From: Greczmiel, Horst

To: "Cal Joyner (cjoyner@fs.fed.us)"; "Jim Upchurch (jupchurch01@fs.fed.us)"; Kopocis, Ken; Blumenfeld, Jared; Bromm, Susan; Rader, Cliff; Goforth, Kathleen; "Ann Acheson - CEQ (aacheson@fs.fed.us)"; "Joe Carbone (jcarbone@fs.fed.us)"; "Robert Bonnie (robert.bonnie@osec.usda.gov)"; "Meryl Harrell (meryl.harrell@osec.usda.gov)"; "Blaine, Marjorie E SPL"; "Castanon, David J SPL"; Meg.E.Gaffney- B6 ; "Dave Sire (david_sire@ios.doi.gov)"; "Deborah Rawhouser (drawhous@blm.gov)"; "Edwin Roberson"

Cc: Guzy, Gary S.; Boots, Michael J.; Patel, Manisha

Subject: Agency Comments - Deliberative - pre-decisional RE: Rosemont Mine - Deferral?

Date: Friday, December 13, 2013 6:46:44 AM

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- [redacted]
  - [redacted]
    - [redacted]
    - [redacted]

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- [redacted]
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[redacted]

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[redacted]

B5

[redacted]

# # # #

Thank you for the input, Horst

Horst Greczmiel
Associate Director for NEPA Oversight
Council on Environmental Quality
[redacted] B6 [redacted]

Please consider the environment before printing this e-mail

From: Greczmiel, Horst
Sent: Thursday, December 12, 2013 5:17 PM
To: Cal Joyner (cjoyner@fs.fed.us); Jim Upchurch (jupchurch01@fs.fed.us); Ken Kopocis (Kopocis.Ken@epa.gov); Jared Blumenfeld (blumenfeld.jared@epa.gov); Susan Bromm (Bromm.Susan@epamail.epa.gov); Cliff Rader (rader.cliff@epa.gov); Kathy Goforth (Goforth.Kathleen@epa.gov); Ann Acheson - CEQ (aacheson@fs.fed.us); Joe Carbone (jcarbone@fs.fed.us); Robert Bonnie (robert.bonnie@osec.usda.gov); Meryl Harrell (meryl.harrell@osec.usda.gov); 'Blaine, Marjorie E SPL'; 'Castanon, David J SPL'; 'Gaffney-Smith, Margaret E HQ'; Dave Sire (david_sire@ios.doi.gov); Deborah Rawhouser (drawhous@blm.gov); 'Edwin Roberson'
Subject: RE: Rosemont Mine - Deferral?

When: Friday, December 13, 2013 3:00 PM-4:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: Conf Call: 2[redacted] B6 d. Conferee passcode: [redacted]

Background:

[redacted] B5 [redacted]

From: Greczmiel, Horst
To: Cal Joyner (cjoyner@fs.fed.us); Jim Upchurch (jupchurch01@fs.fed.us); Kopocis, Ken; Blumenfeld, Jared; Bromm, Susan; Rader, Cliff; Goforth, Kathleen; Ann Acheson - CEQ (aacheson@fs.fed.us); Joe Carbone (jcarbone@fs.fed.us); Robert Bonnie (robert.bonnie@osec.usda.gov); Meryl Harrell (meryl.harrell@osec.usda.gov); "Blaine, Marjorie E SPL"; "Castanon, David J SPL"; Meg.E.Gaffney-Smith[redacted]; Dave Sire (david_sire@ios.doi.gov); Deborah Rawhouser (drawhous@blm.gov); "Edwin Roberson"
Subject: Deliberative - Attorney Client Communication RE: Rosemont Mine - Deferral?
Date: Friday, December 13, 2013 6:33:01 AM

The preliminary read-out from the legal discussions:

[redacted] B5 [redacted]

[redacted]

- [redacted]
- [redacted]

Horst Greczmiel
Associate Director for NEPA Oversight
Council on Environmental Quality
[redacted] B6 [redacted]

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From: Greczmiel, Horst
Sent: Thursday, December 12, 2013 5:17 PM
To: Cal Joyner (cjoyner@fs.fed.us); Jim Upchurch (jupchurch01@fs.fed.us); Ken Kopocis (Kopocis.Ken@epa.gov); Jared Blumenfeld (blumenfeld.jared@epa.gov); Susan Bromm (Bromm.Susan@epamail.epa.gov); Cliff Rader (rader.cliff@epa.gov); Kathy Goforth (Goforth.Kathleen@epa.gov); Ann Acheson - CEQ (aacheson@fs.fed.us); Joe Carbone (jcarbone@fs.fed.us); Robert Bonnie (robert.bonnie@osec.usda.gov); Meryl Harrell (meryl.harrell@osec.usda.gov); 'Blaine, Marjorie E SPL'; 'Castanon, David J SPL'; 'Gaffney-Smith, Margaret E HQ'; Dave Sire (david_sire@ios.doi.gov); Deborah Rawhouser (drawhous@blm.gov); 'Edwin Roberson'
Subject: RE: Rosemont Mine - Deferral?

Horst Greczmiel
Associate Director for NEPA Oversight
Council on Environmental Quality
[redacted]

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-----Original Appointment-----
From: Greczmiel, Horst
Sent: Thursday, December 12, 2013 5:16 PM
To: Cal Joyner (cjoyner@fs.fed.us); Jim Upchurch (jupchurch01@fs.fed.us); Ken Kopocis (Kopocis.Ken@epa.gov); Jared Blumenfeld (blumenfeld.jared@epa.gov); Susan Bromm (Bromm.Susan@epamail.epa.gov); Cliff Rader (rader.cliff@epa.gov); Kathy Goforth (Goforth.Kathleen@epa.gov); Ann Acheson - CEQ (aacheson@fs.fed.us); Joe Carbone (jcarbone@fs.fed.us); Robert Bonnie (robert.bonnie@osec.usda.gov); Meryl Harrell (meryl.harrell@osec.usda.gov); Blaine, Marjorie E SPL; Castanon, David J SPL; Gaffney-Smith, Margaret E HQ; Dave Sire (david_sire@ios.doi.gov); Deborah Rawhouser (drawhous@blm.gov); Edwin Roberson
Subject: Rosemont Mine - Deferral?
When: Friday, December 13, 2013 3:00 PM-4:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: Conf Call: [redacted] B6 d. Conferee passcode: [redacted] B6

Background:

[redacted]

CEQ EQUITY

[redacted]

From: Greczmiel, Horst
To: Cal Joyner (cjoyner@fs.fed.us); Jim Upchurch (jupchurch01@fs.fed.us); Kopocis, Ken; Blumenfeld, Jared; Bromm, Susan; Rader, Cliff; Goforth, Kathleen; Ann Acheson - CEQ (aacheson@fs.fed.us); Joe Carbone (jcarbone@fs.fed.us); Robert Bonnie (robert.bonnie@osec.usda.gov); Meryl Harrell (meryl.harrell@osec.usda.gov); "Blaine, Marjorie E SPL"; "Castanon, David J SPL"; Meg.E.Gaffney-Smith[redacted]; Dave Sire (david_sire@ios.doi.gov); Deborah Rawhouser (drawhous@blm.gov); "Edwin Roberson"
Subject: FR Notice 13Dec2013 RE: Rosemont Mine - Deferral?
Date: Friday, December 13, 2013 6:15:53 AM

EIS No. 20130360, Final EIS, USFS, AZ,
Rosemont Copper Project, Proposed
Mining Operation, Review Period
Ends: 01/29/2014, Contact: Mindy
Vogel 520–388–8300

http://www.gpo.gov/fdsys/pkg/FR-2013-12-13/pdf/2013-29770.pdf

Horst Greczmiel
Associate Director for NEPA Oversight
Council on Environmental Quality
[redacted] B6 [redacted]

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From: Greczmiel, Horst
Sent: Thursday, December 12, 2013 5:17 PM
To: Cal Joyner (cjoyner@fs.fed.us); Jim Upchurch (jupchurch01@fs.fed.us); Ken Kopocis (Kopocis.Ken@epa.gov); Jared Blumenfeld (blumenfeld.jared@epa.gov); Susan Bromm (Bromm.Susan@epamail.epa.gov); Cliff Rader (rader.cliff@epa.gov); Kathy Goforth (Goforth.Kathleen@epa.gov); Ann Acheson - CEQ (aacheson@fs.fed.us); Joe Carbone (jcarbone@fs.fed.us); Robert Bonnie (robert.bonnie@osec.usda.gov); Meryl Harrell (meryl.harrell@osec.usda.gov); 'Blaine, Marjorie E SPL'; 'Castanon, David J SPL'; 'Gaffney-Smith, Margaret E HQ'; Dave Sire (david_sire@ios.doi.gov); Deborah Rawhouser (drawhous@blm.gov); 'Edwin Roberson'
Subject: RE: Rosemont Mine - Deferral?

Horst Greczmiel
Associate Director for NEPA Oversight
Council on Environmental [redacted]
[redacted] B6 [redacted]

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From: Greczmiel, Horst
Sent: Thursday, December 12, 2013 5:16 PM
To: Cal Joyner (cjoyner@fs.fed.us); Jim Upchurch (jupchurch01@fs.fed.us); Ken Kopocis (Kopocis.Ken@epa.gov); Jared Blumenfeld (blumenfeld.jared@epa.gov); Susan Bromm (Bromm.Susan@epamail.epa.gov); Cliff Rader (rader.cliff@epa.gov); Kathy Goforth

(Goforth.Kathleen@epa.gov); Ann Acheson - CEQ (aacheson@fs.fed.us); Joe Carbone (jcarbone@fs.fed.us); Robert Bonnie (robert.bonnie@osec.usda.gov); Meryl Harrell (meryl.harrell@osec.usda.gov); Blaine, Marjorie E SPL; Castanon, David J SPL; Gaffney-Smith, Margaret E HQ; Dave Sire (david_sire@ios.doi.gov); Deborah Rawhouser (drawhous@blm.gov); Edwin Roberson
Subject: Rosemont Mine - Deferral?
When: Friday, December 13, 2013 3:00 PM-4:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: Conf Call: [redacted]d. Conferee passcode: [redacted]

[redacted]

CEQ EQUITY

[redacted]

From: Goforth, Kathleen
To: '[redacted]
Cc: Scott, Jeff; Rader, Cliff; Bromm, Susan
Bcc: Herrera, Angeles; Jessop, Carter; Brush, Jason; Ebbert, Laura
Subject: FW: December 13, 2013 Letter to EPA Administrator McCarthy
Date: Friday, December 13, 2013 11:33:00 AM
Attachments: 12.13.13 Ltr to Administrator McCarthy.pdf

Hi, Horst –
We just received the attached letter from the Tohono O'Odham, requesting referral of the Rosemont project. Jeff Scott asked me to forward it to you.
-Kathy

From: Blumenfeld, Jared
Sent: Friday, December 13, 2013 10:33 AM
To: Goforth, Kathleen; Scott, Jeff
Subject: Fw: December 13, 2013 Letter to EPA Administrator McCarthy

Jared Blumenfeld, EPA

From: April J. Foltz <April.Foltz@tonation-nsn.gov>
Sent: Friday, December 13, 2013 10:30:01 AM
To: jupchurch01@fs.fed.us; Blumenfeld, Jared; agsec@usda.gov
Subject: December 13, 2013 Letter to EPA Administrator McCarthy

Administrator Blumenfeld, Supervisor Upchurch and Secretary Vilsack-

Attached is the December 13, 2013 letter from the Tohono O'odham Nation to EPA Administrator Gina McCarthy regarding the proposed Rosemont Copper Project. Please contact Assistant Attorney General, Laura Berglan, at (520) 383-3410 with any questions you might have.

Respectfully-

April Foltz
Legal Assistant
Office of Attorney General
Tohono O'odham Nation
Office: 520.383.3410
Fax: 520.383.2689

This message and any included attachments are from the Tohono O'odham Nation Office of Attorney General and are intended only for the addressee(s). The information contained herein is confidential and may be attorney work product and/or subject to the attorney-client privilege. Unauthorized review, forwarding, printing, copying, distributing, or using such information is strictly prohibited and may be unlawful. If you have received this message in error, or have reason to believe you are not authorized to receive it, please promptly delete this message and notify the sender by e-mail. Thank you for your assistance.

Tohono O'odham Nation Office of the Chairman & Vice Chairwoman

COMPASSION FAITH TRADITION RESPECT
T-I:BDAG 'AMJED S-WOHOCUDA HIMDAG PI:K 'ELID

Ned Norris, Jr.
Chairman

Wavalene M. Romero
Vice Chairwoman

December 13, 2013

Gina McCarthy
Administrator
Environmental Protection Agency
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N.W.
Mail Code: 1101A
Washington, DC 20460

Via Email at McCarthy.gina@Epa.gov and U.S. Mail

Dear Ms. McCarthy:

The Tohono O'odham Nation ("Nation") writes to you to seek your assistance. The proposed Rosemont Copper Project, located in Ce:wi Duag (Santa Rita Mountains), a Traditional Cultural Place for the Tohono O'odham, appears to be bound for approval. The Nation has attempted to relay its concerns to the Forest Service regarding the Project numerous times and in numerous ways. The Nation actively participated in the National Historic Preservation Act Section 106 tribal consultation process, has held meetings with Forest Service staff, and has corresponded with Secretary Vilsack, among other activities. Ultimately, due to the Forest Service's failures to adequately address the Nation's concerns over the widespread destruction of cultural and natural resources that the Project will cause on Ce:wi Duag, the Nation chose not to sign the Section 106 Memorandum of Agreement for the Project.

The Nation has numerous concerns with this Project, the most significant of which is the destruction of cultural resource sites that are significant to the Nation and to other tribes including Ak-Chin Indian Community, Gila River Indian Community, Salt-River Maricopa Indian Community, Pascua Yaqui Tribe, Hopi Tribe, Zuni Tribe, Mescalero Apache Tribe, White Mountain Apache Tribe, San Carlos Apache Tribe, and Fort Sill Apache Tribe. Ce:wi Duag is located within the historic Papagueria, which extends over an area much wider than the current boundaries of the Nation. Under the proposed action, 85 cultural resource sites on Ce:wi Duag will be buried, destroyed, or damaged, 31 of which are known or likely to have human remains.[1] Historic villages, ancestral resting places, and resource gathering areas will all be

[1] Final Environmental Impact Statement ("FEIS") at 1021-1022.

P.O. Box 837, Sells, AZ 85634. (520)383-2028 . Fax (520)383-3379

destroyed. One of the cultural resource sites that will be adversely impacted is Huerfano Butte, which is a Traditional Cultural Place for Tohono O'odham. The butte was historically a place to make an offering en route to Ce:wi Duag and is still in use today. Two cached pots containing hundreds of turquoise and shell beads and ornaments were collected from the site, one of which is curated at the Arizona State Museum.[2] In addition to specific cultural resource sites being destroyed, 6,177 acres of traditional resource collection areas will be adversely impacted.[3] As noted in the FEIS, the "impact on Native Americans of desecration of land, springs, burials, and sacred sites" is "notable."[4] Indeed, the impact upon the Tohono O'odham Nation and other tribes is beyond "notable." The entire cultural landscape of Ce:wi Duag will be irrevocably altered. Tohono O'odham have frequented Ce:wi Duag for thousands of years to pray and gather traditional plants and other resources. If the proposed action is implemented, that tradition will be destroyed. The destruction of so many cultural resource sites simply cannot be mitigated.

The Nation is also concerned that the Forest Service has failed to consider the Project's impacts upon the natural resources in the area, most significantly, its impact upon s-o'ohi mavid (jaguar). One jaguar has been known to frequent the area. In fact, it is the only jaguar known to freely roam the United States. S-o'ohi mavid prefer wild, open terrain. The Project may have disastrous impacts upon this animal and may destroy efforts to reintroduce s-o'ohi mavid, an animal significant to the Tohono O'odham, to the area in the future.

The Nation requests that this Project be elevated to the Council on Environmental Quality ("CEQ"). The Nation feels that it has exhausted all efforts with the Forest Service and would like CEQ to weigh in on this significant Project. The Nation believes that the Project meets the criteria set out in the CEQ regulations.[5] The Project will have a severe impact upon the cultural resources of the Nation and other tribes in the area. In addition, the impact on natural resources in the area is severe. The geographical scope is quite great. Although active mining may only occur over a 20-25 year period, the impact to the land will be irreversible.[6] As set out in the FEIS, reclamation of the area is planned, however, as the Nation has first-hand knowledge, mine reclamation particularly in an arid desert environment can never replace what was destroyed. Further, the precedent that a Project of this size will set is significant. The scope of cultural resource destruction is incomparable to other recent projects in the area. The Nation is concerned that if this Project is approved with little substantive contribution allowed by the Nation, that it could set a precedent for other Projects in the future. Finally, the Nation believes that there are environmentally preferable alternatives available that would minimize the adverse impact on cultural resources and believes that the Project may not comply with national

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[2] FEIS at 1034.
[3] FEIS at 1022.
[4] *Id.*
[5] 40 C.F.R. § 1504 *et seq.*
[6] FEIS at xviii.

standards and policies. In short, the Nation believes that this Project meets the criteria set out in the regulations for referral to the CEQ and urges you to consider referring this Project.

Sincerely,

Dr. Ned Norris, Jr., Chairman

cc: Jared Blumenfeld, Administrator, EPA Region 9
Jim Upchurch, Supervisor, Coronado National Forest
Secretary Thomas Vilsack, Department of Agriculture
Honorable Raul Grijalva

From:	Goforth, Kathleen
To:	msvogel@fs.fed.us
Cc:	Carter Jessop
Subject:	FW: US EPA Comments on the Rosemont Copper Mine PAFEIS (pdf copy)
Date:	Thursday, August 15, 2013 3:14:00 PM
Attachments:	USEPA_RosemontAFEIS_CommentsTable_081513.pdf

For your records, please use the attached pdf copy of our comments.
Thank you.

Kathleen Martyn Goforth, Manager
Environmental Review Office (CED-2)
U.S. EPA, Region IX
75 Hawthorne Street
San Francisco, CA 94105
415-972-3521

From: Goforth, Kathleen
Sent: Thursday, August 15, 2013 3:02 PM
To: msvogel@fs.fed.us
Cc: Jessop, Carter; Goldmann, Elizabeth; Leidy, Robert; McKaughan, Colleen; Brush, Jason; Rivera, Shirley; Herrera, Angeles
Subject: US EPA Comments on the Rosemont Copper Mine PAFEIS

Ms. Vogel,
Attached, please find EPA's comments on the Preliminary Administrative Final Environmental Impact Statement (PAFEIS) for the proposed Rosemont Copper Mine Project. [redacted] B5 [redacted] If you have any questions regarding our comments, please contact Carter Jessop at jessop.carter @epa.gov or 415-972-3815.

Thank you.

Kathleen Goforth

Kathleen Martyn Goforth, Manager
Environmental Review Office (CED-2)
U.S. EPA, Region IX
75 Hawthorne Street
San Francisco, CA 94105
415-972-3521

DOCUMENT REVIEW COMMENT FORM — (US ENVIRONMENTAL PROTECTION AGENCY)

[redacted]

Ch	Section	Page	Line	Comment/Change requested
3	[redacted]			
3	[redacted]			

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From: Greczmiel, Horst
To: "Cal Joyner (cjoyner@fs.fed.us)"; "Jim Upchurch (jupchurch01@fs.fed.us)"; Kopocis, Ken; Blumenfeld, Jared; Bromm, Susan; Rader, Cliff; Goforth, Kathleen; "Ann Acheson - CEQ (aacheson@fs.fed.us)"; "Joe Carbone (jcarbone@fs.fed.us)"; "Robert Bonnie (robert.bonnie@osec.usda.gov)"; "Meryl Harrell (meryl.harrell@osec.usda.gov)"; "Blaine, Marjorie E SPL"; "Castanon, David J SPL"; Meg.E.Gaffney-Smith@ B6 "Dave Sire (david_sire@ios.doi.gov)"; "Deborah Rawhouser (drawhous@blm.gov)"; "Edwin Roberson"; Ann Acheson - CEQ (aacheson@fs.fed.us); Thomas_Flanagan@nps.gov; David Cottingham (David_Cottingham@fws.gov); Larry Bright (Larry_bright@fws.gov)
Cc: Guzy, Gary S.; Boots, Michael J.; Patel, Manisha
Subject: Next Steps and Agency views on Mitigation - Deliberative - pre-decisional RE: Rosemont Mine - Deferral?
Date: Monday, December 23, 2013 7:46:51 AM
Importance: High

[redacted] ll resume with a call on January 3d with USFS, [redacted]

[redacted]

[redacted] CEQ EQUITY [redacted]

[redacted]

[redacted]

CEQ EQUITY

CEQ EQUITY

n

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Thank you all and have a safe, healthy, and joy-filled holiday!

