

**Final**

**Red Dog Mine**

**Reclamation Plan Approval**

**(F20099958)**

DEPARTMENT OF NATURAL RESOURCES  
Division of Mining, Land and Water

The Alaska Department of Natural Resources, Division of Mining, Land and Water (ADNR), in accordance with and subject to Alaska Statutes 27.19 (Reclamation) and 38.05 (Alaska Land Act) and the Alaska Administrative Code, Title 11 and Chapter 97 (Mining Reclamation), approves the Reclamation Plan for the Red Dog Mine (F20099958) submitted by:

Teck Alaska Incorporated  
3105 Lakeshore Dr. Bldg A, Suite 101  
Anchorage, AK 99503

Throughout this document, unless otherwise specifically indicated, any reference to Teck Alaska Incorporated, Teck, TCAK or Permittee is considered a reference to Teck Alaska Incorporated. Throughout this document, unless otherwise specifically indicated, reference to the State, Department, ADNR, DNR or Division is considered a reference to the State of Alaska – Department of Natural Resources – Division of Mining, Land & Water.

Throughout this document, the Reclamation Plan is considered to consist of the Red Dog Mine Closure and Reclamation Plan (May 2009) and the following Supporting Documents (SD):

- SD A2 – Legal Description of Property;
- SD B1 – Red Dog Mine Development Plan (TCAK, 2004);
- SD B2 – Plan of Operations for Waste Rock Management;
- SD B3 – Plan of Operations for Tailings and Water Management;
- SD E1 – Red Dog Water and Load Balance;
- SD F3 – Revegetation Plan for the Red Dog Mine (ABR, Inc., 2007);
- SD G – Demolition Cost Estimates (Denison Environmental Services, 2004);
- SD I – Red Dog Mine, Waste Management, Reclamation and Closure Monitoring Plan (TAK, 2009);
- SD J1 – Basis of Estimate – Closure Costs;
- SD J2 – Basis of Estimate – Post-Closure Costs;
- SD J3 – Basis of Estimate – Suspension Costs;
- EXCEL Closure Cost Estimate;
- EXCEL Post-Closure Cost Estimate; and,
- EXCEL Suspension Cost Estimate.

Reference to any of these documents throughout this Reclamation Plan Approval is considered to be a reference to the Reclamation Plan.

Effective dates of this Reclamation Plan Approval are December 2, 2009 through December 2, 2014, unless sooner revoked for cause; however, Teck Alaska Incorporated's obligations under the terms and conditions of this Reclamation Plan Approval shall continue beyond the effective term of this Reclamation Plan Approval, unless sooner terminated in accordance with the provisions of this Reclamation Plan Approval, until completion of all requirements under and pursuant to the Reclamation Plan Approval.

This Reclamation Plan Approval is for activities upon private and State lands as described in the Red Dog Mine Closure and Reclamation Plan Supporting Document A2 – Legal Description of Property (January 2004). This Reclamation Plan Approval does not constitute certification of any property right or land status claimed by the applicant.

The Reclamation Plan was found to be complete and is approved by ADNR with the following conditions:

## GENERAL STIPULATIONS

**Financial Assurance.** This Reclamation Plan Approval does not take effect until Teck Alaska Incorporated submits financial assurance in a form approved by ADNR. The financial assurance shall not be released until affected areas have been reclaimed and are approved by the Authorized Officer and all other terms of this Reclamation Plan Approval are met. Modifications to the Red Dog Mine Closure and Reclamation Plan and notification of Temporary or Permanent Closure may, at ADNR's discretion, require review and update of the amount and/or the form of the financial assurance. The total initial financial assurance amount of \$305,150,000 has been approved for the Red Dog Mine. ADNR may require revision to the financial responsibility cost estimate and associated Net Present Value (NPV) calculations based upon: (1) monitoring results at the Red Dog Mine; (2) changes in costs for labor, equipment, fuel, or chemicals; (3) changes in the scope and nature of work required under the Red Dog Mine Closure and Reclamation Plan; and, (4) for the circumstance where the rate of inflation or projected rate of return on assets differs by more than 10% from the rates used in the most recent NPV calculations approved by ADNR.

