

May 29, 2023

Via Email – [adrienne@skeenawild.org](mailto:adrienne@skeenawild.org)

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

Dear Ms. Berchtold:

**RE: Continued misrepresentation of the KSM Project in your reports**

I am not surprised and disappointed that despite providing detailed and factual information about the KSM Project in response to the 'Dirty Dozen 2021: B.C.'s top polluting and risky mines' report you published in 2021', you have once again published misleading information in your 2023 report, demonstrating a clear bias against our efforts and a lack of interest in factual reporting.

As someone with a scientific background, it is expected that you would adhere to the principles of accuracy and get the facts through thorough research. This commitment is the bare minimum owed to your audience so they can draw informed conclusions about the KSM Project and the mining industry as a whole. Regrettably, none of this is evident in the report.

Nevertheless, we would again like to extend to you an opportunity to rectify the misinformation published in your report by providing you with both new and previously shared factual information. We invite you to contribute to a more informed and constructive dialogue by correcting the misinformation about the KSM Project.

***As KSM receives unprecedented extensions of its Environmental Assessment (EA) certificate, Seabridge is pursuing habitat fragmenting construction activities before even acquiring the financial support it needs for full mine development.***

First, we want to clarify that the two-year extension granted to KSM's Environmental Assessment Certificate (EAC) was a result of the significant impacts caused by the COVID-19 pandemic. This crisis affected not only the communities of NW British Columbia (BC) but also the entirety of BC, Canada, and the world, impeding our ability to proceed with the planned development activities to responsibly advance our Project; activities which are progressing in accordance with our existing regulatory authorizations. Implying that Seabridge is pursuing habitat fragmenting construction activities which have been reviewed thoroughly during various environmental assessment processes and then subsequently vetted by the various permitting agencies, is further evidence of your based stance against mining projects.

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It is also **worth noting that the extension request was fully supported by our Indigenous partners - Nisga'a and Tahltan Nations (the First Nations on whose traditional territory the KSM Project is located)**. Our collaborative relationship with the Nisga'a and Tahltan Nations extends beyond mere support for the Project. We have actively engaged with these Nations and have signed comprehensive Benefits Agreements 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. These agreements are a testament to our commitment to meaningful consultation, cooperation, and partnership with our Indigenous partners.

In addition to the invaluable support received from our Indigenous partners, we would like to share that we also received letters of support from the local communities of Terrace and Smithers, further endorsing the KSM Project. Moreover, **an independent perception audit conducted in 2020 revealed that approximately 61% of residents in northwest BC either strongly supported or supported the KSM Project**. The overwhelming support we have received from our Indigenous partners and local communities in northwest BC is a clear reflection of the mutual understanding and a shared vision for responsible development, and the positive economic benefits the Project has the potential to bring to the northwest BC region and beyond. Regrettably, your report failed to acknowledge the crucial support Seabridge has received from our Indigenous partners for the extension of the Environmental Assessment Certificate (EAC) and the significant support we have garnered from the local communities and Indigenous partners in northwest BC for our Project as a whole.

**None of these facts were included in your report.**

*Concerning changes to the mine plan also keep occurring, the latest being that more environmentally destructive open-pit mining will be prioritized over underground mining to save costs.*

**The environmental implication of open pit and underground mining was extensively assessed for the KSM Project** during the seven years of independent joint-harmonized environmental reviews conducted under the [British Columbia Environmental Assessment Act](#), [the Canadian Environmental Assessment Act](#), and in accordance with Nisga'a Lisims Treaty. **The KSM Project was approved for both open pit and underground mining. Implying that open pit mining is inherently environmentally destructive is misleading.** The extensive review process aimed to gather diverse perspectives and ensure informed decision-making, ultimately demonstrating that responsible mining practices can be implemented for both open pit and underground mining methods.

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We also want to highlight the review process involved the active participation of over 250 scientists, engineers, Indigenous partners, and regulators to develop and meticulously review the information pertaining to the KSM Project. Additionally, more than 15,000 people from British Columbia and Alaska actively engaged in public meetings, consultations, and Project information sessions prior to the Project's approval. The comprehensive and inclusive nature of the environmental review process for the KSM Project is also missing in your report.

