Appendix C

Statutory and Executive Order Compliance Documentation

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Appendix C.1

National Historic Preservation Act Final Programmatic Agreement



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PROGRAMMATIC AGREEMENT BY AND AMONG

THE ADVISORY COUNCIL ON HISTORIC PRESERVATION, THE U.S. ENVIRONMENTAL PROTECTION AGENCY, THE U.S. ARMY CORPS OF ENGINEERS,

THE STATE OF ALASKA, AND THE ALASKA STATE HISTORIC PRESERVATION OFFICER, REGARDING

THE POGO GOLD MINE PROJECT

WHEREAS, Teck-Pogo, Inc. (Teck) proposes to develop, operate, and maintain the Pogo Mine Project (Project) over a period of 12 years; construction and development activities are proposed to take place within the next three years; operation and maintenance activities are expected to take place over the next twelve (12) years; and,

WHEREAS, the Environmental Protection Agency (EPA) and the Corps of Engineers (COE) propose to issue permits pursuant to the Clean Water Act to Teck and/or to otherwise consider the environmental effects of these proposed activities pursuant to the National Environmental Policy Act (NEPA) (42 U.S.C. 4321 et seq.); and,

WHEREAS, EPA and the COE have determined that these proposed activities potentially may affect historic properties eligible for inclusion to the National Register of Historic Places (NRHP) during the life span of this project; and have consulted with the Advisory Council on Historic Preservation (Council) and the State Historic Preservation Officer (SHPO) pursuant to 36 CFR 800.14(b) of the regulations implementing Section 106 of the National Historic Preservation Act of 1966 (16 U.S.C.470f)(NHPA); and

WHEREAS, EPA is the lead federal agency responsible for preparing an Environmental Impact Statement (EIS) pursuant to the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321 et seq.), as implemented by the Council on Environmental Quality Regulations 40 CFR Parts 1500-1508; EO 13175 on Consultation and Cooperation with Tribal Governments, EO 12898 on Environmental Justice (February 1994); and

WHEREAS, the Council has been invited to participate in this Programmatic Agreement (PA), and has agreed to do so; and

WHEREAS, the State of Alaska (State), as landowner, proposes to issue permits to Teck pursuant to its State statutory authorities in a timely and consistent manner in consultation with EPA and the COE, and wishes to be considered a signatory party, and has been invited to participate in this PA; and

WHEREAS, EPA, the COE, and the State of Alaska have consulted with and continues to consult with the twelve (12) Federally recognized Indian tribes who attach religious and/or cultural significance to properties that may be affected by the project, and these tribes have been invited to concur in this programmatic agreement. These tribes include: Circle Native Community, Dot Lake Village Council, Native Village of Eagle, Native Village of Healy Lake, Minto Native Village, Tanacross Village Council, Tetlin Village Council, Mentasta Traditional Council, Nenana Native Village, Native Village of Tanana, Manley Village Tribal Council, and

Northway Traditional Council.

WHEREAS, the terms of this Agreement shall apply to all lands affected by the Pogo mine project. As the lead federal agency, EPA has overall responsibility for NHPA compliance. The COE recognizes and accepts lead responsibility for compliance with the NHPA for cultural resources that may be discovered in the COE permit area during construction activities. The term "permit area" as used in COE regulations (33 CFR Part 325, Appendix C) means those areas comprising the waters of the United States that will be directly affected by the proposed work (discharge of dredged or fill material) and uplands directly affected as a result of authorizing the work. The following three tests must all be satisfied for an activity undertaken outside the waters of the United States to be included within the "permit area":

- i. Such activity would not occur but for the authorization of the work (discharge of dredged or fill material) within the waters of the United States;
- ii. Such activity must be integrally related to the work to be authorized within waters of the United States. Or, conversely, the work to be authorized must be essential to the completeness of the overall project or program; and
- iii. Such activity must be directly associated (first order impact) with the work to be authorized.

Proposed activities subject to the COE permit jurisdiction includes the following (dependent upon final project description): mechanized land clearing of the mill site; mill site fill; impoundment structure(s) (structures for the purpose of this document means a dam); road construction (both within the mill site and access route to some degree dependent upon route selection and construction requirements); airstrip runway construction; and material source sites land clearing and overburden stockpiles.

EPA shall be considered the lead federal agency with respect to any potential cultural resource effects outside the COE permit area as well as potential effects related to operation of the proposed Pogo mine project. The State, in order to comply with authorities under AS 41.35 and 11 AAC 16, shall insure that Teck complies with the terms of the PA as a condition of State permits.

NOW THEREFORE, EPA, the COE, the State, the Council, and the SHPO agree that the Project shall be administered in accordance with the following stipulations to satisfy EPA's and the COE's Section 106 responsibilities and the State's statutory responsibilities.

STIPULATIONS

The EPA, COE, and State shall ensure that the following measures are carried out:

I. Administrative Considerations:

- A. The COE, EPA, and the State may attach this PA or the stipulations listed in this PA to the Record of Decision(s) (ROD) for this project, to permits, and to other conditions issued so that this PA and its requirements become legally enforceable and binding on the permittee. The permittee shall comply with this PA on these measures and failure to do so could result in suspension, modification, or revocation of the applicable agency's permit.
- B. This PA and all of its requirements shall be binding on Teck as permittee, its successors, and assigns.
- C. Because of both singular and overlapping legal authorities and purviews among the EPA, COE, and the State regarding individual Project components or activities, one or more of these agencies may be responsible for carrying out the terms of this PA for a given Project component or activity. For certain larger Project components and activities, all involved agencies may carry out the terms of this PA jointly.
- D. The EPA, COE, and the State shall enforce the terms of this PA as is appropriate within each agency's scope with regard to permits, and other conditions that incorporate this PA and its terms. Each shall notify the others if any of them becomes aware of an instance of possible non-compliance with the terms and conditions of this PA or permit or conditions as they relate to this PA. In such case, the "responsible agency(ies)" shall ensure compliance consistent with its/their legal authorities and consult with the other agencies, as needed.
- E. Teck shall not initiate or support any actions that may jeopardize a historic property or the completion of PA tasks without the prior written approval of the "responsible agency(ies)."

II. Historic Properties, Areas of Potential Effect, and the Applicability of this PA:

- A. This PA shall apply to the Project and all components of it, including those not known at this time or not specified in the permits, permit applications, or other project documents so long as they are within the jurisdiction of EPA, the COE, and/or the State.
- B. The EPA, COE, and State shall determine the Areas of Potential Effect of the Project and its components, using the concepts and definitions for Area of Potential Effect (APE), Historic Property, Effect, Adverse Effect, etc. as outlined in 36 CFR Section 800.16. For the purpose of this PA, a historic property is defined as: a district, site, building, structure or object, including landscape, that meets eligibility requirements for the NRHP under 36 CFR 60.4 including properties to which a tribal government

or other party attaches religious and/or cultural significance in accordance with National Register Bulletin #38.

III. Tribal Consultation:

The EPA, COE, and the State shall consult with those tribal governments outlined in Attachment 1 of this PA in carrying out the terms of this PA throughout the life of the mine project and the agency(ies) permit duration. Consultation shall be an on-going process, and EPA, COE, SHPO, Indian tribes, other consulting parties, and Council may consult at any time in person, writing, including e-mail, or over the phone.

IV. Identification and Evaluation of Historic Properties and Assessment of Adverse Effects:

- A. Teck shall make a reasonable and good faith effort to identify historic properties within each Project activity or component's APE, and shall make recommendations to the EPA, COE, State, and SHPO regarding NRHP eligibility. Prior to the initiation of identification and evaluation efforts, Teck shall implement guidance received from the agency(ies) regarding the level and scope of efforts. If Teck and the agency(ies) disagree as to what constitutes adequate identification and evaluation efforts, the EPA, COE, State, and SHPO shall consult to arrive at a determination. If a dispute or objection remains on this issue, these parties shall resolve it in accordance with stipulation XII, Dispute Resolution, below.
- B. Identification efforts may include background research, consultation, ethnographic research, oral history interviews, field surveys, probabilistic sampling, subsurface testing, and other types of tasks. In determining the level of identification and evaluation efforts necessary for a Project activity or component and its APE, Teck and the responsible agency(ies) should consider such factors as past planning, research and studies, the magnitude and nature of the proposed activities, the extent of potential effects on historic properties, and the nature and location of historic properties. Decisions about the level of identification and evaluation efforts shall also reflect documented, prior consultation with tribal governments outlined in Attachment 1. Where construction alternatives consist of corridors or large land areas, Teck may use a phased process, as per 36 CFR 800.4(b)(2) to conduct identification and evaluation efforts for selection of alternative. This will facilitate the selection of alternatives, and may eliminate the need to prepare complex determinations of eligibility for sites that will be avoided. Such identification efforts shall be conducted in accordance with the principles, standards, and guidelines contained in Archeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines (Standards and Guidelines) (48 FR 44716-44742) and follow the procedures set forth in 36 CFR 800.4. Teck shall provide the COE, EPA, State, and SHPO with documentation of these identification and evaluation efforts that meets the Standards and Guidelines and is sufficient to enable them to determine the eligibility of properties to the NRHP.

- C. All archaeological and historical investigations shall be conducted by anthropologists, archaeologists, historians, architectural historians, and/or historical architects meeting the qualifications of the Secretary of the Interior's Standards and Guidelines (48 FR 44738-44739). The technical expertise of the professional shall be appropriate to the nature of the investigation and expected type and significance of historic properties.
- D. EPA and the COE shall apply the NRHP criteria (36 CFR 60.4) to identified properties, in consultation with the SHPO and any tribal government that may attach religious and/or cultural significance to the identified property. For purposes of carrying out the terms of this PA in a uniform manner, the State agrees to also follow the procedures in 36 CFR 60.4 and 36 CFR 800 where applicable to its area(s) of responsibility and where not in conflict with State statutory authorities. The EPA, COE, and State shall resolve disagreements among these parties regarding NRHP eligibility by requesting a determination of eligibility from the Keeper of the National Register, National Park Service in accordance with 36 CFR Part 63, whose determination shall be final.
- E. The EPA, COE, or State, in consultation with the SHPO and in accordance with 36 CFR 800.5, shall make an assessment of whether a Project component or activity may have an adverse effect on historic properties and the necessary treatment of the historic property as outlined in stipulation V, Treatment of Historic Properties, below.

