ALASKA LEGISLATURE COMMITTEE FILES 1999-2000 8672

10136 SENATE RESOURCES

Impacts and Benefits agreements are advantageous to developers not only because they promote a cooperative relationship with local First Nations. but also because they allow the company to learn from those who have intimate knowledge of the land and the environment. These partnerships can result in the development of better projects in which all can benefit.

Jackie Williams
Wolf Clan Elder

I am a Wolf Clan elder. My great grandfather was the Wolf Clan Leader of the Taku River. I would like to see for the young generation to have their own businesses and jobs that Redfern's mine will provide for the First Nation of the Taku. I would like to see the First Nation have full management of the land of the Taku River and the road so it is done in the right way

Economic Opportunities

CARES believes that the reopening of the Tulsequah Chief Mine will have many positive economic impacts on our community. Redfern has committed to ensuring that the TRTFN and the local community enjoy maximum benefits through preferential hiring and contracting opportunities. At the present time, most of Atlin's economy is seasonal. Year round, high paying mine jobs, spin-off employment as well as contracting opportunities will inject much needed stability and financial resources into our economy. Residents will have the financial ability to pursue business ventures in tourism, building and mechanical trades and other industry. They may also acquire essential experience and training in the mining sector, trades and other areas that will allow them to be employed in mining and other industry in the region. Many businesses and individuals will have acquired valuable business and management experience along with a proven track record from the completion of mine contracts that will allow them to successfully bid on other contracts from the region. Furthermore, a more prosperous community may allow local businesses to expand and provide more varied goods and services at a more competitive price, thereby capturing more of the local market than they currently enjoy. The increase in goods and services available will benefit all residents.

Contracting Opportunites

(Estimated Annual Costs)

Limestone Quarry	80,000
Crew Transp. - Buses, Air Charter	300,000
Camp - Food, Laundry Maint.	1,020,000
Tulsequah - Atlin Road Maint.	1,100,000
Atlin - Jakes Corner Road Maint.	1,500,000
Mine Mobile Equip. Maint.	2,200,000
Mine Fuel Supply	8,600,000
Mine Cement Supply	2,400,000
Concentrate Trucking to Skagway	6,480,000
Concentrate Handing in Skagway	1,870,000
Concentrate Movement to Smelters	6,210,000
TOTAL ANNUAL	31,760,000

Operating Supplies Required

(Estimated Annual Costs)

Mine Supplies	9,925,000
Mill Supplies	7,045,000
Fuel / Power Supply	7,670,000
General / Admin. Supplies	1,211,000
Concentrate Movement to Smelters	6,210,000
TOTAL SUPPLIES	25,851,000

Many local spin-off jobs will be created by these contract and supply opportunities.

Employment & Contracting

Direct Employment	199
Contract Trucking Jobs	60
Supply Contracts	$25 million / year
Average Salary + Benefits	$77,000
Road Construction	$30.6 million
Capital Required	$148 million

Atlin Estimated Employment

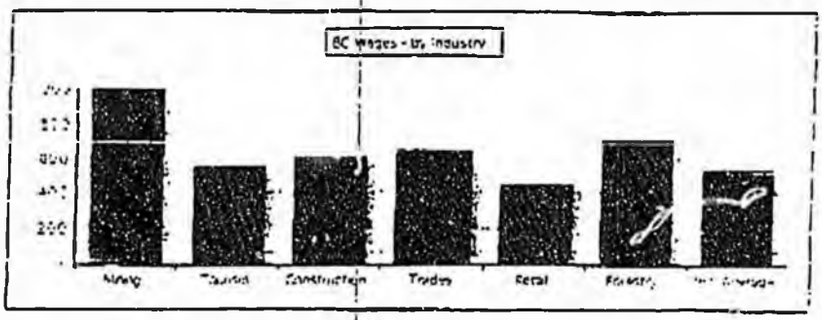
	Direct	Indirect
Construction (2 years)	80	12
Operations (9 years + ?)	51	8

Atlin Estimated Contracting

$7 million per year

Opportunities for the Region

Atlin will be the preferred community for employment and contracting. However because Atlin is a small community with few resources, Redfern anticipates that Whitehorse and Smithers will also benefit dramatically from this project. These communities will be fly in points for employees and will benefit from the many contracts associated with the Tulsequah Chief Mine.



Mining is Canada's Highest Paying Industry

CARES understands that the community must plan for mine closure. However, we have at least 9 years and potentially much longer in which to do so. With proper planning, much of the prosperity enjoyed during the mine's life can be carried beyond if we use this opportunity as a means to explore other options. This planning, on an individual business and community level, is necessary if we are to ensure a sustainable future for our community.

CARES believes that planning for the future is necessary in all areas of the economy. Many sectors, such as tourism, depend on global trends and world economic conditions for their well-being. Inevitably, downturns occur that can have devastating impacts on communities that are dependent on a single industry. Furthermore, every sector, including government and the public sector, is experiencing restructuring and downsizing. Clearly, no single industry or economic sector can guarantee the well-being of a community. What is needed is a diverse foundation in which mining, with its tremendous economic benefits, can play an important role. **CARES** is committed to ensuring that we take advantage of all opportunities that will contribute to a sustainable and healthy future for our community.

James Williams with Daughter Tara
TRTFN Members

"I support the Tulsequah Chief project because there are benefits for the community of Atlin not only for the TRT. But the whole community. Not only me as a grocery business, but all the other people that are in business - they will benefit. And if it means that I have to hire somebody, then I will be hiring somebody local. All the way around, the garage will do the same, the Inn will do the same. I imagine that anyone that's in business will make it happen. So it's not just me, the business community, it's the whole community."

Community Benefits

CARES believes that the reopening of the Tulsequah Chief mine will have many positive social and community impacts. Perhaps the most important is the opportunity for friends and family members who have had to move elsewhere for work to return home. Spouses forced to work far outside of the region for long periods in order to make a living can have a devastating impact on families and relationships. Furthermore, a more prosperous community may allow our school to offer programs up to grade 12. Having to send our youth to Whitehorse or further to continue their education is difficult for families and the community as a whole. Indeed, some families move when their child reaches grade 10 so as not to break up the family.

A more prosperous community may also be able to support better services that other communities take for granted. Services such as full service banking, more extensive health and pharmaceutical care more varied recreational opportunities, such as a youth center, will provide for a healthier community.

Residents working year round earning a good income contribute to the economic and social health of any community. At present many people must depend on employment insurance or social assistance in order to make ends meet. Surely the ability to support oneself and ones family is a social good and should be encouraged.

Mary Cowan & Family
Long-Time Atlin Residents

"I support this project for the future of my four children I have raised here. My son, his wife and daughter, and two of my daughters have been forced to move because of no work. Our children are our future, and their future relies on jobs. Without jobs our children have no future in this community."

Benefits to the Province

Taxes and Royalties to Government - $191 million over 9 year life of mine
(not including employment income taxes)

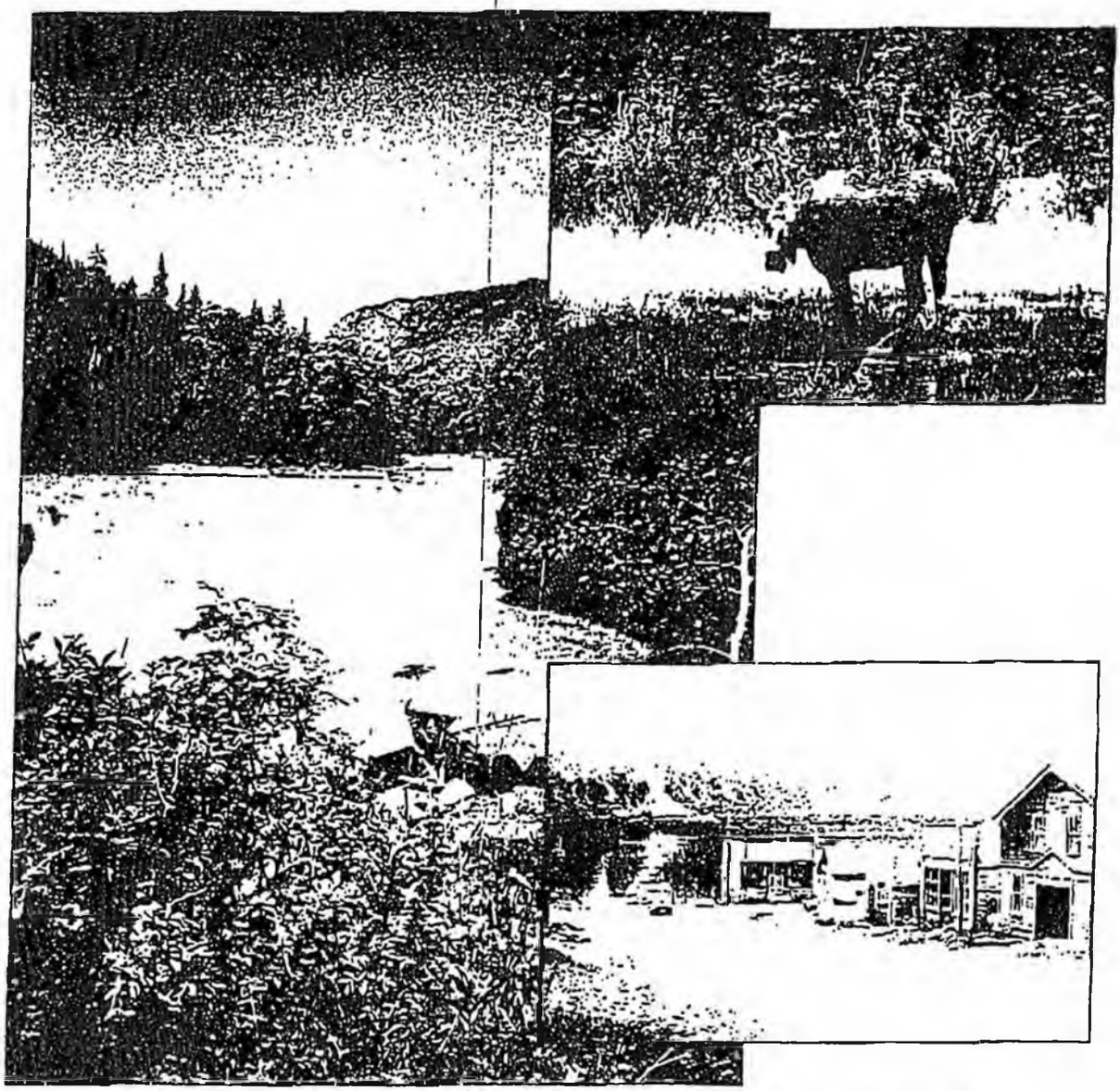
In the province of BC we enjoy a high standard of living that is envied around the world. We have sophisticated accessible health care, a comprehensive social welfare network, a first class public education system and modern infrastructure that allows us to live safely and comfortably. Our society believes these things are essential to our way of life and must be supported! Indeed, elections have been won and lost over these very issues.

At the same time, we must maintain the ability to finance these public goods through government revenue. In order to do this, we must encourage a healthy and vigorous economy through which these revenues are generated. We are fortunate that our province is richly endowed with natural resources that form the basis of our economy. Although efforts are ongoing to diversify beyond the primary industries such as mining, our natural resources will continue to be an essential part of our economy. It is unrealistic to expect that we can stop using these resources and still maintain our standard of living.

CARES members are concerned about the health of our environment. At the same time, we realize that the social and economic health of our community is also important. CARES believes that we must continually seek a balance to ensure that while the environment is protected we are still able to make a living here and provide a future for our children. We have confidence in Redfern's commitment to the community and to the sound environmental management of the Tulsequah Chief Mine.

"Most of us have lived in this community for many years. We are true environmentalists who care intimately about what happens here. We don't want to see this area destroyed. After all, it's beauty is one of the main reasons we have chosen to live in this remote corner of the province. We also care deeply about the economic and social health of our community. We want our children to inherit a healthy environment and a healthy community that can provide them with real opportunities."

Irene Coleman
Long-Time Atlin Resident



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TULSEQUAH CHIEF MINE PROJECT

CANADA-BRITISH COLUMBIA

RESPONSE TO CONCERNS RAISED BY UNITED STATES (US) AGENCIES

NOVEMBER 1998

PURPOSE OF THIS DOCUMENT AND BACKGROUND

The purpose of this document is to provide the Canada and British Columbia response to the issues and remedies outlined by US agencies in the November 13, 1998 letter from the US State Department to the Canadian Embassy in Washington, and discussed at the November 16/17 meeting in Vancouver.

This document was compiled by the British Columbia Environmental Assessment Office (EAO), with the input and assistance of:

- British Columbia Ministry of Environment, Lands and Parks (BC-MELP);
- British Columbia Ministry of Energy and Mines (BC-MEM);
- British Columbia Ministry of Forests (BC-MOF),
- Environment Canada (EC), including Canadian Wildlife Service (CWS);
- Department of Fisheries and Oceans (DFO);
- Natural Resources Canada (NRCAN), including Geological Survey of Canada (GSC);
- Inter-governmental Relations Secretariat, Province of British Columbia; and
- Department of Foreign Affairs and International Trade.

In addition to a response to each of the remedies proposed by US agencies, Canada and British Columbia agreed at the November 16/17 meeting to provide additional technical information which is included in Annexes attached to this document and identified in the responses to the remedies.

This document is the third in a series of responses provided to requests from the US agencies subsequent to Canada and British Columbia completing the joint environmental assessment of the Tulsequah Chief mine project (Project) in spring 1998, thereby allowing the Project to proceed to detailed design and permitting stages. These documents collectively provide additional information and analysis to resolve questions and matters of difference. Together, the documents show how the overall review and conclusions and matters to be included during the statutory permitting processes will ensure that the development and operation of the Project, in accordance with statutory permits, licenses and approvals would not create any potential for significant adverse effects on transboundary resources. Previous documents provided to US agencies include:

- May 21, 1998 binder responses of Canada and British Columbia providing further information on issues raised at the April 16, 1998 Canada-US meeting in Washington, DC; and

- October 1998 responses of Canada and British Columbia to continuing concerns raised by US agencies in a letter from the US State Department to the Canadian Embassy in Washington dated August 28, 1998.

US agencies were invited to participate in the overall review of the Project. Alaska State, US Environmental Protection Agency (EPA) and US Department of Interior (DOI) were involved in the work of the Tulsequah Project Committee from fall 1994 to March 1998. As well, the US Army Corps of Engineers (CORPS) were involved up to June 1997 at which time the barge transportation options were formally removed from the scope of the project review.

Information provided to all Project Committee members and agencies requesting material for review included:

- Redfern Resources Ltd. (Redfern) Application report and subsequent addenda (fall 1994/spring 1995);
- Draft Project Report Specifications (terms of reference for further studies based on a review of the Application) for review and comment prior to finalization;
- Redfern's Project Report for both initial screening and for formal review;
- Redfern's application to formally remove the barge transportation options from the scope of the review;
- Draft conclusions and recommendations on the application to remove the barge;
- All addenda material provided by Redfern and British Columbia during the review of the Project Report, and required by review agencies to complete the overall review; and
- Draft Project Committee recommendations to British Columbia Minister of Environment, Lands and Parks and Minister of Energy and Mines.

US agencies were invited to participate in all Project Committee, sub committee and barge transportation review meetings (including telephone conference calls), totalling over 30 during the overall review. As well, Canada and British Columbia established a process to adhere to the provisions of the *Convention on Environmental Impact Assessment in a Transboundary Context*, United Nations 1991, as yet unratified, to ensure that all transboundary notification, information exchange and consultation requirements were met.

The issues and remedies proposed by US agencies do not raise any new concerns or activities that would not normally be addressed during the permitting stage for the mine. The purpose of the overarching British Columbia and Canadian environmental assessment processes was to identify and resolve such issues to a level of detail that would reasonably confirm that remaining issues could be adequately addressed through the British Columbia and Canadian statutory permitting and authorization processes, and to ensure the project would not have significant

adverse environmental effects. This test was met for all issues and it is the permitting processes that will now adequately address the level of further planning and assessment required to satisfy permitting requirements prior to those permits being issued for each project component.

Canada and British Columbia are confident that the remedies proposed by the US can best be accommodated through the detailed Project design, and planning stage and through continuing discussions and input of all parties. Each aspect of the Project requires a co-ordinated review of the applications for the necessary statutory permits, licenses and approvals required as Project development proceeds. In this context, both British Columbia and Canada continue to invite the participation and input of US agencies in this process. We are confident that the proposed remedies in the US State Department letter, as modified by British Columbia and Canada to fit within the Canadian legal framework are acceptable, and that this dialogue has been effective in resolving questions and matters of difference.

SUMMARY OF TECHNICAL RESPONSES

The following technical responses are presented in order of the issues and remedies raised in the November 13, 1998 letter from Victor Comras, Director, Office of Canadian Affairs, United States Department of State, to John Higginbotham, Embassy of Canada, Washington, DC.

1. Unresolved mine site design issues including long term site maintenance

Issue 1(a). Tailing Impoundment

US Proposed Remedy 1(a). (1) Examine alternative tailing impoundment/disposal locations in much more detail to seek an alternative location for a tailing impoundment in a geologically and hydrologically stable area. (2) If both the United States and Canada agree as a result of this examination that no other suitable location exists, establish mutually agreeable design conditions (e.g. probable maximum flood) that reflect construction of a permanent facility and gather necessary data to estimate not only flood flows but associated debris flows. Address these and all associated geotechnical risks in the facility design, to the satisfaction of both governments. (3) Address all long-term (i.e. in perpetuity) maintenance and contingency needs, including costs and means of transporting large equipment to the site, to the satisfaction of both governments. Accomplish these remedies prior to irretrievable commitment of resources to activities on the ground.

Canada and British Columbia are confident that the approach outlined below fully satisfies remedy 1(a).

Canada and British confirm the invitation extended to US agencies to participate in a review of the available data regarding the tailing pond alternatives assessment to date and additional background information on the hazards assessment for Shazah Creek in a pre-permitting phase. This additional step will assist Redfern with preparing detailed design(s) and permit

application(s) and will help to resolve US questions and matters of difference. The information available for such a meeting is summarized below, and contained in the Annexes to this document.

Item 1 – British Columbia agrees to re-examine the alternatives for location of tailing impoundment/disposal facilities. Redfern was asked to re-examine alternative tailing facility sites and not restrict itself to the seven sites that were originally considered. The best technically and economically feasible site will be selected. BC-MEM experts have conducted a further review of site options. Canada also provided technical assistance in this review. The results of this review are contained in Annex 1.

Item 2 - British Columbia agrees to review the basis on which an acceptable design will be developed, taking into account all foreseeable risks. Redfern was asked to re-examine floods and debris flows that could occur in Shazah Creek and Chasm Creek and the ability to safely pass such flows with a tailing facility located on the Shazah Creek fan. These and other associated geotechnical risks will be further addressed in the facility design. Experts from BC-MEM and Canada have completed further review of Shazah site geotechnical hazards Annex 1 to this document includes the results of this further review.

