To: Beauvais, Joel[Beauvais.Joel@epa.gov]
From: Campbell, Ann
Sent: Mon 4/11/2016 10:49:01 AM
Subject: RE: Rosemont field trip 4/21/16

Sounds good. Program office talked to me about this Friday.

From: Beauvais, Joel
Sent: 4/10/2016 6:34 PM
To: Campbell, Ann
Subject: FW: Rosemont field trip 4/21/16

Let's discuss this discreetly tomorrow am

From: Blumenfeld, Jared
Sent: Sunday, April 10, 2016 6:33 PM
To: Beauvais, Joel <Beauvais.Joel@epa.gov>; Giles-AA, Cynthia <Giles-AA.Cynthia@epa.gov>
Subject: Fwd: Rosemont field trip 4/21/16

FYI

Sent from my iPhone

Begin forwarded message:

From: "Moutoux, Nicole" <Moutoux.Nicole@epa.gov>
Date: April 8, 2016 at 2:03:52 PM PDT
To: "Blumenfeld, Jared" <BLUMENFELD.JARED@EPA.GOV>
Cc: "Johnson, Kathleen" <Johnson.Kathleen@epa.gov>, "Goforth, Kathleen" <Goforth.Kathleen@epa.gov>
Subject: FW: Rosemont field trip 4/21/16

Rosemont Visit Participants on 4/21/16:

EPA R9: Nicole Moutoux, Kathy Goforth, Rob Leidy(**just heard he is unable to attend**)

Forest Service: Tracy Parker, Kerwin Dewberry

BLM: Timothy Shannon, Karen Simms

USACE: Sallie Diebolt

CEQ: Ted Boling

FWS: Jean Calhoun, Johnna Roy

SWCA Env Consultant: C. Garrett

Also, looks like Karen Leff from OFA is not attending.

Nicole G. Moutoux

Assistant Director

Enforcement Division, ENF-4

Moutoux.Nicole@epa.gov

Office: 415-972-3012

Cell: 415-271-0701

From: Vogel, Mindy S -FS [mailto:msvogel@fs.fed.us]
Sent: Thursday, April 07, 2016 4:29 PM
To: Dewberry, Kerwin -FS <kdewberry@fs.fed.us>; Parker, Tracy -FS <tparker03@fs.fed.us>; cgarrett@swca.com; Shannon, Timothy <tshannon@blm.gov>; Karen Simms (ksimms@blm.gov) <ksimms@blm.gov>; Boling, Ted A. EOP/CEQ <Ex. 6 - Personal Privacy; Goforth, Kathleen <Goforth.Kathleen@epa.gov>; Moutoux, Nicole <Moutoux.Nicole@epa.gov>; Leidy, Robert <Leidy.Robert@epa.gov>; Diebolt, Sallie SPL (Sallie.Diebolt@usace.army.mil) <Sallie.Diebolt@usace.army.mil>; Calhoun, Jean (jean_calhoun@fws.gov) <jean_calhoun@fws.gov>; Johnna Roy <Johnna_Roy@fws.gov>
Subject: Rosemont field trip 4/21/16

Hi Team

This email is being sent out to all who will be on the Rosemont field trip scheduled for April 21st. Thursday morning we will be meeting at the USFWS office parking lot (201 N Bonita, Tucson AZ). There are a number of hotels within a short (5-10 min) distance from here.... I would recommend looking for ones along Interstate-10.

I hope to have the agenda finalized later next week and will send that out to everyone. Please note, it is going to be a long day as there are many sites to see so please plan accordingly. At this time, it looks like we will be meeting at 7:45 am and will be returning to Tucson around 5 pm. Stops along the tour include the Rosemont project area, Sonoita Creek Ranch, and Las Cienegas National Conservation Area.

There will be a lunch offered in the field for $10 per person. **Please let me know by 4/15 if you do NOT want the lunch** and prefer to bring your own. Also let me know if you have any special dietary needs. If I do not hear back from you, I will plan to have a lunch available for you.

If you have any questions, please feel free to contact me.

Mindy Sue Vogel
Minerals & Geology Program Manager
Forest Service

Coronado National Forest
p: 520-388-8327
c: 208-818-9994
f: 520-388-8305
msvogel@fs.fed.us
300 W Congress St
Tucson, AZ 85701
www.fs.fed.us

Caring for the land and serving people

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.

To: Beauvais, Joel[Beauvais.Joel@epa.gov]
Cc: Lockwood, Amanda - OSEC[Amanda.Lockwood@osec.usda.gov]; Penman, Crystal[Penman.Crystal@epa.gov]; Peck, Gregory[Peck.Gregory@epa.gov]
From: Bonnie, Robert - OSEC
Sent: Sat 1/30/2016 1:22:03 AM
Subject: Re: Touching Base

That works. We'll talk then.

Sent from my iPhone

On Jan 29, 2016, at 6:59 PM, Beauvais, Joel <Beauvais.Joel@epa.gov> wrote:

Hi, Robert – Sorry for the delay in getting back to you; it's been a hectic week. I will be out of town 3 days next week and have a hearing as well, so would it be possible to set something up for the week of 2/8? Crystal can help to arrange.

Joel

From: Bonnie, Robert - OSEC [mailto:Robert.Bonnie@osec.usda.gov]
Sent: Thursday, January 28, 2016 5:59 PM
To: Beauvais, Joel <Beauvais.Joel@epa.gov>
Cc: Lockwood, Amanda - OSEC <Amanda.Lockwood@osec.usda.gov>; Penman, Crystal <Penman.Crystal@epa.gov>
Subject: Touching Base

Joel:

Hope all is well. I would like to find 20 minutes or so next week to get on the phone with you to discuss the Rosemont mine. I don't know if this is on your radar screen yet, but it's worth us at least touching base on it relatively soon.

I've looped Amanda and Crystal. Thanks,

Robert

To: Jackson, Donald E MG HQ[Donald.E.Jackson@usace.army.mil]
Cc: Crook, Lowry A SES USARMY HQDA ASA[lowry.a.crook.civ@mail.mil]
From: Beauvais, Joel
Sent: Thur 7/21/2016 6:26:32 PM
Subject: Re: [EXTERNAL] Re: Rosemont Mine: Updated Status (UNCLASSIFIED)

Thx

> On Jul 21, 2016, at 2:19 PM, Jackson, Donald E MG HQ <Donald.E.Jackson@usace.army.mil> wrote:
>
> Joel,
>
> I will ping the District, but this is the update we referenced earlier.
>
> Ed
>
> Sent from my BlackBerry 10 smartphone.
> Original Message
> From: Crook, Lowry A SES USARMY HQDA ASA CW (US) <lowry.a.crook.civ@mail.mil>
> Sent: Monday, July 11, 2016 6:40 AM
> To: Gibbs, Kirk E COL SPL
> Cc: Jackson, Donald E MG HQ; Belk, Edward E HQ; Moyer, Jennifer A HQ02; Toy, R. Mark BG; Van Dorpe, David M SPL; Castanon, David J SPL
> Subject: [EXTERNAL] Re: Rosemont Mine: Updated Status (UNCLASSIFIED)
>
>
> Very helpful. Thanks to you both for the clarification.
>
>> On Jul 8, 2016, at 8:08 PM, Gibbs, Kirk E COL SPL <Kirk.E.Gibbs@usace.army.mil> wrote:
>>
>> Sir,
>>
>> No errors - you summarized perfectly concerning a "denial" RECOMMENDATION. I plan to notify the applicant (HUDBAY) and the Forest Service (they asked that I do this during my engagements with them) when I elevate my RECOMMENDATION to SPD. I will highlight that a final decision has not yet been made. We do NOT plan to publicize it since it is not the final decision; however, we will have a communication plan prepared in case the recommendation is provided to the public in some manner.
>>
>> V/R,
>> Kirk
>>
>> COL Kirk Gibbs
>> Commander and District Engineer
>> Los Angeles District, U.S. Army Corps of Engineers
>> Work: (213) 452-3961
>> BB: Ex. 6 - Personal Privacy
>>
>>
>> -----Original Message-----
>> From: Jackson, Donald E MG HQ
>> Sent: Friday, July 08, 2016 2:57 PM
>> To: Crook, Lowry A SES USARMY HQDA ASA <lowry.a.crook.civ@mail.mil>
>> Cc: Belk, Edward E HQ <Edward.E.Belk@usace.army.mil>; Moyer, Jennifer A HQ02 <Jennifer.A.Moyer@usace.army.mil>; Toy, R. Mark BG <Richard.M.Toy@usace.army.mil>; Gibbs, Kirk E COL SPL <Kirk.E.Gibbs@usace.army.mil>
>> Subject: RE: Rosemont Mine: Updated Status (UNCLASSIFIED)

>>
>> Lowry,
>>
>> I am assuming COL Gibbs will only notify the stakeholders, in transparency, that he is elevating a RECOMMENDATION. The initial DECISION, if the district recommends denial, is held at the MSC level. I would think the earliest we would make anything public is after the MSC Commander makes his DECISION, either for or against.
>>
>> Mark/Kirk...please correct the record if I am in error.
>>
>> Major General Ed Jackson, P.E.
>> DCG, Civil and Emergency Operations
>> HQ, US Army Corps of Engineers
>>
>> Office: (202)761-5859
>> Ex. 6 - Personal Privacy
>> DSN: (312)763-5859
>> sipr: donald.e.jackson18.mil@mail.smil.mil
>>
>>
>> -----Original Message-----
>> From: Crook, Lowry A SES USARMY HQDA ASA CW (US) [mailto:lowry.a.crook.civ@mail.mil]
>> Sent: Friday, July 08, 2016 5:30 PM
>> To: Jackson, Donald E MG HQ <Donald.E.Jackson@usace.army.mil>
>> Cc: Belk, Edward E HQ <Edward.E.Belk@usace.army.mil>; Moyer, Jennifer A HQ02 <Jennifer.A.Moyer@usace.army.mil>; Toy, R. Mark BG <Richard.M.Toy@usace.army.mil>; Gibbs, Kirk E COL SPL <Kirk.E.Gibbs@usace.army.mil>
>> Subject: [EXTERNAL] RE: Rosemont Mine: Updated Status (UNCLASSIFIED)
>>
>> CLASSIFICATION: UNCLASSIFIED
>>
>> Many thanks Ed. If COL Gibbs recommends denial, will that be made public at that time, or will any public announcement await the division commander's decision?
>>
>> -----Original Message-----
>> From: Jackson, Donald E MG HQ [mailto:Donald.E.Jackson@usace.army.mil]
>> Sent: Friday, July 08, 2016 12:31 PM
>> To: Crook, Lowry A SES USARMY HQDA ASA CW (US) <lowry.a.crook.civ@mail.mil>
>> Cc: Belk, Edward E HQ <Edward.E.Belk@usace.army.mil>; Moyer, Jennifer A HQ02 <Jennifer.A.Moyer@usace.army.mil>; Toy, R. Mark BG <Richard.M.Toy@usace.army.mil>; Gibbs, Kirk E COL SPL <Kirk.E.Gibbs@usace.army.mil>
>> Subject: Rosemont Mine: Updated Status
>>
>> Lowry,
>>
>> This is an updated timeline for Rosemont Mine. As you recall, Joel asked for an update at our last Deputies Meeting. Please let me know if you have questions on this, and how you wish to transmit the update to EPA. I apologize for the delayed response. I received the update this week but was buried in other actions. We can discuss next week or whenever your schedule allows.
>>
>> BLUF:

Ex. 5 - Deliberative Process

Ex. 5 - Deliberative Process

>>
>> Background:
>> -USFWS issued their final BIOP to USFS on 28APR16. At that point USFS was in a position to move forward with their ROD process. EPA long ago notified USFS of intent to refer the ROD to CEQ. Therefore, before USFS can sign the ROD, they must notify EPA so that EPA can have the opportunity to formally refer the case to CEQ. To date, USFS has not given EPA notice that they are ready to sign their ROD. Thus no referral process to CEQ has been initiated. USFS's delay in giving EPA formal notice may be caused by continuing internal USFS review of their ROD as well as a desire to first know which way the Corps may be leaning on the Clean Water Act Section 404 permit Decision.
>> -Corps permit decision will rely on the USFS Final EIS. Several months ago SPL staff estimated that a draft permit decision would be available for COL Gibbs by late May. However, this case is complex and litigation is certain regardless of what decision is made. The internal reviews and editing have taken longer than anticipated, but these documents are now scheduled to be presented to COL Gibbs on 11JUL16. COL Gibbs' decision will only be preliminary because of the facts of this case that affect the permit process. A final agency decision will take a few more months and can only come either after referral to SPD (in case of denial) or after EPA has an opportunity for a Section 404(q) elevation review to EPA HQ and ASA(CW).
>> -District recommendation to deny the permit would elevate the actual permit decision to the MSC. If the MSC decision were to deny, the applicant could appeal to HQUSACE. The appeal process is structured by regulation and would take 90 days. However, there is no prescribed timeline in regulation for the MSC to review the file and draft decision documents, and then to make a decision. An informal review of the handful of past cases that have gone to MSCs have ranged generally from 3-5 months to over a year.
>> -If COL Gibbs decides to grant the permit, the 404(q) Army-EPA 1992 MOA requires the draft decision documents to be shared with EPA so that they can decide whether to pursue, through their HQ, ASA (CW) review of the District's draft decision documents. There are several steps in this 404(q) elevation process, so it does not go immediately to ASA (CW). The elevation process steps can take up to 75 days before ASA (CW) reviews the issues and possibly remands to the District with guidance. It is also true that EPA has the authority under Section 404(c) to veto a Corps permit after it is issued or even preemptively.
>>
>> Respectfully,
>>
>> Ed
>>
>> Major General Ed Jackson, P.E.
>> DCG, Civil and Emergency Operations
>> HQ, US Army Corps of Engineers
>>
>> Office: (202)761-5859
>> Ex. 6 - Personal Privacy
>> DSN: (312)763-5859
>> sipr: donald.e.jackson18.mil@mail.smil.mil
>>
>>
>>
>> CLASSIFICATION: UNCLASSIFIED
>
>

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, U.S. ARMY CORPS OF ENGINEERS
915 WILSHIRE BOULEVARD, SUITE 930
LOS ANGELES, CALIFORNIA 90017

Office of the Commander
and District Engineer

28 Feb 2014

Mr. Rod Pace
President/CEO
Rosemont Copper Company
PO Box 35130
Tucson, Arizona 85740

Dear Mr. Pace:

I am writing in regard to the proposed Rosemont Open Pit Copper Mine for which Rosemont Copper Company (Rosemont) has submitted an application for a Department of the Army permit pursuant to Section 404 of the Clean Water Act to discharge fill material into waters of the U.S. (WUS) within the Barrel Canyon watershed, near Tucson, Pima County, Arizona.

I appreciated the opportunity to meet with you and your team on January 29, 2014 and visit the proposed mine site. As part of the site visit, Rosemont presented preliminary information regarding potential mitigation to offset environmental losses resulting from unavoidable impacts to approximately 68.8 acres of WUS associated with the proposed discharges of fill material.

As you are aware, our Senior Regulatory Project Manager, Ms. Marjorie Blaine, has worked diligently with Ms. Kathy Arnold and Rosemont's consultants, WestLand Resources, for approximately two years meeting initially monthly, and subsequently, weekly for the past year. The primary focus of these meetings has been in regard to the development of potential compensatory mitigation to offset the impacts to WUS.

While I understand there was, for a period of time, a good possibility that a new in-lieu fee (ILF) mitigation plan at Pantano Dam, along with associated water rights, had the greatest potential to provide a majority of credits needed to offset the impacts of the proposed discharges, other sites (Sonoita Creek Ranch and Fullerton Ranch) were retained as options to provide additional mitigation credits. The current Pima County Regional Flood Control District/Tucson Audubon Society ILF program also has a small number of available advance credits that could be purchased if the ILF sponsor is willing to sell them. Unfortunately, the new ILF mitigation plan for Pantano Dam was withdrawn by the ILF sponsor on December 30, 2013.

Since that time, Ms. Blaine has conveyed the urgency and importance of Rosemont developing sole permittee responsible mitigation which complies with the "Mitigation Rule" codified at 33 C.F.R. Part 332 and 40 C.F.R. Part 230. In accordance with 33 C.F.R. §

332.3(a)(2), Ms. Blaine articulated it is imperative Rosemont focus on restoration/enhancement of WUS to offset the direct loss of 40 acres of WUS, and has suggested other potential mitigation opportunities for Rosemont to investigate. Unfortunately, Rosemont has continued to present mitigation plans which provide more acres of upland and riparian preservation, with some enhancement, than acres of actual restoration/enhancement of WUS.

The U.S. Forest Service (USFS) plans to issue its final Record of Decision (ROD) after the conclusion of their NEPA Objection Process. As a cooperating agency, the Corps has worked closely with the USFS to ensure the EIS and the Section 404 permit processes were concurrent. It is my desire and plan to complete a ROD regarding the Department of the Army permit application by June 30, 2014.

I plan to advise the USFS by April 16, 2014, as to whether adequate compensatory mitigation exists to offset the unavoidable impacts to WUS. To this end, in accordance with 33 C.F.R. § 332.4(c)(1)), I am requesting that Rosemont submit a detailed compensatory mitigation plan that addresses the items described at 33 C.F.R. § 332.4(c)(12) through (c)(14) by April 1, 2014.

In the interim time, Ms. Blaine will continue to work closely with Ms. Arnold and WestLand Resources to ensure expedited review of conceptual plans and on calculating the amount of compensatory mitigation provided by such plans using the Corps' regional Mitigation Ratio Checklist process. She will also coordinate with the U.S. Environmental Protection Agency to allow that agency to review and comment on the components of the conceptual and detailed plans as they are developed.

I look forward to receiving your detailed mitigation plan. If you have any questions, please contact Ms. Blaine at (520) 584-1684 or Mr. David Castanon, my Regulatory Division Chief, at (805) 584-2141. A copy of this letter is being furnished to Mr. Jim Upchurch, U.S. Forest Service, Coronado National Forest, 300 W Congress St., Tucson AZ 85701 and Mr. Jason Brush, Wetlands Office, U.S. Environmental Protection Agency, Region IX, 75 Hawthorne St., San Francisco, CA 94105.

Sincerely,

Kimberly M. Colloton, P.E.
Colonel, US Army
Commander and District Engineer

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, U.S. ARMY CORPS OF ENGINEERS
915 WILSHIRE BOULEVARD, SUITE 930
LOS ANGELES, CALIFORNIA 90017

Office of the Commander
and District Engineer

28 Feb 2014

Mr. Rod Pace
President/CEO
Rosemont Copper Company
PO Box 35130
Tucson, Arizona 85740

Dear Mr. Pace:

I am writing in regard to the proposed Rosemont Open Pit Copper Mine for which Rosemont Copper Company (Rosemont) has submitted an application for a Department of the Army permit pursuant to Section 404 of the Clean Water Act to discharge fill material into waters of the U.S. (WUS) within the Barrel Canyon watershed, near Tucson, Pima County, Arizona.

I appreciated the opportunity to meet with you and your team on January 29, 2014 and visit the proposed mine site. As part of the site visit, Rosemont presented preliminary information regarding potential mitigation to offset environmental losses resulting from unavoidable impacts to approximately 68.8 acres of WUS associated with the proposed discharges of fill material.

As you are aware, our Senior Regulatory Project Manager, Ms. Marjorie Blaine, has worked diligently with Ms. Kathy Arnold and Rosemont's consultants, WestLand Resources, for approximately two years meeting initially monthly, and subsequently, weekly for the past year. The primary focus of these meetings has been in regard to the development of potential compensatory mitigation to offset the impacts to WUS.

While I understand there was, for a period of time, a good possibility that a new in-lieu fee (ILF) mitigation plan at Pantano Dam, along with associated water rights, had the greatest potential to provide a majority of credits needed to offset the impacts of the proposed discharges, other sites (Sonoita Creek Ranch and Fullerton Ranch) were retained as options to provide additional mitigation credits. The current Pima County Regional Flood Control District/Tucson Audubon Society ILF program also has a small number of available advance credits that could be purchased if the ILF sponsor is willing to sell them. Unfortunately, the new ILF mitigation plan for Pantano Dam was withdrawn by the ILF sponsor on December 30, 2013.

Since that time, Ms. Blaine has conveyed the urgency and importance of Rosemont developing sole permittee responsible mitigation which complies with the "Mitigation Rule" codified at 33 C.F.R. Part 332 and 40 C.F.R. Part 230. In accordance with 33 C.F.R. §

332.3(a)(2), Ms. Blaine articulated it is imperative Rosemont focus on restoration/enhancement of WUS to offset the direct loss of 40 acres of WUS, and has suggested other potential mitigation opportunities for Rosemont to investigate. Unfortunately, Rosemont has continued to present mitigation plans which provide more acres of upland and riparian preservation, with some enhancement, than acres of actual restoration/enhancement of WUS.

The U.S. Forest Service (USFS) plans to issue its final Record of Decision (ROD) after the conclusion of their NEPA Objection Process. As a cooperating agency, the Corps has worked closely with the USFS to ensure the EIS and the Section 404 permit processes were concurrent. It is my desire and plan to complete a ROD regarding the Department of the Army permit application by June 30, 2014.

I plan to advise the USFS by April 16, 2014, as to whether adequate compensatory mitigation exists to offset the unavoidable impacts to WUS. To this end, in accordance with 33 C.F.R. § 332.4(c)(1)), I am requesting that Rosemont submit a detailed compensatory mitigation plan that addresses the items described at 33 C.F.R. § 332.4(c)(12) through (c)(14) by April 1, 2014.

In the interim time, Ms. Blaine will continue to work closely with Ms. Arnold and WestLand Resources to ensure expedited review of conceptual plans and on calculating the amount of compensatory mitigation provided by such plans using the Corps' regional Mitigation Ratio Checklist process. She will also coordinate with the U.S. Environmental Protection Agency to allow that agency to review and comment on the components of the conceptual and detailed plans as they are developed.

I look forward to receiving your detailed mitigation plan. If you have any questions, please contact Ms. Blaine at (520) 584-1684 or Mr. David Castanon, my Regulatory Division Chief, at (805) 584-2141. A copy of this letter is being furnished to Mr. Jim Upchurch, U.S. Forest Service, Coronado National Forest, 300 W Congress St., Tucson AZ 85701 and Mr. Jason Brush, Wetlands Office, U.S. Environmental Protection Agency, Region IX, 75 Hawthorne St., San Francisco, CA 94105.

Sincerely,

Kimberly M. Colloton, P.E.
Colonel, US Army
Commander and District Engineer

COUNTY ADMINISTRATOR'S OFFICE
PIMA COUNTY GOVERNMENTAL CENTER
130 W. CONGRESS, FLOOR 10, TUCSON, AZ 85701-1317
(520) 724-8661 FAX (520) 724-8171

C.H. HUCKELBERRY
County Administrator

December 30, 2013

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

Re: **US Environmental Protection Agency Region IX November, 2013 Letter Regarding Its Analysis of the Updated Draft Clean Water Act Section 404 Compensatory Mitigation Proposal for Rosemont Mine, Pima County, Arizona and the December 13, 2013 Rosemont Copper Letter Regarding the Same Subject**

Dear Colonel Colloton:

Pima County and the Pima County Regional Flood Control District (RFCD) would like to take this opportunity to provide you with our position regarding the Rosemont Copper proposal for mitigating adverse impacts on Waters of the United States (WUS), ephemeral streams and riparian areas by their mining proposal. The proposed impacts are significant and substantial within the Cienega Basin Watershed, a watershed the County has attempted to conserve over the last three decades. Impacts to the watershed will come from the actual mining activities that will result in the direct impact to 5,431 acres of land that have inherent environment functions and ecosystem services. Indirect, offsite impacts from the mining activities include diversion of both surface water flows (impacting downstream resources) and groundwater subflows intercepted by the mining activities supporting wetlands and functions of even ephemeral WUS).[1]

[1] Groundwater Model of the Santa Rita Rosemont Project Site Report, Pima County Regional Flood Control District, April 28, 2008; Clean Water Act Section 404 Comments, Pima County 2012; Draft Environmental Impact Statement (DEIS) Comments, Pima County, 2011; Preliminary Administrative Final Environmental Impact Statement (PAFEIS) Comments, Pima County, August 14, 2013; Final Environmental Impact Statement (FEIS), US Forest Service, December 2013).

Pima County and the RFCD Have Heavily Invested in Protecting the Cienega Basin Watershed

The County's concerns about the impacts from the Rosemont project arise from the uniqueness of the Cienega Basin Watershed and our efforts to protect it as a treasured natural resource. The uniqueness of the watershed comes from the fact that it supports large, low-elevation groundwater-dependent ecosystems in a county where depletion of groundwater has already caused the loss of the largest and most significant stream in southern Arizona, the Santa Cruz River. The Cienega Basin Watershed is remarkable for being nearly undeveloped and free of the exotic aquatic species that characterize the San Pedro River and other streams in southern Arizona. This watershed provides valuable habitat for 11 species that are either federally listed or proposed for listing. The scale of the impacts from the Rosemont mine and its position in the headwaters of the watershed threaten the most ecologically intact remnants of the Cienega Basin Watershed.

Community efforts to protect the watershed began 40 years ago, when the Pima County Board of Supervisors was first confronted with a proposal for a new satellite city (Attachment 1). The community debate about the proposal centered largely on water issues.

Recognizing the longstanding interest of citizens in Pima and Santa Cruz Counties for protecting natural and scenic values as well as water resources, Congress designated a significant portion of the watershed as the Las Cienegas National Conservation Area.

The County's acquisitions along the Cienega Creek began in 1980 with the purchase of what is now called the Cienega Creek Natural Preserve from Horizon Land Company. These initial acquisitions have been followed with the acquisition and development of the Cienega Valley Empire Ranch Reserve, including open space acquisitions of the Bar-V Ranch, Sands Ranch, Clyne Ranch, and Empirita Ranch and the expansion of Colossal Cave Mountain Park and the Cienega Creek Natural Preserve and other related acquisitions (Attachment 2). All of these acquisitions have been to protect the watershed basin and these unique groundwater-based stream ecosystems that provide a myriad of benefits to the natural and cultural fabric of our County.[2]

[2] Protecting Our Land, Water and Heritage, Pima County's Voter Supported Conservation Efforts, February 2011; Pima County DEIS comments, 2012.

These open space acquisitions complement the protection of this watershed and are reported to federal authorities through our stormwater management [Clean Water Act (CWA) Section 402] program. Our efforts to monitor the water quality of Cienega Creek and Davidson Canyon began in 1987 with water quality sampling, leading to an interagency petition in 1990 to protect Cienega Creek within the Natural Preserve under the State of Arizona's Outstanding Waters Program. This program imposes anti-degradation standards under State water quality rules. That petition was granted, along with the Pima Association of Government's 2005 request to designate Davidson Canyon as an Outstanding Arizona Water pursuant to R18-11-112 of the Arizona Administrative Code. The designation of Davidson Canyon was sought to protect the high-quality water that Davidson provides to Cienega Creek, and ultimately Tucson, via springs and groundwater underflows. Today, the Pima Association of Governments' monitors a host of water-related indicators, including shallow groundwater and quarterly observations of surface flows along Davidson Canyon. As a result of these efforts and the habitat conservation planning we have done with US Fish and Wildlife Service, we know a great deal about the ecological values of this watershed; which, in turn, has informed our investments of over $64 million to protect these critical and unique resources.

Rosemont Mining Proposal Will Adversely and Irreversibly Impact the Cienega Basin Watershed the County has Protected

Rosemont's mining proposal will have significant long-term and adverse impacts on the watershed and riparian systems within the Cienega Basin Watershed, both from the direct activity of mining where WUS, ephemeral streams and riparian areas will be completed destroyed. By our estimate, approximately 100 miles[3] of stream channels will be directly destroyed by the mining activity (see Attachment 3). The 404(b)(1) Alternatives Analysis relies on a much smaller subset of potentially jurisdictional waters for its analysis. Impacts to WUS include dredging to obtain "soils" for future reclamation, and excavation and filling to create the mine. Furthermore, due to the upper watershed location of the mining activity, there will be long-term and continuing adverse and indirect impacts due to the loss of surface water flows because of topographical alteration of the upper watershed, various diversion channels, and interception of groundwater subflows by the mine pit excavation itself and by dewatering.

These impacts must be fully mitigated by Rosemont in a meaningful, measurable and verifiable manner.

[3]Clean Water Act Section 404 Comments on #SPL-2008-00816-MB, Pima County, 2012.

US Environmental Protection Agency Region IX November 7, 2013 Letter Expresses Real and Definable Concerns that Have Not Been Factually Disputed

Pima County and the RFCD share many of the same concerns over the mitigation proposal as those expressed by the US Environmental Protection Agency (EPA) in their November 7, 2013 letter. Among the many concerns raised by the EPA was the fact that Rosemont must demonstrate clear compliance with the Clean Water Act, and neither the EIS nor the scant mitigation proposal contained in the Final Environmental Impact Statement (FEIS) demonstrate such compliance. They failed to quantify certain upstream and downstream impacts and underestimated impacts to groundwater-supported ephemeral and intermittent streams and springs.

During scoping in 2008, Pima County identified the potential for the mine to cause significant degradation of aquatic ecosystems, including Empire Gulch, various springs, Davidson Canyon and upper and lower Cienega Creek. We provided detailed outlines of hydrologic, hydraulic and geomorphic studies needed to assess impacts to the Outstanding Waters of Davidson Canyon, studies that were never conducted and which would have reduced the uncertainties federal and state agencies faced later in their effects analyses.[4] We also provided detailed reviews of the mine's groundwater and surface water models and provided our own groundwater model, which was reviewed by US Geological Survey staff.[5]

We completely agree with the EPA that the Sonoita Creek and Fullerton Ranch are inappropriate compensatory mitigation for impacts to WUS, principally because neither Fullerton Ranch nor Sonoita Creek are in the same watershed. In 2008, the Corps adopted a watershed approach to mitigation. In 2009, Pima County asked that mitigation be located close to the area of effects, adjacent to other protected land, and protected in perpetuity with legal instruments that secure mineral, as well as water, resources.[6] This same letter provided an extensive list of sites located within the watershed that might offer permittee-based mitigation.

---

[4]April 29, 2008 Scoping Letter to Ms. Bev Everson, Forest Geologist, from C.H. Huckelberry, Pima County Administrator, Attachment 10.
[5]2008 Groundwater Model; Pima County DEIS Comments; Pima County PAFEIS comments; Pima County Section 404 Comments; Pima County February 17, 2010 Letter to Forest Supervisor Jeanine Derby.
[6] December 23, 2009, Letter to Jeanine Derby from C.H. Huckelberry.

In addition, the Interagency Review Team, of which Pima County is a member, has yet to see or approve 1) an appropriate functional assessment that describes the aquatic resource values associated with impacts and mitigation or 2) an assessment of the relationship between the impacts and the mitigation that is appropriate to the scope and degree of the impacts and which are reasonably enforceable.

Furthermore, neither the Corps nor the Forest Service, as the lead agency, has adequately considered interrelated tribal issues. We agree with the Tohono O'odham Nation that there have been ineffective consultations with Native American communities regarding the impact of the proposal on traditional cultural places, including streams and springs. Given the close locational association of historic properties, archeological sites and traditional cultural places to WUS, any disruption or destruction of these Waters will disproportionately destroy these cultural resources, which are located where the water either is or was. Federal agencies, in their conduct of this process, have failed to provide opportunities for meaningful involvement of tribal communities. The mitigation plan, as currently described, is unlikely to relieve the disproportionality of the impacts to the Tohono O'odham Nation or other consulting tribes.

Rosemont Proposed Mitigation is Seriously Inadequate

The Rosemont proposal to mitigate the adverse effects of their direct and indirect impacts on WUS, ephemeral streams and riparian areas, as well as seeps and springs, is substantially inadequate. Rosemont proposes three areas for mitigation credit: 1) the Pantano Dam, including the transfer of 1,122 acre feet of appurtenance surface water rights and the diversion facilities in a nearby groundwater well; 2) Sonoita Creek Ranch; and 3) Davidson Canyon preservation lands. Our comments on each of these proposals appear below.

Pantano Dam

While this proposal will have a positive effect on the ecosystem, it will not produce the desired mitigation, primarily because the appurtenant surface water right is not as advertised at 1,122 acre feet; it is more realistically no more than 360 acre feet per year and declining. As part of our review of the Rosemont EIS and concurrent with development of the possible Cienega ILF, Pima County and RFCD have questioned the availability of wet water to the site.[7] Given the

[7]August 14, 2013 PAFEIS Comments; RFCD Letter to Marjorie Blaine, July 31, 2013.

RFCD have questioned the availability of wet water to the site.[7] Given the specific reductions in flows that have been observed at the site and the trend toward reduced flows due to climate change and other factors such as exempt well drilling,[8] I do not see sufficient wet water to guarantee the long-term success of a project intended to restore lost aquatic functions.

Clearly, an undependable surface water flow of approximately 360 acre feet per year is not the same as a legally possible annual flow of 1,122 acre feet. This element of the Rosemont mitigation proposal fails because it cannot be relied upon to produce the necessary mitigation credits due to an unpredictable and insufficient long-term water supply.

Sonoita Creek Ranch

Rosemont also proposes to mitigate impacts through the purchase of the Sonoita Creek Ranch. This property lies outside the Cienega Basin and violates the County's desired principle of having mitigation occur in the watershed where the damage occurs. Therefore, the Sonoita Creek Ranch should be completely discounted in providing mitigation for the Rosemont impacts. Sonoita Creek is also located in close proximity to other mines the Forest Service is considering in the Patagonia Mountains.[9] It would be more appropriate for this site to serve to mitigate effects of those mines that are located in the Sonoita Creek Watershed, assuming that Sonoita Creek Ranch would remain unaffected.

Davidson Canyon Preservation and Enhancement

The preservation of small, isolated parcels, even within the Cienega Basin Watershed, will provide little overall mitigation. Well-accepted scientific theory in ecosystem preservation discounts the value of small, isolated conservation parcels for either conserving unique ecosystems or in mitigating for their losses.[10] Rosemont proposes to destroy or deny access to an entire, intact, contiguous

[7]August 14, 2013 PAFEIS Comments; RFCD Letter to Marjorie Blaine, July 31, 2013.
[8] Water Resource Trends in the Cienega Creek Natural Preserve, Pima County, August 2013.
[9]FEIS, US Forest Service, December 2013.
[10]Diamond, J.M. 1975. The island dilemma: Lessons of modern biogeographic studies for the design of natural reserves. Biological Conservation 7:129-146; Wilcox, B.A., and D.D. Murphy. 1985. Conservation strategy: effects of fragmentation on extinction. American Naturalist 125:879-887.

Santa Rita Unit of the Coronado National Forest, greatly diminishing the connected ecosystem value of this portion of the Forest. The loss of these resources, including those subject to wetland regulations, cannot be compensated for by a few small and isolated parcels within the Cienega Basin Watershed. The Davidson Canyon preservation lands do not provide meaningful mitigation by themselves. Those parcels most proximal to Rosemont will be most degraded by the changes in the watershed, and other indirect impacts.

It would appear the lands acquired and/or offered by Rosemont as mitigation are simply lands of acquisition by convenience rather than lands of true mitigation. Rosemont, in their letter of December 13, 2013, laments the lack of available mitigation opportunities in the Barrel Canyon/Davidson Canyon Watershed; and in doing so, demonstrates they both fail to understand the watershed or acknowledge the efforts of both the County and RFCD, as well as the US Bureau of Land Management, in conserving the resources within the Cienega Basin Watershed over the last 30 years. If land are "not available" for Rosemont's mitigation, it is because previous actions have conserved them; and it is these same conserved lands that are now threatened by Rosemont's actions.

In summary, all three mitigation strategies are less than adequate compensation. The County respectfully requests that the principle of mitigation in the watershed of impact be adhered to by federal approval agencies because of the County's significant monetary and time investment in conserving the unique water-based resources of the Cienega Basin Watershed.

Significant lands are still available in the watershed for acquisition and restoration. For instance, staff confirms that Andrada Ranch is still for sale (see Attachment 2). It abuts the Rosemont and Bar V Ranches, including over 16,000 acres of State grazing lease and 271 acres of fee-owned land centered on over 4,000 linear feet of Davidson Canyon upstream of the Outstanding Waters reach. It also includes water rights to a perennial or near-perennial stock pond and a perennial spring located on fee-owned land that has wetland vegetation and restoration potential.

A horse ranch along Gardner Canyon was also for sale during the last year and may still be available. Gardner Canyon is an important tributary to Cienega Creek located just south of the Pima County line.

In addition, there are over 100,000 acres of unconserved State Trust lands within the Cienega Creek Watershed that could be available for mitigation. Pima County has successfully purchased almost 3,000 acres of State Trust land since 2009. In 2012, mining company Freeport McMoRan successfully purchased over 8,000 acres of State Trust land to construct a new tailings pile and mitigate its effects at its Sierrita Mine west of the proposed Rosemont Mine. These purchases demonstrate that the purchase of State Trust land for mitigation is plausible, yet Rosemont has not pursued this option.

Pantano or Cienega In-lieu Fee Project May Not be the Best Compliance Vehicle for Rosemont

The RFCD, as an in-lieu fee (ILF) provider under an approved agreement with the Corps, has been working to develop a project located in the Cienega Creek Natural Preserve (Pantano Dam) that would improve the conditions of the aquatic resources there in conjunction with acquisitions or funds that would be made available by Rosemont Copper.

A number of outstanding, interrelated issues have arisen from consideration of the Pantano ILF project, as well as the nature of the Rosemont project and the roles of the regulatory agencies, which include the County, RFCD, Corps, and the US Fish and Wildlife Service. I would appreciate further discussions with you and your staff on these topics.

1.

Many of the Rosemont proposals for the Pantano Dam are tangible actions that can help assure the water supply, but they cannot manufacture water for a stressed watershed. No one has been able to answer the question of whether the planned mitigation is actually possible given the hydrologic reality facing this watershed.

Another essential element of the decision relates to the liability that RFCD may have, if, for any reason, the ILF mitigation bank does not produce or sustain the riparian restoration required. Obviously, the County and RFCD cannot and will not be held financially liable for Rosemont mitigation miscalculations. Please note that an ILF project here would require approval. This approval has not been granted or even scheduled, as there is no final plan available for consideration.

As you are aware, every compensatory mitigation project has an ecological risk and a cost liability associated with the risk. These risks may be managed by the use of mitigation ratios, financial requirements such as performance bonds, or advanced mitigation. Some

form of financial assurance is an option to manage the risk for compensatory mitigation by requiring the permittee to provide collateral to the Corps and/or ILF provider. Ultimately, it is the permittee that must be made responsible. For mining, the potential environmental impacts are significant; and the temporal lag is long between when the impacts occur and when compensatory mitigation is deemed successful. Therefore, the ecological risks are very high. As a potential ILF within an Arizona Mining District, we would be interested in knowing how other Corps District Offices have handled ILF programs for mining, such as coal mining in Kentucky, Virginia and West Virginia.

Through the ILF program, I remain committed to ensure that those causing the impacts are required to pay the full cost of same and are not subsidized in any way by RFCD taxpayers. Rosemont, not Pima County, must remain financially responsible for assuring the success of this project.[11] If this is not possible within the framework of the ILF and the Corps' regulatory timeframes, then we can either explore some type of contractual arrangement for permittee-responsible mitigation on County or RFCD land or abandon the matter entirely.

At this point, I strongly prefer permittee responsible mitigation under the legal authority of the Corps.

Meaningful Mitigation Relies on a Dependable Water Supply

It has become clear to me that an independent supply of water is needed to avoid placing the burden of long-term risks of failure upon Pima County. Additional water supply from outside the Cienega Basin is needed to assure that sufficient wet water is available in perpetuity.

Merely pumping wells near the stream would be "robbing Peter to pay Paul" and could impair the health of the stream and riparian forest above the dam. Other potential sources of water might include Central Arizona Project water or effluent purchased from the US Bureau of Reclamation wheeled through the Tucson Water interconnection to Vail or delivered through an extension of Tucson's reclaimed line (see Attachment 2).

An additional, independent water supply would also reduce the short-term implementation risks and potential temporal losses of aquatic resource functions associated with issues relating to surface water rights. The proposed ILF project depends on water spreading to

[11] Memorandum to the Pima County Board of Supervisors, August 13, 2013.

generate WUS credits outside the main channel of Cienega Creek. Such water spreading would require a sever-and-transfer, and this process could be delayed or otherwise impaired by others. Also, an earlier priority water right in the ILF project area has recently been identified. The status of this right is not yet resolved.

Another key consideration for Pima County is that all of the area in question along Cienega Creek has been identified as mitigation for our upcoming Section 10(a)(1)(B) permit (Section 10) from the US Fish and Wildlife Service. Unfortunately, the regional habitat conservation planning in Pima County has not been well-integrated into federal evaluations for the Rosemont project. A copy of the Pima County Multi-species Conservation Plan (MSCP) and DEIS was provided to all involved federal agencies for review in late 2012. We are still waiting for the federal agencies to sort out the overlap between the MSCP and ILF programs. If parts of the Cienega Creek Natural Preserve might be rendered ineligible for MSCP species credit by the ILF project, the taxpayers must not bear the cost, and replacement habitat must be acquired.

Also unclear to me is the degree to which the Cienega or Pantano ILF projects might be vulnerable to re-consultation and additional National Environmental Policy Act review due to the premature release of the Rosemont FEIS, which contained very vague descriptions of all of the proposed WUS mitigation projects. Would RFCD's execution of the Pantano ILF project be subject to additional federal requirements, liabilities or delays because the FEIS and Biological Opinion relied on vague descriptions? These are issues that must be resolved prior to any final Rosemont approvals or permitting.

<u>A Sustainable Mitigation Strategy for Rosemont Impacts and Our View of Measureable, Meaningful and Verifiable Mitigation</u>

I recommend that Rosemont's CWA Section 404 permit be denied unless Rosemont commits to the following mitigation:

- Purchase and convey the Pantano Dam site to the RFCD;
- Purchase and convey 1,122 acre feet per year of senior surface water rights to the RFCD;
- Purchase and convey the distribution pipeline between the Pantano Dam and the Lago del Oro Golf Course to the RFCD;
- Purchase and convey Water Production Well Registration Number 602949, owned by Vail Water Company, to the RFCD;

- Construct and convey to the RFCD a reclaimed water extension line from Drexel Road at the Pantano Wash approximately 11 miles to the Pantano Dam of sufficient size to deliver approximately 750 acre feet per year of reclaimed water to the Pantano Dam site;
- Purchase from the Bureau of Reclamation or any other reclaimed water owner and deliver approximately 750 acre feet annually of reclaimed water to the Pantano Dam site to the RFCD;
- Purchase and convey the Andrada Ranch, consisting of 276 fee-owned acres along Davidson Canyon, to the RFCD, or other suitable and targeted compensatory mitigation lands as identified in our December 23, 2009 letter to Forest Supervisor Jeanine Derby.

Under this mitigation proposal, Rosemont would be performing permittee-responsible mitigation and would remain financially responsible for successful mitigation as determined by the Corps and concurred with by the RFCD. The RFCD would enter into an appropriate operating agreement with the Corps to carry out the mitigation required if such is necessary.

The Rosemont compensatory mitigation proposal is inadequate and fails to provide measurable and meaningful reduction of impacts because there are more impacts to WUS than have been analyzed, and the offsite impacts are connected and profound.

I would like to thank you for taking the time to consider the County and RFCD perspective on this issue, and I would be happy to discuss this matter with you in person during your upcoming visit to Pima County in January 2014.

Sincerely,

C.H. Huckelberry
County Administrator

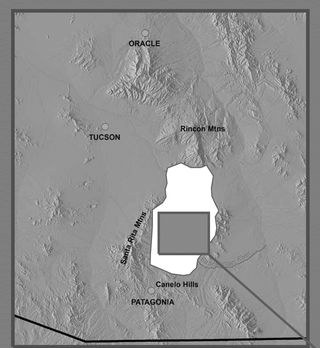
CHH/mjk

Attachments

c: The Honorable Ned Norris, Jr., Chairman, Tohono O'odham Nation
Jared Blumenfeld, Region IX Administrator, US Environmental Protection Agency
Suzanne Shields, Director, Pima County Regional Flood Control District
Julia Fonseca, Environmental Planning Manager, Pima County Office of Conservation and Sustainability

ATTACHMENT 1

ED_001077_00005630-00013



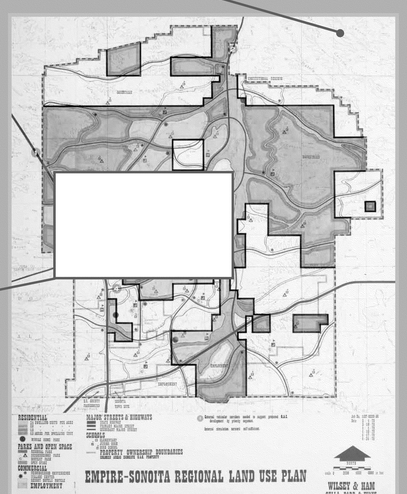
Once one of the largest ranches in southern Arizona, the Empire Ranch stretched from the Rincon Mountains south to the edge of the Canelo Hills near Sonoita (approximate extent outlined at left). This land is home to pronghorn antelope and hundreds of other species of fish and wildlife. Parts of the Empire Ranch were sold off beginning in the early 20th century During the latter half of the century efforts began to conserve ranch land under public ownership. This poster tells a small part of that history.

By Julia Fonseca (Julia.Fonseca@pima.gov), Helen Wilson and Everett Acosta, Pima County, with assistance from Gita Bodner, The Nature Conservancy.

