

COMMENTS ON THE USGS “STUDY” ON THE IMPACT OF MINE TAILINGS
SPILL IN MARINDUQUE ON HUMAN HEALTH AND ENVIRONMENT

By

Romeo F. Quijano, M.D.

Professor, Department of Pharmacology and Toxicology
College of Medicine, University of the Philippines Manila

1. The USGS “study” was very superficial and did not come up with significant primary data that would add and improve on what have already been gathered and already known. The study team relied mainly on review of documents made available to them and there is no evidence that they exerted efforts to approach the problem from a broad historical and social perspective. The approach taken was manifestly a corporate-friendly approach: giving undue importance to information from obviously vested-interest laden sources, drawing invalid conclusions from flawed assumptions and incomplete data, selectively extracting corporate-friendly information out of context from published reports (inexplicably missing out very relevant contrary information) and implicitly dishing them out as scientific facts, and inappropriately applying technical-scientific parameters that only puts undue burden on the victims of the mining disaster and further delays remediation and compensation measures.

2. The USGS report made much prominence of the summary conclusions of the Bentley and Dempsey report, the CPHA report and the UNEP report, which, taken together, tended to trivialize and cast doubt on the fact that the mining operations of Marcopper had caused immense environmental damage and adverse health effects on the people of Marinduque. For example, the USGS team, right in the first page of its health assessment report, quoted the following from the UNEP 1996 report:
 - “The ENVIRONMENTALLY AVAILABLE concentrations of trace metals that were detected in both the river water and mine tailings were not found to be sufficiently high to represent an immediate toxicological threat to either aquatic BIOTA or human health.”
 - “There is no evidence that ACUTE poisoning has occurred in the exposed population due to the mine tailings or that there is an immediate threat to human health as a result of the spillage”.
 - “The drinking water that is used by local communities living adjacent to the affected areas is not obtained from the river system, but from upland sources. Chemical analysis of the drinking water indicated that it meets acceptable standards.”

Furthermore, the “first primary conclusion” of the Bentley and Dempsey report was given prominence by the USGS report:

“Metal intake by people living along Boac is not significantly different to

metal intake by the people living in CONTROL regions (i.e., the residual tailing does not add significantly to the intake of contaminant metals by the population in the Boac region); and The total metal intakes in the Boac population are either less than or approximate the health guidance values for each metal (**i.e. intake of contaminant metals does not pose a health risk to the Boac population**).”

Thus, right at the beginning of its report, the USGS team had already declared that the mine tailings do not pose any health risk to the people in Marinduque, implicitly absolving the mining company from liability. In their report, the USGS team put into doubt the source of lead poisoning (although the team appears unconvinced that there is in fact lead poisoning among the Marinduque residents), suggesting that the paint in the schools and lead from vehicle exhaust might be the sources of lead poisoning rather than the mine tailings. This shows either utter ignorance of local conditions or a deliberate attempt to absolve the mining company from accountability.

The information being communicated by the USGS report is completely contrary to established facts and what is generally known about copper mines and mine tailings. The USGS team apparently ignored worldwide scientific and empirical data showing that mine tailings result in adverse health and environmental effects to the immediately surrounding communities due mainly to heavy metal contamination.

