

May 21, 2021

Via Email: adrienne@skeenawild.org

Attention: Adrienne Berchtold, Ecologist & Mining Impacts Researcher at Skeena Wild Conservation Trust

Dear Ms. Berchtold:

Re: Inaccurate Information about the KSM Project Published in Dirty Dozen 2021: B.C.'s Top Polluting and Risky Mines' Report

With respect to the poorly researched and ill-informed report authored by you, '*Dirty Dozen 2021: B.C.'s top polluting and risky mines*', I write to demand an immediate correction of several inaccuracies published about Seabridge Gold's KSM Project. These factual errors impinge upon our reputation as a responsible developer. I am disappointed that with your scientific background, you did not conduct due diligence of technical information prior to publishing a report.

For your understanding, we are sharing factual information about the KSM Project and feel free to reach me should you require any clarification.

To address the several factual errors and inaccuracies mentioned in your report, we have also provided some background information (below) for your consumption:

1) Acid generation and elevated selenium are predicted in the mine's impacted water, which will be discharged to the Unuk watershed There is currently no proven operational-scale technology for treating selenium. Even with treatment, selenium is still expected to rise downstream.

Water quality near the KSM Project

Since 2007, Seabridge Gold has been conducting ongoing water quality and hydrology monitoring within both the Unuk River, which drains into the Alaska border and tributaries of the Bell Irving River, spending approximately \$1-1.5 M million annually on these programs. Based on the data collected, it has been determined that Mitchell and Sulphurets creeks (flowing into the Unuk River) are **degrading naturally** resulting in **elevated concentrations of selenium and other metals** within the water. Treaty Creek,

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located downstream of the yet to be constructed Tailings Management Facility (TMF) location also has elevated levels of minerals due to the upstream stream location of mineralized zones of exposed bedrock, which are naturally oxidizing and eroding. Hence, **the water quality in these watersheds cannot be characterized as pristine.** The data we collected within UNUK river was further **validated by Greg Tamblyn (Ministry of Environment and Climate Change Strategy)** during the May 19, 2021 AK/BC Transboundary Public Meeting where Mr. Tamblyn said the data collected by Seabridge matched their findings.

Water quality flowing into Alaska will not degrade as a result of the KSM Project, beyond levels associated with ongoing erosion. This includes selenium levels, which will also not increase, in waters flowing across the BC/Alaska border, in the Unuk River.

Proposed selenium treatment technology at the KSM Project

During the KSM Project's Environmental Assessment process, potential impacts to the environment arising from selenium and other naturally occurring metals were **thoroughly evaluated and assessed.** In fact, the BC EA process required Seabridge to evaluate and adopt an effective selenium treatment technology for the KSM Project; it was a legally binding condition for the EA.

Towards that end, Seabridge adopted Selen-IX™ technology developed by selenium technical experts BioteQ Environmental Technologies, Inc. In 2015, Seabridge successfully completed a pilot plant evaluation of this new process for the removal of selenium from waters in northwest BC, **proving that the technology works.** The Selen-IX™ treatment technology was able to reduce selenium concentrations to 1 ppb in water extracted from the KSM project site. The technology was issued a **US patent in 2018 further validating Seabridge Gold's chosen approach for selenium treatment** at the KSM Project. Two additional Se treatment plants utilizing same technology as planned for the KSM Project, have been in construction in the US since last year and will start operation later in the summer of 2021. I note that these facts were conveniently omitted from your article.

Over the last years, there has been a major increase in the number of projects where **Selen-IX is selected as the treatment technology of choice by project owners, approved by regulators, and advanced into implementation.** In 2020, BQE Water completed commissioning and Performance Test of the First Selen-IX™ Plant for Selenium Removal at the Kemess Property in BC.

Furthermore, the proposed water management strategy at the KSM project will not only manage water that has been in contact with mining activities but will also improve the existing naturally poor water quality.

2. The other risk is KSM's massive proposed tailings storage facility (TSF), which will destroy sensitive fish habitat just by being built, and will sit atop the Nass River, one of B.C.'s top salmon-producing systems.