Item 3 - British Columbia agrees to ensure all long-term maintenance and contingency needs are addressed as part of the *Mines Act* application review process and before a decision on the permit for that aspect of the project is made. Redfern was requested to provide additional heavy equipment detail on maintenance and contingency needs in the absence of an access road after completion of mining and mine decommissioning.

At present Redfern has not applied for approval to construct the tailing facility and no construction activities have taken place. This stage of construction will require granting of the necessary permits based on a detailed design addressing British Columbia and Canadian standards. These are equivalent to those of Alaska. In addition to the offer (made above and in person November 16/17) to meet with US counterparts to review the pre-permitting information package found in Annex 1, BC-MEM reiterates the invitation made earlier in the year inviting US participation in the permitting process.

Experts from BC-MEM Geological Survey Branch, Geological Survey of Canada and an external reviewer for BC-MEM have, subsequent to the November 16/17 meeting, reviewed tailing site selection and natural hazards in Shazah Creek. These independent supplementary reviews confirm that the level of work to date by Redfern is accurate and adequate for the joint federal and provincial environmental assessment that was concluded in March of this year.

BC-MEM provides in Annex 1 the supplementary reviews and technical information provided by Redfern. BC-MEM is also providing documents in Annex 2 that provide important information on BC-MEM's mine permitting process, policy and guidelines.

Issue 1(b). Monitoring and long-term enforcement

US Proposed Remedy 1(b). **(1)** Develop monitoring plans to ensure tailing impoundment structural integrity and re-vegetation after closure. **(2)** Assess feasibility of perpetual water treatment if access can only be by air. **(3)** Develop improved plans for tailing impoundment seepage prevention, seepage return system, and "real time" detection and correction via mine shutdown. **(4)** Provide monitoring plans for water quality. **(5)** Provide copies of governmental enforcement plans, implementation schedules for both this proposed mine and past mining activity that has resulted in acid mine drainage, and emergency closure procedures for non-compliance with operational requirements. **(6)** Require adequate bonding to cover cost of site reclamation to benign state.

Canada and British Columbia agree with the 6 identified strategies in the US proposed remedy, and outline the following approach to implement the remedy.

Item 1. Canada and British Columbia concur in the need to develop monitoring plans to ensure tailing impoundment structural integrity and re-vegetation after closure.

BC-MEM monitoring plans are site specific. After mining (as well as for the operating phase), if a tailing facility cannot be decommissioned to a "walk away" state, Redfern is required by the Code to retain a professional geotechnical engineer to conduct an annual inspection and submit an Annual Tailing Facility Report. To address environmental and/or safety risks associated with the facility a commensurate level of site presence will be required, depending on the level of perceived risk, including daily, 365 days of the year, if required. The risks are based upon the consequences of failure and the potential for upsets.

Redfern will be adequately bonded by British Columbia (see Annex 2, references 1, 2 and 3) under the *Mines Act* to ensure the necessary work is performed according to Permit obligations and the logistics of "no road" are taken into account. As indicated at the November 16/17 meeting heavy equipment will be kept on site to perform maintenance and repair work, as required. This equipment will be kept on site in a maintenance garage and maintained in good operating condition according to a regular maintenance schedule. Redfern will be required to follow the care and maintenance schedules for the heavy equipment industry. If required, additional heavy equipment would be barged or flown in. Equipment care and maintenance (and replacement) will be addressed in the long term bond held by British Columbia.

The Permit application prepared in accordance with the "Application Requirements for a Permit Approving the Mine Plan and Reclamation Program Pursuant to the *Mines Act*" requires Redfern to prepare a soil survey and soil management plan, and to strip and stockpile topsoil for replacement on disturbed areas where necessary. In this location and climate, revegetation is expected to be easy on most substrates. Natural revegetation of bare soils following glacial retreat can occur rapidly without human assistance as shown at Glacier Bay, Alaska. To meet the requirements of the Permit and the *Mines Act* Permit and Health, Safety and Reclamation Code for Mines in British Columbia (Code), Redfern must demonstrate that it has achieved permanent, stable vegetation and have satisfied land use and productivity objectives. In addition, Redfern must ensure that metal uptake in vegetation is not a problem. Long term monitoring of vegetation could be required under the *Mines Act* Permit, although in this wet environment it is

expected that revegetation will be relatively straightforward. Demonstration is achieved through the submission of Annual Reclamation Reports which are required until all obligations of the Permit are fulfilled to the satisfaction of the Chief Inspector of Mines, and by joint site inspections with the region's reclamation inspector and Redfern personnel.

Mines Branch inspectors conduct regular site inspections by helicopter or small fixed wing aircraft every year as many sites are inaccessible by other means. A team of inspectors including representatives for reclamation, bonding, geochemistry (ARD/ML), geotechnical, health and safety inspectors will participate in inspections. Joint agency inspections often occur as well involving representatives of line agencies at the provincial and federal regulatory levels. The Tulsequah site would be accessed by air out of Atlin.

Item 2. BC-MELP and BC-MEM agree to the proposed remedy and will request that Redfern provide a more detailed feasibility study as requested by Alaska/US.

The water treatment plant will be installed to treat contaminated water which is presently flowing from existing Tulsequah workings. The new Tulsequah mine design will not generate any additional acid mine drainage. One of the environmental benefits of the Project will be the ability to construct and operate the treatment plant to control the existing effluent. The longer term objective, of course, will be to institute remediation of the existing underground workings to eliminate or greatly reduce the requirement for treatment at the end of mining. Redfern was asked to resubmit costs and scenarios for long term maintenance of the mine and operation of a water treatment plant.

During the review of the Project BC-MELP concluded that perpetual water treatment was feasible based on: the information presented; and on previous experience with perpetual water treatment (Equity Silver) and air-only mine access (Homestake Snip Gold and Skyline Gold).

Item 3. Canada and BC-MELP and BC-MEM agree that developed plans for the detection and correction of seepage problems will be required of Redfern.

The tailing that will fill the tailing facility are very low permeability materials and are the most effective materials for seepage prevention in the long term. It is feasible and possible to improve seepage return, if required. Redfern was asked to expand on this.

The information presented at the November 16/17 meeting demonstrated a low level of risk of seepage contamination such that the proposed seepage monitoring/recovery well network is adequate. Tailing effluent quality from the mill will be monitored daily to ensure that supernatant quality remains low risk. The British Columbia *Waste Management Act* (WMA) permit will require shutdown of discharges from the mill to the tailing impoundment at specified trigger points. These trigger points will be developed during permitting with input from Alaska.

Item 4. Copies of the requested monitoring plans can be made available once completed.

Conceptual monitoring plans were provided in Redfern's Project Report and correspondence. Detailed monitoring programs as referred to in **Item 3** response above will be developed during processing of the WMA effluent permit in full co-operation with Alaska and the EPA. The first step will be to require that Redfern submit a proposed monitoring program as part of the WMA effluent permit application. Monitoring results will be used to determine any new regulatory requirements necessary for added contingencies and/or remediation.

Item 5. Inspection and enforcement requirements are defined in British Columbia and Canadian federal legislation and regulations.

Redfern must submit an Annual Reclamation Report one year after the *Mines Act* permit is issued, and annually by March 31 thereafter. Reclamation inspections will start once the *Mines Act* Permit is issued. Under the *Mines Act* the Chief Inspector of Mines can close the mine for non-compliance with any of the Permit conditions. Any shutdown will be orderly and ensure environmental values are protected. Permit requirements are provided in Annex 2.

DOE has conducted an inspection of the ARD discharge at the site and has advised Redfern, through the issuance of formal Warning letters, that the discharge is in likely contravention of the federal *Fisheries Act*. Redfern has been asked to prepare a mitigation strategy to resolve the problem. If the problem is not resolved in a timely manner, DOE will consider further enforcement action in accordance with its enforcement and compliance policy (see Annex 4).

Item 6. Canada and British Columbia agree that there must be bonding to cover site reclamation requirements.

Adequate bonding (see Annex 2, references 1, 2 and 3) will be a condition of the Permit issued under the *Mines Act*. The bond will cover all the reclamation and decommissioning costs including long term maintenance, monitoring, collection and treatment of acid mine drainage. Two policy documents are included in Annex 2 which outline BC-MEM's position on mine reclamation security.

Issue 1(c) – Migratory Birds

US Proposed Remedy 1(c) – Conduct seasonal avian surveys determining species, habitat use and abundance, in area impacted by proposed development. Mitigate for any loss in habitat of migratory birds.

BC-MEM and BC Ministry of Forests (BC-MOF) will specifically address the issue of migratory bird habitat assessment, conservation and mitigation in the mine and road reclamation permits, respectively. Also refer to Issue 1(b) Item 5 and Item 6.

CWS agrees with the remedy and also agrees that Redfern should mitigate for any loss in habitat of migratory birds. CWS will review Redfern's mine and road permit applications, upon request by BC-MEM and BC-MOF to ensure that Redfern is committed to undertaking all monitoring requirements, and any necessary mitigation measures for the protection of migratory

birds and their habitats prior to the granting of the permits. CWS will provide input to the reclamation permitting process for decommissioning the minesite upon request by BC-MEM.

2. Water Quality

Issue 2(a) – Development of design specifications covering mixing zones

US Proposed Remedy – Fully develop design specifications that affect the mixing zone so that it encompasses the minimum practicable area of stream and ensure the specifications meet Alaska's requirements before a decision to proceed with development of the mine.

BC-MELP has reviewed the Alaska Mixing Zone Regulation (MZR) and agrees with the proposed remedy as it relates to the decision on a *Waste Management Act* (WMA) permit.

Canada and BC-MELP will continue working with Alaskan counterparts to require a minimum mixing zone matching Alaskan requirements and no new discharge will take place prior to issuance of the WMA permit. Canada reviews WMA permit applications for compliance with the Canada *Fisheries Act*. Canada requires no acute toxicity at the end of the pipe and has a compliance evaluation and enforcement program to complement the provincial permit compliance and enforcement procedures. A minimum mixing zone will be a requirement of all agencies.

Issue 2(b) –Chronic Mine effluent toxicity

US Proposed Remedy – **(1)** Conduct a series of chronic toxicity bioassays to determine potential effects of mine and tailing impoundment water to both fish and aquatic invertebrates at most sensitive life history phases. **(2)** Complete these bioassays before mine development is approved, so that any problems can be addressed through the approved design of water treatment facilities plans. **(3)** Compare Canada/BC water quality criteria with AK/US water quality criteria to determine if they will meet AK/US standards.

Canada and BC-MELP agrees with the 3 items identified in the remedy as it relates to the issuance of the WMA permit and the approach to be undertaken is summarized below.

Items 1 and 2- BC-MELP requires chronic toxicity testing prior to authorizing mining discharges, and agrees with the proposed remedy. A chronic and acute toxicity testing program will be part of the pre-development WMA permitting process and will account for the sensitive life histories of fish and aquatic invertebrates which exist within the proposed mixing zone(s). The program will be implemented so that the results will be incorporated in the final design of water treatment facilities, prior to the issuance of final effluent permit authorization under the WMA.

Chronic toxicity testing along with monitoring of receiving environment aquatic life, water quality and sediment quality will be a part an environmental effects monitoring program as part of WMA permitting. It will encompass construction, operational and post-closure periods of the project and will include assessment of both road and minesite impacts to aquatic resources. These assessments will be used to refine the management of the project under WMA permit.

Item 3 - BC-MELP has reviewed the water quality criteria (for the protection of aquatic life) of each of the four jurisdictions for the metals which are of concern for this proposed project. In all but one case the BC/Canada criteria meet or exceed those of the US and Alaska. In the case of lead, the US chronic criterion for protection of aquatic life is the most stringent by a factor of six. BC-MELP will apply the most stringent water quality criteria for use in project permitting and mixing zone regulation, where appropriate.

It has been determined that for at least five metals (Al, Cd, Cu, Pb and Zn), ambient concentrations exceed applicable criteria, and that site specific water quality criteria (as defined in the Alaska Mixing Zone Regulation) or water quality objectives (as defined under BC-MELP policy) will be required. Methods to be used in setting these site specific criteria or objectives will be comparable to those used in Alaska and the US. This will be ensured through the development of a terms of reference to be reviewed by the Alaska DEC and US EPA.

Issue 2(c) – Turbidity and Sedimentation

US Proposed Remedy – (1) Conduct adequate baseline studies to determine pre-development stream bottom structure, water quality and discharge conditions through all seasons. Reliably project worst case conditions in order to assess potential effects to fisheries. **(2)** Require emergency settling ponds for any accidental water releases that exceed permitted turbidity standards from initiation of construction due to legacy of old mine.

BC-MELP agrees with the 2 items identified in the remedy and the approach to be undertaken is summarized below.

Item 1 - BC-MELP agrees that additional baseline studies of the Tulsequah River must occur to adequately characterize stream morphology and water quality, and to project hydrologic conditions during proposed discharges. Terms of reference for these additional baseline studies will be developed in consultation with Alaska DEC and US EPA prior to the 1999 field season. Results of these and previous baseline studies will be incorporated in a risk assessment based on terms of reference previously developed for the Greens Creek project by the Alaska DEC. This risk assessment will project worst case conditions in order to assess potential effects to fisheries.

A reasonably expected worst case scenario (see W. Jackson/T. Eaton letter Nov.27/98, Annex 1) would be a very large very low probability meteorological flood that would impinge against the armoured dike of the tailing facility. This could be expected to cause some damage above the level of armouring. However a release of tailing would not be expected. During operation of the project additional site specific hydrologic data will be collected. This standard 'observational approach' will ensure the adoption of a conservative design to ensure the long term security of

the tailing facility prior to the end of mine operation. In the interim, the 1:200 year flood design criteria for the mine operation period is considered to provide adequate protection.

Item 2 - BC-MELP, in consultation with Canada and U.S. agencies, will set permitted discharge concentration limits for suspended sediments (non-filterable residue and/or turbidity) which will apply to runoff during the construction period as well as to discharges of mining related wastewater. BC-MELP will require the installation and use of settling ponds to ensure that waters in excess of permitted suspended sediment concentrations are treated to a satisfactory degree prior to release.

Issue 2(d) – There is no assurance that the Canadian government will address Alaska's concerns in permits, including specific requirements.

US Proposed Remedy – (1) Identify the specific numerical water quality criteria, effluent limits, monitoring and other requirements which will be incorporated into the permit, such as BMP plans for construction, operation and maintenance of the mine shafts, facilities and roads. **(2)** Reference the specific Canadian policies and procedures in place that assure compliance with permit conditions, i.e. compliance inspections, enforcement of permit conditions, reporting requirements, corrective actions, sanctions, and penalties. **(3)** Define a process allowing Alaska to assure that appropriate requirements are included into the permit, including the development and implementation of a closure plan with contingencies for temporary or early closure.

Canada and British Columbia agree with the 3 items identified in the remedy and the approach to be undertaken is summarized below.

Item 1 - To resolve matters of difference BC-MELP, BC-MEM, EC and DFO will refer all permit applications to Alaska/US agencies for full participation in setting the above noted standards. All concerns will be considered and draft permits containing all limits and requirements will be distributed for review and comment prior to authorization. In addition to BC-MELP's WMA permit dealing with mine discharges, DFO's *Fisheries Act* authorization will contain requirements pertinent to sediment control measures for the access road. A Fish and Fish Habitat Mitigation and Compensation Plan to be developed in support of the *Fisheries Act* authorization will require development of factors listed in Appendix 6 of Appendix 11 of the Tulsequah Project Committee Recommendations Report to BC Ministers, including: independent environmental supervision (Appendix 1 of Appendix 11) with trigger criteria for temporary work stoppages; Road Drainage Management Plan; vehicle servicing restrictions near watercourses; fish passage provisions; fish salvage provisions; application of timing windows for instream work; full bench road design; restrictions on bridge preservatives; and road area revegetation requirements among others.

Item 2 - Annex 4 and 5 to this document respectively provide information regarding Environment Canada, Fisheries and Oceans Canada and British Columbia compliance and enforcement legislation, policies, plans and procedures.

More information on Environment Canada's enforcement programs can be found on the following websites:

www.ec.gc.ca/enforce/prosec/ , and

www.pyr.ec.gc.ca/ep/programs/eppy/enforce/index.html

More information on the British Columbia Ministry of Environment, Lands and Parks compliance and enforcement programs and policies can be found on the following website:

www.env.gov.bc.ca/epd/cpr/admin/cpr.html

Item 3 - Please see Issue 1(b), Item 4, Issue 2(a) and Issue 2(d), Item 1.

3. Fisheries

Issue 3(a) – Toxicity of Mixing Zone to Aquatic Biota

US Proposed Remedy – (1) Determine mixing zone toxicity to aquatic biota at all life history phases and **(2)** develop mitigation plans to fully replace loss of aquatic biota important to sustaining anadromous fish populations.

Canada and British Columbia agree with the 2 items identified in the remedy.

Item 1 - See response to Issue 2(b) Item 1.

Item 2 Canada requires that end of pipe discharge must be shown to be non-acutely toxic. With further refinements in discharge management resulting from the aquatic effects monitoring program as outlined in Item 1, any chronic effects to aquatic resources may be further mitigated. Canada takes a position that source control is the only acceptable approach to pollution, and as such, does not support any regulatory regime that would adversely affect ecological functions to the point that replacement of aquatic biota was required.

On an overall basis, it is expected that the nutrient loadings from treated sewage discharges and blasting residues will enhance productivity in this setting. Experience has shown that these discharges can be treated and managed to avoid any negative impacts in a nutrient deficient system such as the Tulsequah River.

Issue 3(b) – In-stream fish mortality

US Proposed Remedy –(1) Determine fish movement and spawning in effluent receiving waters and downstream flow regimes. **(2)** Avoid risk to anadromous fish populations.

Canada and British Columbia agree with the 2 items identified in the remedy.

Item 1 - BC-MELP will incorporate this issue into the terms of reference for additional baseline studies. US EPA and Alaska DEC are asked to participate in the development of the terms of reference and review the results of these baseline studies in the context of WMA permitting.

Item 2 - BC-MELP and DFO agree that this issue should be the focus of project planning and permitting/authorization for the road and mine. For this issue to be dealt with sufficiently, it requires both pre-development planning and ongoing environmental effects monitoring for the life of the project and post-closure period.

DFO's *Fisheries Act* authorization will legally append a Fisn and Fish Habitat Mitigation and Compensation Plan comprised of 14 sub-plans designed to avoid risk to anadromous and resident fish populations. As outlined in Appendix 6 of Appendix 11 of the Tulsequah Project Committee Recommendations Report and BC Ministers, this Fish and Fish Habitat Mitigation and Compensation Plan is yet conceptual and to be finalized prior to issuance of a *Fisheries Act* authorization. U.S. Agencies will be invited to participate in the development of the plan, as indicated earlier. Sub-plans will include:

- An independent Environmental Supervision Program (Appendix 1 of Appendix 11of the Tulsequah Project Committee Recommendations Report) with trigger criteria for temporary work stoppages;
- Road Drainage Management Plan diverting surface water to vegetation or settling ponds;
- Aquatic Effects Monitoring, as discussed above;
- Sediment Control measures;
- Vehicle Servicing restrictions near watercourses;
- Fish Passage provisions at stream crossings – use of clear span bridges or open-bottom culverts over important fish habitat;
- Fish Salvage provisions;
- Application of Timing Windows for instream work;
- Full bench road design in critical areas;
- Restrictions on Bridge Preservatives;
- Revegetation of cuts/fills/sideslopes as required;
- Instream Habitat Creation proposed by the proponent at road crossings of fish streams;
- Access Restrictions;
- Follow-Up Monitoring;
- Compensation measures for Sloko River bridge, and causeways in Tulsequah River.

