

January 6, 2009

Mr. Tom Last, Planning Director
City of Grass Valley
123 East Main Street
Grass Valley, CA 95945

Re: Idaho Maryland Mine
Draft EIR Comments

Dear Mr. Last:

Below please find my written comments pertaining to the hazardous materials and site cleanup section of the Draft EIR (Section 4.6 of Chapter 4). Please make them part of the "the record" and forward them to ESA for a response in revising the draft EIR.

What I find most disturbing, and a fundamental flaw in the draft EIR, is that nowhere in the document (including specifically the hazardous materials section) is there any table or list identifying by name, quantity or volume, all of the process chemicals that the mine will use daily. Clearly, multi-ton quantities of various hazardous, reactive and explosive chemicals will be used daily and handled and stored on-site, yet no use, storage quantity or material handling details are provided (buried in the "appendices" for the blasting effects I note that IMM plans to use 4 tons of explosives daily).

How can one evaluate the risk when the key EIR document provides no useful information? Who is responsible for this glaring omission? Was it another calculated effort by ESA through IMM to misrepresent and "hide the ball?" Is this indicative of ESA's ability to compile an objective and scientifically accurate document? The draft EIR is an extremely poor work product in need of substantial revision.

Given the controversy surrounding this project, especially its' size and scope, and its' location literally across the street from downtown Grass Valley, I am of the belief it was an intentional omission by ESA not to list actual chemical daily use and storage quantities to misrepresent the inherent project risks. Further, I include a letter which I request become part of the record (and which The Union would not publish), addressing the extent to which Emgold / IMM have worked to influence the local political process and public opinion.

Thank you for your time and the opportunity to comment.

Very truly yours,

Gregory P. Martin, B.A., M.S., C.I.H., J.D.
Nevada City, CA

The following comments are submitted in response to review of Chapter 4, Section 4.6, entitled “Hazards and Hazardous Materials.”

DEIR – Chap. 4, Sctn. 4.6 – Comments

4.6.1 Historical Uses / Idaho-Maryland Site (pg 4.6-1)

Issue 1: The DEIR reports this site as containing “areas with coarse mine tailings on the surface, . . . overgrown with . . . vegetation” and “appearing to have leached out and re-crystallized some chemical salts.”

Comment: Initial site characterization work by MACTEC was a first step to identify potential problem areas, but is wholly inadequate for accurately and fully evaluating past contaminant impacts before commencing new project construction operations on the same land. The appearance of crystalline salt surface deposits is indicative of a significant concentration of contaminants in the underlying soils.

Historical land uses with obvious surface contamination, including all areas where historical mine tailings are present, need to be sampled and fully characterized (beyond initial “due diligence” surveys) to identify and delineate the extent of possible hazardous substance soil and water contamination, and remediation as needed, before “disturbing” historical soils for new mine project construction / operations. Tailings piles must be analyzed for arsenic, mercury, nickel, lead and metals.

Issue 2: The DEIR reports the Lausman Mill site has “a log pond currently filled with vegetation, . . . a former underground storage tank (UST) excavation pit and . . . soil stockpile and thirteen 55-gallon drums . . . and the open runoff . . . suggest the possibility of hazardous materials accumulating in the pond.”

Comment: Initial site characterization work by MACTEC was a first step to identify potential problem areas, but is wholly inadequate for accurately and fully evaluating past contaminant impacts before proceeding with new mine construction and operations on the same land. The “log pond,” UST pit and soil stockpile, and 13 abandoned 55-gallon drums need to be sampled and fully characterized to identify and delineate the extent of possible hazardous substance soil and water contamination, with remediation as needed, before commencing new project construction. Before any “surface disturbance” historical waste rock on-site (“piled to a height of 10 feet” [pg 4.6-2]) should be examined for possible asbestos and silica content.

If this project is allowed to proceed, the Idaho-Maryland portion of the site will be the central work / process area for the mine’s operations. It is therefore of paramount importance to identify, fully characterize, and cleanup as necessary to the satisfaction of DTSC and the RWQCB, all identified areas of potential historical contamination.

4.6.1 Historical Uses / New Brunswick Site (pg 4.6-2)

Issue 3: The DEIR reports “waste rock piles” on the “northwestern part of the site” and also at the Round Hole site.

Comment: Before any surface disturbance for new project work, historical waste rock piled on-site should be examined for possible asbestos and silica content.

