



STATE OF ALASKA  
DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
610 UNIVERSITY AVE.  
FAIRBANKS, AK 99709-3643

WASTE MANAGEMENT PERMIT

for the

**Pogo Mine**

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Permit 2024DB0001

Date: April 19, 2024

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This Waste Management Permit is issued to Northern Star Resources Limited (Pogo Mine), P.O. Box 145, Delta Junction, Alaska 99737, for the disposal of mine tailings, waste rock and other solid wastes as defined in Section 2 of this permit, from a gold recovery facility to an approximately 81-acre Dry Stack Tailings Facility (DSTF), and the mine's underground workings located within Sections 13, 14, 22-27 and 34-36, T5S, R14E; Sections 18, 19 and 29-34, T5S, R15E; Sections 1-3, 10-15 and 36, T6S, R14E; Sections 3-11, 14-23 and 29-32, T6S, R14E, Fairbanks Meridian. This permit is issued under the provisions of Alaska Statute (AS) 46.03.100, AS 46.03.110, and AS 46.03.120, and the Alaska Administrative Code (AAC), 18 AAC 15, 18 AAC 60, 18 AAC 70 and 18 AAC 72, as amended or revised, and other applicable state laws and regulations. This permit is effective **April 19, 2024** and expires after **April 18, 2029**. It may be terminated or modified in accordance with AS 46.03.120.

This permit incorporates by reference Pogo Mine's following documents: *2023 Pogo Plan of Operations* (October 2023), *2023 Pogo Mine Monitoring Plan* (July 2023), *Pogo Quality Assurance Project Plan* (December 2023), *DSTF Construction and Maintenance Plan* (October 2023), *Recycling Tailings Pond Operating and Maintenance Manual* (October 2023), *Pogo Reclamation and Closure Plan* (November 2023) and *Reclamation Cost Estimate & Financial Assurance Model* (November 2023). Changes to the documents incorporated herein must be approved by the Department of Environmental Conservation (department) if they affect this permit. If the department approves the changes, they become part of this permit.

Upon completing reclamation activities and terminating active wastewater treatment, the department requires post-closure maintenance and monitoring. Assessment of post-closure facility conditions shall determine response to and duration of the post-closure period.

  
\_\_\_\_\_  
Signature

April 19, 2024  
\_\_\_\_\_  
Date

James Rypkema  
\_\_\_\_\_  
Printed Name

(Acting) Program Manager  
\_\_\_\_\_  
Title

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## **1 PERMIT COVERAGE & ADOPTED REFERENCES**

### **1.1 COVERAGE**

This permit covers disposal and containment of ore, mineralized waste rock, tailings, and inert construction materials in the DSTF, underground mine workings, temporary mineralized waste rock and ore stockpiles, or Recycle Tailings Pond (RTP). In addition to disposal of waste at the facilities listed above, this permit covers hazardous substance storage and containment, groundwater and surface water containment systems used to prevent the discharge of wastewater, reclamation and closure activities related to all the facilities at the mine site, and financial responsibility. This permit also requires monitoring and reporting associated with waste disposal. This permit does not authorize the discharge of wastewater to surface water.

1.1.1 This permit covers the disposal and containment of waste in the underground mine workings, DSTF, RTP, temporary mineralized waste rock and ore stockpiles, and inert solid waste landfills, and monitoring at the sites listed under this subheading. See the facility map.

#### **1.1.1.1 Underground Workings**

The underground mine is backfilled with waste rock, inert construction material, and paste containing detoxified carbon-in-pulp (CIP) tailings, flotation tailings, and cement. The paste sets as cement providing structural support to mined-out stopes.

#### **1.1.1.2 DSTF**

Dewatered flotation tailings, mineralized waste rock, non-mineralized waste rock, and inert construction debris are disposed of in the DSTF.

#### **1.1.1.3 RTP**

All runoff contacting the DSTF flows downgradient to the RTP via a network of ditches and drains. Drains were constructed in the existing stream valleys beneath the drystack augmenting drainage and allowing precipitation to pass beneath the DSTF. The underdrain capacity significantly exceeds measured flows in Liese Creek before DSTF construction. The maximum storage capacity of the RTP is about 43.6 million gallons.

#### **1.1.1.4 Temporary Mineralized Waste Rock and Ore Stockpiles**

These areas are designated for containment of mineralized waste rock and ore awaiting processing or disposal.