Horst Greczmiel
Associate Director for NEPA Oversight
Council on Enviro B6
3

[redacted]

Please consider the environment before printing this e-mail

From: Greczmiel, Horst
To: Rader, Cliff; "Cal Joyner (cjoyner@fs.fed.us)"; "Ann Acheson - CEQ (aacheson@fs.fed.us)"; "Joe Carbone (jcarbone@fs.fed.us)"; "Jim Upchurch (jupchurch01@fs.fed.us)"; "Brian Amme (bamme@blm.gov)"; "Kerry Rodgers (kerodgers@blm.gov)"; Kopocis, Ken; Goforth, Kathleen; "Dave Sire (david_sire@ios.doi.gov)"; "Marjorie.E.Blaine@usace.army.mil"; "David.J.Castanon@usace.army.mil"; "Deborah Rawhouser (Deborah_Rawhouser@blm.gov)"
Cc: "Robert Bonnie (robert.bonnie@osec.usda.gov)"; Giles-AA, Cynthia; Guzy, Gary S.; Blumenfeld, Jared; Meg.E.Gaffney-Smith[redacted]l; "Chip Smith (G[redacted]"; "Meryl Harrell (meryl.harrell@osec.usda.gov)"; "Manisha Patel[redacted]"; Boots, Michael J.; Crook, Lowry
Subject: RE: Reminder RE: Rosemont Mine Update
Date: Monday, December 09, 2013 11:15:55 AM

[redacted] I will have a limited timeframe to consider, digest, and share your input.

Thank you, Horst

Horst Greczmiel
Associate Director for NEPA Oversight
Council on Environmental Quality
[redacted]

Please consider the environment before printing this e-mail

-----Original Message-----
From: Greczmiel, Horst
Sent: Monday, December 09, 2013 11:56 AM
To: 'Rader, Cliff'; 'Cal Joyner (cjoyner@fs.fed.us)'; 'Ann Acheson - CEQ (aacheson@fs.fed.us)'; 'Joe Carbone (jcarbone@fs.fed.us)'; 'Jim Upchurch (jupchurch01@fs.fed.us)'; 'Brian Amme (bamme@blm.gov)'; 'Kerry Rodgers (kerodgers@blm.gov)'; 'Ken Kopocis (Kopocis.Ken@epa.gov)'; 'Kathy Goforth (Goforth.Kathleen@epa.gov)'; 'Dave Sire (david_sire@ios.doi.gov)'; 'Marjorie.E.Blaine[redacted]; 'David.J.Castanon[redacted]'Deborah Rawhouser (Deborah_Rawhouser@blm.gov)'
Cc: 'Robert Bonnie (robert.bonnie@osec.usda.gov)'; 'Cynthia Giles (Giles-AA.Cynthia@epamail.epa.gov)'; Guzy, Gary S.; 'Jared Blumenfeld (blumenfeld.jared@epa.gov)'; 'Meg Gaffney-Smith ([redacted] 'Chip Smith ([redacted]'; 'Meryl Harrell (meryl.harrell@osec.usda.gov)'; 'Manisha Patel (m[redacted])'; Boots, Michael J.; Crook, Lowry
Subject: Reminder RE: Rosemont Mine Update
Importance: High

The legal beagles are gathering at 1pm today.

The program and environmental staffs are preparing [redacted]

Thank you, Horst

Horst Greczmiel
Associate Director for NEPA Oversight
Council on Environmental Quality
[redacted]

Please consider the environment before printing this e-mail

-----Original Message-----
From: Greczmiel, Horst
Sent: Sunday, December 08, 2013 8:06 AM
To: 'Rader, Cliff'; Cal Joyner (cjoyner@fs.fed.us); Ann Acheson - CEQ (aacheson@fs.fed.us); Joe Carbone (jcarbone@fs.fed.us); Jim Upchurch (jupchurch01@fs.fed.us); Brian Amme (bamme@blm.gov); Kerry Rodgers (kerodgers@blm.gov); Ken Kopocis (Kopocis.Ken@epa.gov); Kathy Goforth (Goforth.Kathleen@epa.gov); Dave Sire (david_sire@ios.doi.gov); 'Marjorie.E.Blaine[redacted] 'David.J.Castanon[redacted] Deborah Rawhouser (Deborah_Rawhouser@blm.gov)
Cc: Robert Bonnie (robert.bonnie@osec.usda.gov); Cynthia Giles (Giles-AA.Cynthia@epamail.epa.gov); Guzy, Gary S.; Jared Blumenfeld (blumenfeld.jared@epa.gov); Meg Gaffney-Smith (meg.e.gaffney-smith@usace.army.mil); Chip Smith (C[redacted]); Meryl Harrell (meryl.harrell@osec.usda.gov); Manisha Patel (m[redacted]); Boots, Michael J.; Crook, Lowry
Subject: Rosemont Mine Update
Importance: High

[redacted] CEQ EQUITY [redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

Thank you, Horst

Horst Greczmiel
Associate Director for NEPA Oversight
Council on Environmental Quality
[redacted] B6 [redacted]

Please consider the environment before printing this e-mail

From: Greczmiel, Horst
To: Cal Joyner (cjoyner@fs.fed.us); Jim Upchurch (jupchurch01@fs.fed.us); Kopocis, Ken; Blumenfeld, Jared; Bromm, Susan; Rader, Cliff; Goforth, Kathleen; Ann Acheson - CEQ (aacheson@fs.fed.us); Joe Carbone (jcarbone@fs.fed.us); Robert Bonnie (robert.bonnie@osec.usda.gov); Meryl Harrell (meryl.harrell@osec.usda.gov); "Blaine, Marjorie E SPL"; "Castanon, David J SPL"; Meg.E.Gaffney-S[redacted] B6 Dave Sire (david_sire@ios.doi.gov); Deborah Rawhouser (drawhous@blm.gov); "Edwin Roberson"
Subject: RE: Rosemont Mine - Deferral?
Date: Thursday, December 12, 2013 2:17:36 PM

Horst Greczmiel
Associate Director for NEPA Oversight
Council on Environmental Quality
[redacted] B6 [redacted]

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From: Greczmiel, Horst
Sent: Thursday, December 12, 2013 5:16 PM
To: Cal Joyner (cjoyner@fs.fed.us); Jim Upchurch (jupchurch01@fs.fed.us); Ken Kopocis (Kopocis.Ken@epa.gov); Jared Blumenfeld (blumenfeld.jared@epa.gov); Susan Bromm (Bromm.Susan@epamail.epa.gov); Cliff Rader (rader.cliff@epa.gov); Kathy Goforth (Goforth.Kathleen@epa.gov); Ann Acheson - CEQ (aacheson@fs.fed.us); Joe Carbone (jcarbone@fs.fed.us); Robert Bonnie (robert.bonnie@osec.usda.gov); Meryl Harrell (meryl.harrell@osec.usda.gov); Blaine, Marjorie E SPL; Castanon, David J SPL; Gaffney-Smith, Margaret E HQ; Dave Sire (david_sire@ios.doi.gov); Deborah Rawhouser (drawhous@blm.gov); Edwin Roberson
Subject: Rosemont Mine - Deferral?
When: Friday, December 13, 2013 3:00 PM-4:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: Conf Call: 2[redacted] d. Conferee passcode: [redacted]

[redacted]
CEQ EQUITY
[redacted]

From:	Greczmiel, Horst
To:	Goforth, Kathleen
Cc:	Marshall, Tom; Rader, Cliff; Campbell, Rich; Hagler, Tom
Subject:	RE: Rosemont Mine follow up
Date:	Tuesday, November 19, 2013 3:49:39 AM

Thank you Kathy.

From: Goforth, Kathleen [mailto:Goforth.Kathleen@epa.gov]
Sent: Monday, November 18, 2013 8:51 PM
To: Greczmiel, Horst
Cc: Marshall, Tom; Rader, Cliff; Campbell, Rich; Hagler, Tom
Subject: Rosemont Mine follow up

Horst –

[redacted]

B5

[redacted]

Please do not hesitate to contact me if I can be of further assistance.

- Kathy

Kathleen Martyn Goforth, Manager
Environmental Review Office (CED-2)
U.S. EPA, Region IX
75 Hawthorne Street
San Francisco, CA 94105
415-972-3521

From:	Goforth, Kathleen
To:	Greczmiel, Horst
Cc:	Scott, Jeff; Blumenfeld, Jared; Herrera, Angeles
Subject:	RE: Rosemont
Date:	Wednesday, December 04, 2013 1:45:26 PM

Horst -
Thank you. I will participate on the call. Most of our senior managers will be in transit at that time; however, Jeff Scott may also be able to participate.
-Kathy

From: Greczmiel, Horst <[redacted] B6
Sent: Wednesday, December 04, 2013 12:08 PM
To: Goforth, Kathleen
Cc: Blumenfeld, Jared; Rader, Cliff; kkopocis@epa.gov
Subject: Rosemont

Kathy,
To follow-up on my voice mail, I will be convening the Rosemont meeting at 3pm (eastern) tomorrow, Dec 5th. Call-in information is forthcoming. Please share with any colleagues that should join you and EPA HQ (Cliff and Ken Kopocis).
Thank you, Horst

Horst Greczmiel
Associate Director for NEPA Oversight
Council on Environmental Quality
[redacted] B6

Please consider the environment before printing this e-mail

From: Greczmiel, Horst
To: "Cal Joyner (cjoyner@fs.fed.us)"; "Jim Upchurch (jupchurch01@fs.fed.us)"; Kopocis, Ken; Blumenfeld, Jared; Bromm, Susan; Rader, Cliff; Goforth, Kathleen; "Ann Acheson - CEQ (aacheson@fs.fed.us)"; "Joe Carbone (jcarbone@fs.fed.us)"; "Robert Bonnie (robert.bonnie@osec.usda.gov)"; "Meryl Harrell (meryl.harrell@osec.usda.gov)"; "Blaine, Marjorie E SPL"; "Castanon, David J SPL"; Meg.E.Gaffney-[redacted]; "Dave Sire (david_sire@ios.doi.gov)"; "Deborah Rawhouser (drawhous@blm.gov)"; "Edwin Roberson"
Cc: Guzy, Gary S.; Boots, Michael J.; Patel, Manisha
Subject: RE: Tomorrow 3pm Call on Rosemont - Background and Agenda: Deliberative and Pre-Decisional
Date: Friday, December 20, 2013 11:56:08 AM

[redacted]

Horst Greczmiel
Associate Director for NEPA Oversight
Council on Environmental Quality
[redacted]

Please consider the environment before printing this e-mail

From: Greczmiel, Horst
Sent: Thursday, December 19, 2013 11:44 AM
To: Cal Joyner (cjoyner@fs.fed.us); Jim Upchurch (jupchurch01@fs.fed.us); Ken Kopocis (Kopocis.Ken@epa.gov); Jared Blumenfeld (blumenfeld.jared@epa.gov); Susan Bromm (Bromm.Susan@epamail.epa.gov); Cliff Rader (rader.cliff@epa.gov); Kathy Goforth (Goforth.Kathleen@epa.gov); Ann Acheson - CEQ (aacheson@fs.fed.us); Joe Carbone (jcarbone@fs.fed.us); Robert Bonnie (robert.bonnie@osec.usda.gov); Meryl Harrell (meryl.harrell@osec.usda.gov); 'Blaine, Marjorie E SPL'; 'Castanon, David J SPL'; 'Gaffney-Smith, Margaret E HQ'; Dave Sire (david_sire@ios.doi.gov); Deborah Rawhouser (drawhous@blm.gov); 'Edwin Roberson'
Cc: Guzy, Gary S.; Boots, Michael J.; Patel, Manisha
Subject: Tomorrow 3pm Call on Rosemont - Background and Agenda: Deliberative and Pre-Decisional

Further Background:

[redacted]

[redacted]

[redacted]

[redacted]

CEQ EQUITY

[redacted]

[redacted]

[redacted]

Horst Greczmiel
Associate Director for NEPA Oversight
Council on Environmental Quality
[redacted] B6 [redacted]

Please consider the environment before printing this e-mail

From: Goforth, Kathleen
To: "Greczmiel, Horst"
Cc: Jessop, Carter; Dunning, Connell
Subject: RE: Upcoming deadlines and FW: December 13, 2013 Letter to EPA Administrator McCarthy
Date: Friday, December 13, 2013 2:37:00 PM

Thank you, Horst, this is very helpful.
Since I will be on leave for a couple weeks, please add Carter Jessop and Connell Dunning to your Rosemont email and meeting invitations lists. Carter is the lead NEPA Reviewer of the Rosemont EIS, and Connell will be acting for me during the week of 12/30.
Thank you -
-Kathy

Kathleen Martyn Goforth, Manager
Environmental Review Office (CED-2)
U.S. EPA, Region IX
75 Hawthorne Street
San Francisco, CA 94105
415-972-3521

From: Greczmiel, Horst [mailto: B6 [redacted]
Sent: Friday, December 13, 2013 1:29 PM
To: Cal Joyner (cjoyner@fs.fed.us); Jim Upchurch (jupchurch01@fs.fed.us); Kopocis, Ken; Blumenfeld, Jared; Bromm, Susan; Rader, Cliff; Goforth, Kathleen; Ann Acheson - CEQ (aacheson@fs.fed.us); Joe Carbone (jcarbone@fs.fed.us); Robert Bonnie (robert.bonnie@osec.usda.gov); Meryl Harrell (meryl.harrell@osec.usda.gov); 'Blaine, Marjorie E SPL'; 'Castanon, David J SPL'; Meg.E.Gaffney- B6 [redacted] l; Dave Sire (david_sire@ios.doi.gov); Deborah Rawhouser (drawhous@blm.gov); 'Edwin Roberson'
Cc: Guzy, Gary S.; Boots, Michael J.; Patel, Manisha
Subject: Upcoming deadlines and FW: December 13, 2013 Letter to EPA Administrator McCarthy
Importance: High

[redacted]

[redacted]

CEQ EQUITY [redacted]

Regards, Horst

Horst Greczmiel
Associate Director for NEPA Oversight
Council on Environmental Quality
[redacted] B6

Please consider the environment before printing this e-mail

From: Goforth, Kathleen [mailto:Goforth.Kathleen@epa.gov]
Sent: Friday, December 13, 2013 2:34 PM
To: Greczmiel, Horst
Cc: Scott, Jeff; Rader, Cliff; Bromm, Susan
Subject: FW: December 13, 2013 Letter to EPA Administrator McCarthy

Hi, Horst –
We just received the attached letter from the Tohono O'Odham, requesting referral of the Rosemont project. Jeff Scott asked me to forward it to you.
-Kathy

From: Blumenfeld, Jared
Sent: Friday, December 13, 2013 10:33 AM
To: Goforth, Kathleen; Scott, Jeff
Subject: Fw: December 13, 2013 Letter to EPA Administrator McCarthy

Jared Blumenfeld, EPA

From: April J. Foltz <April.Foltz@tonation-nsn.gov>
Sent: Friday, December 13, 2013 10:30:01 AM
To: jupchurch01@fs.fed.us; Blumenfeld, Jared; agsec@usda.gov
Subject: December 13, 2013 Letter to EPA Administrator McCarthy

Administrator Blumenfeld, Supervisor Upchurch and Secretary Vilsack-

Attached is the December 13, 2013 letter from the Tohono O'odham Nation to EPA Administrator Gina McCarthy regarding the proposed Rosemont Copper Project. Please contact Assistant Attorney General, Laura Berglan, at (520) 383-3410 with any questions you might have.

Respectfully-

April Foltz
Legal Assistant
Office of Attorney General
Tohono O'odham Nation
Office: 520.383.3410
Fax: 520.383.2689

This message and any included attachments are from the Tohono O'odham Nation Office of Attorney General and are intended only for the addressee(s). The information contained

herein is confidential and may be attorney work product and/or subject to the attorney-client privilege. Unauthorized review, forwarding, printing, copying, distributing, or using such information is strictly prohibited and may be unlawful. If you have received this message in error, or have reason to believe you are not authorized to receive it, please promptly delete this message and notify the sender by e-mail. Thank you for your assistance.

From:	Greczmiel, Horst
To:	Schultz, Frances
Cc:	Scott, Jeff; Herrera, Angeles; Goforth, Kathleen; Jessop, Carter; Brush, Jason
Subject:	Re: Contact information for key federal officials involved with the Rosemont Copper Mine Project
Date:	Friday, November 15, 2013 4:13:46 PM

Thank you - I have what I need for now.

From: Schultz, Frances [mailto:Schultz.Frances@epa.gov]
Sent: Friday, November 15, 2013 03:55 PM Eastern Standard Time
To: Greczmiel, Horst
Cc: Scott, Jeff <Scott.Jeff@epa.gov>; Herrera, Angeles <Herrera.Angeles@epa.gov>; Goforth, Kathleen <Goforth.Kathleen@epa.gov>; Jessop, Carter <JESSOP.CARTER@EPA.GOV>; Brush, Jason <Brush.Jason@epa.gov>
Subject: Contact information for key federal officials involved with the Rosemont Copper Mine Project

Hello, Horst,
Thanks very much for the call today. Here is the contact information we promised you. We are gathering availability for a call with the attorneys next week. Please let me know if there is anything further I or any of our folks can help with before then (415-972-3297).

Contacts:

US Forest Service
Jim Upchurch, Forest Supervisor, Coronado National Forest – (520) 388-8306 (personal cell phone: 520-444-4034); jupchurch01@fs.fed.us

Note: Mr. Upchurch would likely be the most appropriate field-level official. His immediate superior is the USFS' Regional Forester for the Southwest Region. His name and contact is: Cal Joyner, Regional Forester, USFS Region 3 – (505) 842-3300 ; cjoyner@fs.fed.us

US Army Corps of Engineers
Colonel Kimberly M. Colloton, LA District Commander – [redacted]
[redacted] B6 .

Bureau of Land Management
Ray Suazo, BLM Arizona State Director – (602) 417-9500 ; rmsuazo@blm.gov

From: Upchurch, Jim -FS
To: Scott, Jeff
Cc: Goforth, Kathleen; Blumenfeld, Jared; Jessop, Carter; Bromm, Susan; Rader, Cliff; Kopocis, Ken; Joyner, Calvin -FS; Meza, Dan -FS; Raymond Suazo; Carter, Karen M -FS
Subject: Re: Proposed Talking point for ongoing CEQ discussions for media inquires
Date: Saturday, December 14, 2013 7:33:39 AM

Thanks Jeff. [redacted] Jim

Sent from my iPhone

On Dec 13, 2013, at 5:50 PM, "Scott, Jeff" <Scott.Jeff@epa.gov> wrote:

Jim-

Thanks for putting this together and you and your team's continued efforts to work with us. [redacted]

Thanks for the opportunity to provide input and have a great weekend.

Best

Jeff

Jeff Scott
Director, Waste Management Division &
Communites & Ecosystems Division
EPA Region 9
75 Hawthorne St
San Francisco, CA 94105

Phone: (415) 972-3311
Fax: (415) 947-3530

From: Upchurch, Jim -FS <jupchurch01@fs.fed.us>
Sent: Friday, December 13, 2013 2:15:35 PM
To: Joyner, Calvin -FS; Upchurch, Jim -FS; Kopocis, Ken; Blumenfeld, Jared; Bromm, Susan; Rader, Cliff; Raymond Suazo; Carter, Karen M -FS; Acheson, Ann -FS
Subject: Proposed Talking point for ongoing CEQ discussions for media inquires

[redacted]

[redacted]

[redacted]

USFS EQUITY

[redacted]

Jim Upchurch
Forest Supervisor
Coronado National Forest
300 West Congress
Tucson, AZ 85701
Office: 520-388-8306
Cell: 520-444-4034

This electronic message contains information generated by the USDA solely for the intended recipients. Any unauthorized interception of this message or the use or disclosure of the information it contains may violate the law and subject the violator to civil or criminal penalties. If you believe you have received this message in error, please notify the sender and delete the email immediately.

From:	Greczmiel, Horst
To:	Goforth, Kathleen
Cc:	Scott, Jeff; Blumenfeld, Jared; Herrera, Angeles
Subject:	Re: Rosemont
Date:	Wednesday, December 04, 2013 1:46:52 PM

TY!

From: Goforth, Kathleen [mailto:Goforth.Kathleen@epa.gov]
Sent: Wednesday, December 04, 2013 04:45 PM Eastern Standard Time
To: Greczmiel, Horst
Cc: Scott, Jeff <Scott.Jeff@epa.gov>; Blumenfeld, Jared <BLUMENFELD.JARED@EPA.GOV>; Herrera, Angeles <Herrera.Angeles@epa.gov>
Subject: RE: Rosemont

Horst -
Thank you. I will participate on the call. Most of our senior managers will be in transit at that time; however, Jeff Scott may also be able to participate.
-Kathy

From: Greczmiel, Horst [redacted] B6 >
Sent: Wednesday, December 04, 2013 12:08 PM
To: Goforth, Kathleen
Cc: Blumenfeld, Jared; Rader, Cliff; kkopocis@epa.gov
Subject: Rosemont

Kathy,
To follow-up on my voice mail, I will be convening the Rosemont meeting at 3pm (eastern) tomorrow, Dec 5th. Call-in information is forthcoming. Please share with any colleagues that should join you and EPA HQ (Cliff and Ken Kopocis).
Thank you, Horst

Horst Greczmiel
Associate Director for NEPA Oversight
Council on Environmental Quality
[redacted]

Please consider the environment before printing this e-mail

From:	Goforth, Kathleen
To:	Horst Greczmiel
Subject:	Re: Rosemont
Date:	Wednesday, December 04, 2013 5:44:48 PM

From: Greczmiel, Horst <[redacted] B6 >
Sent: Wednesday, December 04, 2013 1:46:47 PM
To: Goforth, Kathleen
Cc: Scott, Jeff; Blumenfeld, Jared; Herrera, Angeles
Subject: Re: Rosemont

TY!