4.6.1 Potential Contamination Sources / Lumber Mill Operations (pg 4.6-3)

Issue 4: The DEIR lists various chemical compounds “commonly associated with lumber mills” including pentachlorophenol, tetrachlorophenol and chromated copper arsenate that may be present.

Comment: Water and soil testing for characterization of the contaminated “log pond,” UST excavation pit and soil stockpiles at the Lausman Mill Site (See Comment/Issue 2) must be analyzed for the various contaminant species including phenols, hydrocarbons, mercury, arsenic and metals. Remediation and cleanup measures must be implemented as necessary before beginning new project work on the same land.

4.6.1 Leaking Underground Storage Tanks (pg 4.6-3)

Issue 5: The DEIR reports two UG tanks were removed in 2002 with 35 cubic yards of contaminated soil excavated and removed as hazardous waste, while stockpiling another 400 cubic yards on site. Lead continues to be detected in water samples. Historical UST database information recorded leaking tanks at this location.

Comment: The remaining stockpiled soils need to be sampled and characterized. The fact that lead continues to be detected in the water indicates lead is still present in the soil column and continues to percolate / leach into the local water table. Site soil characterization work (and remediation) remains incomplete and thus inadequate for discussion and evaluation of its’ impact within the DEIR. If the RWQCB has not issued a “No Further Action” letter for this site area, cleanup is ongoing, contamination remains and additional remedial work needs to be done.

Historical land use with previously identified contamination needs to be sampled and fully characterized to identify and delineate the extent of possible hazardous substance soil and water contamination and needed remediation before commencing new project operations on the same land.

4.6.1 Results of Due Diligence / Idaho-Maryland Site (pg 4.6-4, 5)

Issue 6: The DEIR reports there are “approximately 19, unlabelled 55-gallon . . . drums, some of which are leaking . . . in multiple locations on the site.” The DEIR provides only speculation as to their contents.

Comment: The Lausman Mill site area reportedly contains 13 drums. How many drums are actually on site and at what location? Are there 19 total drums or 32, or is this just an “approximation?” This information is ambiguous and completely inadequate. The stated fact that “some of [the drums] are leaking” but have not yet been characterized and removed is a continuing violation. Is this an example of IMM’s purported “best management practice” going forward? These drums should have been characterized and removed by IMM, as the responsible party / property owner, long ago. See Comment/Issue 2.

Historical land use with unidentified drums and contamination needs to be sampled and fully characterized to identify the extent of possible hazardous substance contamination and needed remediation before commencing new project operations on the same land.

Issue 7: The DEIR states that IMM will “perform basic soils parameters testing on the crystallized mineral deposits.”

Comment: Basic soil testing for the hazardous criteria is only a first step and will likely not be adequate. The presence of surface crystals is indicative of substantial underlying soil contamination. Further sampling and characterization work may be required. See Comment/Issue 1.

Issue 8: The DEIR reports that investigations to characterize historical mine tailings / waste piles are ongoing but that “samples revealed concentrations of arsenic, lead, nickel and mercury” that exceed permissible DTSC limits. The DEIR further states that “subject clean-up activities are not part of the scope if [sic] this EIR review.”

Comment: The fact that mine tailing piles with toxic contaminants are still present at various site locations renders the DEIR’s discussion and evaluation of their current impact upon the proposed project completely inadequate. All mine tailing piles need to be fully characterized, their areal extent (laterally and to depth) established and proper remediation measures implemented as necessary. Suspect tailings must be analyzed for arsenic, mercury, nickel, lead and metals. See Comment/Issue 1.

Future site cleanup activities, for identified areas with past mine tailing contamination, indicate a serious risk / impact from historical operations upon future IMM operations that should be evaluated within the DEIR. Absent full characterization of historical contamination it is inadequate and impossible to evaluate a current impact. For example, once actual cleanup of historical mine tailings piles commences, field conditions upon excavation / sampling could result in a different set of areal contaminant conditions and concentrations and needed soil / debris removal quantities. This could result in a drastically different and more costly investigation and remediation from what is currently anticipated. Existing contaminated areas must be resolved to the satisfaction of the DTSC and RWQCB before any new project construction starts.

4.6.1 Results of Due Diligence / New Brunswick and Round Hole Sites (pg 4.6-5)

Issue 9: The DEIR reports that ERRG conducted preliminary due diligence investigations at these two sites and recommends various additional soil sampling for metals and potential asbestos containing rock.

