



File Code: 1950/2810

Date: December 20, 2011

Kathleen A. Arnold, PE
Vice President, Environmental and Regulatory Affairs
Rosemont Copper Company
P. O. Box 35130
Tucson, AZ 85740-5130

Dear Ms. Arnold:

Although we are still in the 90-day public review and comment period for the Draft Environmental Impact Statement (DEIS), several follow up items for inclusion in the Final Environmental Impact Statement (FEIS) have been noted that could proceed now. Below is a list of items best addressed by Rosemont Copper Company (Rosemont). In an effort to reduce the need for multiple reviews, I have tried to provide sufficient detail to ensure that the products you develop meet the needs for completion of our environmental analysis. If these requests are not clear, please seek clarification. As we continue to consider public comment, other follow up items best addressed by Rosemont could be identified. We will continue to discuss, clarify, and work together to gather the data required by the Forest for completing an environmental analysis that informs and supports the future decision to be made.

GEOCHEMISTRY

To better understand the methodology and assumptions regarding geochemical sampling, testing and modeling, provide more detailed information on the geochemical analysis as follows:

1. Describe in detail what rock types (lithology and mineralogy, especially in the case of potentially acid generating rock types) will be encountered as mining progresses, and the destination (waste rock, heap or mill and concentrator) of each of the rock types.
2. By pit phase, describe the approximate volume of potentially acid generating materials produced vs. non-acid generating materials.
3. Provide a map or location information for all drill holes upon which geochemistry studies done by Rosemont and their consultants are based.
4. Provide detailed lithology and mineralogy for the components of the samples that were tested to characterize the geochemistry of the Rosemont mill tailings. Only formation names were previously provided, and there would be significant variation in rock type and mineral composition within these formations, including sulfide content and other important components of rock chemistry affecting the potential for acid generation and other geochemical concerns.
5. Provide rationale for not doing geochemical testing for tailings characterization on ore deposit formations other than the five formations (Horquilla, Colina, Epitaph, Earp, and Escabrosa) that were tested. The Tertiary andesite, for example, was not tested, and it has been identified as having significant potential for acid generation.



6. Provide rationale for the selection of certain drill core intervals for geochemical characterization. What lithologies and mineralogies were targeted and what was the reasoning for the compilation of each composite sample?
7. Explain the site specific criteria used in determining the length of time that kinetic tests were done. Identify case studies that were used as examples for the timing of kinetic testing, particularly with ore deposits and host rocks that are reasonably similar to that of the Rosemont deposit and host rocks, and to the project area's climatic conditions.
8. Provide any additional geochemical data characterizing the pit wall, waste and tailings, whole rock and mineralogical analysis, static and kinetic testing procedures, methodology for classifying Potentially Acid Generating (PAG) and non-PAG and Net Neutralizing materials, and management strategies for PAG and other problematic materials.

AIR QUALITY

Current modeling predicts that standards for NO₂ 1-hour, PM_{2.5} 24-hour, and/or PM₁₀ 24-hour are exceeded for the Barrel, Barrel Trail, and/or Scholefield alternatives. We need a plan or mitigation measures identified and included in air quality models to reduce air quality impacts to acceptable levels for all alternatives.

1. Provide a draft air modeling protocol, including mitigation required to bring air quality standards within National Ambient Air Quality Standards (NAAQ), for all alternatives. The Forest will coordinate review of your proposal amongst agency specialists and provide further direction for completion of acceptable modeling.
2. The Forest needs to better understand dust dispersal and the chemical make-up of the dust leaving the project area. Provide an estimate of the metal constituents expected in the dust released from tailings and waste rock areas and from road use. Provide a map depicting dust deposition areas or zones.
3. Pima County is close to exceeding ozone standards. Provide an ozone analysis protocol to predict the project's contribution to county ozone levels.

SURFACE WATER

Provide an addendum to the Site Water Management Plan with design concept drawings and descriptions of conceptual storm water management plans for each action alternative. Identify detailed designs and locations if known.

GROUNDWATER

1. Provide the locations and other specifications for all existing and proposed groundwater monitoring wells required by Arizona Department and Environmental Quality (ADEQ) in support of the Aquifer Protection Permit (APP). Identify existing wells or potential locations for extended groundwater monitoring networks on both the east and west sides.

2. For both the Tetra Tech and Montgomery mine site models, provide hydrographs that provide details of the magnitude and timeframes of drawdown for the following locations:
 - Empire Gulch springs (near ranch headquarters)
 - Gardner Canyon (near area of perennial flow)
 - Cienega Creek (near gaging stations)
 - Confluence of Davidson Canyon/Cienega Creek
 - Reach 2 Spring in Davidson Canyon
 - Fig Tree Spring
 - Scholefield Springs
 - Sycamore Spring
 - Rosemont Spring
 - Rueles Spring
 - Helvetia Spring
 - Gardner/Cienega confluence
 - Corona de Tucson residences
 - Singing Valley North residences
 - Hilton Road residences
3. Forward all water monitoring data (lab reports, chain of custody, etc.) since December 2010 as well as a summary of all water related data collected to date for the project. This includes the following:
 - West side groundwater level monitoring
 - West side groundwater quality monitoring
 - East side groundwater quantity monitoring
 - East side surface water quality monitoring
 - East side surface water quality monitoring
 - Weather monitoring including pan evaporation, precipitation, etc.
4. Is Rosemont considering a well owner protection agreement with well owners on the east side of the Santa Rita Mountains similar to the agreement with Sahuarita Heights well owners? If so, provide agreement details.

