**Annually**
Tulsequah River Upstream Mine Site (W10)	**E272544**	**Total and Dissolved Metals (ICP/ICPMS) including Mercury*; pH, Conductivity, Turbidity, Total Suspended Solids, Hardness, Alkalinity**	**Monthly[2]**
Tulsequah River IDZ (W46)	**E272548**	**Total and Dissolved Metals (ICP/ICPMS) including Mercury*; pH, Conductivity, Turbidity, Total Suspended Solids, Hardness, Alkalinity**	**Monthly[2]**
Tulsequah River Near Field Downstream (W51)	**E272547**	**Total and Dissolved Metals (ICP/ICPMS) including Mercury*; pH, Conductivity, Turbidity, Total Suspended Solids, Hardness, Alkalinity**	**Quarterly[2]**
Tulsequah River Far Field Downstream (W32)	**E272546**	**Total and Dissolved Metals (ICP/ICPMS) including Mercury*; pH, Conductivity, Turbidity, Total Suspended Solids, Hardness, Alkalinity**	**Monthly[2]**
Sludge Pond Monitoring Wells (SP1-3)	**E287309 E287310 E287311**	**Dissolved Metals (ICP/ICPMS) including Mercury*; pH, Conductivity, Turbidity, Hardness, Alkalinity**	**Quarterly**

*Mercury sampling will be monthly for 12 months. The need for continued monitoring will be evaluated based on sample results.
[1]Hourly data must be retained on site, only daily volumes will be reported.
[2] Weather and freezing conditions may prevent the collection of a monthly sample. The Permittee must notify the Regional Manager in the event that samples cannot be collected.

Date issued: April 3, 2012
Date amended: April 10, 2012
(most recent)

M. Love

Mark P. Love P.Ag.
for Director, *Environmental Management Act*
Northern Region - Skeena

4.2. Monitoring Procedures

4.2.1 Sampling Procedures

Sampling is to be carried out in accordance with the procedures described in the most recent edition of the "British Columbia Field Sampling Manual for Continuous Monitoring Plus the Collection of Air, Air-Emission, Water, Wastewater, Soil, Sediment, and Biological Samples", or by suitable alternative procedures as authorized by the Director.

A copy of the above manual may be purchased from the Queen's Printer Publications Centre, P. O. Box 9452, Stn. Prov. Gov't. Victoria, British Columbia, V8W 9V7 (1-800-663-6105 or 250-387-6409). A copy of the manual is also available for inspection at all Environmental Protection offices.

4.2.2 Analyses

Water analyses and toxicity testing procedures are to be carried out in accordance with procedures described in the most recent edition of the "British Columbia Laboratory Methods Manual for the Analysis of Water, Wastewater, Sediment, Biological Materials and Discrete Ambient Air", or by suitable alternative procedures as authorized by the Director.

A copy of the above manual may be purchased from the Queen's Printer Publications Centre.

4.2.3 Quality Assurance

All data analysis requirements shall be conducted by a laboratory acceptable to the Director. At the request of the Director, the Permittee shall provide the laboratory quality assurance data, associated field blanks and duplicate analysis results along with the submission of data required under Section 4.1 of the approval.

5. REPORTING REQUIREMENTS

5.1. Reporting of Monitoring Results

Field and lab monitoring results, including a summary of non-compliances and corrective actions taken, shall be submitted to the Regional Manager, Environmental Protection or designate within 30 days of the end of the

month in which the monitoring occurred. Submissions are to be in tabulated and/or graphical formats approved by the Director, and will include interpretation comments.

5.2. Non-Compliance Reporting

The Permittee shall immediately notify the Regional Manager, Environmental Protection, or designate of any non-compliance with the requirements of this permit and take appropriate remedial action. Written confirmation of all non-compliance events, including available test results, is required within 24 hours of the original notification unless otherwise directed by the Regional Manager, Environmental Protection.

5.3. Non-Compliance Follow-up

For any non-compliance with the requirements of this permit, the Permittee shall submit to the Regional Manager, Environmental Protection, a written report within 30 days of the non-compliance occurrence. The report shall include, but not necessarily be limited to, the following:

- All relevant test results related to the non-compliance;
- An explanation of the most probable cause(s) of the non-compliance; and
- Remedial action planned and/or taken to prevent similar non-compliance(s) in the future.

5.4. Non-Compliance Reporting Of Toxicity

Immediately notify the Regional Manager, Environmental Protection, of any toxicity failure. For the purpose of this section, a sample is considered to have failed if more than 50% of the test fish die in 100% effluent solution.

5.5. Monitoring following an Acute Toxicity Non-Compliance.

For the discharge described in section 1.1, rainbow trout toxicity testing must be increased from once per quarter to once per week if a sample of effluent fails the rainbow toxicity test. Samples must continue to be collected and tested at a frequency of once per week until three consecutive tests results pass, at which time the frequency shall revert back to quarterly.

Date issued: April 3, 2012
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for Director, *Environmental Management Act*
Northern Region - Skeena

5.6. Spill Reporting

All spills to the environment (as defined in the Spill Reporting Regulation) must be reported immediately in accordance with the Spill Reporting Regulation. Notification shall be via the Provincial Emergency Program at 1-800-663-3456.

5.7. Annual Report

The Permittee shall submit an annual report by March 31st of each year, with the first report submitted on March 31, 2013. The annual report shall include, but not limited to:

- summaries of the operation of the treatment facilities and other pollution control works,
- the discharge quality and quantity,
- sludge quality and quantity,
- sampling and analytical requirements,
- analysis and interpretation of trends in environmental monitoring data, and
- recommendations for improvements to water management and pollution control works and monitoring programs.

The format of the annual report shall be suitable for review by the public and copies shall be made available for the Ministry of Energy and Mines, and for the Taku River Tlingit First Nation.

6. ENVIRONMENTAL EFFECTS MONITORING

6.1. Environmental Effects Monitoring Program Objectives

The design of the Environmental Effects Monitoring program shall be such that it addresses, at a minimum, the following:

Provision of detailed and reliable characterization of the baseline conditions in the background and potentially affected aquatic environment;

Systematic collection of data for biological parameters sufficient to detect mine-related changes in the aquatic environment;

Analysis on at least an annual basis of the monitoring data and a determination of whether or not mine-related changes are occurring;

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Northern Region - Skeena

Verification of whether the original impact predictions are accurate; and

Utilization of the EEM findings to guide the development and implementation of effective adaptive management plans for addressing unacceptable mine related impacts to the aquatic environment.

6.2. Environmental Effects Monitoring Program Implementation

The Permittee shall implement the EEM Program as approved by the Director, Environmental Protection and shall submit results of the program to the Regional Manager, Environmental Protection, as a component of the Annual Report. Based on the results of this monitoring program, the permittee monitoring requirements may be extended or altered by the Director.

7. ENVIRONMENTAL IMPACT

Environmental Protection Division personnel, as a part of the routine permit inspection procedure, will carry out inspections of the discharge. Based on these inspections and any other information available to the Director on the effect of the discharge on the receiving environment, the Permittee may be required to undertake additional monitoring, additional studies and/or install additional pollution control works.

Date issued: April 3, 2012
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(most recent)

M. Love

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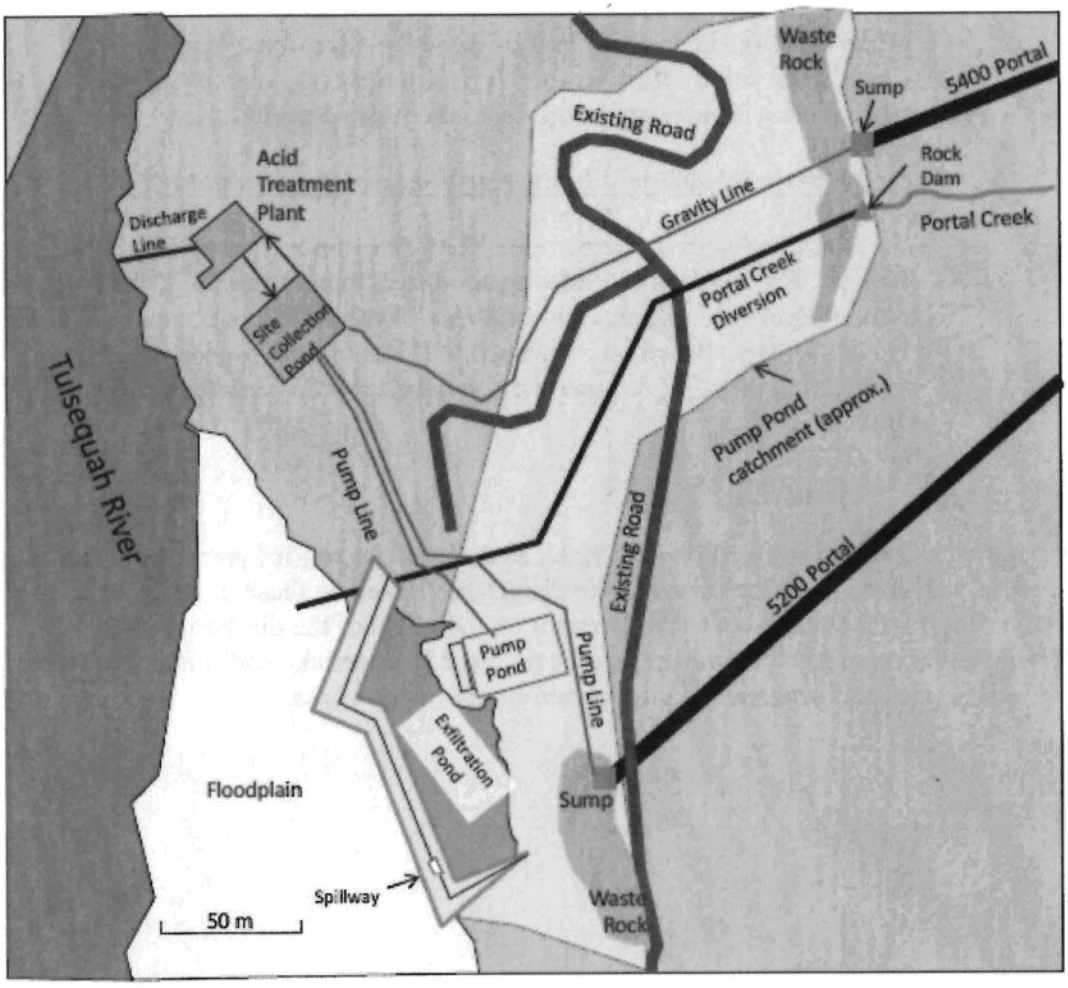
for Director, *Environmental Management Act*
Northern Region - Skeena

SITE PLAN A



Date issued: April 3, 2012
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M. Love

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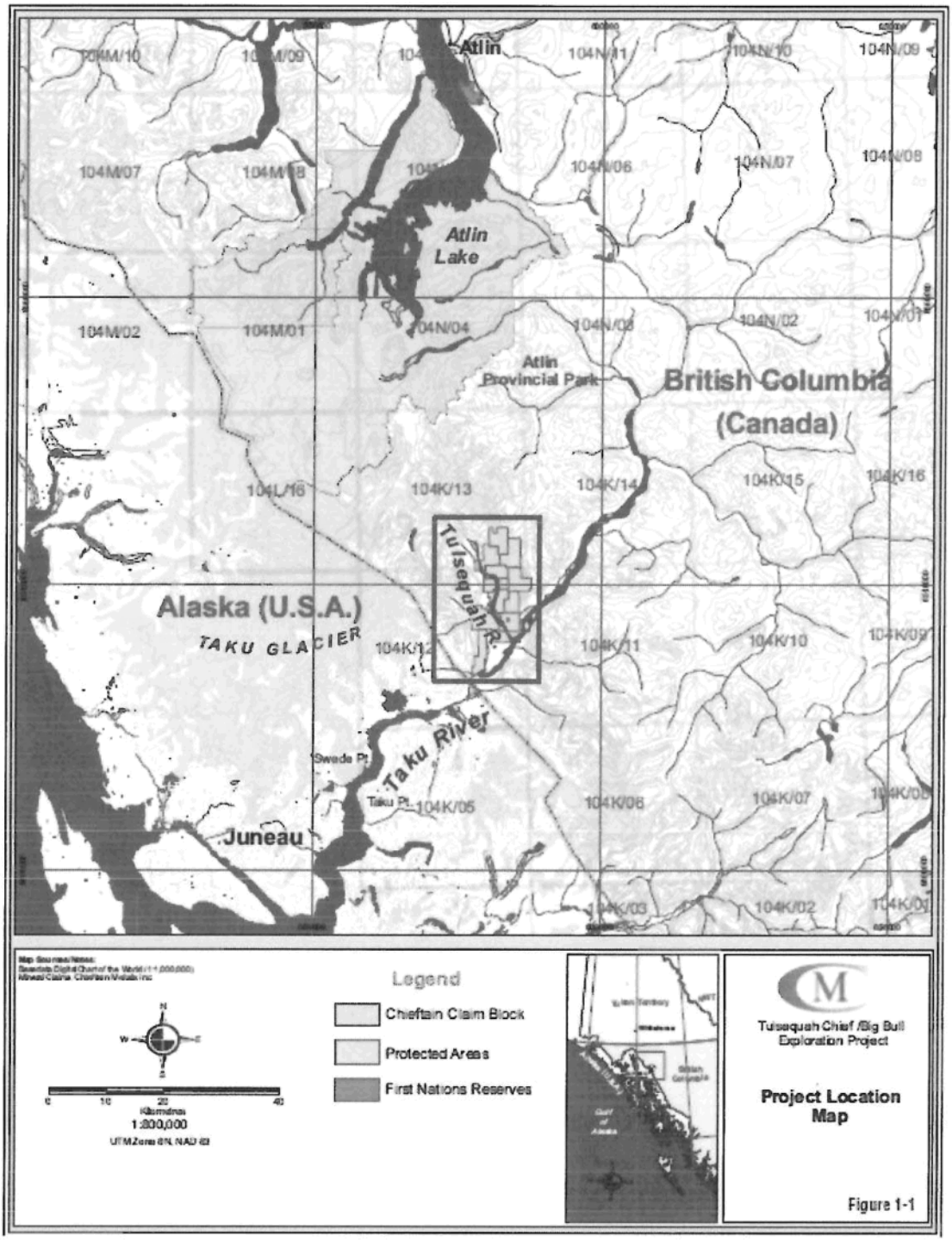
for Director, *Environmental Management Act*
Northern Region - Skeena

Permit Number: 105719



Date issued: April 3, 2012
Date amended: April 10, 2012
(most recent)

M. Love

Mark P. Love P.Ag.
for Director, *Environmental Management Act*
Northern Region - Skeena

Permit Number: 105719

BRITISH COLUMBIA

September 12, 2016

Tracking Number: 350102
Authorization Number: 105719

REGISTERED MAIL

Chieftain Metals Inc.
c/o Lawdell Corporate Services Limited
1600 - 925 West Georgia Street
Vancouver BC V6C 3L2

Dear Permittee:

Enclosed are amendments to Section 4 -Monitoring Requirements of Permit 105719 issued under the provisions of the Environmental Management Act. Your attention is respectfully directed to the amended monitoring requirements outlined in the attachments to this letter. The amended Section 4 replaces previous monitoring requirements. All other terms and conditions of Permit 105719 remain in force and effect.

Failure to comply with the requirements set out in your Permit, including the attached monitoring requirements, is an offence under the *Environmental Management Act*.

It is also the responsibility of the permittee to ensure that all activities conducted under this authorization are carried out with regard to the rights of third parties, and comply with other applicable legislation that may be in force.

This decision may be appealed to the Environmental Appeal Board in accordance with Part 8 of the Environmental Management Act. An appeal must be delivered within 30 days from the date that notice of this decision is given. For further information, please contact the Environmental Appeal Board at (250) 387-3464.

Administration of this permit will be carried out by staff from the Environmental Protection Division's Regional Operations Branch. Plans, data and reports pertinent to the permit are to be submitted by email or electronic transfer to the Director, designated Officer, or as further instructed.

Yours truly,

Environmental Protection Division
Ministry of Environment
Bag 5000
Smithers, BC V0J 2N0
Authorizations - North Region
Telephone: (250) 847-7260
Facsimile: (250) 847-7591

Douglas J. Hill, P.Eng.
for Director, *Environmental Management Act*
Mining Operations

Enclosure

cc: Environment Canada

4. MONITORING REQUIREMENTS

4.1. Discharge and Receiving Environment Water Monitoring Program

The Permittee must undertake the following meteorological, hydrometric and water quality measurements, samples and analyses:

Sampling Location	Location Description/Rationale	Frequency of Field Parameters* and Lab Analysis
Shazah Camp	Climate Data – HOBO weather station and glycol precipitation gauge	April, August and October - download dataloggers; replenish glycol
Chasm Creek and Shazah Creek	Hydrometric stations	April or May, August and October – download dataloggers (including barologger), record staff gauge reading; take manual flow measurements
NMW Discharge **E277509**	Neutral pH Mine Water Discharge from 5400 adit to Portal Creek	April/May/August/October: Field parameters, flow, general chemistry, total and dissolved metals
SE-2	Exfiltration pond spillway	April/May/August/October: total and dissolved metals, general chemistry
P-07-03, MW11-3 and MW11-5 to MW11-7	Near proposed PAG Facility	Download datalogger and record water levels at least once per year
MW11-9 to -10	Near proposed NAG Dump	Record water levels at least once per year
SP11-01 to -03 **E287309** **E287310** **E287311**	Near Lime Sludge Pit at airstrip	April/May/August/October - water levels; April and October: groundwater field parameters, dissolved metals, general chemistry
W10 **E272544**	Tulsequah River mainstem upstream of Project	April/May/August/October: field parameters , total and dissolved metals, general chemistry
W32 **E272546**	Tulsequah River mainstem downstream of Mine Site	April/May/August/October (in duplicate): field parameters, total and dissolved metals, general chemistry

Date issued: April 3, 2012
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Douglas J. Hill, P.Eng.
for Director, *Environmental Management Act*
Authorizations - North Region

Sampling Location	Location Description/Rationale	Frequency of Field Parameters* and Lab Analysis
W51 **E272547**	Downstream of SE-2/NMW discharge	April/May/August/October: field parameters, total and dissolved metals,
Borrow Pit	Near culvert	April, measure Dissolved Oxygen if ice cover present
Taku River downstream of the Tulsequah River confluence	Near WSC gauge Station 08BB005) located downstream of the Tulsequah River confluence near the Canada US Border	Once per year in October: field parameters, total and dissolved metals, general chemistry

Date issued: April 3, 2012
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(most recent)

Douglas J. Hill, P.Eng.
for Director, *Environmental Management Act*
Authorizations - North Region

Analysis of water samples for field parameters, general chemistry and total and dissolved metals must be as follows:

Analysis Group	Parameter List
Field Parameters	pH
	Temperature (°C)
	Conductivity (µS/cm)
General Chemistry	Alkalinity, Total as $CaCO_3$
	Acidity as $CaCO_3$
	Hardness as $CaCO_3$
	Total Suspended Solids
	Sulphate (SO_4)

Analysis Group	Parameter List
Total & Dissolved Metals	Aluminum
	Antimony
	Arsenic
	Barium
	Cadmium
	Calcium
	Chromium
	Cobalt
	Copper
	Iron
	Lead
	Lithium
	Magnesium
	Manganese
	Molybdenum
	Nickel
	Potassium
	Selenium
	Silver
	Sodium
	Thallium
	Tin
	Titanium
	Uranium
	Vanadium
	Zinc

Table Notes:

1. Each heading represents a list of parameters that can be analyzed using a single bottle with appropriate preservative and/or sample preparation.
2. Detection Limits to meet the requirement of BC Aquatic Life Guidelines

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(most recent)

Douglas J. Hill, P.Eng.
for Director, *Environmental Management Act*
Authorizations - North Region

When the treatment plant is operating the discharge and initial dilution zone must be sampled as follows:

Location	*Site I.D.*	*Parameter*	*Frequency*
Water Treatment Plant Discharge	**E272507**	**Field: pH, Conductivity, Turbidity, Temperature,**	**Daily**
		Lab: Total and Dissolved Metals (ICP/ICPMS) including Mercury*	**Weekly for first 5 weeks, then monthly**
		Lab: pH, Conductivity, Turbidity, Total Suspended Solids, Hardness, Alkalinity	**Monthly**
		Flow	**Continuous Data-logger (hourly sampling interval)[1]**
		Toxicity:	
		Rainbow Trout 96 hr LC 50	**Monthly for three months (first sample within 24 hours of commencement of discharge), then quarterly.**
		***Ceriodaphnia dubia* reproduction and survival test** (Reference Method EPS 1/RM/21)	**Annually**
		Rainbow Trout (Oncorhynchus mykiss) Embryo development Test (Reference Method EPS 1/RM/28)	**Annually**
		Algal growth inhibition test using Pseudokirchneriella subcapitata (Reference Method EPS 1/RM/25)	**Annually**
		Macrophyte growth inhibition test using Lemna minor (Reference Method EPS 1/RM/37)	**Annually**
Tulsequah River IDZ (W46)	**E272548**	**Total and Dissolved Metals (ICP/ICPMS) including Mercury*; pH, Conductivity, Turbidity, Total Suspended Solids, Hardness, Alkalinity**	**Monthly[2]**

*Mercury sampling will be monthly for 12 months. The need for continued monitoring will be evaluated based on sample results.
[1]Hourly data must be retained on site, only daily volumes will be reported.
[2] Weather and freezing conditions may prevent the collection of a monthly sample. The Permittee must

Date issued: April 3, 2012
Date amended: September 12, 2016
(most recent)

Douglas J. Hill, P.Eng.
for Director, *Environmental Management Act*
Authorizations - North Region

notify the Regional Manager in the event that samples cannot be collected.

4.2. Monitoring Procedures

4.2.1 Sampling Procedures

Sampling is to be carried out in accordance with the procedures described in the most recent edition of the "British Columbia Field Sampling Manual for Continuous Monitoring Plus the Collection of Air, Air-Emission, Water, Wastewater, Soil, Sediment, and Biological Samples", or by suitable alternative procedures as authorized by the Director.

A copy of the above manual may be purchased from the Queen's Printer Publications Centre, P. O. Box 9452, Stn. Prov. Gov't. Victoria, British Columbia, V8W 9V7 (1-800-663-6105 or 250-387-6409). A copy of the manual is also available for inspection at all Environmental Protection offices.

4.2.2 Analyses

Water analyses and toxicity testing procedures are to be carried out in accordance with procedures described in the most recent edition of the "British Columbia Laboratory Methods Manual for the Analysis of Water, Wastewater, Sediment, Biological Materials and Discrete Ambient Air", or by suitable alternative procedures as authorized by the Director.

