2 North Central Avenue, Suite 1600
Phoenix, Arizona 85004

T: (602) 567-4000
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Memorandum

Prepared for: File
Project Title: Florence Copper
Project No.: 151776

Subject: Florence Copper Project, Temporary APP and UIC Permits, Ambient Events MW-01s 8 and 9
Date: May 18, 2018
To: Ian Ream
From: Barb Sylvester

Groundwater sampling at the Florence Copper Project site took place April 5 and April 19, 2018. Two Supplemental wells were sampled as part of the ambient monitoring program for the Temporary APP and UIC permits. Wells MW-01-LBF and MW-01-O were sampled twice during the month, fourteen days apart. Four total samples were collected. Table 1 summarizes the sampling activities.

Ambient samples were to be analyzed for metals, inorganics, organics, and radionuclides (Table 2). Samples for metal analysis were filtered in the field.

Table 1. Summary of April 2018 Ambient Event

Date	Sample Identification	Pump Style	Analyses
April 5, 2018	MW-01-LBF	Low-Flow	Level II
	MW-01-O	Low-Flow	Level II
April 19, 2018	MW-01-LBF	Low-Flow	Level II
	MW-01-O	Low-Flow	Level II

Table 2. Analytical Parameters		
Analysis	Method	Preservative
Inorganic Common Ions		
pH (lab)	SM 4500H+	None
Electroconductivity (EC) (lab)	SM 2510B	None
Bicarbonate Alkalinity	SM 2320B	None
Carbonate Alkalinity	SM 2320B	None
Hydroxide Alkalinity	SM 2320B	None
Total Alkalinity	SM 2320B	None
Chloride	EPA 300.0	None
Fluoride (Level I)	EPA 300.0	None
Nitrate as N	EPA 300.0	None
Nitrite as N	EPA 300.0	None
Sulfate (Level I)	EPA 300.0	None
Total Dissolved Solids (Level I)	SM 2540C	None
Cation/Anion Balance	Calculation	-
Cyanide	EPA 335.4	NaOH
Formation-Related Radiochemicals		
Gross Alpha	600/00-02	None
Gross Beta	900.0	None
Radium 226	903/GammaRay HPGE	None
Radium 228	904/GammaRay HPGE	None
Total Uranium Isotopes (if G. Alpha >12.0)	ASTM 6239	None
Radon 222	7500-Rn	None (Voas)
Total Uranium (unfiltered total as mg/L)	EPA 200.8	HNO3
Process-Related Organics		
Extractable Fuel Hydrocarbons (Diesel Range Organics)	EPA 8015D	None
Benzene	EPA 8260B	HCl Voas
Ethylbenzene	EPA 8260B	HCl Voas
Toluene	EPA 8260B	HCl Voas
Total Xylene	EPA 8260B	HCl Voas
Carbon Disulfide	EPA 8260B	HCl Voas
Napthalene	EPA 8260B	HCl Voas
Octane	EPA 8260B	HCl Voas
Trace Metals and Cations (Filtered-Dissolved)		
Aluminum	EPA 200.8	HNO3
Antimony	EPA 200.8	HNO3
Arsenic	EPA 200.8	HNO3
Barium	EPA 200.8	HNO3

Table 2. Analytical Parameters		
Analysis	Method	Preservative
Beryllium	EPA 200.8	HNO3
Calcium	EPA 200.7	HNO3
Cadmium	EPA 200.8	HNO3
Chromium	EPA 200.8	HNO3
Cobalt	EPA 200.8	HNO3
Copper	EPA 200.8	HNO3
Iron	EPA 200.7	HNO3
Lead	EPA 200.8	HNO3
Magnesium (Level I)	EPA 200.7	HNO3
Manganese	EPA 200.8	HNO3
Mercury	EPA 245.1	HNO3
Nickel	EPA 200.8	HNO3
Potassium	EPA 200.7	HNO3
Selenium	EPA 200.8	HNO3
Sodium	EPA 200.7	HNO3
Thallium	EPA 200.8	HNO3
Zinc	EPA 200.8	HNO3

Observations/Problems

1. Wells MW-01-LBF and MW-01-O were sampled twice during the month, fourteen days apart.
2. During the April 19 event, the water level in MW-01-O was observed to be not static and rising nearly half a foot in an hour. The second, higher water level was selected for the permanent record.