#### **1.1.1.5 Inert Solid Waste Landfills**

Currently, there are no inert solid waste landfills at the mine site. The permittee must receive written department approval before establishing an inert solid waste landfill.

#### **1.1.1.6 Water Quality Monitoring Sites**

The *2023 Pogo Mine Monitoring Plan* (July 2023) designates locations, parameters, and frequencies for monitoring water quality and quantity. Those data aid in the managing and preventing any negative impacts on offsite water

quality. See the facility map.

## 1.2 ADOPTED REFERENCES

In addition to the stipulations in this permit, the permittee shall adhere to the applicable requirements of 18 AAC 15 *Administrative Procedures*, 18 AAC 60 *Solid Waste Management*, 18 AAC 70 *Alaska Water Quality Standards* (WQS), and 18 AAC 72 *Wastewater Disposal*. The permittee shall also adhere to department-approved plans authorized under the permit and listed below. When the terms of this permit differ from the terms of department-approved project documents adopted by reference in this section, the most recent term with written department approval is controlling. If there is doubt as to which conflicting term is newer, this permit shall control. Department-approved plans adopted by reference in this section must be updated within 90 days of permit issuance incorporating any changes necessary to be consistent with the terms of this permit, and these plans may be revised provided that written department approval is received. Department-approved plans adopted by reference into this permit include the following documents:

- 1.2.1 *2023 Pogo Plan of Operations* (October 2023),
- 1.2.2 *2023 Pogo Mine Monitoring Plan* (July 2023),
- 1.2.3 *Pogo Quality Assurance Project Plan* (December 2023),
- 1.2.4 *DSTF Construction and Maintenance Plan* (October 2023),
- 1.2.5 *Recycling Tailings Pond Operating and Maintenance Manual* (October 2023),
- 1.2.6 *Pogo Reclamation and Closure Plan* (November 2023), and
- 1.2.7 *Reclamation Cost Estimate & Financial Assurance Model* (November 2023)

Future department-approved changes to adopted reference listed above do not require re-issuance or modification of this permit.

## 2 SPECIFIC CONDITIONS

### 2.1 SITE-WIDE WASTE DISPOSAL

While this permit is in effect and subject to the limitations in Section 2, the permittee is authorized to dispose of solid and liquid wastes in permit-designated treatment works at the Pogo Mine. Under 18 AAC 70.010(c), WQS do not apply to a treatment works authorized by the department and applicable water quality criteria “must be met in adjacent surface water and groundwater at and beyond the boundary of the treatment works.” Treatment works are defined in AS 46.03.900(33) as “a plant, disposal field, lagoon, pumping station, constructed drainage ditch or surface water intercepting ditch, incinerator, area devoted to sanitary landfills, or other works installed for the purpose of treating neutralizing, stabilizing, or disposing of sewage, industrial waste, or other wastes.”

2.1.1 All Treatment Works – The underground mine workings, DSTF, RTP, ore and mineralized waste rock stockpiles, and inert solid waste landfills are approved for disposal of solid and liquid wastes as allowed by this permit and approved as treatment works per 18 AAC 70.990(33) and not subject to WQS in 18 AAC 70.010(c). See the facility map.

