

It is difficult to get a man to understand something when his salary depends on his not understanding it.

Upton Sinclair

Tambogrande EIA---Technical Studies or an Advertisement?

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Introduction. What should one believe about this Environmental Impact Assessment (EIA)? Clearly it is large, thousands of pages, filled with promises and predictions. Unfortunately, it is largely disorganized, containing many sections that were clearly never totally completed. This is especially true of the Anexos, where much of the detailed data is supposed to be, but is frequently missing. Much of the EIA is based on the Environmental Baseline Study (Anexo XI), yet the consulting company that prepared the EIA warns that they take no responsibility for any damage that might be suffered by the public if they rely on the information and opinions in Anexo XI! This EIA is often filled with half-truths and unsubstantiated statements, or simply fails to disclose basic information. Let's look at only a *few* of the major issues.

Environmental Issues.

1-The EIA fails to present a usable environmental *baseline* data set, especially for water resources. That is, it fails to provide adequate data to tell the public how much water (both surface and ground waters) presently exists within the project area. The number of wells and the types of hydrogeologic testing are totally inadequate to define the water-bearing characteristics of the local hydrogeologic units. For example, the EIA presents no data for long-term pumping tests. Hence, there is no reason to have confidence in any of the EIA predictions regarding the various mine operations, such as the expected impacts from dewatering the open pit, for example.

Similarly, the EIA fails adequately to define the baseline surface and ground water quality, the agricultural soil quality, aquatic life, air quality, noise, etc. Several important constituents have never been investigated in the water monitoring, such as numerous trace constituents, radioactivity, organic compounds, fuels, herbicides, pesticides, several cyanide degradation compounds—all of which can be toxic to various forms of life. Many of the important project areas have never been sampled. Anexo V of Anexo XI, the Environmental Baseline Study, [Yes, it is easy to be quite confused in this mess!] supposedly contains the actual water quality data. However, when one searches, there is no Anexo 5 (or Anexos 3 and 4) in the Baseline Study---at least in the publicly-available version!

Using the data presented here, there will be no way for the citizens or regulators to prove that negative impacts that might occur (such as ground water

contamination or water level declines) were caused by mining or any other activities.

2-Unlike most comparable EIAs, this document fails to summarize the most relevant geochemical characteristics of the various rocks to be mined. For example, the humidity cell (HC) testing results fail to reveal the most basic information: For how long (number of weeks) were the HC tests conducted? Such details are far too important to neglect. Nevertheless, it is clear that large percentages of these rock types have a strong tendency to produce acids and liberate contaminants.

3-It seems chemically naïve to believe that simply keeping the tailings wet will prevent oxidation and contaminant mobilization from occurring. Oxidation will occur under the conditions described, especially many years after mine closure when no personnel are available to maintain the facilities. The “optimistic” predictions made regarding the possible contamination from the tailings impoundment are ridiculous. They assume that the chemistry of the waters seeping out of the impoundment will be the same as the test process tailings waters presented in Tables 4.9 and 4.10 of the Feasibility Study (Anexo XIII). They disregard the fact that these high-pH waters will chemically react with the solid tailings particles, to produce eventually an acidic, highly contaminated “soup”, having much higher concentrations than those assumed in the EIA.

Similarly, the sulfide minerals left in the flooded open pit walls and floor will also oxidize—albeit at a slower rate than if they were left directly exposed to the air. Thus, this inundated pit will be a potential source of contaminants to the local surface and ground waters—forever. Despite the “happy” promises, possibly the citizens of Tambo Grande should investigate the quality of water currently in and migrating from the flooded, main pit at Anaconda, Montana, USA.—where the past mine operator, ARCO, is being legally forced to spend about \$US 75 million to construct a water treatment plant to treat the contaminated pit water. The costs to operate this plant are estimated to be about \$US 10 million per year.

At actual mining sites, it is essentially impossible to totally segregate potentially acid producing rock from non-acid producing rock. Thus, the proposed waste rock piles will also generate contaminated leachates, especially after heavy rainfall.

4-As a result of the inadequacies in the baseline geochemical and water quality data, and the faulty assumptions made about contaminant sources, there is no reason to have confidence in any of the stated predictions regarding the expected concentrations of chemical constituents in the ground waters near the open pit, the tailings, the waste rock piles, or in the Piura River, after closure.

5-The Tambogrande project is only the first of several projects that will be promoted in the San Lorenzo Valley. Thus, the *cumulative* impacts of all these

potential projects must be considered and evaluated now. It will be foolish and useless to evaluate these projects individually later. No cumulative impacts are considered in the EIA.