United States Concerns – Long Term Development of the Taku River Watershed

US Proposed Remedy - (1) Undertake an assessment of potential cumulative environmental impacts that addresses all transboundary impacts to the United States prior to a decision approving road through a vast roadless area. **(2)** It should include a full assessment of wildlife

and potential impacts to fish and wildlife habitat along any alternate transport routes and approve a route and design that protect fish and wildlife.

Canada-British Columbia are confident that the review to date and the information provided at the November 16/17 meeting have addressed the items raised in the remedy. On the question of long-term watershed management and planning US agencies are invited to participate in the British Columbia land use planning process for this area.

Item 1 - A comprehensive assessment of the potential for cumulative effects was undertaken as part of the overall review of the Tulsequah project. The results of both the broader assessment (looking into the future), and the potential for cumulative water quality effects arising from the development of the Tulsequah project and the historic and current water quality from the Tulsequah, Big Bull and Polaris Taku mine sites, were presented in the Tulsequah Project Committee Recommendations report.

There are no identified forest resource values, mine projects other than the potential for the Polaris Taku re-opening, access road requirements for other mineral claims in the Taku/Tulsequah watershed, or other developments expected to be put forward prior to the completion of a land use plan for the area, which is scheduled to begin in about five years.

In addition to the cumulative effects assessment, a number of access management strategies are to be put in place as the project development proceeds to ensure that the access does not contribute to a cumulative effect on the resource values of the Taku and Tulsequah River watersheds. These include:

- The Tulsequah access road being approved under the British Columbia *Mining Right-of-Way Act*, that authorizes Redfern to control public access on its private industrial road;

- Terms and conditions under the *Mining Right-of Way Act* approval for the road that holds Redfern responsible for ensuring public access control in accordance with the access management plan put forth by Redfern and agreed to by project committee members;

- A Redfern-sponsored and funded public access management plan that consists of a 24hr-7 day per week controlled gate to ensure access control;

- A Redfern corporate policy prohibiting company employees and contractors from carrying firearms, hunting or fishing while employed by Redfern anywhere within the public access controlled area of the Taku and Tulsequah River watersheds;

- A British Columbia Ministry of Environment, Lands and Parks ability to develop and enforce restrictive harvest regulations as a complement to access management strategies, if required;

- Department of Fisheries and Oceans monitoring and re-allocation of the Canadian allowable commercial fish harvest, if British Columbia First Nation fishers choose to change fishing locations;

- The British Columbia Ministry of Forests commitment to not allocate any timber tenures or harvest approvals in the Taku River watershed not currently accessed, until such time as a future land use plan has been completed. It should be noted here that the Ministry of Forests have conducted a reconnaissance level assessment of the Taku River area and has determined that the potential for merchantable timber near the proposed Tulsequah mine road is minimal; and

- The Tulsequah Project Committee recommended that the Ministry of Forests consider the establishment of a Resource Management Zone along the access road until such time as a land use plan could be completed, if it was determined to be necessary. This plan would prevent any timber harvesting except that required for the access road development.

In summary the overall review to date has concluded **that the development of the Tulsequah mine will improve existing water quality in the lower Tulsequah and Taku Rivers, by eliminating the current ARD drainage from the old mine workings**. As well, there are no projects other than the potential re-opening of the Polaris Taku mine (no development plans to date) that could be identified in the cumulative effects assessment that may be proposed prior to the development of a future land use plan, that would create a potential for transboundary or cumulative effects.

Item 2 - A full assessment of transportation options was undertaken as part of the overall review of the Tulsequah project. The barge option was legally removed from review in June 1997, and Redfern conducted a reconnaissance level assessment of all-Canadian private industrial access road alternatives. The access route chosen avoided lands set aside under the Province's Protected Area Strategy. Plans to properly mitigate for any potential for fish and wildlife habitat and population disruption have been determined to be adequate to ensure the potential for adverse effects will not be significant in a British Columbia or transboundary context.

Canada-British Columbia remedy for addressing long term watershed planning and cumulative effects.

British Columbia reiterates its invitation to Alaska to develop a protocol for participating in British Columbia's well-founded land use planning process for the Taku River watershed, set to begin in about five years. This comprehensive land use planning process provides for:

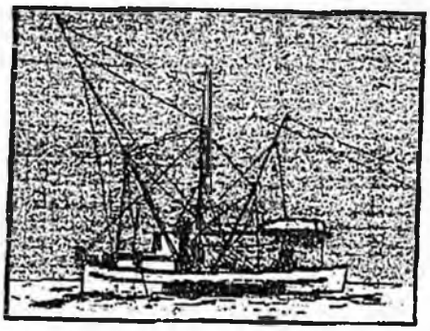
- multiple stakeholder participation;
- consensus based recommendations to the British Columbia Cabinet on a full range of potential land uses; and
- established zonation, objectives and strategies to guide the implementation of land use, once approved.

As indicated in the May 21, 1998 Binder response, the legislative and policy environment for British Columbia land use planning includes the participation of neighbouring jurisdictions. A precedent for Alaska participation in the Taku land use planning process has been established by the protocol for participation of the States of Montana and Idaho in the development of the Kootenay Boundary Land Use Plan in south-eastern British Columbia.

When a land use plan for the Taku/Tulsequah area is to be undertaken British Columbia is willing to develop a similar protocol for Alaska participation in the planning that:

- meets Alaska's requirements for information and involvement in planning that takes place in adjacent areas in British Columbia;
- fosters communication and co-operation between governments; and
- recognizes respective jurisdictional responsibilities.

December 12, 1998



Alaska
Trollers
Association

130 Seward St., No. 505
Juneau, Alaska 99801
(907) 586-9400
(907) 586-4473 Fax

March 25, 1999

Senator Rick Halford, Chairman
Senate Resources Committee
AK State Legislature
Juneau, AK 99811

Dear Senator Halford:

I am writing to express the Alaska Trollers Association (ATA) concern about language in SCR 7, which asks Governor Knowles to withdraw his request for an evaluation of the Tulsequah Chief Mine project by the International Joint Commission of the Boundary Waters Treaty.

While our association is not generally opposed to mining, ATA is concerned about the implications for water quality and fish habitat posed by large-scale development on any body of water that houses anadromous fish. Considering the state's minimal involvement to date with this project; the fact that Alaska will have little input into the near and long-term policy decisions surrounding this mine; and, given the importance of the Taku River to Alaska residents, a third party review does not seem unreasonable.

The Taku River is one of the largest salmon-producing rivers in the state. Sport, commercial and subsistence fishermen from both sides of the border derive significant benefit from fish originating in this river. In one district alone, Taku River salmon have directly contributed up to $5.3 million dollars a year to the commercial harvest. This doesn't account for processing and support industry revenue. Canada has established an in-river commercial fishery, which is of great importance to its residents. And, the Canada's Tlingit First Nation is highly reliant on this area for fishing and hunting purposes.

Under the Pacific Salmon Treaty, Alaska has been party to a successful and cooperative transboundary river agreement on the Taku and Stikine Rivers. In the name of conservation and fair sharing, Alaska fishermen have foregone harvest of thousands of Taku River fish since the mid-1970s. The end result has been a rejuvenation of the resource and enhanced goodwill between our nations.

It is not clear that Canada's environmental laws and programs for project review are as thorough as Alaska's. The status of its fisheries resource on both coasts does little to allay our fears. It is not clear whose science is being utilized in Canada's review process. Given some of the concerns raised about the validity of Canadian data, in this and other forums, by Alaska and Canada's own citizen's and scientific community, it seems even more prudent to consult a third party. After all, the Tulsequah Chief Mine could affect more than just Canada. Degradation of this watershed could mean the loss of millions of dollars to Alaska's fishing industry and the state. If there is another mechanism for working with Canada on this issue without an IJC review, which is supported by ADFG, it may be easier for the fishing industry to trust the end result.

SCR 7 suggests that Alaska cooperate with the Canadian government toward development of this mine. While it makes sense that Alaska would want input into any project that affects a shared waterway, the intent of this provision is unclear.

Thanks in advance for your consideration of ATA's concerns.

Sincerely,

Dale A. Kelley

Dale A. Kelley
Executive Director

By Charles Enman The Ottowa Citizen Friday 4 July 1997

36 scientists: End the Suppression
Manifesto calls for the restoration of integrity within DFO

Thirty-six prominent scientists from across the country have called for an end to suppression and control of government-supported fisheries scientists. They speak of a "long-overdue debate on how to ensure the integrity of government-administered science."

This issue, they say, is important to all Canadians, and not just those in government departments. They say concerns about bureaucratic interference in scientific work are widely held in the academic community and must be discussed "without filtration by senior bureaucrats with a vested interest in suppressing criticism."

These scientists are joint signatories of a letter sent to Dr. Arthur Carty, President of the National Research Council. The council publishes the Canadian Journal of Fisheries and Aquatic Sciences, which two weeks ago published an article and an editorial that were highly critical of the Department of Fisheries and Oceans' (DFO's) use of science in support of bureaucratic decisions.

The journal and the publisher soon came under the guns of a top DFO bureaucrat. "As scientists reliant on the objectivity and fairness of publications such as the Canadian Journal of Fisheries and Aquatic Sciences, we wish to take strong exception to the views expressed by W.A. Rowat, Canadian Deputy Minister of Fisheries and Oceans, in a letter sent to you and posted on the DFO web page," the scientists' letter says.

The scientists accuse Mr. Rowat of misrepresenting the nature of both the article and the editorial.

The article, entitled "Is Scientific Inquiry Incompatible with Government Information Control?," was authored by three biologists – Jeffrey Hutchings of Dalhousie University, Carl Walters of the University of British Columbia, and Richard Haedrich of Memorial University in St. John's, Nfld.

The editorial, by retiring journal editor David Cook, summarized the article by saying: "They demonstrate a tendency for DFO to suppress scientific facts and opinions that do not conform either to current departmental orthodoxy or to political expediency."

Mr. Cook goes further: "This disturbing pattern lends great strength to their argument that a politically independent organization (reminiscent of the late, lamented Fisheries Research Board of Canada) is required to provide the difficult, vital link between scientific research and resource management."

That, of course, would tear apart the DFO, which since its creation in 1979 has had a scientific branch under the wing of departmental bureaucrats.

In recent days, the Citizen has published comments from a number of scientists who have been critical of DFO's treatment of science.

David Schindler, a University of Alberta biologist, worked for the DFO for 22 years until 1989. He said he was reprimanded several times for publicly criticizing policy decisions.

"There has to be something to buffer the politicians interested in being elected and the bureaucrats interested in being promoted from the scientists who are interested in helping the environment and know what they're doing," he said.

Andrew Read, an expatriate Canadian who works at Duke University in North Carolina, said: "I have colleagues in DFO who feel they can't speak out openly. But for good science, they have to be able to speak out without worrying about political pressures being brought to bear on them."

David Lavigne of the International Marine Mammal Association in Guelph was reported saying: "The general principle that the DFO abuses science is not new. The department does not accurately convey accepted scientific views to the people of Canada, a problem that has been going on for a long time."

Ransom Myers, who holds the Killam Chair of Ocean Studies at Dalhousie University, accused the DFO of suppressing scientific papers and scientific discussion. He said that bureaucrats have been responsible for disastrous decisions that have cost tens of thousands of jobs and billions of dollars.

Two DFO bureaucrats have since threatened Mr. Myers with a lawsuit if he does not issue an apology for remarks he made in a June 27 article in the Citizen. The Citizen itself has been threatened with a lawsuit if no retraction and apology for the article are published.

Messrs. Schindler, Read, Lavigne and Myers are among the 36 signatories of the letter sent to Mr. Carty of the National Research Council.

The article and editorial in the Canadian Journal of Fisheries and Aquatic Sciences were unexceptionable parts of a scientific journal addressed to fisheries issues, the letter of the 36 scientists said.

"The Perspectives section of the journal, in which the piece by Hutchings, et al appeared, is clearly intended as a forum for opinion and has a history of lively debate," the scientists' letter says.

As for the editorial, "the opinions of the editor are his own business, and any journal requiring editorial clearance from government bureaucrats would not be worth publishing in."

The letter of DFO Deputy Minister W.A. Rowat to Dr. Carty complaining about the article and editorial was withering in tone and assertion.

"I am appalled at the unprofessional and unsubstantiated nature of their attacks on DFO, its scientists, and its managers," Mr. Rowat wrote. "These authors have maligned the reputations of hundreds of dedicated, hard-working scientists and managers across the country."

He continued: "These are not scientific papers. They are tabloid journalism of the sort one would not expect to encounter in a scientific journal. They are based on innuendo and misrepresentation which have no place in a scientific journal."

It was in response to these strongly worded sentiments from the department's deputy minister that the 36 scientists chose to append their signatures to the letter to Dr. Carty.

"This letter and this collection of signatures is very much a first when it comes to the question of keeping science at arm's length from management," said David Lavigne, executive director of the International Marine Mammal Association in Guelph, where staff penned the actual text of the letter.

"Those who have signed include some very prominent scientists indeed," Mr. Lavigne said. And more signatures were coming in by the hour, he added.

The primary recipient of the letter will of course be Dr. Carty.

But the letter, which in its own words asks for a debate on "the integrity of government-administered science," will also be sent to the very pinnacle of government - Prime Minister Jean Chretien himself.

Other copies will be sent to Fisheries Minister David Anderson, to Ambassador for the Environment John Fraser, and to the two incoming journal editors, John Roth and Moira Ferguson.

In the article by Jeffrey Hutchings and his colleagues, it is alleged that interference in DFO science by bureaucrats and members of government has been costly to the fishing industry.

Such interference "compromises the DFO's efforts to sustain fish stocks and, thereby, the socioeconomic well-being of fishing people and fishing communities."

Bureaucrats, the paper said, do not deal well with the uncertainties and shadings in scientific work. This tendency may partly have accounted for disastrous decisions affecting the Atlantic cod fishery. The cod population may have been routinely overestimated, the paper says.

But then scientific work on the problems afflicting the cod fishery was compromised by a variety of bureaucratic intrusions, which included government denunciation of independent work, interference in scientific conclusions, and disciplining scientists who spoke publicly of the results of peer-reviewed research.

Many of these problems would be solved if fisheries science operated freely of bureaucracy and government, the paper concluded.

"The formation of a politically independent organization of fisheries scientists, or some such reorganization of the link between scientific research and the management of natural resources, is a timely idea that merits immediate, serious, and open debate."

The Canadian Journal of Fisheries and Aquatic Sciences "had a moral obligation to the community" to publish the article, David Cook wrote in his editorial.

Dr. Cook had his own instances of bureaucratic interference to point out. In 1988, he wrote, the DFO attempted to alter a statement in a paper that had been accepted for publication. In 1994, someone from the DFO attempted to find out the name of one or more referees of a published paper whose conclusions the department didn't like.

The DFO asked to read an advance copy of the Hutchings article to prepare a response for publication in the same issue of the journal. However, Mr. Hutchings preferred that any response to the article appear in a following issue, and no advance copy was given.

In a letter published on the DFO website, the department's assistant deputy minister, Scott Parsons, decried this decision.

"Why did these authors choose to deny the institution and individuals being attacked a timely and and fair opportunity to respond?" he asked in a letter published on the department's website.

"DFO's request was consistent with the Journal's common practice."

However, an editorial insert in the journal issue in which the Hutchings article appeared seems to confute Mr. Parson's statement.

"The authors were asked for their permission to provide advance copies of the Perspectives to DFO so that DFO could respond in the same issue. As is their right according to the editorial policy of the journal, the authors declined to do so. A response from the department on the scientific issues raised is anticipated in the June issue of the journal."

David Lavigne of the International Marine Mammal Association said that having the DFO's rejoinder published in a later issue of the journal was normal academic practice. "Usually, until a paper appears, it is essentially embargoed, unless the author chooses to circulate it," he said. "And if you found a point of disagreement after it appears, you would then submit your comments for publication in a subsequent issue."

FISCAL NOTE

STATE OF ALASKA
1999 LEGISLATIVE SESSION

BILL NO. SCR 7

Revision Date 3/18/99
Title Tulsequah Chief Mine
Sponsor Pearce
Requester

Dept. Affected
BRU
Component
Component Serial No.

Expenditures/Revenues (Thousands of Dollars)

OPERATING EXPENDITURES	FY 00	FY 01	FY 02	FY 03	FY 04	FY 05
Personal Services						0.0
Travel						
Contractual						
Supplies						
Equipment						
Land & Structures						
Grants & Claims						
Miscellaneous						
TOTAL OPERATING	0.0	0.0	0.0	0.0	0.0	0.0
CAPITAL EXPENDITURES						
CHANGE IN REVENUES [ ]						

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF						
1005 GF/Program Receipts						
1037 GF/Mental Health						
1091 Designated Program Receipts						
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0

Estimate of any current year (FY99) cost: 0.0

POSITIONS

Full-time						
Part-time						
Temporary						

ANALYSIS: *(Attach a separate page if necessary)*

This resolution is anticipted to have no fiscal impact on state agencies.

Prepared by Senate Resources Committee
Division
Phone 465-4907
Date 3/23/99

Approved by Senator Rick Halford, Chairman
Agency
Date

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SENATE CONCURRENT RESOLUTION NO. 7

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-FIRST LEGISLATURE - FIRST SESSION

BY SENATORS PEARCE, Phillips, Taylor

Introduced: 3/18/99
Referred: Resources

A RESOLUTION

Supporting the responsible development of the Tulsequah Chief Mine through the cooperative effort of Alaska and British Columbia and urging Governor Knowles to withdraw his request for a referral of the Tulsequah Chief Mine to the International Joint Commission under the Boundary Waters Treaty.

BE IT RESOLVED BY THE LEGISLATURE OF THE STATE OF ALASKA:

WHEREAS the governments of Alaska and British Columbia both recognize the importance of environmentally responsible development in meeting the needs of their respective populations; and

WHEREAS the Tulsequah Chief Mine project has been subjected to over three years of thorough environmental review including completion of the cooperative environmental assessment review process of British Columbia and Canada; and

WHEREAS representatives of British Columbian and Canadian federal agencies, as well as agencies from Alaska and the United States, have participated with the project committee; and

WHEREAS, subsequent to the issuance of the Environmental Assessment Certificate in March of 1998, these governmental agencies engaged in a series of cooperative meetings,

discussions, and exchanges of technical details regarding the project; and

WHEREAS these constructive and cooperative interactions have allowed officials to review in detail how British Columbia and Canada will respond to the specific technical concerns raised by officials of Alaska and the United States, and, in most cases, the planned responses are along the lines proposed by these same officials; and

WHEREAS these exchanges have allowed the parties to explore and understand the differences between their respective approaches to accountable environmental assessment and have allowed the Canadian participants to demonstrate that the environmental standards applied to the project are similar in measure to those applied to similar projects in Alaska; and

WHEREAS the government of British Columbia has provided clear assurances that the mine will not be developed if it fails to meet these standards; and

WHEREAS the government of British Columbia has offered to have officials of Alaska and the United States continue to be involved in the review of the project by participating in specific permitting activities as further detailed permitting takes place; and

WHEREAS the government of British Columbia, as well as the Alaska agencies, have a great deal of confidence in the environmental assessment process and recognize that the technically detailed permits will be thoroughly reviewed as the project proceeds; and

WHEREAS continued cooperative work within British Columbia's established regulatory process will help ensure that the development of the Tulsequah Chief Mine takes place in an environmentally responsible manner; and

WHEREAS the government of British Columbia has made assurances that the development of the Tulsequah Chief Mine will result in no transboundary impacts;

BE IT RESOLVED that the Alaska State Legislature recommends continuing the cooperative effort between the two governments toward the environmentally responsible development of the Tulsequah Chief Mine; and be it

FURTHER RESOLVED that the Alaska State Legislature respectfully urges Governor Knowles to withdraw the request for a referral of the Tulsequah Chief Mine project to the International Joint Commission under the Boundary Waters Treaty.

