



COUNTY ADMINISTRATOR'S OFFICE

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C.H. HUCKELBERRY
County Administrator

August 1 2011

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

Re: Additional Comments from Pima County on the Administrative Draft Environmental Impact Statement for the Proposed Rosemont Mine

Dear Mr. Upchurch:

Thank you for the additional 30 days to comment on the Administrative Draft Environmental Impact Statement (ADEIS) for the Proposed Rosemont Mine. On June 30, 2011, we submitted comments to you in order to meet the original review deadline. Those comments are still valid and must still be considered. Attached are additional comments that Pima County staff have produced during this extended review time. I greatly appreciate the level of expertise and experience that Pima County staff are able to bring to the review of this proposed project and strongly suggest that you address these comments prior to publishing a public draft of the EIS.

Below are a number of issues that Pima County staff raised in this additional set of comments, which appear to again signify substantial flaws in the ADEIS.

Economics

Pima County staff with expertise in economic development and transportation impacts and costs, provided additional substantive comments regarding the socioeconomics section of the ADEIS. We expect to offer additional comments on this topic during the public comment period.

Mr. Jim Upchurch

Re: **Additional Comments from Pima County on the Administrative Draft Environmental Impact Statement for the Proposed Rosemont Mine**

August 1, 2011

Page 2

Transportation Costs. One of the factors identified in the socioeconomics section of the ADEIS for comparison across alternatives is the change in demand and cost for road maintenance over time. The ADEIS correctly states that the addition of heavily loaded trucks to Highway 83 will increase maintenance needs. However, incredibly, no actual costs are given. More incredibly, it is assumed impacts are limited to Highway 83 when other sections of the ADEIS state that trucks will be transporting heavy material and equipment between the mine and the Port of Tucson, which is located at Kolb and Valencia, and would include city and county roads, as well as Interstate 10. Further, major transportation improvements may be necessary on these roads to handle the increased truck traffic and congestion.

Pima County Department of Transportation staff estimated the miles of roadways that would be impacted and the costs to address those impacts. It was estimated that 44 miles of roadways would be impacted as primary access roads. The cost to address pavement distress due to heavy truck traffic was estimated at \$14.6 million. This does not include the cost to address accelerated wear on bridge structures over Interstate 10 or the railroad. It was stated that these improvements would become necessary at or shortly after mine operations would begin. The cost to address the construction of additional lanes on Highway 83 to meet safety standards for truck climbing and passing was estimated at \$13 million. These estimates total \$27.6 million and are in today's costs.

If you compare these costs estimates to the \$211,743 that was included in a recent Tucson Regional Economic Opportunities (TREGO) economic impact study as the amount Rosemont will contribute to road improvements, you will see why Pima County has been so critical of both Rosemont's mitigation contributions and the Forest Service's ADEIS.

Economic Benefits of Pit Backfilling. We continue to advocate for the backfilling of the pit. Not only would backfilling have tremendous positive impacts for reducing what would otherwise be irretrievable losses of habitat, scenic views, and water resources, but it would also have economic benefits that could easily be modeled using models accessible to the Forest Service. For example, at the January 10, 2010 Cooperating Agency meeting, a presentation was provided that included information on partial and full backfilling that could be used to model direct and indirect economic benefits including jobs, tax revenues, local spending, etc. According to the presentation provided by Rosemont, full backfilling would take 15 years and would employ an average of 100 people a year.

Cost estimates were not given for full backfilling, only partial backfilling. The cost provided for partial backfilling of 6 percent of the waste rock was \$90 million. This cost estimate appears to be based on the heavy use of trucks. I question whether this cost estimate is purposely inflated and whether the use of conveyors would be feasible, thus greatly reducing the costs. A quick search by staff did turn up a conveyor belt used by the Los Pelambres Copper Mine in Northern Chile that is 13 kilometers long, drops over 4000 feet, and generates electricity. The use of conveyors could also reduce the additional use

Mr. Jim Upchurch

Re: **Additional Comments from Pima County on the Administrative Draft Environmental Impact Statement for the Proposed Rosemont Mine**

August 1, 2011

Page 3

of fuel, dust, and truck emissions that would be generated by another 15 years of construction.

Because of the very significant benefits of this possible alternative or mitigation measure, I strongly suggest that the Forest Service reexamine the possibility of backfilling. The Forest Service should get an independent cost estimate for full backfill, considering the use of conveyors, and should also model the positive community employment impacts of such an alternative.

Economic Impact of Groundwater Pumping. The extent to which reduced groundwater levels due to pumping in the area of Sahuarita will impact other existing industries in the area, water companies, and water users in general, is not addressed in this ADEIS and should be. Impacts to water resources in the arid southwest and subsequent impacts to future generations and businesses is clearly an economic issue. This is also an environment justice issue, as explained below.

Environmental Justice

Similar to other important issues in the ADEIS, conclusions regarding disparate impacts on minority and low income communities are not adequately supported and the basis for analysis is unnecessarily narrow. For instance, the ADEIS fails to disclose potential impacts to several colonias in the general vicinity of Sahuarita. Colonias are defined as federally designated low income communities located within 150 miles of the U.S./Mexico border that often lack safe, sanitary and sound housing, as well as services such as potable water, adequate sewage and drainage. Colonias often rely on individual exempt wells for water supply, and septs for waste disposal. Individual well owners and renters are more vulnerable than the public at large or private water companies to changes in water quality and water availability.

Exempt wells often serve one or a few families located in a relatively small area, so relocation of the well away from areas of depletion may not be possible. Water quality sampling is typically infrequent to non-existent, compared to the extensive monitoring and reporting requirements imposed on large private and municipal providers, so the vulnerability to water quality impacts is greater. In addition, most of their wells are not drilled as deeply as municipal, agricultural, or industrial users, making them inherently more vulnerable to drops in groundwater depth.

A 20-year drawdown area has been identified by Rosemont and is shown on the attached map. The 10-foot, 20-year criterion was chosen by the Forest Service for analytical purposes to examine effects of the Rosemont well fields on groundwater in the Sahuarita area. Rosemont has indicated its willingness to provide insurance for certain well-owners who sign an agreement with them limiting their right to damages (on map as well protection area). But the agreement would only cover about a quarter of the area within

Mr. Jim Upchurch

Re: **Additional Comments from Pima County on the Administrative Draft Environmental Impact Statement for the Proposed Rosemont Mine**

August 1, 2011

Page 4

the 20-year drawdown area. Renters who live on lands inside the well protection area are not protected either if the land owner fails to sign an agreement.

The basis for analysis also does not appear to be meaningful. The unit for analysis for an "environmental justice community" is entire counties, in addition to the two tribes. Census data is then used to define whether more than 50 percent of the population of an entire county or tribe is a minority, and whether the county is low income. The use of counties as units appears to be too large. As stated above, colonias are a smaller unit that is not considered. In addition, if census blocks were considered as units I think you'd find that a majority of those that will be impacted by Rosemont's groundwater pumping in the vicinity of Sahuarita are minorities and would therefore be considered an "environmental justice community".

Overall, Pima County staff found that the ADEIS fails to meet the federal Fair Treatment and Meaningful Involvement requirements.

Ground Water Quality

It is to the benefit of the Forest Service and Pima County that we have on our staff Mr. Jim DuBios, who worked for 19 years at the Arizona Department of Environmental Quality (ADEQ) reviewing more than 20 mines for Aquifer Protection Permits, closure and remedial activities, as well as co-authoring Arizona's Best Available Demonstrated Control Technology (BADCT) for mining facilities. Mr. DuBois reviewed the ground water quality section of the ADEIS and has several comments and suggestions for improvements.

Biological Resources

Staff included several additional comments on the biological resources section. Overall, given the scale of the proposed action, a more thorough and realistic assessment of impacts to species, including all Threatened and Endangered species and their habitats is necessary.

Summary

Overall, these additional comments, together with the first submittal of comments, continue to show that the ADEIS is far from being complete. A significant amount of additional research and analysis is needed in order to substantiate many of the findings, as well as to correct serious errors and omissions. If the Forest Service is going to continue to take the stance that the no action alternative cannot be selected, then you have a duty to this community to ensure this mine has the fewest impacts possible. This is why it is so imperative that you commit the necessary time and resources to considering the pit backfilling option. This is also why the lack of disclosure of the costs to our public roadway system, and Rosemont's lack of commitment to fund these costs, is so egregious.