A copy of the above manual may be purchased from the Queen's Printer Publications Centre.

4.2.3 Quality Assurance

Analyses of samples for parameters designated under the Environmental Data Quality Assurance Regulation must be at a laboratory registered for the designated parameter. At the request of the Director, the Permittee must provide the laboratory quality assurance data, associated field blanks and duplicate analysis results along with the submission of data required under Section 4.1 of the permit. In addition, the Permittee must participate in quality assurance audits as required under the Environmental Data Quality Assurance Regulation.

Date issued: April 3, 2012
Date amended: September 12, 2016
(most recent)

Douglas J. Hill, P.Eng.
for Director, *Environmental Management Act*
Authorizations - North Region

Eichenberger, Kathy MEM:EX

From: Eichenberger, Kathy MEM:EX
Sent: Friday, April 28, 2017 10:16 AM
To: 'DD'
Cc: 'Shane Uren'
Subject: RE: Tulsequah

Hello Daniella,
Thank you for your understanding. Once you've been able to consider the information and discussion during our meeting, we can certainly arrange follow up conversations to answer any remaining questions.
Please use this conference call number for any of your team who will participate by phone: 1-877-353-9184 participant: s.17

See you next Wednesday.
Have a great week end.
Kathy

From: DD s.22
Sent: Friday, April 28, 2017 7:00 AM
To: Eichenberger, Kathy MEM:EX
Cc: Shane Uren
Subject: Re: Tulsequah

Good morning Kathy,
Thank you very much for letting us know and for trying to arrange this pre-meeting briefing. Of course, any information that we can receive is helpful considering the situation. Based on the fact that we will not have much time to digest and discuss the information that will be provided, we may have some challenges reacting to and addressing the potential impact of the information. Nevertheless, we will work to make the meeting as productive as possible as we continue to work together towards a win-win solution. We will send a proposed agenda for the meeting ahead of the meeting.
Please also note that Gord Bogden will not be attending the meeting and Robin Junger will participate by telephone. Shane Uren and I will be there in person. At this time we have not confirmed participation by a representative from West Face, the secured creditor, and we will ensure that we update you if this changes.
I look forward to connecting next week.
Regards - Daniella

On Apr 27, 2017, at 7:37 PM, Eichenberger, Kathy MEM:EX <Kathy.Eichenberger@gov.bc.ca> wrote:

> Hi Daniella,
> Unfortunately, Ministry of Environment technical staff familiar with the study (and they are few) could not be available until the May 3rd meeting. So the plan is to provide you with a hardcopy of the summary of the study and have those staff walk you through it.
> Looking forward to the meeting and answering all your questions.
> Regards,
> Kathy
>
> ---
>
> **From:** Daniella Dimitrov s.22
> **Sent:** Thursday, April 27, 2017 7:03 AM
> **To:** Eichenberger, Kathy MEM:EX

Cc: Shane Uren; Daniella Dimitrov
Subject: Tulsequah

Good morning Kathy,

I am following up re the set up of the verbal technical briefing re the ERA to see when we can hold this call - even if members of the SRL team are not available, it would be helpful for us to speak to the technical teams of the ministries to help us understand and prepare ahead of the May 3 meeting.

Thank you - Daniella

Daniella Dimitrov s.22 416-317-7776

Eichenberger, Kathy MEM:EX

From: Eichenberger, Kathy MEM:EX
Sent: Thursday, April 27, 2017 4:38 PM
To: 'Daniella Dimitrov'
Cc: 'Shane Uren'
Subject: RE: Tulsequah

Hi Daniella,
Unfortunately, Ministry of Environment technical staff familiar with the study (and they are few) could not be available until the May 3rd meeting. So the plan is to provide you with a hardcopy of the summary of the study and have those staff walk you through it.
Looking forward to the meeting and answering all your questions.
Regards,
Kathy

From: Daniella Dimitrov s.22
Sent: Thursday, April 27, 2017 7:03 AM
To: Eichenberger, Kathy MEM:EX
Cc: Shane Uren; Daniella Dimitrov
Subject: Tulsequah

Good morning Kathy,

I am following up re the set up of the verbal technical briefing re the ERA to see when we can hold this call - even if members of the SRL team are not available, it would be helpful for us to speak to the technical teams of the ministries to help us understand and prepare ahead of the May 3 meeting.

Thank you - Daniella

Daniella Dimitrov s.22 416-317-7776

Eichenberger, Kathy MEM:EX

From: Eichenberger, Kathy MEM:EX
Sent: Monday, April 24, 2017 4:11 PM
To: 'Daniella Dimitrov'
Cc: 'Shane Uren'; 'daniella@blackloonmetals.com'
Subject: RE: Tulsequah Chief - Verbal Technical Briefing
Attachments: 2016-09-12 monitoring amendment.pdf; EMA Auth105719 signed 2012-04-27.pdf

Hi Daniella,
Every week end is a nice week end!
I've contacted the technical team and am waiting for a response for dates and times.
Attached is the EMA permit and amendment. I'm still waiting for the Mines act permit- to follow shortly.
Regards
Kathy

Kathy Eichenberger, P.Eng.
Executive Director, Strategic Initiatives
Mines and Mineral Resources Division
Ministry of Energy and Mines
Office: 250 953-3368
Cell: 250 886-1253

From: Daniella Dimitrov s.22
Sent: Monday, April 24, 2017 1:39 PM
To: Eichenberger, Kathy MEM:EX
Cc: Shane Uren; Daniella Dimitrov; daniella@blackloonmetals.com
Subject: Tulsequah Chief - Verbal Technical Briefing

Hello Kathy,

I hope you had an enjoyable weekend. It was a wonderful sunny day here yesterday and it was fantastic to get some fresh air and sun.

I am following up on our call of last week. We appreciate the opportunity to have a pre-call with the technical team from the two ministries along with the consultants from SLR to obtain the verbal technical briefing on the conclusions and recommendations of the ERA noted in the previous communications in order to allow for productive preparation for the May 3 meeting.

From Black Loon would be Shane Uren and possibly myself. Our mandate would be to listen and learn. We are available this week other than on Wednesday.

Thank you very much for assisting us to facilitate this.

Warm regards - Daniella

Daniella Dimitrov s.22 416-317-7776

BRITISH COLUMBIA

September 12, 2016

Tracking Number: 350102
Authorization Number: 105719

REGISTERED MAIL

Chieftain Metals Inc.
c/o Lawdell Corporate Services Limited
1600 - 925 West Georgia Street
Vancouver BC V6C 3L2

Dear Permittee:

Enclosed are amendments to Section 4 -Monitoring Requirements of Permit 105719 issued under the provisions of the Environmental Management Act. Your attention is respectfully directed to the amended monitoring requirements outlined in the attachments to this letter. The amended Section 4 replaces previous monitoring requirements. All other terms and conditions of Permit 105719 remain in force and effect.

Failure to comply with the requirements set out in your Permit, including the attached monitoring requirements, is an offence under the *Environmental Management Act*.

It is also the responsibility of the permittee to ensure that all activities conducted under this authorization are carried out with regard to the rights of third parties, and comply with other applicable legislation that may be in force.

This decision may be appealed to the Environmental Appeal Board in accordance with Part 8 of the Environmental Management Act. An appeal must be delivered within 30 days from the date that notice of this decision is given. For further information, please contact the Environmental Appeal Board at (250) 387-3464.

Administration of this permit will be carried out by staff from the Environmental Protection Division's Regional Operations Branch. Plans, data and reports pertinent to the permit are to be submitted by email or electronic transfer to the Director, designated Officer, or as further instructed.

Yours truly,

Environmental Protection Division
Ministry of Environment
Bag 5000
Smithers, BC V0J 2N0
Authorizations - North Region
Telephone: (250) 847-7260
Facsimile: (250) 847-7591

Douglas J. Hill, P.Eng.
for Director, *Environmental Management Act*
Mining Operations

Enclosure

cc: Environment Canada

4. MONITORING REQUIREMENTS

4.1. Discharge and Receiving Environment Water Monitoring Program

The Permittee must undertake the following meteorological, hydrometric and water quality measurements, samples and analyses:

Sampling Location	Location Description/Rationale	Frequency of Field Parameters* and Lab Analysis
Shazah Camp	Climate Data – HOBO weather station and glycol precipitation gauge	April, August and October - download dataloggers; replenish glycol
Chasm Creek and Shazah Creek	Hydrometric stations	April or May, August and October – download dataloggers (including barologger), record staff gauge reading; take manual flow measurements
NMW Discharge **E277509**	Neutral pH Mine Water Discharge from 5400 adit to Portal Creek	April/May/August/October: Field parameters, flow, general chemistry, total and dissolved metals
SE-2	Exfiltration pond spillway	April/May/August/October: total and dissolved metals, general chemistry
P-07-03, MW11-3 and MW11-5 to MW11-7	Near proposed PAG Facility	Download datalogger and record water levels at least once per year
MW11-9 to -10	Near proposed NAG Dump	Record water levels at least once per year
SP11-01 to -03 **E287309** **E287310** **E287311**	Near Lime Sludge Pit at airstrip	April/May/August/October - water levels; April and October: groundwater field parameters, dissolved metals, general chemistry
W10 **E272544**	Tulsequah River mainstem upstream of Project	April/May/August/October: field parameters , total and dissolved metals, general chemistry
W32 **E272546**	Tulsequah River mainstem downstream of Mine Site	April/May/August/October (in duplicate): field parameters, total and dissolved metals, general chemistry

Date issued: April 3, 2012
Date amended: September 12, 2016
(most recent)

Douglas J. Hill, P.Eng.
for Director, *Environmental Management Act*
Authorizations - North Region

Sampling Location	Location Description/Rationale	Frequency of Field Parameters* and Lab Analysis
W51 **E272547**	Downstream of SE-2/NMW discharge	April/May/August/October: field parameters, total and dissolved metals,
Borrow Pit	Near culvert	April, measure Dissolved Oxygen if ice cover present
Taku River downstream of the Tulsequah River confluence	Near WSC gauge Station 08BB005) located downstream of the Tulsequah River confluence near the Canada US Border	Once per year in October: field parameters, total and dissolved metals, general chemistry

Date issued: April 3, 2012
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(most recent)

Douglas J. Hill, P.Eng.
for Director, *Environmental Management Act*
Authorizations - North Region

Analysis of water samples for field parameters, general chemistry and total and dissolved metals must be as follows:

Analysis Group	Parameter List
Field Parameters	pH
	Temperature (°C)
	Conductivity (µS/cm)
General Chemistry	Alkalinity, Total as $CaCO_3$
	Acidity as $CaCO_3$
	Hardness as $CaCO_3$
	Total Suspended Solids
	Sulphate (SO_4)

Analysis Group	Parameter List
Total & Dissolved Metals	Aluminum
	Antimony
	Arsenic
	Barium
	Cadmium
	Calcium
	Chromium
	Cobalt
	Copper
	Iron
	Lead
	Lithium
	Magnesium
	Manganese
	Molybdenum
	Nickel
	Potassium
	Selenium
	Silver
	Sodium
	Thallium
	Tin
	Titanium
	Uranium
	Vanadium
	Zinc

Table Notes:

1. Each heading represents a list of parameters that can be analyzed using a single bottle with appropriate preservative and/or sample preparation.
2. Detection Limits to meet the requirement of BC Aquatic Life Guidelines

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Douglas J. Hill, P.Eng.
for Director, *Environmental Management Act*
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When the treatment plant is operating the discharge and initial dilution zone must be sampled as follows:

Location	*Site I.D.*	*Parameter*	*Frequency*
Water Treatment Plant Discharge	**E272507**	**Field: pH, Conductivity, Turbidity, Temperature,**	**Daily**
		Lab: Total and Dissolved Metals (ICP/ICPMS) including Mercury*	**Weekly for first 5 weeks, then monthly**
		Lab: pH, Conductivity, Turbidity, Total Suspended Solids, Hardness, Alkalinity	**Monthly**
		Flow	**Continuous Data-logger (hourly sampling interval)[1]**
		Toxicity:	
		Rainbow Trout 96 hr LC 50	**Monthly for three months (first sample within 24 hours of commencement of discharge), then quarterly.**
		***Ceriodaphnia dubia* reproduction and survival test** (Reference Method EPS 1/RM/21)	**Annually**
		Rainbow Trout (Oncorhynchus mykiss) Embryo development Test (Reference Method EPS 1/RM/28)	**Annually**
		Algal growth inhibition test using Pseudokirchneriella subcapitata (Reference Method EPS 1/RM/25)	**Annually**
		Macrophyte growth inhibition test using Lemna minor (Reference Method EPS 1/RM/37)	**Annually**
Tulsequah River IDZ (W46)	**E272548**	**Total and Dissolved Metals (ICP/ICPMS) including Mercury*; pH, Conductivity, Turbidity, Total Suspended Solids, Hardness, Alkalinity**	**Monthly[2]**

*Mercury sampling will be monthly for 12 months. The need for continued monitoring will be evaluated based on sample results.
[1]Hourly data must be retained on site, only daily volumes will be reported.
[2] Weather and freezing conditions may prevent the collection of a monthly sample. The Permittee must

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for Director, *Environmental Management Act*
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notify the Regional Manager in the event that samples cannot be collected.

4.2. Monitoring Procedures

4.2.1 Sampling Procedures

Sampling is to be carried out in accordance with the procedures described in the most recent edition of the "British Columbia Field Sampling Manual for Continuous Monitoring Plus the Collection of Air, Air-Emission, Water, Wastewater, Soil, Sediment, and Biological Samples", or by suitable alternative procedures as authorized by the Director.

A copy of the above manual may be purchased from the Queen's Printer Publications Centre, P. O. Box 9452, Stn. Prov. Gov't. Victoria, British Columbia, V8W 9V7 (1-800-663-6105 or 250-387-6409). A copy of the manual is also available for inspection at all Environmental Protection offices.

4.2.2 Analyses

Water analyses and toxicity testing procedures are to be carried out in accordance with procedures described in the most recent edition of the "British Columbia Laboratory Methods Manual for the Analysis of Water, Wastewater, Sediment, Biological Materials and Discrete Ambient Air", or by suitable alternative procedures as authorized by the Director.

A copy of the above manual may be purchased from the Queen's Printer Publications Centre.

4.2.3 Quality Assurance

Analyses of samples for parameters designated under the Environmental Data Quality Assurance Regulation must be at a laboratory registered for the designated parameter. At the request of the Director, the Permittee must provide the laboratory quality assurance data, associated field blanks and duplicate analysis results along with the submission of data required under Section 4.1 of the permit. In addition, the Permittee must participate in quality assurance audits as required under the Environmental Data Quality Assurance Regulation.

Date issued: April 3, 2012
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Douglas J. Hill, P.Eng.
for Director, *Environmental Management Act*
Authorizations - North Region

BRITISH COLUMBIA
The Best Place on Earth

April 27, 2012 Authorization Number: 105719

REGISTERED MAIL

Chieftain Metals Inc.
2200 - 1055 West Hastings St.
Vancouver BC V6E 2E9

Dear Permittee:

Enclosed is Amended Permit 105719 issued under the provisions of the *Environmental Management Act*. Your attention is respectfully directed to the terms and conditions outlined in the permit. An annual fee will be determined according to the Permit Fees Regulation.

This permit does not authorize entry upon, crossing over, or use for any purpose of private or Crown lands or works, unless and except as authorized by the owner of such lands or works. The responsibility for obtaining such authority rests with the permittee. This permit is issued pursuant to the provisions of the *Environmental Management Act* to ensure compliance with Section 120(3) of that statute, which makes it an offence to discharge waste, from a prescribed industry or activity, without proper authorization. It is also the responsibility of the permittee to ensure that all activities conducted under this authorization are carried out with regard to the rights of third parties, and comply with other applicable legislation that may be in force.

This decision may be appealed to the Environmental Appeal Board in accordance with Part 8 of the *Environmental Management Act*. An appeal must be delivered within 30 days from the date that notice of this decision is given. For further information, please contact the Environmental Appeal Board at (250) 387-3464.

Administration of this permit will be carried out by staff from the Northern Region - Skeena. Plans, data and reports pertinent to the permit are to be submitted to the Regional Manager, Environmental Protection, at Ministry of Environment, Regional Operations, Northern Region - Skeena, Bag 5000, Smithers, BC V0J 2N0.

Yours truly,

M. Love

Mark P. Love P.Ag.
for Director, *Environmental Management Act*
Northern Region - Skeena

Ministry of Environment | Environmental Protection Division | Bag 5000 Smithers, BC V0J 2N0 | Northern Region - Skeena Telephone: (250) 847-7260 Facsimile: (250) 847-7591

Enclosure

cc: Taku River Tlingit First Nation
Ministry of Energy and Mines, Smithers
Environment Canada

BRITISH COLUMBIA
The Best Place on Earth

MINISTRY OF ENVIRONMENT

PERMIT

105719

Under the Provisions of the Environmental Management Act

Chieftain Metals Inc.

Unit 118, 1515 Broadway St
Port Coquitlam BC V3C 6M2

is authorized to discharge site runoff and effluent from the Tulsequah Chief Mine Site in the Tulsequah River Valley, British Columbia, subject to the conditions listed below. Contravention of any of these conditions is a violation of the *Environmental Management Act* and may result in prosecution.

1. AUTHORIZED DISCHARGES

1.1. Interim Acid Water Treatment Plant

This section applies to the discharge of treated effluent from an interim acid water treatment plant. The site reference number for this discharge is E287049.

1.1.1 The maximum authorized rate of discharge is 2640 m^3/day. The average rate of discharge is 1200 m^3/day.

1.1.2 The authorized discharge period is continuous.

1.1.3 The characteristics of the discharge shall not exceed:

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for Director, *Environmental Management Act*
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Parameter	Limit*
Aluminum$_{(dissolved)}$	**0.5 mg/L**
Arsenic$_{(dissolved)}$	**0.05 mg/L**
Copper$_{(dissolved)}$	**0.05 mg/L**
Lead$_{(dissolved)}$	**0.05 mg/L**
Zinc$_{(dissolved)}$	**0.2 mg/L**
Total Suspended Solids	**30.0 mg/L**
pH	**6.0 to 9.5 pH units**
Rainbow Trout 96 hr Acute Lethality, Single Concentration	**50% Survival in 100% Concentration, Minimum**

*Maximum allowable concentration in any grab sample

1.1.4 The sources of effluent include:

- Mine drainage from the 5200, 5400 and 5900 level portals
- Site runoff, including drainage from the HPAG/OPAG facilities once waste rock relocation has commenced.

1.1.5 The authorized works include, but are not limited to, a water collection and conveyance system, pumps, an acid water treatment plant which includes a neutralization chamber, rapid mix tank, flocculant tank, inclined plate-type separator/thickener, filters and holding tanks, a discharge line, outfall to the Tulsequah River, and related appurtenances approximately located as shown on Site Plan A.

1.1.6 The location from which the discharge originates is on mineral tenures 513812 and 513813.

1.1.7 The location of the point of discharge is approximately 58° 43' 33" N 133° 35' 53" W.

1.2. Interim Acid Water Treatment Plant Sludge Storage Pond

This section applies to the discharge of effluent to the ground from the treatment plant sludge storage pond. The site reference number for this discharge is E272523.

Date issued: April 3, 2012
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(most recent)

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Mark P. Love P.Ag.
for Director, *Environmental Management Act*
Northern Region - Skeena

1.2.1 The maximum authorized rate of discharge of effluent to the ground from exfiltration is indeterminate. The average rate of discharge of water treatment plant sludge to the pond is 2000 m^3/year (normal plant operations with 5% solids sludge quality).

1.2.2 The characteristics of the effluent discharge shall be typical of filtrate from stable high density water treatment plant sludge.

1.2.3 The authorized works include an exfiltration storage pond that is lined with a filter cloth, adjacent to the airstrip, and related appurtenances.

1.2.4 The location from which the discharge originates is on mineral tenures 513812 and 513813.

1.2.5 The location of the point of discharge is approximately 58° 44' 4" N, 133° 36' 6" W.

2. GENERAL REQUIREMENTS

2.1. Bypasses

Any bypass of the authorized works is prohibited unless the approval of the Director is obtained and confirmed in writing.

2.2. Process Modifications

The Director shall be notified prior to implementing changes to any process that may adversely affect the quality and/or quantity of the discharge. Despite notification under this section, permitted levels must not be exceeded.

2.3. Maintenance of Works and Emergency Procedures

The authorized works must be inspected regularly and maintained in good working order. In the event of an emergency or condition beyond the control of the Permittee which prevents effective operation of the authorized works or leads to an unauthorized discharge, the Permittee must take appropriate remedial action and notify the Director immediately. The Director may reduce or suspend operations to protect the environment until the authorized works have been restored, and/or corrective steps taken to prevent unauthorized discharges.

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for Director, *Environmental Management Act*
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2.4. Construction of Water Management and Pollution Control Works

The water management and pollution control works, including ditches, sediment control works, and ponds shall be designed, constructed, maintained and modified (as necessary) by a qualified professional who is knowledgeable in water management and pond construction/maintenance techniques. Ditches and structures shall be armoured or designed to prevent erosion of sediment into the environment / water course.

2.5. Construction of Treatment Plant Sludge Storage Pond

The treatment plant sludge pond shall be designed, constructed, maintained and modified (as necessary) by a qualified professional who is knowledgeable in mine water treatment plant sludge management. The works shall be located at least one metre above the high water table, 30 m from the nearest water body and constructed in a manner that prevents the escape of sludge.

2.6. Other Agency Requirements

This permit does not relieve the Permittee from complying with requirements of federal, provincial, regional district or municipal authorities.

2.7. Transfer of Authorization

A transfer of a permit is without effect unless the Director has consented in writing to the transfer.

3. OPERATIONAL REQUIREMENTS

3.1. Operating Plans and Procedures

Detailed operating plans for the water treatment plant and for sludge management shall be completed and retained on site for inspection. The operating plan shall be prepared by a qualified professional who is has expertise in mine water treatment systems. The operating plan shall include but not be limited to: the proper operation and maintenance of the facilities, emergency procedures (including procedures that should be enacted during and after Jokulhlaup events), facility monitoring, operator training requirements and sludge handling.

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3.2. Flow Measurement

Provide and maintain a suitable flow measuring device and record daily the effluent volume discharged over a 24-hour period to the outfall.

3.3. Sludge Storage Pond

The pond must be operated such that:

- There is no overflow from the ponds to the surrounding environment,
- Surface drainage is diverted away from the ponds,
- The sludge is handled in accordance with the sludge management plan required under section 3.1.

3.4. Sludge Pond Quantity

Provide and maintain suitable measuring devices and record the sludge volume discharged on a monthly basis, in cubic metres per month.