Comment: The fact that toxic and hazardous contaminants are still present at various site locations (asbestos, cyanide, arsenic, mercury, metals, PAH’s, PCB’s and hydrocarbons) renders the DEIR’s discussion and evaluation of their impact for the proposed project completely inadequate. EERG’s investigative sampling recommendations (at pages 4.6-5, 6) must be rigorously followed and implemented.

Future cleanup activities at these two sites indicate a serious risk / impact from historical operations upon future IMM operations that should be evaluated within the DEIR. Absent full characterization of historical contamination it is inadequate and impossible to evaluate a current impact. For example, once actual cleanup of historical mine tailings piles commences, field conditions upon excavation / sampling could result in a different set of areal contaminant conditions or concentrations and soil / debris removal quantities. This could result in a much different and more costly investigation and remediation from what is currently anticipated.

4.6.3 Significance Criteria (pg 4.6-12)

Issue 10: The DEIR baldly asserts that because the “proposed project would not be located” near a school or airport it thus would “not interfere” with any existing emergency plan “because of its [IMM’s] relatively remote location.”

Comment: This is completely inadequate and a ridiculous statement. The proposed project is anything but in a “relatively remote location.” It is literally across the street from downtown Grass Valley, many large and small businesses are immediately adjacent to the site, and single family homes and apartments border the project all around. Sierra Nevada Memorial Hospital is just 1000 feet away.

The project’s emergency response / evacuation plans needs a through vetting and must be coordinated with those of Grass Valley, SNMH and surrounding area businesses and residents. What effect would a multi-ton explosion or cyanide release have on all these businesses and people who live and work right next door? The DEIR is fundamentally flawed in failing to assess and evaluate the impact of a likely accidental spill / release and explosion, or a potential catastrophic event. Such hazardous material accidents, given the project’s

huge size and complexity with multi-ton quantities of various hazardous, reactive and explosive compounds that will be used and stored daily are reasonably foreseeable and “create a significant hazard to the public.” Accidental releases given the size, complexity and duration of this project are “reasonably foreseeable” (Significance Criteria- bullet 2). Absent discussion and a realistic assessment of likely spill / release impact scenarios, and absent review of the project’s purported emergency plan, this category of impact and its’ effect upon the local community cannot be adequately determined.

4.6.3 Impacts and Mitigation Measures / Impact 4.6-1 (pg 4.6-12)

Issue 11: The DEIR merely references the use of “miscellaneous hazardous substances” “during project construction, operations and reclamation activities.”

Comment: This is wholly inadequate and a fundamental misrepresentation of the many hazardous materials that are expected to be used. No impact or risk can be adequately evaluated without specifically identifying (1) the chemical species or compound that will be used; (2) the volume or quantity of each species that will be used daily, with on-site storage maximums provided; and (3) actual use, handling / dispensing / on-site transport and use conditions. Accidental spills / releases are reasonably foreseeable and will occur given the huge size and complexity of the project with the multi-ton quantities of various hazardous, reactive and explosive compounds to be transported, handled, used and stored daily. How will these hazardous chemicals be handled and transported on-site? Will there be closed pipe transport systems, 55-gallon drums /carriers or dispensers, buckets, hoses, shovels? The DEIR provides no information.

Mere “regulatory compliance,” absent a specific list of all chemicals and quantities used and stored and how they are expected to be handled and transported on site, is not mitigation. “Following manufacturer’s recommendations” is a necessary first safety step but it is not mitigation. The effectiveness of “worker training” (“WEAP” – Mitigation Measure 4.6-1d) and individual worker compliance with “environmental rules” is highly suspect for a project of this size and complexity. Diligent “voluntary compliance” by IMM staff and every regular mine employee (plus various on-site contractors/vendors) every day 24/7 for a mine of this size with so many hazardous chemicals (stored in tonnage quantities) is extremely doubtful. “Best management practices,” “hazardous substance control and “emergency spill /response plans” will be ineffective unless well written, thoroughly vetted, routinely practiced and rigorously implemented by IMM staff, every single employee and all contractors/vendors on a 24/7 basis. Complete and effective compliance 24/7 is most unlikely and a hazardous material accident / release is reasonably foreseeable.

4.6.3 Impact 4.6-2 (pg 4.6-14)

Issue 12: The DEIR states there could be “unidentified dredge tailings and sediment” containing toxic concentrations of hazardous materials with the “potential that unidentified subsurface contamination could exist at the site.”

Comment: All historical site evidence where contamination potential exists must be fully characterized and identified with appropriate remedial actions implemented as necessary prior to any new project ground disturbance or construction activities. See Comments/Issues 1-9. Arsenic, mercury, nickel, lead and other metals may be present.

