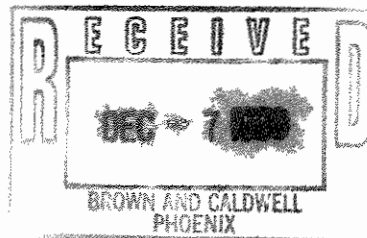


# NEL LABORATORIES

Reno • Las Vegas • Boise  
Phoenix • So. California

Reno Division  
4750 Longley Lane, Suite 106 • Reno, Nevada 89502  
775-348-2522 • Fax: 775-348-2546  
1-800-368-5221

CLIENT: Brown & Caldwell  
3636 N. Central Ave. Ste. 200  
Phoenix, AZ 85012  
ATTN: Barb Sylvester



PROJECT NAME: BHP Florence  
PROJECT #: 15942.004

NEL ORDER ID: P9911039

Attached are the analytical results for samples in support of the above referenced project.

Samples submitted for this project were not sampled by NEL Laboratories. Samples were received by NEL in good condition, under chain of custody on 11/9/99.

Samples were analyzed as received.

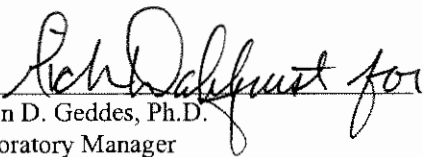
Where applicable we have included the following quality control data:

- Method blank - used to demonstrate absence of contamination or interferences in the analytical process.
- Laboratory Control Spike (LCS) - used to demonstrate laboratory ability to perform the method within specifications by spiking representative analytes into a clean matrix.
- Surrogates - compounds added to each sample to ensure that the method requirements are met for each individual sample.

Should you have any questions or comments, please feel free to contact our Client Services department at (602) 437-0099.

## Some QA results have been flagged as follows:

- C - Sample concentration is at least 5 times greater than spike contribution. Spike recovery criteria do not apply.

  
Jason D. Geddes, Ph.D.  
Laboratory Manager

12/1/99  
Date

## CERTIFICATIONS:

	Reno	Las Vegas	S. California
Arizona	AZ0520	AZ0518	AZ0605
California	1707	2002	2264
US Army Corps of Engineers	Certified	Certified	

	Reno	Las Vegas	S. California
Idaho	Certified	Certified	
Montana	Certified	Certified	
Nevada	NV033	NV052	CA084
L.A.C.S.D.			10228

# NEL LABORATORIES

CLIENT: Brown & Caldwell  
PROJECT ID: BHP Florence  
PROJECT #: 15942.004

CLIENT ID: Pond-W2  
DATE SAMPLED: 11/9/99  
NEL SAMPLE ID: P9911039-01

TEST: AZ METALS PKG  
MATRIX: Aqueous

ANALYST: JY - Reno Division

<u>PARAMETER</u>	<u>RESULT</u> <u>mg/L</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>DIGESTED</u>	<u>ANALYZED</u>
Aluminum	0.70	0.025 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Antimony	ND	0.025 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Arsenic	ND	0.025 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Beryllium	0.0079	0.0025 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Cadmium	0.0053	0.002 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Calcium	730	1.25 mg/L	2.5	EPA 200.7	11/18/99	11/22/99
Chromium	ND	0.005 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Copper	15	0.0025 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Iron	ND	0.05 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Lead	ND	0.025 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Magnesium	220	0.25 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Manganese	6.1	0.0025 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Mercury	ND	0.0002 mg/L	1	EPA 245.1	11/18/99	11/18/99
Nickel	0.43	0.02 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Potassium	26	1. mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Selenium	ND	0.025 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Silver	ND	0.005 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Sodium	620	1.25 mg/L	2.5	EPA 200.7	11/18/99	11/22/99
Thallium	ND	0.05 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Zinc	0.54	0.05 mg/L	0.5	EPA 200.7	11/18/99	11/22/99