3.5. Sludge Pond Quality

The Permittee shall undertake a sludge characterization program that is to the satisfaction of the Director, Environmental Protection. The characterization program shall be submitted to the Director within 30 days of issuance of the permit. The Permittee monitoring requirements may be extended or altered by the Director based on results of the monitoring program as well as any other data obtained by Ministry of Environment – Environmental Protection in connection with this site.

3.6. Neutral pH Water Diversion from the Underground

3.6.1 Uncontaminated groundwater from underground drill holes with characteristics better than or equal to that specified in section 1.1.3, may bypass the treatment plant and be diverted to Portal Creek.

3.6.2 Should water quality monitoring indicate that limits in section 1.1.3 are exceeded; the flows must be directed to the water treatment system. The diversion may recommence once there are three consecutive water quality sampling results below limits specified in section 1.1.3.

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for Director, *Environmental Management Act*
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3.7. Groundwater Monitoring

The Permittee shall install groundwater wells and monitor groundwater quality in the vicinity of the sludge disposal area. The well locations and monitoring frequency are subject to approval by the Director. The Permittee monitoring requirements may be extended or altered by the Director based on results of the monitoring program as well as any other data obtained by Ministry of Environment – Environmental Protection in connection with this site.

3.8. Groundwater Quality

In the event that measured groundwater quality in the vicinity of the sludge ponds exceed standards in Schedule 6 of the Contaminated Sites Regulation and in consideration of the monitoring results established for a background groundwater wells, the Director may require the submission of an impact assessment report and/or the implementation of mitigation measures by the Permittee.

4. MONITORING REQUIREMENTS

4.1. Discharge and Receiving Environment Water Monitoring Program

The Permittee shall undertake the following water quality and quantity sampling and analyses:

Location	*Site I.D.*	*Parameter*	*Frequency*
Neutral pH Mine Water	**E277509**	**Field: pH, Conductivity, Turbidity, Temperature,**	**Daily**
		Lab: Total and Dissolved Metals (ICP/ICPMS) including Mercury*	**Weekly for first 5 weeks, then monthly**
		Lab: pH, Conductivity, Turbidity, Total Suspended Solids, Hardness, Alkalinity	**Monthly**
		Flow	**Continuous Data-logger[1] (hourly sampling interval)**
		Toxicity: Rainbow Trout 96 hr LC 50	**Monthly for three months (first sample within 24 hours of commencement of discharge), then quarterly.**

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Location	*Site I.D.*	*Parameter*	*Frequency*
Water Treatment Plant Discharge	**E272507**	**Field: pH, Conductivity, Turbidity, Temperature,**	**Daily**
		Lab: Total and Dissolved Metals (ICP/ICPMS) including Mercury*	**Weekly for first 5 weeks, then monthly**
		Lab: pH, Conductivity, Turbidity, Total Suspended Solids, Hardness, Alkalinity	**Monthly**
		Flow	**Continuous Data-logger (hourly sampling interval)[1]**
		Toxicity:	**Monthly for three months (first sample within 24 hours of commencement of discharge), then quarterly.**
		Rainbow Trout 96 hr LC 50	
		***Ceriodaphnia dubia* reproduction and survival test** (Reference Method EPS 1/RM/21)	**Annually**
		Rainbow Trout (Oncorhynchus mykiss) Embryo development Test (Reference Method EPS 1/RM/28)	**Annually**
		Algal growth inhibition test using Pseudokirchneriella subcapitata (Reference Method EPS 1/RM/25)	**Annually**
		Macrophyte growth inhibition test using Lemna minor (Reference Method EPS 1/RM/37)	**Annually**
Tulsequah River Upstream Mine Site (W10)	**E272544**	**Total and Dissolved Metals (ICP/ICPMS) including Mercury*; pH, Conductivity, Turbidity, Total Suspended Solids, Hardness, Alkalinity**	**Monthly[2]**
Tulsequah River IDZ (W46)	**E272548**	**Total and Dissolved Metals (ICP/ICPMS) including Mercury*; pH, Conductivity, Turbidity, Total Suspended Solids, Hardness, Alkalinity**	**Monthly[2]**
Tulsequah River Near Field Downstream (W51)	**E272547**	**Total and Dissolved Metals (ICP/ICPMS) including Mercury*; pH, Conductivity, Turbidity, Total Suspended Solids, Hardness, Alkalinity**	**Quarterly[2]**
Tulsequah River Far Field Downstream (W32)	**E272546**	**Total and Dissolved Metals (ICP/ICPMS) including Mercury*; pH, Conductivity, Turbidity, Total Suspended Solids, Hardness, Alkalinity**	**Monthly[2]**
Sludge Pond Monitoring Wells (SP1-3)	**E287309 E287310 E287311**	**Dissolved Metals (ICP/ICPMS) including Mercury*; pH, Conductivity, Turbidity, Hardness, Alkalinity**	**Quarterly**

*Mercury sampling will be monthly for 12 months. The need for continued monitoring will be evaluated based on sample results.
[1]Hourly data must be retained on site, only daily volumes will be reported.
[2] Weather and freezing conditions may prevent the collection of a monthly sample. The Permittee must notify the Regional Manager in the event that samples cannot be collected.

Date issued: April 3, 2012
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Mark P. Love P.Ag.
for Director, *Environmental Management Act*
Northern Region - Skeena

4.2. Monitoring Procedures

4.2.1 Sampling Procedures

Sampling is to be carried out in accordance with the procedures described in the most recent edition of the "British Columbia Field Sampling Manual for Continuous Monitoring Plus the Collection of Air, Air-Emission, Water, Wastewater, Soil, Sediment, and Biological Samples", or by suitable alternative procedures as authorized by the Director.

A copy of the above manual may be purchased from the Queen's Printer Publications Centre, P. O. Box 9452, Stn. Prov. Gov't. Victoria, British Columbia, V8W 9V7 (1-800-663-6105 or 250-387-6409). A copy of the manual is also available for inspection at all Environmental Protection offices.

4.2.2 Analyses

Water analyses and toxicity testing procedures are to be carried out in accordance with procedures described in the most recent edition of the "British Columbia Laboratory Methods Manual for the Analysis of Water, Wastewater, Sediment, Biological Materials and Discrete Ambient Air", or by suitable alternative procedures as authorized by the Director.

A copy of the above manual may be purchased from the Queen's Printer Publications Centre.

4.2.3 Quality Assurance

All data analysis requirements shall be conducted by a laboratory acceptable to the Director. At the request of the Director, the Permittee shall provide the laboratory quality assurance data, associated field blanks and duplicate analysis results along with the submission of data required under Section 4.1 of the approval.

5. REPORTING REQUIREMENTS

5.1. Reporting of Monitoring Results

Field and lab monitoring results, including a summary of non-compliances and corrective actions taken, shall be submitted to the Regional Manager, Environmental Protection or designate within 30 days of the end of the

month in which the monitoring occurred. Submissions are to be in tabulated and/or graphical formats approved by the Director, and will include interpretation comments.

5.2. Non-Compliance Reporting

The Permittee shall immediately notify the Regional Manager, Environmental Protection, or designate of any non-compliance with the requirements of this permit and take appropriate remedial action. Written confirmation of all non-compliance events, including available test results, is required within 24 hours of the original notification unless otherwise directed by the Regional Manager, Environmental Protection.

5.3. Non-Compliance Follow-up

For any non-compliance with the requirements of this permit, the Permittee shall submit to the Regional Manager, Environmental Protection, a written report within 30 days of the non-compliance occurrence. The report shall include, but not necessarily be limited to, the following:

- All relevant test results related to the non-compliance;
- An explanation of the most probable cause(s) of the non-compliance; and
- Remedial action planned and/or taken to prevent similar non-compliance(s) in the future.

5.4. Non-Compliance Reporting Of Toxicity

Immediately notify the Regional Manager, Environmental Protection, of any toxicity failure. For the purpose of this section, a sample is considered to have failed if more than 50% of the test fish die in 100% effluent solution.

5.5. Monitoring following an Acute Toxicity Non-Compliance.

For the discharge described in section 1.1, rainbow trout toxicity testing must be increased from once per quarter to once per week if a sample of effluent fails the rainbow toxicity test. Samples must continue to be collected and tested at a frequency of once per week until three consecutive tests results pass, at which time the frequency shall revert back to quarterly.

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5.6. Spill Reporting

All spills to the environment (as defined in the Spill Reporting Regulation) must be reported immediately in accordance with the Spill Reporting Regulation. Notification shall be via the Provincial Emergency Program at 1-800-663-3456.

5.7. Annual Report

The Permittee shall submit an annual report by March 31st of each year, with the first report submitted on March 31, 2013. The annual report shall include, but not limited to:

- summaries of the operation of the treatment facilities and other pollution control works,
- the discharge quality and quantity,
- sludge quality and quantity,
- sampling and analytical requirements,
- analysis and interpretation of trends in environmental monitoring data, and
- recommendations for improvements to water management and pollution control works and monitoring programs.

The format of the annual report shall be suitable for review by the public and copies shall be made available for the Ministry of Energy and Mines, and for the Taku River Tlingit First Nation.

6. ENVIRONMENTAL EFFECTS MONITORING

6.1. Environmental Effects Monitoring Program Objectives

The design of the Environmental Effects Monitoring program shall be such that it addresses, at a minimum, the following:

Provision of detailed and reliable characterization of the baseline conditions in the background and potentially affected aquatic environment;

Systematic collection of data for biological parameters sufficient to detect mine-related changes in the aquatic environment;

Analysis on at least an annual basis of the monitoring data and a determination of whether or not mine-related changes are occurring;

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Verification of whether the original impact predictions are accurate; and

Utilization of the EEM findings to guide the development and implementation of effective adaptive management plans for addressing unacceptable mine related impacts to the aquatic environment.

6.2. Environmental Effects Monitoring Program Implementation

The Permittee shall implement the EEM Program as approved by the Director, Environmental Protection and shall submit results of the program to the Regional Manager, Environmental Protection, as a component of the Annual Report. Based on the results of this monitoring program, the permittee monitoring requirements may be extended or altered by the Director.

7. ENVIRONMENTAL IMPACT

Environmental Protection Division personnel, as a part of the routine permit inspection procedure, will carry out inspections of the discharge. Based on these inspections and any other information available to the Director on the effect of the discharge on the receiving environment, the Permittee may be required to undertake additional monitoring, additional studies and/or install additional pollution control works.

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for Director, *Environmental Management Act*
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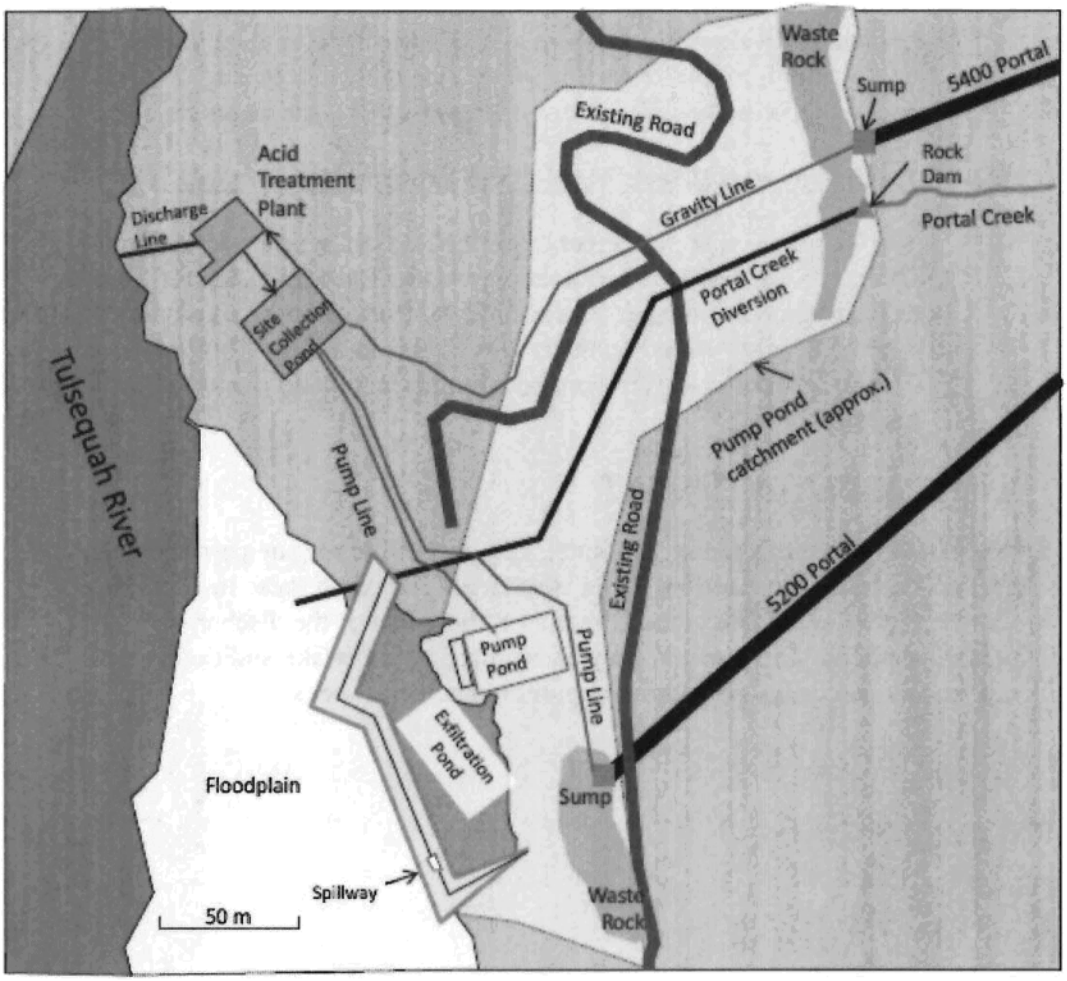
SITE PLAN A



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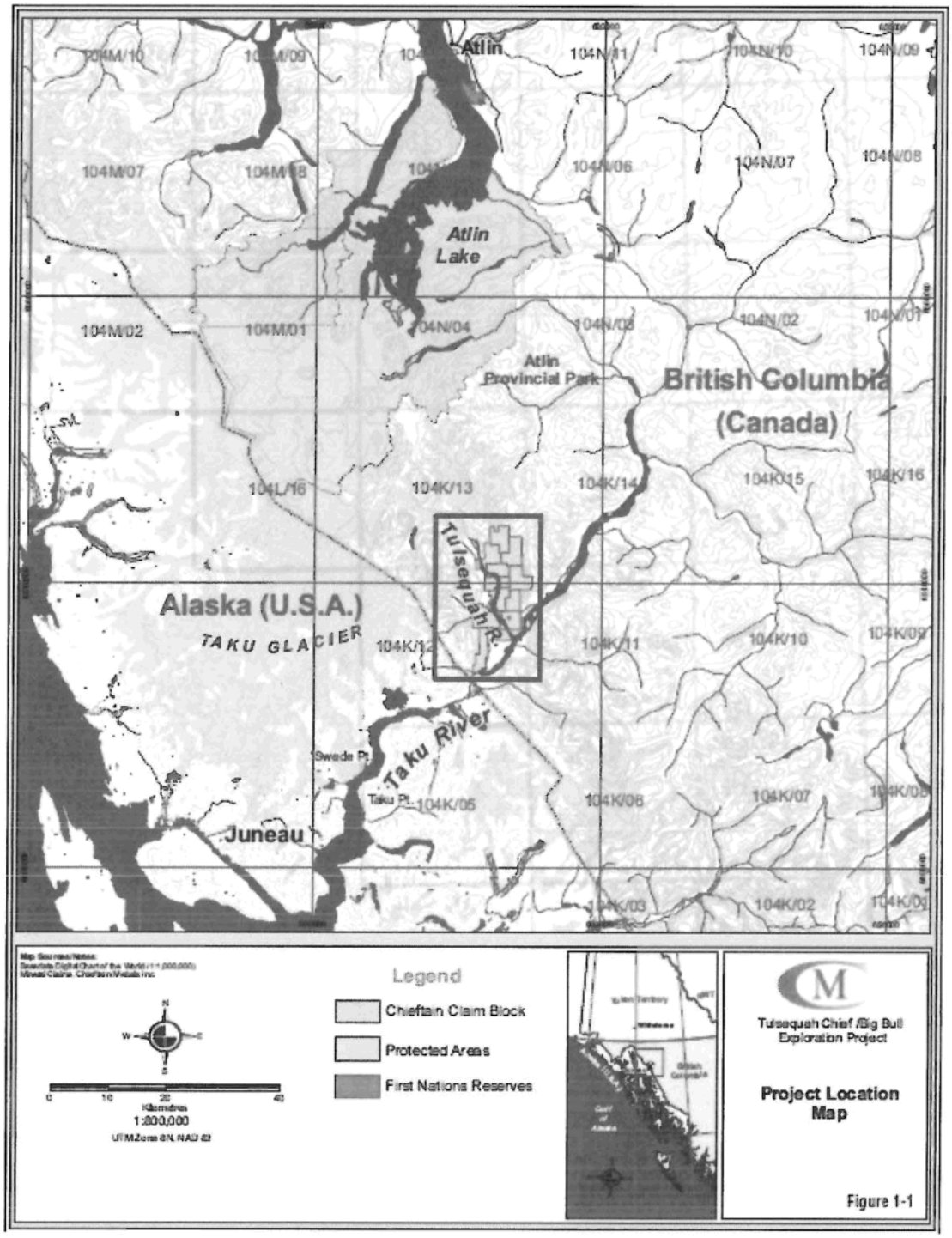


Date issued: April 3, 2012
Date amended: April 10, 2012
(most recent)

M. Love

Mark P. Love P.Ag.
for Director, *Environmental Management Act*
Northern Region - Skeena

Permit Number: 105719

Eichenberger, Kathy MEM:EX

From: Eichenberger, Kathy MEM:EX
Sent: Monday, April 24, 2017 4:25 PM
To: 'Daniella Dimitrov'
Cc: 'Shane Uren'; 'daniella@blackloonmetals.com'
Subject: RE: Tulsequah Chief - Verbal Technical Briefing
Attachments: 2008 02 28 PERMIT M-232 Approving Pre Construction Site Cleanup.pdf; 2008 09 02 Amd M-232 Approving Paddy Flats Laydown and A and B Borrow Areas.pdf; 2008 11 14 Amd M-232 Approving Limited Construction Activities.pdf; 2011 01 21 Amd M-232 Approving Name Change.pdf; 2011 07 07 Amd M-232 Approving Acid Water Treatment Plant.pdf; 2012 06 07 Amd M-232 Approving Road, Camp and Bridge Construction Activities.pdf

And here are the Mines Act permit and amendments

From: Eichenberger, Kathy MEM:EX
Sent: Monday, April 24, 2017 4:11 PM
To: 'Daniella Dimitrov'
Cc: 'Shane Uren'; 'daniella@blackloonmetals.com'
Subject: RE: Tulsequah Chief - Verbal Technical Briefing

Hi Daniella,
Every week end is a nice week end!
I've contacted the technical team and am waiting for a response for dates and times.
Attached is the EMA permit and amendment. I'm still waiting for the Mines act permit- to follow shortly.
Regards
Kathy

Kathy Eichenberger, P.Eng.
Executive Director, Strategic Initiatives
Mines and Mineral Resources Division
Ministry of Energy and Mines
Office: 250 953-3368
Cell: 250 886-1253

From: Daniella Dimitrov s.22
Sent: Monday, April 24, 2017 1:39 PM
To: Eichenberger, Kathy MEM:EX
Cc: Shane Uren; Daniella Dimitrov; daniella@blackloonmetals.com
Subject: Tulsequah Chief - Verbal Technical Briefing

Hello Kathy,

I hope you had an enjoyable weekend. It was a wonderful sunny day here yesterday and it was fantastic to get some fresh air and sun.

I am following up on our call of last week. We appreciate the opportunity to have a pre-call with the technical team from the two ministries along with the consultants from SLR to obtain the verbal technical briefing on the conclusions and recommendations of the ERA noted in the previous communications in order to allow for productive preparation for the May 3 meeting.

From Black Loon would be Shane Uren and possibly myself. Our mandate would be to listen and learn. We are available this week other than on Wednesday.

Thank you very much for assisting us to facilitate this.

Warm regards - Daniella

Daniella Dimitrov s.22 416-317-7776

PROVINCE OF BRITISH COLUMBIA
MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES

PERMIT

APPROVING PRE CONSTRUCTION SITE CLEANUP
(Issued pursuant to Section 10 of the *Mines Act* R.S.B.C. 1996, c. 293)

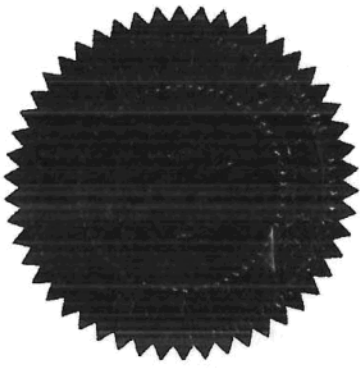
Permit: **M-232**

Issued to: **Redfern Resources Ltd.**
Suite 800- 1281 West Georgia Street
Vancouver, British Columbia
V6E 3J7

for work located at the:

Tulsequah Chief Mine

Issued at Victoria, British Columbia this 28th day of February in the year 2008.



DAVID MORGAN

Douglas E. Sweeney, P.Geo., M.Sc.
Chief Inspector of Mines

PREAMBLE

An application for permission to commence work, including a report on the mine plan and reclamation program entitled "Tulsequah Chief Project – Mines Act Application, Pre-Construction Site Cleanup", dated October 2007, was submitted to the Chief Inspector of Mines (Chief Inspector) in accordance with Part 10.1.2 of the Health, Safety and Reclamation Code for Mines in British Columbia (Code) on October 10, 2007.

Notice of such filing was published in the Whitehorse Star and the Yukon News on October 26, 2007 and the British Columbia Gazette on October 25, 2007.

The Application was referred to other agencies on December 11, 2007 in accordance with Part 10.3.1 of the Code.

A series of reports were also filed with the Chief Inspector and form part of the applications. These are as follows:

- Report entitled "Construction Environment Management Plans" dated November 7, 2007, submitted by Redfern Resources Ltd.
- Report entitled Mineral Exploration Road Avalanche Hazard, by Chris Stetham, dated August 15, 2007, submitted by Redfern Resources Ltd.
- Report entitled Rogers Creek Fan Slope Hazard Assessment, by Westrek Geotechnical Services, dated February 15, 2007, submitted by Redfern Resources Ltd.
- Report entitled Tulsequah Mine Hydrotechnical Report, by Northwest Hydraulic Consultants, dated January, 2008, submitted by Redfern Resources Ltd.

Meetings of the Northwest Mine Development Review Committee were held on September 27, and December 11, 2007 in Smithers, to seek input on the permit application and work plan.

