

The LOGBOOK of CSP²

The CENTER for SCIENCE in PUBLIC PARTICIPATION

"Technical Support for Grassroots Public Interest Groups"

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ALASKA

Over the past year the State of Alaska and the US Forest Service have been conducting a formal review of the amount of bond at the Greens Creek Mine, located in the Admiralty Island National Monument near Juneau, Alaska.

The bond held by the agencies covers the cost of mine site reclamation and closure, water treatment, as well as monitoring and maintenance of reclamation work, engineered soil covers, and surrounding water quality .

This review was driven by several factors: a realization that acid mine drainage was a significant issue for mine closure; a proposal to expand the tailings disposal facility at the mine; and, although not implicitly stated by the agencies, a recognition that then-existing bond was inadequate.

In 2001 an initial bond was set by the agencies at \$6 million. The next year this was increased to \$24.4 million. In 2003 this was increased to \$26.2 million.

CSP² conducted an independent review of the financial assurance calculation based on the information presented in the Reclamation Plan. This evaluation was developed to ensure that the financial assurance amounts held by the USFS for the state of Alaska are adequate to cover the costs of reclamation and closure as required by Alaska statutes and regulations.

Four different scenarios for reclamation were analyzed by **CSP²**, and the bond estimates for these scenarios ranged from \$30.5 to \$149.4 million. We contend that the present bond of \$26.2 million for mine reclamation significantly underestimates the potential cost of mine closure.

The Mine

The Greens Creek mine is a joint venture between Kennecott Minerals Company (70.3%) and



Greens Creek Mine Tailings Pile

Hecla Mining Company (29.7%). This underground mine and milling operation produces bulk concentrates of silver, zinc, lead, and gold. Greens Creek mine development began in 1987 with operations commencing in 1989. Operations were suspended in 1993 and reinitiated in 1996 after completion of mine development work. The life of mine is estimated to be 17 years at the designed production rate of 1,320 tons per day.

The polymetallic ore is removed from underground workings and transported to the surface mill and concentrator facilities where 3 separate concentrates of zinc, lead, a mixed bulk concentrate are produced, as well as some gold/silver doré which is produced at the Greens Creek mill. Concentrates are transported by road to the Hawk Inlet, loaded onto ships and sent to smelters for further processing. Tailings and waste rock generated during metals recovery are sent back underground (approximately 50%) or to dry storage facilities including a 30 acre tailings impoundment, plus a proposed 32 acre expansion, and 44 acres of waste rock sites.

The potential of acid rock drainage (ARD) in the tailings area and production rock sites has been identified in the reclamation plan. The mine site

CENTER for SCIENCE in PUBLIC PARTICIPATION

224 North Church Avenue
Bozeman, Montana 59715-3706

Phone: 406-585-9854 Fax: 406-585-2260
e-mail: csp2@csp2.org Web: www.csp2.org

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also contains 13.5 miles (68 acres) of road surface including 5.7 acres of road constructed from pyritic quarry rock, and 29 acres of mine site facilities including the mill.

CSP² Reclamation Cost Estimates

The CSP² review consisted of a detailed analysis of four different scenarios for mine reclamation. The major difference between the scenarios from a cost standpoint was the length of time after closure water treatment would be required.

The assumption by the agencies (based on the recommendation of the mine operator) was that water treatment would be required for only 7 years after mine operations cease.

In the CSP² preferred reclamation bond sce-

nario, we adopted this assumption, but also included additional cost that we believe had been underestimated by the company and agencies.

The cost for our preferred bond scenario is \$35.4 million. Even accepting the short term water treatment assumption, this amount is still significantly higher than the bond required by the agencies.

In our higher cost scenarios, we assumed water treatment would be required for 50 years (Scenario 3) and 100 years (Scenario 4). The longer requirement for water treatment makes the bond estimate much higher (see Table 1).

Even though we did not believe making the assumption of 50 or 100 years of water treatment was warranted at this time, the estimates show how potentially costly mine closure could be if long term water treatment were required. The relative magnitude of the increase due to long term water treatment would be true at any mine, not just Greens Creek.

We believe the increase in bond over the past 2 years is due in large part to the constructive criticism we have made to the agencies and the company over that period.

Although we are not satisfied with the methodology the agencies are presently using to calculate the bond (which is still to critique a company-submitted bond calculation) or with the amount of the present bond, we are still miles ahead of where we were in terms of public liability over the initial \$6 million bond set in 2001.

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Table 1. Greens Creek Mine Financial Assurance Costs Summary

Greens Creek Mine Reclamation Plan	Greens Creek	CSP ² Scenarios			
	Scenario 0	Scenario 1	Scenario 2	Scenario 3	Scenario 4
	Based on 2001 reclamation plan plus 2003 tailings expansion.	Based on 2001 reclamation plan plus 2003 tailings expansion with increased indirect costs.	Based on Scenario 1 with changes to unit costs.	Based on Scenario 2 with 50 years water treatment.	Based on Scenario 2 with 100 years water treatment.
Capital Costs	\$15,475,139	\$18,117,236	\$21,032,526	\$22,270,926	\$23,710,926
Operating Costs	\$10,573,961	\$12,379,271	\$14,377,271	\$72,319,447	\$125,665,735
Total	\$26,049,100	\$30,496,507	\$35,409,797	\$94,590,373	\$149,376,667

From the Executive Director

Change has been the theme for the environmental community, and for **CSP²**, over the past 12 months.

