Please accept this submission to the board about the Guadalupe TMDL. I mailed you a hard copy this morning, and found out that I needed to FAX it to you instead. Please don't let a small amount of time exclude my comments.

Ms. Jeanine Townsend, Clerk

State Water Resources Control Board
1001 I Street
Sacramento, California 94814-0100

October 18, 2009
New Almaden

Dear Charles R. Hoppin and the State water Resources Control Board members,

We are all trying to do the right things for the environment, but by setting unrealistic standards that are impossible to meet this TMDL will do more harm than good. Unfortunately, the focus on total mercury in the TMDL and Basin Plan, rather than on species of mercury, is going to cause more serious pollution and problems. For example harm has been done because of waste removal during the Jacques Gulch creek restoration project (detailed at the end of this letter).

Please make these changes in the Guadalupe Watershed TMDL Basin Plan Ammenment .

1. Change "total mercury" to "reactive species of mercury".

Total mercury does not correlate with mercury amounts in fish because not all compounds of mercury are bioavailable. Target quantities must be tied to the significance of the relative reactivity of the mercury species and its potential to become methylated and to end up in fish. The Board should focus on removing reactive mercury species, and not total mercury just for the sake of removing mercury. Society can ill afford to waste its time and resources on removal actions that, in the end, do nothing to significantly lower fish mercury concentrations.

a. Cinnabar and metacinnabar, mercury suflide, do not contribute significantly to the production of hazardous forms of mercury. Elemental liquid mercury is also non-reactive, especially when it is not exposed to the air. There should be no numeric target for cinnabar, meaning no target for total mercury. Total mercury is not the issue. From natural sources and processes, it exists in mine areas and Los Alamitos Creek sediments in far greater amounts than the 0.2 mg/kg taget. Natural and non-reactive mercury loads are unnecessary, as well as impossible to remove.

b. Mercury Oxide is a hazardous form of mercury. Anerobic bacteria can readily convert it to a far more hazardous form, methylmercury. Most of it starts as elemental mercury gas from volcanoes, and secondly from burning coal. The gas is often converted to mercury oxide in sunlight. In New Almaden, furnace residue, called calcines, contain mercury oxide. Where this mercury oxide is buried, it is not available to be converted to methylmercury. 0.2 mg/kg of sediment is a reasonable target for mercury oxide and other reactive inorganic mercury compounds, such as mercury sulfate and mercury chloride. The TMDL goals need to be restated in these terms. If the SWRCB was willing to call in the leading scientists and engage in a

discussion panel, the lack of deep consensus, uncertainties, and flaws would be immediately apparent. Each year, at the SFEI meeting, we are learning more about pathways of mercury, and we hear nothing about harm to people, and little about harm to other species. The TMDL needs to objectively deal with the facts. In many ways it does, and is commendable, but in several significant ways it fails and becomes an exercise in spinning things so that "fear stories" can be played up in the media and unnecessary concern justified to higher-level political management. The foundation of the TMDL and BPA The foundation upon total mercury is one of the most significant flaws.

d. Methylmercuries are extremely hazardous, and should have an extremely low tolerance limit, but that limit should be realistic. 1.5 nanograms per liter is unrealistically, unnessessarily, and currently, unmeasurably low—1.5 parts per quadrillion. There were no cases of mercury poisoning in the Guadelupe Watershed before the TMDLs began, and Solar bees have reduced water levels of methylmercury by 95%. Whatever that level is, it should be a low enough level.

e. Urban runoff is primarily reactive mercury, It needs closer monitoring than mine areas, but the TMDL largely lets this source escape unabated. It is politically simpler to say "shut off the mine spigot," when "the mines turn out only to be a dominant issue near the mines but the main source is elsewhere." Over 90% of the production waste from the mines is gone, having been washed downstream and into the Guadalupe River in the 1800's, and the remaining 10% was nearly all contained and capped more than five years ago, with a scant remainder being capped now. The SWRCB must direct staff to objectively find the most significant actual sources of REACTIVE mercury that is ending up in fish, not just possible sources of total mercury.

