

Rosemont Copper Mine

Objection Review

Objection: 0116-DPressnall;

Resource Area(s): Seeps, Springs, and Riparian – General (SSR-1)

Objection Issue:

- 0116-1: Since I commented on the DEIS, I have discovered a spring /water well/seep on my property (116 acres adjacent to the pit). This spring is located on the forty acre property 305-58-034A. It is located at the Southwest corner of the property, just inside or the property line. It consists of a drilled case well in the bottom of the wash, and due to its lower elevation than the land up stream would properly be artesian or a seep during most parts of the year. This source of water is a very valuable asset for my property, and I planned on using it in the future.

Remedy Supplied by Objector (if any):

0116-1: Rosemont should buy his property.

Law, Regulation and/or Policy: Council on Environmental Quality (CEQ) Regulations at 40 CFR 1500-1508; Forest Service mining regulations at 36 CFR 228; FSM 5400 Landownership; FSM 5500 Landownership Title Management

Review Team Member Response:

The objector asserts compensation is appropriate due to the likely loss of available water derived from an existing well.

In its regulations, the Forest Service is directed to minimize mining adverse environmental impacts to resources, where feasible (36 CFR 228). The effects to individual water wells are unknown, but would occur beyond Forest Service boundaries. Monitoring as described in the FEIS will provide data that will determine individual well owner impacts as described in RC-GW-01 [PR 047511_4, Appendix B, pp B91-B92]. This mitigation is a voluntary measure brought forth by Rosemont and provides protection for individual private residential well owners against the risk that mine-associated groundwater drawdown could impact their well. This mitigation involves implementing a legally binding well owner protection agreement that provides certain protections with respect to potential impacts to individual well owners. It may compensate for potential impacts to domestic wells for homeowners who are eligible for and sign up for the plan. The plan includes water-level monitoring program, water well pump warranty program, residential well deepening, and an in-lieu cash option.

The Forest Service complied with 36 CFR 228 based on information and analysis found in the FEIS [PR 047511], DEIS [PR 015781], and the review of water resources [PR 047004, pp. 3-4]. Documentation of water resource analysis and private well mitigations facilitated informed decisions. Further mitigation beyond that brought forth by Rosemont is beyond the authority of the Forest Service for individual wells beyond Forest Service boundaries.

The authority and ability of the Forest Service to purchase private property, or mandate that Rosemont Copper purchase private property is guided by FSM 5400 and 5500; requiring purchase of the property as described in the remedy is not within the authority of the Forest Service. This does not preclude a private property owner from pursuing any available legal remedies or conducting negotiations with the proponent on their own.

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

Review Team Member: James N Snyder, R3-EAP/WSA

Rosemont Copper Mine

Objection Review

Objection # (s): 0090-AZGFD

Resource Area(s): Seeps, Springs and Riparian – General (SSR-1)

Objection Issue:

- 0090-5: The FEIS, SWCA 2013k screening analysis, and draft ROD contain conflicting statements of the potential effects of mine waste rock runoff on surface water quality of OAWs in Davidson Canyon and Cienega Creek.

Remedy Supplied by Objector (if any):

0090-5: Compare the screening analysis of the waste rock constituents with the most restrictive state surface water standard for all protected uses in Davidson Canyon and Cienega Creek and disclose those results in Tables 97, 105, 108, and 111 and accompanying text to all Tables.

Law, Regulation and/or Policy: Council on Environmental Quality (CEQ) Regulations at 40 CFR 1500-1508; Clean Water Act (CWA) [33 U.S.C. §1251 et seq. (1972)]; Arizona Pollutant Discharge Elimination System (Title 18 Arizona Administrative Code Chapter 9); Arizona Water Quality Standards (Title 18 Arizona Administrative Code Chapter 11)

Review Team Member Response:

The objection asserts the water quality screening analysis (SWCA Environmental Consultants 2013k) [PR 045677], and draft ROD (DROD) contain conflicting statements of the potential effects of mine waste rock runoff on surface water quality of Outstanding Arizona Waters (OAWs) in Davidson Canyon and Cienega Creek.

An FEIS [PR 047511] analysis must meet the regulatory requirements of Clean Water Act (33 United States Code 1251–1376) and the objective of “restore and maintain the chemical, physical, and biological integrity of the nation’s waters.” The State of Arizona has specific jurisdiction over water quality deriving from the Clean Water Act Section 401 (33 United States Code 1341) and Section 402 (33 United States Code 1342). Arizona regulations (Title 18 Arizona Administrative Code Chapter 11) identify surface water standards that must be met, including those for Outstanding Arizona Waters. Arizona administers Section 402 authority through the Arizona Pollutant Discharge Elimination System (Title 18 Arizona Administrative Code Chapter 9), which requires permitting for discharges to waters of the U.S., including the mine waste rock runoff noted by the objector.

The State of Arizona has the sole authority to make a determination under Clean Water Act Section 401 concerning a proposed project and potential actions that may violate State Water Quality regulations by degrading Outstanding Arizona Waters (OAWs) [PR 047511_3, p. 503]. The FEIS states that no federal permit action may be approved if the state denies certification [PR 047511_3, p. 449]. The DROD also states that a 401 certification must be issued prior to approval of a final MPO [PR 047504, p. 44], and that the Forest Supervisor consulted with the Arizona Department of Environmental Quality (ADEQ) about the likelihood of 401 certification being issued [PR 047504, p. 15].

The State of Arizona has delegated authority to issue permits under Clean Water Act Section 402 for discharge of stormwater to waters of the U.S. [PR 047511_3, p. 449-450] and has issued authorization for the project [PR 045094]. The Forest reviewed the Stormwater Pollution Prevention Plan submitted as part of the AZPDES authorization, which contains many of the operational details for compliance with the permit [PR 046071].

A Preliminary Administrative FEIS (PAFEIS) was prepared by SWCA in July 2013. The PAFEIS responded to comments from U.S. Environmental Protection Agency (EPA) and the ADEQ on the DEIS [PR 015781]. Additional comments were received on the PAFEIS from USEPA and ADEQ [PR 047453, PR 047457]. SWCA draft memorandum dated August 25, 2013 [PR 045677] details the revised surface water quality analysis included in the FEIS as a result of these comments. The analysis of surface water quality included in the FEIS is responsive to and compliant with EPA and ADEQ collaboration. The involvement of EPA and ADEQ in contributing to the FEIS [PR 047511], the requirement for state water quality certification prior to implementation of the project, and the issuance of a permit by the state for discharge of waste rock runoff, meets the regulatory requirements of Clean Water Act (33 United States Code 1251-1376).