#### 2.1.2 Limitations

2.1.2.1 Except as otherwise authorized in an Alaska Pollutant Discharge Elimination

- System permit, the permittee shall control and treat onsite surface water, groundwater, and seepage as necessary to prevent offsite water quality exceedances.
- 2.1.2.2 The permittee shall ensure that all wastewater, tailings, ore, or mineralized waste rock are deposited in a manner that will not damage or otherwise jeopardize the integrity of containment.
- 2.1.2.3 Mineralized waste rock contains greater than 0.5 percent (%) sulfur (S) or exceeds 600 milligrams per kilogram (mg/kg) arsenic (As) and is subject to regulation by this permit. Mineralized waste rock shall be disposed in the DSTF or underground as soon as practicable.
- 2.1.2.4 Disposal of non-mineralized waste rock containing 0.5% S or less and 600 mg/kg of As or less is unregulated.
- 2.1.2.5 The following materials shall not be disposed onsite.
- 2.1.2.5.1 Acute hazardous wastes, as defined by 18 AAC 60.990(157), including radioactive material, explosives, strong acids, and untreated pathogenic waste; however, this prohibition does not preclude disposal of natural minerals found in mine rock; or
- 2.1.2.5.2 Contaminated soils, spill booms, and liners used for the containment of spilled hazardous substances, chemicals used in the cleanup of hazardous substance spills, or other hazardous substance spill cleanup wastes.
- 2.1.2.6 Monitoring, as specified in Section 2.3, must not result in water quality measurements indicating a statistically significant increase, according to 18 AAC 60.830(h), in constituent concentration above WQS. When a statistically significant increase in a concentration of a constituent above its WQS is discovered, corrective action outlined in Section 2.5 must be implemented.
- 2.1.2.7 Prior to disposal as paste backfill tailings, the CIP tailings shall be subjected to cyanide detoxification using the SO<sub>2</sub> /air process or other suitable cyanide detoxification process approved by the department. The interstitial water samples from detoxified CIP tailings shall contain fewer than 10 milligrams per liter (mg/L) of weak acid dissociable (WAD) cyanide as a monthly average and none of the samples shall contain more than 20 mg/L of WAD cyanide.
- 2.1.2.8 Wash water from the vehicle maintenance shop may go into the RTP provided that oily water goes through an oil/water separator, and it does not have a sheen prior to entering the RTP. Dry methods of cleanup shall be used for initial cleanup of oil spills in the maintenance shop.
- 2.1.2.9 Activities at the site, which will cause a greater amount of waste material to be treated and disposed of than contemplated in this section of the permit, are prohibited without the prior approval by the department.
- 2.1.2.10 The water in compliance monitoring wells MW12-500, MW12-501, and MW12-502 must not exceed the triggers. Monitor MW12-500, MW12-501,

and MW12-502 according to Section 2.3. If any of the triggers listed in the table below are exceeded, corrective action designated in Section 2.5 must be implemented.

**Table: Upper Tolerance Limit Concentrations Triggering Corrective Action**

Parameter <sup>1</sup>	Units	Location		
		MW12-500	MW12-501	MW12-502
antimony	µg/L <sup>2</sup>	0.36	0.35	0.35
arsenic	µg/L	47.8	47.6	45.0
chloride	mg/L <sup>3</sup>	0.79	1.23	1.06
cyanide, WAD <sup>4</sup>	µg/L	5.2	5.2	5.2
nitrate as nitrogen	mg/L	1.28	2.66	2.39
potassium	mg/L	3.18	3.69	3.27
selenium	µg/L	1.35	0.99	0.64
sodium	mg/L	5.41	5.27	3.90

<sup>1</sup> Measure dissolved concentrations because water samples come from monitoring wells, and the presence of non-dissolved constituents, including antimony and arsenic, is considered negligible.  
<sup>2</sup> micrograms per liter  
<sup>3</sup> milligrams per liter  
<sup>4</sup> For WAD cyanide, 20 µg/L is the minimum level of quantification (ML) and the compliance level. The method detection level (MDL) is 10 µg/L.

- 2.1.2.1 The water in compliance monitoring wells MW11-001A, MW11-001B, MW04-213, and MW11-216 must not demonstrate a statistically significant increase in constituent concentrations above background groundwater quality and exceed WQS. Monitor these wells according to Section 2.3. If these thresholds are surpassed, corrective action designated in Section 2.5 must be implemented.
- 2.1.2.2 The permittee must comply with 18 AAC 60.815 and prevent the escape of waste or leachate from disposal facilities. Monitor according to Section 2.3. If damage or potential damage to a waste disposal-related facility is discovered that could lead to an exceedance of WQS or harm to wildlife, corrective action designated in Section 2.5
- 2.1.2.3 For WAD cyanide with a site- specific MDL equal to 10 µg/L and site-specific ML equal to 20 µg/L, values between the MDL and ML provide a margin of safety indicating increasing trends prior to any exceedances. Based on the rate and magnitude of a trend, the department may require corrective action according to Section 2.5 to prevent environmental harm. When lab results are between the MDL and ML, the permittee shall verbally notify the department within 60 days of the end of the calendar quarter when it occurred and provide written notification within 7 days of verbal notice.

