

Because of the alarmingly high number of tailings dam failures, the International Commission on Large Dams (ICOLD) convened several studies to investigate tailings dam failures (ICOLD 2001). In the 10 years since the ICOLD 2001 report, the failure rate of tailings dams has remained at roughly one failure every eight months, or about three failures every two years (Figure 2). Over a 10,000-year lifespan (a figure often used for how long these structures will need to maintain their integrity) (Wieland 2001) this implies a significant and disproportionate chance of failure for a tailings dam. One explanation might be the residual effects of outmoded designs and construction practices, but it has been 15 years since the International Commission on Large Dams initiated a major effort to investigate tailings dams and change construction and operational practices, and the rate of tailings dam failures has remained relatively constant.

**From:** [Craig, Bill](#)  
**To:** [Bellion, Tara](#); [Evans, Jessica](#); [Smith, Neal](#)  
**Subject:** FW: Donlin Gold Draft EIS comment  
**Date:** Wednesday, April 20, 2016 1:07:33 PM

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-----Original Message-----

From: donlingoldeis, POA [<mailto:POA.donlingoldeis@usace.army.mil>]  
Sent: Wednesday, April 20, 2016 10:31 AM  
To: Craig, Bill  
Subject: FW: Donlin Gold Draft EIS comment

-----Original Message-----

From: Allen Joseph [<mailto:ajoseph@avcphousing.org>]  
Sent: Monday, April 18, 2016 2:19 PM  
To: donlingoldeis, POA <[POA.donlingoldeis@usace.army.mil](mailto:POA.donlingoldeis@usace.army.mil)>  
Subject: [EXTERNAL] Donlin Gold Draft EIS comment

I am one of those people having mixed feelings about Donlin Creek.

On one hand, I know the Donlin Creek mine, if developed, could benefit hundreds of local people in the Yukon Kuskokwim Delta and provide them jobs for the life of the mine of 20 years more or less.

On the other hand, a tailings dam is supposed to exist for 10,000 years to keep contaminants in check (source: Wieland 2001, via National Park Service, see below quote).

Other experts say tailings dams must stand in perpetuity (LONG TERM RISKS OF TAILINGS DAM FAILURE, David M Chambers and Bretwood Higman, October, 2011).

It's the prospect of a huge tailings dam that will have to be monitored for a millennia that leaves me nervous or anxious for our future generations of people that will depend on the river for their survival. Therefore, if that's a fact we will exchange 20 plus years of economic gain for thousands and thousands of years of constant monitoring and environmental remediation of this monstrous tailings dam.

As the COE most likely knows, since 1960 more than 100 tailings dam failures have been recorded all over the world from different types of mining activities. These dam failures have killed more or less 2,000 people, destroyed more than 2,000 homes, destroyed some villages, and displaced or affected over 3 million people that depended on the waterways or farmlands near rivers for their livelihood and existence. More often than not, the drinking water supply of affected communities or cities become poisonous for a period of time.

If there is ever a tailings accident at Donlin, like in other dam failures, I see the potential for destruction of the Kuskokwim River ecosystem - the fish, salmon and other marine life and birds that depend on the river system - and the loss of the subsistence way of life in the future for thousands of people that depend on the river. Like other people or cultures that experienced tailings dam failures, the effects of such a failure of the tailings dam at Donlin Creek will be long term and the people will suffer for years afterwards. The dam failure might not occur during our generation or lifetime, but it will occur in some

future generation - not just once, but maybe more than once.

This is why I am concerned: The Donlin Creek gold mine is expected to be one of the world's largest open pit mines. Some history of mining accidents show that toxic slurry can travel hundreds of miles downriver of a dam failure as it happened in the Baia Mare gold mining tailings dam failure in Romania in 2000. Five rivers were affected and in some of those rivers the contaminants killed all living things - fish, birds and animals - and destroyed the livelihood of commercial fishers in the three countries of Romania, Hungary and Yugoslavia. In all, 10 nations and 2.5 million people were affected in some way, mainly with poisoned drinking water. The Baia Mare mishap was Europe's 2nd worst environmental disaster, after the Chernobyl nuclear accident in Russia. More than 10 years later, some fish did come back but in fewer species and commercial fishing was still not possible in the worst-hit areas.

The Kuskokwim River is only one river here. If there is a tailings dam built, Barrick Gold and NovaGold as owners of Donlin Gold, must realize they are developing the mine upriver from the majority of villages and populations that rely or depend on the Kuskokwim for subsistence including commercial fisheries, and therefore must construct this dam in a way that is impermeable and be able to withstand a millennia of natural forces (earthquakes, record rainfall or snow melt, flash floods, etc.) and human activity (overtopping when water levels rise to the brim). The dam must not fail for thousands of years in the least or in perpetuity at the most.

Thank you very much for allowing me to comment.

Allen Joseph

Bethel, Alaska