



COUNTY ADMINISTRATOR'S OFFICE

PIMA COUNTY GOVERNMENTAL CENTER
130 W. CONGRESS, TUCSON, AZ 85701-1317
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C.H. HUCKELBERRY
County Administrator

December 14, 2011

Jim Upchurch, Forest Supervisor
Coronado National Forest
300 W. Congress Street
Tucson, Arizona 85701

**Re: Augusta Resources Mining Proposal at Rosemont in Pima County, Arizona and the
Need to Issue a Supplemental Draft Environment Impact Statement on Same**

Dear Mr. Upchurch:

This letter is to request your review and consideration of a request for the issuance of a supplemental Draft Environmental Impact Statement (DEIS) for the Augusta Resources (Augusta; Rosemont) mining proposal in the Rosemont Santa Rita Mountain area in Pima County, Arizona. A supplemental DEIS would provide additional time for the United States Forest Service to address significant flaws in the current DEIS and would provide the public and interested parties with additional time to comment. There is precedent for issuing a supplemental DEIS when significant enhancements are necessary to a DEIS and when public involvement is elevated to the position it deserves. This letter enumerates several of the issues that could be addressed through a supplemental DEIS.

We very much appreciated your presentation and discussion regarding the DEIS at the November 15, 2011 Pima County Board of Supervisors public meeting. A DVD recording of your presentation is enclosed. However, many of the responses we received raise serious questions about the adequacy of the DEIS. Among these concerns are:

1. Consideration of the No Action Alternative. During your presentation, you indicated that you were precluded by law from seriously considering the No Action Alternative other than for purposes of baseline impact analysis. You stated that Rosemont owns private mineral rights and a possessory interest in unpatented mining claims and is, therefore, entitled, pursuant to United States law, to conduct mining operations on their claims. Similar statements and laws are cited in the DEIS. However, these legal rights and

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interests assume Rosemont's claims are valid. If the claims are not valid, then those rights do not exist, and you could select the No Action Alternative, effectively denying the mine. By way of a letter to me dated August 2, 2011, you stated the Forest Service is not required to conduct mining claim validity exams before processing and approving mine plans of operations. You also state the Forest Service directives identify where a validity exam is appropriate. However, none of this changes the fact that the Forest Service possesses the discretionary authority to examine the validity of the claims. So, by choice, and not by legal requirement, you have constrained your decision-making authority and the DEIS process for alternatives analysis by not examining the validity of the claims. If you continue to assert that the inability to select the No Action Alternative is a legal issue and not a policy issue, please provide a copy of a legal opinion or legal analysis prepared by your legal counsel that substantiates your claim.

2. Violations of federal water quality standards. The modeling conducted by Augusta's consultants predicts there will be no pollution of the ambient groundwater in the vicinity of the mining operation. We seriously question these findings. The findings are based on a mathematical model similar to mathematical models used previously in hard rock mining operations. But according to a 2006 study, the reality is that many previous environmental impact statements for hard rock mining proposals have predicted the same – no pollution (Kuipers and Maest 2006 Comparison of Predicted and Actual Water Quality at Hardrock Mines: the reliability of predictions in Environmental Impact Statements, published by EARTHWORKS). This study found that, in most of these cases, the opposite actually occurred; pollution of the groundwater at these sites did occur. Based on their analysis of 25 mines, the lack of adequate geochemical characterization of the native rock was the single most identified cause for failure to make adequate water quality predictions. Of even greater concern is that in many of these cases, the bonds posted on behalf of and as requested by federal and state agencies have been financially inadequate to cover the cost of cleanup, leaving the taxpayers of Arizona and the United States to make up the difference. We believe similar pollution potential exists at this site and seriously question the modeling. During questioning by the Board of Supervisors, you stated that you made a request to Rosemont to submit additional plans for added protection from groundwater contamination; hence, the need for a supplemental DEIS.

We also understand arrangements are being made by the United States Department of Agriculture to bring the United States Geological Survey (USGS) into this process to review the adequacy of the DEIS with regard to water quality. We support USGS involvement. USGS review is appropriate, and their analysis would assist in issuing a complete and competent DEIS. The present process is a rush to judgment based on incomplete information.

3. Adverse impacts to groundwater resources. The proposed mine will use groundwater, which, as you know, is a precious commodity in the southwestern United States. The

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withdrawal of this groundwater will have adverse impacts on well owners, private property owners, the San Xavier District of the Tohono O'odham Nation and others in the area where groundwater is withdrawn. The impacted area has socioeconomic characteristics that would support an environmental injustice claim.