Mr. Jim Upchurch

Re: **Additional Comments from Pima County on the Administrative Draft Environmental Impact Statement for the Proposed Rosemont Mine**

August 1, 2011

Page 5

Thank you for your consideration of these additional comments.

Sincerely,



C.H. Huckelberry
County Administrator

CHH/dr

Enclosures

- c: The Honorable Chairman and Members, Pima County Board of Supervisors
Melinda Roth, Forest Service Coordinator, Coronado National Forest
Corbin Newman, Regional Forester, US Forest Service
Marjorie Blaine, Senior Project Manager, US Army Corps of Engineers
Larry Voyles, Director, Arizona Game and Fish Department
Hank Atha, Deputy County Administrator for Community and Economic
Development
Jan Leshar, Deputy County Administrator for Medical and Health Services
Nicole Fyffe, Executive Assistant to the County Administrator
Priscilla Cornelio, Director, Transportation
Carmine DeBonis, Jr., Director, Development Services
Jackson Jenkins, Director, Regional Wastewater Reclamation
Ursula Kramer, Director, Environmental Quality
Linda Mayro, Director, Science and Conservation, Cultural Resources and
Sustainability Office
Suzanne Shields, Director, Regional Flood Control District
Ben Goff, Deputy Director, Transportation
Julia Fonseca, Environmental Planning Manager, Science and Conservation,
Cultural Resources and Sustainability Office
Kathy Chavez, Water Policy Manager, Regional Wastewater Reclamation

20 Year Drawdown, and Well Protection Areas

-  20 Year Drawdown
-  Well Protection Area
-  Colonias

TOHONO O'ODHAM NATION

SIERRITA MOUNTAIN COLONIA

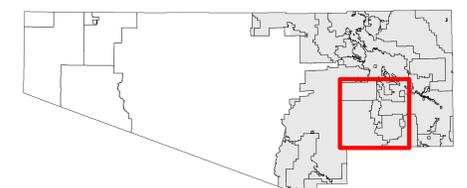
OLD NOGALES HIGHWAY COLONIA

TOWN OF SAHUARITA COLONIA

ELEPHANT HEAD COLONIA

SANTA RITA EXPERIMENTAL RANGE

Pima County Index Map



Index Map Scale 1:1,500,000 for Arch E Print

The information depicted on this display is the result of digital analyses performed on a variety of databases provided and maintained by several governmental agencies. The accuracy of the information presented is limited to the collective accuracy of these databases on the date of the analysis. Pima County Information Technology Department Geographic Information Systems makes no claims regarding the accuracy of the information depicted herein. This product is subject to the GIS Division Disclaimer and Use Restrictions.



Map Scale 1:50,000 for Arch E Print



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JUL 29, 2011

**AGENCY REVIEW OF THE INTERNAL WORKING DRAFT OF THE ROSEMONT COPPER PROJECT DEIS
SPECIAL EXPERTISE REQUIRED COMMENT FORM**

AGENCY: (Pima County)

Instructions:

1. Provide review comments, with reasonable basis, addressing technical accuracy and conformance with laws, regulations, and policies within your agency’s special expertise.¹ If your review confirms technical accuracy and conformance within your agency’s special expertise, please indicate such. Complete all fields and do not alter the format of this form.
2. Provide review comments, with reasonable basis, consisting of recommendations for improvement of materials where they are found to be incomplete, inadequate, or inaccurate within your agency’s special expertise. If your review confirms materials are complete, adequate, or accurate within your agency’s special expertise, please indicate such. Complete all fields and do not alter the format of this form.

Comment Location (Chapter/Section/Page/Line)	Special Expertise Citation	Comment / Rationale / Basis
Community Development & Neighborhood Conservation	Leslie Nixon, J.D Program Manager Neighborhood Reinvestment Program Pima County Community Development and Neighborhood Conservation Department	Responsible for Pima County community revitalization initiatives, neighborhood reinvestment bond program, and outreach to stressed communities. Attorney/Administrator with 23 years of litigation, legislative, and executive experience on behalf of Arizona's low income, minority, and tribal populations. First involvement with Rosemont Copper Project was review and comment on the Environmental Justice section of the draft EIS in July, 2011.
Chapter 3, Socioeconomics and Environmental Justice, pages 1-38 Chapter 3, Socioeconomics and Environmental Justice, page 50, lines 42-44 Chapter 3, Socioeconomics and Environmental Justice, page 51, lines 1-17 Chapter 3, Socioeconomics and Environmental Justice, page 51, lines 6-11	Environmental Justice	The Environmental Justice requirement was established by Executive Order 12898 (February 11, 1994). The U.S. EPA defines environmental justice as: “Fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. <u>Fair treatment</u> means that <u>no group of people should bear a disproportionate share of the negative environmental consequences</u> resulting from industrial, governmental and commercial operations or policies. <u>“Meaningful involvement</u> means that 1) <u>people have an opportunity to participate in decisions about activities that may affect their environment and/or health;</u> 2) the

¹ Special Expertise means statutory responsibility, agency mission, or related program experience (40 CFR 1508.26).

**AGENCY REVIEW OF THE INTERNAL WORKING DRAFT OF THE ROSEMONT COPPER PROJECT DEIS
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AGENCY: (Pima County)

<p>Chapter 3, Socioeconomics and Environmental Justice, page 51, lines 3-5</p>		<p>public's contribution can influence the regulatory agency's decision; 3) their concerns will be considered in the decision-making process; and 4) the <u>decision makers seek out and facilitate</u> the involvement of those in the potentially affected." (emphasis added)</p> <p>The following groups were identified in the draft EIS as protected groups (minority, low income, or living below poverty level) for the purposes of the Rosemont Copper Project:</p> <ol style="list-style-type: none"> 1. Santa Cruz County 2. San Xavier Pascua Yaqui Tribe 3. Tohono O'Odham Nation <p>(Chapter 3, page 38, lines 10-14)</p> <p>"FAIR TREATMENT" REQUIREMENT IS NOT SATISFIED The Fair Treatment standard mandates an analysis of any serious disparate impact on protected classes by the Rosemont Copper Project.</p> <p>First, it is notable that the draft EIS devotes 38 pages of narrative, charts, and diagrams to description and explication of social and economic factors characterizing the Rosemont Analysis Area and the methodology for identifying protected groups. (Chapter 3, pages 1-38)</p> <p>However, only one-half of one page is dedicated to analyzing the impact on the three identified groups affected by the Rosemont project. (Chapter 3, page 50, lines 42-44 and page 51, lines 1-17).</p> <p>On its face, this brief and superficial statement does not meet the "Fair Treatment" standard for determining disproportionate high and adverse impacts on individuals in the three protected classes. The conclusions are not supported by objective data or information, and there is no recognition or discussion of the fact that protected classes do not have the same resources possessed by more privileged groups. The latter have more mobility and adaptability when confronted with changing conditions, such as the multiple impacts of the Rosemont Copper Project.</p> <p>The draft EIS dismisses any environmental justice health concerns by stating that other, non-protected groups are present in the Rosemont impact area so that negates any environmental justice issue. (Chapter 3, page 51, lines 6-11) This approach would render the Environmental Executive Order meaningless, as there are very few relevant geographic areas in the United States which do not include at least one unprotected class of citizens in addition to protected classes.</p>
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**AGENCY REVIEW OF THE INTERNAL WORKING DRAFT OF THE ROSEMONT COPPER PROJECT DEIS
SPECIAL EXPERTISE REQUIRED COMMENT FORM**

AGENCY: (Pima County)