GULF AMERICA BUYS EMPIRE RANCH

In 1969 Gulf America Corporation (GAC) bought the Empire Ranch. The early 1970s the planning for the creation of a satellite city of 180, 000 people in the Sonoita Valley was well underway.

Development Sequence



Empire Ranch Area Plan

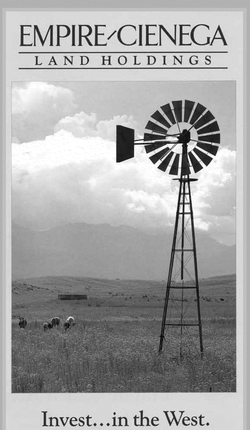
In June 1970 the Empire Ranch plan was heard by the Pima County Planning and Zoning Commission. Over 150 people appeared to protest the plan.

The Pima County Board of Supervisors approved a portion of the plan, requiring GAC to substantially develop 5,300 acres before any additional rezoning would be considered.

ANAMAx BUYS EMPIRE RANCH

By the early 1970s Gulf America Corporation was facing numerous financial and other problems. In part to cut its losses GAC decided to sell the 35,000 acre Empire Ranch to Anamax Mining Company in 1974 for over $12 million.

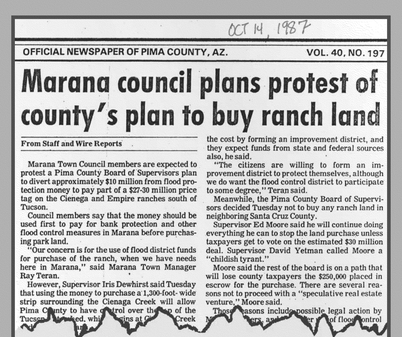
Anamax bought the ranch for its water rights to develop the Rosemont Mine. However, in the mid-1980s it put the ranch up for sale. The land was advertised as an investment for developers. Some of the uses promoted were ranchettes and investment parcels to be resold to secondary investors and developers.



PIMA CoUNtY INtERESt Ed IN oPEN SPACE

Pima County became interested in buying the ranch for a natural open space corridor between Oracle and the Canelo Hills. It was also concerned with flooding issues as Cienega Creek flows into the Tucson basin. Cienega Creek also contributes natural recharge to Tucson's aquifer.

In 1986, Pima County aquired land along lower Cienega Creek that had been part of the Empire Ranch in the 1880s.In August 1987 Pima County entered an agreement with Anamax to purchase 85,500 acres of additional land with bond money and flood control funds. Protests arose from the use of flood control money. The agreement fell through.



OCT 14, 1987

OFFICIAL NEWSPAPER OF PIMA COUNTY, AZ. VOL. 40, NO. 197

Marana council plans protest of county's plan to buy ranch land

From Staff and Wire Reports

Marana Town Council members are expected to protest a Pima County Board of Supervisors plan to divert approximately $10 million from flood protection money to pay part of a $27-30 million price tag on the Cienega and Empire ranches south of Tucson.

Council members say that the money should be used first to pay for bank protection and other flood control measures in Marana before purchasing park land.

"Our concern is for the use of flood district funds for purchase of the ranch, when we have needs here in Marana," said Marana Town Manager Ray Teran.

However, Supervisor Iris Dewhirst said Tuesday that using the money to purchase a 1,300-foot- wide strip surrounding the Cienaga Creek will allow Pima County to have control over the [illegible] of the Tucson [illegible] which [illegible] at [illegible] Creek [illegible] the cost by forming an improvement district, and they expect funds from state and federal sources also, he said.

"The citizens are willing to form an improvement district to protect themselves, although we do want the flood control district to participate to some degree," Teran said.

Meanwhile, the Pima County Board of Supervisors decided Tuesday not to buy any ranch land in neighboring Santa Cruz County.

Supervisor Ed Moore said he will continue doing everything he can to stop the land purchase unless taxpayers get to vote on the estimated $30 million deal. Supervisor David Yetman called Moore a "childish tyrant."

Moore said the rest of the board is on a path that will lose county taxpayers the $250,000 placed in escrow for the purchase. There are several reasons not to proceed with a "speculative real estate venture," Moore said.

Those reasons include possible legal action by [illegible] of flood control

1876 Vail & Partners buy Empire Ranch

1882 Empire Land & Cattle co-created with Walter Vail

1928 Vail Co. sells to Chiricahua Cattle Company

1969 GAC buys Empire Ranch remainder

1974 Anamax Mining Company buys ranch

1987 Pima County acquires part of Empirita Ranch land

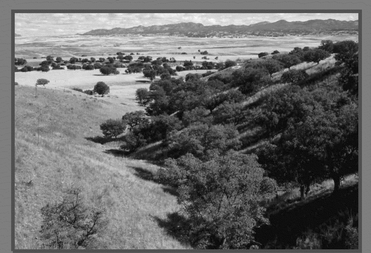
1988 BLM acquires Empire Ranch

2000 Las Cienegas National Conservation Area designated

2009 Pima County acquires more Empirita Ranch land

timeline

BLM ACqUIRES EMPIRE RANCH IN LANd tRAdE



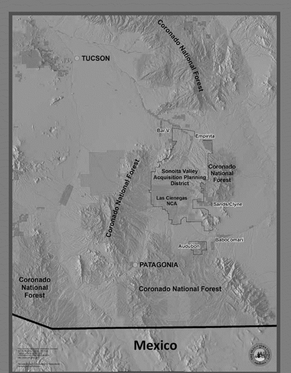
Arizona's Congressional delegation, Pima County and others approached the Bureau of Land Management (BLM) about acquiring the land. On March 24, 1988 the BLM signed a formal agreement acquiring the land in a three-way land exchange. Public lands in Tucson (80 acres) and Phoenix (41,000 acres) were traded to the private investors involved in the trade so that the Empire Ranch could be preserved.

BLM subsequently acquired additional land and Congress designated a National Conservation Area with provisions for inclusion of state lands.

AddItIoNAL LANdS PRotECtEd

Pima County's vision for interconnected, interjurisdictional open space protection has come closer to reality with 2004 bond funding. The funding was used to acquire the Bar V Ranch, Clyne Ranch, and portions of the Sands and Empirita ranches. County ranch lands are shown in red and orange within and adjacent to the Congressionally designated "Sonoita Valley Acquisition Planning District" (black outline).

In addition, The Nature Conservancy brokered many of the conservation easements on private land near Las Cienegas. Easements (shown in red) are now held by a combination of Bureau of Land Management, Arizona Land and Water Trust, Audubon and The Nature Conservancy.



Federally conserved lands are shown in green. State conserved lands are shown in blue. State lands managed under Pima County's Ranch conservation program are shown on orange. Red areas are County and private conservation lands.

ED_001077_00005630-00014

ATTACHMENT 2

ED_001077_00005630-00015

Proposed Rosemont Mine Project Features

Existing Reclaimed Water Line Network
Proposed Reclaimed Water Line
Saguaro Natl. Park
PIMA CO.
COCHISE CO.
Old Spanish Tr
Coronado N. F.
86
Tohono O'odham Nation San Xavier District
Existing CAP Canal
Wilmot Rd
City of Tucson
Houghton Rd
Wentworth Rd
Vail
PANTANO ILF
Lower Cienega Creek
Cienega Creek Watershed
Pima Mine Rd
Proposed CAP Extension
Cienega Creek Natural Preserve
Existing CAP Terminus
Nogales Hwy
Sahuarita Rd
10
Helmet Peak Rd
Bar V Ranch
Dianond Bell Ranch
Town of Sahuarita
Underground Water Line
ANDRADA
Davidson Canyon
Empirita Ranch
Proposed CWC CAP Recharge
Power & Water Lines
83
HELVETIA NORTH
OUTSTANDING WATERS
Duval Mine Rd
Santa Rita Rd
Marley Ranch
FULLERTON RANCH
Access Road
DAVIDSON PARCELS
Santa Cruz River
Green Valley
Santa Rita Experimental Range
Upper Cienega Creek
Whitehouse Canyon Rd
Facilities
Open Pit
Barrel Alt. Landform
Coronado National Forest
Canoa Ranch
Sands Ranch
Las Cienegas National Conservation Area
Clyne Ranch
90
PIMA CO.
SANTA CRUZ CO.
Coronado National Forest
83
82
19
Sonoita
SANTA CRUZ CO.
COCHISE CO.
Rancho Seco
Sopori Ranch
82
Cienega Creek Watershed
SONOITA CREEK RANCH
Coronado National Forest

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

Pima County GIS

GEOGRAPHIC INFORMATION SYSTEMS

Pima County Information Technology Dept.
201 North Stone Avenue - 9th Floor
Tucson, Arizona 85701-1207
(520)740-6670 - FAX:(520)798-3429

N

Scale 1:97,500 for Arch E Print

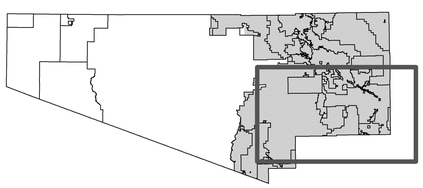
0 2.5 miles

THE SEAL OF PIMA COUNTY ARIZONA

DEC 26, 2013

Rosemont Fee Land
Pima County Preserve Land
Federal Preserve Land
Major Stream or Wash
Incorporated Area
Tribal Land

Pima County Index Map

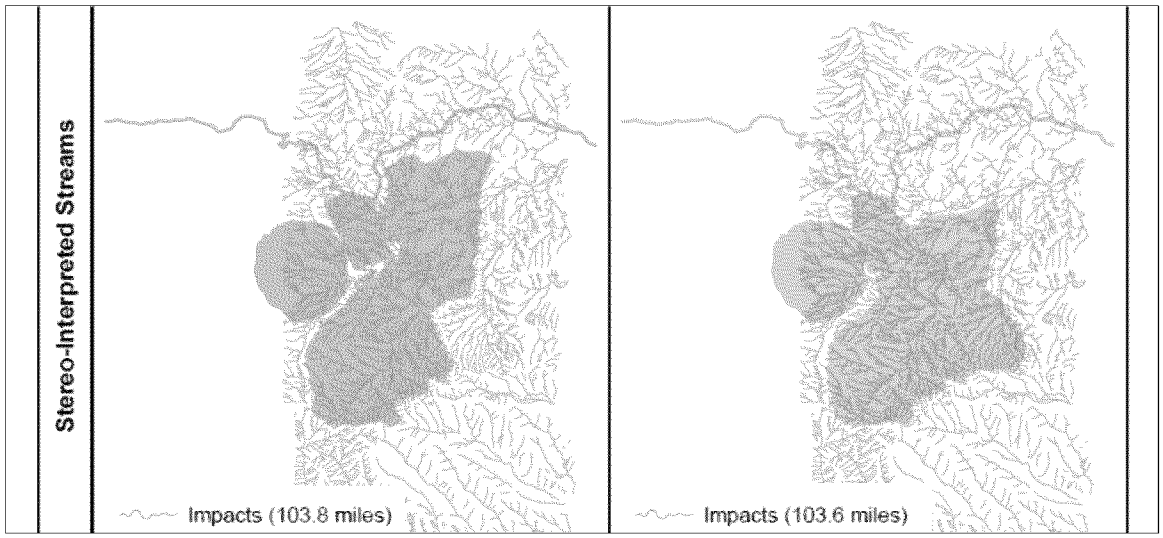


Index Map Scale 1:1,500,000 for Arch E Print

\\gislib\specproj\jfonseca\osc0639\mxds\coe_letter.mxd ml

ATTACHMENT 3

ED_001077_00005630-00017



Mine Plan of Operation (MPO) in orange at left, Preferred (Barrel) Alternative in pink at right. Mine access road is shown as part of the footprint for both. Figure provided by Pima County IT.

Delineation of stream centerlines based on stereo-photographs suggests that many headwaters streams were not analyzed in the Application, nor delineated by WestLand Resources as potentially jurisdictional. Over 100 miles of streams would be directly affected by the Mine Plan of Operations, (shown at left). An equal number of stream-miles would be affected by the Forest's Preferred Alternative (Barrel), shown at right. By contrast, Westland's preliminary JD predicted only 36 channel miles of impact from the MPO and 34 channel miles of impact from the Barrel alternative.

The permit application also appears to greatly underestimate the widths of WOUS. An estimate of the area of Waters of the US (Waters) based on the limits of the 10-yr floodplains yielded 116 acres which is approximately three times larger than the 38.6 acre estimate provided in the permit application. In Pima County, the limits of the 10-yr floodplain are often used as an approximation for the limits of the ordinary high water mark. The analysis described in Appendix D of our comments shows that this criterion results in much higher acreage than those in the permit application and DEIS. Furthermore, the analysis in Appendix D did not estimate 10-yr floodplain areas for the tributary watersheds mentioned above, so the area of the 10-yr floodplains is actually greater than the 116 acres calculated.

In addition to the lack of documentation on the establishment of jurisdictional limits to determine impacts to Waters, these are preliminary JDs. As such, for the purposes of computation of impacts, compensatory mitigation requirements, and other resource protection measures, a permit decision made on the basis of a preliminary JD will treat all waters and wetlands that would be affected in any way by the permitted activity on the site as if they are jurisdictional waters of the U.S.

In general, Regulatory Guidance Letter 08-02, states that an approved JDs should be used to support individual permit application. We requested that the Corps develop and use approved JDs. This is warranted because of the scope of the proposed mining operation and environmental impacts and the likelihood that the Application grossly underestimates potential impacts to Waters.

RAÚL M. GRIJALVA
3RD DISTRICT, ARIZONA

COMMITTEE ON NATURAL RESOURCES
RANKING MEMBER

COMMITTEE ON EDUCATION AND THE WORKFORCE
EARLY CHILDHOOD, ELEMENTARY, AND SECONDARY EDUCATION
HIGHER EDUCATION AND WORKFORCE TRAINING

CONGRESSIONAL PROGRESSIVE CAUCUS
CO-CHAIR

Congress of the United States
House of Representatives
Washington, DC 20515-0307

WEBSITE: http://grijalva.house.gov/

1511 LONGWORTH HOB
WASHINGTON, DC 20515
PHONE (202) 225-2435 | FAX (202) 225-1541

738 N. 5TH AVENUE, SUITE 110
TUCSON, AZ 85705
PHONE (520) 622-6788 | FAX (520) 622-0198

146 N. STATE AVENUE
P.O. BOX 4105
SOMERTON, AZ 85350
PHONE (928) 343-7933 | FAX (928) 343-7949

13065 WEST MCDOWELL ROAD, SUITE C-113
AVONDALE, AZ 85392
PHONE (623) 536-3388 | FAX (623) 748-0451

FACEBOOK: Facebook.com/Rep.Grijalva
TWITTER: Twitter.com/RepRaulGrijalva

June 16, 2015

The Honorable Tom Vilsack
Secretary of the U.S. Department of Agriculture
1400 Independence Ave., S.W.
Washington, DC 20250

Dear Secretary Vilsack:

I am concerned about recent reports that Bureau of Land Management (BLM) and Environmental Protection Agency (EPA) questions about the US Forest Service's Final Environmental Impact Statement (FEIS) and proposed Record of Decision (ROD) for the proposed Rosemont Copper Project have gone unanswered. The proposed mine on and adjacent to the Coronado National Forest could have very significant environmental impacts, and it's critical that all of these impacts are analyzed with the best available science before any decision is made. As you know, due to climate change and prolonged drought, conservation and protection of the quality of our water is even more important in Southern Arizona. Approval of the mine could jeopardize the region's drinking water and the abundant biodiversity dependent upon the springs and riparian areas that will dry up or be polluted.

BLM manages the Las Cienegas National Conservation Area, which is to the east of the proposed mine, and has expressed sincere concerns that the water drawn from the aquifer for the mine pit could potentially dry up Cienega Creek. Questions and concerns about water use impacts have been brought up throughout the administrative review of the proposed EIS and ROD. New wells and groundwater pumping over the life of the mine could lead to permanent water shortages across the region. It's been brought to my attention that in preparing its analysis the US Forest Service relied on data of water use provided by Rosemont Copper from January, not the drier months of June and July when lasting impacts to the water table could potentially occur. BLM has also raised concerns about the use of computer modelling that does not fully account for impacts to outlying water resources. EPA submitted comments on March 2, 2015, that echo the concerns of BLM.

The updated analysis appears to have the same problems as the initial draft. As you may recall, I wrote to you on August 8, 2013, to express concerns about the rushed publication of the Draft Environmental Impact Statement for this same proposal. Comments from both BLM and EPA, among others, about the insufficiency of that analysis led the Forest Service to produce a supplemental report. Now, nearly two years and thousands of agency man hours later, there are

still serious concerns about the credibility of the FEIS. It is imperative that the true impacts of this mine are fully understood.

I urge the Forest Service, under your guidance, to carefully consider all of the comments made by cooperating and participating agencies on the FEIS and ROD for the Rosemont Copper Project.

Sincerely,

Raúl M. Grijalva
Ranking Member
House Committee on Natural Resources

CC: Tom Tidwell, Chief, US Forest Service
Neil Kornze, Director, Bureau of Land Management
Gina McCarthy, Administrator, Environmental Protection Agency

To: Greczmiel, Horst Ex. 6 - Personal Privacy Bonnie, Robert - OSEC[Robert.Bonnie@osec.usda.gov]; Holmes, Patrick - OSEC[Patrick.Holmes@osec.usda.gov]; Bisgeier, Mark -OSEC[Mark.Bisgeier@osec.usda.gov]; Blazer, Arthur - OSEC[Arthur.Blazer@osec.usda.gov]; Patel-Weynand, Toral -FS[tpatelweynand@fs.fed.us]; Acheson, Ann -FS[aacheson@fs.fed.us]; Carbone, Joseph -FS[jcarbone@fs.fed.us]; Joyner, Calvin - FS[cjoyner@fs.fed.us]; Zepeda, Gilbert -FS[gzepeda@fs.fed.us]; Higgins, Jeanne M - FS[jmhiggins@fs.fed.us]; Daniels, Janine -FS[janinedaniels@fs.fed.us]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Bromm, Susan[Bromm.Susan@epa.gov]; Rader, Cliff[Rader.Cliff@epa.gov]; Kaiser, Russell[Kaiser.Russell@epa.gov]; Blumenfeld, Jared[BLUMENFELD.JARED@EPA.GOV]; Goforth, Kathleen[Goforth.Kathleen@epa.gov]; Dunning, Connell[Dunning.Connell@epa.gov]; Hanf, Lisa[Hanf.Lisa@epa.gov]; Brush, Jason[Brush.Jason@epa.gov]; Martynowicz, Trina[Martynowicz.Trina@epa.gov]; Gaudario, Abigail[Gaudario.Abigail@epa.gov]; Diamond, Jane[Diamond.Jane@epa.gov]; Brush, Jason[Brush.Jason@epa.gov]; Meg.E.Gaffney-Smith@usace.army.mil[Meg.E.Gaffney-Smith@usace.army.mil]; 'Chip Smith'[Charles.R.Smith567.civ@mail.mil]; 'kimberly.m.colloton@usace.army.mil'[kimberly.m.colloton@usace.army.mil]; 'Castanon, David J SPL'[David.J.Castanon@usace.army.mil]; 'Blaine, Marjorie E SPL'[Marjorie.E.Blaine@usace.army.mil]; 'Dave Sire'[david_sire@ios.doi.gov]; 'Edwin Roberson'[eroberso@blm.gov]; 'Raymond Suazo'[rmsuazo@blm.gov]; 'Deborah Rawhouser'[drawhous@blm.gov]; 'June Shoemaker'[jshoemaker@blm.gov]; 'Benjamin_Tuggle@fws.gov'[Benjamin_Tuggle@fws.gov]; 'steve_spangle@fws.gov'[steve_spangle@fws.gov]; 'jean_calhoun@fws.gov'[jean_calhoun@fws.gov]; 'larry_bright@fws.gov'[larry_bright@fws.gov]; jason_douglas@fws.gov[jason_douglas@fws.gov]
From: Upchurch, Jim -FS
Sent: Thur 5/29/2014 10:17:40 PM
Subject: RE: Rosemont Fri 3pm (eastern) call 30May
2810-030502-POO-2007-01-Rosemont_BO.pdf

Here is letter that was sent by us to the USFWS regarding out intent to reinitiate consultation for the Rosemont Copper Project.

Jim Upchurch

Forest Supervisor

Coronado National Forest

300 West Congress

Tucson, AZ 85701

Office: 520-388-8306

Cell: 520-444-4034

From: Greczmiel, Horst Ex. 6 - Personal Privacy
Sent: Thursday, May 29, 2014 6:24 AM

To: Bonnie, Robert - OSEC; Holmes, Patrick - OSEC; Bisgeier, Mark -OSEC; Blazer, Arthur - OSEC; Patel-Weynand, Toral -FS; Acheson, Ann -FS; Carbone, Joseph -FS; Joyner, Calvin -FS; Upchurch, Jim - FS; Zepeda, Gilbert -FS; Higgins, Jeanne M -FS; Daniels, Janine -FS; 'Ken Kopocis'; 'Susan Bromm'; 'Cliff Rader'; 'Kaiser, Russell'; 'Jared Blumenfeld'; 'Kathy Goforth'; 'Dunning, Connell'; 'Hanf, Lisa'; 'Brush.Jason@epa.gov'; 'Martynowicz.Trina@epa.gov'; 'Gaudario.Abigail@epa.gov'; 'Diamond.Jane@epa.gov'; 'brush.jason@epa.gov'; 'Gaffney-Smith, Margaret E HQ'; 'Chip Smith'; 'kimberly.m.colloton@usace.army.mil'; 'Castanon, David J SPL'; 'Blaine, Marjorie E SPL'; 'Dave Sire'; 'Edwin Roberson'; 'Raymond Suazo'; 'Deborah Rawhouser'; 'June Shoemaker'; 'Benjamin_Tuggle@fws.gov'; 'steve_spangle@fws.gov'; 'jean_calhoun@fws.gov'; 'larry_bright@fws.gov'; jason_douglas@fws.gov
Subject: Rosemont Fri 3pm (eastern) call 30May

Call-in number:

- Local DC call in number: Ex. 6 - Personal Privacy

- For our colleagues outside the DC area, call-in number: Ex. 6 - Personal Privacy

Passcode: Ex. 6 - Personal Privacy

Agenda:

a. Augusta/Rosemont/VanNessFeldman DC meetings (Corps: Chip Smith; USDA: Mark Bisgeier; CEQ: Horst)

b. Updates: 404 and ESA projections

c. Next Steps on RM: see attachment

d. Next Steps for this group – bi-weekly calls?

Regards, Horst

Horst Greczmiel

Associate Director for NEPA Oversight

Council on Environmental Quality

Ex. 6 - Personal Privacy

Ex. 6 - Personal Privacy

Please consider the environment before printing this e-mail

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.

To: Kaiser, Russell[Kaiser.Russell@epa.gov]
Cc: Castanon, David J SPL[David.J.Castanon@usace.army.mil]
From: Blaine, Marjorie E SPL
Sent: Sat 2/15/2014 12:08:08 AM
Subject: RE: [EXTERNAL] How close is the nearest TNW to the main canyon wash? (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Russ

I hope you are feeling better now. Sorry for the delay in response. I was on A/L and then in meetings all day on Feb 12.

The annual total precip at the RM Mine site from 2006-2008 was 17.12 inches and from 2009 to 2011 was 12.61 inches. The predominant flows would be tied to the winter months when we receive winter rains and then again during the monsoons, July-Sep.

Marjorie
Assist us in better serving you.
You are invited to complete our customer survey, located at the following link:
http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey

-----Original Message-----
From: Kaiser, Russell [mailto:Kaiser.Russell@epa.gov]
Sent: Monday, February 03, 2014 10:48 AM
To: Blaine, Marjorie E SPL; Castanon, David J SPL
Cc: Diebolt, Sallie SPL
Subject: RE: [EXTERNAL] How close is the nearest TNW to the main canyon wash? (UNCLASSIFIED)

Thank you Marjorie! It was great seeing you all and glad to see all is going well!!! I too wished there would have been more time for socialization... I actually got hit with the flu bug on the way back - interesting trip to say the least:)

Just wondering how much rain fall that basin receives annually? Also, is flow predominantly in spring? All help would be greatly appreciated...

Ex. 5 - Deliberative Process

Thanks and best regards!

Russ

Russell L. Kaiser
Chief, Wetlands & Aquatic Resources Regulatory Branch

1301 Constitution Ave., N.W.
Room 7217M West Bldg.
Washington, DC 20004
P: 202.566.0963

-----Original Message-----
From: Blaine, Marjorie E SPL [mailto:Marjorie.E.Blaine@usace.army.mil]
Sent: Friday, January 31, 2014 4:20 PM
To: Castanon, David J SPL; Kaiser, Russell
Cc: Diebolt, Sallie SPL
Subject: RE: [EXTERNAL] How close is the nearest TNW to the main canyon wash? (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

These are approximations using Google Earth:

From SR 83 just downstream of the mine on Barrel Canyon to the confluence of Davidson Canyon Wash and Cienega Creek is approx. 12.28 RM. From the confluence of DCW and Cienega Creek to the Santa Cruz River TNW Reach B is approx 32 RM. Reach B begins upstream of the confluence of the SCR and the Rillito River.

The flow path is Barrel Canyon, Davidson Canyon Wash, Cienega Creek, Pantano Wash, Rillito River, SCR Reach B.

Marjorie
Assist us in better serving you.
You are invited to complete our customer survey, located at the following link:
http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey

-----Original Message-----
From: Castanon, David J SPL
Sent: Friday, January 31, 2014 11:05 AM
To: Kaiser, Russell
Cc: Blaine, Marjorie E SPL
Subject: RE: [EXTERNAL] How close is the nearest TNW to the main canyon wash? (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Russ, I'll have to get that from Marjorie.

It was nice to see you this week. Too bad there wasn't more time to hang out and catch up.

Dave

-----Original Message-----

From: Kaiser, Russell [mailto:Kaiser.Russell@epa.gov]
Sent: Thursday, January 30, 2014 12:56 PM
To: Castanon, David J SPL
Subject: Re: [EXTERNAL] How close is the nearest TNW to the main canyon wash?

How far away is that?

From: Castanon, David J SPL <David.J.Castanon@usace.army.mil>
Sent: Thursday, January 30, 2014 10:10:38 AM
To: Kaiser, Russell
Subject: Re: [EXTERNAL] How close is the nearest TNW to the main canyon wash?

Where Cienegas meets the Santa Cruz River

Sent from my Blackberry Device

----- Original Message -----
From: Kaiser, Russell [mailto:Kaiser.Russell@epa.gov]
Sent: Thursday, January 30, 2014 06:42 AM
To: Castanon, David J SPL
Subject: [EXTERNAL] How close is the nearest TNW to the main canyon wash?

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

3-4-14

Colonel Colloton
L.A. District
U.S. Army Corps of Engineers
915 Wilshire Blvd.
Los Angeles, CA 90017

RECEIVED
MAR 19 2014
Office of the ASA(CW)
Washington, DC

Colonel Colloton:

I'm writing because I believe the benefits of Rosemont Copper are too large to overlook. We need 404 permit approval and we need it soon. The mine will bring job opportunities to Tucson and Southern Arizona, while setting new standards for environmental sustainability and efficiency.

We are looking at some 2,900 jobs being created by the mine, about $30 billion in personal income, and a huge increase in the welfare of the people in Pima county and surrounding communities. The economic benefits of this project are important to the local community and will contribute to needed improvements in the local economic base, such as an additional $700 million in local economic stimulus each year.

Sustainability is also important to Rosemont, and years of careful planning and environmental review ensure that Rosemont's operations will reflect the highest standards for sustainability. They understand that water is an essential resource, necessary to human survival, economic growth, and the natural environment, which is why their mine will use 80% less water than traditional mines. They have received the US Forrest Service's Final Environmental Impact Study as well as the Record of Decision for approval. You should give this substantial consideration in your public interest review.

I support Rosemont Copper, and look forward to seeing the project progress with the final stage of approval.

Respectfully, Don Collins

Don Collins
3224 E. Holladay Street
Tucson, AZ 85706

cc: Tom Vilsack
John McHugh
Jo-Ellen Darcy
Gina McCarthy
Michael Boots

Janie Caldwell ❖ 1661 W Swisher Place ❖ Tucson, AZ 85746

3/5/14

Kimberly Colloton
Colonel, U.S. Army Corps of Engineers
Los Angeles District
915 Wilshire Blvd.
Los Angeles, CA 90017

Ms. Kimberly Colloton:

We have been following Rosemont Copper's progression very closely through the bureaucratic process over the past seven years. My husband did the grading for M3 engineering, and has some insight into the process. As they near the end of this long and arduous process I ask for a detailed quick review process so that Rosemont can gain their 404 water permit.

Arizona is in desperate need of everything that Rosemont has to offer: the jobs, the amazing salaries, the increase in tax revenue, the boost in morale, and more copper, mined in an environmentally friendly way, to keep the U.S. in the running for renewable resource production. All of these benefits that are expected to accrue from the proposal, balanced against any reasonably foreseeable detriments, certainly outweigh them.

Looking beyond Rosemont's substantial benefits, there is also their dedication to the highest standards for sustainability. All off their years of environmental review have confirmed that Rosemont will minimize their impacts to the environment, including 80% less water usage than traditional mines, and a much smaller footprint.
The last step in this process is to get the 404 permit, so let us make sure we stay true to our course.

Regards,

Janie Caldwell

Janie Caldwell

The above letter was also sent to Tom Vilsack, John McHugh, Jo-Ellen Darcy, Gina McCarthy, and Michael Boots.

3/4/14

James & Patricia Mayo
25310 E Arapaho Trail
Benson, AZ 85602

Kimberly Colloton, Colonel
U.S. Army Corps of Engineers
Los Angeles District
915 Wilshire Blvd.
Los Angeles, CA 90017

RECEIVED
MAR 19 2014
Office of the ASA(CW)
Washington, DC

Ms. Kimberly Colloton,

We are writing to express our support of Rosemont Copper. They have gone through intensive scrutiny and have worked hard to adequately and successfully address environmental concerns. It is clear to us that they will minimize their impact on nature, while supplying a greatly needed resource. A boost to our local economic welfare through jobs and tax revenue, a boost to our national economic welfare through lessened pressures on copper imports, and a boost to the environmental standard of mining in the United States through Rosemont's water techniques throughout their operations and clear stewardship beyond the mine.

It is critical that the people in Pima County be given quality opportunities to provide for their families, and yet the continuing delays that have been put upon Rosemont are only holding those opportunities back. It is clear from the recent positive review of the environmental impact statement from the Forest Service, along with the countless approvals prior, that local, state and federal agencies agree and see the merit in Rosemont. I hope the Army Corps will as well.

So please, help stay the course and approve the 404 permit today. Finalize your record of decision as soon as possible.

In appreciation,

James and Patricia Mayo

The above letter was also sent to: Tom Vilsack, John McHugh, Jo-Ellen Darcy, Gina McCarthy, and Michael Boots.

Douglas and Mary Austin
611 N Avenida Cipres
Green Valley, AZ 85614

Kimberly Colloton
Colonel
US Army Corps
LA District
915 Wilshire Blvd.
Los Angeles, CA 90017
3/4/14

Colonel Kimberly Colloton, US Army Corps:

Arizona is the United States' main producer of copper. Economically speaking, it makes complete sense that Arizonans should benefit from the jobs, money, and tax revenue that go with mining the copper. Rosemont Copper will give Arizonans this opportunity, and will do so in such a way that the environment will also be taken care of. The combination of modernized mining techniques to protect and reduce water use including dry stack tailings, environmental regulation and oversight, and improved awareness of the value of natural resources means that the environment will not suffer from this mine in any way.

Federal and state agencies have approved this project, and there's no reason the US Army Corps of Engineers shouldn't do the same. As part of the Environmental Impact Statement, historic, cultural, scenic and recreational values were studied, and I understand your agency will review the Forest Service's analysis as part of your decision making process. Rosemont's plans, as the EIS analysis shows, the Rosemont site is not a national park or a national scenic area. The area does have a significant history of mining and that is deeply rooted in our culture here. Above and beyond the strict environmental standards and policies employed at the mine property and their mitigation plans, Rosemont Copper has committed to permanently conserve 4,500 acres of land for the public along with

Douglas and Mary Austin
611 N Avenida Cipres
Green Valley, AZ 85614

allocating more than 550 million gallons a year of private surface water to the public.

So much study has been completed. Please stick to the facts and ignore political special interests. I look forward to your timely approval of Rosemont's 404 permit.

Respectfully,

Douglas and Mary Austin

A copy of this letter will be sent to the following individuals:

Gina McCarthy, EPA
Tom Vilsack, USDA
John McHugh, US Army
Jo-Ellen Darcy, USACE
Michael Boots, White House Council on Environmental Quality

3/5/14

A copy of this letter has been sent to Tom Vislack, John McHugh, Jo-Ellen Darcy, Gina McCarthy, and Michael Boots.

Colonel Kimbery Colloton
U.S. Army Corps of Engineers
L.A. District
915 Wilshire Blvd.
Los Angeles, CA 90017

Dear Colonel Colloton,

We want to express our support for The Rosemont Copper mine and ask for your swift approval of their 404 water permit. The mine is sorely needed to improve Arizona's struggling economy. They address all the relevant issues, such as bringing in more than 400 new, good-paying jobs, supporting thousands more in the region over the 20+ years of the mine's life, and bringing in an additional $700 million in local economic stimulus each year.

But Rosemont is more than just an economic stimulus. They have continually shown concern for both protection and utilization of important resources. Copper is an incredibly important metal, used in everything from medical devices to military equipment. The ability to produce it in the US and not have to rely on outside sources is significant. As for protection, Rosemont will minimize impacts to the environment, using only one-third of the water used by traditional mines and leaving a much smaller footprint.

The U.S. Forrest Service, as well as many other agencies, have completed detailed evaluations and issued a Record of Decision to approve Rosemont. Thank you in advance for your thorough and thoughtful review - now let's finalize it!

Best regards,
Chuck & Verna Bailer

Charles and Verna Bailer
Rosemont Mine Supporters
8028 E Maguey Drive
Tucson, AZ 85750

PS - THE MINE WILL GIVE DECENT PAY TO INDIVIDUALS THAT DO NOT HAVE A COLLEGE EDUCATION - "NO POLITICS" TUCSON NEEDS THESE TYPE OF JOBS!

Howard and Betty Grant
18410 S Camino Chuboso
Vail, AZ 85641

Colonel Colloton
LA District
U.S. Army Corps of Engineers
915 Wilshire Blvd.
Los Angeles, CA 90017

3-5-2014

U.S. Army Corps, Colonel Colloton,

We are very strong supporters of Rosemont Copper and all of the incredible things they propose. We welcome the mine's completed development, as well as the suite of economic benefits to be gained. The contribution to our community and area is vast and deeply needed.

Having said this, we would like to ask you to follow the U.S. Forest Service's approval (FEIS and ROD) by issuing the very last federal permit required – the 404 permit. We greatly value the insights and diligence you contributed to the Forest Service's final document that guided the approval in the Record of Decision.

Arizona, like most of the U.S., has been in a recession for much too long. Families are struggling to make ends meet, businesses are closing up shop because residents aren't buying, the education sector is suffering, and our fire and police are underpaid. As you already know, Rosemont will cure these ailments and they'll do so with little environmental impact.

Our waters will be protected during and after the life of the mine, thanks to Rosemont's forethought to store water ahead of time and the recycling

Howard and Betty Grant
18410 S Camino Chuboso
Vail, AZ 85641

techniques they will utilize throughout operations such as dry tailings. Their conservation program will further protect thousands of acres of land for the public and hundreds of millions of gallons of surface water – streams and creeks – for the public.

For all of these reasons and more, they should receive their 404 permit. We can't afford to wait any longer for Rosemont. The decision must be made now, for the good of Arizona. Thank you for your attention.

Sincerely,

Howard and Betty Grant

A copy of this letter has also been sent to Tom Vilsack, John McHugh, Jo-Ellen Darcy, Gina McCarthy, and Michael Boots.

March 5, 2014

Kimberly Colloton
Colonel
US Army Corps of Engineers
LA District
915 Wilshire Blvd.
Los Angeles, CA 90017

Colonel Kimberly Colloton:

The Rosemont Copper mine is the opportunity that our community needs. Please make this happen as soon as possible by issuing the 404 permit.

Rosemont's plan is an answer to a big problem that we have had here for a while – the problem of unemployment. Rosemont will create thousands of well-paying jobs, and this community has too many people out of work or underemployed. Good people like my brother need work. More jobs means a stronger, more cohesive community.

The fact of the matter is that Rosemont will bring about so many more benefits to our community, the area – and the industry – than the minor adverse impacts.

The project's benefits reach beyond the Pima County and Arizona border as well. Our country needs copper, and developing domestic resources increases our country's value of national output of goods because we import less of these raw materials and metals.

Of course the permit you are issuing is a water permit – Rosemont will use significantly less – about 60% less than traditional mining operations. The use of dry stack tailings will surely revolutionize the entire industry. And the thorough and meticulously analyzed studies show our water is safe.

Thank you for your consideration to these and all the facts of this proposed project. I'm confident that when fully considered, you will agree with the countless regulatory agencies that have already approved Rosemont.

Sincerely,

John and Carolyn Marquis
3476 W Marlene Street
Tucson, AZ 85741

To: Col. Colloton, US Army Corps of Engineers Los Angeles District
CC: Jo-Ellen Darcy, Tom Vilsack, Gina McCarthy, Michael Boots, John McHugh

Colonel Colloton-

Our need for Rosemont's planned copper mine is greater than ever. It is clear to anyone with eyes to see how important and necessary it is that Rosemont be given the final approvals to move ahead with their plans.

Our technological and economic future absolutely depends on the mining of copper, a resource which has really been the life's blood of this state since its beginning! The demand for copper throughout the country, in a wide array of areas, is so high. Medicine, renewables, and even the defense industry rely on copper. We have the resource, we have the people anxious and ready to go to work to mine it, and we have a soaring debt and high unemployment rate that is begging for relief!

Rosemont has gone above and beyond when meeting the public's concerns about the environment. Rosemont will also conserve 4,500 acres of pristine land, and allocate 550 million gallons a year of private surface water rights to the public. Not to mention using the least about of water of any other mine in the area – less than our golf courses and pecan farms as well!

Economically Rosemont just cannot be ignored, especially when looking at their benefits to the local community and how they will contribute to the many needed improvements in the local economic base. The 2,900 jobs and huge increase in tax revenue will certainly lead to an increase in the welfare of the people in Pima County.

The Forest Service has approved Rosemont through their official Record of Decision, which is being finalized. Surely that counts for something. The only logical thing to do at this point is to lend your final approval of Rosemont's 404 permit. Thank you for issuing their permit today.

All the best,

Jeremy Gypton
9640 E Banbridge Street
Tucson, AZ 85747

NOGALES-SANTA CRUZ COUNTY CHAMBER OF COMMERCE * VISITOR & TOURISM CENTER

123 W. KINO PARK * NOGALES, ARIZONA 85621
Phone: 520 - 287-3685 * Fax: 520- 287-3687
Email: info@thenogaleschamber.com
Website: www.thenogaleschamber.com

ARIZONA NOGALES
"Gateway to Sonoran Desert Heritage"

March 7, 2014

Col. Kimberly M. Colloton, PMP
U.S. Army Corps of Engineers
915 Wilshire Blvd.
Los Angeles, California 90017

Dear Col. Colloton:

As President/CEO of the Nogales-Santa Cruz County Chamber of Commerce established in 1914, I have seen how critical a mine can be to a community's local economy and future. Not only does mining bring numerous employment opportunities, but it also provides secure and well paying jobs for a definite amount of time. With a high unemployment rate for the over 47,000 residents in Santa Cruz County, the Rosemont Copper Mine project will be a vital boost to our county's future economic stability.

Opportunities can be found not only in the vast amount of underground minerals. Significant expansion of the mining industry and high levels of investment in the sector are also creating opportunities for a wide range of players in many ancillary industries. Rosemont Copper will bring 1600 indirect jobs annually and business opportunities in sectors such as construction, retail/wholesale, utilities, real estate and technology services to our struggling families and businesses in Southern Arizona.

Today's mining has incorporated state-of-the-art environmentally friendly technologies, as well as safety procedures and infrastructures to yield high quality products that meet international market standards. Rosemont Copper is committed to sustainable projects that prioritize the safety of mineworkers, environmental responsibility, collaborating with communities and working with the businesses where they operate.

Many are concerned that mines have detrimental effects on the wildlife in the area. Rosemont Copper has made this respective concern a high priority. In their recent Final Environmental Impact Statement, Rosemont Copper received high rankings for addressing this and other concerns through various mitigation commitments.

The Nogales-Santa Cruz Chamber recognizes Rosemont Copper as essential for the betterment of Santa Cruz County. We urge you to continue working through the permitting process expeditiously. In addition, we are hopeful you find, as we have, that Rosemont Copper can provide a unique and much needed opportunity while addressing the best interests of the community at large.

Thank you for allowing me to express our opinion in support of Rosemont Copper. If you have any questions or concerns, please feel in contacting me.

Sincerely,

Olivia Ainza-Kramer

President & CEO

Cc:

The Honorable Tom Vilsack
Secretary of Agriculture
U.S. Department of Agriculture
1400 Independence Ave., SW
Washington, DC 20250

The Honorable John McHugh
Secretary of the Army
101 Army Pentagon
Room 3E700
Washington, DC 20310-0101

The Honorable Jo-Ellen Darcy
Assistant Secretary for Civil Works
108 Army Pentagon
Room 3E446
Washington, DC 20310-0108

The Honorable Gina McCarthy
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Michael Boots
Acting Director
White House Council on Environmental Quality
722 Jackson Place, NW
Washington, DC 20503

ED_001077_00007000-00011

Copy

3.9.14

Kimberly Colloton, Colonel
U.S. Army Corps of Engineers, LA District
915 Wilshire Boulevard
Los Angeles, CA 90017

Dear Col. Colloton:

Anyone who knows anything about Arizona's rich history knows that copper is and has been an indispensible part of our economy. The need for copper in this country and in the world has only continued to grow! Rosemont is a way for us to not have to rely on foreign imported copper. There is a national concern for both protection and utilization of important resources, and Rosemont understands this concern. Yes, protecting the environment is important, and continuing to build sustainable technologies is integral to that task.

However, in order to do that, we need copper!! So when the environmentalists continue to delay Rosemont's copper mine, they really are holding back their own interests! The U.S. Forest Service's Record of Decision shows clearly that Rosemont plans to utilize the latest most ecologically sound practices, so we're not talking about the crude, insensitive operations of the past! We're talking about a safe and sane mine that is providing a necessary resource that we *require* to build our hybrid cars, our wind turbines, our solar panels and the like. You should give the Forest Service's determination to move forward, considerable consideration as part of your own review.

I am imploring you to stand up for what you can clearly see is the right course of action; bring this needless commenting period to a close and issue Rosemont their final major permit, their 404 water permit. We need the jobs, we need the copper, and we need to move forward with securing the economy and the future of this state, and this country!

Regards,

Jay Anderson
3080 E Ina Road
Tucson, AZ 85718

A copy of this letter also sent to:
Honorable Tom Vilsack, Honorable Gina McCarthy, Honorable John McHugh, Honorable Jo-Ellen Darcy and Mr. Michael Boots

Mr. Tom Soto
3563 South Bradford Drive
Tucson, Arizona 85735

United States Army Corps of Engineers
Attention: Los Angeles District Colonel Kimberly M. Colloton
915 Wilshire Boulevard
Los Angeles, CA 90017

CC: Gina McCarthy, EPA
Tom Vilsack, USDA
Michael Boots, Council on Environmental Quality
Jo-Ellen Darcy, US Army Corps of Engineers
John McHugh, US Army

3-9-2014

Col. Colloton:

I want you at the Army Corps of Engineers to understand how important I think Rosemont's approval is. From what I have seen over the years of reviews, the environmental impact of their mine will be minimal, and yet the impact on our job market and economic climate will be tremendous! There will be more than $300 million in local tax dollars that will bring some much-needed relief to the communities' economy.

I have been a long time supporter of Rosemont because they have a vision. They are going about things in the right way, using the most modern equipment, and have reclamation in place right at the outset, and they care about this community. You've seen and studied the plans so I'm not telling you anything you don't already know. Their use of dry stack tailings and the fact that they will use

% less water than traditional hes are just two examp of how w they are going to minimize their environmental impacts.

I have 3 sons with exceptional abilities and training who are in need of good employment and are counting on Rosemont to open so they can put those skills to good use. More delay will only continue to waste the talents of all our idle work force. The Forest Service is moving forward, as I'm sure you know. That should matter to your agency. Please, be sensible and give Rosemont their final permit they need and deserve. It's the right thing to do.

Much appreciated,

Thank you

Tom Soto

Tom Soto

Tucson Hispanic Chamber of Commerce
Southern Arizona • Mexico

823 E. Speedway
Tucson, AZ 85719
520.620.0005
Fax 520.844.7071
www.tucsonhispanicchamber.org

Chairwoman:
Carlos Ruiz
HT Metals

Vice-Chair /
Guillermo Figueroa
Century Link

Treasurer:
Tannya Gaxiola
Quikhelp

Secretary:
Laura Oldaker
By Your Side

Board of Directors:

Bill Addison
Evergreen Mortuary, Cemetery and Crematory
Priscilla Storm
Diamond Ventures
Cecilia Mata
AllSource Global Management
Francisco Melero
Melero International
Libby Francisco
Desert Diamond Casino
Luis Fernando Parra
Parra Law Firm
Glenn Harner
Arizona Chamber of Commerce and Industry
Alma Gallardo
Arizona Bilingual
Dr. Regina Najera
Opthamologist
Dr JP Jones
University of Arizona
Pam Crim
Cox Business
Anthony Snider
Wells Fargo

President/CEO
Lea Marquez Peterson, MBA, IOM

March 11th, 2014

Colonel Kimberly M. Colloton, PMP
Los Angeles District
U.S. Army Corps of Engineers
915 Wilshire Blvd.
Los Angeles, CA 90017

Dear Col. Colloton,

I am writing on behalf of the Tucson Hispanic Chamber of Commerce and the 1000+ business members represented by our chamber. First, I would like to commend your efforts on the Rosemont Copper Project in Arizona and the necessary steps you have taken to ensure a smooth permitting process. It is to our understanding that the Corps has conducted a rigorous EIS process and have taken the responsibility for Section 404 permitting. It is encouraging to know that you are trying to make this process as quick and efficient as possible and for that, we thank you.