- 2.1.2.4 The limitations also do not preclude, and authorization is hereby given for, disposal of non-hazardous incidental wastes either underground or in discrete cells in the DSTF, such as (i) settled solids from sumps, ditches, and degritting basins; (ii) settled solids from the water treatment plant; (iii) dewatered water treatment plant sludge; (iv) dewatered sewage sludge that is untreated or has less than 10% solids by weight; (v) incinerator ash and residue; (vi) ash from combustion of scrap wood material; (vii) iron (drill steel, balls, empty case, etc.); (viii) used ventilation tubing and used filter press cloth; (ix) empty plastic and glass containers; (x) inert domestic waste; (xi) construction debris; (xii) tires; (xiii) spill cleanup debris approved by the department; (xiv) non-terne plated used oil filters that have been gravity hot-drained; (xv) concrete slabs, scrap lumber, pipe and similar wastes; (xvi) empty drums and containers that have been triple-rinsed; (xvii) non-lead acid batteries; and (xviii) such other material as would otherwise be disposed of in a surface landfill without special handling.
- 2.1.2.5 The department may set or modify permit conditions based on monitoring results or changes in facility processes in accordance with permit amendment or modification procedures.

## 2.2 SITE CONSTRUCTION, MAINTENANCE, & OPERATION

### 2.2.1 General

- 2.2.1.1 The permittee shall conduct mining operations according to *2023 Pogo Plan of Operations* (October 2023).
- 2.2.1.2 The Permittee shall construct and maintain the drystack according to the *DSTF Construction and Maintenance Plan* (October 2023). The drystack capacity is limited to 24.9 million tons of regulated waste, i.e., tailings, waste rock, and inert construction debris. Construction rock supporting the stability and drainage of the DSTF are not waste material. Therefore, they are not regulated.
- 2.2.1.3 The Permittee shall operate and maintain the RTP according to the *Recycling Tailings Pond Operating and Maintenance Manual* (October 2023).
- 2.2.1.4 Changes that may have a significant impact on surface or groundwater quality; information on engineering changes to the wastewater disposal systems that may affect water quality; new waste treatment processes; changes to ground and surface water interception, conveyance or monitoring systems; or the addition of new waste streams to the discharge that could significantly change the quality or increase the quantity of pollutants in a waste stream must be submitted to the department and approval must be obtained prior to any such changes or discharges.
- 2.2.1.5 The permittee shall develop the project according to department-approved plans and amendments thereof, which are submitted by the applicant as required by this permit and referenced in Section 1.2. Pollution prevention concepts shall be incorporated into operations plans for the project.
- 2.2.1.6 The permittee shall construct and maintain wastewater collection systems and control wastewater in accordance with plans approved by the department.
- 2.2.1.7 The permittee shall not dispose of tailings, ore, mineralized waste rock, or

wastewater in quantities exceeding the design capacity of the containment and disposal facilities.

2.2.1.8 The permittee shall control wastewater as necessary to prevent causing downgradient offsite water quality exceedances in waters of the State.

2.2.1.9 Tailings, ore, mineralized waste rock, and wastewater containment and disposal systems shall be properly operated and maintained.

## 2.2.2 Secondary Containment

2.2.2.1 Secondary containment of all hazardous substances, as defined at AS 46.03.826(5), must be impermeable to those stored hazardous substances.

2.2.2.2 The permittee shall provide and maintain secondary containment for all tanks containing hazardous or toxic materials and piping associated with that tankage. For a given containment area, secondary containment must provide a storage volume greater than or equal to 110 % of the largest tank or the total volume of permanently manifolded tanks.

2.2.2.3 The permittee must design and install secondary containment structures in a manner that ensures that hazardous substances/fuel will not escape from the structures. To prevent such discharges, facilities shall be always maintained in good working condition by the permittee.

2.2.2.4 The permittee shall maintain fuel handling and storage facilities in a manner that will minimize the discharge of hazardous substances.

## 2.2.3 Notification

2.2.3.1 The permittee shall notify the department in writing at least 15 days before the introduction of a new chemical into the process or wastewater treatment streams that could significantly change the quality or increase the quantity of pollutants in a wastewater stream(s). Safety Data Sheets on such new chemicals must be forwarded to the department at time of notification and maintained onsite. Introduction of the new chemical into the process requires written department approval.

2.2.3.2 Under 18 AAC 72.200, the permittee shall submit engineering plans to the department at least 60 days before construction or modification of an applicable system and receive department approval of any changes that will significantly modify the quality or quantity of a waste stream or operation of a wastewater treatment component covered under this permit.