**Terms of this Plan Approval.** The Terms and Conditions contained within the Red Dog Mine Closure and Reclamation Plan (May 2009), and the following Supporting Documents (SD) are hereby incorporated by reference as stipulations of this Reclamation Plan Approval:

- SD A2 – Legal Description of Property;
- SD B1 – Red Dog Mine Development Plan (TCAK, 2004);
- SD B2 – Plan of Operations for Waste Rock Management;
- SD B3 – Plan of Operations for Tailings and Water Management;
- SD E1 – \*Red Dog Water and Load Balance\*;
- SD F3 – Revegetation Plan for the Red Dog Mine (ABR, Inc., 2007);
- SD G – \*Demolition Cost Estimates (Denison Environmental Services, 2004)\*;
- SD I – Red Dog Mine, Waste Management, Reclamation and Closure Monitoring Plan (TAK, 2009);
- SD J1 – Basis of Estimate – Closure Costs;
- SD J2 – Basis of Estimate – Post-Closure Costs;
- SD J3 – Basis of Estimate – Suspension Costs;
- EXCEL Closure Cost Estimate;
- EXCEL Post-Closure Cost Estimate; and,

EXCEL Suspension Cost Estimate.

\*denotes documents not part of public comment

If there is a difference between the Reclamation Plan as submitted and the terms contained within this Reclamation Plan Approval, the terms contained within this Reclamation Plan Approval take precedence. Changes to the documents incorporated herein must be approved by ADNR if they affect this Reclamation Plan Approval. If ADNR approves the changes, they become terms of this Reclamation Plan Approval.

**Authorized Officer.** The Authorized Officer for ADNR is the Director of the Division of Mining, Land and Water or his designee. The Authorized Officer is designated as Rick Fredericksen. The Authorized Officer may be contacted at 550 West 7<sup>th</sup> Avenue, Suite 900D, Anchorage, Alaska 99501-2577, Attention: Rick Fredericksen, or rick.fredericksen@alaska.gov, telephone (907) 269-8621, and fax (907) 269-8930. Teck Alaska Incorporated will be notified of changes to the authorized officer as needed.

**Monitoring.** Monitoring shall be conducted in accordance with the SD I – Red Dog Mine Waste Management, Reclamation and Closure Monitoring Plan (TAK, 2009) as approved by the Department.

**Reporting.** The results of monitoring, required by the Red Dog Mine Waste Management, Reclamation and Closure Monitoring Plan and any other monitoring required by this Reclamation Plan Approval obtained during a reporting period shall be summarized and submitted to the Authorized Officer quarterly, no later than 60 days after the last day of the first through third calendar quarters, in hard copy and electronic format acceptable to ADNR. Any other monitoring required by state or federal authorizations shall be provided upon request of the Authorized Officer. An annual report will be due by March 1<sup>st</sup> that summarizes activities (surface disturbance, mining, construction, reclamation, monitoring, research, and water treatment / discharge) conducted during the previous calendar year, includes fourth-quarter monitoring data, and that discusses relevant plans for the upcoming year. The annual report shall also address the adequacy of the financial assurance, including, but not limited to, inflation, significant changes in reclamation activity costs, concurrent reclamation, expansion or other changes to the operation of the facility, monitoring results, and the results of test-cover research. The annual report shall include updated mine sump and main waste stockpile seepage trends for TDS, SO<sub>4</sub>, Fe and Zn. The annual report shall also contain the following water treatment data:

- Total volume of water treated in WTP#2;
- Total volume of water discharged to Red Dog Creek from WTP#2;
- Total quantity of flocculant used in WTP#2;
- Total quantity of lime used in WTP#2;
- Total quantity of sodium sulfide used in WTP#2;
- Quantity of any other chemicals used in significant quantities in WTP#2;
- Total quantity of flocculant used in WTP#3;
- Total quantity of lime used in WTP#3; and,
- Quantity of any other chemicals used in significant quantities in WTP#3.

An annual meeting with ADNR will be held in conjunction with ADEC and open to the public in which the annual report will be presented. The annual report shall be available to ADNR two weeks prior to the annual meeting.

