



INSPECTION REPORT: KENSINGTON GOLD MINE

Tongass National Forest Minerals Group
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Date of Inspection: Wednesday, April 01, 2015
Date of Report: Monday, April 06, 2015
USDA Forest Service Inspector: Curtis Caton

Ranger District: Juneau Ranger District
Weather Conditions: Overcast. Temperature: low 40's °F.

Exploration in accordance with operating plan	Not Applicable
Timber removal following timber sale contract	Not Applicable
BMPs for erosion control	Satisfactory
Water Quality BMPs	Satisfactory
Public safety & fire prevention	Satisfactory
Reclamation work adequate and timely	Satisfactory
Roads maintenance adequate and current	Satisfactory
Tails placement in accordance with plan	Satisfactory
Waste Rock placement in compliance	Satisfactory
Company supervision of operation	Satisfactory
Operating in a clean and orderly manner	Satisfactory

Any conditions noted as UNSATISFACTORY will require follow up action by the Mine Inspector and a written memorandum to the operator, outlining the necessary work.

NEW REMARKS

Transportation to/from site was by Ward Air De Havilland Cessna Float Plane.

Kevin Eppers (Environmental Manager, Coeur Alaska) accompanied Dave Wilfong (Mining Engineer, Alaska Department of Natural Resources), Matthew Reece (Minerals Program Manager, US Forest Service), and Curtis Caton (Geologist, US Forest Service) on this inspection.

The inspection included Comet Development Pile, Comet Water Treatment Plant, Sherman Creek Outfall, Mill Bench, Ore Pad, Jualin Development Pile, Tailings Treatment Facility (TTF), Tailings Water Treatment Plant, and Pit 4.

ACTION ITEMS

- Properly store damaged barrels at CWTP
- Minor correction of stormwater runoff at newly constructed ponds
- Minor housekeeping needed at filter cake storage area TTF

COMET DEVELOPMENT PILE

A double berm has been positioned to eliminate accidental dumping of waste rock into Ophir Creek from the top of the Comet Development Pile. The area also has no dumping signs posted to help prevent accidental dumping.





Coeur is considering realigning the Comet Development Pile Access Road, which will also require a relocation of the buried utilities next to the access road. Currently, the access road and the buried utilities that connect the Comet Water Treatment Plant to mine infrastructure are sited between the locally steep terrain and the Comet Waste Rock Development Pile and route from the Comet Portal to the Comet Water Treatment Plant (CWTP) following the old railroad grade. The Comet Access Road relocation proposal is early in the developmental stages and has not been presented to the Forest Service. The proposal will seek to redirect the access road and utilities across the top of the development pile, which will then route following the contour of the development pile downslope toward the CWTP. Realignment of the access road may open additional space for storage of waste rock in the Comet area (Photos 01-03).

COMET WATER TREATMENT PLANT

Pond 1 was active and near capacity while Pond 2 was comparatively empty and inactive. Low seasonal runoff has reduced the need to operate both settling ponds simultaneously. Although receiving waters to Pond 1 looked clear, accumulated sediment was visible in Pond 2 and dredging of the settling ponds is scheduled to continue throughout this year. Dredging in the future will be minimized because of the addition of the triple sumps underground, which have greatly reduced the sediment load from the interior of the mine reaching settling Ponds 1 and 2 (Photo 04-05).

Coeur is transitioning to using dry chemicals instead of liquids where possible at the CWTP to ease the concern of transportation, spills, and secondary containment of liquids (Photo 06).

Two pallets each holding four, fifty-five gallon barrels was located outside the CWTP, the barrels contained a material (Z-FLOCC-401) used in the milling process. Several barrels exhibited signs of impact by forklift and two barrels were punctured, one was already in secondary containment, and the other was not. The leaking material from the punctured barrel was viscous and had not reached the surface of the ground. A downloaded MSDS for the product Z-FLOCC-401 identified the substance as non-toxic and listed no hazardous materials (Photos 07-08). The Z-FLOCC-401 should be returned to the Mill and stored properly; any spilled material should be cleaned up accordingly.

SHERMAN CREEK

The white matter discovered last fall at the Sherman Creek outfall was detected again on this inspection. The white matter envelops all objects in the streambed at and below the water line with thin mucus like coating. The white matter is not visible upstream from the outfall location and continues downstream for approximately 100-150 meters (Photos 09-12). Although testing has occurred, Coeur has been unable to identify the cause or the source of the white matter. Photos documenting the outfall were provided to ADFG.