		<p>Concerning any serious and disparate economic impact on protected classes, the draft EIS states simply that the low income populations may have greater employment opportunities as the mine is constructed and operated. (<i>Chapter 3, page 51, lines 3-5</i>)</p> <p>At a minimum, the environmental justice “Fair Treatment” standard requires that the EIS include objective health risk and economic assessments of the preproduction and production phases of the Rosemont copper project on Santa Cruz County residents, Tohono O’Odham Nation members, and Pascua Yaqui Tribal members.</p> <p>Human health assessments would include but not be limited to air and water quality, noise pollution, and water supply impacts. The economic evaluation would assess the loss of tourism and recreation revenue and the disproportionate impact on low wage workers in the protected classes, and compare such loss, if any, to the offsetting increase in protected class employment opportunities presented by the preproduction and production phases of the Rosemont Project.</p>
<p>Chapter 3, Socioeconomics and Environmental Justice, pages 1-52</p>	<p>Environmental Justice</p>	<p>“MEANINGFUL INVOLVEMENT” REQUIREMENT IS NOT SATISFIED The draft EIS section on Environmental Justice fails to mention any action taken to satisfy the “Meaningful Involvement” legal requirement.</p> <p>The draft contains no information or discussion concerning any community outreach efforts undertaken to ensure that the identified protected groups had sufficient opportunity to provide feedback on the Rosemont copper project, which is mandated by the “Meaningful Involvement” standard set forth above.</p> <p>A generally noticed area-wide meeting or series of meetings is insufficient to provide outreach to the three protected classes, Santa Cruz County residents, Tohono O’Odham Nation members, and Pascua Yaqui Tribe members. Protected classes by definition require special attention and effort, and communication methods which may suffice for the mainstream non-minority, non-poverty population are inadequate means for involving the protected groups. Reasons include lack of access to electronic and print media; economic barriers to travel to meeting sites; inability to read or comprehend the English language; and cultural barriers limiting participation in large contentious public forums.</p> <p>Meaningful outreach to the three protected classes might include small local meetings chaired by community leaders, workshops with participants selected from the protected classes, use of local print media (e.g., monthly newsletters or newspapers), and attendance and participation</p>

**AGENCY REVIEW OF THE INTERNAL WORKING DRAFT OF THE ROSEMONT COPPER PROJECT DEIS
SPECIAL EXPERTISE REQUIRED COMMENT FORM**

AGENCY: (Pima County)

		<p>at various community events.</p> <p>Without verification of “Meaningful Involvement” of the protected classes, the EIS does not comply with Executive Order 12898.</p> <p>CONCLUSION The draft EIS fails to meet the Fair Treatment and Meaningful Involvement requirements set forth in Executive Order 12898, which establishes environmental justice standards.</p>
Regional Flood Control District	Greg Saxe, PhD, M.R.P., B.A., Environmental Planning Manager	<p>Reviews rezoning, comprehensive plan amendment, variances, special use permits, ROW permits and any other Planning and Zoning Commission actions for compliance with Floodplain and Erosion Hazard Management and Riparian Habitat Ordinances. Pima County NFIP CRS Coordinator . Former Planning Director for the Tohono O'odham Nation and the Town of Sahuarita, Water Resources Planner for the Martha's Vineyard Land and Water Commission and consultant on Arizona/Sonora border area water and economic development issues. PhD in Geography and Regional Development, Master of Regional Planning, Bachelor of Arts in Environmental Science and Pubic Policy. 25 years experience in review of EIS and involved with Rosemont Review and monitoring since 2006. Involvement with Forest Service procedures includes developing impact analysis on behalf of the service for growth around the Cape Cod National Seashire and identification/evaluation of Roadless Areas and their impact on local economies and natural resources. 2000 Census Tribal Liaison and nationally recognized for census outreach efforts.</p>
Chapter 3; Socio-economic & Environmental Justice	NEPA & local Planning Authority	<p>The only potential negative economic impacts discussed are to forest service users including ranchers, hikers and hunting. The contention that these uses will be restored after closure on tailings piles unsubstantiated. The relocation of the Arizona Trail as well as numerous FS routes popular with the camping, hunting, bird watching, equestrian and ORV use groups is not addressed in the summary. Together these users comprise a significant tourism and local quality of life economic component. Further the popularity of Pima County as a second home, retirement and relocation destination will be irrevocably damaged by the lack of meaningful reclamation on public lands.</p>
Chapter 3; Socio-economic & Environmental Justice	NEPA & local Planning Authority	<p>The assessment that at least 13 homes would be impacted is grossly understated and demonstrates that a adequately scoped economic impact assessment as required by NEPA was not undertaken.</p>
Executive Summary	NEPA, Comprehensive Planning, Impacts Analysis	<p>Economic Impacts: Mine life is stated to be 20 years. However an alternative to place tailings in Sycamore Canyon on fee title lands outside public lands was rejected because it would impede future expansion, while the EIS states it was to protect views from Tucson. This is inconsistent and demonstrates a pattern of grossly underestimated impacts and exaggerated</p>

**AGENCY REVIEW OF THE INTERNAL WORKING DRAFT OF THE ROSEMONT COPPER PROJECT DEIS
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AGENCY: (Pima County)

		claims of when reclamation would be completed.
Executive Summary, ES-4 Line 27, 34. Chapter 2 pg 81	NEPA, Comprehensive Planning, Impacts Analysis	Visual Resources are a significant contributor to the economy of SAZ. By describing them as "potential" and "short term" the ES is erroneous and misleading. Visual impacts are permanent and definite. Describing them as potential and short term demonstrates the authors have little understanding of this issue and have ignored prior comments by Pima County. In fact in ES 12 line 30 - 25 these impacts are described as "permanent", "irreversible", and, "major". This type of internal inconsistency is unprofessional, misleading and a basis for rejection of the ADEIS as complete or adequate to meet requirements and professional standards.
Executive Summary, ES-4 Line 37 and ES-5 Line 1	NEPA, Comprehensive Planning, Impacts Analysis	Gunsight Pass Access: This FS Route is an ORV vehicle trail featured in the most commonly used guidebook on the subject, has been the site of at least one major motion picture, and attracts tourists and enthusiasts weekly. Keeping this route open is significant economically.
Executive Summary, ES-11 Line 5 & 6	NEPA, Comprehensive Planning, Impacts Analysis	Replacement of lost water sources: 15 stock ponds and 85 springs will be lost. Per the ES "mitigation will replace lost water sources", but it does not say where or how and if it will benefit those enterprises directly impacted. No economic impacts to hunting, grazing or eco-tourism industries are summarized although they are quantified in Chapter 13
Executive Summary, ES-11 Line 15 & 16	NEPA, Comprehensive Planning, Impacts Analysis	Roadway level of service and safety: Stating that Levels of Service (LOS) will decrease but not to "unacceptable levels" misses the intent of this section under NEPA and fact that that safety will decrease significantly. LOS is a convenience measure. Summarizing How many more fatalities would occur statistically is more appropriate. Exclusion of this analysis demonstrates how the ADEIS is applicant produced rather than FS document intended to meet NEPA requirements. This is a basic planning and impacts analysis issue which has not been summarized and demonstrates the inadequacy of the analysis.
ES 12 Line 21	Planning/Impacts Analysis	A 46 percent reduction in surface flow is identified. No mitigation is described.
ES-18 Line 3&4	Planning Practice/Environmental Science	Stating that reclamation is expected to be successful after 100 years has no basis. Furthermore this time allows for natural reclamation. How will the applicant's management and reclamation enhance this natural process in any way such as soil amendment?
ES	Report Writing	No overall conclusions are provided as would be expected in any summary. Results are summarized for each alternative instead.
Chapter 2, pg 22, lines 19-27	Construction, Bonding and Mitigation Costs	Why is the FS investigating and bearing the cost of designing geomorphic design and landforming? Why is the feasibility in question? If not feasible it should not be presented to the public as a major feature. Why is a conclusion already made that it is in conflict with environmental control? The applicant contends this is part of their design approach and mitigation. Costs should be borne by them. Otherwise copper mining is not economically

**AGENCY REVIEW OF THE INTERNAL WORKING DRAFT OF THE ROSEMONT COPPER PROJECT DEIS
SPECIAL EXPERTISE REQUIRED COMMENT FORM**