Table 3. Summary of Water Levels						
Sample Event:	Ambient Event MW-01s 8&9				Measured By:	M. Orcutt
Well ID	Sample Date	Depth to Water (feet bls)	Description of Measuring Point	Elevation of Measuring Point (feet amsl)	Water Level Elevation (feet amsl)	Comments
M52-UBF	4/5/2018	230.08	TOC	1485.04	1254.96	
M54-LBF	4/5/2018	230.26	TOC	1481.89	1251.63	
M54-O	4/5/2018	232.65	TOC	1482.40	1249.75	
M55-UBF	4/5/2018	226.40	TOC	1479.21	1252.81	
M56-LBF	4/5/2018	227.37	TOC	1478.69	1251.32	
M57-O	4/5/2018	228.70	TOC	1478.75	1250.05	
M58-O	4/5/2018	231.40	TOC	1481.16	1249.76	
M59-O	4/5/2018	230.92	TOC	1480.26	1249.34	
M60-O	4/5/2018	226.95	TOC	1477.45	1250.50	
M61-LBF	4/5/2018	230.00	TOC	1480.80	1250.80	
MW-01-LBF	4/5/2018	227.55	TOC	NA	NA	
MW-01-LBF	4/19/2018	231.25	TOC	NA	NA	
MW-01-O	4/5/2018	230.35	TOC	NA	NA	
MW-01-O	4/19/2018	240.80	TOC	NA	NA	Water Level Rising, Not Static
Shaft	4/5/2018	229.04	Surface Plate	NA	NA	

amsl = Above Mean Sea Level

TOC = Top of Casing

TOM = Top of Monument

NA = Not Available

Table 4. Summary of Field Parameters						
Sample Event:	Ambient Event MW-01s 8&9		Measured By:	M. Orcutt		
Well ID	Sample Date	Temperature (°C)	pH	Conductivity (µmhos/cm)	Turbidity (NTU)	Comments
MW-01-LBF	4/5/2018	22.9	7.39	1,461	1.78	
MW-01-LBF	4/19/2018	23.6	7.41	1,468	1.74	
MW-01-O	4/5/2018	22.8	7.68	1,380	0.67	
MW-01-O	4/19/2018	23.0	7.74	1,360	0.64	

°C = degrees Celsius

°F = degrees Fahrenheit

µmhos/cm = Micromhos per Centimeter

NTU = Nephlometric Tubidity Units

QUARTERLY WATER LEVELS – PILOT TEST MONITOR WELLS

Station ID	Measure Date	Depth to Water
MW-01-LBF	4-5-2018	227.55
MW-01-O		230.35
M52-UBF		230.08
M54-LBF		230.26
M54-O		232.65
M55-UBF		226.40
M56-LBF		227.37
M57-O		228.70
M58-O		231.40
M59-O		230.92
M60-O		226.95
M61-LBF		230.00
SHAFT		229.04
Cross-Permit Wells (enter results on both field sheets)		
M14-GL	4-4-18	226.65
M15-GU	4-4-18	225.50
M22-O	4-4-18	~~239.70~~ 228.50
M23-UBF	4-4-18	219.95

Write NM if blocked, Dry if dry.

Measured by: M. Orcutt

BC's 500' sounder
=0' correction

Brown AND Caldwell

SITE VISITATION

JOB NAME: Florence Copper JOB NUMBER: 201 301

PERSONNEL: M. Orait DATE: 4-4-2018 4-5-2018

COMMENTS:

(4/4)

0800 On site, security signed me in at front gate. Spoke w/ Ian then mob to wells for WL's.
Took all static water levels from old POC wells with BC's 500' sounder.

1340 Spoke w/ Ian off site for Nitrogen.

(4/5)

0800 On site, signed in by security, Load up QED, cooler, and nitrogen.
Mob to wells to warm up BC's WQ meters for APP Calibration.
0900 Prep to sample West Bay well 04 (WB-04)

Sampled WB-04
Sampled MW-01-1
MW-01-LBF

1230 Short lunch.
Sounded M32, M33 and new POC wells
1500 Returned Nitrogen + QED.
Mob to MZ6 for photos per Ian
Samples to Ian for Turner lab Tucson
Rad ~~Safty~~ Safety by B.C 4/5/18
1545 off site.