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: Brown & Caldwell  
PROJECT ID: BHP Florence  
PROJECT #: 15942.004

CLIENT ID: Pond-C5  
DATE SAMPLED: 11/9/99  
NEL SAMPLE ID: P9911039-02

TEST: AZ METALS PKG  
MATRIX: Aqueous

ANALYST: JY - Reno Division

<u>PARAMETER</u>	<u>RESULT</u> <u>mg/L</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>DIGESTED</u>	<u>ANALYZED</u>
Aluminum	0.62	0.025 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Antimony	ND	0.025 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Arsenic	ND	0.025 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Beryllium	0.0075	0.0025 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Cadmium	0.0055	0.002 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Calcium	790	1.25 mg/L	2.5	EPA 200.7	11/18/99	11/22/99
Chromium	ND	0.005 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Copper	15	0.0025 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Iron	ND	0.05 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Lead	ND	0.025 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Magnesium	220	0.25 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Manganese	6.3	0.0025 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Mercury	ND	0.0002 mg/L	1	EPA 245.1	11/18/99	11/18/99
Nickel	0.45	0.02 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Potassium	27	1. mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Selenium	0.030	0.025 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Silver	ND	0.005 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Sodium	580	1.25 mg/L	2.5	EPA 200.7	11/18/99	11/22/99
Thallium	ND	0.05 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Zinc	0.56	0.05 mg/L	0.5	EPA 200.7	11/18/99	11/22/99

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: Brown & Caldwell  
PROJECT ID: BHP Florence  
PROJECT #: 15942.004

CLIENT ID: Pond-E10  
DATE SAMPLED: 11/9/99  
NEL SAMPLE ID: P9911039-03

TEST: AZ METALS PKG  
MATRIX: Aqueous

ANALYST: JY - Reno Division

<u>PARAMETER</u>	<u>RESULT</u> <u>mg/L</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>DIGESTED</u>	<u>ANALYZED</u>
Aluminum	0.62	0.025 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Antimony	ND	0.025 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Arsenic	ND	0.025 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Beryllium	0.0076	0.0025 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Cadmium	0.0063	0.002 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Calcium	750	1.25 mg/L	2.5	EPA 200.7	11/18/99	11/22/99
Chromium	ND	0.005 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Copper	15	0.0025 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Iron	ND	0.05 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Lead	ND	0.025 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Magnesium	230	0.25 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Manganese	6.4	0.0025 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Mercury	ND	0.0002 mg/L	1	EPA 245.1	11/18/99	11/18/99
Nickel	0.46	0.02 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Potassium	26	1. mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Selenium	0.026	0.025 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Silver	ND	0.005 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Sodium	530	1.25 mg/L	2.5	EPA 200.7	11/18/99	11/22/99
Thallium	ND	0.05 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Zinc	0.57	0.05 mg/L	0.5	EPA 200.7	11/18/99	11/22/99

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: Brown & Caldwell  
PROJECT ID: BHP Florence  
PROJECT #: 15942.004

CLIENT ID: Method Blank  
DATE SAMPLED: NA  
NEL SAMPLE ID: P11029HG-BLK

TEST: AZ METALS PKG

---

<u>PARAMETER</u>	<u>RESULT</u> <u>mg/L</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>DIGESTED</u>	<u>ANALYZED</u>
Mercury	ND	0.0002 mg/L	1	EPA 245.1	11/18/99	11/18/99

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: Brown & Caldwell  
PROJECT ID: BHP Florence  
PROJECT #: 15942.004