From: Goforth, Kathleen [mailto:Goforth.Kathleen@epa.gov]
Sent: Wednesday, December 04, 2013 04:45 PM Eastern Standard Time
To: Greczmiel, Horst
Cc: Scott, Jeff <Scott.Jeff@epa.gov>; Blumenfeld, Jared <BLUMENFELD.JARED@EPA.GOV>; Herrera, Angeles <Herrera.Angeles@epa.gov>
Subject: RE: Rosemont

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From: Greczmiel, Horst [redacted] B6 >
Sent: Wednesday, December 04, 2013 12:08 PM
To: Goforth, Kathleen
Cc: Blumenfeld, Jared; Rader, Cliff; kkopocis@epa.gov
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Thank you, Horst

Horst Greczmiel
Associate Director for NEPA Oversight
Council on Environmental Quality
[redacted] B6

Please consider the environment before printing this e-mail

From: Greczmiel, Horst
To: Goforth, Kathleen
Cc: Scott, Jeff; Herrera, Angeles; Brush, Jason; Jessop, Carter; Blumenfeld, Jared; Diamond, Jane
Subject: Re: Update re Region 9 participants on Rosemont call
Date: Wednesday, December 04, 2013 5:35:34 PM

Thank you for pulling together the team - [redacted] CEQ EQUITY [redacted]

Much appreciated, Horst

From: Goforth, Kathleen [mailto:Goforth.Kathleen@epa.gov]
Sent: Wednesday, December 04, 2013 08:32 PM Eastern Standard Time
To: Greczmiel, Horst
Cc: Scott, Jeff <Scott.Jeff@epa.gov>; Herrera, Angeles <Herrera.Angeles@epa.gov>; Brush, Jason <Brush.Jason@epa.gov>; Jessop, Carter <JESSOP.CARTER@EPA.GOV>; Blumenfeld, Jared <BLUMENFELD.JARED@EPA.GOV>; Diamond, Jane <Diamond.Jane@epa.gov>
Subject: Update re Region 9 participants on Rosemont call

The following EPA Region 9 individuals will be on tomorrow's call:
Jeff Scott, Director Communities and Ecosystems and Waste Divisions
Angeles Herrera, Associate Division Director, Communities and Ecosystems Division
Kathleen Goforth, Manager, Environmental Review Office
Jason Brush, Manager, Wetlands Office
Carter Jessop, Lead NEPA Reviewer for Rosemont project

From: Greczmiel, Horst [redacted] B6 v>
Sent: Wednesday, December 04, 2013 1:46:47 PM
To: Goforth, Kathleen
Cc: Scott, Jeff; Blumenfeld, Jared; Herrera, Angeles
Subject: Re: Rosemont

TY!

From: Goforth, Kathleen [mailto:Goforth.Kathleen@epa.gov]
Sent: Wednesday, December 04, 2013 04:45 PM Eastern Standard Time
To: Greczmiel, Horst
Cc: Scott, Jeff <Scott.Jeff@epa.gov>; Blumenfeld, Jared <BLUMENFELD.JARED@EPA.GOV>; Herrera, Angeles <Herrera.Angeles@epa.gov>
Subject: RE: Rosemont

Horst -
Thank you. I will participate on the call. Most of our senior managers will be in transit at that time; however, Jeff Scott may also be able to participate.
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From: Greczmiel, Horst [redacted] B6 >
Sent: Wednesday, December 04, 2013 12:08 PM
To: Goforth, Kathleen
Cc: Blumenfeld, Jared; Rader, Cliff; kkopocis@epa.gov

Subject: Rosemont

Kathy,
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Thank you, Horst

Horst Greczmiel
Associate Director for NEPA Oversight
Council on Environmental Quality
2[redacted]
[redacted]B6[redacted]

Please consider the environment before printing this e-mail

From:	Goforth, Kathleen
To:	Vogel, Mindy S -FS
Cc:	Jessop, Carter
Bcc:	Herrera, Angeles; Rader, Cliff
Subject:	Re: responses to PA FEIS
Date:	Tuesday, August 20, 2013 2:20:32 PM

Mindy-
We have no objection to having our comments posted on the Forest Service's website. Thanks for asking.
- Kathleen Goforth
Manager, Environmental Review Office
U. S. EPA Region 9

From: Vogel, Mindy S -FS <msvogel@fs.fed.us>
Sent: Tuesday, August 20, 2013 4:02:39 PM
To: 'brocious@base.sao.arizona.edu'; 'cbeck@azdot.gov'; 'mhont@azdot.gov'; 'daniel_j_moore@blm.gov'; 'dt1@azdeq.gov'; 'David.Jacobs@azag.gov'; falco@cfa.harvard.edu; 'gfleming@asmi.az.gov'; 'Julia.Fonseca@pima.gov'; 'Nicole.Fyffe@pima.gov'; JWindes@azgfd.gov; 'twade@azgfd.gov'; 'karen.howe@tonation-nsn.gov'; 'peter.steere@tonation-nsn.gov'; 'david.stine.1@ang.af.mil'; 'safabritz@azwater.gov'; 'lee.allison@azgs.az.gov'; 'Leslie.Ethen@tucsonaz.gov'; 'nicole.ewing-gavin@tucsonaz.gov'; 'LSwartzbaugh@asmi.az.gov'; 'Marjorie.E.Blaine@usace.army.mil'; jason_douglas@fws.gov; 'rcasavant@azstateparks.gov'; 'rsejkora@azstateparks.gov'; 'ohenderson@ci.sahuarita.az.us'; 'scott_stonum@nps.gov'; darla_sidles@nps.gov; 'jessop.carter@epa.gov'; 'goforth.kathleen@epa.gov'; jean_calhoun@fws.gov; leenhout@usgs.gov; saleake@usgs.gov; jphoffma@usgs.gov; kudall@ci.sahuarita.az.us
Cc: Upchurch, Jim -FS; Kingsbury, Jamie -FS; Everson, Beverley A -FS; cgarrett@swca.com; mpolm@swca.com; tchute99@gmail.com; Linden, Michael A -FS; Cordts, Robert -FS
Subject: responses to PA FEIS

To all the cooperating agencies:

The Forest Service greatly appreciates all the time and effort you put into reviewing the PA FEIS for the Rosemont Copper project. We are reviewing all the comments at this time and may contact you with questions if necessary.

Please be aware, the FS has been receiving FOIA requests for all the cooperating agency comments. We are contemplating posting all the comments on the web to alleviate the need for additional FOIAs. Please let me know if your agency has a concern regarding the release of your comments and I will pass those along to our FOIA coordinators to review whether or not the can be exempt from the process.

Thanks you!

This electronic message contains information generated by the USDA solely for the intended recipients. Any unauthorized interception of this message or the use or disclosure of the information it contains may violate the law and subject the violator to civil or criminal penalties. If you believe you have received this message in error, please notify the sender and delete the email immediately.

From: Greczmiel, Horst
To: Rader, Cliff; "Cal Joyner (cjoyner@fs.fed.us)"; "Ann Acheson - CEQ (aacheson@fs.fed.us)"; "Joe Carbone (jcarbone@fs.fed.us)"; "Jim Upchurch (jupchurch01@fs.fed.us)"; "Brian Amme (bamme@blm.gov)"; "Kerry Rodgers (kerodgers@blm.gov)"; Kopocis, Ken; Goforth, Kathleen; "Dave Sire (david_sire@ios.doi.gov)"; "Marjorie.E.Blaine@[redacted] B6 ; "David.J.Castanon[redacted]; "Deborah Rawhouser (Deborah_Rawhouser@blm.gov)"
Cc: "Robert Bonnie (robert.bonnie@osec.usda.gov)"; Giles-AA, Cynthia; Guzy, Gary S.; Blumenfeld, Jared; Meg.E.Gaffney-Smith[redacted]; "Chip Smith (Ch[redacted] B6 ; "Meryl Harrell (meryl.harrell@osec.usda.gov)"; "Manisha Patel ([redacted]"; Boots, Michael J.; Crook, Lowry
Subject: Reminder RE: Rosemont Mine Update
Date: Monday, December 09, 2013 8:55:47 AM
Importance: High

The legal beagles are gathering at 1pm today.

[redacted] CEQ EQUITY [redacted]

Thank you, Horst

Horst Greczmiel
Associate Director for NEPA Oversight
Council on Environmental Quality
[redacted] B6 [redacted]

Please consider the environment before printing this e-mail

-----Original Message-----
From: Greczmiel, Horst
Sent: Sunday, December 08, 2013 8:06 AM
To: 'Rader, Cliff'; Cal Joyner (cjoyner@fs.fed.us); Ann Acheson - CEQ (aacheson@fs.fed.us); Joe Carbone (jcarbone@fs.fed.us); Jim Upchurch (jupchurch01@fs.fed.us); Brian Amme (bamme@blm.gov); Kerry Rodgers (kerodgers@blm.gov); Ken Kopocis (Kopocis.Ken@epa.gov); Kathy Goforth (Goforth.Kathleen@epa.gov); Dave Sire (david_sire@ios.doi.gov); 'Marjorie.E.Blaine@usace.army.mil'; 'David.J.Castanon@usace.army.mil'; Deborah Rawhouser (Deborah_Rawhouser@blm.gov)
Cc: Robert Bonnie (robert.bonnie@osec.usda.gov); Cynthia Giles (Giles-AA.Cynthia@epamail.epa.gov); Guzy, Gary S.; Jared Blumenfeld (blumenfeld.jared@epa.gov); Meg Gaffney-Smith ([redacted] Chip Smith (C[redacted]); Meryl Harrell (meryl.harrell@osec.usda.gov); Manisha Patel [redacted]; Boots, Michael J.; Crook, Lowry
Subject: Rosemont Mine Update
Importance: High

My appreciation to those able to attend or participate in our meeting last week. [redacted]

[redacted] CEQ E[redacted]

[redacted] CEQ EQUITY [redacted]

[redacted]

[redacted]

Please contact me if you have any questions or concerns regarding our next steps.

Thank you, Horst

Horst Greczmiel
Associate Director for NEPA Oversight
Council on Environmental Quality
[redacted] B6

Please consider the environment before printing this e-mail

From: Greczmiel, Horst
To: Rader, Cliff; Cal Joyner (cjoyner@fs.fed.us); Ann Acheson - CEQ (aacheson@fs.fed.us); Joe Carbone (jcarbone@fs.fed.us); Jim Upchurch (jupchurch01@fs.fed.us); Brian Amme (bamme@blm.gov); Kerry Rodgers (kerodgers@blm.gov); Kopocis, Ken; Goforth, Kathleen; Dave Sire (david_sire@ios.doi.gov); "Marjorie.E.Blaine[redacted]; "David.J.Castanon@[redacted]"; Deborah Rawhouser (Deborah_Rawhouser@blm.gov)
Cc: Robert Bonnie (robert.bonnie@osec.usda.gov); Giles-AA, Cynthia; Guzy, Gary S.; Blumenfeld, Jared; Meg.E.Gaffney-Smith@[redacted] Chip Smith ([redacted]); Meryl Harrell (meryl.harrell@osec.usda.gov); Manisha Patel ([redacted]; Boots, Michael J.; Crook, Lowry
Subject: Rosemont Mine Update
Date: Sunday, December 08, 2013 5:06:15 AM
Importance: High

[redacted]

CEQ EQUITY

[redacted]

[redacted]

[redacted]

[redacted]

Please contact me if you have any questions or concerns regarding our next steps.

Thank you, Horst

Horst Greczmiel
Associate Director for NEPA Oversight
Council on Environmental Quality
[redacted]

Please consider the environment before printing this e-mail

From: Goforth, Kathleen
To: [redacted] B6 [redacted] Campbell, Rich; Hagler, Tom
Bcc: Brush, Jason; Jessop, Carter; Herrera, Angeles
Subject: Rosemont Mine follow up
Date: Monday, November 18, 2013 5:51:00 PM

Horst –

[redacted] B5 [redacted]

[redacted]

Please do not hesitate to contact me if I can be of further assistance.

- Kathy

Kathleen Martyn Goforth, Manager
Environmental Review Office (CED-2)
U.S. EPA, Region IX
75 Hawthorne Street
San Francisco, CA 94105
415-972-3521

From:	Greczmiel, Horst
To:	Goforth, Kathleen
Cc:	Blumenfeld, Jared; Rader, Cliff; kkopocis@epa.gov
Subject:	Rosemont
Date:	Wednesday, December 04, 2013 12:08:39 PM
Importance:	High

Kathy,

To follow-up on my voice mail, I will be convening the Rosemont meeting at 3pm (eastern) tomorrow, Dec 5th. Call-in information is forthcoming. Please share with any colleagues that should join you and EPA HQ (Cliff and Ken Kopocis).

Thank you, Horst

Horst Greczmiel
Associate Director for NEPA Oversight
Council on Environmental Quality
B6 [redacted]

Please consider the environment before printing this e-mail

From: Greczmiel, Horst

To: Cal Joyner (cjoyner@fs.fed.us); Jim Upchurch (jupchurch01@fs.fed.us); Kopocis, Ken; Blumenfeld, Jared; Bromm, Susan; Rader, Cliff; Goforth, Kathleen; Ann Acheson - CEQ (aacheson@fs.fed.us); Joe Carbone (jcarbone@fs.fed.us); Robert Bonnie (robert.bonnie@osec.usda.gov); Meryl Harrell (meryl.harrell@osec.usda.gov); "Blaine, Marjorie E SPL"; "Castanon, David J SPL"; Meg.E.Gaffney-S[redacted] Dave Sire (david_sire@ios.doi.gov); Deborah Rawhouser (drawhous@blm.gov); "Edwin Roberson"

B6

Cc: Guzy, Gary S.; Boots, Michael J.; Patel, Manisha

Subject: Tomorrow 3pm Call on Rosemont - Background and Agenda: Deliberative and Pre-Decisional

Date: Thursday, December 19, 2013 8:44:42 AM

Attachments: Letter to Colonel Colloton re EPA Evaluation - 13Dec2013.pdf
Rosemont.404Mitigation.EPA.assessment[1].pdf

Further Background:

1. Attached is an electronic copy of Rosemont's response to the EPA Evaluation along with a copy of EPA's Nov. 7 letter.
2. Legal review synopsis follows:

[redacted]

CEQ EQUITY

[redacted]

[redacted]

Horst Greczmiel
Associate Director for NEPA Oversight
Council on Environmental Quality
[redacted] B6

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December 13, 2013

Colonel Kim Colloton
District Engineer, Los Angeles District
U.S. Army Corps of Engineers
P.O. Box 532711
Los Angeles, CA 90053-2325

Re: EPA Evaluation of Rosemont Mine Compensatory Mitigation

Dear Colonel Colloton:

Rosemont Copper Company (Rosemont) is committed to developing a copper mine in southern Arizona in a manner that sets new industry standards for an Arizona copper mining facility. However, while doing so, we intend to ensure that both the voluntary actions we choose to take as corporate stewards, and those actions required for Rosemont to meet environmental standards under the various environmental rules, regulations, and laws, are appropriately delineated and correctly applied.

Attached to this letter are Rosemont's initial comments regarding an evaluation by the Environmental Protection Agency (EPA) of the Rosemont Copper Project (Project) titled "EPA Evaluation of Impacts to the Aquatic Ecosystem and Proposed CWA Compensatory Mitigation for the Rosemont Mine Pima County, Arizona" (EPA Evaluation) that was sent to you under a cover letter dated November 7, 2013. The EPA Evaluation concerns the 404 permit that Rosemont is currently seeking from the U.S. Corps of Engineers (Corps) to fill ephemeral washes and to bury a single functioning spring in connection with its proposed copper mining and processing facility in southern Arizona. The EPA Evaluation concludes that Rosemont's "proposed mitigation [is] grossly inadequate to compensate for [the] mine impacts" of the Project (EPA Evaluation, p. 9). As explained below, the EPA Evaluation reaches this conclusion based on a misapplication of the 404(b)(1) Guidelines (Guidelines) as they relate to: (1) the identification of the "secondary effects" of Rosemont's proposed discharge for which mitigation is required; (2) on a mischaracterization of many of the impacts of the proposed Project; and (3) on a mischaracterization of the mitigation proposal. Its conclusions are therefore in error. When the effects are properly identified and characterized by the Corps, and as the mitigation proposal is refined, it will be clear that Rosemont has developed a proposal, that when finalized, will meet the requirements for compensatory mitigation for the unavoidable impacts that the Project has on "waters of the United States."

The discussion of the EPA Evaluation is divided into several sections, below:

I. Introduction;
II. A discussion of what constitutes secondary impacts of the discharge;
III. A discussion of how EPA mischaracterizes Project impacts, including those that are not part of the 404 regulatory process;
IV. Rosemont's 404 mitigation package and proposal; and
V. Conclusion.

I. INTRODUCTION

In connection with the Project, which is a copper mine proposed for Pima County, Arizona, Rosemont has applied to the Corps for a 404 permit to fill ephemeral washes and a single functioning spring. The area impacted by the Project includes a network of first and second order washes and ravines, and covers approximately 5400-acres at the Project site[1]. The filled area will be occupied primarily by the Project's dry stack tailings facility and waste rock storage areas. Other Project components include an open pit, utility and access corridors, and ore processing facilities.

This Project has undergone a 6-year process of public and agency review pursuant to the National Environmental Policy Act (NEPA), which has culminated in a comprehensive Final Environmental Impact Statement (FEIS). The FEIS concludes the Project can meet environmental requirements and proceed, subject to appropriate conditions and mitigation requirements still under development. Rosemont has received approval for all permits required by the state of Arizona for water use, water transport, storm water management, and surface and groundwater protection, including approved mine closure and reclamation plans. From a water quality standpoint, only the Clean Water Act 404 and 401 approvals have yet to be issued.

To obtain the 404 permit, Rosemont must have an adequate plan in place to mitigate the unavoidable impacts to jurisdictional waters that may result from its proposed discharge, as required by EPA's 404(b)(1) Guidelines (Guidelines) and the Corps mitigation rules. 33 CFR Part 230; 40 CFR Part 230, Subpart J. Rosemont has developed a conceptual proposal that would achieve this goal. The principal features include:

- An in-lieu fee (ILF) project at Pantano Dam, made possible by the acquisition of a critical in-holding in the Cienega Creek Natural Preserve and the accompanying 1,122 acre-feet per annum (AFA) of senior surface water rights in Cienega Creek associated with that parcel;
- A permittee-responsible (or potential ILF) project at the 1,200-acre Sonoita Creek Ranch, which comes with its own 590 AFA surface water right and tremendous opportunities for riparian restoration and enhancement; and
- Conservation parcels within the Davidson Canyon watershed along significant xero-riparian corridors along Barrel, Davidson, and Mulberry Canyons.

The November 7, 2013 EPA Evaluation concludes that Rosemont's "proposed mitigation [is] grossly inadequate to compensate for mine impacts," EPA Evaluation, p.9. EPA recommended that Rosemont's 404 permit application should therefore be rejected for the Project as proposed. EPA Cover Letter, p. 2. As discussed below, the EPA Evaluation's conclusion is based on a misapplication of the Guidelines as they pertain to the identification of the "secondary effects" for which mitigation is required and on a mischaracterization of many of the Project's impacts. The Evaluation also mischaracterizes and discounts the mitigation proposals advanced by Rosemont. The conclusions of the EPA Evaluation are therefore in error.

When the "secondary effects" of the discharge are correctly identified and characterized and Rosemont's mitigation proposal is given proper weight, it is our belief that the proposal, once finalized, will be more than adequate to compensate for the unavoidable impacts of its proposed discharge to waters.

[1] See Rosemont FEIS, Volume 1 – Executive summary, Table ES1. Alternative comparisons table: disturbance elements, page xxiv

II. THE EVALUATION INCORRECTLY IDENTIFIES THE IMPACTS FOR WHICH COMPENSATORY MITIGATION IS REQUIRED

As discussed in the FEIS, the Rosemont Project will directly impact approximately 40 acres of ephemeral washes and five springs. Most of these direct impacts will result from the tailings and waste rock facilities fill in Barrel and Wasp canyons, which are relatively broad, low-gradient ephemeral washes. The impacts also include fill for the plant facilities, access and haul roads, utilities, and associated infrastructure. Of the five springs to be directly impacted by the Project (FEIS, p. 563), only one (Rosemont Spring) both occurs in its natural state (with flows of less than a gallon a minute) and supports even modest riparian-type vegetation. Of the remaining features identified as springs, two (Unnamed Springs No. 2 and 3) are seeps that likely are seasonally dry as evidenced by lack of riparian vegetation. The remaining two (Bee Spring and Mueller) were developed (man-made) to fill water sources for livestock use. In addition, the Project will result in some loss of downstream surface water flows to Barrel and Davidson canyons. An algorithm developed for the Project estimates that the downstream loss of Waters is an additional 28.4 acres[2]. This represents a loss of function, which gradually diminishes downgradient of the Project. These impacts simply reduce flows but the drainage areas will remain.

