



July 10, 2012

Mr. Jim Upchurch  
Forest Supervisor  
Coronado National Forest  
300 West Congress  
Tucson, Arizona 85701

**Re: Rosemont Copper Project; Proposed Modifications to Barrel Alternative**

Dear Mr. Upchurch:

The purpose of this letter is to provide additional information concerning possible modifications to the Barrel (Preferred) Alternative. In short, Rosemont has determined that although the Barrel Alternative allows sufficient space to accommodate the proposed heap leach pads, the operational sequencing required under this alternative does not allow Rosemont sufficient time to complete the leaching process and fully recover the copper from the oxide ore materials. In addition, Rosemont has reevaluated the underdrain systems for the waste rock and tailings storage areas, and has concluded that the regulatory uncertainty and confusion created by the underdrain system exceeds that system's geotechnical and environmental benefits. Consequently, Rosemont is proposing to eliminate these features from the Barrel Alternative.

In proposing these modifications, Rosemont has taken into consideration comments from federal and state agencies and from the public in accordance with 40 CFR § 1503.4. Rosemont believes that these modifications will simplify the analysis of environmental impacts, avoid or minimize environmental impacts and reduce controversy concerning this project, and allow your agency to issue the Final Environmental Impact Statement (FEIS) for the Rosemont Project during the fourth quarter of 2012.

#### **Elimination of Heap Leach Pads and SX-EW Processing Facilities**

In the Draft Environmental Impact Statement (DEIS), issued in October 2011, the Coronado National Forest selected the Barrel Alternative as the agency's preferred alternative for the Rosemont Project. The Barrel Alternative differs from the Proposed Action (which was based on Rosemont's MPO) in certain important respects. As a result, Rosemont has been carefully analyzing its project facilities' design and operational plans to ensure that all materials can all be stacked and sequenced safely while maintaining economical ore production and processing rates. At the same time, Rosemont has updated its mining and operational plans based on additional drilling conducted earlier this year.

In addition, Rosemont has reviewed and evaluated comments submitted by federal and state agencies, including EPA Region IX, and members of the public with legitimate environmental concerns. A number of commenters expressed concerns about the potential environmental impacts of the heap leach pads,

including the potential for leachate and process water discharges, and concerns about the closure and reclamation of the heap leach pads and SX-EW process facilities. Frankly, we believe these concerns are overstated and are adequately addressed by, among other things, the requirements imposed under the Aquifer Protection Permit issued by the Arizona Department of Water Quality last April. Nevertheless, Rosemont's goal throughout this process has been to avoid or minimize impacts to the greatest extent possible, while ensuring that the project is economically viable.

As a result of our evaluation of operations under the Barrel Alternative, we have determined that processing copper oxide ores by means of heap leaching is not viable. Based on additional drilling and analysis of ore types and grades, roughly 40 percent of the ore originally considered mixed or leachable ore has been reclassified as sulfide ore that will be processed through conventional milling and concentration; the remaining oxide ore is below current cutoff grade. The limited leach time makes the potential recovery of cathode copper from this material too low to satisfy threshold criteria. Therefore, Rosemont proposes to eliminate the heap leach pads and SX-EW facilities from the Barrel Alternative.

The elimination of the heap leach pads and SX-EW facilities from the Barrel Alternative will avoid or minimize environmental impacts in a number of important respects, directly responding to comments on the DEIS, including the following:

- Four facilities potentially discharging pollutants into groundwater will be eliminated, reducing the project's potential impacts to local groundwater and down-gradient water supplies;
- Any possibility of discharges from the heap leach pads and process solution ponds is eliminated;
- The quantity of water used for mineral processing will be reduced, reducing the project's overall water demand and groundwater pumping in the Santa Cruz Sub-Basin;
- Impacts to birds and other wildlife that may be attracted to solution and process water ponds will be eliminated;
- The outdoor lighting necessary to operate the heap leach pads and SX-EW facilities will be eliminated, reducing nighttime light pollution;
- Eliminating the heap leach pads and SX-EW facilities addresses concerns expressed by some commenters regarding the transportation of sulfuric acid on State Route 83 as well as reducing overall transportation requirements for the project;
- Electric power demand will be reduced by eliminating the SX-EW circuit and solution pumping facilities, reducing indirect effects relating to the generation of power by Tucson Electric Power, including air emissions and greenhouse gas emissions; and
- Eliminating the heap leach pads and SX-EW facilities simplifies closure and reclamation requirements, and addresses concerns expressed by commenters about the adequacy of the closure requirements proposed for the heap leach pads.