Brown AND Caldwell

SITE VISITATION

JOB NAME: Florence Copper JOB NUMBER: 150342.301

PERSONNEL: M. Orcutt DATE: 4/19/2018

COMMENTS:

0830 On site, spoke with Ian and P/U cooler, filters, and QED.

Mob to wells to warm up equipment for Calibrations.

10:00 Sample MW-01-0
11:08 Sampled MW-01-LBF

1200 Mob back to office. Drop off QED equipment.
Samples to Ian for Turner labs.
Radchem to Rad Safety by B.C

1240 off site

4/19/18

GROUNDWATER SAMPLING FIELD DATA

PROJECT: Florence Copper

WELL ID: MW-01-LBF

SAMPLED BY: M. Orcutt

DATE : 4/5/18

WELL INFORMATION

TD Casing: 630 feet

Static Depth to Water: 227.55 feet

System Purge before Params 5.0 liters

Time Purge Start: 11:12 hours

Time Sample Start: 11:36 hours

Time Purged: 24 minutes

Time	Temperature (°C) +/- 3%	pH +/- 0.1	EC (umhos/cm) +/- 3%	DO (mg/L) 10% or <.5	Turbidity (NTU) 10% or <5	Pump Rate (L/min) <0.5L/min	Purge Volume (L)	Pulldown DTW (feet) <0.5 ft	Comments QED Bladder Pump Intake 580'
1125	23.0	7.42	1462	3.50	3.36	0.38	5.0	0.03	Clear, NO ODORS
1128	22.9	7.40	1464	3.31	3.45	0.33	6.0	0.03	
1131	22.9	7.40	1461	3.29	2.61	0.33	7.0	0.03	
1134	22.9	7.39	1461	3.22	1.78	0.33	8.0	0.03	
									Low flow for VOC's
									2.4

Sample ID: MW-01-LBF Sample Time, 1136 Duplicate (ID = N/A, Time N/A) Analyses Requested: Level II – Metals, Inorgs, Radios, BTEX, TPH-D

GROUNDWATER SAMPLING FIELD DATA

PROJECT: Florence Copper

WELL ID: MW-01-LBF

SAMPLED BY: M. Orcutt

DATE : 4/18/2017

WELL INFORMATION

TD Casing: 630 feet

Static Depth to Water: 231.25 feet

System Purge before Params 5.0 liters

Time Purge Start: 1040 hours

Time Sample Start: 1108 hours

Time Purged: 28 minutes

Time	Temperature (°C) +/- 3%	pH +/- 0.1	EC (umhos/cm) +/- 3%	DO (mg/L) 10% or <.5	Turbidity (NTU) 10% or <5	Pump Rate (L/min) <0.5L/min	Purge Volume (L)	Pulldown DTW (feet) <0.5 ft	Comments QED Bladder Pump Intake 580'
1056	23.5	7.46	1466	3.86	3.51	0.31	5.0	0.03	Clear, no odors
1100	23.6	7.43	1468	4.05	2.02	0.25	6.0	0.05	
1103	23.5	7.42	1468	4.07	1.76	0.33	7.0	0.05	
1106	23.6	7.41	1468	4.13	1.74	0.33	8.0	0.05	
									Low flow for VOC's
									2.4

Sample ID: MW-01-LBF Sample Time, 1108 Duplicate (ID = N/A, Time N/A) Analyses Requested: Level II – Metals, Inorgs, Radios, BTEX, TPH-D

GROUNDWATER SAMPLING FIELD DATA

PROJECT: Florence Copper

WELL ID: MW-01-O

SAMPLED BY: M. Orcutt

DATE : 4/5/18

WELL INFORMATION

TD Casing: 1,200 feet

Static Depth to Water: ~~230.440~~ feet 230.35

System Purge before Params 9.2 liters

Time Purge Start: 0954 hours

Time Sample Start: 1033 hours

Time Purged: 39 minutes

Time	Temperature (°C) +/- 3%	pH +/- 0.1	EC (umhos/cm) +/- 3%	DO (mg/L) 10% or <.5	Turbidity (NTU) 10% or <5	Pump Rate (L/min) <0.5L/min	Purge Volume (L)	Pulldown DTW (feet) <0.5 ft	Comments QED Bladder Pump Intake 1000'
1022	22.8	7.62	1387	1.72	1.45	0.33	9.5	0.00	Clear, No odors
1025	22.8	7.65	1384	1.56	0.88	↓	10.5	0.00	
1028	22.9	7.67	1381	1.30	0.63		11.5	↓	
1031	22.8	7.68	1380	1.20	0.67		12.5		
									Low flow for VOCs
									2,4,6,8