As a business organization, we are extremely excited for the 2,100 annual jobs that this project will create, the $701 economic impact on Southern Arizona and the $1.3 billion national impact to the United States. We are also in favor of our natural resources being produced on American soil. For these reasons, the Tucson Hispanic Chamber of Commerce commends you and your colleagues for your dedication to the success of this project. After a 6 year review process, we encourage you to continue to complete the permitting process as efficiently as possible for the benefit of business and the economy.

Sincerely,

Lea Márquez-Peterson

Lea Marquez Peterson
President/CEO
Tucson Hispanic Chamber of Commerce

Your Opportunity for Greater Success - Su Oportunidad para Mayor Éxito

Tucson Hispanic
CHAMBER OF COMMERCE
Southern Arizona • Mexico

823 E. Speedway
Tucson, AZ 85719
520.620.0005
Fax 520.844.7071
www.tucsonhispanicchamber.org

Cc:

The Honorable Tom Vilsack
Secretary of Agriculture
U.S. Department of Agriculture
1400 Independence Ave., SW
Washington, DC 20250

The Honorable John McHugh
Secretary of the Army
101 Army Pentagon
Room 3E700
Washington, DC 20310-0101

The Honorable Jo-Ellen Darcy
Assistant Secretary for Civil Works
108 Army Pentagon
Room 3E446
Washington, DC 20310-0108

The Honorable Gina McCarthy
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Michael Boots
Acting Director
White House Council on Environmental Quality
722 Jackson Place, NW
Washington, DC 20503

ED_001077_00007000-00016

Executive Officers

Michael Benson
Chairman
TDY Housing

DeeDee Hoeft
Past Chair
Wells Fargo Home Mortgage

Rick Shelley
Chair Elect
Horizon Moving Systems of Sierra Vista

Jack Blair
Secretary
SSVEC

Anita Farrow
Treasurer
National Bank of AZ

Board Members

Frank Gonzalez
Lawley Auto Group

Nancy Nash
Stuff 'N Baskets

Nathan Williams
Nathan Williams Law Office

Ken Cecil
Mall at Sierra Vista

Elsie MacMillan
Sierra Toyota

Phil Vega
Sierra Vista Herald & Bisbee Review

Glen Cobb
Sierra Suites

Mary Tieman
Arizona Workforce Connection

Kevin Peterson
CGI

March 06, 2014

RECEIVED
MAR 20 2014
Office of the ASA(CW)
Washington, DC

COL Kimberly M. Colloton, PMP
U.S. Army Corps of Engineers
915 Wilshire Blvd.
Los Angeles, CA

Dear COL Colloton,

I am writing on behalf the Sierra Vista Area Chamber, the largest business organization in Cochise County, representing 662 members and approximately 14,000 employees. One of our core values is to engage in business advocacy and legislative action, The Chamber works tirelessly to stay current on as many issues as possible at the local, state and federal levels. Each month the Chamber's Business Advocacy Committee meets to discuss issues that are affecting or have the potential to affect our businesses.

We are grateful for the hard work your agency has devoted to the Rosemont Copper Project in Arizona. The Corps of Engineers has played an extensive and important role in this process, guiding the Final Environmental Impact Statement (FEIS) process and managing the 404 permitting process under the Clean Water Act.

Since the original application and the subsequent public notice for this project by the Corps in December 2011, the permitting process has continued to evolve. This evolution has taken time, and as the largest business organization in Southern Arizona, we are naturally concerned when unnecessary regulatory delays in the permitting and environmental review process prevent good projects from proceeding so they can bring economic strength and jobs to our community. We understand the Corps is pushing the process forward and we appreciate that approach.

From our perspective, it seems that Rosemont Copper, regulatory agencies, tribes, conservation groups and the community have collaborated to identify the best possible plan for Rosemont. Rosemont will provide 10% of the nation's copper production. Producing copper domestically is something in the public's best interest. It is far better to have our natural resources "Made in the USA" rather than on foreign soil. We are impressed with Rosemont's approach to land and water conservation.

As a business organization, we await Rosemont's anticipated employment of almost 2,000 workers for two years during construction, 450 direct employees

for mine operations and more than 1,700 indirect jobs. These jobs are expected to produce a $3.3 billion increase in personal income over the 20-year life of the mine. The project will put Arizonans to work with above average compensation levels.

The Sierra Vista Area Chamber commends you and your colleagues for your commitment to a thorough, credible permitting process. We urge you to continue working through the permitting process expeditiously and that you find, as we did, that Rosemont provides a unique opportunity to provide a large public benefit while mitigating impacts.

Sincerely,

Michael J Benson
Chairman of the Board

Deanna La Velle
Executive Director

Cc:
The Honorable Tom Vilsack
Secretary of Agriculture
U.S. Department of Agriculture
1400 Independence Ave., SW
Washington, DC 20250

The Honorable John McHugh
Secretary of the Army
101 Army Pentagon
Room 3E700
Washington, DC 20310-0101

The Honorable Jo-Ellen Darcy
Assistant Secretary for Civil Works
108 Army Pentagon
Room 3E446
Washington, DC 20310-0108

The Honorable Gina McCarthy
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Michael Boots
Acting Director
White House Council on Environmental Quality
722 Jackson Place, NW
Washington, DC 20503

Southeast Arizona Economic Development Group
168 East 4th Street
Benson, AZ 85602
www.saedg.org
03-12-14

Col. Kimberly M Colloton
US Army Corps of Engineers
915 Wilshire Blvd.
Los Angeles, California 90017

Dear Col. Colloton;

I am writing on behalf of the members of the Southeast Arizona Economic Development Group (SAEDG) and the employees those companies represent. SAEDG was created in 2007 to work with existing and prospective business-owners and other stakeholders in Cochise County Arizona to identify, develop and expand opportunities within the Cochise County AZ region. SAEDG believes the prosperity of Southeast Arizona depends on the stability and vitality of all area businesses, large and small. Expanding and strengthening economic activity throughout the region ensures healthier communities. Our organization works closely with private and public partners to promote business ownership and related support channels in Southeast Arizona.

We are grateful for the work your agency has devoted to the Rosemont Copper Project in Southern Arizona. The Corps of Engineers has had an extensive and important role in this process, guiding the Final Environmental Impact Statement (FEIS) process and managing the 404 permitting process under the Clean Water Act.

Since the original application and the subsequent public notice for this project by the Corps in 2011, the permitting process has continued to move forward. We are concerned when unnecessary regulatory delays in permitting and environmental review processes keep projects from proceeding. We appreciate the fact that the Corps is pushing the process forward and we appreciate that approach.

As a business organization we look forward to the approximately 2000 jobs during the construction period and the 450 employees for mining operations. This project will put Southern Arizonans to work with above average compensations levels in the mining industry.

Southeast Arizona Economic Development Group appreciates your commitment to a thorough, credible permitting process. We urge you to continue working through the permitting process and allow the Rosemont Copper Project to move forward.

Sincerely,

George Scott
Director

Cc:

The Honorable Tom Vilsack
Secretary of Agriculture
US Department of Agriculture
1400 Independence Ave. SW
Washington, DC 20250

The Honorable John McHugh
Secretary of the Army
101 Army Pentagon
Room 3E700
Washington, DC 20310-0108

The Honorable Gina McCarthy
Administrator
US Environmental Protection Agency
1200 Pennsylvania Ave. NW
Washington, DC 20460

The Honorable Jo-Ellen Darcy
Assistant Secretary for Civil Works
108 Army Pentagon
Room 3E446
Washington, DC 20310-0108

Michael Boots
Acting Director
White House Council on Environmental Quality
722 Jackson Place, NW
Washington, DC 20503

Board of Directors
Larry Dempster/President - David DiPeso/Vice President - Cindy Batten/Treasurer
Les Thompson/Member - Gil Lusk/Member - Jerry DeGrazia/Member - Kimberly Lockhart/Member - Judy Thompson/Member

To: Horst_Greczmiel@ceq.eop.gov[Ex. 6 - Personal Privacy
Cc: Rader, Cliff[Rader.Cliff@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]
From: Smith, Charles R CIV (US)
Sent: Thur 5/8/2014 1:01:40 PM
Subject: Rosemont Mine, Augusta Resources, News Release, Permitting Update (UNCLASSIFIED)
Rosemont Mine Augusta Resource Permitting Update 1may14.docx

Classification: UNCLASSIFIED
Caveats: NONE

FYSA

Chip Smith

Classification: UNCLASSIFIED
Caveats: NONE

To: Horst_Greczmie Ex. 6 - Personal Privacy ; Kopocis, Ken[Kopocis.Ken@epa.gov]; Rader, Cliff[Rader.Cliff@epa.gov]
From: Smith, Charles R CIV (US)
Sent: Tue 3/4/2014 3:27:27 PM
Subject: Rosemont (UNCLASSIFIED)
28 Feb SPL Ltr to Rosemont.pdf

Classification: UNCLASSIFIED
Caveats: NONE

Horst, please share with the others. I don't have their email addresses. Thanks.

Chip

Classification: UNCLASSIFIED
Caveats: NONE

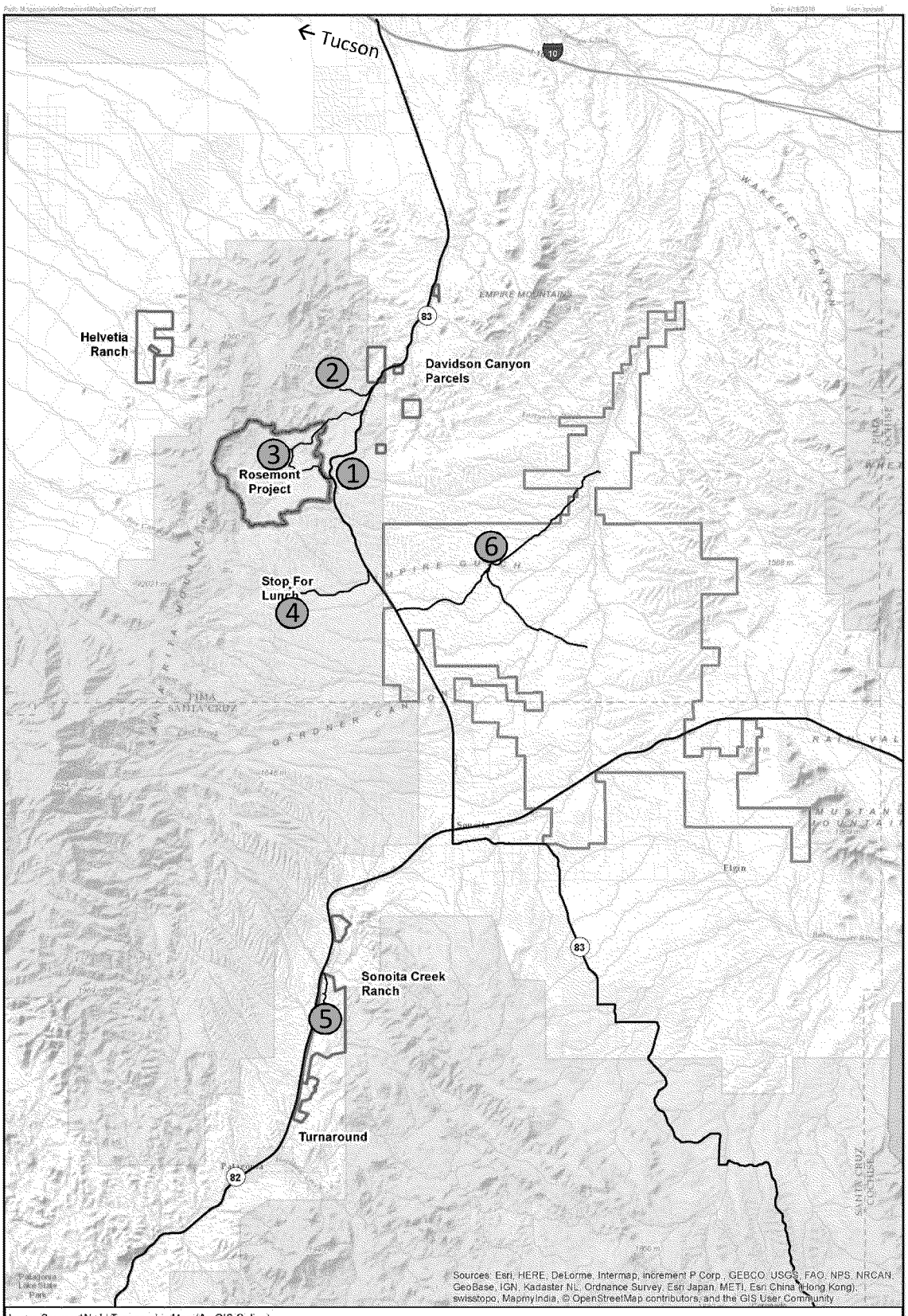


Image Source: World Topographic Map (ArcGIS Online)

N

0 1 2 Miles

0 2 4 Kilometers

Legend

- Rosemont Project
- Mitigation Site
- Las Cienegas Conservation Area

X Tour stops

Tour April 21, 2016

Rosemont Copper Project
CEQ & Federal Family Field Tour
April 21, 2016

Agenda

7:45 **Meet** at USFWS parking lot [201 N. Bonita, Tucson AZ]. (15 min)

- Introductions
- Logistics (schedule, vehicles, food $, etc.)
- Safety

Along drive to Stop 1, will be passing some of the proposed 404 mitigation parcels (refer to map)

8:45 **Stop 1:** Milepost 44, Highway 83. (30 min)

- Overview of Mining History, the Project, and Authorities
- Selected Action
- Orientation to stops
- Format of mitigation discussions

9:30 **Stop 2**: Rosemont Core Shed at Hidden Valley. (30 min)

- Meet Hudbay staff
- Mitigation Discussion: lighting, solar, revegetation, noise, air, etc.

Along drive to Stop 3, will be passing through Barrel Canyon and will slow down and point to the northeastern boundary of the proposed tailings/waste rock facility.

10:30 **Stop 3:** Rosemont Spring. (30 min)

- Waters of the US
- Mitigation Discussion: hydrology, cultural

11:30 **Stop 4:** Rosemont Activity Center (RAC). (30 min)

- Hudbay presentation
- Tour the facility (bathrooms available)

12:00 **Lunch** @ the RAC. (30 min)

12:30 Depart RAC.

1:00 **Stop 5**: Sonoita Creek Ranch. (60 min)

- USACE 404 process
- FWS BO process
- Mitigation Discussion: hydrology, biology
- Hudbay staff departs

2:30 **Bathroom** break at LCNCA work center. (15 min)

3:00 **Stop 6**: Las Cienegas National Conservation Area (LCNCA). (45 min)

- BLM summary of LCNCA
- FEIS, SIR, and SBA disclosure of effects
- Mitigation Discussion: hydrology, biology

3:45 Depart field back to Tucson.

5:00 **Return** to USFWS parking lot.

Logistics

- We will be carpooling with 4x4 arranged vehicles (limited parking in some areas)
- If you pre-ordered lunch, please bring $10.00 cash.
- Recommend wearing layered clothing (may be in lower 90s), sturdy shoes, a hat, and sunscreen.
- Some water will be provided, but you may want to bring snacks or extra beverages.
- Briefing packets will be provided.

Attendees

CEQ:
- Ted Boling

ACE
- Sallie Diebolt
- Leanne Van Tuyl

BLM
- Tim Shannon
- Karen Simms

EPA
- Tim Landers
- Nicole Moutoux
- Kathleen Goforth
- Elizabeth Goldmann
- Rob Liedy

FWS
- Jean Calhoun
- Johnna Ray

FS
- Kerwin Dewberry
- Tracy Parker
- Mindy Sue Vogel

SWCA
- Chris Garrett

Hudbay Minerals
- Cashel Meagher
- Pat Merrin
- Kathy Arnold
- Bonnie Medler

Ex. 6 - Personal Privacy

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, CORPS OF ENGINEERS
915 WILSHIRE BOULEVARD, SUITE 930
LOS ANGELES, CALIFORNIA 90017

REPLY TO
ATTENTION OF:

April 7, 2014

Regulatory Division

Mr. Robert Scalamera
Project Manager
Arizona Department of Environmental Quality
Surface Water Section, MC5415A-1
1110 West Washington Street
Phoenix, Arizona 85007

Dear Mr. Scalamera:

I am writing in response to the public notice issued February 21, 2014, regarding the Arizona Department of Environmental Quality's (ADEQ) draft Section 401 water quality certification for the proposed Rosemont Copper Mine located southeast of Tucson, Pima County, Arizona.

Our regulations at 33 C.F.R. § 320.4(d) state, "[c]ertification of compliance with applicable effluent limitations and water quality standards required under provisions of section 401 of the Clean Water Act will be considered conclusive with respect to water quality considerations unless the Regional Administrator, Environmental Protection Agency (EPA), advises of other water quality aspects to be taken into consideration."

The Corps' Regulatory Guidance Letter (RGL) 90-04 provides guidance with regard to 33 C.F.R. § 320.4(d), which states the district engineer (DE):

> "can usually presume that a state's water quality certification satisfies the requirements of Section 401 of the Clean Water Act, 40 CFR 230.10(b)(1), and 33 CFR 320.4(d). If, however, EPA disagrees with the state's conclusions or raises water quality concerns beyond the state certification's scope, the DE shall consider EPA's objections and concerns as "other water quality aspects," as provided by 33 CFR 320.4(d). "Other water quality aspects," therefore, include water quality concerns outside the scope of the state's Section 401 certification review, indirect impacts on water quality aspects that the state certification does not address, and matters addressed in the state certification which EPA has a different viewpoint".

On February, 13, 2012, the Regional Administrator stated, "[c]onsistent with Corps regulations and the October 29, 2009 Department of the Army Memorandum regarding Water Quality, the EPA believes the likely impacts to water quality detailed above constitute "other water quality aspects" under 33 CFR 320.4(d) that should be

specifically evaluated by the Corps during review of the application. This is particularly important given the potential impacts to OAW [Outstanding Arizona Water], which must be protected from any degradation in water quality."

The effect of the Regional Administrator's letter is to render any granted state Section 401 certification "not conclusive" regarding water quality considerations, and necessitates the DE to make "independent judgments regarding compliance with 40 CFR 230.10(b)(1) and the consideration of water quality issues in the public interest review process."

In addition, Section 401(d) of the Clean Water Act, 33 U.S.C. § 1341(d), requires that 401 certifications shall become a condition on any Federal license or permit. When a state certifying agency proposes conditions, the Corps is responsible for determining whether the 401 water quality conditions are acceptable and comply with the provisions of 33 C.F.R. § 325.4.

Because the Corps is required to further evaluate water quality issues as well as ensure the special conditions of the 401 certification are reasonable and appropriate, we would appreciate it if ADEQ could clarify Special Condition (1) under Section 5.2 "Specific Conditions."

It has been documented in the Final Environmental Impact Statement (FEIS) that, during the life of the mine (20-25 years), there will be as much as a 40% reduction in stormwater flow to portions of Davidson Canyon Wash. Special Condition (1) is unclear as to what level of surface water mitigation shall be required. In one sentence, the mitigation is required "to maintain aquatic and riparian resources at **pre-project levels** in Davidson Canyon and Lower Cienega Creek." However, this same special condition later references the 17.2% post closure stormwater reduction and states "The surface water mitigation program shall describe measures **that will offset the reduced runoff volume** should it occur." Is this a reference to the 17.2% post closure reduction or the reduction which occurs during active mine operations?

We are also unclear why there is a 180-day delay from date of issuance of a Section 404 permit to the required submittal of this surface water mitigation plan. The Corps believes it would be more prudent to require the submittal of the plan prior to issuance of a Section 404 permit.

We appreciate the opportunity to provide comments to this public notice. If you have any questions, please contact Ms. Marjorie Blaine, my Senior Regulatory Project Manager in Tucson at (520) 584-1684 or Marjorie.E.Blaine@usace.army.mil.

Sincerely,

David J. Castanon
Chief, Regulatory Division

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.

ED_001077_00008568-00001

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.

Reductions in Surface Water Flow Downstream of the Mine

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

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

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

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

Doc. No. 052/13-15.2.1

To: Miller, Clay[Miller.Clay@epa.gov]
From: Bromm, Susan
Sent: Thur 7/9/2015 6:25:29 PM
Subject: RE: July 10 Rosemont Mine Call FW: Rosemont Timelines and Flow Chart (UNCLASSIFIED)

If you can't maybe someone else from OWOW can? Thanks

Sent from my Windows Phone

From: Miller, Clay
Sent: 7/8/2015 11:47 AM
To: Bromm, Susan
Subject: Re: July 10 Rosemont Mine Call FW: Rosemont Timelines and Flow Chart (UNCLASSIFIED)

I am on leave but will try to call in.

Sent from my iPhone

> On Jul 8, 2015, at 11:13 AM, "Bromm, Susan" <Bromm.Susan@epa.gov> wrote:
>
> Clay – will you or someone from OWOW be on the call?
>
> From: Greczmiel, Horst [mailto: Ex. 6 - Personal Privacy
> Sent: Wednesday, July 08, 2015 11:07 AM
> To: 'robert.bonnie@osec.usda.gov'; 'patrick.holmes@osec.usda.gov'; 'Arthur.Blazer@osec.usda.gov'; 'lisakwillard@fs.fed.us'; 'tpatelweynand@fs.fed.us'; 'aacheson@fs.fed.us'; 'jcarbone@fs.fed.us'; 'cjoyner@fs.fed.us'; 'jupchurch01@fs.fed.us'; 'tparker03@fs.fed.us'; 'lisakwillard@fs.fed.us'; 'janinedaniels@fs.fed.us'; 'msvogel@fs.fed.us'; 'jkingsbury@fs.fed.us'; Kopocis, Ken; Bromm, Susan; Leff, Karin; Kaiser, Russell; Miller, Clay; Blumenfeld, Jared; Goforth, Kathleen; Dunning, Connell; Hanf, Lisa; Brush, Jason; Martynowicz, Trina; Gaudario, Abigail; Diamond, Jane (Separated); Martynowicz, Trina; Johnson, Kathleen; Jessop, Carter; Woo, Nancy; 'Charles.R.Smith567.civ@mail.mil'; 'jennifer.a.moyer@usace.army.mil'; 'kimberly.m.colloton@usace.army.mil'; 'David.J.Castanon@usace.army.mil'; david.b.olson@usace.army.mil; 'Marjorie.E.Blaine@usace.army.mil'; 'willie_taylor@ios.doi.gov'; 'larry_bright@fws.gov'; 'sarah_quamme@fws.gov'; 'Benjamin_Tuggle@fws.gov'; 'steve_spangle@fws.gov'; 'jason_douglas@fws.gov'; 'jean_calhoun@fws.gov'; 'sarah_quamme@fws.gov'; 'rmsuazo@blm.gov'; 'drawhous@blm.gov'; 'jshoemaker@blm.gov'; 'tshannon@blm.gov'; 'bamme@blm.gov'; 'lbaker@blm.gov'; 'bpsarianos@blm.gov'
> Subject: July 10 Rosemont Mine Call FW: Rosemont Timelines and Flow Chart (UNCLASSIFIED)
>
> Good morning,
> Attached are close-hold, deliberative for our discussion and not for release, timelines that Corps will discuss on our call this Friday at 3pm EST.
> I'll also ask for a brief read-out of meetings the EPA, Corps, and CEQ had with Hudbay.
> Thank you, Horst
>
> Horst Greczmiel
> Associate Director for NEPA Oversight
> Council on Environmental Quality
> Ex. 6 - Personal Privacy
>
> Please consider the environment before printing this e-mail

>
> From: Blaine, Marjorie E SPL [mailto:Marjorie.E.Blaine@usace.army.mil]
> Sent: Wednesday, June 24, 2015 6:59 PM
> To: Greczmiel, Horst
> Cc: Castanon, David J SPL
> Subject: Rosemont Timelines and Flow Chart (UNCLASSIFIED)
>
> Classification: UNCLASSIFIED
> Caveats: NONE
> Horst:
>
> Attached for your review and dissemination to the group are the Corps' recent Section 404 timeline and flow chart. The original timeline (also provided for you alone but now replaced by the current one) and the flow chart were provided to HB. This most recent timeline has not yet been provided to HB as we are waiting for Colonel Colloton to have the chance to see it since it has changed.
>
> Thank you.
> Marjorie Blaine
> Senior Project Manager/Biologist
> U.S. Army Corps of Engineers
> Tucson Project Office, Regulatory Division
> 5205 E. Comanche Street
> Tucson, AZ 85707
> (520) 584-1684 (phone)
> (520) 584-1690 (fax)
> Assist us in better serving you!
> You are invited to complete our customer survey, located at the following link:
>>
http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey<<%3ehttp:/corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_sur
>
>
>
>
> Classification: UNCLASSIFIED
> Caveats: NONE
> <Rosemont Timeline 4_20_15.pdf>
> <Rosemont Flow Chart 4_20_15.pdf>
> <Rosemont Timeline 6_1_15.pdf>

PUBLIC NOTICE

US Army Corps of Engineers®

APPLICATION FOR PERMIT

Public Notice/Application No. SPL-2008-00816-MB
Comment Period: December 6, 2011 to January 5, 2012

Applicant
Rosemont Copper Company
Ms. Kathy Arnold
2450 W. Ruthrauff Rd., #180
Tucson, Arizona 85705
(520) 495-3500

Agent
WestLand Resources, Inc.
Mr. Brian Lindenlaub
4001 E. Paradise Falls Drive
Tucson, Arizona 85712
(520) 206-9585

Location

Approximately 30 miles southeast of Tucson, Arizona within portions of Sections 17, 20, 21 and 25-35, T17S, R14E; portions of Sections 31-35, T17S, R15E; portions of Sections 1, 2 and 12, T18S, R14E; portions of Sections 1, 2, 7, 10-15, 17, 18, 20-25, 35 and 36, T18S, R15E; portions of Sections 6-8, 14-23 and 27-33, T18S, R16E; portions of Sections 1 and 2, T19S, R15E; and portions of Sections 4, 5 and 6, T19S, R16E in Pima County, Arizona (Figures 1 and 2).

Activity

To discharge fill material into Barrel Canyon and associated tributaries including Wasp Canyon, McCleary Canyon, Trail Canyon, and other unnamed ephemeral washes for construction of the proposed Rosemont Copper Project open pit copper mine. The Rosemont Copper Project will, through the discharge of dredged/fill material, directly impact 38.6 acres, indirectly impact 2.5 acres, and temporarily impact 0.75 acre of potential waters of the United States (WUS) (Figure 3). For a detailed description of the proposed project, please see "Proposed Activity for Which a Permit Is Required" and "Additional Project Information" in this Public Notice.

Interested parties are hereby notified that an application has been received for a Department of the Army permit for the activity described herein and shown on the attached drawing(s). Interested parties are invited to provide their views on the proposed work, which will become a part of the record and will be considered in the decision. This permit application will be issued or denied under Section 404 of the Clean Water Act (33 U.S.C. 1344). Comments can be e-mailed to Marjorie.E.Blaine@usace.army.mil or mailed to:

U. S. Army Corps of Engineers
ATTENTION: Marjorie Blaine (SPL-2008-00816-MB)
Tucson Resident Office
5205 E. Comanche Street
Tucson, AZ 85707

ED_001077_00009455-00001

Evaluation Factors

The decision whether to issue a permit will be based on an evaluation of the probable impact, including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. All factors that may be relevant to the proposal will be considered, including the cumulative effects thereof. Factors that will be considered include conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food production and, in general, the needs and welfare of the people. In addition, the evaluation of the activity will include application of the Environmental Protection Agency (EPA) Guidelines (40 CFR 230) as required by Section 404 (b)(1) of the Clean Water Act.

The Corps of Engineers (Corps) is soliciting comments from the public; Federal, state, and local agencies and officials; Native American tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps to determine whether to issue, modify, condition, or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of necessary documentation pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Preliminary Review of Selected Factors

EIS Determination – A draft Environmental Impact Statement (EIS) for the proposed Rosemont Copper Project has been prepared by the U.S. Forest Service (USFS), Coronado National Forest. A Notice of Availability of the Draft EIS was published by the U.S. Environmental Protection Agency in the Federal Register on October 21, 2011 (76 FR 65509). The USFS is accepting comments on the Draft EIS through January 18, 2012. The Corps and the Bureau of Land Management are Federal cooperating agencies for this Draft EIS. The information provided in the Draft EIS will provide a basis for the Corps to make a decision regarding the Section 404 permit for the proposed Rosemont Copper Project. The draft EIS is available online at http://www.rosemonteis.us.

Water Quality – The applicant is required to obtain water quality certification, under Section 401 of the Clean Water Act from the Arizona Department of Environmental Quality. Section 401 requires that any applicant for an individual Section 404 permit provide proof of water quality certification to the Corps.

Cultural Resources – Formal consultation under Section 106 of the National Historic Preservation Act has been initiated by the USFS on behalf of the Corps and the BLM with the State Historic Preservation Office (SHPO) and the appropriate Native American Tribes regarding the proposed project's effect on cultural resources. The USFS will ensure that all requirements of the Memorandum of Agreement and the Historic Properties Treatment Plan will be completed.

Endangered Species –Formal consultation under Section 7 of the Endangered Species Act will be conducted by the USFS on behalf of the Corps and the BLM with the U.S. Fish and Wildlife Service (FWS). The FWS will issue a biological opinion regarding the project's effects to federally listed species and designated critical habitat.

ED_001077_00009455-00002

Public Hearing – Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearing shall state with particularity the reasons for holding a public hearing. Public meetings are currently being held for the Draft EIS, described above. A schedule for future public meetings for the Draft EIS can be found at http://www.rosemonteis.us/public-meetings.

Proposed Activity for Which a Permit is Required

Overview

The applicant has submitted a Section 404 permit application for the Barrel-only Alternative (Alternative 4 under the Draft EIS), which has been identified as the preferred alternative in the Draft EIS. Additional detail on the original proposed action, preliminary Mining Plan of Operation (MPO), as well as other alternatives considered, is provided in the Draft EIS referenced above.

The proposed Rosemont Copper Project is a copper mining project that will produce more than 230 million (M) lbs of copper per year (roughly 10% of annual US production) for 20 years. Average annual production of molybdenum and silver will be 5 M lbs and 3.5 M oz, respectively. Past and recent exploration activities have confirmed or identified the availability of approximately 600 million tons (MT) of ore. This schedule estimates a mill through-put of approximately 75,000 tons per day, which translates into an annual mill through-put of approximately 27 MT per year.

Mining of the ore will be through conventional open-pit mining techniques. Waste rock will be blasted and transported by haul truck to the waste rock storage area. Ore will be blasted and either transported by haul truck to the leach pad and processed by leaching (if it is oxide ore), or crushed and loaded onto a conveyor for transport to the mill for processing by conventional sulfide milling (if it is sulfide ore). Tailings will be stored using a dry stack tailings technique minimizing airborne releases and water seepage. The placement of waste rock will be initiated with perimeter buttresses, including placement on the perimeter of the dry-stack tailings storage areas to provide structural and erosional stability of the tailings pile.

The copper concentrates from the milling operations will be shipped off-site to a smelter. Leach ore (oxide material) will be placed on the heap leach pad. Solutions from the pad will be collected in a solution pond and then processed through the solvent extraction-electrowinning (SX/EW) plant. Copper cathodes generated from the SX/EW plant will be transported off site for further processing.

The proposed project will involve the construction and operation of various mine features, associated structures, and anticipated infrastructure necessary to support these facilities. These constructed features include: the mine pit, waste rock storage areas, heap leach area, dry-stack tailings facility, ancillary facilities and structures, mine haul roads, access roads, and off-site water and power transmission lines (Figures 2 and 3). The nature of the activities associated with each of these mine features is described below.

Mine Pit

The design of the open pit and internal mining phases incorporates geotechnical recommendations for safe slope angles, internal ramp development for access to all working areas, and pit wall smoothing to enhance stability and operator safety. Pit slope angles between ramps will vary according to rock strength, lithology and structural controls, but are expected to range from 28° to 48° between ramps. Where possible, catch benches will be spaced on 100-ft vertical intervals to maximize the effective widths for containing scree (loose rock debris). At the rim, the ultimate open pit will be approximately 6,500 ft across north to south, 6,000 ft across east to west (totaling about 950 ac in area), and will be approximately,800 to 2,900 ft deep. The pit bottom elevation is projected at 3,150 ft above mean sea level (amsl).

ED_001077_00009455-00003

Impacts to potential WUS in the pit will result from the initial blasting and excavation of ore and waste rock (Figure 4). Following a blast, rubblized material, including that found in potential WUS, will be picked up with a loader, placed into a haul truck, and then deposited on the leach pad, the primary crusher stockpile, or within the waste rock storage area.

Waste Rock

The waste rock storage area, approximately 1,460 acres in size, will be constructed south of the tailings facility (Figure 5). It is designed to accommodate approximately 750 million tons of material, with an additional 540 million tons of waste rock dedicated to construction of the perimeter buttress and other facilities. The waste rock storage area will receive pit-run, or run-of-mine (ROM), waste rock consisting largely of limestone and skarn rock types, with some andesite, quartz monzonite porphyry, and arkose. The presence of substantial quantities of limestone and skarn will provide a large buffering capacity within the waste-rock storage areas to minimize the generation of acid rock drainage (ARD).

Site preparation of the waste rock storage areas will involve clearing and grubbing the existing topsoil in preparation of construction of the perimeter buttress. Impacts to potential WUS within the waste rock storage area will result from the placement of ROM waste rock. Flow-through drains, designed to pass overflows from the areas upgradient of the waste rock and tailings facility during construction and post closure, will be constructed within the major drainages to facilitate stormwater flow through the waste rock storage area and dry stack tailings facility (Figure 5). During operations, stormwater may report to the flow-through drains during severe storm events, but diversions, impoundments, and other water management features in the Plant Site area will restrict the volume of stormwater that would report to the drain system. Maintenance is not anticipated to be required for the flow-through drains. The drains will be fed from stilling or sediment ponds, which act to reduce the sediment discharging into the drains. In addition, the drains are segregated from the surrounding waste rock by a geotextile layer that prevents migration of fine sediments from the waste rock into the flow-through drains.

The placement of waste rock on the south and east sides of the waste rock facility will be initiated with perimeter buttresses designed to minimize the visual effects of the project for travelers on SR 83 and for viewers in the surrounding area. The outside face of the buttresses will be revegetated and reclaimed as soon as practicable after they are completed. Waste rock in the remaining portions of each phase will then be deposited west and/or north of (behind) these buttresses. Waste rock will also be placed in the dry-stack tailings storage areas to provide structural and erosional stability.

Concurrent with the starter buttress construction, waste rock will be deposited in lifts internal to the waste rock storage area in the upper Barrel Canyon and Trail Canyon drainages. This concurrent development is necessary to minimize congestion and improve safety and equipment productivity in the buttress areas. The ultimate crest elevations of the waste rock storage areas at the end of mining operations will be about 5,600 ft amsl for the Barrel Canyon drainage and 5,300 ft amsl for the Trail Canyon drainage.

Heap Leach

Oxide ore will be transported by haul trucks from the open pit to lined leach pads. The oxide ore will not be crushed, but will be dumped in 30-ft-high lifts atop the lined pads for subsequent leaching. Crawler dozers will be used to spread the oxide ore and cross rip the material to a depth of 5 to 6 ft to promote the infiltration of barren leach solution. Oxide ore will be leached with weak acidic solution, and the leach solution will be processed using SX-EW technology to produce high purity copper cathode plates. Oxide ore mining and placement on the leach pads will be concentrated in the early years of operation. About 85% of the oxide ore will be placed onto the leach pad by the end of Year 5 and process solutions will stop being added to the heap leach by Year 6. The heap leach pad is anticipated to continue draining pregnant leach solution (PLS) to the PLS pond for three or four years, and by Year 10 the pad should be drained and closed.

ED_001077_00009455-00004

Initial site preparation of the heap leach pad will involve grading the existing topsoil to create a base grade upon which the remainder of the leach liner will be laid. Impacts to potential waters of the U.S. will occur during initial site preparation, as the entire heap leach pad area, including the PLS and stormwater ponds, will be graded prior to the placement of the remainder of the leach liner (Figure 5). As such, potential WUS in this area will be filled by native material as part of the grading process. Captured storm flows will be incorporated into the process flows and become part of the heap leach circuit (i.e. be incorporated into the PLS, delivered to the SX-EW, and returned as raffinate, the portion of an original liquid that remains after other components have been dissolved by a solvent).

A stormwater pond will be installed to collect any excess water that may be generated during a large precipitation event. The PLS pond, a double-lined collection pond containing the copper-bearing leach solution, will be designed to overflow to the stormwater pond. Water that may accumulate in the stormwater pond will be periodically transferred by pumping to the raffinate solution pond.

Dry Stack Tailings Facility

The Rosemont dry stack tailings facility will receive dry tailings from the sulfide ore processing plant. This material will be stacked behind large buttresses constructed from pit-run waste rock. Consequently, this waste rock storage area will be active from late preproduction throughout the life of the mine. The dry-stack tailings facility will ultimately measure approximately 987 acres in area. The general design concept is to construct uniform lifts of dry tailings that are buttressed by the waste rock containment berms.

Advantages of the dry stack tailings stack method over conventional tailings disposal are:

- eliminates the need for an engineered embankment and seepage containment system
- maximizes water conservation and minimizes water makeup requirements
- can result in a more compact site
- allows opportunities for concurrent reclamation and dust control

Site preparation for the tailings will include grading and construction of the flow-through and finger drain systems within the potential WUS (Figure 5). As described above, the flow-through and finger drain systems will consist of ROM waste rock. Additional discussion related to the flow-through and finger drain system is provided in the Surface Water Management section, below.

An initial buttress will be constructed with waste rock to accommodate approximately one year of tailings storage. Concurrent tailings and waste rock placement will occur throughout the life of the tailings facility. Waste rock will be advanced ahead of the tailings level in successive lifts. The waste rock buttresses will have top widths of 150 ft to accommodate two-way haul traffic and outer slopes of about 3H:1V with benches to achieve an overall slope of approximately 3.5H:1V. This configuration will allow visual screening of the tailings placement activities from SR 83 and concurrent reclamation of the lower perimeter buttress slopes.

Dry tailings will be delivered by conveyor from the filter plant down to the tailings facility. Tailings will be placed with a radial stacker and a dozer will be used to spread the dry tailings and provide sufficient compaction for the conveyor and stacker as necessary. When the primary conveyor is inactive due to relocation or maintenance, a secondary conveyor will be used.

Within the dry stack tailings facility, loss of potential WUS will result from initial grading and the construction of the flow-through and finger drain systems and not from direct fill by dry stack tailings. In addition, although the flow-through drains are designed to pass stormwater in larger events, particularly in construction and post-closure, the development of the waste rock storage area and dry stack tailings facility is anticipated to result in significant enough reduced flows in Barrel Canyon down its confluence with McCleary Canyon that the potential WUS in this reach will be indirectly impacted (Figure 5).

Surface Water Management

For the purposes of stormwater management, the open pit, the heap leach facility, and the plant site are closed systems, with all direct rainfall contained on site. Currently designed stormwater features include the flow-through drain system, process water/temporary storage (PWTS) pond, Settling Basin, and two permanent diversion channels (Pit Diversion Channel and Permanent Diversion Channel No. 1). In addition to the primary diversions, a storage and recovery system sump will be developed in the waste rock storage area. In general, project water management facilities are intended to have sufficient capacity to handle runoff generated from 100-year, 24-hour storm events. Sediment control facilities are designed to reduce the total suspended solid loads to the minimum practical level for the 10-year, 24-hour storm event, defined as total suspended sold concentrations equal to existing conditions. Additional details related to the project stormwater management system are provided below.

Pit Diversion Channel

The Pit Diversion Channel will be constructed early in the project life to divert unimpacted stormwater around the west and south sides of the open pit (Figures 6 and 7). Water in the Pit Diversion Channel will be directed to a perimeter containment area (PCA) located along the west side of the waste rock storage area, between the toe of the waste rock and a natural ridge. An overflow channel leads out of this PCA into another PCA. The only impact to potential WUS resulting from this diversion is the interception of flows from the upper reach of Wasp Canyon which will be directed to the above described PCA. Wasp Canyon downstream of the Pit Diversion Channel will be lost primarily to the development of the pit, the Plant Site area, the construction of haul roads, and dewatering effects of the diversion. The Pit Diversion Channel is sized to convey the local and general probable maximum precipitation (PMP) event.

Permanent Diversion Channel No. 1

This diversion channel will be constructed at the beginning of the project on the northeast side of the pit and will divert unimpacted stormwater from an upgradient watershed around the plant site into McCleary Canyon (Figure 8). This feature will not impact any identified potential waters of the U.S. Like the Pit Diversion Channel, Permanent Diversion Channel No. 1 is sized to convey the local and general PMP event.

Plant Site Stormwater Features

Stormwater flows from the plant site will be collected in the lined PWTS pond, located immediately downgradient of the plant site (Figure 8). The PWTS pond functions as a closed system with all water that is directed to the pond from the plant, in addition to collected stormwater runoff, incorporated into the process water flows.

Both the PWTS Pond and Settling Basin will be lined. The PWTS Pond is a combination of two ponds: the Process Water (PW) Pond and the Temporary Storage (TS) Pond. A spillway connects the Settling Basin to the PW Pond portion of the PWTS Pond. Another spillway connects the PW Pond to the TS Pond. The PW Pond is designed to contain the following during operations: recovered water from tailings thickeners, recovered water from the tailings filter plant, overflow from the settling basin, fresh water make-up, accumulated groundwater and stormwater from the open pit, and stormwater runoff from the plant site area. This stormwater will not be discharged offsite. The TS Pond is designed to contain stormwater runoff and overflow from the PW Pond. The Settling Basin is designed for short-term storage of non-filtered tailings and limited stormwater collection.

In addition, the unlined Crusher Stormwater Pond will be constructed immediately north of the Primary Crusher, south of the general Plant Site area (Figure 8). Similar to the PWTS Pond and Settling Basin, potential WUS associated with the Crusher Stormwater Pond will be lost from the initial construction of the pond embankment, with upgradient waters being lost as a result of excavation to ensure pond capacity, sediment fill, or dewatering effects of the pit. Other miscellaneous ponds will be placed throughout the plant site area as needed to control stormwater runoff, though these ponds will not be lined and will not discharge offsite during operations.

ED_001077_00009455-00006

Post-closure grading of the plant site area will include the construction of stock ponds/sediment basins at the same locations as the former PWTS Pond and Settling Basin and other former ponding areas. Upon removal of the pond liner, stormwater reaching the former PWTS Pond area will pass into a flow-through drain (South 1 Drain) leading out of Wasp Canyon drainage and into the main Barrel Canyon flow-through drain (South Main Drain). Construction of the PWTS Pond will result in loss of potential WUS resulting from the construction of the embankment as well as regrading to ensure proper pond capacity. The Settling Basin is constructed in uplands and will not result in the loss of potential WUS.

Flow-Through Drains

Because of the potential for a significant amount of stormwater runoff to be generated between the stormwater diversions and the waste rock and tailings facilities, particularly during construction and post-closure, flow-through drains will be constructed to direct and convey excess stormwater flows to the east side of the waste rock and tailings facility.

Flow-through drains will be constructed within existing drainages throughout the dry stack tailings facility and the waste rock storage area (Figures 9 and 10). Flow-through drains are porous rock drains that allow stormwater to be diverted underneath the dry stack tailing and waste rock facilities. Selected clean ROM rock from the open pit will be the primary material source for the flow-through drains. Waste rock will also be placed in minor washes (finger drains) in the dry stack tailings area to ensure separation between the tailings material and the wash surface. Finger drains will not be covered with a geotextile. Because the finger drains do not extend to the west side of the waste rock and tailings facility, they do not function to provide a hydraulic connection between the east and west sides of the waste rock and tailings facility. The flow-through drains are designed to allow conveyance of the 100-year 24-hour storm volume from the contributing basin through the drain within 30 days.

Compliance Point Dam and PCAs

The Compliance Point Dam is a six-ft high, porous, rock-fill structure where additional sediment controls will be applied as necessary to manage stormwater quality and where stormwater samples will be taken. Perimeter containment areas (PCAs) are located between the waste rock buttress and the adjoining ridge, collect stormwater from a relatively small watershed defined by the waste rock buttress and the adjoining ridge, and filter this stormwater into the waste rock storage area or allow it to evaporate.

Waste Rock Storage Area and Dry Stack Tailings Facility

The buttresses of the dry stack tailings facility will advance ahead of the tailings surface to provide stormwater containment while concurrent reclamation and best management practices, such as settling ponds, will be used to limit erosion on the outer slopes. The top of the tailings area is largely impervious and will be sloped inward so precipitation falling on top of active tailings area will remain on top and evaporate. Ponded water may be pumped to the PWTS pond as needed to limit infiltration into the tailings mass. Stormwater management at the waste rock facilities will be similar to that for the dry tailings facility.