Responding to questioning, you indicated the Forest Service is powerless to require Augusta Resources to directly utilize Central Arizona Project (CAP) water in lieu of groundwater pumping. While this may be the case for state law, we are surprised there is no federal agency concerned with projected impacts to the San Xavier District in light of the Southern Arizona Water Rights Settlement Act, which includes groundwater protection requirements for the San Xavier District. Requiring direct use of CAP water would eliminate the adverse impacts to the Sahuarita area, including the southeastern extent of the San Xavier District of the Tohono O'odham Nation, from groundwater decline due to Augusta Resources' depletion of the groundwater aquifer.

4. Adverse transportation impacts are not limited to a State Highway. The transportation impacts Augusta Resources will cause to the transportation network of Pima County are not limited to State Highway 83, and the impact is not limited to simple traffic congestion. Our largest concern relates to the structural integrity of the pavement system being exposed to repeated, heavy truck loads from concentrate shipment and other travel related to mine development and maintenance. The present DEIS completely ignores that these impacts go beyond the state highway adjacent to the actual proposed mining site. Those impacts that impact County highways, as well as City streets and highways, are of concern to the Board of Supervisors.

There is no mention, no acknowledgment, no proposal to mitigate these impacts in the DEIS. As far as we can determine, a DEIS should thoroughly discuss the impacts to all parties from the proposed action. To limit the impact to a state highway is erroneous and misleading. During questioning, you indicated the impacts were to State Highway 83 and completely failed to acknowledge the impacts to the network of transportation links that would be used by Augusta Resources to transport their products to market over a County and local highway system.

5. Augusta Resources is shopping for air quality regulators. During your presentation, you indicated you had asked Augusta to provide additional air quality modeling to show they will meet air quality standards. In addition, you said you will hold off on a decision on the project to ensure Augusta meets Pima County's air quality standards. The County has been delegated the authority to implement the Clean Air Act by the United States Environmental Protection Agency. As you indicated, the mining proposal made by Augusta Resources lacks sufficient detail or modeling to assure the operation will not violate federal air quality standards. Pima County has pointed such out to Rosemont Copper Company, and Rosemont's response was to sue the County to compel approval through the courts.

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The court action is pending. In addition, Rosemont appealed the decision of our Air Quality Control Officer to deny Rosemont's air quality permit application to an independent hearing board, which has upheld the Control Officer's decision. In the middle of the appeal process, Rosemont wrote to the Arizona Department of Environmental Quality (ADEQ), asking them to permit the project instead. I am enclosing a letter dated November 1, 2011 from an attorney representing Augusta Resources that asks ADEQ to assume air quality permitting jurisdiction. Augusta wants authority for its air quality permit to be removed from the purview of the County and ceded to the State; shopping, in our opinion, for a better answer.

The health of the citizens of Pima County, whom we represent, is in jeopardy. Several well documented air quality air quality rule violations have already occurred at nearby mining operations in southern Arizona. During those instances, blowing dust from mine tailings resulted in severe particle dust impacts at nearby residences. The fact that Augusta proposes an experimental method of tailings pile management is even more troubling. The "dry stack" method of tailings disposal is one we would deem experimental and has been used in only a few places – primarily in extremely cold climates where slurry tailings disposal would be impractical because of freezing or where there is no water, such as the Atacama Desert in Chile, where in some regions, it has not rained for 400 years. There is no evidence dry stack tailings will not cause more particulate air pollution than the conventional methods now used, which have, on numerous occasions in southern Arizona, led to air quality rule violations and violations of national ambient air quality standards.

In addition, the tailings will be coarser, but there are no restrictions on how fine they can grind the ore-bearing rock. If the recovery of the metals is lower than expected, they may likely grind the material finer so that the recovery rates can be raised this way. In fact, even with pilot studies of milling and operations, it is only during production that the specifics of the milling and refining process will be established. No restriction on the grain size of the tailings' materials is proposed; hence, particulate air pollution impacts cannot be quantified and based on known milling processes of mining operations in southern Arizona, a finer tailings' grain sized can be anticipated and the potential for air quality pollution and impacts becomes more likely.

It is unlikely the issue concerning shortcomings in Augusta's assessment of air quality impacts will be resolved anytime soon. The present DEIS, while allowing additional time to Augusta to improve the quality of the data necessary to assess impacts to air quality standards, does not contain any modeling or analysis that assures compliance with National Ambient Air Quality Standards. This section of the DEIS inadequately addresses the adverse air quality impacts that are likely.

