

Mining expert comments on Rock Creek

Part II of a series

Dr. David Chambers, founder of the Montana based non-profit organization Center for Science in Public Participation, visited Nome recently to hold a public presentation on hard rock mining and NovaGold/Alaska Gold Company's proposed Rock Creek mine. Chambers spoke with *The Nome Nugget* reporter Diana Haecker about mining practices and some concerns specifically related to the Rock Creek mine near Nome.

NN: Could you tell us a bit more about the technical aspects of the proposed dam breach upon closure?

DC: So, Charlotte [MacCay] came up to me after the talk, and I said that I think there wasn't very good information there about that the tailings dam is going to be breached after the operation closed. If that were the case, then the one in 475-year design event that I criticized would be appropriate because the dam doesn't have to stay there in perpetuity, but it also raises a number of other issues.

First of all, what is the physical stability of the tailings? Second of all, what is the geochemical stability of the tailings? Because now, if they breach the dam, the tailings become free draining to the environment, and when you subject material to floatation, which all the tailings will be subjected to, there are minor chemical changes due to that.

The floatation process itself isn't a very aggressive process. But if I read their information correctly, 13 percent of the tailings will go through cyanidation. That is a very aggressive chemical process, and there are chemical changes to the rock. I mean you're dissolving gold, so you are dissolving a lot of other things, and a lot more metals end up in solution in the cyanidation process than you would get if you just washed the raw material, which is what happens in placer mining; or if you just subject to floatation—which is basically water plus a number of different organic chemicals, some of which are toxic.

They aren't as toxic as cyanide, they aren't as toxic as metals that are both chemically and naturally liberated when the ore oxidizes, but you can't ignore the toxicity, especially the first flush of water through the material that comes through the tailings and runs out of them. Then all that material is fairly fresh and fairly concentrated.

So I went back and looked in the EID that was submitted by the company to the state, and I found two minor mentions of breaching of the dam. So I don't feel that I was negligent in realizing it so late. It becomes a whole different animal for me now.

This is sort of a pseudo-heap leach operation now, in the sense that they're not actively heap leaching on the tailings, but like the heap leach operation, you're left with tailings that have been subjected to a chemical process and are now pretty much free-draining to the environment.

In Montana, where we have a number of these heap leach operations, these heap leaches are pretty problematic, because we have a lot of water in Montana, and we have a lot of water here in Alaska and it can get flushed. In all fairness, we are dealing with more acid generation potential in most of these Montana mines than those that are here in Alaska. But again, the chemical process, nature and free leach-

ing, free draining – the end product in the process, in this case the tailings, are something that I would like to look much more closely at.

I did look at the humidity cell tests data that they presented, and the levels of arsenic in the tailings are significantly high even at the end of the test, after some 40 weeks of leaching. So what that tells me is that arsenic is definitely something that has to be looked at very carefully.

I think, and I've got to go back and check, the environmental document actually says that there will be levels of arsenic, and I think of antimony too, coming from the tailings that would exceed water quality standards. So the next question would be, all right, how are you gonna deal with this?

In a permitting sense, first of all it's a question for DEC. The DEC has the authority to allow the company mixing zones, both in surface water and in ground water, that may be in solution there. But I think from an environmental analysis standpoint, the point that I am making in criticizing the process and asking for a full EIS is that those are questions that should be answered now, and I think there are answers to them, but I don't think they should be left for further resolution after the operation has been already permitted. I just don't think that it is good policy. And to carry that thought to a logical extreme, if that's the way we're gonna do business, if we're gonna permit first and

"...we trusted the agencies to do a proper analysis and make these decisions and protect us and be prepared for not only these potential environmental problems but also be prepared for bankruptcies and the agencies have fallen down in all of those cases."

- Dave Chambers

figure out these crucial answers later, why not issue the permits and do no environmental analysis? Just let our technical professionals and the state and the Army Corps of Engineers

take care of it?

To answer my own question: Because it hasn't worked in the past. We've had problems with mines, we trusted the agencies to do a proper analysis and make these decisions and protect us and be prepared for not only these potential environmental problems but also be prepared for bankruptcies, and the agencies have fallen down in all of those cases. And that has happened in Alaska. So, that's why I argue that the public needs to be involved in this environmental review process, that we need to have proper analysis and appropriate time.

NN: Can you say in which instances an Alaskan mine went bad?

DC: I think for environmental analysis, Greens Creek mine is a good example, where the initial projections that were done with regards to an EIS, as a matter of fact, that said that the tailings at Greens Creek are not acid generating. They ARE acid generating. It said no acid generating rock would be placed on the surface at Greens Creek. There IS acid generating waste rock at Greens Creek placed on the surface of Greens Creek. So now we're going have to go back and have to figure out how we're going to deal with those issues.