Additional stormwater control features have been incorporated into the reclaimed surface of the waste rock storage area and dry stack tailings facility (benching, stilling ponds, etc.). However, development of these surface water management features will not impact potential WUS which will have been lost during the initial construction of the respective facilities, either through the construction of flow-through drains or the direct deposit of ROM waste rock. A certain volume of stormwater will continue to be shed off of these facilities and discharged to downstream receiving waters, both during construction and operations, and following closure.

Plant Site

The Plant Site Area facilities necessary to support the proposed Rosemont mine and ore processing operations include an administration building, change house, warehouse with lay down yards, analytical laboratory, light

vehicle and process maintenance building, mine truck shop, mine truck wash and lube facility, powder magazines and ammonium nitrate storage, and a main guard shack with truck scale (Figure 8). Also included are fuel and lubricant storage and dispensing facilities for mine and process equipment.

Development of the Plant Site area facilities will result in the loss of potential WUS in several ways. As described above, the Plant Site area will include several stormwater pond features that will require the ground surface to be regraded in preparation of the pond construction, resulting in direct fill of native soil in potential waters of the U.S., with liner material over the regraded native soil. Other minor stormwater catchments in the Plant Site area will be unlined and constructed behind minor dam features. Potential WUS in these areas will be filled directly by the dam fill (comprised largely of native soil and rock fill); upgradient of the minor dam features, potential WUS are anticipated to be graded over as part of the pond construction, resulting in loss by direct fill of native material. Similarly, filling of other potential WUS in the Plant Site area will be required in order to build up a suitable foundation for features such as the pebble crusher, tailings thickeners, tailings filter plant, and tank farm (Figure 8).

In addition, a reach of McCleary Canyon, immediately downstream of its crossing by the Primary Access Road, will be modified from its current alignment to allow a minor expansion in the northeast portion of the Plant Site area (Figure 11). This portion of McCleary Canyon will be lost as a result of the fill from native material and reinforcement by rock riprap near the base of the slope. This channel realignment will not result in the modification of downstream flows. Similarly, expansion of the Plant Site area construction pad will require an encroachment into the McCleary Canyon drainage on the north side of the Plant Site, resulting in impacts to potential waters of the U.S. from the discharge of native fill and riprap.

Haul and In-Plant Roads

Mine haul roads will be constructed around the north, east, and south edges of the planned ultimate pit limits. Temporary haul roads will be constructed internal to the ultimate pit limits as necessary to provide access to all working faces and to provide connection to the primary crusher, oxide leach pads, and the waste rock storage area located to the southeast, east, and northeast of the pit. Mine haul roads will be constructed using material excavated from the open pit, typically consisting of limestone, skarn, arkose, andesite, and quartz monzonite porphyry rock types. Road surface material may be crushed and screened as needed to produce a smooth running surface. Roads will be slightly crowned to promote drainage of surface runoff to side ditches. Side ditches will funnel stormwater to the flow-through drains or secondary diversion channels. Haul and in-plant roads may be culverted during portions of the mine construction and/or operations to manage localized stormwater flows. In the plant site, these flows would not discharge off site. Haul roads to the waste rock storage area and dry stack tailings facility will generally not be culverted. Loss of potential WUS in these areas will be a result of fill of ROM waste rock and/or regrading as part of post-closure reclamation.

Pit haul roads will generally be 125-ft wide, inclusive of safety berms and ditches, and will support the traffic of 260-T off-highway mine haulage trucks. The gradient for the mine haul roads will vary but will generally be under 10%; short intervals may be constructed as steep as 12%. The minimum inside lane radius for switchbacks within the pit will be 40 ft. Roads will be slightly crowned to promote drainage of surface runoff to side ditches or berms. Safety berms will be constructed to a minimum height of about 6 to 8 ft, the height at the center of the largest truck wheel.

In-plant roads will generally measure 24-ft wide with 5-ft wide drainage channels, as required, along both sides of the road. In-plant roads will extend from the plant entrance around the perimeter of the process facilities and along the crushed ore conveyor to the mine truck shop. An access road will leave the perimeter road at the crushed ore stockpile and serve the fresh water storage tank, potable water tank, and process water tank. All traffic on plant roads will be right hand traffic until reaching the mine truck shop. At this point, traffic will become left hand drive to accommodate haul trucks in the area. An access road will also be constructed between the open pit and the truck shop located near the plant site. This road will have the same design

parameters and speed limits as the mine haul roads. Like the open pit and heap leach facilities, the plant site, including in-plant roads will be a closed system with all precipitation and local runoff collected in the PWTS pond and treated as contact water.

Access Roads

Access to the property will be via two routes: the primary access route from the east, and a secondary access route from the west. The primary access road to the property will extend approximately 3.2 mi from SR 83 and end at the main guard building at the entrance to the plant (Figure 12).

The primary access road will be designed for 35-mph traffic and consist of two lanes, one in each direction. Each lane will be 14-ft wide with a 4-ft wide shoulder, providing a 36-ft wide road bed. Each side of the roadway will have a collection ditch which will typically be 4 ft deep with side slopes of about 2H:1V. The resulting 8-ft wide channel on each side will collect and direct stormwater to diversion channels or receiving waters. The access road will be crowned in the center with the surface sloped 2% to each side. The road surface will consist of 8 in of compacted ADOT aggregate (Class 2). The minimum easement for the access road on level ground will be 68 ft, and greater where cut and fill toe lines extend beyond the minimum distance. The primary access road will cross potential WUS at five locations, all which will be culverted (Figures 13 and 14). Details of the culverts are provided in Table 1 below. Roadside diversions will either discharge to containment areas, or discharge directly to potential waters of the U.S. where roadways cross these drainages, resulting in some increased flows to these drainages during storm events. The impacts to these areas, described below, include erosion protection adequate to protect these areas.

Table 1. Primary Access Road Culvert Details

Culvert ID	Size	Material	Estimated Volume of Fill (cubic yards)	Loss of Potential Waters of the U.S. (acres)
C1	42' Arch	Concrete	532	0.22
C2	30"	HDPE	452	0.28
C3	60"	HDPE	282	0.07
C4	60"	RCP	323	0.08
C5	60"	RCP	242	0.06

Secondary access to the plant will be provided to the west over the ridge of the Santa Rita Mountains, and will connect to Santa Rita Road at Helvetia Road. This west access road is considered a secondary access for plant maintenance employees to access the fresh water pump stations and pipeline. The design for the secondary access road from Santa Rita Road to the plant entrance is based on one 11-ft wide lane without shoulders, similar to existing FS roads. The secondary access road currently exists and crosses a potential water of the U.S. in only one location. This location will not be culverted. Minor grading of the crossing may be required as needed, but this activity would be considered a maintenance activity and impacts to the potential water of the U.S. would be negligible.

Offsite Water and Power Transmission Lines

The proposed waterline alignment largely parallels Santa Rita Road through the Santa Rita Experimental Range, and an existing unpaved road over the Santa Rita Mountains, through Lopez Pass (Figure 15). The proposed waterline will be constructed below grade, with a minimum soil cover of 36 inches within State Land or

ED_001077_00009455-00009

easements, and 24 inches on the mine property. The pipe bedding requirements will follow the manufacturer's recommendations. Isolation valves will be installed in the pipeline at intervals of approximately 3,000 feet and at elevation changes of 250 feet.

Impacts resulting from the installation of the pipeline itself will, for most drainage crossings, be temporary, as the pipe trench will be backfilled with the same soil material that had been removed and sidecast to create the trench. In drainages where the stability of the pipe is of concern, self-compacting pipe bedding material (e.g., crushed stone) may be placed immediately around the pipe. The remainder of the trench would be backfilled with native material. The total width of the trenching and sidecast will be approximately 30 feet (Figure 16). There are an estimated 45 crossings of potential WUS resulting from the proposed waterline.

For drainage crossings where the wash material is comprised of soil and gravel, the pipeline will be buried below the calculated scour depth. Use of a non-erosive material, such as concrete, is only anticipated to be required in areas where the pipeline will be placed in relatively soft bedrock. In these instances, a non-erosive material, such as concrete, will be used to backfill the trench over the pipe to the same level as the bedrock. As a result, the bottom elevation of the potential WUS will not change. Some minor bank stabilization may also be required in association with these crossings.

Construction of the waterline includes a permanent unpaved access road. Impacts to potential WUS resulting from the access road are anticipated to be minimal, as culverts will not be required for the majority of crossings. Most wash crossings will be at-grade or will have minor fill of native material during the construction period to facilitate use by light vehicle traffic. These minor fills will be removed following completion of the waterline. In other areas, the access road is anticipated to divert back to Santa Rita Road for short reaches in order to avoid wash crossings. Culvert crossings will likely only be required where the roadway crosses potentially jurisdictional waters on the east end of the alignment on the slopes of the Santa Rita Mountains. It is assumed that no more than five (5) such culverted crossings will be required with a maximum width of 40 feet per crossing. Some minor bank stabilization may also be required in association with these culverted road crossings.

Construction of the pipeline will include up to five forebay reservoirs and pump stations. The reservoirs and pump stations will be built outside potential WUS.

Electrical power will be provided by Tucson Electric Power (TEP) from a link attached to transmission lines on the South Substation loop. The transmission line will be comprised of above-ground transmission lines and will generally follow the same alignment as the waterline (Figure 15). Maintenance access will be provided by the same unpaved road built for the waterline.

For the majority of the transmission line alignment, potential waters of the U.S. will be able to be avoided. On the east end of the alignment, the topography of the western slope of the Santa Rita Mountains provides some constraints for the construction of the powerline. As such, it is anticipated that up to three (3) utility poles will need to be constructed within one or more potential WUS. The pole structures themselves would not result in a significant volume of fill or loss of potential waters of the U.S., but establishing access for heavy equipment to install the poles would likely require some level of temporary impact.

Proposed Project Impacts

The proposed Rosemont Copper Project will directly impact approximately 38.6 acres with the discharge of dredged/fill material as detailed in Table 1. Additionally, approximately 2.5 acres will be indirectly impacted by the reduced flows in Barrel Canyon down to its confluence with McCleary Canyon, resulting from the development of the dry stack tailings and waste rock facilities in Barrel Canyon. Approximately 0.75 acre of potential WUS will be temporarily impacted by water line crossing and road access for utility pole construction. These impact areas are slightly higher than those identified in the Draft EIS prepared by the USFS as a result of more refined mapping developed for the Section 404 permit application. A detailed discussion of the proposed project impacts is in the draft EIS.

Table 2. Rosemont Project Feature Direct Impacts and Volume of Fill

Project Feature	Impact Type/Fill Type	Fill Amount (cubic yards)	Permanent Impact to Waters (acres)	Temporary Impacts to Waters (acres)
MINE PIT	Blasting and Excavation/None	0	4.40	0
LEACH PAD	Grading/Native Material	1,839	0.76	0
Stormwater and PLS Pond	Grading/Native Material	774	0.32	0
WASTE ROCK	Excavated Waste Rock/ ROM Rock	19,941	8.24	0
DRY STACK TAILINGS	Excavated Waste Rock/Selected ROM Rock	66,792	20.70	0
SURFACE WATER MANAGEMENT				
Pit Diversion Channel	Construction Fill /Native Material and Rock Fill	210	0.13	0
Compliance Point Dam	Minor dam construction / Native Material and Rock Fill	581	0.18	0
PLANT SITE				
PWTS Pond and Settling Basin	Grading, Pond Preparation/Native Material and Rock Fill	613	0.38	0
Crusher Stormwater Pond	Grading, Pond Preparation/Native Material and Rock Fill	532	0.22	0
Regrading and Pad Construction	Grading/Native Material	4,040	1.76	0
HAUL ROAD CROSSINGS				
Pit Diversion Channel Haul Road	Road Construction/ROM Waste Rock	226	0.14	0
Leach Pad Haul Road	Road Construction/ROM Waste Rock	726	0.30	0
Crusher Haul Road	Road Construction/ROM Waste Rock	363	0.15	0
ACCESS ROAD CROSSINGS				
Culvert C1	Triple Con-Arch/Native Material and Rock Fill	532	0.22	0
Culvert C2	Culvert/Native Material and Rock Fill	452	0.28	0
Culvert C3	Culvert/Native Material and Rock Fill	282	0.07	0
Culvert C4	Culvert/Native Material and Rock Fill	323	0.08	0
Culvert C5	Culvert/Native Material and Rock Fill	242	0.06	0
OFFSITE WATER LINE				
Water Line Crossings	Trenching, sidecast, temporary road access/ Native Material, Riprap, Pipe Bedding	320	0.10	0.50
Bedrock Crossings	General Grading/Native Rock and Fill and Concrete	480	0.10	0
OFFSITE TRANSMISSION LINE				
Utility Pole Construction	Utility Pole Installation/Native Material and Concrete	75	0.05	0
Road Access for Utility Pole Construction	Ramp Access/Native Material	0	0	0.25
	TOTAL	**99,343**	**38.6**	**0.75**

Additional Project Information

For purposes of the Section 404(b)(1) alternatives analysis, the basic project purpose of the proposed Rosemont Copper Project is copper mining, which is not water dependent. The overall project purpose of the proposed Rosemont Copper Project is to develop the mineral resources associated with an ore deposit in southeastern

ED_001077_00009455-00011

Arizona (Pima, Pinal, Gila, Graham, Greenlee, Cochise, and Santa Cruz counties) using conventional open pit mining and sulfide (mill and concentrate) and oxide (leach and SX/EW) ore processing for the purpose of producing copper and/or copper precursors, silver, and molybdenum. The draft Section 404(b)(1) alternatives analysis is provided as an Appendix in the Draft EIS.

The primary drainage in the proposed project site is Barrel Canyon, with its main tributaries being Wasp Canyon, McCleary Canyon, and Scholefield Canyon. Barrel Canyon drains into Davidson Canyon on the east side of SR-83. Davidson Canyon Wash is tributary to Cienega Creek, tributary to Pantano Wash, tributary to the Rillito River, tributary to the Santa Cruz River which is a Traditionally Navigable Water. Several seeps and springs are present within the proposed project site, including Scholefield Spring (which supports a potentially jurisdictional wetland) located in the north portion of the proposed project site and Rosemont Spring northwest of Rosemont Camp within the Project.

The elevation on the property ranges from approximately 6,824 feet above mean sea level (amsl) at Weigles Butte on the west edge of the proposed project site to approximately 4,500 feet at the lower end of Barrel Canyon. The ridge on the west edge of the property constitutes the main crest of the Santa Rita Mountains. Topographically, the site consists of mountain front and rolling foothills bisected by ephemeral washes (with potential intermittent reaches within McCleary Canyon) draining generally east toward Davidson Canyon, which discharges to Cienega Creek near Interstate 10. Drainages on the west side of the Santa Rita Mountains flow generally west and northwest toward the Santa Cruz River. Underlying geologic units include metamorphic rocks and limestone on the higher ridges and conglomerate and alluvium in the lower hills. The two biomes present within the proposed project site are Madrean evergreen woodland and semidesert grassland. Madrean evergreen woodland covers the higher elevation parts of the proposed project site, generally in the western and southern areas. This community is characterized by open woodlands or savanna with trees interspersed with grasses and forbs. Semidesert grassland covers the lower elevation parts of the proposed project site primarily in the northern and eastern areas. This community is characterized by open grasslandswith widely scattered shrubs and cactus. At middle elevations within the proposed project site, the semidesert grassland grades into the Madrean evergreen woodland in a wide transition zone. Riparian areas are present along some of the major washes within the property and in small patches at some of the more reliable springs. Ephemeral flow in Barrel, McCleary, and Wasp Canyons (with potential intermittent flows in short reaches of McCleary Canyon) supports areas with tree and shrub species not present on drier upland ridges. Several springs in the property, including Rosemont Spring, Scholefield Spring, and Figtree Spring, support a variety of trees, shrubs, and herbaceous plants not found elsewhere within the proposed project site. The highest vegetation density riparian habitat was found in a relatively short, wet reach in upper McCleary Canyon and in association with Scholefield and Fig Tree springs.

The applicant is required to provide a Habitat Mitigation and Monitoring Plan in conformance with the Corps' mitigation rule prior to a permit decision. A preliminary mitigation concept has been previously submitted to the Corps. The final mitigation plan will conform to the Corps' and the U.S. Environmental Protection Agency's (EPA) "Final Rule for Compensatory Mitigation for Losses of Aquatic Resources" (33 C.F.R. Parts 325 and 332 and 40 C.F.R. Part 320; published in 73 Fed. Reg. 19594-19705) hereinafter referred to as the 2008 Mitigation Rule. Components of the final plan are listed below (33 CFR § 332.4(c)).

Corps/EPA mitigation rules include a specific order in which five general classes of compensatory mitigation options must be considered: 1) mitigation banks, 2) in-lieu fee programs, 3) permittee-responsible mitigation under a watershed approach, 4) permittee-responsible mitigation through on-site and in-kind mitigation, and 5) permittee-responsible mitigation through off-site and/or out-of-kind mitigation. Rosemont has considered these five general classes of compensatory mitigation when developing the preliminary mitigation plan:

ED_001077_00009455-00012

Mitigation Banks. Mitigation banks are the preferred method of mitigation. 33 C.F.R. §332.3(b)(2) and (3). However, there are currently no approved mitigation banks in Santa Cruz watershed, and so this approach is not practicable for Rosemont.

In-lieu Fee. An in-lieu fee program includes a sponsoring entity that assumes responsibility for overseeing the mitigation site in exchange for a fee. It is the second most preferable form of mitigation. 33 C.F.R. §332.3(b)(2). In-lieu fees are calculated by estimating the cost of onsite mitigation for the project, and then applying a per-acre cost for the mitigation. Currently there are ten (10) sponsoring entities in the in-lieu fee program in Arizona, only one of which (the Tucson Audubon Society) has an approved in-lieu fee program in the Santa Cruz River watershed. The North Simpson Farm project is a joint effort by the Tucson Audubon Society and the City of Tucson to enhance riparian habitat along the Santa Cruz River near Marana, Arizona. In addition, the Arizona Game and Fish Department is currently working with the Corps to have several projects accepted into the in-lieu fee program, though the schedule for those projects coming online is unknown.

Given the above, there are currently no suitable in-lieu fee projects for the Rosemont Project. As such, permittee-responsible mitigation approaches are also being evaluated.

Permittee-responsible mitigation under a watershed approach. The only approved watershed plan in the Santa Cruz River watershed is Pima County's Sonoran Desert Conservation Plan (SDCP). However, the applicability of the SDCP for compensatory mitigation under CWA Section 404 is in only the preliminary stages of evaluation by the Corps. As such, this option is not anticipated to be available for the proposed Rosemont Copper Project.

Permittee-responsible mitigation through on-site and in-kind mitigation. The Corps mitigation rule states: "***On-site*** means an area located on the same parcel of land as the impact site, or on a parcel of land contiguous to the impact site." Rosemont is currently evaluating the potential for contiguous offsite Rosemont-owned parcels to offer compensatory mitigation for impacts to the impacted potential waters of the U.S. The functions and services of the ephemeral drainages on these mitigation parcels would be anticipated to be comparable to those proposed to be impacted by the proposed Rosemont Copper Project. Rosemont anticipates that mitigation credit for these parcels will be available through preservation with either a restrictive covenant or conservation easement placed over the mitigation lands. The mitigation ratio that will be available for these mitigation lands will be determined as the mitigation plan is further developed.

Permittee-responsible mitigation through off-site and/or out-of-kind mitigation. Rosemont is evaluating additional offsite parcels for their potential to provide compensatory mitigation opportunities. While the location and nature of the sites is currently confidential, all of the parcels being considered are within the Santa Cruz River watershed and offer varying opportunities for preservation or restoration of surface water resources.

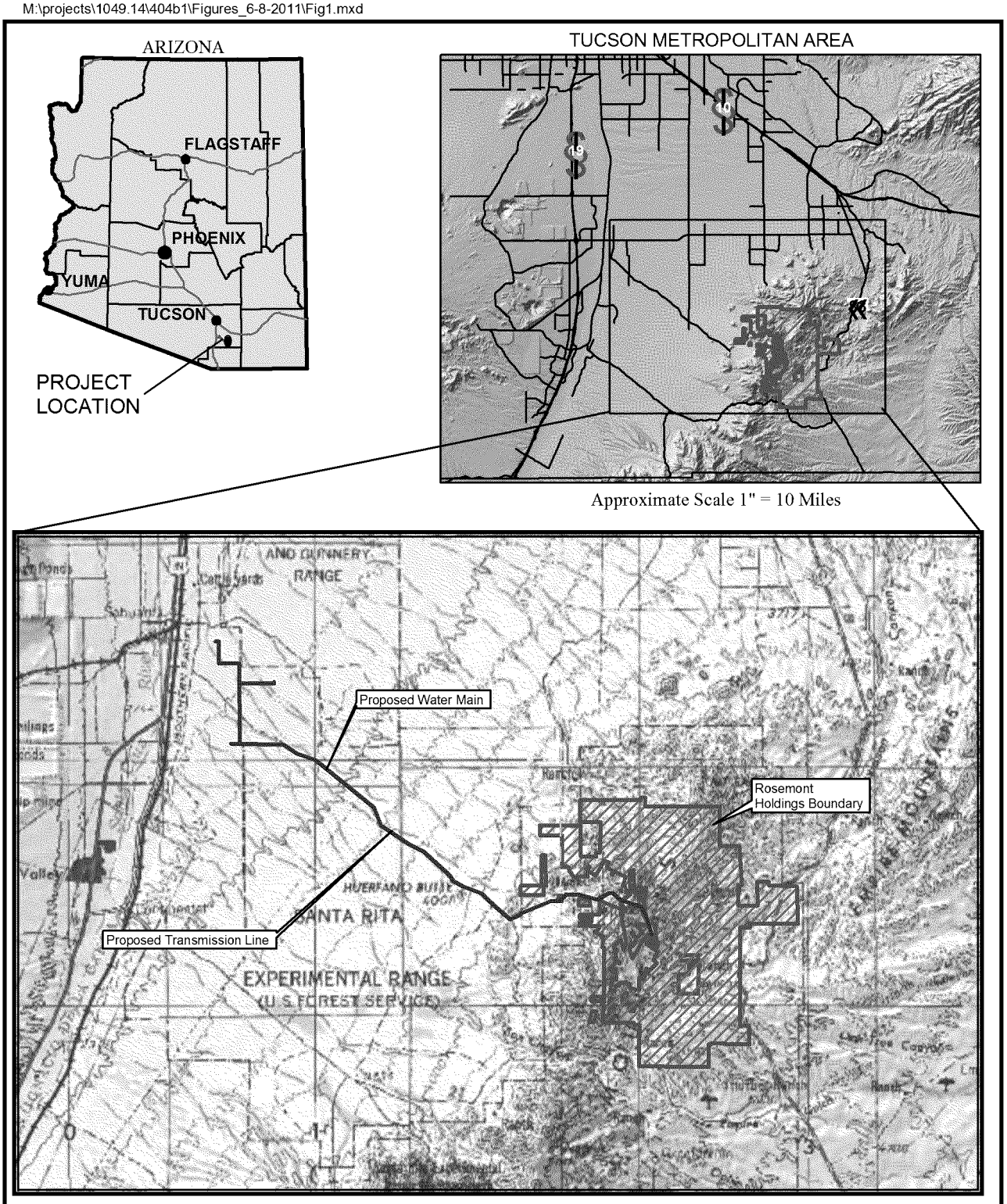
Proposed Special Conditions

To be developed.

For additional information please call Marjorie Blaine at (520) 584-1684. This Public Notice is issued by the Chief, Regulatory Division.

ED_001077_00009455-00013

M:\projects\1049.14\404b1\Figures_6-8-2011\Fig1.mxd



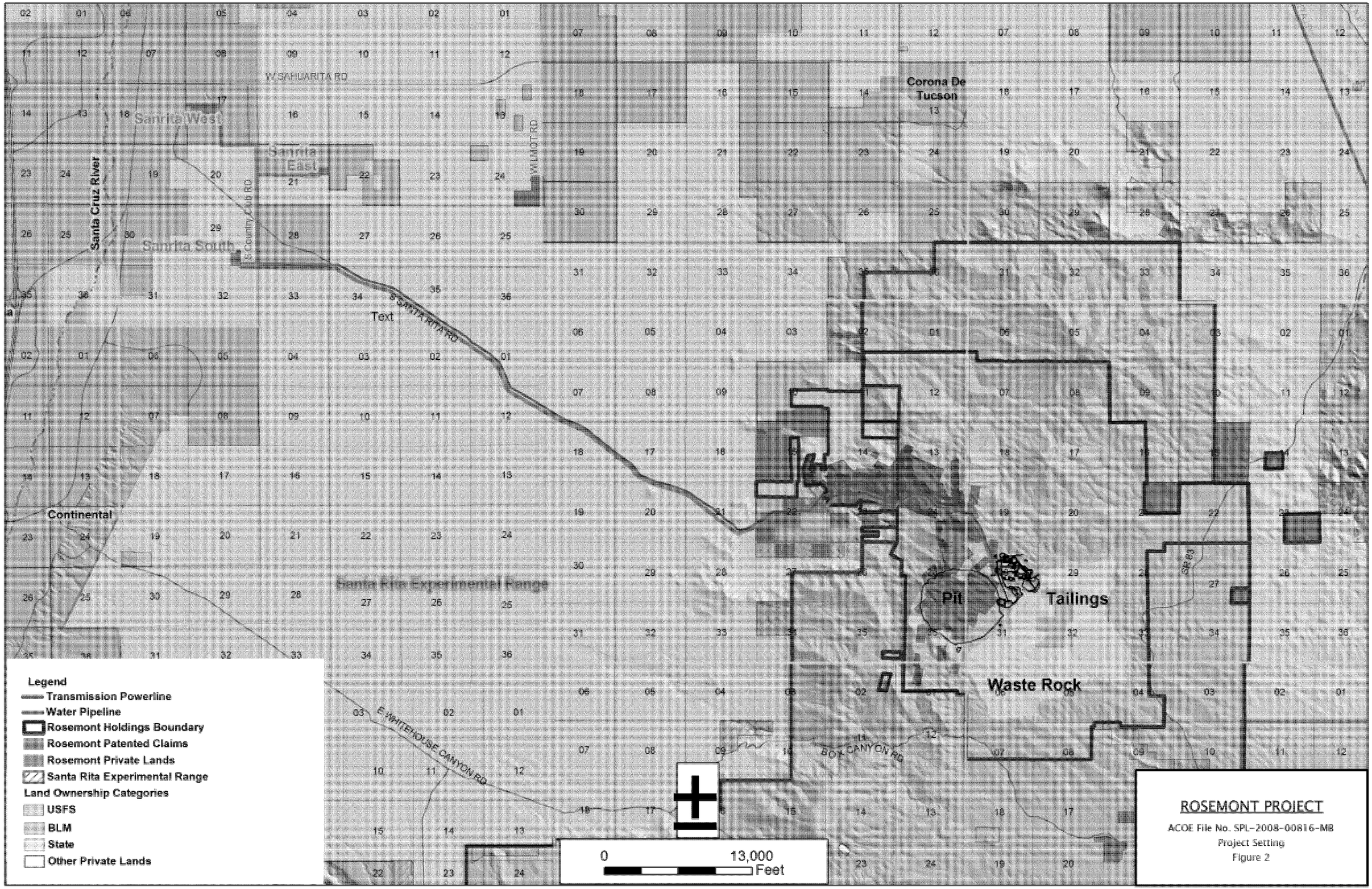
Pima County, Arizona
Sahuarita, Green Valley, Mount Fagan,
Corona De Tucson, Empire Ranch,
& Helvetia USGS 7.5' Quadrangles

WestLand Resources, Inc.
Engineering and Environmental Consultants

0 16,000
Feet

ROSEMONT PROJECT

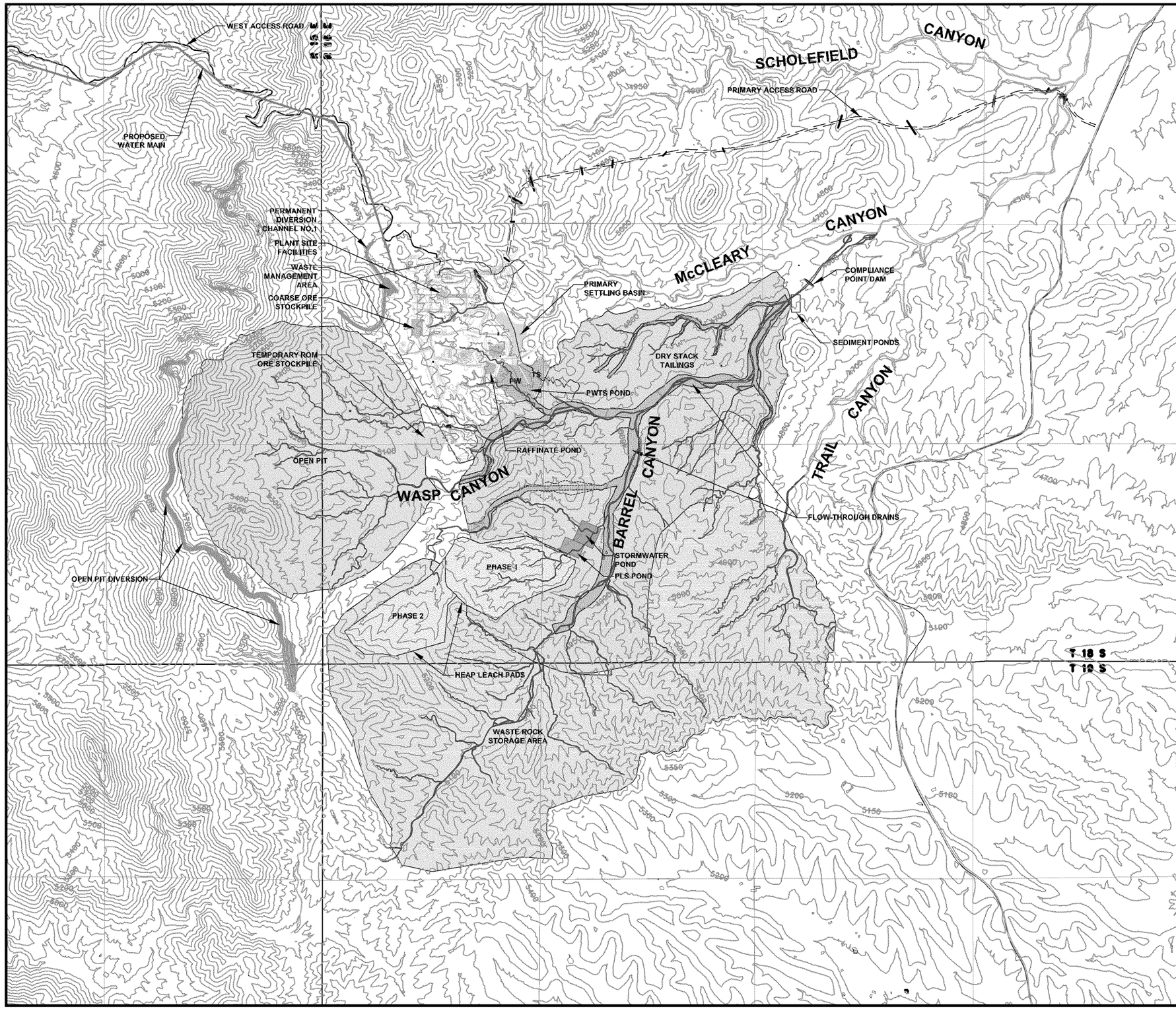
ACOE File No. SPL-2008-00816-MB
Vicinity Map
Figure 1



M:\projects\1049.14\404b1\November 2010\Figures\Figure_12_Proposed_Power_Rev_8-9-11.mxd

M:\projects\1049.15\Public_Notice\Figures_11_29_11\Fig3_Proposed_Project.dwg

Revision Date-Author



LEGEND

- POTENTIAL JURISDICTIONAL WATERS
- DIRECTLY IMPACTED POTENTIAL JURISDICTIONAL WATERS
- INDIRECTLY IMPACTED POTENTIAL JURISDICTIONAL WATERS
- PROPOSED PRIMARY ACCESS ROAD
- ACCESS ROAD CULVERTS
- EXISTING PAVED ROAD
- SECTION BOUNDARIES
- TOWNSHIP & RANGE BOUNDARIES
- FLOW-THROUGH DRAIN

APP REGULATED FACILITIES

- Dry Stack Tailings Facility
- Raffinate Pond
- Heap Leach Pads
- PLS Pond
- Stormwater Pond
- Open Pit
- Waste Rock Storage Area

NOTES:

1. TEMPORARY DIVERSIONS, SEDIMENT PONDS, AND GENERAL STORMWATER CATCHMENTS WILL BE UTILIZED ON AS A NEEDED BAIS AS DETERMINED BY FIELD CONDITIONS IN ORDER TO PROTECT FACILITIES.
2. LAYOUT BASED ON JULY 2010 PLANT SITE FACILITY LOCATIONS AND BARREL ONLY ALTERNATIVE FOR ROSEMONT RIDGE LANDFORM.

N

0 1200 2400 Feet

Original Source:

TETRA TECH

WestLand Resources Inc.
Engineering and Environmental Consultants
4001 E. Paradise Falls Drive
Tucson, Az 85712 (520) 206-9585

ROSEMONT PROJECT

ACOE File No. SPL-2008-00816-MB

Proposed Project
Figure 3

END OF PIT DIVERSION CHANNEL
PIT ELECTRIC LOOP ROAD CONTINUES

PIT DIVERSION CHANNEL
PIT ELECTRIC LOOP ROAD

DROP
STRUCTURE

PIT DIVERSION

FILL AREA

PIT ELECTRIC
LOOP ROAD

HAUL ROAD

OPEN PIT

OPEN PIT
(ULTIMATE LIMITS)

PIT ELECTRIC LOOP ROAD

PERMANENT DIVERSION
CHANNEL NO. 1

HEAP LEACH
PHASE 2

PLANT SITE SEE
FIGURE 8

LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- TOWNSHIP/RANGE LINE
- SECTION LINE
- SURFACE FLOW DIRECTION
- POTENTIALLY JURISDICTIONAL WATER OHWM (IMPACTED/LOST)
- POTENTIALLY JURISDICTIONAL WATER OHWM (NON-IMPACTED)

Data Source - Tetra Tech, April, 2010

W
S N
E

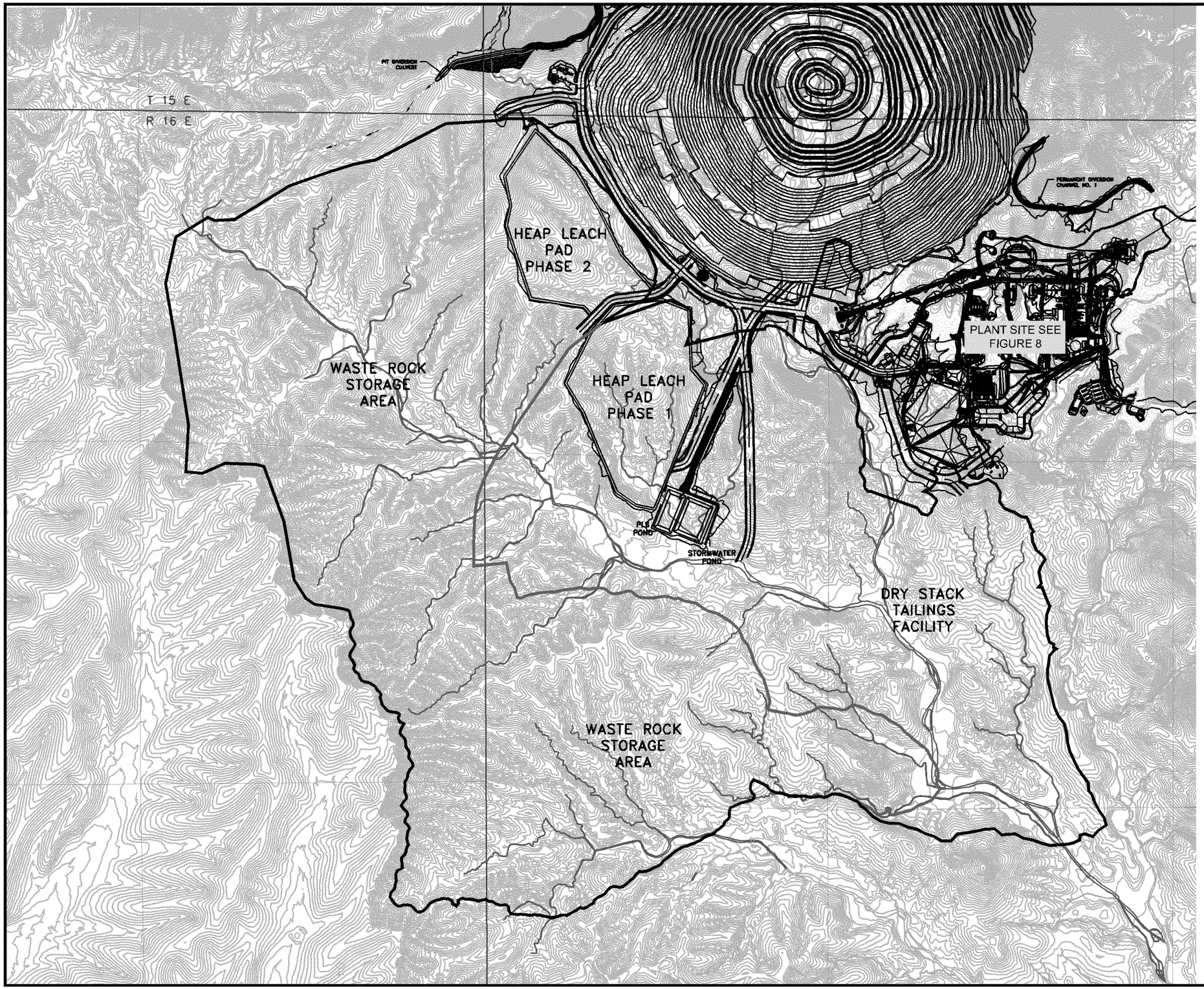
0' 350' 700'

WestLand Resources Inc.
Engineering and Environmental Consultants
4001 E. Paradise Falls Drive
Tucson, Az 85712 (520) 206-9585

ROSEMONT PROJECT

ACOE File No. SPL-2008-00816-MB
Mine Pit

Figure 4



LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- TOWNSHIP/RANGE LINE
- SECTION LINE
- SURFACE FLOW DIRECTION
- POTENTIALLY JURISDICTIONAL WATER OHWM (IMPACTED/LOST)
- POTENTIALLY JURISDICTIONAL WATER OHWM (NON-IMPACTED)

Data Source - Tetra Tech, April, 2010

W S N E

0' 750' 1500'

WestLand Resources Inc.
Engineering and Environmental Consultants
4001 E. Paradise Falls Drive
Tucson, Az 85712 (520) 206-9585

ROSEMONT PROJECT

ACOE File No. SPL-2008-00816-MB
Waste Rock,Tailings & Heap Leach Facilities

Figure 5

Data Source - Tetra Tech, April, 2010

LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- TOWNSHIP/RANGE LINE
- SECTION LINE
- SURFACE FLOW DIRECTION
- POTENTIALLY JURISDICTIONAL WATER OHWM (IMPACTED/LOST)
- POTENTIALLY JURISDICTIONAL WATER OHWM (NON-IMPACTED)
- SECTION DETAIL
- FIGURE NUMBER

W S N E

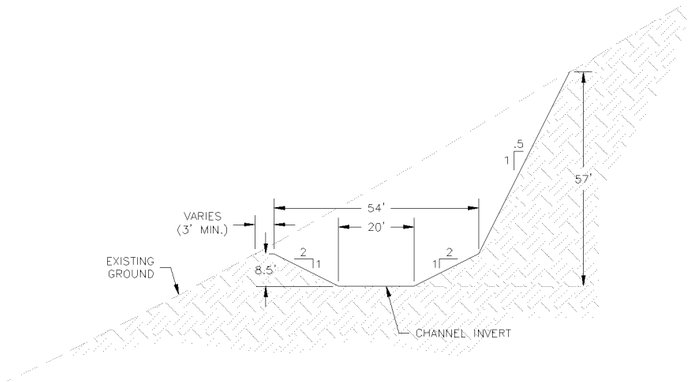
0' 300' 600'

WestLand Resources Inc.
Engineering and Environmental Consultants
4001 E. Paradise Falls Drive
Tucson, Az 85712 (520) 206-9585

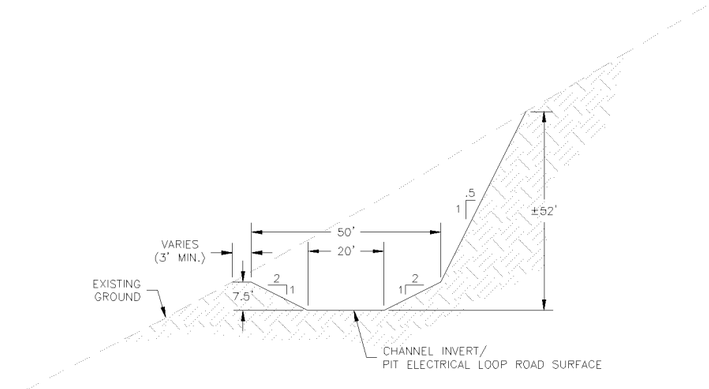
ROSEMONT PROJECT

ACOE File No. SPL-2008-00816-MB
Pit Diversion Channel

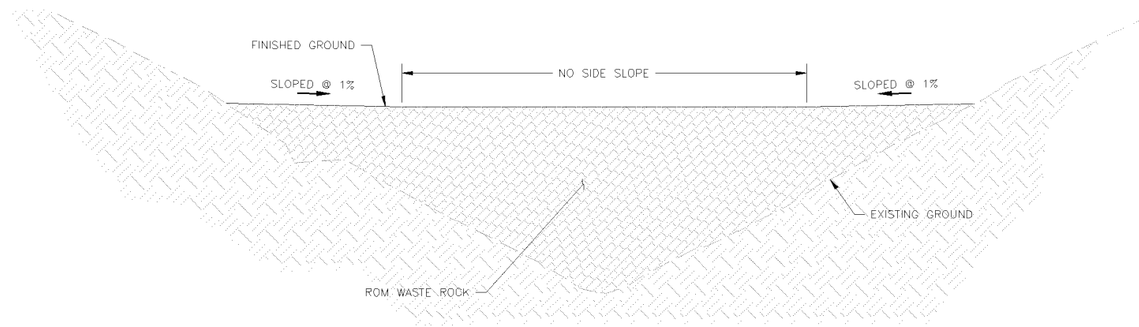
Figure 6



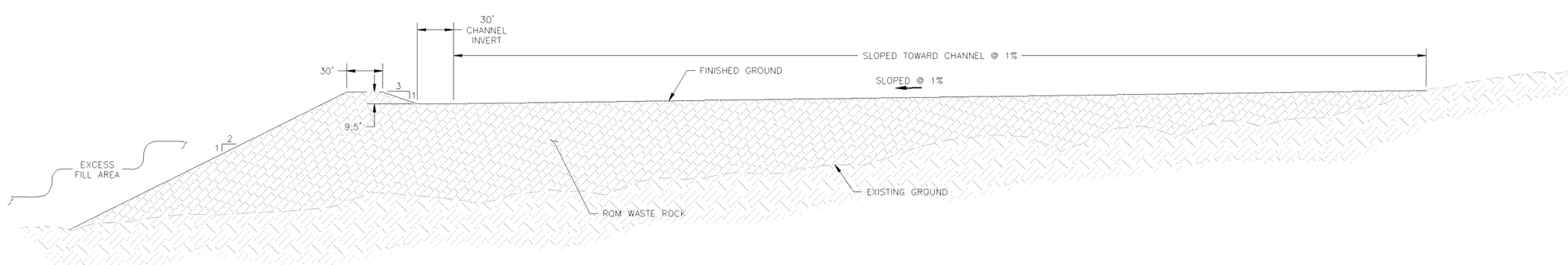
C 7 PIT DIVERSION LOWER CHANNEL – TYPICAL SECTION
SCALE: 1"= 20' (22"x34" FORMAT)



D 7 PIT DIVERSION UPPER CHANNEL – TYPICAL SECTION
SCALE: 1"= 20' (22"x34" FORMAT)



A 7 PIT DIVERSION FILL AREA – SECTION
SCALE: 1"= 30' (22"x34" FORMAT)



B 7 PIT DIVERSION FILL AREA – SECTION
SCALE: 1"= 50' (22"x34" FORMAT)

