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GOVERNOR MIKE DUNLEAVY

Department of Natural Resources

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Kensington Mine Field Inspection Report

Inspection Date:	June 26, 2024
Time:	8:00 AM to 2:20 PM
Weather:	Partly cloudy with a light breeze about 10mph with an average temperature of 60°F.
Agency Personnel:	DNR: Aaron Kruse, Jesse White, and Kindra Geis
Operator Contact:	Coeur Alaska: Sierra Lammers
Inspection Objectives:	Site Inspection

Operations:

The Kensington Mine is located approximately 45-miles northwest of Juneau in the Tongass National Forest between Berners Bay and Lynn Canal. Coeur Alaska, Inc. (Coeur) is the operator of the mine, a wholly owned subsidiary of Coeur Mining. The mine operates on and within private property, federal claims, and a state upland mining lease. Coeur Mining has 100% ownership in the mining operations and mineral land holdings totaling 12,338 net acres.[1] Gold is the primary resource within this load deposit, mined wholly as an underground operation.

Mineralization and geology of the operational area are examples of orogenic-style, or mesothermal vein-style gold deposits. Significant gold vein deposits are hosted in Jualin diorite with discrete vein systems defined by one or more through-going, fault-filling quartz veins. Gold and gold-silver telluride minerals with associated native gold is the predominant vein mineralization characterization.[2]

Kensington Mine began commercial production in 2010 and operates 24-hours a day 365 days a year. Gold production rate is approximately 125,000 ounces per year. Historically, daily production averages 1,800 tons of ore while generating approximately 800 tons of waste rock. Milled concentrate is shipped off site for processing. Tailings are disposed of by two methods: 40% are sent to the underground paste plant and used as back fill in previously mined-out stopes, and 60% is deposited within the Tailings Treatment Facility (TTF). Currently, the life of mine is expected to continue through 2033.[3]

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[1] Coeur Mining. (2023). *Kensington, AK*. Operation Facts. Retrieved: 8/7/2024. https://www.coeur.com/operations-projects/kensington-ak/default.aspx

[2] Pascoe, C., Keim, R.P., Haarala, P. (2021) *Kensington Gold Operations Alaska Technical Report Summary*. Coeur Mining.

[3] Coeur Alaska, Inc. (2018). *Plan of Operations Amendment 1 (POA 1) For the Kensington Gold Mine.* Coeur Mining.

Field Inspection Plan, Execution and Summary Schedule:

The Alaska Department of Natural Resources (DNR) primary objectives for the field inspection were to inspect active disturbance, such as the back dam construction, waste rock storage (WRS), and water management. The inspection plan was also designed to allow for selecting additional sites for inspection in an opportunistic fashion and as time allowed. DNR conducts annual inspections to ensure compliance of the Kensington Mine Reclamation Plan Approval No. J20223158RPA, as required under AS 27.19 and 11 AAC 97. The United States Forest Service (USFS) is the lead agency regarding mining activities on federal land.

DNR staff arrived via the crew boat at Slate Cove Marine Terminal at approximately 6:45 AM. From the port, it's a short bus ride of about 10 miles to Kensington Mine. Sierra Lammers was there to meet DNR staff before attending a safety brief of the mine site and its facilities. Afterwards, DNR staff had a short meeting with Sierra to review the inspection plan for the day.

The inspection would begin by traveling underground to the Comet Portal to access the water treatment facilities, Comet WRS, and the Comet Beach Camp. From there, DNR staff headed back through the mine toward the Kensington Portal to document an area along the tailings pipeline where a spill occurred. Next, DNR staff would travel to Pit 4 WRS to observe progress on a storage area of graphitic phyllite material, considered to have a potential to generate acid mine drainage, and to look at current disturbance of Pit 4 WRS. The last area of focus was to visit the TTF and back dam construction. Drone imagery was taken by the Comet and Kensington Portals, Pit 4, and the TTF.

Findings:

A summary of findings can be found below with a description of active sites that were visited. Detailed route maps with areas of interest, including photos of all inspected sites with observations notes, are in Appendix A.