Proposed Tailings Management Facility

KSM Project's Tailings Management Facility (TMF) has been specifically engineered to be stable under all conditions, including earthquakes, and comply with the highest standards of static stability. The location of the TMF site was selected after completing an extensive alternative assessment which examined **14 different sites**. The site was chosen owing to its stable geological conditions, potential to minimize environmental impacts including those associated with land disturbance and aquatic impacts, and for being the most secure site from operability and closure perspectives. Additionally, water management volumes are also minimized as TMF is located in an alpine valley with no surrounding glaciers.

The TMF site underwent extensive independent evaluation by independent experts hired by the various Indigenous groups and government experts during the almost 7 year joint harmonized environmental assessment review, before being approved in 2014. Additionally, the TMF site received its Schedule 2 Amendment, as required by the Canadian Metal and Diamond Mining Effluent Regulations (MDMER), following further independent review by government experts and extensive Indigenous engagement, which occurred between 2014 -2017.

Additional factual information on the TMF is as follows:

- KSM Project's TMF design (and future operations) is annually reviewed by the **Independent Geotechnical Review Board (IGRB)** formed by Seabridge in 2015, which is comprised of world-class experts in tailings management with more than 300 years combined experience. In April 2016, the IGRB confirmed that the design of the proposed structures for KSM Project were **appropriate and safe**.
- Seabridge Gold also voluntarily initiated a **Best Available Tailings Technology (BATT) Review** of the planned management approach for the KSM Project which **confirmed that the existing** tailing management facility design is the **best available technology** for tailings deposition and the most environmentally responsible plan to minimize long term risks associated with the proposed tailing storage facility for the KSM Project and that **dry stacking was not a viable deposition method**. In actuality, dry stacking of tailings would result in greater environmental impacts.
- Furthermore, Seabridge also commissioned an **independent review of the BATT report by Dr. Dirk van Zyl**, a world-recognized expert in tailings, mined-earth

structures and sustainability with more than 40 years of experience. He also sat on the Mount Polley Independent Expert Review Panel. In his review, Dr. van Zyl concluded: **"I support the overall conclusions of the KSM BAT report."**

Upon reviewing the BATT review report (which is publicly available on our KSM website: www.ksmproject.com) any knowledgeable person would agree that dry stacking of tailings, which is being advocated by yourself and others (as self-professed mining experts), is simply not feasible at the KSM site. Additionally, no responsible mine operator would consider the implementation of such a system given that dry stacking would inevitably result in greater environmental impacts than the currently approved and accepted tailings design for KSM Project.

Once built, the lifespan (52 years) of the KSM Project will be on average more than three to four times the lifespan of the majority of the mining projects currently operating in BC. KSM Project's TMF was designed by considering the long lifespan and the resultant tailings. Hence, the TMF design, using the best available technology, can safely and securely store 2.3 billion tonnes of tailings.

3. Though KSM has been approved, regulators can still require that the mine — with consultation and consent of affected Indigenous groups, including Alaskan tribes — be redesigned for greater safety.

Working with Alaska

The KSM Project's Tailings Management Facility is located in the upper reaches of the Bell Irving River Basin and drains into Canadian waters, not the Unuk River, or any other US waterway. The KSM Project's mineral deposits are situated geographically north of the BC/Alaska Border on Sulphurets Creek, a tributary of the transboundary Unuk River, an area in which both the BC and Canadian governments allow responsible mineral exploration and mining to occur. Even though the KSM Project does not require any permits from US jurisdictions, including Alaska, due to the deposit's location, Seabridge worked extensively with Alaskan State and US Federal regulators to understand and address concerns of Alaskans. Seabridge voluntarily conducted 130 meetings/interactions with Alaskan community members, regulators and Tribes during this time. Alaskans expressed the same concerns as Canadians, and all concerns were given equal weight in the assessment process and ultimately were fully mitigated within the design of the proposed project.

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."*

I would also like to highlight for your information the fact that the Canadian Minister of the Environment in making her decision to approve the environmental assessment for KSM, relied upon a Canadian Environmental Assessment Agency's scientific 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.*” I note that this independent conclusion of KSM Project was also conveniently excluded from your report.