Electronic copies of all quarterly reports and electronic and hard copies of the annual report should also be sent to ADNR, 3700 Airport Way, Fairbanks, AK 99709-4699 (Steve McGroarty at [steve.mcgroarty@alaska.gov](mailto:steve.mcgroarty@alaska.gov) and Jim Vohden at [jim.vohden@alaska.gov](mailto:jim.vohden@alaska.gov)), ADNR Office of Project Management and Permitting, 3700 Airport Way, Fairbanks, AK, 99709-4699 (Jack DiMarchi at [jack.dimarchi@alaska.gov](mailto:jack.dimarchi@alaska.gov)), ADF&G Habitat Division, 1300 College Road, Fairbanks, AK 99701-1551 (Al Ott at [al.ott@alaska.gov](mailto:al.ott@alaska.gov)), and ADEC, Wastewater Discharge Program, 610 University Avenue, Fairbanks, AK 99709-3643 (Tim Pilon at [tim.pilon@alaska.gov](mailto:tim.pilon@alaska.gov)). Amendments to this distribution list will be provided to Teck Alaska Incorporated as needed.

**As-Built Maps.** Teck Alaska Incorporated shall submit to ADNR an “as built” map in conjunction with each annual report (unless otherwise approved by ADNR). The map (or maps) shall illustrate the current development of all facilities within the project area as described in the Red Dog Mine Closure and Reclamation Plan (May 2009). The plan maps shall show: cleared and grubbed areas; topsoil and growth medium, cover material, and waste rock stockpiles; roads; tailings facility; mine pits; facility construction; and any unreclaimed exploration disturbance. Maps shall be 1”=200’ (1:2400) or other appropriate scale necessary to review the development of individual facilities. AutoCAD maps and drawings shall be provided to ADNR upon request.

**Temporary Closure.** Teck Alaska Incorporated shall notify the Authorized Officer in writing at least thirty (30) days prior to any planned Temporary Closure of ninety (90) days or longer. Teck Alaska Incorporated shall notify the Authorized Officer of any unanticipated Temporary Closure expected to last ninety (90) days or more within ten (10) days of the first day of the Temporary Closure. The notice shall state the nature and reason for the Temporary Closure, the anticipated duration of the Temporary Closure, what actions will be taken to maintain compliance with project permits and plan approvals, and any event which would reasonably be anticipated to result in either the resumption of mining or milling activities or the permanent cessation of mining or milling activities. The notice shall include a Temporary Closure Plan in the form of an update to SD J3 – Basis of Estimate – Suspension Costs reflecting current site conditions. The Temporary Closure Plan shall also include the following:

- Reclamation or construction activities anticipated to occur during the period of closure;
- The procedures, methods, and schedule to be implemented for the treatment, disposal, and storage of process waters;
- The control of surface and groundwater drainage to and from the facility and the surrounding area;
- The control of erosion from the tailings area, pits, waste rock disposal areas, and any other disturbed areas within the facility boundary;

- The secure storage of chemicals during the period of closure;
- Procedures for continuing maintenance and monitoring of the dams including seepage collection and water balance;
- Procedures and schedule for continuation of site monitoring; and,
- Procedures for maintaining containment of all water at the facility and providing continued treatment of that water in accordance with NPDES Permit AK-003865-2 or subsequent discharge permit.

ADNR shall have fifteen (15) days to review and approve or require modifications to the Temporary Closure Plan. Once a Temporary Closure Plan has been approved, it becomes enforceable under the conditions of this Reclamation Plan Approval and full implementation of the approved specific plan is required. The Temporary Closure Plan can be amended by submitting a revised plan to ADNR for approval.

Mining or milling operations must resume for not less than ninety (90) consecutive days in order to terminate the running of the Temporary Closure. If a Temporary Closure extends beyond five (5) years, the Department may deem mining and milling operations to be permanently abandoned or ceased, whereupon final reclamation must commence unless otherwise agreed by the Department.

Teck Alaska Incorporated shall ensure that the project area and facilities are maintained in a safe condition during a Temporary Closure and Teck Alaska Incorporated shall not allow the project area and facilities to be degraded or eroded or allow facilities to fall into a state of disrepair during or as a result of the Temporary Closure. Action shall be taken to prevent or mitigate any impacts to ground or surface waters from project facilities. All collection, treatment, maintenance, and monitoring activities required under project permits or plan approvals shall be performed under any Temporary Closure. Water treatment and discharge from the facility shall be continued in any Temporary Closure to ensure that water levels are maintained at a safe elevation in the tailings facility and effluent water quality is maintained in accordance with any applicable state or federal water discharge permits.

