

Rosemont Copper Mine

Objection Review

Objection # (s): 0076-JPepper

Resource Area(s): NEPA – General (NEP-1) (Bias)

Objection Issue:

- 0076-2: The objector states that the NEPA process and FEIS are flawed. He raises the following issues in support of this contention: systematic bias in the FEIS (biased analysis, misinterpretation of research, cherry-picking research, using inappropriate data, failing to produce key data); inconsistency across document sections when addressing “no action alternative”, “cumulative effects,” and “reasonably foreseeable actions”; widespread absence of quantitative data and analyses; failure to consider relevant new information; not properly including Cooperating Agency personnel in ID Team meetings; failure to fully engage ADOT in the NEPA process in a timely manner; and failure to address NEPA policy regarding future generations of Americans.

Remedy Supplied by Objector (if any):

Prepare a fully Revised DEIS.

Law, Regulation and/or Policy:

National Environmental Policy Act of 1969; CEQ’s Implementing Regulations at 40 CFR 1500-1508; Forty Most Asked Questions Concerning CEQ’s National Environmental Policy Act Regulations issued on March 23, 1981.

Review Team Member Response:

The objector identifies a number of general observations pertaining to the FEIS and the NEPA process, including the appearance of bias, inconsistencies, absence of quantitative data, failure to consider new information, inclusion of cooperating agencies, and failure to address the needs of future generations.

The National Environmental Policy Act (NEPA) sets forth procedural requirements for Agencies to follow when considering a proposed action. It does not however mandate a particular result/decision, nor does it require that the Responsible Official select the environmentally preferred alternative. The Council of Environmental Quality’s Regulations for Implementing the Procedural Provisions of NEPA are found at 40 CFR 1500-1508. Among other things, these regulations address the content requirements of an FEIS as well as procedures for considering new information and the inclusion of cooperating agencies.

Bias - The objector raised concerns relating to “bias” when commenting on the DEIS [PR 043482 (letter 24482)]. A specific response to these concerns is presented in the FEIS [PR 047511_7, CD, Public Concern Statement 418, pp. 13-16]. A general response related to ensuring an “unbiased” decision is also presented in the FEIS [PR 047511_7, pp. G-15 and 16]. Maintaining scientific integrity is the key to an unbiased analysis as described in the sections titled “Scientific Uncertainty and Professional Disagreement” found in Chapter 3 of the FEIS. Among other things, these sections discuss monitoring and the parameters of the various models used, including peer review [PR 047511_3, pp. 296-316; 368-369; and 505-506]. There is no indication that the analysis is biased.

Inconsistencies - The objector also raised concerns regarding inconsistencies when commenting on the DEIS [PR 043482 (letter 24482)] and provided examples related to interpretation of the no action alternative, cumulative effects boundaries, and reasonably foreseeable actions. Many of these concerns were addressed in the response to comments and by making changes to the various sections of the FEIS to ensure consistency. For example, clarifications were made to the description of the no action alternative [PR 047511_2, pp. 25, 61, and 63] and the anticipated effects of taking no action [PR 047511_1, pp.123-138]. With respect to cumulative effects boundaries, it is expected that boundaries in time and space would vary by resource. Not all resources would have the same boundary and as such, the potential for reasonable foreseeable actions to contribute to cumulative effects may vary by resource. The FEIS explains that each resource section in Chapter 3 contains an introduction that “...defines both the temporal bounds and the spatial areas of analysis specific to each resource ...” [PR 047511_3, p. 139]. There is no indication that there are inconsistencies in the analysis.

Qualitative Analysis – The objector would prefer the use of quantitative data over qualitative data. Chapter 3 of the FEIS refers to both quantitative and qualitative data where appropriate [PR 047511_3, p.139]. In the absence of quantitative data (often due to incomplete or unavailable information), qualitative measures are used. The CEQ regulations acknowledge there may be situations where there is incomplete or unavailable information, noting that in such situations, the agency shall always make clear that such information is lacking (40 CFR 1502.22). In the DROD, the Responsible Official discusses incomplete or unavailable information noting, “I am aware that there is incomplete or unavailable information for some resource analysis” [PR 047504, p. 9]. Further, Chapter 3 of the FEIS addresses “uncertain” and “unknown” information for several resources and explains the analysis methodologies and assumptions made to address the incomplete information [PR 047511_3]. The FEIS appropriately uses both qualitative and quantitative measures in the effects analysis.

New Information –The objector claims the FEIS contains an overwhelming body of new information and as such, a revised DEIS should have been prepared. The CEQ regulations fully contemplate there will be changes between a DEIS and FEIS based on public comment, allowing for modification and or development of alternatives, supplementing analysis and making factual corrections (40 CFR 1503.4). As such, the changes made between the DEIS and FEIS are fully in line with the CEQ regulations.

The objector also mentions there is new information not yet considered in the FEIS. The CEQ regulations do not prohibit changes to an FEIS prior to making a final decision. Rather, the

regulations clearly contemplate that changes to a final environmental impact statement can be made if the agency makes “substantial changes in the proposed action...” or, if “there are significant new circumstances or information relevant to environmental concerns...” (40 CFR 1502.9(1)). Absent *substantial changes* and *significant new circumstances*, changes can be made to an FEIS prior to signing a ROD without preparing a supplement or a “fully revised DEIS” as suggested by the objector.

Cooperating Agencies – the objector questions whether Cooperating Agency personnel were properly included in ID Team meetings and notes a failure to fully engage ADOT in a timely manner. The CEQ regulations define the term “cooperating agency” (40 CFR 1508.5) and further guidance is provided to agencies in CEQ’s Forty Most Asked Questions Concerning CEQ’s National Environmental Policy Act Regulations issued on March 23, 1981, question 14(a)-(d).

Per the CEQ regulations, the Forest Service invited other agencies with jurisdiction or special expertise to participate in the NEPA process (40 CFR 1501.6(a)(1)). Specifically, ADOT was invited to participate in as a Cooperating Agency in a letter dated July 18, 2008 [PR 011555] and a formal Memorandum of Agreement with the State of Arizona, Department of Transportation was signed December 2009/January 2010 [PR 015026], providing ample time for ADOT to participate as a Cooperating Agency in the NEPA process as evidenced by numerous correspondence between the agencies as well as the proponent [PR 011927, 013292, 013281, 013947, 015510, 018790, 017381, 017382, 017344, 017376, 018783, 018784, 018785, 014652, 015529, 015534, 015600, and 01253].

The project record contains a number of additional Memorandums of Agreement describing the roles and responsibilities of the individual Cooperating Agencies [PR 011535 (Pima County); PR 014398 (Air Force); PR 014394 (State of Arizona Department of Mines and Mineral Resources); PR 014392 (State of Arizona Geological Survey); PR 014395 (State of Arizona Department of Environmental Quality), etc.]. The record also contains extensive notes documenting meetings with Cooperating Agencies. The Forest Service did not improperly invite or prevent participation of Cooperating Agencies.

Future Generations – the objector contends that leaving a “toxic pit – essentially a ‘Superfund site-in-waiting’” fails to meet the “policy directive” of NEPA to provide for future generations of Americans. As stated previously, NEPA sets forth procedural requirements for Agencies to follow when considering a proposed action. It does not however mandate a particular result/decision, nor does it require that the Responsible Official select the environmentally preferred alternative. It is through the NEPA process that agencies analyze and disclose effects of actions and employ mitigation and monitoring to lesson anticipated effects.

Title 1, Section 101 of NEPA notes that in addition to setting forth a policy so that the Nation may, “...fulfill the responsibilities of each generation...” the policy also is designed to “...achieve a balance between population and resource use...” The DROD recognizes that implementing this mine would, “...undoubtedly impact the natural, cultural, and social resource values...” and also notes that the selected alternative “...provides practicable environmental safeguards, including features designed to avoid or reduce environmental impacts; mitigations measures designed to avoid, reduce, or minimize impacts; and a monitoring plan to ensure that

resulting impacts comply with applicable laws and regulations...” [PR 047504, p. 10]. There is no indication that allowing the mine to be implemented under the selected alternative would result in a superfund site or violate NEPA policy.

Recommended Remedy by Review Team Member (if any): The remedy suggested by the objector is not warranted. No remedy is required.

Review Team Member: Rita Skinner, Regional Litigation Coordinator

Rosemont Copper Mine

Objection Review

Objection # (s): 0073-MSheldonDiVito

Resource Area(s): NEPA – General (NEP-1) (Human Environment)

Objection Issue:

- 0073-2: You need to also take into account the human environment and affect.

Remedy Supplied by Objector (if any): None supplied

Law, Regulation and/or Policy: Council on Environmental Quality (CEQ) Regulations at 40 CFR 1500-1508; and Executive Order 12898 on Environmental Justice

Review Team Member Response:

The objector contends that the human environment and affect to the human environment was not addressed in the FEIS.

The CEQ regulations require federal agencies to study the proposed action's effects on the quality of the human environment. The regulations define the human environment broadly, to include the natural and physical environment and the relationship of people with that environment. In addition, when preparing an EIS, federal agencies must discuss economic and social effects if these effects are interrelated with the effects of the natural or physical environment. Economic or social effects are not intended by themselves to require preparation of an environmental impact statement. When an environmental impact statement is prepared and economic or social and natural or physical environmental effects are interrelated, then the environmental impact statement will discuss all of these effects on the human environment (40 CFR 1508.14).

The CEQ regulations also define direct and indirect effects. Direct effects are "caused by the action and occur at the same time and place." Indirect effects are defined as those which "are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable." Effects are further described as being beneficial or detrimental, and applying to ecological and social systems (40 CFR 1508.8).

An environmental analysis is not limited to the natural environment. Environmental impacts to the built environment must also be included in the Environmental Impact Statement (EIS) when they are relevant, including but are not limited to; urban quality, historic and cultural resources, and the design of the built environment (40 CFR 1502.16(g)).

Examples of the built environment to be evaluated in the EIS include; traffic and transportation, noise, historic and cultural resources, land use conflicts, recreation, utilities and public services. Because the CEQ regulations address the human environment, impacts to human health must be included in the EIS when they are relevant. Such impacts include: risk of exposure to hazardous materials, wastes and activities.

The analysis of the all of the action alternatives include the elements that may impact the human environment; the natural or physical environment such as water resources and soil productivity; the built environment such as visuals and transportation access; and human health such as public health and safety and air quality. The analysis also includes discussions about the impacts to the social and economic resources and to the minority and low-income populations that are protected by Executive Order 12898 on Environmental Justice.

The executive summary provides brief discussion on some of these elements and how they impact the human environment [PR 047511_2, pp. vii through xv]. More detailed analysis can be found in Chapter 3 of the FEIS [PR 047511_3/4, pp. 139-1143], and in the various appendices of the FEIS [PR 047511_6] and in the draft ROD [PR 047504].

Recommended Remedy by Review Team Member (if any): No remedy required.

Review Team Member: Beth Dykstra, EAP/WSA

Rosemont Copper Mine

Objection Review

Objection # (s): 0084-SSSR

Resource Area(s): NEPA – General (NEP-1) (Irretrievable/Irreversible Commitment of Resources)

Objection Issue:

- 0084-52: We noted in our previous comments that, in the DEIS section regarding irretrievable and irreversible commitment of resources, the USFS provides hopeful, but purely speculative and unsupported assertions that once the proposed project is completed, "it is possible" that various uses would return and acknowledges that some uses would be lost forever, but fails to provide any assessment of "worst case scenarios" for all phases of mine in terms of impacts to traffic, water, tourism, property values, and local and regional economies. (See SSSR Appendix A at 90-91.) The FEIS fails to adequately respond to this comment and provide this assessment.

Remedy Supplied by Objector (if any):

0084-52: Provide a meaningful analysis of the "low probability, catastrophic consequence" scenario in terms of the irretrievable and irreversible commitment of resources for each resource impacted. (General NEPA)

Law, Regulation and/or Policy: Council on Environmental Quality (CEQ) Regulations at 40 CFR 1500-1508

Review Team Member Response:

The objector contends that the FEIS did not fully discuss irretrievable and irreversible commitment of resources or analyze worst-case scenarios for traffic, water, tourism, property values, and local and regional economies.

The CEQ regulations describe the environmental consequences section of the EIS as forming the scientific and analytic basis for the comparison of the alternatives. The regulations also list topics that should be discussed in an EIS, including "any irreversible or irretrievable commitments of resources which would be involved in the proposal should it be implemented" (40 CFR 1502.16).

Forest Service Handbook (FSH) 1909.15 defines irreversible and irretrievable as:

- Irretrievable. A term that applies to the loss of production, harvest, or use of natural resources. For example, some or all of the timber production from an area is lost irretrievably while an area is serving as a winter sports site. The production lost is

irretrievable, but the action is not irreversible. If the use changes, it is possible to resume timber production.

- Irreversible. A term that describes the loss of future options. Applies primarily to the effects of use of nonrenewable resources, such as minerals or cultural resources, or to those factors, such as soil productivity that are renewable only over long periods of time.

The irreversible and irretrievable commitment of resources is addressed in the FEIS, Required Disclosures section [PR 047511_4]. Most of the resource areas listed by the objector are covered in this section: traffic (Transportation/Access); water (ground and surface water quality and quantity); tourism (visual resources, recreation and wilderness, socioeconomics and environmental justice); and local and regional economies (socioeconomics and environmental justice) [PR 047511_4, pp. 1138-1139, 1140-1142]. Property values are discussed in the previous section titled 'Unavoidable Adverse Effects' [PR 047511_4, p. 1137].

Analysis of a "worst case scenario" is not required under NEPA. Rather, the CEQ regulations were amended in 1986 to address situations where information was lacking, noting that an agency should make clear that information regarding significant adverse effects is incomplete or unavailable (40 CFR 1502.22). This section of the regulations replaced the requirement for the analysis of a worst-case scenario. The FEIS discusses incomplete or unavailable information for each resource in a section titled 'Analysis Methodology, Assumptions, Uncertain and Unknown Information' [PR 047511_3 and 4, pp. 139-1152].

The response to comments section of the FEIS also addresses various concerns related to "worst case scenarios" [PR 047511_7, CD; response to concern statements 612, 613, 219 (letter 2698 on p. 184); 313 (letters 1947 and 3588 on p. 21); and 703 (letter 25219 on p. 33)]. In lieu of analyzing a worst-case scenario, the Forest Service examined the potential impacts to the environment using the best available science and presenting reasonable expected impacts, as required by NEPA. Monitoring would be used to detect changes in the environment not anticipated by the NEPA analysis. The Forest Service also identified the processes that will take place when changes are detected. Low probability events such as earthquakes and geological hazards [PR 047511_4, pp. 1001-1002]; hazardous materials [PR 047511_4, pp. 1005-1008]; and 100-year precipitation events [PR 047511_3, p. 377] were considered if they had the potential to impact resources analyzed in the FEIS.

Irreversible and irretrievable commitments of resources were discussed in both the DEIS and FEIS. Analysis of worst-case scenarios is no longer required under the NEPA. Incomplete or unavailable information was addressed in the FEIS. The NEPA requirements under 40 CFR 1502.6 and 40 CFR 1502.22 were met.

Recommended Remedy by Review Team Member: The remedy suggested by the objector is not warranted. No remedy is required.

Review Team Member: Patricia Cohn, EAP/WSA

Rosemont Copper Mine

Objection Review

Objection # (s): 0084-SSSR; 0117-CienegaWatershedPartnership

Resource Area(s): NEPA – General (NEP-1) (Other Management Plans)

Objection Issue:

- 0084-80: Our previous comments stated that the USFS analysis of the proposed mine's impacts to the ranch conservation in Pima County was inadequate. (SSSR et al. at 82-83.) Pima County has spent over \$44 million to purchase four local ranches (Empirita Ranch, Bar V Ranch, Sands Ranch, and Clyne Ranch) in the vicinity of the project area, all of which will suffer negative impacts from mine operations. As far as we can tell, the agency provided no response at all. The USFS states, "Of the five elements of the [Sonoran Desert Conservation Plan], the four that are most relevant to biological resources in the analysis area are Critical Habitat and Biological Corridors, Riparian Restoration, Mountain Parks, and Ranch Conservation." (FEIS at 590.) However, we could not find any discussion of impacts to the four ranches that Pima County has explicitly purchased for conservation purposes.
- 0084-47: In our previous comments, we noted that there were no relevant local plans, policies, regulations, or ordinances identified in Chapter 6, Literature Cited, and no record of consultation with local governmental agencies and related organizations. (See SSSR et al. Appendix A at 68-69.) However, in the FEIS, the USFS merely repeats the statement that "the mine operation may not conform to the quality of life expectations as expressed by the forest plan and Federal, State, and local regulations and ordinances," and there are still no references to any local regulations, ordinances, or planning groups that may be impacted by the proposed project. (See FEIS at 1054.)
- 0084-82: The FEIS provides inadequate analysis of impacts to the Sonoran Desert Conservation Plan.
- 0084-85: The FEIS provides inadequate analysis of impacts to Las Cienegas National Conservation Area. (See Remedy section.)
- 0117-2: The draft ROD makes no findings with regard to how the Pima County Sonoran Desert Conservation Plan and its elements are impacted.

Remedy Supplied by Objector (if any):

0084-47: Provide information about local plans, regulations and ordinances that may be impacted by the proposed mine plan.

0084-80: The USFS must conduct a detailed analysis of the impacts of the proposed Rosemont Mine to Pima County's ranch conservation lands.

0084-82: Either reiterate the analysis of all the potential impacts to the SDCP and collate them together, or give the reader specific reference page numbers. Otherwise, it is impossible to assess whether impacts to the SDCP have been adequately addressed.

0084-85: The USFS must provide a more robust analysis of noise impacts to humans, facilities and structures, livestock, and wildlife over a wider analysis area, and discuss appropriate mitigation measures to reduce those impacts. The agency must analyze potential impacts to the historic ranch headquarters in LCNCA, including impacts caused by blasting and other proposed activities. The agency must discuss reasonable measures that would mitigate these impacts, including additional mitigation and preservation measures for cultural sites, and describe how applicable federal laws would be met.

Law, Regulation and/or Policy: Council on Environmental Quality (CEQ) Regulations at 40 CFR 1500-1508

Review Team Member Response:

The objectors contend the Forest Service did not adequately analyze impacts on the BLM's Las Cienegas National Conservation Area and Pima County lands (including ranching lands) designated for conservation purposes under the Sonoran Desert Conservation Plan; the 'Literature Cited' section of the FEIS did not list any relevant local plans, policies, regulations, or ordinances, and there was no record of consultation or meetings with other governmental entities; and conflicts with other land use plans and policies were not mentioned in the FEIS.

The CEQ regulations at 40 CFR 1502.16(c) address possible conflicts between the proposed action and the objectives of land use plans, policies, and controls of other Federal and non-Federal government entities, noting the EIS should include a discussion of "Possible conflicts between the proposed action and the objectives of Federal, regional, State, and local (and in the case of a reservation, Indian tribe) land use plans, policies and controls for the area concerned."

The CEQ regulations also address integration of planning processes with non-Federal governmental entities, noting: "To better integrate environmental impact statements into State or local planning processes, statements shall discuss any inconsistency of a proposed action with any approved State or local plan and laws (whether or not federally sanctioned). Where an inconsistency exists, the statement should describe the extent to which the agency would reconcile its proposed action with the plan or law" (40 CFR 1506.2(d)).

Potentially relevant local plans, policies, or controls are discussed in Chapter 2 under *Permits and Authorizations* [PR 045711_2, pp. 56-61] and throughout Chapter 3 [PR 045711_3, 4, pp. 139-1152]. Conflicts with non-Forest Service land management plans and policies are also discussed in the FEIS under the heading *Conflicts with Regional, State, and Local Plans, Policies, and Controls* [PR 045711_4, pp. 1143-1151]. Local ordinances and regulation are also listed throughout Chapter 3 [PR 045711_3,4, pp. 140, 150, 233-235, 318, 370-371, 405-408, 448, 754, 839-840, 880-881, 959, 970, 972, and 1143]. Areas of conflict, degree of impacts, and potential for mitigation or reconciliation of the proposed action and the plan or law are also addressed in this section. The DROD discusses compliance and conflicts with Federal and State

laws and regulations [PR 047504, pp. 4-7, 9, 10, 13, 14, and 44-46], but does not mention other (non-Forest Service) land management plans or policies. Local regulations and ordinances are mentioned briefly [PR 047504, p. 8].

The Las Cienegas National Conservation Area Plan (LCNCA) and the Pima County Sonoran Desert Conservation Plan (SDCP) are among the eight planning documents discussed. The discussions summarize the potential impacts on these conservation areas and describe the conflicts with the management goals. This section also states that the Rosemont Copper project would not violate the implementing legislation of the LCNCA [PR 045711_4, p. 1145].

Chapter 3 of the FEIS discusses impacts by resource area, not by land ownership type. Maps showing the analysis area boundaries for each resource area are found in the analysis and methodology sections for each resource area in Chapter 3 [PR 045711_3, 4, pp. 139-1152]. These boundaries determine the geographical extent of effects. Land ownership is shown on the maps, but in general, effects are not discussed by land ownership or other categories. The impacts discussion covers all lands within the analysis area. The pages in the FEIS that address impacts on the specific areas identified by the objectors are listed below.

Effects on the LCNCA appear throughout Chapter 3 [PR 045711_3, 4, pp. 139-1152]:

- p. 142: reasonably foreseeable actions that are planned to occur on LCNCA
- p. 422, and 430-431: water rights and effects on water rights for LCNCA are discussed on p. 422, and effects are analyzed on p. 430-431.
- p. 496: wetlands within the LCNCA and effects on these wetlands are included in the analysis of Upper Cienega Creek.
- pp. 526 and 546: flow conditions are discussed and a contextual discussion of possible effects to Empire Ranch within the LCNCA
- pp. 485-569: impacts on streamflow and riparian vegetation in Empire Gulch and Upper Cienega Creek (within LCNCA) are found throughout the 'Seeps, Springs, and Riparian Areas' section
- pp. 773, 784, 791, 795-796, and 818: analysis of impacts on visual resources impacts with respect to LCNCA
- pp. 833-873: analysis of impacts on recreation with respect to LCNCA
- pp. 653-731: occurrence and impacts to species within LCNCA are identified and analyzed throughout the 'Biological Resources' section.