Health and Safety Plan mitigation measure 4.6-1c must include criteria for addressing potential off-site air exposures to residents and businesses because so many individuals live and work basically “across the street” from IMM.

Emergency Plan notification to responsible agencies is not mitigation; it is a call for help (after the fact). Additional on-site controls for immediate response by trained IMM staff must be available and incorporated. For example, tarpaulin covers, clean fill /sand, containment booms, and spray / wetting procedures for airborne

releases to immediately control and minimize off-site emissions, before the arrival of responsible agency staff and any actions that may subsequently be taken, are of paramount importance.

Regulatory compliance is not mitigation. “Best management practices,” “hazardous substance control” and “emergency spill /response plans” are ineffective unless well written, thoroughly vetted, routinely practiced and rigorously implemented on a daily basis. Diligent “voluntary compliance” by every IMM staff, every regular mine employee and all contractors / vendors every day 24/7 for a mine of this size is extremely doubtful.

4.6.3 Impact 4.6-3 (pg 4.6-15)

Issue 13: The DEIR provides only a cursory mention of the many hazardous chemicals to be used in processing the crushed rock /ore. No information at all is provided about volume or quantity or handling and storage. Tons of hazardous and reactive chemicals and explosives will be used daily and stored on-site.

Comment: This is wholly inadequate and a fundamental misrepresentation of the many hazardous materials that are expected to be used. Literally tons of hazardous and toxic chemicals will be used and stored daily. Nowhere in the DEIR is there a list identifying all chemicals nor any information about daily use or storage quantities or conditions. Failure to specifically identify and list daily use and storage quantities of major use chemicals is a fundamental flaw of the DEIR. Moreover, it is clear that sodium cyanide will be provided in either granular or liquid form. This is inadequate. Liquid and solid compounds each with the potential for a toxic gas release require different use, handling and storage conditions. One cannot evaluate the impact without specifying which will be used and its quantity or volume. Storage facilities should be at the maximum distance from homes and businesses. Additionally the chemicals identified at page 2-37 are not all the same as those identified at page 4.6-16. Which is correct? See Comment/Issue 10, 11.

No impact or risk can be adequately evaluated without specifically identifying (1) the chemical species or compounds that will be used; (2) the volume or quantity of each that will be used daily, with on-site storage maximums provided; and (3) actual use, handling / dispensing / on-site transport and use conditions.

Mere “regulatory compliance,” absent a specific list of all chemicals and quantities used and stored and how they are expected to be handled and transported on site, is not mitigation. “Best management practices,” “hazardous substance control and “emergency spill /response plans” are ineffective unless well written, thoroughly vetted, routinely practiced and rigorously implemented on a daily basis. Diligent “voluntary compliance” by every IMM staff, every regular mine employee and all contractors / vendors every day 24/7 for a mine of this size is extremely doubtful. The effectiveness of “worker training” (“WEAP” – mitigation measure 4.6-1d) and individual worker compliance with “environmental rules” is highly suspect for a project of this size. It is reasonably foreseeable that an accidental spill / release will occur because of the size, complexity and duration of the proposed project.

4.6.3 Impact 4.6-4 (pg 4.6-17)

Issue 14: The DEIR states that “the applicant [IMM] is working with DTSC to remediate arsenic, lead, and mercury contamination . . . associated with past mine tailings.

Comment: This statement is misleading / inadequate. Conversations with DTSC staff indicate that IMM has yet to commence any remedial work, and will not unless the project is approved by Grass Valley.

Because IMM owns certain parcels comprising the 140-acre site, will not IMM be required to cleanup the site anyway under CERCLA as the owner/operator of a site where hazardous substances are located? Why are old leaking drums (See Comment/Issue 2, 6) still allowed to remain on-site? Is this an example of IMM’s “best management practices” Grass Valley residents can expect going forward?

Mitigation measures 4.6-2a (Develop procedures / Hazardous Substance Control and ER Plan) and 4.6-2b (Implement due diligence recommendations) will be only as effective as the people responsible for implementing them. Regulatory compliance is not mitigation. Measures 4.6-2a, 2b will be ineffective unless

well written, understood and rigorously implemented on a daily basis. Diligent “voluntary compliance” by IMM staff, every regular mine employee and all on-site contractors / vendors 24/7 for a mine of this size is extremely doubtful.

