



GENERAL PLAN OF OPERATIONS

APPENDIX 15

CONCEPTUAL SUSPENSION OF OPERATIONS PLAN

APRIL 2020

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1.0 Introduction

Hecla Greens Creek Mining Company (HGCMC) has prepared this Conceptual Suspension of Operations Plan as required by the Alaska Department of Environmental Conservation (ADEC) Waste Management Permit 2020DB0001 (WMP). This Plan describes in conceptual terms the measures that will be implemented by HGCMC during a temporary suspension of operations to:

- Control surface and groundwater drainage to and from the facility and the surrounding area;
- Collect, store, treat and dispose of process water;
- Control erosion from the tailings disposal facility, waste rock disposal areas, mill, campsite, and any other disturbed areas within the facility boundary;
- Secure storage of chemicals and fuel; and,
- Maintain and monitor the Pond 7/10 dam and site-wide water balance.

Suspension of operations defined as a suspension of mining and milling/processing activities for more than 90 days but less than three years. The length of time for the period of suspension may be extended beyond three years by written authorization from ADEC and the Forest Service.

In the event of a suspension of operations, HGCMC shall notify ADEC and the Forest Service within three days of the suspension and provide the nature of and reason for the suspension and its anticipated duration. No later than ten days after operations have been suspended, HGCMC shall submit a detailed suspension of operations plan that replaces this conceptual Plan with current information and specific details.

During temporary shutdowns, the Company intends to maintain all leases, permits, approvals, and authorizations, continue all of the required monitoring and regulatory mandated compliance, and maintain the mine facilities to allow the resumption of operations as quickly as possible.

2.0 Personnel

Depending on the circumstances that lead to a suspension of operations, and the anticipated duration, a reduction in the workforce may be necessary until mining/milling operations resume. HGCMC will retain a sufficient staff of qualified personnel to carry out the essential monitoring, maintenance, and water treatment activities described in this Plan.

Staffing needs will be adjusted accordingly for the necessary duties, which may or may not necessitate a change to the regular rotating shifts. Greens Creek will determine staffing needs during a crisis-driven suspension of operation as part of the crisis response, which may or may not necessitate a change to the regular rotating shifts.

3.0 Permits and Leases

The mine holds a variety of property leases and permits for mine operations. During a temporary shutdown of any duration, all leases and permits will be maintained. All conditions and stipulations set by the permits and leases will be followed, and lease fees paid. Clause 29 of the Forest Service leases regarding lease termination states: "This lease shall terminate at such time as the Greens Creek mineral deposit is exhausted or upon failure of the lessee to use the leased site for two consecutive years unless such nonuse is waived annually by the Forest Supervisor." Individual permits and leases must be consulted for details on the requirements. Copies of all permits and leases are on file in the Greens Creek Environmental Affairs office.

4.0 Monitoring/Sampling Requirements

In addition to performing compliance monitoring required under the APDES and Title V Air Quality permits, HGCMC will also perform monitoring as described in the Integrated Monitoring Plan (GPO Appendix 1). The only change to monitoring during a suspension of operations would be a potential reduction in the frequency of geochemical monitoring of tailings and waste rock. During operations, acid-base accounting (ABA) samples are collected quarterly from active placement areas at waste rock Site 23 and annually from active placement areas at the tailings disposal facility. During a suspension of operations, these areas would be sampled on the same five-year interval as is performed on inactive waste rock sites and older portions of the tailings pile.

5.0 Water Management and Erosion Control

Water management activities will continue to be performed in the same manner as during active operations. Water from the underground mine will continue to be pumped, as needed, to treatment systems. Runoff diversion and collection systems at the 920 Area, Site 23, and the tailings facility will be maintained to prevent any contact water from escaping containment. Accumulated sediments will be removed from collection ponds, as needed, to maintain capacity for the 25-yr storm event. All pumping systems and pipelines will be maintained to ensure water requiring treatment is routed to Pond 7/10. The only anticipated change to water management activities is that the mill water treatment plants likely would be shut down, and all water treatment operations would be at the Pond 7 WTP.

Erosion control will be accomplished by continuing the monthly visual inspections of waste rock and tailings disposal sites and through the implementation and maintenance of best management practices (BMPs) throughout the facility. A BMP Plan (GPO Appendix 5) has been prepared to control and contain potential pollutants at the site, and this Plan will continue to be implemented during a temporary shutdown. The surface of waste rock Site 23 and the tailings disposal facility will be contoured and compacted to control runoff and minimize erosion. Depending on the anticipated duration of the shutdown, additional measures may be implemented to control erosion and dusting, such as the

application of polymer at appropriate intervals or the installation of interim covers. Hydroseeding will also be performed, where appropriate, for site stabilization.

If possible, remaining ore on the ore stockpile will be processed through the mill prior to mill shutdown, and material in the re-muck pile will be hauled underground for disposal. These measures will reduce the amount of pollutants entering the runoff collection system in the 920 Area.

6.0 Maintenance

6.1 Roads

Roads at the Greens Creek Mine area will be maintained during short- and long-term temporary shutdowns according to road use demand. Road best management practices, as discussed in the BMP plan, will be maintained as necessary. Roads will be graded to maintain proper drainage. Culverts and ditches will be maintained to assure good runoff from the road and nearby watersheds. Damage to roads, bridges, and culverts will be repaired as soon as possible after it is discovered. Road banks will be reseeded and revegetated as needed to minimize erosion. If erosion occurs, it will be repaired and revegetated as soon as possible.