CLIENT ID: Method Blank  
DATE SAMPLED: NA  
NEL SAMPLE ID: P11039i-BLK

TEST: AZ METALS PKG

<u>PARAMETER</u>	<u>RESULT</u> <u>mg/L</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>DIGESTED</u>	<u>ANALYZED</u>
Aluminum	ND	0.025 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Antimony	ND	0.025 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Arsenic	ND	0.025 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Beryllium	ND	0.0025 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Cadmium	ND	0.002 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Calcium	ND	0.25 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Chromium	ND	0.005 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Copper	ND	0.0025 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Iron	ND	0.05 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Lead	ND	0.025 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Magnesium	ND	0.25 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Manganese	ND	0.0025 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Nickel	ND	0.02 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Potassium	ND	1. mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Selenium	ND	0.025 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Silver	ND	0.005 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Sodium	ND	0.25 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Thallium	ND	0.05 mg/L	0.5	EPA 200.7	11/18/99	11/22/99
Zinc	ND	0.05 mg/L	0.5	EPA 200.7	11/18/99	11/22/99

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: Brown & Caldwell  
PROJECT ID: BHP Florence  
PROJECT #: 15942.004

CLIENT ID: Pond-W2  
DATE SAMPLED: 11/9/99  
NEL SAMPLE ID: P9911039-01

TEST: Inorganic Non-Metals  
MATRIX: Aqueous

PARAMETER	REPORTING			METHOD	UNITS	ANALYZED
	RESULT	LIMIT	D. F.			
Alkalinity - Bicarbonate	ND	25.	1	SM 2320 B	mg/L	11/12/99
Alkalinity - Carbonate	ND	25.	1	SM 2320 B	mg/L	11/12/99
Alkalinity - Hydroxide	ND	25.	1	SM 2320 B	mg/L	11/12/99
Alkalinity, Total	ND	25.	1	SM 2320 B	mg/L	11/12/99
Chloride	350	50.	500	EPA 300.0	mg/L	11/15/99
Fluoride	8.8	4.	10	SM 4500-F C	mg/L	11/16/99
pH	6.30	2.	1	EPA 150.1	pH Units	11/10/99
pH Temperature	11.5	1.	1	EPA 150.1	°C	11/10/99
Sulfate	3000	250.	2500	EPA 300.0	mg/L	11/10/99
Total Dissolved Solids	4670	60.	4	SM 2540 C	mg/L	11/10/99

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: Brown & Caldwell  
PROJECT ID: BHP Florence  
PROJECT #: 15942.004

CLIENT ID: Pond-C5  
DATE SAMPLED: 11/9/99  
NEL SAMPLE ID: P9911039-02

TEST: Inorganic Non-Metals  
MATRIX: Aqueous

PARAMETER	REPORTING			METHOD	UNITS	ANALYZED
	RESULT	LIMIT	D. F.			
Alkalinity - Bicarbonate	ND	25.	1	SM 2320 B	mg/L	11/12/99
Alkalinity - Carbonate	ND	25.	1	SM 2320 B	mg/L	11/12/99
Alkalinity - Hydroxide	ND	25.	1	SM 2320 B	mg/L	11/12/99
Alkalinity, Total	ND	25.	1	SM 2320 B	mg/L	11/12/99
Chloride	340	25.	250	EPA 300.0	mg/L	11/15/99
Fluoride	7.9	4.	10	SM 4500-F C	mg/L	11/16/99
pH	6.42	2.	1	EPA 150.1	pH Units	11/10/99
pH Temperature	11.8	1.	1	EPA 150.1	°C	11/10/99
Sulfate	3300	250.	2500	EPA 300.0	mg/L	11/10/99
Total Dissolved Solids	4660	60.	4	SM 2540 C	mg/L	11/10/99

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: Brown & Caldwell  
PROJECT ID: BHP Florence  
PROJECT #: 15942.005