**Abandonment or Cessation of Operations.** Not later than thirty (30) days after the permanent cessation or abandonment of mining and milling operations at the Red Dog Mine, Teck Alaska Incorporated shall notify the Authorized Officer of the cessation of operations.

**Permanent Closure.** Within ninety (90) days of the decision that permanent cessation of mining and milling operations will occur, an updated final Closure and Reclamation Plan and schedule and Monitoring Plan must be submitted to ADNR for approval. The updated plans must address current conditions at the site.

Permanent reclamation of individual facilities must be implemented and completed in accordance with the conditions of this Reclamation Plan Approval.

Permanent reclamation of a facility will be complete when the following criteria are met:

- All terms of the current Red Dog Mine Closure and Reclamation Plan and conditions of this Reclamation Plan Approval have been met;
- All performance standards under 11 AAC 97.200 and 11 AAC 97.240 have been achieved; and,
- A stable vegetative cover is established per the requirements of this Reclamation Plan Approval.

**Post-Closure.** After mining and milling operations have permanently ceased and after completion of reclamation of the site in accordance with this Reclamation Plan Approval, the permittee shall maintain the site correcting any erosion, settlement or other degradation of the dams (main, back, mine water diversion, and Bons Creek), tailings facility, pits, waste rock disposal sites, Red Dog Creek Diversion, facility diversion ditches and seepage collection systems, and any other facilities that may impair water quality or threaten the environment.

Individual facilities and the overall site shall be maintained in a manner that prevents the generation of acid rock drainage or prevents the offsite discharge of acid rock drainage.

Post-closure monitoring of the groundwater, surface water and visual monitoring for settlement and erosion shall continue according to the monitoring schedule set out in the current Monitoring Plan approved by ADNR. This schedule and the parameters monitored may be modified by ADNR based on the monitoring results.

**Environmental Audit.** Periodic third-party environmental audits are required to verify: 1) Teck Alaska Incorporated's compliance with plan approvals, permits, and applicable environmental laws and regulations; 2) that Teck Alaska Incorporated's controls provide reasonable assurances that environmental objectives in the current Closure and Reclamation Plan, and relevant permits and approvals are being met; 3) that the controls are functioning as intended; 4) that the state permit conditions provide environmental protection as required; 5) that both the facility management and regulatory oversight provide reasonable assurances that the facility and controls are functioning as intended to protect environmental resources; and, 6) the adequacy of the financial assurance provided to ensure reclamation.

The first audit shall occur in 2013 or prior to final closure if final closure occurs prior to 2013. Subsequent environmental audits shall occur every five years. Audits shall be timed so that the auditor's site visit occurs during the snow-free season, far enough in advance of the deadline for the permittee's submittal of an updated Closure and Reclamation Plan, and associated Basis of Estimate Reports and EXCEL spreadsheets for suspension, closure and post-closure cost estimates, so that the results of the audit can be taken into account in that update and in the permit renewal process. In January of the audit year, the parties shall confer to discuss the minimum qualifications of and process for selecting an independent, third-party auditor, and the minimum

requirements for the scope of the audit. The third party contractor and the scope of the audit should be mutually agreed upon by ADNR, ADEC, and the permittee, but in the event that agreement cannot be reached, the agencies retain the final contractor selection and scope of audit decisions. The environmental audits required by this Reclamation Plan Approval and those required by the ADEC Waste Management Permit No. 0132-BA002 refer to the same audits, conducted to fulfill the requirements of both authorizations.

The audit results will be used by the permittee to assist in updating policies, plans, procedures, and suspension, closure and post-closure cost-estimates and by the ADNR in determining compliance with the Reclamation Plan Approval and in evaluating the adequacy of the financial responsibility. The audit will be an objective, systematic, documented review of the conditions, operations, and practices related to plan approval and permit requirements and facility management conducted under this Reclamation Plan Approval. The audit will be paid for by the permittee.