WATER REPLACEMENT PLAN

Rosemont has indicated it would replace or repair water guzzlers, stock tanks, and other human created water supply structures lost to wildlife or grazing use, whether through direct or indirect project related impacts. Stock tanks and springs potentially affected are listed in Tables 50 and 78 of the DEIS. Replacement water sources need to functionally serve the needs of livestock and wildlife in water quantity and location.

1. For each alternative, provide a detailed plan including:
 - Which of the listed sources will be replaced
 - The anticipated annual water volume for each replacement
 - Conceptual construction and operational details (i.e., type of structure to be built, method of delivering water, year constructed, water volume anticipated, location, relationship of replacement water source to lost water source)

2. Describe any plans you have for evaluating and mitigating direct or indirect impacts to naturally-occurring water sources.

OTHER - Plans

1. The Mine Plan of Operations, DEIS, Biological Assessment, and technical reports identify a number of plans to be developed before the Forest Service would give the final approval to proceed with construction. The Forest requests that Rosemont compile a list of all plans it intends to develop and begin drafting those that are timely. Attached is a compiled list of the plans from the Mine Plan of Operations for your reference. The Forest believes the following plans could be drafted at this time.
 - Reclamation and Closure Plan for the Preferred Alternative that updates, consolidates, and summarizes components of the reclamation plans submitted in 2007 and 2010 and addressing numerous related management and mitigation plans identified in the DEIS.
 - Transportation Plan, including access to and use of the Port of Tucson once the trucks leave US Interstate I-10. Describe expected impacts to these access roads and any permits required for access or use of the Port of Tucson. Describe the packaging, volume, and destinations of products to be shipped from the Port of Tucson. Describe any mitigation planned or required for Rosemont's use of the Port of Tucson and the use of roadways other than those owned or operated by the Arizona Department of Transportation.
 - Invasive Species Control Plan
2. Develop, in concert with the Forest Service and SWCA – Environmental Consultants, a Biological mitigation and monitoring plan for species of concern discussed in the DEIS.

OTHER-Miscellaneous

1. Identify the specific locations of water line booster stations. Verify that Pima pineapple cactus populations and archeological resources were considered in locating these booster stations.
2. Provide any recent revegetation test plot research data and results.
3. Identify any existing or planned road right-of-way easements through private lands to secure public access through Gunsite and/or Lopez Passes post mine.
4. Describe Rosemont's understanding of the applicability of the project to any Pima County regulations and/or jurisdiction over riparian habitat, floodplains, or cultural resources on County rights-of-way. Identify how County jurisdiction or oversight differs with respect to land ownership.
5. Provide the Forest with details of the work Rosemont intends to conduct related to Dark Skies, including revisions to the existing lighting plan (April 2011), baseline night sky surveys, and potential dark skies modeling.
6. Provide input regarding the long-term feasibility of successfully rerouting and maintaining the Arizona National Scenic Trail in the general area of Rosemont's unpatented mining claims. One possible route is east of State Highway 83 roughly between Oak Tree and Barrel Canyons. The trail would then go northwest approximately

one mile and join the existing trail in Mulberry Canyon. Describe any long-term plans, or lack thereof, that would directly or indirectly impact this possible trail realignment. Would Rosemont be amenable to allowing the AZ Trail to cross their private land at T. 18 S., R. 16 E., Section 15, SE1/4? Are there any future plans for this immediate area that would lead to another future reroute?

7. Review and comment on pit bench visual mitigation concepts as previously requested. Describe how you plan to mitigate visual impacts of pit wall color contrast, including the treatment type(s) and timeframe.
8. Provide all analyses of open pit wall stability completed since 2007. Explain whether or not high wall failure is a concern and the rationale for that conclusion.
9. Describe, in lay terms, dry stack tailings methodology and list the environmental impacts/benefits of this method. (verbally requested Dec. 2nd)

Investigations of the applicability of geomorphic design, or landforming, to the project are continuing. We will be including Rosemont Copper Company in upcoming discussions in January 2012.

Thank you for your continued assistance in providing information needed for the analysis of your proposal. I would like to ask that you keep me apprised of the anticipated timeframes for completion of these tasks. If you have questions, contact Mindee Roth, who will coordinate with specialists from the Forest and/or SWCA to provide any clarification that may be required. Ms. Roth can be reached at (520) 388-8319 or mroth@fs.fed.us.

Sincerely,

/s/ Cornelia Lane
JIM UPCHURCH
Forest Supervisor

Enclosure: List of Plans from Rosemont MPO