FLORENCE COPPER

FLORENCE COPPER INC.
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November 23, 2021

Mr. David Albright
Manager, Groundwater Protection Section
USEPA Region 9 (WTR-4-2)
75 Hawthorne St
San Francisco, CA 94105

Subject: Underground Injection Control (UIC) Permit Number R9UIC-AZ3FY11-1
Monthly Update for AL/AQL Exceedances at Supplemental Monitoring Well M59-O

Dear Mr. Albright:

Florence Copper is providing this monthly update of supplemental monitoring well M59-O alert level (AL) and/or Aquifer Quality Limit (AQL) exceedances under Underground Injection Control (UIC) Permit Number R9UIC-AZ3FY11-1 (Permit).

Florence Copper has been voluntarily monitoring M59-O monthly for the parameters listed in Table 1 (see attached), and previously submitted a monthly report on October 22, 2021. Table 1 has been updated to include the most recent laboratory results from the monthly sample collected on October 19, 2021 and received on November 11, 2021. Concentrations of the indicator parameters magnesium, sulfate, and total dissolved solids (TDS) have decreased since the last monthly sample, as have the gross beta levels. Total uranium and adjusted gross alpha increased since last month while radium remained relatively steady. The November monthly sample was collected on November 8, and the results are pending.

To aid rinsing efforts on the east side of the wellfield, injection into well I-02 was suspended in August and September, and I-02 was temporarily operated as a recovery well from September 28 to October 10, 2021. Injection into well I-01 was also suspended beginning October 14, 2021. Redevelopment of injection and recovery wells in the wellfield continued during the month as part of the ongoing rinsing activities.

In October and November recovery rates in the wellfield averaged greater than three times the injection rates. Hydraulic gradients were maintained throughout the month.

Florence Copper will continue monthly sampling of supplemental monitoring well M59-O for parameters which exceeded the ALs and AQLs and will report these results monthly to EPA until all concentrations are below the ALs and AQLs.

Please feel free to contact me should you have any questions or comments.

Sincerely,
Florence Copper, Inc.

Brent Berg
General Manager

Cc: Nancy Rumrill, EPA Region 9
Maribeth Greenslade, ADEQ

Table 1. Supplemental Monitoring Well M59-O Monthly Sampling Results

	Parameter						
	Magnesium (mg/L)	Sulfate (mg/L)	Total dissolved solids (TDS) (mg/L)	Total Uranium (mg/L)	Adjusted gross alpha (pCi/L)	Radium 226+228 (pCi/L)	Gross beta (pCi/L)
AL	23	202	854	0.0052	15.8	6.9	16
AQL	--	--	--	--	15.8	6.9	16
12/28/2020	**57.2**	**865**	**1,860**	**0.037**	**73.5 ± 3.7**	**19.8 ± 0.8**	**43.2±2.7**
1/18/2021	**63.1**	**960**	**1800**	**0.038**	**35.4 ± 2.5**	**22.0 ±0.8**	**52.7±3.0**
2/22/2021	**26.5**	**383**	**970**	**0.0088**	**17.9±1.4**	6.2±0.5	NA
3/23/2021	19.1	**228**	762	0.003	**18.8±1.5**	**7.0±0.6**	NA
4/14/2021	19.8	**249**	780	0.0038	**18.1±1.2**	**10.9±0.7**	**19.6±1.9**
5/19/2021	**65.6**	**999**	**2010**	**0.0096**	**49.1±2.1**	**18.0±0.8**	**52.1 ± 3.3**
6/1/2021	**59.8**	**850**	**1900**	**0.0117**	**57.3±2.9**	**13.6±0.7**	**36.9±2.9**
7/19/2021	**70**	**1200**	**2300**	**0.0187**	**29.4±3.2**	**15.4±0.7**	**41.6±3.2**
8/24/2021	**59**	**1100**	**2100**	**0.0326**	**31.3±3.7**	**13.7±0.6**	**36.8±3.1**
9/20/2021	**59**	**990**	**2000**	**0.024**	**24.4±3.4**	**10.3±0.6**	**38.6±3.1**
10/19/2021	**55**	**820**	**1800**	**0.043**	**28.0±2.0**	**10.9±0.6**	**33.2±2.7**

BOLD values are exceedances of AL and/or AQL

NA: not analyzed