## **PROJECT - SPECIFIC STIPULATIONS**

### **Red Dog Mine Closure and Reclamation Plan (May, 2009):**

Section 2.1.2 Pits - A geotechnical investigation report shall be provided to ADNR that demonstrates the static and dynamic stability and performance of the Aqqaluk Pit Wall located between the Aqqaluk and Main Pits where slope failure could result in disruption of the Red Dog Creek Diversion. This evaluation should consider both the long-term stability and stability during the time frame when the Main Pit is backfilled and saturated and the Aqqaluk Pit is dry. This report should be provided to ADNR no later than May 2013.

Section 2.1.3 Waste Rock and Ore Stockpiles – Further waste characterization of the Qanaiyaq deposit is required.

Section 3.1.2 Pits – Submit to ADNR final facility closure plans for review and approval prior to initiation of reclamation of the waste rock that would be exposed by the blasting back of the eastern limit of the Aqqaluk Pit to a 4:1 slope. The waste rock in the pit rim that would be exposed by the blasting shall be characterized to determine its ARD potential, the estimated increased contribution to the annual load balance, and the anticipated reduction to the increased load that would result from the placement of a cover over this area. The final facility closure plans shall specify final slopes, cover design (if applicable), growth medium replacement depths, erosion control measures, and surface flow diversion ditches.

Section 3.1.3 Waste and Ore Stockpiles - Prior to the placement of covers on additional stockpile areas, including any test covers, Teck Alaska Incorporated shall submit to ADNR plans that are developed to minimize infiltration into the waste rock material and metal loading in surface runoff. Final facility closure plans shall



document the construction and performance of the cover on the oxide stockpile. Future test covers should evaluate the difference in infiltration rates and runoff quality between covers constructed from Kivalina Shale vs. Okpikruak Shale vs. material removed from the overburden stockpile.

Section 3.1.3 Waste and Ore Stockpiles – Unless changes are approved by ADNR, the fertilizer application rate shall be 400 - 450 lbs per acre of 20N-20P-10K and the seed application rate and species shall be as listed in Table 3.1 (Revegetation Species for Stockpile Covers) or other native species that have proven successful at the site, including transplants. Erosion features which form in areas that have been regraded and covered with topsoil or engineered covers must be stabilized if they affect the long-term stability of the reclaimed area. A self-sustaining vegetative cover shall be achieved a minimum of five years after the last application of cover material, soil amendment, seed or fertilizer before full financial assurance will be released for reclaimed areas.

Section 3.1.4 Red Dog Creek Diversion – Prior to initiation of construction of the post-closure configuration of the Red Dog Creek Diversion, Teck Alaska Incorporated shall submit to ADNR for review and approval final facility design plans.

3.2.4 Main Dam – Prior to the next five-year renewal of the Red Dog Mine Closure and Reclamation Plan, Teck Alaska Incorporated shall increase the width of the tailings beach from the current 300-feet to 600-feet (or as otherwise required by ADNR Dam Safety Authorizations) or provide a plan, cost estimate, and financial assurance with the next five-year renewal of the Red Dog Mine Closure and Reclamation Plan for the construction of this beach in the event of premature mine closure.

4.2.2 Water Treatment - Prior to May 2013, Teck Alaska Incorporated shall develop and submit to ADNR preliminary plans and cost estimates for eventual “out-of-pit” sludge disposal.

5.1.4 Project Suspension or Premature Closure - With the next five-year renewal of the Red Dog Mine Closure and Reclamation Plan, Teck Alaska Inc. shall develop a plan and cost estimate for the premature closure at the point of maximum reclamation liability that is expected to occur during the next five-year period of operations.

## **SD B1 - Red Dog Mine Development Plan:**

ADNR shall be provided any updates to the Red Dog Mine Development Plan that occur prior to the next five-year Reclamation Plan Approval renewal.

## **SD B2 – Plan of Operations for Waste Rock Management Plan:**

Within 90-days of the issuance of this Reclamation Plan Approval, Teck Alaska Incorporated shall develop and submit to ADNR for review and approval a Waste Rock Management QA/QC Plan that will demonstrate compliance with Waste Rock Management Plan and Segregation Criteria specified in Table 1. Monitoring results associated with the QA/QC Plan shall be reported in quarterly and annual reports. Okpikruak Shale and Kivalina Shale shall be segregated where practicable, and stockpiled separately unless otherwise approved by ADNR, until cover trials and further assessment of the distribution of zinc in the Kivalina Shale are completed and demonstrate the acceptability of Kivalina Shale as a cover material.