COPIES of this resolution shall be sent to the Honorable Tony Knowles, Governor of Alaska; to the Honorable Lloyd Axworthy, Minister of Foreign Affairs of the Government of Canada; to the Honorable Dan Miller, Minister of Energy and Mines of the Government

of British Columbia; to the Honorable Madeleine K. Albright, United States Secretary of State; and to the Honorable Ted Stevens and the Honorable Frank Murkowski, U.S. Senators, and the Honorable Don Young, U.S. Representative, members of the Alaska delegation in Congress.

Alaska State Legislature

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Fax (907) 269-0204

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Drue Pearce
President of the Senate

Sponsor Statement

Senate Concurrent Resolution 7 Tulsequah Chief Mine

SCR 7 supports the environmentally responsible development of the Tulsequah Chief Mine through the Canadian permitting process. Furthermore, the resolution urges Governor Knowles to withdraw his request for referral of the project to the International Joint Commission under the Boundary Waters Treaty.

The Tulsequah River Basin has been an active mining area since the 1920's. Likewise, the Tulsequah River and the downstream environs of the Taku River have been producing healthy runs of salmon throughout this same period of time.

The owners of the Tulsequah Chief Mine have gone through extensive environmental research and consultation for over 3½ years, including numerous public meetings dealing with potential local and transboundary impacts. This process has involved the ministries of Canada and British Columbia who have graciously included the permitting agencies of Alaska and the United States.

The permitting process used for Tulsequah Chief is a new process that has been developed over several years. This process, although different than Alaska's, is considered by the Canadian government to be the best, most effective, and most stringent ever used in Canada. The process has been internationally touted as how environmental permitting should be handled and is considered to be at least as thorough as the Alaskan/U.S. permitting system.

The British Columbia government found that after over 3 ½ years of public comment and review by numerous permitting agencies, there were no overwhelming environmental concerns that could not be adequately addressed in the subsequent individual permitting processes. On March 19th, 1998, following comment by a 13 member international committee, the B.C government issued the overall environmental assessment certificate.

SCR 7 supports the continued bilateral cooperative relationship with British Columbia in working towards our common goal of environmentally responsible resource development while recognizing Canada's jurisdictional autonomy.

Senator_Drue_Pearce@legis.state.ak.us

TONY KNOWLES
GOVERNOR

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STATE OF ALASKA
OFFICE OF THE GOVERNOR
JUNEAU

January 6, 1999

Mr. Strobe Talbott
Deputy Secretary of State
U.S. Department of State
2201 C Street, NW, Room 7220
Washington, DC 20520-7512

Dear Mr. Talbott:

Thank you for the Department of State's December 4 letter to Minister Higginbotham, Embassy of Canada, reiterating the United States' concern that no prejudicial action be taken regarding development of the Tulsequah Chief mine while our bilateral discussions continue. In addition, I am writing to let you know that the State of Alaska continues to have strong concerns about the proposed Tulsequah Chief mining project in northwest British Columbia. I seek your assistance in referring this proposed project to the International Joint Commission (IJC) for further review.

The Tulsequah Chief mine is a proposed underground base/precious metals mine located 40 miles from Juneau, Alaska in the Tulsequah River valley, in northwest British Columbia, Canada. Redfern Resources Ltd., the project proponent, seeks to construct an 80-mile road through the Taku River watershed to reopen a previously closed underground mine. The project site is located about 18 miles upstream from the B.C./Alaska border. The proposed mine is located on the Tulsequah River, a tributary to the Taku River, which is a transboundary river under the International Boundary Waters Treaty Act.

The Taku River, and its near pristine watershed, is a prolific producer of all five species of Pacific salmon. These fisheries are fundamental to Southeast Alaska's subsistence, sport, and commercial fishers, and the communities in which they live. The Taku River is also a transboundary river under the Pacific Salmon Treaty with Canada, and fishers from both sides of the border have benefited from joint salmon enhancement projects. By putting salmon habitat at risk, the Tulsequah mine project also puts at risk this successful program to conserve and sustain salmon. As you know, the allocation of this important

salmon fishery has already been the source of difficulties between Canada and the United States.

Alaska has reviewed all key Tulsequah Chief mine project documents and has participated in numerous project meetings over the past four years. We have, on numerous occasions, made our concerns clear; but they have largely been ignored. The most recent project meeting, held in Vancouver in mid-November, ended with an apparent acknowledgement on the part of Canada that our outstanding concerns were legitimate and deserving of attention through appropriate scientific and land use studies. In spite of this acknowledgement, outstanding concerns have not been resolved.

The state is now in an untenable position. Canada has acknowledged the need to gather basic information on key aspects of mine siting, development, and operation, yet refuses to acknowledge this new information may indeed point to potential critical flaws. Our views appear irreconcilable; and, as such, we believe the matter is suitable for referral to the IJC, as we have maintained since my letter to Secretary Albright last March.

In addition, it has come to our attention that while we participate in bilateral negotiations with Canada, the mine/road permitting process continues to move forward. British Columbia appears poised and ready to issue a special use permit that would allow road construction. We find these permitting actions distressing. Most recently, the preparations for building a winter road, which crosses our joint watershed, are proceeding in spite of the December 4 letter from the State Department to the Canadian Embassy clearly stating the U.S. position that no action should take place on the ground until there is a mutually agreeable conclusion to ongoing discussions. To our knowledge, this is the first time in IJC history that permitting for a project has continued while the project is under review for an IJC referral.

Not only are the Tulsequah Chief mine issues fully ripe for IJC review and recommendation, we are at this impasse just as the IJC is expanding its role to include major watershed review. Specifically, the U.S. and Canadian governments have recommended the IJC look at the possibility of forming binational boards for several major watersheds along the joint border, including the Taku River. We believe IJC involvement is imperative *before* the Tulsequah Chief project irrevocably changes the watershed. These irrevocable acts would offend and preclude the very purposes the two nations are trying to achieve through a watershed approach.

I would be happy to provide you further detail to ensure that Alaska's level of interest and concern is clear. I believe it is time for the Department of State to firmly urge Canada to work with the United States in a joint IJC referral of the Tulsequah Chief mine development. I look forward to hearing from you about this important matter.

Sincerely,

Tony Knowles
Governor

cc: Victor Comras, Director, Office of Canadian Affairs
Brooks Yeager, Deputy Secretary, Department of the Interior
Willie Taylor, Director, Office of Environmental Policy and Compliance Department of the Interior
Mary Beth West, Director, Office of Oceans and Environment Department of State
Pete Christich, Director, Office of International Affairs Environmental Protection Agency

ENVIRONMENTAL ASSESSMENT OFFICE

TULSEQUAH CHIEF PROJECT

TECHNICAL ISSUES RAISED BY US AGENCIES

BACKGROUND - OCTOBER 1998

In the context of the government-to-government discussions planned for Vancouver on November 16th and 17th, this paper provides more information and explanation of how issues raised by U.S. review agencies have been resolved or are known to be resolvable during the next stage of federal and provincial statutory permit and approval application review and decision. Also, at the Vancouver meeting Canada and B.C. request clarification and further explanation by key U.S. review agencies regarding issues raised, in order to provide a focused agenda for proposed further technical discussions.

This response document has been compiled by the British Columbia Environmental Assessment Office, with the input and assistance of:

British Columbia Ministry of Environment, Lands and Parks (BC-MELP);
British Columbia Ministry of Energy and Mines (BC-MEM);
Department of Fisheries and Oceans (DFO); and
Environment Canada (EC).

It should be noted that in general terms the working relationships between British Columbia and Canadian federal agencies and their counterparts in the U.S. (both Alaska and U.S. federal) can be characterized by cooperation and professionalism. This has been the case for the overall EA reviews of the SNIP, Eskay, Sulphurets, Premier Silbak mines, as well as the Tulsequah project. In all project reviews and permitting, British Columbia and federal Canadian agencies have taken into consideration the potential for transboundary water quality and fisheries issues during permit application reviews, follow-up monitoring and compliance assessment. Continual efforts are made to ensure information exchange and opportunities to review and comment on applications and monitoring results, based on the interests identified by U.S. agencies. To date, this relationship has worked well, and issues such as those raised by the U.S. agencies in the Tulsequah review have been addressed within the process. As well, Canada and British Columbia have formally invited Alaska State and U.S. federal review agencies to fully participate in the review of major statutory permit, license and approval applications and authorizations, as the project development proceeds.

In each of the cases identified, significant project-specific continuing relationships have been maintained with U.S. agencies, during the statutory permitting stage and after the EA review has been completed. The Alaska Department of Fish and Game, Alaska Department of Environmental Conservation, U.S. National Marine Fisheries Service and Region 10 EPA have continued to be involved. BC-MELP staff has endeavoured to ensure that when downstream U.S. residents and/or agencies raised any concerns, BC-MELP staff have consistently taken the opportunity to work with U.S. counterparts to resolve all concerns and issues.

An example would be the concerns raised by the citizens of Hyder, Alaska in 1990 regarding rumours of a massive cyanide discharge from the Westmin Premier gold mine, 26-km

upstream on a tributary of the Salmon River which enters the Portland Canal at Hyder. In order to gain the confidence of the public regarding the regulation and monitoring of the mine, Alaskan and U.S. federal regulators met with the BC-MELP and EC counterparts. The regulators toured the minesite, reviewed the monitoring data, interviewed mine personnel and conducted a public meeting in Hyder to present findings and answer questions. The program was successful and all regulators were satisfied that there was no truth to the rumour, and that the pollution control works, regulations and monitoring of the mine were satisfactory.

As part of the Eskay Gold/Silver project EA review, on a tributary of the Unuk River, existing water quality monitoring data and information from the site on the river at the Canada-U.S. border were provided by the mine proponent in its EA report. There have been no issues raised regarding the potential for transboundary water quality or fisheries resources.

The SNIP gold mine located near the Lower Iskut River received an EA approval in 1990 and is currently in operation. An environmental effects monitoring program is in place and, to date, the results show that all aquatic resources in the Sky Creek and Monsoon tributaries upstream of the Iskut River are being fully protected.

There is an existing Canada-BC agreement that monitors and reports on water quality at Canada-U.S. border stations on a regular basis. There are a number of such stations located on rivers in northwestern British Columbia and there is a process for review and assessment of the results.

SUMMARY OF TECHNICAL RESPONSES

The following technical responses are in order of those issues raised in the August 28, 1998 letter from the U.S. State Department to the Canadian Embassy in Washington.

1. MINESITE DESIGN INCLUDING LONG-TERM SITE MAINTENANCE

The following further information and clarification from the U.S. EPA technical specialists has been requested by the geotechnical and mine inspectors of BC-MEM. With this additional information available at the Vancouver meeting, BC-MEM staff will be able to understand the perceived issues so that BC-MEM can explain how such issues are addressed in BC-MEM's permitting process.

- What are the U.S. methods used for determining flood and mass movement events?
- What U.S. criteria are used to determine that a proposed facility (e.g. earth dam impoundment) would be considered a permanent structure?
- Alaska DEC advised BC-MELP and BC-MEM of the U.S. methods[1] that would be used to determine the 200-year flood. Given the time period that data is available for the site, how would this approach differ from the approach used during the Tulsequah Chief project assessment?
- The Shazah Creek alluvial fan is post-glacial. What mine design parameters would be

[1] Stanley H. Jones and Charles B. Fahl, 1994. Magnitude and Frequency of Flor 's in Alaska and Conterminous Basins of Canada. U.S. Geological Survey Water Resources Investigations Report 93-4179

impacted by refining the age of the Shazah Creek alluvial fan?

- A suitably conservative flood and mass movement event will be used for design. What mine design parameters would be impacted by identifying all potential debris in Shazah valley?
- What US methods would be used to determine scour, and from what level of event?
- What forms of erosion protection are proposed as alternatives to a launching apron? Why are they to be preferred?
- Large equipment will remain on site after closure and the site will be accessible by air. What is the technical requirement for a feasibility study related to long term access?
- What forms of erosion protection are proposed as alternatives to the launching apron?
- What technical benefit would they provide to the launching apron?

2. LONGTERM CUMULATIVE ENVIRONMENTAL IMPACTS

British Columbia and Canada review agencies conducted a review of the potential for cumulative effects in the Tulsequah River watershed, and the processes currently in place to deal with such future activities. In the near term, the potential for re-opening the historic Polaris-Taku gold mine across the river from the Tulsequah Chief project was the only other mine project identified. All existing water quality data and information for this site was used in a semi-quantitative cumulative effects assessment, the results of which were provided as part of the overall Tulsequah project review.

Although additional mineral claims exist in the Tulsequah and Taku River watershed, there are no plans for exploration or potential development that could be found during the review of the Tulsequah project. As well, the British Columbia Ministry of Forests has indicated that no significant commercial forest values exist in the area of the Tulsequah and Taku valleys currently without access.

A land use planning process, to begin in the future (about 5 years) will include a further assessment of other resources values, land use potential in the area, and long-term land use designations. It is within this planning and land use decision-making process that future land uses and potential for effects and management strategies can be better defined.

The information and analysis provided in the Tulsequah project review, and further elaborated in the May 1998 response document, has fully considered the issues raised and the future processes have been fully described.

3. WATER QUALITY

The following brief synopsis of procedures related to regulation of discharges at mining operations pursuant to the British Columbia *Waste Management Act* (WMA), is provided to assist U.S. review agencies in understanding the rigorous project specific permit limits, monitoring and compliance assessment programs that will be in place as the Tulsequah project is developed and operated.

Permit Limits

Outlined in more detail below is a description of how BC-MELP sets effluent permit quality and quantity standards from receiving water criteria and objectives (sometimes called guidelines) and in consideration of provincial effluent objectives and the *Metal Mining Liquid Effluent Regulations* limits of the Canadian *Fisheries Act*. These permit standards are designed to be protective of the most sensitive receptor in the receiving environment and are necessarily conservative, usually more so in the early years of a mine operation.

Monitoring

Monitoring begins with the accumulation of a baseline characterization of all receiving waters for the project. For the Tulsequah Chief project this is described in the Project Report and through agreements reached during the project certification process, and will be ongoing until project construction begins.

When operations begin the WMA permit will specify a comprehensive monitoring program for the discharges and the receiving environment, including the Taku River at the US border. This will include chemical, physical and biological components. The receiving environment portion, referred to as environmental effects monitoring (EEM), will be ongoing during operation and closure and influence any decisions regarding the adequacy of the permit standards for quality, quantity and monitoring. The mine proponent is responsible for conducting or contracting the work. The accuracy of the monitoring is assured by:

BC-MELP Pollution Prevention Program staff undertaking audit sampling; and
the BC Environmental Data Quality Assurance Regulation which certifies and audits sampling, analyses and laboratories.

If requested, these data can be shared on a routine basis with U.S. agencies.

Compliance Assessment

In accordance with the BC WMA permit, monitoring data for the Tulsequah Chief mine will be reported on a weekly and/or monthly basis and reviewed for compliance. Any noncompliance automatically triggers an Enforcement Routing Sheet that outlines the non-compliance, and is circulated on a first priority basis for determination of the appropriate enforcement action according to an escalating response policy. This ensures any exceedence of a permit limit is brought to the attention of both regulators and the mine proponent, and a body of evidence is gathered in an orderly fashion for the courts if warranted.

In addition, a noncompliance list is published by BC-MELP on a semi-annual basis that lists all operations, which have had significant noncompliances for the reporting period.

Suggestions for Addressing Outstanding Concerns

Having reviewed the issues raised in the August 28, 1998 letter from the U.S. State Department, BC-MELP staff provides the following suggestions as to how technical reviewers can move towards resolution of the issues. These suggestions arise from previous discussions with Alaska DEC staff, and follow-up correspondence with them (May 8 and 19, 1998 letters

to Deena Henkins) regarding how BC-MELP's WMA permitting process, including ongoing baseline studies, are comparable to the Alaska Mixing Zone Regulation. Several aspects of the current regulatory system may alleviate concerns about the uncertainties related to the ultimate fate and impact of contaminants generated by the mine and contained in mining related discharges.

WMA permit(s) for the mine operation will set limits that minimize the total contaminant loading to the environment to acceptable levels. Permit conditions will include discharge concentration and volume limits for contaminants of concern, which will be based on provincial effluent objectives and federal standards. In addition, published water quality criteria and/or site specific objectives (as defined by the Alaska Mixing Zone Regulations) will be met at the mixing zone boundary. Permit conditions will also include spill cleanup and contingency planning, as well as contingencies (groundwater pumping and treatment) to eliminate the potential for impacts from tailings pond seepages and contingencies (built in additional impoundment capacity) for waste water handling and treatment system. Permitting will also include regular government inspection, auditing and enforcement of the mine's environmental performance throughout the life of the project and the post closure period. As well, the development and use of an environmental effects monitoring (EEM) program dealing with all contaminant loading sources associated with the project (road and minesite) which may enter aquatic environments will be implemented as required by the BC WMA permit. The EEM program will be used to fine tune discharge limits as required on an ongoing basis. Each of these permitting and monitoring components will be developed using the accumulated knowledge and experience of Canadian and British Columbia regulatory agencies, as well as the advice of U.S. Federal and Alaska State agencies.

In answer to specific technical concerns outlined in the letter, the following responses are provided.

Fate of contaminants in the aquatic environment:

Contaminants, which are discharged under BC WMA Permit, will by design be quickly diluted and dispersed in the mixing zone of the Tulsequah River. Even so, conditions in the mixing zone will be non-acutely toxic to fish. The design of the treatment and discharge system will be such that suspended particulate sources of contaminants are minimized so that secondary reservoirs of metals in the river which could become available to aquatic life do not occur. Further efforts are also underway to document where there may be sediment depositional zones in the discharge course so that they can be monitored for contaminant accumulation as part of the EEM program. The annual glacial outburst cycle in the Tulsequah River watershed will tend to overwhelm any impacts associated with the development of secondary reservoirs of metals in depositional sediments, if they occur. These seasonal events create major changes in channel morphology and are associated with a huge amount of bedload movement past the minesite and mixing zone.