Most of the discussion regarding impacts on Pima County conservation lands is found in the Biological Resources section [PR 045711_3, pp. 570-723]. Table 126 [PR 045711_4, p. 699] displays acres and percent of Pima County conservation lands impacted, by alternative. Relevant plans and effects on ranching in general are also discussed in the various resource sections in Chapter 3 [PR 045711_3, 4, pp. 139-1152]. Specific mentions of effects on the Pima County SDGP, including ranch conservation lands, appear in several locations throughout the FEIS [PR 045711_2, 3, 4] including:

- pp. 106-108: alternatives and ranch conservation
- pp. 407-408: relevant laws, policies, regulations and plans relating to surface water quantity

- pp. 570, 576, 579, 582, 601, 607, 635, and 668: impacts on biological resources, including wildlife
- pp. 142, 407, 408, 570, 576, 582, 589-590, 601, 607, 651, 651, 699-700, 789, 1045, and 1148: specific mentions of the SCDP and/or Pima County Multi-species Conservation Plan
- p. 699: table 126 displays direct impacts by acres on Pima County conservation lands from each alternative and connected actions
- pp. 714, and B-101: mitigation measures
- p. 789: visual resources
- pp. 858 and 1038: historic properties, including the Bar V Ranch
- Appendix A, pp. 42, 49, and 51: analysis of alternatives

Social, economic, and environmental impacts on agriculture and ranches in the area are found in the Livestock Grazing and Socioeconomics and Environmental Justice sections of Chapter 3 [PR 045711_4, pp. 753-750 and 1053-1130]. Direct impacts on grazing land would occur on Forest Service allotments; Rosemont Copper holds the grazing permits for those allotments.

The potential effects of noise on historic structures, humans, and the environment were addressed in several places in the FEIS. Concerns about noise are addressed in the response to comments on the DEIS [PR 045711_7, pp. G-51 – G-52]. In summary, “No residential receptors are expected to experience noise levels above standard noise thresholds as a result of blasting. Airborne and ground vibrations resulting from blasting were studied and are not expected to exceed regulatory standards at the closest modeled residential receptor.” Mitigation measures have been developed and adverse effects on historic properties within the mine perimeter will be in place before mining starts. Mitigation measures for noise impacts are found in Appendix B [PR 045711_6, pp. B-67 – B-68]. The effectiveness of the mitigation measures is also evaluated in Chapter 3 [PR 045711_4, pp. 988-989] and concluded that they would help reduce noise from mining operations, with the caveat that the noise and sounds associated with a large industrial operation would remain, particularly in the immediate vicinity of the mining operation.

Noise is also addressed in Chapter 3 of the FEIS [PR 045711_4, pp. 958-988]. In response to comments, the Forest Service reviewed the noise analysis and determined that the original analysis was adequate and did not need to be revised.

Over 50 tribes and local, state, and federal agencies were consulted during this NEPA process [PR 045711_5, pp. 1153-1154 and PR 047504, pp. 7, 9, 54-55, and 63]. The Bureau of Land Management and Pima County are among the 17 cooperating agencies [PR 045711_2, p. 27]. Cooperating agencies were consulted throughout the process and provided reviews and input on alternatives and mitigation measures and expressed concerns as described in the FEIS [PR 045711_2, pp. 27, 29, 47, 56, 76, 94, 100, 106, and 110]. Comments from the cooperating agencies were also considered in the DROD [PR 047504, pp. 9, 11, and 55].

Meeting notes, memoranda of understanding, and other documentation of consultation with local governmental agencies and related organizations are found in the project record; there are nearly 600 documents; including [PR 014961-014971; 011464-011492; 012708-012800; 015223-

015246; 017405-017440; and 018759-018786]. Some of these records are also on the project website under the ‘Cooperating Agencies’ tab. Agency reviews of the DEIS are listed in the ‘Literature Cited’ section of the FEIS [PR 045711_5, pp. 1347-1422] under the name of the agency. The index is limited to documents that were cited in the FEIS, and therefore documentation of consultation with other agencies and organizations is not listed there.

The ‘Literature Cited’ section of the FEIS [PR 045711_5, pp. 1347-1522] lists over 10 conservation-related plans, policies, or guidelines prepared or published by Pima County, including the ‘Multi-species Conservation Plan’ and the ‘Sonoran Desert Conservation Plan’ [PR 045711_5, p. 1386]. Nearly 30 plans, policies, or guidelines prepared by non-Forest Service agencies are also listed. The management plan for the LCNCA is also listed in the index [PR 045711_5, p. 1358]. The BLM and Pima County conservation areas, ranches, and plans mentioned by the objectors are not listed in the ‘Index’ section of the FEIS [PR 045711_5, pp. 1423-1438].

The response to comments on the DEIS addressed concerns about the Sonoran Desert Conservation Plan (SCDP) and grazing and ranchlands in general [PR 045711_7, pp. G-18, G-45; and on the CD contained within the cover of the FEIS Volume 6, Public Concern Statement 637, p. 1]. In summary, direct effects on grazing land would only occur on Forest Service allotments. Indirect effects on Pima County ranch lands are discussed throughout Chapter 3, as noted above.

The Forest Service complied with the regulations listed above regarding conflicts with other land management plans, and State and Federal regulations, policies, and controls in both the FEIS and DROD. Discussion in the DROD regarding local plans, policies and controls was very limited. Impacts on the Las Cienegas National Conservation Area and the Sonoran Desert Conservation Plan including ranching conservation lands were discussed in the FEIS. The impacts on these lands were not discussed in separate sections, but rather were found in the individual resource sections. Consultation and involvement with other federal, state, and local agencies and tribes was discussed in the FEIS. Consultation is described in the FEIS and DROD, and consultation documents are found in the project record and on the Rosemont Copper project website. A limited number of the nearly 600 records pertaining to consultation and cooperating agencies are on the website. Plans and policies cited in the FEIS were listed in the index. The effects of noise on the human and natural environment were addressed in the FEIS, and mitigation measures for noise impacts were also included in the mitigation and monitoring plan.

Recommended Remedy by Review Team Member (if any): The remedies suggested by the objectors are not warranted. No remedies are required.

Review Team Member: Patricia Cohn, EAP/WSA

Rosemont Copper Mine

Objection Review

Objection # (s): 0007-BWhitehouse; 0030-RKoppingerTodd; 0031-RKuerzel; 0032-TMoore; 0035-DHanna; 0043-GBrown; 0044-RBrown; 0056-SWhitehouse; 0067-PBradley; 0076-JPepper; 0077-DWeinstein; 0082-SReichardt; 0083-FICO; 0084-SSSR; 0085-AHeitkamp; 0095-SantaCruzCounty; 0099-KPhaler; 0121-SWright

Resource Area(s): NEPA – General (NEP-1) (New Information)

Objection Issue:

- 0007-7: The DEIS has changes in it that we in the emergency and safety services were never aware of, and then we found it in the FEIS. That is not a transparent or appropriate way of having our input to the plan or process of providing services to the travelers and residents who use these roads daily.
- 0030-1, 0031-1, 0032-1, 0035-1, 0043-1, 0044-1, 0067-1, 0056-12, 0082-3, 0085-1, 0095-1, 0121-1, 0084-81, 0083-9, 0084-62: The Rosemont Copper FEIS contains substantial new and important information developed after publication of the DEIS. It is difficult to pinpoint the changes. This greatly limited public review of this new and important information through the use of a narrow, difficult, and highly technical formal objection process. (Paraphrased from the original). As such, a fully revised DEIS or supplemental EIS should be prepared and recirculated for an appropriate level of public review and comment. This does not comply with 40 CFR sec. 1502.9 (c). (EXAMPLES: in Appendix G, I cannot pinpoint (in the FEIS) what those changes are., see 0084-81 for examples, life of mine, soc-econ analysis)
- 0025-14: The EIS fails to discuss important information that is incomplete or unavailable for an evaluation of the proposed project's reasonably foreseeable significant adverse impacts on the environment.
- 0099-4: In presenting new information without the opportunity for public review and comment, the FEIS does not comply with 40 CFR sec. 1502.9 (c).
- 0076-4: The FEIS contains an overwhelming body of "new information". As such, a fully revised DEIS should be prepared and re-circulated for an appropriate level of public review and comment.
- 0077-3: The objector states a revised DEIS is necessary to allow public comment on new information presented in the FEIS.
- 0083-4: The USFS did not provide the new socioeconomic analyses in a DEIS to allow for adequate public comment and review, including review of the appropriateness of the application of the economic literature, the reliability of the data, and the accuracy of the calculations.
- 0083-9: The USFS included significant new information in the FEIS that was not included in the DEIS. Extending the mine life with resulting cumulative impacts by 22.5% to the 50% is significant and warrants an opportunity for the public to review and comment, pursuant to

NEPA. More importantly, the analysis contained in the FEIS is deficient in that it still does not accurately reflect the expected mine life of the project.

- 0084-62: The FEIS analysis does not accurately reflect the expected lifespan of the proposed mine. The USFS included new information in the FEIS that was not included in DEIS. Extending the mine life with resulting cumulative impacts by 22.5% to the 50% is significant and warrants an opportunity for the public to review and comment, pursuant to NEPA. More importantly, the analysis contained in the FEIS is deficient in that it still does not accurately reflect the expected mine life of the project.

Remedy Supplied by Objector (if any):

0077-3, 0082-3, 0085-1: Prepare and distribute a supplemental DEIS.

0007-7, 0030-1, 0031-1, 0032-1, 0035-1, 0043-1, 0044-1, 0056-12, 0067-1, 0076-4, 0085-1, 0095-1, 0121-1: Abandon this version of a FEIS and prepare and circulate a revised DEIS for public review and comment.

0083-4: The new socioeconomic analysis circulated for the first time in the FEIS should be circulated as a revised DEIS. The scope of the socioeconomic impacts must be broadened to also include impacts to the property values in the Sahuarita and Green Valley communities.

0084-81: A revised DEIS is required, in which new information is presented and flawed analysis is corrected and made available for public review and comment.

Law, Regulation and/or Policy: Council on Environmental Quality (CEQ) Regulations at 40 CFR 1500-1508

Review Team Member Response:

The objectors contend that the FEIS contains substantial amounts of new information and the public could not adequately review and comment on the new content.

The CEQ regulations require agencies preparing a DEIS to make every effort to disclose and discuss major points of view on environmental impacts of the alternatives including the proposed action (40 CFR 1502.9 (a)). Following public comment on the DEIS, the agency shall discuss any opposing views in the FEIS that were not adequately discussed in the DEIS (40 CFR 1502.9(b)). Essentially, the public should be provided with an opportunity to conduct a meaningful analysis of project components and potential effects, and all subsequent changes reflected in the FEIS should be a logical outgrowth of the DEIS.

Supplements to a draft or final environmental impact statement should be issued when there are: substantial changes to the proposed action; new circumstances or information relevant to environmental concerns, the proposed action or its impacts; and when the agency determines that doing so will further the NEPA (40 CFR 1502.9(c)(1)-(2)).

The CEQ regulations at 40 CFR 1503.4(a)(1)-(5) addresses responding to comments. Agencies can respond to comments in the final environmental impact statement by modifying the proposed

action, developing and evaluating additional alternatives; by supplementing, modifying, or improving the analyses; making factual corrections; or explaining why some comment(s) do not warrant further response.

40 CFR 1502.14(a) addresses alternatives, stating “a) Rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.”

40 CFR 1502.22 addresses unavailable or incomplete information. The agency shall include a statement in the impact statement that there is (1) unavailable or incomplete information, (2) the relevance of the incomplete or unavailable information to evaluating significant adverse impacts, and (3) a summary of credible scientific evidence that is relevant to evaluating such impacts, and the agency's evaluation of such impacts based upon theoretical approaches or research methods generally accepted in the scientific community.

There were approximately 24,800 comments in response to the draft environmental impact statement. The response to these comments was included in an appendix to the FEIS [PR 047511_7, pp. G-1 – G-74].

In accordance with 40 CFR 1502.9(b), changes were made in response to comments on the DEIS. An overview of these changes is found in Chapters 1 and 2 of the FEIS [PR 047511_2, pp. 3, 25-26] under the heading ‘Changes from the draft environmental impact statement’. Some changes were made based on public comments and included modifying the description of some alternatives; changing alternatives based on refinements to the design; expanding the description of the no action alternative; adding road segments to the analysis; clarifying why some alternatives were not considered in detail; updating mitigation and monitoring; clarification of the overall life of the mine and the duration of the phases of mine life; and adding details about financial assurance. Other changes included refinements, technical updates; integration and explanation of mine life and production schedules; and correction of errors. Refinements to the alternatives were described in Chapter 2 [PR 047511_2, pp. 28-30]. These changes fall within the parameters of 40 CFR 1503.4(a).

New information, updates, and changes made since release of the DEIS are also summarized in the beginning of the various resource sections in Chapter 3 [PR 047511_3/4, pp. 144, 178, 217, 288, 362, 398, 444, 485, 570, 725, 734, 751, 767, 833, 875, 906, 921, 958, 989, 1015 and 1053] under the heading ‘Changes from the Draft Environmental Impact Statement’. These changes included reviews of the appropriateness of analysis methods and modeling, changes in analysis boundaries, and completion of more robust analyses. These changes were made in response to comments on the DEIS as explained at the beginning of each resource section.

The Forest Service also addressed requests to revise or prepare a supplement to the DEIS in the response to comments on the DEIS in Appendix G [PR 047511_7, pp. G-8, G-16, G-18, G-32, G-33, G-34, G-35, G-38, G-39, G-42, G-47, G-51, G-54, and G-55]. Comments from the public requested that the Forest Service revise or expand resource analyses and boundaries, include additional or more robust analyses, provide updated information, and revise mitigation measures. Requests for a supplement to the DEIS or a revised DEIS were also addressed in response to

comment letters [PR 003448, 029909, 031331, 032965, 044216] and in the response to public concern statements 537 and 551, located in the commenter response database on the project website [PR 047511_10]. The Forest Service reviewed the public comments and the changes made between the DEIS and FEIS. The Forest Service found that there were no substantial changes to the proposed action and there were no significant new circumstances or information relevant to environmental concerns that would have triggered a supplement, per 40 CFR 1502.9(c) [PR 047511_7, p. G-16].

An errata sheet [PR 046516] documenting corrections to the text of the FEIS was created on January 10, 2014, and was published on the project website. It is considered a living document and is updated as needed. These corrections reflect minor errors and omissions discovered after the release of the FEIS, and as such this document should be reviewed along with the FEIS. This document first appeared after the release of the FEIS, but there are no changes to the project or significant new circumstances or information identified in these errata.

There was additional time to review the FEIS and DROD – about one month. An informational version of the FEIS was put on the project website on November 29, 2013, with the purpose of giving people more time to read and review the document [PR 044959]. The completed FEIS [PR 047511_2, 3, 4, 5, 6, 7] was posted on the Rosemont website December 12, 2013, and the completed DROD was published to the website on December 16, 2013. The notice of availability (NOA) [PR 47447] was published December 13, 2013 and listed January 29, 2014 as the end of the review (objection) period. The NOA was later amended [PR 047448 and 047449]; this amendment extended the review period to February 14, 2014. The legal notice [PR 047086 and 047017] was published on December 31, 2014; the 45-day objection period began January 1, 2014, with a closing date of February 14, 2014.

Incomplete and unavailable information is addressed for each resource for which it is applicable, under the heading of *Analysis Methodology, Assumptions, Uncertain and Unknown Information* throughout Chapter 3 of the FEIS [PR 047511, pp. 139-1152].

Objectors used examples of analyses that needed updating and that should be addressed in a revised DEIS: the social and economic analysis, effects on property values, and re-analysis of the life of the mine. The social and economic analysis was updated in the FEIS based on comments to the DEIS [PR 047511_4, pp. 1053-1130]. This analysis is expanded and more detailed than in the DEIS. Changes from the DEIS were explained in in the introductory text [PR 047511_4, pp. 1053-1054]. The section titled *Analysis Methodology, Assumptions, Uncertain and Unknown Information* [PR 047511_4, pp. 1055-1058] addresses the methods and data sources used in the analysis. A review of the socioeconomic analysis in the DEIS was conducted by an external consulting team [PR 045231]. Information from this review was used in the FEIS as described in the FEIS [PR 047511_4, p. 1053]. The Forest conducted an internal review of the economic model used in the DEIS [PR 045381]; results were incorporated into the FEIS [PR047511_4, pp. 1055-1058]. A process memo summarizing key documents and how they were used in the socioeconomic analysis is also found in the project record [PR 047364].

The analysis of the changes in property values is more detailed [PR 047511_4, pp. 1105-1109] and was presented in terms of distance from the mining project rather than by community. The

distance of a property from an industrial site (the mine) has a larger effect on property values, according to research cited in the FEIS [PR 047511_4, pp. 1106]. Other factors that may affect property values in communities near the mine are also discussed. Changes regarding the phases and life of the mine are found in the FEIS [PR 047511_2, pp. 1, 3, 26]. Property values are addressed on page G-59 of the response to comments [PR 047511_7].

Regarding the life of the mine, objectors contend that this is new information and the extended life of the mine was not considered in the effects analysis. Changes to or clarifications about the overall life of the mine and phases of mine life are addressed in the FEIS [PR 047511_2, pp. 1 and 3] and the effects analysis in Chapter 3 [PR 047511_3, 4, pp. 139-1152]. Overall mine life and mine life phases are also referred to in the DROD [PR 047504, pp. 28, 31, 52, and A-18]. A key document related to mine life is the memo “Mine Life Phase/Comparison of Current Plans of Operation vs. DEIS Analysis” [PR 046310]. This memo documents the Responsible Official’s decision to adopt the FEIS approach (mine phases) to mine life.

Mine life and the changes between the DEIS and FEIS are described on pp. 1 and 3 of the FEIS [PR 047511_2]. On page 1, a footnote explains that the mine life (20-25 years) described in the DEIS only referred to the operational life of the mine. The extended life of the mine in the FEIS includes 4 stages: premining, active mining, final reclamation and closure, and postclosure; the active mining phase is 20-25 years; this is consistent with the mine life listed in the summary and Chapters 1-2 of the DEIS [PR 015781, pp. v, 1, 24, 28, 73, and 86]. In the DEIS, the mine life is described as approximately 25 years, including construction, operations, reclamation and closure [PR 015781, p. 1] including 20 years of mine operation [PR 015781, pp. 7, 86].

Mine life is also discussed in Chapter 2 of the FEIS. The text describing the action alternatives states that the mine life does not explicitly correlate with production timing for all alternatives [PR 047511_2, pp. 64, 72, 80, 87, and 90]. An explanation about mine life and the crosswalk tables are shown for all action alternatives [PR 047511_2, pp. 64, 66, 72, 74, 80, 82, 87, and 90].

Alternatives that lengthened or shortened the life of the mine were considered but not analyzed in detail [PR 047511_2, pp. 107-109]. An evaluation found that “Neither modification would affect the final size of the open pit, waste rock dumps, or tailings piles, unless changes in operating or capital costs affect the mine life reserves, nor would either modification affect the total volume of water used or the final viewshed.” Further, these alternatives are not practically feasible, and are not standard practice in the mining industry.

The effects analyses in Chapter 3 incorporated the extended mine life under the heading ‘Analysis Methodology, Assumptions, Uncertain and Unknown Information’ [PR 047511_3, 4, pp. 179, 220, 398, 444, 573, 735, 752, 768, 837, 876, 907, 922, 958, 959, 991, and 1055]. Mine life is described as the temporal analysis boundary and was referred to in terms of years or mine phases. The temporal bounds of analysis for a few resource areas used a figure other than mine life [PR 047511_3 pp. 293, 365, and 488]. The description of the temporal bounds of analysis in the DEIS was also described in terms of mine phases for most resources [PR 015781, pp. 414, 429, 442, 452, 453, 513, 552, 553, 580, 614, and 644].

Mine life is described in the Biological Opinion [PR 047511_7, Appendix F, p. 17]. Pertinent references to mine life are in the DROD [PR 047504]. A production schedule showing mine life and phases for the selected action is found on page A-17 of the DROD [PR 047504]. One of the general stipulations (#11) listed on p. 31 of the DROD [PR 047504] states that Rosemont Copper shall notify the Forest of “any action, activity or occurrence that results in deviation from the mine life as described in the final MPO.”

Finally, life of the mine was addressed in the response to comments on the DEIS [PR 047511_7, Appendix G, p. G-69]. The response states that the FEIS described a process that will be followed if mine operations fall outside the bounds of the approved MPO and NEPA decision. This process, however, is not clearly outlined in the FEIS.

A listing and description of the sequence of steps in the approval and permitting process of the mine project is found in Chapter 2 of the FEIS [PR 047511_2, pp. 60-61]. One piece of the process is an annual review by an interagency group that would evaluate monitoring reports and make recommendations to the Forest Supervisor. If it is determined that “...activities are exceeding the scope of the selected alternative and approved MPO, a modified MPO would be required. This could result in temporary suspension of operations, and additional analysis would be conducted as required under NEPA and Forest Service regulations.”

This monitoring system is described in more detail later in Chapter 2 [PR 047511_2, pp. 95-97]. Life of the mine is not specifically addressed; however, evaluation of the monitoring results would indicate “whether changed conditions, if any, dictate modification of the final MPO and/or ROD,” [PR 047511_2, p. 96]. These steps and processes do not specifically address the overall life of the mine, but extending the operative life of the mine so that the scope of the alternative and/or MPO is exceeded would likely require additional analysis.

Additional responses to comments regarding mine life state that “The life span for the Rosemont project is the best information currently available. If the life of the project is proposed for extension, additional analysis would be triggered, which would include public participation.” [PR 047511_10, Public Concern Statement 567, pp. 1-4]

The descriptions of the life of the mine and the mine life phases were consistent throughout the FEIS, and corresponded to the descriptions in the DEIS. The analysis boundaries described in Chapter 3 included a temporal boundary, which, in most cases, was defined by the life of the mine and/or mine life phases.

The FEIS contains a brief discussion of the alternatives that were not considered in detail and appropriately discloses impacts of the alternatives that were carried forward through the environmental review process as required by 40 CFR 1502.14(a).

The Forest Service complied with 40 CFR 1502.9(c)(1)-(2) regarding the issuance of a supplement to the draft or final environmental impact statement. The Forest Service was also in compliance with 40 CFR 1503.4(a)(1)-(5) regarding making corrections to or otherwise modifying the FEIS in response to public comments on the DEIS.

Recommended Remedy by Review Team Member: The remedies suggested by the objectors are not warranted. No remedy is required.

Review Team Members: Patricia Cohn, EAP/WSA

Rosemont Copper Mine

Objection Review

Objection # (s): 0100-TohonoOodhamNation

Resource Area(s): NEPA – General (NEP-1) (Public Participation)

Objection Issue:

- 0100-1: The public participation process was defective because the Forest Service's Notice of Intent ("NOI") failed to disclose all federal actions that are subject to NEPA review. The NOI disclosed only that the EIS would address action by the Forest Service. Although the NOI indicates that "[c]onnected actions related to the MPO (e.g., construction of roads, utilities) will also be evaluated in the EIS" this statement does not allow reasonable public notice and participation of other agencies that would be using the Forest Service EIS process to comply with their NEPA requirements. The NOI did not state which federal actions the EIS would review and which will be reviewed through subsequent NEPA compliance efforts. For example, on the face of the NOI it is unclear whether any of the actions taken by USACE would be subject to NEPA review.

