

SEABRIDGE GOLD

May 8, 2019

Via Email

Representative Louise Stutes, Chair of the Fisheries Committee
Representative Neal Foster
Representative Bob Herron
Representative Craig Johnson
Representative Charisse Millett
Representative Jonathan Kreiss-Tomkins
Representative Dan Ortiz

Juneau Legislative Information Office
State Capitol, Terry Miller Building, Suite 111
Juneau, AK 99801-1182

Dear Chairwoman Stutes and Fisheries Committee Members:

RE: April 30th Fisheries Committee Overview of Transboundary Mining, Correction of Record Regarding Inaccurate Information about the KSM Project.

After reviewing the testimony presented to the Fisheries Committee regarding transboundary mining on April 30, 2019, I wish to correct the stated inaccurate statements and provide you with factual information about Seabridge Gold's KSM Project, located in northwest British Columbia.

Proposed Mine Size

Presenter Jill Weitz stated that once KSM is built, it will be the largest open pit gold and copper mine in North America. This statement is inaccurate. **When** KSM goes into production, it will be similar in size to the existing Highland Valley Copper Mine, with a proposed production rate of 130,000 tonnes of ore per day. In addition, there are several existing mines in South America which exceed KSM's proposed throughput rate of 130,000 tonnes per day. Further, the Bingham Canyon mine, located in the United States, has a production rate that exceeds KSM's proposed rate. In comparison, KSM will be an average-sized mine when in production.

Regulatory Review

Beginning in 2008, the proposed KSM Project was under regulatory review for nearly seven years by both the Canadian and British Columbia's governments, a regulatory review that also involved both US Federal and State representatives working alongside Provincial and Federal regulators.

The KSM Project's mineral deposits are situated above the BC/Alaska Border on Sulphurets Creek, a tributary of the transboundary Unuk River. Due to the deposit's location, concerns of Alaskans along with the potential impacts to Alaskan waters were an important focus and carefully evaluated during both the provincial and federal environmental assessment reviews. Alaskans expressed the same concerns as Canadians, and all concerns were given equal weight in the assessment process. It is important to note that KSM's Tailings Management Facility is proposed along the Nass River, which **is not** a transboundary river.

As noted in the decision statement of the Canadian Minister of the Environment: *The project is not likely to cause adverse environmental effects as defined in the former Act, taking into account the implementation of mitigation measures described in the report ... the mitigation measures and follow up programs described in the Report are appropriate for the project.* The Minister also relied upon an independent Canadian Environmental Assessment Agency (CEAA) report, which stated: *"the agency has concluded that no significant adverse impacts on water quality, water quantity, fish, or human health are expected on the Alaskan side of the Unuk River."*

The British Columbia Ministers of Environment and Energy and Mines concluded, *"the project will be constructed, operated and decommissioned in a way that ensures that no significant adverse effects are likely to occur."*

During this same period, Seabridge engaged in regular communications with US Federal and State agencies who represent the views of their constituents. Between July 17, 2008 and, April 2019, Seabridge had more than 140 interactions (including meetings and correspondence) with at least ten US Federal and State agencies. Additionally, Seabridge worked closely with Alaskan environmental non-governmental organizations and communities, to ensure their concerns were acknowledged, addressed, and reflected in the KSM Project record throughout the Environmental Assessment (EA) process. Our efforts included: public notices, public information sessions, meetings with NGOs, an open house in Ketchikan, and tribal meetings and presentations.

The independent CEAA Report acknowledged and summarized these comments for the public record as follows: *"Residents of the United States, including tribal groups, raised concerns over the Project's potential transboundary impacts on fish, recreational and commercial fisheries, and human health from degraded water quality and changes in water quantity in the Unuk River."*

The State of Alaska was concerned about the potential elimination of fish habitat in BC watersheds that drain to Alaska, and the impact downstream to Alaskan fishery resources and water quality. The participating US Federal and State agencies did not identify any outstanding transboundary concerns following the EA processes. An April 2014 article in the Juneau Empire described the US's review of the KSM Project as follows: *"Four of the same resource managers and specialists who review Alaskan mines have examined KSM's plan, said Kyle Moselle of the Alaska Department of Natural Resources. They found no significant issues with the application."*

Moreover, the CEAA Report states the participating US Federal and State agencies did not identify any outstanding transboundary concerns with the EA.