2.2.3.3 With respect to any department-approved change as described in Section 2.2.1.5, the permittee must submit to the department within 60 days after completing construction:

2.2.3.3.1 As-built drawings of the process components showing changes potentially affecting performance as required in 18 AAC 72.240,

2.2.3.3.2 A summary of the quality control activities that were carried out during construction, and

2.2.3.3.3 The revised operating plans that reflect modifications made during construction.



## 2.3 MONITORING

The *2023 Pogo Mine Monitoring Plan* (July 2023) was submitted by Northern Star Resources Ltd., approved by the department, and incorporated into this permit. The permittee shall adhere to the *2023 Pogo Mine Monitoring Plan* (July 2023) and

- 2.3.1 Visually monitor all facilities for signs of damage or potential damage from settlement, ponding, leakage, instability, frost action, erosion, thawing of the waste, or operations at the site. Also, check for signs of stress to vegetation and wildlife at the facility, the presence of auferis, and sheen on discharged water. Visual monitoring shall be at least weekly and documented monthly.
- 2.3.2 Monitor surface and groundwater near the site to ensure that WQS or natural water quality conditions are protected as confirmed by representative sample results.
- 2.3.3 Employ sufficiently sensitive water chemistry analytical methods to determine compliance with applicable WQS.
- 2.3.4 The permittee shall adhere to the *Pogo Quality Assurance Project Plan* (December 2023) (QAPP) as approved by the department and adopted into the permit by reference.
  - 2.3.4.1 The QAPP must be updated within 90 days of permit issuance, as needed.
  - 2.3.4.2 The QAPP shall ensure water quality samples are analyzed by a laboratory that follows EPA-approved procedures, quality control requirements, reporting and documentation procedures.
  - 2.3.4.3 The QAPP must be designed to assist in planning for the collection and analysis of water samples in support of the permit and in explaining data anomalies when they occur.
  - 2.3.4.4 Throughout all sample collection and analysis activities, the permittee must use chain-of-custody procedures described in the QAPP.
  - 2.3.4.5 The permittee must amend the QAPP whenever there is a modification in sample collection, sample analysis, or other procedure addressed by the QAPP.
  - 2.3.4.6 A copy or copies of the QAPP must be made available to the department upon request.
  - 2.3.4.7 Maintenance of inspection and sampling logs and procedures for processing, consolidating, and reporting inspection and sampling data shall be in conformance with the most recent QAPP.
- 2.3.5 Groundwater and surface water monitoring and corrective action monitoring shall be according to Section 2.3, 18 AAC 60 Solid Waste Management Regulations, the most recently approved monitoring plan, and QAPP.
- 2.3.6 The department may modify monitoring requirements, including the establishment of additional compliance points in response to trends showing changes in the concentration of parameters being monitored.
- 2.3.7 Groundwater, surface water, and corrective action monitoring shall be in accordance with Section 2.3, Article 7 of 18 AAC 60 Solid Waste Management Regulations, *2023 Pogo Mine Monitoring Plan* (July 2023), and the QAPP.
- 2.3.8 The department may modify monitoring requirements, including the establishment of

additional compliance points in response to trends showing changes in the concentration or load of parameters being monitored.

- 2.3.9 If the permittee monitors any surface or groundwater identified in the *2023 Pogo Mine Monitoring Plan* (July 2023), more frequently than required, the permittee shall notify the department that the additional monitoring has occurred in the next quarterly report after the monitoring has occurred. The results of such monitoring shall be available for inspection by the department, and the permittee shall provide copies of the results to the department upon request.

## 2.4 REPORTING

- 2.4.1 When a statistically significant increase in the concentration of a constituent above a WQS is discovered at a groundwater or surface water monitoring station., or if noncompliance with a permit requirement is discovered, the permittee shall verbally notify the department no later than the end of the next working day after discovery and shall conduct corrective actions according to Section 2.5.

- 2.4.2 The permittee shall provide the department with quarterly monitoring reports summarizing inspection and monitoring results required in Section 2.3. The reports shall satisfy the following conditions.

2.4.2.1 Due Dates - Reports for the first three calendar quarters are due within 60 days after the quarter ends, and the report for the fourth calendar quarter shall be submitted by March 1<sup>st</sup> of the following year.

2.4.2.2 Form – Reports shall be provided in electronic form using commercially available software or according to other electronic reporting requirements approved by the department. Paper copies of the reports are not required unless specifically requested.

2.4.2.3 Content - Reports shall contain a narrative portion discussing data and information collected during the preceding quarter.

2.4.2.4 Graphing - Reports shall present water quality data in graphical form indicating trends as well as the margin of compliance with limits.

2.4.2.4.1 Graphs of concentration measurement versus time must include the past five years of data, if available, and may contain all historic data.

