



Department of Natural Resources

DIVISION OF MINING, LAND & WATER Mining Section

MINE PERMITTING ANCHORAGE 550 West 7th Avenue, Suite 900B Anchorage, AK 99501 Main: 907.269-8647 Fax: 907-8949 dnr.anc.mining@alaska.gov MINE PERMITTING FAIRBANKS 3700 Airport Way Fairbanks, Alaska 99709 Main: 907.458-6896 Fax: 907.451-2703 dnr.fbx.mining@alaska.gov

Greens Creek Mine Inspection Report

Inspection Date: Time: Weather:

Agency Personnel: Operator Contacts: Inspection Objectives: September 12, 2024 7:00AM to 4:00PM Overcast, frequent scattered showers occasionally heavy. Wind gusts to 35mph. 50°F. Jesse Garnett White, William Groom, and Carolyn Curley Paula Lillesve Site Inspection

Operations:

Operated by Hecla Mining Company, the Greens Creek Mine (HGCMC) (Map 1) is a silver, lead, and zinc mine located 19 miles southwest of Juneau, Alaska on the northwest side of Admiralty Island. Greens Creek Mine primarily produces zinc and lead; however, it is the largest silver mine in the US...¹

The U.S. Forest Service, Tongass National Forest, is responsible for the administration and management of federal lands on Admiralty Island, including Youngs Bay Experimental Forest and Admiralty Island National Monument where roads and mine facilities are located.

Field Inspection Plan, Execution and Summary Schedule:

The DNR inspection is based on the Hecla Greens Creek Mine Reclamation Plan Approval (No. J20202682RPA) and focused on documentation of and compliance with State of Alaska reclamation requirements. Inspection routes were tracked with GPS. A drone was deployed for aerial imagery when conditions were favorable, and photos were taken at inspection sites. Primary objectives for the field inspection were to inspect sites of active disturbance, water management, and reclaimed areas. Major facilities at the mine include the 920 Area, 1350 Area, 860 Area, Site 23 waste rock storage facility (WRS), tailings disposal facility (TDF), water treatment plant (WTP), water diversion system, material and growth media sites, roads and bridges, Young Bay Facility, and Hawk Inlet Facility. Two roads (A and B roads) link Young Bay and Hawk Inlet Facility with the 920 area. The A-road is 5 miles in length from the Young Bay dock to the Hawk Inlet Facility. The B-road is 8.5 miles in length used for transport of personnel, supplies, and ore concentrates between Hawk Inlet and the 920 area, as well as transport of tailings from the mill to the TDF.

¹ Greens Creek website citation

DNR personnel arrived at 13401 Glacier Hwy (Auke Bay) at 4:45am and boarded the crew boat to Greens Creek Mine. The crew boat docked at Young Bay dock at 5:50am. Crew buses transported personnel via A-Road to the Hawk Inlet Facility. DNR staff attended a brief meeting to review the inspection plan with Hecla personnel Paula Lillesve and Jennifer Stoutamore. It was decided that inspections should be conducted to prioritized drone flights between rains. Areas were visited in the following order: TDF, WTF, Pond 10, Pond 7, Site 23 WRS, 1350 Portal, 920 Area mill and mine portal, Material Site E, Pond E, Sand Pit, and Pit 7 (Maps 1 through 5).

Findings:

A summary of findings can be found below with descriptions of sites that were visited. A general location map, detailed route maps, tracks, and photos of all inspected sites with observation notes are in Appendix A.

1. Inspection of Active Areas of Disturbance

1.1 TDF, WTP, and Ponds 7 and 10.

Ponds 7 and 10 (Map 2, Photos 1-6 and 8) are located at the southwestern end of the TDF near the WTF. Pond 10 was nearly devoid of water (Photos 1-2) while WTP water was actively discharging into Pond 7 (Photos 3-5).

On the TDF, there was activity on the Original Tailings Development Area and Stage 3 Phase 1 Expansion Area (Photos 5-8). Areas of reclamation and stabilization on the West Buttress Area, Northwest Expansion Area, and stockpile storage area were observed including peat slopes scattered with small trees and shrubs (Photos 7-9). Material that is not currently stabilized with vegetation is graded and maintained.

1.2 1350 Portal

At the time of the inspection, we observed the water collection pond and 1350 Portal (Map 3, Photos 10-11). Slopes around the portal are heavily vegetated and wildlife (solitary deer) was spotted on the slopes above the water collection pond (Photo 12).

1.3 920 Area Mill and Mine Portal Facilities

We viewed the 920 Portal, weir (Greens Creek), and mill and mine buildings (Map 3, Photos 13-14).