V. Treatment of Historic Properties:

- A. Teck shall ensure to the extent possible the avoidance of all known historic properties, including archaeological and historical sites, historic buildings, structures, and landscapes.
- B. If any historic property on or eligible for the NRHP may be adversely affected because it cannot be avoided, Teck shall develop a mitigation or treatment plan in consultation with the EPA, COE, State, SHPO, tribal governments that may attach religious and/or cultural significance to the identified property, and other affected parties. During the preparation of the treatment or mitigation plan, Teck shall consider the views of these parties. The mitigation or treatment plan shall not be implemented until approved by the EPA, COE, State, and SHPO. The EPA, COE, State, and SHPO shall also determine if additional public involvement is warranted during the preparation of the treatment or mitigation plan. Disputes or objections to the mitigation or treatment plan shall be resolved in accordance with stipulation XII, Dispute Resolution, below.
 - 1. If the property is archaeological in nature, the mitigation or treatment plan shall include a research design with provisions for data recovery and recordation, analysis, reporting, and curation of resulting collection and records in an institution as outlined in stipulation VIII, Collection and Curation, below. Archaeological recovery, analysis, and reporting shall be in conformance with the Secretary of Interior's Standards and Guidelines for Archaeological Documentation (Archaeological Documentation Guidelines) (FR 48:44734-44737).

2. If the property is a building, structure, landscape, or not otherwise significant for the data that it contains, the plan shall specify approaches for the mitigation or treatment of the property in accordance with the principles, standards, and guidelines contained in Guidelines (Standards and Guidelines) (48 FR 44716-44742). This may include but not be limited to use of such approaches as relocating a historic property, re-landscaping to reduce effects, public interpretation, ethnographic recordation, prescribing use of a Project component or activity is such as way as to minimize effects to historic properties or to those concerned about the effects of that component or activity. Methods of recordation and documentation described in the mitigation plan shall be in conformance with the Secretary of the Interior's Standards for Architectural and Engineering Documentation (FR 48:44730-44734) or other standards specified by SHPO.

VI. Treatment of Human Remains:

It is the intent of this project to totally avoid the disturbance or removal of any human remains. No activity will knowingly disturb human graves or human remains. If human remains or funerary objects are inadvertently discovered during the course of activities, all activities in the immediate vicinity shall immediately cease and the attached Plan of Action (POA) (Attachment 2) for the treatment of human remains shall be implemented. The POA shall be approved by the signatory parties in consultation with the Tribes.

VII. Monitoring:

- A. Teck shall ensure that an archaeologist meeting the qualifications of the Secretary of the Interior's Standards and Guidelines (48 FR 44738-44739) is present in areas of ground disturbing activity when the probability to uncover unidentified archaeological or historical materials is determined likely by the EPA, COE, State, or SHPO. If Teck and the agency(ies) disagree as to what constitutes adequate identification and evaluation of efforts, the EPA, COE, State, and SHPO shall consult to arrive at a determination. If a dispute or objection remains on this issue, these parties shall resolve it in accordance with stipulation XII, Dispute Resolution, below.
- B. The results of monitoring shall be included in a report to the EPA, COE, State, and SHPO. This report shall be developed and incorporated into the annual mine report and be acceptable to the EPA, COE, State, and SHPO.

VIII. Collection and Curation:

- A. Materials collected in conjunction with recovery actions under this PA are the property of the State, as landowner.
- B. Artifacts, faunal materials, and/or samples collected during activities covered by this PA shall be deposited in the University of Alaska Museum at Fairbanks, along with records, field notes, and related materials. At the discretion of the State, an alternate institution may be selected as a repository for collections.

- C. Teck shall incur any and all reasonable costs charged by the approved institution for curation of materials collected in conjunction with recovery actions under this PA.
- D. Teck, in consultation with the receiving institution, the State, the SHPO, and conservation specialist(s), shall insure that collected materials are conserved and packaged in a manner acceptable to the State and receiving institution.

IX. Annual Review and Reports:

A. Meetings

- 1. Annual Meeting: A meeting of the EPA, COE, SHPO, State, Teck, and other interested parties, including Indian tribes and governments if they so wish, shall be held each year to discuss the previous year's activities, and activities scheduled for the upcoming year. The parties may be linked by telephone if they so desire.
- 2. Additional Meetings: If any party deems a meeting necessary in addition to the annual meeting described above, that party shall inform the other parties, who shall consider the request in consultation with the other parties.
- 3. Meeting Minutes: Teck shall provide all signatories and concurring parties to this PA the minutes of the meetings described above within 15 calendar days of the date of the meeting(s).

B. Reports

- 1. Annual Report . Each year, prior to the Annual Meeting, Teck will provide the EPA, COE, State, Council, SHPO, and other signatory or concurring parties to this PA a written <u>draft</u> report of previous and upcoming activities as they relate to compliance with the stipulations of this agreement. The report will include the following:
 - (a) A description of the past year's activities;
 - (b) A projection of the upcoming year's activities, including information about anticipated Project components and activities and possible Project changes;
 - (c) A summary of past year's and anticipated upcoming efforts to identification, evaluation, and protection of historic properties;
 - (d) Descriptions of any historic properties affected, as well as any testing, remediation, or mitigation efforts;
 - (e) Descriptions of artifacts or other archaeological or historic materials encountered, including representative photographs or drawings, a description of analyses, and other recordation documents as appropriate;
 - (f) Clear illustrations of areas surveyed or monitored, cultural resources identified, and alternative routes to be followed to avoid any identified historic properties.
 - (g) An evaluation of the effectiveness of the PA and whether any amendments or changes are needed.
 - (h) A list of personnel who received training under XI, below.
- 2. Certain archaeological surveys, special excavations, and/or testing efforts may require

individual reports outside the normal reporting cycle in order to facilitate decision making processes. The scope and time parameters for these reports shall be determined on a case-by-case basis through consultation among Teck, the EPA, the COE, the State, and the SHPO.

X. Procedures for Inadvertent Discoveries:

- A. Upon the inadvertent discovery of a potential historic property in any activity's APE, work in the immediate vicinity that could harm the historic property shall cease and Teck shall protect the discovery site against further disturbance.
- B. Within 24 hours of the discovery Teck shall notify the EPA, COE, and SHPO of the discovery. If none of these agencies can be reached on the weekend, Teck shall contact them on the next business day.
- C. The EPA, COE, SHPO, Teck, local Tribal governments if the site has the potential to be of Alaska Native origin, and other affected parties as deemed necessary by the agencies, shall confer in person or by telephone. If the consulting parties agree that the discovery is not significant, verbal authorization to proceed may be given by the SHPO or EPA.
- D. If the consulting parties agree that the discovery may be significant, Teck shall proceed in accordance with stipulation V, Treatment of Historic Properties, or VI, Treatment of Human Remains, of this PA, as appropriate.

XI. Training:

- A. On an annual basis, or more frequently as circumstances require, Teck shall insure that its contractors and employees are:
 - 1. Advised against the illegal collection and disturbance of historic and prehistoric materials, including human remains, and are familiarized with the scope of applicable laws and regulations;
 - 2. Trained in identifying and reporting historic properties, archaeological materials, human remains, and historic buildings or structures that may potentially be discovered during the course of their work.
- B. The advice and training in A.1 and A.2 above shall be provided by an archaeologist meeting the qualifications of the Secretary of the Interior's Standards and Guidelines (48 FR 44738-44739).

XII. Dispute Resolution:

Should the EPA, COE, State, or SHPO object within 30 days of any action pursuant to this agreement, the parties shall consult among themselves and with Teck to resolve the objection.

A. If the EPA, COE, State, or SHPO determines that the objection cannot be resolved,

the EPA shall forward all documentation relevant to the dispute to the Council within 5 days. Within 30 days after receipt of all pertinent documentation, the Council will either:

- 1. Provide the EPA and the COE with recommendations, which they will take into account in reaching a final decision regarding the dispute; or
- 2. Notify the EPA and the COE that it will comment pursuant to 36 CFR 800.6(b), and proceed to comment. Any Council comment provided in response to such a request shall be taken into account by the EPA and the COE with reference to the subject of the dispute.
- 3. Any recommendation or comment provided by the Council shall be understood to pertain to the subject of the dispute; the EPA's the COE's responsibility to carry out all actions under this agreement that are not the subjects of the dispute shall remain the same.
- B. At any time during implementation of the measures stipulated in this agreement, should an objection to any such measure or its manner of implementation be raised by a Tribe or a member of the public, the EPA and the COE shall take the objection into account and consult with the objecting party, the State, SHPO, the applicant, or the Council to resolve the objection.

XIII. Amendments:

Any signatory party to this Agreement may request that the other signatories consider amending it, whereupon the parties shall consult to consider the amendment(s). Amendments will be executed in the same manner as the original PA. Concurring parties may suggest proposed amendments to the signatory parties, who shall consult to consider them.

XIV. Termination:

Any signatory party to this agreement may terminate it by providing thirty (30) days notice to the other parties explaining the reasons for the termination. The signatory parties will consult during this period to seek agreement on amendments or other actions that will avoid termination. In the event of termination, the EPA and COE will comply with 36 CFR 800.1 through 800.7 and the State will comply with AS 41.35 on remaining Project undertakings, components, activities, or outstanding issues.

XV. Failure to Carry Out Agreement:

If the EPA, COE, and State do not insure that the terms of this PA are carried out, or if the Council determines that the terms of this PA are not carried out, the EPA and COE shall comply with 36 CFR Part 800.1 through 800.7 and the State will comply with AS 41.35 with regard to individual undertakings covered by this PA.

XVI. Duration:

This PA shall become effective upon execution by the EPA, COE, State, SHPO, and Council and shall remain in effect throughout the duration of the Federal and State permits issued to Teck or its subcontractors in conjunction with the project.

XVII. Execution and Implementation:

Execution and implementation of this PA evidences that the EPA and COE have satisfied responsibilities under Section 106 of the National Historic Preservation Act pursuant to 36 CFR 800, and that the State has satisfied responsibilities under the Alaska Historic Preservation Act pursuant to AS 41.35.