Chronic toxicity:

It is the practice of the Pollution Prevention Program of BC-MELP to include chronic toxicity testing wherever possible in mining proposal evaluation. At the pre-development stage, BC-MELP has not had the opportunity to acquire representative samples of the range of discharges from the mine site to conduct a comprehensive suite of site specific chronic toxicity tests.

However, this will be required prior to discharges occurring, and as opportunities associated with milling or treatment plant tests arise. It will also occur as a main component of the ongoing EEM program that will be required under BC WMA permit. In addition to this safeguard, BC-MELP experience with chronic toxicity testing at the Eskay Creek mine project using the same wastewater treatment technology as proposed for Tulsequah Chief, indicates a satisfactory record.

Most recently chronic toxicity test results from the EEM program have been used to trigger toxicity identification evaluation (TIE) procedures aimed at eliminating a toxic component of the mill flotation process.

Discharge chemistry predictions:

Discharge chemistry prediction is an iterative process that began as part of the EA review, and will continue as required under the BC WMA permit. While the EA review determined that the project warranted an "approval in principle", the EA review did not pre-determine the outcome of any of the proponent's required permits or licences. With the EA review's "approval in principle" the proponent now has permission to apply for all of the licences and permits required for the works associated with the project. With regard to effluent, there are two key legislative requirements one, under the Canadian *Fisheries Act*, and one under BC's WMA. The terms of both laws must be met prior to any effluent discharge.

The BC WMA prohibits the discharge of effluent without a permit. The proponent is required to apply for a BC WMA permit, and the permitting process requires that the company characterize effluent discharge chemistry prior to a BC WMA permit being issued. BC-MELP staff, in consultation with other provincial and federal agencies, determines the necessary quality standards of the effluent, and require treatment to those standards as a term of the permit. Treatment required under the permit must be established prior to discharges occurring. BC WMA permitting includes ongoing discharge and environmental effects monitoring.

BC-MELP has determined at a conceptual level that the treatment plant technology proposed by the company, and accompanied by "real world" examples of its use and performance, is capable of meeting the legislative requirements of the BC WMA which are comparable to the Alaska Mixing Zone Regulation. However, it is through the permitting process that the company is required to demonstrate that the BC WMA requirements will be met.

In combination, the requirements of the Canadian *Fisheries Act* and the BC WMA permit ensure that any discharge is not acutely toxic and that there will be no measurable impacts beyond the initial zone of influence.

Risks associated with low flow periods:

Data available to date have provided a coarse (and therefore conservative) estimate of winter low flows in the Tulsequah River, which may be available for dilution of discharges. These estimates are being refined as new data is made available and an adequate database for setting practical limits will be available at the end of 1999 as required by the project report specifications under BC's *Environmental Assessment Act*. A number of measures, that will be made part of the BC WMA permit as necessary, are available to ensure that low flow conditions are recognized and dealt with in terms of discharge planning, so that impacts within

the mixing zone are avoided. These include the use of more than one of the several river channels for discharges if needed, thus taking advantage of additional low flow dilution, and the use of impoundment storage capacity to limit discharge volumes at critical winter low flow periods, if they occur. It is important to keep in mind that discharge will not be acutely toxic and that there will be no measurable impacts beyond the initial zone of influence.

Use of unproven diffuser technology:

Diffusers for wastewater discharges are common in BC. The proponent has acknowledged that the dynamics of seasonal flows of the Tulsequah River will present some challenges for their use at this mine. BC-MELP will require the proponent to optimize the design to achieve immediate dilution of discharges, especially in critical low flow periods. Based on the analysis of further data and information, it may be determined that diffuser use is reserved for seasonal periods, or used as a contingency when shoreline or "end of pipe" mid channel discharge equipment does not afford adequate immediate dilution.

Current discharges at the minesite and transboundary effects:

BC-MELP is working with the proponent to ensure that a permanent solution to this historic problem will be in place at the earliest possible time, given the constraints of access, and the fact that mining the Tulsequah Chief deposit provides the best options for solving the problem.

Responsibility for remediating current discharges:

The proponent is currently under direction of BC-MELP and is responsible for the remediation of the historic discharge problem at the Tulsequah Chief mine site. If the proponent fails to meet this direction and abandons the property, then British Columbia has the right to take action, using the proponent's posted reclamation security. It should be noted that the development of the project is the most cost effective and proven approach to the remediation of the existing Tulsequah drainage.

Factors influencing toxicity:

The risk assessment developed by BC-MELP in consultation with the Alaska DEC, and currently being implemented by the proponent addresses the concerns cited in the letter. These include long term exposure to mixtures of metals which may be additive in nature; bio-availability of these metals; physiological effects on reproduction and growth and effects through dietary routes of exposure. In response to the suggestion that there may be issues associated with alteration of pH in the Taku inlet, BC-MELP has determined that this type of effect is not possible, due to the magnitude of dilution available in the intervening distance.

Impacts identified prior to certification:

BC-MELP shares the same goal as U.S. state and federal agencies, in striving to have all of the environmental issues associated with the Tulsequah Chief mine proposal resolved prior to proceeding with project development. It appears as if the concern about when issues will be resolved may stem from the differences in the respective regulatory and institutional structures.

BC-MELP believes that the magnitude of risk associated with the mine proposal was dealt with sufficiently by the Project Committee in rendering an approval in principle certificate decision under BC's *Environmental Assessment Act*. This certificate approval does not fetter the regulatory authority or obligations under other statutory permitting legislation to continue issue resolution prior to any development taking place. BC-MELP is committed to an iterative approach, fully involving U.S. state and federal agencies to ensure that all reasonable measures are implemented to ensure that the Tulsequah Chief project is developed, operated and decommissioned using the most environmentally safe means possible.

Sedimentation impacts:

BC-MELP shares the concern regarding "deposition of fine particulate matter on the stream bottom" as it relates to "...quality spawning habitat and productive invertebrate habitat". As a result of this concern, BC-MELP has developed a terms of reference (TOR) for additional baseline sampling and EEM work focussing on areas of the proposed road and minesite where these types of impacts have the potential to occur. These TOR were circulated to U.S. agencies as they were being developed during the project review period, and staff from these agencies participated in discussions used to edit and revise them. Subsequent to this, additional detailed baseline study plans have been developed and implemented by the company, based on the TOR, with further reporting to occur, as new data becomes available. It is intended that the level of study associated with these EEM efforts will be sufficient to qualify as a major advance in impact assessment in both Canada and the U.S. BC-MELP welcomes the input from U.S. federal and state agencies to ensure joint benefits can be realized.

Toxicity associated with metals in fine sediments:

It is acknowledged that the impact mechanism as stated is a legitimate concern. BC-MELP proposes to deal with it through the use of WMA discharge permit limits which will control suspended particulate loadings in mine related discharges, and the use of both total and dissolved metals concentration limits for these discharges, as necessary.

4. FISHERIES

Fisheries issues raised in the August 1998 letter focus on aspects of risk assessment. The U.S. response provided two suggestions:

- identify acceptable risks to fisheries resources and
- fully evaluate potential impacts of the project.

Canada and British Columbia confirm that these two issues are indeed the focus of the next stage of the assessment process and of continued consultation with stakeholders including U.S. state and federal agencies. The following provides an explanation of how risks have been evaluated, how the impact assessment process will continue and invites clarification from U.S. state and federal agencies on the specifics of their outstanding concerns regarding fisheries resources.

Identification of Acceptable Risks to Fisheries Resources

As stated in previous sections, project assessment is an iterative process. At the EA review stage of project assessment, Canada and British Columbia concluded that the proponent's approach to identification of the risks to fish and their habitats was acceptable. The method of identification included an inventory and assessment of risks to fish and fish habitat over all of the proposed road corridors, and the mining discharge receiving environment. The proponent also identified areas where fisheries values existed and where potential impact mechanisms (both infrastructure and causative process impacts) were found to pose risk on those fisheries values.

Once the risks were identified by the proponent in accordance with accepted methodology, the Project Committee (which included Canadian and US federal and provincial and state regulators), assessed the risks and made a judgement regarding whether the impacts can be avoided or adequately mitigated with known technology. Because impacts were found to be avoidable or mitigable with known technology, the Project Committee concluded that the project was not likely to cause significant adverse environmental effects and recommended approval-in-principle of the project.

The next stage of project assessment is the permitting-process and authorizations stage. This stage ensures that the best, most up-to-date information available for designing and regulating the project is used. The following is a listing of the issues which have been considered in the certification process, and which will be the subject of continued evaluation by Canada and British Columbia in the development and issuance of permits and authorizations:

- full identification of sensitive fish habitat and populations near areas where construction will take place;
- full identification of areas posing risk of mass wasting and sediment release resulting from road and mine development, for example, the effects of sediment release on early life history on fish, particularly in combination with metal-rich tailings supernatant or seepage (see "Outstanding U.S. Concerns on the Tulsequah Mine Project" page 3, section 4-Fisheries, second bullet);
- adequacy of sediment control mitigation - evaluation of effectiveness of mitigation measures using Canadian standards for protection of aquatic life and other uses;
- adequacy of sedimentation monitoring and impact assessment;
- maintenance and re-prescription of sediment control measures;
- adequacy of construction timing windows to protect fish during bridge culvert and causeway construction and decommissioning;
- effective controls on unauthorized fishing effort;
- adequacy of environmental reporting and enforcement;
- control of metals leaching from the tailings pond into Shazah Slough;
- adequacy of compensation measures to offset causeway intrusion into fish habitat in the Tulsequah River;
- post closure integrity of the tailings dam and other structures through detailed design and ongoing monitoring and evaluation; and
- effectiveness of mine road decommissioning to control surface erosion and mass wasting.

U.S. state and federal agencies are invited to participate in all further iterations of risk evaluation and mitigation planning, including clarifying outstanding issues and concerns

relating to identification of acceptable risks. Clarification is sought from U.S. state and federal agencies so discussions can commence at the proposed up-coming bilateral meeting in November, 1998.

Fully Evaluate Potential Risks to Fisheries Resources

In general, a full evaluation of potential risks involves:

- characterization of likely impacts;
- identification, examination and evaluation of proposed mitigation measures; and
- assessment of potential residual impacts after mitigation has been applied.

The EA review is the first stage of full evaluation of potential risks. Full evaluation of potential risks occurs through the combination of the EA review and the permitting-process/authorizations stage.

During the EA review the majority of likely impacts must be identified and characterized, and related mitigation measures evaluated. The significance of a potential impact is determined after mitigation has been applied. This requirement focuses the proponent's and Project Review Committee's efforts in developing measures which will mitigate the magnitude and likelihood of potential impacts. This is done to avoid the pitfalls of developing detailed evaluations of the effects of unmitigated worst-case impacts. This approach provides an opportunity to limit the scope of risk assessment (at the EA stage) within the limits of practicality, while dealing with the range of potential risks of the project as designed.

During the next stage, i.e. permitting/authorization, the focus is on:

- more detailed characterization of likely impacts;
- assessment of potential residual impacts after proposed mitigation has been applied; and
- refinement of mitigation measures to meet regulatory requirements (i.e. conditions for issuance of permits and authorizations).

As mentioned above U.S. state and federal agencies are invited to participate in the full evaluation of potential risks to fisheries in the permitting/authorization stage. Clarification of outstanding issues to be fully evaluated is sought from U.S. state and federal agencies at the up-coming bilateral meeting in November 1998.

Table 1. Summary of EA Project Committee and Subcommittee Meeting Dates, Locations and Purpose

Project Committee Meetings	Location	Purpose	Attendance by US reps.
February 27-28, 1995	Vancouver	Application review workshop • Transportation options • Water quality • Fisheries • Tailings pond • Acid rock drainage	Alaska State rep provided workshop information to state, US federal and US local governments • Alaska State • Dept. of Environmental Conservation • EPA • US Army Corps of Engineers
March 15, 1995	Vancouver	Acid rock drainage Follow-up Workshop	
March 29, 1995	Vancouver	Wildlife Workshop	
July 26, 1995	Smithers	Ad-Hoc Project Committee Workshop	
December 13, 1996	Vancouver	Project Report s.26 Review/Discussion of Deficiencies	State of Alaska
January 13, 1997	Conference Call	Project Report s.26 Conclusion/Clarification of Deficiencies	State of Alaska
March 24, 1997	Conference Call	Status of Review/Change of Project Director	State of Alaska unable to attend
April 18, 1997	Conference Call	Economic Specialist's Meeting – Barging Option	State of Alaska
April 30, 1997	Conference Call	Status of Review/Discuss Application to Remove Barging From Scope of Project	• State of Alaska • US Department of the Interior • US Army Corps of Engineers
June 17, 1997	Conference Call	Conclusion on Application to Remove Barge and Recommendation to Executive Director	• US Department of the Interior • State of Alaska
September 17, 1997	Conference Call	Project Report Review Update and Discussion of Next Steps	• State of Alaska • EPA declined to attend • US Department of the Interior declined to attend as there were no outstanding issues now that barge option had been removed • US Army Corps of Engineers declined to attend as there were no permit requirements and no issues as barge option had been

			removed
December 15, 1997	Conference Call	Project Report Review Update/ Review Tasks and Timelines to Complete Overall Review and Referral to Ministers by January 21, 1998	• State of Alaska • EPA able to attend first 25 minutes only
January 15, 1998	Vancouver	Receive Subcommittee Recommendations and Reach Conclusions and Recommendations	• State of Alaska • US Department of the Interior • Alaska Dept. of Fish and Game • US Fish and Wildlife Service
ARD/Metal Leaching/Water Quality Subcommittee			
October 22, 1997	Vancouver	Set up Subcommittee and Begin Issue Identification and Resolution Process	State of Alaska
December 11, 1997	Smithers	Discuss Preliminary Responses to Issues Raised	
January 13, 16, 1998	Vancouver	Resolution of Outstanding Issues	• State of Alaska • US Department of the Interior • Alaska Dept. of Fish and Game • US Fish and Wildlife Service
January 19, 20, 21, 1998	Teleconference	Resolution of Outstanding Issues	• EPA/state of Alaska invited but did not participate
Wildlife/Aquatic and Access Subcommittee			
March 22, 1996 (Ad Hoc)	Richmond	To Discuss and Clarify Information Requests in Project Report Specifications	
October 29, 1997	Vancouver	Set up Subcommittee and Begin Issue Identification and Resolution Process	
December 2, 1997	Victoria	Outline Approach to Developing Grizzly Bear CEA	
January 14, 16, 1998	Vancouver	Seek Resolution of Outstanding Issues and Acceptance of CEA TOR Prepared by Independent Consultant	• State of Alaska • US Department of the Interior • US Fish and Wildlife Service
January 27, 1998	Teleconference	Resolution and acceptance of CEA TOR, Grizzly Monitoring program and to discuss winter trail and road alignment issues	US Dept. of Interior declined to attend

February 12, 13, 1998	Teleconference	Resolution of outstanding wildlife issues	
Cumulative Effects Subcommittee			
November 14, 1997	Vancouver	Set up Subcommittee and Reach Agreement on Scope of Study	
January 13, 1998	Vancouver	Review and Acceptance of Report prepared by Independent Consultant	• State of Alaska • US Department of the Interior • US Fish and Wildlife Service
January 29, 1998	Teleconference	Key participants to discuss follow-up and monitoring plan	

Please note that all Project Committee members, which included the US Department of the Interior, State of Alaska, US Army Corps of Engineers and Environmental Protection Agency, were invited to attend each Project Committee meeting. As most PC members responded to invitations verbally, only those cases where lack of attendance was noted in the minutes, or the PC member wrote in their regrets are noted in the table.

Table 2. Public Consultation – Summary of Open Houses and Public Meetings in the US

Date	Location
Open House presentation March 8, 1995	Juneau Alaska – advertised in Juneau Empire newspaper
Open House presentation March 9, 1995	Skagway Alaska– advertised in Juneau Empire newspaper
Open House presentation October 1, 1997	Skagway Alaska– advertised in Juneau Empire newspaper
Open House presentation October 3, 1997	Juneau Alaska– advertised in Juneau Empire newspaper

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DEPARTMENT OF STATE
WASHINGTON

January 27, 1999

Dear ~~Governor Knowles~~:

I am writing in reply to your letter of January 6 regarding British Columbia's Tulsequah Chief mine.

The Department of State, the Department of the Interior and the Environmental Protection Agency fully share Alaska's deep concern about the potential adverse effects that reopening the Tulsequah Chief might have on the Taku River watershed and the salmon fisheries there. Federal and State of Alaska agencies have cooperated closely over the past ten months in presenting our concerns to the Governments of Canada and British Columbia and seeking the proper remedial actions.

The U.S. side has been willing to try to settle these issues directly with the interested parties, to see if our concerns can be met. In so doing, however, we have made clear to Canada our expectation that no action will be taken on the project that would prejudice this matter while it remains open between us. We have reiterated that we would proceed to a reference to the International Joint Commission (IJC) should such prejudicial action take place.

Upon learning that the British Columbia permitting committee was meeting to consider the granting of an access road construction permit, we immediately sought clarification from the Canadian government. We reminded the Canadians that construction on the road would be among the actions that we would consider prejudicial. Since then we have been assured by British Columbian and Canadian federal officials that the permit being considered for the road will be conditional on the mining

The Honorable
Tony Knowles,
Governor of Alaska,
P.O. Box 110001,
Juneau, Alaska 99811-0001.

company first carrying out further investigation of the environmental impact of the construction. Together with Alaskan officials and other federal agencies, we will review closely the conditions set by the permit process to ensure that they are acceptable from the standpoint of impact on the shared watershed of the Taku. We also are seeking further assurances that construction on the road will not be undertaken while U.S. concerns about its impact remain unresolved.

As a result of the November meeting in Vancouver and an additional technical meeting in Seattle in December 1998, the U.S. experts have received additional technical and environmental information concerning the project. Federal and state agencies are assessing this information. We will remain in close touch with your office as we work together to press for resolution of U.S. concerns regarding the Tulsequah Chief.

I welcome your thoughts on this matter at any time, and hope you will not hesitate to contact me in the future.

Sincerely,

Strobe Talbott
Acting Secretary

ALASKA MINERS ASSOCIATION, INC.
3305 Arctic #202, Anchorage, Alaska 99503 FAX: (907) 563-9225 Telephone: (907) 563-9229

December 16, 1998

Honorable Tony Knowles
Governor
State of Alaska
Capitol Building
Juneau, AK 99801

Dear Governor Knowles,

Thank you again for speaking at the Northwest Mining Association. Throughout the remainder of the conference I heard many positive comments about your speech. Your presence at the conference and your speech set a very positive tone for Alaska. This was in sharp contrast to the very negative view mining companies have of some other western states. I trust that you and your staff enjoyed the event also.

After such a positive experience as the NWMA conference, it is unfortunate that I need to bring a more serious issue to your attention. It appears that Alaska's opposition to the Tulesquah Chief project is about to become a major international incident. I know from your past comments to me that you honestly believe the Tulesquah Chief project constitutes a serious threat to salmon stocks. However, it is our concern that you may not have been given all the relevant facts in this matter.