Remedy Supplied by Objector (if any):

0100-1: Choose the no action alternative.

Law, Regulation and/or Policy: National Environmental Policy Act of 1969; Council on Environmental Quality (CEQ) Regulations at 40 CFR 1500-1508; Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations issued on March 23, 1981.

Review Team Member Response:

The objector contends that the public participation process was defective because the Notice of Intent (NOI) was unclear in which federal actions would be analyzed in the Rosemont EIS, and which other agencies will analyze the activities associated with the Rosemont Mine construction and operations and subsequently comply with NEPA regulations. The objector contends the failure to disclose this information did not allow for public notice and participation of other agencies.

The CEQ regulations refer to the NOI as a notice that shall "briefly" state the proposed action, possible alternatives, the agency's proposed scoping process, and the contact information for the person within the agency who can answer questions about the proposed action and the environmental impact statement. The NOI represents just one aspect of the public participation process and it essentially begins the formal scoping process. It is through the scoping process that the lead agency invites other agencies to be cooperators and identifies their responsibilities (40 CFR 1501.7 (1), (4), and (6)). The scoping process is also used to refine and clarify the scope of the project. The scope consists of the range of actions (including connected actions), alternatives, and impacts to be considered in an EIS (40 CFR 1508.25).

In accordance with the CEQ regulations (40 CFR 1501.7) the Forest Service announced its intent to prepare an environmental impact statement to document and publicly disclose the environmental effects of proposed construction and operation of the Rosemont Copper Mine on National Forest System land (NFS).

The NOI stated, “Connected actions related to the MPO (e.g., construction of roads, utilities) will also be evaluated in the EIS, regardless of whether they are proposed to be undertaken on NFS land” and requests comments “concerning the scope of the environmental impact statement (EIS) analysis” [PR 011308].

The NOI also provided other required information; including identifying the Forest Service as the lead agency. The project is described in the NOI as being “undertaken on a mosaic of privately owned and Federally managed land” with a description of the type of activities by land jurisdiction. The purpose of and need for action section states, “the proposed Forest Service action is to grant permission to the Company to use NFS land for certain activities related to operation of the Rosemont Mine. The agency’s need for action is based on statutes and policy that govern mining on NFS land” [PR 011308].

Per the CEQ regulations, the Forest Service invited other agencies with jurisdiction or special expertise to participate in the NEPA process (40 CFR 1501.6(a)(1)). The project record contains 32 invitations to various Federal, state, and local agencies, dated July of 2008, to participate as a cooperating agency, [PR 011550 (Pima County); PR 011541 (Air Force); PR 011557 (State of Arizona Department of Mines and Mineral Resources); PR 011548 (State of Arizona Geological Survey); PR 011556 (State of Arizona Department of Environmental Quality), etc.]. The project record contains 15 Memorandums of Agreements, dated 2008 through 2009, describing the roles and responsibilities of the individual Cooperating Agencies [PR 011535 (Pima County); PR 014398 (Air Force); PR 014394 (State of Arizona Department of Mines and Mineral Resources); PR 014392 (State of Arizona Geological Survey); PR 014395 (State of Arizona Department of Environmental Quality), etc.].

The public participation process was not defective. The NOI for the Rosemont Copper project meets the intent of the CEQ regulations and provided one of many public participation opportunities.

Recommended Remedy by Review Team Member: The remedy suggested by the objector is not warranted. No remedy is required.

Review Team Member: Beth Dykstra, EAP/WSA

Rosemont Copper Mine

Objection Review

Objection # (s): 0025-WBunting; 0099-KPhaler

Resource Area(s): NEPA – General (NEP-1) (Quantitative Assessment)

Objection Issues:

- 0025-3: The EIS fails to quantify and determine with confidence the probabilities of reasonably foreseeable adverse environmental impacts occurring.
- 0025-5: “What is the probability that one or more unacceptable adverse environmental impacts will occur during the lifetime and/or after closure of the proposed project?” has not been analyzed, discussed, or answered in the FEIS.
- 0025-10: (Even with removal of the heap leach) There remain many significant adverse impacts to public health and safety, and to the environment, that lack the rigorous quantitative risk assessment found necessary in the Objector’s comment.
- 0099-3: While the proposed Record of Decision pays lip service to scientific uncertainty it does not examine the very real implications of this issue at all. Because the FEIS ignores or claims to be unable to answer many critical questions, it cannot and does not provide necessary analysis of the most probable scenarios, and thus it is not in any legal sense a reliable document on which to base a decision to proceed.

Remedy Supplied by Objector: None

Law, Regulation and/or Policy: Council on Environmental Quality (CEQ) Regulations at 40 CFR 1500-1508

Review Team Member Response:

Response to objection issues 0025-3, 0025-5, 0025-10, and 0099-3

The objectors contend that the FEIS and the draft Record of Decision (DROD) do not analyze, discuss, or address quantitative assessments of risk or the probability of the occurrence of reasonably foreseeable adverse environmental impacts.

The CEQ regulations at 40 CFR 1502.16 require agencies to include a discussion of environmental impact of the alternatives and any adverse environmental effect which cannot be avoided should the proposal be implemented. This discussion of environmental consequences shall include (in part): (a) Direct effects and their significance; (b) Indirect effects and their significance; and (d) the environmental effects of alternatives including the proposed action, and (h) means to mitigate adverse environmental impacts.

The CEQ regulations at 40 CFR 1502.22 address incomplete or unavailable information. If the information is important to the analysis and the cost to obtain it is not prohibitive, the agency shall do so. If costs are prohibitive or the information cannot be found, or the means to obtain it cannot be found, the agency shall make it clear in the statement that this information is lacking; the relevance of the information to the effects analysis; a summary of existing information relevant to reasonably foreseeable adverse impacts; and an evaluation of the information based on generally accepted methods or theoretical approaches. The CEQ regulations define “reasonably foreseeable” in the context of 40 CFR 1502.22 as including “impacts which have catastrophic consequences, even if their probability of occurrence is low, provided that the analysis of the impacts is supported by credible scientific evidence, is not based on pure conjecture, and is within the rule of reason.”

40 CFR 1502.24 addresses methodology and scientific accuracy, noting, “Agencies shall insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements.” Methods used in an analysis should be identified and information sources should be referenced. The CEQ regulation does not mention either the use of specific approaches or methods or the use of statistics and probability in determining impacts.

40 CFR 1503.4(a)(1)-(5) states the ways an agency can respond to comments, including supplementing, improving, or modifying the analyses. The response to comments shall be stated in the final EIS.

The quantification of adverse impacts was addressed in the response to comments on the DEIS [PR 047511_7, CD, Public Concern Statement 230, p. 66 (letter 10600)]: “Not all impacts can reasonably, nor need to be mathematically measured.” The CEQ regulations do not address or prescribe the use of specific analytic approaches or methods or the use of statistics and probability in determining impacts.

The analysis methods used and assumptions made are described at the beginning of each resource section in Chapter 3 of the FEIS [PR 047511_3/4, pp. 145, 179, 220, 293, 365, 401, 446, 488, 573, 735, 752, 768, 836, 876, 907, 925, 959, 991, 1018, and 1055]. The resource analyses used quantitative and qualitative methods, including mathematical models, to determine and describe beneficial and adverse impacts.

Changes, updates, and supplements to the effects analyses made in the FEIS are described in each resource section of Chapter 3 under the heading ‘Changes from the Draft Environmental Impact Statement’ [PR 047511_3/4, pp. 144, 178-179, 217-219, 288-291, 362-364, 400-401, 444, 485-487, 570-571, 725, 734, 751-752, 767, 833-834, 875, 906, 922-923, 958-959, 989-990, 1015-1016, and 1053-1054]. These changes were also addressed in the response to comments [PR 047551_7, pp. G-20 – G-62]. The analyses were updated to reflect the minor changes made to the alternatives. Other analyses were reviewed by external reviewers or supplemented, and some were modified; most of these changes and reviews were made in response to public comments on the DEIS.

Scientific uncertainty is addressed in each resource section of Chapter 3 of the FEIS under the heading ‘Analysis Methodology, Assumptions, Uncertain and Unknown Information’ [PR 047511_3/4, pp. 145, 179-182, 220-229, 293-316, 365-369, 401-403, 446-447, 488-506, 573-

582,735-736, 752-755, 768-781, 836-839, 876-878, 907-909, 925-927, 959-969, 991-993, 1018, and 1055-1058]. Scientific uncertainty is addressed to the degree that is pertinent to that particular resource analysis. Uncertainty regarding impacts on resources and how it affected the decision is addressed in the DROD [PR 047504, pp. 9, 14, 20, 21, and 24]. The DROD also acknowledges the uncertainty regarding predictions and the role of monitoring and mitigations in reducing effects.

For some resource areas in Chapter 3, the probability or likelihood of the occurrence of adverse or beneficial impacts is stated quantitatively or qualitatively [PR 047511_3/4; pp. 259, 287, 371, 432, 470, 473, 503, 505, 524, 547, 562, 563, 663, 675,677, and 843]. Adverse or beneficial effects are not described as being ‘reasonably foreseeable’. The response to comments [PR 047511_7, p. G-56] also addresses probability or likelihood, stating that “The analysis included in the FEIS considers expected impacts to resources that are reasonably likely to occur. The analysis of worst-case scenarios is not a requirement under NEPA or its implementing regulations. Even so, the FEIS takes into account extreme or low-probability events where possible.” Several examples are given in the response.

One objector referred to significant adverse impacts on public health and safety and the environment that lack rigorous quantitative risk assessment. The FEIS discloses effects on public health and safety and the environment. Effects on the environment are discussed in Chapter 3 of the FEIS [PR 047511_3/4] and in the preceding paragraphs of this response. Effects on public health and safety are discussed throughout the FEIS: (1) significant issue number 10, ‘Impact on Public Health and Safety’ [PR 047511_2, p. 23]; (2) effects analysis section ‘Public Health and Safety’ [PR 047511_4, pp. 989-1014 and 1136]; (3) mitigation and monitoring [PR 047511_6, pp. B-16 - B-19; B-66; B-68 - B-70; B-83 - B-88; B-89 - B-90; B-91; and B-97 - B-99], and in the DROD [PR 047504, pp. 15, 25, and 42]. Qualitative and quantitative assessments were used to compare alternatives in the ‘Public Health and Safety’ section of Chapter 3 [PR 047511_4, pp. 991, 993, and 994-996].

The changes in the FEIS fall within the parameters of 40 CFR 1503.4(a)(1)-(5) and do not warrant preparation of a new DEIS or a supplemental EIS. Changes made from the DEIS were described in clearly marked sections of Chapters 1, 2, and 3. Changes were also addressed in the response to comments.

The Forest Service met the requirements of 40 CFR 1502.16(a)(b)(d)(h), 40 CFR 1502.22 and 40 CFR 1502.24. The methodology used in the effects analyses as well as scientific accuracy, uncertainty, and incomplete or unavailable information were discussed in clearly marked sections of the resource analyses in Chapter 3. External reviews of methodology and modifications to analyses were also explained in the FEIS. Many of these changes and reviews were prompted by public comments on the DEIS. Public comments regarding risk assessments, probabilities, and quantification of adverse impacts were also addressed in the response to comments. The effects analyses in Chapter 3 considered impacts that were reasonably likely to occur and also considered extreme or low-probability events.

Recommended Remedy by Review Team Member (if any): No remedy is necessary.

Review Team Member: Patricia Cohn, EAP/WSA

Rosemont Copper Mine

Objection Review

Objection # (s): 0025-WBunting

Resource Area(s): NEPA – General (NEP-1) (Revised DEIS)

Objection Issue: 0025-1

- 0025-1: ...the CNF failed to issue a substantially revised DEIS or a supplemental DEIS in order to permit the public and public agencies the opportunity to review and comment on a proper evaluation of all of the proposed project's reasonably foreseeable significant adverse socioeconomic, traffic and safety, biological resources, water resources, public health and safety, and surface water impacts. (pp. 6, 8, 11, 15, 12-13, 19, 20, 21, 23, 25, 28, 35, 37, 39, 40, 45, 50, 52)

Remedy Supplied by Objector (if any): None supplied

Law, Regulation and/or Policy: Council on Environmental Quality (CEQ) Regulations at 40 CFR 1500-1508; Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations

Review Team Member Response:

The objector contends that a revised DEIS or supplement should have been issued before the FEIS so the public and other agencies could sufficiently review and comment on reasonably foreseeable adverse impacts on resources.

According to 40 CFR 1502.9(c)(1)-(2), supplements to a draft or final environmental impact statement should be issued when there are: substantial changes to the proposed action; new circumstances or information relevant to environmental concerns, the proposed action or its impacts; and when the agency determines that doing so will further the purposes of NEPA.

The CEQ regulations at 40 CFR 1502.16 require agencies to include a discussion of environmental impact of the alternatives and any adverse environmental effect which cannot be avoided should the proposal be implemented. This discussion of environmental consequences shall include (in part): (a) Direct effects and their significance; (b) Indirect effects and their significance; and (d) the environmental effects of alternatives including the proposed action, and (h) means to mitigate adverse environmental impacts.

40 CFR 1508.8 defines direct and indirect effects. Direct effects are "caused by the action and occur at the same time and place." Indirect effects are defined as those which "are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable." Effects are further described as being beneficial or detrimental, and applying to ecological and social systems.

The Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations, Question 18, addresses uncertainty about indirect effects noting, "The EIS must...make a good faith effort to explain the effects that are not known but are 'reasonably foreseeable,'" and, "The agency has the responsibility to make an informed judgment, and to estimate future impacts on that basis, especially if trends are ascertainable or potential purchasers have made themselves known."

Adverse and beneficial impacts for each alternative were summarized in the 'Executive Summary' [PR 047511_2, pp. xxiii-1]. Chapter 2, table 12, 'Alternatives impact summary' displays adverse and beneficial impacts by alternative for each resource [PR 047511_2, pp. 123-138]. A summary of impacts in relation to significant issues is found in both the FEIS [PR 047511_2, pp. 15-24] and DROD [PR 047504, pp. 4-9]. Adverse (and beneficial effects) for each resource are discussed in Chapter 3 [PR 047511_3/4, pp. 139-1152]. The section titled 'Unavoidable Adverse Effects' in Chapter 3 [PR 037511_4, pp. 1134-1137] specifically addresses adverse effects.

The interdisciplinary team created a list of reasonably foreseeable actions with input from all resource specialists. This list was used in the effects analysis. These reasonably foreseeable actions are presented in the introduction to Chapter 3 of the FEIS [PR 047511_3, pp. 140-143]. Some actions were considered speculative, that is they are not well-developed and could not be considered 'reasonably foreseeable'. These are described in the FEIS: "Certain actions within the spatial and temporal bounds of the Rosemont Copper Project that were considered to be speculative include the future mining by Rosemont Copper of other mineral deposits in the area, specifically the Peach-Elgin, Copper World, and Broadtop deposits. Currently, no proposals for development of these projects have been submitted to the Coronado or other land management agency," [PR 047511_3, p. 140]. Consideration of reasonably foreseeable actions are described in the 'Cumulative Effects' section for each resource in Chapter 3 [PR 047511_3/4, pp. 176, 213, 280-283, 355-357, 394, 437-438, 479-480, 564-565, 711-712, 729-730, 748, 764-765, 824-828, 869-870, 905, 918, 954-955, 987-988, 1010-1011, 1018, 1020, 1044-1048, and 1125-1128].

The project record contains two memos that discuss aspects of reasonably foreseeable actions: (1) "Determination of past, present, and reasonably foreseeable actions for use in the cumulative effects analysis," [PR 047497], and (2) "Rationale for selection of reasonable foreseeable actions to analyze in cumulative effects section, groundwater, surface water, soils, and seeps/springs/riparian sections" [PR 044888].

Reasonably foreseeable actions in respect to cumulative effects were also addressed in the response to comments on the DEIS in Appendix G [PR 047511_7, p. G-15] and with respect to resource analyses [PR 047511_7, pp. G-13, G-19, G-21, G-27, G-29, G-32, G-54, and G-69].

The Forest Service addressed requests to revise or prepare a supplement to the DEIS or a revised DEIS in the response to comments Appendix G [PR 047511_7, pp. G-8, G-16, G-18, G-32, G-33, G-34, G-35, G-38, G-39, G-42, G-47, G-51, G-54, and G-55]. The Forest Service reviewed the public comments and the changes made between the DEIS and FEIS and found that there were no substantial changes to the proposed action and there were no significant new circumstances or information relevant to environmental concerns that would have triggered a supplement, per 40 CFR 1502.9(c) [PR 047511_7, p. G-16].

Additional responses to requests to prepare a supplemental DEIS are located on the CD contained within Volume 6 of the FEIS [PR 047511_7, CD, Public Concern Statement 242, p. 12 (Letter #12331); 246, p. 101 (Letter # 13965); 289, p. 11 (Letter # 10909); 308, p. 9 (Letter # 3448); and 329 p. 5 (Letter # 25216)]. The responses explained the changes made to the analyses and FEIS.

An overview of changes from the DEIS to the FEIS is found in Chapters 1 and 2 of the FEIS [PR 047511_2, pp. 3, 25-26] under the heading 'Changes from the draft environmental impact statement'. Some changes were made based on public and agency comments and included modifying the description of some alternatives; changing alternatives based on refinements to the project design; expanding the description of the no action alternative; adding road segments to the analysis; clarifying why some alternatives were not considered in detail; and updating mitigation and monitoring. Other changes included refinements; technical updates; integration and explanation of mine life and production schedules; and correction of errors.

New information, updates, and changes made since release of the DEIS are also summarized in the beginning of the various resource sections in Chapter 3 [PR 047511_3, 4, pp. 144, 178, 217, 288, 362, 398, 444, 485, 570, 725, 734, 751, 767, 833, 875, 906, 921, 958, 989, 1015 and 1053] under the heading 'Changes from the Draft Environmental Impact Statement'. These changes included reviews of the appropriateness of analysis methods and modeling, changes in analysis boundaries, and completion of more robust analyses. These changes were made in response to comments on the DEIS as explained at the beginning of each resource section. These changes fall within the parameters of 40 CFR 1503.4(a) and do not warrant preparation of a revised DEIS or a supplemental EIS.

Adverse and beneficial impacts were both summarized and explained in detail throughout the FEIS and summarized in the DROD. The summaries provided a way for the public to quickly compare the alternatives and impacts. The interdisciplinary team discussed and documented their consideration of reasonably foreseeable actions that could contribute to impacts. There were no significant changes to the proposed action or significant new circumstances or information relating to concerns and bearing on the proposed action or its impacts. No additional alternatives were reviewed or evaluated. Changes from the DEIS to the FEIS were made in response to public and agency comments and were found in clearly described sections of the FEIS in Chapters 1, 2, and 3.

The Forest Service complied with 40 CFR 1502.16(a)(b)(d) regarding the discussion of environmental impacts. Reasonably foreseeable actions that could contribute to impacts, as defined in 40 CFR 1508.8(a)(b) were evaluated and considered in the effects analysis. Changes from the DEIS to the FEIS fall within the parameters of 40 CFR 1502.9(c) and do not warrant preparation of a new DEIS or a supplemental EIS.

Recommended Remedy by Review Team Member (if any): No remedy is required.

Review Team Member: Patricia Cohn, EAP/WSA

Rosemont Copper Mine

Objection Review

Objection # (s): 0077-DWeinstein

Resource Area(s): NEPA – General (NEP-1) (Spatial Bounds)

Objection Issue:

- 0077-2: The FEIS report treats the project almost in isolation by making the boundaries of impact absurdly small and thereby fails to measure the total cost to the entire area.

Remedy Supplied by Objector: None

Law, Regulation and/or Policy: Council on Environmental Quality (CEQ) Regulations at 40 CFR 1500-1508; Forest Service Handbook (FSH) 1909.15

Review Team Member Response:

The objector contends that the spatial bounds of analysis for the resource analyses in the FEIS are not large enough and so do not cover the potential impacts on the entire area. The objector does not define ‘the entire area’.

The CEQ regulations at 40 CFR 1502.24, explain Methodology and Scientific Accuracy, noting: “Agencies shall insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements. They shall identify any methodologies used and shall make explicit reference by footnote to the scientific and other sources relied upon for conclusions in the statement. An agency may place discussion of methodology in an appendix.” The CEQ regulations do not address how to determine the boundaries of an analysis area.

The CEQ regulations also describe the Environmental Consequences section of the EIS as forming the “scientific and analytic basis for the comparisons” of alternatives and lists what should be discussed including: environmental impacts of the alternatives; any unavoidable, adverse environmental effects; the relationship between short-term uses of the environment and long-term productivity; and any irreversible or irretrievable commitments of resources (40 CFR 1502.16). The regulation does not address how to determine the boundaries of an effects analysis area.

Forest Service Handbook describes the process for defining the spatial boundary for an affected area, “Spatial boundaries define the affected area for each resource indicator. The affected area is the area in which a specific resource may be affected by management actions; whether they are past, present, or future. Affected areas can vary in size by resource and by the type of effect that may occur” (FSH 1905.15_15.2a). The Handbook also discusses measures used to assess effects

and notes the geographic extent or location where effects would occur should be considered (FSH 1905.15_12.5).

The spatial bounds of the effects analysis for assessing effects are discussed in the FEIS. Spatial bounds for some resources are addressed in Appendix G, 'Response to Comments on the DEIS' [PR 047511_7, pp. G-46, G-60]. In summary, the bounds of analysis for determining effects are not the same as the boundary of the project area. The project area is the area immediately surrounding the mine that contains the majority of direct ground-disturbing activities. The boundary of a resource analysis area is determined by the resource and consideration of where the potential impacts are expected to occur.

The rationale for the selecting the bounds of analysis used to assess direct, indirect, and cumulative effects are found in Chapter 3 of the FEIS [PR 047511_3, 4; pp. 139-1152]. Each resource section contains a discussion and in most cases, a map showing the spatial bounds used for the impact analysis, under the heading 'Analysis Methodology, Assumptions, Uncertain and Unknown Information' [PR 047511_3, 4; pp. 145-146, 179-181, 220-222, 289, 293, 365-366, 438, 446, 488-489, 573-575, 725, 735, 75-753, 768-769, 836-868, 876-877, 907-908, 925-926, 959-961, 991-992, 1018-1020, 1055, and 1057].