Sample ID: MW-01-O Sample Time, 1033 Duplicate (ID = N/A, Time N/A) Analyses Requested: Level II – Metals, Inorgs, Radios, BTEX, TPH-D

GROUNDWATER SAMPLING FIELD DATA

PROJECT: Florence Copper

WELL ID: MW-01-O

SAMPLED BY: M. Orcutt

DATE : 4/19/2017

WELL INFORMATION

TD Casing: 1,200 feet

Static Depth to Water: 241.18 feet 240.80

System Purge before Params 9.2 liters water Rising.

Time Purge Start: 0908 hours

Time Sample Start: 1000 hours

Time Purged: 52 minutes

Time	Temperature (°C) +/- 3%	pH +/- 0.1	EC (umhos/cm) +/- 3%	DO (mg/L) 10% or <.5	Turbidity (NTU) 10% or <5	Pump Rate (L/min) <0.5L/min	Purge Volume (L)	Pulldown DTW (feet) <0.5 ft	Comments QED Bladder Pump Intake 1000'
0946	23.0	7.67	1365	2.04	1.31	0.25	9.5	-0.00	Clear, NO ODORS.
0950	23.1	7.74	1366	2.01	0.84	0.25	10.5		
0954	23.0	7.76	1364	1.88	0.67	0.25	11.5		
0958	23.0	7.74	1360	1.80	0.64	0.25	12.5		
									Low flow for VOC's
									2,4,6,8

Sample ID: MW-01-O Sample Time, 10:00 Duplicate (ID = N/A, Time N/A) Analyses Requested: Level II – Metals, Inorgs, Radios, BTEX, TPH-D

pH and TEMP CALIBRATION RECORD

Florence Copper Project

Instrument: YSI 556
SN: 15A102406
Probe SN: 600336

APP Sampling Event
Month: April
Year: 2018

Calibration Procedures:

-pH calibration/measurement should be performed in accordance with protocols set forth by ***Standard Methods for the Examination of Water and Wastewater – 4500 H pH.*** Gentle agitation or stirring of sample should maintained during pH calibration and sample analysis.

-Temperature measurement should be performed in accordance with protocols set forth by ***Standard Methods for the Examination of Water and Wastewater – 2550 Temperature*** using an NIST traceable thermometer.

Calibration Standards Used:

Standard	Manufacturer	Lot#	Received	Expiration
4.00	Envi. Supply	7GL593	4/5/18-4/10	Dec/19
7.00	↓	7GL695	3/22/18/4/10	Dec/19
10.00		7GF884	3/28/18	Jun/19
7.00 Chk	Terra Tech	4706046	4/5/18	~~Dec/19~~ 6/1/19

pH 7 chk 9GB386/4/9/18/Feb 20 / pH 10 – 9GA543 4/10/18 Jan 20

Calibration Record

Date	Time	Sampler	pH 4.00		pH 7.00		pH 10.00		pH 7.00Chk		Temp Chk*	Notes**
			T (°C)	Cal.	T (°C)	Cal.	T (°C)	Cal.	T (°C)	Cal.	T (°C)	
4/5/18	0845	M. Orwitt	19.2	3.98	18.6	7.00	19.4	10.0	21.7	7.02	21.0	pH 7 chk.
4/19/18	0915	"	20.6	4.01	18.9	7.00	19.7	10.02	19.9	7.02		

* Temperature check performed with second NIST thermometer.
** If meter does not provide slope, ensure that the calibration is confirmed with a recheck of pH 7.0 in the column "pH 7.00Chk".
***Perform 7-Check every 10 measurements or if Temperature increases by 15 °F.
**** All maintenance to instrument during the field event should be logged on this form. All maintenance should also be logged on the "Preventative Maintenance" log.

