

Freeport-McMoRan Sierrita Inc.
6200 W. Duval Mine Rd.
PO Box 527
Green Valley, Arizona 85622-0527

May 15, 2009

Via Certified Mail # 7008 2810 0000 0983 2859
Return Receipt Requested

Ms. Cynthia S. Campbell
Arizona Department of Environmental Quality
Water Quality Compliance Section
1110 West Washington Street
Phoenix, Arizona 85007-2935

Re: Mitigation Order on Consent Docket No. P-50-06
Response to ADEQ Comments on
Recommended Groundwater Monitoring for Sulfate

Dear Ms. Campbell:

On December 23, 2008, Freeport-McMoRan Sierrita Inc. (Sierrita) submitted a letter to the Arizona Department of Environmental Quality (ADEQ) requesting a change in the groundwater monitoring program being conducted pursuant to Mitigation Order on Consent Docket No. P-50-06. ADEQ issued a letter dated January 26, 2008¹, providing comments on the requested changes to the program. Sierrita subsequently discussed and resolved most of ADEQ's comments during a conference call on February 13, 2009 and during several follow-up telephone calls. As a follow-up to those calls, ADEQ issued a letter to Sierrita dated April 17, 2008¹, with revised comments. The purpose of this letter is to clarify our understanding of how each comment was resolved. ADEQ's comments are presented below in italics, followed by Sierrita's responses.

1. *On a quarterly basis, Freeport should continue to sample water quality and measure water levels at the following monitoring wells:*

MO-2009-1, upgradient of Community Water ("CW") 10;

MO-2007-4A, B, C, upgradient of CW-6;

NP-2, MO-2007-3B, C, upgradient of CW-9; and

All drinking water production wells.

Response:

Sierrita agrees that quarterly monitoring should continue at the above listed wells. ADEQ agreed that by "all drinking water production wells", the agency was referring to the following wells: CW-6, CW-9, CW-10, GV-01-GVDWID, and GV-02-GVDWID. To further clarify what wells will be sampled and on what frequency, we developed a summary table (Table 1) for what is referred to as the "Pre-Implementation Groundwater Monitoring Plan" in the Mitigation Plan that was submitted on May 8, 2009. This plan will remain in effect until a Post-Implementation Groundwater Monitoring Plan has been developed under the Mitigation Plan. Figure 1 illustrates the locations of the wells listed in Table 1. Table 1

¹ Although ADEQ's letter was dated 2008, it was issued in 2009.

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identifies sentinel wells for specific drinking water supply wells consistent with ADEQ's letter.

2. *On an annual basis, Freeport should sample water quality and measure water levels at the 82 wells referenced in the "First Quarter 2009 Groundwater Monitoring Report" (to the extent possible).*

Response:

Actually, a total of 91 wells were referenced in the *First Quarter 2009 Groundwater Monitoring Report*. Water quality samples were collected from 77 wells and water levels only were measured in 14 wells. Table 1, based on the groundwater monitoring reported for the first quarter of 2009, lists the wells where Sierrita will sample water quality and measure water levels, and the wells where Sierrita will only measure water levels on an annual basis under the Pre-Implementation Groundwater Monitoring Plan.

3. *In addition to the sampling and water level measurements requested above, on a semiannual basis Freeport should sample water quality and measure water levels at the wells identified in Freeport's December 23, 2008 letter to ADEQ.*

Response:

Sierrita agrees with ADEQ's comment. The wells that Sierrita will sample water quality and measure water levels semiannually under the Pre-Implementation Groundwater Monitoring Plan are listed in Table 1.

4. *As stated in the January 26, 2009 letter from ADEQ to Freeport, Freeport may analyze filtered groundwater samples for dissolved sulfate following the United States Environmental Protection Agency ("EPA") Method 300.0, eliminating the monitoring of total sulfate concentrations.*

Response:

Sierrita agrees with ADEQ's comment to eliminate total sulfate as an analytical parameter.

5. *As stated in the January 26, 2009 letter from ADEQ to Freeport, Freeport may submit groundwater monitoring reports to ADEQ on the last date of the month in April and October, unless Freeport detects levels rising above 135 mg/L sulfate in the vicinity of identified drinking water sources. In that event, ADEQ expects that Freeport will notify ADEQ immediately in writing, providing the analytical results, as well as any interim actions taken in response to the increased levels of sulfate.*

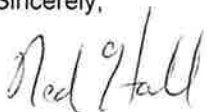
Response:

Sierrita agrees with ADEQ's comment to modify submittal dates for the groundwater monitoring reports. Sierrita agrees that if the sulfate concentration exceeds 135 mg/L at one of the sentinel wells, it will notify ADEQ immediately in writing and increase sampling frequency to monthly. After a total of five samples are taken from the sentinel well exceeding 135 mg/L, a trend analysis on the sampling results will be conducted and a change in sampling frequency to quarterly may be recommended if there is no statistically significant upward trend in sulfate concentrations.

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Please do not hesitate to contact Mr. Stuart Brown at (503) 675-5252 or myself at (520) 229-6470 if you have any question regarding this submittal.

Sincerely,



E. L. (Ned) Hall
Manager – Water Quality Programs
Freeport-McMoRan Copper & Gold Inc.

ELH:ms
Attachments
20090515_001

xc: Henry Darwin, Arizona Department of Environmental Quality
John Broderick, Sierrita
Chad Fretz, Sierrita
Stuart Brown, Bridgewater Group, Inc.
Jim Norris, Hydro Geo Chem, Inc.

