



FOURTH QUARTER 2014 MONITORING REPORT
UIC PERMIT AZ396000001 AND APP PERMIT 101704
FLORENCE COPPER PROJECT, FLORENCE, ARIZONA

Curis Resources (Arizona) Inc.
1575 W. Hunt Highway
Florence, AZ 85132

January 28, 2015



FLORENCE COPPER INC.

1575 W. Hunt Highway, Florence, Arizona 85132 USA

florencecopper.com

January 28, 2015

Ms. Nancy Rumrill
U.S. Environmental Protection Agency
Region 9, Ground Water Office, WTR-9
75 Hawthorne Street
San Francisco, California 94105-3901

Sent U.S. Certified Mail
#7002 0860 0005 5148 1328
Return Receipt Requested

Subject: Fourth Quarter 2014 Monitoring Report
Underground Injection Control (UIC) Permit Number AZ396000001

Dear Ms. Rumrill:

Florence Copper Inc. (formerly Curis Resources (Arizona) Inc.) is submitting this report in accordance with the reporting requirements of Parts II.G.2.(a) through (j) of the UIC Permit No. AZ396000001 issued by the United States Environmental Protection Agency (USEPA) on May 1, 1997. The Florence Copper project is also subject to the requirements of Aquifer Protection Permit (APP) No. 101704 issued by the Arizona Department of Environmental Quality (ADEQ) on June 9, 1997, and last amended on February 14, 2014.

This report pertains to monitoring activities conducted at the Florence Copper project from October 1 through December 31, 2014. Copies of records required by Part II.G.1 are maintained at the mine site, along with other information that is summarized below.

As you are aware, Florence Copper discontinued hydraulic control of the original pilot test facility on September 1, 2004 in order to conduct groundwater quality tests in accordance with the APP and Part II.I.2 of the UIC Permit. A report of the results has been provided to ADEQ and USEPA for review. The recovery wells have remained off until a plan for further activity can be approved. As a result, no extraction flows or water levels are reported under Sections (b) and (c) below.

(a) A map showing the current status of the mine.

Figure 1 shows the current monitoring area, including the Point of Compliance (POC) wells and the well field. Figure 2 shows the approximate layout of the well field and denotes the four well observation well/recovery well pairs.

There are four injection/recovery wells and nine original recovery wells. The four injection wells were later used as recovery wells during the rising of the mine block. Five observation wells were installed to demonstrate net inward hydraulic gradient for the 90 days required by the permit. Solution injection began on October 31, 1997 and ceased on February 8, 1998.

(b) A table and graph showing daily cumulative injection flows and extraction flows in each active mine block over the reporting period.

There are currently no active mine blocks. Hydraulic control for the test block was discontinued on September 1, 2004 for purposes of collecting groundwater samples following a 90-day period of no hydraulic control, and remains discontinued for evaluation of results. Accordingly, there are no injection or extraction flows to report.

(c) A table and graph comparing average daily head in the four observation wells surrounding each active mine block with that of the four adjacent extraction wells.

There are currently no active mine blocks. Hydraulic control was not required during this reporting period for the test block and water level measurements are not required.

(d) A table showing POC monitoring wells analytical results and Alert Levels.

The POC Quarterly Compliance Monitoring Report is included as Attachment 1. The report summarizes the results of groundwater monitoring activities and includes tables of the field parameters and analytical results for the quarterly monitoring parameters. Brown and Caldwell, along with Project personnel, conducted quarterly compliance sampling on October 27 through November 3, 2014.

Quarterly parameters were analyzed for 29 of the 31 POC monitoring wells. POC monitoring wells M32-UBF and M33-UBF were dry and could not be sampled.

For the Fourth Quarter 2014, one result exceeded the approved laboratory alert levels (ALs). Sulfate in upgradient well M1-GL was 121 milligrams per liter (mg/L), above the AL of 109 mg/L.