A. Executor (Signatory) Parties

Advisory Council On Historic Preservation By:	Date: 8/12/03
U. S. Environmental Protection Agency By: L. John Iani Regional Administrator, Region 10	Date: 10 km 2003
U. S. Army Corps of Engineers By: Timothy J. Gallagher Colonel, Corps of Engineers Alaska District Engineer Larry L. Reeder Chief, Regulatory Branch	Date: 8 July 2003
Alaska State Historic Preservation Officer By Judy H. Bittner State Historic Preservation Officer	Date: June 27,2003
State of Alaska, Department of Natural Resources By: Bob Loeffler, Director Division of Ministry A and and Water	Date: $6/(8/03)$

В. **Tribal Concurrence** Circle Native Community By:___ Date: Name: Title: Dot Lake Village Council By: Such fully Date: 6-24-2003 Name: William J. Miller Title: PRESIDENT Native Village of Eagle Ву:_ Date: Name: Title: Native Village of Healy Lake Name: Title: Minto Native Village Ву:__ Date: Name: Title: Tanacross Village Council

Ву:_

Name: Title: Date:

B. Tribal Concurrence (continued)	
Tetlin Village Council By: Name: Title:	Date: 7-1-03
Mentasta Traditional Council By: <u>Lisa Woll</u> Name: Lisa Muwak Title: Frost Cheef	Date: 7/2/10-3
Nenana Native Village By: Name: Title:	Date:
Native Village of Tanana By: Name: Title:	Date:
Manley Village Tribal Council By: Manley Villag Aufafa Name: Hand Hartle Title: Cheif	mul Date: 7 15 03
Northway Traditional Council By: Name: Title:	Date:

C. Applicant Concurrence

Teck-Pogo, Inc.

By: Kal Hansan

Title: Alaska Regional Manager

Date: $\frac{9/2}{0.3}$

By signing the concurrence page, the applicant is bound by the Programmatic Agreement to implement any mitigation measures stipulated in this agreement. The applicant shall provide in writing a response to EPA that the applicant understands its obligations and agreement to carry forward with mitigation measures stipulated or deemed warranted by Section 106, which is integrally tied to EPA's decision to issue a ROD and NPDES permit.

Attachment 1

Tribal Governments

Circle Native Community Paul Nathaniel, First Chief (907) 773-2884

Dot Lake Village Council William Miller, President (907) 882-2695

Native Village of Eagle Joanne Beck, President (907) 547-2281

Native Village of Healy Lake Ben Saylor, First Chief (907) 876-5018

Minto Native Village Andy Jimmie, Chief (907) 798-7112

Tanacross Village Council Jerry Isaac, President (907) 883-5024

Tetlin Village Council Donald "Danny" Adams, President (907) 883-2021

Mentasta Traditional Council Lisa Wolf, President (907) 291-2328

Nenana Native Village Charlie Stevens, President (907) 832-5662

Native Village of Tanana Faith Peters, Chairwoman (907) 366-7160

Manley Village Tribal Council John Woods, Chief (907) 672-3331

Northway Traditional Council Lorraine Titus, President (907) 778-2211

Attachment 2: Teck-Pogo Programmatic Agreement Plan of Action for the Treatment of Human Remains and Graves

Purpose:

The purpose of this document is to establish procedures for the treatment of human remains and graves in the event of inadvertent discoveries in conjunction with the Pogo Project.

Preface:

The treatment of human remains following inadvertent discovery is governed by state and federal laws, land status, postmortem interval (time since death), and biological/cultural affiliation. On all lands in Alaska, the intentional and unauthorized destruction or removal of any human remains or intentional disturbance of a grave or associated objects is a violation of AS 11.46.482(a)(6), a class C felony. The disturbance of "historic, prehistoric and archeological resources," including graves, on State lands is a violation of AS 41.35.200, a class A misdemeanor.

On federal lands and federal trust lands, the unauthorized destruction or removal of <u>archaeological</u> human remains (i.e., more than 100 years old) is a violation of 16 USC 470ee (Archeological Resources Protection Act)(ARPA). ARPA also applies to interstate transport of artifacts acquired illegally from <u>any</u> lands. If human remains on federal or federal trust lands are determined to be Native American, their treatment and disposition are also governed by the Native American Graves and Repatriation Act (NAGPRA) of 1990 (PL 101-601; 25 USC 3001-30013; 104 Stat. 3048-3058; 43 CFR 10), which also applies to Native American human remains and sacred objects from <u>any</u> lands <u>if</u> the remains or objects are curated in a federally funded institution.

In Alaska, the State Medical Examiner (SME) has jurisdiction over all human remains (with rare exceptions, such as deaths resulting from military aircraft incidents or certain shared Federal/State jurisdictions), regardless of age (AS 12.65.005 to 100). The Alaska State Troopers (AST) require notification when any human remains, including ancient remains, are discovered. Because the Pogo Project is situated entirely on State lands, ARPA and NAGPRA do not apply except with regard to the exceptions cited above.

A. Discovery, initial treatment, and notification:

- 1. No project personnel or project related activity shall knowingly disturb human graves or remains.
- 2. If human graves or remains are discovered during any activity associated with the Pogo Project, Teck-Pogo, Inc. (Teck) shall insure that work stops in the vicinity of the discovery and shall make efforts to protect the grave, remains, and/or associated materials from further disturbance.
- 3. All human remains shall be treated with care, dignity, and respect.
- 4. Following the inadvertent discovery of human remains, Teck shall immediately notify the Alaska State Troopers (including Lt. Nils Monsen or Investigator Bill Hughes and the SHPO). If the human remains are determined or believed to be Native American, Teck shall notify the tribes(s) with the nearest geographic, cultural, or ethnic affinity. Additionally, Teck

shall notify the State Medical Examiner's Office if the remains are believed to be less than 100 years old. Specific contact information may be found at the end of this document in Contact Information for Agency Officials Referenced in the Human Remains POA.

5. Following Teck's completion of the requirements of the POA, the SHPO shall determine if Teck has complied with the POA and will provide Teck with a notice to proceed with actions in the Treatment Plan (described below). However, if the AST or SME choose to investigate, any actions will be at their discretion.

B. Investigation and Reporting:

- 1. If any human remains or graves are discovered and avoided during Teck-Pogo activities without disturbance, Teck's project archaeologist shall document the nature and location of those discoveries by non-intrusive investigation. The information shall be recorded in a **Report of Findings**, which shall include photos and maps as appropriate. Copies of this report shall be supplied to the EPA, COE, State, SHPO, AST, and SME within 10 work days from the time of discovery. Copies of the report may also be distributed to affected Native American governments and local governments, as well as other parties who may have an interest in the remains through lineal or cultural ties. Due to the confidential and sensitive nature of this information, distribution of the report to any organization other than EPA, COE, State, SHPO, AST, and SME shall be done in consultation with the SHPO. To insure that the remains will not be inadvertently disturbed at a later date, Teck field personnel shall be notified on a "need to know" basis.
- 2. If the AST and/or SME choose to investigate, Teck shall continue to preserve the integrity of the scene and shall only conduct further documentation at the direction of the AST and/or SME.
- 3. If the AST and SME decline involvement in the investigation, and it is not possible to leave the remains or grave in undisturbed condition, Teck's project archaeologist shall develop a Treatment Plan in consultation with the EPA, COE, State, SHPO, applicable Native American governments and/or local governments and other affected parties. If information in the **Report of Findings** is insufficient to characterize the grave or remains with regard to cultural or lineal affinity, the SHPO may require that Teck conduct or sponsor a respectful non-destructive investigation of the remains and associated funerary objects by a qualified professional to ascertain estimations of postmortem interval, race, sex, biological age, trauma, disease, cause of death, and cultural practices. The primary purpose of this investigation is to facilitate the identification of lineal and cultural descendents of the deceased. The findings of this investigation shall be documented in a Report of Osteological **Examination** that includes the above information, along with basic measurements¹ and photographs. The Report of Osteological Examination shall be attached or appended to the Treatment Plan prior to distribution. Copies of the *Treatment Plan* shall be supplied to the EPA, COE, State, and SHPO, along with applicable Native American governments, local governments, and other interested parties within 30 days of discovery, or within 45 days of

 $^{1}\ Osteometric\ measurements\ shall\ minimally\ include\ those\ reported\ in\ ``Data\ Collection\ Procedures\ for\ Forensic$

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Skeletal Material," by Peer M. Moore-Jansen, Stephen D. Ousley, and Richard L. Jantz, the University of Tennessee, Department of Anthropology, Report of Investigations No. 48, 1994. These are standard measurements used in forensic osteological investigations conducted by/for the Alaska State Medical Examiner's office, and will provide consistency in reporting.

the discovery if a *Report of Osteological Examination* is required. In either case, the receiving parties shall have ten business days to review the treatment plan and provide comments to Teck, who shall incorporate the comments into the final *Treatment Plan*.

C. Final Treatment and Disposition:

- 1. Upon concurrence and approval of the treatment plan by the EPA, COE, State, and SHPO, Teck shall follow the procedures outlined in the treatment plan. No response by the federal agencies, State, or interested parties may be taken as concurrence to the procedures outlined in the treatment plan. However, regardless of the absence of comments by the signatory or interested parties, Teck shall obtain SHPO approval of the treatment plan prior to implementation. The SHPO may provide a copy of the treatment plan to the SME and AST.
- 2. Any removal or re-interment of human remains shall be done in consultation with the EPA, COE, State, SHPO, and affected parties. The District Magistrate or Registrar of Vital Statistics shall be consulted regarding the need for a disinterment-reinterment permit or a burial transit permit.

Contact Information for Agency Officials Referenced in the Human Remains POA

Alaska State Troopers:

Lt. Nils Monsen, Statewide Criminal Investigations Unit, Criminal Investigation Bureau

Phone: (907) 269-5648) Fax: (907) 338-7243

e-mail: nils_monsen@dps.state.ak.us

Investigator Bill Hughes, Missing Persons Bureau

Phone (907) 269-5058 Fax: (907) 338-7243

e-mail: william_hughes@dps.state.ak.us

Alaska State Medical Examiner's Office:

Dr. Franc G. Fallico, Acting Chief Medical Examiner

Phone: (907) 334-2200 Fax: (907) 334-2216

e-mail: franc_fallico@health.state.ak.us

Dr. Susan Klingler, Deputy Medical Examiner

Phone: (907) 334-2200 Fax: (907) 334-2216

e-mail: susan_klingler@health.state.ak.us

Alaska Bureau of Vital Statistics:

Alfred G. Zangri, Chief

Phone: (907) 465-3392 Fax: (907) 465-3618

e-mail: al_zangri@health.state.ak.us

Alaska Office of History and Archaeology (State Historic Preservation Office):

Judith E. Bittner, Chief (OHA/SHPO)

Phone: (907) 269-8715 Fax: (907) 269-8908

E-mail: judy_bittner@dnr.state.ak.us

Dave McMahan, Archaeologist (OHA/SHPO)

Phone: (907) 269-8723 Fax: (907) 269-8908

E-mail: dave_mcmahan@dnr.state.ak.us

Joan Dale, Archaeologist (OHA/SHPO)

Phone: (907) 269-8718 Fax: (907) 269-8908

Tribal Governments:

See Attachment 1 for a list of Tribal Government contacts

Appendix C.2

Endangered Species Act

- 1. U.S. Fish and Wildlife Serivce
 - A. EPA letter to USFWS (August 14, 2000)
 - B. USFWS letter to EPA (September 7, 2000)
 - C. USFWS letter to EPA (September 25, 2002)
 - D. USFWS letter to EPA (May 9, 2003)
- 2. National Marine Fisheries Service
 - A. EPA letter to NMFS (August 14, 2000)
 - B. EPA letter to NMFS (December 2, 2002)
 - C. NMFS letter to EPA (December 23, 2002)



September 2003 Appendix C.2 C.2-1



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 10

1200 Sixth Avenue Seattle, Washington 98101

Reply to

Attn of: OW-130

AUG 1 4 2000

Mr. Patrick Sousa Field Supervisor U.S. Fish and Wildlife Service 101 - 12th Avenue, Box 19, Room 110 Fairbanks, Alaska 99701

Re:

Endangered Species

Dear Mr. Sousa:

This letter is a request for a current species list from your agency. With the enclosed document, EPA opens the comment period on scoping for the Pogo Mine Project Environmental Impact Statement (EIS).

