

SUBJECT

Response to RFI 003: Depletion Timeframe for Tailings Constituents in Crooked Creek, Donlin Gold Supplemental EIS

TO

Enric Fernandez, Permitting and Environmental Manager, Donlin Gold

DATE

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OUR REF

30274544

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Introduction

The U.S. Army Corps of Engineers (USACE) and AECOM are currently developing a Supplemental Environmental Impact Statement (SEIS) for the Donlin Gold Project near Crooked Creek, Alaska. As part of Request for Information (RFI) 003 dated September 2, 2026, USACE/AECOM requested an update to a table that was included in the Environmental Effects Document (EED) drafted by Donlin Gold and Arcadis and submitted to USACE in April 2026 to support development of the SEIS. Specifically, RFI 003 reads as follows:

Table 2.3-6 Estimated Hypothetical Depletion Timeframe for Tailings Constituents in Crooked Creek from the Environmental Effects Document is being included in the SEIS. The EED analyzed a scenario of 25 percent of the TSF contents, but the SEIS is analyzing a 27 percent scenario.

Please update Table 2.3-6 for a 27 percent scenario instead of the 25 percent scenario currently presented.

This technical memorandum includes a revised Table 2.3-6 (to be included as Table 4.7-1 in the SEIS) to reflect the 27 percent scenario, as requested by USACE/AECOM.

Calculation Basis

The calculated “hypothetical depletion timeframe” represents a high-level estimate of the time that could be required for constituent concentrations in Crooked Creek to decrease below Applicable Water Quality Criteria (AWQC). This timeframe is simply estimated based on the mass of releasable/leachable constituents associated with the tailings estimated to deposit within Crooked Creek under each release scenario, diluted into ambient surface water flow in Crooked Creek. Estimates of total releasable constituent mass were calculated from the volume of tailings estimated to settle in Crooked Creek under each scenario (provided by BGC Engineering in acre-feet on a bulk volume basis), multiplied by the mass of leachable constituents associated with the tailings on a per tailings bulk volume basis. As described in the EED, the mass concentration of releasable constituents in the tailings was calculated as the sum of tailings pore water plus sequential Meteoric Water Mobility Procedure (MWMP) leachate concentrations for the tailings solids. The hypothetical timeframe calculation uses the annual average Crooked Creek flow volume, estimated at approximately 11.8 billion cubic feet per year.

Table 2.3-6/4.7-1 Update

The original estimates of settled tailings volumes in Crooked Creek provided by BGC Engineering and included in the April 2026 EED were based on 0.5% 5.4%, 13.3%, and 24.6% release scenarios. Arcadis understands that the SEIS being developed by USACE/AECOM will include a 27% release scenario, rather than the 24.6% scenario. This modification, based on information obtained from simulations conducted by BGC Engineering, results in an increase in the volume of tailings deposited in Crooked Creek from **61,464 acre-feet** (under the 24.6% scenario) up to **69,588 acre-feet** (under the 27% scenario). This modification results in a corresponding increase in the estimated hypothetical depletion timeframes. The updated Table 4.7-1 is provided below. Note that the 13% increase in deposited tailings with increase from the 24.6% to the 27% scenario results in a corresponding 13% increase in estimated timeframes; this may not be obvious in all cases with rounding to the nearest tenth of the year.

Table Error! No text of specified style in document.-1: Estimated Hypothetical Depletion Timeframe for Tailings Constituents in Crooked Creek

Release Scenario			27%	13%	5%	0.5%
	AWQC	Solute Mass	Time to Dilute Below AWQC			
	mg/L	mg/cf tailings	years	years	years	years
Fluoride	1	132	1.2	0.7	0.2	0.03
Cadmium	0.00064	0.024	0.3	0.2	0.1	0.01
Molybdenum	0.01	7.91	7.2	4.2	1.2	0.2
Selenium	0.0046	0.997	2.0	1.2	0.3	0.05

Notes: AWQC = Applicable Water Quality Criteria; mg/L = milligrams per liter; mg/cf = milligrams per cubic foot