

January 20, 2009

Tom Last
Planning Director
City of Grass Valley
125 East Main Street
Grass Valley, CA 95945

Subject: Idaho-Maryland Draft Environmental Impact Report

LETTER OF SUPPORT

Dear Mr. Last,

I'm Jim Wood, former Manager of Material Science and Testing for the Golden Bear Ceramics Company. I say "former" because it has been about 18 months since I was on the payroll for Golden Bear having been laid off in 2007. This unfortunate development occurred due to the refocus of the parent company, Emgold, to direct all its financial resources into the environmental review process to obtain the operating permit for the Idaho-Maryland Mining Project. I've been a long term resident of Colfax and had been working for another Grass Valley company, Anderson Consulting Group, before beginning to work for Golden Bear.

My background is as a research geologist with an emphasis in petrology, ie., the study of rock. I'm only one of the several "experts" that Golden Bear hired from the local Grass Valley community to build its research staff to develop this new technology to be able to turn otherwise unusable waste mineral materials into stone tile and other building products. Golden Bear sought out some of the most creative and brilliant engineers and scientists that I have ever worked with in my 30 year career in the field of geology to fill its staff. This creative group of people was able to advance the development of this new tile making technology based on the Ceramext process to the point of producing stone tile from waste mineral fines (aka "tailings") in a continuous automated tile production pilot line. Like me, the other Golden Bear professionals still remain in this community and have tried to find suitable employment elsewhere to the best of their abilities. For specialized professionals of our sort, it's very difficult to find local employment in our chosen fields. Most often we have commute to urban areas with the types of manufacturing or technology companies that can utilize our specialized skills.

In spite of the official "down time" of Golden Bear which as been idled in recent months; those of us dedicated professionals continue to believe in Golden Bear and the long term implications to society and industry that the success of this technology could bring. Thus, we have worked behind the scenes to continuing to support the company to achieve the independent financing that will be required to launch Golden Bear as an independent company. This move is crucial to ensure the success of Golden Bear with the likely prospect of some period of regulatory delays in the IM Project. You should not think that this means that Golden Bear will not be a part of the IM Project. On the contrary, as our continued development of Golden Bear has been hampered, we believe the best recipe for success of Golden Bear is to move ahead in technology development

without delay...this technology is too important to sit on the shelf any longer. This would benefit the success of the IM Project as well.

The unfortunate reality of the delay in the permitting process will mean that our development of the Golden Bear tile technology will likely occur in another nearby community that is more “new technology friendly”. We have had no shortage of nearby communities in the adjacent areas of Placer County that don’t appear to have the degree of concern about building our technology in their community to the degree of concern shown by the Nevada County community. Our conversations in this regard have been with various development agencies within the Cities of Auburn, Lincoln, Roseville, Sacramento, and the Counties of Sacramento and Amador. If Golden Bear does end up initially developing its technology somewhere besides Grass Valley, we certainly have no shortage of invitations.

In the big scheme of things, it makes no difference to the Golden Bear professional “brain trust”, what other local community we end up going to continue our development work. The point is, its time to end this development delay and get this show on the road—we have a lot of important work to do and without further delay!

Over the last couple of years since we have been able to produce attractive stone tiles from waste mineral fines, we’ve been gathering a lot of attention from various industries that have such waste materials to cope with as far as “what to do with the stuff”. One of the most recent inquiries about our technology has come from the coal burning power generation industry. People in that industry have recently been forced to look for long term solutions to the disposal of power plant fly-ash aside from merely stock piling or land filling it. Recent events in Tennessee have shown the pitfalls of merely impounding the massive amounts of waste mineral fines that are regarded as unusable to be used for other products or industrial processes such as fly-ash and mine tailings. The implications of our Golden Bear stone technology that can use these worthless waste materials as feedstock to produce high quality and high value stone tile and building products is almost beyond comprehension.

You probably know that there are major developments recently in the Green Building industry with the adoption of the new building code requirements requiring “Green Building” standards not only in California but in many other states as well. We now live in a different world in which building products have much higher value if they have recycled content and are manufactured close to the market to lower energy consumption and air emissions caused by long distance transportation.

The products that would be produced by Golden Bear will fit well into this new Green building paradigm. The development of this technology will also mean major changes to the way in which these products are marketed and sold to the consumer. Currently, most tile and building products that are manufactured all over the country or overseas require elaborate marketing and distribution networks. In this new era of “manufactured close to the market” concept, Golden Bear would likely adopt “direct sales” strategies if feasible. The implications of this change in marketing philosophy would not only mean major increases in sales revenues for Golden Bear but would also mean striking increases to local tax revenues. An analogy of the prospective sales estimates from merely a small tile manufacturing development plant in our current building would make the sales revenues from a car dealership look like a kid’s neighborhood lemonade stand by comparison.

Skeptics to the notion of our recycled waste mineral stone tile product are dubious that our products are of the quality to compete with current commercial products or that there is much demand for such products. Let me assure you from the public's reception to our products at recent Green Building Product exhibitions are that potential customers want our products NOW. Architects and designers are looking for greater choices of tile products with recycled content for their projects which increasingly have to meet "LEED" standards set by the US Green Building Council (USGBC). In less than one year, ALL new construction in California including residential will have to meet these new Green building standards. There is a demand for our products now and it will increase exponentially in merely one year from now.