The EPA Evaluation finds that Rosemont's proposed mitigation for these impacts is deficient because it fails to compensate for all of the unavoidable "secondary effects" of the proposed discharge (as characterized by Region IX's Wetlands Office, which we believe is the primary author of the EPA Evaluation). The EPA Evaluation focuses, in particular, on the potential impacts that the open pit may have on groundwater levels in the bedrock formations surrounding the pit, and on how those impacts could affect surface flows some distance from the Project site. It also defines "secondary effects" too broadly by assuming that the "secondary effects" of the proposed discharge to "waters of the United States" are the same as the potential cumulative or possible indirect impacts to water resources from the Project as a whole, as disclosed in the FEIS. This is not how "secondary effects" are defined by the Guidelines.

"Secondary effects" are defined by the Guidelines as the "effects on an aquatic ecosystem that are associated with a discharge of dredged or fill materials, but do not result from the actual placement of the dredged or fill material." 40 CFR 230.11 (h)(1). A correct determination of the "secondary effects" of a proposed discharge is obviously critical to any evaluation of the adequacy of a plan to mitigate those effects. Without such a determination, it is impossible to determine whether the proposed mitigation is "commensurate with the amount and type of impact that is associated with a particular" discharge. 40 CFR 230.93(a)(1). The Wetlands Office appears to ignore this fact when it attempts to explain in its Evaluation how the impacts of the Project, as a whole, for which it claims compensatory mitigation is required, fit within the Guidelines' definition of "secondary effects."

To insure that the concept of "secondary effects" is properly understood by those affected by, or by those authorized to regulate those affected by the Clean Water Act, the Guidelines provide three specific examples to define such effects. The first example is "fluctuating water levels in an impoundment and downstream associated with the operation of a dam." The second example is "septic tank leaching and surface runoff from residential or commercial developments on fill." The third

[2] FEIS Volume 5, Appendix A U.S. Army Corps of Engineers' Section 404(b)(1) Alternatives Analysis, Section 3.1.3, page 38

example is "leachate and runoff from a sanitary landfill located in waters of the United States." What these examples illustrate is that to qualify as a "secondary effect" of a discharge, the effect must be a result of water moving across or through, or being manipulated by, the structure or feature that has been created by the discharge. In the first example, the discharge creates a dam, and the dam then affects the water levels both in the impoundment and downstream; in the second example, the discharge creates dry land on which a residential or commercial development may be built, and the development on the land then results in leaching into the groundwater from septic tanks that are placed in the fill and surface runoff from the fill; in the third example, the discharge creates a sanitary landfill, and the storm water that falls on the landfill then produces leachate into the groundwater as it passes through the landfill and runoff from its surface.

So there would be no misunderstanding about the meaning of the examples, these examples were followed by an explicit statement that "activities to be conducted on fast land created by the discharge of dredged or fill material in waters of the United States may have secondary impacts within those waters which should be considered in evaluating the impact of creating those fast lands." This statement is specific to activities conducted on a structure or feature created by the discharge. Significantly, the Guidelines do not discuss impacts of activities that are not subject to section 404 jurisdiction but that may have been facilitated by creation of the fast lands, or activities that might not take place elsewhere "but for" the creation of that fast land.

Unfortunately, activities not subject to 404 jurisdiction are exactly what the Wetlands Office included in its EPA Evaluation. It considered the "secondary effects" of Rosemont's proposed discharge to include the effects on aquatic resources (e.g., the potential effects of the mine pit on groundwater levels) resulting from all Project activity conducted anywhere within the Project area, rather than simply the effects to Waters based on the activities conducted on the "fast land" created by the discharge—i.e., the effects in "waters of the United States" of the tailings, waste rock, and ancillary facilities. The Wetlands Office simply assumes, that because Rosemont's proposed discharge is part of a larger project that will be facilitated by the issuance of the 404 permit, any effects that the Project will have on aquatic resources are "secondary effects" of the discharge, and therefore must be mitigated. This overreaching is contrary to the Guidelines, and the explicit guidance provided.

In describing the "secondary effects" that it claims must be mitigated, the Wetlands Office makes repeated references to "project impacts" or "mine impacts." See EPA Evaluation p. 5, 8, and 9 for example. The Wetlands Office does not identify the "secondary effects" of the discharge itself. Additionally on page 1 of EPA's Evaluation, the Wetlands Office erroneously concludes that the "project does not comply with … the Guidelines." It is, of course, not the entire Rosemont Project that must comply with the 404 permit mitigation Guidelines; it is the discharge component of the Project, as the Guidelines plainly state. The Wetlands Office not only fails to clearly define that distinction, it appears to disregard it altogether in making its Evaluation.

The Wetlands Office does not explain how the impacts it identifies can be reconciled with the illustrative examples of such effects that are provided in the Guidelines. Additionally, its identification of impacts attributable to the proposed discharge are in direct conflict with guidance provided on the issue of "secondary effects" by EPA's General Counsel. The guidance was issued on March 17, 1983 in response to a question that was asked by the Assistant Administrator for Water in the course of preparing the Guidelines. The Assistant Administrator asked, "Must the guidelines consider secondary impacts?" In response, the General Counsel stated:

> By "secondary impacts," I am assuming that you mean reasonably foreseeable impacts of the

> discharge itself that occur away from the immediate site of the discharge, e.g., downstream impacts or impacts from the altered circulation as opposed to impacts on whatever is buried by the discharged material. Such secondary impacts must be considered in the guidelines.
>
> ….
>
> When one moves beyond secondary impacts, as defined above, to impacts caused by the subsequent operation of a project or by associated development, the question becomes more difficult. While it is hard to answer in the abstract, in general whether such impacts must be considered would appear to depend on the directness of the causal connection and the predictability of the impacts, interpreted in the light of reason. For example, where fill is discharged to build a dam whose *purpose* is to manipulate water flow, the permitting authority, in evaluating the impacts of the fill, may reasonably take into account the fact that water levels will be manipulated. On the other hand, when a barge-loading facility for an upland factory involves some fill, the water quality impacts of the factory are outside the scope of the guidelines, even if they are, in a sense, a "result" of the fill.

Like the Guidelines, the guidance allows for the possibility that some downstream effects of the structure or feature created by a discharge are properly considered "secondary effects" of the discharge. In the guidance, as in the Guidelines, the example of a dam is used. Because the dam is created by the discharge, and has as its purpose the storage and release of water, the General Counsel concludes that "the permitting authority may reasonably take into account the fact that water levels will be manipulated" as a result of the fill, and the effects of the manipulation may therefore properly be considered a "secondary effect" of the discharge. On the other hand, the General Counsel uses the example of a discharge that is necessary to construct "a barge-loading facility for an upland factory" to illustrate effects that would not properly be considered "secondary effects" of the discharge. It is apparent that the General Counsel reasons that because the upland factory would not be created by the discharge itself, "the water quality impacts of the factory are outside the scope of the Guidelines, even if they are, in a sense, a 'result' of the fill"—i.e., even if the factory might not be built if the 404 permit is not issued.

This latter example is directly analogous to the situation presented by Rosemont's proposed discharge. To facilitate the operation of its Project, which equates to the "upland factory" in the General Counsel's example, Rosemont needs to construct tailings, waste rock, and ancillary facilities; similar to the "barge-loading facility" in the General Counsel's example, and the construction of those facilities will require "some fill." While the water quality impacts of the Project as a whole could possibly be considered, "in a sense, a 'result' of the fill," in that they might not take place if the 404 permit is not issued, "they are [nonetheless] outside the scope of the guidelines" because the impacts are not effects of the discharge itself; they are the effects of some other activity, in Rosemont's case the operation of the open pit, which is not regulated under section 404.

Based on the examples given in the Guidelines and in the guidance, it is clear that for an effect on aquatic resources to be considered a "secondary effect" of the "discharge itself," the effect must be the result of water interacting with the structure or feature created by the discharge—i.e., it must be the result of water running across or through, or being manipulated by, the structure or feature that is created by the discharge. This is what is meant by the Guidelines' definition of "secondary effects" as "effects that are associated with a discharge of dredged or fill materials, but [that] do not result from the actual placement of the dredged or fill material." The Wetlands Office either overlooked or dismissed the regulatory definition and erroneously concluded that the discharge would "result in the

loss, conversion and functional degradation of aquatic and terrestrial habitats over several thousand acres" (see EPA Evaluation, p. 2). As a result of this mistaken belief by the Wetlands Office, and thus the limits of its section 404 authority, EPA's Evaluation stating that Rosemont's mitigation proposal is inadequate is in error.

III. THE EVALUATION MISCHARACTERIZES MANY OF THE IMPACTS OF THE PROJECT

Even if the Wetlands Office had properly identified the "secondary effects" of the proposed discharge, it mischaracterized the likelihood, severity and extent of many of them, including those which do not even require 404 mitigation (i.e., groundwater drawdown). The EPA Evaluation identifies three types of what it terms "Indirect/Secondary Impacts" for which it claims that 404 permit mitigation is required. In order of their significance, they are "Groundwater Drawdown," "Reductions in Surface Water Flow Downstream of the Mine," and "Lost Functions to Waters Upstream of Mine." EPA generally: (a) mischaracterizes the effects of the Project on groundwater resources (which are not a secondary effect of the discharge in any event); (b) mischaracterizes effects on downgradient surface water flows (which are being accounted for and addressed through compensatory mitigation); and (c) wrongly suggests that loss of waters upgradient of the Project were not fully counted (they have been and the effects are being addressed through compensatory mitigation). Each type of impact is discussed below.

Groundwater Drawdown

The FEIS reveals that the open pit will lower or drawdown groundwater levels in the regional aquifer underlying the Project area, both during active mining operations and afterwards. The EPA Evaluation claims that this groundwater drawdown will result in

> "….dramatic and persistent changes to surface hydrologic and hydraulic regimes driven by groundwater hydrology," particularly in Davidson Canyon and the lower reaches of Cienega Creek , that it "will reduce streamflows, increase water temperatures, and disrupt breeding, spawning, rearing and migratory movements, or other critical life history requirements of fish and wildlife resources,"

and that it

> "….will add to a baseline trend of decreasing groundwater, causing a permanent reduction of water in streams and wetlands along Empire Gulch, Mattie Canyon, Gardner Canyon and Cienega Creek with potential adverse impacts to over 30 seasonal and perennial wetlands, and threatened and endangered aquatic habitat dependent plants, fish and wildlife."

EPA Evaluation, p. 3-4.[4] However, this characterization considerably exaggerates the potential effects and cannot be reconciled with the conclusions reached in the FEIS. On page 355, the FEIS states that:

1) "[w]ith respect to drawdown in the regional aquifer, the weight of the available evidence suggests that it is unlikely that flows in Davidson Canyon are connected to the regional aquifer that would be impacted by the mine site;"

[4] For perspective on the statement, Empire Gulch is approximately 5 miles south and east of the Project site, Mattie Canyon is approximately 10 miles due east of the Project site, Gardner Canyon is 6 miles south of the Project site, and Cienega Creek is between 8 and 13 miles east and north of the Project site. The watershed at the Project site drains from the Project location in Barrel Canyon, east approximately 3 miles to Davidson Canyon and then north approximately 13 miles before reaching the confluence with Cienega Creek.

2) even if a connection between the regional aquifer and Davidson Canyon exists, the groundwater models show no "drawdown at the confluence of Davidson Canyon and Cienega Creek" after 150 years, and only a drawdown of "0.1 foot or less" after 1,000 years; and

3) such small levels "are beyond the reasonable ability of the models to predict impacts and are not suggestive of any likely changes" in the reduction of surface flow in lower Davidson Canyon, "even assuming that the springs and underflow in Davidson Canyon are connected to the regional aquifer."

On page 294, the FEIS describes uncertainties associated with groundwater models:

> "The models used to predict impacts to groundwater availability have a level of uncertainty that must be considered when interpreting the results. While the models can mathematically predict groundwater drawdown to thousandths of a foot, in reality this level of refinement is meaningless. The models were designed for the purpose of predicting the inflow of groundwater to the mine pit and the general drawdown that would occur in the regional aquifer; however, the farther the predictions are in terms of distance from the mine pit and the farther out in time the predictions occur, the less certain they become. The groundwater modeling experts contracted by the [Forest Service] determined that the reasonable limits of certainty to the groundwater models is the 5 to 10 foot drawdown contour …. Within this contour, the groundwater models would be able to reasonably predict changes to wells, springs, and streams. Changes below this threshold are beyond the capabilities of the models to accurately predict."

Further, on page 290 of the FEIS there is a discussion regarding temporal and distal uncertainties:

> "[A] common opinion among experts is that the site-specific groundwater models—or any groundwater models—do not have the ability to predict impacts on distant waters such as Cienega Creek [and] Davidson Canyon … where these impacts are the result of small groundwater changes … at remote periods in the future (hundreds or even thousands of years from now)."

The studies and conclusions reported in the FEIS are based on three different groundwater models, two of which were subjected to peer review. These models represent the best science available. In its assumptions and with no scientific backing, the Wetlands Office states that the surface flows in Davidson Canyon and Cienega Creek "can be sensitive to changes in groundwater supply measured in inches, …… the applicability of even the best available modeling with respect to answering questions about probable impacts" is questioned. EPA Evaluation, p. 5. These statements are not supported by the thorough technical analysis and disclosures in the FEIS. Instead, they are simply speculation.

<u>Reductions in Surface Water Flow Downstream of the Mine</u>

The EPA Evaluation cites an evaluation performed by Rosemont that shows a reduction in surface flows at the confluence of Cienega Creek and Davidson Canyon as the result of mine operations. EPA took that reduction as "a signal that impacts [to surface water flows] are likely to extend some point beyond this confluence" into the lower reaches of Cienega Creek, and are "likely to be significant, especially given the cumulative effects of predicted reductions in groundwater levels." EPA Evaluation, p. 3.

Again, this is simply speculation by the Wetlands Office that is not supported by technical study and analysis. The FEIS contains an extensive evaluation of the potential impact of mine operations on surface flows in perennial streams, including the lower reaches of Cienega Creek. As the principal

contributor to perennial stream flows are the subsurface expression of groundwater sources, the FEIS flags the same uncertainty about its predictions with respect to perennial stream flow as were cited in connection with the discussion of groundwater drawdown. Pages 524 to 525 of the FEIS states that:

> "While the analysis [of reductions in surface flow] … is quantitative, it reflects predicted impacts from relatively small amounts of groundwater drawdown, often fractions of a foot, that are occurring decades, hundreds, or even a thousand years in the future.…[S]uch small drawdowns are beyond the ability of these groundwater models, or any groundwater model, to accurately predict …. It is important to understand that the detailed predictions [provided in the FEIS] are meant to inform the decision and to show what could potentially happen if the model predictions were to occur as modeled; however, this does not change the overall uncertainty."

In addition, page 525 of the FEIS notes that "[t]here are other trends and exacerbating factors occurring in the watershed that add to the uncertainty of predicting impacts to perennial streams" from mine operations. In other words, whatever the predictions, the effect of mine operations would be, at worst, only one of several contributing factors.

Against that background, the FEIS discloses its technical conclusion that "the lowest estimates of drawdown" produced by the models "would not change the perennial nature of" Lower Cienega Creek, "even up to 1,000 years after closure," and that "the highest estimates of drawdown would not change the perennial nature of the stream up through 50 years after closure, but the stream would gradually become intermittent by 150 years after closure and would become ephemeral 1,000 years after closure." FEIS, p. 539. While it may tempt EPA to only use the worst-case projection, and to use the longest time period – 1,000 years – into the future, this sort of speculation is hardly a legitimate basis on which to challenge the thorough analysis performed during the NEPA process.

It is important when discussing possible impacts to Lower Davidson Canyon and Cienega Creek to keep the physical setting in mind. Lower Cienega Creek is located approximately 13 miles downstream from the Project. Modeled flow reductions from Project activities at a downstream point (14.4 river miles from the Project) immediately above the confluence of Davidson Canyon with Cienega Creek are estimated to be 4%. At its confluence with Cienega Creek, Davidson Canyon amounts to approximately 51.3 square miles of drainage while the entire Cienega Creek drainage at the Pantano Dam is 457 square miles. This means Davidson accounts for 11% of the drainage at Pantano Dam. The Project site is approximately 7.2 square miles. This amounts to 14% of the Davidson Canyon drainage area and 1.5% of the drainage area above Pantano Dam. Calculations of runoff from these areas have shown that the change in flows is indiscernible from background flow below the confluence of Davidson Canyon and Cienega Creek. To assert, as EPA does, that "impacts are likely to extend some point beyond" the confluence of Davidson Canyon and Cienega Creek" is unsupported by data and contradicted by, flow modeling, numerous investigations provided by Rosemont in support of their 404 permit and the FEIS, and common sense. This analysis is presented in the FEIS on page 355.

In fact, the FEIS goes to great length to discuss the potential reductions in flow and the modeling; "In reality, flows from the project site would need to flow downstream approximately 12 miles in an ephemeral stream channel (desert wash) composed of pockets of highly transmissive sediments before those flows would contribute recharge to lower Davidson Canyon. Recharge is more likely to derive from closer tributaries, although certainly during larger flow events, contribution from Barrel Canyon would occur." (FEIS, p. 355)

Lost Functions to Waters Upstream of Mine

The EPA Evaluation claims that there will be "secondary impacts to drainages upstream of the mine" that "include severing surface hydrology and connectivity, decreasing quality of wildlife habitat, and fragmentation of animal movement corridors," and that these impacts "need to be more completely quantified and ultimately mitigated." EPA Evaluation, p. 3. In fact, the Project lies against a hillside and the ephemeral washes that exist above the operations site are therefore quite limited. Even assuming that the ephemeral washes upstream of the Project site are jurisdictional, what the EPA Evaluation overlooks is that the "upgradient impacts" to those washes (totaling 0.18 acres) have already been quantified and included as part of the 40 acres identified as direct impacts of the proposed discharge. Moreover, the preferred alternative for the Project layout was selected as a result of the NEPA alternatives analysis, which included consideration of the criteria for the Least Environmentally Damaging Practical Alternative (LEDPA) under the Guidelines. The selection process criteria were chosen to insure that as many upstream drainages as possible (including McCleary Canyon) would remain open, connected, and free-flowing, and that the impacts to any particular drainage would be minimized.

IV. ROSEMONT'S 404 MITIGATION PROPOSAL WILL, WHEN FINALIZED, COMPENSATE FOR ALL UNAVOIDABLE IMPACTS TO "WATERS OF THE UNITED STATES" FROM ROSEMONT'S PROPOSED DISCHARGE

Rosemont's 404 mitigation proposal

Rosemont is proposing three projects to compensate for unavoidable impacts to Waters from its proposed discharge:

- A potential in-lieu fee (ILF) project at Pantano Dam, made possible by the acquisition of a critical in-holding in the Cienega Creek Natural Preserve that the Dam is located on, as well as the accompanying 1,122 acre-feet per annum (AFA) of senior surface water rights in Cienega Creek associated with that parcel.
- A permittee-responsible (or potential ILF) project at the 1,200-acre Sonoita Creek Ranch (SCR) which comes with its own 590 AFA surface water right and opportunities for riparian restoration and enhancement.
- Conservation parcels within the Davidson Canyon watershed along significant xeroriparian corridors along Davidson Canyon and two tributaries (Mulberry and Barrel Canyons) (collectively the "Davidson Canyon" parcels.

The projects listed above are part of a larger mitigation package that will be associated with the final Mine Plan of Operations (MPO). These mitigation measures are described in Appendix B of the FEIS. This broader package includes efforts to minimize and offset impacts to a variety of resources, including for example, endangered species and wildlife habitat.

In selecting the proposed 404 mitigation projects, Rosemont had to be cognizant of the hierarchy of mitigation approaches preferred by the mitigation rule: (1) established mitigation banks, (2) ILF projects, and/or (3) Permittee responsible mitigation. However, there are no currently approved mitigation banks available to Rosemont. Therefore, Rosemont evaluated the next approach, an ILF. A number of ILF sponsoring entities and Corps staff have been working to develop projects consistent with the mitigation rules. However, at this juncture there is not an approved ILF project that Rosemont can rely

upon for mitigation credits. If an ILF project cannot be timely approved, Rosemont will need to complete a permittee responsible plan.

Development of Rosemont's 404 mitigation proposal

Rosemont arrived at the proposed 404 mitigation parcels through an extensive acquisition effort that was part of the larger mitigation package development. Recognizing the rule preference for a watershed based approach to compensatory mitigation, Rosemont sought parcels and projects located within the drainages potentially impacted by the Project. Barrel Canyon lies in the upper reaches of the Davidson Canyon watershed, which is in turn part of the Cienega Creek watershed, which is ultimately a tributary to the Santa Cruz River Basin. As shown in Figure 1, the vast majority of lands in the Cienega Creek watershed are public (federal, state, or county) and not available for acquisition. Rosemont was able to acquire private lands in the upper Davidson Canyon watershed (Mulberry and Davidson Canyons) and those lands are proposed as part of the 404 mitigation package. Due to their relatively undisturbed condition (limited to cattle grazing), these lands are proposed primarily for preservation purposes. Again, given the predominance of public lands, there were no other available mitigation opportunities in the Barrel Canyon/Davidson Canyon watersheds immediately down-gradient of the Rosemont Project.