EC and DO CALIBRATION RECORD

Florence Copper Project

Instrument: VS1556
SN: 15A102406
Probe SN: 600336

APP Sampling Event
Month: April
Year: 2018

Calibration Procedures:

-EC calibration/measurement should be performed in accordance with protocols set forth by ***Standard Methods for the Examination of Water and Wastewater – 2510 Conductivity.***

-Temperature measurement should be performed in accordance with protocols set forth by ***Standard Methods for the Examination of Water and Wastewater – 2550 Temperature*** using an NIST traceable thermometer.

-DO calibration/measurement should be performed as per manufacturer recommendations.

Calibration Standards Used:

Standard Conc.	Manufacturer	Lot#	Received	Expiration
1413	Env. Supply	BGA685	~~3/2~~ 4/5/18	1/19
(check)	N/A			

Calibration Record

Date	Time	Sampler	Specific Conductance						DO calibration performed?	Notes*
			EC 1413		EC 1413		EC 1413 Chk			
			T (°C)	Cal.	T (°C)	Cal.	T (°C)	Cal.	Yes/No	
4/5/18	0900	Orcutt			21.2	1413	N/A		Yes	100% SAT
4/19/18	0925	"			21.1	1413	N/A		Yes	100% SAT

* All maintenance to instrument during the field event should be logged on this form. All maintenance should also be logged on the "Preventative Maintenance" log.

TURBIDITY CALIBRATION RECORD

Florence Copper Project

Instrument: BC's La Motte 2020e 4/18 La Motte 2020 we
SN: 10969 26862
Probe SN: N/A N/A

APP Sampling Event
Month: April
Year: 2018

Calibration Procedures:

-Calibration/measurement should be performed in accordance with protocols set forth by ***USEPA Method 180.1*** using an NIST traceable thermometer.

Calibration Standards Used:

Standard	Manufacturer	Lot#	Received	Expiration
0 NTU	Amco	C801268	3/5/18	6/19
1 NTU		C691608	3/5/18	1/19
10 NTU		C797837	3/5/18	2/19
1 NTU Chk		C691608	3/5/18	1/19

Calibration Record

Date	Time	Sampler	0 NTU	1 NTU	10 NTU	1 NTU Chk	Notes**
4/5/18	0855	Orcutt	0.00	1.01	10.01	1.02	
4/19/18	0930	"	0.01	0.99	10.02	0.98	

YSI 556 NEW JAN 28, 2015

1/28/15

No Maint. Required

3/26/15

5/4/2015 DO not calibrating -
M. Orcutt Replaced DO Sensor membrane
Recalibration OK. (Florence).

5/7/2015 NIST Thermometer check.
M. Orcutt BC-1A Model 4146 Exp 11/8/2015
1°C from YSI 556 Temp.

8/10/2015
M. Orcutt pH not calibrating.
F.C. Forced readings -
Uncalibrated and pH 7.0
Re Calib. check OK. MV +140
at pH 7.0

8/13/2015 Replaced pH/ORP Sensor
M. Orcutt +0.6 MV - good

Scale: 1 square = _____

2016

Aug 9, - Ernies
M. Orcutt D.O. Fluid Replace
and D.O. Tip replaced

Aug 26 Replaced DO Tip
w/ new fluid.
M. Orcutt Andrews property

Sept. 6 M. Orcutt NWR
YSI pH failure.
Replaced pH/ORP Sensor
Equipco - repair.

Nov 10, 2016 M. Orcutt
Florence
Replaced YSI 556 pH/ORP Sensor

Nov 11, 2016 NIST Thermometer
check @ Florence (W15859378)
18.4°C - YSI / 19.4°C NIST (1°C)

Scale: 1 square = _____

Rite in the Rain

OLD pH Sensor report

pH	mV	Reading	Temp
pH 7	·29	7.00	24.8 °C
4	+85.9	4.00	8524.4 °C
10	-141.4	10.01	24.6

* pH 7 ok,
pH 4, 10 forced,

Changed Sensor (pH, ORP)

Scale: 1 square = _____

Scale: 1 square = _____

AbsoluteGrade PT Program

NELAC-TNI PTP16

PT Evaluation Report

Brown and Caldwell
Michael Orcutt 6025674000
201 East Washington Street Suite 500
Phoenix AZ 85004

Account # 5490

USEPA Lab ID
Study # **QTA**
Study Type **External PT**

NPDES ID #
Open Date **10/30/2017**
Close Date **12/13/2017**

Part# **55026WV** Lot# **081117** **WP Conductance @ 25°C - DMRQA** **@ 25 C** Invoice# **166494** Units **umhos/cm**