TABLE 1
Pre-Implementation Groundwater Monitoring Plan

Well Name	ADWR 55 Well Registry Number	Owner	Quarterly Sampling	Semiannual Sampling	Annual Sampling
CC OF GV	501760	CC of GV			✓
CW-3	627483	CWC		✓	✓
CW-6	627485	CWC	✓	✓	✓
CW-7	502546	CWC			✓ (WLO)
CW-8	543600	CWC			✓ (WLO)
CW-9	588121	CWC	✓	✓	✓
CW-10	207982	CWC	✓	✓	✓
ESP-1	623102	Sierrita		✓	✓
ESP-2	623103	Sierrita		✓	✓
ESP-3	623104	Sierrita		✓	✓
ESP-4	623105	Sierrita		✓	✓
ESP-5	623106	Sierrita			✓ (WLO)
GV-01-GVDWID	603428	GVDWID	✓	✓	✓
GV-02-GVDWID	603429	GVDWID	✓	✓	✓
GV-SI-GVDWID	208825	GVDWID			✓
HAVEN GOLF	515867	Haven Golf			✓
I-10	608525	TBPI			✓
IW-1	623129	Sierrita			✓
IW-2A	216464	Sierrita			✓
IW-3A	623131	Sierrita			✓
IW-4	623132	Sierrita			✓
IW-5	623133	Sierrita			✓
IW-6A	545565	Sierrita			✓
IW-8	508236	Sierrita			✓
IW-9	508238	Sierrita			✓
IW-10	508237	Sierrita			✓
IW-11	508235	Sierrita			✓
IW-12	545555	Sierrita			✓
IW-13	545556	Sierrita			✓
IW-14	545557	Sierrita			✓
IW-15	545558	Sierrita			✓
IW-16	545559	Sierrita			✓
IW-17	545560	Sierrita			✓
IW-18	545561	Sierrita			✓
IW-19	545562	Sierrita			✓
IW-20	545563	Sierrita			✓
IW-21	545564	Sierrita			✓
IW-22	200554	Sierrita			✓
IW-23	200555	Sierrita			✓
IW-24	200556	Sierrita			✓
M-8	87390	TBPI		✓	✓
M-9	501652	TBPI			✓
M-10	501653	TBPI		✓	✓
M-20	906595	TBPI			✓
MH-1	803629	Sierrita			✓ (WLO)
MH-3	803630	Sierrita			✓ (WLO)
MH-5	803632	Sierrita			✓ (WLO)
MH-6	803633	Sierrita			✓ (WLO)
MH-7	803634	Sierrita			✓ (WLO)
MH-9	803635	Sierrita			✓
MH-10	803636	Sierrita			✓
MH-11	803637	Sierrita			✓
MH-12	803638	Sierrita			✓
MH-13A	904071	Sierrita			✓

TABLE 1
Pre-Implementation Groundwater Monitoring Plan

Well Name	ADWR 55 Well Registry Number	Owner	Quarterly Sampling	Semiannual Sampling	Annual Sampling
MH-13B	904072	Sierrita			✓
MH-13C	904073	Sierrita			✓
MH-14	528098	Sierrita			✓ (WLO)
MH-15E	528094	Sierrita			✓ (WLO)
MH-15W	528093	Sierrita			✓ (WLO)
MH-16E	528100	Sierrita			✓ (WLO)
MH-16W	528099	Sierrita			✓ (WLO)
MH-24	563799	Sierrita			✓
MH-25A	201528	Sierrita			✓
MH-25B	208429	Sierrita			✓
MH-25C	208426	Sierrita			✓
MH-26A	201527	Sierrita			✓
MH-26B	208427	Sierrita			✓
MH-26C	208428	Sierrita			✓
MH-28	903648	Sierrita		✓	✓
MH-29	903649	Sierrita		✓	✓
MH-30	903884	Sierrita			✓
MO-2007-1A	907342	Sierrita		✓	✓
MO-2007-1B	907210	Sierrita		✓	✓
MO-2007-1C	907209	Sierrita		✓	✓
MO-2007-2	906765	Sierrita			✓
MO-2007-3B ¹	906816	Sierrita	✓	✓	✓
MO-2007-3C ¹	906817	Sierrita	✓	✓	✓
MO-2007-4A ²	907213	Sierrita	✓	✓	✓
MO-2007-4B ²	907212	Sierrita	✓	✓	✓
MO-2007-4C ²	907211	Sierrita	✓	✓	✓
MO-2007-5B	907456	Sierrita		✓	✓
MO-2007-5C	907457	Sierrita		✓	✓
MO-2007-6A ³	907607	Sierrita	✓	✓	✓
MO-2007-6B ³	907606	Sierrita	✓	✓	✓
MO-2009-1 ⁴	910458	Sierrita	✓	✓	✓
NP-2 ¹	605898	CWC	✓	✓	✓
PZ-7	561870	Sierrita			✓
PZ-8	561866	Sierrita			✓
PZ-9	561859	Sierrita			✓
TMM-1	616156	Pima County		✓	✓
1350	ND	TBPI			✓ (WLO)

ADWR = Arizona Department of Water Resources

CC OF GV = Country Club of Green Valley

CWC = Community Water Company of Green Valley

GVDWID = Green Valley Domestic Water Improvement District

ND = No Data

Sierrita = Freeport-McMoRan Sierrita Inc.

TBPI = Twin Buttes Properties, Inc.

WLO = Water Level Only

¹ Sentinel Well for CW-9

² Sentinel Well for CW-6

³ Sentinel Well for CW-10

⁴ Sentinel Well for GV-01-GVDWID and GV-02-GVDWID