SWCA draft memorandum dated August 25, 2013 [PR 045677, p. 2] states: “In addition to numeric standards, the OAW reaches also have an anti-degradation standard. A fundamental problem exists with any attempt at predicting impacts from the mine: without existing water quality it is an impossible task to predict whether degradation would occur. Further, in their comments ADEQ cautioned that the authority to make an anti-degradation conclusion lies with ADEQ, not the Forest Service. Therefore, it is not the goal of this analysis to attempt a full prediction of post-construction stormwater quality that would occur at the OAW reaches. The goal instead is to perform a screening level analysis that would identify and disclose potential problem areas that could occur. Again, “good faith” means that the uncertainties involved should not preclude attempting the prediction.” That authority for water quality certification lies with ADEQ does not preclude disclosure requirements under NEPA. The objection specifically concerns potential contradictions in that disclosure.

The water quality analysis presented in the FEIS [PR 047511_3, pp. 471-477, 511-553] and DROD [PR 047504, pp. 14-15] presents data and discussion concerning springs, seeps, and riparian areas; OAWs; and surface water quality. The objection excerpts passages throughout these sections and compares them for internal contradiction. Upon consideration of the full

context, the statements listed by the objector are not contradictory. All sections identified by the objector concerning potential impacts to OAWs are consistent in the following ways: 1) identify the potential for some constituents to be elevated in runoff, 2) identify that there are uncertainties that prevent full analysis, and 3) identify that there are also mitigating factors that could result in lesser concentrations of constituents in runoff. The FEIS and DROD also note that the authority for determining whether OAWs impacts will violate state regulations lies with ADEQ [PR 047511_3, p. 503], [PR 047511_3, p. 449], [PR 047504, p. 44], [PR 047504, p. 15]. With respect to potential impacts of surface water quality and OAWs, the analysis meets the disclosure requirements under NEPA; however, the FEIS analysis does not need to conclude that no impacts will occur, as this authority lies with ADEQ.

The DROD does not contain “conflicting statements” concerning water quality as discussed in the FEIS. The following DROD [PR 047504, pp. 14-15] statement best describes the overall issue of water quality: “... *Ultimately, it is Rosemont Copper’s responsibility to demonstrate compliance with water quality standards and acquire the 401 certification from the State prior to my approval of the final MPO.*”

With regard to objection 0090-5, the Forest Service complied with the CWA based on information found in the FEIS, DROD, SWCA draft memorandum dated August 25, 2013 [PR 045677], the requirement for state water quality issuance prior to implementation, and the issuance of a permit by the state for discharge or waste rock runoff. When taken in full context, the FEIS passages noted by the objector are not contradictory. The DROD language found on pages 14-15 [PR 047504, pp. 14-15] does not conflict with FEIS discussions or analysis concerning water quality.

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

Review Team Member: James N Snyder, R3-EAP/WSA

Rosemont Copper Mine

Objection Review

Objection # (s): 0090-AZGFD

Resource Area(s): Seeps, Springs and Riparian – NEPA (SSR-2)

Objection Issue:

- 0090-6: The FEIS statement on page 548 that a comparison of predicted mine waste rock runoff water quality to the water quality in the downstream Outstanding Arizona Waters is “not appropriate” is not supported by NEPA.

Remedy Supplied by Objector (if any): None

0090-6: Conduct additional stormwater runoff analyses.

Law, Regulation and/or Policy: Council on Environmental Quality (CEQ) Regulations at 40 CFR 1500-1508; Clean Water Act (CWA) [33 U.S.C. §1251 et seq. (1972)]; Arizona Pollutant Discharge Elimination System (Title 18 Arizona Administrative Code Chapter 9); Arizona Water Quality Standards (Title 18 Arizona Administrative Code Chapter 11)

Review Team Member Response:

The objection asserts that a statement in the FEIS about a comparison of predicted mine waste rock runoff water quality to the water quality in the downstream Outstanding Arizona Waters is “not appropriate” is not supported by NEPA.

The FEIS analysis meets the regulatory requirements of the Clean Water Act and the objective to “restore and maintain the chemical, physical, and biological integrity of the nation’s waters.” The State of Arizona has specific jurisdiction over water quality deriving from the Clean Water Act Section 401 (33 United States Code 1341) and Section 402 (33 United States Code 1342). Arizona regulations (Title 18 Arizona Administrative Code Chapter 11) identify surface water standards that must be met, including those for Outstanding Arizona Waters. Arizona administers Section 402 authority through the Arizona Pollutant Discharge Elimination System (Title 18 Arizona Administrative Code Chapter 9), which requires permitting for discharges to waters of the U.S., including the mine waste rock runoff noted by the objector.

The State of Arizona has the sole authority to make a determination under Clean Water Act Section 401 concerning a proposed project and potential actions that may violate State Water Quality regulations by degrading Outstanding Arizona Waters (OAWs) [PR 047511_3, p. 503]. The FEIS states that no federal permit action may be approved if the state denies certification [PR 047511_3, p. 449]. The DROD also states that a 401 certification must be issued prior to

approval of a final MPO [PR 047504, p. 44], and that the Forest Supervisor consulted with the Arizona Department of Environmental Quality (ADEQ) about the likelihood of 401 certification being issued [PR 047504, p. 15].

The State of Arizona has delegated authority to issue permits under Clean Water Act Section 402 for discharge of stormwater to waters of the U.S. [PR 047511_3, p. 449-450] and has issued authorization for the project [PR 045094]. The Forest reviewed the Stormwater Pollution Prevention Plan submitted as part of the AZPDES authorization, which contains many of the operational details for compliance with the permit [PR 046071].

In addition to the state's authority under Sections 401 and 402, the water quality screening analysis [SWCA Environmental Consultants 2013k; PR 045677] is part of the FEIS analysis that meets the intent of the CWA. The FEIS discussion [PR 047511_3, pp. 548-549] further explains the statement in question and explains that the screening analysis procedure will be used to further assess waste rock runoff affects to downstream Outstanding Arizona Waters. The water quality screening analysis [PR 045677] as discussed in the FEIS [PR 047511_3, pp. 548-549] details the revised surface water quality analysis included in the FEIS.

A PAFEIS (Preliminary Administrative FEIS) was prepared by SWCA in July 2013. The PAFEIS responded to comments from U.S. Environmental Protection Agency (EPA) and the ADEQ on the DEIS [PR 015781]. Additional comments were received on the PAFEIS from EPA and ADEQ [PR 047453, PR 047457]. SWCA draft memorandum dated August 25, 2013 [PR 045677] details the revised surface water quality analysis included in the FEIS as a result of these comments. The analysis of surface water quality included in the FEIS is responsive to and compliant with EPA and ADEQ collaboration. The involvement of EPA and ADEQ in contributing to the FEIS meets the regulatory requirements of Clean Water Act.