NELAC #	Component	Method Code	Method Description	</>	Reported Value	AV or StudyMean	Assigned Value	Acceptance Limits Low	High	Performance Evaluation	Analysis Date
1610	Specific Conductance @ 25 C	200	2510B		768	744	744	670	818	ACCEPT.	12/12/2017

Samples were prepared and scored according to the principles outlined in the "The TNI Standard EL-V3-2009" and the current Fields of Proficiency Testing Tables, FoPTs.
All components are formulated and verified under Absolutes' NELAC scope (ANAB Accreditation ISO 17025, 17043 (Cert.# AP-1543) , Guide 34-35) as shown in blue font.
This report may be used in whole or in part by the participant. All results are confidential but limited to accreditation body or other participant requests!

Calibration
Certificate No. 1750.01

Calibration complies with ISO/IEC 17025, ANSI/NCSL Z540-1, and 9001

Cert. No.: 4372-8485029

Traceable® Certificate of Calibration for Flip-Stick™ Thermometer

Instrument Identification:

Model: 4372 S/N: 170481521 Manufacturer: Control Company

Standards/Equipment:

Description	Serial Number	Due Date	NIST Traceable Reference
Temperature Calibration Bath TC-191	A42238		
Thermistor Module	A27129	12/01/17	1000401760
Temperature Probe	5202	12/19/17	B6B30058-1
Temperature Calibration Bath TC-218	A73332		
Thermistor Probe	5356	1/10/18	B7104024
Readout, Digital Thermometer	B5C344	3/12/18	B7314035

Certificate Information:

Technician: 104 Procedure: CAL-3 Cal Date: 4/24/17 Due Date: 4/24/19
Test Conditions: 23.7°C 47.0 %RH 1015 mBar

Calibration Data: (New Instrument)

Unit(s)	Nominal	As Found	In Tol	Nominal	As Left	In Tol	Min	Max	±U	TUR
°C		N.A.		0.000	-0.4	Y	-1.0	1.0	0.059	>4:1
°C		N.A.		90.000	89.9	Y	89.0	91.0	0.059	>4:1

This Instrument was calibrated using Instruments Traceable to National Institute of Standards and Technology.

A Test Uncertainty Ratio of at least 4:1 is maintained unless otherwise stated and is calculated using the expanded measurement uncertainty. Uncertainty evaluation includes the instrument under test and is calculated in accordance with the ISO "Guide to the Expression of Uncertainty in Measurement" (GUM). The uncertainty represents an expanded uncertainty using a coverage factor k=2 to approximate a 95% confidence level. In tolerance conditions are based on test results falling within specified limits with no reduction by the uncertainty of the measurement. The results contained herein relate only to the item calibrated. This certificate shall not be reproduced except in full, without written approval of Control Company.

Nominal=Standard's Reading; As Left=Instrument's Reading; In Tol=In Tolerance; Min/Max=Acceptance Range; ±U=Expanded Measurement Uncertainty; TUR=Test Uncertainty Ratio; Accuracy=±(Max-Min)/2; Min = As Left Nominal(Rounded) - Tolerance; Max = As Left Nominal(Rounded) + Tolerance; Date=MM/DD/YY

Nicol Rodriguez, Quality Manager

Aaron Judice, Technical Manager

Maintaining Accuracy:

In our opinion once calibrated your Flip-Stick™ Thermometer should maintain its accuracy. There is no exact way to determine how long calibration will be maintained. Flip-Stick™ Thermometers change little, if any at all, but can be affected by aging, temperature, shock, and contamination.

Recalibration:

For factory calibration and re-certification traceable to National Institute of Standards and Technology contact Control Company.

CONTROL COMPANY 12554 Galveston RD Suite B230 Webster TX USA 77598
Phone 281 482-1714 Fax 281 482-9448 service@control3.com www.control3.com

Control Company is an ISO 17025:2005 Calibration Laboratory Accredited by (A2LA) American Association for Laboratory Accreditation, Certificate No. 1750.01.
Control Company is ISO 9001:2008 Quality Certified by (DNV) Det Norske Veritas, Certificate No. CERT-01805-2006-AQ-HOU-RvA.
International Laboratory Accreditation Cooperation (ILAC) - Multilateral Recognition Arrangement (MRA).

