



Janice K. Brewer
Governor

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

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Henry R. Darwin
Director

August 29, 2013

VRP 14.108

Mr. John Broderick
Freeport-McMoRan Copper & Gold
Sierrita Operations
Post Office Box 527
Green Valley, Arizona 85622-0527

RE: Response to Freeport McMoRan Copper & Gold (FMI) Comment Letter dated 08/01/13

Freeport Sierrita, Inc
6200 W. Duval Mine Rd.
Post Office Box 527
Green Valley, Arizona 85622-0527
Site Code: 100073-03

Dear Mr. Broderick:

The Arizona Department of Environmental Quality (ADEQ) Waste Program's Division (WPD) Voluntary Remediation Program (VRP) has reviewed the letter titled *Response to Comments and Revised Report for Final Voluntary Remediation Soil and Sediment Characterization Report* (Report) dated August 1, 2013 and received by ADEQ on August 5, 2013.

The VRP approves the response to comments and Report with the following clarifications:

Comment 2. VRP's understanding is that if the soil concentration for the samples analyzed for total chromium using USEPA Method 6010B were greater than the chromium VI residential soil remediation level (SRL) of 30 milligrams per kilogram (mg/kg), the soil sample was then analyzed for chromium VI, using EPA Method 3060A and 7196A. FMI believes that since seven samples were analyzed for chromium VI, and the seven samples were below the respective residential SRL, that the chromium observed in the total chromium results are indicative of chromium III and not chromium VI. VRP does not agree with the reference that it is assumed that all chromium on the site is most likely to be chromium III. Therefore, VRP recommends following the same characterization methodology if soil samples for total chromium are collected in the future, since a No Further Action Determination will only be considered for those constituents that have been adequately characterized. In addition, to avoid confusion, the respective soil tables should state "total chromium" instead of chromium III.

Comment 4. The guidance document titled *A Screening Method to Determine Soil Concentrations Protective of Groundwater Quality*; dated September 1996 does not indicate that

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a 95% upper confidence level can be used for determining concentrations that are protective of groundwater. The groundwater protection level (GPL) is a leaching threshold value and is not based on risk, as is the case with the SRLs. VRP recommends calculating an alternative GPL for antimony.

The VRP appreciates FMI efforts in remediating this site and if you have questions regarding this correspondence please feel free to contact Danielle Taber at 602-771- 4414 or John Patricki at 602-771-4397.

Sincerely,



Danielle Taber, Project Manager
Voluntary Remediation Program



John Patricki, Project Manager
Voluntary Remediation Program

cc: Stuart Brown, FMI, Senior Director – Remediation Projects
Martha Mottley, FMI – Sierrita Operations, Chief Environmental Engineer
Kanyembo Katapa, FMI – Sierrita Operations, Environmental Engineer
Katy Brantingham, ARCADIS, Project Manager