6. Inadequate disclosure of adverse economic impacts. The economic benefits of the proposed mine are well delineated and quantified in the DEIS. However, the DEIS is wholly

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inadequate in discussing the adverse economic impacts to the community because it overlooks and fails to quantify the adverse impacts to economic activities and jobs related to the astronomy industry, as well as to tourism based jobs in places like Sonoita, Elgin and Patagonia. In addition the single statement on property tax generation is woefully inadequate.

The economic benefits of astronomical research in southern Arizona are well known, and the industry world renown. At the Board of Supervisors meeting, you indicated an inability to require compliance with a local dark sky ordinance. The most immediate impact of this noncompliance by Augusta will be on the Whipple Observatory located a mere 13.2 miles from the mine site. Failure to quantify the economic and job losses associated with losing a world class astronomical research industry is a key failure in the economic component of the DEIS.

The number of jobs that will be lost in places such as Sonoita, Elgin and Patagonia must also be considered. Although the DEIS qualitatively discloses the fact that the economies of these towns are almost entirely dependent on tourism, and that Highway 83 will impact travelers to and from these towns, it fails to quantify an estimate of job losses. This lack of quantification of adverse impacts was raised by one of the Supervisors at the meeting. Without quantification, the public and decision makers reliant on the DEIS are unable to assess the net effect on jobs from the mining proposal.

A single statement is made on Page 742 of the DEIS estimating annual property tax revenue at \$3.5 million. There is no explanation in the DEIS regarding the assumptions behind this estimate, nor is there adequate explanation in other documents the County has reviewed concerning the economic impacts and feasibility of this project. We do know that our tax records indicate Rosemont, for the last tax year, paid a total of \$1,409 for 2,002 acres associated with their patented mining claims. This is roughly equivalent to the property taxes paid by one single family home in Green Valley.

The adverse impacts to both astronomy and tourism should be clearly compared to positive impacts. The tax revenue estimates provided by the company are also in need of closer scrutiny. This will allow the community and decision makers to weigh both the positive and negative economic impacts of the Augusta mining proposal.

7. Limited regulatory authority. You stated that your regulatory authority was limited to Coronado National Forest lands. We agree; however, this does not relieve you of the obligation of disclosing impacts to lands, public infrastructure, drainage systems, ecosystems, groundwater and air sheds that are both on and off Forest Service lands. The present DEIS does a poor job of disclosing impacts that are off Forest Service lands and within a reasonable distance of the source of the impact. This is a significant weakness that must be corrected; hence, the need to issue an improved supplemental DEIS.

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8. Incomplete data. In many parts of the DEIS, there are comments indicating the draft is incomplete and premature. Statements such as “not enough time to analyze” or “data not yet available” raise concerns over the adequacy of the DEIS addressing the actual impacts of the proposal. On October 28, 2011, we sent an email inquiry to the Forest Service Cooperating Agency Representative regarding availability of sediment delivery modeling for the Barrel Alternative. We have received no response. At the meeting, you stated you are not trying to speed up or slow down the process. However, more time is clearly needed to even respond to our requests.

We believe the present DEIS does not explore all of the technical issues associated with Augusta’s mining proposal, and conclusions that the mining operation will not violate federal air or water quality standards are premature and not supported by existing evidence as is so clearly demonstrated by the outcomes of past practices.

9. Additional Concerns. In addition to concerns regarding comments you expressed at the meeting, there are several other reasons why a supplemental DEIS should be issued for informed public comment.

A. Lack of compensatory land mitigation. There have been previous proposals to mine the Rosemont copper deposit by other national and international mining corporations. In these previous proposals, mitigation lands, through the process of a land exchange, were offered to secure their rights to mine and offset the adverse impacts of the proposed action on the National Forest landscape and ecosystem. A land exchange was offered previously to the Forest Service when ASARCO proposed to mine the Rosemont deposit. Resolution Copper Company, in pursuing development of a large copper deposit in Superior, Arizona, acquired title to a significant number of acres of biological and recreational importance as a proposal to compensate the federal government and the public for the impacts they would cause. Lack of compensatory land mitigation, either through a land exchange or simply offsite land committed to conservation in perpetuity, makes it impossible for Augusta to meaningfully mitigate the significant adverse impacts of the proposal on the landscape and ecosystem. Additional time could be spent encouraging Augusta to seriously consider this option.