Mine planning is an inherent component of successful and responsible mining operations. It is important to note that regardless of the various mine plans discussed and evaluated, fundamentally the Project remains unchanged. All mine plans will undergo thorough review and evaluation by the appropriate regulatory authorities and our Indigenous partners to ensure adherence to responsible practices.

***Though KSM's EA is approved, regulators can still require that the mine—with consultation and consent of affected Indigenous governments, including downstream Alaskan tribes—be re-designed for reduced risks and impacts.***

As noted previously in this letter, Seabridge maintains a strong collaborative relationship with our Indigenous partners, particularly the Nisga'a and Tahltan Nations. In addition to the comprehensive Benefits Agreements, we have entered into with these Nations, further evidence of our close collaboration is **demonstrated through the recent establishment of the [Treaty Creek Limited Partnership](#) between Nisga'a and Tahltan Nations**. Announced on January 26, 2023, this partnership aims to optimize the participation of the Nisga'a and Tahltan Nations, maximize economic benefits, and create new opportunities for Nation members through training, employment, and contracting at our KSM Project. This new partnership further enhances and reinforces Indigenous involvement and responsible operations at KSM, which continue to be our guiding principles and key priorities as we continue to responsibly move forward through our early-stage construction programs.

### **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. Although the KSM Project does not require any permits from US jurisdictions, including Alaska, due to the deposit's location, Seabridge is working extensively with Alaskan State and US Federal regulators (140+ meetings, interactions and correspondence) and engaged with Alaskan tribes and ENGOs during the EA Process to understand and address their concerns. Most recently, representatives of the Alaska Department of Fish and Game, and Alaska Department of Environmental Conservation attended Seabridge Gold's Environmental Workshop. **You can find the Seabridge team's detailed interaction with Alaskans [here](#).**

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Alaskans expressed the same concerns as Canadians, and those concerns were given equal weight in the assessment process and ultimately, they were fully mitigated within the design of the proposed Project adding more than C\$300 million in design changes to the Project's capital cost. Alaska-specific changes include -

- Changed the water management approach on the mine side of the Project, to mimic mine discharge with high seasonal flows.
- Incorporating lined centre cell in the Tailings Management Facility to store sulphide-rich tailings.

The independent Canadian Environmental Assessment Agency (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 Agency is satisfied that identified mitigation measures for the Project would address potential impacts in Alaska on fish; recreational and commercial fisheries and human health from changes to water quality and quantity in the Unuk River."*

The participating US Federal and State agencies also did not identify any outstanding transboundary concerns following the EA processes. In fact, 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."*

***KSM's massive tailings storage facility (TSF), proposed to be 239 m tall and containing 2.3 billion tonnes of wet tailings, is the largest permitted dam in B.C. and among the largest in the world. If built, it will sit atop the Nass River, one of B.C.'s top salmon-producing systems, with 'Extreme' consequences if it fails..... This would include: primarily underground mining, non-degradation standards for discharge water quality, full reclamation bonding, and reduced tailings water content and/or dry closure of the TSF.***

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 that examined 14 different sites and consultations with local Indigenous groups. The remote location was selected for being the most secure site from an operational and closure perspective and was found to have the best environmental and waste management approach. Additionally, water management volumes are also minimized as the TMF location is situated in an alpine valley with no surrounding glaciers.

It is also important to note that once built, the KSM Project will have a lifespan of 50+ years. The Project's TMF was designed with consideration for that long lifespan and the resultant tailing volume to be stored. Using the best available technology, the facility as is

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currently designed can safely and securely store 2.3 billion tonnes of tailings. You can learn more about the design of the TMF [here](#).