Other documents in the project record that address bounds of analysis include 'Bounds Analysis-Chapter 3 Affected Environment: Hazardous Materials' [PR 047022]; 'Draft Bounds of Analysis-Soils and Reclamation' [PR 012049]; 'Bounds of Analysis Chapter 3 Water Resources' [PR 012076]; and interdisciplinary team (IDT) meeting notes [PR 011245, 011247, 012110, 016887, and 046279].

Spatial bounds of analysis were discussed in the FEIS and in IDT meetings. The spatial boundaries of the effects analyses appropriately vary by resource and were defined by the potential effects that were expected to occur. This is in accordance with FSH 1905.15_12.5 and 15.2a. The discussion about, and the outlining of, different spatial bounds of analysis allowed the IDT to meet standards of scientific and professional integrity in analyzing impacts. Designation and discussion of boundaries for each resource also allowed for an informed analysis and presentation of effects. The intent of 40 CFR 1502.24 regarding methodology and scientific accuracy and 40 CFR 1502.16 regarding environmental consequences was also met.

Recommended Remedy by Review Team Member (if any): No remedy is required.

Review Team Member: Patricia Cohn, EAP/WSA

Rosemont Copper Mine

Objection Review

Objection # (s): 0025-WBunting

Resource Area(s): NEPA – General (NEP-1) (Use of science)

Objection Issues:

- 0025-6: The FEIS declares that its standard for analyzing environmental impacts relies on the “best science” and that its standard for assessing mitigation measures relies on the “best available technology and practices.” There is clear evidence that it does neither.
- 0025-17: The EIS draws conclusions from hundreds of numerical tables without discussing the tables’ associated uncertainty, explaining why the data presented were selected for inclusion, or how they lead unambiguously to the presented conclusions.
- 0025-18: The EIS lacks the necessary and sufficient scientific foundation to properly inform the public and public land managers regarding the adverse environmental impacts of the proposed project.

Remedy Supplied by Objector (if any): None

Law, Regulation and/or Policy: Council on Environmental Quality (CEQ) Regulations at 40 CFR 1500-1508

Review Team Member Response:

Response to objection issues 0025-6, 0025-17, and 0025-18

The objector contends that the conclusions reached in the FEIS are not explained by the scientific information presented, the information in the tables is not presented clearly, the standards for analyzing impacts and mitigation measures are not based on the best science, and the FEIS lacks the scientific foundation to analyze and inform people about the environmental impacts of this project.

According to 40 CFR 1500.1(b), environmental information must be made available to public officials and the public before decisions are made and actions are taken. This information must be of high quality, and accurate scientific analyses are essential. The statement should avoid including needless detail.

Incomplete and unavailable information is addressed in 40 CFR 1502.22. Here, the regulations state that the agency shall include within the environmental impact statement: (1) A statement that such information is incomplete or unavailable; (2) a statement of the relevance of the incomplete or unavailable information to evaluating reasonably foreseeable significant adverse impacts on the human environment; (3) a summary of existing credible scientific evidence which

is relevant to evaluating the reasonably foreseeable significant adverse impacts of the human environment, and (4) the agency's evaluation of such impacts based upon theoretical approaches or research methods generally accepted in the scientific community.

Regarding scientific information and accuracy, the CEQ regulations note, agencies should insure the scientific integrity of the analyses and discussion, describe methodologies used, and cite references or sources used (40 CFR 1502.24). Furthermore, mitigation measures that reduce adverse impacts are to be discussed in the environmental consequences section of an EIS (40 CFR 1502.16(h)).

The Forest Service has not defined “best available science” in policy; instead, the agency works to fulfill regulation and policy aimed at analyzing the best and most relevant scientific data. The FEIS refers to the term “best available science” and notes that this term varies over time and by scientific discipline [PR 047511_2, p. 5]. Readers are told that the documents supporting the analyses are located in the project record, and where the project record is located. The FEIS states, “Effects are discussed in proportion to their significance, with emphasis on items deemed most useful to decision makers and the public” [PR 047511_2, p. 5].

The term “best available technology and practices” is not found in the FEIS. The terms “best available demonstrated control technology” and “best management practices” are defined in the FEIS [PR 047511_4, p. 1326], but these are not methods used to assess the effectiveness of mitigation measures. Every resource section in Chapter 3 of the FEIS [PR 047511_3/4, pp. 139-1152] contains a section titled ‘Mitigation Effectiveness’ that describes mitigation measures, their purpose, and their effectiveness as evaluated in the impact analysis. Appendix B [PR 047511_6, p. B-6] states that effectiveness of mitigation measures was considered during the impact analysis and refers readers to the individual resource sections in Chapter 3 for details. The mitigation and monitoring plan [PR 047511_6, pp. B-1 – B-102] lists the criteria used to determine effectiveness of the measures. This section notes that some measures, particularly those required by other permitting agencies, are specific to an alternative. Details and modifications to some of these measures will be completed after the approval and issuance of the ROD [PR 047511_6, pp. B-4, B-5].

The Forest Service has met the intent of 40 CFR 1502.24 by creating an interdisciplinary team of resource professionals with the relevant education and experience appropriate for analysis and document preparation in their specialty areas [PR 047511_5, pp. 1319-1323]. Each specialist reviewed pertinent data, scientific studies (including opposing viewpoints), monitoring, and used professional judgment to draw conclusions about the effects of each alternative.

The introductory section of Chapter 3 [PR 047511_3, pp. 139-143] provides information on the organization of the chapter and individual resource sections. The introduction to each resource section in Chapter 3 [PR 047511_3/4, pp. 139-1152] discusses how the temporal and spatial analysis boundaries were determined, the changes made since the DEIS, the links between the issues and analyses, and the methodology, assumptions, unknown and/or uncertain information, and data used, which forms the scientific basis for the analysis. These sections also refer readers to specialist reports, technical memos, and other sources used in the effects analysis. Statements regarding the certainty or uncertainty of outcomes and effects are noted throughout Chapter 3.

The table of contents [PR 047511_2, pp. lxii-lxxii] lists the tables and figures found in the FEIS. Tables are explained in the text and/or with footnotes, and most table titles are detailed and provide additional information.

The objector cites examples from the Transportation/Access (Highway and Road Usage) section and the Public Health and Safety section (Potential Accidents and Fatalities) of the DEIS [PR 015781, pp. 591-614 and 652]. These sections have been updated in the FEIS and now describe the changes in the analysis approach and analysis boundaries [PR 047511_4, pp. 932-937 and 989-990]. The *Potential Accidents and Fatalities* section in the FEIS [PR 047511_4, p. 1005] was updated and has added an explanation regarding the analysis predictions and certainty. The text preceding this section has been updated and refers readers to additional and updated information in the Transportation/Access section of Chapter 3. Similar updates are found throughout Chapter 3 and address the objector's concerns about uncertainty and ambiguity.

The Forest Service has complied with NEPA regulations cited above regarding scientific integrity, scientific information and accuracy, and incomplete or unavailable information.

Recommended Remedy by Review Team Member (if any): No remedy is required.

Review Team Members: Patricia Cohn, EAP/WSA

Rosemont Copper Mine

Objection Review

Objection # (s): 0076-JPepper; 0084-SSSR; 0099-KPhaler

Resource Area(s): NEPA – Legal/APA (NEP-2)

Objection Issues:

- 0076-3: By its own admission, the CNF acknowledges that the FEIS has been published before it was truly complete. This leaves a serious legal and political cloud over any decision based on the current document. It is also a violation of both the intent and legal requirements of NEPA as a “full disclosure” document.
- 0084-54: The failure to produce and review any plan to smelt/process the ore renders the Plan of Operations unreasonable and incomplete, which cannot be approved by the USFS. Unsupported assertions from the company that it will mill the ore somewhere at some future time are clearly inadequate under NEPA, the Organic Act, and Part 228 regulations. Failure to address off-site processing/smelting is also in violation of NEPA’s requirement to analyze all indirect and cumulative adverse environmental effects that are “reasonably foreseeable”.
- 0084-55: The USFS fails to require FLPMA right-of-ways and/or special use permits for roads, pipeline(s) transmission line(s), and other conveyances. The agency's decision to approve these facilities solely through the Part 228 PoO process, violates federal law and is arbitrary and capricious.
- 0084-73: The agency has a duty under NEPA to fully analyze whether each and every applicable requirement will be met. Such analysis cannot be deferred to the future, especially to a state agency under no NEPA obligations. The example provided states the discharges from the soil cover and waste rock are predicted to violate water quality standards and requirements (FEIS at 472-73, 548-553) yet the “mitigation” measures proposed for these facilities are delegated to Rosemont's stormwater permit issued by Arizona.
- 0099-8: The idea that Rosemont need not account for the emissions associated with ore smelting simply because they “suggest” at this point in time that they do not plan to smelt in Arizona, is completely wrong under governing rule and statute.

Remedy Supplied by Objector (if any):

0076-3: Prepare a fully Revised DEIS.

0084-55: The USFS cannot issue the ROD as proposed, and must instead review and regulate the proposed activities under the legally-correct permitting regime.

Law, Regulation and/or Policy: General Mining Law of 1872; Multiple Use Mining Act of 1955; Federal Land Policy and Management Act of 1976; National Environmental Policy Act of 1969; Council on Environmental Quality (CEQ) Regulations at 40 CFR 1500-1508; Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations; CEQ Memorandum for Heads of Federal Departments and Agencies on Appropriate Use of Mitigation and Monitoring issued January 14, 2011; 43 CFR 3800; 36 CFR 228 Subpart A; Forest Service Manual 2730; Forest Service Manual 2810

Review Team Member Response:

Response to objection issue 0076-3

The objector claims the Forest Service acknowledged the FEIS was published before it was truly complete and alleges this is a violation of the intent and legal requirements of NEPA to provide a "full disclosure" document. The objector does not specify the context in which the Forest Service makes this statement.

The CEQ regulations acknowledge there may be situations where there is incomplete or unavailable information, noting that in such situations, the agency shall always make clear that such information is lacking (40 CFR 1502.22). In the DROD, the Responsible Official discusses incomplete or unavailable information noting, "I am aware that there is incomplete or unavailable information for some resource analysis" [PR 047504, p. 9]. Further, Chapter 3 of the FEIS addresses "uncertain" and "unknown" information for several resources and explains the analysis methodologies and assumptions made to address the incomplete information [PR 047511_3/4].

The FEIS appropriately discloses the anticipated direct, indirect, and cumulative impacts of the proposed action and alternatives, no remedy is needed.

Response to objection issue 0084-54 and 0099-8

The objectors claim the Forest Service failed to address indirect and cumulative adverse environmental effects associated with off-site processing/smelting, thus violating NEPA's requirement to analyze reasonably foreseeable actions and rendering the Plan of Operations incomplete.

In defining the scope of analysis, the CEQ regulations note three types of actions to be considered: connected, cumulative, and similar. Actions are connected if they automatically trigger other actions, cannot or will not proceed unless other actions are taken, or depend on the larger action for their justification (40 CFR 1508.25 (a)(1)). Cumulative actions are those that have cumulatively significant impacts, and similar actions may have common timing or geography.

The FEIS identified connected actions to include: construction of an electrical transmission line, construction of a water supply line and ancillary facilities, relocation of an existing electrical distribution line, reroute of a portion of the Arizona National Scenic Trail, and maintenance and

improvement on State Route 83 [PR 047511_2, pp. 8-9]. The effects of these connected actions are discussed by resource throughout Chapter 3 of the FEIS [PR 047511_3/4, p. 139-1152].

Much of the initial processing of copper ore will occur on site as described in the FEIS and supporting record. The resulting copper concentrate will be transported off-site to an as yet undetermined location for smelting [PR 011882, pp. 5, 9, 17, and 50; PR 012044, pp. 9, 48, 85, and 106; PR 018958, pp. 8, 99, 177, 192, 207-208, and 210; and PR 047511_2, p. 33]. Because the location and timing of smelting is not known, it is not feasible to analyze specific impacts of the actual smelting activities. The copper ore removed from the mine will be the property of Rosemont Copper Company and they have the right to determine where it will be smelted. Rosemont has indicated there is a lack of capacity for smelting in the United States and therefore smelting will occur outside the country. Furthermore, building additional smelters in the United States is not within the scope of the decision to made [PR 047511_7, CD, Public Concern Statement 353, pp. 6 and 13].

Response to objection issue 0084-55

The objector claims the Forest Service failed to require FLPMA right-of-ways and/or special use permits for roads, pipeline(s) transmission line(s), and other conveyances. Thus, the decision to approve these facilities solely through the Part 228 PoO process violates federal law and is arbitrary and capricious.

This concern was raised during the comment period on the DEIS and was responded to in the FEIS [PR 047511_7, p. G-19]. A more thorough discussion is presented here.

Part 228 Subpart A applies to all “operations authorized by the United States mining laws (30 USC 21-54)”. Under 36 CFR 228.3(a), the Plan of Operations applies to “All functions, work, and activities in connection with prospecting, exploration, development, mining, or processing of mineral resources and all uses reasonably incident thereto, including roads and other means of access on lands subject to the regulations in this part, regardless of whether said operations take place on or off mining claims.”

The General Mining Law of 1872, the Multiple Use Mining Act of 1955, and the regulations at 36 CFR 228 Subpart A provide a framework for the decision on the MPO and the FLPMA requirements for evaluation and collection of fair market value are not applicable to this project.

There is no evidence the hypothetical scenario of ancillary use on unclaimed lands is or will be present. Rosemont has staked a large block of mining claims on the subject Forest Service lands [PR 012716]. This map does not show current claims but does indicate that as of 2007 virtually the entire project area was under one or more claim by Rosemont. The project area has remained open to location of additional mining claims since that time as alternatives have been developed that may vary the project’s footprint. The area remains open to location of additional claims to cover any areas used for the final approved project. Therefore there appears to be no factual basis for the hypothetical concern that ancillary uses may occur on unclaimed lands. However to the extent such use might occur it is legally permissible to permit it under 36 CFR Part 228.

In its 2001 rulemaking, BLM adopted a similar policy to the Forest Service current policy. See 43 CFR 3809.5, defining ‘operations’ subject to approval under that part to include “reasonably incidental uses, whether on a mining claim or not”. This policy of approving all ‘reasonably incidental uses’ under one approval mechanism for locatable mineral operations was discussed at length in a judicial challenge to the rule. See Mineral Policy Center v Norton, 292 F.Supp.2d 30 (D. D. C., 2003). This court upheld BLM’s regulation. However, it remanded to the Department of Interior for the limited purpose of considering whether fair market value should be required for use of unclaimed lands. In subsequent rulemakings BLM confirmed that the normal practice of industry is to conduct activities on claimed lands. See 72 Fed. Reg. 8139 (February 23, 2007) and 73 Fed. Reg. 73789 (December 4, 2008) “None of the comments presented factual scenarios in which such ancillary uses took place in association with operations on unclaimed lands that amount to more than initial exploration activities” 73 Fed. Reg. at 73791. BLM further noted that the “court concluded that the Mining Law authorizes operations, including possession, occupancy, and mineral extraction activities, without payment of fair market value for that use.” Id. BLM adopted an interim final rule that did not require FLPMA ‘fair market value’ fees for such ancillary uses. Id.; see also 43 C.F.R. 3800.6.

The Forest Service regulations and policy is consistent with existing BLM regulation and policy and with the provisions of FLPMA and the Mining Laws. The Forest Service interpretation in its regulations implements a longstanding policy of the Forest Service to efficiently administer locatable mineral operations including their ancillary uses whether or not they are on mining claims. As indicated in BLM’s lengthy rulemakings and litigation, many initial activities might occur before claims are located. However it is common industry practice to stake claims in areas used for mineral operations. Mixed ownership of an ore body (private patented and mining claims) is also a common scenario. Application of 36 CFR Part 228 authorization to the factual scenario of mixed patented and claimed lands such as present in the Rosemont project has been explicitly upheld. See Okanogan Highlands Alliance v. U.S. Forest Service, E.D.WA, CV-07-251-RHW (2007). This is factually different from simple access to a private inholding which does not involve reasonably incidental use of Federal lands under the Mining laws in support of mining claims. Such instances may be subject to a FPLMA authorization. See Virgil Horn 117 IBLA 10 (1990) and FSM 2817.25 “Access to patented mining claims, mineral leases, and private property inholdings are not subject to 36 CFR part 228” However that factual scenario of ‘access only’ to a patented inholding is not present here. The application of 36 CFR Part 228 to the authorization of all reasonably incidental and ancillary uses of Forest Service lands, whether on or off mining claims, is consistent with applicable law.

Response to objection issue 0084-73

The objector claims the Forest Service has a duty under NEPA to fully analyze whether each and every applicable requirement will be met and that such analysis cannot be deferred to the future, especially to a state agency. As an example, the objector notes discharges from soil cover and waste rock are predicted to violate water quality, yet the mitigation measures proposed are delegated to Rosemont’s stormwater permit issued by the State of Arizona.

The CEQ regulations define mitigations to include: (a) Avoiding the impact altogether by not taking a certain action or parts of an action; (b) Minimizing impacts by limiting the degree of

magnitude of the action and its implementation; (c) Rectifying the impact by repairing, rehabilitating or restoring the affected environment; (d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and (e) Compensating for the impact by replacing or providing substitute resources or environments (40 CFR 1508.20).

Furthermore, CEQ requires that agencies include appropriate mitigation measures not already included in the proposed action or alternatives (40 CFR 1502.14(f)) and, the environmental consequences shall include discussions of means to mitigate adverse environmental impacts (40 CFR 1502.16(h)).

The subject of mitigations is also addressed in CEQ's Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations issued on March 23, 1981. Question 19(b), notes "All relevant, reasonable mitigation measures that could improve the project are to be identified, even if they are outside the jurisdiction of the lead agency or the cooperating agencies, and thus would not be committed as part of the RODs of these agencies." In 2011, CEQ issued further advice pertaining to mitigation in a January 14, 2011, Memorandum for Heads of Federal Departments and Agencies on Appropriate Use of Mitigation and Monitoring. The memo notes, "Agencies should not commit to mitigation measures absent the authority or expectation of resources to ensure the mitigation is performed."

Per 40 CFR 1505.2 (c), a monitoring and enforcement program shall be adopted and summarized where applicable for any mitigation. Once an agency determines that it would provide for monitoring in a particular case, monitoring plans and programs should be described or incorporated by reference in the agency's decision documents. CEQ advises, "the mitigation plan and program should be described to the extent possible based on available and reasonably foreseeable information in cases where NEPA analysis and documentation are completed prior to final design of a proposed project." CEQ also notes, "Monitoring is fundamental in ensuring the implementation and effectiveness of mitigation commitments, meeting legal and permitting requirements, and identifying trends and possible means for improvement" (CEQ, 2011, p.10).

The FEIS clearly outlines the mitigation and monitoring plan and appropriately identifies those that fall within the authority of the Forest Service or another regulatory agency [PR 047511_6]. The DROD explains that monitoring and evaluation activities would be prescribed, conducted, and/or reviewed by Rosemont Copper, the Coronado National Forest, and other regulatory agencies participating in a proposed multiagency monitoring and evaluation task group. The functions the task group will be charged with are detailed in the DROD [PR 047504, p. 33].

Recommended Remedy by Review Team Member (if any): The remedies suggested by the objectors are not warranted. No remedies are required.

Review Team Member: Steve Hattenbach and Rita Skinner, Regional Litigation Coordinator

Rosemont Copper Mine

Objection Review

Objection # (s): 0084-SSSR; 0100-TohonoOodhamNation

Resource Area(s): NEPA – Purpose and Need (NEP-3)

Objection Issue:

- 0084-1: The USFS provides an inadequate statement of purpose and need.
- 0100-2: The Forest Service has crafted the purpose and need statement too narrowly, apparently in an attempt to limit the alternatives that will serve the purpose.
- 0084-2: The FEIS and Draft ROD are based on incorrect and unsupportable assumptions and positions regarding Rosemont's alleged "entitlement" to have the project approved under the mining law.

Remedy Supplied by Objector (if any):

0084-1: The FEIS and Draft ROD need to be revised or supplemented to determine whether Rosemont's claims are valid under existing law.

0084-2: No PoO can be approved, and no ROD authorizing mine approval can be issued.

Law, Regulation and/or Policy:

General Mining Act of 1872, Council on Environmental Quality (CEQ) Regulations at 40 CFR 1500-1508; 36 CFR 228; Forest Service Handbook (FSH) 1909.15

Review Team Member Response:

The objectors contend that the purpose and need is too narrow and thus is inadequate and limits the range of alternatives. They also contend that the Forest Service misconstrued the General Mining Law and violated NEPA in creating the purpose and need statement.

Under the General Mining Law, claimants have a statutory right to conduct mining activities in compliance with Federal and State statutes and regulations [PR 047511_2, p. 7]. The Rosemont Copper Company is exercising its statutory rights to conduct mining activities, and the analysis of the MPO is in compliance with statutes and regulations.

Rosemont Copper Company submitted a MPO to the Forest Service, as allowed by 40 CFR 1508.18. The Forest Service has the authority to approve, approve with changes, or hybridize the MPO under the decision framework in the FEIS [PR 047511_2, pp. 9-10]. Under CFR 228.4(f), an environmental analysis is conducted on the mining plan of operations (MPO), and thus the

MPO shaped the purpose and need allowing for the consideration of a range of reasonable, implementable alternatives.

CEQ regulations regarding purpose and need statements indicate only that they “shall briefly specify the underlying purpose and need...” (40 CFR 1502.13, see also 40 CFR 1508.9(b)). As discussed in Forest Service Handbook (FSH) 1909.15_10, Section 11.21, a well-defined “need” or “purpose and need” statement narrows the range of alternatives that may need to be considered. However, neither the CEQ regulations nor the Forest Service policy specify what is too narrow for a purpose and need statement.

The Forest Service did not misconstrue the General Mining Law and fully complied with law, regulation, and policy in framing the purpose and need for this project.

Recommended Remedy by Review Team Member (if any): The remedies suggested by the objectors are not warranted. No remedies are required.

Review Team Members: Roxanne Turley, Beth Dykstra, and Patricia Cohn, EAP/WSA

Rosemont Copper Mine

Objection Review

Objection # (s): 0011-CKestler; 0034-DPickrell; 0084-SSSR

Resource Area(s): NEPA – Alternative Development (NEP-4) (Backfill Pit)

Objection Issues:

- 0011-2: I still see no viable plan to fill in the open pit.
- 0034-1: ...the alternative to fill in the pit should have been studied in detail.
- 0084-71: The USFS provides inadequate justification for its determination that partial waste rock pit backfill "is not technically, economically, or environmentally feasible.