B. Inadequate consideration of irreversible impacts to *Ce:wi Duag* – a traditional cultural place to the Tohono O’odham Nation. The importance of the Santa Rita Mountains as a traditional cultural place to the Tohono O’odham Nation has been known for many years and publicly asserted in Resolution 09-569 by the Nation. While the Forest Service prepared a background report on the ethno history of the area and consulted with certain tribal members, the documentation prepared thus far for listing *Ce:wi Duag* in the National Register of Historic Places has not involved the Nation in directing its preparation. To give full consideration of impacts to *Ce:wi Duag* in the preparation of the DEIS, the Nation should be provided the opportunity, time and

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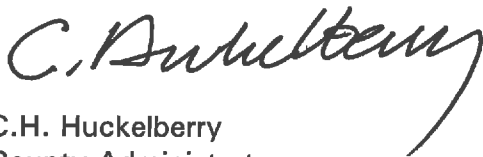
Page 7

resources to conduct and direct its own studies in organizing traditional knowledge of the area and in assessing how the mine will impact its cultural values.

C. Politicizing the Process. Augusta Resources has made it standard practice to conduct extensive and often misleading public relations and lobbying campaigns to attempt to stampede regulators – federal, state and local agencies – into a decision favorable to Augusta. The best example relates to Pima County’s involvement with air quality permitting. The Board of Supervisors was advised by the County Attorney that as a public body, we have no say in the issuance of the air quality permit. In fact, one of Augusta’s attorneys appeared before the Board of Supervisors to reiterate what the Board had been told by our County Attorney. Shortly thereafter, Augusta Resources conducted a public relations campaign to have individuals in our community call the Board of Supervisors and ask them to “approve” the air quality permit. Such is disingenuous, particularly when Augusta Resources knew the Board had no authority over the issuance of an air quality permit.

For the reasons stated above, we ask that you favorably consider issuing a supplemental DEIS with a new additional comment period after the deficiencies in the current DEIS are addressed. The public deserves to have adequate, clear and accurate information regarding this mining proposal. They are now being asked to comment on incomplete and misleading information largely, if not entirely, provided by the project proponent, Augusta Resources Corporation.

Sincerely,



C.H. Huckelberry
County Administrator

CHH/mjk

Enclosures

c: The Honorable Gabrielle Giffords, Arizona Congressional District 8, United States
House of Representatives
The Honorable Raúl Grijalva, Arizona Congressional District 7, United States House
of Representatives
The Honorable Thomas Vilsack, Secretary, United States Department of Agriculture
The Honorable Chairman and Members, Pima County Board of Supervisors
Tom Tidwell, Chief, United States Forest Service

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November 1, 2011

VIA EMAIL

Mr. Eric Massey
Air Quality Division Director
Arizona Department of Environmental Quality
1110 West Washington Street
Phoenix, Arizona 85007

Re: Request for State Implementation Plan permitting and assertion of jurisdiction
Rosemont Copper Company, Rosemont Copper Project

Dear Director Massey:

Rosemont Copper Company (Rosemont) requests that the Arizona Department of Environmental Quality (ADEQ) permit the Rosemont Copper Project (RCP) in accordance with the Arizona State Implementation Plan (ASIP) and Pima County State Implementation Plan (PCSIP) and, to avoid multiple permits for the same facility, assert jurisdiction over any remaining state permit requirements pursuant to A.R.S. § 49-402(B). The rationale for this request follows.

The RCP is a typical open pit copper mine that is planned for construction in the area generally south southeast of Tucson within Pima County. Controlled non-fugitive emissions from the mine are estimated at less than 100 tons/year for any regulated air pollutant and less than 10 tons/year of any single hazardous air pollutant (HAP) and less than 25 tons/year of any combination of HAPs. Rosemont was, therefore, seeking a Class II air quality permit from the Pima County Air Pollution Control District (PC APCD), which is part of the Pima County Department of Environmental Quality (PDEQ).

As part of the permit application process, a dispute arose between PDEQ and Rosemont over whether fugitive emissions must be included under the PCSIP. This dispute ultimately led to PDEQ's denial of the RCP permit. An outline of events and why Rosemont believes PDEQ's PCSIP interpretation is improper are set forth in my letter to you dated October 20, 2011 and a subsequent memorandum dated October 24, 2011. The dispute with PDEQ did prompt Rosemont to further investigate the PCSIP to ensure that all requirements were met. That investigation revealed that Rosemont should have submitted its application to ADEQ, as the successor to the Arizona Department of Health Services, in accordance with express provisions of the PCSIP and ASIP.

