



RED DOG WATER MANAGEMENT WEEKLY REPORT

To: Kyle Moselle, OPMP Executive Director

Report Date: August 28, 2020

Prepared By: Emily Hart, Large Project Coordinator, OPMP

Purpose: To provide a weekly update on the continuing water management and mitigation activities by Teck Alaska, Inc (TAK) at the Red Dog Mine and the related actions by the Large Mine Permitting Team (LMPT).

Current Reported TSF Water Elevation: 980.5 feet (as of 8/26)

Previous Reported TSF Water Elevation: 980.4 feet (as of 8/18)

Distance from 981.0 feet Freeboard Limit: 0.5 feet (as of 8/26)

Current Reported Aqqaluk Pit Water Elevation: 740.21 feet (as of 8/26)

Current Reported Main Pit Water Elevation: 843.65 feet (as of 8/26)

Discharge Update (as of 8/28)

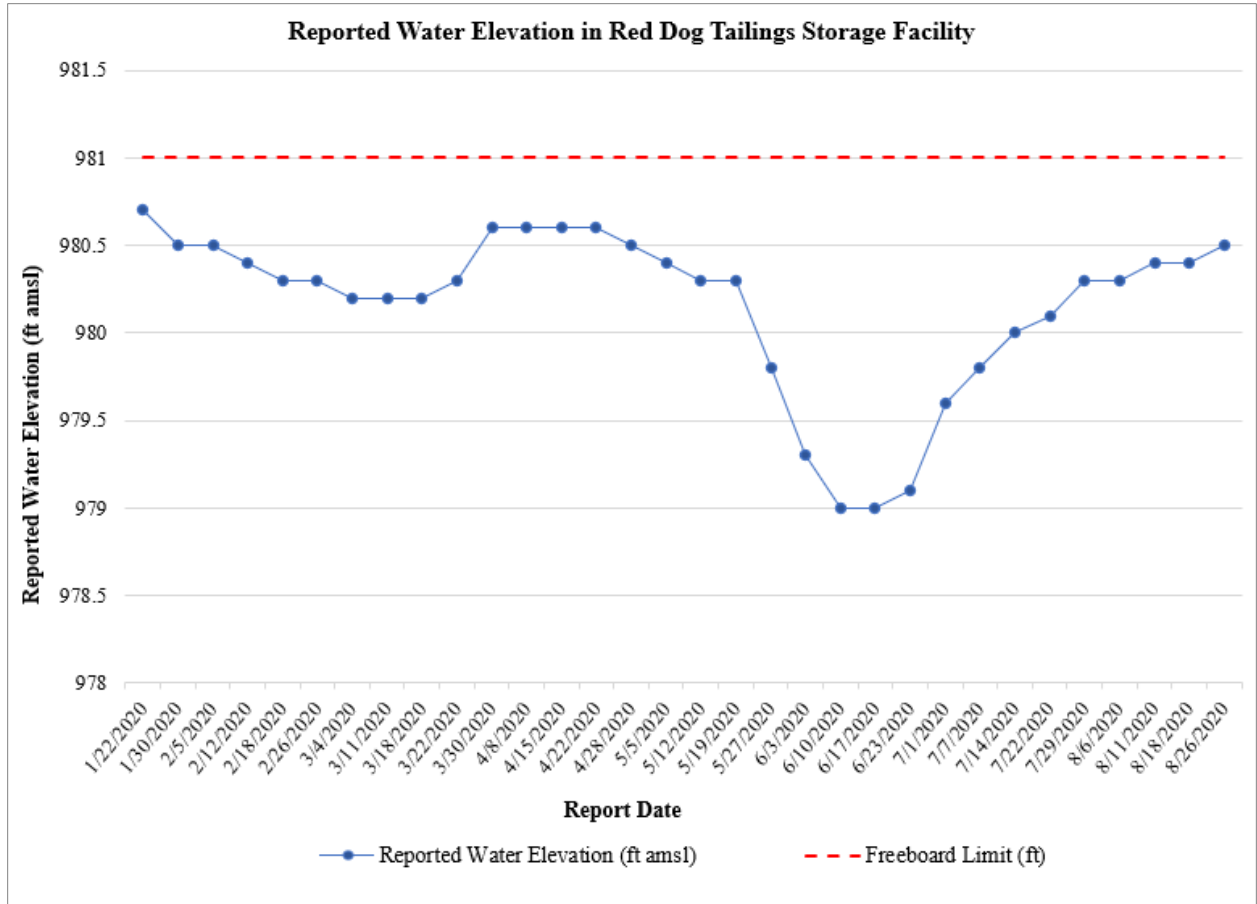
- Discharge began on May 10 but was temporarily stopped on July 6 due to high background Total Dissolved Solids (TDS) and minimal precipitation. Following the successful start-up of the new Reverse Osmosis (RO) water treatment system, discharge resumed on August 26.
 - In total, approximately 837.9 million gallons (Mgal) have been discharged into Red Dog Creek from Outfall 001 authorized by APDES Permit No. AK0038652 this season.