CLIENT ID: Pond-E10  
DATE SAMPLED: 11/9/99  
NEL SAMPLE ID: P9911039-03

TEST: Inorganic Non-Metals  
MATRIX: Aqueous

PARAMETER	RESULT	REPORTING		METHOD	UNITS	ANALYZED
		LIMIT	D. F.			
Alkalinity - Bicarbonate	ND		1	SM 2320 B	mg/L	11/12/99
Alkalinity - Carbonate	ND		1	SM 2320 B	mg/L	11/12/99
Alkalinity - Hydroxide	ND		1	SM 2320 B	mg/L	11/12/99
Alkalinity, Total	ND	25.	1	SM 2320 B	mg/L	11/12/99
Chloride	370	100.	1000	EPA 300.0	mg/L	12/1/99
Fluoride	10	4.	10	SM 4500-F C	mg/L	11/16/99
pH	6.42	2.	1	EPA 150.1	pH Units	11/10/99
pH Temperature	12.6	1.	1	EPA 150.1	°C	11/10/99
Sulfate	3300	1250.	2500	EPA 300.0	mg/L	11/15/99
Total Dissolved Solids	7820	60.	4	SM 2540 C	mg/L	11/10/99

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: Brown & Caldwell  
PROJECT ID: BHP Florence  
PROJECT #: 15942.004

CLIENT ID: Sludge-W  
DATE SAMPLED: 11/9/99  
NEL SAMPLE ID: P9911039-04

TEST: Inorganic Non-Metals  
MATRIX: Solid

---

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>UNITS</u>	<u>ANALYZED</u>
Sulfate	3000	250.	2500	EPA 300.0	mg/kg	11/10/99

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: Brown & Caldwell  
PROJECT ID: BHP Florence  
PROJECT #: 15942.004

CLIENT ID: **Sludge-C**  
DATE SAMPLED: 11/9/99  
NEL SAMPLE ID: P9911039-05

TEST: **Inorganic Non-Metals**  
MATRIX: Solid

---

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>UNITS</u>	<u>ANALYZED</u>
Sulfate	3000	250.	2500	EPA 300.0	mg/kg	11/10/99

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: Brown & Caldwell  
PROJECT ID: BHP Florence  
PROJECT #: 15942.004

CLIENT ID: **Sludge-E**  
DATE SAMPLED: 11/9/99  
NEL SAMPLE ID: P9911039-06

TEST: **Inorganic Non-Metals**  
MATRIX: Solid

---

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>UNITS</u>	<u>ANALYZED</u>
Sulfate	3000	250.	2500	EPA 300.0	mg/kg	11/10/99

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: Brown & Caldwell  
PROJECT ID: BHP Florence  
PROJECT #: 15942.004

CLIENT ID: **Method Blank**  
DATE SAMPLED: NA  
NEL SAMPLE ID: 991110IC-BLK

TEST: **Non-Metals**

---

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>UNITS</u>	<u>ANALYZE</u>
Sulfate	ND	0.1	1	EPA 300.0	mg/L	11/10/99

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: Brown & Caldwell  
PROJECT ID: BHP Florence  
PROJECT #: 15942.004  
TEST: Non-Metals

CLIENT ID: Method Blank  
DATE SAMPLED: NA  
NEL SAMPLE ID: 991110TDS-BLK

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>UNITS</u>	<u>ANALYZE</u>
Total Dissolved Solids	ND	15	1	SM 2540 C	mg/L	11/10/99

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: Brown & Caldwell  
PROJECT ID: BHP Florence  
PROJECT #: 15942.004

CLIENT ID: Method Blank  
DATE SAMPLED: NA  
NEL SAMPLE ID: 991115IC-BLK

TEST: Non-Metals

---

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>UNITS</u>	<u>ANALYZE</u>
Chloride	ND	0.1	1	EPA 300.0	mg/L	11/15/99

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: Brown & Caldwell  
PROJECT ID: BHP Florence  
PROJECT #: 15942.004

CLIENT ID: Method Blank  
DATE SAMPLED: NA  
NEL SAMPLE ID: 991116F-BLK

TEST: Non-Metals

---

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>UNITS</u>	<u>ANALYZE</u>
Fluoride	ND	0.4	1	SM 4500-F C	mg/L	11/16/99