2.4.2.4.2 The graphs must also include the parameter, units, and applicable permit limit or WQS.

2.4.2.4.3 Multiple stations, identified using symbols in a legend, may be included in the same graph.

2.4.2.4.4 Scales shall be proportioned to display the limit or WQS, as indicated by a highlighted line, near the top of the graph or when data exceeds the limit, the maximum value shall be near the top of the graph.

2.4.2.4.5 Formatting shall allow addition of new data to each graph's cumulative data when producing the next quarterly report.

2.4.2.4.6 For graphical purposes, non-detect values shall be plotted at one half the method detection limit (MDL), and values between the minimum level of

quantification (ML) and MDL shall be plotted at the value of the qualified measurement.

- 2.4.3 Annual Report - In addition to satisfying the requirements of Section 2.4.2, the fourth calendar quarter report serves as the annual report. The annual report shall:
- 2.4.3.1 Be submitted to the department by March 1<sup>st</sup> of the following year;
  - 2.4.3.2 Contain an electronic copy (preferably Excel) of the water quality data for the reporting year, including the past five years' data, if available, and may contain all historic data in spreadsheet form. When a value is less than the ML, it must be identified as less than the ML, and the ML must be provided. Non-detect values must be identified as less than the MDL or non-detect and the MDL must be provided in the electronic water quality data spreadsheets; and
  - 2.4.3.3 Address the adequacy of the financial responsibility including, but not limited to, significant changes in reclamation activity costs, concurrent reclamation, expansion, or other changes to the operation of the facility.
- 2.4.4 The permittee shall provide the department with copies of any amendments to the and Plan of Operations Approval or Reclamation Plan Approval issued by Alaska Department of Natural Resources (DNR), when they affect the waste disposal operations authorized by the permit.
- 2.4.5 All records, information, and reports resulting from the monitoring activities required by this permit, including but not limited to all records of analyses performed, calibration and maintenance of instrumentation, and recordings from continuous monitoring instrumentation, shall be retained for observation by the department for a minimum of five years. Upon request from the department, the permittee shall submit certified copies of such records.
- 2.4.6 Any onsite wildlife casualties associated with facility activities shall be reported to appropriate State agencies, including the department, within one working day of discovery.
- 2.4.7 All mailed reports submitted under the requirements of this permit shall be sent to:
- Dept. of Environmental Conservation
  - Division of Water
  - 610 University Ave.
  - Fairbanks, AK 99709
  - (907) 451-2136
- 2.4.8 Knowingly making a false statement, by the permittee, the operator, or other employees, including contractors, on any such report may result in the imposition of criminal penalties as provided under AS 46.03.790.

## 2.5 CORRECTIVE ACTIONS

- 2.5.1 The permittee shall comply with 18 AAC 60.815 if the visual monitoring program in Section 2.3.1 discovers damage or potential damage to the waste disposal-related facility that could lead to water quality violations.
- 2.5.2 When a statistically significant increase in a constituent concentration above a WQS is discovered in any of the water sampling locations, the permittee shall comply with

18 AAC 60.820-860. Statistical significance shall be determined using one of the methods outlined in 18 AAC 60.830(h). The permittee shall comply with the notification requirements in 18 AAC 60.850(c) upon determining a statistically significant increase in a constituent concentration.

- 2.5.3 For a single constituent, when a statistically significant increase in concentration above its WQS is discovered at a water monitoring station or if noncompliance with a permit requirement is discovered, the permittee shall:
- 2.5.3.1 Orally notify the department no later than the end of the next working day;
  - 2.5.3.2 Determine the extent of the exceedance or noncompliance;
  - 2.5.3.3 In consultation with the department and documented in writing, implement a plan to restore compliance and determine the cause of the exceedance or noncompliance;
  - 2.5.3.4 Submit to the department, within seven working days after an exceedance or noncompliance is verified by the permittee, a plan for corrective actions to prevent adverse environmental impacts and avoid future exceedances of a similar nature; and
  - 2.5.3.5 Implement the corrective actions as approved by the department.