The screening analysis [PR 045677, p. 2] states: "In addition to numeric standards, the OAW reaches also have an anti-degradation standard. A fundamental problem exists with any attempt at predicting impacts from the mine: without existing water quality it is an impossible task to predict whether degradation would occur. Further, in their comments ADEQ cautioned that the authority to make an anti-degradation conclusion lies with ADEQ, not the Forest Service. Therefore, it is not the goal of this analysis to attempt a full prediction of post-construction stormwater quality that would occur at the OAW reaches. The goal instead is to perform a screening level analysis that would identify and disclose potential problem areas that could occur. Again, "good faith" means that the uncertainties involved should not preclude attempting the prediction." The State of Arizona has the sole authority to make a determination concerning a proposed project and potential actions that may be violation of the State Water Quality regulations by degrading Outstanding Arizona Waters (OAWs), as discussed in the FEIS [PR 047511_3, p. 503].

That authority for water quality certification lies with ADEQ does not preclude disclosure requirements under NEPA. The screening analysis provides the disclosure of potential water quality impacts to OAWs. The objection concerns potential contradictions in that disclosure. The objector appears to believe that the statement quoted means that no analysis was undertaken to disclose effects to water quality in the OAWs. When taken in context, the statement quoted does

not indicate this. Rather, the statement conveys that one type of water quality analysis (i.e., water quality of the direct runoff from waste rock) is applicable in Barrel Canyon but not applicable downstream at the OAWs; however, a different water quality analysis (the screening analysis) is indeed applicable downstream at the OAWs and was undertaken.

The Forest Service complied with the CWA based on information and analysis found in the FEIS, DEIS, the water quality screening analysis [PR 045677], the requirement for state water quality issuance prior to implementation, and the issuance of a permit by the state for discharge or waste rock runoff. The screening analysis [PR 045677] as discussed in the FEIS [PR 047511_3, pp. 548-549] shows that a water quality analysis was discussed, utilized the best available scientific data, and is appropriate and supported in NEPA; the FEIS analysis does not need to conclude that no impacts will occur, as that authority lies with ADEQ.

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

Review Team Member: James N Snyder, R3 EAP/WSA

Rosemont Copper Mine

Objection Review

Objection # (s): 0084-SSSR

Resource Area(s): Seeps, Springs and Riparian – Legal (SSR-3)

Objection Issue:

- 0084-167: The loss of critical riparian areas also violates the USFS's own requirements for riparian and wetland protection (FSM § 2526.02).

Remedy Supplied by Objector (if any): none

Law, Regulation and/or Policy: Forest Service Manual (FSM) 2520 (U.S. Forest Service 2004); Forest Service mining regulations at 36 CFR 228.8; Clean Water Act (CWA) [33 U.S.C. §1251 et seq. (1972)], 40 CFR 230; Council on Environmental Quality (CEQ) Regulations at 40 CFR 1500-1508

Review Team Member Response:

The objector asserts the Forest Service is in violation of its own requirements for riparian and wetland protection as directed by Forest Service Manual (FSM) 2526.02.

Forest Service direction establishes agency policy and objectives and assigns responsibilities to Forest Service personnel for that policy. Forest Service guidance is nonprescriptive in nature. It does not provide absolute requirements for managing water quality or water resources but provides general objectives to be considered when managing those resources. The Forest Service must follow all applicable Federal policy, law, and regulation, and consider Forest Service policy and objectives in the context of other laws and regulations. With respect to riparian and wetland protection, this includes FSM 2526.02, as noted by the objector, as well as the Clean Water Act (CWA), and Forest Service mining regulations found at 36 CFR 228.8.

FSM 2520 provides guidance for watershed protection and management. Specific areas of responsibility include planning, implementing, and monitoring watershed improvements (including abandoned mine lands); managing riparian areas for long-term conservation, productivity, biological diversity, and ecosystem integrity; and managing wetlands and flood plains. FSM 2526.02 states:

1. To protect, manage, and improve riparian areas while implementing land and resource management activities.
2. To manage riparian areas in the context of the environment in which they are located, recognizing their unique values.

The CWA Section 404 requires mitigation for those actions analyzed as degrading to the resource (in this case, riparian areas and wetlands) as well as a demonstration of avoidance of impact. As part of CWA Section 404 individual permit requirements for dredge and fill of waters of the United States, a Habitat Mitigation and Monitoring Plan (HMMP) must be prepared in accordance with the U.S. Army Corps of Engineers (Corps) and the U.S. Environmental Protection Agency's (EPA) "Final Rule for Compensatory Mitigation for Losses of Aquatic Resources" (33 CFR Parts 325 and 332 and 40 CFR Part 320; published in 73 Fed. Reg. 19594-19705). The Corps requires a 404 permit [PR 047511_6, Appendix A, p. 1]: "In addition to the development of an EIS by the CNF, an analysis of alternatives to the proposed Project is required by the Corps to demonstrate compliance with guidelines established under the CWA, Section 404(b)(1) (40 CFR 230), for avoidance and minimization of impacts to jurisdictional waters of the United States." The 404(b)(1) alternatives analysis, included as Appendix A of the FEIS [PR 047511_6, Appendix A], is intended to ensure that no discharge be permitted "if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences" (40 CFR 230.10(a)).

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]. Rosemont Copper Company is exercising its statutory rights to conduct mining activities, and the analysis of the mine plan of operations (MPO) is in compliance with statutes and regulations. Notwithstanding this statutory right, mining operations are subject to further regulation. 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).

On October 11, 2011, Rosemont submitted a CWA Section 404 permit application to the Corps requesting a Section 404 permit to discharge fill materials into potential waters of the United States in connection with proposed project activities [PR 015734]. Subsequently, additional package components were submitted to the Corps. These include the 404(b)(1) alternatives analysis [PR 044793, also included as Appendix A of the FEIS PR 047511_6], and mitigation components proposed in the HMMP. Note that the full HMMP has not been submitted to the Forest Service; analysis was based on a summary of expected HMMP components [PR 018989] as well as analysis of these components as part of Endangered Species Act consultation [PR 018947].

A suite of mitigation measures related to riparian resources are incorporated into the FEIS. The mitigations required by the CWA, as defined in the HMMP, were included in the FEIS and analyzed for effectiveness. Additional mitigations proposed as conservation measures and incorporated into the Biological Opinion [PR 047511_7, Appendix F] are also included. FEIS [PR 047511_6, Appendix B, p. 43] displays the FS-BR-16 mitigation as required by the U.S.

