



GREENS CREEK MINING COMPANY

CONCEPTUAL SUSPENSION OF OPERATIONS PLAN

November 2014

TABLE OF CONTENTS

1.0	Introduction	4
2.0	Personnel	4
3.0	Permits and Leases	4
4.0	Monitoring/Sampling Requirements	6
5.0	Water Management and Erosion Control.....	6
6.0	Maintenance	7
6.1	Roads	7
6.2	Docks.....	7
6.3	Buildings/Structures	7
6.4	Underground Mine	8
7.0	Hazardous Materials Storage.....	8
7.1	Fuels/Oil.....	8
7.2	Mill Chemicals/Reagents	8
8.0	Pond 7 Management.....	9
9.0	Reclamation	9

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 2014DB0003 (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 dam and site-wide water balance.

Suspension of operations is 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.

In the event of a suspension of operations, HGCMC shall notify ADEC 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, it is the Company's intent to maintain all leases and permits, 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 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.

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." Table 1 summarizes pertinent current operational permits and leases in existence and the measures needed to maintain them during a temporary shutdown. 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.

Table 1: Permit/Lease Index

AGENCY	DESCRIPTION	NUMBER	ISSUE DATE	EXPIRATION DATE	MAINTENANCE ACTIONS
NRC	Licensed Material	50-23276-01 Amdmt. 13	1/10/14	1/31/24	Comply with conditions of permit
ADNR	Right of Way Permit (Marine Outfall to Hawk Inlet)	ADL 105124	7/1/91	6/30/16	Annual fee
ADNR	Tideland Lease (Young Bay Dock)	ADL 106488	1/25/00	1/24/55	Annual fee
ADNR	Tideland Permit (Mooring Buoy in Hawk Inlet)	LAS 19928	10/6/10	10/05/15	Annual fee
ADNR	Water Use Permit (700 gal/min-Greens Creek-for milling purposes)	LAS 11807	10/5/88	Administratively continued	Comply with conditions of permit
ADNR	Water Rights # 656 (Cannery Creek - 17,000 Gal/Day - Public Supply)	ADL 43347	10/06/86	Until water use is abandoned for 5 years	Comply with conditions of permit
ADNR	Temporary Water Use Permit - Multiple	J2010-03 J2010-04 J2010-06 J2010-07 J2000-10	5/18/10	Every 5 years	Comply with conditions of permit
ADNR	Certificate of Approval to Operate a Dam – Pond 7	AK00307	4/8/13	6/13/17	Comply with conditions of permit
ADEC	Waste Management Permit	2014DB0003	8/11/14	8/10/19	Comply with conditions of permit
ADEC	APDES	AK-0043206	7/1/05	Pending renewal	Comply with conditions of permit
ADEC	Title V Air Quality Operating Permit	AQ302TVP02	7/1/08	Pending renewal	Comply with conditions of permit
ADEC	Cannery Camp - (Food Service)	113010178	1/14	Annual renewal	Annual fee

AGENCY	DESCRIPTION	NUMBER	ISSUE DATE	EXPIRATION DATE	MAINTENANCE ACTIONS
ADEC	Drinking Water System - 920	PWSID #119205	8/10/05	Until modified or revoked	Comply with conditions of permit
ADEC	Drinking Water System - Camp	PWSID #113560	8/10/05	Until modified or revoked	Comply with conditions of permit
USFS	Lease-Mine Portal/Mill Site (61.19 acres)	4050-03 Amdmt. 6	8/12/86 4/27/94	Clause 29	Annual fee
USFS	Lease for Milling - 1350 Portal and Campsite (9.82 acres)	4050-09	1/01/87	ibid	Annual fee
USFS	Special Use Permit-Road (146 acres)	ADM228	6/15/09	ibid	Annual fee
USFS	Waste Area E (10.8 acres)	ADM229	6/15/09	ibid	Annual fee
USFS	Lease for Mining (123 acres) Tailings & Pipeline	ADM230	6/15/09	ibid	Annual fee
USFS	Communications Site Permit (0.18 acres)	ADM227	6/15/09	12/31/19	Annual fee

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, November 2014). 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 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. 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 at 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. 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 shut down, based on the anticipated duration of the shut down 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 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 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
- 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 Management

All collected surface water and ground water will continue to be routed to Pond 7 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. Operation of the water treatment plant will be optimized for efficiency based on the Pond 7 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 to provide capacity for a 25-yr, 24-hr storm event. Installed instrumentation provides continuous recording of Pond 7 water level and inflow rates from the various pumping systems throughout the site.

Visual inspections of Pond 7 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 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 to 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 sand pit, or possibly Site 23. Reclamation of any other facilities is likely not practicable until it is determined to initiate final closure of the mine.

