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Received
DEC 2 2014
Environmental Review Section

Forward to Wetlands Office

November 18, 2014

Mr. Jared Blumenfeld
Regional Administrator
U.S. EPA Region 9
75 Hawthorne Street
San Francisco, CA 94105

Col. Kimberly M. Colloton
District Engineer, Los Angeles District
U.S. Army Corps of Engineers
PO Box 532711
Los Angeles, CA 90053-2325

Dear Regional Administrator Blumenfeld and Colonel Colloton:

I am writing to transmit to you a letter signed by well owners and water producers who will be adversely impacted by the proposed Rosemont Mine. Many of the signers are constituents and the proposed project along with many of its impacts would occur in my Supervisorial District.

As you know, the mine is seeking a Sec. 404 Clean Water Act permit that would allow it to discharge potentially toxic materials into a significant regional watershed that provides drinking water. As part of your consideration of this application, you must consider the impacts, both primary and secondary, to regional drinking water supplies. These impacts are spelled out in detail in this letter.

Some will assert that the views of the signers of this letter should be dismissed because of the potential economic benefits of the project. I disagree. As you know, in an arid environment, potential adverse impacts to water resources must be carefully evaluated. In southern Arizona, our future economy depends on having ample supplies of clean drinking water. The potentially impacted watershed provides 20% of the groundwater recharge in the Tucson basin. If we compromise that availability of drinking water, the economic devastation that would occur will far outweigh any economic gain from this project.

Thank you in advance for your careful consideration of these and other issues related to the proposed mine.

Please do not hesitate to contact me if you have further questions or concern.

Sincerely,

Ray Carroll

cc: The Honorable Jo-Ellen Darcy
Assistant Secretary of the Army (Civil Works)

Nancy Stoner, Acting Assistant Administrator for Water
US Environmental Protection Agency

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DEC 2 2014

Environmental Review Section

November 12, 14

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**RE: Proposed Rosemont Mine Section 404 Permit Analysis: Information on Adverse Effects of Mine's Discharges on Public and Private Water Supplies**

Dear Regional Administrator Blumenfeld and Colonel Colloton:

The undersigned are private well owners and public water suppliers and users, many of whom have previously written or commented with our many serious concerns regarding the proposed Rosemont Mine and its ill effects on, among other things, air quality, public health, water quantity and quality, biological resources, recreation, visual resources, and cultural and historic resources. In light of recent media focus on Arizona's severe drought and concerns about the effect of climate change, and the proponents planned additional exploratory drilling that might lead to even greater discharges from the proposed mine, we write today to detail the detrimental impacts that the discharge for which the proponent seeks a permit will have on our public and private water supplies in southern Arizona, both in terms of quantity of water available and quality with respect to color, taste, odor, chemical content and suspended particulate concentration. *See* 33 U.S.C. 1344(b)(1); 40 C.F.R. § 230.50(b). In its permit application, and specifically in its Section 404(b)(1) analysis, Rosemont wholly ignored this important issue.

**Discharges from the proposed mine will have an adverse effect on the quantity of our private and public water supplies.**

The mine's discharges into waters of the United States will have direct and secondary detrimental effects on our water supplies both west and east of the Santa Rita Mountains. We discuss these impacts below:

Detrimental Effects on Quantity of Water Supply East of the Santa Rita Mountains

The mine's discharges likely will have the effect of depleting public and private water supplies east of the Santa Rita Mountains, in the Sonoita Plain. Communities in the Sonoita Plain rely on groundwater pumped from local wells, and are therefore highly vulnerable to groundwater depletion that is likely to occur both as a result of the mine's excessive groundwater withdrawals and the drainage of the groundwater into the open pit that Rosemont seeks to permit. Indeed, the

water table could be lowered by up to 1500 feet in this area. Such lowering would completely obliterate the ability of most public or private wells to provide water supply for drinking water and other uses including firefighting to current and future homeowners and businesses in the Elgin, Sonoita, and outlying areas. It is important to note that these groundwater impacts also impact the value of vacant land and its future suitability for development.

Simply, the mine's heavy (and potentially unchecked) use of water from the aquifer is an unacceptable adverse impact of fill discharge on "the quantity of water available for municipal and private water supplies," both east and west of the Santa Rita Mountains. That impact must be considered in the context of a Section 404(b)(1) analysis. *See* 40 C.F.R. 230.50(b).

**Discharges from the proposed mine will have an adverse effect on the quality of our private and public water supplies.**

Some of us use private and public water supplies located downstream from the proposed mine. The proposed mine's fill discharges will undoubtedly cause a precipitous drop in the value of our public and private water supply systems because these discharges would result in the pollution of our water supplies "in such a way as to reduce the fitness of the water for consumption." 40 C.F.R. § 230.50(b).

As just one example, arsenic discharged from mine tailings in and around the mine potentially will enter our water supply. This raises the obvious concern about unhealthy and even dangerous exceedances of chemical levels in our water supply, but arsenic also has the ill effect of lowering pH of the water in the aquifer that supplies water to our wells, which then would deplete important calcium compounds in the water.

In addition to arsenic, the proposed mine's fill discharges have the potential to release unhealthy amounts of mercury, lead, chromium, zinc, antimony, thallium, and radioactive elements (especially thorium) into our water supply. Chromium, thorium and other radioactive elements are carcinogens, antimony and thallium affect cardiac function, and lead is a neurotoxin.