Sulfate has exceeded the AL in M1-GL since the Third Quarter of 2011. No AQL has been set for sulfate and there is no established Aquifer Water Quality Standard (AWQS). A report has been submitted demonstrating that the AL exceedance is not related to the permitted mining activities and routine quarterly monitoring for the well resumed during the Third Quarter 2012 event.

(e) Results of the monthly analyses of organic in the injectate

Organic analyses are not required because no solution was injected during the reporting period.

(f) Results of monitoring required by 40 CFR 146.33 (b)(1)

No solution was injected.

(g) Results of the mechanical integrity tests

No mechanical integrity test was conducted.

(h) Results of the annular conductivity monitoring

Although injection ceased in early 1998, annular conductivity measurements have continued to the present time. A graph showing measurement results for this reporting period is presented on Figure 3. No unusual conditions were noted.

(i) Well and core hole plugging and abandonment.

None of the existing wells or core holes were abandoned during the report period.

(j) A summary of closure operations during the reporting period.

There were no closure operations during the reporting period.

Florence Copper believes that you will find this report complete and in compliance with all permit conditions. Please contact me at (520) 374-3984 should you have any questions regarding this report.

Sincerely,

Florence Copper Inc.

A handwritten signature in blue ink, appearing to read 'Daniel Johnson', with a stylized flourish at the end.