1. Inspection of Active Areas of Disturbance

1.1. Comet WRS was not active at time of inspection, there was no waste rock being hauled for placement. Only a small stockpile of pebble reject from the mill was present for use as road material (Photo 1). Just south of the water treatment plant is grubbed area encompassing approximately 2 acres (Photo 2). This site will be used for a future storm water pond.

1.2. Pit 4 is currently the active site for storage of underground waste rock. The footprint of this site has not changed considerably since DNR's last inspection in November of 2023. However, there has been a noticeable change in volume of material placement on the southeastern portion of the WRS area (Photo 7). At the time of inspection, material from the phyllite storage area was still being excavated to be sent back into the mine to be used as backfill underground (Photo 8).

1.3. Pit 7 is approximately halfway between the main road by Pit 4 and the TTF. At the present time, this area is used for construction material storage. Several piles of material were documented (Photo 9): One comprised of waste rock transported from the portal pad, to be used in back dam construction and for the new pad of the water treatment plant (WTP). There were also covered piles of potentially acid generating material (PAG) and a stockpile of reject pebble from the mill (Photos 10 and 11).

1.4. Along the access road of the TTF to the main dam is another PAG material storage site. This material was generated from excavation of the back dam and is properly covered for storage (Photo 12). It extends approximately 750 feet in length starting from the dock for the floating tailings barge along the main dam access road. All stored PAG will be hauled back underground within the mine for disposal.

1.5. Just east of the current WTP for the TTF is an area that has been designated for the new WTP under stage 4a plans. This area was grubbed with active construction establishing the new pad for the WTP. At the present time an access road was in place with equipment spreading waste rock, forming the initial footprint for the WTP pad (Photo 13)

2. Water Management

2.1. DNR staff observed Sherman Creek Outfall 001 and were informed there was a small increase of the White Stuff in the spring (Photo 4). Outfall 001 is monitored weekly and sampled monthly. There were no concerns noted from DNR staff.

2.2. The construction of the back dam was at a point where it was built to its final height. Ongoing work for the welded outer liner and spillway were presently underway (Photo 14). The west ramp of the back dam is used for material storage. Some waste rock was also observed from the dam's excavation. Organic stockpiles resided within this area and will be relocated for future use (Photo 15).

2.3. DNR staff also visited the main dam and its facilities along with Outfall 002. At the time of inspection, the new access road down to dam water seepage collection pump and water sampling locations was in place. Initial work for the Stage 4a spillway was underway (Photo16) with observed disturbance, uphill, and directly west of the main dam. Water was flowing from the spillway into Outfall 002.

3. Miscellaneous Sites

3.1. DNR staff observed a bladder tear with sediment cake strung about at the sediment filtration storage area next to the Comet WTP. Cleanup measures were currently under way to transport the cake into the mine for disposal (Photo 3).

3.2. Comet Beach Camp is primarily used to store stacks of core boxes (Photo 5). Some are recent others are from older exploration activities. Older core stocks have degraded and fallen over. Currently cleanup efforts are taking place to remove core and debris to clean up the site.

3.3. Earlier this spring, there was a tailings spill caused by a rupture in the tailings pipeline. The pipeline was repaired and covered with reject pebble from the mill. DNR staff inspected the site and found it to be in good condition after efforts were made to clean up the subaqueous tailings around the break and repairs were made to the pipeline (Photo 6). Cour staff continue to monitor the site weekly.

Violations:

No violations of Kensington Reclamation Plan Approval No. J20223158RPA stipulations, AS 27.19 or 11 AAC 97 were observed during this inspection.

Conclusion and Recommendations:

DNR finds Coeur's Kensington Mine operation is in good condition and is consistent with industry standards. The operation facilitates activities in a manner which prevents unnecessary and undue degradation of private, USFS lands, and State water resources.