4.6.3 Impact 4.6-5 (pg 4.6-17)

Issue 15: The DEIR reports that diesel exhaust and process emissions were modeled and that “cancer risks were found to be potentially significant.” Mitigation measures 4.2-2a and 4.2-2b are proposed.

Comment: Mitigation measures 4.2-2a (Implement mitigation measures 4.2-1a / Dust Control Plan, 1b, and 1d / Control Devices) and 4.2-2b (submits Asbestos Dust Mitigation Plan to NSAQMD for approval) will be only as effective as the people responsible for implementing them. The described “mitigation measures” include diesel exhaust filters, low sulphur fuel, low NOx burners, wetting and covers for dust control sources and “traffic control.” While certainly helpful as presented these measures are more stop gap and window dressing. The purported “idling limits” and provision that the “primary contractor shall ensure trucks are properly tuned and maintained” is highly suspect and largely infeasible. IMM cannot ensure full compliance / implementation of such “controls” on contract haulers / large semis (estimated 275 heavy truck trips/day). Further, the DEIR states that diesel particulate filters will not be installed on large earth / rock movers which will operate below and above ground (See Table 8-1, fn. 1 at pg 8-10).

When blasted and partially crushed rock /ore is transported via piles on open conveyors with an “apron feeder” and dropped onto storage piles which increase in size and exposed surface area, “wet suppression” efforts for fugitive dust control (“at least twice daily”) will be minimally effective. The constant movement, material loading/unloading and depositing of accumulated ore materials onto large outdoor stockpiles will routinely generate airborne particulate (and significant noise) through the mechanized process itself. Furthermore, instituting dust control measures when wind speeds “exceed 20 mph” (Mitigation Measure 4.2-1a, bullet 4) is too little too late. Particulate can be air-entrained / carried off site with wind speeds much less than 20 mph.

Overall, the proposed measures are inadequate to sufficiently mitigate air quality degradation and cancer causing emissions. Air emissions will comprise a mix of various nuisance and toxic air contaminants, cumulatively unhealthful and, according to the DEIR, incapable of mitigation. The DEIR is inadequate by failing to address the severity of potential cumulative air impacts. Regulatory compliance is not mitigation and mitigation measures will be ineffective unless rigorously implemented on a daily basis. Diligent “voluntary compliance” by IMM staff and every employee and contractor 24/7 is most unlikely. It is reasonably foreseeable that effective compliance with these “mitigation measures” for a mine of this size and complexity is extremely doubtful.

4.6.4 Cumulative Impacts (pg 4.6-18)

Issue 16: The DEIR offers the conclusion that “The potential for accidental releases of chemicals . . . is a site-specific issue with little potential for cumulative effects,” and further states that “[T]here would be no potential for significant cumulative impacts.”

Comment: This bald assertion is unsupported by the facts and ignores the reality that multi-ton quantities of hazardous, toxic and reactive chemicals will be used, handled and stored on-site 24/7. No table specifically listing the identity, volume or quantity of any hazardous material that will be used on site is provided. No storage or use and material handling conditions are discussed. No likely or significant hazardous chemical spill / release scenario is mentioned or discussed. This is a fundamental flaw of the DEIR. How can the DEIR conclude that cumulative impacts will not be significant when the underlying risk evaluations necessary for examining all the chemical species and quantities that will be used, transported and stored are not presented or discussed? Given the size, complexity and duration of the proposed project the likelihood of an accidental spill

/ release event is reasonably foreseeable. Because the DEIR concludes that the project's air quality impacts will be incapable of mitigation, how can the cumulative effects of daily process emissions including dust, asbestos, blast residues, diesel particulate, fugitive chemical handling and process emissions, and /or a chemical release / spill event not be significant and cumulative? Moreover, there is no discussion of the potential exposure to off-site receptors – residents and businesses – all in close proximity to mine operations.

Regulatory compliance is not mitigation. The proposed mitigation measures will be ineffective unless rigorously implemented on a daily basis. Diligent “voluntary compliance” by IMM staff and every employee and contractor 24/7 is most unlikely. It is reasonably foreseeable that full and effective compliance with these “mitigation measures” for a mine of this size and complexity is extremely doubtful.

The DEIR lacks a factual basis and reasoned discussion supporting its’ “[N]o potential for significant cumulative impacts” conclusion. The sheer variety and volumes/quantities of hazardous, toxic, reactive and incompatible chemicals used daily and stored and handled on site, together with routine daily process emissions does not support the DEIR's conclusion.