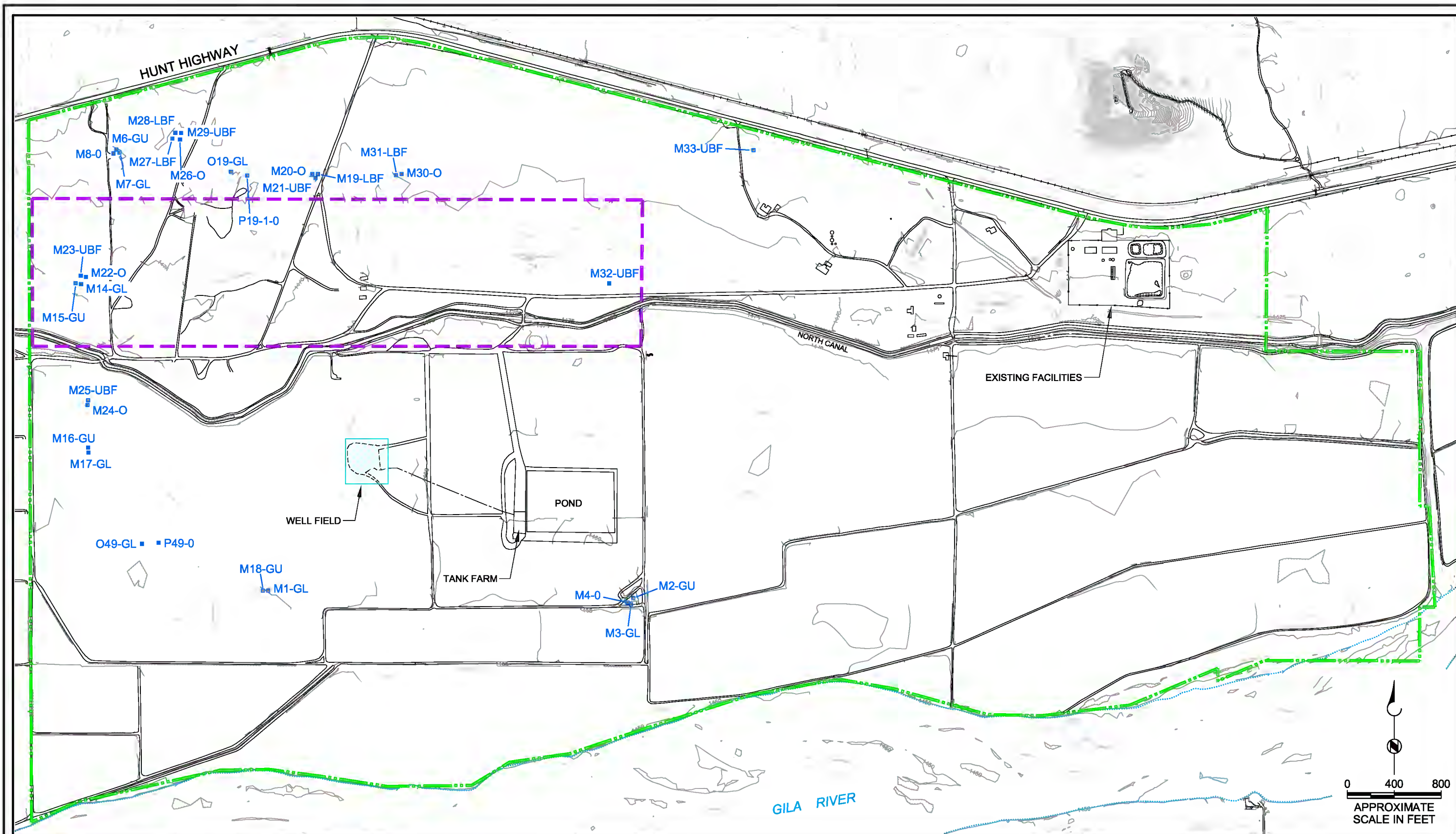
Daniel Johnson

Vice President Environment and Technical Services

BAS:cr

Attachments

cc: Florence Copper File

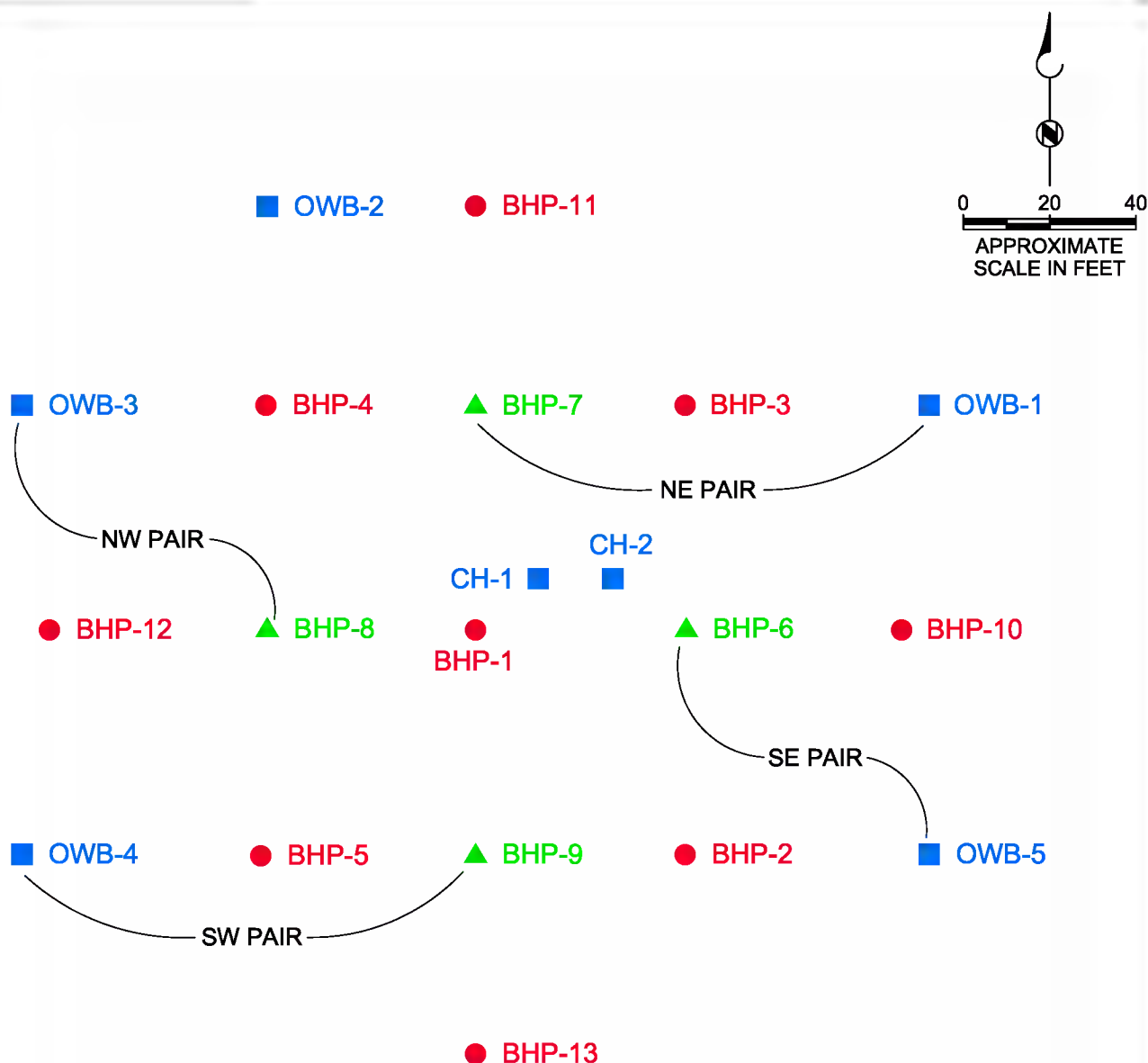


EXPLANATION

- APPROXIMATE PROPERTY BOUNDARY