The Scoping Document contains the project as proposed by the applicant, Teck Resources. The proposed project is an underground gold mine and ancillary facilities with an all season access road and an airstrip. A map showing the proposed footprint of the project is included. The road access alternatives are described in the text of the document.

An application for a National Pollutant Discharge Elimination System (NPDES) permit has also been received for this project. The final location of the discharge point may not be decided until a Record of Decision is issued by EPA on the EIS but the approximate location will be:

Latitude:

64º27'

Longitude:

144º54'

If you have any concerns that this project may adversely affect a threatened or endangered species, please contact me so your concerns may be addressed in the EIS.

If you have any questions regarding this project, please feel free to call me at (206) 553-0246.

Sincerely.

John Matthew Harrington

EIS Project Manager

Enclosure

cc: Leroy Phillips, COE/Anchorage



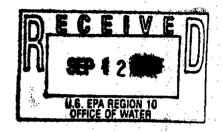
United States Department of the Interior



FISH AND WILDLIFE SERVICE NORTHERN ALASKA ECOLOGICAL SERVICES 101 12th Ave., Box 19, Room 110 Fairbanks, Alaska 99701

September 7, 2000

John Matthew Harrington Environmental Protection Agency Region 10 1200 Sixth Avenue Seattle, WA 98101



Re: Endangered Species
Pogo Mine Project EIS

Dear Mr. Harrington:

The U.S. Fish and Wildlife Service has received your request for a species list for Pogo Mine Project site.

There are no threatened or endangered species in the project area. The proposed project site is within the range of the American peregrine falcon (Falco peregrinus anatum), which was removed from the list of threatened and endangered species on August 25, 1999. Due to its recent recovery from endangered status, the American peregrine falcon will be monitored on a regular basis for the next decade. If survey data indicates a reversal in recovery, the American peregrine falcon could be emergency listed at any time. The Service recommends applicants and agencies avoid impacts to peregrine falcons to assure a healthy long-term population. The Service believes the proposed project and associated activities are not likely to adversely affect peregrine falcons.

We have searched our raptor database for known nest sites within 15 miles of the Pogo Mine site. For your information, the following is the result of that search:

SPECIES	<u>Miles</u>	Direction	<u>Latitude</u>	Longitude	<u>Remarks</u>
AMERICAN PEREGRINE FALCON	4.4	186		144 54' 56"	
AMERICAN PEREGRINE FALCON	9.6 9.6	217 217		145 5' 34" 145 5' 34"	
AMERICAN PEREGRINE FALCON AMERICAN PEREGRINE FALCON	11.6	213		' 145 6' 40"	
AMERICAN PEREGRINE FALCON	12.0	72		' 144 31' 0"	
GOLDEN EAGLE	13.8	127	64 19' 45'	" 144 31' 54	" Nest Site

AMERICAN PEREGRINE FALCON	14.6	350	64 39' 30" 144 59' 10" Nest Site
AMERICAN PEREGRINE FALCON	14.6	350	64 39' 29" 144 59' 10" Nest Site
BALD EAGLE	14.9	210	64 15' 48" 145 9' 8" Nest Site

This letter constitutes informal consultation under section 7 of the Endangered Species Act of 1973, as amended. Preparation of a Biological Assessment or further consultation regarding this project is not necessary at this time. If project plans change, additional information on listed or proposed species becomes available, new species are listed that may be affected by the project, or listed species are observed on the project site, consultation should be reinitiated by your agency.

We appreciate this opportunity to comment. Please contact Elaine Gross at 456-0209 should you have any questions concerning these comments.

Sincerely,

Larry K. Bright

Acting Field Supervisor

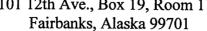
ESG/esg

cc: Ted Rockwell, EPA, Anchorage
Leroy Phillips, COE, Anchorage
Steve McGroarty, ADNR, Fairbanks
Jack Winters, ADF&G, Fairbanks
Pete McGee, ADEC, Fairbanks
Dick LaFebvre, ADNR, Anchorage
Karl Hanneman, Alaska Regional Manager, Teck Resources, Inc., 3520 International St, Fairbanks, 99701



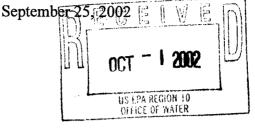
United States Department of the Interior Fish and Wildlife Service

FAIRBANKS FISH AND WILDLIFE OFFICE 101 12th Ave., Box 19, Room 110





Bill Riley NEPA Compliance Coordinator U.S. EPA Region 10 1200 Sixth Avenue Seattle, WA 98101



Re: Preliminary Draft Environmental Impact Statement for Pogo Gold Mine

Dear Mr. Riley:

The U.S. Fish and Wildlife Service has reviewed EPA's Preliminary Draft Environmental Impact Statement (PDEIS) for the Pogo Gold Mine Project. Teck-Pogo Inc. proposes to develop the underground Pogo Mine on State of Alaska land in the Goodpaster River Valley approximately 38 miles northeast of Delta Junction, Alaska. The mine would process approximately 2,500 tons of ore per day and would produce approximately 375,000 ounces of gold annually at start-up, with a possibility of increasing production and expanding the mill to 3500 tpd and 500,000 oz annually. The project would require 25 to 33 months to construct and have an operating life of approximately 12 years. The project would include a 49.5-mile access road, 50-mile power line, mill and camp complex, dry stack tailings pile and recycle water tailings pond, 3,000-foot airstrip, gravel pits, laydown and fuel storage areas, and a local network of roads. Gold would be recovered by gravity separation, flotation concentration, and cyanide vat leaching. Approximately one-half of the tailings would be returned underground as a paste backfill.

We have the following comments on the PDEIS:

2.3.27 Mine Closure and Reclamation

The PDEIS states that the goal of closure and reclamation plans would be to reestablish wildlife habitat within 5 to 15 years by stimulating the growth of early successional vegetation. The 49.5 mile main access road would be reclaimed and all bridges removed. On-site access and service roads not specifically required for post-closure and reclamation monitoring would be reclaimed.

The Goodpaster River, a major clear water tributary to the Tanana River in the Yukon drainage basin, supports significant fish resources including anadromous chinook and chum salmon, resident Arctic grayling, round whitefish, northern pike, and burbot. The river provides excellent spawning, rearing and overwintering habitat and serves as an important migration corridor for both resident and anadromous fish.

Wetlands in the project area are vital for sustaining a variety of fish, migratory birds, and other wildlife because they provide habitat for nesting, feeding, rearing, and staging. These wetlands support numerous species, including peregrine falcons, bald eagles, pintail, canvasback and other ducks, moose, caribou, gray wolf, brown and black bear, lynx, beaver, muskrat, coyote, red fox, martin, short-tailed weasel, least weasel, mink, wolverine and river otter.

The Pogo project lies in the southwestern portion of the annual range of the Fortymile Caribou Herd and 15 miles southwest of the herd's current calving and summer ranges. The Pogo project may affect the Fortymile Caribou Herd by reducing available range that may be required if the herd continues to grow in size and expands its range.

Due to the value of the fish and wildlife resources in this area, the applicant, with assistance from agencies and local residents, has sought to minimize the potential impacts of this project. Early in the planning process it was recognized that the road and powerline corridor would impact far more acreage and present a different set of environmental risks than the proposed mine and associated facilities. In order to minimize total project impacts, it is therefore essential that erosion, habitat loss, wildlife disturbance, and other impacts of the Pogo road and powerline be kept to a minimum during operation and upon closure of the mine.

The Service commends Teck-Pogo Inc. for their recognition of the importance of this area to fish and wildlife, and we support the proposed reclamation of the access road and powerline.

4.8.2 Cumulative Impacts - Options Common to All Alternatives:

As mentioned in the PDEIS and earlier in these comments, the Goodpaster River is a high-value fish-bearing stream. The proposed location of the new airstrip abuts an outside bend of the Goodpaster River, which is where erosion and bank failure normally occurs during flood events. In the interagency *General Recommendations for Riparian Management Zones in Interior Alaska* (2002), a minimum riparian buffer zone of 200' is recommended when a project is located along a high-value anadromous fish stream, is on public land, and the area has wildlife habitat values of regional significance. In order to protect the airstrip from erosion and the river from sedimentation, and considering the potential for contaminant migration toward the river, the Service recommends maintaining a 300' buffer zone along the Goodpaster River. Once the new airstrip is functioning, the old airstrip should be removed and the site revegetated in order to maintain a larger riparian buffer in the area of development.

As we stated in our September 7, 2000 letter, there are no threatened or endangered species in the project area, and thus impacts to listed species are not anticipated.

We appreciate this opportunity to comment. Please contact Elaine Gross at 456-0209 should you have any questions concerning these comments.

Sincerely,

Larry K. Bright

Acting Field Supervisor

cc: Cindi Godsey, EPA, Anchorage
Leroy Phillips, COE, Anchorage
Steve McGroarty, ADNR, Fairbanks
Jack Winters, ADF&G, Fairbanks
Pete McGee, ADEC, Fairbanks
Karl Hanneman, Alaska Regional Manager, Teck Resources, Inc., 3520 International St, Fairbanks, 99701

Literature Cited

ADF&G. 2002. General Recommendations for Riparian Management Zones in Interior Alaska. Interagency Report. Fairbanks, AK.