AGENCY: (Pima County)

		feasible as presented throughout, without significant public subsidy, liability, and responsibility. How can the FS quantify adequate bonding if the applicant does not include all design costs in the Plan of Operation?
Chapter 2 pg 29 Line 29	FPMO	Riparian mitigation should conform with the local jurisdiction's SDCP not just the ACOE
Chapter 2 pg 21 line 22 and pg 32 Line 16	FPMO	While the Chapter states that a comprehensive Drainage Plan will be part of the Reclamation and Closure Plan subject to annual reporting and that minimum requirements will be exceeded, PCRFCO is not mentioned nor is the Drainage Plan included as Voluntary Resource Protection Plan which would be consistent with the image of an environmentally and locally sensitive operation. Furthermore such a plan provides the opportunity to combine consideration of surface water, riparian and public safety issues. PCRFCO is the best qualified local entity to review such a plan as required of all non-exempt development within the County.
Chapter 2 pg 49	Geography	From a visual impacts perspective the Scholefield-McCleary Alternative is preferable. As a geographer is readily discernable that the site is a land bridge over 4000 feet in elevation between the Sierra Madre and Rocky Mountains. Furthermore the view from the Rt 83 up Barrel canyon to the Santa Rita peaks is maintained. This is a known wildlife corridor and scenic resource. Water quality and stormwater impacts may also be more readily prevented from entering Barrel canyon and downstream to Davidson canyon. This also places the operation closer to Rosemont fee lands and further from NFS recreation and private residential areas. It is also most concurrent with existing historical mining disturbance.
Chapter 2 page 78	Viewshed analysis	Stating that the "facility" will be blocked by the waste rock and tailings is not reasonable. The tailings and waste rock are the facility as defined in the mining plan of operation. Otherwise they would not be exempt as a part of the operation. At the very least the analysis should state they will be visible for the first 100 years as that is the length of time projected for vegetation recovery to pre-mine vegetation conditions. Furthermore the greater visibility of the Scholefield-McCleary is from the south above the site, not the southern approach looking up at the mountains as one leaves Tucson to go on a scenic drive to Sonoita. The visibility changes associated with this alternative from the side of a canyon to a tailing pile versus from an expansive vista to a rock pile associated with all the other alternatives. This chart seems to have neglected the factor of where the view is from. Standard viewshed analysis practices have thus been ignored rendering it meaningless and non-repeatable which as the basis of all good scientific analysis.
Chapter 3 Socioeconomics and Environmental Justice, pg2, pg 5 Table 3.1	Socioeconomic Analysis	The selected measure (direct, indirect, and induced effect of mine employment" is inadequate and does not address the public scoping, NEPA requirements, or professional standards. Impact analysis requires also assessing the potential losses in impacted sectors. The ADEIS is inherently flawed and conclusions are meaningless.

**AGENCY REVIEW OF THE INTERNAL WORKING DRAFT OF THE ROSEMONT COPPER PROJECT DEIS
SPECIAL EXPERTISE REQUIRED COMMENT FORM**

AGENCY: (Pima County)

Chapter 3 Socioeconomics and Environmental Justice, pg2	Socioeconomic Analysis	Only tax revenue has been assessed. Impact assessment without analysis of lost revenue is meaningless, inadequate, unreasonable and does not meet federal requirements or professional standards.
Chapter 3 Socioeconomics and Environmental Justice, pg 7 line 5 & 6	Demographics	Analysis is based on an out of date and flawed census. The 2000 census was flawed and a special census was conducted in 2005 to remedy the undercounts of disadvantaged populations and exclusion of alleyway addresses. 2010 data is available and should be used. The chapter states such data will be used as it becomes available but it is not clear of it has been.
Chapter 3 Socioeconomics and Environmental Justice, pg 34 Lines 8-16, pg 48 line 14-22	Socioeconomics	Correctly identifies the Coronado as important to identity and economy beyond on-forest recreation including regional tourism and home construction. The appropriate conclusion is drawn that the Coronado is an economic asset. Potential losses however have not be quantified to offset reported gains from mine employment, as the Coronado is large enough to accommodate users whom are displaced from the mine footprint to other areas of the forest. While quantification is difficult and losses overshadowed by scale they are losses none-the-less.
Chapter 3 Socioeconomics and Environmental Justice, page 50	Socioeconomics	While the property values within the identified 2 mile buffer are predicted to change by 15% and public service needs not expected to increase due to the availability of housing stock this section correctly recognizes that individuals may decide to move or not purchase within the area due to the presence of the mine. Impacts may be small on avg but great in any individual case. Cumulative and incremental losses such as these have the potential to greatly impact a region over time. This may be why the current FS Management Plan calls for recreation over extractive uses. The change required to accommodate the applicants' interests may not be appropriate and their plans may need to be scaled back within private lands. While the Mining Act may prevent the FS from preventing extraction it can limit its area of impact to private lands and those pubic lands with valid claims.
Chapter 3 Socioeconomics and Environmental Justice, page 52 line 11 & 12	Impact Assessment	The claim is put forth that there would be no irreversible impacts because the area would be reclaimed. Reclamation plans described have been shown to be inadequate in fact and therefore this claim is spurious at best.
Pima County Office of Sustainability and Conservation	Brian Powell, Program Manager, M.S. in Wildlife Ecology from the University of Arizona School of Natural Resources and the Environment	Responsible for implementing the effectiveness ecological monitoring program for the County's forthcoming Section 10(a)1(A) permit from the U.S. Fish and Wildlife Service. Expert on wildlife habitat assessment and enumeration.

**AGENCY REVIEW OF THE INTERNAL WORKING DRAFT OF THE ROSEMONT COPPER PROJECT DEIS
SPECIAL EXPERTISE REQUIRED COMMENT FORM**

AGENCY: (Pima County)

	B.S. in Ecology and Wildlife	
Ch. 3, Biological Resources, p.2, Map	As above	The analysis area for the biological resources should extend both further up and down Cienega Creek from the confluence of Davidson Canyon. A change in the quality and quantity of water from Davidson Canyon could significantly alter the baseflow of Cienega Creek and subsequently impact wildlife that rely on this important area. This fact is acknowledged in the "Ground Water Quality" section of the report and therefore must be addressed by way of expanding the scope of the impacts to Cienega Creek Preserve.
Ch. 3, Biological Resources, p. 3/line 16,17	As above	The statement that "reclamation <i>may not</i> restore natural conditions" (italics added for emphasis) is both absurd and representative of the overly optimistic impact of the mining operation on natural resources. How could it be possible for a tailings pile with evenly contoured slopes and homogeneity of material (and in some case over 500 feet high) to restore natural conditions that were formed over millions of years and that are characterized by heterogeneity in slope, aspect, and coarseness of material? The same language is used to describe habitat loss: "... <i>may</i> result in loss of habitat..." Any process or document that seeks to maintain credibility would not make such a vague assessment.
Ch. 3 Biological Resources,p5	As above	Table 3.1 includes the County's Priority Vulnerable Species (PVS), but numerous species are omitted from the list: Huachuca water umbel, Pima pineapple cactus, Chirichahua leopard frog, Sonoran desert tortoise, cactus ferruginous pygmy owl, southwestern willow flycatcher, western yellow-billed cuckoo, Gila chub, Gila topminnow, lesser long-nosed bat. It is incorrect to say the Priority Vulnerable Species list for the Sonoran Desert Conservation Plan (SDCP) is the same as for the proposed Multi-species Conservation Plan (MSCP). Rather, the species proposed for coverage under the MSCP are a subset of the PVS list.
Ch. 3, Biological Resources,p.5/line 1	As above	The report "SWCA Environmental consultants 2011a" is not available on the Forest Service website and others are similarly not available. More generally, all reports that have been produced by Rosemont and its subcontractors cited in the document, should be made available to the cooperators and the general public if they are not widely available in peer reviewed journal or permanent Federal government URL.
Ch 3, Biological Resources, p.9/ Table 3.2/Issue 5E. Also throughout the EA	As above	Clarify the meaning of the term "population viability"
Ch. 3, Biological Resources,	As above	Executive order 13112 requires that the Forest Service consider invasive species in its actions.