- STATE LEASE LAND BOUNDARY
- M3-GL POC MONITORING WELL
- WELL FIELD DETAIL, FIGURE 2

**Brown AND
Caldwell**

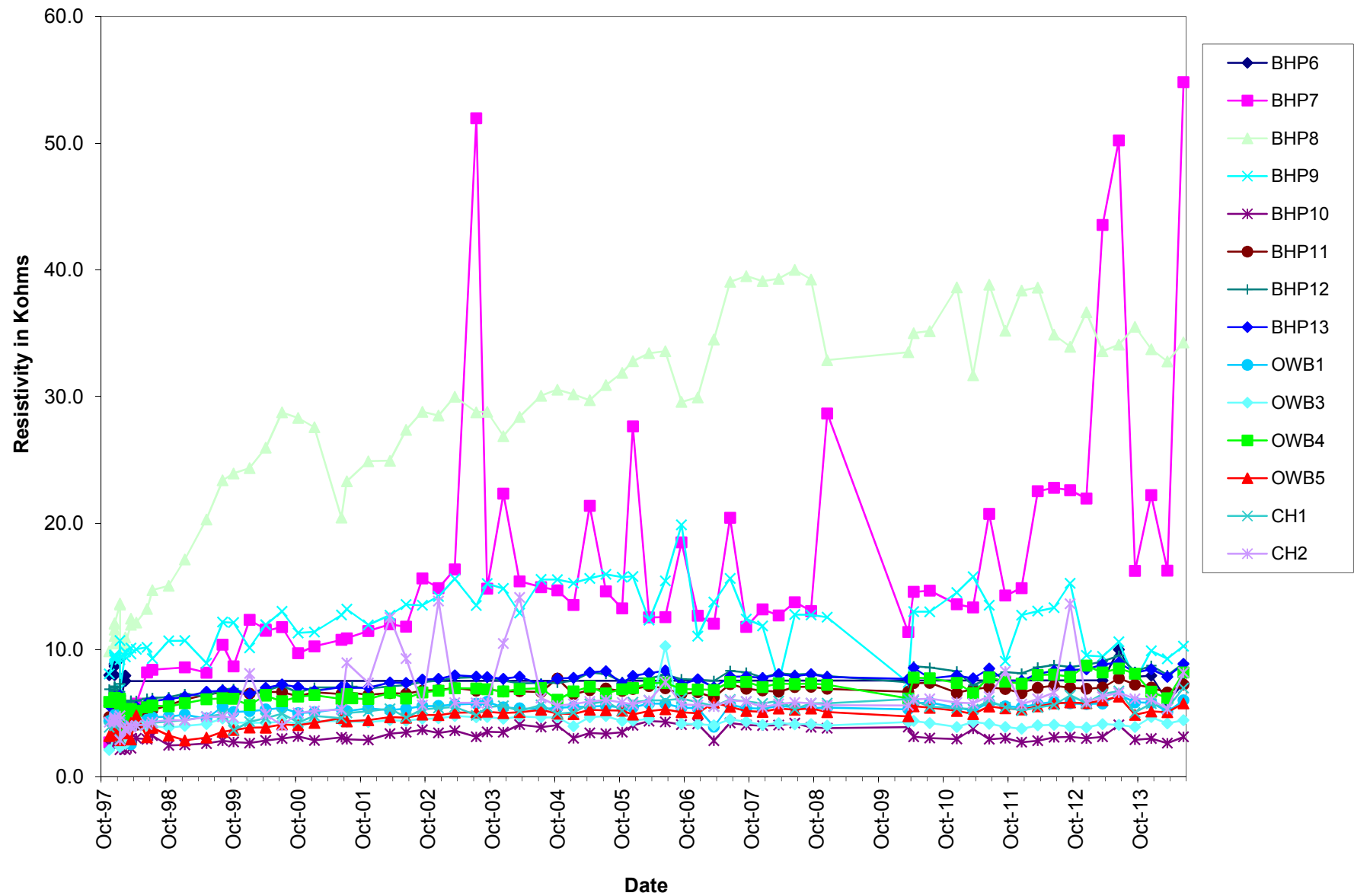
Figure 1
MONITORING AREA
FLORENCE COPPER PROJECT
FLORENCE, ARIZONA