Alaskan concerns and mitigation of these concerns were also identified within the British Columbia Provincial Government's "Reasons for Ministers' Decisions on the KSM Project. The document stated: *Concerns were raised by Alaskan non-government organizations regarding the potential effects of diminished water quality on fish and aquatic habitat in Alaska. After considering input*

from the Working Group, (including agencies from the State of Alaska and US federal government) EAO proposed a number of conditions to address potential effects to downstream water, fish and aquatic habitats. Proposed conditions include the requirement to have a fully operational selenium treatment plant by year five of operations; constructing water treatment facilities prior to the mining of any ore; the requirement for a comprehensive Aquatic Effects Management Plan, Selenium Management Plan, Water Management Plan and a Groundwater Monitoring and Mitigation Plan. All of these conditions will become legally enforceable. EAO concluded there would be no significant adverse effects to surface or groundwater quality or quantity, fish or aquatic habitats. As a result of this conclusion, EAO also concluded that there would be no significant adverse effects to fish and aquatic habitat from degradation of water quality and we concur with this finding”.

As a result of the feedback received during the EA processes, major design changes and additions were incorporated into the design of the mine site (i.e., the portion of the KSM Project that flows directly into Alaska), particularly changes focused on water management and treatment processes respectively.

Cumulative Effects

Although asserted otherwise during testimony, cumulative effects studies were included as part of the regulatory review for the KSM Project. This assessment included an evaluation of 14 additional foreseeably future projects. The cumulative effects assessment information can be found in Chapter 37 of the environmental assessment document.

Ms. Weitz has a history of making inaccurate statements regarding the depth and extent of the Canadian regulatory processes, especially as they relate to the KSM Project. Attached is a letter dated January 6, 2017, where we publicly corrected her previous inaccurate statements.

Baseline Water Quality

During the testimony, it was stated there is little baseline water quality data existing for the various projects and that any existing data is incomplete. This is incorrect. Seabridge has been collecting water quality data for the KSM Project since 2006 including from within the Unuk River. Further, this baseline data is of the highest quality and has been reviewed and accepted by independent Federal, Provincial and First Nation government scientists. Contrary to the assertions of the expert who testified at your hearing, we are willing to share this data with Alaska, which is why we provided it to the Alaska Department of Natural Resources in both 2018 and 2019.

Through our baseline data collection, we have determined that the Unuk River water quality is far from pristine. In fact, due to the natural erosion of the KSM mineral deposits, without any mining activity, the water is elevated in many metals and chemical parameters including iron, copper, and total suspended solids.



Photo 1: Confluence of Sulphurets Creek with the Unuk River depicting the impact of the natural erosion of the upstream mineral deposits on the regional water quality. The confluence is located approximately 22 miles upriver from the Alaska/BC border



Photo 2: The Mitchell Deposit highlighting the natural erosion and oxidation processes at work. Please note the presence of “green” copper sulphate staining in the middle left portion of the photograph.

Project Metal Grades

Significant exploration activity is taking place in northwest British Columbia due to its favourable geological environment. The KSM deposit has been evaluated and determined by an experienced industry expert to be an economically viable porphyry copper deposit that can be operated responsibly, as reported in a 2016 Preliminary Feasibility Study which is also posted on the SEDAR website (www.sedar.com). The KSM mineral deposit grades compare favorably with other gold deposit as is presented in Table 1. We encourage the House Committee to seek the services of an experienced mineral economist should you have additional questions on what makes a deposit economical.

