STATE OF ALASKA

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF MINING, LAND AND WATER
DAM SAFETY AND CONSTRUCTION UNIT

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FIELD INSPECTION REPORT
LOWER SLATE LAKE TAILINGS DAM
KENSINGTON MINE, ALASKA

Inspection Date:	June 14, 2018
Report Date:	July 11, 2018
Weather:	50° Rain
Inspection Objectives:	Observe the Lower Slate Lake Tailings Dam construction and sediment ponds around the Kensington Mine site
Operator Contact:	Kevin Eppers, Couer
State Personnel:	Charlie Cobb, ADNR, Eli Ward, ADNR
Documentation:	Photos and field book notes may be reviewed at DNR-Anchorage

Field Inspection Notes

The following information describes observations of the Lower Slate Lake Tailings Dam and other related features.

Lower Slate Lake Tailings Dam (AK00308): Figure 1 through 4 show the preparation and construction work for the spillway, including the plunge pool and forms for the walls and baffle piers, and the downstream side of the widening of the Stage III raise and foundation grouting.

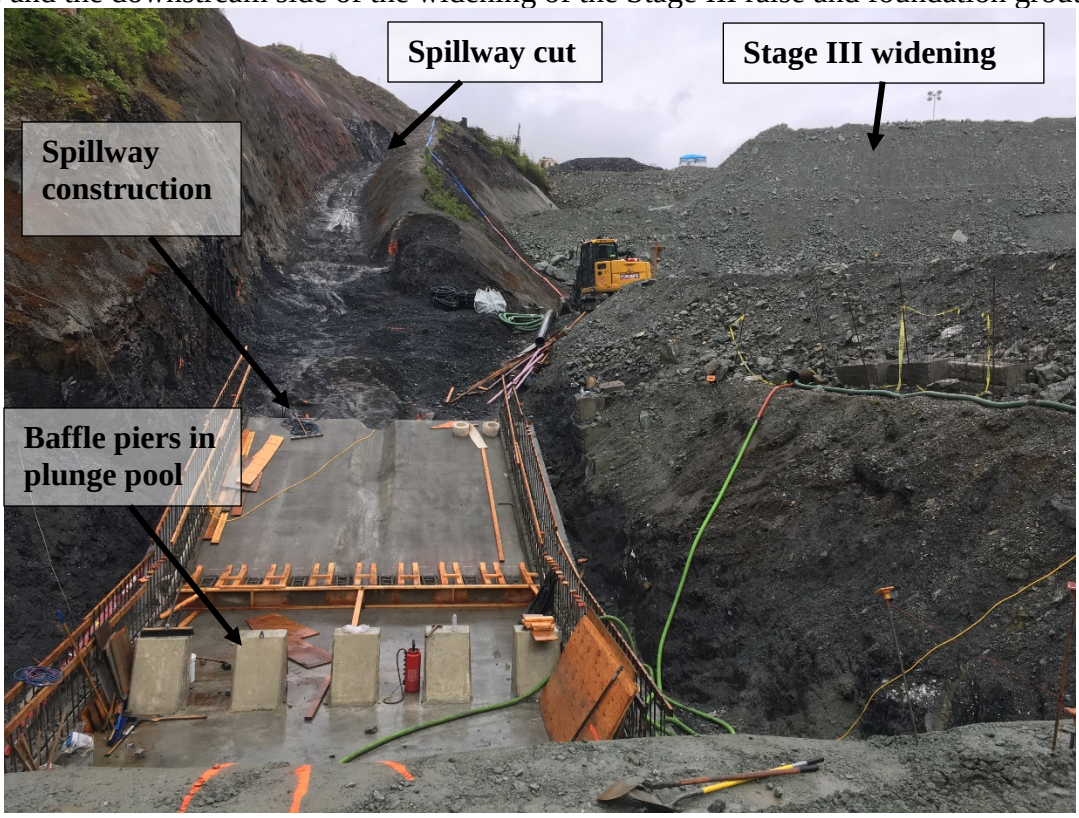

Figure 1. Lower Slate Lake Tailings Dam spillway and fill.

Figure 2. Construction downstream of dam.

Figure 3. Crest of dam and downstream slope, looking west

Figure 4. Grouting efforts in spillway cut.

Other ponds around mine site: Several sediment ponds at the mine were observed. Figure 5 through Figure 9 show typical sediment ponds at the Water Bar and Avalanche pond series, directly above the main camp. Figure 10 shows the Comet Water Treatment Plant ponds.