EXPLANATION

- BHP-10 RECOVERY WELL (CURRENTLY INACTIVE)
- OWB-2 OBSERVATION WELL
- ▲ BHP-8 INJECTION / RECOVERY WELL
(RECOVERY MODE SINCE 1998)

Figure 3 - Well Field Annular Resistivity



ATTACHMENT 1

POC Quarterly Compliance Monitoring Report

FLORENCE COPPER PROJECT
QUARTERLY COMPLIANCE MONITORING REPORT
FOURTH QUARTER 2014



Sampling Activities

Groundwater sampling at the Florence Copper Project site took place on October 27 through November 3, 2014 (Fourth Quarter 2014). Groundwater sampling and analysis was conducted in accordance with the requirements of Aquifer Protection Permit (APP) No. 101704, Section 2.5.3 (Groundwater Monitoring and Sampling Protocols) and Underground Injection Control (UIC) Permit No. AZ396000001 Part II.F.

Quarterly parameters, as listed in Section 4.0, Table 4.5 of the APP, were analyzed from the designated Point of Compliance (POC) wells. The quarterly analytical parameters are magnesium, sulfate, fluoride, and total dissolved solids (TDS) in addition to field pH, temperature, and specific conductance. The field parameters of dissolved oxygen (DO) and turbidity are also monitored to determine stabilization of wells sampled using low-flow purging methods, but are not reported.

During the Fourth Quarter 2014 sampling event, 29 POC wells were sampled. Two POC wells (M32-UBF and M33-UBF) were dry and could not be sampled. Analyses of the samples were conducted by TestAmerica Laboratories – Phoenix, Denver, and Irvine (TestAmerica). Analytical results for the quarterly parameters are provided in Table 1, and field parameters measured during sampling are indicated in Table 2.

The majority of the monitoring well network is equipped with low-flow bladder pumps. Low-flow sampling was conducted in accordance with Section 2.5.3 (Groundwater Monitoring and Sampling Protocols). Wells M16-GU, M20-O, M22-O, M24-O, O49-GL(R) and P49-O are equipped with stainless-steel electric pumps. The wells were sampled by purging a minimum of three borehole volumes, except for M20-O which is purged dry for two consecutive days and allowed to recharge prior to sampling. No reduced pumping volumes occurred, and there were no other modified sampling procedures noted.

