

# STATE OF ALASKA

## DEPARTMENT OF NATURAL RESOURCES

DIVISION OF MINING, LAND AND WATER

DAM SAFETY AND CONSTRUCTION UNIT



### Certificate of Approval to Operate a Dam

The **State of Alaska** under AS 46.17, and the regulations adopted under this statute, grants to:

#### **Mystery Creek Resources Inc.**

The approval to operate the following structure in accordance with the terms and conditions contained in this certificate:

#### **Nixon Fork Tailings Dam (NID ID#AK00213)**

The location of this project is: T26S, R21E, S13, Kateel River Meridian

The holder of this certificate shall:

- Operate the Nixon Fork Tailings Dam and appurtenances in accordance with accepted practice and the document titled "Operation, Maintenance and Emergency Action Manual" dated August 2016.
- 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 that apply to the operation of this dam as found in Attachment A, attached hereto and made a part hereof.

# ORIGINAL COPY

**CERTIFICATE OF APPROVAL TO OPERATE A DAM**  
**Nixon Fork Tailings Dam**

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This *Certificate of Approval to Operate a Dam* supersedes any other *Certificate of Approval to Operate a Dam* for the Nixon Fork Tailings Dam and shall become invalid on the expiration date specified in Attachment A.

This *Certificate of Approval to Operate a Dam* is granted subject to the pertinent statutory provisions in AS 46.17 and in Administrative Regulations in 11 AAC 93.

APPROVED BY: Charles F. Cobb, P. E.  
TITLE: State Dam Safety Engineer  
Division of Mining, Land and Water  
SIGNATURE: *Charles F. Cobb*  
DATE: *Sept 20, 2016*

State of Alaska            )  
  ) SS.  
Third Judicial District )

This is to certify that on September 20<sup>th</sup>, 2016, before me appeared Charles F. Cobb, known by me to be the Director or 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.

*Christine Ballard*  
Notary Public in and for the State of Alaska

My Commission expires: *With Office*



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**CERTIFICATE OF APPROVAL TO OPERATE A DAM**  
**Nixon Fork Tailings Dam**

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**Attachment A – Special Conditions**

1. The Nixon Fork Tailings Dam (AK00213) is approved to operate as a Class II (Significant) hazard potential dam as defined in 11 AAC 93.157 at a nominal crest elevation of 983 feet MSL local datum.
2. Operate, monitor, inspect, and maintain the Nixon Fork Tailings Dam in accordance with the procedures outlined in Operations, Maintenance and Emergency Action (OM&EA) Manual for the Nixon Fork Tailings Dam dated August 2016. Inspect the dam after all significant seismic or precipitation events. Maintain records of inspections and make them available to the Department upon request.
3. Water storage in the TSF shall be minimized to the extent practicable.
4. Implement the recommendations in the most recent periodic safety inspection.
5. Maintain a minimum of 3 feet of cover over the geomembrane for all tracked or wheeled equipment traversing or operating inside the TSF.
6. Maintain and monitor thermistors in the vicinity of the Nixon Fork Tailings Dam on a monthly schedule. Compile a dataset of monthly thermistor readings and corresponding impoundment water levels.
7. Weekly monitoring reports for the TSF and dam shall be submitted to the Department during the period of May 1 through October 31. Monthly monitoring reports shall be submitted for the period of November 1 through April 30. The format and content of the report is subject of approval by the Department. The frequency of reporting may be adjusted on field conditions and other factors.
8. Submit to the Department an annual report which includes at a minimum:
  - a. A copy of the completed annual inspection form (in Appendix D of the OM&EA Manual),
  - b. The findings of a visual inspection of the dam when it is clear of snow,
  - c. Photographs of key features of the dam and appurtenant works and other observations during the visual inspection,
  - d. A review and evaluation of the routine inspection and maintenance reports
  - e. A review and evaluation of monitoring data including instrumentation, seepage, thermistors, water levels, and annual crest survey data,
  - f. Other information pertinent to the operation and performance of the dam.The report shall be in summary form and in a format approved in advance by the Department. The report shall be sealed by an engineer qualified in accordance with 11 AAC 93.193(c). This requirement is waived for each year that a PSI is conducted, but the PSI must include the above listed information in addition to meeting the other

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**Nixon Fork Tailings Dam**

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requirements of 11 AAC 93.159. The annual report will be due by December 30 of each calendar year.

9. Unless removed or abandoned based on a *Certificate of Approval* issued by the Department, perform a Periodic Safety Inspection as required by 11 AAC 93.159 on the Nixon Fork Tailings Dam and appurtenances by August 21, 2018. The frequency for Periodic Safety Inspections shall be in accordance with 11 AAC 93.159(a). The Periodic Safety Inspection must be performed by a qualified engineer in accordance with 11 AAC 93.193(b). Prior approval of the inspection engineer and the scope of the inspection must be agreed upon in advance with the Department.

10. An Emergency Action Plan is required for the Nixon Fork Tailings Dam. The emergency action procedures included in the OM&EA Manual meets this requirement. The OM&EA Manual shall be reviewed, exercised, and revised in accordance with the following schedule:

<u>DATE</u>	<u>ACTION</u>
Annually	Internal review
Annually	Orientation exercise with all responsible parties
Annually	Revise as needed and distribute updated pages
Biennially	Drill exercise (internal responsible parties)
Triennially	Table top exercises with all responsible parties

Notify the Department within 14 days after each emergency action plan exercise with a brief, written report of the exercise. Provide updated emergency action procedures to Dam Safety, upon revision.

11. Notify the Department within 24 hours of any uncontrolled discharges from the reservoir, if the freeboard limits on the dam are exceeded, or any other emergency condition occurs involving the dam and its appurtenances.

12. Review the OM&EA Manual every three years, at a minimum, or whenever substantial operational changes occur, and update as appropriate. Provide an updated copy of the manual to the Department.

13. Prior to performing any modifications that may affect the safety of the dam, submit to the Department an application for a *Certificate of Approval to Modify a Dam* in accordance with the requirements of 11 AAC 93.171.

14. Sufficient consideration for the closure of the Nixon Fork Tailings Dam must be included in the financial assurance required by the Department for the Nixon Fork Mine.

15. This certificate expires October 20, 2018.

**END OF ATTACHMENT A**

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