With regard to reclamation, there has been one bankruptcy of a chemical process — it actually was a heap leach mine — the Illinois Creek mine, and there was insufficient reclamation surety held by the State of Alaska to close the mine. They had to actually keep operating it, in order to generate enough funds to close it. And that's not the way it's supposed to work. The company

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Tuesday, November 7, 2006

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Media That Matters

• Chambers

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that was running the mine went bankrupt and the state and or the federal agencies have an agreement to jointly hold reclamation sureties and they are supposed to have enough surety on hand to close that mine at the point a bankruptcy were to occur so that it wouldn't cause any significant environmental damage.

Well, they didn't have enough money on hand. Why? Because there is a tendency on the part of regulators and on the part of companies who provide all the initial detailed reclamation estimates to regulators to underestimate those. And it's easy to see why. It's expensive and you try to minimize expense. And if a regulator complains that a company is underestimating the cost, they open themselves to criticism. The Center for Science in Public Participation has done detailed analyses of all the reclamation bonds in the state. And we still think the state is still significantly underbonded. We published a paper on that and I'm going to give a presentation [at an EPA mining conference] on that next month in Tucson. We were concerned and wanted to take a quantitative look at that, and we have, and I stand behind that information.

NN: In your opinion, was the public adequately involved from your review of the situation? What does normally take place?

DC: Rather than saying that corners were cut, I'd say that the process was just incomplete. It stopped short. With the data that I reviewed, I would've expected the agencies to go back to NovaGold to say we need more information before we put this out for public comment. And in fact the agencies did do that in the sense that they required more testing of particular acid base accounting at Big Hurrah - but they already issued the permits. So I as a member of the public myself I have no opportunity to comment on what the results of those test are before they issue a permit. That's a done deal.

NN: How do you feel your concerns were answered in the DNR's response to comments?

DC: I reviewed the response to comments, and most of the responses fit one of two categories. The most frustrating one is: "We're gonna look into this later." I heard that response to several of my issues. And the second response is: "We don't agree with you." All right, I'm willing to accept that there are other opinions out there. And if it comes down to one professional opinion versus another, I guess I can ultimately say one of two things. Either: you are right, or you were wrong, and I told you so. But the frustrating part is when they say, "We'll take care of this later." They have an obligation to do that now, not later.

Can't it be done right? Yes. Can I say something is going to go wrong? Well, yes, there are going to be things going wrong. We already had one transportation accident. And the question to that is "How do you respond to those? How do you fix them?" Red Dog, unfortunately is a bad example. They had water quality issues in 1990, and it took over a year for the company to admit that they were responsible for that problem, and that's not good. So the company can't say, "we're not gonna have any problems", because they don't know that. And I can't say they will have serious problems, because I don't know that either.

The community has to decide whether the risk - whatever those risks might be - are worth it to the community, and that's where you go beyond the technical standpoint. Now you have to factor economic and social issues in there. Of course, that's what everybody is struggling with at those meetings. I'm trying to be technical, but you have to take all three of them into consideration.

When you build the mine you

got surface disturbance that is not going to go away. You are going to have waste piles and tailings piles, and they pose some risk because of the chemical nature of each of them. We are reaping the economic benefits and social costs and benefits, but we're leaving some liability, big or little, for future generations, and they don't realize the same benefits that we do.

NN: The permits are issued and construction is underway. What can the public do that ensures that they are involved from this?

DC: I think the public needs to stay involved with the mine. People that are concerned need to ask their public regulators how this mine is going, and if they're told it's going fine, ask, "How do you know it's going fine? Can you show me the data and explain to me the data that proves to you that everything is fine and going as planned?" If they can do that, that's good, if they can't, then keep pressing.

NN: Thank you.

BLM reviews public comments on Kobuk-Seward Peninsula plan

By Diana Haecker

The federal Bureau of Land Management is in the process of reviewing public comments on its proposed Kobuk-Seward peninsula resource management plan.

According to BLM planning doc-

uments, the plan is needed to update the Northwest Management Framework Plan from 1982. The areas affected are 13.1 million acres of federal lands administered by the Fairbanks District Office in the Kobuk area and the entire Seward

Peninsula.

Public scoping meetings for an Environmental Impact Study were held in spring of 2004 to determine what the public's thoughts are on

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Photo submitted by Sharla Pate

RETIRING— Staff members, past and present, gathered together to honor AMCC superintendent Rita Anderson at her retirement party on October 13. During her 20 years at AMCC, Rita worked as a correctional officer, shift supervising sergeant, probation officer, assistant superintendent and superintendent. Rita and her husband Rudy will retire to northern Minnesota. Happy retirement Rita!

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