The mining of copper has historically produced the largest volume of uncontrolled and dangerous wastes in the mining industry. It does so still today. For example the Clark Fork Complex is the biggest "Superfund" (Environmental Protection Agency clean-up) site in the USA, and one of the largest dumping grounds for metallic wastes in the world. A 1998 study of Peru's biggest copper operation (SPC - Southern Peru Copper) revealed that tailings containing iron, aluminium, copper, manganese, zinc, lead, arsenic, chrome and cadmium had been deposited in the Locumba river. Several other cases, receiving global publicity, have focussed on the hazards of copper wastes disposal - notably from the Rio Tinto-owned Bougainville mine (officially closed in 1989), the Grasberg gold-copper mine in Papua (formerly West Papua/Irian Jaya) and the Ok Tedi mine run by BHP of Australia in the highlands of Papua New Guinea. In Vermont, USA, drainage from abandoned copper mines is negatively affecting the environment. The USGS, in fact, has cooperated with a local citizens group, the Elizabeth Mine Study Group, to evaluate acid mine drainage around the Elizabeth mine near South Strafford.. Similar, but smaller, mines were also in operation north of South Strafford near West Fairlee and Corinth. Waters draining the Elizabeth mine workings and waste piles are acidic and laden with toxic heavy metals. Copper mining in Butte and Anaconda, Montana, starting in 1860's, poisoned the air, the land, and the water. Over 100 years later, contaminants are still found as far as 300 miles down the Clark Fork River, whose headwaters are in that area. The presence of the contaminants has been known for many decades.

A review of a USEPA document published in February 1997 regarding CERCLA 106 actions taken at various mining sites in the US should leave no doubt as to the health and environmental risks associated with mining operations similar to the Marcopper operations in Marinduque. Section 106 of the US Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) provides for abatement action by a State, local government, or the President, when there exists an “imminent and substantial endangerment to the public health or welfare or the environment because of an actual or threatened release of a hazardous substance.” In addition, Section 106 contains severe penalties for noncompliance, forcing potentially responsible parties to clean up a site, or pay as much as \$25,000 a day. These orders are EPA’s means of enforcement, which achieve cleanup at sites posing significant threat to human health and the environment where negotiations over Superfund cleanups have failed. CERCLA 106 authority has been invoked in response to hazards posed by a substantial number of abandoned mining and mineral processing sites in the US.

There are many other examples of adverse health and environmental effects associated with heavy metals released by copper mining operations. It is therefore inexcusable that the USGS report is practically saying that the mine tailings from Marcopper do not pose a health risk to the population.

The USGS team gave little importance to, or even disparaged, the results of prior studies done by Filipino experts on the Marinduque incident, showing heavy metal contamination of both environmental and biological media, and showing clinically discernible adverse effects, especially among children in Marinduque.

3. The USGS team, in fact, misrepresented the findings of the UNEP investigative mission in 1996 since they omitted the other relevant conclusions in the UNEP report. For example, among its conclusions, the UNEP report stated the following:
 - The Makulapnit and Boac River system has been so significantly degraded as to be considered an environmental disaster;
 - The aquatic life, productivity and beneficial use of the rivers for domestic and agricultural purposes are totally lost as a result of the physical process of sedimentation;
 - The coastal bottom communities adjacent to the mouth of the Boac River are also significantly degraded as a direct result of smothering by the mine tailings;
 - There is an increased health and safety risk due to immersion and flooding as a result of the very large volume and physical properties of the mine tailings, should they be mobilized during the wet season;

The UNEP investigative mission, in the first place, was not a health assessment team. It was an environmental team and there were no medical experts with them competent enough to adequately assess the health impacts of the mine tailings. Nevertheless, its findings do not necessarily contradict the empirical observations

by people who experienced directly the adverse effects of the mine tailings and the results of the studies done by Filipino expert teams corroborating the empirical experiences of the people in the affected communities

4. Curiously, the USGS team did not make any mention of a previous USGS study done from October 14-19, 2000, (USGS Open file report 01-441) which showed that water samples from the mine tailing causeway in Calancan Bay, Marinduque contained high levels of heavy metals, including lead, and that the water samples were toxic to the embryological development of sea urchin, a biological indicator of the potential toxicity of mine tailing wastes. In its summary and conclusion the report stated:

“High toxicity was observed and elevated levels of metals were measured in the pore waters collected at the two stations nearest to the Calancan tailings causeway, although those sites were in the predominately upcurrent direction.”

