# Northwestern B.C. gold mine tailings plan exhaustively reviewed

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**Dear Sir:**

Re: KSM Tailing Management Facility

Seabridge wishes to ensure the public record is correct with respects to its KSM Project and the proposed Tailing Management Facility (TMF).

It is important to remember the KSM project underwent an approximately 6.5 year environmental assessment (EA) process with both the provincial and federal governments. During this process, the tailing storage facility was thoroughly reviewed by provincial, federal and independent experts hired by local aboriginal groups. KSM did not receive federal approval until five months after the Mount Polley incident.

During the EA, questions regarding the potential risk associated with centerline dam construction were raised. The question was addressed to the satisfaction of the independent regulators during the environmental assessment process via a technical memo (this memo is available on the BC EAO website).

Key points from the memo include:

* The centerline method of dam construction is internationally accepted for major tailings dams and the method has been used with success at more than five mines in British Columbia since the 1960s.

* Centreline cyclone sand dams differ from conventional water retention dams in three significant ways.

1. Centreline dams are designed with wide upstream tailings beaches that keep the stored water pond separated well away from the dam and the volume of the water stored in the operating ponds is far less than in a conventional water reservoir. This restricts the magnitude of potential seepage through dams and contributes to the stability of this dam type.

2. Tailings dams are built slowly in increments over periods of several decades.

This allows the engineers and operator to observe the behaviour of the dams as they are raised and to implement any necessary changes to the designs prior to reaching the final ultimate height.

3. The tailings dams do not store water against the dams (they have long upstream tailing beaches) and they are provided with impermeable cores (liners or till cores) to further restrict seepage. As such, the dams do not require the downstream construction method.

KSM will not use earthen dykes constructed of till material (as is used at Mount Polley). Instead, the dams will be constructed of double cycloned sand at a 3:1 slope, which is free draining. Additionally, KSM's Tailing Management Facility will be situated in a confining valley with dams at either end. It will not be situated within a ring dyke structure.

The tallest tailing dam structure at the KSM tailing facility will be 239 metres in height at the end of operation (i.e. 52 years after the initiation of construction).

The dam will be holding back saturated sand, well away from the dam crest due to the free draining characteristics of the tailings material with some water ponded on its surface. It will not be holding back copious volumes of water or a lake.

The Mount Polley Review Panel indicated implementing Best Available Technology (BAT) is the best way to avoid dam failure. It is important to remember the Review Panel did not recommend dry-stacking as the only form of BAT, but as one potential example

The KSM Tailings Storage Facility has been designed according to BAT principles, incorporating both physical and geo-chemical stability suitable to KSM site specific characteristics.

Seabridge did consider the use of only dry stacking; however, it was determined use of this method would result in significantly more environmental impacts, with increased environmental risk than what is associated with the current approved design consisting of dams constructed with double cycloned sand.

The KSM closure plan (which is more than 50 years into the future) is designed to reestablish the natural waterways, which were present prior to operation while maintaining both physical and geochemical stability, while minimizing water cover.

Finally, Seabridge wishes to reiterate that it has voluntarily established an Independent Geotechnical Review Board (IGRB) to provide independent, expert oversight, opinion and advice to Seabridge on the design, construction, operational management and ultimate closure of the tailings management facility and water storage dam.

Seabridge has committed to making the board's reports public as is evident on our website www.ksmproject.com.

The establishment and operation of the board is another significant component in the overall risk reduction strategy for the KSM tailing management facility as well as the water storage facility.

As always, Seabridge is pleased to answer community questions about the KSM Project.

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