Remedy Supplied by Objector (if any):

0011-2: Deny Rosemont Copper's permit application.

0084-71: Fully analyze the alternative of partial backfill of the likely and uncertain acid generating waste rock, rather than just the partial backfill of random waste rock as was presented in the FEIS.

Law, Regulation and/or Policy: Council on Environmental Quality (CEQ) Regulations at 40 CFR 1500 - 1508

Review Team Member Response:

Three objectors contend that alternatives for backfilling the mine pit were not analyzed in detail and that the justification for not analyzing backfill alternatives in detail was inadequate.

The CEQ Regulations direct agencies to, "Study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources..." (40 CFR 1501.2(c)). For alternatives that have been eliminated from detailed study, CEQ Regulations state that agencies shall briefly discuss the reasons why alternatives have been eliminated from detailed study (40 CFR 1502.14).

A detailed discussion of the development of alternatives is found in the project record. The six alternatives analyzed in detail in the FEIS present a range of reasonable alternatives designed to address the significant issues. Several alternatives addressing backfilling the open pit were considered. These alternatives were identified as a result of public participation as well as agency concerns but were ultimately eliminated from detailed study for a variety of reasons. In short, backfilling the pit was not feasible because of technical, economic, safety, jurisdictional, and environmental reasons.

A consulting firm conducted a preliminary analysis of the backfill alternatives [PR 013421], and it became evident that backfilling the pit would not be feasible primarily for technical and economic reasons. This preliminary analysis also took a cursory look at environmental effects. Appendix A in the FEIS [PR 047511_6] also looks at alternatives. In the Alternatives Development Process Memo, Table 3, *Alternatives determined to be technically or financially infeasible* [PR 047496] discusses backfilling the pits. This table also lists environmental impacts.

Several alternatives addressed backfilling the pit [PR 047511_2, pp. 104-106]. Chapter 2 of the FEIS [PR 047511_2, pp. 100-114] summarizes the reasons why backfill alternatives were considered but eliminated from detailed study by the responsible official. Rationale for the elimination of these alternatives includes safety concerns and technical and economic reasons. In some cases, backfilling the pit would cause more environmental damage, and there would be impacts from additional noise, traffic, and dust over the many years it would take to backfill the pit [PR 047511_2, pp. 104-105, 106; PR 013421]. These environmental impacts are listed in the *U.S. Army Corps of Engineers' Section 404(b)(1) Alternatives Analysis* [PR 047511_6, pp. 29-30]. This is Appendix A of the FEIS.

Finally, most of the open pit is located on private land: the pit would disturb 955 acres, of which 590 acres are on private land and 365 acres are on Forest Service lands [PR 047511_2, p. xv]. The agency has no jurisdiction over private land uses and cannot override Arizona law and regulate the manner in which Rosemont Copper's private land is reclaimed [PR 016933, p. 3]. Despite this, the Forest Service was obligated to consider the backfill alternatives. Rosemont Copper was asked to provide information pertaining to the economic viability of mine operations as it related to backfilling the pit, the ability to conduct concurrent reclamation of resources, impacts to resources, the possibility of future expanded mining operations, and additional questions regarding the full pit backfill scenario [PR 016934].

Numerous other documents in the project record, including meeting notes [PR 011918, 011714, 012110, 012316, 012317, 012324, 012893, 016888, 016912, 046082]; letters [PR 015610, 016933, 016934, 017291, 018868, 017390, 013257]; and technical memos [PR 012093, 012097, 012102, 012185, 046268, 012192, 015550, 015551, 012338] also address backfilling the pit. These documents indicate that the impacts of backfilling the pit outweigh the benefits.

The alternatives did undergo extensive feasibility and impact studies prior to being eliminated from detailed analysis in the NEPA process. Because of this, the Forest Service appropriately dismissed these alternatives. The agency provided adequate justification for eliminating these alternatives from detailed analysis.

Recommended Remedy by Review Team Member: The remedies suggested by the objectors are not warranted. No remedies are required.

Review Team Members: Roxanne Turley, Beth Dykstra, and Patricia Cohn, EAP/WSA

Rosemont Copper Mine

Objection Review

Objection # (s): 0025-WBunting; 0038-KBeck; 0088-RCalabro; 0108-DPierson; 0100-Tohono O’odham Nation

Resource Area(s): NEPA – Alternative Development (NEP-4) (No Action)

Objection Issue:

- 0025-15: The “no action” alternative cannot be characterized correctly by a set of variables whose values are frozen in time.
- 0108-1: Nowhere in the final statement is the rejection of the Alternative 1-No Action justified.
- 0038-4: If the no action alternative is one of the choices, why is the Forest Service stance that it must follow the 1872 mining law so strong?
- 0088-1: Nothing in these CEQ regulations (Section 1502.14) authorizes the United States Forest Service, in its formulation of the Environmental Impact Statement, to maintain the policy that the United States Forest Service may not legally select the No Action Alternative and that the United States Forest Service may limit their consideration of the No Action Alternative to using it solely as the baseline against which to evaluate the impacts of other alternatives. P. 2.The massive damage to the environment and biosphere associated with this proposed Rosemont open pit mining operation would occur, which is clearly in violation of this stated national policy (NEPA section 2). Having ruled out their authority to select the No Action Alternative from the very start of the process of formulating an Environmental Impact Statement the United States Forest Service is failing to comply with the stated purpose, the legal requirements, and the policy of the National Environmental Policy Act of 1969 (NEPA Section 101).
- 0100-3: The FEIS does not adequately consider the No Action Alternative. According to the Forest Service, choosing the no action alternative is simply not an option. This is not in accordance with applicable federal law.

Remedy Supplied by Objector (if any):

0108-1: Don’t hide behind the mining law; decision must prevent or eliminate environmental damage; Select the no action alternative;

Law, Regulation and/or Policy:

Mining and Minerals Policy Act; National Forest Management Act; Multiple Use Sustained Yield Act; Multiple Use Mining Act; General Mining Law; Organic Act; National Environmental Policy Act of 1969 (42 U.S.C. 4321-4347); Council on Environmental Quality (CEQ) Regulations at 40 CFR 1500-1508

Review Team Member Response:

Several objectors claimed the Forest Service inaccurately portrayed the No Action alternative and did not provide adequate rationale for not selecting the No Action alternative. Concerns were also expressed that the Forest Service failed to comply with the stated purpose, the legal requirements, and the policy of the National Environmental Policy Act of 1969 (NEPA Section 101).

The NEPA requires that major Federal actions significantly affecting the quality of the human environment include “alternatives to the proposed action” (42 USC 4332 Section 102(C)(iii)). CEQ regulations require that agencies “Include the alternative of no action” (40 CFR 1502.14(d)). Subsection (d) merely requires a No Action alternative, without further specifics.

Under 40 CFR 1501.2(c), agencies must develop appropriate alternatives that respond to unresolved conflicts. In a record of decision, agencies may discuss preferences among alternatives based on relevant factors, including considerations of national policy (40 CFR 1505.2(b)).

The purpose of the NEPA, as described in 42 U.S.C. 4321 and 42 U.S.C. 4331, states that it is the continuing policy of the Federal government to “create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.”

Numerous federal laws support and/or encourage the exploration, development, and extraction of mineral resources on federal lands by private entities and individuals:

- The Mining and Minerals Policy Act states that it is the continuing policy of the Federal Government, in the national interest, to foster and encourage private enterprise in (among other goals) the development of domestic mineral resources and the reclamation of mined land.
- The National Forest Management Act of 1976 is a principal tool for assuring that mineral resources are given proper consideration in land management planning.
- The Multiple Use Sustained Yield Act specifies that nothing in the act should be construed to affect the use of mineral resources on National Forest System lands.
- The Multiple Use Mining Act confirms that U.S. citizens may conduct mining activities on public land.
- The General Mining Law of 1872 grants citizens the right to conduct mining activities on public lands that are open to mineral exploration.
- The Organic Act provides the public with continuing rights to conduct mining activities under general mining laws and in compliance with rules and regulations applicable to National Forest system (NFS) lands. It also recognizes the rights of miners and prospectors to access NFS lands for prospecting, locating, and developing mineral resources.

The No Action alternative is described as serving as a baseline or benchmark; the proposed mining activity would not take place, and the resulting environmental effects from taking no

action are compared with the effects of permitting the proposed activity or an alternative activity to go forward [PR 047511_2, pp. xviii and 61; PR 047504, pp. 46-47]. Modifications to the analysis of the No Action alternative are described in the response to comments for the DEIS [PR 015781, p. G-10, 32] and FEIS [PR 047511_2, p. 25]. Analysis of the No Action alternative occurs in every resource section in Chapter 3 of the FEIS [PR 047511_3/4, pp. 139-1152].

The No Action alternative was modified to incorporate changing environmental conditions; regional social, economic, and population trends; and private land development, and aggregates “future” baseline conditions and reasonably foreseeable actions identified in local or regional public policy documents. The variables or conditions analyzed are dynamic, not static or frozen, and recognize changing conditions over time.

The analysis of the No Action alternative considers dynamic social and environmental conditions over time. The Forest Service gave consideration to the No Action alternative and explained the constraints surrounding the decision to select an action alternative. The CEQ regulations do not address selection of the no action alternative over other alternatives. Use of private or public land for mining or processing operations is allowed under federal mining laws.

The rationale for the decision and the application of law, policy, and regulation regarding mining and mineral development is found in the draft record of decision (DROD) [PR 047504, pp. 10-15]. Constraints on the decision space are addressed in both the DROD [PR 047504, pp. 10-11, 46] and the FEIS [PR 047511_2, p. 10]. The General Mining Law of 1872 is listed as the primary guiding policy for the decision [PR 047504, p. 10]. Other relevant law, regulation, and policy related to mining and minerals development are found in the FEIS [PR 047511_3, p. 144] and elsewhere [PR 047357].

The responsible official recognized the significant environmental and social impacts that would occur as a result of the selected alternative and that the No Action alternative is the environmentally preferable alternative [PR 047504, pp. 11], fulfilling 40 CFR 1505.2(b). The selected alternative meets the purpose and need, adheres to national policy regarding mining and minerals development, and allows for reasonable and legal mineral operations, including mining or processing, on private and public land.

The analysis and decision comply with NEPA sections 101 and 102 and the CEQ regulations. A systematic, interdisciplinary approach was used to analyze the effects of the proposal and alternatives, as described under section 102 and the CEQ regulations. The operating conditions and mitigation measures would achieve some degree of resource protection while fulfilling other legal requirements.

Recommended Remedy by Review Team Member: The remedy suggested by the objector is not warranted. No remedy is required.

Review Team Member: Roxanne Turley, Beth Dykstra, and Patricia Cohn, EAP/WSA

Rosemont Copper Mine

Objection Review

Objection # (s): 0007-BWhitehouse; 0011-CKestler; 0106-PHomer

Resource Area(s): NEPA – Alternative Development (NEP-4) (Rail Line)

Objection Issues:

- 0011-4: There is no rail access for the mine.
- 0007-6: State Route 83, which is a designated Scenic Highway, is not appropriate as a industrial/mining haul route. Rosemont Mine would be the ONLY open pit copper mine in this part of the state without a rail siding, and hauling the product 27 miles one way to Kolb and I-10 every 15 minutes is beyond comprehension. That is where the Port of Tucson rail access is being talked about.
- 0007-3: I previously suggested a rail line from the Green Valley side of the Santa Ritas, since the destruction of Lopez Pass and Gunsite Pass area would be inevitable for their suggested TEP electric lines, water pipes, and easements that were are the plan.
- 0106-1: The use of a rail spur to the mine site to haul equipment and supplies to the mine and haul ore from the mine was not adequately addressed. I asked about the comparison of costs and benefits of using trucks to haul supplies to the mine and ore from the mine vs. using a rail line to the mine. The FEIS mentions the costs and difficulty of getting the right-of-way for such a rail line, both in terms of the time required and the costs. However, there is no actual cost estimate for this right of way acquisition. There is also no cost estimate for actually constructing the rail line. Finally, there is no cost estimate of the benefit.

Remedy Supplied by Objector (if any):

0011-4: Deny Rosemont Copper's permit application.

0007-6: Revise the DEIS.

0106-1: Complete cost estimates and a comparison of train vs. truck transportation for this project.

Law, Regulation and/or Policy: Council on Environmental Quality (CEQ) Regulations at 40 CFR 1500-1508; Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations

Review Team Member Response:

The objectors contend that their suggestion of the use of a rail line was not considered in the range of alternatives.

CEQ guidance on range of alternatives is provided in the document “*Forty Most Asked Questions Concerning CEQ’s National Environmental Policy Act Regulations*”. The phrase “range of alternatives” refers to all the alternatives discussed in environmental documents. It includes “reasonable alternatives, which must be rigorously explored and objectively evaluated, as well as those other alternatives, which are eliminated from detailed study with a brief discussion of the reasons for eliminating them” (40 CFR 1502.14).

Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and use common sense, rather than simply desirable from the standpoint of the applicant. Whether an alternative is “reasonable” also depends on whether it would fulfill the purpose of, and need for, the proposed action. In addition to the alternatives that were considered in detail in the DEIS and FEIS, a number of other alternatives, and alternative themes and components were considered by the Forest Service for detailed study in the EIS process.

Six alternatives were developed in detail. Numerous other alternatives were developed based on public comments and agency concerns. Based upon a review of these alternatives, themes and components, the responsible official determined that they were not practical, feasible or reasonable and eliminated them from detailed study. Chapter 2 of the FEIS [PR 047511_2, pp. 100-114] contains a brief discussion of these alternatives, as is required by 40 CFR 1502.14(a).

The rail line alternative was dismissed from detailed study because “it is not environmentally or economically feasible.” Construction of a rail line would also require obtaining a ROW across numerous ownerships and building a railway siding and loading facility at or near the mine, and this would add to the environmental impacts, including to threatened, endangered, and sensitive wildlife species and habitat [PR 047511_2, pp. 111-112]. The Alternatives Development Process Memo, Table 3, *Alternatives determined to be technically or financially infeasible* [PR 047496], discusses the rail line. It summarizes that it would be cost prohibitive to acquire the necessary rights-of-way and that it may not be possible across so many jurisdictions. This table also lists environmental impacts.

All alternatives presented in Chapter 2, both those analyzed in detail and those considered but eliminated from detailed study, represent a range of reasonable alternatives, given the purpose and need and key issues for the proposed action [PR 047511_2, pp. 6-8 and 15-24]. The FEIS appropriately discloses impacts of the alternatives that were analyzed in detail through the environmental review process [PR 047511_3/4, pp. 139-1152].

The FEIS complies with the NEPA and conforms to the CEQ regulations. The Responsible Official has a suitable range of alternatives to consider in making a reasoned choice between the alternatives.

Recommended Remedy by Review Team Member (if any): The remedies suggested by the objectors are not warranted. No remedies are required.

Review Team Member: Roxanne Turley, EAP/WSA

Rosemont Copper Mine

Objection Review

Objection # (s): 0084-SSSR; 0098-MWilliams

Resource Area(s): NEPA – Alternative Development (NEP-4) (Range of Alternatives)

Objection Issue:

- 0084-5: The USFS provides an inadequate identification and analysis of the development of alternatives.
- 0098-1: The USFS offered the same alternatives in the FEIS as it did in the DEIS, same open-pit mine, five different dirt piles. They presented a case for “this mine” or “no mine” and nothing in between. This is a false choice and a fundamental flaw in the FEIS.

Remedy Supplied by Objector (if any):

0098-1: The process should begin again.

Law, Regulation and/or Policy: National Environmental Policy Act of 1969 (42 U.S.C. 4321-4347); Council on Environmental Quality (CEQ) Regulations at 40 CFR 1500 – 1508; Forty Most Asked Questions Concerning CEQ’s National Environmental Policy Act Regulations

Review Team Member Response:

The objectors contend that the range of alternatives was not properly identified and the analysis of the development of alternatives is inadequate. The objectors cite 40 CFR 1508.9(b) (which applies to environmental assessments (EAs)), along with 42 U.S.C. §4332(E) and 40 CFR 1501.2(c), which require the agency to, “Study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources”

CEQ guidance on range of alternatives is provided in the document “*Forty Most Asked Questions Concerning CEQ’s National Environmental Policy Act Regulations.*” The phrase “range of alternatives” refers to all the alternatives discussed in environmental documents. It includes “reasonable alternatives, which must be rigorously explored and objectively evaluated, as well as those other alternatives, which are eliminated from detailed study with a brief discussion of the reasons for eliminating them” (40 CFR 1502.14).

Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and use common sense, rather than simply desirable from the standpoint of the applicant. Whether an alternative is “reasonable” also depends on whether it would fulfill the purpose of, and need for, the proposed action. In addition to the alternatives that were considered

in detail in the DEIS and FEIS, a number of other alternatives, and alternative themes and components were considered by the Forest Service for detailed study in the EIS process.

Six alternatives were developed in detail. Numerous other alternatives were developed based on public comments and agency concerns. Based upon a review of these alternatives, themes and components, the responsible official determined that they were not practical, feasible or reasonable and eliminated them from detailed study. Chapter 2 of the FEIS [PR 047511_2, pp. 100-114] contains a brief discussion of these alternatives, as is required by 40 CFR 1502.14 (a).

All alternatives presented in Chapter 2, both those analyzed in detail and those considered but eliminated from detailed study, represent a range of reasonable alternatives, given the purpose and need and key issues for the proposed action [PR 047511_2, pp. 6-8 and 15-24]. The FEIS appropriately discloses impacts of the alternatives that were analyzed in detail through the environmental review process [PR 047511_3/4, pp. 139-1152].

The FEIS complies with the NEPA and conforms to CEQ regulations. The responsible official has a suitable range of alternatives to consider in making a reasoned choice between the alternatives.

Recommended Remedy by Review Team Member: The remedy suggested by the objector is not warranted. No remedy is required.

Review Team Members: Roxanne Turley, Beth Dykstra, and Patricia Cohn, EAP/WSA

Rosemont Copper Mine

Objection Review

Objection # (s): 0102-MMaguder

Resource Area(s): NEPA – Connected Actions (NEP-5)

Objection Issue:

- 0102-2: The DEIS did not include a discussion of "connected actions" for transmission lines; however, the FEIS and Draft ROD specify that the transmission line serving the Rosemont Copper Mine is a "connected action." Because this "connected action" was not articulated in the DEIS, the Arizona Line Siting Committee Chairman ruled that there was no "connected action" between the transmission line and the mine. Based on this ruling, the resultant hearings prohibited testimony concerning any relationship between the mine and the line. Thus, the resultant permit for the transmission line (the CEC) was based on erroneous and incomplete testimony and, in fact, an incomplete four-day Line Siting hearing was held.

Remedy Supplied by Objector (if any):

0102-2: The Arizona Corporation Commission should re-consider its Transmission Line ROW permit (CEC) because testimony on connected actions between Rosemont Mine and the Rosemont Transmission line was not considered (or allowed) during the Line Site hearings (p. 47).

Law, Regulation and/or Policy: Council on Environmental Quality (CEQ) Regulations at 40 CFR 1500-1508; Title 40 Arizona Revised Statutes.

Review Team Member Response:

The objector contends that the Forest Service did not articulate the connected action of transmission lines serving the Rosemont Copper Mine in the DEIS, thereby affecting the Arizona Line Siting Committee hearing and resulting in erroneous testimony on the Certificate of Environmental Compatibility (CEC).

The CEQ regulations require agencies to address connected actions (40 CFR 1508.25(a)(1)). Actions are connected if they, (i) Automatically trigger other actions which may require environmental impact statements. (ii) Cannot or will not proceed unless other actions are taken previously or simultaneously. (iii) Are interdependent parts of a larger action and depend on the large action for their justification. The construction of the transmission line is considered a connected action because the transmission line would not be constructed if the Rosemont Copper Mine was not built.

Section 40 CFR 1501.2 of the CEQ regulations require agencies to consult early with appropriate state and local agencies when their involvement is reasonably foreseeable. Table 3 of the DEIS, *Major permits of authorizations applicable to the proposed Rosemont Copper Mine* [PR 015781], lists Arizona Corporation Commission as ensuring compliance with Arizona Revised Statutes 40-360 and as the regulating agency for placement of electrical transmission lines.

The proposed action as written in the DEIS [PR 015781, pp. 28, 36, 38, 39] includes the construction of a transmission line across several land ownerships and jurisdictions, including state, private, and National Forest System lands. Discussion of the transmission line as a connected action is disclosed and the nature of the relationship for authority to site transmission lines on lands administered by Federal agencies is found in the DEIS [PR 015781, p. 10]. In Chapter 2 of the DEIS [PR 015781, p. 29], the electrical power supply is discussed as an ancillary facility and an activity common to all action alternatives. This discussion includes the process for permitting through the Arizona Corporation Commission.

The Coronado National Forest has the authority to site transmission lines on lands they administer. Siting authority on private and state lands lies with the Arizona Corporation Commission. However, the Federal agencies and the commission/committee coordinate with respect to the siting of the transmission line so that their decisions will not conflict.

The Arizona Corporation Commission (Commission) is a State agency; therefore, it does not have authority over the decisions of Federal agencies. The Arizona Power Plant and Transmission Line Siting Committee (Committee) was created by the Arizona State Legislature to “*provide a single forum for the expeditious resolution of all matters concerning the location of electric generating plants and transmission lines in a single proceeding to which access will be open to interested and affected individuals, groups, county and municipal governments and other public bodies to participate in these decisions.*”

The discussion of electrical and water supply lines in the DEIS [PR 015781, p. 29] applied to all action alternatives, including the proposed action. The development and identification of alternative routes for the Rosemont transmission line project was based on electrical system requirements and an environmental and public planning process conducted by Tucson Electric Power (TEP) from the summer of 2008 through the spring of 2010.

A Notice of Availability (NOA) announcing the DEIS was available for public review and comment was published in the Federal Register in October 19, 2011 [PR 015741]. A public comment hearing was held by TEP on December 12, 2011, in Tucson, Arizona to meet the obligation of the Commission process [PR 015664]. On June 12, 2012, Arizona Corporation Commission concluded that the Certificate of Environmental Compatibility issued by the Arizona Power Plant and Transmission Line Siting Committee was approved [PR 017299]. The process of approving the CEC was not complete when the DEIS was released.

The Forest Service has an obligation under NEPA to examine connected actions regardless of the State’s decisions; however, the State’s actions do not affect the adequacy of the FEIS and concerns about the State’s actions are outside the scope. Analysis of the connected action of the

proposed transmission line on National Forest System lands is disclosed in in the FEIS and DROD, as described under 40 CFR 1508.25(a)(1).