JUALIN BENCH

Reject material from the milling process has been stockpiled on the Jualin Bench/development pile and additionally at Pit 4. The reject material is below the cutoff grade for the Kensington milling process but





the reject material does still contain a small percentage of mineralization. Coeur plans to rerun the reject material through an X-Ray sorting process to recover any remaining ore. The rejected material from this separation process will be used as construction gravel aggregate; the recovered ore will be reprocessed at the mill (Photo 13).

Expansion of the Jualin Development Pile has caused the need to relocate two settling ponds that rest between the mine camp and mill bench, the ponds are positioned to best capture stormwater runoff from the Mill Bench and the Mill Bench access road. Minor improvements would help redirect some of the runoff into the settling ponds instead of pooling in front of them (Photo 14).

TAILINGS TREATMENT FACILITY

Phase 3 construction of TTF dam is scheduled for 2016 and Coeur estimates approximately 9 years of storage capacity in the TTF at the current rate of production. Coeur is planning to relocate the graphitic phyllite (GP) batch plant and to excavate the graphitic phyllite infiltration gallery before dam construction commences. The GP batch plant will be relocated to the north end of the TTF closer to the water treatment plant and will be used to treat small batches of water collected from the GP seeps located at the north end of the TTF (Photo 15). The stockpiled GP material from the chimney drain near the TTF dam will be excavated and transported to Pit 4. At Pit 4, the GP material will be mixed with cement and then transported underground for permanent disposal.

Minor housekeeping is needed at the filter cake storage area at the TTF Water Treatment Plant (Photo 16). The filter cake material should not be allowed to come in contact with soil off the HDPE liner and should be covered more effectively to prevent precipitation from entering. The filter cake material is hydraulically dewatered sediment that has been filtered during the water treatment process at the facility. After dewatering, the cakes are temporarily stored at the TTF and eventually transported underground where they are added into a cement paste mixture for permanent disposal.

PIT 4

Reject material from the Jualin Development Pile has been stockpiled at Pit 4 because of limited space at Jualin. Specialized sorting equipment is scheduled to arrive on site in June of this year and will separate all reject material into either a construction gravel aggregate, or ore aggregate. The ore aggregate will return to the Mill for inclusion into the milling process and the gravel aggregate will be used as construction aggregate for cement. The cement will be mixed in a pug plant that Coeur plans to install at Pit 4 along with the specialized sorting equipment this summer.

The pug plant will be used to encase GP material stored on site within a cement mix, which will prevent ARD of the GP material once placed underground for permanent disposal. GP material has been stored in four places on site; north end TTF, Pit 4, Mud Dump, and the chimney drain near the TTF dam (Photo 17). The heaps of GP at the TTF, Pit 4, and the Mud Dump have been encased in layer of HDPE to prevent acid rock drainage (ARD) from occurring while awaiting disposal.



FOLLOW UP ITEMS

- Bridge replacement on the Comet side
- Comet access road realignment
- Sherman Creek Outfall

PHOTOS (available upon request)



Photo 01. Approximate location of realigned Comet access road. Portal in background but not visible.



Photo 02. Approximate location of realigned Comet access road following contours off Comet development pile towards the Comet Water Treatment Plant.



Photo 03. Current location of Comet access road and buried utilities against terrain. Photo taken from top of development pile at approximate realignment position.



Photo 04. Pond 1 at capacity.



Photo 05. Pond 2.



Photo 06. Dry chemical storage at CWTP.



Photo 07. Pallets at CWTP with damaged barrels.



Photo 08. Small leak in one palletized barrel.



Photo 09. Sherman Creek.



Photo 10. Sherman Creek.



Photo 11. Sherman Creek.



Photo 12. Sherman Creek.



Photo 13. Jualin reject pile.



Photo 14. New pond location near camp. Small puddle of stormwater runoff accumulating.



Photo 15. GP batch plant with GP chimney drain in background.



Photo 16. Filter cake storage area at TTF WTP.



Photo 17. Reject material storage at Pit 4. HDPE encased GP in background.

Thanks to Kensington Mine for a safe visit.
U.S. Forest Service Officer: /s/ Curtis Caton