Engaging with our Indigenous and Community Partners

To Seabridge, working alongside Indigenous groups during Project permitting, planning and development stages is critical to the success of all Projects. We take an open-minded approach to input we receive and based on feedback and requests from Indigenous and other working groups (including those of Alaskans), we incorporated several design changes into the project, adding more than \$300 million to the project’s capital cost. Several of these design changes were at the request of Alaskan regulators.

The significant public support that Seabridge has developed for the KSM Project is also another significant omission from the report. For the past 12 years, Seabridge Gold has worked closely with the local communities to gain the social license to operate. Because of the trust built through these consultations, engagements and the accommodations made to address concerns, Seabridge entered into a comprehensive Benefits Agreements with both the Nisga’a Lisims Treaty Nation in 2014 and the Tahltan Nation in 2019 (the First Nations on whose traditional territory the KSM Project is located), covering protections of Indigenous rights, the environment and shared economic benefits for the KSM Project. Seabridge Gold also has an environmental agreement with the Gitanyow Wilps and the Gitksan Hereditary Chiefs have endorsed the Project with a letter of support for the environmental assessment approval. We have also received letters from the local communities of Terrace and Smithers both supporting the KSM Project.

Information the two signed benefits agreement with the Nisga’a and Tahltan nations and the additional support publicly expressed for KSM, was not referenced within your report.

Full reclamation bonding

With a simple web search, you would know that the provincial government of BC establishes the bond value required to reclaim and monitor the site and Seabridge is prepared for and has included full reclamation costing in all of our financial models to reclaim and monitor the KSM Project site. If the government were to find any project proponent, including Seabridge, incapable of posting the necessary funds to reclaim or monitor the site, they would not issues permits to build and operate the mine.

4. Voluntary environmental remediation at the Johnny Mountain Mine

I can only assume that because it did not fit your narrative of irresponsible mining, you also failed to acknowledge that Seabridge Gold is **voluntarily reclaiming the historic legacy and outstanding liabilities at the Johnny Mountain Mine site** at our Iskut property over a multi-year reclamation program, with the strong support of the Tahltan Nation.

To date, Seabridge Gold has spent approximately **\$6 million** to restore the Johnny Mountain Mine site (which was developed by a different operator and then purchased by Seabridge) and ensure that the Project is in compliance with BC Government regulations and authorizations. The overall objective of the reclamation plan for the Johnny Mountain site is to return disturbed lands and new anthropogenic landforms to their original land use and capability of alpine tundra wildlife habitat. Some of the remediation work done to date includes –

- Implemented general site cleanup;
- Dismantled the abandoned fuel tank farm;
- Removed hazardous materials including miscellaneous chemicals, batteries, mercury lights, and asbestos from the mill building and sent offsite to a licensed hazardous waste disposal facility;
- Closed underground adits and portals;
- Strengthened sections of the Tailings Management Facility with fill material;
- Revegetated disturbed areas, using locally sourced native grass seed mix, willow, alder, and heather/heath transplants; and
- Implemented extensive regional monitoring in the downstream aquatic environment

For Seabridge Gold, protection of the environment in both Canada and in the US is a guiding principle behind all our Projects. We are committed to sustainably developing all our Projects and would like to reiterate that the KSM project has been 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.

Once the Project begins operations, it will also be subject to monitoring requirements under a variety of approved plans including aquatic effects management, salmon monitoring, selenium management, wildlife management and the Canadian federal government Metal Mining and Effluent Regulations. We are confident in our plans that the KSM Project will be able to operate without harming the environment, including the major watersheds in which we will operate.

In closing, we strongly encourage you to fully educate yourself with all the facts regarding the mining industry and the KSM Project before publicly sharing information about our Project, so as to eliminate transmitting any further factual errors. I again reiterate my demand for a correction to your inaccurate description of KSM. I would be happy to answer any questions you have about how we are advancing the KSM Project using best available technology, robust sustainable practices and most importantly, collaborative relationships with our Indigenous partners and stakeholders. You can reach out to me via email brent@seabridgegold.com.

Sincerely,

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

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

RBM/RS/...

Cc: Greg Knox Executive Director, SkeenaWild Conservation Trust