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 information about KSM Project’s proposed TMF which we think you might find useful:**

- 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 of combined experience. **In April 2016, the IGRB confirmed that the design of the proposed structures for the 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 as we wanted to ensure again that the best and safest approach for tailings management had been selected. **This study 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. It was determined that dry stacking would result in greater environmental impacts and is not a viable option.**
    - Please read the [BATT Report](#) and the [Plain Language Summary](#) of the BATT Report to learn more about tailings management at the KSM Project and the conclusions from the study. Seabridge Gold’s commitment to selecting the safest and most environmentally responsible approach for tailings management is underscored by the BATT Review, further ensuring the Project’s adherence to stringent environmental standards.
  - 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 BATT report."**
  - The TMF will be regulated and monitored in compliance with the Canadian Dam Safety Association (CDA), International Commission on Large Dams (ICOLD), International Council on Mining and Metals (ICMM), Mining Association of Canada (MAC), and Engineers and Geoscientists BC (EGBC), along with regular reviews by Seabridge’s Independent Geotechnical Review Board.
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**Full reclamation bonding**

The BC government establishes the bond value required for reclamation and site monitoring. Seabridge Gold, as a responsible company, has taken this into consideration and has included full reclamation costing in all of our financial models to reclaim and monitor the KSM Project site. Our commitment to reclamation is unwavering, and we have allocated the necessary funds to fulfill our obligations. Moreover, we also want to highlight that the government strictly evaluates the financial capabilities of Project proponents, including Seabridge, before issuing permits to build and operate a mine. If any proponent is deemed incapable of meeting the financial requirements for site reclamation and monitoring, permits to build and operate the mine would not be granted. Seabridge Gold remains fully prepared and committed to fulfilling our reclamation obligations for the KSM Project, ensuring environmental responsibility and long-term sustainability.

*The mine's wastewater, containing elevated metals and selenium, will require treatment for hundreds of years before release to the Unuk watershed— a watershed that supports salmon stocks of concern.*

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 C\$1-1.5 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, 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. You can read the Unuk River Watershed Baseline Characterization Report (2007 to 2018) [here](#).**

The data we collected (and continue to collect) within the Unuk River was further **validated by Greg Tamblyn (Ministry of Environment and Climate Change Strategy)** during 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, within the Unuk River.

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The pictures below demonstrate the existing natural conditions around the KSM Project and the current water quality issues in this region.



Photo 1: Confluence of Sulphurets Creek with the Unak 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 3: Existing conditions at the KSM and downstream areas. Seep water near the Mitchell Glacier Toe.



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.

***Perpetual water treatment is inherently risky, especially given that selenium treatment technologies are immature.***

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. To 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 the same technology as for the KSM Project, are now successfully operating in the US. In 2020, BQE Water also completed the commissioning and Performance Test of the First Selen-IX™ Plant for selenium removal at the Kemess Property in BC. 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 the commissioning and Performance Test of the First Selen-IX™ Plant for Selenium Removal at the Kemess Property in BC and in 2021 was awarded the prestigious 2022 Clean50 Top Project Award for the Kemess plant by Delta Management Group.

Characterizing the Se Treatment technology as immature is another misrepresentation of the facts, intended to raise emotional concerns about the KSM Project. Such statements further demonstrate your biased stance against mining, particularly the KSM Project.

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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.** I note that these facts were conveniently omitted from your article.

At Seabridge Gold, the protection of the environment in both Canada and the US is a guiding principle behind all our Projects. We are dedicated to developing all our Projects responsibly, and we would again like to emphasize that the KSM Project has undergone rigorous environmental and technical assessments by independent experts to ensure that its operation does not pose any harm to the surrounding environment.

We urge you to thoroughly familiarize yourself with the technical facts concerning the KSM Project before disseminating information publicly. Furthermore, we kindly reiterate our request that you either remove the inaccurate details about the KSM Project or include accurate facts in your report to ensure a fair representation. If you have any questions or require further information about the KSM Project, please don't hesitate to contact me at [brent@seabridgegold.com](mailto:brent@seabridgegold.com). I would be more than happy to assist you.

Thank you for your time.

Sincerely,



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

RBM/RS/...

CC. Greg Knox Executive Director, SkeenaWild Conservation Trust  
Nikki Skuce, Director of Northern Confluence Initiative  
Jessica Spanton, Communications Coordinator, BC Mining Law Reform  
Roy Millen, Legal Counsel, Blake, Cassels & Graydon LLP

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