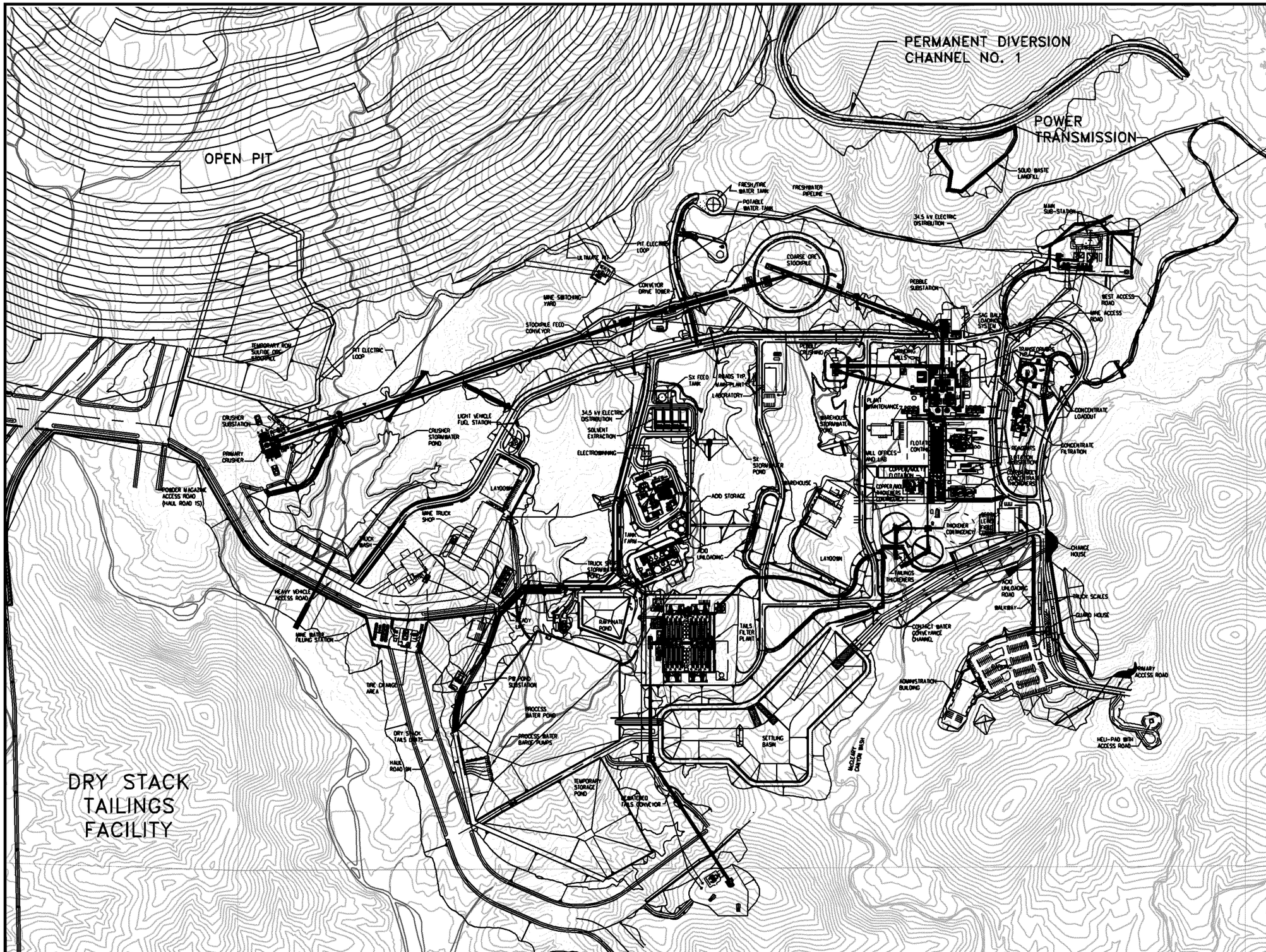
WestLand Resources Inc.
Engineering and Environmental Consultants
4001 E. Paradise Falls Drive
Tucson, Az 85712 (520) 206-9585

Data Source - Tetra Tech, April, 2010

ROSEMONT PROJECT

ACOE File No. SPL-2008-00816-MB
Pit Diversion Channel Sections

Figure 7



LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- TOWNSHIP/RANGE LINE
- SECTION LINE
- SURFACE FLOW DIRECTION
- POTENTIALLY JURISDICTIONAL WATER OHWM (IMPACTED/LOST)
- POTENTIALLY JURISDICTIONAL WATER OHWM (NON-IMPACTED)

Data Source - Tetra Tech, April, 2010

W S N E

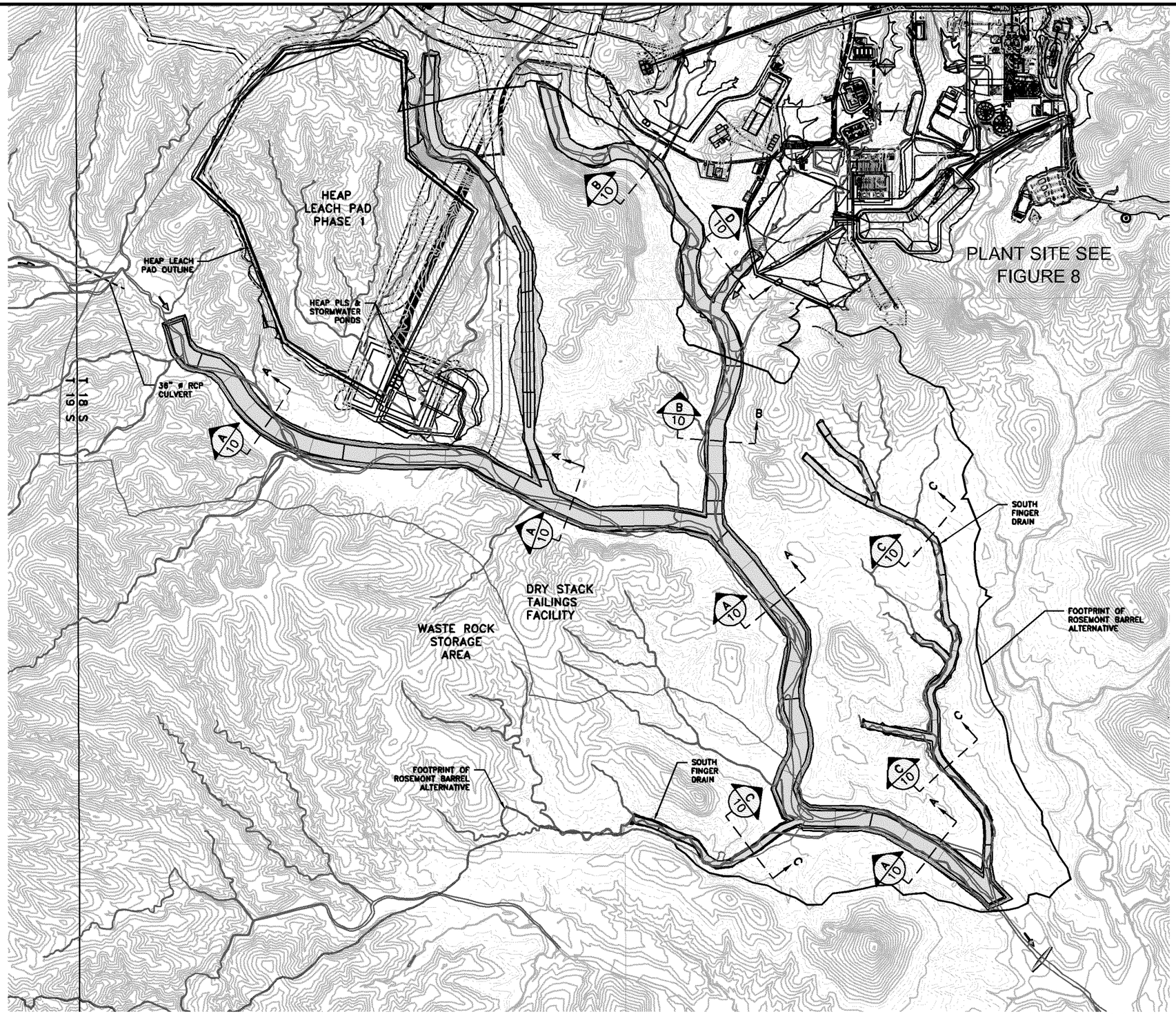
0' 250' 500'

WestLand Resources Inc.
Engineering and Environmental Consultants
4001 E. Paradise Falls Drive
Tucson, Az 85712 (520) 206-9585

ROSEMONT PROJECT

ACOE File No. SPL-2008-00816-MB
Plant Site

Figure 8



Data Source - Tetra Tech, April, 2010

LEGEND

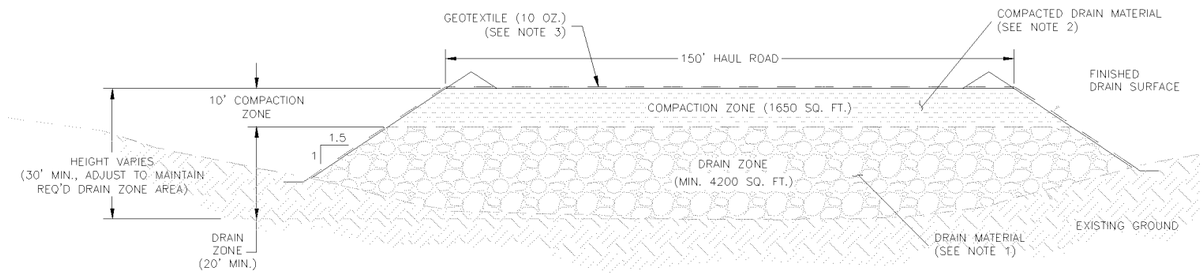
- EXISTING CONTOURS
- PROPOSED CONTOURS
- TOWNSHIP/RANGE LINE
- SECTION LINE
- SURFACE FLOW DIRECTION
- POTENTIALLY JURISDICTIONAL WATER OHWM (IMPACTED/LOST)
- POTENTIALLY JURISDICTIONAL WATER OHWM (NON-IMPACTED)
- B / 10 — SECTION DETAIL / FIGURE NUMBER

WestLand Resources Inc.
Engineering and Environmental Consultants
4001 E. Paradise Falls Drive
Tucson, Az 85712 (520) 206-9585

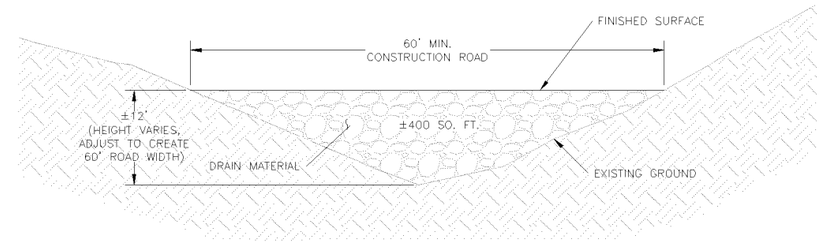
ROSEMONT PROJECT

ACOE File No. SPL-2008-00816-MB
Flow-Through Drain Plan View

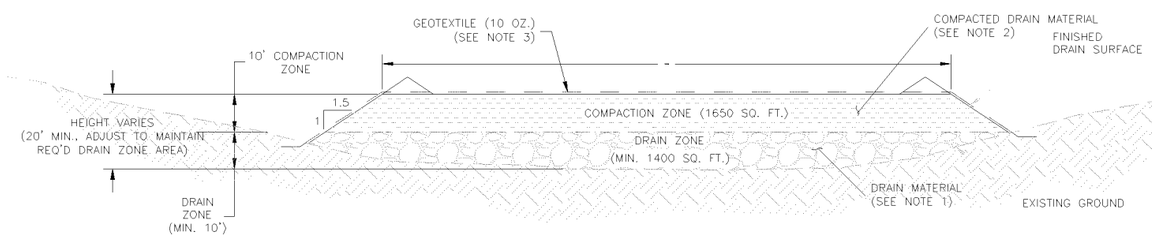
Figure 9



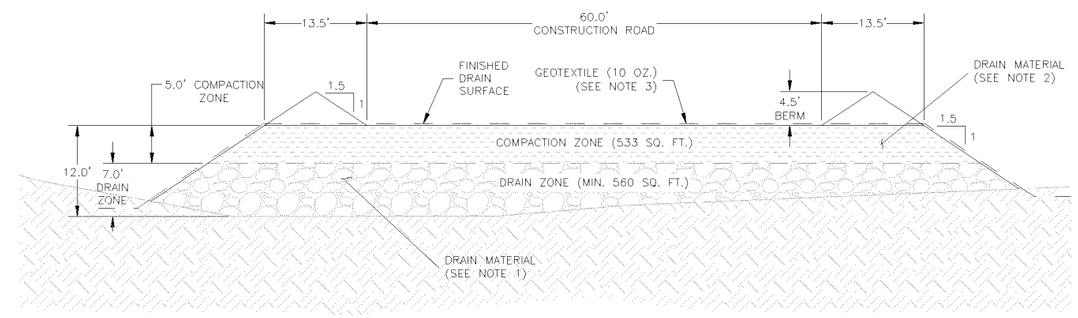
A 1.0 SOUTH MAIN "FLOW-THROUGH" DRAIN – TYPICAL SECTION
SCALE: 1"= 20' (22"x34" FORMAT)



C 1.0 FINGER DRAIN – TYPICAL SECTION
SCALE: 1"= 10' (22"x34" FORMAT)



B 1.0 SOUTH 1 "FLOW-THROUGH" DRAIN – TYPICAL SECTION
SCALE: 1"= 20' (22"x34" FORMAT)



D 1.0 FLOW-THROUGH DRAIN TO PWTS POND AREA – TYPICAL SECTION
SCALE: 1"= 10' (22"x34" FORMAT)

NOTES:

1. CUT SITE MATERIAL AND PLACE NON-WOVEN GEOTEXTILE (10 OZ.) ±10' UP SIDE OF DRAIN AS CONSTRUCTION ADVANCES IN ~300' INCREMENTS.
2. SECURE GEOTEXTILE WITH PREVIOUSLY CUT MATERIAL. PLACE FLOW CONTROL STRUCTURES (USING SITE CUT MATERIAL) ALONG DRAIN TOE AT ~300' INTERVALS TO REDUCE DRAINAGE FLOW ALONG TOE.
3. TOP AND REMAINING EXPOSED SIDES OF DRAIN SHALL HAVE NON-WOVEN GEOTEXTILE (10 OZ.) PLACED AFTER CONSTRUCTION TRAFFIC CEASES AND BEFORE PLACEMENT OF PERMANENT FILL/ TAILINGS OVER FLOW-THROUGH DRAINS. REMOVE SAFETY BERM PRIOR TO PLACEMENT OF GEOTEXTILE.
4. SURFACE PREPARATION SHALL ENTAIL THE REMOVAL OF LARGE BOULDERS AND SMOOTHING OF DRAIN SURFACE.

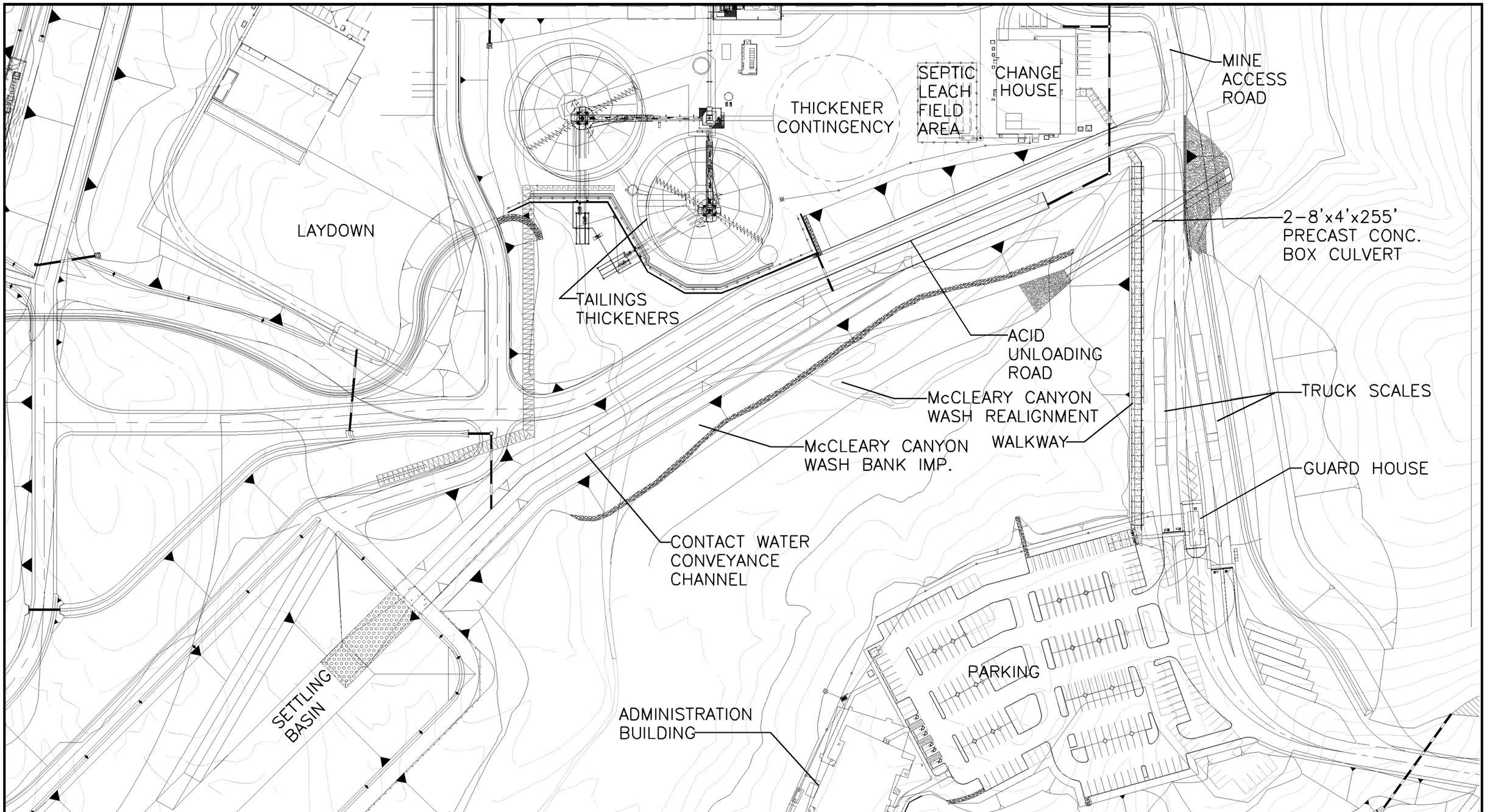
WestLand Resources Inc.
Engineering and Environmental Consultants
4001 E. Paradise Falls Drive
Tucson, Az 85712 (520) 206-9585

Data Source - Tetra Tech, April, 2010

ROSEMONT PROJECT

ACOE File No. SPL-2008-00816-MB
Flow-Through Drain Sections

Figure 10



Data Source - Tetra Tech, April, 2010

LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- TOWNSHIP/RANGE LINE
- SECTION LINE
- SURFACE FLOW DIRECTION
- POTENTIALLY JURISDICTIONAL WATER OHWM (IMPACTED/LOST)
- POTENTIALLY JURISDICTIONAL WATER OHWM (NON-IMPACTED)

W S N E

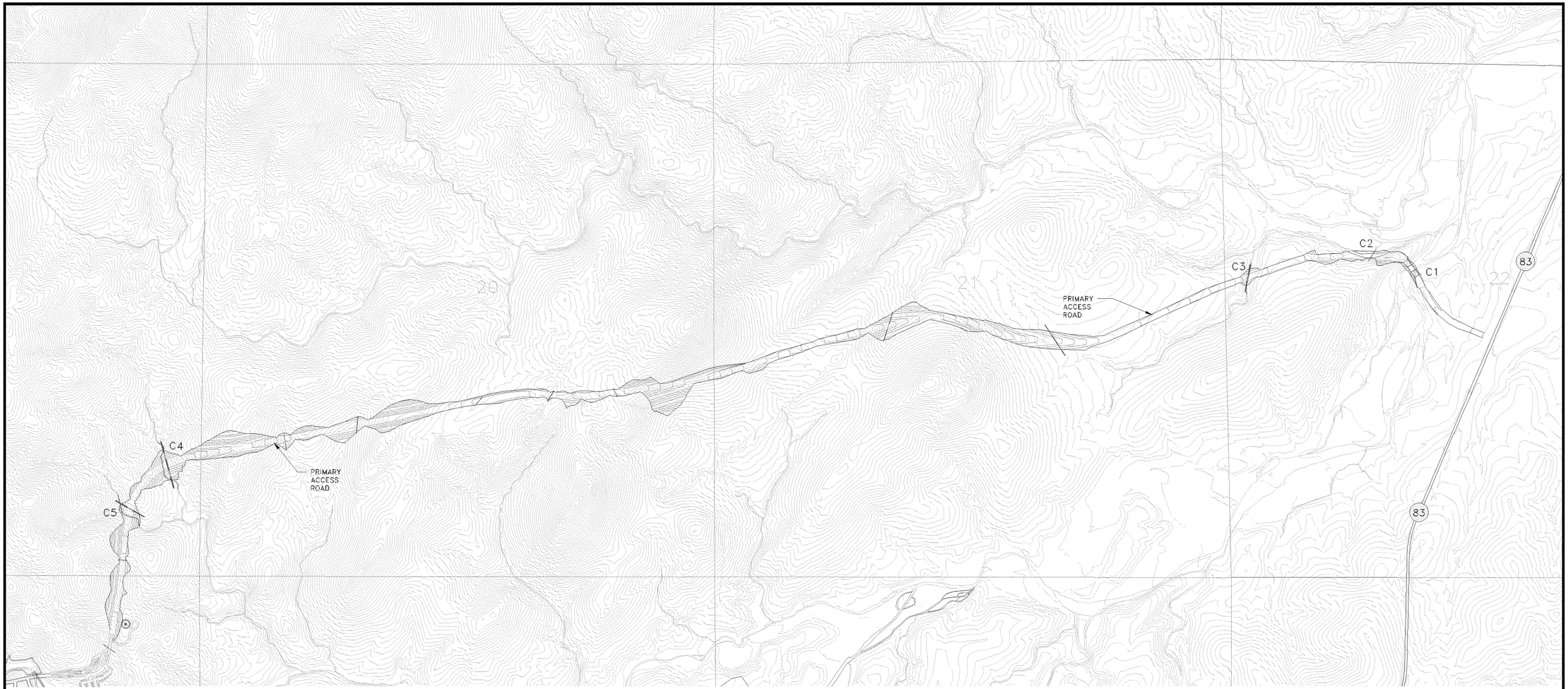
0' 60' 120'

WestLand Resources Inc.
Engineering and Environmental Consultants
4001 E. Paradise Falls Drive
Tucson, Az 85712 (520) 206-9585

ROSEMONT PROJECT

ACOE File No. SPL-2008-00816-MB
McCleary Canyon Wash

Figure 11



Data Source - Tetra Tech, April, 2010

LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- TOWNSHIP/RANGE LINE
- SECTION LINE
- SURFACE FLOW DIRECTION
- POTENTIALLY JURISDICTIONAL WATER OHWM (IMPACTED/LOST)
- POTENTIALLY JURISDICTIONAL WATER OHWM (NON-IMPACTED)
- CULVERT
- C2 CULVERT IDENTIFICATION

N
W E
S

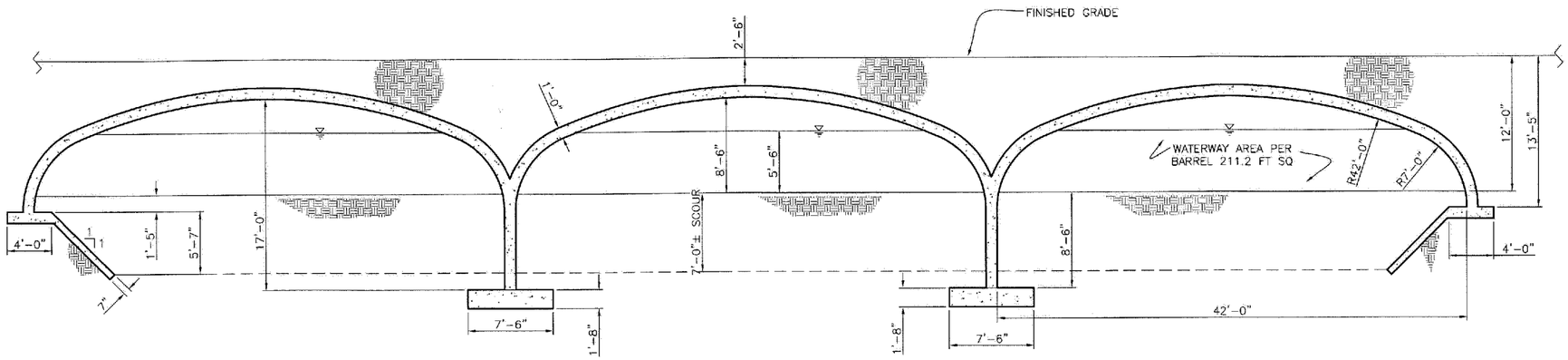
0' 500' 1000'

WestLand Resources Inc.
Engineering and Environmental Consultants
4001 E. Paradise Falls Drive
Tucson, Az 85712 (520) 206-9585

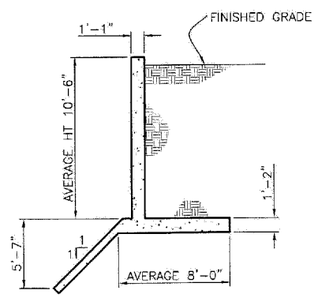
ROSEMONT PROJECT

ACOE File No. SPL-2008-00816-MB
Primary Access Road

Figure 12



CON-ARCH 3-42'x8'-6" CULVERT



WINGWALL CROSS SECTION

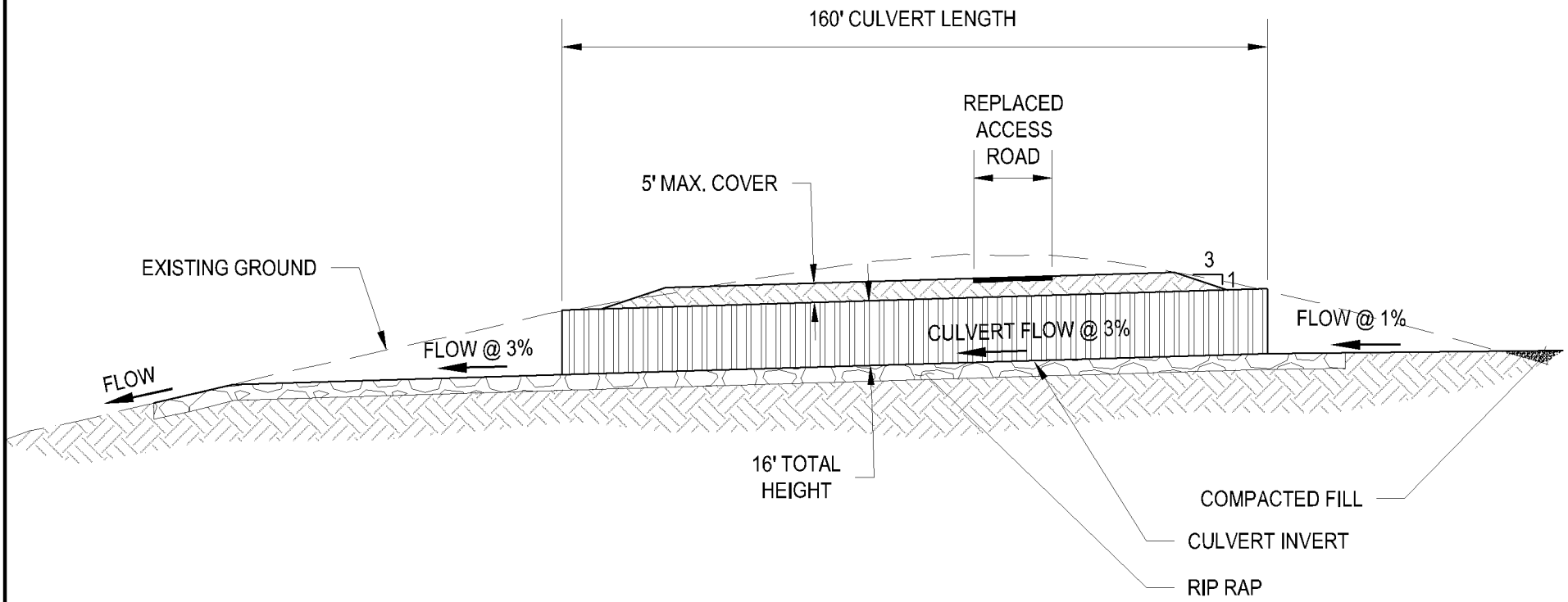
Data Source - SACRA Engr., March 29, 2009

WestLand Resources Inc.
Engineering and Environmental Consultants
4001 E. Paradise Falls Drive
Tucson, Az 85712 (520) 206-9585

ROSEMONT PROJECT

ACOE File No. SPL-2008-00816-MB
Access Road Con-Arch Detail

Figure 13



NOTE:

WINGWALLS NOT SHOWN THIS VIEW

WestLand Resources Inc.
Engineering and Environmental Consultants
4001 E. Paradise Falls Drive
Tucson, Az 85712 (520) 206-9585

ROSEMONT PROJECT

ACOE File No. SPL-2008-00816-MB
Typical Diversion
Culvert Section
Figure 14

T.17S., R.14E., Portion Sections 17, 20, 21 & 27-35,
T.18S., R.14E., Portion Sections 1, 2 & 12,
T.18S., R.15E., Portion Sections 7, 17, 18 & 20-24,
T.18S., R.16E., Portion Sections 19 & 30,
Pima County, Arizona
Photo Source: Aerials Express Tucson, 2009

2,250 0 2,250
Feet
1 inch = 4,500 feet

WestLand Resources, Inc.
Engineering and Environmental Consultants

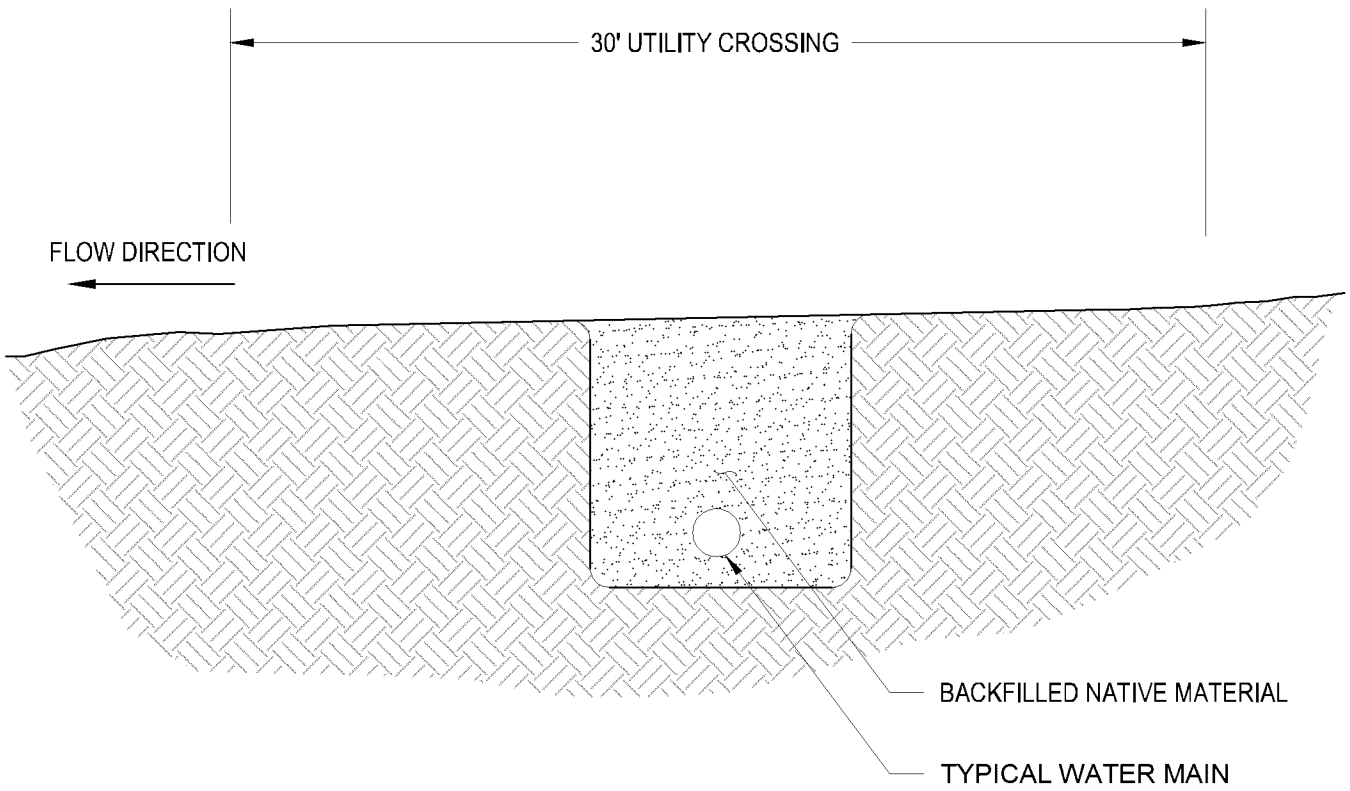
Legend

- Powerline
- Water Pipeline
- Proposed Booster Station Locations
- Potential Waters of the U.S.

ROSEMONT PROJECT

ACOE File No. SPL-2008-00816-MB
Offsite Utility Lines
Figure 15

M:\projects\1049.14\JD\waterline\Figures\SHT1 Overview.mxd



WestLand Resources Inc.
Engineering and Environmental Consultants
4001 E. Paradise Falls Drive
Tucson, Az 85712 (520) 206-9585

ROSEMONT PROJECT

ACOE File No. SPL-2008-00816-MB

Typical 30' Utility Crossing Cross-Section

Figure 16

M:\projects\1049.15\Public_Notice\Figures_11_29_11\Fig16_Utility_Line_Crossing.dwg 11/29/2011 5:22 PM

To: 'craig.schmauder@us.army.mil'[craig.schmauder@us.army.mil]
Cc: Peck, Gregory[Peck.Gregory@epa.gov]
From: Alan Mintz
Sent: Thur 3/31/2016 6:00:21 PM
Subject: Apology

Craig,

Thanks for taking the time to meet with Greg Peck, David, Andrew and me this morning to discuss the current status of the Federal permitting for the Rosemont mine project in southern Arizona. I hope that the discussion was helpful to you.

I was very sorry to have to leave the meeting so abruptly. I am sure that you can understand that I could not be late for my lunch appointment, but I would much rather have stayed and finished our conversation.

Thank you and Greg for listening to our concerns and for being forthcoming about the continuing regulatory process. We found the discussion to be very helpful.

As we move forward on this matter, please feel free to contact me at any time if you need any additional information or have any continuing concerns. We look forward to talking with you again soon. Meanwhile, I hope that you will seriously consider joining Ted Boling and others from the Federal family on a tour of the mine site and the associated proposed mitigation on April 21. I believe that there is no substitute in seeing the mine site and the proposed mitigation site to more fully understand this project and the concerns that have been raised by some of its critics.

Again, my apology for leaving the meeting this morning before we were done. Thanks for (hopefully!) understanding.

Alan L. Mintz

Partner

Van Ness Feldman, LLP

1050 Thomas Jefferson Street, N.W.

Washington, D.C. 20007

Direct line – 202-298-1837

Cell – 202-257-7175

alm@vnf.com

This communication may contain information and/or metadata that is legally privileged, confidential or exempt from disclosure. If you are not the intended recipient, please do not read or review the content and/or metadata and do not disseminate, distribute or copy this communication. Anyone who receives this message in error should notify the sender immediately by telephone (202-298-1800) or by return e-mail and delete it from his or her computer.

To: Peck, Gregory[Peck.Gregory@epa.gov]
From: Schmauder, Craig R SES (US)
Sent: Mon 3/28/2016 8:05:37 PM
Subject: RE: Rose

Works well for me. Do you have any up-to-date info on Rosemont Mine you can send me? My info is all pretty dated.

Respectfully -- Craig
Craig R. Schmauder, SES
Deputy General Counsel
Installations, Environment & Civil Works
(703) 695-2253
NOTICE: This message may contain information protected by the attorney-client, attorney work-product, deliberative-process, or other privilege. Do not disseminate without the approval of the Office of the General Counsel, Department of the Army. If you have received this message in error, please notify the sender immediately by email or telephone and delete this message.

-----Original Message-----
From: Peck, Gregory [mailto:Peck.Gregory@epa.gov]
Sent: Monday, March 28, 2016 1:14 PM
To: Schmauder, Craig R SES (US) <craig.r.schmauder.civ@mail.mil>
Cc: alm@vnf.com
Subject: [Non-DoD Source] Re: Rose

Let's go with 11am if that works for Alan.

We could grab lunch after.

Best,
Greg

Gregory E. Peck
Chief of Staff
Office of Water
U.S.Environmental Protection Agency
Washington, DC 20460

(202)564-5700

> On Mar 28, 2016, at 12:36 PM, Schmauder, Craig R SES (US) <craig.r.schmauder.civ@mail.mil> wrote:
>
> Greg, Thursday AM will work for me. As per Alan's request, I am available from 10-12:30, so whatever works best for everyone.
>
>
> Respectfully -- Craig
> Craig R. Schmauder, SES
> Deputy General Counsel
> Installations, Environment & Civil Works
> (703) 695-2253
> NOTICE: This message may contain information protected by the attorney-client, attorney work-product, deliberative-process, or other privilege. Do not disseminate without the approval of the Office of

the General Counsel, Department of the Army. If you have received this message in error, please notify the sender immediately by email or telephone and delete this message.
>
>
> -----Original Message-----
> From: Peck, Gregory [mailto:Peck.Gregory@epa.gov]
> Sent: Monday, March 28, 2016 11:46 AM
> To: Schmauder, Craig R SES (US) <craig.r.schmauder.civ@mail.mil>; alm@vnf.com
> Subject: [Non-DoD Source] Rose
>
>
>
> Craig - how does Thursday look for s discussion with Alan re Rosemount? Say 11am at EPA.
>
> Thanks

To: Beauvais, Joel[Beauvais.Joel@epa.gov]
Cc: Lockwood, Amanda - OSEC[Amanda.Lockwood@osec.usda.gov]; Penman, Crystal[Penman.Crystal@epa.gov]; Peck, Gregory[Peck.Gregory@epa.gov]
From: Bonnie, Robert - OSEC
Sent: Sat 1/30/2016 1:22:03 AM
Subject: Re: Touching Base

That works. We'll talk then.

Sent from my iPhone

On Jan 29, 2016, at 6:59 PM, Beauvais, Joel <Beauvais.Joel@epa.gov> wrote:

Hi, Robert – Sorry for the delay in getting back to you; it's been a hectic week. I will be out of town 3 days next week and have a hearing as well, so would it be possible to set something up for the week of 2/8? Crystal can help to arrange.

Joel

From: Bonnie, Robert - OSEC [mailto:Robert.Bonnie@osec.usda.gov]
Sent: Thursday, January 28, 2016 5:59 PM
To: Beauvais, Joel <Beauvais.Joel@epa.gov>
Cc: Lockwood, Amanda - OSEC <Amanda.Lockwood@osec.usda.gov>; Penman, Crystal <Penman.Crystal@epa.gov>
Subject: Touching Base

Joel:

Hope all is well. I would like to find 20 minutes or so next week to get on the phone with you to discuss the Rosemont mine. I don't know if this is on your radar screen yet, but it's worth us at least touching base on it relatively soon.

I've looped Amanda and Crystal. Thanks,

Robert

HUDBAY

May 18, 2015

U.S. Army Corps of Engineers
Los Angeles District
915 Wilshire Blvd
Los Angeles, CA 90017

Attn: Colonel Colloton

Re: EPA Letter of April 14, 2015 regarding "Other Water Quality Aspects"

Dear Colonel Colloton:

Hudbay is in receipt of correspondence from Jared Blumenfeld, EPA Region 9 Administrator to your office dated April 14 regarding the issuance of the Certification under Section 401 of the Clean Water Act (401 certification) on February 3, 2015, by the Arizona Department of Environmental Quality (ADEQ). The 401 certification pertains to the permit for the discharge of fill material under Section 404 of the Act for the Rosemont Copper Project (Project). As explained in this letter, EPA's assertions are without merit (or unsupported by evidence) and constitute a threat to the State's responsibility to regulate water quality and its authority to allocate water resources.

Background on the 401 certification

Certification under Section 401 of the Clean Water Act ensures that a discharge permitted under Section 404 complies with applicable state water quality standards. *See* A.R.S. § 49-202(C). In this case, ADEQ concluded that "the activities proposed for the Rosemont Copper Project will not violate applicable surface water quality standards (SWQS) in the subject waterbodies, which include McCleary, Wasp, Trail, Barrel and Davidson Canyons, and Cienega Creek . . . ." The 401 certification is supported by ADEQ's detailed analysis set forth in a fact sheet explaining the basis for ADEQ's conclusion.[1]

Davidson Canyon Wash is ephemeral throughout virtually all of its length, and flows primarily in response to localized precipitation events. During its 401 certification process, ADEQ expressed concern about possible reduction in surface flows to the lower reach of Davidson Canyon, located approximately 12 miles downstream of the Project. A portion of this downstream reach has been designated an Outstanding Arizona Water (OAW) under Arizona law, and is therefore subject to stringent "anti-degradation" standards designed to protect existing water quality. Construction of Rosemont will remove the Project footprint from the regional watershed during operations, and result in a corresponding

[1] Fact Sheet, State 401 Certification Decision, Rosemont Copper Project, ACOE Application No. SPL -2008-00816-MB (Fact Sheet).

P.O. BOX 35130
Tucson, Arizona 85740
United States
tel 520 495-3500
fax 520 495-3540
hudbayminerals.com

ED_001077_00010225-00001

temporary reduction in stormwater runoff from the Project site. (This reduction is attributable in part to Clean Water Act requirements for the discharge of stormwater.)

In the Final Environmental Impact Statement (FEIS) for the Project, the U.S. Forest Service (USFS) analyzed in detail the extent to which the Project would reduce stormwater flow in Davidson Canyon Wash. The USFS estimated that the impact at the OAW would be extremely small—about 4.3%.[2] Stormwater monitoring conducted by Hudbay and its predecessor indicate that few, if any, flows from the Project site actually reach the OAW under current conditions.[3] Again, it is important to remember that Davidson Canyon is ephemeral throughout its length. When water does flow in this wash and its tributaries, which are also ephemeral, much of the flow percolates into the wash-bed alluvium rather than flowing downstream.

ADEQ found no evidence that discharges from the Project will impact water quality within the OAW, but was concerned that reduced flows in the OAW reach could result in a corresponding reduction in the stream's assimilative capacity, i.e., the ability of the stream to absorb pollutants. A reduction in assimilative capacity is not prohibited under Arizona's antidegradation regulations. However, it can make a stream more vulnerable to degradation. Nevertheless, it would be improper to automatically equate a reduction in flow with a reduction in assimilative capacity, particularly in an ephemeral system. For example, some flow may actually be contributing pollutants, which if removed, increases the stream's assimilative capacity.[4]

In this instance, ADEQ found only that the modeled reduction in flow, "if realized, could result in a potential loss of assimilative capacity and therefore, potential degradation of water quality." [5] There is no affirmative finding by ADEQ that there will be a loss of flow, that the loss of flow will result in degradation of the water quality of the stream, or that discharges from the Project would cause such degradation to occur. Nor is there any credible scientific evidence that these impacts are likely to occur, despite years of study and analysis.

The OAW reaches in Davidson Canyon Wash and Cienega Creek are, as noted above, about 12 miles from the Project site, and there will be no direct discharges from the Project to these stream segments. Numerous existing activities and potential pollutant sources that are unrelated to the Project can affect the quality and quantity of water in the OAW reaches. These include downstream point or nonpoint source discharges, diversions of flow (such diversion to fill stock ponds), aquifer pumping in nearby areas (from residential and other wells), road crossings and off road vehicle use, agricultural use, and recreational activities. [6] As ADEQ notes in its Fact Sheet, flows in Cienega Creek declined by over 80% between 1990 and 2011, and Davidson Canyon exhibits a similar drying trend. [7] Consequently, it will be difficult to assess whether any observed future changes result from the Project or from other activities located much closer to the OAW.

ADEQ developed a 401 certification that combined pre-discharge monitoring to establish the range of baseline conditions with performance-based standards to protect the OAW segments if an effect that is

---

[2] FEIS at pp. 429-30.

[3] Far less water is flowing through the system than was modeled. Modeling assumed that 1,407 acre-feet per year would flow through Barrel Canyon at the USGS gaging station, roughly ten miles above the Davidson Canyon OAW. Actual flow measurements from 2010 to 2013 ranged from 41 to 185 acre-feet per year. Surface Water Mitigation Plan at p. 9. Moreover, there is little correlation between flows in Barrel Canyon and flows in Davidson Canyon. In 2013, there were 23 total days of measured streamflow in lower Barrel Canyon compared to 2 days of measured streamflow in Davidson Canyon Wash four miles downstream (and nearly eight miles above the OAW). *Id.* at p. 16. For 2014, there were 47 days of streamflow in Barrel and 8 in Davidson Canyon. U.S. Forest Service, *Rosemont Copper Project Supplemental Information Report* (March 2015)(SIR), pp. 22-23.

[4] For example, it is just as possible that a reduction in stormwater runoff from the Project site could remove possible sources of lead that have caused exceedances of water quality standards for that metal in the watershed. Surface Water Mitigation Plan at p. 17.

[5] Fact Sheet at p. 10.

[6] The attached WestLand Resources, Inc. memorandum, Existing Stressors Contributing to the Current Compromised State of Davidson Canyon (April 29, 2015), specifically delineates stressors in Davidson Canyon with a potential to affect water quality.

[7] Fact Sheet, p. 11.

attributable to future Project activities is subsequently observed. To that end, ADEQ required Rosemont to submit a Surface Water Mitigation Plan to establish baseline conditions in the watershed, to monitor water flow and quality as the Project develops, and to develop and implement mitigation measures to address water quality issues if they emerge. Compliance with the Plan is a condition of the 401 certification. The Plan is necessarily flexible given the number of variables involved, but represents a cautious approach to ensuring that water quality in the Davidson Canyon watershed, and specifically the OAW reach, will be protected.