An Environmental Certificate #M02-01, was issued for this project by the Environmental Assessment Office under the Authority of the *Environmental Assessment Act* S.B.C. 2002, C.43 (Act), on December 12, 2002.

This permit contains the requirements of the Ministry of Energy, Mines and Petroleum Resources. It also is compatible, to the extent possible, with the requirements of other provincial ministries. The amount of security required by this permit and the manner to which this security may be applied, will also reflect the requirements of those ministries. However, nothing in this permit limits the authority of other provincial ministries to set other conditions, or to act independently, under their respective permits and legislation.

Decisions made pursuant to this permit by staff of the Ministry of Energy, Mines and Petroleum Resources will be made in consultation with other provincial ministries and federal departments and agencies, within reasonable timeframes. Where these decisions directly affect the Ministry

of Environment, Ministry of Agriculture and Lands or Ministry of Forests and Range, and the Environmental Assessment Office, all decisions will be made in concurrence with the appropriate Manager or Director.

CONDITIONS

The Chief Inspector hereby approves the pre-construction site cleanup as described in the Application, subject to compliance with the following conditions:

General

1. Compliance with *Mines Act* and Code

   All work shall be in compliance with all sections and parts of the *Mines Act* and Code, and the owner, agent or manager (herein called the Permittee) shall obey all orders issued by the Chief Inspector or his delegate.

2. Departure from Approval

   The Permittee shall notify the Chief Inspector in writing of any intention to depart from either the plan of the work system or the program for the protection and reclamation of the surface of the land and watercourses to any substantial degree, and shall not proceed to implement the proposed changes without the written authorization of the Chief Inspector.

3. Permit Approval

   This permit approves a limited work plan for pre-construction site cleanup as specified in the Mines Act Application. This work includes:

   (a) Construction of temporary material storage facilities on the north side of the Rogers Creek alluvial fan located 1 km south of the existing mine site including the historical (HPAG) PAG storage pad, the pyrite pond, and the Operating (OPAG) PAG storage pad;

   (b) Clearing, grubbing, borrowing from and preparation of the Non PAG waste pad on the south side of Rogers Creek alluvial fan;

   (c) Construction of water management structures and diversion ditches at the Tulsequah Chief mine site and at the Rogers Creek Facilities;

(d) Relocation and consolidation of historic mine waste and mineral exploration infrastructure from the historic Tulsequah Chief mine site to a newly constructed temporary material storage facilities at Rogers Creek; and,

(e) Installation and operation of a 40 m^3/hr interim water treatment plant and associated piping to treat contaminated discharges from the Rogers Creek facilities and the historic mine up to plant capacity.

4. Mineral Tenures

Development, including surface disturbance and works, is authorized under this permit on Crown Grants #5669, #5668, #5676. #5670, #5679, and mineral claims 513812, 513813, held by Redfern Resources Ltd.

5. Permit

This Permit is not transferable or assignable.

6. Environmental Assessment Certificate

The Permittee shall ensure that all programs and work undertaken through this permit shall be consistent with the commitments and other requirements set out in the Environmental Certificate and amendments.

7. Taku River/Tlingit First Nation (TRTFN)

The Permittee shall submit to the TRTFN, Land Resources Manager copies of all reports relevant to this permit, including annual monitoring reports and any changes to the approved Reclamation and Closure plans.

Health and Safety

1. Mine Health and Safety Plan

(a) The Permittee shall prepare and submit for review to the regional Inspector of Mines (Inspector), a Mine Health and Safety Plan to include an Emergency Response Plan, within 30 days after the issuance of this permit. The plan shall be kept up to date and posted at the mine site at all times.

(b) The Permittee shall ensure that mine site employees and contractors are knowledgeable and accountable for fulfilling the actions of the Health and Safety Plan and Emergency Response Plans.

2. Avalanche Safety Program

The Permittee shall implement the avalanche safety programs as provided in the Stetham report. (August 2007).

Work System

1. Historic PAG dump (HPAG), Pyrite pond and Operating PAG dump (OPAG)

(a) Design and Construction

(i) Before construction commences on the HPAG, OPAG or Pyrite facilities, the Permittee shall submit to the Chief Inspector final designs prepared by a qualified Professional Engineer.

(ii) Foundation preparation work shall be completed as recommended by the design consultant and shall include tree clearing, removal of weak organic material and any other unsuitable surficial materials to provide a stable foundation for the dump.

(iii) All rock dumps shall be operated and monitored in accordance with the Interim Guidelines of the British Columbia Mine Waste Rock Pile Research Committee (1991).

(b) Liner Design and Installation

(i) The Permittee shall construct the HPAG, OPAG liner systems in accordance with the design by the design consultant TBT Engineering.

(ii) The Permittee shall develop a monitoring and maintenance procedure for the drainage system and pump back system. The procedure shall be submitted to the Inspector prior to operating the HPAG, OPAG and pyrite pond facilities.

(c) Operation and Monitoring

(i) Instrumentation shall be installed around the periphery of the lined facilities to verify that the berm and liner system is performing as per the design assumptions, and in accordance with the criteria provided by the design consultant. The instrumentation shall include monitoring of pore water pressures, liner seepage, and pond elevation. Threshold warning levels shall be specified for each monitoring function.

(ii) Dam inspections and monitoring shall be carried out in accordance with the recommendations of the design consultant and the current Canadian Dam Association, Dam Safety Guidelines. Any measurements or changes indicating instability or advanced erosion shall be immediately reported to the Inspector.

(d) Reporting

(i) Construction will be signed off by a Professional Engineer prior and an "as-built" report shall be prepared by a Professional Engineer and submitted to the Chief Inspector within 30 days of the completion of facility construction, certifying the facility was constructed in accordance with the approved design.

(ii) This permit does not allow for operation of the pyrite pond and OPAG facilities for purposes other than water storage at this time.

2. Surface Water Management Structures and Sediment Control Structures

(a) Design and Construction

The Permittee shall ensure that impoundment dams are constructed under the supervision of a Professional Engineer.

(b) Operation and Monitoring

(i) Regular inspection of sediment control ponds, perimeter diversion and collection ditches shall be undertaken and the results included in the annual Inspection report for the storage facilities.

(ii) The Permittee shall implement a Maintenance and Surveillance Manual prepared by a qualified professional for all water management structures, diversion channels and stream crossings.

(iii) Mine site climate and hydrology shall be monitored on an ongoing basis, and water balances shall be updated periodically.

(c) Reporting

The Permittee shall submit to the Chief Inspector an 'as-built' report for sediment ponds and water management structures within 6 months of completion of construction.

Protection of the Land and Watercourses

1. Construction Environmental Management Plan

(a) The Permittee shall implement the Construction Environmental Management Plans. The Plans shall be kept up to date and be made available at the mine site at all times.

(b) The Permittee shall ensure that mine site employees and contractors are knowledgeable and accountable for fulfilling the actions of the Construction Environmental Management Plan.

(c) In the event that major changes are made to the Construction Environmental Management Plan, an updated report shall be filed with the Chief Inspector.

2. Environmental Site Manager

(a) The Permittee shall ensure that an environmental manager is on site at the commencement, and for the duration of the activities conducted under this Permit. This person shall be a licensed qualified professional and shall be identified in writing to the Chief Inspector.

(b) The environmental site manager shall be familiar with the objectives, procedures and requirements of the Construction Environmental Management Plans, permit requirements and the Environmental Certificate.

(c) The environmental site manager shall have the authority to implement remedial actions as may be necessary to ensure maintenance of environmental standards and permit requirements. This person shall also have the authority to suspend mining operations on the basis of environmental concern. If suspension of mining occurs due to environmental concerns, the Permittee or environmental site manager shall immediately notify the Chief Inspector and appropriate personnel with the Ministry of Environment.

3. Fuel Handling/Spill Containment

(a) The spill contingency plan developed in accordance with the BC MOE Guidelines for Industrial Emergency Response Contingency Plans (1992) shall be implemented prior to commencing mine operations. This plan shall be maintained at the mine and be available to all supervisors and workers. All supervisors and workers shall be instructed in the provisions of this plan prior to the commencement of site development and operations and as may be necessary thereafter.

(b) The Permittee shall immediately contain and implement remedial measures for any spill of hydrocarbon or other deleterious substance. Any such occurrence shall be reported to the Chief Inspector, and to the Provincial Emergency Program in accordance with the Spill Reporting Regulation of the *Environmental Management Act*. Contaminated materials shall be disposed of in a manner acceptable to the Regional Waste Manager. Any spill of hydrocarbon product or other deleterious material in quantities that require reporting under Federal or Provincial regulation or statute, shall be considered a dangerous occurrence pursuant to Part 1.7.1 of the Code.

4. Metal Leaching (ML) and Acid Rock Drainage (ARD)

(a) General

(i) All materials with the potential to generate ML/ARD shall be placed in a manner that minimizes the production and release of metals and contaminants to levels that assure protection of environmental quality.

(ii) Unless otherwise approved, all plans for the prediction, and if necessary, the prevention, mitigation and management of metal leaching and acid rock drainage shall be prepared in accordance with the *Guidelines for Metal Leaching and Acid Rock Drainage at Minesites in British Columbia*.

(b) Construction Materials

Prior to their use, construction materials shall be tested and characterized for their potential for ML/ARD. Acid generating and potentially acid generating materials shall not be used for construction purposes.

(c) Historic Waste Rock (HPAG) Handling, Storage and Monitoring Requirements

(i) All historic waste rock shall be placed in the HPAG containment facility. No segregation of non-PAG materials is permitted without the approval of the Chief Inspector.

(ii) The Permittee shall ensure that any contaminated till and/or soils that are associated with the historic waste rock is excavated and placed within the HPAG storage facility.

(iii) The Permittee shall confirm that all materials impacted by historic mine waste are fully excavated and placed in the HPAG facility, by

implementing the confirmatory soil sampling program outlined in the Environmental Monitoring and Surveillance Plan.

(iv) The geochemistry of historic waste rock shall be characterized in accordance with the provisions of the Environmental Monitoring and Surveillance Plan.

(v) The Permittee shall maintain a database inventory of materials relocated to the HPAG facility that includes historical waste rock, residual ore, and contaminated native soils etc. The database shall record material type, mass, volume, storage locations, history and timing of excavation, and monitoring data. This information shall be summarized in the Annual Reclamation Report.

(vi) The Permittee shall ensure no significant seepage occurs from the HPAG, and OPAG facilities that could negatively impact the environment. The monitoring program for groundwater, physical aspects, and seepage detection provided in the Environmental Monitoring and Surveillance Plan shall be implemented.

(d) Drainage Collection System and Interim Water Treatment Plant

(i) The water level in the PAG sump shall be kept at a sufficiently low level or use backflow prevention to ensure that water does not back-up into waste rock stored in the HPAG facility.

(ii) The Permittee shall track the volume and quality of drainage inputs and outputs of the treatment system (including pH, acidity, metal concentrations), as well as volume of lime used and sludge volumes generated. This information shall be reported in the Annual Reclamation Report.

(iii) Sludge from the interim water treatment system shall be disposed of in the lined OPAG storage pond.

(iv) The Permittee shall maintain an operations, monitoring and maintenance procedures manual which fully describes the procedures necessary to carry out the operations and successful treatment of mine affected drainage. This manual shall be submitted to the Chief Inspector within 12 months of commissioning the interim treatment plant. The Permittee shall upgrade this manual as procedural changes are implemented.

(v) The Permittee shall maintain all facilities and works to the satisfaction of the Chief Inspector until they are no longer required.

5. Water Management, Sediment Control and Monitoring

(a) General

(i) The monitoring of sediment and erosion control and water quality shall be conducted in accordance with the Environmental Monitoring and Surveillance Plan.

(ii) The Permittee shall, when required to do so by the British Columbia Ministry of Environment, obtain permits and licenses for water diversion and discharge.

(iii) In the event that the mine site drainage is not of acceptable discharge quality, the Permittee shall collect and treat, or otherwise mitigate drainage for as long as is necessary.

(b) Sediment and Erosion Control

(i) Sediment control and water management structures shall be constructed and operational prior to soil disturbance which has the potential to result in sediment release, including grubbing activities.

(ii) The Permittee shall initiate progressive reclamation where possible to control erosion around the mine area.

(c) Surface Water and Ground Water Quality Monitoring

(i) The Permittee shall develop and implement a program to monitor and track any changes to drainage chemistry from individual disturbed areas, including the historical waste rock disposal areas and newly constructed waste storage facilities. The program shall be capable of detecting significant metal leaching and provide early warning about the onset of ARD or an increase in contaminant loading to the receiving environment.

(ii) Results of the drainage chemistry quality and water quantity monitoring, shall be reported in the Annual Reclamation Report.

6. Soil Salvage and Storage

(a) The Permittee shall salvage and stockpile topsoil for use in reclamation and protect topsoil stockpiles through revegetation and other practices as described in the application.

(b) Soil stockpile areas shall be clearly marked in the field to ensure that they are protected during construction activities; the locations, origins and quantities of material shall be documented and reported in the Annual Reclamation Report.

(c) Soil suitable for use in reclamation shall not be used as fill.

7. Vegetation Management

The Permittee shall limit disturbance to the vegetation to those areas approved in the permit applications.

Contingency Reclamation and Closure Plan

1. Reclamation Security

(a) The Permittee shall cause to be deposited with the Minister of Finance, security in the amount of one million, two hundred thousand dollars ($1,200,000.00). The Permittee shall deposit the security in accordance with the following installment schedule. The security will be held by the Minister of Finance for the proper performance of the approved program and all the conditions of this permit in a manner satisfactory to the Chief Inspector.

	$	Cumulative $
Within 30 days of the receipt of this permit	$600,000.00	$600,000.00
On or before December 31, 2008	$600,000.00	$1,200,000.00
	Total:	$1,200,000.00

(b) The amount of security will be adjusted for inflation where required. The first adjustment will be made when cumulative inflation from January 1, 2009 exceeds 10% based on each of the previous year's annual increase in the British Columbia Consumer Price Index (B.C. CPI).

(c) The Permittee shall conform to all forest tenure and special use permit requirements of the Ministry of Forests and Range. Should the Permittee not

conform to these requirements then all or part of the security may be used to cover the costs of these requirements.

(d) The Permittee shall conform to all Ministry of Environment and Ministry of Agriculture and Lands approval, license, and permit conditions, including the *Environmental Management Act*, Contaminated Sites and Special Waste regulations, as well as requirements under the *Wildlife Act*. Should the Permittee not conform to these conditions then all or part of the security may be used to fulfill these requirements.

(e) The Permittee shall conform to all *Land Act* tenure (permit, license of occupation, statutory right of way or lease) or *Water Act* license terms and conditions. Should the Permittee not perform any of the required obligations under any *Land Act* tenure or *Water Act* license, then all or part of the security may be used to cover any costs or expenses incurred by the Province of British Columbia to perform any of these obligations or otherwise satisfy any outstanding obligation under any such tenure or license.

(f) Over the life of the mine the security will be adjusted to cover all the costs associated with carrying out all the conditions of this permit. Upon application by the Permittee, the amount of security in condition 1(a) may be reduced if initial mining or development work will create less disturbance and liability, or to reflect reduced liability due to reclamation work completed.

2. Reclamation/Contingency Closure Plan

In the event the project does not proceed with further mine development, the Permittee shall follow the contingency closure plan as detailed in the Application, Section 11.4, for those areas of the mine affected by the activities of this permit. In addition the Permittee shall submit a report providing the status of the work system and a breakdown of outstanding liabilities, a compilation of all monitoring data and a schedule for completion of final reclamation and closure works.

PROVINCE OF BRITISH COLUMBIA
MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES

PERMIT

APPROVING WORK SYSTEM AND RECLAMATION PROGRAM

(Issued pursuant to Section 10 of the *Mines Act* R.S.B.C. 1996, c. 293)

Permit: **M-232**

Issued to: **Redfern Resources Ltd.**
Suite 800- 1281 West Georgia Street
Vancouver, British Columbia
V6E 3J7

for work located at the:

Tulsequah Chief Mine

This permit contains the following sub-sections:

Issue Date	**Permit**
February 28, 2008	Permit Approving the Work System
February 28, 2008	Permit Approving the Reclamation Program

Amendments

As listed on attached.

Issued at Victoria, British Columbia this 2nd day of September in the year 2008.

for Douglas E. Sweeney
Chief Inspector of Mines

Amendments

September 2, 2008	Approving Paddy's Flats and Areas A and B Borrow Pits

\Amd Permit M-232 Approving Paddy's Flats and Areas A and B Borrow Pits

AMENDMENT TO PERMIT

APPROVING PADDY'S FLATS LAYDOWN AND AREAS "A" AND "B" BORROW PITS

Permit: **M-232**

Issued to: **Redfern Resources Ltd.**
Suite 800 – 1281 West Georgia Street
Vancouver, British Columbia
V6E 3J7

for work located at the:

Tulsequah Chief Mine

Amended at Victoria, British Columbia this 2nd day of September in the year 2008.

Douglas E. Sweeney
Chief Inspector of Mines

PREAMBLE

A letter application for amendment of permit M-232, entitled "Application for Minor Amendment to Permit M-232" dated June 3, 2008 was submitted to the Chief Inspector of Mines (Chief Inspector) on July 22, 2008 in accordance with Section 10(6) of the *Mines Act*.

A letter application for amendment of permit M-232 entitled "Tulsequah Chief Construction" dated June 30, 2008 was submitted to the regional Inspector of Mines on June 30, 2008 in accordance with Section 10(6) of the *Mines Act*.

The following supporting information also forms part of the application:

- Report entitled "Archaeological Field Assessment, Paddy's Flats, Tulsequah Chief Mine Project", by Diana French, dated July 4, 2008.
- Report entitled "Assessment of the Effects of Paddy's Storage Area on Wildlife, Tulsequah Chief Mine", by Gartner Lee Ltd., dated June, 2008.
- Email from John Tymstra to Doug Flynn, entitled "Tulsequah Chief Construction", dated July 20, 2008, containing plan maps, sections and digital photos of Borrows A and B.
- Email from Heather Eagle to Doug Flynn, entitled "RedfernGeoCausewayWork_rev1.docx, dated July 24, 2008, containing North Causeway Fill Material Monitoring Procedure.
- Email from Mike Allen to Doug Flynn, entitled "Area B", dated July 25, 2008, containing sample location map and ABA monitoring results.

A letter approval from the regional Inspector of Mines to develop Paddy's Flats was given on July 23, 2008.

A letter approval from the regional Inspector of Mines to develop quarry Area "A" was given on July 21, 2008 and approval to develop quarry Area "B" was given on July 31, 2008.

CONDITIONS

The Chief Inspector in Mines approves the development of Paddy's Flats laydown area and the Area "A" and "B" Borrow Pits as described in the applications subject to compliance with the following conditions:

General

1. Compliance with *Mines Act* and Code

   All work shall be in compliance with all sections and parts of the *Mines Act* and the Health, Safety and Reclamation Code for Mines in B.C. (Code) and the owner, agent or manager (herein called the Permittee) shall obey all orders issued by the Chief Inspector or his delegate.

2. Departure from Approval

   The Permittee shall notify the Chief Inspector in writing of any intention to depart from the approved Application and this *Mines Act* permit (M-232) to any substantial degree, and shall not proceed to implement the proposed changes without the written authorization of the Chief Inspector.

3. Permit Approval

   This permit approval is limited to the following activities:

(a) Clearing, grubbing, borrowing, and cut and fill work at areas "A" and "B" located at the old Tulsequah Chief Mine, in the area East of the Tulsequah River, South of Camp Creek and North of Portal Creek;

(b) Use of area A and B borrow pit rock for construction of the North Causeway;

(c) Construction of a temporary material storage facility at Paddy's Flats located 4 kilometers from the presently mapped confluence of Taku River and Tulsequah River; and,

(d) Construction of a 1 kilometer access road to access Paddy's Flats Laydown from an existing trail.

4. Mineral Tenures

Development, including surface disturbance and works, is authorized under this permit amendment on mineral claim 513820 and 576316, Crown Grant #6161, held by Redfern Resources Ltd.

Work System

Borrow Pits

No blasting is permitted to occur in area "A" and "B" borrow pits.

Protection of the Land and Watercourses

1. Metal Leaching and Acid Rock Drainage (ML/ARD)

(a) Prior to their use, construction materials shall be tested and characterized for their potential for ML/ARD.

(b) Materials that are potentially acid generating shall not be used for construction purposes.

(c) The quarry site shall be inspected daily by a suitably qualified geologist who shall make a visual determination of the quality of rock destined for causeway construction. Remarks regarding the quality of rock inspection, and results of analytical testwork on borrow materials, shall be reported weekly in the Environmental Report.

2. Sediment and Erosion Control

The Permittee shall initiate progressive reclamation where possible to control erosion in and around the approved construction areas.

3. Vegetation Management

The Permittee shall limit disturbance of the vegetation to those areas approved in the permit applications.

All other terms and conditions remain the same.

PROVINCE OF BRITISH COLUMBIA
MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES

PERMIT

APPROVING WORK SYSTEM AND RECLAMATION PROGRAM
(Issued pursuant to Section 10 of the *Mines Act* R.S.B.C. 1996, c. 293)

Permit: **M-232** Mine #: **0100019**

Issued to: **Redfern Resources Ltd.**
Suite 800- 1281 West Georgia Street
Vancouver, British Columbia
V6E 3J7

for work located at the:

Tulsequah Chief Mine

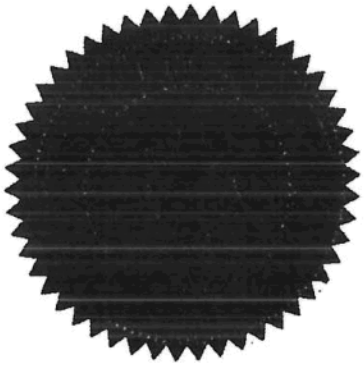
This permit contains the following sub-sections:

Issue Date	**Permit**
February 28, 2008	Permit Approving the Work System
February 28, 2008	Permit Approving the Reclamation Program Approving Pre Construction Site Cleanup

Amendments

As listed on attached.

Issued at Victoria, British Columbia this 14th day of November in the year 2008.