Table 1: Summary of Global Gold Projects and their Associated Grades

Property Name	Gold											
	P+P Reserves			M&I Resources			Inferred Resources			MI&I Resources		
	Ore	Grade	Contained	Ore	Grade	Contained	Ore	Grade	Contained	Ore	Grade	Contained
	(M tonnes)	(g/t)	(M oz)	(M tonnes)	(g/t)	(M oz)	(M tonnes)	(g/t)	(M oz)	(M tonnes)	(g/t)	(M oz)
Pebble	-	-	-	6,439.0	0.34	70.4	4,460.0	0.26	37.3	10,899.0	0.31	107.6
KSM	1,974.0	0.55	35.3	2,924.7	0.53	49.2	3,959.2	0.38	48.9	6,883.9	0.44	98.1
Potchefstroom Goldfield	-	-	-	-	-	-	583.6	4.06	76.1	583.6	4.06	76.1
Sukhoi Log	-	-	-	-	-	-	887.0	2.00	58.0	887.0	2.00	58.0
Donlin	504.8	2.09	33.8	541.3	2.24	39.0	92.2	2.02	6.0	633.6	2.21	45.0
Reko Diq	-	-	-	2,982.8	0.27	25.5	2,885.1	0.17	15.9	5,867.9	0.22	41.4
Klerksdorp	-	-	-	-	-	-	85.1	14.50	39.7	85.1	14.50	39.7
ERP Extension	-	-	-	18.7	7.33	4.4	160.6	6.72	34.7	179.3	6.78	39.1
Snowfield	-	-	-	1,370.1	0.59	25.9	833.2	0.34	9.0	2,203.3	0.50	34.9
Natalka	293.0	1.70	16.0	411.0	1.80	24.2	148.0	2.10	9.9	558.0	1.90	33.6
Cerro Casale	1,197.6	0.60	23.2	1,494.3	0.55	26.6	495.4	0.38	6.0	1,989.7	0.51	32.6
Armgold/Orkney	12.6	5.45	2.2	107.0	5.13	17.7	210.1	2.09	14.1	317.1	3.12	31.8
La Colosa	-	-	-	821.7	0.85	22.4	242.5	0.78	6.1	1,064.2	0.83	28.5
Wafi-Golpu	380.0	0.91	11.0	803.4	0.85	22.1	202.4	0.74	4.8	1,006.0	0.83	26.9
Caspiche	-	-	-	1,403.6	0.52	23.2	198.1	0.29	1.8	1,601.7	0.49	25.1
Lookout Hill	35.0	0.55	0.6	122.0	0.57	2.2	1,874.0	0.37	22.4	1,996.0	0.38	24.6
Constellation	-	-	-	3,208.0	0.17	18.0	1,235.0	0.12	4.7	4,443.0	0.16	22.7
Pascua Lama	-	-	-	434.5	1.53	21.3	15.4	1.74	0.9	449.9	1.54	22.2
Frieda River	686.0	0.28	6.1	1,895.0	0.26	15.6	797.0	0.18	4.7	2,692.0	0.24	20.3
Metates	1,102.3	0.52	18.3	1,179.4	0.50	19.0	67.6	0.38	0.8	1,246.9	0.49	19.8
Elang-Dodo	-	-	-	1,476.0	0.35	16.8	375.0	0.24	2.9	1,851.0	0.33	19.7
Rosia Montana	214.9	1.46	10.1	512.7	1.04	17.1	44.8	0.98	1.4	557.5	1.04	18.6
Casino	1,123.0	0.20	8.9	1,140.0	0.20	8.9	1,713.0	0.20	9.0	2,853.0	0.20	17.9
Tampakan	-	-	-	2,270.0	0.21	15.5	670.0	0.10	2.2	2,940.0	0.19	17.7
Conga	-	-	-	693.9	0.65	14.6	230.6	0.39	2.9	924.5	0.59	17.5
NuevaUnion	1,838.2	0.15	8.9	2,327.6	0.14	10.2	1,288.9	0.16	6.5	3,616.4	0.14	16.6
Haiyu	48.0	4.42	6.8	51.4	4.86	8.0	68.4	3.79	8.3	119.8	4.25	16.4
Jeanette	19.2	11.52	7.1	13.1	22.41	9.4	33.4	5.42	5.8	46.5	10.20	15.3
Brisas	482.7	0.66	10.2	556.9	0.66	11.8	121.1	0.59	2.3	677.9	0.65	14.1
Goldrush	5.7	8.10	1.5	37.2	9.10	10.9	8.8	8.24	2.3	46.0	8.93	13.2
New Prosperity	831.0	0.41	11.0	1,010.5	0.41	13.2	-	-	-	1,010.5	0.41	13.2
Livengood	391.7	0.71	9.0	525.4	0.68	11.5	52.8	0.66	1.1	578.2	0.68	12.6
Cascabel	-	-	-	430.0	0.40	6.0	650.0	0.30	6.3	1,080.0	0.35	12.3
Kingking	617.9	0.40	7.8	981.1	0.33	10.4	199.0	0.25	1.6	1,180.1	0.32	12.0
Courageous Lake	91.1	2.20	6.5	107.3	2.31	8.0	53.6	2.27	3.9	160.9	2.30	11.9
White Rivers/Harmony Gold JV	-	-	-	18.6	8.41	5.0	30.7	6.55	6.5	49.2	7.26	11.5
Schaft Creek	940.8	0.19	5.8	1,228.6	0.19	7.4	597.2	0.18	3.4	1,825.7	0.18	10.7
Nezhdaninskoye	15.5	3.80	1.9	23.0	4.20	3.1	48.5	4.90	7.6	71.4	4.70	10.7
Galore Creek	528.0	0.32	5.5	814.7	0.30	8.0	346.6	0.24	2.7	1,161.3	0.29	10.7
Megamine	-	-	-	21.4	4.64	3.2	43.4	5.36	7.5	64.8	5.12	10.7