EPA's Letter

For purposes of the public interest review, the Corps is to consider a 401 certification by a state "conclusive with respect to water quality considerations unless the EPA Regional Administrator advises of other water quality aspects to be taken into consideration." 33 CFR §320.4(d). The Corps Regulatory Guidance Letter 90-04 states that "other water quality aspects" can consist of EPA's "disagree[ments] with the state's conclusions" in its certification or "water quality concerns beyond the state certification's scope." EPA's letter states that its purpose is to apprise the Corps of "water quality aspects which may be outside the scope of the State's 401 certification review," and to request the Corps' consideration of those "other water quality aspects" as part of its public interest review. The letter thus seeks to create the impression that EPA is not taking issue with "the state's conclusions" in the certification, but, rather, is simply bringing water quality issues "beyond the state's certification's scope" to the Corps' attention. The first half of the letter, however, is nothing more than a collateral attack on the the State's conclusions in the certification. EPA does not identify any "water quality concerns [that are] beyond the state's certification scope", "and that were therefore not considered by ADEQ." Instead, EPA merely states in conclusory fashion why it disagrees with the 401 certification.

The first half of the letter identifies three "water quality aspects" that were purportedly "beyond the certification's scope" and that, in EPA's view, remain "unaddressed by the final certification": 1) "water quality impact avoidance;" 2) water quality impact minimization;" and 3) "water quality impact mitigation." These three issues, however, were not "outside the scope of the state's 401 certification review;" instead, they were at the very heart of it. Rather than being "unaddressed" by ADEQ, as EPA claims, they were addressed in detail; indeed, the certification rests upon ADEQ's careful consideration and treatment of these three issues. ADEQ's certification contains 33 specific conditions with which the Project must comply, which are aimed directly at avoiding, minimizing, and mitigating the water quality impacts of the Project. Significantly, EPA offers not a single fact in support of its conclusory statement that "the specific conditions in the certification are highly unlikely to avoid potential water quality degradation, detect anticipated or unanticipated degradation, or mitigate for those impacts."

The second half of the letter comments on two issues that are not "other water quality aspects" of the Project's activities: 1) water supply and conservation, and 2) recreational and aesthetic values. The water supply and conservation issue concerns the question of how "the mine's water needs" and "the mine's projected water use" will "impact public and private water supplies." But the question of how much water the mine will be allowed to use (and the closely related question of how that use might affect other water users) is a question of water resource allocation, a question which is explicitly reserved to the states by the Clean Water Act itself. [8] The recreational and aesthetic values issue is simply another thinly veiled attack on the 401 certification; i.e, because EPA believes, contrary to "the state's conclusions" in the certification, that the Project's discharges will "lower[] ... water quality in OAWs," it speculates that there may also be some "[l]oss of recreational and aesthetic value" in the OAWs.

[8] 33 U.S.C. § 1251(g) ("the authority of each State to allocate quantities of water within its jurisdiction shall not be superseded, abrogated or impaired by [the Clean Water Act]); 33 C.F.R. § 320.4(d).

ED_001077_00010225-00003

We understand that the Corps advised ADEQ on April 7, 2014, [9] that the water quality concerns raised by EPA's February 13, 2012 letter to the Corps "render any granted state Section 401 certification 'not conclusive' regarding water quality considerations, and necessitates the DE to make 'independent judgments regarding compliance with 40 CFR 230.10(b)(1) and the consideration of water quality issues in the public interest review process.'" These statements from EPA were made over two full years before ADEQ issued its draft certification, and nearly three years before ADEQ responded to EPA's comments on the draft certification. We would therefore request that the Corps take full account of the record that has been compiled by ADEQ and the Forest Service in the three years since EPA first raised its water quality concerns before concluding that EPA's April 14, 2015 letter "render[s] ... [the] state Section 401 certification 'not conclusive.'" Moreover, we note that, Corps guidance notwithstanding, EPA's collateral attack on the 401 certification is contrary to Section 401 of the Clean Water Act itself, which clearly contemplates a conclusive role for state certification decisions on the issue of compliance with the State's water quality standards; the Corps public interest regulation, which does the same; and the express purpose of EPA's own letter. [10]

Nevertheless, if the Corps concludes that the 401 certification is "not conclusive", we are confident that the Corps will accord the 401 certification appropriate deference. We believe that when ADEQ's decision-making is evaluated, it will withstand the unsupported assertions that EPA makes in its letter, and the Corps will find, like ADEQ, that the Project will not cause or contribute to a violation of State water quality standards.

We appreciate the opportunity to have our views heard. Please do not hesitate to contact me if you require any additional information.

Sincerely,

Patrick Merrin
Vice-President, Arizona Business Unit

Enclosure: WestLand Resources, Inc. memorandum, *Existing Stressors Contributing to the Current Compromised State of Davidson Canyon* (April 29, 2015)

cc:[A1] David Castanon, USACE
Sallie Diebolt, USACE
Marjorie Blaine, USACE
Henry Darwin, ADEQ
Trevor Baggiore, ADEQ
Jared Blumenfeld, EPA
Jamie Kingsbury, USFS
Steve Spangle, USFWS
Ray Suazo, BLM

---

[9] Letter from Dave Castanon, Chief, Regulatory Division, USACE Los Angeles District, to Robert Scalamera, ADEQ (April 7, 2014) citing Regulatory Guidance Letter (RGL) 90-04.

[10] The Corps regulation provides that a 401 certification "will be considered conclusive with respect to water quality considerations unless the Regional Administrator, Environmental Protection Agency (EPA), *advises of other water quality aspects* to be taken into consideration." 33 C.F.R. § 320.4(d) (emphasis added). The RGL notwithstanding, "other" clearly refers to matters *not* addressed by the 401 certification.

ED_001077_00010225-00004

HudBay Minerals, Inc. (Hudbay)

Response to (1) Letter from Jared Blumenfeld, Regional Administrator, EPA Region 9 (April 14, 2015) regarding "'Other Water Quality Aspects' of permit issuance for the Rosemont Mine in light of state actions under §401 of the Clean Water Act" (Blumenfeld Letter); and (2) Letter from Jane Diamond, Director, Water Division, EPA Region 9 (April 7, 2014) regarding "State of Arizona Clean Water Act (CWA) Draft Section 401 Water Quality Certification for Rosemont Copper project, Pima County, Arizona" (Diamond Letter)

The following provides HudBay Minerals, Inc. (Hudbay) response to comments made by EPA in conjunction with the draft and final 401 Certification issued by the Arizona Department of Environmental Quality (ADEQ). The final 401 Certification was issued February 4, 2015. EPA comments or our paraphrase of those comments are in italics, followed by Rosemont's response.

1.0 RESPONSE TO BLUMENFELD LETTER OF APRIL 14, 2015

EPA Comment: *"After careful review and consultation with the state, EPA has determined that the impacts of the project include substantial water quality aspects which may be outside the scope of the state's §401 certification review. Thus, EPA believes the certification alone is unlikely to provide sufficient measures to safeguard the water quality of the Cienega Creek watershed, including stream reaches meeting or exceeding existing water quality standards under CWA §303 (these CWA "Tier 3" waters in Arizona are designated "Outstanding Arizona Waters" or OAW).*

Response: As discussed above, EPA's comments fail to identify a single water quality issue that was not addressed by the State in its review. EPA's comments are almost entirely a collateral attack on the 401 Certification and are not directed to "other water quality aspects" contemplated by the Corps' public interest review regulation addressing water quality. 33 C.F.R. §320.4(d).

We also note that EPA's comment seems to suggest that any water that meets all applicable standards is a Tier 3 water subject to the strictest antidegradation protection. In reality, only those 22 OAWs designated by rule at A.A.C. R18-11-112(G). (including portions of lower Davidson Canyon Wash and lower Cienega Creek) are subject to Tier 3 protection. The portions of Davidson Canyon Wash and its tributaries proximate to the Project are ephemeral, and thus are considered Tier 1 for antidegradation purposes.

EPA Comment: *"The Rosemont Copper Project [FEIS] and other documentation concluded the Rosemont mine, if constructed, would adversely modify surface and groundwater hydrology, sediment transport, and pollutant loadings in the watershed." The state CWA §401 certification lacks sufficient, specific preventative actions to avoid these adverse impacts to water quality, creating a substantial risk to designated beneficial use standards set by the state for Davidson Canyon and Cienega Creek. In general, the certification relies upon limited, voluntary (i.e., non-enforceable) post-discharge monitoring that may detect water quality degradation after it occurs, and includes insubstantial corrective actions to be developed at a later time. Many of EPA's concerns identified in comments on the state's February 21, 2014 draft certification (letter attached) remain unaddressed by the final certification."*

Response: EPA asserts in conclusory fashion that the Project would result in a "substantial risk" to water quality standards in downstream OAWs. This assertion is not consistent with the extensive analyses done as part of the EIS process. Two scenarios have been posited as to how the Project could potentially adversely affect water quality in the downstream OAWs (roughly 12 miles from the Project

ED_001077_00010225-00005

site): (1) by reducing flow in the downstream OAWs, which potentially could reduce assimilative capacity and result in higher pollutant levels if loadings remained the same; or (2) by discharging poor quality water that reached the OAWs and degraded water quality there. The first of these scenarios (reduced flow in the OAWs) is addressed below; the weight of evidence gathered to date suggests that the risk of significantly reduced flow in the OAWs is low, and the likelihood of adverse water quality effects based on that reduced flow is speculative. As to the second scenario (Project discharges adversely affecting water quality in the OAWs), the FEIS (p. 454 and Table 102) and the SIR (p. 26) note that existing, pre-Project stormwater discharges into Barrel Canyon have been documented to exceed applicable surface water quality standards for 6 pollutants, whereas runoff from Project facilities is modeled to exceed applicable standards for only one pollutant, and that could be avoided through waste rock segregation techniques (FEIS p. 472 and SIR p. 26). In sum, there is not a "substantial risk" to OAW standards.

EPA also claims that the certification "lacks sufficient, specific preventative actions to avoid ... adverse impacts to water quality" from modifications to "surface and groundwater hydrology, sediment transport, and pollutant loadings," but fails to explain why the many "specific preventative actions" that are, in fact, required by the 401 Certification are "insufficient," or to identify a single specific action that ADEQ should have required beyond those in the 401 Certification. As set forth in detail in the FEIS, the Project was carefully designed to minimize impacts to surface and groundwater hydrology. Building on that foundation, the 401 Certification contains at least 15 specific conditions that are designed to prevent and minimize sediment loading and transport in any water of the United States as a result of the Project's activities, and 7 specific conditions that are designed to prevent and minimize any harmful pollutant loadings to any water of the United States.

One of the specific preventative actions ADEQ has required is the implementation of the Surface Water Mitigation Plan. The Plan is necessarily flexible; before specific mitigation measures can be required, a water quality problem posed by the Project must be identified. The Surface Water Mitigation Plan provides an additional layer of protection over and above operational aspects of the Project (including compliance with the Aquifer Protection Permit and AZPDES stormwater permit requirements) to identify whether reductions in flow in the OAW are occurring, whether they are attributable to the Project, and whether they result in degradation.

EPA Comment: "Water quality impact avoidance: Without reasonable assurance of impact avoidance, the available information suggests Tier 3 antidegradation standards are very likely to be violated.

Water quality impact minimization: A specific and complete monitoring program is necessary at the outset to ensure rapid detection of impacts should a robust preventative program fail, and provide for the ability to deploy corrective measures;

Water quality impact mitigation: Specification of, and enforceable commitment to, available and sufficient corrective measures are needed to offset mine-related reduction of assimilative capacity, changes in downstream sediment yield, and other potential diminutions of water quality that may be detected. Presently, the corrective measures proposed in a "Surface Water Mitigation Plan" lack specificity regarding their ability to arrest and reverse water quality problems once water quality degradation of OAWs or other waters has been detected."

Response: These general statements, particularly the contention that Tier 3 antidegradation standards are "very likely to be violated," are not supported by the scientific studies and information in the record and are directly refuted by ADEQ's expert analysis of that record. Once again, EPA provides no specific support for these assertions. Again, it should be noted that the OAW is located approximately 12 miles downstream from the Project. An uninformed reader would erroneously assume that OAW is immediately downstream of the Project.

The Surface Water Mitigation Plan is in fact a "specific and complete monitoring program" which provides "for detection of impacts" in as quick a manner as practical. The system is ephemeral, and so impact detection is entirely reliant on rainfall and runoff. In deciding whether to deploy corrective measures, the first step is to identify whether there is a real and consistent impact. Based on geochemical characterization data, groundwater and seepage/infiltration modeling, baseline water quality monitoring, and baseline stormwater flow monitoring, impacts to Barrel Canyon Wash and Davidson Canyon Wash due to the Project are not anticipated. Should an anomaly in data become evident, i.e., a potential impact, specific corrective measures will be implemented.

EPA Comment: EPA generally asserts that the water quality concerns raised above are "other water quality aspects" that the Corps should independently evaluate, instead of accepting the 401 Certification as conclusive as to matter of water quality, citing to both the 404(b)(1) Guidelines and public interest review.

Response: As discussed above, Hudbay does not believe that EPA's collateral attack on the 401 Certification represents "other water quality aspects" to be reviewed by the Corps in conjunction with the public interest review or its evaluation of water quality impacts under the 404(b)(1) Guidelines. The 401 Certification should be accorded conclusive effect as to these matters. We are confident, however, that if the Corps were to evaluate more closely ADEQ's decision to issue the 401 Certification, it would conclude, like ADEQ has done, that the Project will not degrade existing water quality in Davidson Canyon Wash or Cienega Creek.

EPA Comment: EPA notes the Corps regulation regarding evaluation of water supply and conservation under the public interest review criteria, characterizes Rosemont's use of groundwater in the context of the regional dependence on groundwater and then notes that "[d]rought, climate change, and the significant uncertainty regarding the potential to successfully recharge subsurface supplies, only heighten EPA's concerns over Rosemont mine's projected water use in an aquifer already subject to groundwater overdraft." EPA goes on to describe purported impacts to well owners from Rosemont's water supply wells.

Response: The issue of how much water the Project will be allowed to use (and the related issue of how that will affect other water users) is not water "quality" concern but rather goes to the question of how Arizona allocates its water resources, something explicitly reserved to the States by the Clean Water Act itself. The Clean Water Act itself states that "the authority of each State to allocate quantities of water within its jurisdiction shall not be superseded, abrogated or impaired . . . ." 33 U.S.C. § 1251 (g). This admonition is repeated by the Corps' public interest review criteria. 33 C.F.R. § 320.4(d). Thus, EPA's concerns about the Project's water use, while important, are irrelevant to 401 certification and to the Corps' permitting decision.

Even though it is not required under Federal or Arizona law, Hudbay and its predecessor implemented an insurance program at no cost to the homeowners in the area that may be impacted by supply well pumping. Although to date no groundwater has been pumped, this insurance program has repaired and replaced water system components including pumps, pressure tanks, and piping for nearly five years and will deepen wells that are impacted by project pumping once it commences. Nearly all homeowners in the area that may be affected have taken advantage of the program.

EPA Comment: EPA argues that the Cienega Creek watershed "is located in a near pristine landscape rich in biodiversity" and then extolls the importance of the area for outdoor recreation before concluding with another collateral attack on the 401 Certification: "Loss of recreational and aesthetic value stemming from the mine's various adverse impacts to water quality are an important additional consideration in permit authorization." EPA then cites to the public interest review criteria.

Response: As a preliminary point, this is not an "other water quality aspect" of the Project which has not been addressed by the 401 Certification, but is in fact another collateral attack on that decision by ADEQ.

It is also very important to note that despite EPA's repeated assertions, [11] Davidson Canyon (part of the Cienega Creek watershed) is *not* located in a "near pristine" area but has, in fact, a history of human uses potentially impacting water quality in the OAW. Attached is a technical memorandum by WestLand Resources discussing the existing stressors affecting the OAW reach of Davidson Canyon. The memorandum concludes:

> The EPA refers to the Cienega Creek watershed (which includes Davidson Canyon) as a "pristine" environment that is under threat by the Rosemont Copper Project. However, even preliminary analysis of readily available public records show that the Davidson Canyon watershed has been significantly impacted by anthropogenic activities, both currently and in the past. Davidson Canyon Wash is crossed by 11 unpaved roads and is used as a thoroughfare itself for off-road vehicle use. In addition, the watershed has a long history of grazing use, including an in-stream diversion of surface water flows for livestock watering just 1.5 miles upstream of the OAW. Finally, human development in the watershed has resulted in the establishment of water development and wastewater systems that also have the potential to impact surface water quality. As such, it can be reasonably concluded that Davidson Canyon does not exist in a pristine condition. It has been impacted by a variety of land use activities in the past, and will continue to be impacted by a variety of activities, including mining, ranching and recreational uses.

WestLand Resources, Inc. *Existing Stressors Contributing to the Current Compromised State of Davidson Canyon* (April 29, 2015).

Finally, it should be noted that while the FEIS has an extensive discussion of socioeconomics and environmental justice including impacts on tourism (FEIS at pp. 1052-1130), EPA chose to cite from a Sonoran Institute study that is outdated and incomplete.

2.0 RESPONSE TO DIAMOND LETTER OF APRIL 7, 2014

Sediment Transport

EPA comment: EPA argues that sediment transport (and potential impacts on downstream OAWs) has not been adequately analyzed because the geomorphic assessment prepared by Patterson and Annandale (2012), and relied on by the Forest Service (in the FEIS) and ADEQ (in the 401 certification), does not consider "temporal variability" and does not account for the fact that "the impacts of mining activities on sediment transport are likely to change over time during the active mine life and after closure." As a result, EPA believes that additional analysis is required (suspended and bedload transport analyses).

Response: EPA provides no explanation for its assertion that the impacts of mining on sediment transport are likely to change over time, and is simply speculating about potential, future impacts that are unlikely to occur. In fact, a careful review of the FEIS discussion of the geomorphic analysis (FEIS pp. 465-66) shows that the conclusion that the Project would not be expected to significantly alter the fluvial geomorphology of the downstream OAW segments relies primarily on two factors: (1) Barrel Canyon is a sediment-transport limited system (meaning there is more sediment in the system than flowing water can transport in normal or even flood conditions), and this would be the case even after the Project is

[11] EPA's prior comment letters on the Project's 404 application contain the same mischaracterization of the watershed. See for example, EPA's detailed comments in response to the Corps Public Notice (Fe. 13, 2012), at p. 1 ¶6.

ED_001077_00010225-00008

constructed; and (2) the presence of two grade control structures in Barrel Canyon downstream of the proposed Project (the bridge at SR-83, and the occurrence of bedrock within the streambed upstream of Davidson Canyon) limits the extent of erosion both upstream and downstream of the structures, and thereby prevents streambed degradation. These conditions would continue to exist both during and after Project operations. Therefore, there is no basis to conclude that additional analysis considering "temporal variability" would alter the core conclusions of the existing geomorphic analysis relied on by the Forest Service and ADEQ.

Furthermore, the FEIS includes monitoring measures (FS-SR-05 and FS-BR-22) that commits Rosemont to sediment transport monitoring and stream channel geomorphological monitoring in Barrel Canyon and Davidson Canyon. The final 401 certification refers to these monitoring requirements (Section 5, Specific Condition 1) and requires that Rosemont implement the ADEQ-approved Surface Water Mitigation Plan (December 2014) (the "Plan"). The Plan provides further details on the proposed sediment transport and stream channel monitoring (Sections 2.2.3, 2.2.4 and 2.2.5). Sediment mitigation is addressed in Section 5.2 of the Plan. Given that sediment is a pollutant and its discharge is regulated under the AZPDES program, [12] Rosemont cannot unilaterally commit to adding sediment to the stream in the event that ADEQ concludes that such addition is needed for geomorphic reasons—which, for obvious reasons, is extremely unlikely. Therefore, the Plan reasonably states that Rosemont will coordinate any mitigation response with ADEQ in the event that sediment—a pollutant—needs to be added to the system.

In short, ADEQ's approach to sediment in the 401 Certification is reasonable and should not be revised by the Corps.

Reduction in Available Assimilative Capacity

Background (antidegradation requirements): As a preliminary matter, it is necessary to precisely describe what watercourses are classified as Tier 1 waters and Tier 3 waters and what antidegradation requirements apply to those waters. Barrel Canyon and all of Davidson Canyon Wash above the OAW segments are ephemeral, and therefore considered Tier 1 waters for purposes of antidegradation analysis. A.A.C. R18-11-107.01(A)(c). As such, the antidegradation standard is that a regulated discharge must not cause a violation of an applicable surface water quality standard. A.A.C. R18-11-107.01(A)(2). By contrast, the OAW segments of lower Davidson Canyon Wash—— and lower Cienega Creek, which are located 12 miles or more from the Project, are Tier 3 waters. Existing water quality in Tier 3 waters must be maintained, although temporary water quality impacts (those occurring for a period of six months or less) are allowed. A.A.C. R18-11-107.01(C).

A reduction in assimilative capacity is not prohibited under Arizona's antidegradation regulations. Rather, if the reduction in assimilative capacity results in a violation of an applicable water quality standard (for Tier 1 waters, including Barrel Canyon and the upper 10 miles of Davidson Canyon) or results in a degradation of water quality (for Tier 3 waters, meaning the OAW segments of lower Davidson Canyon Wash and Cienega Creek), then there may be a violation of antidegradation requirements.

Furthermore, a potential reduction in flow should not automatically be equated with a reduction in assimilative capacity. For example, if the stormwater runoff that will no longer report to the OAW reaches currently exceeds applicable surface water quality standards for one or more pollutants, a reduction in flow could actually increase the assimilative capacity with regard to those pollutants. This may in fact be the case in the current situation. Baseline stormwater quality sampling in Barrel Canyon indicate

[12] The Mining MSGP, under which Rosemont is permitted, requires mines to implement erosion control measures during the construction and operational phases. *See* Parts 2.1.1.5 and 8.G.5.2 of the Mining MSGP. Furthermore, the final 401 certification itself includes measures to reduce sediment leaving the site (see Section 5, Specific Conditions 17-19).

ED_001077_00010225-00009

exceedances of SWQSs for certain metals, particularly total lead and dissolved and total copper (Rosemont baseline stormwater quality database). Therefore, there may not be a direct correlation between reduction in flow, reduction in assimilative capacity, and resulting adverse changes to water quality.

EPA comment: EPA cites portions of the FEIS that estimate reductions in stormwater flows from the proposed mine site, ranging from 30-40% (during roughly the first 10 years of operation) to 17% (post-closure). FEIS, pp. 424-25 and Table 76. EPA criticizes ADEQ for focusing on the 17% figure, rather than the 30-40% figure, in discussing potential loss of assimilative capacity in the OAW reaches.

Response: The predicted reduction in stormwater runoff from the mine site does not directly correlate to a comparable reduction in flows in the OAW reaches of Davidson Canyon Wash and Cienega Creek, as those areas are fed by a much larger watershed. With respect to those areas, the FEIS concludes (recognizing the uncertainty inherent in the modeling) that stormwater flow would be reduced at the confluence of Davidson Canyon and Cienega Creek by approximately 4.3% for the Barrel alternative. FEIS, pp. 429-30 . Moreover, flow in the OAW also depends, at least in part, on springs that are not (or not wholly) dependent on stormwater flows. Therefore, a roughly 4.3% reduction in stormwater flows does not correspond to a 4.3% reduction in total flows in the OAWs. This (projected) figure is the more pertinent one for purposes of the 401 Certification.

Stream flow data collected since December 2012 in Barrel Canyon Wash and Davidson Canyon Wash indicate that stream flow measured at the lower Barrel Canyon Wash station does not directly relate to stream flow in Davidson Canyon Wash, measured 4 miles downstream from the Barrel Canyon Wash station. For example, as discussed above, there were 23 total days of measured streamflow in lower Barrel Canyon in 2013 compared to 2 days of measured streamflow in Davidson Canyon Wash four miles downstream (and nearly 8 miles above the OAW). For 2014, there were 47 days of streamflow in Barrel Canyon and 8 in Davidson Canyon.

EPA comment: EPA suggested that Rosemont be required to submit its surface water mitigation program to ADEQ for approval prior to issuance of the final 401 water quality certification, rather than after issuance of the certification (as had been proposed in the draft certification).

Response: Based in part on the original EPA comments, Rosemont did submit a mitigation plan for approval before the 401 Certification was finalized. The December 2014 Surface Water Mitigation Plan was reviewed and approved by ADEQ.

EPA comment: EPA did not believe that the activities described in the draft 401 certification for providing additional water to offset reduced flows, if needed, were certain to occur.

Response: Section 5, Specific Condition 1 of the 401 Certification requires Rosemont to implement the ADEQ-approved Plan. Sections 4 and 5 of that Plan make clear that replacement of water flows is tied to potential changes in water quality in the OAWs. In other words, if water quality in the OAWs is degraded as a result of reduced surface flow resulting from Rosemont's activities, [13] then Rosemont will undertake mitigation efforts to replace that flow as needed to restore water quality to pre-Project conditions. This is made clear in the introductory language of Sections 4 and 5 of the Plan. Because it is impossible to predict whether and to what extent flow supplementation will actually be required, it is impossible to predict exactly what mitigation efforts will be required. The Plan therefore lays out a series of steps that may be taken (Section 5.1), following ADEQ approval.

[13] Given the distance of the OAWs from the proposed mine (roughly 12 miles), and the potential for other sources to impact the OAWs, Rosemont cannot be an absolute guarantor of water quality in the OAWs because many other sources and activities can affect that water quality. Rosemont's mitigation obligations are tied to effects reasonably attributable to its activities.

Given the uncertainty regarding whether, when and how much flow supplementation will be required, the ADEQ 401 Certification and the approved Plan take a reasonable approach to potential mitigation. The certification clearly prohibits degradation in water quality in the OAWs based on Rosemont's activities, as required by Arizona's antidegradation rules, and makes it clear that ADEQ may ask the Corps to suspend the 404 permit if such degradation is observed and not remedied. This is a reasonable approach to a complex situation involving the effects of reduced surface runoff on areas 10 miles away, which are also affected by numerous other factors and sources. Under these circumstances, the Corps should not second-guess ADEQ's approach for dealing with this issue.

Degree of Confidence in Modeling

EPA comment: EPA argued that inevitable uncertainty inherent in modeling that attempted to model a complex system over periods up to 1000 years and beyond demands application of more protective standards.

Response: In making the 401 Certification, ADEQ reviewed the available model results and the FEIS analysis, and concluded that the best scientific evidence supported a finding that the proposed activities would not result in a degradation of current surface water quality standards. This is discussed on pages 13-15 of the Fact Sheet accompanying the 401 Certification decision. EPA apparently disagrees with ADEQ's conclusion, but has provided no credible scientific evidence that suggests the Corps should second-guess ADEQ and reach a different decision.

EPA comment: EPA asserts that pit dewatering will adversely impact approximately 20 miles of the Upper Cienega Creek OAW.

Response: Any long term effects of "pit dewatering" do not result from a discharge of dredged or fill material or any other discharge that is regulated under the Clean Water Act. ADEQ is therefore limited in its ability to consider certification conditions related to this alleged dewatering under A.R.S. § 49-202(C). Furthermore, these potential flow reductions—which are, again, highly uncertain and will occur, if at all, hundreds of years from now—are not "water quality" aspects that would justify the Corps reopening a state 401 certification decision pursuant to 33 C.F.R. § 320.4(d).

The Forest Service recently completed an extensive Supplemental Information Report (SIR) reviewing these specific possible effects, and EPA provided comments specific to those elements. This analysis showed that at the low end of the sensitivity analysis, even at 1,000 years dewatering had little to no effect on the baseline condition and, as expected, at the high end of the sensitivity range had varying degrees of effect on the OAW reach in Upper Cienega Creek. But in no case did all of the sensitivity runs show adverse effects over the entire 20-mile segment of Cienega Creek. In fact, only on the extreme range of time (1,000 years) and using the high end of all sensitivity runs were significant impacts predicted. [14]

Potential for Cumulative Impacts

EPA comment: Without elaboration, EPA asserted that "the scope and magnitude of impacts associated with the proposed Rosemont Copper Project, and the context in which these impacts will occur, have not been adequately presented" in the certification and Basis for Decision.

Response: ADEQ's decision (and the FEIS) discusses cumulative impacts. It is unclear what additional analysis EPA believes necessary. Rosemont has committed to extensive monitoring and

[14] SIR, pp. 28-108.

ED_001077_00010225-00011

mitigation measures to address potential impacts from its activities, and ADEQ and the USFS have concluded that these measures are sufficient. EPA has not provided a sufficient justification for the Corps to make a different decision.

Monitoring

EPA comment: It is unclear whether corrective measures can be put in place to prevent the degradation of OAWs should scour or aggradation be detected, or whether these measures can be effective given the potential lag time between detection and implementation of potential remedies.

Response: Rosemont has agreed to conduct topographic surveys, as well as pebble count and particle-size analysis monitoring. Desert watercourses in the Southwest change naturally following flow events, especially turbulent summer monsoon flows and major winter storm events. In addition, there are numerous sources other than the Project that will affect portions of the wash located between the Project and the OAWs. Moreover, scour or aggradation in the 12 miles between the mine and the nearest OAW most likely will not have an effect on water quality in the OAWs. As noted previously, if it is determined that sediment needs to be added back into the system, then there are other programs to be considered (e.g., the AZPDES program, which generally requires permittees like Rosemont to reduce sediment being discharged in stormwater from a site). If work in channels is required, Section 404 permit authorization may be required. For all these reasons, as a practical matter, it is difficult, if not impossible, to be more specific about potential future sediment mitigation at this time.

EPA Comment: EPA suggests that Forest Service sediment monitoring to identify areas of scour or aggradation between the mine and State Route 83 will be ineffective for determining impacts to the OAW because these measures are only applicable on USFS lands, while the OAW is located downstream.

Response: In addition to the monitoring required under FS-SR-05 (referred to by EPA in its comments), Rosemont has committed to additional monitoring pursuant to FS-BR-22 related to protection of the Cienega Creek Watershed and endangered and threatened aquatic species potentially present in that watershed. This monitoring is designed to satisfy conservation measures identified on pp. 57-58 of the Fish and Wildlife Service's October 2013 Biological Opinion. Pursuant to FS-BR-22, Rosemont will establish 4 sites within Davidson Canyon to monitor (*inter alia*) geomorphic changes to Davidson Canyon, which would include physical changes such as scour and aggradation. This monitoring will help detect potential adverse impacts to the downstream OAWs.

EPA comment: EPA argued that the any adverse changes detected in water quality in OAWs should require immediate suspension of the 401 certification (and thus of the 404 permit).

Response: Because many other activities can affect the OAWs (located ~12 miles or more from the proposed mine), and because natural water quality may vary in the OAWs, automatic suspension of the certification based on any adverse change in water quality is not appropriate. The final certification (Section 5, specific condition 1) states that ADEQ will request that the Corps suspend the permit if monitoring detects that water quality in the OAWs has been degraded as a result of Project activities, in order to allow time to evaluate the issues and consider additional mitigation measures in the event that more than temporary degradation may occur. This is an appropriate and reasonable approach.

ED_001077_00010225-00012

PUBLIC NOTICE

US Army Corps of Engineers®

EXTENSION OF PUBLIC NOTICE COMMENT PERIOD

Public Notice/Application No. SPL-2008-00816-MB
Initial Comment Period: December 6, 2011 to January 5, 2012
EXTENDED COMMENT PERIOD: January 6 – January 19, 2012

Applicant
Rosemont Copper Company
Ms. Kathy Arnold
2450 W. Ruthrauff Rd., #180
Tucson, Arizona 85705
(520) 495-3500

Agent
WestLand Resources, Inc.
Mr. Brian Lindenlaub
4001 E. Paradise Falls Drive
Tucson, Arizona 85712
(520) 206-9585

On December 6, 2011, the U.S. Army Corps of Engineers issued a public notice (SPL-2008-00816-MB) for the proposed Rosemont Open Pit Copper Mine. The original public notice may be viewed at: http://www.spl.usace.army.mil/regulatory/pn/200800816.pdf

Interested parties are hereby notified that numerous requests for extension of the public notice comment period have been received. Therefore, **the Corps is extending the public notice comment period through January 19, 2012.** Interested parties are invited to provide their views on the proposed work prior to the close of the extended comment period. Comments received by January 19, 2012 will become a part of the record and will be considered in the decision. This permit application will be issued or denied under Section 404 of the Clean Water Act (33 U.S.C. 1344). Comments can be mailed to:

U. S. Army Corps of Engineers
ATTENTION: Marjorie Blaine (SPL-2008-00816-MB)
Tucson Resident Office
5205 E. Comanche Street
Tucson, AZ 85707

For additional information please call Marjorie Blaine at (520) 584-1684. This Public Notice is issued by the Chief, Regulatory Division.

ED_001077_00010820-00001

ORIGINAL

PUBLIC NOTICE

US Army Corps of Engineers®

APPLICATION FOR PERMIT

Public Notice/Application No. SPL-2008-00816-MB
Comment Period: December 6, 2011 to January 5, 2012

Applicant
Rosemont Copper Company
Ms. Kathy Arnold
2450 W. Ruthrauff Rd., #180
Tucson, Arizona 85705
(520) 495-3500

Agent
WestLand Resources, Inc.
Mr. Brian Lindenlaub
4001 E. Paradise Falls Drive
Tucson, Arizona 85712
(520) 206-9585

Location

Approximately 30 miles southeast of Tucson, Arizona within portions of Sections 17, 20, 21 and 25-35, T17S, R14E; portions of Sections 31-35, T17S, R15E; portions of Sections 1, 2 and 12, T18S, R14E; portions of Sections 1, 2, 7, 10-15, 17, 18, 20-25, 35 and 36, T18S, R15E; portions of Sections 6-8, 14-23 and 27-33, T18S, R16E; portions of Sections 1 and 2, T19S, R15E; and portions of Sections 4, 5 and 6, T19S, R16E in Pima County, Arizona (Figures 1 and 2).

Activity

To discharge fill material into Barrel Canyon and associated tributaries including Wasp Canyon, McCleary Canyon, Trail Canyon, and other unnamed ephemeral washes for construction of the proposed Rosemont Copper Project open pit copper mine. The Rosemont Copper Project will, through the discharge of dredged/fill material, directly impact 38.6 acres, indirectly impact 2.5 acres, and temporarily impact 0.75 acre of potential waters of the United States (WUS) (Figure 3). For a detailed description of the proposed project, please see "Proposed Activity for Which a Permit Is Required" and "Additional Project Information" in this Public Notice.

Interested parties are hereby notified that an application has been received for a Department of the Army permit for the activity described herein and shown on the attached drawing(s). Interested parties are invited to provide their views on the proposed work, which will become a part of the record and will be considered in the decision. This permit application will be issued or denied under Section 404 of the Clean Water Act (33 U.S.C. 1344). Comments can be e-mailed to Marjorie.E.Blaine@usace.army.mil or mailed to:

U. S. Army Corps of Engineers
ATTENTION: Marjorie Blaine (SPL-2008-00816-MB)
Tucson Resident Office
5205 E. Comanche Street
Tucson, AZ 85707

ED_001077_00010820-00002

Evaluation Factors

The decision whether to issue a permit will be based on an evaluation of the probable impact, including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. All factors that may be relevant to the proposal will be considered, including the cumulative effects thereof. Factors that will be considered include conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food production and, in general, the needs and welfare of the people. In addition, the evaluation of the activity will include application of the Environmental Protection Agency (EPA) Guidelines (40 CFR 230) as required by Section 404 (b)(1) of the Clean Water Act.

The Corps of Engineers (Corps) is soliciting comments from the public; Federal, state, and local agencies and officials; Native American tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps to determine whether to issue, modify, condition, or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of necessary documentation pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Preliminary Review of Selected Factors

EIS Determination – A draft Environmental Impact Statement (EIS) for the proposed Rosemont Copper Project has been prepared by the U.S. Forest Service (USFS), Coronado National Forest. A Notice of Availability of the Draft EIS was published by the U.S. Environmental Protection Agency in the Federal Register on October 21, 2011 (76 FR 65509). The USFS is accepting comments on the Draft EIS through January 18, 2012. The Corps and the Bureau of Land Management are Federal cooperating agencies for this Draft EIS. The information provided in the Draft EIS will provide a basis for the Corps to make a decision regarding the Section 404 permit for the proposed Rosemont Copper Project. The draft EIS is available online at http://www.rosemonteis.us.

Water Quality – The applicant is required to obtain water quality certification, under Section 401 of the Clean Water Act from the Arizona Department of Environmental Quality. Section 401 requires that any applicant for an individual Section 404 permit provide proof of water quality certification to the Corps.

Cultural Resources – Formal consultation under Section 106 of the National Historic Preservation Act has been initiated by the USFS on behalf of the Corps and the BLM with the State Historic Preservation Office (SHPO) and the appropriate Native American Tribes regarding the proposed project's effect on cultural resources. The USFS will ensure that all requirements of the Memorandum of Agreement and the Historic Properties Treatment Plan will be completed.

Endangered Species –Formal consultation under Section 7 of the Endangered Species Act will be conducted by the USFS on behalf of the Corps and the BLM with the U.S. Fish and Wildlife Service (FWS). The FWS will issue a biological opinion regarding the project's effects to federally listed species and designated critical habitat.

ED_001077_00010820-00003

Public Hearing – Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearing shall state with particularity the reasons for holding a public hearing. Public meetings are currently being held for the Draft EIS, described above. A schedule for future public meetings for the Draft EIS can be found at http://www.rosemonteis.us/public-meetings.

Proposed Activity for Which a Permit is Required

Overview

The applicant has submitted a Section 404 permit application for the Barrel-only Alternative (Alternative 4 under the Draft EIS), which has been identified as the preferred alternative in the Draft EIS. Additional detail on the original proposed action, preliminary Mining Plan of Operation (MPO), as well as other alternatives considered, is provided in the Draft EIS referenced above.

The proposed Rosemont Copper Project is a copper mining project that will produce more than 230 million (M) lbs of copper per year (roughly 10% of annual US production) for 20 years. Average annual production of molybdenum and silver will be 5 M lbs and 3.5 M oz, respectively. Past and recent exploration activities have confirmed or identified the availability of approximately 600 million tons (MT) of ore. This schedule estimates a mill through-put of approximately 75,000 tons per day, which translates into an annual mill through-put of approximately 27 MT per year.

Mining of the ore will be through conventional open-pit mining techniques. Waste rock will be blasted and transported by haul truck to the waste rock storage area. Ore will be blasted and either transported by haul truck to the leach pad and processed by leaching (if it is oxide ore), or crushed and loaded onto a conveyor for transport to the mill for processing by conventional sulfide milling (if it is sulfide ore). Tailings will be stored using a dry stack tailings technique minimizing airborne releases and water seepage. The placement of waste rock will be initiated with perimeter buttresses, including placement on the perimeter of the dry-stack tailings storage areas to provide structural and erosional stability of the tailings pile.

The copper concentrates from the milling operations will be shipped off-site to a smelter. Leach ore (oxide material) will be placed on the heap leach pad. Solutions from the pad will be collected in a solution pond and then processed through the solvent extraction-electrowinning (SX/EW) plant. Copper cathodes generated from the SX/EW plant will be transported off site for further processing.

The proposed project will involve the construction and operation of various mine features, associated structures, and anticipated infrastructure necessary to support these facilities. These constructed features include: the mine pit, waste rock storage areas, heap leach area, dry-stack tailings facility, ancillary facilities and structures, mine haul roads, access roads, and off-site water and power transmission lines (Figures 2 and 3). The nature of the activities associated with each of these mine features is described below.

Mine Pit

The design of the open pit and internal mining phases incorporates geotechnical recommendations for safe slope angles, internal ramp development for access to all working areas, and pit wall smoothing to enhance stability and operator safety. Pit slope angles between ramps will vary according to rock strength, lithology and structural controls, but are expected to range from 28° to 48° between ramps. Where possible, catch benches will be spaced on 100-ft vertical intervals to maximize the effective widths for containing scree (loose rock debris). At the rim, the ultimate open pit will be approximately 6,500 ft across north to south, 6,000 ft across east to west (totaling about 950 ac in area), and will be approximately,800 to 2,900 ft deep. The pit bottom elevation is projected at 3,150 ft above mean sea level (amsl).

Impacts to potential WUS in the pit will result from the initial blasting and excavation of ore and waste rock (Figure 4). Following a blast, rubblized material, including that found in potential WUS, will be picked up with a loader, placed into a haul truck, and then deposited on the leach pad, the primary crusher stockpile, or within the waste rock storage area.

Waste Rock

The waste rock storage area, approximately 1,460 acres in size, will be constructed south of the tailings facility (Figure 5). It is designed to accommodate approximately 750 million tons of material, with an additional 540 million tons of waste rock dedicated to construction of the perimeter buttress and other facilities. The waste rock storage area will receive pit-run, or run-of-mine (ROM), waste rock consisting largely of limestone and skarn rock types, with some andesite, quartz monzonite porphyry, and arkose. The presence of substantial quantities of limestone and skarn will provide a large buffering capacity within the waste-rock storage areas to minimize the generation of acid rock drainage (ARD).

Site preparation of the waste rock storage areas will involve clearing and grubbing the existing topsoil in preparation of construction of the perimeter buttress. Impacts to potential WUS within the waste rock storage area will result from the placement of ROM waste rock. Flow-through drains, designed to pass overflows from the areas upgradient of the waste rock and tailings facility during construction and post closure, will be constructed within the major drainages to facilitate stormwater flow through the waste rock storage area and dry stack tailings facility (Figure 5). During operations, stormwater may report to the flow-through drains during severe storm events, but diversions, impoundments, and other water management features in the Plant Site area will restrict the volume of stormwater that would report to the drain system. Maintenance is not anticipated to be required for the flow-through drains. The drains will be fed from stilling or sediment ponds, which act to reduce the sediment discharging into the drains. In addition, the drains are segregated from the surrounding waste rock by a geotextile layer that prevents migration of fine sediments from the waste rock into the flow-through drains.

The placement of waste rock on the south and east sides of the waste rock facility will be initiated with perimeter buttresses designed to minimize the visual effects of the project for travelers on SR 83 and for viewers in the surrounding area. The outside face of the buttresses will be revegetated and reclaimed as soon as practicable after they are completed. Waste rock in the remaining portions of each phase will then be deposited west and/or north of (behind) these buttresses. Waste rock will also be placed in the dry-stack tailings storage areas to provide structural and erosional stability.

Concurrent with the starter buttress construction, waste rock will be deposited in lifts internal to the waste rock storage area in the upper Barrel Canyon and Trail Canyon drainages. This concurrent development is necessary to minimize congestion and improve safety and equipment productivity in the buttress areas. The ultimate crest elevations of the waste rock storage areas at the end of mining operations will be about 5,600 ft amsl for the Barrel Canyon drainage and 5,300 ft amsl for the Trail Canyon drainage.

Heap Leach

Oxide ore will be transported by haul trucks from the open pit to lined leach pads. The oxide ore will not be crushed, but will be dumped in 30-ft-high lifts atop the lined pads for subsequent leaching. Crawler dozers will be used to spread the oxide ore and cross rip the material to a depth of 5 to 6 ft to promote the infiltration of barren leach solution. Oxide ore will be leached with weak acidic solution, and the leach solution will be processed using SX-EW technology to produce high purity copper cathode plates. Oxide ore mining and placement on the leach pads will be concentrated in the early years of operation. About 85% of the oxide ore will be placed onto the leach pad by the end of Year 5 and process solutions will stop being added to the heap leach by Year 6. The heap leach pad is anticipated to continue draining pregnant leach solution (PLS) to the PLS pond for three or four years, and by Year 10 the pad should be drained and closed.

ED_001077_00010820-00005

Initial site preparation of the heap leach pad will involve grading the existing topsoil to create a base grade upon which the remainder of the leach liner will be laid. Impacts to potential waters of the U.S. will occur during initial site preparation, as the entire heap leach pad area, including the PLS and stormwater ponds, will be graded prior to the placement of the remainder of the leach liner (Figure 5). As such, potential WUS in this area will be filled by native material as part of the grading process. Captured storm flows will be incorporated into the process flows and become part of the heap leach circuit (i.e. be incorporated into the PLS, delivered to the SX-EW, and returned as raffinate, the portion of an original liquid that remains after other components have been dissolved by a solvent).

A stormwater pond will be installed to collect any excess water that may be generated during a large precipitation event. The PLS pond, a double-lined collection pond containing the copper-bearing leach solution, will be designed to overflow to the stormwater pond. Water that may accumulate in the stormwater pond will be periodically transferred by pumping to the raffinate solution pond.

Dry Stack Tailings Facility

The Rosemont dry stack tailings facility will receive dry tailings from the sulfide ore processing plant. This material will be stacked behind large buttresses constructed from pit-run waste rock. Consequently, this waste rock storage area will be active from late preproduction throughout the life of the mine. The dry-stack tailings facility will ultimately measure approximately 987 acres in area. The general design concept is to construct uniform lifts of dry tailings that are buttressed by the waste rock containment berms.

Advantages of the dry stack tailings stack method over conventional tailings disposal are:

- eliminates the need for an engineered embankment and seepage containment system
- maximizes water conservation and minimizes water makeup requirements
- can result in a more compact site
- allows opportunities for concurrent reclamation and dust control

Site preparation for the tailings will include grading and construction of the flow-through and finger drain systems within the potential WUS (Figure 5). As described above, the flow-through and finger drain systems will consist of ROM waste rock. Additional discussion related to the flow-through and finger drain system is provided in the Surface Water Management section, below.

An initial buttress will be constructed with waste rock to accommodate approximately one year of tailings storage. Concurrent tailings and waste rock placement will occur throughout the life of the tailings facility. Waste rock will be advanced ahead of the tailings level in successive lifts. The waste rock buttresses will have top widths of 150 ft to accommodate two-way haul traffic and outer slopes of about 3H:1V with benches to achieve an overall slope of approximately 3.5H:1V. This configuration will allow visual screening of the tailings placement activities from SR 83 and concurrent reclamation of the lower perimeter buttress slopes.

