

# STATE OF ALASKA

## DEPARTMENT OF NATURAL RESOURCES

DIVISION OF MINING, LAND AND WATER

DAM SAFETY AND CONSTRUCTION UNIT



## Certificate of Approval to Modify a Dam

The **State of Alaska** under Alaska Statute Title 46 and the regulations adopted under this statute, grants to:

### **Teck Alaska Incorporated**

The approval to modify the following structure at the **Red Dog Mine** in accordance with the terms and conditions contained in this certificate:

### **Red Dog Tailings Back Dam (NID ID# AK00303)**

The location of this project is: S31, T31N, R18W, Kateel River Meridian

The holder of this certificate shall:

- Modify the dam and appurtenant works in accordance with the construction documents listed in Attachment A.
- Except for claims or losses arising from negligence of the State, defend and indemnify the State against, and hold it harmless from any and all claims, demands, legal actions, loss, liability and expense for injury or death of persons, and damages to or loss of property, arising out of or connected with the exercise of the approval granted by this certificate.
- Comply with all applicable laws, regulations and conditions.
- Allow representatives of the Department to inspect the work and records covered by this certificate at all times determined necessary by the Commissioner.
- Follow special conditions listed in Attachment A, attached hereto and made a part hereof.

ORIGINAL

**CERTIFICATE OF APPROVAL TO MODIFY A DAM**  
**Red Dog Tailings Back Dam**

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This *Certificate of Approval to Modify a Dam* is granted subject to the pertinent statutory provisions in AS 46.17 and the Administrative Regulations in 11 AAC 93. This certificate is valid only for the time period indicated in Attachment A.

APPROVED BY: Tom Barrett C.P.G.  
TITLE: Water Section Chief  
Division of Mining, Land and Water  
SIGNATURE: Tom Barrett  
DATE: 9-23-2021

State of Alaska )  
) SS.  
Third Judicial District )



This is to certify that on September 23, 2021, before me appeared Tom Barrett, known by me to be the Authorized Representative of the Division of Mining, Land and Water, Alaska Department of Natural Resources, and acknowledged to me that this Certificate of Approval was voluntarily executed on behalf of the State of Alaska.

Carl S. [Signature]

Notary Public in and for the State of Alaska

My Commission expires: with office

**ORIGINAL**  
**COPY**

**CERTIFICATE OF APPROVAL TO MODIFY A DAM  
Red Dog Tailings Back Dam**

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**Attachment A – Special Conditions**

1. This work authorized by this certificate is described in the Technical Memorandum subject "Work Plan for Proposed 2021 Geotechnical Investigation at the Tailings Storage Facility, Red Dog Mine, Alaska" by Golder Associates dated August 20, 2021. This approval only applies to the investigation, the installed instrumentation, and the borehole completion procedures as described in the plan.
2. An engineer qualified in accordance with 11 AAC 93.193 must be in direct responsible charge of observing the work. A field engineer, geologist or technician under the direct supervision of the qualified engineer must be on site during the work.
3. Any unexpected performance of the drilling progress or the instrument installation that could affect the safety of the dam should be reported to Department within 24 hours.
4. Any existing instrumentation potentially affected by this repair must be preserved and remain operational, or be replaced, unless specifically approved for removal or abandonment by the engineer of record and the Department.
5. Any new piezometers and thermistors installed during the work must be maintained and monitored in accordance with a revised operation and maintenance manual for the dam as required by 11 AAC 93.197, and collected data must be included in the annual instrumentation report required under the most current *Certificate of Approval to Operate a Dam* for the Red Dog Tailings Back Dam.
6. If any conditions are encountered which require substantial clarification, deviation or change from the Technical Memorandum referenced in Special Condition 1, the clarification, deviation or change must be approved in writing by the qualified engineer and submitted to the Department. Any clarification, deviation or change that could affect the safety of the dam must be approved in writing by the Department before continuing that aspect of the investigation or repair. The engineer of record shall maintain a sequentially numbered record of all clarifications, deviations and changes to be included in the report required under special condition 7.
7. No later than March 31, 2022, provide a report on the geotechnical investigation including a description of borehole completion for each boring, field and laboratory data, test results and other information.
8. This certificate of approval expires on December 31, 2022

**End of Attachment A**

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