## **STANDARD STIPULATIONS**

**Alaska Historic Preservation Act.** If burials or human remains are discovered as a result of or during the activities authorized by this Reclamation Plan Approval, all activities that would disturb such remains shall be stopped and measures taken to protect the site. The State Historic Preservation Officer (907-269-8722) and the State Troopers shall be contacted immediately to ensure full compliance with state laws.

### **Reclamation Stipulations.**

- a. Topsoil and overburden, not promptly redistributed to an area being reclaimed, shall be separated and stockpiled for future use. This material shall be protected from erosion and contamination by acidic or toxic materials and shall not be buried by development rock or surface construction activities.
- b. All surface drill holes for the purpose of subsurface exploration or sampling that enter into a water source (other than those holes within the ore to be mined) shall be plugged with a minimum of 7 feet of bentonite holeplug, a benseal mud, or equivalent slurry immediately above the static water level in the drill hole. A bentonite holeplug, a benseal mud, or equivalent slurry, shall also be placed for a minimum of 10 feet within the top 20 feet of the drill hole in competent material. The remainder of the hole will be backfilled to the surface with drill cuttings. Complete filling of the drill holes, from bottom to top, with a bentonite holeplug, benseal mud, or equivalent slurry is also permitted and is considered to be the preferred method of drillhole closure.
- c. If artesian conditions are encountered in surface drill holes, the operator shall contact the Division of Mining, Land & Water (Steve McGroarty – (907) 451-2795) or the Department of Environmental Conservation (Tim Pilon – (907) 451-2136) to advise the agencies of proposed hole plugging methodology and receive approval for the hole plugging plans.

**Inspection and Entry.** Teck Alaska Incorporated shall permit authorized representatives of ADNR to enter the area and facilities covered under this Reclamation Plan Approval at all reasonable times without notice for the purpose of inspecting the area and activities covered under this Reclamation Plan Approval. Inspectors shall observe Teck Alaska Incorporated safety and security procedures. Space on company chartered flights to and from the mine shall be made available to agency staff on space-available basis and at a reasonable frequency. Travel on the mine site or claim block, by vehicle or rotorcraft, will be provided by Teck.

Upon ADNR's written request, Teck Alaska Incorporated shall promptly make any and all records, documents, or other information required to be kept or maintained by law, regulation, ordinance, permit, or this Reclamation Plan Approval, available to ADNR for inspection and copying as reasonably required by ADNR to determine Teck Alaska Incorporated is in compliance with local, state and federal laws governing the operations authorized under this Reclamation Plan Approval.

Upon ADNR's written request, Teck Alaska Incorporated shall promptly make any and all records, documents, or other information required to determine if reclamation covers or other environmental controls are functioning as designed available to ADNR for inspection and copying as reasonably required by ADNR.

Upon ADNR's written request, Teck Alaska Incorporated shall promptly make any and all records, documents, or other information required to evaluate suspension, closure or post-closure cost estimates available to ADNR for inspection and copying as reasonably required by ADNR.

**Violations.** Violation of the terms and conditions of this Reclamation Plan Approval subjects Teck Alaska Incorporated to the consequences set out in AS 27.19.070 and 11 AAC 97.

**Adverse Impact.** Teck Alaska Incorporated 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 Reclamation Plan Approval, including any additional monitoring needed to determine the nature and impact of the noncomplying activity. Teck Alaska Incorporated shall cleanup and restore all areas adversely impacted by the noncompliance.

**Permittee Responsibility for Actions of Contractors.** Teck Alaska Incorporated is responsible for the actions of contractors, agents, or other persons who perform work to accomplish the approved project, and shall ensure that workers are familiar with the requirements of this authorization.

**Assignment.** If Teck Alaska Incorporated transfers its interest in the Red Dog Mine to another miner, the Reclamation Plan may be amended and assigned to that successor miner under the terms of 11 AAC 97.330 and 11 AAC 97.350. The

Department may require a review of the financial assurance amount and/or form as part of the approval process for a proposed assignment of the Reclamation Plan.