An opportunity to secure and restore flows in the lower Cienega Creek watershed was found that is associated with the Pantano Dam (Dam), a storage impoundment located on lower Cienega Creek and surrounded by the Cienega Creek Nature Preserve (Preserve). The Dam is currently used to store and divert water for a golf course and has substantial appurtenant surface water rights (1,122 AFA). Pima County has long had interest in acquiring the rights to this water for use in restoring and enhancing the Preserve. While out of kind (Rosemont's impacts are almost entirely associated with ephemeral systems), from a Clean Water Act standpoint this presents an ideal and extremely rare opportunity in Southern Arizona to restore a perennial system. The Dam and lower Cienega Creek watershed ultimately discharge into the downstream reach of the Santa Cruz River designated as navigable.

In addition, in the adjacent Sonoita Creek watershed, and not in the Cienega Creek watershed, Rosemont has acquired the right to purchase the Sonoita Creek Ranch (SCR). This property consists of approximately 1,200 acres of land and appurtenant water rights along Sonoita Creek between Sonoita and Patagonia, Santa Cruz County, Arizona (Figure 1). Sonoita Creek is a major tributary of the Santa Cruz River and ultimately discharges upstream of the southernmost navigable water reach of the Santa Cruz River near Green Valley. Prior to Rosemont acquiring the right to purchase the SCR property, the Arizona Game & Fish Department (AGFD) had identified this ranch as having high conservation value for sensitive wildlife and fish species due to the presence of significant surface water and the appurtenant water right (over 590 AFA), as well as the property's potential as a corridor link between the Canelo Hills and the Santa Rita Mountains.

However, Rosemont believes that the conservation value of the Pantano Dam parcel and associated water rights are likely to be great enough to meet all 404 mitigation requirements for the Project. In fact, based on preliminary plans, Rosemont anticipates that the Project will be able to be fully mitigated through the purchase of mitigation credits from an ILF project, which is under development. Rosemont has agreed to convey substantial surface water rights associated with Pantano Dam to the ILF sponsor, Pima County Regional Flood Control District (PCRFCD) and the Tucson Audubon Society. The agreement also includes the conveyance of the two-acre parcel , which contains the Pantano Dam, diversion facilities, and a nearby groundwater well to PCRFCD, as well as substantial funding to implement and maintain the ILF project.

In the event that the Pantano Dam ILF project will not fully mitigate the impacts of the fill discharge at the Rosemont Project, SCR offers considerable mitigation potential, either as a permittee-responsible project or as another ILF project. SCR is of a size and ecological value that mere preservation of the parcel would provide substantial ecological benefit to onsite aquatic resources. The upper Davidson Canyon parcels are also in reserve if needed.

Despite EPA assertions that these projects are "grossly inadequate" (EPA Evaluation, p. 9), Rosemont believes these parcels and projects, once fully defined, designed, and developed, will clearly present unique and valuable mitigation opportunities for Clean Water Act purposes. As explained above, they are proximate to mine operations and represent the best mitigation opportunities in the area.

Sufficiency of mitigation offered.

After having applied the Corps' South Pacific Division (SPD) standard operating procedures (SOPs), Rosemont believes that Pantano Dam (potentially on its own) and SCR (if needed with or without the upper Davidson Canyon parcels) provide sufficient mitigation. SPD developed the SOPs in order to have a regional, standardized process to determine compensatory mitigation ratios pursuant to the Corps' mitigation rules (33 CFR Part 332). This was done in response to inconsistencies in determining mitigation ratios across Corps districts and project managers. Public Notice 12501-SPD Regulatory Program Standard Operating Procedure for Determination of Mitigation Ratios was published on December 19, 2012 followed by subsequent updates and clarifications on August 5, 2013. These procedures instruct Corps project managers to complete Steps 2 through 10 of Attachment 12501.1 – SPD Mitigation Ratio Setting Checklist (Checklist), which compares elements of a permit applicant's proposed mitigation plan (e.g., watershed location, risk, temporal loss, etc.) to the proposed project impacts, producing a final mitigation ratio for each proposed mitigation site or type.

The initial step of the Checklist is to establish a baseline ratio based upon a qualitative or quantitative comparison between the aquatic functions and values present at the impact and mitigation sites. The SPD does not currently have a Corps-approved quantitative functional assessment available for use in Arizona or for ephemeral washes, so a qualitative assessment is required.

Per Corps direction, Rosemont utilized the Rapid Stream Riparian Approach (RSRA) functional model to assess the functions of the proposed Project and mitigation sites to inform the establishment of baseline ratios for the Checklist. The RSRA model had been developed for wetter systems than what occur at the Rosemont Project and the proposed 404 mitigation sites. Therefore, substantial modifications were made to the model for better application to ephemeral systems.

To date, Rosemont and the Corps have calculated preliminary mitigation ratios on two elements of Rosemont's proposed mitigation package (Sonoita Creek Ranch and Davidson Canyon Parcels). We understand that the Corps and the ILF sponsor are completing an assessment of available credits associated with the Pantano Dam project.

In making their ratio determination, the Corps was informed by the results of Rosemont's functional assessment as well as Attachment 12501.3-SPD Examples for SPD Mitigation Ratio Setting Checklist, which provided examples of completed Checklists very similar to portions of Rosemont's proposed mitigation package. The permittee-responsible mitigation ratios calculated by the Corps ranged from 4:1 to 6.1:1 for preservation of wetlands and waters of the United States and 9.1:1 for preservation of upland buffer at the mitigation parcels. The Corps also calculated mitigation ratios ranging from 3.6:1 to 6.2:1 on a conceptual ILF project at Sonoita Creek Ranch for establishment of wetland and riparian habitat.

Thus, using the functional assessment and working through the Checklist indicated that the three projects would collectively have available credits substantially higher than the 68 acres of direct and indirect impacts the Corps is requiring Rosemont to mitigate. EPA has criticized the use of the Corps' SOPs and the functional assessment done by Rosemont. However, these efforts were undertaken at the direction of Corps staff, following the current Corps' guidance and represent Corps staff providing the best direction available in light of: (a) the lack of an agency-approved standardized functional assessment; and (b) SPD's efforts to standardize the application of mitigation ratios to Corps' permits across the Districts that make up the South Pacific Division. If EPA has broad policy differences with the Corps over which functional assessments to use, or what procedures should be used to determine mitigation ratios, it should address those concerns outside of the permit process. The EPA should not delay or undermine a permit applicant's attempts to secure a permit while these issues are worked out.

In summary, the mitigation credits likely available at each site are:

> **Pantano Dam:** Rosemont's initial proposal was to release water currently impounded by the Dam into the bed of what is now Pantano Wash. There are 22 acres of jurisdictional waters (all now ephemeral) immediately below the Dam that would benefit from this release. In addition, Rosemont understands that Pima County has been working on more detailed plans that would result in enhancement of riparian areas and ephemeral tributaries within the Preserve so as to obtain additional credit. While Rosemont is not privy to those discussions, the credits available should be significant and may be sufficient to mitigate all 68 acres of Project impact to Waters.
>
> **Sonoita Creek Ranch:** Rosemont is working on a revised Habitat Mitigation and Monitoring Plan (HMMP) for SCR. An earlier version of mitigation proposed for this site would have included significant enhancement of jurisdictional waters, riparian buffer and upland buffer, plus preservation of wetlands, yielding almost 200 acres of credit based on the Checklist. This is understandable given that the SCR includes over 1,200 acres in size located in and around the floodplain of Sonoita Creek, with access to approximately 590 acre-feet of "wet water" each year. Even if this amount of credit proves optimistic as the new HMMP is developed, Rosemont asserts that there is sufficient credit available on this parcel to supplement any credits necessary after considering the Pantano Dam ILF project. In addition, if the ILF at Pantano proves unworkable, SCR could meet all of Rosemont's compensatory mitigation obligations.
>
> **Davidson Canyon Preservation Lands:** Putting these lands through a similar analysis yielded 14 acres of mitigation credit, all in the preservation category. This simply adds weight to the point that mitigation proposals by Rosemont can be considered sufficient to meet 404 requirements.

In summary, some combination of these projects will meet Rosemont's compensatory 404 mitigation obligations. These are the best and indeed most appropriate properties available for mitigation purposes in proximity to the Project, and offer unique riparian restoration opportunities in a region with very little surface water available.

V. Conclusion

Rosemont remains committed to meeting and maintaining compliance with all regulatory requirements for the Project, and understands that the scale and nature of the Project demands solid mitigation planning, execution, and agency oversight. However, Rosemont also believes that its plans should be applied, measured, and judged on their true merits, on their full scope, and on their full potential to meet the individual regulatory requirements the law requires. The rules are clear that agencies are to use the best science available, not simply speculation about what could happen hundreds of years into

the future.

The statements made in EPA's November 7 letter appear to ignore regulatory guidance, Guidelines, or agency requirements, and in fact seem premature by inappropriately exaggerating impacts of the Project without the benefit of consideration of the FEIS, Draft Record of Decision conditions, Biological Opinion conservation measures, or voluntary conservation and mitigation measures. Having these documents available should provide a common understanding of the Project and facilitate the analysis and discussions.

Rosemont looks forward to your visit early next year, which will give us the opportunity to provide you with a Project briefing along with a tour. Rosemont believes that a site visit would be helpful to give you context regarding the Project, the overall setting of the area, the proposed mitigation sites, and the proximity of the specific areas referenced in the EPA letter. We will continue to work with your staff to schedule this visit.

Regards,

Katherine Ann Arnold, P.E.
Vice-President, Environmental and Regulatory Affairs

Attachment: *Figure 1: Surface Management*

cc: Marjorie Blaine, U.S. Army Corps of Engineers
Jared Blumenfeld, U.S. EPA Region IX
Jim Upchurch, U.S. Forest Service
Henry Darwin, Arizona Department of Environmental Quality
Mike Fulton, Arizona Department of Environmental Quality
David Baker, Bureau of Land Management
Steven Spangle, U.S. Fish and Wildlife Service

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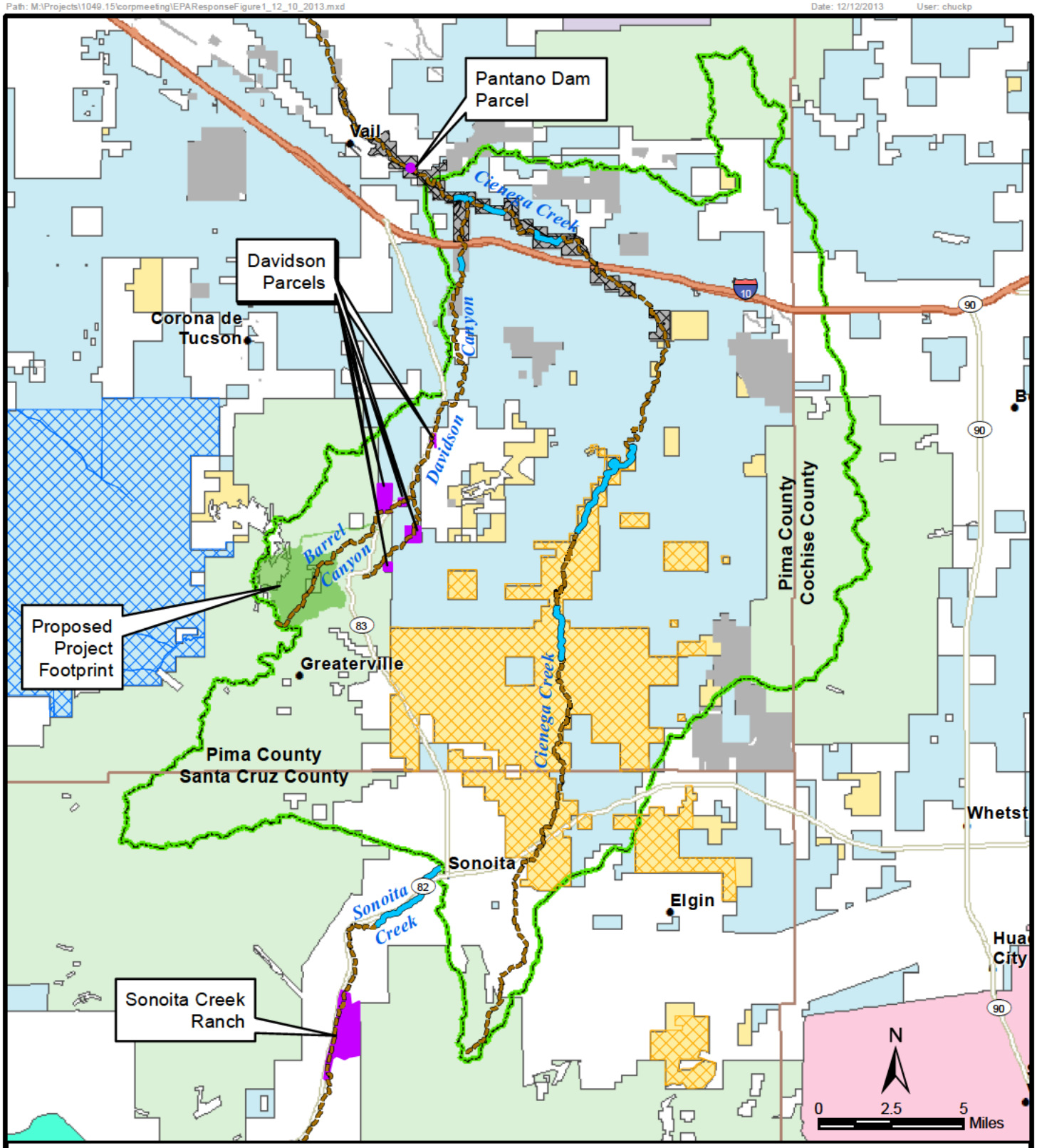

Data Source: BLM, Pima County
ESRI Base Data,
Integrated Watershed Summary,
Rosemont Copper 2012

Perennial Stream Reach
Ephemeral Drainage Channel
Proposed Project Footprint
Mitigation Site
CIENEGA CREEK NATURAL PRESERVE
LAS CIENEGAS NATIONAL CONSERVATION AREA
SANTA RITA EXPER MENTAL RANGE
Cienaga Creek Watershed (USGS)

Surface management
US Forest Service (USFS)
Pima County
Bureau of Land Management (BLM)
Military
National Park Service (NPS)
Private Land (No Color)
State Trust Land
State Wildlife Area

WestLand Resources, Inc.
Tucson • Phoenix • Flagstaff
4001 E. Paradise Falls Drive
Tucson, Arizona 85712 (520) 206-9585

ROSEMONT COPPER CO.

SURFACE MANAGEMENT
Figure 1

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

NOV 07 2013

Colonel Kim Colloton
District Engineer, Los Angeles District
U.S. Army Corps of Engineers
P.O. Box 532711
Los Angeles, California 90053-2325

Subject: Analysis of updated draft Clean Water Act §404 Compensatory Mitigation Proposals for Rosemont Mine, Pima County, Arizona

Dear Colonel Colloton:

On September 10, 2013, our regulatory managers and senior staff met to discuss impacts from the proposed Rosemont Mine and recent conceptual compensatory mitigation proposals. We subsequently received the 4-page *Rosemont Copper Project Conceptual Habitat Mitigation and Monitoring Plan Summary* (Summary) on September 25, 2013. As part of ongoing coordination under our agencies' Memorandum of Agreement, enclosed is our analysis of the Summary for consideration in your permit decision. Briefly, our review reaffirms conclusions from our January 25, 2013 letter (also enclosed) to the U.S. Army Corps of Engineers (Corps) on mitigation that currently proposed activities would be insufficient to avoid "significant degradation" of the aquatic ecosystem. Such degradation would be a substantial and unacceptable impact to aquatic resources of national importance, including the "Outstanding Waters" of Davidson Canyon and Cienega Creek.

The Summary discusses three regional sites where waters of the U.S. (waters) could be preserved and/or potentially enhanced for Clean Water Act (CWA) §404 mitigation credit. As discussed at our September 10th meeting and described in the attached analysis, we agree with your staff's assessment that two of the three sites would not provide appropriate compensatory mitigation for impacts to waters from the Rosemont Mine project. We also agree that one site, immediately below Pantano Dam, would benefit from enhancement activities if water supplies were available and design uncertainties could be overcome, and that those activities could then lend themselves to an In Lieu Fee (ILF) program arrangement for 404 impacts from small projects (*e.g.*, flood control and highway projects). However, the proposal at Pantano Dam is inadequate to compensate for impacts proposed to be permitted at Rosemont Mine.

The proposed copper mine lies within the Cienega Creek watershed, which contains regionally rare, largely intact mosaics of some of the highest quality stream and wetland ecosystems in Arizona. The construction of the mine would permanently fill approximately 18 miles of streams across an

approximately 5,000-acre project footprint and result in the fragmentation of an intact natural hydrologic landscape unit composed of hundreds of streams stretching many linear miles. The mine pit would reverse groundwater flow direction well beyond the project, and cause permanent regional drawdown of groundwater that currently sustains hundreds of acres of springs, seeps, streams, and wetlands and their aquatic and wetland dependent fish, wildlife and plant species.[1] The persistence and health of aquatic resources associated with Cienega Creek and its major tributaries of Barrel Canyon, Davidson Canyon, Empire Gulch, Gardner Canyon and other waters are dependent on contributions of water from the site of the proposed mine.

These impacts would be a direct consequence of the CWA 404 permit action under consideration by the Corps, and represent a large and permanent change in the regional ecology of the Cienega Creek watershed to a significantly drier, less biologically diverse stream and riparian condition. The region in question includes vast areas of National Forest, federal land preserve, County preservation areas and state-designated "outstanding" resource waters, and is home to ten federally listed endangered or threatened species. In this context, the EPA finds the proposal to enhance the approximately 250-acre Pantano Dam site to be out of balance with the impacts to be permitted.

In our attached discussion, we describe the resource at risk, the current mitigation actions proposed, and key policy considerations related to use of ILF programs, criteria for setting and interpreting mitigation ratios under Corps procedures, and compliance with the CWA 404(b)(1) Guidelines. Based on the information currently available, the permit application does not appear to comply with The Guidelines at 40 CFR 230.10(b), (c) and (d) and should not be permitted as proposed. We hope you will find these comments useful in consideration of your pending permit decision, and we look forward to working closely with your staff on the Interagency Review Team (IRT) for mitigation projects under ILF programs in Arizona. We also remain available to assist the Corps and applicant with a risk-based assessment to determine the full extent of indirect (or "secondary") impacts to waters and an appropriate functional assessment model to scale compensatory mitigation activities under a watershed approach.

Thank you for your ongoing partnership implementing CWA programs. If you have any concerns or questions, please do not hesitate to contact me at (415) 947-8707, or have your Regulatory Division Chief contact Jason Brush at (415) 972-3483.

Sincerely,

Jane Diamond
Director
Water Division

[1] PAFEIS, July 3013, Chapter 3, *Seeps, Springs and Riparian Areas*

cc: Marjorie Blaine, U.S. Army Corps of Engineers
Jim Upchurch, U.S. Forest Service
Mike Fulton, Arizona Department of Environmental Quality
David Baker, Bureau of Land Management
Steven Spangle, U.S. Fish and Wildlife Service
Chuck Huckelberry, Pima County
Suzanne Shields, Pima County Regional Flood Control District
Applicant

Attachments:

(1) EPA Evaluation of Impacts and to the Aquatic Ecosystem and Proposed CWA Compensatory Mitigation for the Rosemont Mine

(2) EPA letter to Corps LA District dated January 25, 2013

ATTACHMENT
EPA EVALUATION OF IMPACTS TO THE AQUATIC ECOSYSTEM AND PROPOSED CWA COMPENSATORY MITIGATION FOR THE ROSEMONT MINE PIMA COUNTY, ARIZONA

I. INTRODUCTION

The U.S. Environmental Protection Agency, Pacific Southwest Region (EPA) has prepared this document to assist the Corps in determining compliance with the Clean Water Act §404(b)(1) Guidelines (Guidelines), particularly with regard to significant degradation of the aquatic ecosystem (40 CFR 230.10(c)), and the compensatory mitigation that may be necessary to avoid it.

The document utilizes information presented and referenced in the Preliminary Administrative Final Environmental Impact Statement (PAFEIS), dated July 2013, prepared by Coronado National Forest; Rosemont's *Rosemont Copper Project Conceptual Habitat Mitigation and Monitoring Plan Summary* (Summary), dated September 2013; meetings with Rosemont, the Corps and Pima County; site visits by EPA staff; and other information contained in documents from multiple sources. EPA's careful review of this information, including our assessment of the full range of probable direct and secondary adverse impacts to the aquatic ecosystem resulting from permit issuance, leads us to conclude that the proposed Rosemont Mine project does not comply with 40 CFR §§ 230.10(b), (c) and (d) of the Guidelines and should not be permitted as proposed.

II. ADVERSE ENVIRONMENTAL IMPACTS TO THE AQUATIC ECOSYSTEM

The environmentally-damaging nature of the proposed project (*i.e.*, a large-scale, long-lasting, extractive mineral mine) and its geographic location (*i.e.*, large, high-functioning, undisturbed landscape) will combine to cause and/or contribute to significant, persistent degradation of the regional aquatic environment. This sensitive area is largely within National Forest boundaries, is adjacent to both federal and local nature preserves, is home to ten federally listed species, and is a hydrologic source area for state designated Outstanding Resource waters. These aquatic resources are recognized as being of regional and national importance.