6-It is a certainty that the proposed Tambogrande project will greatly increase competition for water with the other domestic and agricultural users. Because the water to be used in the mine operations will be ground water (water pumped / captured from the open pit and from the Quebrada San Francisco), the company will presumably not be required to pay for the use of this water.

The ground water studies described in the EIA and its Anexos are totally inadequate to quantify the future impacts to the surrounding water resources. Thus, a reader should be even more concerned about the *total*, actual impacts and competition for water that would result if several additional mine projects were approved in the overall Tambo Grande-San Lorenzo Valley region.

7-The various sections dealing with Socioeconomic / Cost-Benefit Analysis discuss only the positive aspects of the proposed project and disregard the negative. Forgetting the promises, one might ask: What have generally been the environmental experiences and costs at other Peruvian mine sites—in fact?

8-Once the project ceases, most of the new facilities promised for the community (schools, water treatment, electricity, road maintenance, etc. will no longer have funding to allow them to continue operating or to pay staffs. Experience at other sites, especially in low income regions in less developed countries, indicates that these facilities will close and most of the trained staff will depart. The EIA presents no detailed, enforceable measures to deal with these Sustainable Development issues.

9-The impacts discussed in the EIA do not consider the truly *long-term* nature of these activities. Many of the wastes generated will remain on the site, not merely for a few decades, but essentially forever. Other impacts, such as the creation of a water-filled pit could easily increase the incidence of malaria and yellow fever in an area already prone to such diseases—long-term.

10- The EIA contains no discussion of financial assurance issues. Thus, there are no enforceable financial guarantees that any of the promises will be followed. Financial assurance for environmental costs at closure is standard operating practice under existing law in Canada, where Manhattan is located.

Most of the observations / criticisms made above, and many more, have also been made by the Peruvian Instituto Nacional de Recursos Naturales, INRENA (see <http://www.inrena.gob.pe/dgaa/tambogrande/ot-019-03-ogateirn-ugat.pdf>).

General Comment: Because mining companies, especially junior companies, have no cash flow before (and after) operating, they attempt to spend as little

money as possible (for environmental activities, etc.) prior to project approval. Thus, during these periods, they don't spend adequately on collection of *actual data*, but instead substitute *promises and predictions*---which are relatively inexpensive and more malleable. Experience from dozens of mining projects indicates that there is little correspondence between the *specific* predictions and the *specific* reality. That is, there is little or no reason to believe the quantitative details of the predicted water quality concentrations, impacts to local ground water levels, or predicted river flow volumes in this EIA, for example.

At all mining projects, technical and project details frequently change, often every few months. This provides no certainty for the public. For example, Manhattan, if given project approval, could decide to mine only the oxide portions of the ore body and end the project after only about 4-5 yrs. (Possibly due to low world zinc and copper prices.) Then, the public would be left with numerous unforeseen and unfunded problems.

EIA Process / Political Issues.

Mine project approval is usually given predominantly for economic and political reasons----not for environmental reasons. The EIA process, internationally, is used largely as an excuse to justify project approval by regulators and politicians. Almost all such projects are ultimately approved, everywhere. Has any comparable large mining project ever been rejected in Peru? With Tambogrande, it is clear that Manhattan views the EIA process as largely a vehicle for obtaining project approval and to provide an impression of *certainty about the future*.

Unfortunately, the public is caught in the fog, the *garua* of the EIA process. It appears that actual technical studies are being conducted and various options are actually being investigated, when normally, the ultimate outcome has already been decided by the industrial proponents and the government. In almost all EIAs, the results and impact interpretations are greatly biased by the fact that the technical consultants and EIA preparers are usually chosen, paid by, and directed by the prospective mine operator. Most of these consultants, like Klohn Crippen, derive the majority of their revenues working for mining companies and other industrial clients. They are, thus, reluctant to present public conclusions that are uncomfortable for their clients.

International companies always want the maximum security for their money (capital). If there is too much uncertainty, they will not go forward with any project. However, given the present situation (political, regulatory, economic), the citizens have essentially *no* security or enforceable assurances that they will receive any of the *long-term* benefits that have been promised. At present, all the EIA process has provided them are more **predictions and promises**, generally based on mostly useless or inadequate data. Thus, why should the citizens agree to go forward with the project? Are short-term benefits adequate for the

local people? Can they even make an informed choice on the basis of such a flawed document?