KSM Project Support

Companies like Seabridge work hard to develop respectful relationships. As to our Indigenous relationships, Seabridge has entered into a Comprehensive Benefits Agreement with the Nisga'a Nation in 2014 and is currently negotiating an agreement with the Tahltan Nation. The Project also entered into an Environmental Sustainability agreement with the Gitanyow Hereditary Chiefs Office, and the Gitxsan Hereditary Chiefs have endorsed the Project with a letter of support for the Project. Further, the company also received letters from the communities of Terrace and Smithers, both supporting the KSM Project.

Conclusion

I am disappointed we did not have an opportunity to provide facts as they relate to the KSM project during the Committee hearing. We would appreciate the opportunity to provide a balanced perspective of northwest British Columbia's mining activity alongside both Alaskan and BC government regulators and experts in mining, water treatment and aquatic monitoring and those First Nation governments who support responsible mining activity.

Seabridge, along with its experts, will continue to work with the State of Alaska and its representatives to ensure that factual information regarding KSM is provided and shared.

Anytime you seek this information, we are happy to share it with you as well.

Yours truly,

A handwritten signature in blue ink, appearing to read "R Brent Murphy". The signature is fluid and cursive, with the first name "R Brent" and the last name "Murphy" clearly distinguishable.

R Brent Murphy, M.Sc., P.Geol.,
Vice President, Environmental Affairs

RBM/MH/...

Cc: Kyle Moselle, Alaska Department of Natural Resources
Jennifer Anthony, British Columbia Ministry of Energy, Mines and Petroleum Resources

Attachments

SEABRIDGE GOLD

January 6, 2017

Ms. Jill Weitz
Campaign Manager
Salmon Beyond Borders
jweitz@tu.org; salmonbeyondborders@gmail.com

Dear Ms. Weitz,

We would like to bring your attention to several erroneous quotes with regard to Seabridge Gold's KSM Project attributed to you in a recent DeSmog Blog article titled *Southeast Alaska Asks Canada to Strengthen its Environmental Laws* and several false claims you recently made to the CEAA Review Panel in Prince Rupert, BC on December 9, 2016. We hope by correcting the record and providing you with factual information you will be more mindful in the future.

In the DeSmog blog article you are quoted saying "Changes made under the previous federal government excluded major mines in British Columbia from the federal environmental assessment process" which is not the case.

Contrary to your assertion, the KSM Project underwent a joint BC-Canada environmental assessment as mandated by the BC Environmental Assessment Act and the Canadian Environmental Assessment Act (1992) respectively. These independent environmental assessment review processes occurred over 70 months between March 2008 and December 2014 and concluded with receipt of the Federal Government's approval as signed by the Minister of Environment on December 19, 2014. The BC approval was granted on July 30, 2014 with signatures from the Minister of Energy and Mines and the Minister of Environment.

We request that you correct the misinformation regarding the absence of a federal environmental assessment on the KSM project immediately.

You have also made statements suggesting, "Despite living directly downstream from the mine, Alaskans were frustratingly prevented from meaningful participation in the project's environmental review." Again this is false.