The project will impact aquatic and wetland resources within Pima County's Cienega Creek Natural Preserve and the Bureau of Land Management's (BLM) Las Cienegas National Conservation Area (NCA). The National Landscape Conservation System was established to protect some of the most remarkable public lands in the American West.[2] At its nearest point, the mine site lies approximately 3 miles from the NCA. The Las Cienegas NCA was established by Congress and the President, in large part, to conserve, protect and enhance the unique and nationally important aquatic, wildlife, vegetation and riparian resources such as those in the Cienega Creek watershed. Six types of rare ecosystems are protected within the NCA, including aquatic ecosystems such as cienegas (marshlands), cottonwood-willow riparian wetlands, and mesquite bosques.

[2]http://www.blm.gov/wo/st/en/prog/blm_special_areas/NLCS.html

Impacts from the proposed project include direct fill and secondary impacts which will result in the loss, conversion and functional degradation of aquatic and terrestrial habitats over several thousand acres. The consequence of groundwater drawdown from the proposed mine pit is the indirect loss or conversion of hundreds of acres of riparian vegetation, including wetlands, and the drying of streams currently characterized by permanent flow. These large-scale shifts in the amount and species composition of riparian areas and the loss of stream surface flows is an example of an ecological regime shift; a large threshold change in the ecological state or condition of the Cienega Creek watershed to drier conditions.

The project site supports 101.6 acres of waters, including wetlands associated with springs and seeps. The project will adversely affect three types of Special Aquatic Sites (wetlands, sanctuaries and refuges, and riffle and pool complexes, see 40 CFR 230.40-45) as well as Tier 3 "unique waters"; portions of Davidson Canyon Wash and Cienega Creek are designated by the State of Arizona as "Outstanding Arizona Waters" (section 303 of the CWA and 40 CFR 131.12). EPA has identified these waters as "Aquatic Resources of National Importance" pursuant to the CWA §404(q) MOA.

Filling streams, constructing the massive mine pit (2,900 feet deep), and land clearing disturbances will dramatically alter in perpetuity the topography and surface and subsurface hydrology within the Cienega Creek watershed. Placement of permanent fill and other mine-related features within this undisturbed landscape will fragment high-functioning blocks of aquatic and terrestrial wildlife habitat used as foraging and movement corridors, rendering surrounding habitats less suitable for fish and wildlife. [3]

Direct Impacts

The proposed project will directly fill 39.97 acres of waters, including a largely undisturbed network of 18 linear miles of streams comprised of up to 154 individual drainages. In addition, five springs and their associated wetlands will be filled.

Indirect / Secondary Impacts

EPA's Guidelines (40 CFR 230.11(h)) and the 2008 Mitigation Rule (40 CFR 230.93) clearly state the need to compensate for losses of waters due to secondary impacts. The requirement that secondary impacts be fully compensated is consistent with standard practice for projects of this magnitude and essential given that the range, extent and severity of secondary adverse impacts upon aquatic resources are as significant as the direct impacts.

To the extent the Corps may wish to utilize the assessment of secondary impacts provided by the Forest Service's NEPA document for the Corps' decision document, the Corps should consider the limitations of the current assessment. As described below, secondary impacts have yet to be analyzed upstream of

[3]For example, the U.S. Fish and Wildlife Service's biological opinion concludes that, because of the indirect effects of groundwater drawdown, the proposed project is likely to adversely affect designated critical habitat for the federally-listed endangered Gila chub and threatened Chiricahua leopard frog, and likely to adversely affect the federally-listed endangered Gila topminnow.

the mine and downstream of the mine beyond the confluence of Davidson Canyon and Cienega Creek. Moreover, the secondary impacts that are currently assessed by the Forest Service rely upon models that, while valid, lack the sensitivity to detect adverse impacts to much of the affected arid aquatic environment. These assessments will be necessary under the Guidelines to make defensible decisions regarding the regulatory restrictions on discharges and the possibility of mitigation.

Lost Functions to Waters Upstream of Mine - As discussed above, the project site supports 101.6 acres of waters of which 39.97 acres will be directly impacted. The remaining 62 acres of waters on the project site will likely be indirectly impacted. Some of these secondary impacts are accounted for with regard to reduced surface stormwater flows in Barrel and Davidson Canyons within the project area downstream of the mine site. However, there will also be secondary impacts to drainages upstream of the mine. These impacts include severing surface hydrology and connectivity, decreasing quality of wildlife habitat, and fragmentation of animal movement corridors. We believe that secondary impacts to waters that lie upstream from the mine site need to be more completely quantified and ultimately mitigated.

Reductions in Surface Water Flow Downstream of the Mine - At the request of the Corps, Rosemont estimated indirect impacts to jurisdictional waters in Barrel and Davidson canyons downstream from the proposed mine due to modeled reductions in surface water volume resulting from the Rosemont Project.[4] Secondary impacts to downstream waters were estimated at 28.4 acres during mine operation. The estimate shows impacts at the confluence of Cienega Creek and Davidson Canyon, but ceases its analysis at that confluence. EPA believes data showing an impact at this confluence is a signal that impacts are likely to extend some point beyond this confluence, and recommend that secondary impacts to waters downstream from the mine site include the reach of Cienega Creek from its confluence with Davidson Canyon downstream to Pantano Dam. Certainly, reductions in surface water flow volume have the potential to adversely affect other surface waters, including wetlands, in Cienega Creek downstream from the confluence of Davidson Canyon. These surface water impacts are likely to be significant, especially given the cumulative effects of predicted reductions in groundwater levels from the proposed mine pit.

Groundwater Drawdown - Secondary effects on the aquatic environment include dramatic and persistent changes to surface hydrologic and hydraulic regimes driven by groundwater hydrology.[5] Portions of sensitive and regionally significant downstream receiving waters, including Outstanding Arizona Waters, rely in part or whole on groundwater contributions to baseflow. Secondary impacts from project-related groundwater drawdown will reduce streamflows, increase water temperatures, and disrupt breeding, spawning, rearing and migratory movements, or other critical life history requirements of fish and wildlife resources.

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[4] Email from Brian Lindenlaub, Westland Resources to Elizabeth Goldmann, EPA, dated August 16, 2013.

[5] Following mine closure the pit lake will continue to permanently divert, capture and evaporate 35-127 acre-feet of mountain-front groundwater recharge in perpetuity. This natural groundwater would otherwise replenish sensitive downstream receiving waters (PAFEIS. July 2013, Chapter 3, *Alternatives, Including the Proposed Action*; Comment Letter from Pima County to U.S. Forest Service on PAFEIS, dated August 14, 2013). During active mining, the pit will cause significant losses to recharge between 18,000-26,000 acre-feet, or about 900-1300 acre-feet annually.

According to the PAFEIS, eleven springs are highly likely to be indirectly impacted due to groundwater drawdown. An additional fifty-nine springs may be indirectly impacted due to drawdown. An additional 13 riparian areas associated with springs would be directly or indirectly disturbed with high certainty and an additional 36 riparian areas associated with springs may be indirectly disturbed. Although not formally delineated, subsets of these riparian areas contain jurisdictional wetlands and other waters of the U.S.[6]

Modification to the water balance along portions of Davidson Canyon, Empire Gulch, Gardner Canyon and Cienega Creek will adversely impact special aquatic sites. The 2,900-foot deep mine pit will permanently convert the hydrologic regime of the site from a water source area to a terminal sink, significantly lowering the surrounding regional aquifer. The pit will permanently reverse the natural direction of groundwater flow toward and into the mine pit, and away from the sensitive aquatic habitats in Las Cienegas NCA and Cienega Creek Natural Preserve. This will add to a baseline trend of decreasing groundwater, causing a permanent reduction of water in streams and wetlands along Empire Gulch, Mattie Canyon, Gardner Canyon and Cienega Creek with potential adverse impacts to over 30 seasonal and perennial wetlands, and threatened and endangered aquatic habitat dependent plants, fish and wildlife.

Groundwater drawdown will result in stress and degradation of riparian habitat, including wetlands. The PAFEIS estimates that indirect effects from the proposed mine project will change the composition of 1,071 acres of riparian vegetation along Empire Gulch (*i.e.*, 407 acres of hydroriparian) and Barrel and Davidson canyons.[7] Several additional springs, seeps, streams, emergent marshes, and riparian areas within the project assessment area likely contain jurisdictional waters, including wetlands, which will be indirectly impacted by the proposed project, primarily from groundwater drawdown.[8]

Sensitivity and Applicability of Groundwater Models – All three groundwater models utilized by the Forest Service show an increasing, long-term trend of significant declines in groundwater levels due to

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[6] A June 2013 field inspection by EPA, BLM and Pima County staff estimates the presence of tens to hundreds of acres of jurisdictional waters/wetlands in the assessment area likely to be impacted by groundwater drawdown. To date, the geographic extent of potentially jurisdictional waters along Empire Gulch, Gardner Canyon, Cienega Creek, and the other noted waters, has not been formally delineated and therefore secondary impacts to jurisdictional waters have not been quantified.

[7] PAFEIS, July 2013, Chapter 3, *Seeps, Springs and Riparian Areas*

[8] For example, the PAFEIS states that for Empire Gulch and Cienega Creek all three groundwater models predict near- and long-term stream flow drawdown along Upper Cienega Creek. Comparing these projected model drawdowns with minimum monthly stream flows (2001-2010 period of record) for Upper Cienega Creek indicates that the predicted drawdown would cause the stream to go dry during critical low flow months (Chapter 3, Figure 70). The PAFEIS further concludes that a small change in stream flow could result in the loss of surface flow during these drought periods (PAFEIS, Chapter 3, *Seeps, Springs and Riparian Areas*). In addition, the PAFEIS states that Upper Cienega Creek receives surface water [and groundwater] flow from Empire Gulch and the potential exists for a reduction in Empire Gulch stream flow to result in reductions in Cienega Creek's stream flow as well. Small amounts of groundwater drawdown could affect near-and long-term stream flow in Empire Gulch and Cienega Creek and hydrologic changes predicted for Empire Gulch from drawdown could have a potential effect on springs and stream flow, potentially shifting some or all of the stream length from perennial to intermittent (PAFEIS, July 2013, Chapter 3, *Seeps, Springs and Riparian Areas*). Pima County, as well as the BLM which manages the NCA, have expressed similar concerns regarding the secondary effects to Empire Gulch and Cienega Creek surface waters from groundwater drawdown (Comments submitted to the Forest Service by Pima County and BLM on the PAFEIS, dated August 14, 2013). In addition, secondary impacts to intermittent surface flows are likely to occur in Box Canyon, Sycamore Canyon, Adobe Tank Wash, and Mulberry Canyon which all lie within the modeled 5-foot drawdown area (Comments submitted to the Forest Service by Pima County on the PAFEIS, dated August 14, 2013).

the mine pit. Although there are limitations in groundwater model accuracy, the drawdown at Upper Empire Gulch Spring is within the accuracy of the models to predict (*i.e.*, 5- foot drawdown contour) and therefore, we believe impacts to streamflow and wetlands from drawdown within Empire Gulch are reasonably certain and will be significant.[9] We also believe that there is a high potential for many additional waters, including Cienega Creek, Gardner Canyon and others, to be adversely impacted by mine pit drawdown. These resources can be sensitive to changes in groundwater supply measured in inches, and thus EPA has questioned the applicability of even the best available modeling with respect to answering questions about probable impacts.

To address the limitations in the accuracy of the groundwater models, EPA recommends that a risk-based or weight-of-evidence approach be developed to combine multiple lines of evidence on mine projects' impacts from groundwater drawdown. Combining various lines of evidence reduces the probability of making false conclusions based on a single line of evidence (*e.g.*, relying only on models with limited accuracy), allows the use of multiple methods or information sources about the situation being assessed (*e.g.*, likely mine project effects on ground and surface water resources), and consequently allows decision makers to make better informed decisions.

III. ROSEMONT COPPER MINE - 404 CWA MITIGATION

To EPA's knowledge, no compensatory mitigation plan compliant with the regulations has been prepared to date. However, EPA has provided written comments to the Corps and the USFS on different versions of Rosemont's proposed mitigation activities.[10] The most recent information is a 4-page "Summary" dated September 2013, which appears to be a stand-alone document rather than a summary of a more substantive document or plan. A complete mitigation plan that satisfies each element of the 2008 Mitigation Rule will be necessary to issue a 404 permit.

Based on the Summary, proposed 404 mitigation consists of: 1) enhancement of waters and non-aquatic upland habitat at Cienega Creek below Pantano Dam, and, if necessary 2) conservation and establishment of waters at Sonoita Creek Ranch (SCR) and 3) conservation of a 160 acre parcel along a portion of Mulberry Canyon.[11] These components are sequential; the SCR and Mulberry Canyon activities are presented as a contingency if an ILF project with sufficient credits is not available for Rosemont's purchase at Pantano Dam. To date, EPA is not aware of any supporting documentation or assessment demonstrating the mitigation proposed to offset impacts to waters is compensatory.[12]

Cienega Creek Enhancement below Pantano Dam

Rosemont has acquired the rights to purchase 1,122 acre-feet per annum of surface water rights, a groundwater well, and an approximately 2-acre parcel at Pantano Dam supporting open water and

[9] PAFEIS, Chapter 3, Biological Resources, pp. 86-87.
[10] EPA letter to the Corps dated January 25, 2013 addressing mitigation plans at SCR. EPA letters to the USFS dated February 21, 2013 and August 15, 2013, responding to mitigation as presented in the DEIS and PAFEIS.
[11] EPA meeting with the Corps on September 10, 2013 and Rosemont's Summary dated September, 2013.
[12] See EPA letter dated January 25, 2013 regarding the inadequacies of the "functional assessment" for SCR.

riparian habitat. Rosemont proposes to allocate 826 AFY of water rights to an ILF sponsor for development of an ILF project below Pantano Dam. Based on Pima County monitoring, the actual average "wet" water at the site is 360 AFY. The project undertaken by the third party sponsor would include various enhancement actions to generate "credits" under the ILF program for prospective 404 permittees. If Rosemont were to use an ILF program for its mitigation obligations, the total credits needed would be based upon calculation of a mitigation ratio using the Corps' Mitigation Ratio Checklist. Although the crediting mechanism and amount necessary for Rosemont's impacts are yet to be determined, Corps staff has stated that Rosemont's need is anticipated to be at least equal to all the credits generated by the Pantano Dam ILF project as currently described. To mitigate all secondary impacts, Rosemont proposes credit for the water rights transfer, the 2-acre parcel and the water well. [13]

On June 19, 2013, EPA met with the Corps, Pima County Regional Flood Control District (Pima County) and Tucson Audubon Society to discuss the feasibility of such an ILF project in Cienega Creek, downstream of Pantano Dam. On September 4, 2013 the Corps met with Pima County to discuss a revised ILF project. Under the current plan, Pima County as an ILF sponsor would accept 826 AFY of water rights from Rosemont to enhance approximately 150 acres of non-aquatic upland habitat, and 91 acres of Cienega Creek primarily through the release of water at several distribution points. The project would also create in-channel "microbasins" and channel modifications (berms) aimed at correcting head cutting and erosion.[14]

While EPA supports returning surface water to this reach of Cienega Creek, it is uncertain whether proposed water distribution points along Cienega Creek will result in any significant enhancement of aquatic functions; much of the released water will likely drain into the porous substrate and deep aquifer without functionally meaningful improvement in riparian habitat. This concern, and the availability of sufficient wet water for success, have been echoed by the ILF sponsor themselves:

> *We have concluded that significant uncertainty exists regarding our ability to mitigate for streams, seeps, and springs based on approximately 20 years of data documenting progressively declining surface water within Cienega Creek...We estimate that approximately 700 AFY are needed to sustainably raise the groundwater level downstream of the dam to a level that would support hydro-riparian species without continued surface irrigation. The current baseflow is insufficient and may actually decrease if the downward trend in surface water quantity continues. Ongoing irrigation is not a sustainable strategy for the long-term survival of hydro-riparian species nor does it meet the conditions of the 2008 404 Mitigation Rule...The diminishing base flows in Cienega Creek, from studies conducted for over 20 years and most recently by the Pima Association of Governments, is a trend that is expected to continue in to the future. It is possible that, under the best of circumstances, there may only be enough surface flow to maintain the existing riparian vegetation upstream of the dam in the future, if that.* (pp.1-2).[15]

[13] The Summary is unclear, but it appears the ILF credits would be purchased to mitigate only direct fill impacts.
[14] Per EPA phone call September 9, 2013 with Chris Cawein, Pima County, 826 AFY of water rights approximates 350 AFY or less of wet water. Moreover, long-term monitoring clearly demonstrates that there is insufficient wet water available for the proposed project *(i.e.,* no dependable water is available for 40% of the 1908 senior water right, and perhaps none for the remaining water rights).
[15] Letter from Pima County Regional Flood Control District to Marjorie Blaine, Crops, dated July 31, 2013.

Since the mine itself will worsen this baseline condition of diminishing water supplies, EPA questions the viability of ILF or permittee-responsible mitigation below Pantano Dam. [18, 16]

EPA has several concerns with the ILF proposal which in our judgment render the project untenable for the mine's compensatory mitigation needs:

1. **High risk and uncertainty** – To be successful, the project would depend on wet water from rights that haven't produced at the necessary amounts, would require artificial means of retarding or eliminating infiltration (*i.e.,* liners), and is likely to need maintenance in perpetuity.

2. **Ecologically inappropriate** – The project, if successful, would provide credits to mitigate impacts to a high functioning water source area by enhancing a water sink area. The project would purport to replace the functions of 18 linear miles of streams across a landscape with a single segment of stream less than two miles in length.

3. **Counterproductive hydrological interventions** – Rather than provide enhancement, proposed erosion protection structures upstream of Colossal Cave Road may actually exacerbate erosion problems elsewhere along Cienega Creek, further reducing the project's overall value for aquatic resource compensation. Similarly, planned in-channel rock/earthen berms for slowing and retaining surface flows in tributary channels will likely quickly back up with sediment, or be washed away during large storm events.

4. **Jurisdictional area** – EPA believes the reach and extent of jurisdictional waters may be significantly overestimated at the Pantano Dam site. Most of the area proposed for enhancement is non-aquatic, upland habitat.

5. **Mitigation Rule** – the proposal lacks the certainty and other assurances required under the 2008 regulations (such as enforceable and ecologically meaningful success criteria).

6. **Temporal loss** – The amount of time likely required to sever and transfer water rights to the ILF sponsor also makes the consideration of any ILF credits as mitigation for Rosemont Copper unacceptable. The approval process could take two years or more and there are no guarantees Rosemont Copper will obtain approval from Arizona Department of Water Resources to sever and transfer these water rights should irrigation districts and other water right holders object.[17] Although there is discussion of purchasing water rights directly for Pima County, to avoid potential sever and transfer issues, the process issues have not been resolved.

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[16] During the June 19, 2013 meeting with the Corps, Pima County and Tucson Audubon, Pima noted there is incomplete information on the existing geologic condition below Pantano Dam. The potential exists for surface water to percolate deep into the aquifer without providing necessary hydrologic conditions to support enhancement of existing riparian.

[17] p. 44, Supplemental to the Biological Assessment Proposed Rosemont Copper Mine Santa Rita Mountains, Pima County, Arizona Nogales Ranger District, dated February 2013.

Sonoita Creek Ranch

The 1,200-acre Sonoita Creek Ranch (SCR) is six miles south of Sonoita, Arizona. Approximately 590 acre-feet per annum of water rights are appurtenant to the ranch. The SCR proposal described in Rosemont's Summary proposes a site protection instrument on the 1,200-acre ranch, and a permittee-responsible mitigation project including modification of grazing and an unspecified amount of creation of aquatic habitat within the floodplain of Sonoita Creek.

The Corps has determined the Sonoita Creek Ranch (SCR) site is not acceptable compensatory mitigation under § 404 CWA for impacts from the Rosemont Mine.[18] EPA concurs with this determination. EPA recognizes the conservation value of Sonoita Creek Ranch, but given the existing geomorphology of the site, we remain highly skeptical of the proposals to create and enhance wetlands on the ranch. In addition, the site is far removed from the Davidson Creek and Cienega Creek watersheds and therefore, does not provide ecological benefit for the loss of acreage and function that would occur from the proposed copper mine.

Preservation of 160-acre parcel in Mulberry Canyon

In the event that mitigation credits beyond Pantano Dam and SCR are required for the Rosemont Project, the Summary suggests that additional mitigation may be provided by preservation of the 160-acre Mulberry Canyon parcel. There is no information on the extent of aquatic resources on the site. Under this proposal, Rosemont would record a site protection instrument prohibiting certain land uses on the parcel (Summary, p.4).

Pursuant to the 2008 Mitigation Rule, preservation as 404 mitigation can be used when the resources to be preserved provide important physical, chemical or biological functions for the watershed; contribute significantly to the ecological sustainability of the watershed; and are under threat of destruction or adverse modification (33 CFR Part 332.3(h)).