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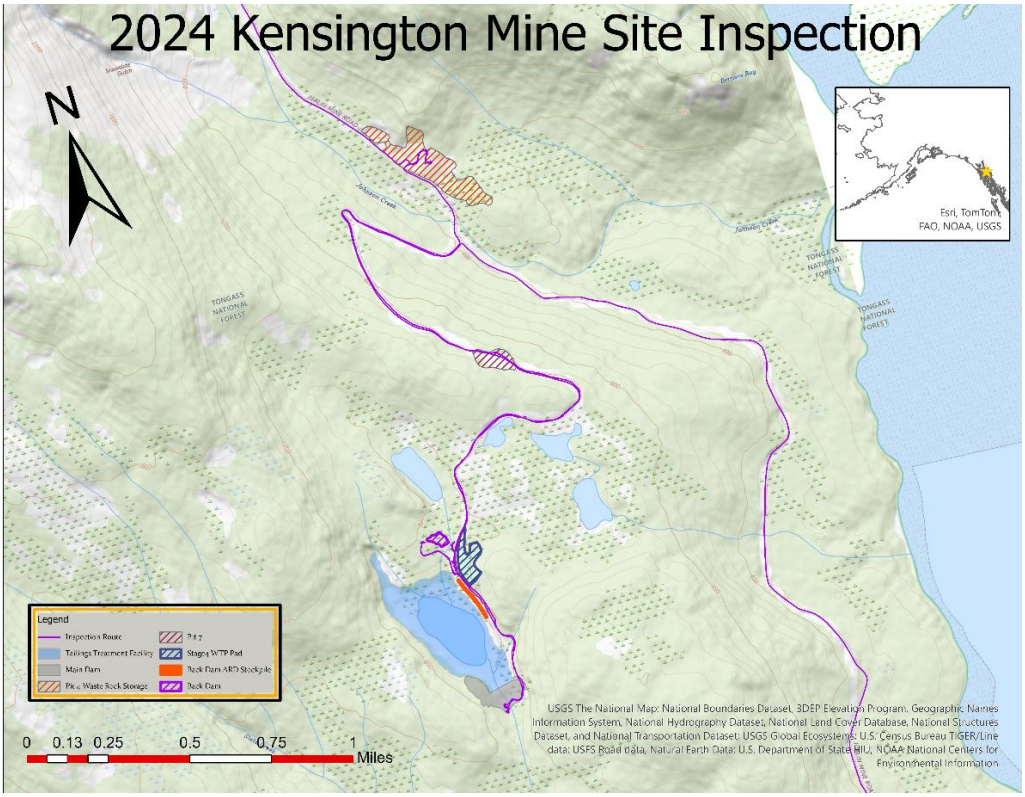
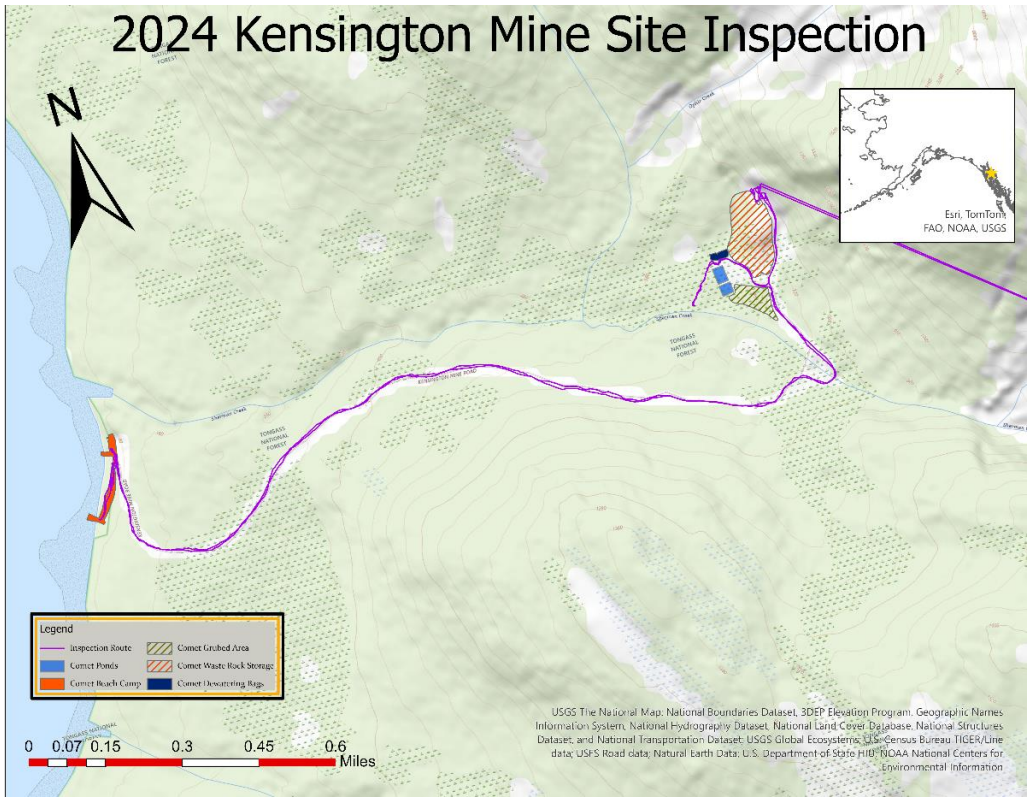
Appendix A