I first learned about the latest political escalation of the Tulesquah Chief issue last week. Since then I have done some additional investigation of the issue. Here are some of the facts as I now understand them:

1. The mine review and permitting process used for Tulesquah Chief is a new process and this project is among the first major mines to be permitted under it. This process was developed over several years and is considered to be the best, most effective, most stringent, etc. ever used in Canada. This process has been touted throughout Canada and internationally as how environmental permitting should be handled and is considered to be at least as thorough as the U.S. permitting process.

2. Many see the Tulesquah Chief issue as political fallout from the B.C./Alaska "fish wars."

3. Canadians see Alaska's opposition to the Tulesquah Chief as an affront to Canadian sovereignty.

4. The Canadians point to the recent meeting in Vancouver as an indication that Alaska is not interested in addressing the technical facts of the project. They point out that *with the possible* exception of one person from DEC, no one familiar with the technical aspects of the project were

involved in the meeting. Represented at the meeting were: US State Department, 2 persons; US Fish & Wildlife Service, 3 persons; EPA, 3 persons; ADF&G, 2 persons, DEC, 1 person. No one was present that was acquainted with or would understand the mining, geotechnical engineering, etc. aspects of the project.

5. It is also the view of B.C. officials that, even though project owner Redfern Resources Ltd. spent over $100,000 answering Alaska's questions about the project (in addition to the several million dollars spent on environmental studies and the permitting process), Alaska has not reviewed or seriously evaluated those answers.

6. The Tulesquah project will clean up currently existing historic acid rock drainage and will seal all such rock in mined-out underground workings.

7. Several Canadian provinces are now becoming concerned and energized over the Tulesquah Chief issue. It is their concern that any industrial activity in Canada that is in a watershed which flows into the US will become a target for environmental extremist challenge through the International Joint Commission. This would include resource development activities as well as farming and any other industry or municipality. If an activity 10 miles inside Canada (Tulesquah) can be challenged, they are concerned that activities 20 miles, 50 miles, 80 miles, etc. inside Canada could also be challenged anywhere along the U.S.-Canada border.

8. Some officials in Canada believe that American Rivers, Sierra Club Legal Defense Fund (now known as Earth Justice) and Vice President Gore are involved in this issue, just as they were in blocking the Windy Craggy project.

9. Members of Parliament from several provinces are preparing to raise this issue in the House of Commons in the near future.

As stated earlier, you may not have all the facts in this issue. We urge that the Tulesquah Chief project be given a new and thorough review by staff that understand mining, acid rock generation and control, construction of tailings impoundments, avalanche hazards, etc. If the Tulesquah Chief project is allowed to become an international incident, it will be to the detriment to our relationship with our closest neighbor and long term friend and to the detriment of the mining industry in Alaska. A significant part of the new mineral investments occurring in Alaska are by Canadian companies and an international incident between our countries would make Canadian investors very skeptical of supporting such investments.

We felt that it was important to communicate our concerns in this matter to you directly. If there is any way we can be of assistance in this matter please contact me.

Sincerely,

Steven C. Borell, P.E.
Executive Director

Fair's fair: The Tulsequah Chief Mine should go ahead

GORDON GIBSON

IN VANCOUVER

The Tulsequah Chief Mine property lies in remote northwestern British Columbia near Alaska. The project has passed every environmental hurdle known to federal and provincial governments with flying colours and has its approvals. It still can't get started, because of pressure directly from or financed by American so-called environmentalists. This is a case where we decide whether we are a sovereign country.

Some basics follow, of fairness, economics and the environment.

Active work to prove the feasibility of the project has been under way since 1987. The owner is Redfern Resources, a company listed on the Toronto Stock Exchange. About $27-million has been spent to date to do things right, and a lot of small shareholders have bought stock to finance that.

The company went through extensive research and consultation over 3½ years, including public meetings to deal with all the necessary local-impact issues. This involved ministries of the permitting governments of Canada and B.C., the small town of Atlin and the Taku River Tlingit Band based there, and various branches of the governments of neighbouring Yukon, Alaska and the United States.

On March 19, 1998, after comment by a 13-member international committee, the B.C. government granted a Project Approval Certificate. These mining folks had done all they were required to do, a lot of it no doubt flat-out ridiculous. They had jumped through all the hoops. Fairness says the mine should go ahead.

As for economics, this project would provide construction jobs for 400, and continuing work for at least 260 for at least nine years (the ore-body limits are not known). It would see an investment of $160-million (much to Ontario suppliers, no doubt), pay company taxes of $20-million a year and pay personal taxes in addition to that, while extracting ore (mostly metals, some gold and silver) worth about $1.2-billion.

Mining jobs are the best-paying in the province. Even city dwellers (and we are an overwhelmingly urban nation now) who tend to think that food comes from supermarkets and money comes from banks should dimly understand that you could pay for a few schools and hospitals out of all this.

As for the environment, not only is this mine clean (sulphites are even replaced underground), but it would also mop up residue from an older, smaller operation. The haulage road would be single-lane gravel, with 12 truck trips a day and access controlled around the clock (to keep out wildlife poachers and tourists). The mine is underground, not open-pit. We are not talking about the heavy footprint of man.

So, to review: These are good, clean jobs, earning foreign exchange to boost the loonie, paying taxes for social services. Enter the enviros.

A group close to Alaska Governor Tony Knowles persuaded him to ask for an International Joint Commission review last March 31. The IJC is a Canada-U.S. body set up to consider cross-border issues. The stated case had to do with fish and water quality, matters already definitely resolved. Retaliation for Glen Clark's salmon wars may have had something to do with it.

The U.S. State Department conveyed the request and Canada gave a detailed technical response in May. Mysteriously, pressure continued.

Eventually a Sierra Legal Defence Fund document was leaked, describing a multi-eco organization campaign last fall to exploit the "financial weaknesses" of the mine project and to secure a development moratorium on the entire Taku River watershed — about 2 per cent of B.C. Funding over three years of more than $600,000 was planned, mostly from American sources.

The IJC was a favoured instrument of attack. Redfern is financially stressed. Enough delay (the IJC can be *very* slow) could kill the deal. And of course, as the document stated, the IJC would be a "key media opportunity."

Allies were needed. The 400-member Taku River Tlingit Band is negotiating a treaty in the area, and the leaked document proposed that up to $300,000 be spent to "strengthen the community's commitment to legal challenge of the Redfern permit," nudge, wink. A lawsuit has indeed been filed by the band.

Last November and December, every environmental issue was again satisfactorily answered by Canadian negotiators, whose approval is needed for an IJC reference. The American government was even offered continuing oversight of the process. However, that does not resolve the company's financing problem. You can't raise money to fund a mine that could be endlessly on hold.

That means it is now up to Foreign Affairs Minister Lloyd Axworthy to make an unequivocal statement that this matter does not have an international impact (as all government studies show) and will not be going to the IJC — period. Canadian sovereignty demands no less of a defence against a bunch of folks who would rather see northern B.C. as their private park. If you can't build a mine even with full approvals, mining is dead in this province.

The Taku River Tlingit Band's legitimate interests can be worked out in Canada's governmental and legal system; fair enough. But it is simply not appropriate to give foreigners effective control over our resources. Mr. Axworthy has said some helpful things in the Commons on the IJC matter. Now is the time to put them in writing.

RAVEN ENVIRONMENTAL SERVICES

NATURAL RESOURCES CONSULTING • PERMITTING • TECHNICAL SUPPORT
628 BASIN ROAD, JUNEAU, ALASKA 99801
907-586-2459

February 12, 1999

FEB 12 1999

To: Representative Scott Ogan

From: Paul Rusanowski

Subject: Tulsequah Chief update

I thought you might be interested in the attached information concerning a new campaign being launched by the environmental community that I just received from Redfern Resources. It clearly shows the lengths that the environmental community is willing to go to stop any and all development.

The Tulsequah Chief project has a relatively small economic impact on Alaska; but it is substantial for Skagway and AIDEA's ore terminal. Given our present economic conditions, it would be helpful if all opportunities for economic benefit were pursued on an equal footing.

There are no genuine issues to resolve through the IJC process but the State continues to push for it. Differences are perceived as largely process related; and British Columbia and Canada follow a significantly different permitting process than the US and Alaska. You can see from this document how the environmentalists plan to use native sovereignty issues, the State of Alaska Governor's Office, and regional comprehensive planning to block the project. It is significant to note that Redfern itself is targeted for action to prevent investment and cause financial harm.

I have also included the latest round of correspondence between the State of Alaska, US State Department and the Province of British Columbia.

Please make use of this information as you feel is appropriate. If you would like more information from Redfern Resources please contact Terry Chandler at 604-669-4775; or Shawn Magee at Optimum 604-662-4560, Redfern's public relations firm.

Message points for 3rd Party Briefings

The document

- Redfern has uncovered a planning document that lays bare a cynical campaign by international environmental groups to stop the Tulsequah Chief Project -- in fact, to halt all economic development in the project area.
- The U.S. and Canadian groups involved in this campaign are the same well-connected, well-financed coalition that sank the Windy Craggy Project in 1993.
- What the document illustrates is American environmental groups, utilizing money from American foundations and contacts with American government officials to stop a duly reviewed and approved project in Canada.
- The stated objectives of the campaign are:

1. Stop the Tulsequah Chief Mine
2. Stop the mine in a way that provides financial and economic deterrents to future developments in the project area.

- The tactics identified in the plan include:

1. Leveraging U.S. government officials to utilize the International Joint Commission (IJC) process to delay and/or stop mine development.
2. Attacking Redfern in the marketplace, by utilizing the IJC threat to scare off existing and potential investors, and limiting the company's ability to raise funds to develop the mine.
3. Providing financial and legal support for factions of the local native community (TRTFN) predisposed to challenge the B.C. and Canadian government's environmental review and permitting of the Tulsequah Chief mine.

- Key players in the campaign include:

1. Ric Careless of BC Spaces for Nature;
2. Alan Young of the Environmental Mining Council of BC;
3. the Washington D.C.-based American Rivers, which maintains close connections to the Clinton administration through VP Al Gore.

- These three groups also comprised the core of Tatshenshini Wild, the group that successfully fought against development of the largest copper reserve in North America (Windy Craggy) in the early 1990s.
- The Tulsequah Chief coalition has identified a budget of $170,000 for the first year of its campaign.
- The document identifies more than 20 major U.S. foundations that they expect to fund the campaign, including the Rockefeller Bros. Fund, the Turner Foundation and others.

TO SAVE THE TAKU RIVER

A Coordinated Campaign Strategy Outline

Prepared by:
Michael Magee
Sierra Legal Defence Fund
(604) 685-5618
magee@sierralegal.org

In coordination with:
Taku Wilderness Association
Nakina Centre for Aboriginal Life and Learning
Sierra Club of British Columbia
Environmental Mining Council of B.C.
BC Spaces for Nature
David Suzuki Foundation
Northwest Institute
The River League
American Rivers
Southeast Alaska Conservation Coalition
Walter & Duncan Gordon Foundation

THE CAMPAIGN NEED

The Taku wilderness is under threat of pending developments that impact on the lives and well being of the Taku River Tlingit First Nation (TRTFN) and the ecological integrity of one of North Americas last remaining magnificent wilderness areas.

An aggressive, thoughtful and strategic campaign is urgently needed to stop the immediate threats to this area and to establish a plan for the longer term protection of its environmental values and of the people in the region.

In a serious effort to achieve these goals a coordinated strategy was organized in Vancouver of September of 1998 amongst key groups in the U.S. and Canada dedicated to preserving the Taku wilderness.

NOT CONSERVING

The groups who participated in this meeting and will continue to work on this project include:

Taku Wilderness Association
Nakina C.A.L.L. (Centre for Aboriginal Life and Learning)
Sierra Club of British Columbia
The River League
BC Spaces for Nature
Sierra Legal Defence Fund
Northwest Institute
Environmental Mining Council of British Columbia.
American Rivers
Southeast Alaska Conservation Coalition

Groups who were not in attendance at the meeting but will play a role in a coordinated campaign include:

The David Suzuki Foundation
Earthjustice Legal Defence Fund

The purpose of this document is to:

- . Provide a multi-organization, coordinated campaign outline that illustrates the specific goals, objectives, strategies, tactics, organizational structures, relationships and funding that will be required to win.

Background

The Taku River watershed is an 18,000 square kilometer (4.5 million acre) unroaded tract of land near the town of Atlin in northwestern British Columbia, Canada. This immense watershed, equivalent in size to the state of Massachusetts is the traditional homeland of the Taku River Tlingit and contains

habitats representing five biogeoclimatic zones ranging from high plateaus to lush coastal temperate rainforests. It contains some of the richest wildlife habitat on the west coast of North America and is home to grizzly bears, moose, caribou, black bear, mountain goat, salmon and many species of migrating birds. These species thrive here in large numbers due to the area's essentially untouched nature and the fact that it is only accessible by float plane, river boat or by foot. This region is the highest producer of salmon on the southeast shore of Alaska and northwest British Columbia.

This spectacular area is now threatened by a proposal to construct a 160 km access road needed to reopen the Tulsequah Chief Mine located on the Tulsequah River just upstream from B.C.'s border with southeast Alaska. The road is needed in order to transport ore to the shipping tidewaters of Skagway. Proponents, Redfern Resources Ltd., claim that the Tulsequah Chief Mine will provide nine years of profitable mining activity. While this scenario has appeal for some factions, the mine would introduce massive quantities of Acid Mine Drainage to the watershed, endangering water quality and aquatic habitat for salmon and other wildlife. The proposed road also threatens the survival of a recovering woodland caribou population and threatens to disrupt grizzly bear habitat. The cumulative effects of this road would be increased hunting and poaching pressure, roadside developments, spur roads to new mining claims, and logging of the fragile boreal forest and globally endangered temperate rainforest. Wildlife experts both within and outside of government disagree with the proponent's claims that impact on wildlife in the Taku will be minor.

Current Status of Development

Redfern Resources is continuing to push ahead aggressively with their plans to establish the Tulsequah Chief Mine. There are several obstacles to this which include:

- An review by the International Joint Commission (IJC). The United States has requested that this issue be referred to the International Joint Commission for investigation as there are serious threats it will effect trans-boundary waterways. As this document is being written there has been no formal agreement from Canada refer it to the IJC, however, Canada has requested another meeting with the United States to review the agenda for eventual referral to IJC. The State Department has responded aggressively and is becoming increasingly agitated with the Canadian Federal Government's delaying tactics, this in turn has served to delay some of the Special Use Permits (SUP) into December of 1998.

- Redfern Resources share prices are sinking and the company is increasingly unstable. This vulnerability is more evident when the financial assumptions of the Tulsequah Chief Mine proposal are examined more closely. Given the

current economic conditions there is high probability of exploiting this vulnerability and exposing the mine as financial non-viable.

- There continues to be the possibility that the Taku River Tlingit First Nation (TRTFN) will challenge the provincial mine approval process. Should this take place it would pose a serious threat to the future development of the mine.

Campaign Goals and Objectives

1. Stop the Tulsequah Chief Mine.

2. To stop the mine in such a way that it ensures a developmental moratorium on the Taku Watershed.

3. To ensure that a comprehensive Land Use Planning process is completed that is agreeable and inclusive of the Taku River Tlingit River First Nations (TRTFN).

Strategies

1. Stop the Tulsequah Chief Mine

The strategic objective in the early stages of this campaign will be to stop the mine from proceeding in such a way that establishes a moratorium on the area for further development. This will be achieved through several tactical components including:

- A coordinated trans-boundary political effort focusing on the US Congress and key legislators within Alaska and Washington DC. Given the mines potential negative impact on a highly profitable Alaskan fishery and waterway it is highly probable that the U.S. Congress can be leveraged to take further defensive actions against such a threat.

- A comprehensive economic analysis of Redfarn Resources. This would include closer scrutiny of Redfarns shareholder interests, current mineral prices and the underlying financial calculations they have used to substantiate the mine proposal. This data will be critical in establishing with the financial community and policy makers of the financial weaknesses of the Tulsequah Chief mine proposal and other similar initiatives that are being explored in the Taku Watershed.

- Solidarity and support for the Taku River Tlingit First Nation (TRTFN). The TRTFN have been considering taking further legal and political action based on their aboriginal rights to oppose the approval of the mine. The TRTFN must be given adequate capacity support and resources to defend any such actions should they be taken.

- The International Joint Commission. While it would be the objective to stop the mine development long before any IJC reference is undertaken, the reference itself needs to be used to increase profile of the issue. Further pressure needs to be brought to focus on the Canadian External Affairs to make a final decision in referring this matter to the IJC. Most importantly, the process of moving the complaint to a formal investigation by the IJC must be used as a key media opportunity for heightened exposure on the Taku and to support the above noted initiatives

2. Ensure a Development Moratorium

The Tulsequah Chief proposal has generated heated debate and attention in the local community, within the TRTFN, with the B.C. government and the U.S. One of the process issues that has been given the most attention is the weaknesses in the provincial approval process for the mine. This has underscored the significant need to develop a comprehensive land use plan that considers the socioeconomic future and ecological integrity of the Taku wilderness. To complete this a moratorium on development will need to be established. It is the objective of this campaign to stop the Tulsequah Chief Mine in a manner that provided ample financial and economic deterrents to future developments until a land use plan is agreed upon.

3. Ensure a Taku Land Use Plan

The success of establishing a comprehensible protected area in the Taku will depend largely on the longer term work and creditability of the Land Use Plan. Significant capacity support will have to be established for key groups including the TRTFN to complete work related to scientific, legal and social economic research.

For the purposes of this proposal, we will focus on the first two points. A planning committee will be established to work on the longer term details on requirements of a Land Use Plan. This will be the subject a future proposal.

Campaign Structure

There will be several components to the campaign structure to ensure quick campaign development, decision making and proper tactical assignments. The structure will be as follows:

- Taku Network: The Network will include all organizations and individuals who wish to support the campaign initiatives overall. This will be an information sharing network with organizations receiving regular briefs and being called upon for specific actions when necessary.

- The Taku Steering Committee: This will be the key groups with a more direct involvement and interest in the Taku campaign. The Steering Committee will assist in guiding overall priorities and policy directions. The members of this committee will include:

  Taku Wilderness Association
  Nakina C.A.L.L. (Centre for Aboriginal Life and Learning)
  Sierra Club of British Columbia
  The River League
  BC Spaces for Nature
  Sierra Legal Defence Fund
  Northwest Institute
  Environmental Mining Council of British Columbia
  American Rivers
  Southeast Alaska Conservation Coalition
  The David Suzuki Foundation
  Earthjustice Legal Defence Fund

- The Executive Committee. This committee will be a smaller group from the Steering Committee that will set the strategic direction of the campaign, make decisions on a regular basis and coordinate the activities of the key organizations. The Executive Committee members include:

  Don Weir, Taku Wilderness Association
  Alan Young, Environmental Mining Council of BC
  Ric Careless, BC Spaces for Nature
  Mike Magee, Sierra Legal Defence Fund

The campaign will have established several working groups to develop the critical strategic components. These working groups will be a combination of groups and individuals from the Network, assigned to groups depending on their area of expertise. Each working group will have a lead organization.

