NEW ALMADEN
QUICKSILVER COUNTY PARK ASSOCIATION
P.O. Box 124, New Almaden, CA 95042

April 21, 2008

Carrie M. Austin, P.E.
Project Manager - Hg TMDL in Guadalupe
SFB Water Board
1515 Clay St., # 1400
Oakland, CA 94612

Dear Ms. Austin,

As a resident of New Almaden, California, and a Board member of the New Almaden Quicksilver County Park Association, I am pleased to provide the Regional Water Quality Control Board, San Francisco Bay Region ("the Board"), with comments regarding the Guadalupe River Watershed Mercury Total Maximum Daily Load Report ("Report") dated February 2008 and the proposed Basin Plan Amendment ("Amendment") dated February 2008.

In general, comments in my letter of August 17, 2006 have been ably addressed. The main issues are now implementation and the Amendment. The Amendment needs to be reworked. It is a good first attempt, but the timing and content must be questioned. *Could the Board postpone the Basin Plan Amendment review until after the TMDL Report is finalized and approved?* The community requests that the Amendment be re-drafted and issued for review after the Report is finalized and more is known about the specific implementation actions the responsible parties will undertake. The concern here is to take pragmatic action and avoid further studies that satisfy scientific inquiry but have no real value regarding taking action to remove pollution entering the system. *Are there any programs that can provide money for source control measures for private homeowners?*

The mercury problem is regional and a societal issue that should not unreasonably burden any one entity or citizen. The Amendment as currently written is causing a great deal of local concern and confusion regarding what exactly it means for the responsible parties and for local homeowners and residents, especially the reference to issuing 13267 letters. Although it is the intent, it is not clear that the Amendment proposal is to address upland mining source areas before undertaking downstream removal actions. The Amendment does not seem to track the Report content as well as it could. It appears to contain some new approaches, deadlines, recommendations and requirements, or at least prior ones but in such different form as to appear to be new concepts beyond those of the Report. *A particularly important question is the issue of how remedial actions such as those already completed and to be completed will receive "load allocation credit" under the current scheme?*

The TMDL development illuminated the fact that mining waste is obvious in the field and sampling is not required to locate it. If it is unstable and prone to erosion, it should be stabilized. Unfortunately, the Report and Amendment allude to further studies to define emissions and prescribe controls. The Report and Amendment seem to struggle to maintain a narrative-standard while suggesting numeric targets, yet the upland target is unreasonably low and begs the question of *why a target is needed for sediments when the only practicable remedial measures are erosion control, mine waste capping, and reservoir stratification control- measures that have already been successfully used in the watershed?*

The numeric sediment targets for upland areas must be questioned. This is not a new concern, yet the targets remain unchanged. The sediment quality goal is not a consensus target because not all agree and it is not empirical because it relies on information from a completely different watershed with respect to urbanization, geology, and natural mineralization. It is inconsistent with the

natural background gradient to have sediment targets in the mining areas that are lower than sediment targets at the Bay. Soil samples collected at depth for the Jacques Gulch project might justify a reconsideration of the soil targets. *Would it not be wiser to delay an Amendment until the TMDL report is truly final and the sediment quality goals are truly consensus and differentiated between areas of mineralization and no mineralization?*

Regarding fish methylmercury, the Report demonstrates that the aquatic food chain is phenomenally efficient at bio-concentrating mercury. Some question whether there will ever be a reduction of fish tissue concentrations to levels below any threshold of no adverse effect. This is because, as the Report notes, the system already has large amounts of total mercury in it, both naturally occurring and from mining discharges. Equally important is the fact that the system is also being impacted with a growing invasion from the global atmospheric mercury pollution reservoir. Unfortunately, the Report and Amendment do not adequately address the issue of atmospheric invasion. *How exactly is atmospheric invasion addressed in the allocation scheme and Amendment?*

Because of the complexity of mining impacts, combining with atmospheric and non-mined but mineralized sediment impacts, it would be helpful if the Amendment were examined to be sure the intent of the Board is clear to a lay reader. *Could the Amendment be reworked to clarify the additional sampling that is proposed to identify areas of erosion that might be prioritized for control? Could it also be clarified that it is not the intent to assign numeric effluent limits to suspended sediment discharge, but rather to implement erosion control for the significant sources and to demonstrate effectiveness through proper installation and maintenance? What about priority based on whether the discharge is to a body of water with a known higher potential for methylation, all other factors being equal?*

The Report illuminated the tenuous nature of allocating load to accomplish the attainment of unimpaired water uses, mainly fishing, when the link between fish mercury concentrations and mercury sources is so uncertain. Not all of the mercury is due to mining waste, and not all forms of mercury behave the same with regard to the ultimate concern of methylmercury concentrations in fish. Atmospheric mercury is reportedly more bio-available than cinnabar. The Report illuminates that even small amounts of mercury can produce substantial amounts of methylmercury, if the right conditions are present. *Could the Report methodology for target setting and load allocation, and the Amendment be modified to address the different forms of mercury in pollution sources (atmospheric, process waste, unprocessed waste, water seeps and discharges) and their relative ability to be transformed to methylmercury in fish?* Controls may be wasted on impressive loads of total mercury that ultimately matter less to fish targets than smaller amounts of highly transformable mercury.

Finally, below are some comments specific to particular pages of the Report.

Page 2-3:

The second and third paragraphs contain redundant text.

Page *2-5*:

There is an uneasy reality when fish from some reservoirs with little mining impact have unsafe fish methylmercury concentrations. *The Report implies that there will be opportunity to make adjustments for reality during the implementation phase, but how will this truly be the case if the targets will be codified in the Basin Plan and applied to the rest of the watershed, and the Basin Plan is difficult or at least takes some time to amend?*

Page 3-15-3-18:

At least in Almaden Quicksilver County Park, the areas of significant potential mercury spillage, furnace dust, and calcine dumps have all been capped. *Could the Report and Amendment*

have a mechanism whereby erosion and source control measures are recognized as an offset to a source allocations?

Page 3-16:

The peak concentrations in water are interesting, but the examples only serve to illuminate the extreme variability and therefore the highly uncertain targets of the TMDL.

Page 3-20:

It should be noted that although DTSC would have allowed limited removal and capping of hot-spots within the calcine waste piles, the County elected to completely stabilize and cap each pile, thereby addressing the issues of soil erosion and potential bioaccumulation of the eroded material. The next several paragraphs confirm this and contradict the statement that "the issues of soil erosion and transport of mercury to water bodies and bioaccumulation were not addressed." *Could the statement be clarified?*

Figure 3.10

This is not an accurate rendering of mercury concentrations remaining after cleanup. The concentrations were measured prior to remedial actions. Calcine piles on the figure were graded and covered with clean clay fill, or excavated and buried at an authorized engineered disposal site on Mine Hill. The Dames and Moore sampling was designed to investigate the soil and wastes most likely to pose a potential risk to park users and horses. The mines were never investigated to characterize the overall distribution of mercury in soils. The Guadalupe mine was not investigated at all, because it was a private landfill, not a public park. *Could this be noted somehow?*

I hope these comments are useful to the Board and the participants in the TMDL.

Sincerely,

Michael Cox
New Almaden Quicksilver County Park Association