Inspection Maps and Observations of Note



Map 1: Site inspection route south of main facilities of active areas of disturbance and water management.



Map 2: Site inspection route on the Comet side of the WRS, WTP, and old camp.

Field Inspection Observations of Note with Photos in Sequence of Inspection

Photo 1: Comet WRS with small stockpiles of mill reject pebble just outside portal. This smaller material is primarily used in road maintenance. There is no active waste rock currently hauled.	
Photo 2: Right half of image is an area that has been grubbed for a future storm water pond. Below are ponds for the water treatment facility.	

Photo 3: Sediment filtration storage with one of the bladders torn open. The sediment cake will be transported underground for disposal.	
Photo 4: Sherman Creek Outfall 001. Image is of water manifold with valved outlets into the creek.	

Photo 5: Comet Beach Camp core storage yard. This area is currently being cleaned up to remove all core and debris.	
Photo 6: Location of subaqueous tailings spill along the tailings pipeline. Remediation efforts included excavation and removal of any tailings. Repair of pipeline, topped with reject pebble from the mill. This area is monitored weekly at time of inspection.	

Aerial image is of Pit 4 WRS, excluding the new area of deposition. Starting on the upper left of the image is an organic stockpile. Center below highwall is phyllite storage from main dam construction. Just to the right of the highwall is an older waste rock stockpile. This area has not substantially changed since DNR's last inspection in November 2023.	
Photo 7: Pit 4 WRS area of new material deposition.	

Photo 8: Phyllite storage, very little of this material is left at time of inspection. Almost all this material has been transported underground for disposal.	
Photo 9: Pit 7 waste rock storage from portal area to be used in back dam and WTP pad construction.	

Photo 10: Pit 7 PAG covered stockpile likely from excavation of the back dam. Pile sits north along the road edge across from the main pit area.	
Photo 11: Pit 7 mill reject pebble stockpile located northwest of the main pit and just west of the covered PAG material.	

Photo 12: Along the access road to the main dam on the east side of the TTF is covered PAG material. This material will be hauled underground for disposal.	
Photo 13: Area of construction for the new WTP pad. The WTP must be relocated for the dam raise outlined in the Stage 4a proposal.	

Photo 14: Construction of the back dam. Left of dam is wood cribbing where spillway will be located. Outer liner is almost complete. Dam has reached its final height at time of inspection. Upper right of photo is some stockpiled construction material accessed by west ramp.	
Photo 15: West ramp of back dam showing material stockpiles (background), and organics (center) with storage area for more construction material (foreground).	

Photo 16: Main dam (center) with views of tailing mounds just below the water line. Some disturbance noted in the upper right of image. This will be the location for the new spillway. Liner covers exposed phyllite from dam's original excavation. Just below at the toe of the dam is the seepage pump.