It's been about two years since about 2,000 square feet of our tile products were installed in a large home and business building in Auburn to test and demonstrate the installation and long term performance characteristics of this new recycled building product. Not only did this stone tile product get raving reviews by the professional tile installer—Don Dean of Mission Tile in Grass Valley—but its long term performance is excellent, meeting our greatest expectations.

People are amazed to learn that we are producing a recycled tile from unusable waste fines without the use of artificial additives or binders. They are incredulous that we claim to make a superior tile product from 100% of the waste materials. Actually, it is very easy to make this claim because our Golden Bear technology simply returns the mineral fines "back to rock". Soon, we are expecting the favorable award of a long awaited Composition Patent from the US Patent Office after a 3 year patent examining process. From our extensive research about the nature of this unique recycled stone tile material, the awarded US Patent will grant us sole ownership to the composition and manufacture of "synthetic rock". This will be a major coup in the ability to consume and recycle the massive volumes of waste mineral material on a global basis.

It is sad that such a globally important recycling technology has to be politicized as it has with its partnering with this gold mine project in Grass Valley. However, many people even in the environment activism circles realize that mining will continue and is a necessity to our society and technology base. Thus, a new technology development to clean or "green" such necessary mining activities are most welcome.

One important member of the National Sierra Club who sits on various executive committees has visited Golden Bear and the IM Project on more than one occasion to review our new technology. Although this person is most favorable to our new technology and wishes to support us by networking with possible financial backers, a public backing by this person is currently out of the question in light of the politicization of this technology and the controversy swirling around its local development. However, this person wrote a striking commentary to put the importance of this technology into perspective. I'll close this letter with this message...

Reduce, Reuse, Recycle

Reduce, reuse, recycle. This is the mantra of zero waste—the future of environmentalism. To achieve sustainability, we must engineer waste

management into the production process, not try to remove waste following production.

For example, farmers cannot be sustainable by burning their fields after harvest, thus converting their waste into air pollution. Manufacturers who use non-recyclable packaging cannot be sustainable if all that packaging must end up in landfills. Power generation is not sustainable that uses non-renewable fossil fuels to create electricity.

Sustainability means looking at a production process from beginning to end and designing a continuous process that never taxes the environment.

One of the most environmentally challenged industries today is mining. Every mine has its own peculiar problems based on geological and sociological conditions, but one problem that is common to all mines is the disposal of the waste mineral fines at the “tail” end of the mining process or “tailings”. Mining involves taking ore from the ground and extracting a precious element or other mineral commodity such as sand and gravel products. After the precious element is extracted, the tailings are a waste product that demands attention.

Historically, mining operations just left tailings near the mine and left town when they extracted the riches beneath the ground. Obviously, this is not sustainable and mining communities all over the world are cursed with the problems of tailings. What is the sustainable solution? Shut down all mines? That is a preferred solution to one extreme faction in the environmental movement.

According to an axiom, “if it isn’t grown, it’s mined”. The reality is that world wide demand for mined materials is accelerating, not declining. We could just shut down mining in California or even in the US, but to meet growing demand, that would just put additional pressure on mining throughout the developing world where sustainability has no meaning.

Many domestic mining companies have developed strategies for dealing with tailings including backfilling underground mines or refilling an open pit mine or quarry and covering the waste piles with topsoil. But these strategies involve tremendous expense to the mining operations. The legitimate fear of a community is that once the precious commodity of a mine runs out, the mining operation will close up and leave a legacy of tailings for the next generation.

One possible sustainable approach to tailings reduction is to divert the waste mineral fines to produce ceramic tile. If “Tailings to Tile” is a profit center instead of a pure expense, the mining community is assured that the tailings will not be a part of the mine’s legacy.

Tailings to Tile involves high heat and considerable energy use. However, compared to conventional ceramic tile production that relies on the mining of new

raw materials and long distance transport of the finished products to market, Tailings to Tile production could be a big energy saver. Conceptually, the idea is sound. Most tile manufacturers must begin with mining new raw materials. With Tailings to Tile, the mining is already done and the raw material for tile manufacturing is paid for as a by-product of the mining operation. The cost analysis of the Tailings to Tile option would vary from mine to mine, but since the raw material costs are next to nothing; this is a strong contender for addressing the tailings waste problem of many mining operations.

Tailings to Tile is not so different from a standard recycling process. We buy a bottle of water, drink the water and recycle the plastic bottle. A recycler takes the bottle and turns the plastic into another product for a profit. We drink the water and the recycler deals with the waste. In Tailings to Tile, the mining company extracts the precious metal and the recycler (tile maker) deals with the waste rock. This is exactly the idea behind reduce, reuse, recycle.

“Eureka” is a concept that links the Greeks with the discovery of gold in California. Originally, the scientific thinker Archimedes cried “Eureka” (I found it!) while in a bath when he discovered the solution to issues of displacement while pondering a problem of how much gold was contained in a regal crown. California adopted “Eureka” as a part of the state seal in 1849 due to the discovery of gold. In 1963, California adopted “Eureka” as the state motto because Discovery had become such an important part of the California experience—in ways far beyond gold mining.

Now we have an opportunity to close the loop. Now we may discover the sustainable way to mine with Tailings to Tile—solving the most troubling environmental legacy of the mining industry. Our “Eureka” in this case might not be the yellow metal, but the path for sustainable mining not only in California but throughout the world.

From the point of view of our Golden Bear professionals, the Draft EIR is complete and the City of Grass Valley should move ahead in the review process.

With best regards,

Jim Wood
Registered Professional Geologist in California