2. Do not include standards for aerial deposition.

Aerial deposition is significant, yet it cannot be controlled locally. Responsible parties will be punished for the effect even though they can do nothing to control the source. If the honorable members of water protection boards from across the country, all of which are impacted by the airborne mercury problem, came together with the EPA to discuss the matter, we are sure some relief and proper accounting could be found for the various nation-wide mercury TMDLs. Ignoring the facts and transferring the load to the Guadalupe River is not wise or responsible. Volcanic emissions cannot be controlled, and controlling coal-burning emissions is an international political problem. Areas with unlucky wind patterns that no one can control could be prosecuted for exceeding the target. You should not put this into law.

3. Table this TMDL due to "lack of Knowledge".

"Lack of knowledge" Page 4 paragraph 3 states that "there is a lack of knowledge of the impact of mining waste on the watershed." This line negates the entire TMDL. It backs up the idea that the TMDL is a law based on a fear rather than on facts. There have been no credible poisonings due to methyl-mercury in fish of humans, and one credible 5% impact on one bird species. We do know that cinnabar and elemental liquid mercury are not the main source of the problem, and we know how to lower the amount of methylmercury in reservoirs. It seems as if we know enough to know that our problems are not as serious as some of the inflammatory rhetoric suggests. We should table and change this TMDL, and concentrate on other water quality

problems that we know are hurting people, and wildlife.

4. Los Alamitos Creek should not be called "highly polluted".

Please remove this inflamatory language until and unless it has clearly been shown that there are reactive mercury species in the creek, and that they are the sole or primary source of the methylmercury in fish.

5. State that home-owners are not responsible parties.

There is a benighted law that says that a property owner is responsible for cleaning up any pollutants on their property, regardless of who put them there. This law is compounded by the good Samaritan law that says you can help to clean-up waste from abandoned mines without being responsible for the whole mine cleanup, unless the EPA decides to overrule the State, but whatever help you decide to do must be finished. Homeowners are confused by this. The SWRCB could bring some clarification and relief. The Santa Clara Valley Water District and Santa Clara County Parks and Recreation Department own the mines and reservoirs that have and are discharging and depositing mine wastes on downstream properties. These agencies need to be funded. They have the experience, access, knowledge, and workers needed to do the clean-up. This approach will work better than encouraging landowners to band together to apply for grants and undertake a joint investigation and cleanup project. Homeowner's in Hunter's Point were not told to do this to cleanup military wastes. Residents of the Barron Park neighborhood in Palo Alto were not told they had to clean up soil and groundwater pollution from the Stanford Business Park. Landowners in the Great Oaks area of South San Jose have not been told they are responsible for cleaning up pollution from IBM and other businesses. The SWRCB needs to direct the two primary responsible parties to remove their waste from the waterways that bisect private lands. Reservoirs and streams are reserved by easement and are not generally in the control or jurisdiction of the householders and landowners. The SWRCB needs to assure homeowners and landowners that although they must provide access to the responsible parties, the act of giving access will not make the owners responsible for the wastes discharged onto their property by others.

The Jacques Gultch project

a. Calcines were exposed to the air and dust was stirred up by the heavy equipment. Calcine dust released by the work has certainly resulted in more mercury oxide in the reservoirs and waterways. Also, greater amounts of elemental mercury were exposed to oxygen and sunlight where it can be converted to mercury oxide. Clean-up has surely resulted in higher levels of mercury oxide in the air, and in runoff, and from that, more methylmercury can be produced in the reservoir water.

b. In the cleanup in the Almaden Quicksilver Park, the calcines were trucked up hill where they were dumped on top of a steep pile of formerly buried calcines that, in turn, was dumped into an unlined open-cut in an area riddled with mine workings. This leaves open the possibility of slides and leaching. Runoff from the open-cut was never tested before the infilling and there is no testing to ensure adequate containment of the waste. Testing should be required before and after the work at any site where calcines are removed or placed for burial. The TMDL needs to be redesigned to ensure some method for demonstrating the immediate local impact, good or bad, of the restoration projects. To date there has been no adequate baseline of the fluxes of reactive mercury species at any of the restoration sites before or after the work.

c. Removal projects involve other hazards as well. It is only by luck that no mailmen, cats or children were hurt by the hundreds of speeding trucks diving through New Almaden to get to and from removal projects.

Sincerely,

Robbie Lamons

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