**AGENCY REVIEW OF THE INTERNAL WORKING DRAFT OF THE ROSEMONT COPPER PROJECT DEIS
SPECIAL EXPERTISE REQUIRED COMMENT FORM**

AGENCY: (Pima County)

p.11/line 9		Later in the document (Ch. 3/p. 61/line 19) it is stated that Rosemont will be required to ensure that no invasive species occupy the site. Where is the plan that provides the details and necessary assurances that are sufficient to satisfy Executive Order 13112? Promises such as “Rosemont will monitor disturbed and revegetated areas” is significantly lacking detail. The FS seems to have made up its mind prior to seeing important details.
Ch. 3, Biological Resources, p. 19/line 5	As above	This area of the Santa Ritas is a critical wildlife movement corridor and may have acted (historically) as one of the most important wildlife corridors in the region. More recently, the corridor in which Rosemont is sited is as the heart of three wildlife linkage areas that will be significantly impacted by the proposed action.
Ch. 3. Biological Resources, p. 19/Line 4 and throughout chapter 2. Also throughout the Environmental Assessment	As above	Throughout the document (and especially the associated EA), the Forest Service relies on the EIS that was developed by the University of Arizona in 1977 and 1978. It is surprising that the Forest Service would rely on such a dated document to establish baseline conditions. It is recommended that new data is collected to establish a more credible and realistic baseline, most especially because the EA relies so heavily on this document for determination of impacts. If a determination of no impact is warranted, it must be based on an on-the-ground and thorough survey that has been conducted more recently.
Ch. 3. Biological Resources,p.21/line 1	As above	Special Status Species. Given the breadth and scope of the resource impacts on the Rosemont site, Pima County would like to see all Priority Vulnerable Species receive the same attention as the BLM And Forest Service special status species. In addition, no justification has been given for why the analysis way restricted to these species.
Ch. 3, Biological Resources, p.24/line 30	As above	The Huachuca water umbel has been found in the Cienega Creek Preserve, just upstream of the confluence with Davidson Canyon.
Ch. 3, Biological Resources, p. 35/line 14; also EA	As above	Not evaluating threatened and endangered (T&E) species because a preferred alternative has not been identified is unacceptable. If this were true, why did the Service feel comfortable with evaluating impacts on non-T&E species?
Ch. 3 Biological Resources, p. 36/lines 43,44 and P. 37/lines 1,2	Ac above	<p>“All action alternatives would directly impact at least 11 mines and adits....construction an operation...may result in the loss of mine adits and shafts.” This statement is misleading. In fact, the proposed plan will (not “may”) result in the total destruction of bat habitat within the mine’s footprint.</p> <p>In general, the overly cautious tone of the document—in terms of mine impacts on resources—is unwarranted and the Service should be more forceful in its assertions about impacts. The example of the mines is an excellent example. If the caves will be destroyed, there is no need to use cautious language; this is just a fact.</p>

**AGENCY REVIEW OF THE INTERNAL WORKING DRAFT OF THE ROSEMONT COPPER PROJECT DEIS
SPECIAL EXPERTISE REQUIRED COMMENT FORM**

AGENCY: (Pima County)

Environmental Assessment: p. 34.	As above	For the Arizona Manihot, the EA states: "Forest Service (2009r) reports that only 11 specimens of Arizona manihot have been collected in the United States". Surveys specifically looking for this species have not been conducted on this species, yet the Forest Service gives the standard answer: " <i>For all action alternatives, the proposed project may impact individuals but is not likely to result in a downward trend toward federal listing as threatened or endangered or a loss of population viability.</i> " If not enough is known about the species, how can this conclusion be reached?
EA; p. 58	As above	The suggestion that peregrine falcons "have been observed breeding in less optimal habitats (small, broken cliffs in ponderosa pine forest or large, sheer cliffs in very xeric areas" is not correct. There is no data to support this claim and the Rosemont site is almost certainly a foraging area for this species
Office of Sustainability and Conservation	Julia Fonseca Environmental Planning Manager Office of Sustainability and Conservation M.S. Geology, 25 years experience in inventory and protection of natural resources in Pima County Arizona. Hydrologist and Environmental Manager at Pima County Flood Control 1986-2007.	Fonseca: In her capacities at Pima County Regional Flood Control District, Pima County Natural Resources, Parks and Recreation, and Pima County Office of Sustainability and Conservation she worked to develop the natural resource inventories, plans and policies for the Sonoran Desert Conservation Plan. She currently oversees the development of a multi-species habitat conservation plan under the Endangered Species Act, and a related Environmental Impact Statement under the National Environmental Policy Act. In 2004 she evaluated the natural resources of Rosemont Ranch as a potential County acquisition, and have continuously maintained involvement in the Rosemont Ranch on behalf of Pima County, including participation in scoping, defining work objectives for staff and consultants and representing Pima County in Cooperator's meetings.
Chapter 2, page 14, line 14-18	Same as above	Is there a deadline for achievement of closure and reclamation? A deadline for achieving various reclamation and closure miletones would be an important way to mitigatie the visual impacts.
Chapter 2, page 3, line 24-25	Same as above	Mine construction here is proposed over an 18-month time period, but other Rosemont documents say there is a 5 year construction window. Please clarify the difference. Also, what happens if the construction ceases due to lack of funds?
Chapter 2, page 21, line 9 and following	Same as above	Nothing in this section describes whether there is a deadline or trigger to initiate closure. Is closure required by year 25? If not, please disclose this fact.
Chapter 2, page 22, line 8 and 9 and following	Same as above	Nothing in this section describes whether there is a time limit to the operation. If there is no practical time limit to the life of the mine, please disclose this fact.

**AGENCY REVIEW OF THE INTERNAL WORKING DRAFT OF THE ROSEMONT COPPER PROJECT DEIS
SPECIAL EXPERTISE REQUIRED COMMENT FORM**

AGENCY: (Pima County)

Chapter 2, no section, life of mine,p. 58, line 10	Same as above	What is the Forest Service’s intention with regard to the “approximately 25 years” operation? It is impossible to tell from this description. Is there a practical limit on the years of operation common to all action alternatives? What happens if the mine decides to suspend operation for years? If the mine has this right, then what is the practical life of the mine and hence the duration of the temporary impacts? It would be necessary to understand what happens during suspended operations to draw conclusion about the impacts.
Chapter 2, no section, page 58, life of mine, line 14-15	Same as above	The Forest Service incorrectly assumes that changing the life of the mine would not result in total volume of water used or other aspects of the mine. This is not correct. A permit that constrained the life of the mine to less than 20 years would provide opportunity for Rosemont to recover investments and also provide an opportunity for the Forest Service to limit impacts and address problems that arise during the operating life of the mine. The impacts of a mine with a different life would be dissimilar, and the cumulative impacts (considering the potential for development of other prospects) might or might not be dissimilar.
Chapter 2, no section, page 58, life of mine, line 14-15	Same as above	This discussion makes no sense in light of Westland 2010b which indicates that one of the decision-making agencies for this EIS has requested evaluation of an alternative that would reduce the mine life by more than 3 years, and reduce the waste rock by 25% in volume. While Westland chose to assume that the reduction in waste volume would not reduce the footprint, the Forest Service should analyze an alternative that would reduce the footprint while retaining the height.
Chapter 2, no section, page 55, line 14-18 and Chapter 2, no section, page 56, lines 28 and following.	Same as above	With reference to pit configuration and backfilling, please see impacts listed in Chapter 3, Groundwater Quantity, Page 20. All effects listed on this page are the same, yet groundwater quantity is one of the major issues in the entire ADEIS. This table is additional evidence for the deficiency of the alternative analysis process. Forest Service must seriously evaluate backfilling and modification of the pit. These two alternatives (or mitigation measures) can significantly reduce impacts for forest resources and water.
Chapter 2, no section, page 55, line 14-18 and Chapter 2, no section, page 56, lines 28 and following.	Same as above	This discussion makes no sense in light of Westland 2010b which indicates that one of the decision-making agencies for this EIS has requested evaluation of a modified pit configuration that would reduce the mine life by more than 3 years, and reduce the waste rock by 25% in volume. While Westland chose to assume that the reduction in waste volume would not reduce the footprint, the Forest Service could analyze an alternative that would reduce the footprint.
Chapter 2, Barrel Trail Alternative, page 45, line 11-12	Same as above	These lines acknowledge that a more varied topography requires an expanded footprint of the tailings and waste rock facilities. These impacts could be reduced through backfilling or changes in the pit configuration.
Chapter 2, Utility section, page 48,	Same as above	Why was the temporary construction powerline alternative eliminated?