6.2 Docks

The Hawk Inlet Marine Terminal docks and the Young Bay pedestrian dock will be maintained during a temporary shut down of any duration. Damage to docks will be repaired as soon as possible after it is discovered.

6.3 Buildings/Structures

All buildings and structures will be maintained during both short- and long-term temporary closures. Depending on use and need, some buildings may be closed for the duration of the shutdown and may not be heated. This will be decided at the time of the shutdown, based on the anticipated length of the shutdown and the use of the building. Unused and unheated buildings will be inspected at least monthly to check for damage or deterioration. Damage to buildings and structures will be repaired as soon as possible after it is discovered.

6.4 Underground Mine

The underground mine will be maintained as necessary to enable a prompt resumption of operations, or to allow backfill operations to proceed if it is decided to initiate permanent closure following an extended shutdown. It is possible that underground drilling/exploration activities will continue during a suspension of operations.

7.0 Hazardous Materials Storage

7.1 Fuels/Oil

Fuel consumption needs will be less during a shutdown. However, some buildings will need to remain heated. Fuel will also need to be available for on-site power generation and operation of mobile equipment. Therefore, fuel will continue to be stored at the mine during shutdowns in quantities consistent with fuel consumption needs. Unheated buildings will have their fuel tanks drained.

Bulk tanks, pipelines, and containment areas will continue to be inspected monthly as required by Title 40 CFR Part 112. Inspections are recorded on inspection log forms, signed by the inspector, and kept on-site for a period of three years.

Personnel will continue to be trained in the operation and maintenance of equipment to prevent the discharge of oil. A designated person-in-charge will be accountable for oil spill prevention. Reporting any spills to company management will continue to be the responsibility of any employee aware of a spill. If an oil spill occurs or is discovered during a temporary shutdown, Greens Creek will follow the spill reporting and response procedures contained in GPO Appendix 6, Spill Prevention Control and Countermeasure Plan (SPCC). Damage to fuel storage tanks will be repaired as soon as possible after it is discovered.

An adequate inventory of spill response equipment and materials will be maintained at appropriate locations throughout the facility. HGCMC will also maintain an active membership with the Southeast Alaska Petroleum Resource Organization (SEAPRO).

7.2 Mill Chemicals/Reagents

In the event of a temporary shutdown, the continued storage of chemicals/reagents at the Greens Creek Mine will be assessed. Factors in determining whether to continue the storage of chemicals/reagents during a temporary shutdown include:

- Anticipated duration of the shutdown;
- Known or anticipated use of chemical/reagent during shutdown;
- Future use or need for the chemical/reagent;
- Hazards of chemical/reagent; and
- The shelf life of chemical/reagent.

These and any other relevant factors will be considered in deciding whether to store chemicals/reagents or to remove them during temporary shutdowns. Greens Creek will determine what chemicals/reagents and quantities need to remain in stock and what chemicals/reagents can reasonably be returned to vendors, sold to other mine operators, or disposed of, considering the anticipated length of the

shutdown. In the case of a short-term shutdown, the chemical/reagent inventory will most likely be stored in place. Adequate containment will be provided for all stored chemicals.

An overview of hazardous or toxic substances presently used and stored at the Greens Creek Mine is provided in GPO Appendix 5, Best Management Practices Plan. If a spill of chemical/reagent occurs during a temporary shutdown, Greens Creek will follow the spill reporting and response procedures contained in GPO Appendix 6, SPCC, and also GPO Appendix 9, Facility Response Plan.

8.0 Pond 7/10 Management

All collected surface water and groundwater will continue to be routed to Pond 7/10 for storage and subsequent treatment and discharge to Hawk Inlet under an APDES permit. During a suspension of operations, the volume of water requiring treatment and discharge will be substantially reduced. The operation of the water treatment plant will be optimized for efficiency based on the Pond 7/10 water balance and weather conditions. It is likely that during the summer months, the WTP would be able to operate in batch mode with periods of shutdown. Adequate freeboard will be maintained in Pond 7/10 to provide capacity for a 25-yr, 24-hr storm event. Installed instrumentation provides continuous recording of Pond 7/10 water level and inflow rates from the various pumping systems throughout the site.

Visual inspections of Pond 7/10 will continue on a weekly basis and following any significant seismic and precipitation events. More thorough monthly inspections will be performed following the Alaska Dam Safety Program Visual Inspection Checklist. Geotechnical surveys of the Pond 7/10 embankments will continue to be performed on a quarterly basis.

9.0 Reclamation

HGCMC will evaluate the feasibility of initiating or completing reclamation of certain facilities during a suspension period based on the impact on the mine plan assuming operations will resume. Potential areas where reclamation could commence would be inactive waste rock Site E, the 1.4 mile A-road sandpit, or possibly Site 23. Reclamation of any other facilities is likely not practicable until it is determined to initiate the final closure of the mine.

Revision History:

Date	Prepared By	Description
02/27/2020	Chris Wallace	With the issuance of the WMP 2020DB0001, I reviewed and revised appendix 15 to reflect current operations, though there were no substantive changes made.
3/23/2020	Chris Wallace	Made a few modifications to include the Forest Service in approvals and that road BMPs will be maintained as necessary.
4/21/2020	Chris Wallace	I made a couple of clarifications at the request of the ADEC. No substantive changes made.