It is unlikely that the USGS 2003 team was unaware of this very relevant USGS Open File report 01-441 because in their Phase one report, they made mention of a prior USGS preliminary mission report, USGS Open File report 00-397. The fact that they completely ignored this 01-441 report adds to the suspicion that this USGS team is not “independent” after all and that the “study” was designed to whitewash the Marinduque mining disaster and to absolve the mining company from liabilities.

5. The USGS 2003 team made unwarranted judgements on the studies done and the clinical decisions made by the Filipino experts from the DOH/NPCIS team. While constructive criticisms of the scientific aspects of the studies are welcomed, the USGS team did not exert any effort to clarify with the UP-NPCIS team the questions they had and the practical constraints under which the studies were done. The USGS team also did not have the appropriate qualifications and competence to pass judgement on the clinical decisions of the team of medical toxicologists from the UP-NPCIS. It must be noted that the USGS team had only one medical doctor in their team who is reportedly a pediatrician but not a medical toxicologist. In contrast, the UP-NPCIS team had at least 6 medical toxicologists involved directly in the health assessments and management of the Marinduque incidents and who have had extensive experience in actually managing poisoning cases, including two internationally recognized pediatrician-toxicologists who are often invited as consultants by international bodies, including WHO. Furthermore, the USGS team did not have the benefit of actually seeing and examining the patients treated by the UP-NPCIS team and even admitted that they did not see the raw data of the studies they were reviewing and, therefore, were basing their observations and conclusions merely on theoretical grounds, tenuous assumptions and grossly inadequate information.

6. Concluding remarks:

The basic questions relating to the Marinduque mining disaster have not been made clearer by the USGS “study”. In fact, it even obscured whatever information already exists. The decision of the Marinduque provincial government and the National government to call in US based experts as so-called “independent” study team reflects the persistence of colonial mentality among key Philippine government officials at the highest levels. It also reflects the lack of respect and confidence on the capacity of local Filipino experts to provide sound and “independent” expert advice on the appropriate government response to situations such as the Marinduque mining disaster. It is lamentable that the Philippine government did not give due importance to the DOH/UP-NPCIS team as much as it did to the USGS team. Early on, the DOH/UP-NPCIS team was requesting funds to undertake the appropriate studies and health management measures to respond to the Marinduque mining disaster and to determine the extent of harm that the mine tailings had inflicted on the Marinduque residents but they had always been forced to work on extremely limited funds. Yet, the provincial government of Marinduque and the Office of the President could easily provide P20 million for a US team to make judgements on what Filipino experts are more than capable of doing. In fact, it does not take much study to know that the Marcopper mining operations had resulted in a monumental health and environmental disaster. Historically, open pit mining had always been associated with such health and environmental disasters and there are many examples in other areas of the Philippines (e.g., Maricalum in Negros and Lepanto in Benguet) and throughout the world, including the US (Mining disasters have occurred in several states in the US, for example, in California and Colorado). It is also known that contamination of the surrounding environmental media by toxic heavy metals are almost always a consequence of open pit mining operations such as what has happened in Marinduque and elsewhere. Even without so-called “independent” studies, it should be a matter of common sense that adverse effects from one or more toxic heavy metals are bound to occur in people residing in areas where there are mine tailings nearby. A careful analysis of events and confounding factors related to the mining disaster in Marinduque would easily reveal the truth to a sensible, honest and truly independent person devoid of vested interests. There is, in fact, sufficient evidence, scientific and empirical, to declare that people have been adversely affected by the mining operations of Marcopper and that the company and the government should be made accountable for the damages that have been incurred. It is absurd that the USGS team is looking for other sources of lead other than the mine tailings to explain the lead poisonings that had been observed and documented in Marinduque residents, especially among children. Well, considering that the USGS team comes from the highly corporate oriented BUSH government, this absurdity is understandable. It reflects the pervasive BUSH-ITE mentality prevailing in the US nowadays. Rather than looking at the real cause, BUSH-ITES are used to pointing fingers at so-called “terrorists” as the cause of world insecurity. Sadly, the highest officials of the land have the same mentality.

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