Douglas E. Sweeney
Chief Inspector of Mines

Amendments

September 2, 2008	Approving Paddy's Flats and Areas A and B Borrow Pits
November 14, 2008	Approving Limited Construction Activities

AMENDMENT TO PERMIT

APPROVING
LIMITED CONSTRUCTION ACTIVITIES

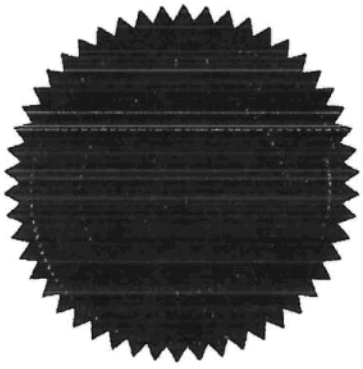
Permit: **M-232** Mine: **0100019**

Issued to: **Redfern Resources Ltd.**
Suite 800 – 1281 West Georgia Street
Vancouver, British Columbia
V6E 3J7

for work located at the:

Tulsequah Chief Mine

Amended at Victoria, British Columbia this 14th day of November in the year 2008.



Douglas E. Sweeney
Chief Inspector of Mines

PREAMBLE

A letter application for amendment of permit M-232, entitled "Application to Amend Mines Act Permit M-232 for Limited Construction Activities" dated September 9, 2008 was submitted to the Chief Inspector of Mines (Chief Inspector) on September 10, 2008 in accordance with Section 10(6) of the *Mines Act*.

The Application was referred to other agencies through the Northwest Mine Development Review Committee on September 23, 2008 in accordance with Part 10.3.1 of the Code.

The following supporting information also forms part of the application:

- Application to Amend Mines Act Permit M-232 for the Construction and Operation of the New Tulsequah Chief Mine, dated March 24, 2008.
- Appendices for Tulsequah Chief Mine Project Mines Act Permit Amendment: New Mine Development, dated February 2008.
- Tulsequah Chief Mine Project Conceptual Reclamation Report, dated May 17, 2008.
- Tulsequah Chief Slash Rock ARD Characterization Memo, dated October 15, 2008, including:
    - Underground_ABA_Sampling_FinalResults.xls
    - 5400Sampling_Lab.pdf
    - 5200Sampling_Lab.pdf.
- Tulsequah Chief Waste Development Memo, dated October 15, 2008.
- Tulsequah Chief NAG Pile Seepage Monitoring Program dated October 15, 2008.
- Redfern Resources, Tulsequah Chief Mine Historic PAG Maintenance Plan, by TBT Engineering, dated September 13, 2007.
- Tulsequah Initial Slashing Limits, Map attachment, dated October 21, 2008.
- Email letter requesting the construction of the NAG camp, dated November 4, 2008.

CONDITIONS

The Chief Inspector of Mines (Chief Inspector) hereby approves the Limited Construction Activities application subject to compliance with the following conditions:

General

1. Compliance with *Mines Act* and Code

    All work shall be in compliance with all sections and parts of the *Mines Act* and the Health, Safety and Reclamation Code for Mines in B.C. (Code) and the owner, agent or manager (herein called the Permittee) shall obey all orders issued by the Chief Inspector or his delegate.

2. Departure from Approval

    The Permittee shall notify the Chief Inspector in writing of any intention to depart from the approved application and this *Mines Act* permit (M-232) to any substantial degree, and shall not proceed to implement the proposed changes without the written authorization of the Chief Inspector.

3. Mineral Tenures

Development, including surface disturbance and works, authorized under this permit is amended to include mineral claim #590422.

4. Limited Construction Permit Approval

(a) This permit approves the following activities:

- Site preparation works for the site collection pond;
- Construction of the site sludge pond at the airstrip;
- Site drilling/blasting/filling and construction of retaining walls and foundation excavations;
- Installation of the fire water tank. (using fresh water);
- Installation of temporary power and foundations at the final genset location;
- Construction and installation of the fuel supply area on the lower terrace;
- Cement-in the reclaim tunnel and construction of road over top;
- Cement-in utilidor from the truck shop to the warehouse;
- Installation of foundations for crusher building, MTS camp, truck shop, limestone building, mill buildings and installation of the assay lab;
- Installation of stair towers 1 and 2, and utilidor 2;
- Construction of the 5200 level portal bridge and 5200 portal preparation;
- Construction/installation of the Procon facilities on the 5200 and 5400 levels;
- Set-up underground drainage to interim water treatment plant and Ampex clean-up of underground workings;
- Slashing of 5200 and 5400 level adits and separation of acid and clean water sources;
- Construction and operation of the Non – PAG facilities;
- Prepare the quarry and set-up crushing system, and
- Construction of the NAG camp.

(b) This permit does not approve mining or milling at a production level, operation of the HPAG, OPAG or pyrite facilities, construction or operation of the tailings impoundment facility.

(c) The Permittee shall not proceed with the program for the excavation and installation of the diffuser and/or the site sewage system, installation and commissioning of the potable water treatment plant, installation of the Dawn Creek Gabion and water supply and/or the Tulsequah Creek water supply, and installation of the site incinerator, until all necessary permits, approvals and authorizations from other agencies are in place.

Health and Safety

1. Health and Safety Plan

(a) Within 30 days of receipt of this permit, the Permittee shall update and submit to the District Inspector of Mines (Inspector), a Health and Safety Plan which includes an Emergency Response Plan and emergency warning system for the underground work program.

(b) A mutual aid agreement for mine rescue services shall be prepared and submitted to the Inspector prior to commencing work underground.

3. Ventilation

Ventilation required for 5200 and 5400 preproduction excavation shall be based on the required air flow for the sum of diesel equipment operating. The minimum requirement for flow is as specified in the Code, Part 4.6.1(3).

4. Diesel Powered Equipment

All diesel powered equipment shall comply with Part 4.6.1(2) and 4.7.1 (2) as specified in the Code.

5. Underground Blasting Procedure

The Permittee shall submit an underground blasting procedure to the Inspector for review and approval prior to any blasting being conducted underground.

6. Dust Monitoring

The Permittee shall implement a program to monitor airborne dust within the tunnel where diesel equipment is being used, and at all electrical installations. Records shall be kept and maintained at the minesite and be made available to an Inspector on request.

7. Occupational Health Monitoring Program

The Permittee shall develop and implement an Occupational Health Monitoring Program. Records shall be kept and maintained at the minesite and be made available to an Inspector on request.

Work System

1. 5200 and 5400 Level Slashing

(a) This permit approves the pre-production work for the 5200 and 5400 levels as described in the application.

(b) This permit approval does not include any operational development.

(c) The Permittee shall maintain at all times, up to date mine plans, drawings, calculations, specifications and written descriptions of the:

- geometry of existing excavations, and proposed excavations;
- geology of the mine;
- rock mass characteristics that are representative of the ore, footwall and hanging wall rock that will be encountered most frequently and identify the orientation of the most common joint sets; and
- hydrological features that may affect the working of the mine.

(d) The mine design and plan shall be continually updated to reflect the actual rock mass and geological structures encountered in the workings. All mine design information must be in a form acceptable to the Chief Inspector and made available to any Inspector upon request.

(e) The Permittee shall designate a mining/rock mechanical engineer responsible for the implementation of a rock mechanics program at the Tulsequah Mine. This person is responsible for:

- mapping of any structural discontinuities in mine headings;

- performing weekly and monthly inspections of the underground and surface excavations and maintaining a log book of results of the inspections;
- conducting wedge analysis for planned excavations; and
- determining rock mass ratings in new development headings and determining the rock support standard based on the rock mass headings.

2. Limestone Quarry

The Permittee shall, before pre-stripping commences, submit a detailed mine design for the limestone quarry to the Chief Inspector for approval.

3. Design and Construction of Surface Facilities

(a) The overall layout of the surface facilities as described in the application is approved.

(b) All buildings and structures shall be constructed in accordance with the Health, Safety and Reclamation Code and the British Columbia Building Code.

(c) Before energizing the site, the Permittee shall submit to the Electrical Inspector for review, an electric line drawing showing power cables (size and type), sub-stations and details of the ground protection system.

Protection of the Land and Watercourses

1. Metal Leaching and Acid Rock Drainage (ML/ARD)

(a) General

(i) All materials with the potential to generate ML/ARD shall be placed in a manner that minimizes the production and release of metals and contaminants to levels that assure protection of environmental quality.

(ii) Unless otherwise approved, all plans for the prediction, and if necessary, the prevention, mitigation and management of metal leaching and acid rock drainage shall be prepared in accordance with the *Guidelines for Metal Leaching and Acid Rock Drainage at Minesites in British Columbia.*

(iii) No changes shall be made to the definition of PAG materials, waste rock handling practices or monitoring requirements without the approval of the Chief Inspector.

(b) Definition of PAG Materials

(i) All waste rock is considered to have the potential to be ARD generating (PAG) if NPR is < 2, where AP = total sulphur - acid soluble sulphate - acid insoluble sulphate sulphur calculated from %BaO. NP is calculated as Sobek NP - 5 kg CaCO3/tonne.

(ii) Unit 4 is defined as non-PAG (NAG).

(iii) Unit 1 is defined as PAG.

(c) Waste Rock Handling and Mitigation

(i) Waste rock developed from the slashing of the 5200 and 5400 level workings shall be segregated according to its potential for ML/ARD determined through analytical testwork.

(ii) All areas that have not been sampled and analysed for its ML/ARD potential shall be handled as PAG unless analytical data is available prior to slashing which meets the geochemical criteria outlined in permit condition 1 (b) (i). This includes all areas behind the temporary passive treatment cell on the 5200 level and the altered Unit 2 on 5400 level.

(iii) Additional sampling shall be conducted on 5 metre intervals in the transition zones of Unit 2 to ensure proper waste handling. If results of this testwork are not available prior to slashing of these areas, the waste shall be handled as PAG.

(iv) All PAG waste generated from the slashing shall be stored in the HPAG facility.

(v) For the slashing program, no waste rock shall be stored underground or in the OPAG facility.

(vi) All non-PAG waste rock shall be stored in the non-PAG (NAG) dump facility.

(vii) No waste rock shall be deposited in the NAG dump facility until the groundwater seepage monitoring wells have been installed and a baseline sample has been collected.

(d) ML/ARD Operational Monitoring Program

(i) Mine Waste Inventory

The Permittee shall maintain an inventory of waste materials stored in the HPAG and NAG dumps, which includes composition, mass, volume, waste source, waste disposal location and geochemical monitoring data.

(ii) Monitoring of NAG Dump

Geochemical characterization of slashing waste rock stored in the NAG dump shall be conducted at a minimum frequency of at least one sample for every 2000 tonnes of waste.

(iii) Monitoring of HPAG Dump

Slashing waste stored in the HPAG dump shall be sampled for geochemical analyses at a minimum frequency of one sample for every 2000 tonnes of waste.

(e) ML/ARD Analytical Testwork

(i) Geochemical analyses shall be conducted on the natural <2mm particle size fraction and shall include acid base accounting and total elemental composition.

(ii) Acid base accounting analyses shall include paste pH, total sulphur, acid soluble sulphate sulphur, %BaO (for determining acid insoluble sulphate), and Sobek NP.

(iii) Total elemental composition shall be analysed by ICP methods after strong acid digestion and shall include all major cations and trace elements.

(iv) The Permittee shall implement an effective QA/QC program for ML/ARD testwork.

(f) NAG Dump Groundwater Monitoring

Groundwater and seepage monitoring shall be conducted in accordance with "Tulsequah Chief NAG Pile Seepage Monitoring Program", dated October 15, 2008.

(g) HPAG Dump Groundwater Monitoring

Groundwater monitoring at wells MW08-4, MW08-05 and MW08-6 shall be conducted on a monthly frequency, with the same parameters and detection limits as for NAG Dump groundwater monitoring.

(h) Reporting of Results

Results of water quality monitoring and ML/ARD analytical testwork shall be reported in the Annual Reclamation Report.

(i) Environmental Monitoring and Surveillance Plan

The Construction Environmental Monitoring and Surveillance Plan shall be updated to be consistent with the requirements of this permit, including mine waste management and monitoring requirements. The plan shall also be updated to include the HPAG monitoring and inspection requirements detailed in "Redfern Resources, Tulsequah Chief Mine Historic PAG Maintenance Plan", by TBT Engineering, dated September 13, 2007.

2. Mine Water Management

The Permittee shall ensure, prior to any structures being removed or disturbed underground, that the interim mine water treatment plant is operating and is capable of handling and treating all underground mine water discharge to acceptable criteria.

Reclamation Program

1. Reclamation Security

(a) The Permittee shall cause to be deposited with the Minister of Finance, security in the amount of two million, seven hundred thousand dollars ($2,700,000.00) bringing the total security for this permit to three million, three hundred thousand dollars ($3,300,000.00). The Permittee shall deposit the security in accordance with the following installment schedule. The security will be held by the Minister of Finance for the proper performance of the approved program and all the conditions of this permit in a manner satisfactory to the Chief Inspector.

	$	Cumulative $
Currently held	$600,000.00	$600,000.00
On or before December 31, 2008	$600,000.00	$1,200,000.00
On or before April 30, 2009	$1,000,000.00	$2,200,000.00
On or before July 30, 2009	$1,100,000.00	$3,300,000.00
	Total:	$3,300,000.00

2. Temporary Shutdown

If the mine ceases operation, the Permittee shall,

(a) continue to carry out the conditions of the permit in conformity with Part 10 of the Code, and

(b) carry out a program of site monitoring and maintenance.

(c) continue to treat water from the HPAG facility for at least 2 years after the cover has been installed and drain-down of the waste pile has occurred.

All other terms and conditions remain the same.

PROVINCE OF BRITISH COLUMBIA
MINISTRY OF NATURAL RESOURCE OPERATIONS

PERMIT

APPROVING WORK SYSTEM AND RECLAMATION PROGRAM

(Issued pursuant to Section 10 of the *Mines Act* R.S.B.C. 1996, c. 293)

Permit: **M-232** Mine #: **0100019**

Issued to: **Chieftain Metals Inc.**
Unit 118 – 1515 Broadway Street
Port Coquitlam, British Columbia
V3C 6M2

for work located at the:

Tulsequah Chief Mine

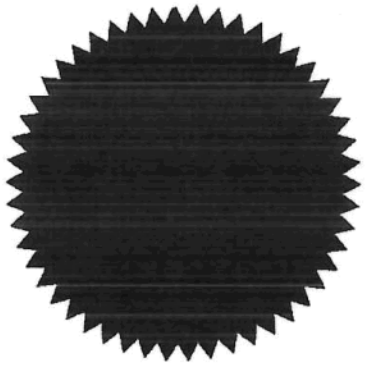
This permit contains the following sub-sections:

Issue Date	**Permit**
February 28, 2008	Permit Approving the Work System
February 28, 2008	Permit Approving the Reclamation Program

Amendments

As listed on attached on page 2.

Amended in Victoria, British Columbia this 21st day of January in the year 2011.



Al Hoffman P. Eng.
Chief Inspector of Mines

Amendments

September 2, 2008	Approving Paddy's Flats and Areas A and B Borrow Pits
November 14, 2008	Approving Limited Construction Activities
January 21, 2011	Approving Name Change

AMENDMENT TO PERMIT

APPROVING NAME CHANGE

Permit: **M-232** Mine #: **0100019**

Issued to: **Chieftain Metals Inc.**
Unit 118 – 1515 Broadway Street
Port Coquitlam, British Columbia
V3C 6M2

for work located at the:

Tulsequah Chief Mine

This permit contains the following sub-sections:

Amended at Victoria, British Columbia this 21st of January in the year 2011.

Al Hoffman, P.Eng.
Chief Inspector of Mines

PREAMBLE

A letter application dated October 19, 2010 from Chieftain Metals Inc. requesting a name change to permit M-232 was received by the Chief Inspector on October 19, 2010.

CONDITIONS

The Chief Inspector approves the permit amendment hereby amending Permit M-232 to Chieftain Metals Inc. and the transfer of all reclamation liability held under M-232.

1. Reclamation Security

(a) The Permittee shall cause to be deposited with the Minister of Finance, security in the amount of three million, three hundred thousand dollars ($3,300,000.00). The Permittee shall deposit the security in accordance with the following installment schedule. The security will be held by the Minister of Finance for the proper performance of the approved program and all the conditions of this permit in a manner satisfactory to the Chief Inspector.

Within 30 days of receipt of this permit amendment	$1,200,000.00
On or before commencement of underground development	$2,100,000.00
Total:	$3,300,000.00

All other terms and conditions under Permit M-232 remain.

PROVINCE OF BRITISH COLUMBIA
MINISTRY OF ENERGY AND MINES

PERMIT

APPROVING WORK SYSTEM AND RECLAMATION PROGRAM
(Issued pursuant to Section 10 of the *Mines Act* R.S.B.C. 1996, c. 293)

Permit: **M-232** Mine #: **0100019**

Issued to: **Chieftain Metals Inc.**
Unit 118 – 1515 Broadway Street
Port Coquitlam, British Columbia
V3C 6M2

for work located at the:

Tulsequah Chief Mine

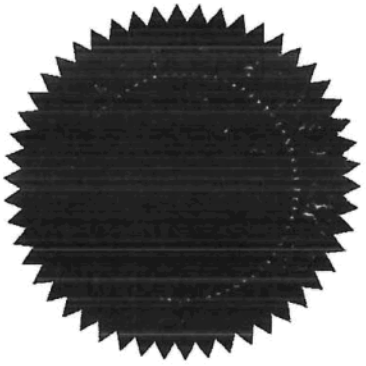
This permit contains the following sub-sections:

Issue Date	**Permit**
February 28, 2008	Permit Approving the Work System
February 28, 2008	Permit Approving the Reclamation Program

Amendments

As listed on page 2.

Amended in Victoria, British Columbia this 7th day of July in the year 2011.



for

Al Hoffman P. Eng.
Chief Inspector of Mines

Amendments

September 2, 2008	Approving Paddy's Flats and Areas A and B Borrow Pits
November 14, 2008	Approving Limited Construction Activities
January 21, 2011	Approving Name Change
July 7, 2011	Approving Acid Water Treatment Plant

AMENDMENT TO PERMIT

APPROVING ACID-WATER TREATMENT PLANT

Permit: **M-232** Mine: **0100019**

Issued to: **Chieftain Metals Inc.**
Unit 118 – 1515 Broadway Street
Port Coquitlam, British Columbia
V3C 6M2

for work located at the:

Tulsequah Chief Mine

Amended at Victoria, British Columbia this 7th day of July in the year 2011.

Al Hoffman, P.Eng.
Chief Inspector of Mines

PREAMBLE

A letter application for amendment of permit M-232, entitled "Tulsequah Chief M-232 Amendment for Revised Interim Water Treatment Plant Location and Lime Sludge Storage" dated May 16, 2011 was submitted to the Chief Inspector of Mines (Chief Inspector) on May 17, 2011 in accordance with Section 10(6) of the *Mines Act*.

The following supporting information also forms part of the application:

- Tulsequah Chief Mine Project Waste Discharge Permit Application Technical Assessment Report: Interim Acid Water Treatment Plant, dated May 2011.

- Tulsequah Chief Mine Project, Environmental Monitoring and Surveillance Plan, dated May 2011.

CONDITIONS

The Chief Inspector of Mines (Chief Inspector) hereby rescinds permit conditions (4)(d)(i) through (v), Protection of the Land and Watercourses, in the February 28, 2008 *Mines Act* Permit M-232 and approves the application subject to compliance with the following conditions:

A. General

1. Compliance with *Mines Act* and Code

All work shall be in compliance with all sections and parts of the *Mines Act* and the Health, Safety and Reclamation Code for Mines in B.C. (Code) and the owner, agent or manager (herein called the Permittee) shall obey all orders issued by the Chief Inspector or his delegate.

2. Departure from Approval

The Permittee shall notify the Chief Inspector in writing of any intention to depart from the approved application and this *Mines Act* permit (M-232) to any substantial degree, and shall not proceed to implement the proposed changes without the written authorization of the Chief Inspector.

B. Work System

1. Water Management and Treatment Structures

(a) Design and Construction

The construction of the acid-water treatment plant and associated water management structures as described in the application is approved.

(b) Operation and Monitoring

(i) Water treatment shall be optimized and the water level in the site collection pond shall be kept as low as possible to maximize the available storage of contaminated site water.

(ii) The Permittee shall maintain an Operations, Monitoring and Surveillance Procedures manual which fully describes the procedures

necessary to carry out the operation and successful management and treatment of mine affected drainage. An updated manual shall be submitted to the Chief Inspector within 12 months of commissioning the acid-water treatment plant that includes procedures for operations, monitoring, surveillance and maintenance of water management and water treatment systems. The Permittee shall upgrade this manual over time as procedures are modified.

2. Temporary Lime Sludge Pond

(a) Design and Construction

(i) The construction of the sludge pond near the airport for the temporary storage of lime treatment sludge from the acid-water treatment plant is approved. Temporary disposal shall be limited to a single sludge pond.

(ii) The temporary sludge pond shall be lined with permeable material to prevent the migration of sludge fines.

(b) Operation

The Permittee shall operate the lime sludge pond with a minimum freeboard of 1 metre.

3. Exfiltration Pond

No construction activities on the exfiltration pond shall occur below the high water level of the Tulsequah River until all required authorization from other agencies are in place.

C. Protection of the Land and Watercourses

1. Drainage Collection System and Acid-Water Treatment Plant

(a) The Permittee shall collect and treat all water discharging from the 5200, 5400 and 5900 level portals.

(b) The Permittee shall make efforts to maximize the collection and treatment of contaminated site runoff within the limitations of the approved water management facilities.

(c) All drainage collection and treatment facilities shall be operated and maintained for as long as is necessary to achieve environmental protection requirements, as required by the Chief Inspector.

(d) The Permittee shall track the volume and quality of drainage inputs and outputs of the treatment system (including pH, acidity, metal concentrations), as well as the volume of lime used and sludge volumes generated. This information shall be reported in the Annual Reclamation Report.

2. Long Term Sludge Storage

(a) A long term sludge storage plan shall be submitted to the Chief Inspector by December 15, 2013.

(b) In the event that the long term sludge storage plan cannot be implemented, the temporary lime sludge pond will be relocated from Shaza to a suitable location as required to prevent the lime sludge from entering the receiving environment.

3. Environmental Monitoring and Surveillance Plan

The Environmental Monitoring and Surveillance Plan shall be implemented and updated over time to be consistent with permit requirements.

4. Reporting

The Annual Reclamation Report shall include data and interpretation of site water quality monitoring outlined in the Environmental Monitoring and Surveillance Plan as well as a summary of the operation of the acid-water treatment plant, reagent use, water quality trends and updated cost estimate for operating and maintaining the acid water treatment system and sludge facility.

All other terms and conditions remain the same.

PROVINCE OF BRITISH COLUMBIA
MINISTRY OF ENERGY AND MINES

PERMIT

APPROVING WORK SYSTEM AND RECLAMATION PROGRAM
(Issued pursuant to Section 10 of the *Mines Act* R.S.B.C. 1996, c. 293)

Permit: **M-232** Mine #: **0100019**

Issued to: **Chieftain Metals Inc.**
Unit 118 – 1515 Broadway Street
Port Coquitlam, British Columbia
V3C 6M2

for work located at the:

Tulsequah Chief Mine

This permit contains the following sub-sections:

Issue Date	**Permit**
February 28, 2008	Permit Approving the Work System
February 28, 2008	Permit Approving the Reclamation Program

Amendments

As listed on page 2.