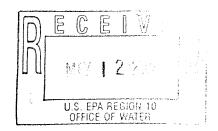


United States Department of the Interior Fish and Wildlife Service

FAIRBANKS FISH AND WILDLIFE OFFICE 101 12th Ave., Box 19, Room 110 Fairbanks, Alaska 99701 May 9, 2003



Hanh Gold NEPA Compliance Coordinator U.S. Environmental Protection Agency 1200 Sixth Avenue, OW-130 Seattle, WA 98101



Re: Draft Environmental Impact Statement for Pogo Gold Mine

Dear Ms. Gold:

The U.S. Fish and Wildlife Service has reviewed EPA's Draft Environmental Impact Statement (DEIS) for the Pogo Gold Mine Project. Teck-Pogo Inc. proposes to develop the underground Pogo Mine on State of Alaska land in the Goodpaster River valley approximately 38 miles northeast of Delta Junction, Alaska. The geologic resource of the mine is approximately 5.6 million ounces of gold. The proposed mine would use crushing, grinding, gravity concentration, floatation, and cyanide leaching processes to extract the gold. The tailings would be placed back underground and in an engineered disposal area in the Liese Creek valley. The mine would operate 24 hours a day, 365 days a year. Mine development is projected to begin in fall, 2003 with construction lasting approximately 2 years and have an operating life of approximately 11 years. At the end of mine life, Teck-Pogo proposes to seal and reclaim the mine. The Agency Preferred Alternative combines the mine access route and powerline from Alternative 2 (the Shaw Creek Hillside All-Season Road) and the water treatment system from Alternative 4 (the Off-River Treatment Works). Under this alternative, the 49-mile Shaw Creek Hillside All-Season Road would be open to general public use for the first 23 miles where the road is within or adjacent to the Tanana Valley State Forest, and then closed for the remaining 26 miles to the mine. The last 26 miles would be reclaimed, and the first 23 miles of the road would be retained permanently. A 50-mile power line would parallel the road. Mine site facilities include a mill and camp complex, dry stack tailings pile and recycle water tailings pond, 3,000-foot airstrip located on the Goodpaster Valley floor just north of the mouth of Leise Creek, gravel pits, laydown and fuel storage areas, and a local network of roads.

We have the following comments on the DEIS:

2.3 Applicant's Preferred Alternative

Alternative 2 is the Applicant's Proposal. The Agency's Preferred Alternative is discussed in Section 5 - Agency Determination of Preferred Alternative. Section 2.3 should be changed from

"Applicant's Preferred Alternative" to "Applicant's Proposal" to eliminate confusion regarding the Preferred Alternative. As the DEIS is written, there appears to be two preferred alternatives - the Applicant's and the Agency's. There should only be one Preferred Alternative. Potential impacts of the Preferred Alternative, as compared to other alternatives, should be the focus the final EIS.

4.12 Land Use

Options for permanent and temporary access roads are discussed in sections 4.12.4 and 4.12.5. The Agency Preferred Alternative modified the Applicant's Proposal (Alternative 2) to include reclamation of roughly one-half of the proposed 49-mile access road. The DEIS effectively analyzes temporary and permanent access road options, but lacks a thorough analysis of the newly proposed combination of temporary and permanent access in the Agency Preferred Alternative. The FEIS should address the direct, indirect and cumulative effects of the preferred access alternative.

4.8 Fish and Aquatic Habitat

Section 4.8.2. As stated in the DEIS and PDEIS, the Goodpaster River is a high-value fishbearing stream. The proposed location of the 3,000 ft. airstrip abuts an outside bend of the Goodpaster River. Outside bends of rivers are very susceptible to erosion and bank failure during floods and high sediment discharge. Clearing for the airstrip could lead to river channel changes with increased downstream sedimentation and possible loss of spawning and macroinvertebrate habitat. Erosion resulting from airstrip construction could have a major local impact on the Goodpaster River if it occurred during salmon spawning. On page 4-89, the DEIS states that from the perspectives of local topography and flight safety, the airstrip location cannot meet both the Service requested 300-foot buffer and the FAA runway alignment requirements. The applicant proposes to use mitigation and reclamation measures to maintain river bank stability and to prevent encroachment on the airstrip. The most effective way to stabilize a river bank is to maintain a vegetated buffer. A minimum buffer of 50 feet would help stabilize the river bank. The airstrip should be engineered to include a vegetative buffer ranging from 50 to 300 feet depending on runway alignment requirements. Trimming willow to a 3 foot height along the bank will keep roots in tact and stabilize the river bank while providing visibilty. Rather than using rip rap to stabilize the bank, the Service asks you consider, as you work to mitigate impacts, leaving the bank vegetated and utilizing methods discussed in the enclosed paper, The Cross-Vane, W-Weir and J-Hook Vane Structures... Their Description, Design and Application for Stream Stabilization and River Restoration by D. L. Rosgen, P.H. The in-stream structures discussed in this paper reduce near-bank shear stress and stream power while increasing center channel shear stress and stream power to retain both flood-flow and sediment transport capacity. Testing has shown that submerged vanes like J-Hooks not only redirect velocity away from the riverbank thereby reducing erosion, but improve fish habitat by creating slow-water pools downstream of the structures.

4.20 Mitigation, Reclamation and Monitoring

Table 4.20-1 effectively summarizes resource protection measures that are being proposed by Teck-Pogo Inc. The Service commends Teck-Pogo Inc. for their recognition of the importance of this area to fish and wildlife, and we support the proposed mitigation measures. We have the following suggestions for improving the mitigation plan.

<u>Wildlife</u>. Mitigation measure #1 states, "Gravel pits excavated and maintained with appropriate pit slopes to ensure stability and avoid wildlife entrapment." The Service suggests you consider the following additional mitigation for creating and enhancing productive wildlife habitat when reclaiming gravel pits:

- Design reclaimed gravel pits to include a shallow littoral zone, extending at least 20 feet from shore with a maximum underwater shoreline slope of 20H:1V with a maximum water depth of 12" at 20 feet from shore. Extreme shallows (1-3") should be a portion of the 20-foot littoral zone to provide habitat for wading birds and shorebirds.
- The perimeter of the reclaimed gravel pit should be irregularly-shaped with coves, spits and peninsulas to provide a diversity of shoreline habitat.
- Overburden stockpiled from the gravel pit operation should be returned to the pit, taking care to spread a portion of it within the littoral zone. Organics from the overburden will facilitate plant growth.

<u>Subsistence</u>. Mitigation measure #1 states, "All-season road open only to Pogo-related vehicles. Gated, video monitored, and patrolled to ensure compliance." With the new Agency Preferred Alternative, the all-season road would be open to general public use for the first 23 miles where the road is within or adjacent to the Tanana Valley State Forest, and then closed for the remaining 26 miles to the mine. The last 26 miles would be reclaimed, and the first 23 miles of the road would be retained permanently. Mitigation for subsistence should be addressed under the Agency Preferred Alternative.

As we stated in our September 7, 2000 and September 25, 2002 letters, there are no threatened or endangered species in the project area, and thus impacts to listed species are not anticipated.

We appreciate this opportunity to comment. Please contact Elaine Gross at 456-0209 should you have any questions concerning these comments.

Sincerely,

Steven A. Lewis

Field Supervisor

cc: Doug Mutter, DOI, Anchorage
Cindi Godsey, EPA, Anchorage
Leroy Phillips, COE, Anchorage
Ed Fogels, ADNR, Anchorage
Steve McGroarty, ADNR, Fairbanks
Jack Winters, ADF&G, Fairbanks
Pete McGee, ADEC, Fairbanks
Karl Hanneman, Alaska Regional Manager, Teck Resources, Inc., 3520 International St, Fairbanks, 99701

Attachment: The Cross-Vane, W-Weir and J-Hook Vane Structures... Their Description, Design and Application for Stream Stabilization and River Restoration by D. L. Rosgen, P.H.

Literature Cited

Rosgen, David L. 2001. The Cross-Vane, W-Weir and J-Hook Vane Structures... Their Description, Design and Application for Stream Stabilization and River Restoration. In 2001 Wetlands Engineering & River Restoration Conference, August 27-31, Reno, NV.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 10

1200 Sixth Avenue Seattle, WA 98101

Reply To

Attn Of: OW-130

AUG 1 4 2000

Mr. James W. Balsiger Regional Administrator National Marine Fisheries Service P.O. Box 21668 Juneau, Alaska 99802

Re:

Endangered Species/Essential Fish Habitat

Dear Mr. Balsiger:

This letter is a request for a current threatened and endangered species list and essential fish habitat managed species and habitat list from your agency. With the enclosed document, EPA opens the comment period on scoping for the Pogo Mine Project Environmental Impact Statement (EIS).

The Scoping Document contains a description of the project as proposed by the applicant, Teck Resources. The proposed project is an underground gold mine and ancillary facilities with an all season access road and airstrip. A map showing the proposed footprint of the project is included. The road access alternatives are described in the text of the document.

An application for a National Pollutant Discharge Elimination System (NPDES) permit has also been received for this project. The final location of the discharge point may not be decided until a Record of Decision is issued by EPA on the EIS but an approximate location is:

Latitude:

64227

Longitude:

144954

If you have any concerns that this project may adversely affect a threatened or endangered species or impact essential fish habitat, please contact me so your concerns may be addressed in the EIS.

If you have any questions regarding this project, please feel free to call me at (206) 553-0246.

Sincerely

John Matthew Harrington

EIS Project Manager

Enclosure

cc:

Leroy Phillips, COE/Anchorage

Printed on Recycled Paper



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 10

1200 Sixth Avenue Seattle, Washington 98101

Reply To Attn. Of: OW-130

James Balsiger Regional Administrator National Marine Fisheries Service P.O. Box 21668 Juneau, Alaska 99802

RE:

Endangered Species/Essential Fish Habitat

Pogo Gold Mine Project

Dear Mr. Balsiger:

The purpose of this letter is to request a current endangered species list, essential fish habitat managed species, and habitat list for the Pogo Gold Mine Project from your agency. EPA sent you a letter, along with the Scoping Document, on August 14, 2000 requesting this information, however, we have not received a response.

Enclosed for your information is several figures depicting the location of the project area. I would appreciate a response as soon as possible. Please feel free to contact me at (206) 553-0171 or by email at gold.hanh@epa.gov if you have any questions or concerns.

Thank you in advance for your help on this project.

