



Douglas A. Ducey  
Governor

# ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY



Misael Cabrera  
Director

*Sent via US Mail*

November 12, 2015  
VRP 16-130

Mr. Chad Fretz  
Freeport-McMoRan Inc. - Sierrita Operations  
Post Office Box 527  
Green Valley, Arizona 85622-0527

**RE: Approval of Revised Data Gaps Work Plan;** including October 2015 *Field Sampling Plan Addendum* and October 2015 *Quality Assurance Project Plan Addendum*  
Freeport Sierrita Inc.  
Green Valley, Arizona  
VRP Site Code: 100073-03

Dear Mr. Fretz:

The Arizona Department of Environmental Quality (ADEQ) Waste Program's Division Voluntary Remediation Program Unit (VRP) has completed review of the *Revised Data Gaps Work Plan* prepared by ARCADIS on behalf of Freeport-McMoRan Inc. Sierrita Operations (FMI), and dated October 12, 2015.

The *Revised Data Gaps Work Plan* addresses comments and discussions held between FMI and the VRP since submittal of the original *Data Gaps Work Plan* in November 2014. The *Revised Data Gaps Work Plan* incorporate changes requested in correspondence from the VRP dated December 24, 2014 and March 11, 2015, as well as discussions held between FMI, ARCADIS, and the VRP during a November 20, 2014 meeting and a May 13, 2015 teleconference.

In the VRP's March 11, 2015 correspondence, the VRP issued interim approval of the *Data Gaps Work Plan*, provided two final comments were addressed. The following bullets summarize these two comments and indicate how FMI addressed the comments in the *Revised Data Gaps Work Plan*:

1. In the November 2014 *Data Gaps Work Plan* (Table 6), the total depth of well MW-2014-04 was proposed at 500 feet bgs with a screen from 400 to 450 feet bgs. Per the 2014 report, the location was selected based on it being representative of background basin fill deposit conditions hydrologically upgradient of the Sierrita Tailings Impoundment (STI). In a January 23, 2015 response to comments letter from FMI, the total depth of well MW-2014-04 was revised to 310 feet below ground surface (bgs), with a screen interval from 315 feet bgs to 365 feet bgs. The VRP understood this proposed screen interval as a typographical error and requested clarification in the *Revised Data Gaps Work Plan*.

In the *Revised Data Gaps Work Plan*, FMI changed the proposed well name to MW-2015-04 with a total depth of 310 feet bgs and a screen interval from 260 feet bgs to 310 feet bgs, and moved the siting of the well to the south/southeast of its original proposed location. The new location is now south of the STI, which is hydraulically cross-gradient of the STI. The revised proposed depth of this well appears consistent with basin fill deposits, and is proposed to a completion depth shallower than the depths of investigation wells located to the east (downgradient) of the STI in basin fill. The VRP understands well MW-2015-04 is sited at a location approximately 200 feet higher in elevation (3,315 feet above mean sea level) than the wells installed to the east of the STI (approximately 3,100 feet above mean sea level) and therefore approves of the revised proposed screen interval, with the caveat that field discretion must be applied to assure the correct screen interval is selected for this well to serve as a background basin fill well representative of the groundwater observed in the wells to the east of the STI.

2. The VRP requested FMI submit a detailed analysis documenting the assertion that the wells referred to as “background wells” in the November 2014 *Data Gaps Work Plan* represent background conditions. The VRP suggested submitting the information as a separate document or in a subsequent report that will document the findings of the data collected as part of the data gap investigation.

**In the *Revised Data Gaps Work Plan*, FMI has proposed to proceed with the data gap investigation, and to include additional sampling data to verify that the selected locations for the new background wells, as well as those identified as existing background wells, represent background groundwater quality conditions. FMI then proposes to present additional information with a forthcoming data gaps report.**

### **General Comments**

The VRP approves the *Revised Data Gaps Work Plan* and hereby grants FMI approval to proceed with the field investigation. Please note, this approval does not express or imply the VRP’s concurrence that the locations of the background wells proposed in the work plan will be representative of background conditions and/or the representative of the lithologic unit they are proposed to intercept. This determination can only be made once the data is collected and evaluated.

### **Required Information**

Pursuant the schedule proposed in the work plan, FMI shall initiate the pre-mobilization activities for the data gap investigation within 60 days of the date of this letter. Upon completion of all field investigation activities and within 90 days of validation of the laboratory data, FMI shall submit a *Data Gaps Investigation Report* to the VRP, summarizing findings of the field investigation.

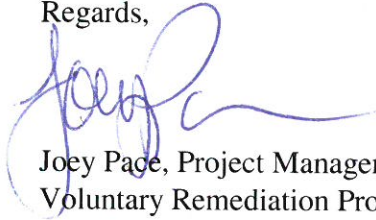
### **How to Submit**

The VRP site name (Freeport Sierrita Inc) and site code (100073-03) should be consistently used on all correspondence and reports relating to this site to ensure accuracy of file identification. With regards to the above-referenced documentation, please submit to:

Arizona Department of Environmental Quality  
Remedial Projects Section, Voluntary Remediation Program  
Attn: Ms. Joey Pace, Project Manager  
1110 West Washington Street, Mailcode 4415B-1  
Phoenix, AZ 85007

If you have any questions, please do not hesitate to contact me by electronic mail at [jp8@azdeq.gov](mailto:jp8@azdeq.gov) or by telephone at (602) 771-4818.

Regards,

A handwritten signature in blue ink, appearing to read "Joey Pace", is written over the typed name and title.

Joey Pace, Project Manager  
Voluntary Remediation Program

cc: Stuart Brown, FMI, Senior Director, Remediation Projects – *sent via email*  
Deborah Chismar, FMI Sierrita Operations, Senior Environmental Specialist – *sent via email*  
Diana Kelts, FMI Sierrita Operations, Chief Environmental Engineer – *sent via email*  
Katy Brantingham, ARCADIS, Project Manager – *sent via email*