**AGENCY REVIEW OF THE INTERNAL WORKING DRAFT OF THE ROSEMONT COPPER PROJECT DEIS
SPECIAL EXPERTISE REQUIRED COMMENT FORM**

AGENCY: (Pima County)

line 12 and following		
Chapter 3, Socioeconomic, Property Value, page 25, line 21 and following	Same as above	<p>The effect on property values considers only the impacts due to proximity, not dewatering of west-side properties that depend on wells for occupancy. Many of the affected properties are not supplied by municipal wells. The 20-year time frame chosen by the Forest Service is inappropriate for impacts analysis on property value. Water is the basis for occupancy of the land, which should continue after 20 years, especially given that most mortgages are for 30-years and the housing life is more like 50 years. The EIS acknowledges that the lateral extent of impacts of west-side impacts will continue to expand after pumping stops, but no impacts are described on property values. Nor is the well protection agreement sufficiently large to protect even properties in the 20-year, 10-foot drawdown area from being greatly diminished in value.</p> <p>Impacts to the San Xavier District should be acknowledged based on the additional time frame.</p>
Chapter 3, Socioeconomic Impacts, no line or page	Same as above	The existing mines are trying to expand their capabilities to mine ore, and produce copper. For the existing mines, what are the economic impacts of the Forest Service approving the Rosemont project versus the no action alternative?
Chapter 3, Socioeconomic Impacts, no line or page	Same as above	What is the socioeconomic impact of exacerbating the rate of subsidence depicted in Figure 3.3a of Chapter 3 Groundwater Quantity page 28?
Regional Wastewater and Reclamation Department	James DuBois, R.G Principal Hydrologist Regional Wastewater Reclamation Department	<p>Jim DuBois is an experienced Hydrologist, Environmental Manager, and Registered Professional Geologist in the state of Arizona. He is currently employed as Principal Hydrologist for Pima County's Regional Wastewater Reclamation Department. He has been in this position managing groundwater recharge, aquifer protection, surface water discharge, and reuse permit issues since 2008. Prior to joining Pima County, Mr. DuBois spent 2 ½ years as an Environmental Project Manager handling the City of Tucson's MS4 permit responsibilities in the Stormwater Management Section of the Department of Transportation. Previously, Mr. DuBois served as a Senior Hydrologist for the Arizona Department of Environmental Quality (ADEQ) for 19 years. At ADEQ Mr. DuBois' experience with aquifer protection permits for mines included reviewing more than 20 major mines for APP, closure or remedial activities. He co-wrote the initial guidance document outlining Arizona's Best Available Demonstrated Control Technology (BADCT) for mining facilities. He developed the concept and statutory language for permitting mining facilities with an "areawide" approach. He served on ADEQ's TQM Committee in 1994-6 to expand/revise the Mining BADCT Guidance Manual into its latest version. He wrote agency policy regarding how to address in a permit the impacts from sulfate and other pollutants not covered by established numeric aquifer water quality standards. Jim has also worked for 5 years as a consulting geologist in Wisconsin, and for 3 years as an exploration geologist for Noranda Exploration, Inc., in Arizona and Wisconsin. Mr. DuBois</p>

**AGENCY REVIEW OF THE INTERNAL WORKING DRAFT OF THE ROSEMONT COPPER PROJECT DEIS
SPECIAL EXPERTISE REQUIRED COMMENT FORM**

AGENCY: (Pima County)

		holds a B.A. in geology from Carleton College and an M.S. in geology with an emphasis in geochemistry and geochronology from the University of Kansas.
Executive Summary, Page 2, line 19-20	See above	Encapsulating the heap leach pad and ponds within the waste rock storage area is not an identified BADCT alternative nor is it a typical approach to closure for such facilities. This part of the design could stand more evaluation. Particularly important is to maintain access to heap drains and pond until full drain-down is complete and the operator can verify that no additional discharge is occurring.
ES, Page 8, line 35-37	See above	This statement relates only to seepage from the tailings and waste rock and should clarify that the modeling only examined metals and nitrogen compounds for which there are <u>numeric</u> Aquifer Water Quality Standards. No assessment was conducted for chemical species for which narrative standards might apply, such as sulfate, TDS, or uranium. (It is interesting to note, however, that Chapter 3, page 15 contains reference to another mining area, the Sierrita Mine, where a sulfate plume is being mitigated under APP permit action.)
ES, Page 9, line 1-2	See above	This statement indicates that seepage will continue beyond closure for the heap facility. However, Arizona's statutory definition of clean closure requires that the operator eliminate "to the greatest degree practicable, of any reasonable probability of further discharge."
ES, Page 9, line 4-8	See above	This statement appears non-committal about whether treatment of the heap drainage will be implemented. This is different from Chapter 3, which states it as a necessity to meet Aquifer Water Quality Standards.
ES, Page 12, line 16-18	See above	The statement that tailings and waste rock facilities are not anticipated to exceed surface water quality standards.
Chapter 2, Page 15, line 31-35	See above	The stability design for slopes is a key feature of APP BADCT for tailings facilities. This aspect should be resolved before making statements that the facility complies with BADCT. In Arizona, both erosion of tailings and slope failure have been major factors in violation of surface water quality standards through unintended releases.
Chapter 2, Page 30, line 32	See above	This statement implies that Rosemont will separate acid generating waste rock. However, a separate disposal facility for this segregated material is not described.
Chapter 2, Page 33, line 3-10	See above	Water as replacement water sources for livestock and wildlife is not accounted for in the Water Supply and Control description.
Chapter 2, Page 56, line 28-40	See above	In this discussion of the alternative of backfilling the pit, it should be noted that Arizona's APP

**AGENCY REVIEW OF THE INTERNAL WORKING DRAFT OF THE ROSEMONT COPPER PROJECT DEIS
SPECIAL EXPERTISE REQUIRED COMMENT FORM**

AGENCY: (Pima County)

		statute specifically exempts from regulation “mining overburden returned to the excavation site” so long as it “has not been subjected to any chemical or leaching agent or process.” Also, since Rosemont is not claiming the pit lake as passive containment under BADCT, there may not be a compelling need to maintain the pit lake configuration upon closure.
Chapter 3, Groundwater Quality Page 6, line 19-22	See above	This subsection describes the portion of Arizona statute that allows passive containment to be used as BADCT when technically demonstrated to ADEQ. However, since Rosemont is not utilizing the pit lake as passive containment for BADCT, it is misleading to include it here.
Chapter 3, Groundwater Quality, Page 6, line 24	See above	State regulations regarding water quality standards for both surface water and groundwater include <u>narrative</u> as well as <u>numeric</u> standards. Narrative standard provisions should also be included in the Rosemont discussion and evaluation. With regard to narrative Aquifer Water Quality Standards, of particular importance are the following two provisions: <ul style="list-style-type: none"> a. R18-11-405(B) A discharge shall not cause or contribute to a violation of a water quality standard established for a navigable water of the state. b. R18-11-405(C) A discharge shall not cause a pollutant to be present in an aquifer which impairs existing or reasonably foreseeable future uses of water in an aquifer.
Chapter 3, Groundwater Quality, Page 9, line 1 and subsection that follows	See above	This subsection evaluates seepage from the tailings, heap leach, and waste rock facilities as if these are the only discharging facilities. However, the various ponds (impoundments) on the site are APP discharging facilities, too. Their contribution to the aquifer should be evaluated for potential to exceed standards at appropriate points of compliance. Ponds include the raffinate, PLS, PW, TS, and stormwater ponds.
Chapter 3, Groundwater Quality, page 9, line 36	See above	Only nine samples are used to represent 720 million tons of tailing material. To get a good statistical representation, more testing than this should be performed for a facility of this magnitude.
Chapter 3, Groundwater Quality, Page 9, line 30-41, and Page 10, line 1-2	See above	Evaluation of the tailing facility should not be limited to the ore that is processed. Rosemont should also evaluate environmental fate of milling process chemicals and their breakdown products. Of particular importance here are xanthates and carbon disulfide. Carbon disulfide is regulated under A.R.S. 49-243(I) so that the applicant must limit discharge to the maximum extent practicable regardless of cost.
Chapter 3, Groundwater Quality, Page 10 and 11, Tables 3.3 and 3.4	See above	The values for selenium and perhaps some of the other metals will be a problem if it is found that discharge to the aquifer may connect with surface water downgradient of the facility. If this is the case, the narrative standard of R18-11-405(B) could apply, and the surface water quality standards, which are more stringent for some of these metals, could be applied at the point of

**AGENCY REVIEW OF THE INTERNAL WORKING DRAFT OF THE ROSEMONT COPPER PROJECT DEIS
SPECIAL EXPERTISE REQUIRED COMMENT FORM**