Sincerely,

Hanh Gold

NEPA Compliance Coordinator

Enclosure

cc:

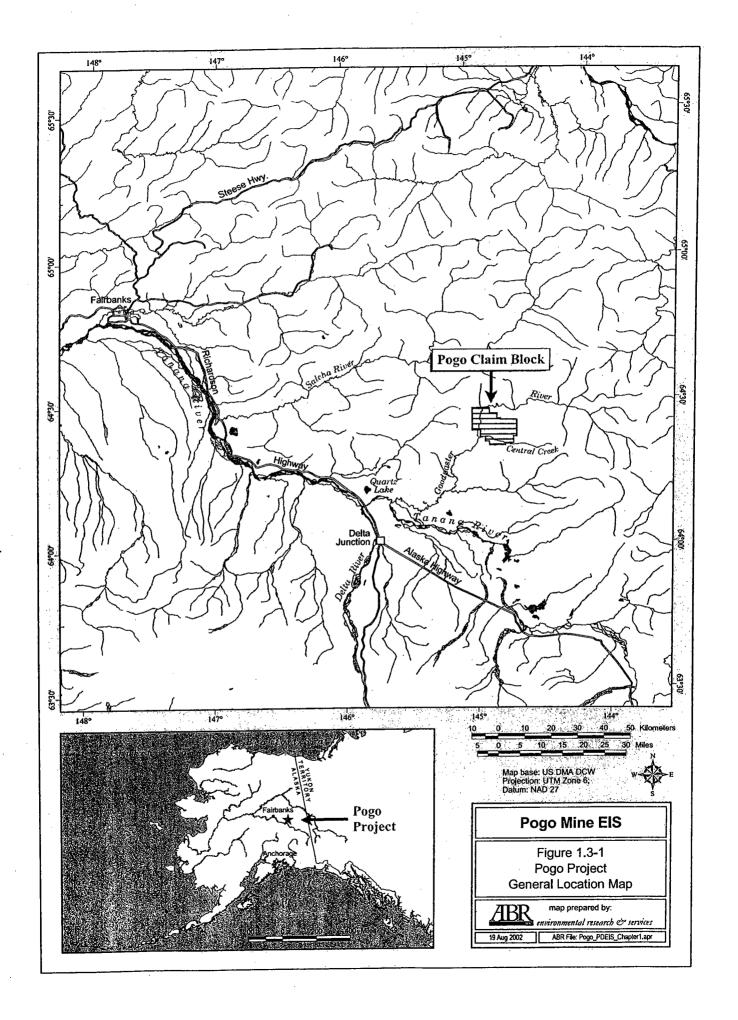
Bill Riley, EPA

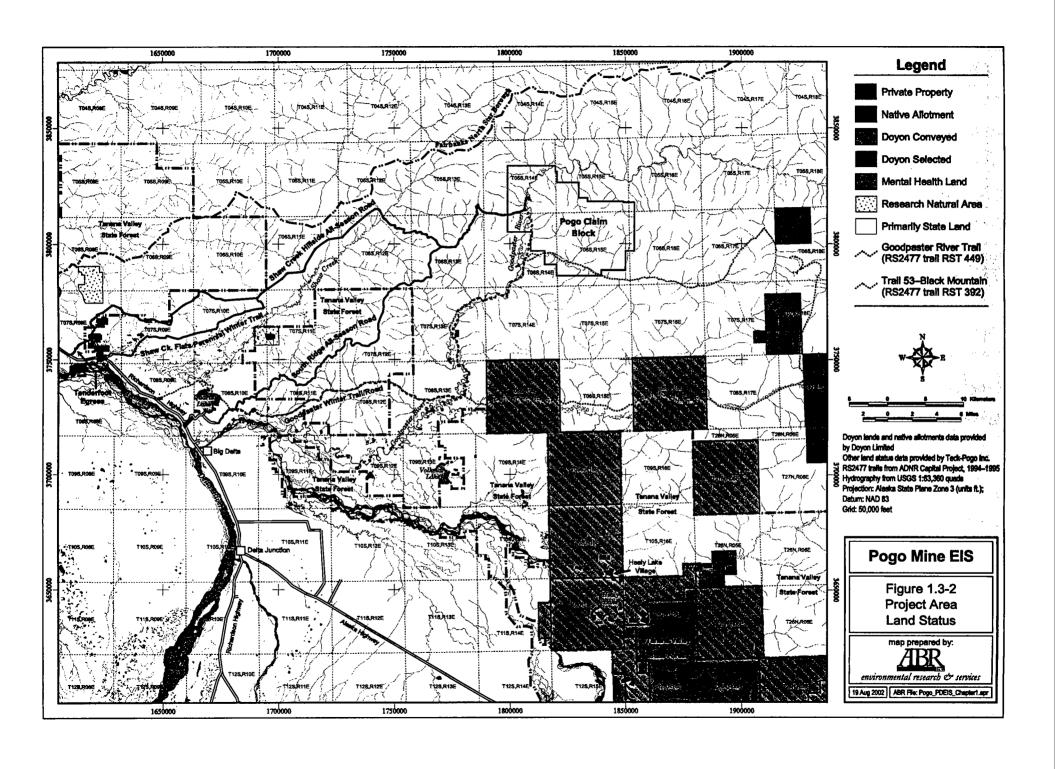
Ed Fogels, ADNR

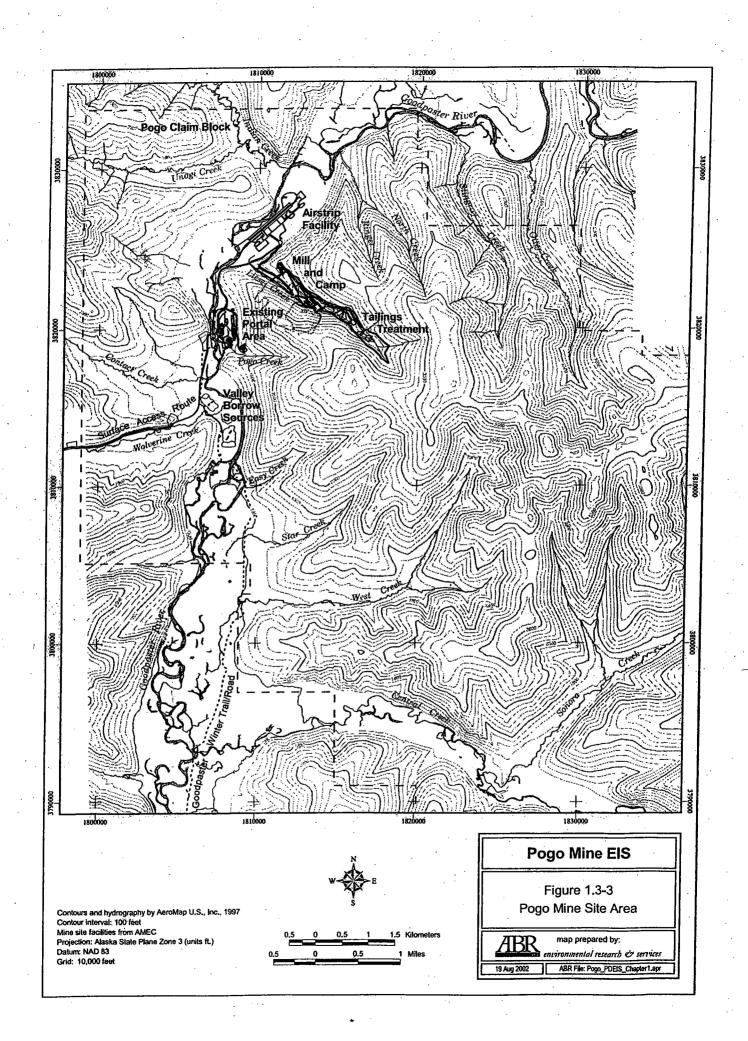
Leroy Phillips, USACE

Mike Smith, Michael Baker, Jr., Inc.

Karl Hanneman, Teck-Pogo, Inc.









UNITED STATES DEPARTMENT OF COMMERCE National Oceanic and Atmospheric Administration

U.S. EPA REF.

National Marine Fisheries Service P.O. Box 21668 Juneau, Alaska 99802-1668

December 23, 2002

Hanh Gold NEPA Coordinator U.S. Environmental Protection Agency Region 10 1200 Sixth Avenue Re: Pogo Mine T&E Species

Seattle, Washington 98101

Dear Ms. Gold:

The National Marine Fisheries Service (NMFS) has received your request for information regarding environmental laws that may be applicable to the Pogo Mine project. We have reviewed your preliminary information and offer the following comments specific to the Endangered Species Act (ESA) and the Marine Mammal Protection Act (MMPA).

Endangered Species Act

Section 7(a)(2) of the ESA directs interagency cooperation to ensure that any action authorized, funded, or carried out by a federal agency is not likely to jeopardize the continued existence of any endangered or threatened species or result in destruction or adverse modification of designated critical habitat. In Alaska, NMFS is responsible for the administration of the ESA as it applies to listed species of whales, Pacific salmon1, and Steller sea lions.

No endangered species under NMFS jurisdiction are likely to occur in the vicinity of the project site, and critical habitat for listed species does not occur in the project vicinity. Additional information on ESA listed species is provided in Table 1, and more information is available on the internet at:

http://www.fakr.noaa.gov/protectedresources/

¹ Several Northwest Pacific salmon stocks grow to maturity in offshore areas of Alaska. Several of these stocks are listed as an endangered species. Please see the Summary of Salmon & Steelhead Listings at http://www.nwr.noaa.gov/ for further information.

Marine Mammal Protection Act

Marine mammals that are protected under the MMPA range throughout Alaskan marine waters. However, no marine mammals are expected to occur in the vicinity of the project site.

Further consultation with NMFS under the ESA and MMPA is not required unless substantial changes in the project occur. Please contact John Olsen for further coordination regarding this project, at (907) 271-5006.