EPA does not believe preservation of this parcel is appropriate compensation for project impacts. This proposed mitigation parcel does not have water rights. The parcel is surrounded by USFS land and is not under any foreseeable threat of destruction or adverse modification. In addition, the mitigation parcel lies downstream from the mine. The proposed Mulberry Canyon mitigation parcel would be adversely affected by the very impacts it is meant to mitigate.[19]

The Corps has determined the Mulberry Canyon parcel is not acceptable compensatory mitigation under § 404 CWA for impacts from the Rosemont Mine.[20] EPA concurs with this determination. Indeed, Mulberry Canyon represents a potential secondary impact area of the project itself that should be assessed, and for which Rosemont may be required to mitigate.

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[18] EPA-Corps meeting September 10, 2013; phone conversation between David Castanon and Jason Brush September 26, 2013.
[19] PAFEIS, July 2013, Chapter 3, *Seeps, Springs and Riparian Areas.*
[20] Phone conversation between David Castanon and Jason Brush dated September 26, 2013.

Additional Conservation Lands

Rosemont Copper has developed a Conservation Lands Program, but has not presented this as part of proposed 404 mitigation. The program proposes conservation of lands surrounding the proposed mine to address federal and state endangered and sensitive species, cultural resources and public viewsheds. However, in a meeting with Rosemont and the Corps on August 7, 2013, Rosemont suggested that 1,700 acres at Fullerton Ranch and 940 acres at Helvetia Ranch Annex North might be considered as mitigation under §404 CWA. The Corps determined these conservation lands were not suitable as mitigation under §404 CWA.[21] EPA concurs with the Corps' determination.

Adequacy of Proposed §404 CWA Mitigation

The 2008 Mitigation Rule states, *The fundamental objective of compensatory mitigation is to offset environmental losses resulting from unavoidable impacts to waters of the United States authorized by DA permits* (33 CFR 323.3(a)(1)). EPA has identified significant flaws in Rosemont's plans for offsetting the project's environmental harm. First, 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. Second, the compensatory mitigation proposals do not account for the interrelationship of the headwater streams and the surrounding terrestrial ecology and will not replace the high quality resources in the Cienega Creek watershed. Enhancement of existing waters and upland habitat (Pantano Dam) in the lower watershed would not offset the mine's impacts to high quality headwater streams. Third, despite some assurances inherent in ILF proposals, there is great ecological uncertainty in the Pantano Dam proposal. Based on the information to date, EPA finds the proposed mitigation grossly inadequate to compensate for mine impacts. In summary:

- There is no acceptable functional assessment of the mine site or proposed mitigation sites on which to make a determination how the proposed ILF or other proposals compensate for project impacts (2008 Mitigation Rule, 33 CFR 332.8(o)(2), 33 CFR 332.3(f)(1)), ILF Enabling Instrument, June 2013, p. 15);
- There is significant uncertainty whether the ecological condition at the ILF site is suitable to support the proposed mitigation;
- The ILF sponsors will not assume full legal responsibility for the required reestablishment of specific acreage of riparian vegetation downstream of the dam site;[22]
- Additional water rights are necessary to conduct enhancement downstream of Pantano Dam;
- Declining water levels due to drought and exacerbated by climate change, and the proposed mine, will continue to reduce the availability of water in Cienega Creek;
- The proposed ILF project, if approved, would consist of enhancement of existing waters/uplands, providing limited compensation for the loss of aquatic area and function in the watershed as a result of the proposed project;
- The SCR proposal would not benefit the watershed affected by the mine, and its ecological success and sustainability are unlikely, and;

[21] EPA-Corps meeting September 10, 2013 and phone discussion between Jason Brush and David Castanon September 26, 2013.
[22] Memorandum dated August 13, 2013 from C.H. Huckelberry, County Administrator to Pima County Board of Supervisors.

- Preservation of the Mulberry Canyon parcel is an inadequate compensatory measure because it is a probable impact site and is not under foreseeable threat from development.

Usefulness of the Standard Operating Procedure for Determining Mitigation Ratios

The Corps' Mitigation Ratio checklist is a standard operating procedure (SOP) in the South Pacific Division used for determining compensatory mitigation amounts. The SOP seeks to simplify compliance with the 2008 Mitigation Rule by applying stepwise criteria to arrive at a compensation ratio (acres replaced for acres lost). The SOP allows both qualitative and quantitative approaches, but consistent with the Mitigation Rule, requires use of functional or condition assessment data to inform a quantitative approach whenever practicable.

As currently applied, the calculation of a simple ratio through the SOP for a project of this scope and magnitude fails to meet the clear intent of Corps regulations at 33 CFR 320.4(r)(2), which state: *"...all mitigation will be directly related to the impacts of the proposal, appropriate to the scope and degree of those impacts, and reasonably enforceable."*

- The SOP (Checklist Step 3) recommends that a functional/condition assessment should be required for impacts over 0.5 acre or 300 linear feet. The mine would result in 95,040 linear feet of stream impact and 40 acres of fill.
- Absent functional or condition assessment data, it is all the more important that any ratios generated by the SOP be rigorously defensible. The SOP's maximum ratio adjustment of 4:1 for the qualitative method is without adequate justification, and inappropriate in this context of landscape-scale impacts. Particularly with non-aquatic habitat preservation, ratios higher than 4:1 are allowed under the SOP (Question 11 – June 2013, Corps' SOP training PowerPoint).
- Out of kind, preservation-dominated mitigation activities such as those proposed in the Summary fail to address the net loss of function and area within the hydrologic source area landscape.
- Section 4.0 of the SOP defines enhancement as, *"the manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource functions, but may also lead to a decline in other aquatic resource function(s)."* Proposed enhancement of non-aquatic upland is not considered enhancement in the SOP, but it is recognized in the Mitigation Rule (p. 19661) only when it has been demonstrated as critical for maintaining the integrity and sustainability of aquatic resource functions. A functional assessment is necessary to make this determination.
- EPA has noted several examples of significant risk and uncertainty above. The SOP notes: *"If too many uncertainty factors are identified this may indicate the overall mitigation proposal design is not acceptable."*(checklist #7, SOP PowerPoint).[23]
- Compensatory mitigation is required for secondary impacts (SOP checklist #9). Secondary impacts are not only wildly underestimated, but to our knowledge, only paper water rights,

[23] The Mitigation Rule Preamble notes the likelihood of success must be considered when evaluating compensatory mitigation proposals. If the potential for satisfying the objectives of a proposal is low, then alternative mitigation proposals with a higher likelihood of success should be required. Risk and uncertainty must be minimized as much as possible (p. 19633).

preservation of a 2-acre site, and retirement of an existing well have been proposed to date as compensation for secondary impacts.

- For ILF projects, an appropriate assessment method or other suitable metric must be used to assess and describe the aquatic resource types that will be restored, established, enhanced and or preserved. The number of credits must reflect the functional or condition assessment or other suitable metric (33 CFR 332.8).
- Separate assessments must be used for each resource impact (*e.g.*,springs, ephemeral waters) and for each mitigation type (*e.g.*, upland buffer preservation, in-stream enhancement)(SOP Section 7.3). The approach taken in the Summary appears to group all impacts into an acreage total and simply apply a ratio.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

JAN 25 2013

Colonel R. Mark Toy
District Engineer, Los Angeles District
U.S. Army Corps of Engineers
Attn: Regulatory Branch (SPL-2004-01399-MB)
5205 E. Comanche Street
Tucson, Arizona 85707

Subject: Draft Rosemont Copper Project Habitat Mitigation and Monitoring Plan (HMMP)

Dear Colonel Toy:

EPA Region 9 appreciates the Corps' ongoing coordination regarding your pending permit decision for the Rosemont copper mine, located on 4,750 acres of predominantly on U.S. Forest Service (USFS) lands in Pima County, Arizona. Enclosed please find comments reflecting our detailed technical review of the project's November 2012 HMMP and related documents,[1] which we trust will be useful to the Corps in advancing the project through the regulatory process.

In summary, we believe implementation of the HMMP would fail to fully compensate for the project's impacts to regulated waters. The methods used to assess aquatic functions at the project site and proposed mitigation sites are scientifically flawed, and therefore fail to adequately identify and quantify those functions. This fundamental error is then compounded by the attempt to establish appropriate compensation ratios. Among the most significant issues are:

- The failure to fully assess the direct, indirect and cumulative impacts from the proposed project;
- The functional assessment methodology does not provide any meaningful assessment of the functions of ephemeral systems across the proposed project and mitigations sites and significantly underestimates the function of impacted waters; and
- The habitat creation proposed at Sonoita Creek Ranch may not be ecologically sustainable and may not result in the creation of jurisdictional waters.

EPA remains concerned that substantial loss and/or degradation of water quality and other aquatic ecosystem functions are likely if the proposed mine is constructed. Although we are pleased to provide the enclosed detailed analysis of proposed compensatory mitigation, the applicant should be reminded that mitigation begins with the avoidance and minimization of impacts, and that compliance with 40 CFR 230.10(a) (alternatives) is prerequisite to assessing compliance with 40 CFR 230.10(d) (mitigation) or the requirements of Subpart J of the 404(b)(1) Guidelines.

[1] All documents November 2012 by WestLand Resources, Inc on behalf of Rosemont Copper Company: (a) *Functional Analysis of Impacted Waters of the U.S.* (RCFA); (b) *Sonoita Creek Ranch Functional Analysis and Mitigation Ratio Determination* (SCR); and (c) *State Route 83 Corridor and Davidson Parcels: Functional Analysis and Mitigation Ratio Determination* (SR83/Davidson).

Thank you for your ongoing partnership in implementing CWA programs. As additional information on this project's regulatory progress becomes available, please ask your staff to coordinate with Elizabeth Goldmann at (415) 972-3398 or Dr. Robert Leidy at (415) 972-3463.

Sincerely,

Jason Brush
Supervisor
Wetlands Office

Attachment

cc: Rosemont Copper Company
U.S. Forest Service
U.S. Fish and Wildlife Service

Rosemont Copper Mine
404 Comments on HMMP

Proposed Project Impacts

In our evaluation of the proposed HMMP, it is important to identify in advance the discrepancy that exists between EPA's and Rosemont's assessment of project impacts upon which the HMMP has been developed. In addition to other significant concerns (*e.g.*, functional analysis) described in this letter, the HMMP fails to provide compensation as required by the Guidelines and 2008 Mitigation Rule for the entire scope of direct and indirect/secondary project impacts associated with the proposed project.

The proposed project site supports 101.6 acres of waters, including wetlands, in the Cienega Creek watershed providing hydrologic, chemical and biological connectivity to Cienega Creek and the Santa Cruz River. In developing the HMMP, Rosemont identified only 39.97 acres of direct impacts and 2.79 acres of indirect impacts in their mitigation analysis.

EPA maintains the impacts from the proposed project include direct fill, secondary impacts resulting in functional degradation, and habitat conversion of aquatic and terrestrial resources over a large geographic area. The project will result in the loss or conversion of approximately 7,000 acres including semi-desert grassland, Madrean evergreen woodland, and Sonoran desert scrub communities, and their associated aquatic and riparian habitats, that form a vast, largely unfragmented, natural landscape.

The proposed project will authorize the direct fill of 39.97 acres of waters, including a largely undisturbed network of 18 linear miles of stream comprised of up to 154 individual drainages. There will also be direct impacts to aquatic habitats associated with several springs. Secondary effects on the aquatic environment include dramatic and persistent changes to hydrologic and hydaulic regimes within the project and adjoining watershed, adversely affecting the function of sensitive and regionally significant downstream receiving waters, including wetlands. The U.S. Forest Service estimates 1,364 acres of riparian habitat, likely to include a significant amount of jurisdictional riparian wetlands, impacted by the proposed project.[2] The project will adversely affect three types of Special Aquatic Sites (wetlands, sanctuaries and refuges, and riffle and pool complexes, see 40 CFR 230.40-45) as well as Tier 3 "unique waters"; portions of Davidson Canyon Wash and Cienega Creek are designated by the State of Arizona as "Outstanding Arizona Waters" (section 303 of the CWA and 40 CFR 131.12). In addition, EPA identified these waters as "Aquatic Resources of National Importance" pursuant to the 404q MOA.

The proposed project is likely to have significant impacts to downstream reaches of Davidson Canyon, Empire Gulch and Cienega Creek, including:[3]

- Modification to the water balance along portions of Davidson Canyon, Cienega Creek and Empire Gulch Creek adversely impacting special aquatic sites;
- Secondary impacts from project-related groundwater drawdown disrupting breeding, spawning, rearing and migratory movements, or other critically life history requirements of fish and wildlife resources;
- Groundwater drawdown resulting in stress and mortality to riparian habitat, including wetlands;

[2] DEIS for the Rosemont Copper Project (December 11, 2011), Chapter 3, Table 98.
[3] Letters from EPA to Corps dated January 5, 2012 and February 13, 2012

- Modification of sediment yield resulting in adverse impact to downstream water quality. Permanent surface water quality impacts to 2.5 miles of Barrel Canyon Wash and 14 miles of Davidson Canyon Wash through increased channel scour and aggradation. Other changes include bank erosion and loss of riparian habitat;
- Adverse effects on aquatic organisms due to elevated suspended sediments;
- Loss of 18 miles of stream channel resulting in significant reduction of groundwater recharge functions within Davidson.

Rosemont's Habitat Mitigation and Monitoring Plan

On October 11, 2011, Rosemont Copper submitted a CWA 404 permit to the Corps requesting a permit to discharge dredged or fill material into waters to construct the proposed Rosemont Copper Mine. On November 8, 2012, EPA received a copy of the Rosemont Copper Mine HMMP. Rosemont Copper proposes the HMMP as compensatory mitigation in compliance with the CWA 404 permit and the 2008 Mitigation Rule.

The 2008 Mitigation Rule states the fundamental objective of compensatory mitigation is to offset environmental losses resulting from unavoidable impacts to waters. Compensatory mitigation may be performed using the methods of restoration, enhancement, establishment, and in certain circumstances, preservation.

Preservation

As described in the HMMP, Rosemont proposes to record a conservation easement on 1774 acres of land containing 35.34 acres of aquatic resources and approximately 39.45 acres of riparian vegetation within the Santa Cruz River watershed on the following parcels:

State Route 83 Corridor Parcels - The State Route 83 parcels consist of 4 parcels totaling 545 acres. The size of each parcel is not described in the referenced documents. These parcels contain surface water features that occur within or drain into Davidson Canyon (SR83/Davidson p. 2). Waters located within these conservation parcels total 13.76 acres and range from 0.94 acre to 7.28 acres per parcel. There are no water rights associated with the SR 83 parcels.

Davidson Parcels - The Davidson parcels consist of 2 parcels totaling 29 acres. These parcels consist of two adjoining parcels of land encompassing both sides of Davidson Canyon. Waters located within these conservation parcels total 1.75 acres (SR83/Davidson p. 3). There are no water rights associated with the Davidson parcels.

Sonoita Creek Ranch Parcel – The Sonoita Creek Ranch parcel is 1200 acres consisting of ranching, open space and agriculture. Perennial Monkey Spring is located 0.8 mile north of the ranch and provides surface water to the ranch. There are 19.83 acres of aquatic resources on the Sonoita Creek Ranch consisting of: 1) 13.03 acres of ephemeral drainages; 2) 0.16 acre of perennial drainage; 3) 5.92 acres of wetlands; and 4) 0.72 acre of 5 seasonal ponds. A total of 52.01 acres of riparian vegetation was identified on the parcel (SCR p. 6).

Creation

Sonoita Creek Ranch Parcel - The HMMP is proposing 115.5 acres of habitat consisting of a drainage feature, wetland fringe and riparian buffer (p. 9 SCR). Based on the maps provided in the HMMP, Rosemont is proposing a 3,000' riverine corridor with a 5' channel (1' to 2' bottom width) and 20' riparian habitat on each side (HMMP p. 17). This would result in approximately 0.34 acre of wetted channel and 2.75 acre of adjacent riparian habitat. The remainder of the 112 acres proposed as mitigation on this parcel would be sown with native seed mix. The native seed mix is comprised of approximately 91% upland species (HMMP p. 22-23). The 112 acres would remain as uplands.

Rosemont would share certified water rights on Monkey Springs with an upstream property owner and flow would be based on a water delivery schedule agreed to with the other property owner (HMMP p. 8). The flow of water would be controlled through existing infrastructure. This water would be used to create a perennial compacted drainage feature and adjacent riparian. Waters within the proposed 3,000' riverine channel will eventually infiltrate due to the nature of the soils on the agricultural field. Therefore, this channel may not be considered a jurisdictional water as it would not have a surface water connection with Sonoita Creek.

MRA - Functional Analysis of Jurisdictional Impacts

According to the 2008 Mitigation Rule, compensatory mitigation must be, to the extent practicable, sufficient to replace lost aquatic resource functions. If a functional or conditional assessment, or other suitable metric is not used, a minimum one-to-one acreage or linear foot compensation ratio must be used. The Corps must require a ratio greater than one-to-one where necessary to account for the method of compensatory mitigation (*e.g.,* preservation), the likelihood of success, differences between the functions lost at the impact site and the functions expected to be produced by the compensatory mitigation project, temporal losses of aquatic resource functions, the difficulty of restoring or establishing the desired aquatic resource type and functions, and/or the distance between the affected aquatic resources and the compensation site (CFR 230.93(f)).

To assess the functional condition of aquatic resources on the proposed project site as well as the proposed mitigation lands, WestLands modified a Rapid Stream-Riparian Assessment[4] (RSRA) for their own use and called it the Modified RSA approach or "MRA." The original methodology involves a quantitative evaluation of between two to seven indicator variables in five different ecological categories: water quality, fluvial geomorphology, aquatic and fish habitat, vegetation composition and structure, and terrestrial wildlife habitat. Each variable is rated on a scale that ranges from "1," representing highly impacted and non-functional conditions, to "5," representing a healthy and completely functional system. Whenever possible, scores are scaled against what would be observed in control or reference sites that have similar ecological geophysical characteristics, but which have not been heavily impacted by human activities.

Although the RSRA was designed to assess the functional condition of perennial systems, WestLands modified the RSRA in order to apply it to ephemeral systems. In addition, they propose the MRA can also be used to compare functions between ephemeral, intermittent and perennial stream reaches on the

[4] Steven, L.E., Stacey, P.B., Jones, A.K., Duff, D., Gourley, C., and J.C. Catlin. 2005. A protocol for rapid assessment of southwestern stream-riparian ecosystems. Proceedings of the Seventh Biennial Conference of Research on the Colorado Plateau titled *The Colorado Plateau II, Biophysical, Socioeconomic, and Cultural Research.* Charles van Riper III and David J. Mattsen Ed.s. pp. 397-420. Tucson, AZ: University of Arizona Press.

same scale. They used the MRA scores as an absolute assessment based upon the values and indicators in the RSRA Guidebook rather than as scores for comparison of stream reaches with similar biotic and abiotic characteristics (RCFA, p.4). The MRA averaged the indicators for each ecological category, and then calculated an overall score by averaging the five ecological categories. As a result, all ephemeral streams using the MRA scored "0" for water quality, fluvial geomorphology and fish/aquatic habitat. The overall MRA score of the Rosemont Project area was 1.17, indicating the aquatic resources are non-functioning or highly impacted (RCFA p. 11).

The MRA used by WestLands does not provide any meaningful assessment of the functions of ephemeral systems across the proposed project and mitigation sites. The MRA is not scientifically sound. Therefore, the MRA does not satisfy the requirements of a suitable assessment method to assess the loss of aquatic function (33 CFR 332.3 (f)(1)). Since 1993, the federal government has expressed the need for improvement of rapid assessment techniques to allow for better consideration of the functions of waters/wetlands in the context of the CWA Section 404 process. Fundamental to the development of a functional assessment is the recognition that waters/wetlands perform certain functions better than others, not because they are impacted in some way, but because waters are inherently different. Therefore, it is critical to accurately describe functions for each class of waters/wetlands that occur within a study area. It is not appropriate to strictly compare functions across classes of waters/wetlands. For example, comparison of the functions of 1st through 3rd order ephemeral riverine waters with those of perennial waters/wetlands for the purpose of computing MRA scores is not meaningful. Even though some functions overlap significantly between classes, which they often do, the functions are likely to be performed through the combination of slightly difference processes and at different levels or intensities.

Essential to the development of a functional assessment, is the use of reference systems. Reference sites are the observed and measured characteristics of a range of similar sites within a regional or study area. Development of a reference framework allows the use of a relative rather than an absolute scale, which provides for better resolution of expected functions and a regional standard for comparison. For example, within the context of a regional reference framework the 1st through 3rd order ephemeral streams on the Rosemont Project impact site likely would be scored as high functioning (*i.e.*, an overall functional rating or 4 or 5 within the RSRA framework).

The MRA also assigns a score of zero to RSRA categories that rely on the presence of water for proper functioning. The MRA assumes that "any variable within the five major RSRA categories that rely on the presence of surface water that cannot be assessed due to the lack of an appropriate water regime at the time of sampling will result in the overall major category receiving a score of zero, representing a lack of functionality" (p. 4). This fails to acknowledge that by definition ephemeral and intermittent streams are functioning aquatic ecosystems that periodically contain flowing water. Any scientifically valid functional assessment of ephemeral and intermittent streams must account for the seasonal nature of flows and either: 1) assess and score functions when water is present, or 2) assay the probable functions in the absence of flows. The MRA assumption that the ephemeral and intermittent streams have no function because there is no water present at the time of the assessment demonstrates a clear lack of understanding of how these aquatic ecosystems function. Ephemeral and intermittent streams on the Rosemont Project impact site perform important functions that were not properly assessed by the MRA. In this regard, there are several hydrogeomorphic (HGM) functional assessments available for modification and use in arid western systems similar to environmental conditions found at the Rosemont project site. The RSRA or other functional assessment methodologies could have been easily modified

to fully assess the functions of ephemeral and intermittent streams or other methodologies for the Rosemont Project.