The PCSIP's jurisdictional provisions are quite clear on this matter. The PCSIP states:

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These RULES AND REGULATIONS shall not apply to emission sources under the original jurisdiction of the Arizona Department of Health Services unless regulatory authority has been delegated to Pima County pursuant to ARS 36-1705 or 36-1706.

1. Emission sources under original jurisdiction of the Arizona Department of Health Services, and subject to delegation from time to time, include:
 - a. Major sources of air pollution, including any source capable of generating more than 75 tons per day of air contaminants, uncontrolled....

PCSIP, Rule 112.B.1.a. Rosemont's consultants have determined that the uncontrolled potential to emit of the RCP, considering just haul truck and related traffic, is in excess of 75 tons/day under the current design plan for the RCP submitted to PDEQ. Therefore, under the express terms of the PCSIP, it does not apply.¹ Instead, Rosemont is to apply to ADEQ. The ASIP is similar. *See, e.g.*, ASIP § 36-1706(A)(1). This bifurcated approach was specifically noted and approved by EPA when it approved the PCSIP. *See* 44 Fed. Reg. 39480 (July 6, 1979) (proposal); 45 Fed. Reg. 49112 (July 23, 1980) (proposal); and 47 Fed. Reg. 29532 (July 17, 1982) (final).

Rosemont recognizes that the ASIP differs from currently effective Arizona state law in A.R.S. § 49-402, which no longer provides for state jurisdiction over "major sources" defined as sources that emit 75 tons/day. *Compare* ASIP § 36-1706(A)(1) with A.R.S. § 49-402(A)(1). Nevertheless, A.R.S. § 49-404(C) makes it clear that ADEQ's jurisdiction under the SIP remains fully in effect. ADEQ is thus the appropriate SIP permitting authority for the Rosemont project pursuant to both PCSIP Rule 112.B.1.a and ASIP § 13-1706(A)(1). It is also indisputable that under the ASIP, the RCP requires a SIP permit. *See, e.g.*, ASIP § 36-1707.01(A).

There remains a question whether Rosemont may still require a PDEQ permit pursuant to the provisions of PCC Title 17 independent of the PCSIP and ASIP provisions discussed above. After the Comprehensive Air Quality Act of 1992, S.B. 1430, 40th Leg., 2nd Sess (1992), it is clear that the policy of the State is that only a single permit be required for each source. *See, e.g.*, S.B. 1430, §§ 14, 17-19 (eliminating "installation" and "operation" permits at state level); §§ 39, 40-43 (eliminating "installation" and "operation" permits at county level). This policy was adopted based upon complaints that a source would obtain an installation permit to construct a source, but then might be denied an operating permit to operate it despite considerable expenditure. This policy applies with equal force to the possibility that a source might be required to obtain an installation/operating permit from ADEQ pursuant to the ASIP and then obtain a separate A.R.S. Title 49/PCC Title 17 air quality permit from PDEQ. If the goal of the legislature was to have only a single air permit per facility, then it seems likely that where the county is prohibited from issuing the SIP permit, the appropriate course is to consolidate

¹ The individual permit provisions of the Pima County Code (PCC), Title 17, are not yet SIP-approved. *See generally* 40 C.F.R. § 52.120. Therefore, Rosemont cannot fall back on the PCC for a federally-recognized air construction permit, even if this were appropriate given the specific language of PCSIP 112.B.1.a.

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permitting with ADEQ consistent with the legislative policy direction established in the Comprehensive Air Quality Act of 1992 (S.B. 1430).

Under the unique circumstances presented by the Rosemont permit application for the RCP, we believe the best course is for ADEQ to assert jurisdiction pursuant to A.R.S. § 49-402(B) over the RCP permit application and thus consolidate all of the possible competing permit authorities and processes into a single proceeding. This would avoid the possibility of multiple permit proceedings (Rosemont will withdraw its application with PDEQ upon acceptance of a permit application by ADEQ) and inconsistent determinations on substantially identical language by different agencies.