For the Fourth Quarter 2014, one result exceeded an approved Alert Level (AL). Sulfate in upgradient well M1-GL was 121 milligrams per liter (mg/L), above the AL of 109 mg/L.

Sulfate has exceeded the AL in M1-GL since the Third Quarter of 2011. No AQL has been set for sulfate and there is no established AWQS. A report has been submitted demonstrating that the AL exceedance is not related to the permitted mining activities, and routine quarterly monitoring for the well resumed during the Third Quarter 2012 event.

As described above, a general increase in sulfate concentrations in M1-GL has been observed since 2000. A similar general increase has been observed in sulfate concentrations in M27-LBF since 2000; however, there is no sulfate increase in nearby wells M28-LBF which is screened below M27-LBF, or M29-UBF which is screened above M27-LBF. Recently, concentrations of magnesium, sulfate, and TDS appear to be increasing in upgradient wells M2-GU, M3-GL, and M4-O. In the upper aquifer, a decreasing trend for

magnesium concentrations and an increasing trend for fluoride concentrations were observed from 2000 to 2008, stabilizing since 2008. Rising concentrations were also observed in upgradient wells M2-GU and M18-GU for magnesium, sulfate, and TDS from 2005 to 2007, declining somewhat since 2008. Site-wide water levels have declined more than 50 feet in all three aquifer zones since the start of monitoring in 1996. Levels had stabilized or recovered from 2004 to 2011, and are again decreasing.

Of the 23 wells with low-flow pumps, some changes in water quality have been observed, since these pumps were installed between the Third Quarter 2011 and the First Quarter 2012. Concentrations of the indicator parameters in M26-O, and M28-LFB have decreased on an average basis from 5 percent to 60 percent. Concentrations in M4-O have increased on an average basis from 20 percent to 80 percent. The changes of concentrations are likely related to the change of sampling methodology.

Contingency Sampling Plans

No contingency sampling plan was required during the Fourth Quarter 2014. No contingency sampling plan is required for the First Quarter 2015.

Table 1. Summary of Analytical Results, Quarterly Parameters

Well ID	Sample Date	Magnesium		Sulfate		Fluoride		Total Dissolved Solids	
		Concentration	Alert Level	Concentration	Alert Level	Concentration	Alert Level	Concentration	Alert Level
M1-GL	Oct 30 2014	22	31	121	109	0.72	1.3	720	1028
M2-GU	Oct 30 2014	29	39	171	275	0.83	1.4	930	1496
M3-GL	Oct 30 2014	23	36	159	187	0.72	1.3	744	1157
M4-O	Oct 30 2014	7.0	15	77.1	405	2.59	5.1	520	1072
M6-GU	Oct 31 2014	2.5	5.1	47.8	86	0.73	1.3	376	620
M7-GL	Oct 31 2014	<0.2	1	21.3	82	0.96	1.7	278	464
M8-O	Oct 31 2014	<0.2	1	53.5	122	2.18	3.6	386	609
M14-GL	Nov 03 2014	2.4	23	64.5	144	0.63	1.4	450	874
M15-GU	Oct 31 2014	20	44	54.3	126	0.62	1.2	636	1359
M16-GU	Oct 28 2014	26	52	202	248	0.72	1.1	1020	1635
M17-GL	Nov 03 2014	3.6	9.3	52.1	209	0.7	1.6	386	831
M18-GU	Oct 30 2014	22	36	163	288	0.96	1.6	828	1323
M19-LBF	Oct 27 2014	9.8	21	42.6	89	<0.4	1	432	794
M20-O	Oct 29 2014	8.8	14	69.7	112	0.79	1.7	494	809
M21-UBF	Oct 27 2014	23	87	189	487	0.79	1.1	938	2867
M22-O	Oct 29 2014	6.0	8.6	55.4	86	0.75	1.3	416	1094
M23-UBF	Nov 03 2014	32	69	255	411	0.75	1.3	1170	2392
M23-UBF (Dup)	Nov 03 2014	32	69	255	411	0.79	1.3	1160	2392
M24-O	Oct 27 2014	9.0	19	765	1364	1.11	2.5	1310	2363
M24-O (Dup)	Oct 27 2014	9.6	19	768	1364	1.1	2.5	1300	2363
M25-UBF	Nov 03 2014	37	76	272	387	0.69	1.6	1380	2683
M26-O	Oct 29 2014	<0.2	1	57.7	105	1.54	3.4	300	556
M27-LBF	Oct 29 2014	34	51	154	179	<0.4	1	1060	1745
M27-LBF (Dup)	Oct 29 2014	34	51	154	179	<0.4	1	1050	1745
M28-LBF	Oct 29 2014	0.95	2.6	12.8	81	0.77	1.6	326	610
M29-UBF	Oct 28 2014	32	84	237	465	0.61	1.1	1120	2751
M30-O	Oct 27 2014	10	18	63.2	102	0.72	1.6	510	824
M31-LBF	Oct 27 2014	20	46	172	330	0.84	1.3	898	1665
O19-GL	Oct 28 2014	11	17	61.3	99	0.56	1.4	468	770
O49-GL(R)	Oct 28 2014	11	18	79.9	159	0.43	1	652	849
P19-1-O	Oct 28 2014	5.1	12	68.5	107	1.44	2.8	438	767
P49-O	Oct 29 2014	3.7	6.2	111	181	0.95	2	452	801
Arizona Aquifer Water Quality Standard		-		-		4		-	