During this review, Alaskans, including State and US regulators, Tribes, and the general public, information about the KSM project and the environmental review process was exchanged in more than 85 separate meetings and as a result, Alaskans' views were taken into consideration during the environmental assessment approval process as was referenced in the CEAA scientific report. It is important to highlight that the concerns of the Alaskans associated with potential downstream risks and impacts were the same as those expressed by Canadian residents. The involvement of Alaskan regulators was documented in a 2014 *Juneau Empire* article which summarized the conclusions of these regulators, "*four of the same resource managers and specialists who reviewed Alaskan mines have examined KSM's plan. They found no significant issues with the application.*"

The Canadian Minister of Environment, in making her favourable decision to approve the KSM project, determined the independent scientific review of the KSM Project was more than adequate and rejected the requests received in the fall of 2014 from Alaskan-based non-governmental organizations for an “environmental panel review” of the project. These requests were not ignored. The Minister in her decision and in private letters to various US based regulatory authorities explained why she concluded the environmental assessment of the KSM Project was deemed to be complete and she was confident in approving the project.

We are also requesting that you correct the misinformation regarding the absence of meaningful consultation with regard to permitting the KSM project immediately.

Third, you have suggested “Not only is the BC process flawed in terms of identifying whether KSM would have significant environmental impacts but the baseline data needed to say that doesn’t exist.” Again this is a false statement.

Prior to entering into the Canadian Federal and Provincial mandated environmental assessment processes, Seabridge Gold was required to collect significant environmental baseline data. Seabridge initiated baseline data collection at KSM in 2007 and collected aquatic, wildfire, air chemistry, and traditional knowledge data in areas potentially affected by KSM up to the US-Canada border and this data was presented as supporting documentation in KSM’s environmental impact statement submission to the independent regulators who reviewed KSM’s submission. This baseline data collection continues today, well after the completion of the environmental assessment review process. This **data does exist** and is publicly available on the BCEAO or the CEAA websites or by contacting Seabridge directly.

Canadian and US laws prevented Seabridge from collecting additional baseline data in areas of the Unuk River located within the US. However, Seabridge in acknowledging the concerns being expressed by Alaskans regarding water quality within the lower Unuk River, offered in a 2013 letter to Alaskan Tribal representatives to fund water quality baseline and ongoing sampling in this area. This offer was ignored.

Finally, you have erroneously stated the KSM Mine Tailings management facility “is perched in the Bell/Irving/Nass Watershed in BC near Sulphurets Creeks, which runs into the Unuk River and will drain into Alaskan waters.” The KSM tailings management facility (TMF) is not situated in waters upstream of the US border. To imply otherwise is simply incorrect. KSM’s TMF is situated within the Bell Irving Watershed which flows entirely into Canadian waters and is located over 20-kilometres from Sulphurets Creek.

Again, we are requesting an immediate retraction of your statement with regard to the KSM TMF being upstream of US waters.

Ms. Weitz, we appreciate your efforts of protecting the environment which is also a guiding principle behind the design of the KSM Project. Seabridge has put the KSM project through extensive environmental and technical evaluations by independent experts to ensure its operation will not cause harm to the surrounding environment, including waterways and fish, and has worked closely with all stakeholders, including Alaskans, to ensure that their concerns were acknowledged and addressed throughout the environmental assessment review. We are confident in our design and the robustness of the environmental assessment review processes that were mandated by BC and Canada, respectively.

We continue to work closely with our stakeholders to ensure ongoing questions and concerns regarding the KSM Project are addressed honestly and transparently and hope in the future you will also provide factual information when discussing the KSM Project publicly. Going forward with regard to referencing KSM, I would be happy to work with you to ensure you have the correct facts so Alaskans can make an informed decision. I am available either via telephone at 867-445-5553 or via email at brent@seabridgegold.net to answer questions regarding KSM.

I reiterate that I am requesting that the numerous errors you have made publicly be corrected as soon as possible.

Yours sincerely,

A handwritten signature in blue ink, appearing to read "Brent Murphy". The signature is fluid and cursive, with a large initial "B" and a long, sweeping underline.

R. Brent Murphy, M.Sc., P.Geol.
Vice President, Environmental Affairs

RBM/RS/...