The process conducted by Arizona Corporation Commission/Arizona Power Plant and Transmission Line Siting Committee is outside the decision space of the DROD and the Forest Service's need to comply with the NEPA.

Recommended Remedy by Review Team Member: The remedy suggested by the objector is not warranted. No remedy is required.

Review Team Member: Beth Dykstra, EAP/WSA

Rosemont Copper Mine

Objection Review

Objection # (s): 0099-KPhaler; 0117-CienegaWatershedPartnership

Resource Area(s): NEPA – Effects: Direct and Indirect (NEP-6)

Objection Issues:

- 0117-1: The FEIS failed to analyze and mitigate impacts to the Las Cienegas National Conservation Area (LCNCA) as designated by Congress through H.R. 2941.
- 0099-5: As the Forest Service has accepted the single extraction choice that maximizes rather than minimizes every adverse impact conceivable, it is impossible to argue there has been substantial compliance with the cited regulations (36 CFR 228.8(a)-(e)).

Remedy Supplied by Objector (if any):

0117-1: The draft ROD should not be finalized until a specific section identifies impacts to the LCNCA and until adequate mitigation is developed.

Law, Regulation and/or Policy: H.R. 2941 (Public Law 106-538); 36 CFR 228

Review Team Response:

Response to objection issues 0117-1 and 0099-5

One objector contends that the Forest Service has not adequately analyzed and mitigated impacts on the LCNCA. The second objector contends that the agency has not complied with 36 CFR 228.8(a)-(e) regarding environmental protection necessary to minimize adverse impacts.

H.R. 2941 (Public Law 106-538) established the LCNCA. The area is to be managed to conserve, protect, and enhance the aquatic, wildlife, vegetative, archaeological, paleontological, scientific, cave, cultural, historical, recreational, educational, scenic, rangeland, and riparian resources and public lands resources and values of the area. All federal lands within the boundaries are withdrawn from mineral development except for previously existing rights. Section 5(i) precludes the establishment of buffer zones around the conservation area.

Forest Service mining regulations under 36 CFR 228.8(a)-(e) address requirements for environmental protection of air and water quality, scenic values, and fish and wildlife habitat, and disposal and treatment of solid waste. Mining operations are to be conducted in a way that minimizes adverse environmental impacts on National Forest surface resources and comply with Federal and State air quality standards, including the Clean Air Act; and applicable Federal and State water quality standards, including the Federal Water Pollution Control Act (Clean Water Act).

While the FEIS does not have a specific section that discusses impacts on the LCNCA, impacts on the LCNCA are discussed in the individual resource sections throughout Chapter 3 of the FEIS [PR 047511_3/4, pp. 139-1152]. Other specially-designated areas are treated in a similar manner.

Specific FEIS sections include: ground and surface water quantity (pp. 340-350, 353-354, 410, 422, 429-431, 439), seeps, springs and riparian (pp. 488-493, 496, 526, 538-542, 546-547, 564, 566-569), biological resources (pp. 573, 598-599, 612, 617-618, 620, 622-623, 625, 628, 632-634, 650, 653-723), dark skies (pp. 755, 757, 762, 764), visual resources (pp. 773, 784, 791, 795-796, 818, 836), recreation and wilderness (pp. 837, 846, 849, 858, 860, 1045, 1046); noise (1038); socioeconomics and environmental justice (1112); conflicts with the LCNCA management plan (1143-1145); mitigation measures (pp. B25-B26); and the Empire Ranch (p. D-19). Federally listed species within the LCNCA are addressed in the biological opinion, Appendix F of the FEIS [PR 047511_7]. These analyses discuss methods used, assumptions, and uncertainties.

The LCNCA is specifically addressed on pages 1143-1145 of the FEIS [PR 047511_4]. This section acknowledges conflicts between the LCNCA management plan and the proposed mining activities. It also acknowledges that the Rosemont Copper project would not further the goals of the LCNCA, but would not violate the implementing legislation: “The fact that there may be activities or uses on lands outside the Conservation Area that would not be permitted in the Conservation Area shall not preclude such activities or uses on such lands up to the boundary of the Conservation Area consistent with other applicable laws” (H.R. 2941 Section 5(i)).

The FEIS discusses compliance with other regulations under 36 CFR 228.8 (a)-(e) regarding air and water quality, solid waste, scenic values, and fish and wildlife habitat throughout Chapter 3 [PR 047511_3/4, p. 139-1152]. Specifically, compliance with air quality regulations is found in the air quality and climate change sections [PR 047511_3, pp. 217-288]; mitigation and monitoring measures [PR 047511_6, pp. B-76 - B-83] and in the DROD [PR 047504, pp. 12-14, 34-35, 45 and 62]. The air quality analysis memo [PR 047434] has detailed information on the air quality analysis process and the involvement of other agencies.

Water quality is addressed in the groundwater quality and geochemistry [PR 047511_3, pp. 362-398] and surface water quality [PR 047511_3, pp. 443-485] sections of Chapter 3. Related mitigation and monitoring measures are in Appendix B of the FEIS [PR 047511_6, pp. B-16 – B-23, B-26 - B-27; B-83 - B-88; B-88 - B-90]; and in the DROD [PR 047504, pp.14-17, 20-22, 34-36, 44-45, and 62]. The memo *Overview of water resource process* [PR 047366] reviews water-related issues, modeling approaches, and development of mitigation measures, and monitoring.

Disposal of solid wastes is found in the FEIS [PR 047511_2/3/4, pp. 38, 371, 393, 397, 483, and 1149], and in the DROD [PR 047504, p. A-7].

Scenic values are addressed in the visual quality section in Chapter 3 of the FEIS [PR 047511_4, pp. 767-833], Appendix B [PR 047511_6, pp. B-60 – B-62], and in the DROD [PR 047504, pp. 22-23 and 38-3]. A technical memo *Geomorphic reclamation/landforming* [PR 047095] discusses mitigation of visual impacts.

Fisheries and wildlife habitat are primarily addressed in FEIS Chapter 3 in the biological resources section [PR 047511_3/4, pp. 570-725] and in the DROD [PR 047505, pp. 15, 17, 18, 22, 36-38 and 59-62]. Supporting documents include the biological assessment [PR 017312] and its supplements [PR 018908 and PR 018909]; the biological evaluation [PR 046412] and its supplement [PR 047330]; the biologist's report [PR 046411]; migratory bird report [PR 046410]; management indicator species report [PR 046409]; and GIS habitat analysis [PR 047363]. Appendix B also lists mitigation and monitoring measures [PR 047511, pp. B- 28 - B-55].

Chapter 3 also lists other disclosures for air quality [PR 047511_4, pp. 1132, 1134, 1137]; visual resources [PR 047511_4, pp. 1133, 1136]; biological resources [PR 047511_4, pp. 1133, 1135, 1139, 1143]; and ground and surface water [PR 047511_4, pp. 1132, 1133, 1135, 1138, 1139].

Rosemont Copper will be required to obtain state and federal permits for final approval of the mining plan of operations. Rosemont Copper will be required to comply with State and Federal law, regulation, and policy, including the Clean Air Act and Clean Water Act when the permits are received [PR 047504 pp. 12-14, 62].

The Forest Service analyzed impacts on the LCNCA and developed mitigation and monitoring measures for LCNCA resources. The Forest Service did not violate the implementing legislation for this area.

The Forest Service complied with 36 CFR 228.8(a)-(e) regarding environmental protection of air and water quality, solid waste, scenic values, and fish and wildlife habitat. The project will comply with the Clean Air Act and Clean Water Act upon receipt of State and Federal permits and final approval of the mining plan of operations.

Recommended Remedy by Review Team Member (if any): The remedy suggested by the objector is not warranted. No remedy is required.

Review Team Member: Patricia Cohn, EAP/WSA

Rosemont Copper Mine

Objection Review

Objection # (s): 0072-MFarr; 0084-SSSR

Resource Area(s): NEPA Effects – Cumulative (NEP-7) (Energy Generation)

Objection Issues:

- 0084-4: The FEIS fails to analyze the impacts of generating the energy required by this project. The USFS failed to provide an adequate response to our comments that "the DEIS is seriously and legally deficient in failing to account for the cumulative impacts of off-site sources having to generate such a huge amount of energy." (SSSR et al. at 110.)
- 0072-3: The DEIS is seriously and legally deficient in failing to account for the cumulative impacts of off-site sources having to generate such a huge amount of energy.

Remedy Supplied by Objector (if any):

0084-4: Consult with Tucson Electric Power about possible sources of electrical power and provide some estimate of the impact of generating the necessary energy for this project in a revised DEIS.

Law, Regulation and/or Policy: Council on Environmental Quality (CEQ) Regulations at 40 CFR 1500-1508; Forest Service NEPA Regulations at 36 CFR 220; Forest Service Handbook (FSH) 1909.15

Review Team Member Response:

The objectors contend that the FEIS failed to analyze the cumulative impacts of generation of energy from off-site sources. The objectors also contend the Forest Service provided an inadequate response to comments on this matter.

According to 40 CFR 1502.16, the environmental consequences section of the EIS is what "forms the scientific and analytical basis for the comparisons" of the alternatives, including the proposed action. Agencies shall consider the cumulative effects of their actions. This includes the incremental effects of the action when added to the past, present, and reasonably foreseeable related future actions of the Forest Service, as well as those of other agencies and individuals, that may have a measurable and meaningful impact on particular resources (40 CFR 1508.7; 36 CFR 220.4(f); and FSH 1909.15_15.1).

According to 40 CFR 1503.4, preparation of a FEIS requires an assessment and consideration of comments on the DEIS in a response that may include: (1) modification of alternatives; (2) development of new alternatives; (3) supplementation or modification of analyses; (4) factual corrections; or, (5) explanation of why the comments do not warrant a further response.

When evaluating reasonably foreseeable significant adverse effects in an environmental impact statement, regulations state that incomplete information is permissible. However, the agency must always “make clear that such information is lacking” (40 CFR 1502.22).

The FEIS addresses direct, indirect, and cumulative effects in Chapter 3 of the FEIS [PR 047511_3/4, pp. 139-1152]. Chapter 3 contains 22 sections that are focused on disclosing the results of impact analysis related to specific resource issues. The introduction to Chapter 3 [PR 047511_3, p. 139-143] discusses the process under which effects were considered and reasonably foreseeable actions for this analysis are listed. Past and present actions are described in the Affected Environment section of each resource section and taken into consideration in the determination of direct and indirect effects [PR 047511_3/4, pp. 139-1152].

The Interdisciplinary team noted that reasonably foreseeable actions must be sufficiently defined with respect to the nature of the actions and their location relative to the proposed action and alternatives to facilitate consideration of their potential impacts. Projects that are not developed to this extent are considered speculative and are not “reasonably foreseeable.” Therefore, it is not appropriate to include them in a cumulative effects analysis [PR 047511_3, p. 140].

In the FEIS, energy generation and use was discussed under the “*Uncertain and Unknown Information*” section. The FEIS acknowledges that Tucson Electric Power (TEP) would be supplying the power consumed by the project. It would come from a wide geographic area (i.e., Western Interconnect), and the manner in which this power is generated would vary (e.g., fossil fuels, nuclear, solar, wind, hydro power, geothermal, etc.). All of these methods are in the TEP portfolio for energy production. It is estimated the project would require 108 to 112 megawatts (MW) (WestLand Resources Inc. 2007a). So, for example, if the power demand of the project were to be supplied solely by a fossil fuel-fired plant(s), there would be an indirect increase in criteria pollutant and greenhouse gas emissions. However, the calculation of these indirect impacts cannot be made because the type and location of the generation facility or facilities are unknown, the quantity of any resulting emissions is unknown, and the Forest Service has no control over how or where the energy is created [PR 047511_3, p. 228].

In responding to comments on the issue, the Forest Service stated “It is not possible for the Forest Service to determine the source of electrical power that will power the Rosemont project. Tucson Electric Power Company will be the provider of electricity. Tucson Electric Power Company engages in the generation, transmission, and distribution of electricity in Arizona. The company generates electricity through coal, gas, oil, and solar facilities. It serves 403,000 retail electric customers in a 1,155 square mile area in southeastern Arizona. In addition, the company sells electricity to other utilities and power marketing entities in the western United States. Where power comes from for a particular customer or use is dependent on multiple variables and changes depending on electricity available, demand, etc., that cannot be accurately predicted” [PR 047511_7, p. G-11, 29].

The FEIS did not include detailed descriptions of energy generation and use in the cumulative effects analysis because this type of information is lacking. For the same reason, the FEIS provided a summary of the unknown information on this issue in its response to comments. The FEIS makes this unavailability of information clear.

The FEIS appropriately discussed generation of energy for the Rosemont Copper project in terms of cumulative effects, provided an explanation of why comments on this matter do not warrant a further response, and included a statement explaining that information is lacking.

Recommended Remedy by Review Team Member (if any): The remedy suggested by the objector is not warranted. No remedy is required.

Review Team Member: Roxanne Turley, EAP/WSA

Rosemont Copper Mine

Objection Review

Objection # (s): 0061-ACavanaugh; 0084-SSSR

Resource Area(s): NEPA Effects – Cumulative (NEP-7) (General)

Objection Issue:

- 0084-72, 0061-2: The FEIS does not provide an adequate cumulative effects analysis and fails to consider connected actions and indirect effects. The FEIS fails to provide the NEPA-required level of analysis for past, present, or reasonably foreseeable future activities in the region. The agency cannot support its conclusions that the Project will comply with all laws (e.g., water quality, air quality, wildlife protection) when it failed to quantitatively assess the impacts from all of the past, present, and reasonably foreseeable future actions when combined with the direct and indirect impacts from Rosemont.

Remedy Supplied by Objector:

0084-72: The USFS must explain, clarify, correct, and quantify the cumulative effects of these six proposed mining projects and the increased traffic they will produce, along with the proposed Rosemont project, on the Sonoita, Elgin and Patagonia economies, and this information should be presented for public review and comment in a revised DEIS.

Law, Regulation and/or Policy: Council on Environmental Quality (CEQ) Regulations at 40 CFR 1500-1508; Forest Service NEPA Regulations at 36 CFR 220; Forest Service Handbook (FSH) 1909.15

Review Team Member Response:

The objectors claim that the FEIS does not provide an adequate cumulative effects analysis because it neglected to consider past, present, and reasonably foreseeable future actions and it also fails to consider connected actions and indirect effects from the Rosemont Copper project.

According to 40 CFR 1502.16, the environmental consequences section of the EIS is what “forms the scientific and analytical basis for the comparisons” of the alternatives, including the proposed action. Direct effects are caused by the action and occur at the same time and place. Indirect effects include effects that are caused by the action but are later in time or farther removed in distance (40 CFR 1508.8). In addition to considering direct and indirect effects, agencies shall consider the cumulative effects of their actions. This includes the incremental effects of the action when added to the past, present, and reasonably foreseeable related future actions of the Forest Service, as well as those of other agencies and individuals, that may have a measurable and meaningful impact on particular resources (40 CFR 1508.7; 36 CFR 220.4(f); and FSH 1909.15_15.1).

Finally, to determine the scope of an environmental impact statement, the agency shall also consider connected actions, those that are closely related and therefore should be discussed within the same impact statement (40 CFR 1508.25(a)(1)).

Direct, indirect, and cumulative effects are addressed in Chapter 3 of the FEIS [PR 047511_3/4, pp. 139-1152]. Chapter 3 contains 22 sections that are focused on disclosing the results of impact analysis related to specific resource issues. The introduction to Chapter 3 [PR 047511_3, p. 139-143] discusses the process under which effects were considered and reasonably foreseeable actions for this analysis are listed. Past and present actions are described in the Affected Environment section of each resource section and taken into consideration in the determination of direct and indirect effects [PR 047511_3/4, pp. 139-1152].

The Interdisciplinary team documented their process for determining past, present, and reasonably foreseeable actions for use in the cumulative effects analysis [PR 047497] and included a complete list of past, present, and reasonably foreseeable actions occurring in the same spatial and temporal boundary as the Rosemont Copper mine. Additionally, many resources have additional data regarding their individual effects analysis located in the project record; overview of water resource process [PR 047366]; socioeconomic analysis (including consideration of additional mines) [PR 047364]; transportation analysis [PR 047365]; air quality analysis [PR 047434]; biological resources [PR 046411]; and other additional analyses not listed here.

The Interdisciplinary team noted that reasonably foreseeable actions must be sufficiently defined with respect to the nature of the actions and their location relative to the proposed action and alternatives to facilitate consideration of their potential impacts. Projects that are not developed to this extent are considered speculative and are not “reasonably foreseeable.” Therefore, it is not appropriate to include them in a cumulative effects analysis [PR 047511_3, p. 140].

Consideration of applicable reasonably foreseeable actions are described in the Cumulative Effects section for each resource presented in Chapter 3 of the FEIS [PR 047511_3/4], including: geology, minerals, and paleontology (p. 176); soils (p. 213); air quality and climate change (pp. 280-283); groundwater, surface water, and seeps, springs, and riparian areas (pp. 355-357, 394, 437-438, 470-480, 564-565); biological resources (pp. 711- 712); landownership (pp. 729-730); livestock grazing (p. 748); dark skies (pp. 764-765); visual resources (pp. 824-828); recreation and wilderness (pp. 869-870); hazardous materials (p. 905); fuels and fire management (p. 918); transportation/access (pp. 954-955); noise (pp. 987-988); public health and safety (pp. 1010-1011); cultural resources (pp. 1018, 1044-1048); socioeconomics and environmental justice (pp. 1125-1128).

Connected Actions are listed in Chapter 1 of the FEIS. They include an electrical transmission line, a water supply line, an electrical distribution line, Arizona National Scenic Trail reroute, and SR 83 maintenance and improvements [PR 047511_2, pp. 8-9]. These actions are analyzed for their potential impacts in the resource sections throughout Chapter 3 for which they are pertinent [PR 047511_3/4, p. 139-1152].

The FEIS addresses indirect and connected actions and contains a full cumulative effects analysis. The FEIS concludes that the Preferred Alternative will have detrimental impacts, some of them significant, as well as beneficial effects. As stated in Chapter 1 of both the DEIS and FEIS, the Forest Service acknowledges these impacts and that while it may reasonably regulate mining activities to protect surface resources, there are statutory and constitutional limits to its discretion.

The FEIS appropriately discussed any connected actions associated with the Rosemont Copper project and disclosed the direct, indirect, and cumulative effects on resources. The Forest Service followed law, regulation, and policy by considering past, present and reasonably foreseeable projects and their cumulative effects.

Recommended Remedy by Review Team Member (if any): The remedy suggested by the objector is not warranted. No remedy is required.

Review Team Member: Roxanne Turley, EAP/WSA

Rosemont Copper Mine

Objection Review

Objection # (s): 0084-SSSR

Resource Area(s): NEPA Effects – Cumulative (NEP-7) (Jaguar Critical Habitat)

Objection Issue:

- 0084-14: The analysis of the proposed action's impacts on critical habitat for the jaguar in the U.S. ignores important reasonably foreseeable actions and cumulative effects of further mining development in the region, and consequently vastly undercounts the amount of acreage in which functionality would be lost due to land disturbance, noise, light, and severance of connectivity, including to Mexico, due to the cumulative impacts of other potential mining projects. Due to the failure to have an adequate cumulative impacts analysis in the Draft or Final EIS, the USFS's violation of the ESA and related requirements applies to all listed species, including the jaguar.

Remedy Supplied by Objector (if any):

0084-14: Re-consult with USFWS and a new Biological Opinion should be issued that includes all reasonably foreseeable actions and cumulative impacts, including potential development of Rosemont's holdings adjacent to the project area and other mining projects in the region.

Law, Regulation and/or Policy: Clean Water Act (CWA); Endangered Species Act of 1973(ESA); Council on Environmental Quality (CEQ) Regulations at 40 CFR 1500-1508; Forest Service Handbook (FSH) 1909.15

Review Team Member Response:

The objector claims that the FEIS does not provide an adequate cumulative effect analysis because it neglected to consider reasonably foreseeable actions and cumulative effects of further mining and the amount of acreage that would be lost or affected due to other potential mining projects.

The CEQ regulations require agencies to consider the cumulative effects of their actions. This includes the incremental effects of the action when added to the past, present, and reasonably foreseeable related future actions of the Forest Service, as well as those of other agencies and individuals, that may have a measurable and meaningful impact on particular resources (40 CFR 1508.7). Furthermore, the CEQ regulations explain the environmental consequences section of the EIS is what “forms the scientific and analytical basis for the comparisons” of the alternatives, including the proposed action (40 CFR 1502.16).

Under Section 7(a)(2) of the ESA, the Forest Service is required to consult with the U.S. Fish and Wildlife Service (USFWS) to insure that any action authorized by the agency is not likely to

jeopardize the continued existence of any listed species or result in the destruction or adverse modification of designated critical habitat for such species. Section 7(c) requires the preparation of a Biological Assessment (BA) to facilitate compliance with section 7(a)(2). This includes the cumulative effects of non-Federal actions likely to impact the species or its critical habitat. The USFWS takes Federal actions and non-Federal actions (cumulative actions) into consideration of the baseline of the species when issuing the Biological Opinion.

The FEIS addresses direct, indirect, and cumulative effects in Chapter 3 of the FEIS [PR 047511_3, 4]. The introduction to Chapter 3 [PR 047511_3, p. 139-143] discusses the process under which effects were considered and reasonably foreseeable actions for this analysis are listed. Past and present actions are described in the Affected Environment section of each resource section and taken into consideration in the determination of direct and indirect effects [PR 047511_3, 4].

The Interdisciplinary team documented their process for determining past, present, and reasonably foreseeable actions for use in the cumulative effects analysis [PR 047497] and included a complete list of past, present, and reasonably foreseeable actions occurring in the same spatial and temporal boundary as the Rosemont Copper mine. Additionally, an individual effects analysis for biological resources is located in the project record [PR 046411].

A description of Rosemont Copper-owned mineral deposits in the vicinity of this project is contained in Appendix A, CWA 404(b)(1) Alternatives Analysis [PR 047511_6, pp. 23-26]. However, according to FEIS Appendix G, "There are no other proposals for mining in the immediate Rosemont area at this time. Augusta Resources owns mineral resources adjacent to the area proposed for mining in the Rosemont Copper Project [including Broad Top Butte, Copper World and Peach Elgin]. Development of these resources is not ripe for inclusion as a reasonably foreseeable action in the Rosemont EIS because these mineral resources have not been adequately explored to determine economic feasibility and basic information such as type of mining, estimates of tailings and waste rock, etc. is not available and cannot be determined given current information. While further exploration and eventual mining could occur at some unknown time in the future, it would require further permitting and NEPA analysis should it involve federal lands or resources, including public notice and involvement" [PR 047511_7, pp. G-14, G-21, G-69].

