



Copper Queen Branch/Freeport-McMoRan Corporation  
36 West Highway 92  
Bisbee, Arizona 85603

**VIA CERTIFIED MAIL # 7008 1830 0002 0847 3133**  
**Return Receipt Requested**

August 10, 2011

Ms. Mindy Cross  
Manager, Water Quality Compliance Section  
Arizona Department of Environmental Quality  
1110 West Washington Street  
Phoenix, Arizona 85007

**Re: Interim Action Discontinuation**  
**ADWR Well No. 531770 (RUIZ)**  
**Mitigation Order on Consent No. P-121-07**

Dear Ms Cross:

This letter is to report that Freeport-McMoRan Corporation, Copper Queen Branch (CQB) will discontinue the interim action for the RUIZ well starting September 15, 2011 because the concentration of sulfate in the well has been less than 250 milligrams per liter (mg/L) for the last nine (9) quarterly samples. Sulfate concentration data for the RUIZ well are provided on the attached Table 1 and Figure 1. Although the sulfate concentration in the RUIZ well exceeded the sulfate mitigation level of 250 mg/L in quarterly samples collected in February and May 2008 and February 2009, sulfate concentrations were less than 250 mg/L in quarterly samples collected from April 2009 through April 2011. The RUIZ well is located at 2295 South Barnett Road in the San Jose area near the northwest edge of the sulfate plume.

An interim action of providing bottled drinking water was reported<sup>1</sup> to Arizona Department of Environmental Quality (ADEQ) in May 2008 according to the requirements of Mitigation Order on Consent, Docket No. P-121-07 between CQB and ADEQ. The factors to be considered for discontinuing an interim action are described in Section 4 of the Mitigation Order work plan<sup>2</sup> submitted to ADEQ. Section 4 of the Work Plan states the following about a water supply at which an interim action is implemented.

*“Follow-up sampling will be used to calculate an average sulfate concentration for a water supply. The average sulfate concentration will be calculated as the arithmetic mean of the three most recent discrete water quality samples for the water supply. Any interim action implemented would*

<sup>1</sup> Correspondence from Michael Jaworski, Copper Queen Branch, to Robert Casey, Arizona Department of Environmental Quality, Re: Interim Action Report. May 22, 2008.

<sup>2</sup> Hydro Geo Chem, Inc. 2008. Revision 1 Work Plan to Characterize and Mitigate Sulfate with Respect to Drinking Water Supplies in the Vicinity of the Concentrator Tailing Storage Area, Cochise County, Arizona. July 3, 2008.

*continue until follow-up monitoring determines that the average sulfate concentration of the drinking water supply is less than the sulfate mitigation level of 250 mg/L based on at least three quarters of follow-up monitoring."*

The average sulfate concentration of the RUIZ well based on the last three quarterly samples is 227 mg/L. The average concentration at the RUIZ well has been less than 250 mg/L since at least April 2009, as shown on Table 1.

As provided for in Section 4 of the work plan, CQB will discontinue the interim action for the RUIZ well because follow-up groundwater sampling has had average concentrations less than the sulfate mitigation level for the last nine (9) three-quarter periods since April 2009. The interim action will be discontinued starting September 15, 2011.

Section 4 of the work plan also indicates that water supplies with sulfate between 135 mg/L and 250 mg/L will be sampled monthly for four (4) months to identify any trend in sulfate over time and that a monitoring schedule will be developed based on the apparent trend. Although the sulfate concentration at the RUIZ well is between 135 mg/L and 250 mg/L, quarterly sampling will be retained and monthly sampling and trend analysis omitted because the existing record of water quality samples does not show an increasing trend.

Sincerely,



Rebecca A. Sawyer  
Senior Environmental Engineer  
Copper Queen Branch

cc: Michael Jaworski, Freeport-McMoRan Corporation, Copper Queen Branch  
Sheila Deely, Freeport-McMoRan Copper & Gold Inc.  
Stuart Brown, Freeport-McMoRan Copper & Gold Inc.  
Dalva Moellenberg, Gallagher & Kennedy  
James Norris, Clear Creek Associates.

**Table 1**  
**Sulfate Concentration Data for the Ruiz Well**

Sample Date	Sulfate (mg/L)	Average Sulfate (mg/L)
2/5/08	263	
5/15/08	265	
7/30/08	243	
10/20/08	238	
2/12/09	254	
4/21/09	227	240
8/3/09	221	234
10/28/09	227	225
2/1/10	236	228
4/26/10	240	234
7/20/10	240	239
10/20/10	231	237
1/18/11	213	228
4/8/11	236	227

The average sulfate equals the arithmetic mean of the three most recent samples at the dates indicated.

Sulfate Concentrations at Ruiz Well