Amended in Victoria, British Columbia this 7th day of June in the year 2012.

for Kim Bellefontaine
Al Hoffman P. Eng.
Chief Inspector of Mines

Amendments

September 2, 2008	Approving Paddy's Flats and Areas A and B Borrow Pits
November 14, 2008	Approving Limited Construction Activities
January 21, 2011	Approving Name Change
July 7, 2011	Approving Acid Water Treatment Plant
June 7, 2012	Approving Road, Bridge and Camp Construction Activities

PERMIT AMENDMENT

APPROVING ROAD, BRIDGE AND CAMP CONSTRUCTION ACTIVITIES

Permit: **M-232** Mine: **0100019**

Issued to: **Chieftain Metals Inc.**
Unit 118 – 1515 Broadway Street
Port Coquitlam, British Columbia
V3C 6M2

for work located at the:

Tulsequah Chief Mine

Amended at Victoria, British Columbia this 7th day of June in the year 2012.

Kim Bellefontaine
for Al Hoffman, P. Eng.
Chief Inspector of Mines

PREAMBLE

A letter application for amendment of permit M-232, entitled "Tulsequah Chief M-232 Mines Act Permit Amendment for Mine Site Roads and Bridges to Connect to Special Use Permit Access Road and Provision for Construction Camp Site" (Document 1) dated April 3, 2012 was submitted to the Chief Inspector of Mines (Chief Inspector) on April 10, 2012 in accordance with Section 10(6) of the *Mines Act*.

The following supporting information also forms part of the application:

- Letter entitled "Tulsequah Chief M-232 Amendment for Mine Site Roads and Bridges – Incremental Reclamation Costs" by Chieftan Metals Inc., dated May 10, 2012 (Document 2)

CONDITIONS

The Chief Inspector approves the application subject to compliance with the following conditions:

A. General

1. Compliance with *Mines Act* and Code

All work shall be in compliance with all sections and parts of the *Mines Act* and the Health, Safety and Reclamation Code for Mines in B.C. (Code) and the owner, agent or manager (herein called the Permittee) shall obey all orders issued by the Chief Inspector or his delegate.

2. Departure from Approval

The Permittee shall notify the Chief Inspector in writing of any intention to depart from the approved application and this *Mines Act* permit (M-232) to any substantial degree, and shall not proceed to implement the proposed changes without the written authorization of the Chief Inspector.

3. Limitations of Permit Approval

(a) This permit approves the following activities:

(i) Construction and upgrades to the main mine road from the plantsite area to the North Shazah Creek bridge;

(ii) Construction of lower level mine road from the plantsite to the existing road 1 km north of the mine;

(iii) Installation of temporary Chasm Creek and North Shazah Creek bridge crossings;

(iv) Final Installation of permanent bridges for Shazah Creek and Rogers Creek crossings;

(v) Construction of borrow pits within the TMF for road base construction and fill;

(vi) Minor upgrade work on Dawn Creek and Camp Creek bridge structures;

(vii) Clearing, grubbing and base preparation for permanent camp.

(b) This permit does not approve mining or milling at a production level, operation of the OPAG or pyrite facilities, construction of the permanent camp or construction or operation of the tailings impoundment facility.

B. Work System

1. Bridge and Road Design

(a) Final construction drawings for bridges and roads shall be submitted to the Regional Inspector.

(b) Where modifications to bridge and road designs have been made during construction, final "as-builts" shall be submitted to the Regional Inspector.

2. Bridge and Road Inspection

(a) A suitably qualified geotechnical engineer shall inspect exposed bridge foundation areas prior to bridge construction and placement. A summary inspection report which indicates that foundation conditions are consistent with the design assumptions shall be submitted to the Regional Inspector.

(b) All road cut slopes and fill slopes shall be inspected by a suitably qualified geotechnical engineer following construction. A summary inspection report which confirms conformance with design standards shall be submitted to the Regional Inspector.

C. Reclamation

1. Reclamation Security

(a) The Permittee shall cause to be deposited with the Minister of Finance, security in the amount of Two Million Three Hundred Thousand dollars ($2,300,000.00) bringing the total security for this permit to Three Million Five Hundred Thousand dollars ($3,500,000.00). The Permittee shall deposit the security in accordance with the following installment schedule. The security will be held by the Minister of Finance for the proper performance of the approved program and all the conditions of this permit in a manner satisfactory to the Chief Inspector.

	Cumulative $
Current security (as of June 7, 2012)	$1,200,000.00
On or before commencement of work under this amendment	$ 200,000.00
On or before commencement of underground development	$2,100,000.00
Total:	$3,500,000.00

All other terms and conditions remain the same.

Eichenberger, Kathy MEM:EX

From: Eichenberger, Kathy MEM:EX
Sent: Friday, April 21, 2017 4:15 PM
To: 'DD'
Cc: 'Robin Junger'
Subject: RE: Details for the May 3rd meeting

Hi Daniella,
For the Mines Act permit please contact Howard Davies, regional director, Health and Safety Permitting in our Smithers Office. He can be reached at Howard.Davies@gov.bc.ca or 250 847-7653.
For the EMA permit please contact Douglas Hill, Regional Director, Mining Operations, Environmental Protection Division, Ministry of Environment. He can be reached at Douglas.Hill@gov.bc.ca or 250 398-4542.
Kathy

From: DD s.22
Sent: Friday, April 21, 2017 1:16 PM
To: Eichenberger, Kathy MEM:EX
Cc: Robin Junger
Subject: Re: Details for the May 3rd meeting

Kathy - thank you very much for the information re the meeting - I received it. From Black Loon, it will be myself, Gord, Shane and Robin. If we are joined by others, I will confirm. I will also confirm who will be in person - probably Robin and Shane and possibly Gord and I.
I will follow up on the other couple matters we discussed.
One other point - we had asked for most current copies of the mines act and environmental management act discharge permit or permits to ensure we are looking at the right things - who may I follow up with to obtain these copies.
Thank you - Daniella

On Apr 21, 2017, at 3:01 PM, Eichenberger, Kathy MEM:EX <Kathy.Eichenberger@gov.bc.ca> wrote:

> May 3rd, 1:00 – 3:00 pm
> Ministry of Energy and Mines
> 1810 Blanshard Victoria BC - room 343
>
> Meeting to discuss more in depth questions and issues regarding the Tulsequah mine site, the project and the permits prior to the ministries responding to Black Loon Metals' March 30th correspondence to Elaine McKnight and Wes Shoemaker.
>
> Invitees:
> Peter Robb ADM, Mines and Mineral Resources Division; MEM
> Howe, Diane, Deputy Chief Inspector of Mines, Reclamation and Permitting, Mines and Mineral Resources Division, MEM
> Chris Trumpy, Executive Director, Policy, Legislation and Issues Resolution, Mines and Mineral Resources Division, MEM
> Kathy Eichenberger, Executive Director Strategic Initiatives, Mines and Mineral Resources Division, MEM
> Rowbotham, Elizabeth, Legal Counsel, Legal Services Branch, Justice and Attorney General
> Mark Zacharias, Assistant Deputy Minister, Environmental Protection Division, ENV
> McGuire, Jennifer, Executive Director, Environmental Protection Division, ENV

Robin Junger, MacMillan LLP
Shane Uren, Greenwood Environmental

Other staff from MEM and ENV may attend depending on the final agenda

Eichenberger, Kathy MEM:EX

From: Eichenberger, Kathy MEM:EX
Sent: Friday, April 21, 2017 12:01 PM
To: 'Daniella Dimitrov'
Cc: 'Robin Junger'
Subject: Details for the May 3rd meeting

May 3rd, 1:00 – 3:00 pm
Ministry of Energy and Mines
1810 Blanshard Victoria BC - room 343

Meeting to discuss more in depth questions and issues regarding the Tulsequah mine site, the project and the permits prior to the ministries responding to Black Loon Metals' March 30th correspondence to Elaine McKnight and Wes Shoemaker.

Invitees:
Peter Robb ADM, Mines and Mineral Resources Division; MEM
Howe, Diane, Deputy Chief Inspector of Mines, Reclamation and Permitting, Mines and Mineral Resources Division, MEM
Chris Trumpy, Executive Director, Policy, Legislation and Issues Resolution, Mines and Mineral Resources Division, MEM
Kathy Eichenberger, Executive Director Strategic Initiatives, Mines and Mineral Resources Division, MEM
Rowbotham, Elizabeth, Legal Counsel, Legal Services Branch, Justice and Attorney General
Mark Zacharias, Assistant Deputy Minister, Environmental Protection Division, ENV
McGuire, Jennifer, Executive Director, Environmental Protection Division, ENV
Robin Junger, MacMillan LLP
Shane Uren, Greenwood Environmental

Other staff from MEM and ENV may attend depending on the final agenda

Page 171 to/à Page 176

Withheld pursuant to/removed as

s.14

Eichenberger, Kathy MEM:EX

From: Shoemaker, Wes ENV:EX
Sent: Monday, March 27, 2017 2:33 PM
To: 'Gordon Bogden'; McKnight, Elaine L MEM:EX
Cc: Zacharias, Mark ENV:EX; Trumpy, Chris MEM:EX; Love, Mark P ENV:EX; McGuire, Jennifer ENV:EX; Eichenberger, Kathy MEM:EX; Robin Junger; Shane Uren (shaneu@greenwoodenvironmental.ca); Daniella Dimitrov
Subject: RE: Thank you again and follow-up

Thank you Gordon. We trust that Daniella and you had a safe journey back to Toronto. We await hearing from you regarding specifics on the Tulsequah Chief project.

Wes

From: Gordon Bogden [mailto:gordon@blackloonmetals.com]
Sent: Monday, March 27, 2017 2:31 PM
To: Shoemaker, Wes ENV:EX; McKnight, Elaine L MEM:EX
Cc: Zacharias, Mark ENV:EX; Trumpy, Chris MEM:EX; Love, Mark P ENV:EX; McGuire, Jennifer ENV:EX; Eichenberger, Kathy MEM:EX; Robin Junger; Shane Uren (shaneu@greenwoodenvironmental.ca); Daniella Dimitrov
Subject: Thank you again and follow-up

Dear Wes & Elaine,

Many thanks again to you and your respective colleagues for providing me and my colleagues at Black Loon, with the opportunity to share with you our strategy for the development of the Tulsequah project should we consummate a transaction with the Receiver. We appreciate your warm welcome, candor and transparency. As we mentioned in closing, we will summarize our understanding of the complex compliance issues and the support we would ask from you to allow us to conclude our deliberations on the possible acquisition and operation of the project.

Kind regards,

Gordon

Gordon J. Bogden
Executive Chairman

BLACK LOON METALS INC.
O +1 416 646-1047
M +1 416 587-5177
Suite 1600, 401 Bay Street
Toronto, ON M5H 2Y4

Eichenberger, Kathy MEM:EX

Subject: FW: Typed from hand written notes (replace XXXXX with words I could not read)

Gord: Geophysicist Queens, mining exploration investment banker 23 years, funding mergers and acquisitions. Sat on many mining co-boards resource capital funds. Avanti – changed name to Allycorp (sp?) Kitsault – molybdenum – no good market for a decade – investors left. Haven't made a final decision to move Tulsequah it's an excellent project economically makes business sense. Social license isn't there. Need to clean up the site. Made two site visits. Restart water treatment plant. It's a mess. Work in parallel with FN's. Daniella incumbent CEO been at table with Chieftain for about a year. Finding out how to move it forward. Ask: if we build, will we be stuck with historic liability?

Wes: we're motivated, would like to see the site cleaned up.

Gord: already got a letter from Rivers without Borders.

Daniela: lawyer then financial services, 2009 moved into mining, northern Quebec, Baffin Island last few years mining in Spain and Bolivia.

Elaine: very please you're here – sensitive one XXXXX bar – MBB commitment.

Mark: how can we help make a go, no go decisions s.22

Wes: we have to fix this.

Shane: get treatment plant back up and running. IM modifications needed, clean up of site; lot of history there, advance the permits – EAC. Bonding – quick look at bond levels. Q's about reclamations bonding and when after a few years when would closure and reclamation be triggered.

Robin: go XXXXX strategy – if go ahead decision, don't want liability for past if it doesn't pan out after kicking the tires for 2 – 3 years. Gord already reached out to TRT, didn't get a formal response from their letter. Shane has had a cursory conversation with Alaska. Want to be ready to go by mid-May.

Gord: committed to building it out, not cut and run. Doesn't make sense economically to build a road, XXXXX airstrips.

Chieftain: s.21

By 2020 Black Loon wants to build another mining company. Would start off with barging; then 4 – 5 years XXXXXX airship for 12 month operations.

Gord: reclamations bonding not the single factor.

Robin: don't want to be saddled with a bunch of historical stuff. Lots of complicated issues. If the province says if whoever comes in, even if short term, they'll have to step up to deal with historical issues. Then not on phased approach – maybe we can make it a go maybe we can't.

From: King, Sandra M MEM:EX
Sent: Monday, March 27, 2017 1:50 PM
To: Eichenberger, Kathy MEM:EX
Subject: Typed from hand written notes (replace XXXXX with words I could not read)

BRITISH COLUMBIA

September 12, 2016

Tracking Number: 350102
Authorization Number: 105719

REGISTERED MAIL

Chieftain Metals Inc.
c/o Lawdell Corporate Services Limited
1600 - 925 West Georgia Street
Vancouver BC V6C 3L2

Dear Permittee:

Enclosed are amendments to Section 4 -Monitoring Requirements of Permit 105719 issued under the provisions of the Environmental Management Act. Your attention is respectfully directed to the amended monitoring requirements outlined in the attachments to this letter. The amended Section 4 replaces previous monitoring requirements. All other terms and conditions of Permit 105719 remain in force and effect.

Failure to comply with the requirements set out in your Permit, including the attached monitoring requirements, is an offence under the *Environmental Management Act*.

It is also the responsibility of the permittee to ensure that all activities conducted under this authorization are carried out with regard to the rights of third parties, and comply with other applicable legislation that may be in force.

This decision may be appealed to the Environmental Appeal Board in accordance with Part 8 of the Environmental Management Act. An appeal must be delivered within 30 days from the date that notice of this decision is given. For further information, please contact the Environmental Appeal Board at (250) 387-3464.

Administration of this permit will be carried out by staff from the Environmental Protection Division's Regional Operations Branch. Plans, data and reports pertinent to the permit are to be submitted by email or electronic transfer to the Director, designated Officer, or as further instructed.

Yours truly,

Environmental Protection Division
Ministry of Environment
Bag 5000
Smithers, BC V0J 2N0
Authorizations - North Region
Telephone: (250) 847-7260
Facsimile: (250) 847-7591

Douglas J. Hill, P.Eng.
for Director, *Environmental Management Act*
Mining Operations

Enclosure

cc: Environment Canada

4. MONITORING REQUIREMENTS

4.1. Discharge and Receiving Environment Water Monitoring Program

The Permittee must undertake the following meteorological, hydrometric and water quality measurements, samples and analyses:

Sampling Location	Location Description/Rationale	Frequency of Field Parameters* and Lab Analysis
Shazah Camp	Climate Data – HOBO weather station and glycol precipitation gauge	April, August and October - download dataloggers; replenish glycol
Chasm Creek and Shazah Creek	Hydrometric stations	April or May, August and October – download dataloggers (including barologger), record staff gauge reading; take manual flow measurements
NMW Discharge **E277509**	Neutral pH Mine Water Discharge from 5400 adit to Portal Creek	April/May/August/October: Field parameters, flow, general chemistry, total and dissolved metals
SE-2	Exfiltration pond spillway	April/May/August/October: total and dissolved metals, general chemistry
P-07-03, MW11-3 and MW11-5 to MW11-7	Near proposed PAG Facility	Download datalogger and record water levels at least once per year
MW11-9 to -10	Near proposed NAG Dump	Record water levels at least once per year
SP11-01 to -03 **E287309** **E287310** **E287311**	Near Lime Sludge Pit at airstrip	April/May/August/October - water levels; April and October: groundwater field parameters, dissolved metals, general chemistry
W10 **E272544**	Tulsequah River mainstem upstream of Project	April/May/August/October: field parameters , total and dissolved metals, general chemistry
W32 **E272546**	Tulsequah River mainstem downstream of Mine Site	April/May/August/October (in duplicate): field parameters, total and dissolved metals, general chemistry

Date issued: April 3, 2012
Date amended: September 12, 2016
(most recent)

Douglas J. Hill, P.Eng.
for Director, *Environmental Management Act*
Authorizations - North Region

Sampling Location	Location Description/Rationale	Frequency of Field Parameters* and Lab Analysis
W51 **E272547**	Downstream of SE-2/NMW discharge	April/May/August/October: field parameters, total and dissolved metals,
Borrow Pit	Near culvert	April, measure Dissolved Oxygen if ice cover present
Taku River downstream of the Tulsequah River confluence	Near WSC gauge Station 08BB005) located downstream of the Tulsequah River confluence near the Canada US Border	Once per year in October: field parameters, total and dissolved metals, general chemistry

Date issued: April 3, 2012
Date amended: September 12, 2016
(most recent)

Douglas J. Hill, P.Eng.
for Director, *Environmental Management Act*
Authorizations - North Region

Analysis of water samples for field parameters, general chemistry and total and dissolved metals must be as follows:

Analysis Group	Parameter List
Field Parameters	pH
	Temperature (°C)
	Conductivity (µS/cm)
General Chemistry	Alkalinity, Total as $CaCO_3$
	Acidity as $CaCO_3$
	Hardness as $CaCO_3$
	Total Suspended Solids
	Sulphate (SO_4)

Analysis Group	Parameter List
Total & Dissolved Metals	Aluminum
	Antimony
	Arsenic
	Barium
	Cadmium
	Calcium
	Chromium
	Cobalt
	Copper
	Iron
	Lead
	Lithium
	Magnesium
	Manganese
	Molybdenum
	Nickel
	Potassium
	Selenium
	Silver
	Sodium
	Thallium
	Tin
	Titanium
	Uranium
	Vanadium
	Zinc

Table Notes:

1. Each heading represents a list of parameters that can be analyzed using a single bottle with appropriate preservative and/or sample preparation.
2. Detection Limits to meet the requirement of BC Aquatic Life Guidelines

Date issued: April 3, 2012
Date amended: September 12, 2016
(most recent)

Douglas J. Hill, P.Eng.
for Director, *Environmental Management Act*
Authorizations - North Region

When the treatment plant is operating the discharge and initial dilution zone must be sampled as follows:

Location	*Site I.D.*	*Parameter*	*Frequency*
Water Treatment Plant Discharge	**E272507**	**Field: pH, Conductivity, Turbidity, Temperature,**	**Daily**
		Lab: Total and Dissolved Metals (ICP/ICPMS) including Mercury*	**Weekly for first 5 weeks, then monthly**
		Lab: pH, Conductivity, Turbidity, Total Suspended Solids, Hardness, Alkalinity	**Monthly**
		Flow	**Continuous Data-logger (hourly sampling interval)[1]**
		Toxicity:	
		Rainbow Trout 96 hr LC 50	**Monthly for three months (first sample within 24 hours of commencement of discharge), then quarterly.**
		***Ceriodaphnia dubia* reproduction and survival test** (Reference Method EPS 1/RM/21)	**Annually**
		Rainbow Trout (Oncorhynchus mykiss) Embryo development Test (Reference Method EPS 1/RM/28)	**Annually**
		Algal growth inhibition test using Pseudokirchneriella subcapitata (Reference Method EPS 1/RM/25)	**Annually**
		Macrophyte growth inhibition test using Lemna minor (Reference Method EPS 1/RM/37)	**Annually**
Tulsequah River IDZ (W46)	**E272548**	**Total and Dissolved Metals (ICP/ICPMS) including Mercury*; pH, Conductivity, Turbidity, Total Suspended Solids, Hardness, Alkalinity**	**Monthly[2]**

*Mercury sampling will be monthly for 12 months. The need for continued monitoring will be evaluated based on sample results.
[1]Hourly data must be retained on site, only daily volumes will be reported.
[2] Weather and freezing conditions may prevent the collection of a monthly sample. The Permittee must

Date issued: April 3, 2012
Date amended: September 12, 2016
(most recent)

Douglas J. Hill, P.Eng.
for Director, *Environmental Management Act*
Authorizations - North Region

notify the Regional Manager in the event that samples cannot be collected.

4.2. Monitoring Procedures

4.2.1 Sampling Procedures

Sampling is to be carried out in accordance with the procedures described in the most recent edition of the "British Columbia Field Sampling Manual for Continuous Monitoring Plus the Collection of Air, Air-Emission, Water, Wastewater, Soil, Sediment, and Biological Samples", or by suitable alternative procedures as authorized by the Director.

A copy of the above manual may be purchased from the Queen's Printer Publications Centre, P. O. Box 9452, Stn. Prov. Gov't. Victoria, British Columbia, V8W 9V7 (1-800-663-6105 or 250-387-6409). A copy of the manual is also available for inspection at all Environmental Protection offices.

4.2.2 Analyses

Water analyses and toxicity testing procedures are to be carried out in accordance with procedures described in the most recent edition of the "British Columbia Laboratory Methods Manual for the Analysis of Water, Wastewater, Sediment, Biological Materials and Discrete Ambient Air", or by suitable alternative procedures as authorized by the Director.

A copy of the above manual may be purchased from the Queen's Printer Publications Centre.

4.2.3 Quality Assurance

Analyses of samples for parameters designated under the Environmental Data Quality Assurance Regulation must be at a laboratory registered for the designated parameter. At the request of the Director, the Permittee must provide the laboratory quality assurance data, associated field blanks and duplicate analysis results along with the submission of data required under Section 4.1 of the permit. In addition, the Permittee must participate in quality assurance audits as required under the Environmental Data Quality Assurance Regulation.

Date issued: April 3, 2012
Date amended: September 12, 2016
(most recent)

Douglas J. Hill, P.Eng.
for Director, *Environmental Management Act*
Authorizations - North Region

BLACK LOON METALS INC.

DELIVERED BY EMAIL

March 30, 2017

Ms. Elaine McKnight
Deputy Minister
British Columbia – Ministry of Mines & Energy
1810 Blanshard Street, 8th Floor
Victoria, BC V8W 9N3

Mr. Wes Shoemaker
Deputy Minister
British Columbia – Ministry of Environment
2975 Jutland Road, 5th Floor
Victoria, BC V8W 9M1

Dear Ms. McKnight and Mr. Shoemaker,

I would like to again thank you and your colleagues for taking the time to speak with us last Friday to discuss our potential interest in acquiring the Tulsequah Chief Mine from the Chieftain Metals receivership.