Sincerely,

James W. Baļsiger

Administrator, Alaska Region

cc: ADEC, ADF&G, ADGC, USFWS, EPA - Anchorage

Table 1: The following species² and critical habitat occur in Alaska waters and have been provided protection under the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.):

Listed species	Stock	Latin Name	Ctatus
<u>Listed species</u>	<u>Stock</u>	<u>Latin Name</u>	<u>Status</u>
Blue whale		Balaenoptera musculus	Endangered
Bowhead whale		Balaena mysticetus	<u>Endangered</u>
Fin whale		Balaenoptera physalus	Endangered
Humpback whale		Megaptera novaeangliae	Endangered
Right whale		<u>Balaena (=Eubalaena)</u> glacialis	Endangered
<u>Sei whale</u>		Balaenoptera borealis	Endangered
Sperm whale		Physeter macrocephalus	Endangered
Steller sea lion	Western population	Eumetopias jubatus	Endangered
Steller sea lion	Eastern population	Eumetopias jubatus	Threatened
Northern Sea Otter*		Enhydra lutris kenyoni	Candidate
Chinook salmon*	Puget Sound	Oncorhynchus tshawytscha	Threatened
	Lower Columbia River		Threatened
	Upper Columbia River Spring		Endangered
	Upper Willamette River	ar .	Threatened
	Snake River spring/summer		Threatened
	Snake River fall		<u>Threatened</u>
Sockeye salmon *	Snake River	Oncorhynchus nerka	Endangered
Steelhead*	Upper Columbia River	Onchorynchus mykiss	Endangered
	Middle Columbia River		Threatened
	Lower Columbia River		Threatened
	Upper Willamette River		<u>Threatened</u>
	Snake River Basin		<u>Threatened</u>

² The Endangered Species Act of 1973, as amended, defines traditional biological species concept of the biological sciences and "any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature" (16 USC 1532). NMFS uses the term *evolutionarily significant unit* as synonymous with *distinct population segment* and lists Pacific salmon accordingly. For the purposes of section 7 consultations, these are all "species."

Leatherback sea turtle	Dermochelys coriacea	Endangered
American Peregrine Falcon*	Falco peregrinus anatum	<u>Delisted</u>
Short-tailed Albatross*	<u>Diomedea albatrus</u>	Endangered
Aleutian Canada Goose*	Branta canadensis leucopareia	<u>Delisted</u>
Steller's Eider*	Polysticta stelleri	Threatened

Designated critical habitat

Species Group	General Reference Area	
Whales	No critical habitat has been designated for the above referenced whales in Alaskan waters.	
Steller sea lion	Shelikof Strait Area, Bogoslof Area, and Seguam Pass Area (50 CFR Part 226.12)	
Pacific Salmon*	No critical habitat has been designated for salmon species in Alaskan waters.	

^{*}The northern sea otter, American peregrine falcon, Aleutian Canada goose, short-tailed albatross, and Steller's eider are under the jurisdiction of the U.S. Fish and Wildlife Service at 907-786-3542. All salmon species are under the jurisdiction of NMFS, Northwest Regional Office, Seattle, Washington at (503) 230-5400.

Appendix C.3

Essential Fish Habitat Assessment

- 1. EPA letter to NMFS (December 2, 2002)
- 2. EFH Assessment
- 3. NMFS letter to EPA (May 19, 2003)



September 2003 Appendix C.3 C.3-1



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 10

1200 Sixth Avenue Seattle, Washington 98101

Reply To Attn. Of: OW-130

James Balsiger Regional Administrator National Marine Fisheries Service P.O. Box 21668 Juneau, Alaska 99802

RE:

Endangered Species/Essential Fish Habitat

Pogo Gold Mine Project

Dear Mr. Balsiger:

The purpose of this letter is to request a current endangered species list, essential fish habitat managed species, and habitat list for the Pogo Gold Mine Project from your agency. EPA sent you a letter, along with the Scoping Document, on August 14, 2000 requesting this information, however, we have not received a response.

Enclosed for your information is several figures depicting the location of the project area. I would appreciate a response as soon as possible. Please feel free to contact me at (206) 553-0171 or by email at gold.hanh@epa.gov if you have any questions or concerns.

Thank you in advance for your help on this project.

Sincerely,

Hanh Gold

NEPA Compliance Coordinator

Enclosure

cc:

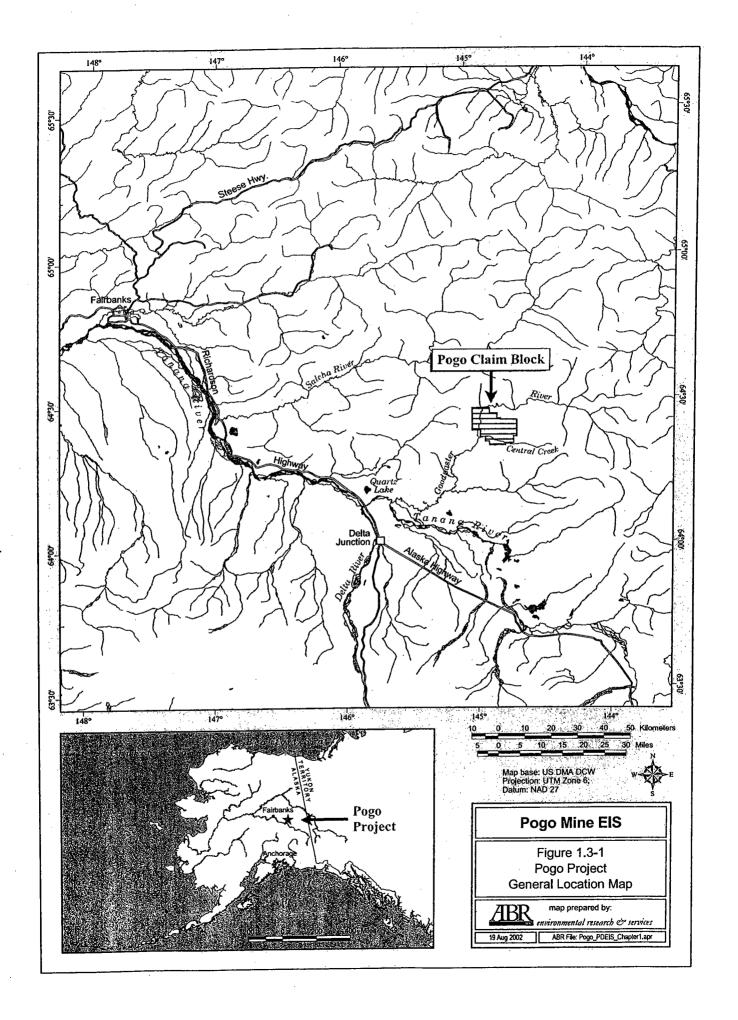
Bill Riley, EPA

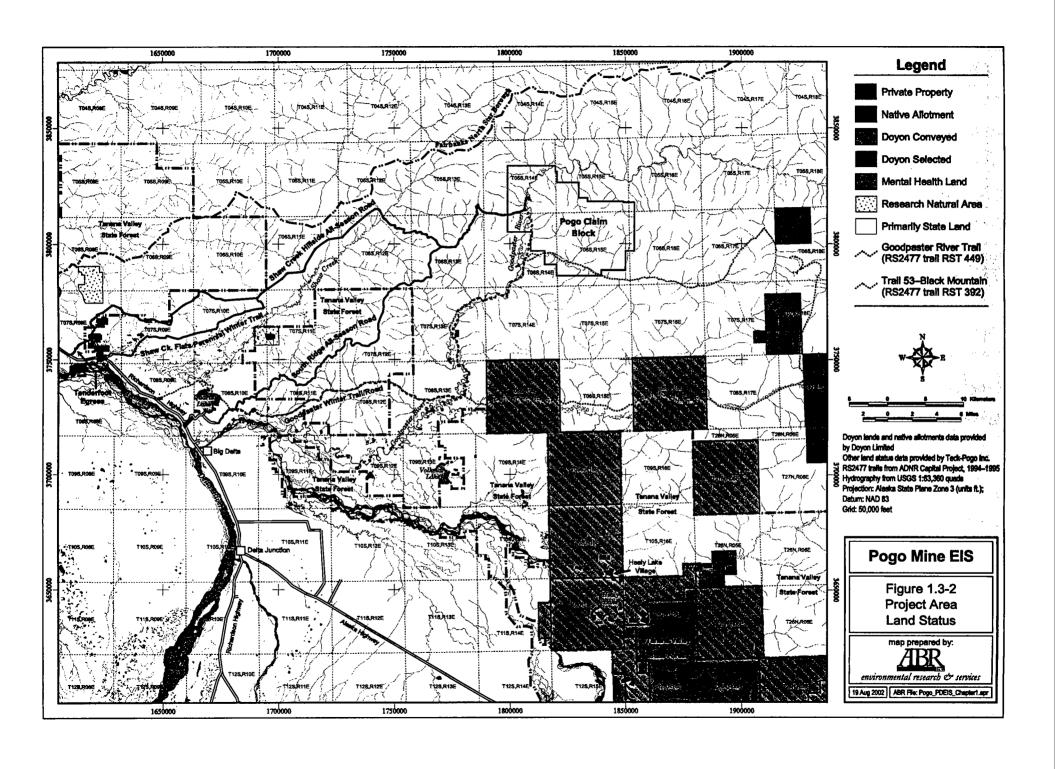
Ed Fogels, ADNR

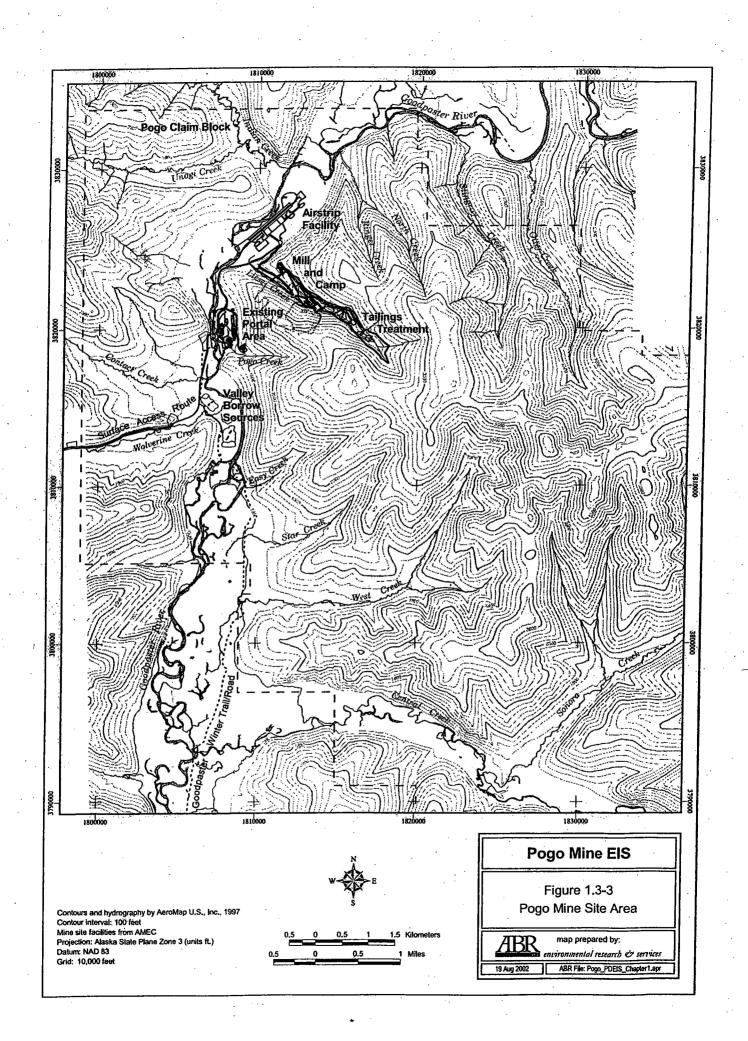
Leroy Phillips, USACE

Mike Smith, Michael Baker, Jr., Inc.