Fish and Wildlife Service (USFWS), which establishes a conservation fund for mitigation within the Cienega Creek watershed. FEIS [PR 047511_6, Appendix B, pp. 25-26] displays the FS-SSR-01 mitigation as required by the USFWS and Corps, which involves securing water rights along Cienega Creek, establishing in-stream flow rights, and use of water for riparian restoration. FEIS [PR 047511_6, Appendix B, p. 26] displays the FS-SSR-02 mitigation as required by the USFWS and Corps, which involves monitoring of springs and constructed waters. FEIS [PR 047511_6, Appendix B, pp. 32-33] displays the FS-BR-05 mitigation as required by the USFWS, which involves construction and enhancement of water sources. FEIS [PR 047511_6, Appendix B, pp.35-36] displays the FS-BR-08 mitigation as required by the USFWS and Corps, which involves preservation and restoration activities at Sonoita Creek Ranch. FEIS [PR 047511_6, Appendix B, pp. 47-48] displays the FS-BR-21 mitigation as required by the USFWS and Corps, which involves the preservation of several parcels in Davidson Canyon.

In addition to those mitigations brought forth through the HMMP or Biological Opinion, the Forest Service developed additional mitigation and monitoring measures specific to Forest Service surface resources. These include measure FS-BR-22 [PR 047511_6, Appendix B, pp. 48-49], which monitors for downstream changes in surface water, groundwater, and riparian conditions, measure FS-SR-05 [PR 047511_6, Appendix B, p. 16], which monitors for downstream geomorphological changes, measure FS-GW-02 [PR 047511_6, Appendix B, pp. 17-19], which monitors water quality in spring riparian areas, and measures FS-SW-01 and FS-SW-02 [PR 047511_6, Appendix B, pp. 23-24], which allow for as much stormwater as possible to be routed downstream.

The Forest Service has a responsibility for development and analysis of alternatives under NEPA. Part of the alternatives development process included avoidance of riparian resources, particularly in McCleary Canyon [PR 047496]. The DROD also cites avoidance of riparian resources in McCleary Canyon as one factor in choosing the selected alternative [PR 047504, pp. 16, 18].

The Forest Service complied with law, regulation, and policy related to the CWA by incorporating the alternatives analysis that minimizes impacts to waters of the U.S. through avoidance and by incorporating riparian mitigation brought forward under the HMMP, and complied with Endangered Species Act by incorporating additional riparian conservation measures. The alternatives analysis required by the CWA and undertaken by the Forest Service under NEPA regulations facilitated and informed decisions that were protective of riparian resources. The development of a comprehensive mitigation and monitoring plan for Forest Service surface resources is protective of riparian resources in the context of mining activities. The mitigations described in the FEIS will minimize adverse affects to wetlands and riparian areas.

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

Review Team Member: James N Snyder, R3 EAP/WSA

Rosemont Copper Mine

Objection Review

Objection # (s): 0036-Rosemont; 0090-AZGFD; 0117-CienegaWatershedPartnership

Resource Area(s): Seeps, Springs and Riparian – Mitigation (SSR-4)

Objection Issues:

- 0036-23: There is no in lieu fee program that will be completed at the Pantano Dam area so #3 in the description of mitigation measure FS-SSR-01 is incorrect. Rosemont objects to the inclusion of terms that are under negotiation and are subject to regulation by another federal agency. (Volume 5, Appendix B, FS- SSR-01, page B-25)
- 0036-31: The weather station in the pit has not been identified as a monitoring site. It needs to be removed as there can be no permanent surface water monitoring station located there. Rosemont objects to the inclusion of this location. (Volume 5, Appendix B, FS-BR- 22 page B-49)
- 0090-10: The statement in the FEIS at 555 that Mitigation Measure OA-SW-01 will “address uncertainty associated with impacts to Outstanding Arizona Waters” by requiring the detention and testing of stormwater quality “prior to flowing downstream” is not supported by other sections of the FEIS.
- 0117-6: All monitoring of the OAWs that USFS recommended is on State Land upstream of the Outstanding Arizona Waters. Dikes in the geology would prevent good monitoring on the effects downstream and the challenge of not disturbing this sensitive land while monitoring well installation has not been addressed. The surface water/groundwater interactions are not sufficiently understood as to what sustains these valuable springs.

Remedy Supplied by Objector (if any):

0090-10: Amend the statement at 555 that only a small portion of the mine stormwater waste rock runoff will be detained for testing. Describe what corrective measures will be taken in the event that tested stormwater is elevated in mine-related constituents.

0117-6: More adequate monitoring.

Law, Regulation and/or Policy: Forest Service mining regulations at 36 CFR 228 Subpart A; Clean Water Act (CWA) [33 U.S.C. §1251 et seq. (1972)]; Final Rule for Compensatory Mitigation for Losses of Aquatic Resources (33 CFR Parts 325 and 332 and 40 CFR Part 320); Arizona Pollutant Discharge Elimination system (Title 18 Arizona Administrative Code Chapter 9); Arizona Water Quality Standards (Title 18 Arizona Administrative Code Chapter 11)

Review Team Member Response:Response to objection issue 0036-23

The objector (Rosemont Copper) states there is no in lieu fee program that will be completed at the Pantano Dam area so #3 in the description of mitigation measure FS-SSR-01 is incorrect. The objector asserts they are not subject to the inclusion of terms that are under negotiation and are subject to regulation by another Federal agency.

With respect to mitigation of water or riparian resources, there are legal and regulatory requirements under Forest Service mining regulations (36 CFR 228), Section 404 of the Clean Water Act (CWA) under the authority of the U.S. Army Corps of Engineers (Corps), authorities under Sections 401 and 402 of the CWA delegated to the State of Arizona, and project components brought forward under Endangered Species Act consultation and incorporated into the Biological Opinion either as applicant-proposed conservation measures or terms and conditions imposed in the Biological Opinion.

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. Notwithstanding this statutory right, mining operations are subject to further regulation. 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).

As part of Section 404 of the CWA, a Habitat Mitigation and Monitoring Plan (HMMP) must be prepared in accordance with the Corps' and the U.S. Environmental Protection Agency's (EPA) "Final Rule for Compensatory Mitigation for Losses of Aquatic Resources" (33 CFR Parts 325 and 332 and 40 CFR Part 320; published in 73 Fed. Reg. 19594-19705).

The State of Arizona has specific jurisdiction over water quality deriving from the Clean Water Act Section 401 and Section 402. Arizona regulations (Title 18 Arizona Administrative Code Chapter 11) identify surface water standards that must be met, including those for Outstanding Arizona Waters. Arizona administers Section 402 authority through the Arizona Pollutant Discharge Elimination System (Title 18 Arizona Administrative Code Chapter 9), which requires permitting for discharges to waters of the U.S., including the mine waste rock runoff noted by the objector. This jurisdiction includes the requirement for a permittee to undertake corrective measures in the event of violations.