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: Brown & Caldwell  
PROJECT ID: BHP Florence  
PROJECT #: 15942.004

CLIENT ID: **Sludge-W**  
DATE SAMPLED: 11/9/99  
NEL SAMPLE ID: P9911039-04

TEST: **SPLP Metals by EPA 6010A, July 1992**  
MATRIX: Solid

PARAMETER	RESULT mg/L	REPORTING LIMIT	D. F.	METHOD	TCLP/STLC EXTRACTION		
					DATE	DIGESTED	ANALYZED
Aluminum	ND	0.05 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Antimony	ND	0.05 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Arsenic	ND	0.1 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Beryllium	ND	0.005 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Cadmium	ND	0.01 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Calcium	41	0.50 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Chromium	ND	0.01 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Copper	ND	0.01 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Iron	ND	0.1 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Lead	ND	0.05 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Magnesium	9.1	0.50 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Manganese	0.01	0.005 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Mercury	ND	0.002 mg/L	10	EPA 7470A	11/18/99	11/22/99	11/22/99
Nickel	ND	0.04 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Potassium	ND	2.0 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Selenium	ND	0.1 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Silver	ND	0.015 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Sodium	37	0.50 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Thallium	ND	0.1 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Zinc	ND	0.1 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: Brown & Caldwell  
PROJECT ID: BHP Florence  
PROJECT #: 15942.004

CLIENT ID: Sludge-C  
DATE SAMPLED: 11/9/99  
NEL SAMPLE ID: P9911039-05

TEST: SPLP Metals by EPA 6010A, July 1992  
MATRIX: Solid

PARAMETER	RESULT mg/L	REPORTING LIMIT	D. F.	METHOD	TCLP/STLC EXTRACTION		
					DATE	DIGESTED	ANALYZED
Aluminum	0.081	0.050 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Antimony	ND	0.05 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Arsenic	ND	0.1 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Beryllium	ND	0.005 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Cadmium	ND	0.01 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Calcium	140	0.50 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Chromium	ND	0.01 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Copper	2.5	0.01 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Iron	ND	0.1 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Lead	ND	0.05 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Magnesium	12	0.50 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Manganese	0.44	0.005 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Mercury	ND	0.002 mg/L	10	EPA 7470A	11/18/99	11/22/99	11/22/99
Nickel	ND	0.04 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Potassium	ND	2.0 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Selenium	ND	0.1 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Silver	ND	0.015 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Sodium	36	0.50 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Thallium	ND	0.1 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Zinc	ND	0.1 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: Brown & Caldwell  
PROJECT ID: BHP Florence  
PROJECT #: 15942.004

CLIENT ID: Sludge-E  
DATE SAMPLED: 11/9/99  
NEL SAMPLE ID: P9911039-06

TEST: SPLP Metals by EPA 6010A, July 1992  
MATRIX: Solid

PARAMETER	RESULT mg/L	REPORTING LIMIT	D. F.	METHOD	TCLP/STLC EXTRACTION		
					DATE	DIGESTED	ANALYZED
Aluminum	0.12	0.050 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Antimony	ND	0.05 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Arsenic	ND	0.1 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Beryllium	ND	0.005 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Cadmium	ND	0.01 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Calcium	550	0.50 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Chromium	ND	0.01 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Copper	4.1	0.01 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Iron	ND	0.1 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Lead	ND	0.05 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Magnesium	13	0.50 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Manganese	0.79	0.005 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Mercury	ND	0.002 mg/L	10	EPA 7470A	11/18/99	11/22/99	11/22/99
Nickel	0.052	0.04 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Potassium	ND	2.0 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Selenium	ND	0.1 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Silver	ND	0.015 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Sodium	33	0.50 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Thallium	ND	0.1 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Zinc	0.16	0.1 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: Brown & Caldwell  
PROJECT ID: BHP Florence  
PROJECT #: 15942.004