All Results in Milligrams per Liter (mg/l)

< = Less than the Laboratory Practical Quantitation Limit



Table 2. Summary of Quarterly Field Parameters

Well ID	Sample Date	Temperature (°C)	Temperature (°F)	pH	Conductivity (µmhos/cm)
M1-GL	Oct 30 2014	21.0	69.8	7.38	973
M2-GU	Oct 30 2014	20.2	68.4	7.11	1383
M3-GL	Oct 30 2014	20.5	68.9	7.26	1051
M4-O	Oct 30 2014	20.6	69.1	7.39	668
M6-GU	Oct 31 2014	24.6	76.3	6.79	410
M7-GL	Oct 31 2014	24.1	75.4	9.12	495
M8-O	Oct 31 2014	23.4	74.1	8.84	473
M14-GL	Nov 03 2014	21.1	70.0	8.02	594
M15-GU	Oct 31 2014	21.3	70.3	7.40	915
M16-GU	Oct 28 2014	22.3	72.1	7.49	1580
M17-GL	Nov 03 2014	20.4	68.7	8.75	853
M18-GU	Oct 30 2014	20.7	69.3	7.29	1036
M19-LBF	Oct 27 2014	21.9	71.4	7.68	720
M20-O	Oct 29 2014	21.5	70.7	7.37	650
M21-UBF	Oct 27 2014	21.8	71.2	7.13	2044
M22-O	Oct 29 2014	26.8	80.2	8.02	629
M23-UBF	Nov 03 2014	20.7	69.3	7.15	1979
M24-O	Oct 27 2014	28.8	83.8	7.91	1647
M25-UBF	Nov 03 2014	20.3	68.5	7.03	2142
M26-O	Oct 29 2014	22.5	72.5	8.75	431
M27-LBF	Oct 29 2014	22.1	71.8	7.42	1423
M28-LBF	Oct 29 2014	22.8	73.0	9.01	523
M29-UBF	Oct 28 2014	21.9	71.4	7.18	1729
M30-O	Oct 27 2014	22.5	72.5	7.29	543
M31-LBF	Oct 27 2014	21.9	71.4	7.22	1348
O19-GL	Oct 28 2014	21.4	70.5	7.45	776
O49-GL(R)	Oct 28 2014	24.2	75.6	7.77	678
P19-1-O	Oct 28 2014	21.2	70.2	7.27	699
P49-O	Oct 29 2014	26.1	79.0	7.68	634

°C = Degrees Celcius

°F = Degrees Fahrenheit

µmhos/cm = Micromhos per Centimeter