The State of Arizona has the sole authority to make a determination under Clean Water Act Section 401 concerning a proposed project and potential actions that may violate State Water

Quality regulations by degrading Outstanding Arizona Waters (OAWs) [PR 047511_3, p. 503]. The FEIS states that no federal permit action may be approved if the state denies certification [PR 047511_3, p. 449]. The DROD also states that a 401 certification must be issued prior to approval of a final MPO [PR 047504, p. 44], and that the Forest Supervisor consulted with the Arizona Department of Environmental Quality (ADEQ) about the likelihood of 401 certification being issued [PR 047504, p. 15]. The 401 permit also may require mitigation measures be implemented by the permittee under certain conditions.

On October 11, 2011, Rosemont submitted a CWA Section 404 permit application to the Corps requesting a Section 404 permit to discharge fill materials into potential waters of the United States in connection with proposed project activities [PR 015734]. Subsequently, additional package components were submitted to the Corps. These include the 404(b)(1) alternatives analysis [PR 044793, also included as Appendix A of the FEIS PR 047511], and mitigation components proposed in the HMMP. Note that the full HMMP has not been submitted to the Forest Service; analysis was based on a summary of expected HMMP components [PR 018989] and analysis of these components as part of Endangered Species Act consultation [PR 018947]. The Biological Opinion [PR 047079, also included in PR 047511_7, Appendix F] incorporates the proposed conservation measures derived from the HMMP summary documents, as well as other applicant-proposed conservation measures.

With respect to objection issue 0036-23, the document “Comment to Proposed Mitigation Measures Revision,” dated September 26th, 2013 [PR 046809] shows Katherine Ann Arnold, Vice-President of Environmental and Regulatory Affairs of Rosemont Copper commenting on FS-SSR-01, p. 15: “Delete “it is also required by the BO.” This is a voluntary wildlife conservation measure and part of the proposed action, not required by the BO.” This requested change was not made by the Forest Service in the FEIS [PR 047511_6, Appendix B, p. 25] and the reasons for this were clarified in the text of the FEIS: “These conservation measures are no longer considered voluntary for the purposes of this appendix, as implementation of these conservation measures is required under the biological opinion.”

The project record further shows the statement raised by Rosemont Copper in their response (found in PR 046809) to be false. This mitigation concerning the Pantano Dam is included in the Biological Opinion [PR 047079 or PR 047511_7, Appendix F, pp. 50-53] and therefore is no longer voluntary. In addition, while the Rosemont Copper HMMP is not finalized with the Corps, the summary upon which the analysis was conducted includes this mitigation.

With regard to the objection 0036-23 and the voluntary nature of the Pantano Dam mitigation measure, the Forest Service complied with the regulations found in 36 CFR Part 228.1; 33 CFR Parts 325 and 332; 40 CFR Part 320; and the Clean Water Act (CWA) [33 U.S.C. §1251 et seq. (1972)]. It seems clear that Rosemont Copper is obligated to the terms and conditions outlined in the FEIS [PR 047511_3/4, pp. 439, 566, 714] and also found in the Biological Opinion of the FEIS [PR 047511_7, Appendix F, pp. 52-53] and the HMMP that would eventually be approved by the Corps.

However, with respect to the details contained in the FEIS, it should be noted that the BO is phrased such that an in-lieu fee program is not necessarily required, and therefore changes in this mitigation would not necessarily conflict with the Biological Opinion. In addition, it should be noted that the full HMMP has not been submitted to the Forest Service; analysis was based on a summary of expected HMMP components [PR 018989] as well as analysis of these components as part of Endangered Species Act consultation [PR 018947], and therefore changes in this mitigation would not necessarily conflict with the Section 404 permit requirements either.

Response to objection issue 0036-31

The objector asserts that a weather station in the pit has not been identified as a monitoring site and objects to inclusion of the location.

As previously noted, the role of the Coronado National Forest under its primary authorities in the mining regulations (36 CFR 228 Subpart A) is to ensure that mining activities minimize adverse environmental effects on National Forest System (NFS) surface resources. The Coronado may impose reasonable conditions to protect surface resources but cannot materially interfere with reasonably incidental activities under the General Mining Law that are otherwise lawful. The Forest Service authority related to mitigation is limited to protection of surface resources of NFS lands.

Figure 1 in the Davidson Canyon Conceptual Groundwater Monitoring Plan [PR 017316] shows the proposed Rosemont Weather Station location within the eventual extent of the pit footprint. Figure 5 in the Davidson Canyon Conceptual Surface-Water Monitoring Plan [PR 017318], shows the proposed Rosemont Weather Station location within the “disturbance area.” These plans and the FEIS [047511] all show the communication and process resulting in the locating of the disputed weather station. The record shows prior communication, proposal, and approval of the weather station location. The Forest Service has the authority to require collection of meteorological data as part of a comprehensive monitoring plan to minimize effects on Forest Service surface resources; however, the location of this weather station is currently on private lands outside the jurisdiction of the Forest Service. The measure (FS-BR-22) in which the meteorological station is proposed [PR 047511_6, Appendix B, B-48 and B-49] is a comprehensive monitoring program intended to assess the potential impacts downstream in Davidson Canyon from possible reductions in surface water flow. The monitoring plans upon which FS-BR-22 is based [PR 017318, PR 017316] are both conceptual, and recognize that further work needs to be done to locate the various well or monitoring locations.

Response to objection issue 0090-10

The objector asserts impacts to OAWs (Outstanding Arizona Waters) using mitigation measure OA-SW-01 to address uncertainty associated with impacts by requiring the detention and testing of stormwater quality prior to flowing downstream is not supported by other sections of the FEIS [PR 047511].

The State of Arizona has delegated authority to issue permits under Section 402 of the CWA for discharge of stormwater to waters of the U.S. [PR 047511_3, p. 449-450] and has issued authorization for the project [PR 045094]. The Forest reviewed the Stormwater Pollution Prevention Plan submitted as part of the AZPDES authorization, which contains many of the operational details for compliance with the permit [PR 046071].

Section 6.1.1.2 (Comingled Discharges) of the ADEQ stormwater discharge permit [PR 045094, p. 24] states: “If discharges authorized by this permit commingle with discharges not authorized under this permit, any required sampling of the authorized discharges must be performed at a point before they mix with other unauthorized discharges to the extent practicable.”

This is the regulatory document that describes all actions associated with monitoring of flows.