Pit Dewatering Update (as of 8/26)

- TAK began dewatering the Aqqaluk Pit, Main Pit, and Qanaiyaq Pit on May 24. Water removed from the three Pits was pumped to the Tailings Storage Facility (TSF), where it was either stored or, when possible, treated and discharged into Red Dog Creek.
 - Due to high background TDS, the inability to discharge, and the increasing TSF water elevation, pit dewatering was stopped on July 18.
- To further aid in the management of the TSF water elevation, use of the reverse flow pumping system temporarily resumed from July 19 to August 16, during which time approximately 29.6 Mgal were pumped from the TSF to the Aqqaluk Pit.
 - TAK will continue closely monitoring the water elevation in the TSF and increase or decrease the reverse flow pumping rate accordingly.

TSF Water Elevation Change Over Time (as of 8/26)

- Between December 2019 and June 17, the mitigation measures TAK implemented in combination with discharge, resulted in a decrease of 1.7-feet in the reported TSF water elevation. Since June 17, the reported TSF water elevation has increased 1.5-feet, thereby resulting in a net decrease of 0.2-foot in the reported TSF water elevation since January 2020.
 - Please see the graph on page 2 for a detailed depiction of the TSF water elevation change over time.



Ongoing Mitigation Measures

- Reverse Osmosis Water Treatment System
 - Commissioning of the RO system concluded on August 26, at which time TAK began using the system for discharge.
 - As of August 28, approximately 1.2 Mgal have been discharged into Red Dog Creek from Outfall 001.
 - TAK anticipates using the RO system for discharge for approximately one month, or until the creeks freeze and discharge is no longer authorized.
- Stage XI-A Interim Dam Raise
 - Tailings Main Dam (TMD)
 - The TMD embankment widening and raise is progressing and as of August 22, was approximately 98% complete.
 - As of August 22, the TMD Wing Wall Wing Wall widening and raise was approximately 86% complete and the Wing Wall Cut Off Wall extension was 100% complete.
 - Overall, TMD construction is approximately 90% complete for the season.
 - Tailings Back Dam (TBD)
 - As of August 22, TBD Cut Off Wall placement was approximately 89% complete.
 - Overall, TBD construction is approximately 82% complete for the season.

Next Steps

- TAK will continue with TMD embankment and Wing Wall embankment widening and raise, geomembrane placement, and construction of the secant wall, as well as TBD Cut Off Wall placement.
- TAK will continue monitoring the water elevation in the TSF to ensure compliance with the maximum allowed surface water level defined in Certificate of Approval to Operate a Dam FY2019-7-AK-00201 and FY2018-14-AK00303.
- OPMP will facilitate weekly calls between TAK and agencies, and additional topic-specific meetings as necessary.

Cc: Corri Feige, Commissioner, Alaska Department of Natural Resources
Jason Brune, Commissioner, Alaska Department of Environmental Conservation
Doug Vincent-Lang, Commissioner, Alaska Department of Fish and Game
Brent Goodrum, Deputy Commissioner, Alaska Department of Natural Resources
Emma Pokon, Deputy Commissioner, Alaska Department of Environmental Conservation
Ben Mulligan, Deputy Commissioner, Alaska Department of Fish and Game
Randy Bates, Water Division Director, Alaska Department of Environmental Conservation
Martin Parsons, DMLW Division Director, Alaska Department of Natural Resources