We do not believe that delegation of the RCP to PDEQ is an appropriate resolution at this time. ADEQ is familiar with the requirements of the ADEQ regulations and the ASIP and has some familiarity with the PCSIP as both the SIP submittal authority and as the permit writer for the Freeport-McMoRan Sierrita mine. While PDEQ recently received delegation for Sierrita, it is not as familiar with the ADEQ regulations and ASIP as ADEQ and is unlikely to have gained such familiarity in the limited time since it received delegation of the Sierrita property. Accordingly, we do not believe that immediate delegation to PDEQ would be helpful. If ADEQ has manpower constraints, Rosemont is amenable to submitting its application pursuant to the "expedited permitting" provisions to reduce the burden on ADEQ.

Rosemont is mindful that state regulated sources remain subject to appropriate county ordinances that have been recommended for SIP adoption. *See* A.R.S. § 49-402(D). Rosemont is, therefore, retaining its demonstration of compliance with all applicable portions of the PCC in the application it will submit to ADEQ. Because Rosemont can demonstrate compliance with all PCC requirements currently in effect, Rosemont will not question whether the PCC requirements meet the requirements of A.R.S. § 49-479 for purposes of this application. We trust that this should make ADEQ's task in reviewing the permit application considerably simpler, as ADEQ will have a demonstration of compliance with the ASIP, ADEQ regulation, and PCC requirements all contained in the same application.

We appreciate the consideration the Department has shown to Rosemont in this matter and hope that you concur with our determination that the applicable PCSIP and ASIP transfer permitting from PDEQ to ADEQ and that assertion of ADEQ's permitting jurisdiction pursuant to A.R.S. § 49-402(B) is the best way to resolve the many unprecedented permitting issues raised by this matter. Please feel free to contact me with any questions or concerns and we look forward to meeting with you and members of your staff on November 3, 2011 to discuss Rosemont's application.

Sincerely,



Eric L. Hiser
Counsel for Rosemont Copper Company

Mr. Eric Massey, Air Quality Division Director
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Attachments

Pima County SIP Rule 112
Letter from Louis Thanukos, JBR, RCP uncontrolled emissions

Cc: Kathy Arnold, Rosemont Copper Company (w/attachments)

**PIMA COUNTY
STATE IMPLEMENTATION PLAN (SIP)**

This abbreviated copy of the Pima County SIP is provided so the public may access and review applicable rules for Pima County. This document is an unofficial copy and does not contain the SIP appendices including:

**Delegation of Jurisdiction
Reference Test Methods
Performance Specification for Continuous Monitoring Equipment
Air Quality Modeling Guidelines**

**To review the official copy at the PDEQ offices
150 West Congress, Tucson, AZ
contact PDEQ at (520) 740-3340**

Rule 103: Authority

- A. These RULES AND REGULATIONS are adopted pursuant to the authority granted by Title 36, Chapter 6, Article 8, Section 36-770, et seq., Arizona Revised Statutes, abbreviated hereinafter as ARS when referring to a specific Statute.

REGULATION 11: JURISDICTION

RULE 111: General Applicability

- A. These RULES AND REGULATIONS shall apply to all persons in Pima County, including citizens, residents, transients, and all other persons except where specifically exempted by Arizona Revised Statutes.

Rule 112: State and/or County

- A. These RULES AND REGULATIONS shall apply to all types, kinds, and sizes of air pollutant emission sources in Pima County except those sources under the jurisdiction of the Arizona Department of Health Services.
- B. These RULES AND REGULATIONS shall not apply to emission sources under the original jurisdiction of the Arizona Department of Health Services unless regulatory authority has been delegated to Pima County pursuant to ARS 36-1705 or 36-1706.
1. Emission sources under original jurisdiction of the Arizona Department of Health Services, and subject to delegation from time to time, include:
 - a. Major sources of air pollution, including any source capable of generating more than 75 tons per day of air contaminants, uncontrolled, and
 - b. Air polluting operations and activities of all agencies and departments of the State and its political subdivision, and
 - c. Motor vehicles, and
 - d. Air polluting mobile or portable machinery and equipment capable of being operated in more than one county.

Rule 113: Limitations

- A. Nothing in these RULES AND REGULATIONS shall be construed so as to:
1. Regulate or control air pollution existing solely within commercial or industrial plants, works, or shops owned by or under the control of the person causing the air pollution, or
 2. Prevent normal agricultural soil-cultivation and crop-producing practices which cause dust.

REGULATION 12: ADMINISTRATION

RULE 121: Air Quality Control District

- A. The Pima County Air Pollution Control District, having been created by Pima County Ordinance 1966-44, in accordance with ARS 36-773C and 36-775 and consisting of an operating division of the Pima County Health Department, is hereby continued and shall be known as the Pima County Air Quality Control District.