The design, location, and methodology used to reduce potential impacts to ground and surface water affected by mine related leaching are discussed in the FEIS [PR 047511_3, pp. 396, 471-479, 482, and 555]. Mitigation measure OA-SW-01 [PR 047511_6, Appendix B, pp. 88-89] and the Biological Opinion [PR 047511_7, Appendix F, pp. 42-43] further describe stormwater runoff contaminant testing. The stormwater testing would be in compliance with State of Arizona permitting requirements delegated under Section 402 of the CWA. The limitations of the required stormwater testing, specifically that the compliance point dam only detains water but not does not impound it, and that discharges may overtop the compliance point dam, are clearly identified in the FEIS.

Response to objection issue 0117-6

The objector asserts monitoring with the use of dikes would not provide accurate assessment of effects and disturb sensitive land. Monitor well installation has not been addressed and the surface/ground water interactions are not sufficiently understood as to what sustains these valuable springs.

The comprehensive mitigation and monitoring plan in the FEIS [PR 047511_6, Appendix B] is one method for compliance with both the CWA and Forest Service requirements to minimize impacts on Forest Service surface resources. The Davidson Canyon dike is discussed in the Davidson Canyon Conceptual Groundwater Monitoring Plan [PR 017316, pp.18-19]. Table-11 in the Davidson Canyon Conceptual Surface-Water Monitoring Plan [PR 017318, pp. 24-25] shows the recommended stream station locations and Table-10 gives a full description of the locations. The Davidson Canyon Conceptual Groundwater & Surface Water Monitoring Plans fully discuss water quantity and quality monitoring and intent to further understand surface/ground water interactions. The FEIS discusses FS-BR-22 and water quality/quantity monitoring [PR 047511_3/4, pp. 302, 357, 395, 403, 440, 545, 568, 719]. Mitigation measure FS-BR-22 [PR 047511_6, Appendix B, pp. 48-50] requires monitoring in Barrel and Davidson Canyons to evaluate impacts from groundwater drawdown to surface water features following the conceptual monitoring plans.

The objector notes the lack of certainty with respect to surface/groundwater interactions. The referenced monitoring location is one component of a more comprehensive monitoring plan. The intent of this particular monitoring as a means to address this uncertainty associated with groundwater and surface water interaction is clearly described in the FEIS [PR 047511_3, pp. 302, 403, 545], and in the monitoring plans submitted to the Forest Service [PR 017316, p. 6 and PR 017318, p. 13]. Without this monitoring, the uncertainty associated with potential surface water impacts would continue. It should also be noted that the specific monitoring location mentioned by the objector is not located on Forest lands, but rather on state lands; it would be beyond the jurisdiction of the Forest Service to modify or change this location.

With regard to the objection 0117-6, the Forest Service complied with the regulations found in the CWA and in 36 CFR 228 by inclusion of monitoring measures intended to reduce uncertainty, verify modeling predictions, and identify potential problems during mine operation in a timely manner. The monitoring is further supported by analysis in multiple locations in the FEIS [PR 047511] and project records Davidson Canyon Conceptual Groundwater Monitoring Plan [PR 017316, pp. 18-19] and Davidson Canyon Conceptual Surface-Water Monitoring Plan [PR 017318, pp. 24-25]. Sufficient analysis and data is presented in the FEIS to facilitate and informed decision.

Recommended Remedy by Review Team Member (if any):

Remedy for objection issue 0036-23

The objector believes inclusion of the in-lieu fee program in this measure is not appropriate. However, the Forest Service has not received any revised HMMP or HMMP summary that dictates otherwise, and it would not be appropriate to fully remove mention of the in-lieu fee program without further details. Because the HMMP is still under negotiation, and because flexibility was built into the language of the BO, clarification could be added to the ROD that the in-lieu fee program is not the only possible use of the water at Pantano Dam.

Remedy for objection issue 0036-31

The objector believes the weather station in the pit area is incorrect; however, the project record clearly identifies that this location was originally proposed by Rosemont Copper and was not subsequently modified. This weather station would be disturbed by mining activities. Clarification could be added to the ROD to indicate that an alternative weather station location could be selected.

Review Team Member: James N Snyder, R3 EAP/WSA

Rosemont Copper Mine

Objection Review

Objection # (s): 0084-SSSR; 0090-AZGFD; 0091-PimaCounty; 0105-RCasavant

Resource Area(s): Seeps, Springs and Riparian – Effects (SSR-5)

Objection Issue:

- 0105-3: Travertine deposition is associated with one the springs in the area of interest attests to the presence of not only subsurface dissolution, but also ongoing organic and inorganic chemical and material transport. I failed to note this information in the FEIS assessment and uncertainty in the draft ROD.
- 0084-164: The proposals lack an adequate functional assessment characterizing the services performed by streams/springs and wetlands directly and indirectly impacted by the project, or of those resources at the proposed mitigation lands.
- 0090-15: The FEIS does not discuss or disclose the potential adverse effects of mine contaminants in stormwater and seepage upon riparian-dependent species and aquatic and riparian habitat in downstream watersheds.
- 0091-8: Impacts on Outstanding Arizona Waters for all mining life phases are not fully disclosed.
- 0084-163: If such (isotopic) data are available, they should be acquired, analyzed and incorporated into the revised DEIS.
- 0084-165: The FEIS failed to clarify whether the required detailed surveys of springs and seeps, and other critical areas (similar to surveys conducted on the eastern slopes of the Santa Rita Mountains within the model boundaries) were conducted within and immediately adjacent to the western model boundary, particularly within the Santa Rita and Empire mountains. The groundwater analysis area extends east of Cienega Creek, yet appears that seeps, springs, streams, wetlands and riparian areas that may lie east of Cienega Creek were not inventoried or assessed for potential effects of groundwater drawdown. The FEIS fails to adequately analyze impacts to springs and fails to consider adequate mitigation for those impacts.
- 0090-7: The FEIS statement at 548-9 that the lack of stormwater samples in Davidson Canyon or Cienega Creek prevents a comparison of mine waste rock runoff to existing water quality in the OAWs lacks a regulatory and scientific basis.
- 0084-83: The FEIS provides inadequate analysis of impacts to Cienega Creek Natural Preserve. There does not seem to be any direct response to concerns regarding the impacts of Cienega Creek Natural Preserve and its management, and there does not seem to be any meaningful analysis of the impacts to this Preserve.
- 0090-8: The data presented in Table 112 (Summary of screening analysis to identify potential problem constituents in mine runoff) predicts post mine exceedances in

stormwater runoff from mine waste rock and soil cover on downstream watersheds in terms of percentages that are not readily understandable.

Remedy Supplied by Objector (if any):

0090-15: Analyze the predicted constituents in mine-related stormwater runoff and seepage and the potential impacts on downslope/downstream riparian-dependent special status species. Discuss alternatives to mitigate or avoid the impacts.