1.4 Site 23 WRS

Site 23 WRS Placement Areas (Types 1-3) were active at the time of inspection (Map 3, Photos 15-17). Reclaimed and stabilized areas on the flanks and lower slopes of the WRS are well established. Material that is not currently stabilized with vegetation is graded and maintained.

1.5 Material Site E and Pond E

At the time of inspection, the area was graded with berms with parts of the site being used as a laydown yard, storage area, and material site (gravel pile). (Map 4, Photos 18-19).

1.6 Sand Pit

Reclamation surrounding Sand Pit was stable with various grasses, ferns, and small tree growth. This area was reclaimed about 5 years ago, which gives an indicator at the rate re-vegetation occurs. The graded eastern slopes were also stable and in good condition. The pit contained water and growth media including peat,

various grasses, and woody debris. The spillway was well above the current pit water level and in good condition. The flat area surrounding the pit is now a temporary laydown and storage area (Map 5, Photos 20-22).

1.7 Pit-7

Located at 1.8-mile A-road, Pit-7 was previously a rock quarry but is now a stockpile for material brought in for the road. The slopes of the older portion of the material site have been graded, stabilized, and re-seeded, except for a minor slump exposing gravels. At the time of inspection there were some rusting pipes, piles of gravel, and boulders (Map 5, Photos 23-25). Supersacks on site (Photo 25) contain clean material for the paste plant.

Violations

All observed activities followed the Hecla Greens Creek Mine Reclamation Plan Approval (No. J20202682RPA) stipulations, AS 27.19 and 11 AAC 97.

Conclusion and Recommendations

Greens Creek Mine continues the expansion of the Tailings Disposal Facility. DNR finds HGCMC in good condition and consistent with industry standards. The operator facilitates activities in a manner which prevents unnecessary and undue degradation of land and water resources and is responsive to requests made by the DNR.

Report Prepared By: Jesse Garnett White

Steve Buckley, DNR cc: William Groom, DNR Carolyn Curley, DNR Aaron Kruse, DNR Ben Wagner, DNR Kim Bustillos, DNR Sylvia Kreel, DNR Kate Harper, DNR Kindra Geis, DNR Jenny March, DNR Allan Nakanishi DEC David Khan, DEC Kate Kanouse, ADF&G Jesse Lindgren, ADF&G Paula Lillesve, HGCMC Casey Loofbourrow, USFS Matthew Reece, USFS

Appendix A Inspection Maps and Observations of Note



Map 1: Greens Creek Mine 09/2024 Inspection. Note: TDF – Tailings Disposal Facility, YBEF – Youngs Bay Experimental Forest, AINM – Admiralty Island National Monument, and Mat - Material.



Map 2: Greens Creek Mine 09/2024 Inspection. TDF – Tailings Disposal Facility and Water Treatment Plant.



Map 3: Greens Creek Mine 09/2024 Inspection. Site 23 and 860, 920, and 1320 areas.



Map 4: Greens Creek Mine 09/2024 Inspection. Material Site E.



Map 5: Greens Creek Mine 09/2024 Inspection. Sand Pit and Pit 7.

Field Inspection Observations

Photo 1: Pond 10. Pond 10 is a backup pond to provide additional surge protection and was essentially devoid of water at the time of inspection. The liner appeared well maintained. Note the sediment bags and hoses in the upper right of Pond 10. When the pond is dredged to remove sediment, that sediment is pumped to the bags and dewatered. The dry tails are removed from the bags and placed on the TDF.

Photo 2: A different view of Pond 10 exhibiting the minor amount of water in the basin, liner, and gabion inlet spillway. Note that Pond 10 was prepped but had not yet been dredged at the time of inspection.





Photo 3: Pond 7. Pond 7 was actively receiving water at the time of inspection via the Pond 7 Inlet Gabion Spillway. The liner appeared to be well maintained and in good condition. Pond 7 is the primary collection point for all contact water from the TDF, 920, and Hawk Inlet Areas. Note the dredge is drydocked for repair.	Pond 7	ATP	TDF Dredge
Photo 4: Water Treatment Plant (WTP). The WTP was operating at the time of inspection.	N VTP C C Pond 7		















Photo 19: Another view N T Pit 6 of Material Site E and Pond E. B Road Pond E Material Site E Photo 20: Sand Pit. Sand N A Road Pit was a quarry for sand Ţ Hawk Inlet material that was exhausted in 2016. It is now an excellent example of reclamation and how vegetation quickly takes hold on reclaimed areas at Spillway Greens Creek. Sand Pit contains overburden material for mine reclamation and is used as Sand Pit a temporary storage and laydown area.