The MRA does not assess the full range of functions that are performed by riverine waters at the Rosemont Project site. Several important functions not assessed by the MRA performed by ephemeral and intermittent riverine waters in the Arid West and that would be expected to occur in the Rosemont Project area include the following:

Hydrologic Functions

- *Surface and Subsurface Water Flow, Storage and Exchange* - The retention and/or circulation of surface and ground water within the floodprone area.
- *Sediment Mobilization, Transport, and Deposition/Storage* – The mobilization, transport, and deposition of sediment influences the channel pattern, dimension, and profile, channel bed materials, and vegetation of riverine waters/wetlands at the assessment site and in downstream waters.
- *Energy Dissipation* – Energy dissipation results in the allocation of potential energy to other forms of kinetic energy as water moves into, through, and out of a water/wetland.
- *Landscape Hydrologic Connections* – The hydrologic connectivity of contributing areas to riverine waters/wetlands and then, in turn, to other down-gradient waters/wetlands.

Biogeochemical Functions

- *Element and Compound Cycling* – Element and compound cycling includes the abiotic and biotic processes that convert compounds (e.g., nutrients and metals) from one form to another.
- *Organic Carbon Export* – The export of dissolved and particulate organic carbon through leaching, flushing, displacement, and erosion from waters/wetlands.
- *Detention, Retention, and Removal of Imported Elements, Compounds and Particulates* – The delay, transformation and removal of imported nutrients, contaminants, particulates, and other compounds into, through, and out of the riverine system.

Habitat/Faunal Support Functions

- *Maintenance of Spatial Structure of the Habitat* – The capacity of waters/wetlands to support animal populations and guilds by providing heterogeneous habitats.
- *Maintenance of Habitat Interpersion and Connectivity* – The capacity of a water/wetland to permit aquatic, semi-aquatic and terrestrial organisms to enter and leave a riverine system via permanent, intermittent, or ephemeral channels, floodprone areas, or unconfined hyporheic gravel aquifers, or other large contiguous habitat patches.
- *Distribution and abundance of Invertebrates and Vertebrates* – The capacity of the water/wetland to maintain the density and spatial distribution of characteristic aquatic, semi-aquatic and terrestrial invertebrates and vertebrates.

Several of the MRA sampling method indicators are not adequate to assess a particular function. For example, water quality is a societal value and not strictly a function. Hydrologic functions (*e.g.*, element and compound cycling, removal of compounds) are better measures of the ability of a water/wetland to affect "water quality." The MRA uses a single indicator (*e.g.*, channel shading, solar exposure) for water quality. Also, as noted above, it is not reasonable to assign a zero score to the functioning of a

water/wetland just because there is no water present at the time the assessment was conducted. Clearly, the waters that were assessed on the Rosemont Project impact site function in some capacity to improve the quality of downstream receiving water. The MRA is not designed to capture the performance of this function.

Other MRA sampling method indicators are inappropriate for the types to waters being assessed. For example, the logic for using variables 8 (riffle-pool distribution), 9 (underbank cover), and 10 (cobble embeddedness), to assess the functioning of fish/aquatic habitat in 1st and 2nd ephemeral streams is unclear. These variables are better suited for assessing fish and invertebrate habitat in perennial streams, not streams where one would not expect to find fish. If these variables are to be used, the logic for their use needs to be clearly justified and the scoring definitions need to be scaled within the context of a reference framework. In addition, there are 10 plant-related indicators for assessing riparian and vegetation and terrestrial wildlife habitat that are similar (sensu autocorrelated), which would tend to bias the combined scores.

The overall MRA water quality, hydrogeomorphology, and fish/aquatic habitat scores for the Rosemont Project area are zero (*e.g.*, Table 5), even though the scores for individual variables for these functions may not have scored zero. For example, if for the water quality function a site receives a score of "2" for channel shading from solar exposure in the absence of surface water, then why would it not receive the same score when surface water is present? Again, the assignment of a "zero" score in the absence of water at the time of the assessment unjustifiably lowers the overall MRA scores.

Calculating Mitigation Ratios

To assist in calculating a compensatory mitigation ratio, the functions and values of the mitigation sites were evaluated relative to the functions and values of the impact site prior to the occurrence of impacts. The functional scores of the impact and mitigation site informed the final mitigation ratio (RCFA p.13).

Using the MRA, WestLands calculated the overall functional score of the aquatic habitat: 1) Rosemont site scored 1.17; 2) Sonoita Creek Ranch scored 1.25; 3) and the SR 83 Corridor and Davidson Parcels scored 1.25. In order to determine compensatory mitigation ratios for the proposed Rosemont Copper Project, WestLands used the Mitigation Ratio Setting Checklist Attachment 12501.2 SPD. Using a qualitative impact mitigation comparison and ratio adjustment, WestLands concluded their proposed mitigation would provide 592% of the required mitigation credits. In other words, the compensatory mitigation package proposed by Rosemont Copper will provide nearly six times the required mitigation for unavoidable impacts to waters (HMMP p. 9).

Following our review of the HMMP and mitigation ratio calculations, we have identified several significant concerns:

- The MRA used in calculating the mitigation ratios is based on a flawed functional assessment methodology (see above) and, in all likelihood, significantly underestimates the function of the impacted waters.
- The Step Adjustment in the Mitigation Setting that relied, in part, on the MRI is therefore incorrect and skewed.
- The MRA functional analysis of Sonoita Creek Ranch scored nearly all (approaching 100%) of the drainage features, while the MRA for the impacted waters scored only 10% of the drainages, which would likely bias the overall scores.

- The proposed creation of 115.5 acres of habitat consisting of a drainage feature, wetland fringe, and riparian buffer proposed at Sonoita Creek Ranch (SCR, p. 9) may not result in the creation of jurisdictional waters of the U.S. Only 3.5 acres of the proposed 115.5 acres of habitat may qualify as a three-parameter jurisdictional wetland (SCR, p. 21).
- The proposed design would not be self-sustaining as it would largely rely on the release of regulated releases of irrigation water (see HMMP, pg. 19). Because of variable soil conditions that characterize the creation site, it is unclear whether the amount of water proposed for release is sufficient to maintain the proposed wetted channel and adjacent riparian wetlands.
- The aquatic habitat proposed at Sonoita Creek Ranch consists of 112 acres of uplands (91% of the proposed native seed mix consists of upland plants) and is not aquatic habitat.
- The preservation of wetlands at Sonoita Creek Ranch, formed from controlled water releases of irrigation water upstream may be isolated aquatic features that are not jurisdictional waters of the U.S. If so, they are unacceptable as mitigation.
- It is unclear why Rosemont did not propose a continuous corridor from the ponds through the agricultural field, hydrologically connecting to Sonoita Creek. Based on the information presented, we believe the proposed creation at Sonoita Creek Ranch is unlikely to be ecologically successful and sustainable, as required in the 2008 Mitigation Rule.
- It appears as though the mitigation proposal includes 101.3 acres of upland buffer as compensation for unavoidable impacts to waters (HMMP Table 7, p. 12). Any proposed upland buffer mitigation should be first applied toward the direct and indirect impacts to upland buffers on the project site. We do not believe Rosemont has conducted this analysis.
- The scoring of several mitigation ratio adjustments on the Mitigation Ratio Setting Checklist for the SCR and SR83/Davidson Canyon Parcels are unsupportable.
- The HMMP states that plants used for the Sonoita Creek Ranch habitat creation will "be obtained from the nearest local grower to take advantage of the local genotype to maximize success." (HMMP p. 21). All plant materials used for site restoration should come from within the Sonoita Creek Ranch or from within the Sonoita Creek watershed.
- Monitoring of all created habitat should be for a minimum 10-year period, not 5-years as implied in the HMMP.
- The success criteria presented in the HMMP do not adequately address invasive species control (p. 24).
- The SR 83 and Davidson Canyon mitigation parcels all lie downstream from the impacted drainages and yet the functional assessment used to determine compensatory mitigation does not factor in indirect effects from the proposed Rosemont copper mine to the proposed mitigation sites, thereby inflating the value of the site.
- Rosemont may convey the Sonoita Ranch property to another entity at any time (HMMP p. 25). Conveyance of the property should be pursuant to approval by the Corps.

On page 13 of the HMMP, Rosemont discusses conservation easements and notes, *"The implementation of mitigation activities described in this HMMP shall not limit or restrict Rosemont or it successors in interest from requesting and if approved securing additional compensatory mitigation credits from the mitigation sites for future 404 permits provided they are able to demonstrate functional capacity above currently proposed conditions of the function and values of the mitigation sites."*

The compensatory mitigation package proposed in the above referenced documents is grossly inadequate, fails to accurately assess the functional condition at the project site and mitigation sites, and

fails to provide compensation for proposed project impacts. Therefore, any future request by Rosemont for securing additional compensation is moot and contrary to mitigation guidelines.

From:	Goforth, Kathleen
To:	msvogel@fs.fed.us
Cc:	Jessop, Carter; Goldmann, Elizabeth; Leidy, Robert; McKaughan, Colleen; Brush, Jason; Rivera, Shirley; Herrera, Angeles
Bcc:	Rader, Cliff; Sachs, Carol; Bose, Laura; Harris-Bishop, Rusty; Thomas Plenys
Subject:	US EPA Comments on the Rosemont Copper Mine PAFEIS
Date:	Thursday, August 15, 2013 3:01:00 PM
Attachments:	RosemontAFEIS_CommentsTable_081513.docx

Ms. Vogel,

Attached, please find EPA's comments on the Preliminary Administrative Final Environmental Impact Statement (PAFEIS) for the proposed Rosemont Copper Mine Project. [redacted] B5 [redacted] If you have any questions regarding our comments, please contact Carter Jessop at jessop.carter @epa.gov or 415-972-3815.

Thank you.

Kathleen Goforth

Kathleen Martyn Goforth, Manager
Environmental Review Office (CED-2)
U.S. EPA, Region IX
75 Hawthorne Street
San Francisco, CA 94105
415-972-3521

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From: Greczmiel, Horst
To: Cal Joyner (cjoyner@fs.fed.us); Jim Upchurch (jupchurch01@fs.fed.us); Kopocis, Ken; Blumenfeld, Jared; Bromm, Susan; Rader, Cliff; Goforth, Kathleen; Ann Acheson - CEQ (aacheson@fs.fed.us); Joe Carbone (jcarbone@fs.fed.us); Robert Bonnie (robert.bonnie@osec.usda.gov); Meryl Harrell (meryl.harrell@osec.usda.gov); "Blaine, Marjorie E SPL"; "Castanon, David J SPL"; Meg.E.Gaffney-S[redacted] Dave Sire (david_sire@ios.doi.gov); Deborah Rawhouser (drawhous@blm.gov); "Edwin Roberson"
Cc: Guzy, Gary S.; Boots, Michael J.; Patel, Manisha
Subject: Upcoming deadlines and FW: December 13, 2013 Letter to EPA Administrator McCarthy
Date: Friday, December 13, 2013 1:29:07 PM
Attachments: 12.13.13 Ltr to Administrator McCarthy.pdf
Importance: High

Per our conversation today, attached is the letter from the Tohono O'Odham and here are the dates moving forward:

[redacted]

Regards, Horst

Horst Greczmiel
Associate Director for NEPA Oversight
Council on Environmental Quality
[redacted]

Please consider the environment before printing this e-mail

From: Goforth, Kathleen [mailto:Goforth.Kathleen@epa.gov]
Sent: Friday, December 13, 2013 2:34 PM
To: Greczmiel, Horst
Cc: Scott, Jeff; Rader, Cliff; Bromm, Susan
Subject: FW: December 13, 2013 Letter to EPA Administrator McCarthy

Hi, Horst –
We just received the attached letter from the Tohono O'Odham, requesting referral of the Rosemont project. Jeff Scott asked me to forward it to you.
-Kathy

From: Blumenfeld, Jared
Sent: Friday, December 13, 2013 10:33 AM
To: Goforth, Kathleen; Scott, Jeff
Subject: Fw: December 13, 2013 Letter to EPA Administrator McCarthy

Jared Blumenfeld, EPA

From: April J. Foltz <April.Foltz@tonation-nsn.gov>
Sent: Friday, December 13, 2013 10:30:01 AM
To: jupchurch01@fs.fed.us; Blumenfeld, Jared; agsec@usda.gov
Subject: December 13, 2013 Letter to EPA Administrator McCarthy

Administrator Blumenfeld, Supervisor Upchurch and Secretary Vilsack-

Attached is the December 13, 2013 letter from the Tohono O'odham Nation to EPA Administrator Gina McCarthy regarding the proposed Rosemont Copper Project. Please contact Assistant Attorney General, Laura Berglan, at (520) 383-3410 with any questions you might have.

Respectfully-

April Foltz
Legal Assistant
Office of Attorney General
Tohono O'odham Nation
Office: 520.383.3410
Fax: 520.383.2689

This message and any included attachments are from the Tohono O'odham Nation Office of Attorney General and are intended only for the addressee(s). The information contained herein is confidential and may be attorney work product and/or subject to the attorney-client privilege. Unauthorized review, forwarding, printing, copying, distributing, or using such information is strictly prohibited and may be unlawful. If you have received this message in error, or have reason to believe you are not authorized to receive it, please promptly delete this message and notify the sender by e-mail. Thank you for your assistance.

Tohono O'odham Nation Office of the Chairman & Vice Chairwoman

COMPASSION FAITH TRADITION RESPECT
T-I:BDAG 'AMJED S-WOHOCUDA HIMDAG PI:K 'ELID

Ned Norris, Jr.
Chairman

Wavalene M. Romero
Vice Chairwoman

December 13, 2013

Gina McCarthy
Administrator
Environmental Protection Agency
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N.W.
Mail Code: 1101A
Washington, DC 20460

Via Email at McCarthy.gina@Epa.gov and U.S. Mail

Dear Ms. McCarthy:

The Tohono O'odham Nation ("Nation") writes to you to seek your assistance. The proposed Rosemont Copper Project, located in Ce:wi Duag (Santa Rita Mountains), a Traditional Cultural Place for the Tohono O'odham, appears to be bound for approval. The Nation has attempted to relay its concerns to the Forest Service regarding the Project numerous times and in numerous ways. The Nation actively participated in the National Historic Preservation Act Section 106 tribal consultation process, has held meetings with Forest Service staff, and has corresponded with Secretary Vilsack, among other activities. Ultimately, due to the Forest Service's failures to adequately address the Nation's concerns over the widespread destruction of cultural and natural resources that the Project will cause on Ce:wi Duag, the Nation chose not to sign the Section 106 Memorandum of Agreement for the Project.

The Nation has numerous concerns with this Project, the most significant of which is the destruction of cultural resource sites that are significant to the Nation and to other tribes including Ak-Chin Indian Community, Gila River Indian Community, Salt-River Maricopa Indian Community, Pascua Yaqui Tribe, Hopi Tribe, Zuni Tribe, Mescalero Apache Tribe, White Mountain Apache Tribe, San Carlos Apache Tribe, and Fort Sill Apache Tribe. Ce:wi Duag is located within the historic Papagueria, which extends over an area much wider than the current boundaries of the Nation. Under the proposed action, 85 cultural resource sites on Ce:wi Duag will be buried, destroyed, or damaged, 31 of which are known or likely to have human remains.[1] Historic villages, ancestral resting places, and resource gathering areas will all be

[1] Final Environmental Impact Statement ("FEIS") at 1021-1022.

P.O. Box 837, Sells, AZ 85634. (520)383-2028 . Fax (520)383-3379

destroyed. One of the cultural resource sites that will be adversely impacted is Huerfano Butte, which is a Traditional Cultural Place for Tohono O'odham. The butte was historically a place to make an offering en route to Ce:wi Duag and is still in use today. Two cached pots containing hundreds of turquoise and shell beads and ornaments were collected from the site, one of which is curated at the Arizona State Museum.[2] In addition to specific cultural resource sites being destroyed, 6,177 acres of traditional resource collection areas will be adversely impacted.[3] As noted in the FEIS, the "impact on Native Americans of desecration of land, springs, burials, and sacred sites" is "notable."[4] Indeed, the impact upon the Tohono O'odham Nation and other tribes is beyond "notable." The entire cultural landscape of Ce:wi Duag will be irrevocably altered. Tohono O'odham have frequented Ce:wi Duag for thousands of years to pray and gather traditional plants and other resources. If the proposed action is implemented, that tradition will be destroyed. The destruction of so many cultural resource sites simply cannot be mitigated.

The Nation is also concerned that the Forest Service has failed to consider the Project's impacts upon the natural resources in the area, most significantly, its impact upon s-o'ohi mavid (jaguar). One jaguar has been known to frequent the area. In fact, it is the only jaguar known to freely roam the United States. S-o'ohi mavid prefer wild, open terrain. The Project may have disastrous impacts upon this animal and may destroy efforts to reintroduce s-o'ohi mavid, an animal significant to the Tohono O'odham, to the area in the future.

The Nation requests that this Project be elevated to the Council on Environmental Quality ("CEQ"). The Nation feels that it has exhausted all efforts with the Forest Service and would like CEQ to weigh in on this significant Project. The Nation believes that the Project meets the criteria set out in the CEQ regulations.[5] The Project will have a severe impact upon the cultural resources of the Nation and other tribes in the area. In addition, the impact on natural resources in the area is severe. The geographical scope is quite great. Although active mining may only occur over a 20-25 year period, the impact to the land will be irreversible.[6] As set out in the FEIS, reclamation of the area is planned, however, as the Nation has first-hand knowledge, mine reclamation particularly in an arid desert environment can never replace what was destroyed. Further, the precedent that a Project of this size will set is significant. The scope of cultural resource destruction is incomparable to other recent projects in the area. The Nation is concerned that if this Project is approved with little substantive contribution allowed by the Nation, that it could set a precedent for other Projects in the future. Finally, the Nation believes that there are environmentally preferable alternatives available that would minimize the adverse impact on cultural resources and believes that the Project may not comply with national

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[2] FEIS at 1034.
[3] FEIS at 1022.
[4] *Id.*
[5] 40 C.F.R. § 1504 *et seq.*
[6] FEIS at xviii.

standards and policies. In short, the Nation believes that this Project meets the criteria set out in the regulations for referral to the CEQ and urges you to consider referring this Project.

Sincerely,

Dr. Ned Norris, Jr., Chairman

cc: Jared Blumenfeld, Administrator, EPA Region 9
Jim Upchurch, Supervisor, Coronado National Forest
Secretary Thomas Vilsack, Department of Agriculture
Honorable Raul Grijalva

From: Goforth, Kathleen
To: Horst Greczmiel
Cc: Scott, Jeff; Herrera, Angeles; Brush, Jason; Jessop, Carter; Blumenfeld, Jared; Diamond, Jane
Subject: Update re Region 9 participants on Rosemont call
Date: Wednesday, December 04, 2013 5:32:40 PM

The following EPA Region 9 individuals will be on tomorrow's call:
Jeff Scott, Director Communities and Ecosystems and Waste Divisions
Angeles Herrera, Associate Division Director, Communities and Ecosystems Division
Kathleen Goforth, Manager, Environmental Review Office
Jason Brush, Manager, Wetlands Office
Carter Jessop, Lead NEPA Reviewer for Rosemont project

From: Greczmiel, Horst <[redacted] B6 v>
Sent: Wednesday, December 04, 2013 1:46:47 PM
To: Goforth, Kathleen
Cc: Scott, Jeff; Blumenfeld, Jared; Herrera, Angeles
Subject: Re: Rosemont

TY!

From: Goforth, Kathleen [mailto:Goforth.Kathleen@epa.gov]
Sent: Wednesday, December 04, 2013 04:45 PM Eastern Standard Time
To: Greczmiel, Horst
Cc: Scott, Jeff <Scott.Jeff@epa.gov>; Blumenfeld, Jared <BLUMENFELD.JARED@EPA.GOV>; Herrera, Angeles <Herrera.Angeles@epa.gov>
Subject: RE: Rosemont

Horst -
Thank you. I will participate on the call. Most of our senior managers will be in transit at that time; however, Jeff Scott may also be able to participate.
-Kathy

From: Greczmiel, Horst [redacted] B6
Sent: Wednesday, December 04, 2013 12:08 PM
To: Goforth, Kathleen
Cc: Blumenfeld, Jared; Rader, Cliff; kkopocis@epa.gov
Subject: Rosemont

Kathy,
To follow-up on my voice mail, I will be convening the Rosemont meeting at 3pm (eastern) tomorrow, Dec 5th. Call-in information is forthcoming. Please share with any colleagues that should join you and EPA HQ (Cliff and Ken Kopocis).
Thank you, Horst

Horst Greczmiel
Associate Director for NEPA Oversight
Council on Environmental Quality

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