AGENCY: (Pima County)

		compliance in the Aquifer Protection Permit.
Chapter 3, Groundwater Quality, Page 11, line 6-22	See above	Demonstration of meeting Aquifer Water Quality Standards for the heap leach facility is dependent on an engineered biologic treatment system. There is no mention of such a system in the Rosemont APP application, the BADCT Guidance Document does not mention such an approach, and it is uncertain whether such a system would perform as described. This subject needs further evaluation.
Chapter 3, Groundwater Quality, Page 12, line 20-21	See above	The description says that seepage would be treated after closure. However, Arizona's statutory definition of clean closure requires that the operator eliminate "to the greatest degree practicable, of any reasonable probability of further discharge." The facility would have to wait for closure until this condition could be satisfied.
Chapter 3, Groundwater Quality, Page 14-15, Table 3.7	See above	This table uses numeric aquifer water quality standards to evaluate the chemistry of the pit lake. However, the pit lake could be regarded as a surface water body to which surface water quality standards would apply
Chapter 3, Groundwater Quality, Page 16, Line 34-41 and Page 17, line 1-2	See above	As mentioned earlier, the BADCT should include evaluation of the impoundments.
Regional Flood Control District	Frank Postillion Chief Hydrologist, Section Manager, Water Resources MS, Watershed Management and Hydrology	Responsible for coordination of review for impacts to water supply, water resources, shallow groundwater for this projects (2006). 35 years of experience in water resource and water quality evaluations in the public and private sectors. Evaluated the effects of Tucson Copper Mining District copper mining and the effects tailing pond recharge on the ground-water quality of the Upper Santa Cruz Basin. His affiliation and management of the Upper Santa Cruz Basin Mines Task Force led to modeling and management recommendations to pump interceptor wells at a sufficient rate to contain the mineralized sulfate and TDS plumes, and to avoid contamination of public supply wells. Evaluated the effects of coal mining on the hydrology of Black Mesa in Northern Arizona.
Chp3GWQuan, P.20 Table 3.1, 3A	Water Resources	If the reference is indeed referring to ET loss as Mt front recharge, then 19% for Davidson Canyon is more appropriate to reference. We could not find any reference to changes in mountain front recharge in Montgomery 2010. They did reference Montgomery's 19% ET loss for Davidson in the EIS Table 3.1, last item-4.
Chp3GWQuan, P.59, lines 8-12	Water Resources	The item is unclear and needs to be referenced more in table 3.1 and p.59. Nothing can be found in the Montgomery 2010 reference for mountain front recharge. The 1% is referenced relative to what? Is it the entire Cienega Creek watershed or the Davidson Canyon Sub-Watershed? It should be quantified for the Davidson Canyon Watershed, since it will be the

**AGENCY REVIEW OF THE INTERNAL WORKING DRAFT OF THE ROSEMONT COPPER PROJECT DEIS
SPECIAL EXPERTISE REQUIRED COMMENT FORM**

AGENCY: (Pima County)

		watershed most impacted.
ES/Table 3B/p70/row7, column 3	Hydrology	A footnote or caveat is needed to indicate that the Rosemont proposal is 20 years. However, as witnessed with the Tucson Copper Mining District, mine life can extend to 40-50 year and beyond. In addition, the duration of effect on water level will continue beyond 20 years. Recovery of the water table from continuous stress for 20 years will not take place instantaneously. (AMENDED COMMENT FROM SUBMITTAL ON 6-30-11)
County Administrator's Office	Henry Atha, Deputy County Administrator B.A. Zoology Masters: Public Administration	35 Years experience in Public Policy and Administration, frequently in rural communities. Oversees County services to low income communities, housing, workforce development and economic development and tourism activities. Former adjunct professor data analysis and statistics.
Chapter 3, Socioeconomics and Environmental Justice, page 3 line 20	Same as above	The study excludes the buffer zone areas of Pinal and Graham Counties. However, the Pinal County area includes an important retirement community that spends major parts of its transfer income in metropolitan Pima County.
Chapter 3, Socioeconomics and Environmental Justice, page 7, line 9-15	Same as above	The study explicitly excludes post closure impacts. While it is difficult to estimate social and economic impacts 25 years in the future the most serious impacts of the project, including the mine pit itself, the waste dumps and the depletion of the upper Santa Cruz ground water are economic impacts that extend into the post production period and cannot be excluded from economic consideration. Post production impacts may be particularly heavy on the low income and minority environmental justice communities. This failure to include and quantify post production impacts is a major failing of the DEIS that needs to be corrected.
Chapter 3, Socioeconomics and Environmental Justice, page 18, table 3.7	Same as above	<ul style="list-style-type: none"> a) The Coronado Forest's contributions to the area economy are understated and should not be limited to recreation related contributions. The DEIS does not, for example, include the astronomy and planetary sciences activities located in the Santa Rita and Catalina Mountains, both of which are likely to be negatively impacted by the mine and construction activities, including increased dark sky problems. Construction and utility jobs also appear to be understated. b) Even the 799 jobs included are nearly double the 450 annual jobs projected for the production.
Chapter 3, Socioeconomics and Environmental Justice, page 18, line 11	Same as above	Personal income for Cochise County is misstated as \$3.06 million.
Chapter 3, Socioeconomics and Environmental Justice, page 22, lines 23-29	Same as above	DEIS states that the ratio of assessed valuation is 25% on commercial properties, which is out of date. The current ratio is 20%.

**AGENCY REVIEW OF THE INTERNAL WORKING DRAFT OF THE ROSEMONT COPPER PROJECT DEIS
SPECIAL EXPERTISE REQUIRED COMMENT FORM**

AGENCY: (Pima County)

Chapter 3, Socioeconomics and Environmental Justice, page 23, table 3.11	Same as above	Current net assessed primary valuation for Pima County is \$8,939,647,260 not \$17.8 billion as shown in this table. It appears the DEIS may have added the primary and secondary assessed values to obtain this figure. The DEIS should be examined to determine if similar mistakes were made for other jurisdictions and if the inflated numbers were used in computations.
Chapter 3, Socioeconomics and Environmental Justice, page 24-25, Transaction Taxes and Royalties	Same as above	Pima County does not collect sales tax on sales in the unincorporated County which will reduce the potential revenue realized from mining related activities. The DEIS states the “Hard Rock Mining” does not pay royalties on federal lands, which further reduces the revenue available to Pima County. The DEIS indicates that part of federal royalty revenue is distributed by the State of Arizona which appears to conflict with the initial “no royalty” statement.
Chapter 3, Socioeconomics and Environmental Justice, page 32, Community Values & Social Trends and page 33, Social Benefits of Amenities on Coronado Forest	Same as above	DEIS correctly recognizes that community values are closely tied to the scenic and forest resources including State Route 83, dark skies and outdoor recreation opportunities and that the intensity and importance of these ties is growing. However, the DEIS does not assign quantitative values to these community values and does not consider them in its economic impact analysis.
Chapter 3, Socioeconomics and Environmental Justice, page 34-38 Environmental Justice	National Affordable Housing Act of 1990 Section 916	In identifying low income social justice populations the DEIS does not mention, nor consider “colonias” which are specific low income communities that are “determined to be a colonia on the basis of objective criteria including lack of potable water supply and inadequate sewage system” National Affordable Housing Act of 1990, Section 916, within 150 miles of the U.S. Mexico border designated pursuant to U.S. Department of Housing and Urban Development criteria. There are five of these colonias within the Rosemont project area, constituting the closest and most immediately affected low income communities. The colonias may be particularly impacted by the reduction in groundwater levels in both the production and post production stages. The DEIS fails to even recognize, much less analyze economic impact on the colonia communities or to include the colonias in groundwater insurance or mitigation requirements. This is a substantial flaw that should be corrected. Similarly the DEIS fails to analyze the economic and social impact of groundwater level reductions, in both production and post production phases, on the Tohono O’Odham and Pascua Yaqui Native American communities.
Chapter 3, Socioeconomics and Environmental Justice, page 43, line 28	Same as above	DEIS states in production phase there is an annual average of 450 workers over 20 years or total of roughly 2,900 person-years of employment. The two figures do not match (450 X 20 = 9,000)?
Chapter 3, Socioeconomics and Environmental Justice, page 45,	Same as above	There is a disconnect between the Government Revenue figures in the two tables and the figures given in the Taxes and Revenue narrative.

