



## February 13<sup>th</sup>, 2014 Inspection of the Kensington Gold Mine

Weather: Temperature in the upper 20's, with light snow in the morning increasing to heavy snow and wind in the afternoon.

Inspection Team:  
Curtis Caton, USFS  
Cody MacCabe, USFS  
David Wilfong, ADNR

This report covers the February 13<sup>th</sup>, 2014 general inspection of the Kensington Gold Mine. The inspection team met at Ward Air at 8 AM, and after a slight delay due to the lack of a pilot, left the Juneau airport at approximately 8:30 AM. The United States Forest Service (USFS) chartered DeHavilland Beaver floatplane landed at Slate Creek Cove just before 9 AM. The team was met



Figure 1 Looking south on the top of the Comet wasterock pile.

by Kevin Eppers of Coeur Alaska soon after landing, and was shuttled to the camp area for a safety briefing. Mr. Eppers (Kevin) accompanied the team for the entire inspection.

to be pushed over the side (Figure 1). Coeur had recently finished a lift at the southern toe in an attempt to lessen the slope of the pile (Figure 2).

After attending the required safety training, the team was shuttled to the mill and donned the extra personal protective equipment (PPE) required for the trip underground. The team then traveled through the almost 3 mile long main tunnel to the Comet Wasterock Pile. Snow was falling heavily on the Comet side, and visibility was poor. A few piles of waste rock were sitting at the southern end of the pile waiting

The team then drove to the Comet Wastewater Treatment Plant (Figure 3). Flow from the underground workings was approximately 800 GPM at the time of the inspection, which was relatively low due to freezing conditions. After a tour through the inside of the water treatment plant, the team moved down the trail to the distribution manifold near the outfall for the treatment plant. Past the manifold, trail



Figure 2 Lift at the south end of the wasterock pile. Looking southeast from the Comet WTP.



**Figure 3 Comet water treatment plant. Looking southwest from the wasterock pile.**

storage site for the construction rock to be used for Phase III of the Tailings Treatment Facility (TTF) Dam. The only other noteworthy item observed, although not a concern, was the significant quantity of oversized ore that had accumulated (Figure 4). Occasionally, an excavator equipped with a rock breaker, fragments the oversized ore into smaller pieces that will fit through the grizzly at the opening of the crusher.

After leaving the portal area, the team moved to the mill, returned the underground PPE, and stopped at the Kitchen-Dining-Room (KDR) facility for lunch. After eating, the team traveled to the TTF Dam. The dam itself was

covered in a thick blanket of snow however, it was apparent

that the spillway and plunge pool had received seepage from the graphitic phyllite formation during the warming trend that had ended just a few days earlier. The shotcrete covering the graphitic phyllite was mostly free of snowpack, but was quickly being covered by the heavy falling snow. Thick icicles covered areas of the exposed bedrock, and no seepage was observed (Figure 5). The small ARD batch treatment plant was not operating at the time of the inspection. The tank used for storing seepage from the graphitic phyllite was covered with plastic, and warm air was being pumped under the cover to keep the tank from freezing. When a predetermined quantity of water fills the tank, it is pumped into the 60 gpm treatment plant where it is treated

conditions prohibited further travel without ice cleats, so the team returned and walked around the outside of the water treatment plant. No significant issues were observed at the Comet Wasterock Pile or water treatment plant. The Comet Beach area was not visited.

The team returned to the Jualin side of the mine and stopped at the wasterock and ore pile outside of the portal. The Jualin Wasterock Pile appeared to have grown significantly since the previous inspection that ADNR attended<sup>1</sup>. The area doubles as a



**Figure 4 Oversize ore stored near the Jualin Portal. Looking west.**

<sup>1</sup> October 29, 2013



Figure 5 Large ice formations have grown (left side of picture) due to ground water seeping and freezing near the shotcrete. Looking northwest.

and discharged into an infiltration gallery. No problems were observed at the TTF Dam or ARD treatment plant.

The inspectors moved to the north end of the TTF and visited the ongoing graphitic phyllite barrel tests. The water level in the TTF was relatively high, and very close to submerging the lowest point of the road that accesses the barrel tests. Kevin stated that a new access road would be constructed so that the barrel test area could be accessed freely. Three of

the four barrel tests had lids attached to the barrels (Figure 6) because freeze – thaw cycles were causing the barrels to overflow. Kevin stated that the lids would be removed after the spring break up.

The team moved on to the TTF Water Treatment Plant, and quickly inspected the interior of the plant. No significant issues were noted at the treatment plant. During the stop at the treatment plant, Ward Air was contacted for an update on the status of the return flight. However, the weather had deteriorated to a point where flying back to Juneau was no longer an option. The team was shuttled back to the Mill Bench for a short tour of the mill, then returned to the Camp for a short wait in the KDR until the regular crew buses



Figure 6 Barrel tests at the north end of the TTF. Looking north.

began loading at approximately 4:30 PM. The buses departed the Camp at about 4:45 PM, and shuttled the inspectors along with several dozen Coeur Alaska employees to Slate Creek Cove for the return boat ride to Yankee Cove. After off-loading the crew boat, the team boarded more buses for the trip back to the Juneau airport.

The Alaska Department of Natural Resources would like to thank the United States Forest Service for providing transportation via floatplane, and Kevin Eppers at Coeur Alaska for the safe and informative inspection at the Kensington Mine.