Dry tailings will be delivered by conveyor from the filter plant down to the tailings facility. Tailings will be placed with a radial stacker and a dozer will be used to spread the dry tailings and provide sufficient compaction for the conveyor and stacker as necessary. When the primary conveyor is inactive due to relocation or maintenance, a secondary conveyor will be used.

Within the dry stack tailings facility, loss of potential WUS will result from initial grading and the construction of the flow-through and finger drain systems and not from direct fill by dry stack tailings. In addition, although the flow-through drains are designed to pass stormwater in larger events, particularly in construction and post-closure, the development of the waste rock storage area and dry stack tailings facility is anticipated to result in significant enough reduced flows in Barrel Canyon down its confluence with McCleary Canyon that the potential WUS in this reach will be indirectly impacted (Figure 5).

Surface Water Management

For the purposes of stormwater management, the open pit, the heap leach facility, and the plant site are closed systems, with all direct rainfall contained on site. Currently designed stormwater features include the flow-through drain system, process water/temporary storage (PWTS) pond, Settling Basin, and two permanent diversion channels (Pit Diversion Channel and Permanent Diversion Channel No. 1). In addition to the primary diversions, a storage and recovery system sump will be developed in the waste rock storage area. In general, project water management facilities are intended to have sufficient capacity to handle runoff generated from 100-year, 24-hour storm events. Sediment control facilities are designed to reduce the total suspended solid loads to the minimum practical level for the 10-year, 24-hour storm event, defined as total suspended sold concentrations equal to existing conditions. Additional details related to the project stormwater management system are provided below.

Pit Diversion Channel

The Pit Diversion Channel will be constructed early in the project life to divert unimpacted stormwater around the west and south sides of the open pit (Figures 6 and 7). Water in the Pit Diversion Channel will be directed to a perimeter containment area (PCA) located along the west side of the waste rock storage area, between the toe of the waste rock and a natural ridge. An overflow channel leads out of this PCA into another PCA. The only impact to potential WUS resulting from this diversion is the interception of flows from the upper reach of Wasp Canyon which will be directed to the above described PCA. Wasp Canyon downstream of the Pit Diversion Channel will be lost primarily to the development of the pit, the Plant Site area, the construction of haul roads, and dewatering effects of the diversion. The Pit Diversion Channel is sized to convey the local and general probable maximum precipitation (PMP) event.

Permanent Diversion Channel No. 1

This diversion channel will be constructed at the beginning of the project on the northeast side of the pit and will divert unimpacted stormwater from an upgradient watershed around the plant site into McCleary Canyon (Figure 8). This feature will not impact any identified potential waters of the U.S. Like the Pit Diversion Channel, Permanent Diversion Channel No. 1 is sized to convey the local and general PMP event.

Plant Site Stormwater Features

Stormwater flows from the plant site will be collected in the lined PWTS pond, located immediately downgradient of the plant site (Figure 8). The PWTS pond functions as a closed system with all water that is directed to the pond from the plant, in addition to collected stormwater runoff, incorporated into the process water flows.

Both the PWTS Pond and Settling Basin will be lined. The PWTS Pond is a combination of two ponds: the Process Water (PW) Pond and the Temporary Storage (TS) Pond. A spillway connects the Settling Basin to the PW Pond portion of the PWTS Pond. Another spillway connects the PW Pond to the TS Pond. The PW Pond is designed to contain the following during operations: recovered water from tailings thickeners, recovered water from the tailings filter plant, overflow from the settling basin, fresh water make-up, accumulated groundwater and stormwater from the open pit, and stormwater runoff from the plant site area. This stormwater will not be discharged offsite. The TS Pond is designed to contain stormwater runoff and overflow from the PW Pond. The Settling Basin is designed for short-term storage of non-filtered tailings and limited stormwater collection.

In addition, the unlined Crusher Stormwater Pond will be constructed immediately north of the Primary Crusher, south of the general Plant Site area (Figure 8). Similar to the PWTS Pond and Settling Basin, potential WUS associated with the Crusher Stormwater Pond will be lost from the initial construction of the pond embankment, with upgradient waters being lost as a result of excavation to ensure pond capacity, sediment fill, or dewatering effects of the pit. Other miscellaneous ponds will be placed throughout the plant site area as needed to control stormwater runoff, though these ponds will not be lined and will not discharge offsite during operations.

ED_001077_00010820-00007

Post-closure grading of the plant site area will include the construction of stock ponds/sediment basins at the same locations as the former PWTS Pond and Settling Basin and other former ponding areas. Upon removal of the pond liner, stormwater reaching the former PWTS Pond area will pass into a flow-through drain (South 1 Drain) leading out of Wasp Canyon drainage and into the main Barrel Canyon flow-through drain (South Main Drain). Construction of the PWTS Pond will result in loss of potential WUS resulting from the construction of the embankment as well as regrading to ensure proper pond capacity. The Settling Basin is constructed in uplands and will not result in the loss of potential WUS.

Flow-Through Drains

Because of the potential for a significant amount of stormwater runoff to be generated between the stormwater diversions and the waste rock and tailings facilities, particularly during construction and post-closure, flow-through drains will be constructed to direct and convey excess stormwater flows to the east side of the waste rock and tailings facility.

Flow-through drains will be constructed within existing drainages throughout the dry stack tailings facility and the waste rock storage area (Figures 9 and 10). Flow-through drains are porous rock drains that allow stormwater to be diverted underneath the dry stack tailing and waste rock facilities. Selected clean ROM rock from the open pit will be the primary material source for the flow-through drains. Waste rock will also be placed in minor washes (finger drains) in the dry stack tailings area to ensure separation between the tailings material and the wash surface. Finger drains will not be covered with a geotextile. Because the finger drains do not extend to the west side of the waste rock and tailings facility, they do not function to provide a hydraulic connection between the east and west sides of the waste rock and tailings facility. The flow-through drains are designed to allow conveyance of the 100-year 24-hour storm volume from the contributing basin through the drain within 30 days.

Compliance Point Dam and PCAs

The Compliance Point Dam is a six-ft high, porous, rock-fill structure where additional sediment controls will be applied as necessary to manage stormwater quality and where stormwater samples will be taken. Perimeter containment areas (PCAs) are located between the waste rock buttress and the adjoining ridge, collect stormwater from a relatively small watershed defined by the waste rock buttress and the adjoining ridge, and filter this stormwater into the waste rock storage area or allow it to evaporate.

Waste Rock Storage Area and Dry Stack Tailings Facility

The buttresses of the dry stack tailings facility will advance ahead of the tailings surface to provide stormwater containment while concurrent reclamation and best management practices, such as settling ponds, will be used to limit erosion on the outer slopes. The top of the tailings area is largely impervious and will be sloped inward so precipitation falling on top of active tailings area will remain on top and evaporate. Ponded water may be pumped to the PWTS pond as needed to limit infiltration into the tailings mass. Stormwater management at the waste rock facilities will be similar to that for the dry tailings facility.

Additional stormwater control features have been incorporated into the reclaimed surface of the waste rock storage area and dry stack tailings facility (benching, stilling ponds, etc.). However, development of these surface water management features will not impact potential WUS which will have been lost during the initial construction of the respective facilities, either through the construction of flow-through drains or the direct deposit of ROM waste rock. A certain volume of stormwater will continue to be shed off of these facilities and discharged to downstream receiving waters, both during construction and operations, and following closure.

Plant Site

The Plant Site Area facilities necessary to support the proposed Rosemont mine and ore processing operations include an administration building, change house, warehouse with lay down yards, analytical laboratory, light

vehicle and process maintenance building, mine truck shop, mine truck wash and lube facility, powder magazines and ammonium nitrate storage, and a main guard shack with truck scale (Figure 8). Also included are fuel and lubricant storage and dispensing facilities for mine and process equipment.

Development of the Plant Site area facilities will result in the loss of potential WUS in several ways. As described above, the Plant Site area will include several stormwater pond features that will require the ground surface to be regraded in preparation of the pond construction, resulting in direct fill of native soil in potential waters of the U.S., with liner material over the regraded native soil. Other minor stormwater catchments in the Plant Site area will be unlined and constructed behind minor dam features. Potential WUS in these areas will be filled directly by the dam fill (comprised largely of native soil and rock fill); upgradient of the minor dam features, potential WUS are anticipated to be graded over as part of the pond construction, resulting in loss by direct fill of native material. Similarly, filling of other potential WUS in the Plant Site area will be required in order to build up a suitable foundation for features such as the pebble crusher, tailings thickeners, tailings filter plant, and tank farm (Figure 8).

In addition, a reach of McCleary Canyon, immediately downstream of its crossing by the Primary Access Road, will be modified from its current alignment to allow a minor expansion in the northeast portion of the Plant Site area (Figure 11). This portion of McCleary Canyon will be lost as a result of the fill from native material and reinforcement by rock riprap near the base of the slope. This channel realignment will not result in the modification of downstream flows. Similarly, expansion of the Plant Site area construction pad will require an encroachment into the McCleary Canyon drainage on the north side of the Plant Site, resulting in impacts to potential waters of the U.S. from the discharge of native fill and riprap.

Haul and In-Plant Roads

Mine haul roads will be constructed around the north, east, and south edges of the planned ultimate pit limits. Temporary haul roads will be constructed internal to the ultimate pit limits as necessary to provide access to all working faces and to provide connection to the primary crusher, oxide leach pads, and the waste rock storage area located to the southeast, east, and northeast of the pit. Mine haul roads will be constructed using material excavated from the open pit, typically consisting of limestone, skarn, arkose, andesite, and quartz monzonite porphyry rock types. Road surface material may be crushed and screened as needed to produce a smooth running surface. Roads will be slightly crowned to promote drainage of surface runoff to side ditches. Side ditches will funnel stormwater to the flow-through drains or secondary diversion channels. Haul and in-plant roads may be culverted during portions of the mine construction and/or operations to manage localized stormwater flows. In the plant site, these flows would not discharge off site. Haul roads to the waste rock storage area and dry stack tailings facility will generally not be culverted. Loss of potential WUS in these areas will be a result of fill of ROM waste rock and/or regrading as part of post-closure reclamation.

Pit haul roads will generally be 125-ft wide, inclusive of safety berms and ditches, and will support the traffic of 260-T off-highway mine haulage trucks. The gradient for the mine haul roads will vary but will generally be under 10%; short intervals may be constructed as steep as 12%. The minimum inside lane radius for switchbacks within the pit will be 40 ft. Roads will be slightly crowned to promote drainage of surface runoff to side ditches or berms. Safety berms will be constructed to a minimum height of about 6 to 8 ft, the height at the center of the largest truck wheel.

In-plant roads will generally measure 24-ft wide with 5-ft wide drainage channels, as required, along both sides of the road. In-plant roads will extend from the plant entrance around the perimeter of the process facilities and along the crushed ore conveyor to the mine truck shop. An access road will leave the perimeter road at the crushed ore stockpile and serve the fresh water storage tank, potable water tank, and process water tank. All traffic on plant roads will be right hand traffic until reaching the mine truck shop. At this point, traffic will become left hand drive to accommodate haul trucks in the area. An access road will also be constructed between the open pit and the truck shop located near the plant site. This road will have the same design

parameters and speed limits as the mine haul roads. Like the open pit and heap leach facilities, the plant site, including in-plant roads will be a closed system with all precipitation and local runoff collected in the PWTS pond and treated as contact water.

Access Roads

Access to the property will be via two routes: the primary access route from the east, and a secondary access route from the west. The primary access road to the property will extend approximately 3.2 mi from SR 83 and end at the main guard building at the entrance to the plant (Figure 12).

The primary access road will be designed for 35-mph traffic and consist of two lanes, one in each direction. Each lane will be 14-ft wide with a 4-ft wide shoulder, providing a 36-ft wide road bed. Each side of the roadway will have a collection ditch which will typically be 4 ft deep with side slopes of about 2H:1V. The resulting 8-ft wide channel on each side will collect and direct stormwater to diversion channels or receiving waters. The access road will be crowned in the center with the surface sloped 2% to each side. The road surface will consist of 8 in of compacted ADOT aggregate (Class 2). The minimum easement for the access road on level ground will be 68 ft, and greater where cut and fill toe lines extend beyond the minimum distance. The primary access road will cross potential WUS at five locations, all which will be culverted (Figures 13 and 14). Details of the culverts are provided in Table 1 below. Roadside diversions will either discharge to containment areas, or discharge directly to potential waters of the U.S. where roadways cross these drainages, resulting in some increased flows to these drainages during storm events. The impacts to these areas, described below, include erosion protection adequate to protect these areas.

Table 1. Primary Access Road Culvert Details

Culvert ID	Size	Material	Estimated Volume of Fill (cubic yards)	Loss of Potential Waters of the U.S. (acres)
C1	42' Arch	Concrete	532	0.22
C2	30"	HDPE	452	0.28
C3	60"	HDPE	282	0.07
C4	60"	RCP	323	0.08
C5	60"	RCP	242	0.06

Secondary access to the plant will be provided to the west over the ridge of the Santa Rita Mountains, and will connect to Santa Rita Road at Helvetia Road. This west access road is considered a secondary access for plant maintenance employees to access the fresh water pump stations and pipeline. The design for the secondary access road from Santa Rita Road to the plant entrance is based on one 11-ft wide lane without shoulders, similar to existing FS roads. The secondary access road currently exists and crosses a potential water of the U.S. in only one location. This location will not be culverted. Minor grading of the crossing may be required as needed, but this activity would be considered a maintenance activity and impacts to the potential water of the U.S. would be negligible.

Offsite Water and Power Transmission Lines

The proposed waterline alignment largely parallels Santa Rita Road through the Santa Rita Experimental Range, and an existing unpaved road over the Santa Rita Mountains, through Lopez Pass (Figure 15). The proposed waterline will be constructed below grade, with a minimum soil cover of 36 inches within State Land or

ED_001077_00010820-00010

easements, and 24 inches on the mine property. The pipe bedding requirements will follow the manufacturer's recommendations. Isolation valves will be installed in the pipeline at intervals of approximately 3,000 feet and at elevation changes of 250 feet.

Impacts resulting from the installation of the pipeline itself will, for most drainage crossings, be temporary, as the pipe trench will be backfilled with the same soil material that had been removed and sidecast to create the trench. In drainages where the stability of the pipe is of concern, self-compacting pipe bedding material (e.g., crushed stone) may be placed immediately around the pipe. The remainder of the trench would be backfilled with native material. The total width of the trenching and sidecast will be approximately 30 feet (Figure 16). There are an estimated 45 crossings of potential WUS resulting from the proposed waterline.

For drainage crossings where the wash material is comprised of soil and gravel, the pipeline will be buried below the calculated scour depth. Use of a non-erosive material, such as concrete, is only anticipated to be required in areas where the pipeline will be placed in relatively soft bedrock. In these instances, a non-erosive material, such as concrete, will be used to backfill the trench over the pipe to the same level as the bedrock. As a result, the bottom elevation of the potential WUS will not change. Some minor bank stabilization may also be required in association with these crossings.

Construction of the waterline includes a permanent unpaved access road. Impacts to potential WUS resulting from the access road are anticipated to be minimal, as culverts will not be required for the majority of crossings. Most wash crossings will be at-grade or will have minor fill of native material during the construction period to facilitate use by light vehicle traffic. These minor fills will be removed following completion of the waterline. In other areas, the access road is anticipated to divert back to Santa Rita Road for short reaches in order to avoid wash crossings. Culvert crossings will likely only be required where the roadway crosses potentially jurisdictional waters on the east end of the alignment on the slopes of the Santa Rita Mountains. It is assumed that no more than five (5) such culverted crossings will be required with a maximum width of 40 feet per crossing. Some minor bank stabilization may also be required in association with these culverted road crossings.

Construction of the pipeline will include up to five forebay reservoirs and pump stations. The reservoirs and pump stations will be built outside potential WUS.

Electrical power will be provided by Tucson Electric Power (TEP) from a link attached to transmission lines on the South Substation loop. The transmission line will be comprised of above-ground transmission lines and will generally follow the same alignment as the waterline (Figure 15). Maintenance access will be provided by the same unpaved road built for the waterline.

For the majority of the transmission line alignment, potential waters of the U.S. will be able to be avoided. On the east end of the alignment, the topography of the western slope of the Santa Rita Mountains provides some constraints for the construction of the powerline. As such, it is anticipated that up to three (3) utility poles will need to be constructed within one or more potential WUS. The pole structures themselves would not result in a significant volume of fill or loss of potential waters of the U.S., but establishing access for heavy equipment to install the poles would likely require some level of temporary impact.

Proposed Project Impacts

The proposed Rosemont Copper Project will directly impact approximately 38.6 acres with the discharge of dredged/fill material as detailed in Table 1. Additionally, approximately 2.5 acres will be indirectly impacted by the reduced flows in Barrel Canyon down to its confluence with McCleary Canyon, resulting from the development of the dry stack tailings and waste rock facilities in Barrel Canyon. Approximately 0.75 acre of potential WUS will be temporarily impacted by water line crossing and road access for utility pole construction. These impact areas are slightly higher than those identified in the Draft EIS prepared by the USFS as a result of more refined mapping developed for the Section 404 permit application. A detailed discussion of the proposed project impacts is in the draft EIS.

ED_001077_00010820-00011

Table 2. Rosemont Project Feature Direct Impacts and Volume of Fill

Project Feature	Impact Type/Fill Type	Fill Amount (cubic yards)	Permanent Impact to Waters (acres)	Temporary Impacts to Waters (acres)
MINE PIT	Blasting and Excavation/None	0	4.40	0
LEACH PAD	Grading/Native Material	1,839	0.76	0
Stormwater and PLS Pond	Grading/Native Material	774	0.32	0
WASTE ROCK	Excavated Waste Rock/ ROM Rock	19,941	8.24	0
DRY STACK TAILINGS	Excavated Waste Rock/Selected ROM Rock	66,792	20.70	0
SURFACE WATER MANAGEMENT				
Pit Diversion Channel	Construction Fill /Native Material and Rock Fill	210	0.13	0
Compliance Point Dam	Minor dam construction / Native Material and Rock Fill	581	0.18	0
PLANT SITE				
PWTS Pond and Settling Basin	Grading, Pond Preparation/Native Material and Rock Fill	613	0.38	0
Crusher Stormwater Pond	Grading, Pond Preparation/Native Material and Rock Fill	532	0.22	0
Regrading and Pad Construction	Grading/Native Material	4,040	1.76	0
HAUL ROAD CROSSINGS				
Pit Diversion Channel Haul Road	Road Construction/ROM Waste Rock	226	0.14	0
Leach Pad Haul Road	Road Construction/ROM Waste Rock	726	0.30	0
Crusher Haul Road	Road Construction/ROM Waste Rock	363	0.15	0
ACCESS ROAD CROSSINGS				
Culvert C1	Triple Con-Arch/Native Material and Rock Fill	532	0.22	0
Culvert C2	Culvert/Native Material and Rock Fill	452	0.28	0
Culvert C3	Culvert/Native Material and Rock Fill	282	0.07	0
Culvert C4	Culvert/Native Material and Rock Fill	323	0.08	0
Culvert C5	Culvert/Native Material and Rock Fill	242	0.06	0
OFFSITE WATER LINE				
Water Line Crossings	Trenching, sidecast, temporary road access/ Native Material, Riprap, Pipe Bedding	320	0.10	0.50
Bedrock Crossings	General Grading/Native Rock and Fill and Concrete	480	0.10	0
OFFSITE TRANSMISSION LINE				
Utility Pole Construction	Utility Pole Installation/Native Material and Concrete	75	0.05	0
Road Access for Utility Pole Construction	Ramp Access/Native Material	0	0	0.25
	TOTAL	**99,343**	**38.6**	**0.75**

Additional Project Information

For purposes of the Section 404(b)(1) alternatives analysis, the basic project purpose of the proposed Rosemont Copper Project is copper mining, which is not water dependent. The overall project purpose of the proposed Rosemont Copper Project is to develop the mineral resources associated with an ore deposit in southeastern

ED_001077_00010820-00012

Arizona (Pima, Pinal, Gila, Graham, Greenlee, Cochise, and Santa Cruz counties) using conventional open pit mining and sulfide (mill and concentrate) and oxide (leach and SX/EW) ore processing for the purpose of producing copper and/or copper precursors, silver, and molybdenum. The draft Section 404(b)(1) alternatives analysis is provided as an Appendix in the Draft EIS.

The primary drainage in the proposed project site is Barrel Canyon, with its main tributaries being Wasp Canyon, McCleary Canyon, and Scholefield Canyon. Barrel Canyon drains into Davidson Canyon on the east side of SR-83. Davidson Canyon Wash is tributary to Cienega Creek, tributary to Pantano Wash, tributary to the Rillito River, tributary to the Santa Cruz River which is a Traditionally Navigable Water. Several seeps and springs are present within the proposed project site, including Scholefield Spring (which supports a potentially jurisdictional wetland) located in the north portion of the proposed project site and Rosemont Spring northwest of Rosemont Camp within the Project.

The elevation on the property ranges from approximately 6,824 feet above mean sea level (amsl) at Weigles Butte on the west edge of the proposed project site to approximately 4,500 feet at the lower end of Barrel Canyon. The ridge on the west edge of the property constitutes the main crest of the Santa Rita Mountains. Topographically, the site consists of mountain front and rolling foothills bisected by ephemeral washes (with potential intermittent reaches within McCleary Canyon) draining generally east toward Davidson Canyon, which discharges to Cienega Creek near Interstate 10. Drainages on the west side of the Santa Rita Mountains flow generally west and northwest toward the Santa Cruz River. Underlying geologic units include metamorphic rocks and limestone on the higher ridges and conglomerate and alluvium in the lower hills. The two biomes present within the proposed project site are Madrean evergreen woodland and semidesert grassland. Madrean evergreen woodland covers the higher elevation parts of the proposed project site, generally in the western and southern areas. This community is characterized by open woodlands or savanna with trees interspersed with grasses and forbs. Semidesert grassland covers the lower elevation parts of the proposed project site primarily in the northern and eastern areas. This community is characterized by open grasslandswith widely scattered shrubs and cactus. At middle elevations within the proposed project site, the semidesert grassland grades into the Madrean evergreen woodland in a wide transition zone. Riparian areas are present along some of the major washes within the property and in small patches at some of the more reliable springs. Ephemeral flow in Barrel, McCleary, and Wasp Canyons (with potential intermittent flows in short reaches of McCleary Canyon) supports areas with tree and shrub species not present on drier upland ridges. Several springs in the property, including Rosemont Spring, Scholefield Spring, and Figtree Spring, support a variety of trees, shrubs, and herbaceous plants not found elsewhere within the proposed project site. The highest vegetation density riparian habitat was found in a relatively short, wet reach in upper McCleary Canyon and in association with Scholefield and Fig Tree springs.

The applicant is required to provide a Habitat Mitigation and Monitoring Plan in conformance with the Corps' mitigation rule prior to a permit decision. A preliminary mitigation concept has been previously submitted to the Corps. The final mitigation plan will conform to the Corps' and the U.S. Environmental Protection Agency's (EPA) "Final Rule for Compensatory Mitigation for Losses of Aquatic Resources" (33 C.F.R. Parts 325 and 332 and 40 C.F.R. Part 320; published in 73 Fed. Reg. 19594-19705) hereinafter referred to as the 2008 Mitigation Rule. Components of the final plan are listed below (33 CFR § 332.4(c)).

Corps/EPA mitigation rules include a specific order in which five general classes of compensatory mitigation options must be considered: 1) mitigation banks, 2) in-lieu fee programs, 3) permittee-responsible mitigation under a watershed approach, 4) permittee-responsible mitigation through on-site and in-kind mitigation, and 5) permittee-responsible mitigation through off-site and/or out-of-kind mitigation. Rosemont has considered these five general classes of compensatory mitigation when developing the preliminary mitigation plan:

ED_001077_00010820-00013

Mitigation Banks. Mitigation banks are the preferred method of mitigation. 33 C.F.R. §332.3(b)(2) and (3). However, there are currently no approved mitigation banks in Santa Cruz watershed, and so this approach is not practicable for Rosemont.

In-lieu Fee. An in-lieu fee program includes a sponsoring entity that assumes responsibility for overseeing the mitigation site in exchange for a fee. It is the second most preferable form of mitigation. 33 C.F.R. §332.3(b)(2). In-lieu fees are calculated by estimating the cost of onsite mitigation for the project, and then applying a per-acre cost for the mitigation. Currently there are ten (10) sponsoring entities in the in-lieu fee program in Arizona, only one of which (the Tucson Audubon Society) has an approved in-lieu fee program in the Santa Cruz River watershed. The North Simpson Farm project is a joint effort by the Tucson Audubon Society and the City of Tucson to enhance riparian habitat along the Santa Cruz River near Marana, Arizona. In addition, the Arizona Game and Fish Department is currently working with the Corps to have several projects accepted into the in-lieu fee program, though the schedule for those projects coming online is unknown.

Given the above, there are currently no suitable in-lieu fee projects for the Rosemont Project. As such, permittee-responsible mitigation approaches are also being evaluated.

Permittee-responsible mitigation under a watershed approach. The only approved watershed plan in the Santa Cruz River watershed is Pima County's Sonoran Desert Conservation Plan (SDCP). However, the applicability of the SDCP for compensatory mitigation under CWA Section 404 is in only the preliminary stages of evaluation by the Corps. As such, this option is not anticipated to be available for the proposed Rosemont Copper Project.

Permittee-responsible mitigation through on-site and in-kind mitigation. The Corps mitigation rule states: "***On-site*** means an area located on the same parcel of land as the impact site, or on a parcel of land contiguous to the impact site." Rosemont is currently evaluating the potential for contiguous offsite Rosemont-owned parcels to offer compensatory mitigation for impacts to the impacted potential waters of the U.S. The functions and services of the ephemeral drainages on these mitigation parcels would be anticipated to be comparable to those proposed to be impacted by the proposed Rosemont Copper Project. Rosemont anticipates that mitigation credit for these parcels will be available through preservation with either a restrictive covenant or conservation easement placed over the mitigation lands. The mitigation ratio that will be available for these mitigation lands will be determined as the mitigation plan is further developed.

Permittee-responsible mitigation through off-site and/or out-of-kind mitigation. Rosemont is evaluating additional offsite parcels for their potential to provide compensatory mitigation opportunities. While the location and nature of the sites is currently confidential, all of the parcels being considered are within the Santa Cruz River watershed and offer varying opportunities for preservation or restoration of surface water resources.

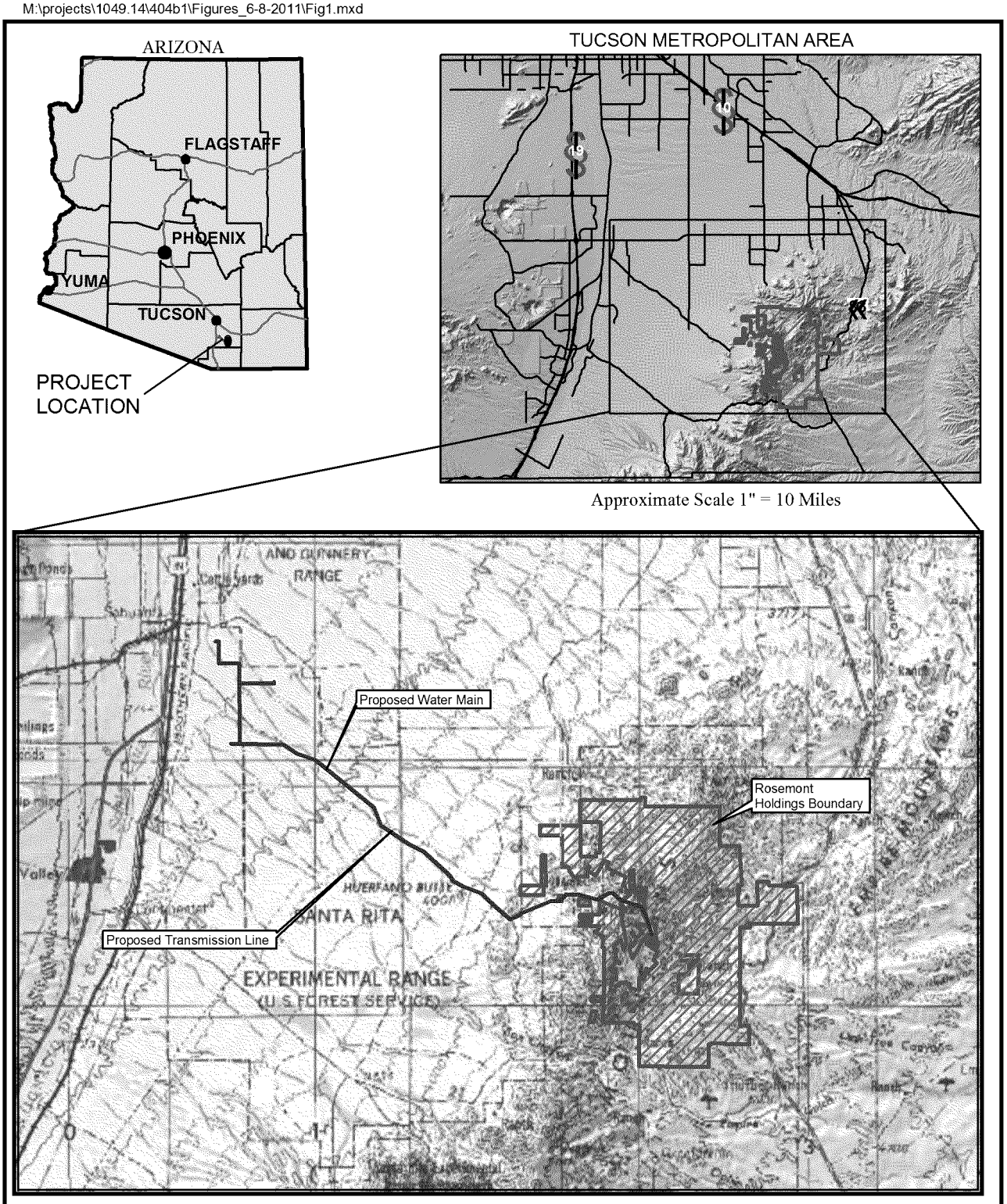
Proposed Special Conditions

To be developed.

For additional information please call Marjorie Blaine at (520) 584-1684. This Public Notice is issued by the Chief, Regulatory Division.

ED_001077_00010820-00014

M:\projects\1049.14\404b1\Figures_6-8-2011\Fig1.mxd



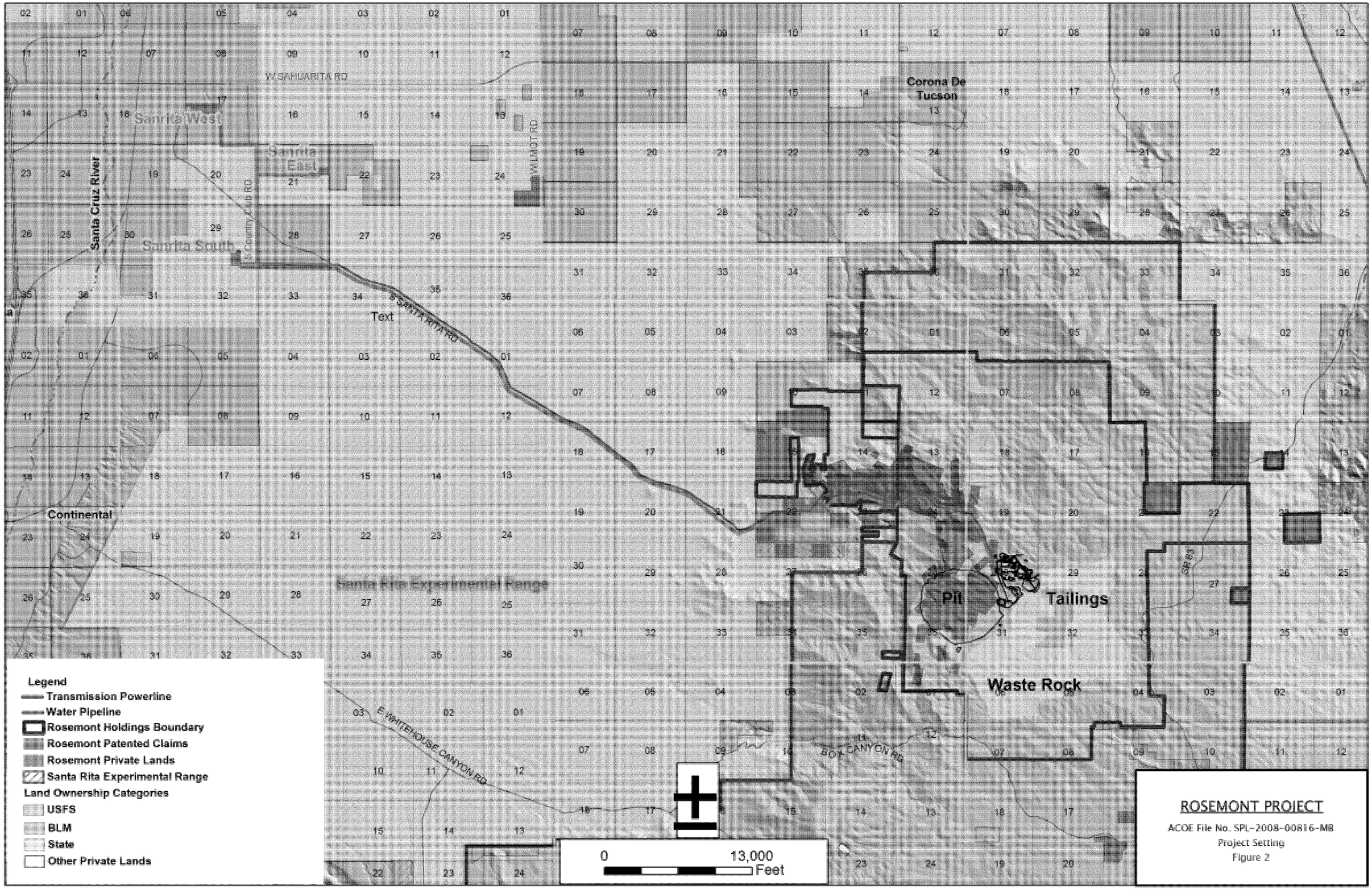
Pima County, Arizona
Sahuarita, Green Valley, Mount Fagan,
Corona De Tucson, Empire Ranch,
& Helvetia USGS 7.5' Quadrangles

WestLand Resources, Inc.
Engineering and Environmental Consultants

0 16,000
Feet

ROSEMONT PROJECT

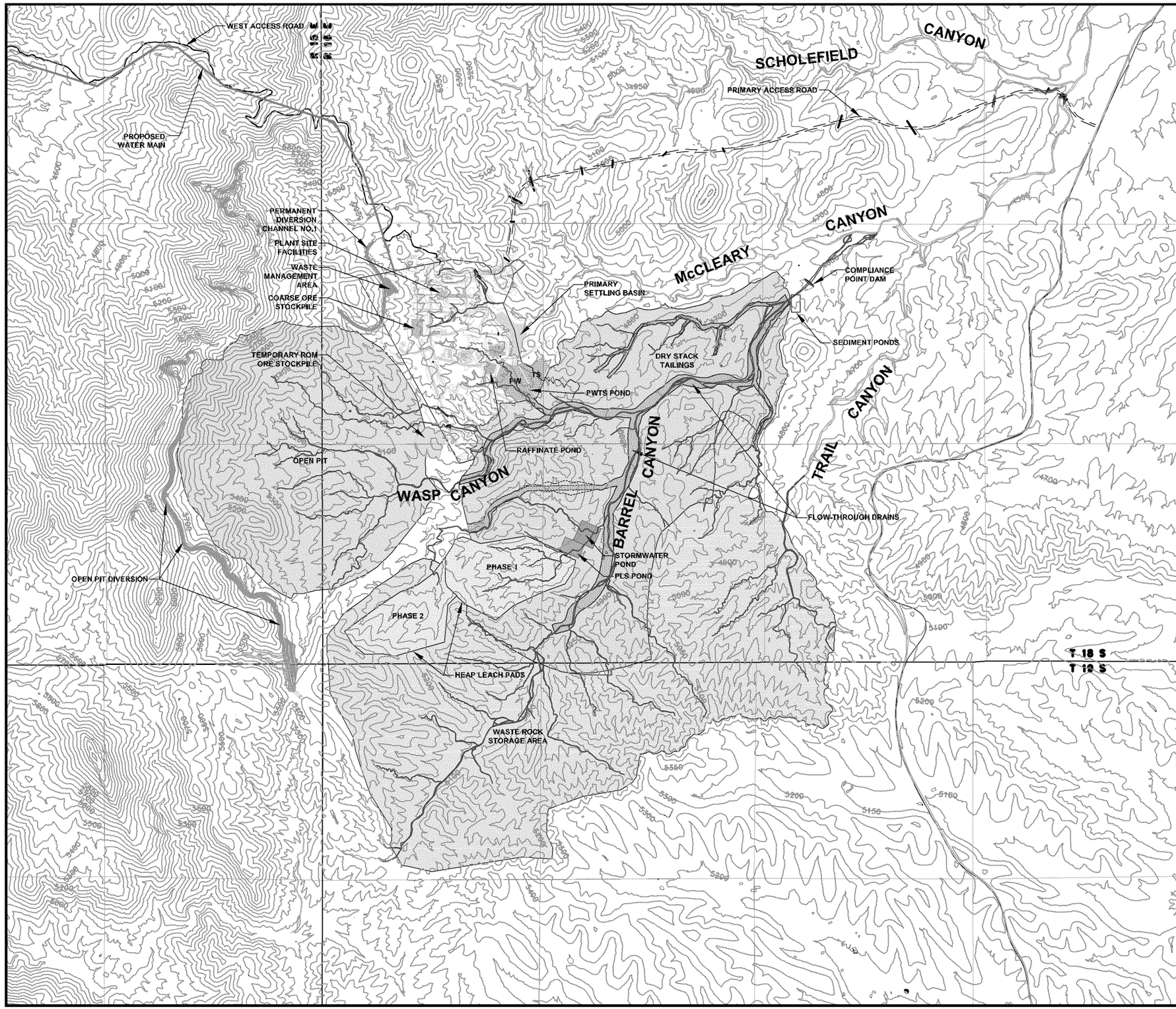
ACOE File No. SPL-2008-00816-MB
Vicinity Map
Figure 1



M:\projects\1049.14\404b1\November 2010\Figures\Figure_12_Proposed_Power_Rev_8-9-11.mxd

M:\projects\1049.15\Public_Notice\Figures_11_29_11\Fig3_Proposed_Project.dwg

Revision Date-Author



LEGEND

- POTENTIAL JURISDICTIONAL WATERS
- DIRECTLY IMPACTED POTENTIAL JURISDICTIONAL WATERS
- INDIRECTLY IMPACTED POTENTIAL JURISDICTIONAL WATERS
- PROPOSED PRIMARY ACCESS ROAD
- ACCESS ROAD CULVERTS
- EXISTING PAVED ROAD
- SECTION BOUNDARIES
- TOWNSHIP & RANGE BOUNDARIES
- FLOW-THROUGH DRAIN

APP REGULATED FACILITIES

- Dry Stack Tailings Facility
- Raffinate Pond
- Heap Leach Pads
- PLS Pond
- Stormwater Pond
- Open Pit
- Waste Rock Storage Area

NOTES:

1. TEMPORARY DIVERSIONS, SEDIMENT PONDS, AND GENERAL STORMWATER CATCHMENTS WILL BE UTILIZED ON AS A NEEDED BAIS AS DETERMINED BY FIELD CONDITIONS IN ORDER TO PROTECT FACILITIES.
2. LAYOUT BASED ON JULY 2010 PLANT SITE FACILITY LOCATIONS AND BARREL ONLY ALTERNATIVE FOR ROSEMONT RIDGE LANDFORM.