**AGENCY REVIEW OF THE INTERNAL WORKING DRAFT OF THE ROSEMONT COPPER PROJECT DEIS
SPECIAL EXPERTISE REQUIRED COMMENT FORM**

AGENCY: (Pima County)

tables 3.27 and 3.28		
Chapter 3, Socioeconomics and Environmental Justice, page 46	Same as above	The DEIS recognizes and discusses negative impact of the project on property values, but the only data presented is from studies very disparate from the Rosemont project. Furthermore, the DEIS needs to quantify and discuss potential loss of value on the Santa Cruz basin due to reduction in groundwater levels in both the production and post production phases. Groundwater reduction will impact a wide radius from the mine site.
Chapter 3, page 52, Irretrievable and Irreversible Commitment of Resources	Same as above	Paragraph one of this section states that there will be no irreversible impacts of the mine because of the required reclamation. This statement is inconsistent with the statement in paragraph 2 that there may be irretrievable loss of community values. Rosemont has not committed to the extent of reclamation and has resisted efforts to require backfill of the pit. Moreover, groundwater reduction impacts may be irreversible over a wide area. The DEIS is incomplete without specific reclamation information; and without discussion of groundwater reduction socio economic impacts. Without complete backfill of the pit there will definitely be irreversible impacts. Paragraph two recognizes that there may be “irretrievable loss of community values and quality of life. The DEIS should attempt to quantify these impacts.
Pima County Health Department	Glenda Aguirre, epidemiologist Lisa Labita Woodson, epidemiologist	Glenda Aguirre has a Bachelor of Science degree in Microbiology from the University of Arizona. She worked from 2006 through 2008 in a laboratory conducting sterility surveillance on medical surgical products. In 2008 she joined Pima County Health Department as a communicable disease investigator. She currently works as an epidemiologist. Lisa Labita Woodson has a Bachelor of Science in Biology Conservation and a Masters in Public Health in Maternal and Child Health from the University of Arizona. She has received a Fulbright grant to study hygiene and sanitation practices in Nepal; has worked as a consultant for nutrition research in Senegal; and has studied HIV knowledge and attitudes in indigenous populations in Thailand. She currently works at the Pima County Health Department as an epidemiologist.
Chapter 3, Public Health and Safety, Page 14-16	Public Health and Safety	<ol style="list-style-type: none"> 1. The Rosemont Mine should have a mosquito control plan to address mosquito species of interest in southern Arizona, such as <i>Anopheles</i> (Malaria), <i>Aedes</i> (Dengue, Yellow Fever and nuisance mosquitoes), and <i>Culex</i> (West Nile Virus, Western Equine and St. Louis Encephalitis). The mosquito control plan should have a surveillance component, including a threshold to commence treatment with pesticides: larvicide and adulticide. 2. An appropriate design of the holding ponds or tanks should preclude mosquito breeding. If breeding occurs, it is typically be near the shallow edges or where

**AGENCY REVIEW OF THE INTERNAL WORKING DRAFT OF THE ROSEMONT COPPER PROJECT DEIS
SPECIAL EXPERTISE REQUIRED COMMENT FORM**

AGENCY: (Pima County)

		<p>overgrowth of vegetation has occurred and could be mitigated with larvicide.</p> <ol style="list-style-type: none"> 3. Increased movement of heavy equipment may create depressions in the land that are capable of holding standing water, particularly for <i>Aedes</i> type mosquitoes that lay their eggs in soil and await water accumulation for hatching and development. These areas where depressions are routinely created should be monitored after rainfall. These areas, depending on the soil and configuration, may be treated with larvicide to prevent mosquito development. Previous research of cattle tracks by UA Entomology department confirmed mosquito breeding in these depressions. 4. Workers should be properly educated on preventing mosquito bites by using repellent or physical barriers, such as clothing.
<p>Department of Transportation</p>	<p>Benjamin H. Goff, P.E. Deputy Director B.S. College of Engineering Registered Professional Engineer</p>	<p>Over thirty years of experience preparing or reviewing traffic forecasts, traffic impact analysis, traffic safety reviews, roadway improvement project development, public transit service plans and budgets, and bikeway improvement plans within Pima County. Co-authored NEPA environmental documents related to roadway projects including: Kolb Corridor, Draft and Final EIS Palo Verde Corridor, Draft and Final EIS Campbell Corridor, Draft and Final EIS Kino Parkway Noise Analysis Report (principal author) River Road – La Cholla to Thornydale Section 4f Mitigation Report (principal author)</p>
<p>Chapter 3, Socioeconomics, Page 49, lines 3-15</p>	<p>Transportation costs</p>	<p>No cost information is provided for addressing impacts to roadways from heavy truck loads. Department of Transportation staff submitted comments during the first 30 days under jurisdiction review of the DEIS for the Rosemont Mine concerning the impacts of additional heavy vehicles on roadway safety and level of service. These comments dealt primarily with the insufficient information or lack of clarity within the document upon which to fully ascertain the extent of impacts, particularly on the county-maintained roadway system. However, there is sufficient information at a gross level to support findings and conclusions regarding the immediate impacts on the identified primary routes serving the proposed mine. These primary access roads are:</p> <p>Sonoita Highway - State Route 83 from I-10 south to Sonoita, S.R. 82. The most impact will be from I-10 south to the primary access road, to be located about 0.5 miles south of Hidden Springs Road; impacted length 13 miles.</p> <p>I-10 from S.R. 83 to Kolb Road; impacted length 13 miles</p>

**AGENCY REVIEW OF THE INTERNAL WORKING DRAFT OF THE ROSEMONT COPPER PROJECT DEIS
SPECIAL EXPERTISE REQUIRED COMMENT FORM**

AGENCY: (Pima County)

		<p>Kolb Road from I-10 north to Valencia Road (Port of Tucson Rail / Truck intermodal facilities located on the west side of Kolb south of Valencia); impacted length 2.5 miles.</p> <p>Sahuarita Road from S.R. 83 to I-19; impacted length 15.2 miles.</p> <p>The heavy truck traffic induced by the mine construction and operations will accelerate pavement distress on these primary access routes. A structural overlay of these affected routes will be required at or shortly after the commencement of operations. The total estimated cost of the structural overlay is \$14.6 million. This includes the asphalt concrete pavement in place, design, contractor mobilization, construction traffic control, and adjustment of adjacent shoulder grades. Note that I-10 and Kolb Road will require milling of the existing surface prior to placing the structural layer to maintain existing roadway drainage facilities and cross slope. This estimate does not include any consideration of the accelerated wear of the bridge structures over I-10 or the UPRR that are located along these primary access routes.</p> <p>Heavy truck traffic on the steeper sections of Sonoita Highway – S.R. 83 will also require consideration of truck climbing / passing lanes for safety and level of service. The American Association of State Highway and Transportation Officials (AASHTO) have published recommended design policies that address truck operations for uphill grades on two-lane highways.</p> <p>The AASHTO guidelines are based on several operating and safety factors, but the key one is speed differential. The crash rate for heavy trucks with four or more axles increases at a significantly greater rate when the speed differential approaches ten mph. While incidents increase with any speed reduction, the rate of change is much greater for speed differentials above ten miles per hour than below ten. AASHTO recommends the ten mph reduction criterion for determining critical lengths of grades (Figure III-30 on pg 237, <i>A Policy on Geometric Design of Highways and Streets</i>, 1990 ed., American Association of State Highway and Transportation Officials, Washington, D.C.). The AASHTO critical length for design based on the ten mph criterion is 1,000 feet for a 4% upgrade, assuming an initial speed of 55 mph entering the grade (Figure III-31, pg 238, <i>op. cit.</i>).</p> <p>There are four identified segments of Sonoita Highway – S.R.83 between mileposts 47.5 and 53.3 which meet the threshold AASHTO criterion for the construction of supplemental lanes. This portion of the highway is to the north of the planned primary access road intersection with Sonoita Highway. The preliminary estimate of the cost of the truck lanes is \$13 million. This estimate includes earthwork, rough and finish grade to drain, base, paving and new guardrails. This also includes the typical construction related costs for design, contractor mobilization, construction traffic control, adjustment of adjacent shoulder grades, and installation and</p>
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**AGENCY REVIEW OF THE INTERNAL WORKING DRAFT OF THE ROSEMONT COPPER PROJECT DEIS
SPECIAL EXPERTISE REQUIRED COMMENT FORM**

AGENCY: (Pima County)

		<p>maintenance of the storm water pollution prevention plan (SWPPP) required until all newly constructed roadside slopes are sufficiently stable from erosion.</p> <p>The total preliminary estimate of costs for these mitigation elements is \$27.6 million, at today's cost of construction.</p>
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