Funding

As most of us well know, foundation support has decreased significantly in the last year as a result of the downturn in the economy – a trend that continues despite pro-business administrations at both the federal and most state levels. This foundation “bite” has finally affected the Center in 2003.

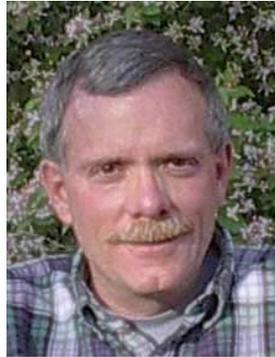
The good news is that unlike many non-profits, **CSP²** has not had to cut staff or programs. However, several of the long time foundations supporters of **CSP²** have had to curtail funding, and some of the remaining funders have decreased their level of support.

The Center has historically generated about half of its financial support from foundations. Recently these foundations have included: Brainerd Foundation, Seattle, WA; Bullitt Foundation, Seattle, WA; Leighty Foundation, Cascade, CO; Alaska Fund for the Future, Anchorage, AK; Alaska Conservation Foundation, Anchorage, AK; William and Flora Hewlett Foundation, Menlo Park, CA; McCune Foundation, Santa Fe, NM; True North Foundation, Fort Collins, CO; Turner Foundation, Atlanta, GA; and the Wilburforce Foundation, Seattle, WA.

Thanks to these foundations for their support.

This change in foundation funding is driven by several factors. The primary affect has been the downturn in the economy, which significantly decreased the net worth of many major foundations, including Turner, Hewlett, and Brainerd. Other factors include a change in US tax laws that lessen the tax advantages of financial giving for major donors, and the inevitable changes in foundation priorities in their charitable giving.

This change to the funding climate has impacted **CSP²** in several ways. First, we must rely more on cost recovery from services that we provide to our non-profit clients. So, although we have not had to cut the level of service we have provided to the environmental community and tribal governments, we have had to increase our level of fee recovery to match the decreased level of foundation giving.



*Dave Chambers is the Executive Director of **CSP²***

The second significant change is that unlike past years, where a majority of the foundation grants have been for general support – that is, funds which could be used to support a broad range of projects over a large geographic area, and also provide for administrative overhead – all of the foundation funding for 2004 will be for specific projects. This means we will have less latitude to provide support for small projects that do not fit the guidelines for the project grants that now fund most of **CSP²**'s work.

On the up-side, the funding climate is beginning to turn around. And, we will continue to provide support for unfunded projects wherever we can, even if we have to do this “after hours.” So, please don’t hesitate to call – we will continue to do our best to help you with technical analysis and assistance on mining issues.

Strategic Alliances

For many years **CSP²** has worked closely with the Mineral Policy Center in providing that organization technical advice and analysis. MPC does not have a technical mining professional on its staff. In order to provide MPC with a more responsive technical support, and to provide better access to technical research and analysis, **CSP²** has entered into an agreement with the Mineral Policy Center to provide technical support and research to MPC and its major programs.

The purpose of the strategic alliance is to provide communities, civil society organizations, and regulators access to the independent scientific and technical research and expertise so that they can make informed decisions regarding natural resource development and protection, and to ensure that extractive industry practices follow the highest standards. We have agreed to work together to increase access to scientific and technical analysis and information and to promote greater transparency and information sharing in the sector.

Not only should this working relationship provide MPC with high quality - more responsive technical support, but it should also help **CSP²** continue its grassroots technical work through support of MPC’s major programs, including the groups supported by its Circuit Riders.

In summary, while there are major changes afoot for **CSP²** and many of its clients and partners, we are viewing these changes as an “opportunity” to do better work, and eventually to serve more clients with a broader range of technical services. So, don’t hesitate to pick up the phone and let us know how we can help.

A handwritten signature in black ink, appearing to read "Dave Chambers". The signature is fluid and cursive, written in a dark ink on a white background.



THANKS to the Following Donors for Their Support!!!

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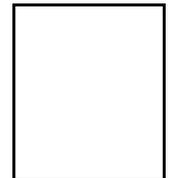
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- Become a Donor to the **CENTER for SCIENCE in PUBLIC PARTICIPATION**. You can help us to provide local public interest organizations with technical analysis and policy support. **CSIP²** is the only organization focusing on providing technical support to local groups on local issues. We realize that there are a lot of good causes, and that everyone is asking for your support. A donation of \$25, or more, would help our efforts in furthering rational debate on natural resource issues.
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