N

0 1200 2400 Feet

Original Source:

TETRA TECH

WestLand Resources Inc.
Engineering and Environmental Consultants
4001 E. Paradise Falls Drive
Tucson, Az 85712 (520) 206-9585

ROSEMONT PROJECT

ACOE File No. SPL-2008-00816-MB

Proposed Project
Figure 3

END OF PIT DIVERSION CHANNEL
PIT ELECTRIC LOOP ROAD CONTINUES

PIT DIVERSION CHANNEL
PIT ELECTRIC LOOP ROAD

DROP
STRUCTURE

PIT DIVERSION

FILL AREA

PIT ELECTRIC
LOOP ROAD

HAUL ROAD

OPEN PIT

OPEN PIT
(ULTIMATE LIMITS)

PIT ELECTRIC LOOP ROAD

PERMANENT DIVERSION
CHANNEL NO. 1

HEAP LEACH
PHASE 2

PLANT SITE SEE
FIGURE 8

LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- TOWNSHIP/RANGE LINE
- SECTION LINE
- SURFACE FLOW DIRECTION
- POTENTIALLY JURISDICTIONAL WATER OHWM (IMPACTED/LOST)
- POTENTIALLY JURISDICTIONAL WATER OHWM (NON-IMPACTED)

Data Source - Tetra Tech, April, 2010

W
S N
E

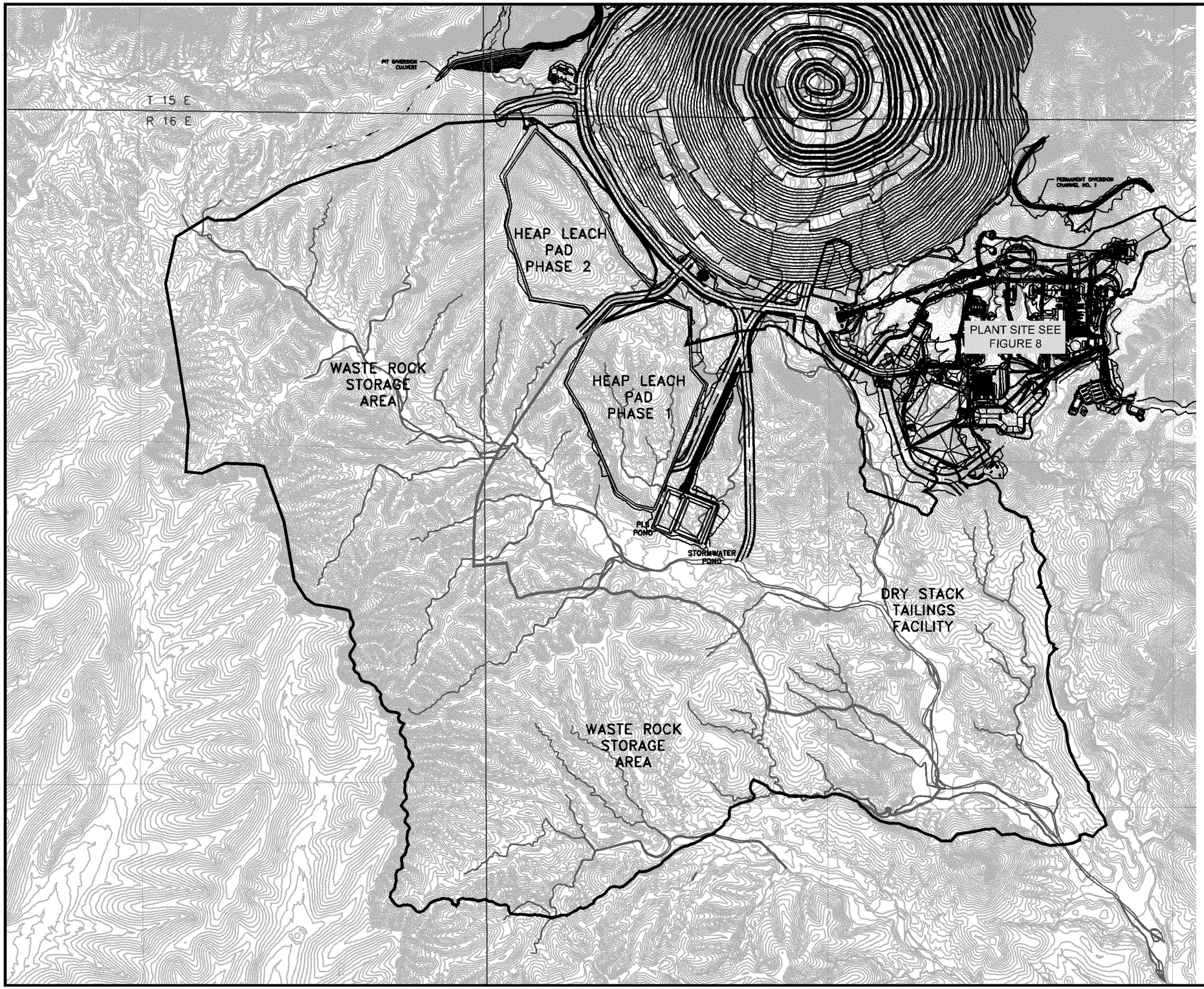
0' 350' 700'

WestLand Resources Inc.
Engineering and Environmental Consultants
4001 E. Paradise Falls Drive
Tucson, Az 85712 (520) 206-9585

ROSEMONT PROJECT

ACOE File No. SPL-2008-00816-MB
Mine Pit

Figure 4



LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- TOWNSHIP/RANGE LINE
- SECTION LINE
- SURFACE FLOW DIRECTION
- POTENTIALLY JURISDICTIONAL WATER OHWM (IMPACTED/LOST)
- POTENTIALLY JURISDICTIONAL WATER OHWM (NON-IMPACTED)

Data Source - Tetra Tech, April, 2010

W S N E

0' 750' 1500'

WestLand Resources Inc.
Engineering and Environmental Consultants
4001 E. Paradise Falls Drive
Tucson, Az 85712 (520) 206-9585

ROSEMONT PROJECT

ACOE File No. SPL-2008-00816-MB
Waste Rock,Tailings & Heap Leach Facilities

Figure 5

Data Source - Tetra Tech, April, 2010

LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- TOWNSHIP/RANGE LINE
- SECTION LINE
- SURFACE FLOW DIRECTION
- POTENTIALLY JURISDICTIONAL WATER OHWM (IMPACTED/LOST)
- POTENTIALLY JURISDICTIONAL WATER OHWM (NON-IMPACTED)
- SECTION DETAIL
- FIGURE NUMBER

W S N E

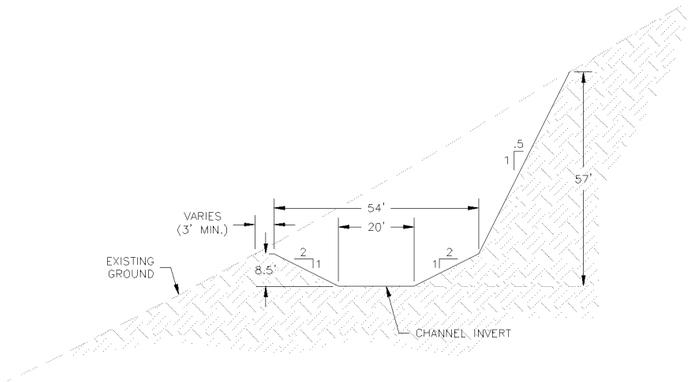
0' 300' 600'

WestLand Resources Inc.
Engineering and Environmental Consultants
4001 E. Paradise Falls Drive
Tucson, Az 85712 (520) 206-9585

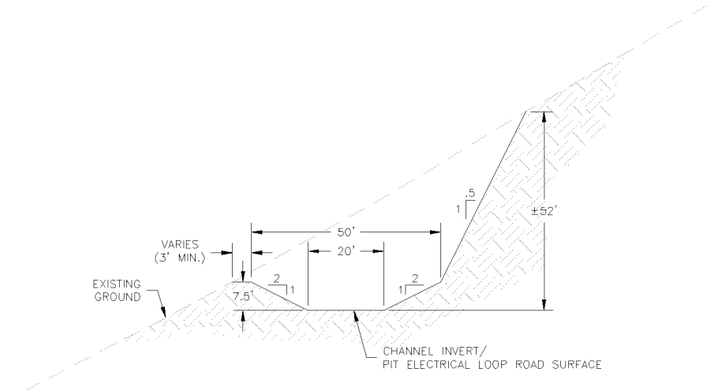
ROSEMONT PROJECT

ACOE File No. SPL-2008-00816-MB
Pit Diversion Channel

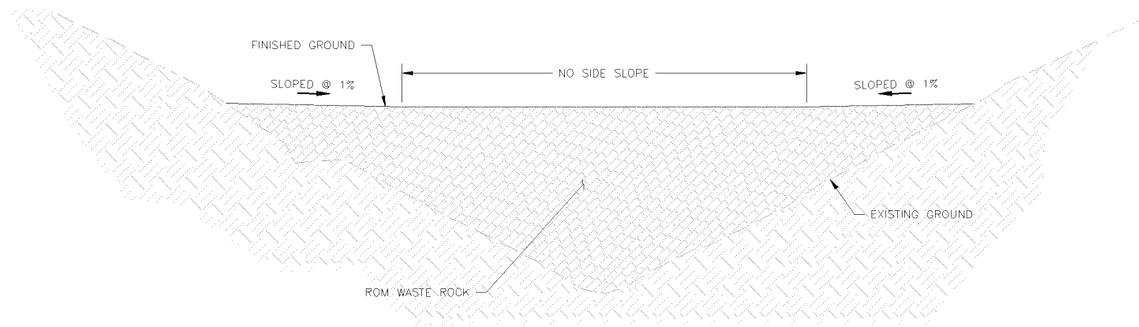
Figure 6



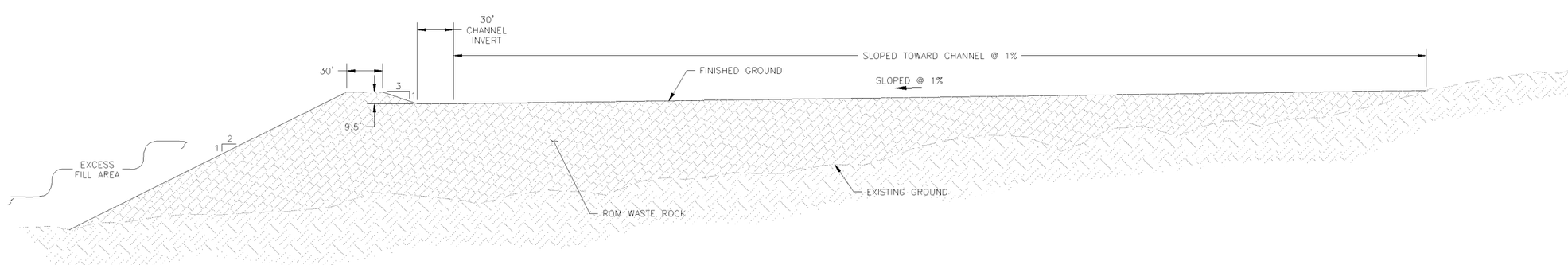
C 7 PIT DIVERSION LOWER CHANNEL – TYPICAL SECTION
SCALE: 1"= 20' (22"x34" FORMAT)



D 7 PIT DIVERSION UPPER CHANNEL – TYPICAL SECTION
SCALE: 1"= 20' (22"x34" FORMAT)



A 7 PIT DIVERSION FILL AREA – SECTION
SCALE: 1"= 30' (22"x34" FORMAT)



B 7 PIT DIVERSION FILL AREA – SECTION
SCALE: 1"= 50' (22"x34" FORMAT)

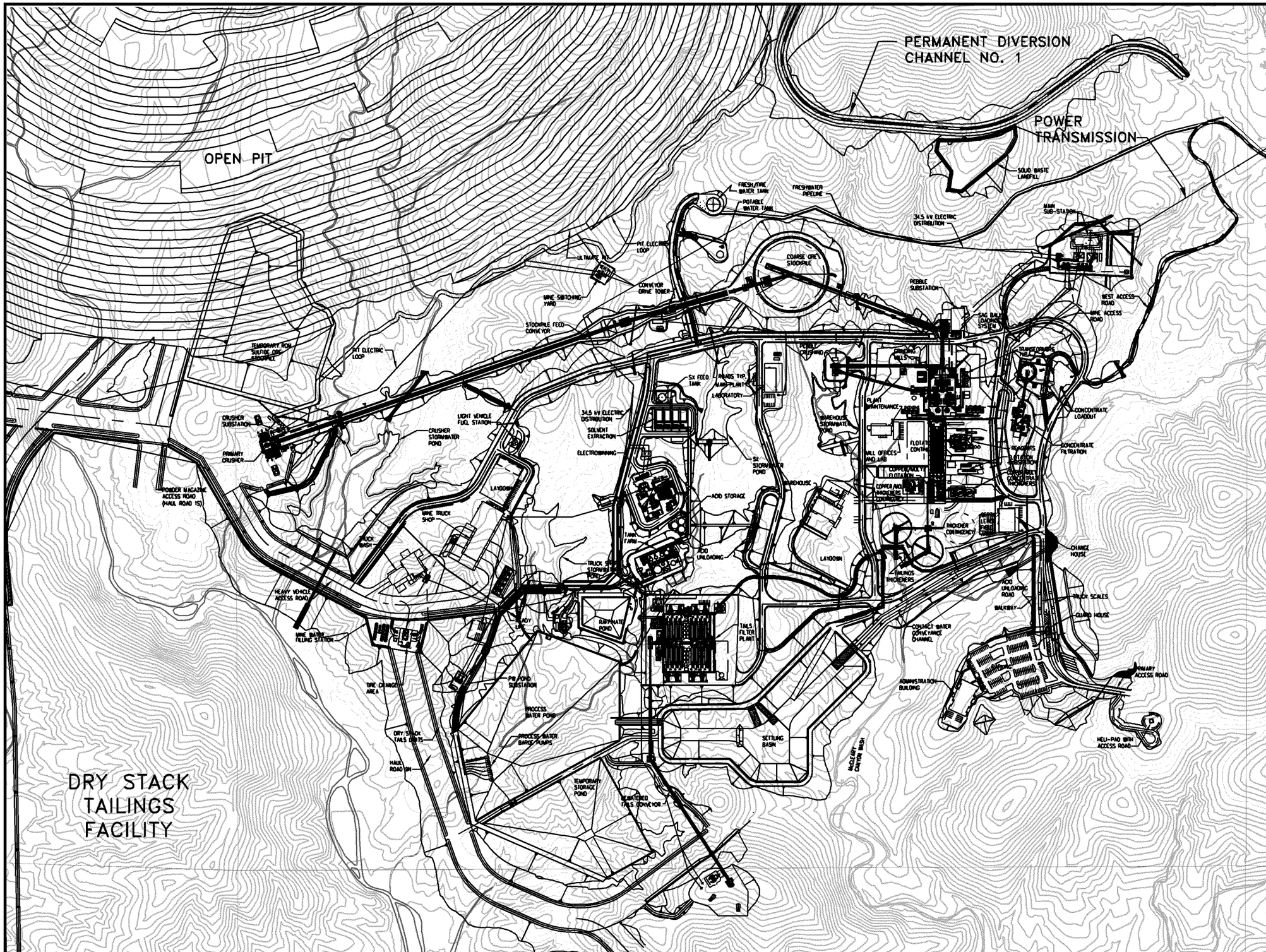
WestLand Resources Inc.
Engineering and Environmental Consultants
4001 E. Paradise Falls Drive
Tucson, Az 85712 (520) 206-9585

Data Source - Tetra Tech, April, 2010

ROSEMONT PROJECT

ACOE File No. SPL-2008-00816-MB
Pit Diversion Channel Sections

Figure 7



LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- TOWNSHIP/RANGE LINE
- SECTION LINE
- SURFACE FLOW DIRECTION
- POTENTIALLY JURISDICTIONAL WATER OHWM (IMPACTED/LOST)
- POTENTIALLY JURISDICTIONAL WATER OHWM (NON-IMPACTED)

Data Source - Tetra Tech, April, 2010

W S N E

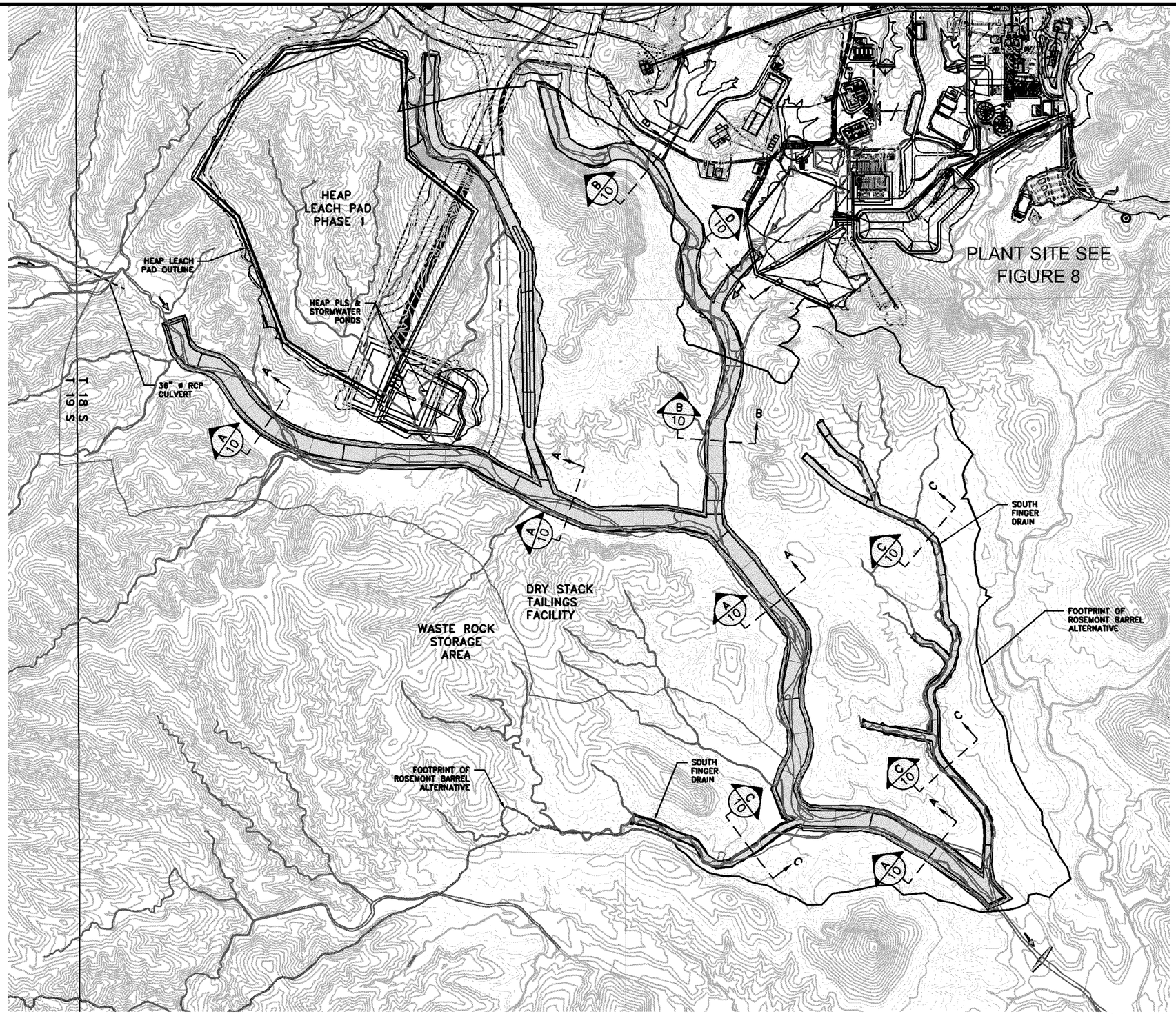
0' 250' 500'

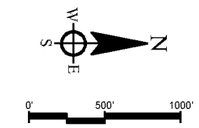
WestLand Resources Inc.
Engineering and Environmental Consultants
4001 E. Paradise Falls Drive
Tucson, Az 85712 (520) 206-9585

ROSEMONT PROJECT

ACOE File No. SPL-2008-00816-MB
Plant Site

Figure 8





LEGEND

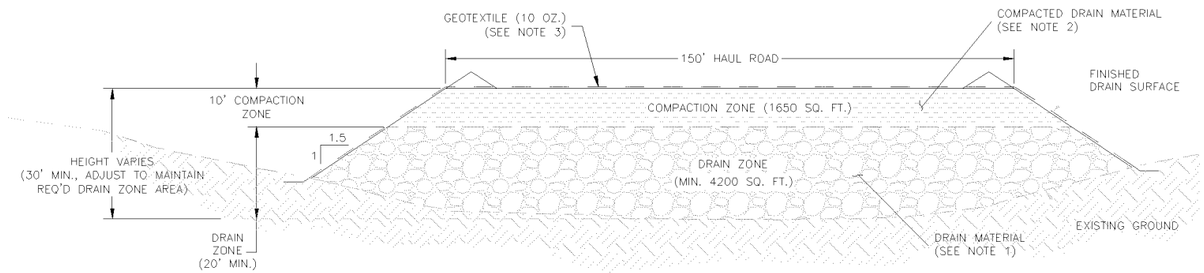
- EXISTING CONTOURS
- PROPOSED CONTOURS
- TOWNSHIP/RANGE LINE
- SECTION LINE
- SURFACE FLOW DIRECTION
- POTENTIALLY JURISDICTIONAL WATER OHWM (IMPACTED/LOST)
- POTENTIALLY JURISDICTIONAL WATER OHWM (NON-IMPACTED)
- B / 10 — SECTION DETAIL / FIGURE NUMBER

WestLand Resources Inc.
Engineering and Environmental Consultants
4001 E. Paradise Falls Drive
Tucson, Az 85712 (520) 206-9585

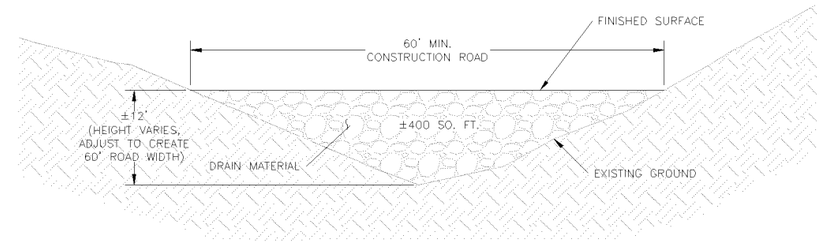
ROSEMONT PROJECT

ACOE File No. SPL-2008-00816-MB
Flow-Through Drain Plan View

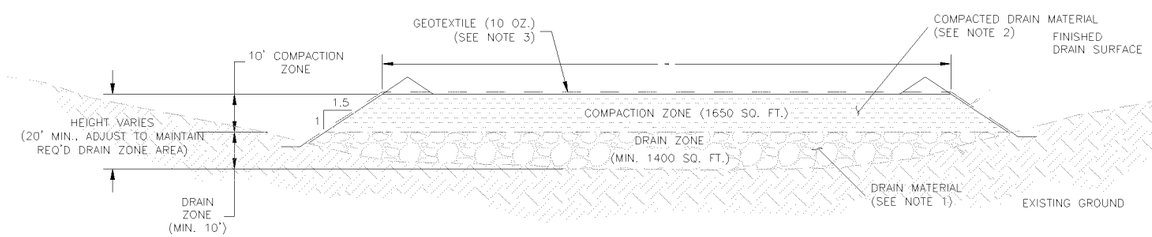
Figure 9



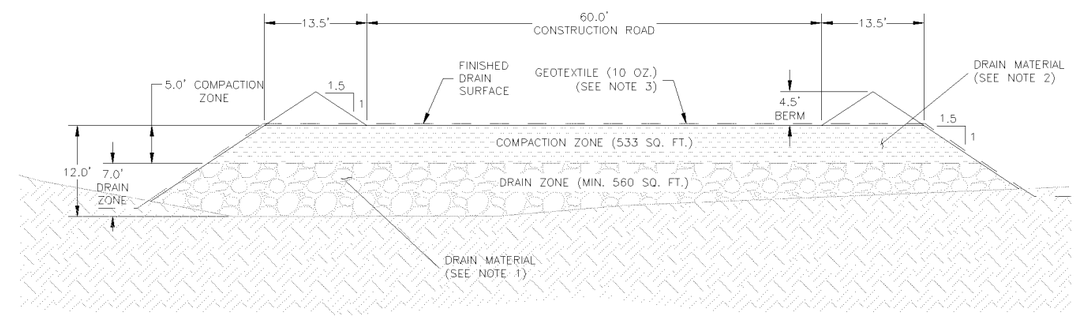
A 1.0 SOUTH MAIN "FLOW-THROUGH" DRAIN – TYPICAL SECTION
SCALE: 1"= 20' (22"x34" FORMAT)



C 1.0 FINGER DRAIN – TYPICAL SECTION
SCALE: 1"= 10' (22"x34" FORMAT)



B 1.0 SOUTH 1 "FLOW-THROUGH" DRAIN – TYPICAL SECTION
SCALE: 1"= 20' (22"x34" FORMAT)



D 1.0 FLOW-THROUGH DRAIN TO PWTS POND AREA – TYPICAL SECTION
SCALE: 1"= 10' (22"x34" FORMAT)

NOTES:

1. CUT SITE MATERIAL AND PLACE NON-WOVEN GEOTEXTILE (10 OZ.) ±10' UP SIDE OF DRAIN AS CONSTRUCTION ADVANCES IN ~300' INCREMENTS.
2. SECURE GEOTEXTILE WITH PREVIOUSLY CUT MATERIAL. PLACE FLOW CONTROL STRUCTURES (USING SITE CUT MATERIAL) ALONG DRAIN TOE AT ~300' INTERVALS TO REDUCE DRAINAGE FLOW ALONG TOE.
3. TOP AND REMAINING EXPOSED SIDES OF DRAIN SHALL HAVE NON-WOVEN GEOTEXTILE (10 OZ.) PLACED AFTER CONSTRUCTION TRAFFIC CEASES AND BEFORE PLACEMENT OF PERMANENT FILL/ TAILINGS OVER FLOW-THROUGH DRAINS. REMOVE SAFETY BERM PRIOR TO PLACEMENT OF GEOTEXTILE.
4. SURFACE PREPARATION SHALL ENTAIL THE REMOVAL OF LARGE BOULDERS AND SMOOTHING OF DRAIN SURFACE.

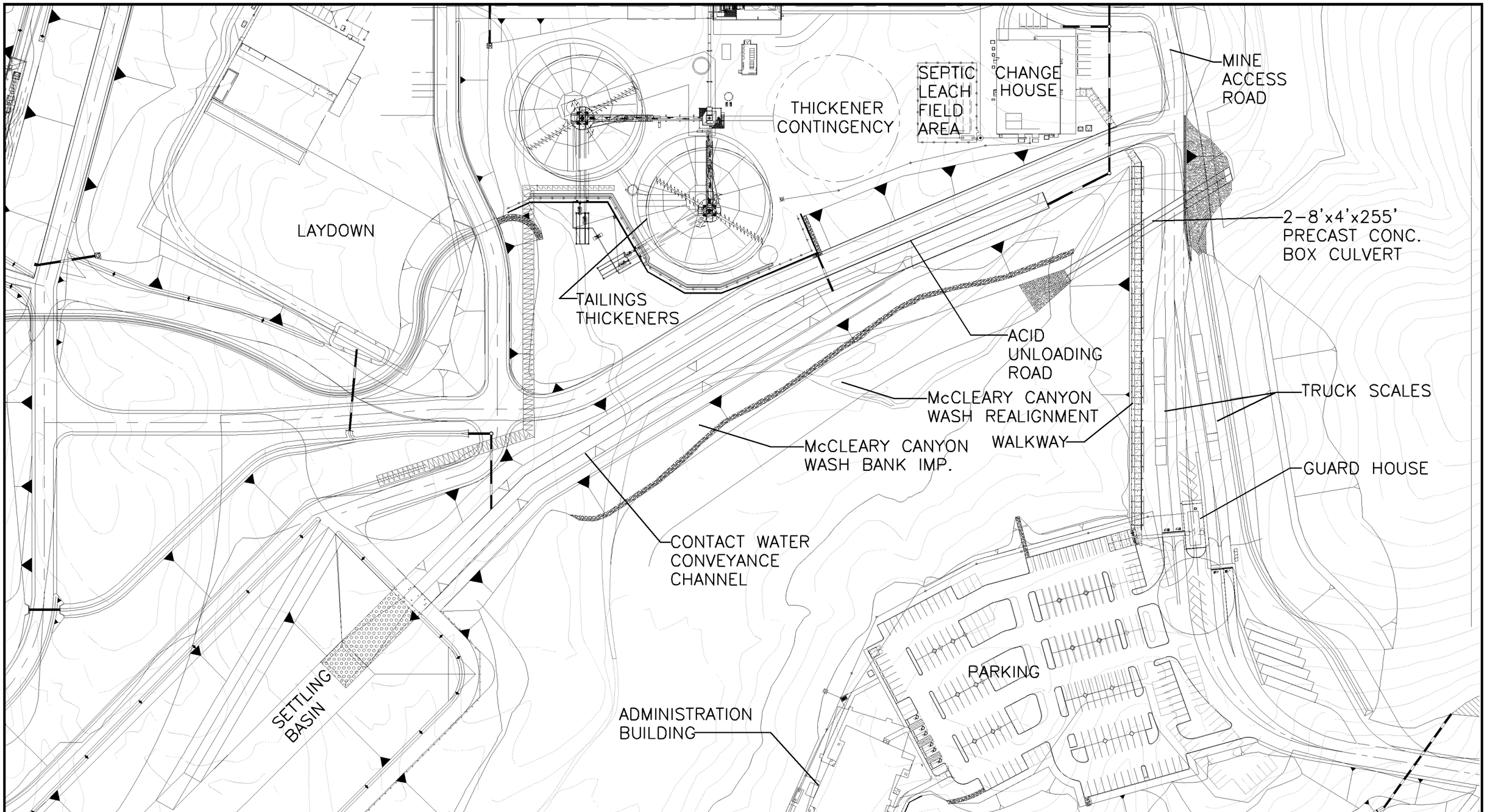
WestLand Resources Inc.
Engineering and Environmental Consultants
4001 E. Paradise Falls Drive
Tucson, Az 85712 (520) 206-9585

Data Source - Tetra Tech, April, 2010

ROSEMONT PROJECT

ACOE File No. SPL-2008-00816-MB
Flow-Through Drain Sections

Figure 10



Data Source - Tetra Tech, April, 2010

LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- TOWNSHIP/RANGE LINE
- SECTION LINE
- SURFACE FLOW DIRECTION
- POTENTIALLY JURISDICTIONAL WATER OHWM (IMPACTED/LOST)
- POTENTIALLY JURISDICTIONAL WATER OHWM (NON-IMPACTED)

W S N E

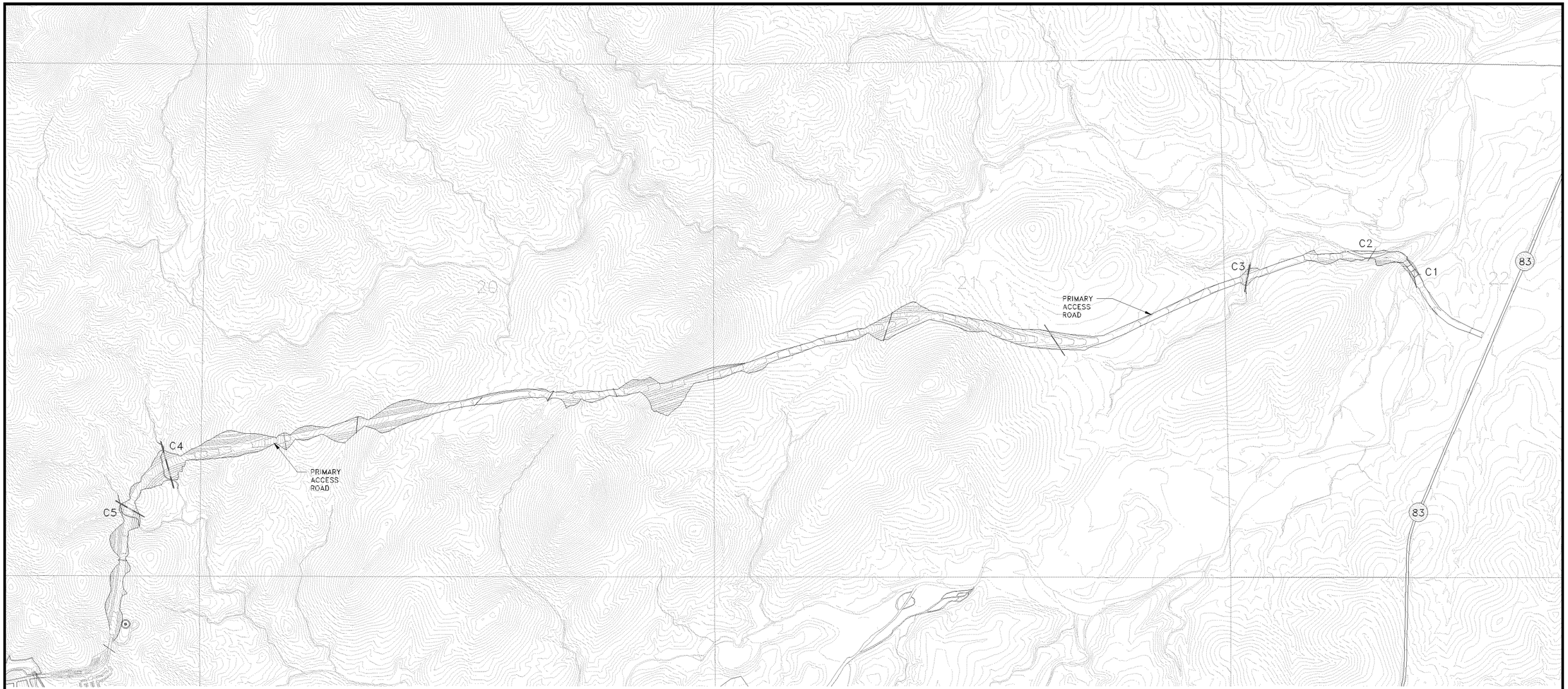
0' 60' 120'

WestLand Resources Inc.
Engineering and Environmental Consultants
4001 E. Paradise Falls Drive
Tucson, Az 85712 (520) 206-9585

ROSEMONT PROJECT

ACOE File No. SPL-2008-00816-MB
McCleary Canyon Wash

Figure 11



Data Source - Tetra Tech, April, 2010

LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- TOWNSHIP/RANGE LINE
- SECTION LINE
- SURFACE FLOW DIRECTION
- POTENTIALLY JURISDICTIONAL WATER OHWM (IMPACTED/LOST)
- POTENTIALLY JURISDICTIONAL WATER OHWM (NON-IMPACTED)
- CULVERT
- C2 CULVERT IDENTIFICATION

N
W E
S

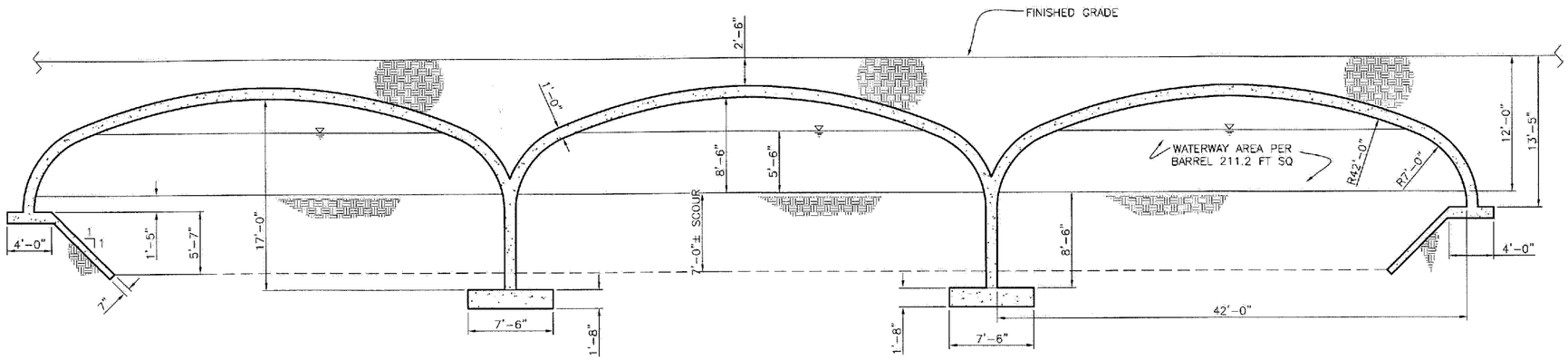
0' 500' 1000'

WestLand Resources Inc.
Engineering and Environmental Consultants
4001 E. Paradise Falls Drive
Tucson, Az 85712 (520) 206-9585

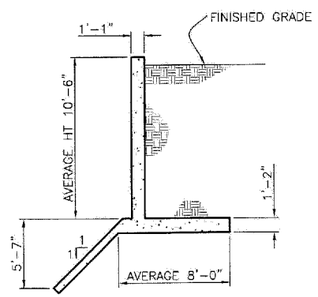
ROSEMONT PROJECT

ACOE File No. SPL-2008-00816-MB
Primary Access Road

Figure 12



CON-ARCH 3-42'x8'-6" CULVERT



WINGWALL CROSS SECTION

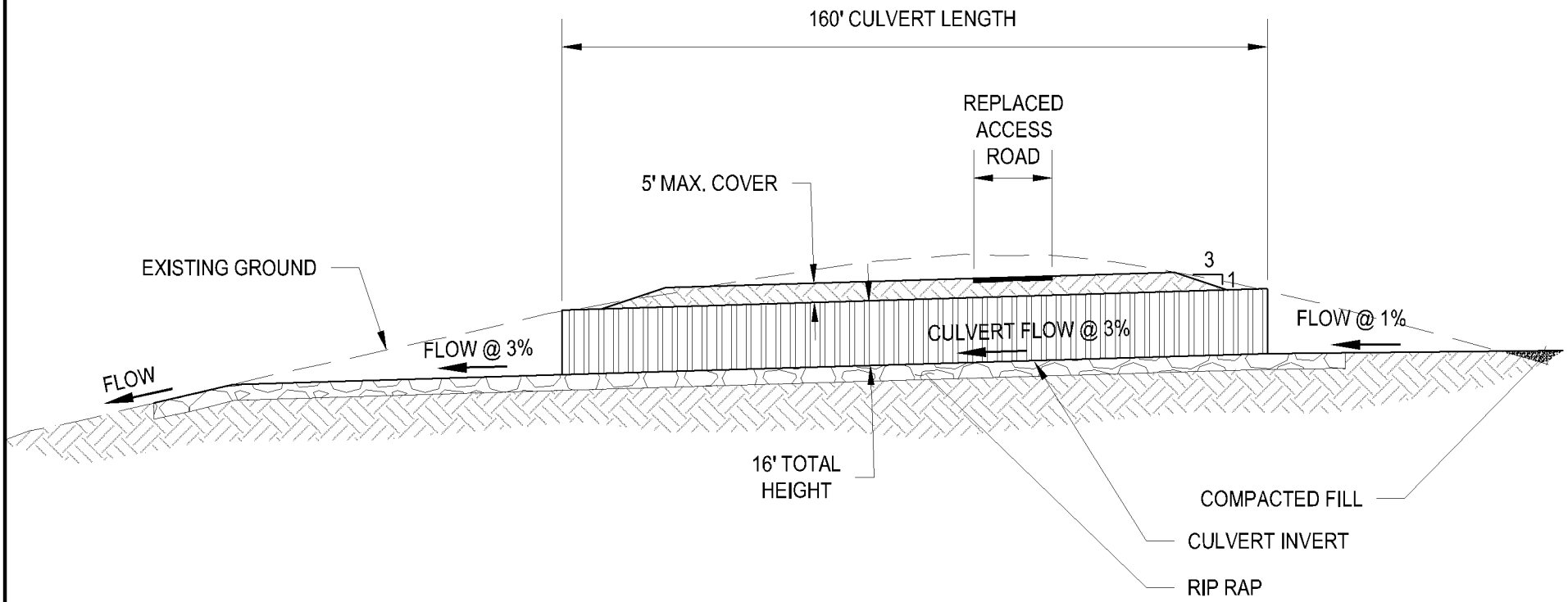
Data Source - SACRA Engr., March 29, 2009

WestLand Resources Inc.
Engineering and Environmental Consultants
4001 E. Paradise Falls Drive
Tucson, Az 85712 (520) 206-9585

ROSEMONT PROJECT

ACOE File No. SPL-2008-00816-MB
Access Road Con-Arch Detail

Figure 13



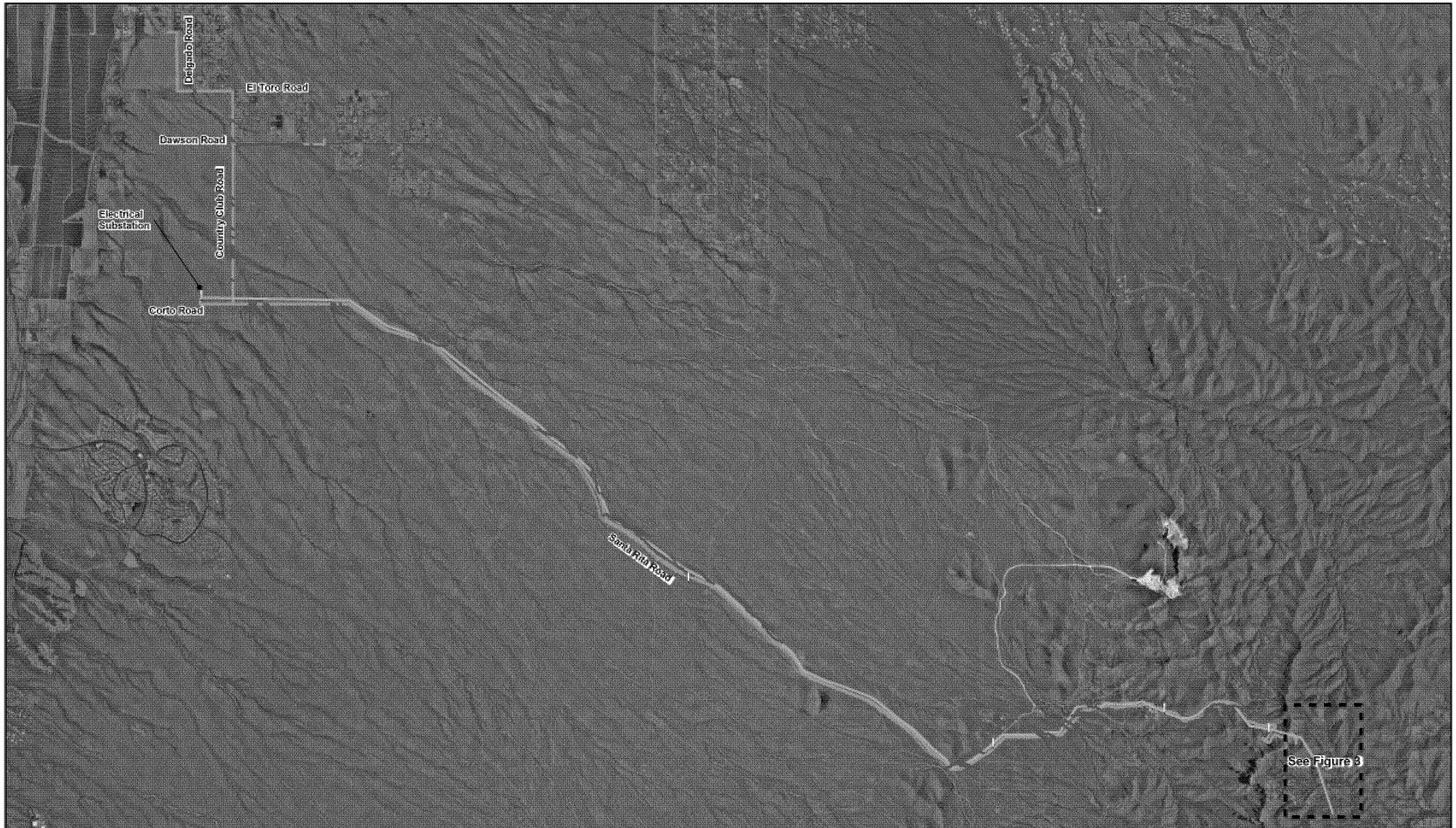
NOTE:

WINGWALLS NOT SHOWN THIS VIEW

WestLand Resources Inc.
Engineering and Environmental Consultants
4001 E. Paradise Falls Drive
Tucson, Az 85712 (520) 206-9585

ROSEMONT PROJECT

ACOE File No. SPL-2008-00816-MB
Typical Diversion
Culvert Section
Figure 14



T.17S., R.14E., Portion Sections 17, 20, 21 & 27-35,
T.18S., R.14E., Portion Sections 1, 2 & 12,
T.18S., R.15E., Portion Sections 7, 17, 18 & 20-24,
T.18S., R.16E., Portion Sections 19 & 30,
Pima County, Arizona
Photo Source: Aerials Express Tucson, 2009

WestLand Resources, Inc.
Engineering and Environmental Consultants

2,250 0 2,250
Feet
1 inch = 4,500 feet

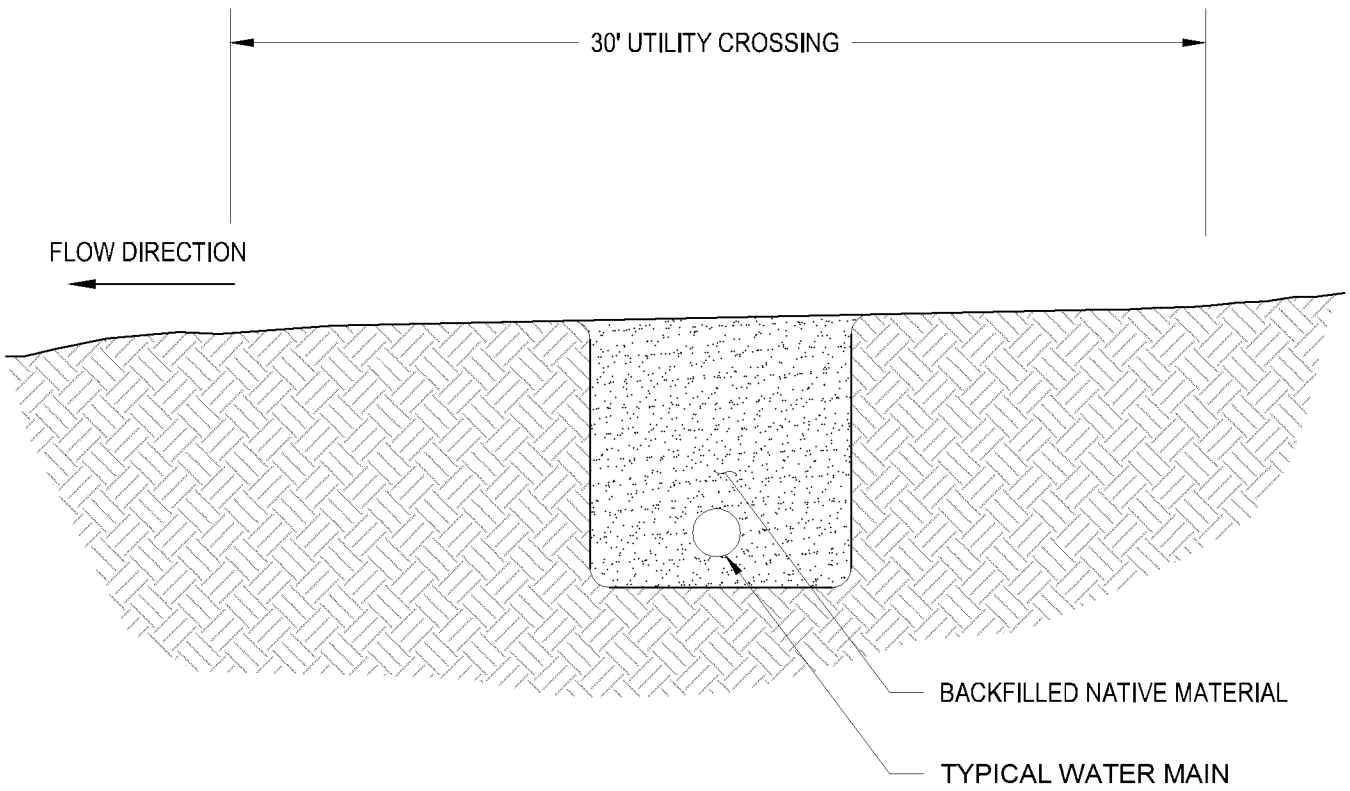
Legend

- Powerline
- Water Pipeline
- Proposed Booster Station Locations
- Potential Waters of the U.S.

ROSEMONT PROJECT

ACOE File No. SPL-2008-00816-MB
Offsite Utility Lines
Figure 15

M:\projects\1049.14\JD waterline\Figures\SHT1 Overview.mxd



WestLand Resources Inc.
Engineering and Environmental Consultants
4001 E. Paradise Falls Drive
Tucson, Az 85712 (520) 206-9585

ROSEMONT PROJECT

ACOE File No. SPL-2008-00816-MB

Typical 30' Utility Crossing Cross-Section

Figure 16

M:\projects\1049.15\Public_Notice\Figures_11_29_11\Fig16_Utility_Line_Crossing.dwg 11/29/2011 5:22 PM

To: Schmauder, Craig R SES (US)[craig.r.schmauder.civ@mail.mil]
From: Peck, Gregory
Sent: Thur 5/26/2016 1:50:33 PM
Subject: FW: Meeting request for Hudbay

Are these folks meeting with senior policy managers at army – or Chip?

Thanks

Gregory E. Peck

Chief of Staff

Office of Water

U.S. Environmental Protection Agency

1200 Pennsylvania Avenue

Washington, D.C. 20460

202-564-5700

From: Alan Mintz [mailto:alm@vnf.com]
Sent: Thursday, May 26, 2016 9:44 AM
To: Peck, Gregory <Peck.Gregory@epa.gov>
Subject: Meeting request for Hudbay

Greg,

I hope that you are well and look forward to catching up with you at your convenience. Let's talk when you have a spare minute.

I would also like to schedule a meeting with you and Joel next month. On Wednesday, June 22, and Thursday, June 23, two Hudbay representatives will be in Washington, D.C., for further discussions with senior Federal officials. On this visit, I will have with me Alan Hair, the President and CEO of Hudbay, the parent company of Rosemont Copper Company, and Pat Merrin (with whom you and Joel have met in the past), the Hudbay Vice President who has responsibility for the Rosemont project. I hope that we can find a mutually convenient time for these folks and me to meet with you and Joel.

I am beginning to prepare an itinerary for this visit. Please let me know what time or times on one of those two days in mid-June might work best for you and Joel. I look forward to seeing both of you then. In the meantime, please feel free to give me a call when you can.

Thanks.

Alan L. Mintz

Partner

Van Ness Feldman, LLP

1050 Thomas Jefferson Street, N.W.

Washington, D.C. 20007

Direct line – 202-298-1837

Cell – 202-257-7175

alm@vnf.com

This communication may contain information and/or metadata that is legally privileged, confidential or exempt from disclosure. If you are not the intended recipient, please do not read or review the content and/or metadata and do not disseminate, distribute or copy this communication. Anyone who receives this message in error should notify the sender immediately by telephone (202-298-1800) or by return e-mail and delete it from his or her

computer.