**Other Authorizations.** The issuance of this Reclamation Plan Approval does not alleviate the necessity of Teck Alaska Incorporated from obtaining and complying with authorizations required by other agencies, including Alaska Department of Environmental Conservation, Alaska Department of Natural Resources – Dam Safety Section, and Alaska Department of Fish & Game.

**Valid Existing Rights.** This authorization is subject to all valid existing land rights. The State of Alaska makes no representations or warranties whatsoever, either expressed or implied, as to the existence, number, or nature of such valid existing rights.

**Change of Address.** Any change of address must be submitted in writing to the Authorized Officer.

**Modifications.** Any request for modification of the Red Dog Mine Closure and Reclamation Plan and any affected permits or authorizations must be made by written application to ADNR and may require the updating of related Supporting Documents. Requests for modification must be made no later than 30 days before the planned effective date of the modification. Modification to the Closure and Reclamation Plan may, at the discretion of ADNR, require review and update of the financial assurance provided to ensure reclamation.

**Application for Renewal.** Applications for renewal of this Reclamation Plan Approval must be made no later than 30 days before the expiration date of the Reclamation Plan Approval. Unless otherwise approved by ADNR, the periodic five-year renewal of the Red Dog Mine Closure and Reclamation Plan will require the submission of the following updated Supporting Documents (SD) or the information must be incorporated into the body of the Reclamation and Closure Plan:

- SD B1 – Red Dog Mine Development Plan (TCAK, 2004);
- SD B2 – Plan of Operations for Waste Rock Management;
- SD B3 – Plan of Operations for Tailings and Water Management;
- SD E1 – Red Dog Water and Load Balance;
- SD I – Red Dog Mine, Waste Management, Reclamation and Closure Monitoring Plan (TAK, 2009);
- SD J1 – Basis of Estimate – Closure Costs;
- SD J2 – Basis of Estimate – Post-Closure Costs;
- SD J3 – Basis of Estimate – Suspension Costs;
- EXCEL Closure Cost Estimate;
- EXCEL Post-Closure Cost Estimate; and,
- EXCEL Suspension Cost Estimate.

The periodic five-year renewal of the Red Dog Mine Closure and Reclamation Plan will require the submission of updates to the following Supporting Documents (SD)

only if the relevant information within the documents has changed since the original submission:


- SD A2 – Legal Description of Property;
- SD F3 – Revegetation Plan for the Red Dog Mine (ABR, Inc., 2007); and,
- SD G – Demolition Cost Estimates (Denison Environmental Services, 2004).

**Statutes and Regulations.** This Reclamation Plan Approval is subject to AS 27.19 and 11 AAC 97.

**Severability.** If any clause or provision herein contained shall be adjudicated to be invalid, it shall not affect the validity or effect of any other clause or provision of this Reclamation Plan Approval.

**Save Harmless.** The recipient of this Reclamation Plan Approval (permittee) shall indemnify, save harmless, and defend the Department, its agents and its employees from any and all claims, actions or liabilities for injuries or damages sustained by any person or property arising directly or indirectly from permitted activities or Teck Alaska Incorporated's performance under this Reclamation Plan Approval. However, this provision has no effect, if, and only if, the sole proximate cause of the injury is the Department's negligence.

**Commencement of permitted activities will be considered an acceptance by Teck Alaska Incorporated of these stipulations.**

Approved:   
Rick Fredericksen, Mining Section Chief  
Department of Natural Resources

12-02-2009  
Date

**Appeal Right and Procedure.**

A person affected by this decision may appeal it, in accordance with 11 AAC 02. Any appeal must be received by **20-days after the decision is signed** and may be mailed or delivered to Tom Irwin, Commissioner, Department of Natural Resources, 550 W. 7th Avenue, Suite 1400, Anchorage, Alaska 99501; faxed to 1-907-269-8918, or sent by electronic mail to [dnr.appeals@alaska.gov](mailto:dnr.appeals@alaska.gov). This decision takes effect immediately. If no appeal is filed by the appeal deadline, this decision becomes a final administrative order and decision of the department **31-days after issuance**. An eligible person must first appeal this decision in accordance with 11 AAC 02 before appealing this decision to Superior Court. A copy of 11 AAC 02 may be obtained from any regional information office of the Department of Natural Resources.