Rule 122: Executive Head

- A. The Director of the Pima County Health Department shall be on the Air Pollution Control Officer and the executive head of



JBR Environmental Consultants, Inc.

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November 1, 2011

Ms. Kathy Arnold, P.E.
Vice President, Environmental and Regulatory Affairs
Rosemont Copper Company
2450 West Ruthrauf Road, Suite 180
Tucson, Arizona 85705

Re: Uncontrolled Daily Emissions from the Planned Rosemont Copper Project

Dear Ms. Arnold:

Per our recent discussions, attached please find a summary of uncontrolled emissions for Years 1, 5, 10, 15, and 20 of the Rosemont Copper Project. Emissions have been calculated based upon the capacity of the equipment and continuous operation.

Uncontrolled emissions are based primarily on AP-42 emissions factors except where an emission unit is subject to an emissions limitation. Emissions for PM/TSP are based on particulate matter in the PM₃₀ size range (particulates between zero and 30 microns) where such data is provided, or PM if such data is not available. As indicated in the discussion of PM and TSP in the attached summary, uncontrolled emissions for processes with PM₃₀ emission factors exceed 75 tons/day for most of the years listed in the attached summary.

Please call if you need more information.

Sincerely,

A handwritten signature in black ink that reads 'Louis C. Thanukos'. The signature is written in a cursive style and is underlined with a horizontal line.

Louis C. Thanukos, Ph.D.
Division Manager
JBR Environmental Consultants

**ROSEMONT COPPER PROJECT
SUMMARY OF UNCONTROLLED DAILY EMISSIONS**

Summary of Emissions

A summary of the uncontrolled daily emissions from the Rosemont Copper Project (RCP) is presented in the table below. The table includes all non-fugitive and fugitive emission sources at the RCP including emergency equipment, but excluding tallpipe emissions. Fugitive emissions from mining sources are calculated using annual mining rates from Rosemont's mine plan of operations. Emissions from process equipment are calculated using the maximum capacity of equipment (taking into account physical or operational limitations) and continuous operation. Complete detailed explanations of how emissions are calculated for each individual emission source at the RCP are presented in the Calculation Methodology of Rosemont's Class II Air Quality Permit Application.

Summary of Total Uncontrolled Daily Emissions at the RCP (Non-Fugitive and Fugitive)					
Pollutant	Uncontrolled Daily Emissions ^a (tons/day)				
	Year 1	Year 5	Year 10	Year 15	Year 20
PM/TSP ^b	86.83	119.83	99.57	98.76	59.12
PM ₁₀	23.11	31.59	26.38	26.16	15.94
PM _{2.5}	2.57	3.42	2.90	2.87	1.84
CO	2.13	2.13	2.13	2.13	2.13
NO _x	1.07	1.07	1.07	1.07	1.07
SO ₂	0.05	0.05	0.05	0.05	0.05
VOCs	0.05	0.05	0.05	0.05	0.05
H ₂ SO ₄	0.005	0.005	0.005	0.005	0.005
CO ₂	99.02	99.02	99.02	99.02	99.02
HAPs	0.01	0.01	0.01	0.01	0.01

^a Daily emission totals do not include tallpipe emissions.

^b See the discussion of PM and TSP below.

Discussion of PM and TSP

Emission factors from the latest version of the *Compilation of Air Pollutant Emission Factors, Volume I: Stationary, Point, and Area Sources (AP-42)* were used to calculate uncontrolled emissions from the majority of the emission sources at the RCP. Emission factors for particulate emissions greater than 10 microns in aerodynamic diameter (PM_{10}) are presented in AP-42 in the following categories:

- Total suspended particulates (TSP)

TSP is assumed in AP-42 to be a surrogate for particulate matter less than or equal to 30 microns in aerodynamic diameter (PM_{30}).

- Particulate matter less than or equal to 30 microns in aerodynamic diameter (PM_{30}).

- Filterable particulate matter (PM)

Filterable PM is defined in AP-42 as PM collected on or prior to the filter of an EPA Method 5 (or equivalent) sampling train. This can include all sizes of particulate matter.

- Particulate matter less than or equal to 100 microns in aerodynamic diameter (PM_{100}).