CLIENT ID: **Method Blank**  
DATE SAMPLED: NA  
NEL SAMPLE ID: P11039-SPHg-BLK

TEST: **SPLP Mercury**  
MATRIX: TCLP Extract

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>D. F.</u>	<u>TCLP/STLC EXTRACTION</u>			
				<u>METHOD</u>	<u>DATE</u>	<u>DIGESTED</u>	<u>ANALYZED</u>
Mercury	ND	0.002 mg/L	10	EPA 7470A	11/18/99	11/22/99	11/22/99

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: Brown & Caldwell  
PROJECT ID: BHP Florence  
PROJECT #: 15942.004

CLIENT ID: Method Blank  
DATE SAMPLED: NA  
NEL SAMPLE ID: P11039SPLP+-BLK

TEST: SPLP Metals by EPA 6010A, July 1992  
MATRIX: TCLP Extract

PARAMETER	RESULT	REPORTING		TCLP/STLC EXTRACTION			
		LIMIT	D. F.	METHOD	DATE	DIGESTED	ANALYZED
Aluminum	ND	mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Antimony	ND	0.05 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Arsenic	ND	0.1 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Beryllium	ND	0.005 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Cadmium	ND	0.01 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Calcium	ND	mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Chromium	ND	0.01 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Copper	ND	0.01 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Iron	ND	0.1 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Lead	ND	0.05 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Magnesium	ND	mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Manganese	ND	0.005 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Nickel	ND	0.04 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Potassium	ND	mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Selenium	ND	0.1 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Silver	ND	0.015 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Sodium	ND	mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Thallium	ND	0.1 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99
Zinc	ND	0.1 mg/L	1	EPA 6010	11/18/99	11/19/99	11/19/99

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: Brown & Caldwell  
 PROJECT ID: BHP Florence  
 PROJECT #: 15942.004  
 TEST: Inorganic Non-Metals  
 MATRIX: Aqueous

<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Sulfate	991110IC-LCS	100	101	101	90 - 110	
Sulfate	991110IC-LCSD	100	102	102	90 - 110	1.
Sulfate	P9911001-02-MS	100	89	89	80 - 120	

ND - Not Detected

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# NEL LABORATORIES

CLIENT: Brown & Caldwell  
 PROJECT ID: BHP Florence  
 PROJECT #: 15942.004  
 TEST: **Inorganic Non-Metals**  
 MATRIX: Aqueous

<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
7.00 Buffer	991110PH2-LCS	7	7.013	100	99 - 101	
7.00 Buffer	991110PH2-LCSD	7	7.016	100	99 - 101	0.

ND - Not Detected

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## NEL LABORATORIES

CLIENT: Brown & Caldwell  
PROJECT ID: BHP Florence  
PROJECT #: 15942.004  
TEST: Inorganic Non-Metals  
MATRIX: Aqueous

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<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Total Dissolved Solids	991110TDS-LCS	1000	928	93	80 - 120	

ND - Not Detected

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# NEL LABORATORIES

CLIENT: Brown & Caldwell  
 PROJECT ID: BHP Florence  
 PROJECT #: 15942.004  
 TEST: Inorganic Non-Metals  
 MATRIX: Aqueous

<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Alkalinity, Total	991112ALK-LCS	125	123	98	85 - 115	
Alkalinity, Total	991112ALK-LCSD	125	121	97	85 - 115	1.6

ND - Not Detected

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# NEL LABORATORIES

CLIENT: Brown & Caldwell  
 PROJECT ID: BHP Florence  
 PROJECT #: 15942.004  
 TEST: Inorganic Non-Metals  
 MATRIX: Aqueous

