



Janet Napolitano
Governor

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

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Stephen A. Owens
Director

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July 21, 2008

Attention: E. L. (Ned) Hall
Freeport McMoran Copper & Gold Inc.
Sierrita Operations
6200 W. Duval Mine Road
P.O. Box 527
Green Valley, AZ 85622-0527

Re: Mitigation Order on Consent, Docket No. P-50-06
ADEQ's Response to Freeport's Comments on ADEQ's Initial Response to the
Sierrita Aquifer Characterization Report

Dear Mr. Hall:

The Arizona Department of Environmental Quality (ADEQ) has reviewed your comments pertaining to the department's April 24, 2008 review of the Aquifer Characterization Report (ACR) that Freeport McMoran Copper & Gold Inc., (Freeport) submitted on December 27, 2008. Although ADEQ approves the ACR, it does so with the following comments.

In its last response, Freeport attempted to address ADEQ's three principal concerns in reviewing the ACR, namely; 1) Vertical characterization of the sulfate plume and the potential for sulfate to migrate into and be transported through fractures in bedrock; 2) Groundwater Flow and Transport Model; and 3) Conditions in the Vicinity of Well, MO-2007-5. ADEQ maintains that its concerns are valid and have not been fully addressed by Freeport.

Although ADEQ agrees that the low bedrock permeability and hydraulic conductivity renders sulfate movement to the basin fill from bedrock unlikely, over the long term, as basin fill sulfate levels fall due to reduced mass loading from the tailings impoundment and other mitigation actions, sulfate seepage from the bedrock may become more pronounced.

Further, ADEQ agrees with Freeport that the "Groundwater Flow and Transport Model," titled, PDSI Regional-Scale Model (PDSIRM), is a "simplistic conceptualization of a very complex natural system." Inherent in this portrayal are numerous assumptions designed to construct and calibrate the model. At this juncture, ADEQ has determined it is not necessary to provide an itemized response to Freeport's comments, but reiterates that the PDSIRM only grossly reflects conditions in the southeastern areas of the plume in the vicinity of the MO-2007-5 Wells and well CW-3. ADEQ is encouraged by Freeport's decision to install another monitoring well in this area to obtain additional data that should be used to further refine the PDSIRM.

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In light of the differences in opinion between Freeport and ADEQ regarding the efficacy of the model or Freeport's current characterization of areas of bedrock, ADEQ recommends that the adaptive management approach provided in the Mitigation Order be used as the guiding principle for all activities being planned and implemented by Freeport. Moreover, depending upon the ultimate mitigation alternative selected in the Mitigation Plan, the issues raised by ADEQ in reviewing Freeport's ACR may be reopened in the context of execution of the Mitigation Plan in order to achieve the objectives of Mitigation Order No.P-50-06.

Because of the lengthy ACR review and discussions, it is necessary to reestablish the deadlines for Freeport to submit a Feasibility Study and subsequent Mitigation Plan. Freeport should submit a feasibility study to ADEQ within thirty (30) days of receipt of this letter. The Mitigation Plan should be submitted within sixty (60) days of receipt of ADEQ's written review of the Feasibility Study.

If you have any questions or concerns, please contact me at (602) 771-2209.

Sincerely,



Cynthia S. Campbell, Manager
Water Quality Compliance Section

cc: Stuart M. Brown, President
Bridgewater Group, Inc.
4500 SW Kruse Way Suite 110
Lake Oswego, OR 97035

Ray Lazuk, Freeport McMoran Gold & Copper Inc.

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