The elimination of the heap leach pads and SX-EW facilities from the Barrel Alternative is a logical outgrowth of the Barrel Alternative, which has been selected as the Preferred Alternative. As explained above, the Barrel Alternative requires a more compact configuration for the waste rock and tailings areas, requiring operational changes that affect sequencing. At the same time, this project modification

does not constitute a substantial change to the Barrel Alternative, given that the project footprint and primary facilities – the open pit, waste rock area, tailings area, plant and administration area, site access and utilities – will not change. The material already scheduled for placement within the waste rock and tailings areas will not change. The material that will not be leached has been tested and analyzed, and its geochemical characteristics are known. In fact, the low grade oxide ore is actually less mineralized than cut-off grade sulfide ore.

Consequently, this modification simply recognizes the changed economics of utilizing heap leaching to process low grade oxide ore and the operational constraints imposed by the Barrel Alternative. At the same time, it directly responds to comments on the DEIS by addressing and eliminating potential environmental impacts. Modifying the Barrel Alternative in response to comments is expressly contemplated by 40 CFR § 1503.4(a)(1) and will increase the Forest Service’s ability to differentiate that alternative from other project alternatives without adding any impact that would require additional analysis.

### **Elimination of the Underdrain System**

Under the Barrel Alternative, the footprint of the project’s facilities is more compact than the Proposed Action and other project alternatives. As a result, there are more stormwater diversion opportunities. After reviewing modifications made to the project’s stormwater system, Rosemont has evaluated the necessity of the underdrain system. Moreover, various commenters, including the EPA and the Army Corps of Engineers, expressed concern about potential problems that the underdrain system may create, which prompted Rosemont to examine the need for this system.

Based on this evaluation, and in response to comments on the DEIS, Rosemont proposes to eliminate this drainage system from the Barrel Alternative. The project’s stormwater system, as modified for that alternative, will not be necessary for construction or operation of the project. Accordingly, Rosemont has instructed that the underdrain system be removed from the designs for the site water and reclamation plans developed for the Barrel Alternative .

The elimination of the underdrain system from the Barrel Alternative will avoid or minimize environmental impacts in several important respects, directly responding to comments on the DEIS, including:

- Concerns about possible silting and blockage of the underdrains drains will be eliminated;
- Concerns about possible unstable conditions resulting from blocked drains will be eliminated; and
- Concerns about the possibility that leachate, tailings draindown, and other process water could co-mingle with stormwater in the underdrain system, and be discharged into Barrel Canyon will be eliminated.

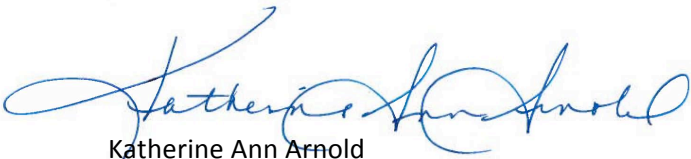
Again, the elimination of the underdrain system from the Barrel Alternative is a logical outgrowth of the Barrel Alternative, which is more compact than other project alternatives, thereby allowing greater options for managing stormwater. This modification does not constitute a significant change in the

Barrel Alternative. The underdrain system is a minor aspect of the project's stormwater management and drainage system; the principle project components remain the same and overall stormwater runoff calculations will not be reduced. Again, this modification directly responds to comments on the DEIS by addressing and eliminating potential environmental impacts, as contemplated by 40 CFR § 1503.4(a)(1), and will increase the Forest Service's ability to differentiate the Barrel Alternative from other project alternatives without adding any impact that would require additional analysis.

In short, Rosemont believes these proposed modifications to the Barrel Alternative will avoid or minimize environmental impacts raised by agencies and other commenters, assisting the Forest Service in addressing concerns about the Rosemont Project.

We hope to provide you with engineering drawings and other materials that describe the foregoing modifications in greater detail within the next several days. In the meantime, please let me know if you have questions or would like to discuss this letter in greater detail.

Regards,



Katherine Ann Arnold  
Vice President, Environmental and Regulatory Affairs

Cc: Marjorie Blaine, ACOE  
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