0084-165: The USFS must provide an assessment of all the springs in the analysis area using Spring Ecosystem Assessment Protocol Levels I and II. The agency should consult with experts to determine potential impacts to springs, as well as to develop measures that could be taken to avoid, minimize, and mitigate those impacts.

0090-7: Compare predicted stormwater waste rock runoff to existing baseline water quality in the OAW sections of Davidson Canyon and Lower Cienega Creek. If stormwater data are not readily available for the ephemeral reaches of Davidson Canyon, use the existing stormwater data in Barrel Canyon as an analog.

0084-83: The USFS must thoroughly analyze impacts to Cienega Creek Natural Preserve.

0090-8: Convert the percentages in Table 112 of “problem constituents” in post mine waste rock runoff to milligrams per liter.

Law, Regulation and/or Policy:

Council on Environmental Quality (CEQ) Regulations at 40 CFR 1500-1508; Clean Water Act (CWA) [33 U.S.C. §1251 et seq. (1972)]; Arizona Water Quality Standards (Title 18 Arizona Administrative Code Chapter 11); Forest Service Mining Regulations at 36 CFR 228

Review Team Member Response:

Response to objection issue 0105-3

The objector states the FEIS lacks cave/karst information for a specific spring-area having a ‘travertine deposition’.

The word ‘travertine’ is not found in the DROD or FEIS. Travertine deposits are commonly associated with spring/cave/karst complexes. The objector is responding to a specific location of travertine deposition. An SRK Consulting memo dated August 3rd, 2012, “Professional Opinions to Assess Impacts to Cave and Karst Formations,” fully assesses cave and karst formation and refers to those ‘travertine’ deposits as ‘float’ deposits [PR 018926, pp. 33-34]. This investigation report from SRK was commissioned by the Forest. Other field evidence collected in the Rosemont area is noted here too. The discussion of the findings related to this issue can be found in the FEIS [PR 047511_3, pp. 171-172, 174-175]. Specifically, page 175 states: “In SRK’s professional opinion, the existence of caves has been assessed to the best extent possible at the current time.” A review of available information by the Coronado’s consulting geologists and

cave specialists indicated that no impacts are expected to caves. The SRK Consulting memo [PR 018926, p. 33], mentioned above, states: “While not completely negating the possibility of an undiscovered cave, SRK believes there is a low probability of a cave/karst feature at that location (CNF personnel provided SRK...with the UTM coordinates for a specific area of interest in the NE ¼, NW ¼, Section 1 in T. 18S, R. 15E on a prominent south-trending ridge overlooking Sycamore Canyon to the West).” In the event a cave is discovered, a specific mitigation measure (FS-GMP-02) has been developed and incorporated [PR 047511_6, Appendix B, p. B7-B8]

The Forest Service has a responsibility for proper disclosure of impacts under NEPA. According to 40 CFR 1502.22, the agency will include within the environmental impact statement:

- (1) incomplete or unavailable 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.

40 CFR 1502.24 states agencies shall:

- (1) assure the scientific integrity of the analyses and discussion,
- (2) describe methodologies used, and
- (3) cite references or sources used.

With regard to objector issue 0105-3, the Forest Service complied with law, regulation, and policy based on information found in the FEIS and the SRK Consulting memo “Professional Opinions to Assess Impacts to Cave and Karst Formations” [PR 018926]. Sufficient knowledge and analysis of cave/karst/spring complexes and their associated travertine (float) deposits exists to facilitate an informed decision.

Response to objection issues 0084-164 and 0084-165

The objections have a common concern of analysis adequacy concerning riparian assessment, insufficient effects data on springs, and mitigations for spring impacts.

The concept of a riparian functional assessment is discussed in the FEIS [PR 047511_3, pp. 486, 496-501, 541-547]. Development of the riparian functional assessment methodology is recorded in the project record [PR 045111 and 045377]. Riparian resources and associated issues are discussed in the DROD [PR 047504, pp. 14-15, 18, 20-22, 34-38]. The FEIS states [PR 047511_3, pp. 485-486]: “The Coronado convened a meeting of cooperating agencies (Garrett 2012e) to discuss riparian mapping needs and reconsider riparian mapping data sources subsequently selected for use in the FEIS (see the “Riparian Mapping” part of this resource section). This differs from the riparian mapping used in the DEIS.” In a meeting summary document titled, “Cooperating Agency Discussion of Riparian Mapping and Functional Assessments (28June2012)” the stated purpose of meeting is: “In response to public comments received on the Rosemont DEIS, the Forest is considering revising the methods used to analyze potential impacts to riparian vegetation due to changes in surface water or groundwater associated with mine activities. The Forest is inviting cooperating agencies with jurisdiction,

special expertise, or interest in this topic to participate in a working session to evaluate possible approaches. The intended outcome of the meeting is to inform the Forest Supervisor of 1) riparian mapping data sources, and 2) functional assessment techniques, so Jim (Forest Supervisor) can make NEPA analysis decisions going forward” [PR 045377]. The impact analysis based on this methodology is described on p. 541-547 [PR 047511_3].

Springs were specifically assessed in the FEIS both for direct effects (within the area of mine disturbance) or indirect effects (within the area of groundwater drawdown) [PR 047511_3, pp. 485-570]. Springs outside the area of groundwater drawdown, as defined by the 5-foot drawdown contour, were assumed to be not impacted and therefore were not analyzed, whether they existed on mitigation lands or otherwise. A total of 95 springs were considered for impacts [PR 017343, PR 015193, PR 013411, PR 012337, and PR 015562].

Objection 84-165 indicates that water resources were not analyzed on the west slope of the Santa Rita Mountains. This is not the case as discussed in the FEIS [PR 047511_3, p. 301]. The water resources investigated for inclusion on the west side of the Santa Ritas are summarized in a SWCA memorandum dated August 29, 2013 [PR 047004] and also included as a reference to the FEIS (SWCA 2013m).

Spring mitigation and monitoring are also included in the comprehensive mitigation and monitoring plan in the FEIS [PR 047511_6, Appendix B] including measure FS-GW-02 (water quality monitoring, pp. B17-B19), measure FS-SSR-02 (replacement water and spring monitoring, pp. B26-B27), and measure FS-BR-05 (replacement water construction and enhancement, pp. B32-B33).

With regard to objector issues 0084-164 and 0084-165, the Forest Service complied with law, regulation, and policy based on the analysis found in the FEIS [PR 047511], DEIS [PR 015781], and Cooperating Agency Discussion of Riparian Mapping and Functional Assessments (June 28, 2012) [PR 045377]. Riparian assessments and springs analysis facilitated an informed decision.