## 2.6 SUSPENSION OF OPERATIONS

- 2.6.1 Suspension of operations is defined as a suspension of mining activities for more than one year but less than three years. The length of time for the period of suspension may be extended beyond three years by written authorization from the department. The permittee shall submit a conceptual suspension of operations plan to the department within 90 days of permit issuance.
- 2.6.2 The permittee must notify the department within three days of suspending operations. The notice shall provide the nature of and reason for the suspension and its anticipated duration.
- 2.6.3 No later than ten days after operations have been suspended, the permittee shall submit a detailed and updated suspension of operations plan that supersedes the suspension of operations conceptual plan required by Section 2.6.1 with current information and specific details. The suspension plan shall address the following:
- 2.6.3.1 Explain what would reasonably result in resuming or permanently terminating mining activities;
  - 2.6.3.2 Reclamation or construction activities during the period of temporary suspension;
  - 2.6.3.3 Procedures, methods, and schedule to be implemented for the treatment, disposal, or storage of wastewater;
  - 2.6.3.4 The control of surface and groundwater drainage to and from the facility and the surrounding area;
  - 2.6.3.5 The control of erosion from the waste rock disposal areas and any other disturbed areas within the facility boundary;
  - 2.6.3.6 The storage of hazardous materials during the period of suspended operations;

and

- 2.6.3.7 The department shall have 15 days to review and approve or request modifications to the suspension plan.
- 2.6.4 Once a suspension of operations plan has been approved, it becomes enforceable under the conditions of this permit and full implementation of the approved suspension plan is required. The plan can be amended by submitting a revised plan to the department for approval.
- 2.6.5 During suspension of operations, the permittee shall:
  - 2.6.5.1 Continue pollution control activities associated with waste disposal and management, including but not limited to dust control, maintenance of the drainage diversion structures, maintenance of all discharge and leakage control structures and processes, as specified by the suspension plan.
  - 2.6.5.2 Continue monitoring and reporting activities of all active portions of the site as specified by this permit or the suspension plan.
- 2.6.6 Written department approval is required before resuming mining after a period of temporary closure.

## 2.7 TERMINATION OF MINING ACTIVITIES

- 2.7.1 Termination of mining activities is defined as the permanent cessation of those activities. Updated reclamation and monitoring plans must be submitted for approval within 90 days after initiating termination of mining. The updated plans must address current conditions at the facility. Updates and changes to those plans must be approved in writing by the department.
- 2.7.2 Termination of mining at the site must be implemented and completed according to the conditions of this permit and the *Pogo Reclamation and Closure Plan (November 2023)* as approved by the department and incorporated by reference into this permit.
- 2.7.3 Closure of the waste disposal facilities will be complete when the following criteria are met:
  - 2.7.3.1 Department-approved covers are installed on the waste rock dumps and pits and that drainage channels are constructed and stable;
  - 2.7.3.2 A stable vegetative cover is established on the waste rock, re-contoured areas, and other infrastructure or other facilities as prescribed in the *Pogo Reclamation and Closure Plan (November 2023)*; and
  - 2.7.3.3 The department determines that active water treatment is not required for any water discharged from the project.
- 2.7.4 The permittee shall maintain the facility correcting any erosion or settlement that may impair water quality or otherwise threaten the environment, up until the time that this permit, or any successor permit, is transferred to another entity or terminated by the department.
- 2.7.5 Post-closure monitoring of surface water quality and visual monitoring for settlement, seeps, and erosion is required annually for at least 60 months after termination of active wastewater treatment and discharge.

- 2.7.6 The permittee shall assess the conditions at the facility and respond accordingly throughout the reclamation and post-closure care periods. At the end of the post-closure monitoring period, the department will determine whether post-closure care and monitoring should be extended beyond the initial 60-month period, based on the information collected by that time.

## 2.8 FACILITY AUDIT

Unless waived by the department, a periodic third-party environmental audit shall be completed during the final year of the permit term or sooner if final closure starts during the permit term. However, the field inspection portion of the audit shall be conducted during the snow free season the year before permit expiration. The audit will include all aspects of this Waste Management Permit. The intent of the audit is to verify that the permittee complies with applicable environmental laws associated with this permit. The contractor should be mutually agreed on by the State and permittee, but if agreement cannot be reached, the State retains the final contractor selection decision. Costs for the contractor shall be borne by the permittee.

## 3 GENERAL CONDITIONS

### 3.1 ACCESS AND INSPECTION

The permittee shall allow the Commissioner or designated representative access to the permitted facility at reasonable times to conduct scheduled or unscheduled inspections or tests to determine compliance with this permit, state laws, and regulations.

### 3.2 INFORMATION ACCESS

Except where protected from disclosure by applicable State or Federal law, all records and reports submitted in accordance with the terms of this permit shall be available for public inspection at the State of Alaska, Department of Environmental Conservation, Fairbanks, Alaska.