The FEIS appropriately discussed cumulative effects associated with the Rosemont Copper project and disclosed details on mineral resources that are known in name but are too speculative at this point as actual projects to be given any real consideration of impacts. The FEIS explains that reasonably foreseeable actions must be sufficiently defined with respect to the nature of the actions and their location relative to the proposed action and alternatives to facilitate consideration of their potential impacts. Projects that are not developed to this extent are considered speculative and are not "reasonably foreseeable." Therefore, it is not appropriate to include them in a cumulative effects analysis [PR 047511_3, p. 140].

The Forest Service followed law, regulation, and policy by considering past, present, and reasonably foreseeable projects and their cumulative effects. Cumulative effects to the jaguar were disclosed in the BA [PR 017312, p. 114] and explicitly considered by the USFWS in their

Biological Opinion [PR 047479, p. 144]. A list of projects considered to be cumulative to the proposed project is in the FEIS [PR 047511_3, pp. 140-143]. The projects which might cumulatively affect wildlife are discussed in the FEIS [PR 047511_4, pp. 711-712].

Recommended Remedy by Review Team Member (if any): The remedy suggested by the objector is not warranted. No remedy is required.

Review Team Member: Ernie Taylor, Wildlife; Roxanne Turley, EAP/WSA

Rosemont Copper Mine

Objection Review

Objection # (s): 0025-WBunting; 0060-NMcCoy; 0091-PimaCounty; 0099-KPhaler;

Resource Area(s): NEPA Effects – Cumulative (NEP-7) (Other Mines)

Objection Issues:

- 0099-7: The FEIS refuses to analyze the effect that approval of the proposed mining plan will have on other area mining operations, rejecting the “cumulative impact” analysis as too speculative. If you are ready to permit reenactment of WWII in the Santa Ritas, on what basis can you possibly refuse to approve Wildcat Silver’s proposed open-pit mine in the Patagonias, with its own attendant air and water and light pollution and increased truck traffic on rural roads?
- 0025-2: The analyses of cumulative impacts in Chapter 3 of the FEIS do not contain or evaluate all reasonably foreseeable actions including future mining activities in the Rosemont and Patagonia areas.
- 0091-26: The Forest Service failed to include other future mining activity in the immediate area in its cumulative impacts analysis. The FEIS discloses an intent to develop three additional deposits in the vicinity of the Rosemont Mine: “At some point in the future, Rosemont Copper Company intends to conduct further work at Broadtop, to better evaluate the mineral potential.” Similar statements are included in Appendix A regarding Peach-Elgin and Copper World deposits. The mineral fractions identified in the map include areas mineral fractions at Broadtop Butte and elsewhere in Management Area 16.
- 0060-1: The FEIS states that there are seven proposed mining projects in Santa Cruz County that, along with the proposed Rosemont mine, may contribute to cumulative impacts to socioeconomic resources in the area. Omitted from this list is the proposed CH project in the Patagonia Mountains, a 5 hole exploratory drilling operation.

Remedy Supplied by Objector (if any):

0060-1: Explain, clarify, correct, and quantify the cumulative effects of these six proposed mining projects and the increased traffic they will produce, along with the proposed Rosemont project, on the Sonoita, Elgin and Patagonia economies, and this information should be presented for public review and comment in a revised DEIS.

Law, Regulation and/or Policy: Council on Environmental Quality (CEQ) Regulations at 40 CFR 1500-1508; Forest Service NEPA Regulations at 36 CFR 220; Forest Service Handbook FSH 1909.15

Review Team Member Response:

The objectors claim that the Forest Service did not analyze the effect that approval of the proposed mining plan will have on other area mining operations and, in effect, rejected the associated “cumulative impact” analysis as too speculative.

According to 40 CFR 1502.16, the environmental consequences section of the EIS is what “forms the scientific and analytical basis for the comparisons” of the alternatives, including the proposed action. Agencies shall consider the cumulative effects of their actions. This includes the incremental effects of the action when added to the past, present, and reasonably foreseeable related future actions of the Forest Service, as well as those of other agencies and individuals, that may have a measurable and meaningful impact on particular resources (40 CFR 1508.7; 36 CFR 220.4(f); and FSH 1909.15_15.1).

The FEIS addresses direct, indirect, and cumulative effects of existing mining operations in Chapter 3 [PR 047511_3/4, pp. 139-1152]. The introduction to Chapter 3 [PR 047511_3, p. 139-143] discusses the process under which effects were considered and reasonably foreseeable actions for this analysis are listed. Past and present actions are described in the Affected Environment section of each resource section and taken into consideration in the determination of direct and indirect effects [PR 047511_3/4, pp. 139-1152].

The ID team documented their process for determining past, present, and reasonably foreseeable actions for use in the cumulative effects analysis [PR 047497] and included a complete list of past, present, and reasonably foreseeable actions occurring in the same spatial and temporal boundary as the Rosemont Copper mine.

In the FEIS, the ID Team noted that reasonably foreseeable actions must be sufficiently defined with respect to the nature of the actions and their geographic location to facilitate consideration of their potential impacts. Information such as this may originate in an application for a permit, formal consideration of authorization of an activity by another agency, or approval of action by a legislative body (e.g., City Council, County Commission, or Congress). Projects that are not developed to this extent are considered speculative and are not “reasonably foreseeable.” Therefore, it is not appropriate to include them in a cumulative effects analysis. Certain actions within the spatial and temporal bounds of the Rosemont Copper Project that were considered to be speculative include the future mining by Rosemont Copper of other mineral deposits in the area, specifically the Peach-Elgin, Copper World, and Broadtop deposits. Currently, no proposals for development of these projects have been submitted to the Coronado or other land management agency [PR 047511_3, p. 140].

Consideration of applicable reasonably foreseeable actions are described in the Cumulative Effects section for each resource presented in Chapter 3 of the FEIS [PR 047511_3/4], including: geology, minerals, and paleontology (p. 176); air quality and climate change (pp. 280-283); groundwater, surface water, and seeps, springs, and riparian areas (pp. 355-357, 394, 437-438, 564-565); biological resources (pp. 711- 712); visual resources (pp. 824-828); recreation and wilderness (pp. 869-870); transportation/access (pp. 954-955); public health and safety (pp.

1010-1011); cultural resources (pp.1044-1048); and socioeconomics and environmental justice (pp. 1125-1128).

A description of Rosemont Copper-owned mineral deposits in the vicinity of this project is contained in Appendix A, CWA 404(b)(1) Alternatives Analysis [PR 047511_6, pp. 23-26]. According to FEIS Appendix G, “There are no other proposals for mining in the immediate Rosemont area at this time. Augusta Resources owns mineral resources adjacent to the area proposed for mining in the Rosemont Copper Project [including Broad Top Butte, Copper World and Peach Elgin]. Development of these resources is not ripe for inclusion as a reasonably foreseeable action in the Rosemont EIS because these mineral resources have not been adequately explored to determine economic feasibility and basic information such as type of mining, estimates of tailings and waste rock, etc. is not available and cannot be determined given current information. While further exploration and eventual mining could occur at some unknown time in the future, it would require further permitting and NEPA analysis should it involve federal lands or resources, including public notice and involvement” [PR 047511_7, pp. G-14, G-21, G-69].

The FEIS appropriately discussed cumulative effects associated with the Rosemont Copper project and disclosed information on tentative projects that are known in name but are too speculative at this point to be given any real consideration of impacts. The Forest Service followed law, regulation, and policy by considering past, present, and reasonably foreseeable projects and their cumulative effects.

Recommended Remedy by Review Team Member (if any): The remedy suggested by the objector is not warranted. No remedy is required.

Review Team Member: Roxanne Turley, EAP/WSA

Rosemont Copper Mine

Objection Review

Objection # (s): 0093-DDaugherty

Resource Area(s): NEPA Effects – Cumulative (NEP-7) (Overall)

Objection Issue:

- 0093-1: I was unable to locate any assessment of the overall Cumulative Effect of the project. I believe the overall Cumulative Effect of the proposed project will be much greater than the sum of its parts and that viewing the proposed project in this way would have led to a different assessment and selection of the No Action alternative.

Remedy Supplied by Objector (if any):

0093-1: Revise the findings in the FEIS and select the No Action alternative.

Law, Regulation and/or Policy:

General Mining Law of 1872; Council on Environmental Quality (CEQ) Regulations at 40 CFR 1500-1508; Forest Service NEPA Regulations at 36 CFR 220; Forest Service Handbook (FSH) 1909.15

Review Team Member Response:

Response to objection issue 0093-1

The objector claims that the Forest Service neglected to consider the overall Cumulative Effect of the project, and, because of this, missed an opportunity to view the proposed project in a way that would have led to a different assessment and selection of the No Action alternative.

According to 40 CFR 1502.16, the environmental consequences section of the EIS is what “forms the scientific and analytical basis for the comparisons” of the alternatives, including the proposed action. Agencies shall consider the cumulative effects of their actions. This includes the incremental effects of the action when added to the past, present, and reasonably foreseeable related future actions of the Forest Service, as well as those of other agencies and individuals, that may have a measurable and meaningful impact on particular resources (40 CFR 1508.7; 36 CFR 220.4(f); and FSH 1909.15_15.1).

The rationale for the decision and the application of law, policy, and regulation regarding mining and mineral development is found in the draft record of decision (DROD) [PR 047504, pp. 10-25]. Constraints on the decision space are addressed in both the DROD [PR 047504, pp. 10-11, 46] and the FEIS [PR 047511_2, p. 10]. The General Mining Law of 1872 is listed as the primary guiding policy for the decision [PR 047504, p. 10]. Other relevant law, regulation, and

policy related to mining and minerals development are found in the FEIS [PR 047511_3, pp. 144] and elsewhere [PR 047357].

The FEIS addresses direct, indirect, and cumulative effects in Chapter 3 of the FEIS [PR 047511_3/4, pp. 139-1152]. Chapter 3 contains 22 sections that are focused on disclosing the results of impact analysis related to specific resource issues. The introduction to Chapter 3 [PR 047511_3, p. 139-143] discusses the process under which effects were considered and reasonably foreseeable actions for this analysis are listed. Past and present actions are described in the Affected Environment section of each resource section and taken into consideration in the determination of direct and indirect effects [PR 047511_3/4, pp. 139-1152].

Consideration of applicable reasonably foreseeable actions are described in the Cumulative Effects section for each resource presented in Chapter 3 of the FEIS [PR 047511_3/4], including: geology, minerals, and paleontology (p. 176); soils (p. 213); air quality and climate change (pp. 280-283); groundwater, surface water, and seeps, springs, and riparian areas (pp. 355-357, 394, 437-438, 470-480, 564-565); biological resources (pp. 711- 712); landownership (pp. 729-730); livestock grazing (p. 748); dark skies (pp. 764-765); visual resources (pp. 824-828); recreation and wilderness (pp. 869-870); hazardous materials (p. 905); fuels and fire management (p. 918); transportation/access (pp. 954-955); noise (pp. 987-988); public health and safety (pp. 1010-1011); cultural resources (pp. 1018, 1044-1048); socioeconomics and environmental justice (pp. 1125-1128).

The FEIS contains a full cumulative effects analysis by resource area. No overall cumulative effect of the project was provided, and it is not required. However, the responsible official did consider all direct, indirect, and cumulative effects in the DROD [PR 047504, pp. 9-25].

The responsible official recognized the significant environmental and social impacts that would occur as a result of the selected alternative and that the No Action alternative is the environmentally preferable alternative [PR 047504, pp. 11], fulfilling 40 CFR 1505.2(b). The selected alternative meets the purpose and need, adheres to national policy regarding mining and minerals development, and allows for reasonable and legal mineral operations, including mining or processing, on private and public land.

The FEIS concludes that the Rosemont Copper project's preferred alternative will have detrimental impacts, some of them significant, as well as beneficial effects. As stated in Chapter 1 of both the DEIS [PR 015781] and FEIS [PR 047511_2], the Forest Service acknowledges these impacts and that, while it may reasonably regulate mining activities to protect surface resources, there are statutory and constitutional limits to its discretion.

The FEIS appropriately discussed and disclosed the cumulative effects associated with the Rosemont Copper project. The Forest Service followed law, regulation, and policy by considering past, present, and reasonably foreseeable projects and their cumulative effects by resource area.

Recommended Remedy by Review Team Member: The remedy suggested by the objector is not warranted. No remedy is required.

Review Team Member: Roxanne Turley, EAP/WSA

Rosemont Copper Mine

Objection Review

Objection # (s): 0104-PascuaYaquiTribe

Resource Area(s): NEPA Effects – Cumulative (NEP-7)

Objection Issue:

- 0104-1: It seems as though the prior mining activity is being used as a justification for allowing the proposed Rosemont Copper Mine to go forward. In actuality, the fact that the Santa Rita Mountains have already been impacted only demonstrates the additional cumulative impact that the proposed Rosemont Copper Mine will likely have on the local and regional water supply, animals, plants, and the environment as a whole.

Remedy Supplied by Objector (if any):

0104-1: Select the no action alternative.

Law, Regulation and/or Policy: Council on Environmental Quality (CEQ) Regulations at 40 CFR 1500-1508; Forest Service NEPA Regulations at 36 CFR 220; Forest Service Handbook (FSH) 1909.15

Review Team Member Response:

Response to objection issue 0104-1

The objector claims that prior mining activity in the Santa Rita Mountains is being used as a justification for allowing the proposed Rosemont Copper Mine to go forward without really considering the cumulative effects to the local and regional water supply, animals, plants, and the environment as a whole.

According to 40 CFR 1502.16, the environmental consequences section of the EIS is what “forms the scientific and analytical basis for the comparisons” of the alternatives, including the proposed action. Agencies shall consider the cumulative effects of their actions. This includes the incremental effects of the action when added to the past, present, and reasonably foreseeable related future actions of the Forest Service, as well as those of other agencies and individuals, that may have a measurable and meaningful impact on particular resources (40 CFR 1508.7; 36 CFR 220.4(f); and FSH 1909.15_15.1).

The FEIS addresses direct, indirect, and cumulative effects in Chapter 3 of the FEIS [PR 045711_3/4, pp. 139-1152]. Chapter 3 contains 22 sections that are focused on disclosing the results of impact analysis related to specific resource issues. The introduction to Chapter 3 [PR 045711_3, pp. 139-143] discusses the process under which effects were considered and reasonably foreseeable actions for this analysis are listed. Past and present actions are described

in the Affected Environment section of each resource section and taken into consideration in the determination of direct and indirect effects [PR 045711_3/4, pp. 139-1152]. This is where prior mining activity in the area is considered. Additionally, the Geology, Minerals, and Paleontology section of the FEIS provides a discussion of mineral exploration and mining history [PR 047511_3, pp. 164-165].

The Interdisciplinary team documented their process for determining past, present, and reasonably foreseeable actions for use in the cumulative effects analysis [PR 047497] and included a complete list of past, present, and reasonably foreseeable actions occurring in the same spatial and temporal boundary as the Rosemont Copper mine. Additionally, many resources have additional data regarding their individual effects analysis located in the project record; overview of water resource process [PR 047366]; socioeconomic analysis (including consideration of additional mines) [PR 047364]; air quality analysis [PR 047434]; biological resources [PR 046411]; and other additional analyses not listed here.

The FEIS contains a full cumulative effects analysis. The FEIS concludes that the Preferred Alternative will have detrimental impacts, some of them significant, as well as beneficial effects. As stated in Chapter 1 of both the DEIS and FEIS, the Forest Service acknowledges these impacts and that while it may reasonably regulate mining activities to protect surface resources, there are statutory and constitutional limits to its discretion.

The FEIS appropriately discussed any former mining operations in the vicinity of the Rosemont Copper project. The Forest Service followed law, regulation, and policy by considering past, present and reasonably foreseeable projects and their cumulative effects.

Recommended Remedy by Review Team Member (if any): The remedy suggested by the objector is not warranted. No remedy is required.

Review Team Member: Roxanne Turley, EAP/WSA

Rosemont Copper Mine

Objection Review

Objection # (s): 0091-PimaCounty

Resource Area(s): NEPA Effects – Cumulative (NEP-7)

Objection Issue:

- 0091-27: The pending grant to Pima County of a federal Section 10 permit for incidental take (Pima County’s MSCP) under ESA is not listed as a cumulative effect despite the County’s insistence. By excluding this pending Section 10 permit, the Forest Service ignored cumulative impacts to species.

Remedy Supplied by Objector (if any): None

Law, Regulation and/or Policy: Endangered Species Act (ESA); Council on Environmental Quality (CEQ) Regulations at 40 CFR 1500-1508; Forest Service NEPA Regulations at 36 CFR 220; Forest Service Handbook (FSH) 1909.15

Review Team Member Response:

The objector contends that the pending grant to Pima County of a federal Section 10 permit for incidental take (Pima County’s Multiple Species Conservation Plan (MSCP)) under ESA is not listed as a cumulative effect and that by excluding this pending Section 10 permit, the Forest Service ignored cumulative impacts to species.

Under Section 7(a)(2) of the ESA, the Forest Service is required to consult with the U.S. Fish and Wildlife Service (USFWS) to insure that any action authorized by the agency is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of designated critical habitat for such species. Section 7(c) requires the preparation of a Biological Assessment to facilitate compliance with section 7(a)(2). Section 7(b) of the ESA requires the USFWS to issue a Biological Opinion, and Section 7(b)(4) specifies that, with a finding of no jeopardy or no destruction or adverse modification of critical habitat, the USFWS shall specify the impact of incidental take on the species, specify the reasonable and prudent measures necessary to minimize such impact, and set forth the terms and conditions necessary to implement those measures.

According to 40 CFR 1502.16, the environmental consequences section of the EIS is what “forms the scientific and analytical basis for the comparisons” of the alternatives, including the proposed action. Agencies shall consider the cumulative effects of their actions. This includes the incremental effects of the action when added to the past, present, and reasonably foreseeable related future actions of the Forest Service, as well as those of other agencies and individuals,

that may have a measurable and meaningful impact on particular resources (40 CFR 1508.7; 36 CFR 220.4(f); and FSH 1909.15_15.1).

The introduction to Chapter 3 [PR 047511_3, p. 139-143] discusses the process under which effects were considered and reasonably foreseeable actions for this analysis are listed. Past and present actions are described in the Affected Environment section and taken into consideration in the determination of direct and indirect effects [PR 047511_3, pp. 582-651]. Cumulative effects to biological resources are described in Chapter 3 of the FEIS [PR 047511_4, pp. 711- 712].

In fulfillment of ESA Section 7(a)(2) requirements, a Biological Assessment was prepared to analyze the effects to federally listed species and their designated critical habitat [PR 017312]. In consultation with the USFWS, the information in the Biological Assessment was supplemented several times [PR 18908, PR 18955, PR 18956, and PR 18909]. The USFWS issued a Biological Opinion [PR 047479; also PR 047511_7] determining that the project was not likely to jeopardize any of the listed species affected, nor would the project result in the destruction or adverse modification of designated critical habitat for any listed species. The USFWS determination uses the environmental baseline for each species. The environmental baseline includes past and present impacts of all Federal, State, or private actions in the action area, the anticipated impacts of all proposed federal actions in the action area that have undergone formal or early section 7 consultation, and the impact of State and private actions that are contemporaneous with the consultation process. The above mentioned incidental take from the Pima County MSCP would be considered by the USFWS in the issuance of the Biological Opinion for the Rosemont Copper Mine.

The FEIS addresses biological resources and contains a full cumulative effects analysis. The Biological Assessment analyzed the effects to federally listed species resulting in the issuance of a Biological Opinion from the U.S. Fish and Wildlife Service for the Rosemont Copper Mine. The Forest Service followed law, regulation, and policy by considering past, present and reasonably foreseeable projects and their cumulative effects.

Recommended Remedy by Review Team Member (if any): No remedy required.

Review Team Member: Ernie Taylor, Wildlife; Roxanne Turley, EAP/WSA

Rosemont Copper Mine

Objection Review

Objection # (s): 0063-DianeMeyer

Resource Area(s): NEPA Effects – Cumulative (NEP-7) (Visuals)

Objection Issue:

- 0063-4: Rosemont’s announcement to investors that it plans to develop three more mining areas on this side of the ridge will destroy more scenic mountain views and surround Green Valley and Sahuarita with visible copper mines.

Remedy Supplied by Objector (if any): N/A

Law, Regulation and/or Policy: Council on Environmental Quality (CEQ) Regulations at 40 CFR 1500-1508; Forest Service NEPA Regulations at 36 CFR 220; Forest Service Handbook (FSH) 1909.15

Review Team Member Response:

The objector contends that additional mining developments will destroy more mountain views and will surround Green Valley and Sahuarita with visible copper mines.

According to 40 CFR 1502.16, the environmental consequences section of the EIS is what “forms the scientific and analytical basis for the comparisons” of the alternatives, including the proposed action. Agencies shall consider the cumulative effects of their actions. This includes the incremental effects of the action when added to the past, present, and reasonably foreseeable related future actions of the Forest Service, as well as those of other agencies and individuals, that may have a measurable and meaningful impact on particular resources (40 CFR 1508.7; 36 CFR 220.4(f); and FSH 1909.15_15.1).

The FEIS addresses direct, indirect, and cumulative effects of existing mining operations in Chapter 3 [PR 047511_3/4, pp. 139-1152]. The introduction to Chapter 3 [PR 047511_3, p. 139-143] discusses the process under which effects were considered and reasonably foreseeable actions for this analysis are listed. Past and present actions are described in the Affected Environment section of each resource section and taken into consideration in the determination of direct and indirect effects [PR 047511_3/4, pp. 139-1152].

The Interdisciplinary team documented their process for determining past, present, and reasonably foreseeable actions for use in the cumulative effects analysis [PR 047497] and included a complete list of past, present, and reasonably foreseeable actions occurring in the same spatial and temporal boundary as the Rosemont Copper mine.

The Interdisciplinary team noted that reasonably foreseeable actions must be sufficiently defined with respect to the nature of the actions and their geographic location to facilitate consideration

of their potential impacts. Information such as this may originate in an application for a permit, formal consideration of authorization of an activity by another agency, or approval of action by a legislative body (e.g., City Council, County Commission, or Congress). Projects that are not developed to this extent are considered speculative and are not “reasonably foreseeable.” Therefore, it is not appropriate to include them in a cumulative effects analysis. Certain actions within the spatial and temporal bounds of the Rosemont Copper Project that were considered to be speculative include the future mining by Rosemont Copper of other mineral deposits in the area, specifically the Peach-Elgin, Copper World, and Broadtop deposits. Currently, no proposals for development of these projects have been submitted to the Coronado National Forest or other land management agency [PR 047511_3, p. 140].