Figure 5. View downstream from Water Bar Ponds

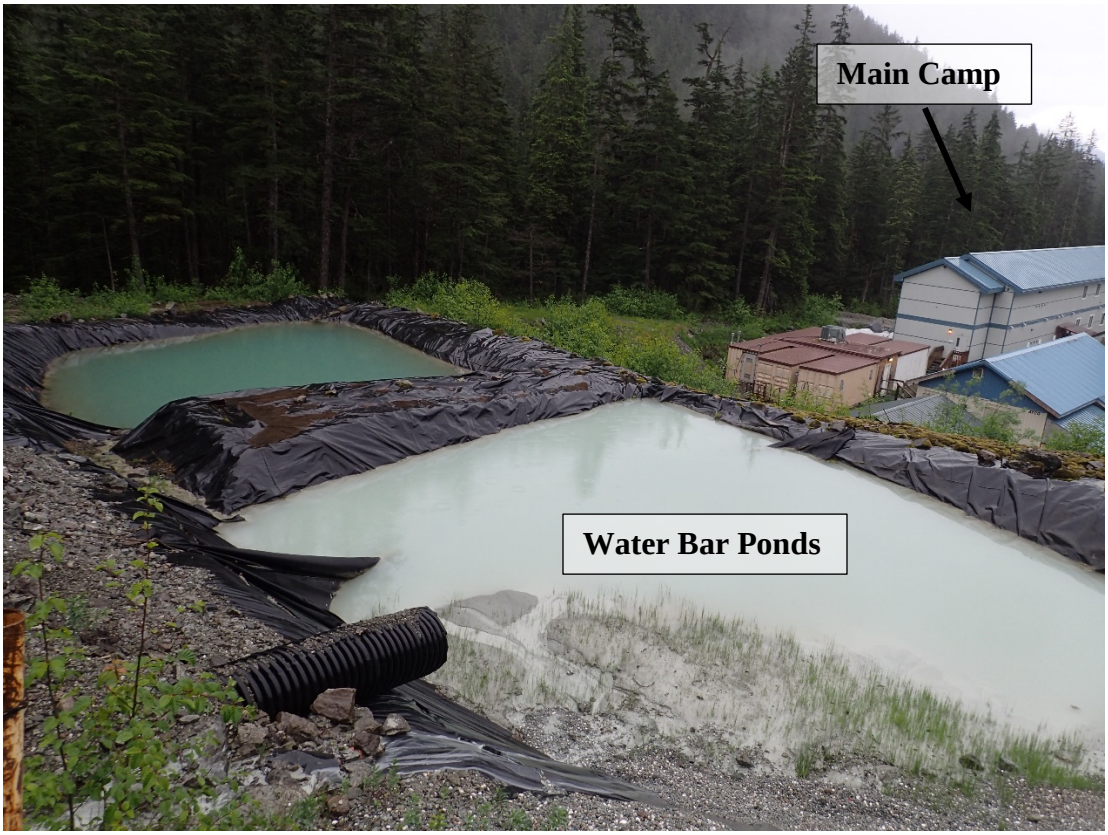

Figure 6. Water Bar Ponds, camp facilities in the background.

Figure 7. Water Bar Ponds downstream embankment.

Figure 8. Water Bar Ponds and Avalanche Series.

Figure 9. Avalanche Ponds, directly upstream of Water Bar Ponds.

Figure 10. Comet Water Treatment Plant ponds.

Summary of Key Observations

Lower Slate Lake Tailings Dam Stage III Construction

Construction efforts at the tailings dam were focused on the grouting, fill for the Stage III widening of the crest, and preparing the spillway flume for roller compacted concrete (RCC) application. The grouting program (Figure 4) and fill placement appeared to be progressing according to the schedule provided by Alaska Aggregate Products LLC (AAP) on April 30, 2018. Dam Safety was not able to observe any RCC application during the site inspection, but were able to view the test pad by AAP next to their gravel plant.

Other sediment ponds

During the site visit, several sediment ponds and embankments were observed. Most of these ponds are for the collection of sediment and rainwater runoff around the site, except for the Comet Water Treatment Plant ponds. ADNR noted that several of the embankments appear to be more than 20 feet in height with narrow crest widths, limited freeboard and spillway capacities and poorly fitted liner systems.

ADNR Dam Safety observed that the Water Bar and Avalanche pond series are situated directly above the camp facilities, as seen in Figure 5 through Figure 9, may not be safe as designed and constructed and could threaten personnel and structures at the main camp of the Kensington Mine. The potential for a cascading failure of the Avalanche and Water Bar pond embankments amplifies the risk.

Action Items

1. Complete an ADNR *Hazard Potential Classification and Jurisdictional Review* form for the embankments of all sediment ponds upstream of the Mile 4/Bridge 1 area, including the Comet Water Treatment Plant ponds, while clear of snow, and submit to ADNR before October 31, 2018.

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