### 3.3 CIVIL AND CRIMINAL LIABILITY

Nothing in this permit shall relieve the permittee from any potential civil or criminal liability for noncompliance with the permit or with applicable laws.

### 3.4 AVAILABILITY

The permittee shall post or maintain a copy of this permit available to the public at the facility.

### 3.5 ADVERSE IMPACT

The permittee shall take all necessary means to minimize any adverse impacts to the receiving waters or lands resulting from noncompliance with any limitation specified in this permit, including any additional monitoring needed to determine the nature and impact of the noncomplying activity. The permittee shall cleanup and restore all areas adversely impacted by the noncompliance.

### 3.6 APPLICATIONS FOR REISSUANCE

In accordance with 18 AAC 15.100(d), an application for reissuance or amendment of this permit must be made no later than 120 days before the expiration date of the permit (December 20, 2028) or the planned effective date of the amendment.

### 3.7 OTHER LEGAL OBLIGATIONS

This permit does not relieve the permittee from the duty to obtain any other necessary permits from the department or from other local, state, or federal agencies, and to comply with the requirements contained in any such permits. All activities conducted and all plans implemented by the permittee pursuant to the terms of this permit shall comply with all applicable local, state, and federal laws and regulations.

### 3.8 TRANSFER OF OWNERSHIP

In the event of any change in control or ownership of the permitted facility, the permittee shall notify the succeeding owner or controller of the existence of this permit by letter, a copy of which shall be forwarded to the Director of the Division of Water. The original permittee remains responsible for permit compliance unless and until the succeeding owner or controller agrees in writing to assume such responsibility, and the department approves assignment of the permit. The department will not unreasonably withhold such approval.

As between the State and the permittee, no transfer of this permit shall relieve the permittee of any liability arising out of operations conducted prior to such transfer, regardless of whether such liability accrues before or after such transfer.

### 3.9 TOXIC POLLUTANTS

If during the life of this permit a new or revised toxic pollutant (including oil, grease, or solvents) concentration standard is established in accordance with 18 AAC 70 for a pollutant managed at this facility and that standard is more stringent than previously, then upon the effective date of the new rule, this permit automatically adopts the new toxic pollutant concentration standard and applies it to management of facility wastes going forward from the date of adoption. Authorized discharges made prior to any standards change or adoption will not be subject to ex post facto clean up requirements.

### 3.10 POLLUTION PREVENTION

To prevent and minimize present and future pollution, when making management decisions that affect waste generation, the permittee shall consider the following order of priority options as outlined in AS 46.06.021:

- 1<sup>st</sup> waste source reduction,
- 2<sup>nd</sup> recycling of waste,
- 3<sup>rd</sup> waste treatment, and
- 4<sup>th</sup> waste disposal.

## 4 AMOUNT OF FINANCIAL RESPONSIBILITY

Review of the *Pogo Reclamation and Closure Plan* (November 2023) and *Reclamation Cost Estimate & Financial Assurance Model* (November 2023) were conducted in consultation and agreement between the department and DNR. The amount of financial responsibility, \$88,250,000, provided to DNR, as detailed in the *Reclamation Cost Estimate & Financial Assurance Model* (November 2023), satisfies the requirements of AS 46.03.100(f), 18 AAC 15.090, and 18 AAC 60.265.

## **5 GLOSSARY OF ACRONYMS**

AAC	Alaska Administrative Code
AS	Alaska Statutes
CIP	Carbon-in-Pulp
DSTF	Dry Stack Tailings Facility
DNR	Alaska Department of Natural Resources
MDL	Method Detection Limit
ML	Minimum Level of Quantification
QAPP	Quality Assurance Project Plan
WAD	Weak Acid Dissociable
WQS	Alaska Water Quality Standards (18 AAC 70)





### Appendix A Monitoring Locations Pogo Mine

Coordinate System: NAD 1983 StatePlane Alaska 3 FIPS 5003 Feet  
 Projection: Transverse Mercator  
 Datum: North American 1983  
 False Easting: 1,040,416.67  
 False Northing: 0.00  
 Central Meridian: -146.00  
 Latitude of Origin: 54.00  
 Author: Jeremiah Drowel, Environmental Geospatial

**Monitoring Locations**

- MET Station
- LL Wells
- Monitoring Wells
- Flume
- OUTFALL

1:25,000