Detrimental Effects on Quantity of Water Supply West of the Santa Rita Mountains

The Tucson Active Management Area ("AMA") was one of five AMAs established under Arizona's Groundwater Management Act in order to make sure that groundwater pumping does not exceed the amount of recharged groundwater. The Tucson AMA covers over 3,800 square miles in southern Arizona, and uses hundreds of thousands of acre-feet of water per year, the majority of it obtained from groundwater supply from the Upper Santa Cruz aquifer. Water supply users in the AMA also have access to limited supplies of water brought in from the Colorado River via the Central Arizona Project ("CAP"). However, due to severe drought conditions on the Colorado River watershed, the CAP supply is far from guaranteed and southern Arizona's population is increasing, and so the AMA is likely to be faced with shortages of water supply in the future.

As you know, the Arizona Department of Water Resources has authorized the proposed mine to withdraw up to 6,000 acre-feet of groundwater per year from the same aquifer that supplies the Tucson AMA, and much of that (between 4,700-5,400 af) is estimated to actually be used per year.[1] If granted a 404 permit, the proponent has plans to pump this immense amount of groundwater from four to six production wells located on land owned or leased by Rosemont near the community of Sahuarita. (See FEIS at 41-42.). This groundwater pumping would have a disastrous effect on the quantity of public and private water supplies in the AMA.

Specifically, effects of the mine's fill discharges would negatively impact those of us who use the Tucson AMA water supply because pumping at the mine would cause a 90-foot drawdown of the Upper Santa Cruz Valley aquifer that replenishes the AMA's water supply. This drawdown would: (1) exacerbate the risk that the AMA will not achieve "safe yield" by 2025 (i.e., a healthy balance between the amount of groundwater withdrawn and the amount of recharge); and (2) result in higher costs for us to pump existing groundwater or to obtain water outside of the aquifer. *See, e.g.*, Coronado National Forest FEIS at 317 (describing the 90-foot drawdown of groundwater due to the proposed mine); *id.* at Executive Summary, xi ("[w]ater needed to run the mine facility could reduce groundwater availability to private and public wells in the Santa Cruz Valley, specifically the communities of Sahuarita and Green Valley, Arizona and that household water availability could potentially be reduced.").

The increased cost for pumping groundwater from an aquifer that has been drawn down includes funds for additional electricity for pumping from a deeper area, and payment for filtering water from deeper areas (because the deeper the water, the more salts and metals it carries). And obtaining water outside of the aquifer is no easy task, because there is no sure supply of additional water outside the aquifer. Indeed, there is not enough CAP water legally or physically available to Rosemont to offset what it will use for the proposed mine, and it is highly unlikely that CAP water will become available for groundwater recharge in the foreseeable future. Given ongoing drought in the Colorado River Basin, the predictions by climate scientists that drought conditions are likely to continue in the Southwest, current water demands in the Tucson AMA, and the recent Bureau of Reclamation Colorado River Basin Water Supply and Demand Study that predicts continuing future imbalances between water supply and future water demand, CAP water is unlikely to be available to address the proposed mine's enormous water usage. In all cases, the mine's over-use of groundwater from the aquifer will severely increase demand for our private and public water supplies, and thus cause the costs for such water supplies to skyrocket.

Additionally, there is also the possibility that the increased pumping by Rosemont in this area would exacerbate the migration of a documented sulfate plume emanating from the existing Sierrita mine and impacting drinking water supplies.

Rosemont has attempted to mask the adverse effects that the mine's fill discharge will have on the quantity of our public and private water supplies in the AMA by highlighting its voluntary "commitment" to recharge with CAP water the water it takes out of the AMA. But Rosemont's

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[1] Indeed, because a modification to the mine's groundwater withdrawal permit would essentially be rubber-stamped, the mine could potentially significantly raise its estimate groundwater consumption.

ability to access this recharge with CAP water is speculative at best. The only recharge that Rosemont is able to access would utilize Excess CAP water as its source, and the CAP Conservation District announced in 2011 that Excess CAP water is no longer available for subcontractors like Rosemont because of increased use of CAP water by public and industrial CAP subcontractors. And even in the unlikely circumstance that Excess CAP water was available to Rosemont, Rosemont would have no enforceable obligation to use it for recharging the aquifer—indeed, it could simply use any available CAP water for the proposed mine.

Rosemont has also tried to distract from the adverse effects that the mine's discharge will have on our public and private water supplies by pointing to the "Sahuarita Heights Well Protection Program." As part of this "program," Rosemont has signed a Master Agreement that purports to require it to repair or replace only private residential wells when, as a result of its over-pumping for the mine, the water table drops to within 50 feet of the current pump setting or the bottom of the well's casing. But what Rosemont often fails to mention is that the only wells that even qualify for this so-called "protection" are in a very narrow area that Rosemont itself has designated, and only where a well owner signs an "Individual Well Protection Agreement" drafted by Rosemont. In addition, this "protection" program is only limited to residential wells, and does not address irrigation or other types of irrigation wells. Rosemont has never made clear just how many individuals have signed these agreements, and in no event does the designated area cover all individuals whose public or private water supplies are likely to be adversely affected by the mine's fill discharge. Indeed, the program does not commit Rosemont to recharge the water supply when the mine's discharges inevitably result in its depletion and/or disappearance.

In sum, the proposed mine's discharges will adversely "affect the quantity of water available for municipal and private water supplies," and this effect must be considered in the context of Rosemont's Section 404 permit. Moreover, the release of toxic elements into our water supply as a result of the permitted discharges from the proposed mine will undoubtedly "have a toxic effect on consumers," and "the expense of removing such substances before the water is delivered" would surely be high. *See* 40 CFR 230.50(b). As such, these effects should be considered as part of the Section 404(b)(1) analysis.

Sincerely,

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c.c. The Honorable Jo-Ellen Darcy
Assistant Secretary of the Army (Civil Works)

Nancy Stoner, Acting Assistant Administrator for Water
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