As I mentioned in our meeting, we believe that our approach to the project -- and in particular our strong desire to explore a meaningful partnership with the Taku River Tlingit First Nation – presents a greater potential for success (broadly defined) than may have ever existed in the past, as well as a potential to advance the clean-up of the site and water treatment necessitated by past activities.

At the same time, we understand that there is no guarantee the TRTFN will come to support the project and partner with us. It will take us some time and a serious commitment to determine whether this is possible. We do not want to get ahead of our potential partners.

In all the circumstances, if we were to proceed with the acquisition, our plan would be to undertake an initial phase which would consist of:

- Physical clean-up of the site (debris removal etc.) and upgrade and restart water treatment plant;
- Discussions and negotiations with the TRTFN on social, economic and environmental matters, which we hope could include both a Cooperation and Benefits Agreement and a separate Environmental Cooperation Agreement to supplement provincial permitting (like we negotiated with the Nisga'a Nation in respect of the Kitsault project when I was CEO of Alloycorp Mining);
- Information gathering, including updating of technical studies and assessment of financing alternatives, to help confirm whether and on what terms the project could feasibly proceed;
- Updating permits, including seeking amendments to the environmental assessment certificate to enable barging and use of airships rather than road construction, and seeking any additional permits as necessary with implementation of certain monitoring; and
- Potentially initiating some of the previously approved construction activities.

We anticipate this phase could take up to three years, although, we do hope to reach a positive determination to proceed sooner. During this period, we would be prepared to upgrade and then restart the approved water treatment system and run it at our expense. This would include a capital expenditure of approximately $1 million to optimize the system. Based on the necessary work, we would expect the restart to take place in 2018.

BLACK LOON
METALS INC.

In order to help us make a decision whether or not to proceed, we are seeking confirmation of two things by the Province:

1. The Province will continue to hold and apply toward the project the $1.2M in bonding held under the permits and is not (within the next three years) planning to impose any material amendments to the existing permits (including in respect of bonding) under the Mines Act and Environmental Management Act in relation to activities presently permitted; and
2. If Black Loon decides at the end of a three-year period that it does not intend to proceed further with the project it will be permitted (if it chooses) to surrender its claims, leases and permits to the Province without any further obligation to continue operating the water treatment system or execute on the closure plan.

We appreciate that additional reclamation bonding will be required if and as any further activities are sought to be permitted, and we also appreciate that Black Loon would be responsible for any environmental impacts it may cause (though we expect the environmental impacts of this phase to be only positive).

In addition to the above, we would greatly appreciate receiving a copy of the EY reclamation bonding analysis, the recent provincial risk assessments and the updated closure plan being completed by the province that were mentioned in our meeting. We would be willing to sign a confidentiality agreement.

We believe that this represents a tremendous opportunity that has no downside for any party, and has significant potential upsides for everyone including the Province, our company, and the TRTFN.

At minimum, it would ensure the site is cleaned and that the water treatment system is improved and operated for several years without taxpayer expense.

In a best case scenario, it will see a long term, environmentally sustainable development of this project with the partnership and support of the TRTFN. That is, of course, a matter for the TRTFN to decide, but we are committed to doing everything we can to show we are serious about working with them and that we recognize how significant this proposed project has been for that community (going right back to the historic 2004 Supreme Court of Canada *Taku* decision, from which the duty to consult sprang forth).

Sincerely,

BLACK LOON METALS INC.

Gordon J. Bogden
Executive Chairman

cc: Robin Junger, McMillan LLP
Daniella Dimitrov, Black Loon Metals Inc.
Shane Uren, Black Loon Metals Inc.

Black Loon Tulsequah pre-mtg May 3rd '17

Peter Lobb
Diane Howe
Jennifer McGuire by phone
Chris Trumpy
Mark Zacharias
Doug Hill by phone
Elizabeth Lowbotham by phone

1-877-353-9184 s.17
mod s.17

Black Loon

proposed roadmap -
1. update (commercial) re proposed transaction
2. " on receivership process
3. update on AERA
4. comfort on moving forward.

Klastline : TO investment mgt co
has investment in Chieftain since they
bought project
provided convertible debt to operate
water treatment plant + business

not a mining company
first option as secured creditor - primary
still think project is viable

Robin → so is it safe to say that treatment would make it better?

MOE/MEM non-committal

Doug H: while river does move, still a mixing zone these stds would have to be met & risks managed.

Black Loon reached commercial terms to have exclusivity period. — June 5th end of exclusivity period

looking for comfort around transfer of permits

Interface dealing w unsecured creditors to allow Blk Loon to acquire all shares of Chieftain + become parent company

↳ if no definitive agreement then technically parties can leave

DD: how to manage risk around disclosure w other potentially interested parties

(2)

Black Loon May 3, '17

DD looking for financing still
when financing is raised, goes into escrow → go thru receivership process, only when unsecured creditors are settled then rest of money is released. Meeting of unsecured creditors, then DD, final financing mid - end July

Who will operate ? no mine operator - once transaction is done, Black Loon is owner of shares, has asset, then ?

intent to revise the engineering of the WTP, we know that's not working)
can't get WTP ~~done this year~~ - barging season, procurement, transportation
↳ needs to be upgraded : optimized
may be a year until they can start the WTP, then need to test, tweak, optimize etc.

TRT hasn't replied to Black Loon letter.

s.21 budget over 2 years for environmental work.

- MEM & MOE compliance lists/issues

Steve: 2 year exploration plan surface & underground

DD - mtg w technical team to discuss compliance plan.

DELIVERED BY EMAIL

February 8, 2017

Minister Bill Bennett
Ministry of Energy and Mines
PO Box 9060 Stn Prov Govt
Parliament Buildings
Victoria BC, V8W 9E2

Email: Bill.Bennett@gov.bc.ca

Minister Mary Polak
Ministry of Environment
PO Box 9047 Stn Pov Govt
Rm 112, Parliament Buildings
Victoria BC, V8W 9E2

Email: Mary.Polak@gov.bc.ca

Dear Minister Bennett and Minister Polak,

As you are aware, Chieftain Metals has entered into bankruptcy proceedings and a process is presently underway to determine whether and how the Tulsequah Chief project will move forward. Our company, Black Loon Metals Inc., has recently established a role as the leading potential proponent (working closely with Chieftain's largest creditor and other potential investors) and I am writing you today to provide an update on our plans.

Black Loon is Canadian private company with the strategy of becoming a multi-mine metals producer. The management of Black Loon is comprised of a committed team of experienced mining executives, with extensive capital markets and direct operating. In particular, the majority of the management team of Black Loon were part of Alloycorp Mining Inc., which from April, 2014 to September, 2015, successfully pre-developed the Avanti-Kitsault project near Terrace, B.C.

We believe that the present situation is one that is perfectly suited to our company. We have a very strong record of working successfully with First Nations to jointly overcome complex and long-standing environmental issues in the mining sector. As you may recall, I was CEO of Alloycorp Mining Inc. during the period of time that we successfully negotiated a Comprehensive Benefit Agreement with the Nisga'a Nation and a corresponding Environmental Agreement, which put to an end many years of rancor and discord. I am proud to say that the Nisga'a leadership repeatedly commented on the different approach taken once I became head of that company, and Alloycorp as a result had the honour of being the first company to attend the Wilp Si'ayuukhl Nisga'a as a guest of the Nisga'a Lisims Government.

Suite 1600, 401 Bay Street, Toronto, ON, M5H 2Y4

We see many environmental and First Nation parallels between the Kitsault and Tulsequah Chief mine projects and we are committed to unlocking value through cooperation and partnership with the local community. To that end, I have also sent the enclosed letter to Louise Gordon which outlines our commitment to partnership and respectful engagement.

We would very much appreciate the opportunity to meet with you both to discuss our plans at your earliest convenience. In particular, we would like to discuss our thoughts and options regarding potentially restarting the water treatment plant while some additional exploration work is undertaken. We would also be interested in hearing your perspectives on the project generally and the status of relations between the province and the Taku River Tlingit.

Please let us know if you might have some time to meet with us in the next few weeks. I would be happy to make myself available in either Vancouver or Victoria as best suits your schedules.

Thank you in advance for your consideration.

Sincerely,

BLACK LOON METALS INC.

Gordon J. Bogden
Executive Chairman

Encl:

cc: Honourable John Rustad, Minister of Aboriginal Relations
Elaine McKnight, Deputy Minister, Energy and Mines
Wes Shoemaker, Deputy Minister, Environment
Doug Caul, Deputy Minister, Aboriginal Relations and Reconciliation

Suite 1600, 401 Bay Street, Toronto, ON, M5H 2Y4

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Extract from 2016 Aquatic Ecological Risk Assessment, Tulsequah Chief Mine, Skeena Region

SLR Consulting (Canada) Ltd. (SLR) was retained by BC Ministry of Environment to complete water sampling, sediment sampling and a fisheries habitat assessment at the Tulsequah Chief Mine Site in the fall of 2016; and to prepare this aquatic ecological risk assessment (AERA) based on the 2016 results. The purpose of the 2016 AERA was to provide a current state assessment of potential impacts to aquatic receptors within the Tulsequah River, including the mainstem, braided channels and tributaries surrounding the Site.

The main difference in the 2016 sampling program were the areas where samples were collected compared to historical sampling programs. The 2016 program focused on collecting samples from areas exposed to historic mine input sources and/or in areas where aquatic receptors (fish and invertebrates) potentially reside. The 2016 program included an aquatic habitat assessment to identify fish habitat features and fish utilization within these sampling areas. The historical sampling program was designed for environmental monitoring and permitting purposes.

The 2016 AERA study area was divided into four exposure units referred to as "zones"; with each zone having unique mine-related input sources and fish habitat features. A total of 20 surface water, five porewater and six sediment samples were collected within the four zones. Zone 1 was a reference zone while Zones 2 to 4 were impacted by mine-related sources. The 2016 AERA calculated risk estimates (HQs) for fish, fish eggs, and aquatic invertebrates using maximum concentrations for Contaminants of Potential Concern (COPCs) that were specific to each of the four zones. Three types of media were used to represent exposure sources to the five receptor groups. Surface water concentrations were used for resident and migratory fish, porewater concentrations were used for fish eggs and pelagic invertebrates, and sediment was used for benthic invertebrates. Fish HQ results were further evaluated within the context of what fish species would be present, when they would be present, and their exposure duration within each zone.

HQs were highest in Zone 2. This is likely because multiple undiluted and untreated sources of historic mine waste are discharging into the Tulsequah mainstem and side channels from surface water and groundwater inputs.

Within Zone 2 metal concentrations pose unacceptable risks to fish, fish eggs and pelagic invertebrates. The highest HQ values were cadmium, copper, and zinc HQs for fish, fish eggs and pelagic invertebrates and the aluminum HQ for fish eggs. There also was potential risk identified from aluminum, iron and lead for both fish and pelagic invertebrates, cobalt for pelagic invertebrates, and lead, iron and sulphate for fish eggs. For benthic invertebrates copper was the only elevated HQ identified with potential risk. Based on the SEM/AVS results copper has a high bioavailability to invertebrates within sediments from this zone.

The 2016 habitat assessment identified that it is unlikely that fish and aquatic invertebrates would spend a significant amount of time within Zone 2. This is due to a combination of high turbidity, and low pH input from mine sources documented during the 2016 field program.

HQs were lower in Zone 3 than in Zone 2. HQs were greater in Zone 3 than in Zone 4. Within Zone 3 copper and lead HQs for resident and migratory fish, zinc HQs for resident fish, and the iron HQ for pelagic invertebrates were associated with the highest potential risk. There also was potential risk identified from cadmium for fish, aluminum for pelagic invertebrates, and aluminum, copper and iron HQs for fish eggs. For benthic invertebrates arsenic was the only elevated HQ identified with potential risk. A moderate level of uncertainty is associated with Zone 3 risk estimates because although maximum concentrations were used it is unclear whether they represent the worst case scenario exposure conditions.

Zone 3 has the potential for the largest number of receptors to be exposed to Tulsequah Chief Mine sources within the study area, although concentrations were not the highest. Elevated HQs identified potential risk for both fish and aquatic invertebrates which were slightly lower than risk levels in Zone 2. The main difference between Zones 2 and 3 are the number of areas with high quality habitat features in Zone 3 compared to Zone 2. As a result both fish and aquatic invertebrates receive constant exposure to mine-related COPCs because they have a high potential to spend a significant amount of time within Zone 3.

Historically samples were not collected within Zone 3 despite containing mine-related sources and high quality fish habitat. Although migratory fish would not spend their entire life cycle within this zone, Zone 3 provides high quality habitat for migratory salmonids. Zone 3 also provides high quality habitat for resident fish such as Trout and Dolly Varden to spawn, rear, and for overwintering juveniles. Exposure would be highest for resident fish such as Stickleback, Sculpin, and sub-adult Dolly Varden. Almost all habitat requirements are met for residents which would allow them to spend all of their life cycle within this Zone, and receive year-round lifelong exposure to mine-related COPCs.

Within Zone 4 all calculated HQs for fish and benthic invertebrates indicated acceptable risk. Porewater was not collected within Zone 4 and therefore HQs weren't calculated for fish eggs and pelagic invertebrates. A high level of exposure is associated with the resident and migratory fish HQs because the amount of time that these fish would spend within this area is substantial.

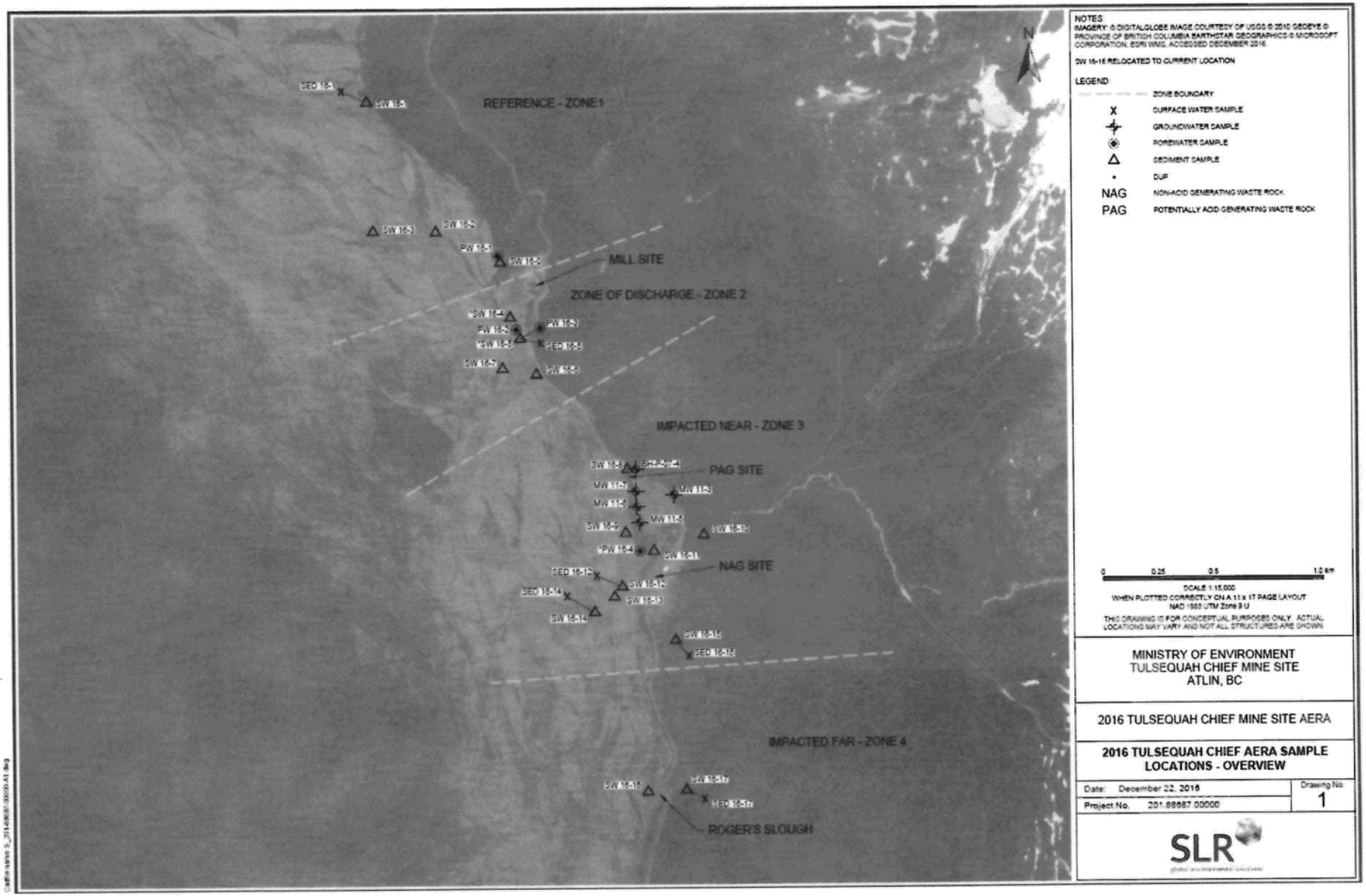
A moderate level of uncertainty is associated with the 2016 AERA risk estimates because although maximum concentrations were used it is unclear whether they represent the worst case scenario exposure conditions.

Based on the AERA conclusions SLR provides the following recommendations to address site risks and uncertainties, and to provide input into remediation planning:

- Restricting overland flow would reduce exposure and thereby reduce risk to aquatic receptors. Overland discharge of untreated mine source waters from the exfiltration pond and portals into the Tulsequah River are sources of contamination to Tulsequah River and aquatic receptors;
- Full characterization of the spatial extent and contaminant concentrations in all relevant media has not been conducted. Complete follow-up assessment that includes concurrent groundwater, porewater, and surface water sampling in all four zones;
    - Porewater concentrations indicate that groundwater is a source of contamination into the Tulsequah River. Groundwater was not a media evaluated under the current AERA. Trends between groundwater and porewater need to be evaluated to confirm mine sourced COPCs into receiving waters within Zones 2 and 3. An evaluation of groundwater concentrations for current wells surrounding the Non Acid Generating (NAG) and Potentially Acid Generating (PAG) piles relative to porewater would reduce the uncertainty associated with porewater data relied upon in the assessment;
    - Concurrent water sampling should be repeated so that seasonal and temporal variation can be captured under exposure conditions involving both high and low source input;
    - Quantify total and speciated chromium to confirm the contribution of chromium VI vs. III to total chromium within all three media; and
    - Incorporate all historical information into a follow-up risk assessment.
- Aquatic habitat assessment was limited in 2016 due to the fall/winter season. Complete a follow-up aquatic habitat assessment to confirm:

  - Presence/absence of dominant macrophytes in areas receiving groundwater input and downgradient of NAG/PAG;
  - Presence/absence of resident and migratory fish when the spring (Sockeye, Cutthroat Trout) and fall (Coho, Dolly Varden) migratory fish will be present using capture techniques between Zones 1 to 3; and
  - Changes from the original aquatic habitat assessment.
- Geochemical assessment of NAG and PAG waste rock areas would confirm the acid/metal leaching potential of the piles. Complete a geochemical assessment of future metal availability and loading from source materials into groundwater and surface water; and
- Complete an update of the 2016 AERA to incorporate the above recommendations and once steady-state COPC concentrations have been identified to aid remediation option analysis for reducing the risks to aquatic receptors.

Extract from 2016 Aquatic Ecological Risk Assessment, Tulsequah Chief Mine, Skeena Region



Barber, Jessie MEM:EX

From: Trumpy, Chris MEM:EX
Sent: Friday, July 7, 2017 10:46 AM
To: Barber, Jessie MEM:EX
Subject: FW: Thank you again and follow-up

From: Trumpy, Chris MEM:EX
Sent: Monday, March 27, 2017 2:38 PM
To: Robb, Peter L. MEM:EX
Subject: FW: Thank you again and follow-up

FYI

From: Shoemaker, Wes ENV:EX
Sent: Monday, March 27, 2017 2:33 PM
To: 'Gordon Bogden'; McKnight, Elaine L MEM:EX
Cc: Zacharias, Mark ENV:EX; Trumpy, Chris MEM:EX; Love, Mark P ENV:EX; McGuire, Jennifer ENV:EX; Eichenberger, Kathy MEM:EX; Robin Junger; Shane Uren (shaneu@greenwoodenvironmental.ca); Daniella Dimitrov
Subject: RE: Thank you again and follow-up

Thank you Gordon. We trust that Daniella and you had a safe journey back to Toronto. We await hearing from you regarding specifics on the Tulsequah Chief project.

Wes

From: Gordon Bogden [mailto:gordon@blackloonmetals.com]
Sent: Monday, March 27, 2017 2:31 PM
To: Shoemaker, Wes ENV:EX; McKnight, Elaine L MEM:EX
Cc: Zacharias, Mark ENV:EX; Trumpy, Chris MEM:EX; Love, Mark P ENV:EX; McGuire, Jennifer ENV:EX; Eichenberger, Kathy MEM:EX; Robin Junger; Shane Uren (shaneu@greenwoodenvironmental.ca); Daniella Dimitrov
Subject: Thank you again and follow-up

Dear Wes & Elaine,

Many thanks again to you and your respective colleagues for providing me and my colleagues at Black Loon, with the opportunity to share with you our strategy for the development of the Tulsequah project should we consummate a transaction with the Receiver. We appreciate your warm welcome, candor and transparency. As we mentioned in closing, we will summarize our understanding of the complex

compliance issues and the support we would ask from you to allow us to conclude our deliberations on the possible acquisition and operation of the project.

Kind regards,

Gordon

Gordon J. Bogden
Executive Chairman

BLACK LOON
O +1 416 646-1047
M +1 416 587-5177
Suite 1600, 401 Bay Street
Toronto, ON M5H 2Y4

Date March 23, 2017

MBB Briefing:

- Diane permit release & NR.

March 24, 2017

Blair Coon:

- two site visits already.
- need to clean up site first; s.21 to re-open WTP.
- good technical/econ. case, don't want to own and flip in 2 yrs.
- looking to minimize historical liability. (indemnity)
- mine site:
  1. get WTP up & running (BIM)
  2. general site clean-up.
  3. advance some of the permits, Mines Act
  4. bonding & reclamation. costs.

high level monitoring plan as well.

permits. EAC amendment req.

- informally told if was a good letter & the right letter to TRT.
- strong interest in partnering (cent on Mine Board)

Date

- TRT road construction.
  - looking at Lockheed airships for site access.
- acquire assets from creditor, rights to project infrastructure.
  - would get them for no debt.

s.21

- want to be ready to go by mid-May. to hit work season.

s.21

- bonding/rec significant factor.
- permitting issues.
  - WTP name Δ & permit for operations. (final in April)
  - MEM/MoE AERA does identify some groundwater issues.
  - RFP for closure & rec. plan during summer

1. bonding & gov't approach.
2. what is in permits.
3. any potential app. of CS regime.