Karl Hanneman, Teck-Pogo, Inc.







APPENDIX C.3

Draft Essential Fish Habitat Assessment Pogo Gold Mine

Goodpaster River, Alaska

This essential fish habitat (EFH) assessment is largely drawn from the Pogo Gold Mine Project Environmental Impact Statement (EIS).

Project Description

Teck-Pogo Inc. is proposing development of the Pogo Gold Mine project in a currently roadless area 38 miles northeast of Delta Junction, Alaska. The mine would be located adjacent to the 140-mile long Goodpaster River at approximately its midpoint, river mile 70. The project would require a temporary camp complex and laydown area in the river's floodplain to support 200 personnel during the 2 to 3 years of construction. A permanent camp complex for up to 500 personnel during construction, and up to 250 personnel during operations, a mill complex, and storage areas would be constructed in Liese Creek Valley well above the Goodpaster Valley floor. The project proposes construction of a 49.5-mile, all-season access road to supply the mine annually with 100 crew changes and an estimated 40,000 tons of materials and supplies. Both access options would require crossing the Goodpaster River near the mine site. A 3,000foot airstrip would be constructed in the Goodpaster floodplain to supply construction, operation, and emergency needs.

The underground mine would operate 24 hours a day, seven days a week. It would produce between 2,500 and 3,500 tons of ore per day for at least 11 years to supply an on-site mill. The milling method would consist of grinding ore into a fine sand-like consistency, recovering gold through gravity concentration, concentrating the remaining gold and sulfide minerals by flotation, and recovering gold from the flotation process concentrate by cyanide vat leaching. The milling method would isolate the cyanide process from the environment. The method also would allow the separate production and handling of two types of tailings: the tailings from the flotation process and the tailings from the cyanidation process. The flotation tailings would account for approximately 90 percent of the total tailings produced and likely would contain very low levels of arsenic and sulfide mineralization. Half of these tailings would be filtered to remove water and trucked to a tailings storage area. The other half would be combined with all cyanidation tailings to make cement backfill that would be pumped back into the mine for support purposes.

The tailing storage area would be located in upper Liese Creek Valley and would be a surface dry stack. Tailings would be a compacted unsaturated "mound" of fine material mixed with developmental rock and would have minimal propensity for drainage in the near term, and a tendency to move toward zero drainage long term. Seven million tons of tailings and developmental rock are expected over the life of the mine. All surface water runoff and seepage from the tailings as well as the entire mill and camp complex would be collected in a recycle tailings pond (RTP) behind a dam below the storage area. The area is seismically stable with the added benefit that Liese Creek disappears into a wetland complex that is not directly connected to the river.

Water management for the project would be based on maximum recycle, minimal use of fresh water, and control of all site runoff. The primary water requirements would be for process water



for the mill and potable water for domestic needs. Recycled process water, mine drainage water, and surface runoff captured in the RTP would meet mill requirements in most years. Water from two groundwater wells would be used for domestic supply and for processing when the other sources are inadequate.

The central features of the control system for surface water would include a major diversion ditch on the hillside above the tailing storage facility and the RTP. The system is designed to separate all waters potentially in contact with project facilities or mineralized/chemically processed rock and tailings from waters considered "non-contact" that can be safely discharged without treatment. The diversion ditch would capture surface waters flowing into the Liese Creek drainage from above the tailings storage area and mill complex and would divert these waters as a stormwater flow into Liese Creek below the RTP dam. Inflows to the RTP would consist of "contact" waters from spring snowmelt, stormwater runoff, seepage from the tailings, and excess mine water that could not be used in the mill due to abnormal conditions such as a plant shutdown.

The RTP design would permit water storage of 40 million gallons, and operating levels would provide storage for the 100-year, 24-hour intensity storm event. Excess RTP water above the operating level would be treated and discharged the Goodpaster River through an off-river treatment works. Effluent from domestic use would be treated in a package treatment plant and discharged to the Goodpaster River. All treatments of discharge water would be designed to meet or exceed federal and state criteria and standards.

Analysis of Effect To EFH

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Pursuant to the Magnuson-Stevens Fishery Conservation and Management Act and the 1996 Sustainable Fisheries Act, an EFH consultation is necessary for species included in management plans of the North Pacific Fisheries Research Council. The Goodpaster River supports three such species, chinook, chum, and silver salmon. Juvenile silver salmon have only been found during early summer in the lower 2 miles of the river, more than 60 river miles below the mine site. These most likely spawned in the Delta Clearwater River, which flows into the Tanana River 8 miles upstream of the mouth of the Goodpaster. The Goodpaster likely affords these species a resting and feeding area during their outmigration to the sea. As such, and because of the downstream distance of more than 60 miles, the project would have no impact on silver salmon.

While both chinook and chum salmon use the Goodpaster in the vicinity of the project, differences in their biology and distribution would affect the extent of potential project impacts. Chinook salmon spawn, rear, and overwinter in a 90-mile reach of river encompassing the project area. Approximately 70 percent of spawning and, presumably, rearing and overwintering habitat, lies below the project site. Adults arrive in mid-July and spawning occurs over a gravel and cobble substrate in depths of 1 to 3 feet during a 3-week period ending in mid-August. Adults die after spawning. Eggs incubate over the winter, and hatching occurs from the end of March through mid-April. Fry emerge from the substrate in May and typically remain in the river for 1 year before outmigrating as smolts the following May. Juveniles occupy a variety of habitats in the main stem, side channels, sloughs, and some tributaries throughout the project area, but prefer the main stem. Of the two tributaries directly affected by the project, Liese and Wolverine creeks, juveniles are only found in the lower mile of the latter where the all-season access road would be sited.

Chum salmon have been found to only spawn in a length of river ending 6 to 15 miles downstream of the mine site. Adults arrive a week or more behind Chinook, and spawning is

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complete by the end of August. Like chinook, adult chum salmon die after spawning. Eggs hatch from the end of December through January. Fry emerge from the substrate sometime in April and immediately outmigrate starting at ice-out in late April and May. Thus, no chum are in the river from late May to August.

Because of the design (siting, closed-cycle processing, runoff control), and enforcement of state and federal permit requirements and regulations, project operations would cause insignificant impact to the essential aquatic habitat of the EFH species under expected or "normal" conditions. Under some abnormal conditions, however, such as construction of drainage and containment structures, transportation accidents involving fuel or mine reagents, process failures, or severe storm events, singly or in combination, and depending on the timing, location, and duration of the event, major impacts to habitat, fish, or both could occur. Impacts would come from erosion during construction or from flooding of access roads and facilities, which could cause sedimentation of spawning sites, channel alterations, or both, and from runoff or discharge contaminated with metals and sulfides affecting growth and survival of eggs and fry. The nature of these abnormal events and the dilution of contaminants downstream of the point source, however, would only temporarily and locally affect habitat. Chum salmon would be least affected because their habitat is well downstream of where the impacts would occur. In a worstcase scenario for chinook, which would have to be specific in nature and timing, a spawning failure (egg death), young-of-the-year fish kill, or physiological changes to behavior/development would affect only a portion of one year class.

Proposed Mitigation

Teck-Pogo Inc. plans to mitigate potential impacts to aquatic habitat of the Goodpaster River by siting the mill and camp complex out of the Goodpaster floodplain; controlling and managing runoff from the mill and tailings storage sites; using a closed-circuit gold recovery process; using wells instead of river water; discharging treated wastewater to an off-river treatment works; designing the RTP in Liese Creek Valley for the 100-year, 24-hour event; and using a bridge to cross the Goodpaster River. Federal and state laws pertaining to habitat and fish protection and construction suggest further mitigation. Floodplain development should be limited to absolute necessities, such as access roads and gravel pits, because runoff and erosion control is impossible during a flood. Ideally, the proposed airstrip should be located out of the Goodpaster Valley floor. Other location options, however, are not feasible. Use of crushed mine nonmineralized developmental rock where feasible instead of mined gravel would minimize size and number of gravel pits on the valley floor. To the extent possible, storage and laydown areas during construction and operation should be located within the water management system in Liese Creek Valley.

Federal Action Agency Determination

On the basis of the scope and nature of impacts expected from the project and the mitigation measures identified above, no substantial adverse individual or cumulative effects on EFH are expected in the project area.

The following special conditions should be included in permits to ensure that habitat designated as EFH in the Goodpaster River is protected:

1. All work in the Goodpaster River must be approved by the Alaska Department of Fish and Game, and appropriate measures will be taken to protect fish and fish habitat when working in the waterway.





- 2. Adequate sedimentation and erosion control devices for example geotextile silt fences or other devices capable of filtering the fines involved will be installed and properly maintained to minimize adverse impacts on waters and wetlands during construction.
- 3. No temporary fill (e.g., access roads or cofferdams) will be placed in waters or wetlands unless specifically authorized.
- 4. The water level of the RTP, when feasible, will be maintained at a capacity that could retain a 100-year, 24-hour storm event. To maintain the appropriate level, water will be treated and discharged per design and permit stipulations.

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UNITED STATES DEPARTMENT OF COMMERCE National Oceanic and Atmospheric Administration

National Marine Fisheries Service P.O. Box 21668 Juneau, Alaska 99802-1668

May 19, 2003

Hanh Gold NEPA Compliance Coordinator US Environmental Protection Agency 1200 Sixth Ave. OW-130 Seattle, WA. 98101

Dear Ms. Gold:

The National Marine Fisheries Service (NMFS) has reviewed the Draft Environmental Impact Statement for the Pogo Gold Mine Project. NMFS review was focused on Appendix F.3, the Draft Essential Fish Habitat Assessment (DEFHA). NMFS concurs with the Environmental Protection Agency's (EPA) Assessment that "On the basis of the scope and nature of impacts expected from the project and mitigation measures identified above, no substantial adverse individual or cumulative effects of EFH are expected in the project area." NMFS supports the special conditions in the DEFHA proposed by EPA. Please contact Larry Peltz at (907) 271-1332 if you have any questions.

Sincerely,

Jonathan M. Kurland

Assistant Regional Administrator

for Habitat Conservation