Response to objection issues 0090-15, 0091-8, 0090-7, 0084-83, and 0084-163

The objections listed above have a common concern of analysis adequacy for water quality in the riparian areas and Outstanding Arizona Waters (OAWs). The objections (0090-15; 0091-8; 0090-7; 0084-83; and 0084-163) state a lack of analysis adequacy concerning water quality and effects on riparian areas and OAWs.

This FEIS analysis must meet the regulatory requirements of the Clean Water Act (33 United States Code 1251–1376) and the objective to “restore and maintain the chemical, physical, and biological integrity of the nation’s waters”. This FEIS analysis must also analyze the requirements of Outstanding Arizona Waters (Arizona Water Quality Standards - Title 18 Arizona Administrative Code, Chapter 11).

The memo, “Revised Analysis of Surface Water Quality”, dated August 25, 2013 [PR 045677] details the revised surface water quality analysis included in the FEIS. A PAFEIS (Preliminary Administrative FEIS) was prepared by SWCA in July 2013. The PAFEIS responded to

comments from the U.S. Environmental Protection Agency (EPA) and the Arizona Department of Environmental Quality (ADEQ) on the DEIS [PR 015781]. Additional comments were received on the PAFEIS from EPA and ADEQ [PR 047453, PR 047457]. SWCA draft memorandum dated August 25, 2013 [PR 045677] details the revised surface water quality analysis included in the FEIS in response to these comments. The analysis of surface water quality included in the FEIS is responsive to and compliant with USEPA and ADEQ collaboration.

The State of Arizona has the sole authority to make a determination concerning a proposed project and potential actions that may generate a violation to the State Water Quality regulations by degrading OAWs (FEIS) [PR 047511_3, p. 503]. The aforementioned memo, “Revised Analysis of Surface Water Quality” states: “In addition to numeric standards, the OAW reaches also have an anti-degradation standard. A fundamental problem exists with any attempt at predicting impacts from the mine: without existing water quality it is an impossible task to predict whether degradation would occur. Further, in their comments ADEQ cautioned that the authority to make an anti-degradation conclusion lies with ADEQ, not the Forest Service. Therefore, it is not the goal of this analysis to attempt a full prediction of post-construction stormwater quality that would occur at the OAW reaches. The goal instead is to perform a screening level analysis that would identify and disclose potential problem areas that could occur. Again, “good faith” means that the uncertainties involved should not preclude attempting the prediction” [PR 045677, p. 2]. The involvement of EPA and ADEQ in contributing to the FEIS [PR 047511] meets the regulatory requirements of Clean Water Act (33 United States Code 1251–1376).

With respect to objection 084-163, the objector notes that isotopic data should be acquired, analyzed, and incorporated. All isotopic data that are available have been incorporated into the analysis [PR 047511_3, pp. 493, 519-520, 525, 534-536]. Isotope data are also found in the record [PR 012941 and PR 016791].

One objector requests as a remedy that the agency “Compare predicted stormwater waste rock runoff to existing baseline water quality in the OAW sections of Davidson Canyon and Lower Cienega Creek. If stormwater data are not readily available for the ephemeral reaches of Davidson Canyon, use the existing stormwater data in Barrel Canyon as an analog.” The screening analysis utilized in the FEIS to assess whether impacts could occur to the OAW sections of Davidson Canyon and Lower Cienega Creek did this, utilizing the available water quality data for Barrel Canyon and extrapolating it to represent the rest of the watershed in the absence of other stormwater data [PR 047511_3, pp. 547-553].

One objector indicates that the Cienega Creek Natural Preserve was not specifically analyzed. Physical impacts to the resources that comprise the reserve were analyzed as part of the overall FEIS impacts analysis, including riparian impacts, surface water impacts, and biological impacts.

With regard to the objections 0090-15, 0091-8, 0090-7, 0084-83, and 0084-163, the Forest Service complied with the CWA based on information found in the FEIS, DEIS, and memo, “Revised Analysis of Surface Water Quality.” The memo [PR 045677] fully addresses issues of analysis adequacy concerning water quality in the riparian areas and OAWs and the analysis

derived from this effort is contained in the FEIS with a level of scientific effort that meets the requirements of NEPA. With respect to potential impacts of surface water quality and OAWs, the analysis meets the disclosure requirements under NEPA; however, the FEIS analysis does not need to conclude that no impacts will occur, as this authority lies with ADEQ.

Response for objection issue 0090-8

The objection listed above states a concern that the analysis displayed in FEIS Table-112 is not “readily understandable.”

The technical memo, “Revised Analysis of Surface Water Quality”, dated August 25, 2013 [PR 045677, p. 9]: “Under the waste rock runoff scenario, only two analyses suggest that care should be taken with respect to downstream waters. Molybdenum (both dissolved and total) is approximately 20% higher under the post-mine scenario, and sulfate (both dissolved and total) is almost 50-100% higher. Under the soil cover runoff scenario, molybdenum and sulfate are acceptable but dissolved arsenic, iron, and sodium are elevated (up to about 20% higher), and both total and dissolved mercury are significantly elevated (200 to 1,000% higher). The high mercury is driven by one extremely high SPLP soil sample.” The FEIS [PR 047511_3, p. 553] states: “...based on discussions with ADEQ on preliminary drafts of the FEIS, it was made clear to the Coronado that the responsibility and jurisdiction for assessing whether the mine meets antidegradation criteria lie with ADEQ.”

The FEIS [PR 047511_3, p. 549] (referring to Table-112) notes: “Concentrations of several other constituents are suggested to increase, including total and dissolved fluoride, dissolved aluminum, dissolved selenium, and dissolved sodium. These increases are less than 10 percent and may not be considered significant, given the relatively great uncertainty associated with this analysis...” and “...dissolved and total mercury is substantially higher. Most waste rock samples contained mercury concentrations below detection limits (74 out of 78 samples collected), but these detection limits are higher than surface water standards and therefore are not able to be incorporated into this part of the analysis. Many or even all of these unusable samples could have very low mercury concentrations. The usable samples include one sample with a very high concentration of mercury (0.03 mg/L). Because of the small number of usable samples, this single sample has a large influence on the predictions. However, it appears to be a legitimate sample, and it still indicates a potential for degradation from stormwater interacting with soil cover.”

With regard to the objection 0090-8, the Forest Service complied with the CWA based on information found in the FEIS and memo, “Revised Analysis of Surface Water Quality” [PR 045677]. Table-112 in the FEIS [PR 047511_3, p. 549] provides the best explanation of effects to water quality by summarizing the screening analysis used to identify potential problem constituents in mine runoff.

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

Review Team Member: James N Snyder, R3-EAP/WSA