Most of the detailed opinions in this EIA will not assist either the public or the regulators to come to an honestly-determined solution regarding the proposed project. *Much of this EIA is simply, in my view, an expensive advertisement in support of project approval rather than an independent technical evaluation.*

The usefulness, for the public, of the present EIA is truly questionable based on a *very unusual disclaimer* presented by Klohn Crippen (KC) on page 228 of the Environmental Baseline Study (Anexo XI), entitled Final Comments. In these short comments, KC essentially states that the material contained in the Environmental Baseline Study represents KC's best judgment based on the information available at the time. However, they will not be responsible for how any third party uses this information. *Most importantly, KC accepts no responsibility for any damage that might be suffered by any third party if they rely on the information and opinions in this report.* Lastly, it states that, as a matter of protection for both KC and the general public, all of the information and reports that they have prepared for Manhattan are *confidential*, unless written permission is received. Such statements make it very clear that the public cannot rely on these materials or opinions.

Not surprisingly, this Environmental Baseline Study and the associated Feasibility Study had never previously been made public prior to their inclusion as Anexos to the present EIA. This has prevented the public and MEM from realizing that Manhattan has made almost no substantive progress in defining the environmental baseline since the publication of their Preliminary Environmental Baseline Study in July, 2000. Thus, essentially all of the comments made in my 2001 report, An Alternative Look at A Proposed Gold Mine in Tambogrande, Peru (http://andes.miningwatch.org/andes/english/tambo_eng.pdf), are still relevant.

There is no question that the residents of the District of Tambo Grande are generally poor and that they have obvious socioeconomic needs. Based on Manhattan's information, they are more disadvantaged than populations in much of Peru. However, Manhattan is *not a development company*, or even a particularly experienced mining company; they operate no other properties. Also, mining companies in general have a largely poor track record when it comes to *sustainable* development. Thus, it is a bit of a diversion to focus on such promised economic benefits, while generating an inadequate environmental analysis.

In their 2002 Consolidated Financial Statements, Notes (pg. 5), written to inform prospective investors and filed with the Canadian government, (<http://www.sedar.com/csfsprod/data38/filings/00542506/00000001/i:\SEDAR\Manhattan03\FS.pdf>), Manhattan states:

“The Company has agreed that the mining methods to be used will not physically affect the town of Tambogrande, nor cause damage to its population. In addition, the tailings should be located in areas that will not affect the surrounding agricultural areas.”

The EIA states that, as a minimum, Manhattan will relocate roughly 1800 out of a total of 3300 homes in Tambo Grande, divert the river, excavate a pit about 260 meters deep, mine about 171 *million tons* of ore and waste rock, and disturb about 1008 total hectares of land. Does such a massive undertaking sound consistent with the previous investor disclosure statement?

The version of the EIA originally released in December 2002 was even more disorganized and incomplete than the present version, despite the fact that they both have the same date on their pages. Why was there such a rush to release this incomplete document? I note that the Manhattan stock price rose more than 100 percent within the month the EIA was released to the public. It is for others to decide if there was any relationship between these events.

Recommendations. *It is not my role to tell the Peruvians whether this mine should or should not be developed; that is their decision. In Tambo Grande, the citizens have made clear via the 2002 referendum results that they do not want any mine projects to proceed. Nevertheless, the Tambogrande EIA document and the process it has followed point out several weaknesses in the **general EIA process** that need to be corrected. What follows are suggestions that might facilitate the making of such decisions.*

1-Some mechanism must be created to allow the local population to make public their collective opinions about project approval---such as an official, legally-binding referendum. How does a community effectively say NO?

2-Both the public and regulators should disregard most of the *specific, quantitative* predictions and promises in EIAs. They may be valuable qualitatively, but for quantitative purposes they are mostly useless. Rely instead on politically enforceable *financial assurance measures*.

All mining corporations proposing large projects should be required to provide financial assurance in the form of financial bonds or liability insurance, held by independent trustees. The amounts of the financial assurance should be determined by independent specialists. There must be legally-enforceable contracts made between the government and the PARENT corporation protecting such financial assurance.

3-Mandate that *active* citizen involvement in all environmental monitoring must occur. Trained citizen’s representatives should also have essentially-constant access to all environmental data and reports, in all large projects.

Because the public, in almost every country, mistrusts the government’s will to enforce environmental regulations, the public must be allowed to be actively involved at all levels of project development and operation. Clearly the mistrust of

6-21-03

government enforcement is aggravated where the government would have partial ownership in a mine, or any other project.

4- All companies should be required to fund *independent* environmental studies and monitoring, including independent review of the routine studies performed by outside consultants.

5-It might be reasonable to elevate the role of INRENA in any project evaluation. Because INRENA is a natural resource / environmental agency and not a mining regulatory agency, the public may have greater confidence in their observations and opinions.

By adopting and enforcing such measures, Peru has the opportunity to become the most progressive government in terms of promoting more enlightened mining.