Traceable® is a registered trademark of Control Company © 2009 Control Company

BROWN AND CALDWELL

Acknowledgement Form

Page ____ of ____

Name of Project/Site: Florence Copper	**Project No:** 152044
Project/Site Location: Florence, AZ	**Permit Type (APP, AZPDES):** APP
Employee Completing Form: (Print and Sign):	**Date:** 2/2/18

Employee Acknowledgement:

The following signatures indicate that these personnel have read and/or been briefed on the documents indicated and understand the work to be performed:

- ☑ pH by SM 4500 H-B
- ☑ temperature by SM 2550B
- ☑ specific conductance by SM 2510 B
- ☑ dissolved oxygen by SM 4500 O-G
- ☑ turbidity by EPA 180.1
- ☑ Manufacturer Info for Instrument YSI-556
- ☑ Manufacturer Info for Instrument Lamott 220 WE

Print	Sign
Michael Oram II	

Comments

TURNER LABORATORIES INC.
2445 N. Coyote Drive, Suite 104
Tucson, Arizona 85745
(520) 882-5880
Fax: (520) 882-9788
www.turnerlabs.com

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

TURNER WORK ORDER # _____ DATE 4-5-2018 PAGE 1 OF 1

PROJECT NAME Florence Copper #
CONTACT NAME : Barb Sylvester
COMPANY NAME : Brown and Caldwell
ADDRESS : 2 N Central Ave, Suite 1600
CITY Phoenix STATE AZ ZIP CODE 85004
PHONE 602-567-3894 FAX
SAMPLER'S SIGNATURE

CIRCLE ANALYSIS REQUESTED AND/OR CHECK THE APPROPRIATE BOX

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX*	NUMBER OF CONTAINERS (*)	Diss Metals - list (Field Filtered)	Total Uranium (not Filtered)	Inorganics - list	Cyanide (free)	Organics - list	G.Alpha, Beta, (RadSafety sub)	Uranium activity if G. Alpha >12	Ra226, 228, Ra-Tot (RadsSafety)	Radon 222 (RadSafety sub)	TPH-D (TestAmerica Sub)
MW-01-0	4-5-18	1033		GW	12	X	X	X	X	X	X	X	X	X	X
MW-01-LBP	↓	1136		GW	12	X	X	X	X	X	X	X	X	X	X
TB	↓	—		GW	2					X	~~X~~				
				GW											
				GW											
				GW											
				GW											
				GW											
				GW											
				GW											
				GW											

1. RELINQUISHED BY:
Signature Michael Orcutt
Printed Name BFC
Firm 4-5-2018 1500
Date/Time

2. RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

TURNAROUND REQUIREMENTS:
X Standard (approx.10 days)*
___Next day ___2 Day ___5 Day*
___ Email Preliminary Results To:
* Working Days

REPORT REQUIREMENTS:
X I. Routine Report
___ II. Report (includes DUP,MS,MSD, as required, may be charged as samples)
___ III. Date Validation Report (Includes All Raw Data)
Add 10% to invoice

INVOICE INFORMATION:
Account X Y ___ N
P.O. #
Bill to: Florence Copper

SAMPLE RECEIPT:
Total Containers
Temperature
☑ Wet Ice ☐ Blue Ice

3. RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

4. RECEIVED BY:
Signature
Printed Name TURNER LABORATORIES, INC.
Firm
Date/Time

*LEGEND
DW = DRINKING WATER
GW = GROUNDWATER
SD = SOLID
SG = SLUDGE
SL = SOIL
ST = STORMWATER
WW = WASTEWATER

SPECIAL INSTRUCTIONS/COMMENTS:

Compliance Analysis:	☐ Yes ☐ No	Custody Seals	☐	Preservation Confirmation	☐
ADEQ Forms:	☐ Yes ☐ No	Container Intact	☐	Appropriate Head Space	☐
Mail ADEQ Forms:	☐ Yes ☐ No	COC/Labels Agree	☐	Received Within Hold Time	☐

Diss. metals field Filtered
(*) 3 bottles to Rad Safety by B.C.