NOTE: For the purposes of this proposal, working groups are assigned "global" budget estimates. Specific proposals for working groups would be submitted by the lead organization. These proposals may vary from the global estimates

depending on the scope of the plan produced by the working group. The working groups include:

- COORDINATION (ie. the Executive Committee):
  This working group will largely be the work of the Executive Committee and a staff coordinator. Lead organization will be the Environmental Mining Council of British Columbia with support from the Sierra Legal Defence Fund. Budget estimate: $30,000 (CDN)

- TRANS-BOUNDARY STRATEGIES:
  This working group will include BC Spaces for Nature, American Rivers, Southeast Alaska Conservation Coalition, Earthjustice Legal Defence Fund, Sierra Legal Defence Fund, Taku Wilderness Association. Lead organizations will be BC Spaces for Nature and Taku Wilderness Association. Budget estimate: $40,000 (CDN)

- MEDIA AND COMMUNICATIONS:
  This group will assist in cultivating major media stories, executing media strategies for specific initiatives, training and capacity support for key Network organizations. The group will include David Suzuki Foundation, Sierra Legal Defence Fund, The River League, Sierra Club of BC, Earthjustice Legal Defence Fund. Lead organization will be Sierra Legal Defence Fund.
  Budget estimate: $30,000 (CDN)

- ECONOMICS:
  This group will initiate a review of the underlying financial assumptions of the Tulsequah Chief mine and the real costs and benefits of development in the Taku wilderness. The work will include an examination of Redfern Resources. The group will include BC Spaces for Nature, Taku Wilderness Association, Environmental Mining Council of BC. Lead organization will be the Environmental Mining Council of BC with support from BC Spaces for Nature.
  Budget estimate: $40,000 (CDN)

- COMMUNITY DEVELOPMENT AND LIAISON:
  This group will focus on cultivating relationships and understanding in the local community. Work will include on-going relationship building and support for the TRTFN and the Nakina CALL and communications with local industry and government officials. It may, from time to time, include capacity support for the TRTFN. The group will include the Taku Wilderness Association, Nakina CALL , the River League and the David Suzuki Foundation. Lead organizations will be the Taku Wilderness Association and the Nakina CALL.
  Budget estimates: $30,000 (CDN)

- RESEARCH:

This group will initiate the longer term planning and research that will be required for a proper land use planning process. In the initial stages the group will identify the key socioeconomic, legal and scientific intelligence that will be required to accomplish such a plan. Working group members will include the Natina CATL, Northwest Institute, Sierra Club of BC and The River League and the Taku Wilderness Association. Budget estimates will be developed as the necessary elements of the research are identified. It's expected this part of the overall strategy will be the subject of future funding proposals in later stages of the campaign.

WORKING TIMELINES:

For the purposes of this proposal the time lines are broken down into immediate and short term modes. Medium and long term plans will be developed through the working groups and distilled through the Executive Committee for future presentation

IMMEDIATE TERM: November 1998 through to January 1999 (3 months)
The goal in the short term is to establish secure funding for the working groups and to initiate the strategy outlined in this document. Bridge funding will be necessary to hire a coordinator, provide an office and for capacity support to a few key groups such as the Taku Wilderness Association. This will be the work of the Executive Committee with lead initiative from Sierra Legal Defence Fund.

The working groups will have completed their medium and long term campaign plans by the end of January 1999.

SHORT TERM: February 1999 through to June 1999 (6 months)
By this point a coordinator will be well in place, funding secured (or at least identified). The Trans-Boundary Working Group should have well under way it's tactical moves related to the International Joint Commission, Congress, and the Alaskan government. The Economics Working Group should have completed it's initial review of the financial assumptions of the mine, the investor community, shareholder activity and other related economic factors. The Media Working Group should have significant work completed on cultivating major media stories on the Taku including CBC and CTV national news and the NY Times and Washington Post.

Draft
Taku Campaign Fundraising Strategy
December 1998

Note: All grant amounts in US dollars except where noted. All project goal amounts in CDN dollars.

A. Coordination: EMCBC is lead organization
Goal: $48-60,000
First Priority

Endswell Fund - $15,000 CDN committed
EMCBC core - $10-15,000 CDN available
Weeden Fdn - $15,000
Lichen Fdn - $10,000 CDN

B. TRTFN Land Protection Plan (while not central to campaign, critical to ground 1st Nation and strengthen the community's commitment to legal challenge of Redfern permit.)

Goal: Short-term $2,000 for consultant to work with TRTFN to develop proposal.
Long-term $200-300,000 over 2-3 year period to complete the plan.

Robt Schad Fdn- Bolton, Ontario
Hewlett Fdn
Packard Fdn
W.Alton Jones Fdn
Rockefeller Bros. Fund
Paul G. Allen Forest Trust?????

C. TRTFN Litigation and Community Liaison: SLDF is lead organization and fiscal agent for the TRTFN.
Goal: $180,000 of which $150,000 is the total estimated cost of Art Pape's representation of the TRT. $30,000 for Atlin community nurturing.

Litigation:

Brainerd Fdn	- $20,000 March 1999 docket
Endswell Fdn	- $10,000 CDN committed
W&D Gordon Fdn	- $20,000 CDN
W.Alton Jones Fdn	- $30-50,000
Lannan Fdn	- $50,000/yr. Possible 2 yr Approach?
Wilburforce Fdn	- $30,000
David Suzuki Fdn	- $30,000 CDN

Community Liaison:

Tides donor funds	- $20,000
True North Fdn	- $10,000
Turner Fdn	- $10,000 ???

D. Media and Communications
Lead group: SLDF
Goal: $30,000 for direct media work and training for TRTFN and other core actors.

Lichen Fdn	- $10,000 CDN
Kongsgaard/Goldman Fdn	- $10,000
Surdna	- $20,000 ?

E. Community Support
Lead groups: Taku Wilderness Association (TWA) and Nakina CALL
Goal: $30,000

Fdn for Deep Ecology	$10,000 – Contact John Davis
W&D Gordon Fdn	$20,000
Kinney Watershed Fdn	$10,000 US committed 12/98 to TWA

F. Transboundary Strategies
Lead groups: BC Spaces for Nature and TWA
Goal: $40,000 *Does not include support for US groups in SE Alaska

W&D Gordon Fdn	$20,000 CDN
Weeden Fdn	$10,000
K/G Fdn	$ 7,500
True North	$10,000
Lazar Fdn	$ 7,500

G. Economics/Corporate financing strategy
Lead groups: EMCBC + BC Spaces for Nature
Goal: $30,000

Fdn for Deep Ecology -	$10,000
Tides Fdn - donor funds -	$10,000
Lichen Fdn	$10,000

GLOBAL BUDGET

NOTE: Lead organizations will submit funding proposals for specific components of this coordinated campaign. The budget figures presented here reflect the general needs that will be created by lead organizations taking on their respective work in coordination with other groups. These budget figures may alter once the Working Groups finalize their work plans in the immediate term. The global budget was derived to establish a coordinated pattern for submission of proposals to funders from lead organizations.

COORDINATION	$30,000
TRANS-BOUNDARY	$40,000
ECONOMICS	$30,000
MEDIA AND COMMUNICATIONS	$40,000
COMMUNITY DEVELOPMENT and LIASION	$30,000
RESEARCH	future pending

TOTAL GLOBAL BUDGET (1 year) $170,000

Redfern

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TULSEQUAH CHIEF PROJECT
ENVIRONMENTAL ASSESSMENT PROCESS AND AFTERMATH

In September 1994, Redfern Resources Ltd. entered the Mine Development Assessment process in British Columbia by filing an application to re-develop the former Tulsequah Chief Mine in northwest B.C. The application was subsequently transitioned to the B.C. Environmental Assessment Act (BCEAA) process in July 1995. The BCEAA review of the Tulsequah Chief Project involved the governments of B.C., Canada, Alaska and the United States, as well as public and First Nations stakeholders. Key milestones in the review process included:

September 1994	Application
February 1995	Public Review of Application
July – Nov 1995	Draft Project Report Specifications developed
Nov 26, 1995 - Jan 30, 1996	Public and Project Committee review draft Project Report Specifications; formulation of Final Project Report Specifications
Nov 25, 1996	Redfern submits Project Report to Project Committee for screening to determine if Report meets Specifications
Nov 25, 1996 - Jan 21, 1997	Project Committee completes screening and does not accept Report for review pending resolution of deficiencies for environmental studies related to barge access and First Nations traditional land use studies.
March 14, 1997	Redfern submits Application to amend Project by removal of barging as an access option due to technical and economic infeasibility.
March 15 to June 18, 1997	Project Committee reviews and accepts Amendment application
July 4, 1997	Redfern submits revised Project Report for screening by Project Committee.
August 1, 1997	Project Committee unanimously accepts Project Report for full review.
Sept 8 - Nov 6, 1997	Project Report undergoes full public review. Redfern holds advertised public consultation meetings in Atlin, Whitehorse, Skagway and Juneau.
Nov 7, 1997 - Feb 13, 1998	Project Report reviewed by Project Committee – 19 meetings of the full Project Committee and/or sub-committees are held to review resolution of project issues.
Mar 5 - Mar 13, 1998	Draft Project Committee recommendations report circulated to Committee members for comment, incorporating resolutions to issues from Committee and sub-committee review findings.
Mar 19, 1998	Certificate granted by BC Government

POST-CERTIFICATE EVENTS

In late March 1998, Alaska Governor Tony Knowles referenced the Tulsequah Project in a letter to Secretary of State Madeleine Albright, in which he called for additional review of the mine proposal through the International Joint Commission (IJC). Mr. Knowles' letter made it clear that the he perceived there to be inadequate information and/or insufficient review conducted to assess the technical risk of the Project on shared resources, namely fish and waters.

In response to the statement of concern, the B.C. Environmental Assessment Office ("EAO") and federal Canadian agencies, through the auspices of the federal Department of Foreign Affairs, visited Washington, DC on April 16, 1998 to meet with Alaskan and federal US government representatives. The meeting was held to answer American concerns, where possible, and to explain the differences between the American and Alaskan permitting process relative to the Canadian and BC provincial review and certification process. As a result of the meeting a commitment was made to provide a follow-up document addressing specific issues and providing further clarification for Alaskan and US agencies.

Following further discussions between various US and Alaskan technical personnel and their Canadian federal and provincial review agency counterparts, a document was compiled by the BC EAO to answer the specific technical concerns raised. This response document was forwarded on May 21, 1998 to the US State department, US EPA, and the Governor's Office, State of Alaska. Copies were also sent to Canadian Department of Fisheries and Oceans, Canadian Environmental Assessment Agency (CEAA) and External Affairs in Ottawa.

On August 28 the US State Department sent a letter to Canadian Foreign Affairs requesting that Canada agree to an IJC review of the Tulsequah Project. A second round of bilateral government meetings were held in mid-November, and a further series of response documents have been forwarded in December to demonstrate the lack of substantive technical issues. A final meeting to present the response to Alaskan-US concerns over stability of the tailings area was held on December 23, 1998. It is our understanding, from discussions with the participants, that the US technical representatives were largely satisfied with the tailings design and stability assessment responses.

For additional information on the content of the May Alaskan response document please refer to:
http://www.eao.gov.bc.ca/PROJECT/MINING/TULSEQUA/US_Concerns/toc1.htm

Redfern

Redfern Resources Ltd.
Box 40, Suite 900
999 West Hastings Street
Vancouver, British Columbia
Canada V6C 2W2

Tel: 604-669-4775
Fax: 604-669-5330

Key Facts
Environmental Assessment Review

- The Tulsequah Chief Project received its Project Approval Certificate from the British Columbia provincial government on March 19, 1998. Signed by B.C.'s Minister of Energy, Mines and Northern Development (Dan Miller) and Minister of Environment, Lands and Parks (Cathy McGregor), the certificate grants approval for the mine's proponent, Redfern Resources Ltd., to re-open the historic underground mine and build an access road to Atlin, B.C. for the transportation of concentrates from the mine to the port of Skagway, Alaska.

- The government's decision was based on recommendations put forward by the Tulsequah Chief Project Committee, which was formed in November 1994 by the B.C. Environmental Assessment Office (EAO) to conduct the necessary review and make recommendations on the project. The committee was comprised of representatives from the following groups:

Provincial Agencies:
Environmental Assessment Office
Ministry of Environment, Lands and Parks
Ministry of Energy and Mines
Ministry of Small Business, Tourism and Culture
Ministry of Transportation and Highways
Ministry of Forests

Federal Agencies:
Department of Fisheries and Oceans
Canadian Coast Guard
Environment Canada

Local Government:
Atlin Advisory Planning Commission

First Nations:
Taku River Tlingit First Nation

Yukon Territorial Government:
Dept. of Community and Transportation Services

Alaska State Government:
Division of Governmental Coordination

United States Federal Government:
Environmental Protection Agency
Department of Interior

- The environmental assessment of the Tulsequah Chief Project was comprehensive and exhaustive. During the 3½ year review period, the following issues were studied in detail:

- Geology
- Geotechnical structures
- Mine development and mining methods
- Mineral processing and metallurgy
- Access alternatives and access management
- Climate and precipitation
- Hydrology
- Water chemistry
- Water quality
- Fish and fish habitat
- Other aquatic life
- Vegetation
- Wildlife and wildlife habitat
- Culture, sustenance and archaeology
- Land use
- Water management
- Tailings management
- Air quality and noise control
- Materials and waste management
- Acid rock drainage
- Socioeconomics
- Accidents and malfunctions
- Cumulative effects
- Environmental supervision and monitoring
- Reclamation, decommissioning and closure

- The Tulsequah Chief Project Committee indicated in its majority report that all technical and policy issues related to the project are considered manageable, and that the project is not expected to cause significant adverse environmental effects.

- British Columbia's review process is thought to be one of the world's most rigorous standards of environmental assessment in the world. The Tulsequah Chief Project assessment met the requirements of the B.C. Environmental Assessment Act (BCEAA) as well as the Canadian Environmental Assessment Act, under the Canada-British Columbia Agreement for Environmental Assessment Co-operation.

- As one of the first mines to be comprehensively studied under BCEAA, which was introduced in 1995, Tulsequah Chief may be the most exhaustively studied mining project in B.C. history. Since the environmental assessment review of the project began in 1995, Redfern has:
  - Invested an estimated $8 million in environmental, socioeconomic and engineering studies;
  - Held 10 public open house meetings in Atlin, B.C., Whitehorse, Yukon, Skagway and Juneau, Alaska, in addition to numerous meetings with stakeholders;
  - Established a community office in Atlin to provide information and liaise with the local community;
  - Worked closely with the Taku River Tlingit First Nation to identify the native community's priorities and study archaeological, cultural and traditional use issues in the project area.

- Extensive public and First Nation consultation above and beyond that required under the BCEAA occurred at each stage of the review process, including:
  - Three formal public review periods;
  - Stakeholder input in project committee meetings following the end of the public review period;
  - 10 open houses;
  - 300 public submissions;
  - Ongoing meetings with the public and stakeholder groups;
  - Provision of intervener funding to third parties to participate in the review;
  - Hiring of an Aboriginal Liaison Officer to allow for information exchange with Taku River Tlingit directors and members.

- During the review process, the government granted four extensions to the legislated time limits for review of the project, in order to allow additional time for the public and the Tulsequah Chief Project Committee to complete the assessment of the project.

- The next step for Redfern is to obtain the routine permits required in order to begin construction and eventual operation of the mine.

- Redfern is currently involved in discussions with joint venture partners to secure project financing. The company estimates that capital investment in the Tulsequah Chief Project will total $160 million, including $148 million for construction costs and an additional $12 million for working capital.

-30-

For more information:
Janice Loukras
(604) 669-4775

January 22, 1999

BRITISH COLUMBIA

Right Honourable Jean Chrétien, P.C., M.P.
Prime Minister of Canada
House of Commons
Ottawa, Ontario
K1A 0A6

Dear Prime Minister Chrétien:

On September 29, 1998, I wrote to you expressing my firm belief that the Tulsequah Chief Mine can be developed in an environmentally sound and responsible fashion, consistent with the conclusions of three and one-half years of review under British Columbia's and Canada's statutory processes for environmental assessment. I emphasized the cost of the threat of a referral of the Tulsequah Chief Mine to the International Joint Commission (IJC) – not only to this project, but also to the broader prospects for responsible development in British Columbia and elsewhere in Canada.

Following the environmental assessment (EA) review, over nine months of comprehensive, cordial and constructive discussions on specific technical aspects of the project have been completed. These discussions involved officials of the Governments of British Columbia, Canada, the United States and the State of Alaska. Meetings were held in April 1998 in Washington, D.C.; on November 16 and 17, 1998, in Vancouver; and on December 23, 1998, in Seattle. Technical information has also been exchanged on several occasions. During these interactions, officials have responded to the technical concerns identified by the United States by indicating in detail how British Columbia and Canada have or will address these concerns – in nearly all cases along the lines proposed by U.S. and Alaskan officials.

The remaining points of disagreement relate to matters of difference in statutory processes for environmental assessment and development of such projects, and to timing of issuance of permits. They do not relate to questions of environmental standards. Indeed, the various parties are substantially in agreement on this matter; B.C./Canadian standards generally meet or exceed equivalent Alaskan and U.S. standards.

.../2

Office of the Premier
Mailing Address: PO Box 9041 Stn Prov Govt Victoria BC V8W 9E1
Location: Parliament Buildings Victoria

It is therefore my strong belief that this matter can and must be brought to a close, in the interests of moving ahead with orderly economic development in the northwestern part of our province.

Despite the progress made on technical issues and the good relations maintained between our officials, I have learned that the Office of the Governor of the State of Alaska continues to press for a referral to the IJC. This action appears to be based on inaccurate and misleading information.

Concerns over loss of salmon habitat and fish mortality are unfounded. It has been made clear to U.S. officials that the underlying principles established by the Department of Fisheries and Oceans and the Province's Ministry of Environment, Lands and Parks and applied to this project are: zero fish mortality, zero loss of habitat. The claim that Alaskan concerns have been largely ignored is simply wrong; indeed, written agreement on technical issues and commitments for further action which accord with recommendations of the U.S. participants (including Alaskan representatives) have been made by British Columbia and Canada on every issue identified by the U.S.

The harmonized EA review has allowed British Columbia and Canada to conclude that there are no critical flaws in the general design of the project. Further investigation of all elements of the project will take place at subsequent detailed design and permitting stages. In the unlikely event that these investigations reveal a significant problem, British Columbia has committed to take appropriate action to ensure applicable federal and provincial environmental standards are met and maintained, including, if necessary, declining the authorization of further development activity.

While these technical discussions with the U.S. were underway, B.C. has been obliged to meet the requirements of its statutory permitting and authorization processes in response to the proponent's applications to proceed with the project. The U.S. has repeatedly been invited to participate in these processes, but to our regret has consistently declined. It should be noted that no construction activity has begun to date, and the Province is not aware of immediate plans to proceed. Approval to proceed with any construction activity, including on the access road, will require further detailed data collection and design.

.../3

Nonetheless, Alaska appears to have concluded, based on information of questionable accuracy, that it is now in an untenable position and finds itself obliged to press the Department of State to urge Canada's participation in a joint IJC referral.

British Columbia and Canada have made extensive efforts to address U.S. and Alaskan concerns. Our harmonized EA process has concluded that the project poses no significant transboundary threat and can proceed to the next stage of our review process. British Columbia is obliged by provincial law to meet the requirements of our statutory processes in response to applications for further permitting.