A description of Rosemont Copper-owned mineral deposits in the vicinity of this project is contained in Appendix A, CWA 404(b)(1) Alternatives Analysis [PR 047511_6, pp. 23-26]. According to FEIS Appendix G, *“There are no other proposals for mining in the immediate Rosemont area at this time. Augusta Resources owns mineral resources adjacent to the area proposed for mining in the Rosemont Copper Project [including Broad Top Butte, Copper World and Peach Elgin]. Development of these resources is not ripe for inclusion as a reasonably foreseeable action in the Rosemont EIS because these mineral resources have not been adequately explored to determine economic feasibility and basic information such as type of mining, estimates of tailings and waste rock, etc. is not available and cannot be determined given current information. While further exploration and eventual mining could occur at some unknown time in the future, it would require further permitting and NEPA analysis should it involve federal lands or resources, including public notice and involvement”* [PR 047511_7, pp. G-14, G-21, G-69].

Consideration of applicable reasonably foreseeable actions are described in the Cumulative Effects section for each resource presented in Chapter 3 of the FEIS, including visual resources [PR 047511_4, pp. 824-828].

The Forest Service has assessed and disclosed potential social and environmental impacts in the FEIS, including effects to scenic quality. The FEIS appropriately discussed cumulative effects associated with the Rosemont Copper project and disclosed information on tentative projects that are known in name but are too speculative at this point as actual projects to be given any real consideration of impacts. The Forest Service followed law, regulation, and policy by considering past, present, and reasonably foreseeable projects and their cumulative effects.

Recommended Remedy by Review Team Member (if any): No remedy required.

Review Team Member: Roxanne Turley, EAP/WSA

Rosemont Copper Mine

Objection Review

Objection # (s): 0021-CMartin; 0036-Rosemont; 0084-SSSR; 0091-PimaCounty;

Resource Area(s): NEPA – Mitigation (NEP-8)

Objection Issues:

- 0084-70: There is no indication in the FEIS as to whether there is any avenue for public participation or any requirements for public disclosure (concerning reporting and evaluation of mitigation and monitoring).
- 0036-2: Multiple statements (draft ROD, p. 30) require Rosemont to implement mitigation and monitoring in Appendix B, however all items in Appendix B do not apply to the selected action. Rosemont will not implement those actions that do not apply for instance, OA-AQ-06, -07, -10, FS-GW-05, and OA-GW-01 are specific for the heap leach facilities. DROD, page 30, first two sections.
- 0084-84: The FEIS provides inadequate discussion of mitigation measures for impacts to Pima County's Conservation Lands System.
- 0084-67: Contrary to the FEIS and Draft ROD, the Forest Service has the authority to impose mitigation measures to protect public resources, even if those impacts occur off of USFS lands.
- 0091-29: The project continues to fall short regarding acceptable levels of mitigation for the significant and long-term environmental and social impacts that will result from locating such a heavy industrial use in a relatively undisturbed natural environment.
- 0084-69: Of the 72 USFS mitigation measures listed in Appendix B, only three reference any sort of on-site USFS involvement or presence. Nowhere in the current FEIS is there any reference to the possibility and/or conductance of unannounced on-site USFS spot audits to confirm adherence to the mitigation measures noted. The ramifications and disclosures in regard to Rosemont's self-monitoring should be addressed.
- 0084-68: The FEIS failed to provide the required mitigation analysis during the NEPA public review process (including the required effectiveness analysis) for a number of critical resources. The Draft ROD erroneously refused to review an entire category of mitigation measures in violation of NEPA (Rosemont mitigation which are not within the jurisdiction of the Forest Service). The agency does not explain why it does not have authority to impose off-site mitigation measures. The agency's failure to implement, let alone recognize, this authority fundamentally flaws the FEIS and any ROD authorizing approval of any of the action alternatives. Also, at a minimum, these additional mitigation measures are "reasonably foreseeable future actions" under NEPA and must be fully reviewed. The monitoring plan in the FEIS continues to be inadequate to ensure compliance.

Remedy Supplied by Objector (if any):

0084-70: Require that all multi-agency task group meetings are open to the public and that reasonable public notice will be provided in advance of such meetings, including any special meetings outside of regularly scheduled meetings. Require that quarterly and annually required reports are made available to the public, and the agency should require that Rosemont create and maintain a publicly accessible website and post its required monitoring and reporting activity.

0084-84: The USFS must provide a discussion of reasonable mitigation measures for impacts to the Conservation Lands System.

0084-67: The agency cannot approve any action.

0084-69, 68: A more detailed and comprehensive monitoring plan is required that includes requirements for unannounced, spot audits and on-site verification testing. Add information regarding the significance, applicability, and consequences of AZ HB2199, the Arizona Environmental Privilege Law.

Law, Regulation and/or Policy: Endangered Species Act of 1973(ESA); Clean Water Act (CWA); National Historic Preservation Act of 1966 (NHPA); Council on Environmental Quality (CEQ) Regulations at 40 CFR 1500-1508; Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations; CEQ Memorandum for Heads of Federal Departments and Agencies Regarding Appropriate Use of Mitigation and Monitoring issued January 14, 2011; Arizona Environmental Privilege Law AZ HB 2199.

Review Team Member Response:

Response to objection issues 0036-2, 0084-70, 0084-67, 0084-68, 0084-69, 0084-84, and 0091-29

Objectors made several contentions in regard to the mitigation and monitoring:

- there is no indication of public disclosure for the mitigation effectiveness during implementation;
- the selected action mitigation measures need to be corrected;
- the mitigation measures and the monitoring plan are inadequate;
- the Forest Service has the authority to impose mitigation measures on non NFS lands;
- there is a failure to establish enforceable mechanisms to assure the measures are adequate;
- the effectiveness of all mitigation measures was not analyzed; and
- the Forest Service has failed to provide public comment and review on additional mitigation measures were included in the FEIS.

The CEQ regulations define “mitigation” to include: (a) Avoiding the impact altogether by not taking a certain action or parts of an action; (b) Minimizing impacts by limiting the degree of magnitude of the action and its implementation; (c) Rectifying the impact by repairing,

rehabilitating or restoring the affected environment; (d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and (e) Compensating for the impact by replacing or providing substitute resources or environments (40 CFR 1508.20).

The CEQ regulations also require agencies to “include appropriate mitigation measures not already included in the proposed action or alternatives” (40 CFR 1502.14(f)) and, the environmental consequences shall include discussions of “means to mitigate adverse environmental impacts” (40 CFR 1502.16(h)).

Guidance provided to Federal agencies by the Council on Environmental Quality, (Council on Environmental Quality, March 23, 1981, The CEQ Forty Most Asked Questions Concerning CEQ’s National Environmental Policy Act Regulations, question 19b), states “All relevant, reasonable mitigation measures that could improve the project are to be identified, even if they are outside the jurisdiction of the lead agency or the cooperating agencies, and thus would not be committed as part of the RODs of these agencies” and the CEQ Memorandum for Heads of Federal Departments and Agencies Regarding Appropriate Use of Mitigation and Monitoring issued January 14, 2011 (Memo on Mitigation and Monitoring), states “agencies should not commit to mitigation measures absent the authority or expectation of resources to ensure the mitigation is performed” (p. 3).

A monitoring and enforcement program shall be adopted and summarized where applicable for any mitigation (40 CFR 1505.2 (c)). Once an agency determines that it would provide for monitoring in a particular case, monitoring plans and programs should be described or incorporated by reference in the agency’s decision documents.

“Monitoring is fundamental for ensuring the implementation and effectiveness of mitigation commitments, meeting legal and permitting requirements, and identifying trends and possible means for improvement” (CEQ Memo on Mitigation and Monitoring, p. 10). Further, “the mitigation plan and program should be described to the extent possible based on available and reasonably foreseeable information in cases where NEPA analysis and documentation are completed prior to final design of a proposed project” (CEQ Memo on Mitigation and Monitoring, p. 11).

Monitoring and evaluation activities would be prescribed, conducted, and/or reviewed by Rosemont Copper, the Coronado National Forest, and other regulatory agencies participating in a proposed multiagency monitoring and evaluation task group. The functions the task group will be charged with are detailed in the DROD [PR 047504, p. 33].

Specific to the selected alternative, corrections made to the mitigation measures that refer to facilities or actions associated with the heap leach pad are noted in the DROD [PR 047504, p. 30], the FEIS [PR 047511_6, Appendix B, FS-GW-05 and OA-AQ-06], and the current Errata [PR 046516].

Appendix B [PR 047511_6, pp. B-1 through B-102] also describes the mitigation and monitoring plan, including 3 categories of mitigation and monitoring, 1) Forest Service, 2) Other Regulatory

and Permitting Agencies, and 3) Rosemont Copper. Each category of mitigation and monitoring has its unique authority or agreements for compliance. Appendix B lists supporting documents and permits that contain detailed information on mitigation or monitoring requirements. These documents are incorporated by reference in their entirety [PR 047511_6, p. B-5].

All mitigation and monitoring in the 1) Forest Service and 2) Other Regulatory and Permitting Agency categories are within the jurisdiction of the Forest Service or other regulatory agency, are nondiscretionary, and are required to be implemented. Rosemont Copper has committed to implementing the mitigation and monitoring in the Rosemont Copper category; however, these items are not within the jurisdiction of the Forest Service or other regulatory agencies.

Each mitigation and monitoring measure described in Appendix B includes the measure, its source, what impacts are mitigated or the purpose of monitoring, the location, performance criteria, the responsible party and the FEIS applicable alternatives. Several methods of monitoring are recognized in Appendix B, such as Forest Service on-site audit and periodic self-reporting by Rosemont [PR 047511_6].

Using information from a variety of sources including comments received on the DEIS, the mitigation and monitoring section was updated in the FEIS to include additional details on: the impacts being mitigated; whether the mitigation measure is meant to avoid, minimize, reduce, rectify, or compensate for impacts; monitoring actions; effectiveness criteria; timing; responsible party; and to which alternatives the items are applicable [PR 047511_6, p. B-3]. Mitigation measure changes between the DEIS and the FEIS are found under each resource heading in the FEIS [PR 047511_3/4, pp. 144 – 1053]. Each resource section includes additional analysis of the changes and the effectiveness of the mitigation. The DROD also discloses that a number of modifications to the preliminary MPO [PR 047504, pp. 30-64], will be incorporated in to a revised MPO.

Additional mitigation measures may be put in place by non-Forest Service regulatory agencies. The Forest Service will have additional modifications to meet the purposes of the applicable regulations, including compliance with the Endangered Species Act (ESA), compliance with Sections 401 and 404 of the Clean Water Act (CWA), and compliance with the National Historic Preservation Act (NHPA), DROD [PR 047504, p. 30]. Appendix B of the FEIS [PR 047511_6, p. B-3], describes the process with an example of how the permit requirements from regulatory agencies (other than the Forest Service) may be modified based on the alternative selected in the ROD. The final MPO will be approved per the ROD and the final permitting will be completed by all appropriate Federal, State, and county regulatory agencies. The Forest Service ROD responds to the responsibility and jurisdiction of the Forest Service.

Mitigation and monitoring requirements are described for each resource presented in the DROD [PR 047504, pp. 30-43], including: geology, minerals, and paleontology; soils and revegetation; air quality and climate change; groundwater and surface water quantity and quality; seeps, springs, and riparian areas; biological resources; landownership; dark skies; visual resources; recreation and wilderness; hazardous materials; transportation/access; noise; public health and safety; cultural resources; power use; and community programs.

Effectiveness monitoring is primarily focused on determining whether the results of implementing the mitigation measure or requirement achieve the results predicted in the FEIS, upon which the ROD and final MPO are based, and whether they comply with applicable laws and regulations. Analysis of mitigations measures and effectiveness are described in the Affected Environment and Environmental Consequences section for each resource presented in Chapter 3 of the FEIS [PR 047511_3/4, pp. 139-1151], including: biological resources (p. 713); landownership and boundary management (p.730); livestock grazing (p. 748); dark skies (p. 76-765); visual resources (p. 829); recreation and wilderness (p. 871); hazardous materials (p. 905); fuels and fire management (p. 955); transportation/access (p. 955); noise (p. 988); public health and safety (p. 1010); cultural resources (p. 1049); and socioeconomics and environmental justice (pp. 1128-1130).

Pima County's Conservation Lands System is specifically addressed in the FEIS [PR 047511_4, p. 1148]. This section acknowledges conflicts between the Pima County's Conservation Lands System and the proposed mining activities. While the Pima County's Conservation Lands System covers lands within Pima County, local plans do not necessarily apply to federal lands, federal regulations require that possible conflicts with local plans be discussed in environmental statements (40 CFR 1502.16(c); 40 CFR 1506.2(d)).

The FEIS identifies mitigation measures and monitoring activities developed to avoid or reduce impacts on biological resources such as avoidance of some impacts to the biological core areas identified in Pima County's Conservation Lands System, "Sonoran Desert Conservation Plan" [PR 047511_4, pp. 714-715, and PR 047511_6, p. B-28]. The FEIS also discusses riparian areas, one of five elements identified for conservation in the "Sonoran Desert Conservation Plan [PR 047511_3, p. 407]. Pima County's Title 16 Floodplain and Erosion Hazard Management Ordinance (2010-FC5) is listed under Relevant Laws, Regulations, Policies and Plans [PR 047511_3 p.407]. Pima County Board of Supervisors will identify the mitigation needs and approve a mitigation plan associated with ordinance 2010-FC5.

The Coronado developed a mitigation and monitoring plan that meets the guidance and direction specified by the CEQ and applicable laws and regulations [PR 047511_6, pp. B3-B102]. The Forest Service will review all final designs and monitoring and mitigation plans, and written approval from the Forest Service must be obtained prior to initiation of the work outlined in the final MPO [PR 047504, p. 33].

As stated in the resource sections in Chapter 3 of the FEIS, impacts have been mitigated to the degree practicable; however, conflicts with aspects of Pima County's Conservation Lands Systems would remain, FEIS [PR 047511_4, pp. 1148]. Pima County Board of Supervisors will approve mitigation measures that are specific to the County's Title 16 Floodplain and Erosion Hazard Management Ordinance (2010-FC5) on lands within Pima County but outside the boundary of NF system lands.

The objector refers to AZ HB 2199 AZ Environmental Privilege Law which pertains to privilege of mining companies to clean up environmental problems without penalties. The Arizona state law would apply to state land.

Additional mitigation measures will be applied to the final MPO as required by federal, state and county regulatory agencies. Monitoring and compliance with the terms of the MPO will be evaluated and recorded by the multiagency task force.

Corrections to mitigation measures that refer to facilities or actions associated with the heap leach pad, specific to the selected alternative, have been made.

Recommended Remedy by Review Team Member (if any): The remedies suggested by the objectors are not warranted. No remedies are required.

Review Team Member: Beth Dykstra, EAP/WSA

Rosemont Copper Mine

Objection Review

Objection #s: 0037-EmpireRanchFoundation; 0051-QLewton; 0053-RMaddox; 0054-PNegri; 0076-JPepper; 0083-FICO; 0084-SSSR; 0094-MMcCoy; 0099-KPhaler; 0102-MMagruder; 0052-SHart; 0112-KWillmarth

Resource Area: NEPA – Response to Comments (NEP-9)

Objection Issues:

- 0054-1: Ten of my comment letters on the Draft EIS, which were submitted timely in January 2012 via email with Word docx attached, were neither included in nor responded to in the FEIS - Appendix G.
- 0099-1: The objector states that his comments on the DEIS did not receive adequate attention or substantive response.
- 0037-2: The FEIS Response to all my other stated concerns in Letter # 14253 was: “The Empire Ranch headquarters is more than 8 miles distant from the mine operations area.” As stated in Letter # 14253 - The Empire Ranch Headquarters are ... located 6.88 miles from the Rosemont Copper blasting area.
- 0102-4: The Forest Service did not accept or even reply to many specific comments...it was very obvious that my inputs...just were not considered, understood or probably not even read by the Forest Service...the Forest Service has already made up its mind and "to hell with the public" and what the public wants.
- 0094-1: My comments to the Rosemont Copper Project DEIS were substantive. The responses (to my comments on the DEIS) were not substantive. The objector cites comments from letter 19508: (1) “When I consider the loss of the Rosemont valley and the affects that mine traffic will have on HWY 83, I realize that the mine will probably kill this ride.” (2) “I have spent the last twelve years developing the Old Pueblo and Las Cienegas (LC) Endurance Rides into two of the most popular Endurance events in the Southwest. The Old Pueblo is a three-day, 155-mile race and the LC is a one-day, 100-mile race. These events draw roughly one hundred competitors from across the US and Canada and from as far away as Australia and are both based out of the LCNCA Airfield Event Site. As I look out from base camp to Weigles Butte, it is obvious what the blasting, lighting and dust from the proposed mine will mean for user groups on the Las Cienegas and surrounding areas.”; and (3) Has the FS made plans to develop alternative recreation areas to make up for the loss, not only of the Rosemont, but also of the wider recreation assets that the mine will negatively impact?
- 0083-13: The USFS failed to respond to our comments regarding the impact that groundwater pumping for the Rosemont Copper Project will have on groundwater overdraft.
- 0083-8: The USFS failed to respond to our comments regarding the impact that groundwater pumping for the Rosemont Copper Project will have on groundwater

overdraft and achieving the goal of safe-yield within the Tucson AMA. We were unable to find in the FEIS any discussion of Rosemont's additional groundwater pumping and consistency with the Third Management Plan for the Tucson AMA.

- 0052-7: I could find no USFS response whatsoever in any of the Appendix G files.
- 0084-77: The Forest Service did not respond to any of the Coalition's comments concerning the financial capability of Augusta Resource and its subsidiary, Rosemont Copper Company, to execute the Mine Plan of Operations.
- 0051-4: None of the comment letters with photos, Letter numbers / Public Concern Statements (PCS) #s as follows; 12270/804, 12296/804, 12302/804, 12273/804, 12294/804, 12274/804 that I provided in responding to the DEIS where posted or responded to.
- 0053-2: My concern is not mentioned in the hardcopy version of Appendix G in the FEIS or in the digital PCS 743 or 746. There has been no FS response to this concern.
- 0053-4: My DEIS comment has not been directly considered, nor responded to, by the FS as a public concern. P. 5-6
- 0112-1: I searched through all pages of the Forest Service's response to public comments, and found no response specifically addressing my contention that the mine plan permits land uses in excess of, and in violation of allowed uses for land held in unpatented mining claims.
- 0039-25: The Forest Service discussion ignores the radioactivity content of the air particulate emissions following the blast stage. Uranium and thorium will be present in the particulate matter. Both elements can be measured gravimetrically, and will be part of any elemental analysis of particulates. The FEIS has not responded to the comments here by SSSR et al. (at 15).
- 0076-1: In seeking to connect the FEIS index numbers identifying my specific comments to my actual submitted comments/testimony, I discovered that there was no electronic link, indeed no link of any sort between these comments and the text of my comments/testimony. I finally found my comments/testimony in the CNF website devoted to the Draft Environmental Impact Statement. But alas, when I finally located this information the numbers identifying my initial comments did not match the index numbers assigned in the FEIS. As a result of this serious lack of correspondence between my initial comments and the FEIS responses, I was unable to directly connect any of my initial comments/testimony to the responses published in the FEIS. 2.

Remedies Supplied by Objectors:

0037-2: 1. The Forest Service and the State Historic Preservation Office (SHPO) include the Empire Ranch Foundation as a party to the Section 106 Agreement; 2. The USFS must conduct a proper and independent study on the effect of vibrations, both airborne and ground on the Empire Ranch Headquarter Buildings and on the Las Cienegas National Conservation Area; 3. A mitigation plan (bond or other financial instrument) must be established for the Historic Buildings of the Empire Ranch, its implementation and funds must be administered by a neutral, third party, nonprofit organization; 4. The USFS should abandon this version of a FEIS and

prepare and circulate for public review and comment a Revised DEIS or Supplemental Draft EIS.

0083-14: Require additional NEPA analysis should Rosemont propose to increase its groundwater pumping anytime during the life of the mine, or if makes any other changes to any other Federal, state or local permits, and include this requirement in a revised DEIS.

0083-8: Revise the analysis to include a complete discussion of additional groundwater pumping for the Rosemont Copper Project and how that additional pumping affects achievement of the goal of safe yield within the Tucson AMA. Provide this information in a revised DEIS.

0084-77: The USFS must respond to these concerns regarding the real possibility that Augusta Resources does not or will not have the financial capability to meet its bonding requirements.

Law, Regulation and/or Policy: Council on Environmental Quality (CEQ) Regulations at 40 CFR 1500-1508

Review Team Member Response:

The objectors contend their comments on the DEIS were not appropriately included in the project record or adequately addressed in the FEIS.

After preparing a DEIS and before preparing a FEIS, the CEQ regulations require agencies to request comments from other agencies and the public (40 CFR 1503.1). Furthermore, an agency preparing an FEIS shall assess and consider comments both individually and collectively, and shall respond by one or more of the means listed below, stating its response in the final statement: (1) modify alternatives including the proposed action. (2) Develop and evaluate alternatives not previously given serious consideration by the agency. (3) Supplement, improve or modify its analysis. (4) Make factual corrections. (5) Explain why the comments do not warrant further agency response, citing sources, authorities, or reasons which support the agency's position and, if appropriate; indicate those circumstances which would trigger agency reappraisal or further response (40 CFR 1503.4 (a)).

Additionally, the CEQ regulations required that all substantive comments be attached to the final statement regardless of whether the comment is thought to merit individual discussion (40 CFR 1503.4(b)).

In accordance with the CEQ regulations, a comment period was provided from October 11, 2011 to January 31, 2012, with additional extensions given to several agencies. Approximately 24,800 submissions, including transcripts of oral comments from formal public meetings and telephone calls, letters, form letters, and petitions were received. All submissions were analyzed using a content analysis process described in Appendix G of the FEIS [PR 047511_7, pp. G-3 and G-4]. Responses to comments are also presented in Appendix G with a sample of responses being located on pp G-5 through G-74, and the entirety of responses included on a CD located in the pocket cover of the FEIS, Volume 6.

Upon review, all comment letters were determined to be contained in the project record. Because of the sheer volume of comments, a separate response was not written for each comment letter. Rather, common themes were grouped and addressed on the CD contained in Volume 6 of the FEIS. The Forest Service followed law, regulation, and policy in the process they used to evaluate and respond to the comments in the FEIS.

Recommended Remedy by Review Team Member: The remedies suggested by the objectors are not warranted. No remedies are required.

Review Team Member: Rita Skinner, Regional Litigation Coordinator and Beth Dykstra, EAP/WSA