TURNER LABORATORIES INC.
2445 N. Coyote Drive, Suite 104
Tucson, Arizona 85745
(520) 882-5880
Fax: (520) 882-9788
www.turnerlabs.com

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

TURNER WORK ORDER # _____ DATE 4-19-2018 PAGE 1 OF 1

PROJECT NAME Florence Copper # _____
CONTACT NAME: Barb Sylvester
COMPANY NAME: Brown and Caldwell
ADDRESS: 2 N Central Ave, Suite 1600
CITY Phoenix STATE AZ ZIP CODE 85004
PHONE 602-567-3894 FAX
SAMPLER'S SIGNATURE [signature]

CIRCLE ANALYSIS REQUESTED AND/OR CHECK THE APPROPRIATE BOX

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX*	NUMBER OF CONTAINERS (*)	Diss Metals - list (Field Filtered)	Total Uranium (not Filtered)	Inorganics - list	Cyanide (free)	Organics - list	G.Alpha, Beta, (RadSafety sub)	Uranium activity if G. Alpha >12	Ra226, 228, Ra-Tot (RadsSafety)	Radon 222 (RadSafety sub)	TPH-D (TestAmerica Sub)
MW-01-0	4-19-18	10:00		GW	12	X	X	X	X	X	X	X	X	X	X
MW-01-LBF	↓	11:08		GW	12	X	X	X	X	X	X	X	X	X	X
TB	↓			GW	1					X					
				GW											
				GW											
				GW											
				GW											
				GW											
				GW											
				GW											
				GW											

1. RELINQUISHED BY: [signature]
Signature
Michael Orcutt
Printed Name
Brown + Caldwell
Firm
4-19-2018 @ 1220
Date/Time

2. RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

TURNAROUND REQUIREMENTS:
X Standard (approx.10 days)*
___Next day ___2 Day ___5 Day*
___Email Preliminary Results To:
* Working Days

REPORT REQUIREMENTS:
X I. Routine Report
___ II. Report (includes DUP,MS,MSD, as required, may be charged as samples)
___ III. Date Validation Report (Includes All Raw Data)
Add 10% to invoice

INVOICE INFORMATION:
Account X Y ___ N
P.O. # _____
Bill to: Florence Copper

SAMPLE RECEIPT:
Total Containers _____
Temperature _____
☑ Wet Ice ☐ Blue Ice

3. RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

4. RECEIVED BY:
Signature
Printed Name
TURNER LABORATORIES, INC.
Firm
Date/Time

*LEGEND
DW = DRINKING WATER
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SPECIAL INSTRUCTIONS/COMMENTS:

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ADEQ Forms:	☐ Yes ☐ No	Container Intact	☐	Appropriate Head Space	☐
Mail ADEQ Forms:	☐ Yes ☐ No	COC/Labels Agree	☐	Received Within Hold Time	☐

(*) 3 Bottles to Rad Safety By B.C. 4-19-18
Diss. Metals Field Filtered / See 1374 w/ COC

Florence Copper Project
New POC Wells - Ambient Monitoring

Inorganics - 500 ml Poly Unpreserved

pH (lab)
EC (lab)
Bicarbonate Alkalinity
Carbonate Alkalinity
Hydroxide Alkalinity
Total Alkalinity
Chloride
Fluoride
Nitrate as N (48-hr Hold time)
Nitrite as N (48-hr Hold time)
Sulfate
Total Dissolved Solids
Cation/Anion Balance

500 ml NaOH

Cyanide (free)

Organics

3 HCl Voas

Benzene
Ethylbenzene
Toluene
Total Xylene
Napthalene
Octane
Carbon Disulfide

2 1L Amber to TestAmerica

Extractable Fuel Hydrocarbons
(Diesel Range Organics)

Filtered Dissolved Metals - 250 ml NO3

Aluminum
Antimony
Arsenic
Barium
Beryllium
Cadmium
Calcium
Chromium
Cobalt
Copper
Iron
Lead
Magnesium
Manganese
Mercury
Nickel
Potassium
Selenium
Sodium
Thallium
Zinc

UNFiltered Total Metals - 250 ml NO3

Total Urnanium

Radiochems to Radiation Safety

1G unpreserved poly

Gross Alpha
Gross Beta
Radium 226+228

Uranium istotopes (if G. Alpha >12.0)

Adjusted Alpha (if G. Alpha >12.0)

2 blank Voas - 72 Hour Hold Time

Radon