AP-42 emission factors are expressed as TSP or PM_{30} for the following emission sources at the RCP:

- ❖ Drilling (TSP)
- ❖ Blasting (TSP)
- ❖ Loading (PM_{30})
- ❖ Material transfer points (PM_{30})
- ❖ Vehicle travel on unpaved roads (PM_{30} specifically stated to be assumed equivalent to TSP)
- ❖ Bulldozer use (PM_{30})
- ❖ Grader use (PM_{30})
- ❖ Wind erosion of tailings (PM_{30})

The AP-42 emission factors used to calculate uncontrolled emissions from the remainder of the emission sources at the RCP are expressed in the form of PM or PM_{100} .

Total uncontrolled TSP/ PM_{30} emissions from the above emission sources exceed 75 tons/day (117.69 tons/day for Year 5).

Complete tables detailing emissions from each individual emission source at the RCP are presented in the Emission Tables of Rosemont's Class II Air Quality Permit Application.



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49-402. State and county control

A. The department shall have original jurisdiction over such sources, permits and violations that pertain to:

1. Major sources in any county that has not received approval from the administrator for new source review under the clean air act and prevention of significant deterioration under the clean air act.
2. Smelting of metal ore.
3. Petroleum refineries.
4. Coal fired electrical generating stations.
5. Portland cement plants.
6. Air pollution by portable sources.

7. Air pollution by mobile sources for the purpose of regulating those sources as prescribed by article 5 of this chapter and consistent with the clean air act.

8. Sources that are subject to title V of the clean air act and that are located in a county for which the administrator has disapproved that county's title V permit program if the department has a title V program that has been approved by the administrator. On approval of that county's title V permit program by the administrator, the county shall resume jurisdiction over those sources.

B. Except as specified in subsection A of this section, the review, issuance, administration and enforcement of permits issued pursuant to this chapter shall be by the county or multi-county air quality control region pursuant to the provisions of article 3 of this chapter. After the director has provided prior written notice to the control officer describing the reason for asserting jurisdiction and has provided an opportunity to confer, the county or multi-county air quality control region shall relinquish jurisdiction, control and enforcement over such permits as the director designates and at such times as the director asserts jurisdiction at the state level. The order of the director which asserts state jurisdiction shall specify the matters, geographical area, or sources over which the department shall exercise jurisdiction and control. Such state authority shall then be the sole and exclusive jurisdiction and control to the extent asserted, and the provisions of this chapter shall govern, except as provided in this chapter, until jurisdiction is surrendered by the department to such county or region.

C. Portable sources under jurisdiction of the department under subsection A, paragraph 6 of this section may be required to file notice with the director and the control officer who has jurisdiction over the geographic area that includes the new location before beginning operations at that new location.

D. Notwithstanding any other law, a permit issued to a state regulated source shall include the emission standard or standard of performance adopted pursuant to section 49-479, if such standards are more stringent than those adopted by the director and if such standards are specifically identified as applicable to the permitted source or a component of the permitted source. Such standards shall be applied to sources identified in subsection A, paragraph 2, 3, 4 or 5 of this section only if the standard is formally proposed for adoption as part of the state implementation plan.

E. The regional planning agency for each county which contains a vehicle emissions control area shall develop plan revisions containing transportation related air quality control measures designed to attain and maintain primary and secondary ambient air quality standards as prescribed by and within the time frames specified in the clean air act. In developing the plan revisions, the regional planning agency shall consider all of the following:

1. Mandatory employee parking fees.
2. Park and ride programs.
3. Removal of on-street parking.

4. Ride share programs.
 5. Mass transit alternatives.
 6. Expansion of public transportation systems.
 7. Optimizing freeway ramp metering.
 8. Coordinating traffic signal systems.
 9. Reduction of traffic congestion at major intersections.
 10. Site specific transportation control measures.
 11. Reversible lanes.
 12. Fixed lanes for buses and carpools.
 13. Encouragement of pedestrian travel.
 14. Encouragement of bicycle travel.
 15. Development of bicycle travel facilities.
 16. Employer incentives regarding ride share programs.
 17. Modification of work schedules.
 18. Strategies for controlling the generation of air pollution by nonresidents of nonattainment or maintenance areas.
 19. Use of alternative fuels.
 20. Use of emission control devices on public diesel powered vehicles.
 21. Paving of roads.
 22. Restricting off-road vehicle travel.
 23. Construction site air pollution control.
 24. Other air quality control measures.
- F. Each regional planning agency shall consult with the department of transportation to coordinate the plans developed pursuant to subsection E of this section with transportation plans developed by the department of transportation pursuant to any other law.