Barber, Jessie MEM:EX

From: Eichenberger, Kathy MEM:EX
Sent: Wednesday, May 3, 2017 9:55 AM
To: Robb, Peter L. MEM:EX; Howe, Diane J MEM:EX; Zacharias, Mark ENV:EX; McGuire, Jennifer ENV:EX; Trumpy, Chris MEM:EX; Hill, Douglas J ENV:EX
Subject: FW: Black Loon Meeting today

FYI

-----Original Message-----
From: DD s.22
Sent: Wednesday, May 3, 2017 9:51 AM
To: Eichenberger, Kathy MEM:EX
Cc: Daniella Dimitrov
Subject: Black Loon Meeting today

Hello Kathy,

I would like to confirm our meeting today along with our attendees:
- Daniella Dimitrov - Black Loon in person
- Shane Uren - Black Loon - in person
- Gord Bogden - Black Loon - in person
- Robin Junger - counsel to Black Loon, by phone
- Peter Fraser - West Face (secured creditor) - by phone
- Graeme McLellan - West Face - by phone
- Philip Panet - West Face (in-house) - by phone
- Mark Wheeler - BLG - corporate counsel to West Face - by phone
- Dino Rossi - BLG - environmental counsel for West Face - by phone
- Jay Kellerman - corporate counsel for Black Loon - by phone
- Kevin Smyth - corporate counsel for Black Loon - by phone

We propose to use our dial in number

1-866-305-1460
s.17

If there are any changes in your list attendees, please let me know.

We look forward to seeing you at 13:00.

Warm regards
Daniella

Barber, Jessie MEM:EX

From: Shane Uren <shaneu@greenwoodenvironmental.ca>
Sent: Thursday, April 6, 2017 10:15 AM
To: Howe, Diane J MEM:EX
Subject: Fw: Tulsequah Chief - Black Loon - Follow Up

Hi Diane, thanks for your time yesterday to discuss TC.
Please see below.
Shane
Sent from my BlackBerry 10 smartphone on the TELUS network.

From: Daniella Dimitrov
Sent: Thursday, April 6, 2017 3:58 AM
To: Elaine L. McKnight; Wes Shoemaker Env:Ex
Cc: Gordon Bogden; Shane Uren; Robin Junger
Subject: Tulsequah Chief - Black Loon - Follow Up

Good morning Elaine and Wes,
We understand that our colleague Shane Uren had a good discussion with Diane Howe yesterday and that Diane provided some good questions and helpful information that may warrant further discussion. We understand that there is a related internal meeting of government staff tomorrow.
May we suggest that our teams hold a small group discussion to further canvass a number of the issues before you respond to our recent letter? We think such a discussion could be beneficial for all concerned.
We would be happy to have the meeting early next week, and on our end it would be Shane and Robin (and potentially me by phone). We would of course be happy to have your teams involve whomever you wish on your end.
Thanks you in advance and warm regards,
Daniella
Daniella Dimitrov
daniella@blackloonmetals.com
416-317-7776

Barber, Jessie MEM:EX

From: Robb, Peter L. MEM:EX
Sent: Thursday, March 30, 2017 4:14 PM
To: Eichenberger, Kathy MEM:EX; Hoffman, Al MEM:EX; Howe, Diane J MEM:EX
Subject: FW: Tulsequah Project
Attachments: Ltr DM McKnight and DM Shoemaker 30 March 2017.pdf

Let's meet to discuss…this will be an interesting discussion

Peter Robb
Assistant Deputy Minister
Ministry of Energy and Mines
Cell: 250 812 7392

From: Shoemaker, Wes ENV:EX
Sent: Thursday, March 30, 2017 3:02 PM
To: Zacharias, Mark ENV:EX; Robb, Peter L. MEM:EX
Subject: FW: Tulsequah Project

In case their letter did not come with my previous message.

Wes

From: Gordon Bogden [mailto:gordon@blackloonmetals.com]
Sent: Thursday, March 30, 2017 2:34 PM
To: McKnight, Elaine L MEM:EX; Shoemaker, Wes ENV:EX
Cc: Robin Junger; Daniella Dimitrov; Shane Uren (shaneu@greenwoodenvironmental.ca)
Subject: Tulsequah Project

Dear Elaine and Wes,

Please see the attached letter regarding Black Loon's potential interest in the Tulsequah Project.

Kind regards,

Gord

Gordon J. Bogden
Executive Chairman
BLACK LOON

O +1 416 646-1047
M +1 416 587-5177
Suite 1600, 401 Bay Street
Toronto, ON M5H 2Y4

Page 08

Withheld pursuant to/removed as

DUPLICATE

Barber, Jessie MEM:EX

From: McKnight, Elaine L MEM:EX
Sent: Tuesday, April 25, 2017 12:14 PM
To: Robb, Peter L. MEM:EX; Shoemaker, Wes ENV:EX
Subject: FW: Black Loon Metals and Tulsequah Chief Project
Attachments: Ltr Louise Gordon DM McKnight 25 April 2017.pdf

FYI

Elaine

From: Melissa Santagato [mailto:melissa@blackloongroup.com]
Sent: Tuesday, April 25, 2017 12:12 PM
To: govern.spokesperson@gov.trtfn.com; McKnight, Elaine L MEM:EX
Cc: spoke.assist@gov.trtfn.com
Subject: Black Loon Metals and Tulsequah Chief Project

Dear Ms. Gordon,

On behalf of Mr. Gordon Bogden, Executive Chairman of Black Loon Metals Inc. please see the letter attached regarding the Tulsequah Chief project.

Melissa Santagato

BLACK LOON METALS

401 Bay Street
Suite 1600
Toronto, ON M5H 2Y4
T +1 416 646 1046
melissa@blackloonmetals.com

DELIVERED BY EMAIL

April 25, 2017

Ms. Louise Gordon
Spokesperson
Taku River, Tlingit First Nation
P.O. Box 132
Atlin, BC V0W 1A0

Ms. Elaine McKnight
Deputy Minister
British Columbia – Ministry of Mines & Energy
1820 Blanshard Street, 8th Floor
Victoria, BC V8W 9N3

Dear Ms. Gordon and Ms. McKnight,

I would like to take the opportunity to reiterate to you that Black Loon Metals remains sincerely interested in, and committed to, working in full partnership with the Taku River Tlingit First Nation (TRTFN) to explore a win-win opportunity concerning the Tulsequah Chief project.

Unlike some projects that may require a *choice* between environmental impacts and economic opportunity, in this case the best and most affordable solution to the environmental problems we believe, is to complete the mining operation and ensure appropriate closure. We would like to play a role in that, in full partnership with the TRTFN, as noted in my October 17, 2016, letter. That partnership would not be limited to an economic interest, rather it would also include a meaningful role in project planning and governance.

Given the status of the court proceedings concerning the Chieftain receivership, we believe a window of opportunity exists and we would very much welcome the opportunity to sit down in a tripartite manner to discuss these issues and hopefully chart a common path forward. We would be happy to do so completely without prejudice to the TRTFN position on the project, and would not in any way hold out such a meeting as indicating support for even constituting consultation in respect of the proposed project. We just want to ensure that the TRTFN is able to hear from us directly as to the different approach that we are prepared to offer as compared to other companies. As I hope is clear, we want to work with government and the TRTFN on this project because we believe it could be a win-win opportunity for the TRTFN and the province as a whole, as well as our company. More specifically, we think it could become a prime example of how, when companies, First Nations and governments work together through honest and candid discussions that major successes can be found where others have yet to find them.

We do appreciate that a provincial election campaign is ongoing and that government agencies may have limited ability to address certain matters at this point, but we would nonetheless welcome the opportunity to meet with each of you, or those that you may designate, as soon as possible.

Thank you again for your consideration and please let me know if you would be able and willing to meet in person or speak by telephone sometime during the week of May 1st to 6th . In the meanwhile, please do not hesitate to call me directly on (416) 646-1047, if you would like to speak.

Sincerely,

BLACK LOON METALS INC.

Gordon J. Bogden
Executive Chairman

cc: Wes Shoemaker, Deputy Minister, British Columbia – Ministry of Environment

Doug Caul, Deputy Minister, British Columbia – Ministry of Aboriginal Relations and Reconciliation

Barber, Jessie MEM:EX

From: Shoemaker, Wes ENV:EX
Sent: Thursday, April 20, 2017 8:18 AM
To: Robb, Peter L. MEM:EX; Zacharias, Mark ENV:EX
Subject: FW: Meeting to discuss Tulsequah site/project/permit issues

FYI.

Wes

From: Daniella Dimitrov [mailto:ddimitrov@rogers.com]
Sent: Thursday, April 20, 2017 4:06 AM
To: Robin Junger; Eichenberger, Kathy MEM:EX
Cc: gordon@blackloonmetals.com; Shane Uren; daniella@blackloonmetals.com; Shoemaker, Wes ENV:EX; McKnight, Elaine L MEM:EX
Subject: Re: Meeting to discuss Tulsequah site/project/permit issues

Good morning Kathy,

Our apologies for the delay in responding. We have been tied up in negotiations and things appear to be moving well on that front.

As mentioned to Wes, we are in a rather tight time situation and meeting two weeks out is a bit problematic. We were hoping to have the meeting this week. Is there a chance we could find even an hour, perhaps this Friday morning or Monday (even if we have to proceed with some but not all of the relevant people available)? We believe these discussions are important to our overall decision-making and we believe there remains a possibility of a path forward that is positive for all parties and environmental protection generally.

If there is no possibility of meeting in the next few days, we would greatly appreciate it if you could please let us know if it possible to at least meet sometime next week?

Thank you very much and regards,

Daniella

Daniella Dimitrov ddimitrov@rogers.com 416-317-7776

From: Robin Junger <Robin.Junger@mcmillan.ca>
To: "Eichenberger, Kathy MEM:EX" <Kathy.Eichenberger@gov.bc.ca>
Cc: "ddimitrov@rogers.com" <ddimitrov@rogers.com>; "gordon@blackloonmetals.com" <gordon@blackloonmetals.com>; Shane Uren <shaneu@greenwoodenvironmental.ca>

Sent: Wednesday, April 19, 2017 9:39 PM
Subject: Re: Meeting to discuss Tulsequah site/project/permit issues

Thanks Kathy. Sorry for the delay.

I have connected with Gord and Daniella. They are juggling things and I know time is of the essence so expect they will respond to you very soon

Regards

Robin

Robin Junger*
Partner/National Co-chair, Environmental and Aboriginal Law Groups, Co-Chair Oil & Gas (B.C.) Group
d 778.329.7523 | f +1.604.685.7084
c +1.604.375.8900
robin.junger@mcmillan.ca

Assistant: Amy Bui | 236.826.3007 | amy.bui@mcmillan.ca

McMillan LLP
Lawyers | Patent & Trademark Agents
Royal Centre, 1055 W. Georgia Street, Suite 1500
PO Box 11117
Vancouver, BC V6E 4N7
mcmillan.ca

*Law Corporation

On Apr 19, 2017, at 4:54 PM, Eichenberger, Kathy MEM:EX <Kathy.Eichenberger@gov.bc.ca> wrote:

> Any news?
>
> ---
>
> **From:** Robin Junger [mailto:Robin.Junger@mcmillan.ca]
> **Sent:** Tuesday, April 18, 2017 3:00 PM
> **To:** Eichenberger, Kathy MEM:EX
> **Subject:** RE: Meeting to discuss Tulsequah site/project/permit issues
>
> Thx Kathy – I have passed along.
>
> Regards,
>
> Robin

Robin Junger*
Partner/National Co-chair, Aboriginal and First Nations Law Group, Environmental Law Group and Oil & Gas (B.C.) Group
d 778.329.7523 | f 604.685.7084
c 604.375.8900
robin.junger@mcmillan.ca

Assistant: Evelyn Fontaine | 236.826.3077 | evelyn.fontaine@mcmillan.ca

McMillan LLP
Lawyers | Patent & Trademark Agents
Royal Centre, 1055 W. Georgia Street, Suite 1500
PO Box 11117
Vancouver, BC V6E 4N7
mcmillan.ca

*Law Corporation

From: Eichenberger, Kathy MEM:EX [mailto:Kathy.Eichenberger@gov.bc.ca]
Sent: Tuesday, April 18, 2017 2:16 PM
To: Robin Junger
Subject: RE: Meeting to discuss Tulsequah site/project/permit issues

Now it looks like afternoon of May 3rd is the only time that would work in the near term. Hopefully that will work for your team.

From: Robin Junger [mailto:Robin.Junger@mcmillan.ca]
Sent: Tuesday, April 18, 2017 12:20 PM
To: Eichenberger, Kathy MEM:EX
Subject: RE: Meeting to discuss Tulsequah site/project/permit issues

Hi Kathy

Got it thanks – I am just waiting to hear back from the others on our team re availability.

Regards,

Robin

Robin Junger*
Partner/National Co-chair, Aboriginal and First Nations Law Group, Environmental Law Group and Oil & Gas (B.C.) Group
d 778.329.7523 | f 604.685.7084
c 604.375.8900
robin.junger@mcmillan.ca

Assistant: Evelyn Fontaine | 236.826.3077 | evelyn.fontaine@mcmillan.ca

McMillan LLP
Lawyers | Patent & Trademark Agents
Royal Centre, 1055 W. Georgia Street, Suite 1500
PO Box 11117
Vancouver, BC V6E 4N7
mcmillan.ca

*Law Corporation

From: Eichenberger, Kathy MEM:EX [mailto:Kathy.Eichenberger@gov.bc.ca]
Sent: Tuesday, April 18, 2017 9:36 AM
To: Robin Junger
Subject: FW: Meeting to discuss Tulsequah site/project/permit issues

Hi Robin,
My emails have bounced back. Hope this finds you.
Cheers
Kathy

s.14

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Withheld pursuant to/removed as

s.14

Barber, Jessie MEM:EX

From: Trumpy, Chris MEM:EX
Sent: Monday, March 27, 2017 2:38 PM
To: Robb, Peter L. MEM:EX
Subject: FW: Thank you again and follow-up

FYI

From: Shoemaker, Wes ENV:EX
Sent: Monday, March 27, 2017 2:33 PM
To: 'Gordon Bogden'; McKnight, Elaine L MEM:EX
Cc: Zacharias, Mark ENV:EX; Trumpy, Chris MEM:EX; Love, Mark P ENV:EX; McGuire, Jennifer ENV:EX; Eichenberger, Kathy MEM:EX; Robin Junger; Shane Uren (shaneu@greenwoodenvironmental.ca); Daniella Dimitrov
Subject: RE: Thank you again and follow-up

Thank you Gordon. We trust that Daniella and you had a safe journey back to Toronto. We await hearing from you regarding specifics on the Tulsequah Chief project.

Wes

From: Gordon Bogden [mailto:gordon@blackloonmetals.com]
Sent: Monday, March 27, 2017 2:31 PM
To: Shoemaker, Wes ENV:EX; McKnight, Elaine L MEM:EX
Cc: Zacharias, Mark ENV:EX; Trumpy, Chris MEM:EX; Love, Mark P ENV:EX; McGuire, Jennifer ENV:EX; Eichenberger, Kathy MEM:EX; Robin Junger; Shane Uren (shaneu@greenwoodenvironmental.ca); Daniella Dimitrov
Subject: Thank you again and follow-up

Dear Wes & Elaine,

Many thanks again to you and your respective colleagues for providing me and my colleagues at Black Loon, with the opportunity to share with you our strategy for the development of the Tulsequah project should we consummate a transaction with the Receiver. We appreciate your warm welcome, candor and transparency. As we mentioned in closing, we will summarize our understanding of the complex compliance issues and the support we would ask from you to allow us to conclude our deliberations on the possible acquisition and operation of the project.

Kind regards,

Gordon

Gordon J. Bogden
Executive Chairman

BLACK LOON
O +1 416 646-1047
M +1 416 587-5177
Suite 1600, 401 Bay Street
Toronto, ON M5H 2Y4

Barber, Jessie MEM:EX

From: Bennett, Bill MEM:EX
Sent: Thursday, March 9, 2017 11:34 AM
To: Denniston, Tristan M MEM:EX
Cc: Robb, Peter L. MEM:EX; McKnight, Elaine L MEM:EX
Subject: Fwd: Meeting next week
Attachments: image003.png; ATT00001.htm; image002.png; ATT00002.htm; Ltr Minister Bennett and Minister Polak 8 February 2017.pdf; ATT00003.htm

Will need to figure out how to respond to this. I can't see any reason not to meet but perhaps there is?

B

Sent from Bill Bennett,
Minister of Energy & Mines
British Columbia

Begin forwarded message:

> **From:** Gordon Bogden <gordon@blackloonmetals.com>
> **Date:** March 9, 2017 at 10:52:04 AM EST
> **To:** "Honourable Bill Bennett MLA - Government of British Columbia (Bill.Bennett@gov.bc.ca)" <Bill.Bennett@gov.bc.ca>
> **Cc:** "Elaine McKnight (elaine.mcknight@gov.bc.ca)" <elaine.mcknight@gov.bc.ca>, "Kim Henderson (Kim.Henderson@gov.bc.ca)" <Kim.Henderson@gov.bc.ca>, "Robin Junger" <Robin.Junger@mcmillan.ca>
> **Subject: Meeting next week**
>
> Dear Minister Bennett,
> I am following up on the note below and letter attached to see if you might have 30 minutes next week to meet in Victoria to discuss this matter. We believe there is a window of tremendous opportunity here that is in the interests of all parties, including the province, but the matter is somewhat time sensitive as we are at the point of having to make important decisions regarding our potential investment in this project.
> I would be happy to travel to Victoria to meet with you anytime next week if you might be able to find 30 minutes in your schedule.
> Many thanks in advance.
> Kind regards,
> Gord
> ***Gordon J. Bogden***
> **Executive Chairman**

DELIVERED BY EMAIL

February 8, 2017

Minister Bill Bennett
Ministry of Energy and Mines
PO Box 9060 Stn Prov Govt
Parliament Buildings
Victoria BC, V8W 9E2

Email: Bill.Bennett@gov.bc.ca

Minister Mary Polak
Ministry of Environment
PO Box 9047 Stn Pov Govt
Rm 112, Parliament Buildings
Victoria BC, V8W 9E2

Email: Mary.Polak@gov.bc.ca

Dear Minister Bennett and Minister Polak,

As you are aware, Chieftain Metals has entered into bankruptcy proceedings and a process is presently underway to determine whether and how the Tulsequah Chief project will move forward. Our company, Black Loon Metals Inc., has recently established a role as the leading potential proponent (working closely with Chieftain's largest creditor and other potential investors) and I am writing you today to provide an update on our plans.

Black Loon is Canadian private company with the strategy of becoming a multi-mine metals producer. The management of Black Loon is comprised of a committed team of experienced mining executives, with extensive capital markets and direct operating. In particular, the majority of the management team of Black Loon were part of Alloycorp Mining Inc., which from April, 2014 to September, 2015, successfully pre-developed the Avanti-Kitsault project near Terrace, B.C.

We believe that the present situation is one that is perfectly suited to our company. We have a very strong record of working successfully with First Nations to jointly overcome complex and long-standing environmental issues in the mining sector. As you may recall, I was CEO of Alloycorp Mining Inc. during the period of time that we successfully negotiated a Comprehensive Benefit Agreement with the Nisga'a Nation and a corresponding Environmental Agreement, which put to an end many years of rancor and discord. I am proud to say that the Nisga'a leadership repeatedly commented on the different approach taken once I became head of that company, and Alloycorp as a result had the honour of being the first company to attend the Wilp Si'ayuukhl Nisga'a as a guest of the Nisga'a Lisims Government.

Suite 1600, 401 Bay Street, Toronto, ON, M5H 2Y4

We see many environmental and First Nation parallels between the Kitsault and Tulsequah Chief mine projects and we are committed to unlocking value through cooperation and partnership with the local community. To that end, I have also sent the enclosed letter to Louise Gordon which outlines our commitment to partnership and respectful engagement.

We would very much appreciate the opportunity to meet with you both to discuss our plans at your earliest convenience. In particular, we would like to discuss our thoughts and options regarding potentially restarting the water treatment plant while some additional exploration work is undertaken. We would also be interested in hearing your perspectives on the project generally and the status of relations between the province and the Taku River Tlingit.

Please let us know if you might have some time to meet with us in the next few weeks. I would be happy to make myself available in either Vancouver or Victoria as best suits your schedules.

Thank you in advance for your consideration.

Sincerely,

BLACK LOON METALS INC.

Gordon J. Bogden
Executive Chairman

Encl:

cc: Honourable John Rustad, Minister of Aboriginal Relations
Elaine McKnight, Deputy Minister, Energy and Mines
Wes Shoemaker, Deputy Minister, Environment
Doug Caul, Deputy Minister, Aboriginal Relations and Reconciliation

Suite 1600, 401 Bay Street, Toronto, ON, M5H 2Y4

Barber, Jessie MEM:EX

From: Shoemaker, Wes ENV:EX
Sent: Thursday, April 6, 2017 10:01 AM
To: 'Daniella Dimitrov'; McKnight, Elaine L MEM:EX; Crozier, Bev ENV:EX
Cc: Gordon Bogden; Shane Uren; Robin Junger
Subject: RE: Tulsequah Chief - Black Loon - Follow Up

Thanks for the message Daniella. I will see if we can pull together another discussion for next week. I will have my assistant Bev reach out to you and try to find us a time.

Wes

From: Daniella Dimitrov [mailto:daniella@blackloonmetals.com]
Sent: Thursday, April 6, 2017 3:58 AM
To: McKnight, Elaine L MEM:EX; Shoemaker, Wes ENV:EX
Cc: Gordon Bogden; Shane Uren; Robin Junger
Subject: Tulsequah Chief - Black Loon - Follow Up

Good morning Elaine and Wes,

We understand that our colleague Shane Uren had a good discussion with Diane Howe yesterday and that Diane provided some good questions and helpful information that may warrant further discussion. We understand that there is a related internal meeting of government staff tomorrow.

May we suggest that our teams hold a small group discussion to further canvass a number of the issues before you respond to our recent letter? We think such a discussion could be beneficial for all concerned.

We would be happy to have the meeting early next week, and on our end it would be Shane and Robin (and potentially me by phone). We would of course be happy to have your teams involve whomever you wish on your end.

Thanks you in advance and warm regards,
Daniella

Daniella Dimitrov
daniella@blackloonmetals.com
416-317-7776

Page 23 to/à Page 26

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s.14