While British Columbia remains committed to full and open cooperation with all concerned parties, I must reiterate the Province's view that a referral to the IJC is unwarranted. I urge your Government to instead seek explicit assurances from Department of State that the U.S. is prepared to continue the dialogue we have maintained over the past nine months by working within British Columbia's and Canada's statutory processes to ensure that our mutual interests in respect of the environment are taken into account as the project progresses.

I look forward to the continued support of your Government in bringing closure to this most important matter.

Sincerely

Glen Clark
Premier

pc: see attached list

TAKU RIVER RECREATION ASSOCIATION

P.O. Box 240295
Douglas, AK 99824

March 21, 1999

Senator Drue Pearce
Alaska State Legislature
Capitol Building
Juneau, AK 99811

Representative Brian Porter
Alaska State Legislature
Capitol Building
Juneau, AK 99811

Dear Senator Pearce & Representative Porter:

Our organization represents over 130 recreation cabin and lot owners and users of the Taku River. Several members were introduced to the Taku river by their parents and have river background and experiences dating back more than fifty years. TRRA members are very familiar with the history of the various mines that have operated on both sides of the border in the Taku valley.

When the previous owners of the Tulsequah Chief announced plans to evaluate the potential for re-opening the mine fifteen years ago, we established and have maintained contact with them to insure current communications. Our group has continually stated that we neither support nor oppose the mine. The project is located in Canada and the approval of all permits is their responsibility. We have asked Redfern at several public meetings and by letter (copy attached) to please address our concerns about downstream water quality. To date, we have never received a response. Redfern or any operator of the Tulsequah mines must be prepared to insure the environmental quality of the river as it flows through Alaska. We do not want to experience a situation like the soil contamination at Skagway's waterfront. Alaska had no opportunity to secure a commitment or ownership of any environmental problems stemming from the Anvil mine had no responsibility to assist the state in dealing with these problems.

Before adopting resolution SCR NO.7 or HCR NO. 4, we request the legislature's support in urging Redfern Resources to answer the water quality issues important to the cabin owners on this side of the border. American Rivers are pushing hard to obtain a "Wild & Scenic River" designation on the Taku because of downstream concerns. We are opposed to this effort but it would help if Redfern would improve communications and not remain cavalier to our questions. The Taku River has been a major commercial trade and recreation route into the interior for hundreds of years and we want to keep it that way.

Sincerely

Cherie Rudolph

Cherie Rudolph
President

Cc: Members of the Alaska Legislature

TAKU RIVER RECREATION ASSOCIATION

P.O. Box 240295
Douglas, AK 99824

October 28, 1997

Mr. Norm Ringstad
Project Committee Chairman
Environmental Assessment Office, Second Floor
836 Yates Street
Victoria, B.C. V8V 1X4

REF: Tulsequah Chief Mine Project

On behalf of the members of the Taku River Recreation Association, we thank you for coming to Juneau on October 3rd with officials from Redfern Resources Ltd. to explain the current status of their plans to reopen the mine. The TRRA members represent the 130 plus property owners and users of the Taku river below the border. Because the project is located in Canada, we do not intend to take a position on the permit under review, but after the presentation, we do have several questions and concerns we would like to raise.

While the mine location and the road will lie in Canada, the water flow heads toward the U.S. border and is in Alaska in less than five miles. We wonder why there has been no contact or dialog with any property owner below the border? Our members have years of local experience on the river and many remember when the mine was operating in the 1950's. Local knowledge should be useful in understanding the impacts of the annual Tulsequah floods-especially on Flannigan's slough; on fish and wildlife migration patterns and on navigation upon the river itself (just to name a few). Why has the Alaskan side of the Taku river been excluded from any dialog during the preparation of the environmental assessment?

Additional questions are:

1. How and where will the equipment be staged that will build the road? Will it be flown in by helicopter in pieces and reassembled at various road headings? How will the fuel be hauled into the project before the road is complete? Officials indicated that Juneau would see minimum impacts during operation of the mine, but nothing was said about the impacts during the construction phase.

2. The impacts of the annual Tulsequah floods do affect Flannigan's slough and the lower Taku river. The Redfern presentation discounted the significance of these floods and stated that impacts on Flannigan's and other areas below the confluence of the Tulsequah and Taku would not be addressed. The Alaska border is 85 ft. above sea level which means the mine site will be over 100 ft. All liquid discharges, both natural and operationally created, will head directly into the Taku and twenty miles downstream to tidewater. After many years of

experience on the river, our members respectfully disagree with your current position and would ask that the impacts be addressed.

3. Will there be occasional uses of barges originating on the U.S. side? Where will they stage? What are the sizes, type of propulsion and planned frequency? If they are used, even during the construction phase, how will accelerated bank erosion be reduced? The river on the Alaska side is not as "wild & scenic" as some would like the public to think. There are 135 deeded lots and over 40 recreation cabins built between the border and the Taku Lodge, a span of about ten miles. Alaskan's have been using this area for a variety of recreational purposes for more than sixty years and the Tlingits sailed up and down the river for hundreds of years. The Taku river valley is not an untouched, seldom visited area as claimed by the project opponents.

4. What is the frequency and nature of flights originating in Juneau and flying up the valley? Often our coastal weather conditions may make Juneau the only "open" airport. Is Juneau a backup for routine flights or only in the case of emergencies?

5. Redfern should not overlook the need to control access to the road at the lower end (mine site), especially after the project is ended. During mine operation, we assume access will be controlled, but what happens after the mine is reclaimed. Boats could easily haul "four wheelers" to access the road at the mine. Will the entire length of the road be removed to prevent passage by any type of motorized vehicle?

6. Finally, what financial instrument will be required (such as a performance bond) to insure fiscal resources are available to clean-up or correct problems that might occur on the U.S. side of the Taku river as a result of mine operations? Where will water quality monitoring stations be located on the Alaska side? Where there is a difference in water quality standards between the U.S. and Canada, which regulations will prevail?

Thanks for giving us the opportunity to comment on Redfern's plans and communicate our concerns and questions. We look forward to their responses.

Sincerely yours,

Cherie Rudolph
President

cc: Membership of TRRA
Senator Ted Stevens
Senator Frank Murkowski
Congressman Don Young
Alaska Dept. of Fish & Game
Alaska Office of Governmental Coordination
U.S. Forest Service
Community Development Dept. - City & Borough of Juneau

Jeffrey Williams,
Box 3886,
Wood Street,
Whitehorse, Yukon Y1A 5M6

Mar 31, 1999

Senator Rick Halford
Chair, Senate Resources Committee
State Capitol
Juneau, Alaska 99801-1182
via fax: 1-907-465-4928

re: Senate Resolution No. 7

Dear Senator Halford:

I am a member of the Taku River Tlingit First Nation. I am from the Crow Clan.

This letter concerns the proposed Tulsequah Chief Mine on the Tulsequah River in B.C., within the Traditional Territory of the Taku River Tlingit First Nation(TRTFN).

Mining has been the main stay of the Atlin and TRTFN economies since the gold rush in the late nineteenth century. These communities have relied on the jobs and wealth creation associated with mining. We have seen the industry ebb and flow over time as commodity prices move up and down. We are currently in a serious slump in northern Canada as gold and other metals have fallen in value.

The Tulsequah Chief Project is a hoped for respite from this down turn. It will produce many different metals thus making it relatively immune from the price fluctuations of any one commodity. The Project has been subjected to intense environmental scrutiny, like no other mining project this community has experienced. The owners have expressed not only the willingness but the desire to work with the community to ensure that impacts are minimized and benefits to local people are maximized. Many of us feel confident that the environmental review and the attitude of the company (Redfern Resources) will ensure that the project will be a success for all.

Earlier, environmental groups tried to stop the project by spreading misinformation on the impacts of the project. It has now become clear to us in the north that they have cynically tried to manipulate the TRTFN into opposing the project. The TRTFN is currently split on this issue, with some people still worried about the terrible and inaccurate stories that the environmental groups have been telling. A growing number of the TRTFN look to the project as a key

element in the quest for growth of confidence, wealth, opportunity, and hope that it will provide both the aboriginal and non-aboriginal members of the local area.

This project is important to us in northern B.C. It can be the economic and social engine that starts a renewed beginning for our community and for Atlin, Whitehorse and Skagway. It has been reviewed and approved by an extremely intensive environmental review process. It deserves the support of the State of Alaska in addition to the support it has earned from the governments of Canada and British Columbia. I urge you and your colleagues to ensure that Resolution No. 7 is supported, that the request for a referral to the IJC be withdrawn and that the State of Alaska inform the world of its comfort in working with native and non-native Canadians in the orderly development of the north.

Yours sincerely,

Jeffrey Williams

United Southeast Alaska Gillnetters
PO Box 22427
Juneau, Alaska 99802
(907) 586-5860 Fax (907)780-6621
E-mail: usag@alaska.net

March 25, 1999

Senator Halford
Senate Resource Committee
Alaska State Legislature
Juneau, AK 99811

Dear Senator Halford and Committee Members,

The United Southeast Alaska Gillnetters Association (USAG) is writing to express concern and opposition to HCR 4 and SCR 7, resolutions regarding the Tulsequah Chief Mine. USAG is an organization of approximately 200 members and 35 associated businesses representing Southeast Alaska fishery. Of 485 permits in the Southeast Alaska gillnet fishery, 72.5% are Alaskan residents.

USAG is not opposed to expansion or development of new industries or other resource uses as long as it is conducted in a manner that protects the interests of those currently dependent on present resources quality and quantity. We have worked with Coeur Alaska in what we believe is a positive working relationship in the development of the Kensington Mine located in Lynn Canal. We are currently working with them as they go through the process of amending their permits for the changes they wish to make to their project following the optimization study performed over the last year. We have attached to our testimony today the Water Quality and Habitat Resolution USAG passed on 11/22/97 by our membership. (Attachment #1)

The Taku gillnet fishery supports approximately 100 boats at the peak of the sockeye run. The gillnet fishery harvests sockeyes, chums, cohos, pinks and kings within the district 11 Taku fishery. The troll fishery in Southeast Alaska also harvests an average catch of 57,400 coho per year. According to information from CFMD in the past 5 years this has provided an ex-vessel value of salmon in the range of $3.5 to $5.3 million. The sports fishery in Juneau significantly benefits from the salmon resources of the Taku watershed, in particular from the coho and chinook salmon stocks.

Salmon is of economic, cultural, social and recreational importance on both sides of the border. The Taku watershed is located within the traditional

territory of the Taku River Tlingit First Nation. This area is important for the harvesting of subsistence needs both fish and game. Canada also has a small commercial fleet that significantly utilizes the salmon resources of the Taku. As part of the Pacific Salmon Treaty, Canada and US have been participating in joint transboundary sockeye projects for the benefit of both countries. The success of these transboundary projects has been a bright spot over the past several years when treaty negotiations have not been successful.

While the sockeye salmon is very important to the gillnet fleet, the coho salmon which benefits the sports, charter, troll and gillnet fleet is very important to Southeast Alaska. Cohos have been of particular concern during this process as the largest stock of coho spawns immediately below the project location in the Flannigan Slough. Besides being spawning habitat, this is an area of critical rearing and staging area for juvenile salmon from throughout the watershed. The potential short and long-term impacts to this area have not been thoroughly analyzed.

The mine-tailings site will be located with a low-lying slough within an area subject to periodic flooding. Since the Tulsequah Chief mine is a highly acidic mine, the possible of leaching of acid and heavy metals into the Taku watershed is highly probable. Tailings pond seepage is expected to exceed the guideline for protection of aquatic life with regards to copper and zinc. Mine discharge should be treated prior to placement within the tailings pond. The seepage discharge from the tailings pond will be across several hundred meters of wetland shoreline, and it is anticipated that the metals will precipitate out as sulfides and the dissolved metals will be diluted by water moving through the wetlands. Monitoring is proposed downstream of this site, but is would be difficult to remediate the problem once the tailing pond was in operation.

The proposed road option presented in November of 1997 would have a road being built across 126 streams and tributaries of the Taku. We are concerned about the habitat disturbance in both the short and long term. Generally a road of this length and profile does not end up being decommissioned at the end of a project. USAG has concerns about the amount of spawning and rearing habitat that could be forever harmed.

We have enclosed the attachment to a letter sent to Mr. John Higginbotham at the Embassy of Canada dated August 28, 1998 that lists the outstanding concerns of Alaska on the Tulsequah Chief Mine Project. (Attachment #2)

The State of Alaska is not the only entity that is questioning the process that has been used to issue the mine certificate. The Taku River Tlingit First Nation was also invited to be at the table during the 3-1/2 year review and

participated in the review during the whole time period. The Taku River Tlingit First Nation has filed suit in the Supreme Court of British Columbia on Feb. 11 (No. A990300 of the Vancouver Registry) in order to voice their concern about the project.

USAG feels that it was very appropriate for the Governor to request an International Joint Commission (IJC) review of this mine proposal. We feel that it is possible to have the Tulsequah Chief Mine be operational in a safe manner that would protect the water quality and fish resources of the Taku Watershed. It is very possible that most of the Alaskan concerns will be met during the remainder of the permitting process but for us to feel that there is not a major risk that cannot be overcome we need some of the details of the project that have not been planned out to date. Therefore to determine the quantity of risk to Alaska it is most appropriate to have an IJC review that will address the differences between the permitting processes and whether this project will have an impact on the habitat necessary for salmon and the water quality aspects of this project.

An IJC review prevents and resolves disputes between the US and Canada under the 1909 Boundary Waters Treaty and pursues the common good of both countries as an independent and objective adviser to the two governments. (Mission Statement of the International Joint Commission) The IJC recommendations are non-binding unless requested by the two Governments for a binding decision. As of September 1998 this provision has not been used even though the IJC review process itself has been used on a variety of issues mostly on the East Coast and around the Great Lakes area. (Attachment 3 is the Mission Statement and Guiding Principles of the IJC.)

We hope that you will consider the importance of the Alaskan Commercial fishing industry as you deliberate on this issue and will agree that an IJC review would be in the best interests of the state.

Sincerely,

Kathy Hansen

Kathy Hansen
Executive Director

Attachment #1

United Southeast Alaska Gillnetters
PO Box 22427
Juneau, Alaska 99802
(907) 586-5860 Fax (907)780-6621
E-mail: khansen@ptialaska.net

Resolution
Water Quality & Habitat

Whereas commercial fishing in Alaska is critically dependent on maintaining water quality and healthy fish rearing habitat from both a biological basis and a market perception basis United Southeast Alaska Gillnetters Association will:

1. Participate in the development of government (national, state and local) policy actions that involve setting standards for water quality and habitat usage. The goal should be to maintain our current pristine water conditions and our viable and healthy fish rearing habitat.

2. Participate in public hearings for resource extraction projects or industrial development projects and insist that such projects be carried out according to standards that will insure and maintain present water quality and fish rearing habitat.

3. Strive to make it clear that fishermen are not opposed to economic development. Expansion or development of new industries can be good for everyone if it is conducted in a manner that protects the interests of those currently dependent on present resource quality and quantity. (In simple terms, creating new jobs is a good thing only if it doesn't come at the expense of current jobs!)

Adopted 11/22/97
Annual Membership Meeting

Attachment #2

Outstanding U.S. Concerns on the Tulsequah Mine Project

1. Unresolved mine site design issues including long-term site maintenance

- The placement of a large tailings pond for mine waste on an active flood plain, without either designing it as a permanent facility or securing an adequate data base to estimate the size and frequency of future flood and mass movement events.

  -- The short time period for collection of the data from Shazah Creek used to extrapolate a 200-year flood limits confidence in the flood prediction.

  -- Evaluation of the erosion potential of the Shazah Creek flood flow may be too limited in scope, given that the valley fill is described as an alluvial fan or flood plain. Additional detail is needed on the age of the fan and all potential sources of debris and erosion.

  -- The stability of the launching apron (of the riprap berm/toc) relied on for dam stability during flood events is not clear, as the scour is anticipated to extend beneath the apron.

  -- Given the need for perpetual maintenance if the tailings impoundment is located in the floodplain, U.S. agencies believe a feasibility study of long-term access for large equipment that addresses logistical considerations as well as cost is needed. This is particularly important as air transport would be the method to bring in necessary equipment to maintain the impoundment, and it remains unclear whether this is feasible given the limited runway and the fact the airstrip would be in the floodplain as well.

- In sum, U.S. federal agencies and the State of Alaska believe the option of a tailings disposal site at Paddy's Flat appears to have been prematurely eliminated from consideration, given that it appears to be a more environmentally sound option.

2. Long-term cumulative environmental impacts

- Construction of the proposed mine access road is likely to contribute to the development of additional mines in the area, which could dramatically increase environmental risks to the Taku River watershed. Canada's responses to date do not provide adequate information and assurances that water pollution in the Taku River watershed will be prevented or minimized over the long-term. We believe the possibilities of further development need to be addressed before irrevocable changes are approved in the watershed.

3. Water Quality

- Alaska has strict regulatory requirements that must be met before a mixing zone can be granted in Alaskan waters. British Columbia has agreed to address these requirements, but only during the permitting stage. Such a delay leaves other site locations and alternatives off the table for discussion, as the location of major project features will have already been approved by the time an assessment is made.

- Specific concerns about the mixing area relate to the fate of contaminants, principally metals; the concentration of contaminants and chronic toxicity at low flows; and unproven use of a diffuser in a volatile, glacial fed river. In addition, information is needed about the timing of seasonal flows and dilution factors of mine waste in the river in relation to the movement and spawning of fish, given that some life stages have very limited mobility or range and may not move from the mixing zone.

- Absence of discussion in project documents of the impact of untreated water discharge on the river until treatment begins in late 1999, as well as indication of who will be responsible and what the threshold will be for moving the effluent discharge pipe to account for changes in water flow.

- Long-term enforcement of water quality requirements. Past mining activities in the area that are causing water quality problems, including chronic ARD discharge from the current mine site since the 1950s, have yet to be corrected, whereas project documents indicate that

there are no known transboundary water quality or fisheries effects from any mine project in the area. Chronic toxicity at this location is an unknown. It will be influenced by factors such as the long-term exposure to mixtures of metals which may be additive in nature; bioavailability of these metals; bioaccumulation of some metals; physiological effects on reproduction and growth; and effects through dietary routes of exposure. Moreover, there are potential pH issues in the receiving creek waters and at the creek's confluence with the inlet. Although the inlet may have a great enough dilution and mixing to eliminate pH problems, it might be a different story in the freshwater receiving stream.

4. **Fisheries**

- Potential negative effects on important transboundary fisheries resources. While the proposed risk assessment appears to respond to a number of U.S. concerns, we believe acceptable risks should be identified, and potential impacts fully evaluated, before project certification.

- The potential effects of turbidity, as well as the deposition of fine particulate matter on the stream bottom. This depositional material fills interstitial spaces necessary for quality spawning habitat and productive invertebrate habitat. In addition, fine particulate matter associated with metals-rich tailings may be directly toxic to the invertebrate stream community through their exposure to the whole sediments as well as the interstitial water (pore waters) associated with those depositional sediments.