<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike</u>	<u>Spike</u>	<u>Percent</u>	<u>Acceptable</u>	<u>RPD</u>
		<u>Amount</u>	<u>Result</u>	<u>Recovery</u>	<u>Range</u>	
Chloride	991115IC-LCS	100	99	99	90 - 110	12.3
Chloride	991115IC-LCSD	100	112	112	90 - 110	
Chloride	P9911043-01-MS	100	409	89	80 - 120	
Sulfate	991115IC-LCS	100	101	101	90 - 110	2.9
Sulfate	991115IC-LCSD	100	104	104	90 - 110	
Sulfate	P9911043-01-MS	100	295	85	80 - 120	

ND - Not Detected

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# NEL LABORATORIES

CLIENT: Brown & Caldwell  
 PROJECT ID: BHP Florence  
 PROJECT #: 15942.004  
 TEST: **Inorganic Non-Metals**  
 MATRIX: Aqueous

<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Fluoride	991116F-LCS	1	1.01	101	85 - 115	
Fluoride	991116F-LCSD	1	1.09	109	85 - 115	7.6
Fluoride	P9911039-01-MS	0.5	9.355	111	80 - 120	
Fluoride	P9911039-01-MSD	1	9.385	117	80 - 120	5.3

ND - Not Detected

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# NEL LABORATORIES

CLIENT: Brown & Caldwell  
 PROJECT ID: BHP Florence  
 PROJECT #: 15942.004  
 TEST: Metals  
 MATRIX: Aqueous

<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Mercury	P11029HG-LCS	0.005	0.00509	102	85 - 115	
Mercury	P9911029-01-MS	0.005	0.00606	112	70 - 130	
Mercury	P9911029-01-MSD	0.005	0.00593	110	70 - 130	2.3

ND - Not Detected

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# NEL LABORATORIES

CLIENT: Brown & Caldwell  
PROJECT ID: BHP Florence  
PROJECT #: 15942.004  
TEST: TCLP/STLC Metals  
MATRIX: Solid

<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Mercury	P11039-SPHg-LCS	0.005	0.00508	102	85 - 115	
Mercury	P9911039-04-MS	0.05	0.0493	99	85 - 115	
Mercury	P9911039-04-MSD	0.05	0.0485	97	85 - 115	1.6

ND - Not Detected

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# NEL LABORATORIES

CLIENT: Brown & Caldwell  
 PROJECT ID: BHP Florence  
 PROJECT #: 15942.004  
 TEST: Metals  
 MATRIX: Aqueous

<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Aluminum	P11039i-LCS	1	1.04	104	85 - 115	
Aluminum	P9911039-01-MS	1	1.82	112	75 - 125	
Aluminum	P9911039-01-MSD	1	1.77	107	75 - 125	4.6
Antimony	P11039i-LCS	1	1.02	102	85 - 115	
Antimony	P9911039-01-MS	1	1.08	108	75 - 125	
Antimony	P9911039-01-MSD	1	1.08	108	75 - 125	0.
Arsenic	P11039i-LCS	0.5	0.499	100	85 - 115	
Arsenic	P9911039-01-MS	0.5	0.551	110	75 - 125	
Arsenic	P9911039-01-MSD	0.5	0.561	112	75 - 125	1.8
Beryllium	P11039i-LCS	0.1	0.102	102	85 - 115	
Beryllium	P9911039-01-MS	0.1	0.112	104	75 - 125	
Beryllium	P9911039-01-MSD	0.1	0.114	106	75 - 125	1.9
Cadmium	P11039i-LCS	0.2	0.213	107	85 - 115	
Cadmium	P9911039-01-MS	0.2	0.222	108	75 - 125	
Cadmium	P9911039-01-MSD	0.2	0.22	107	75 - 125	0.9
Calcium	P11039i-LCS	20	21.2	106	85 - 115	
Calcium	P9911039-01-MS	100	897	167 C	75 - 125	
Calcium	P9911039-01-MSD	100	902	172 C	75 - 125	2.9
Chromium	P11039i-LCS	0.5	0.508	102	85 - 115	
Chromium	P9911039-01-MS	0.5	0.495	99	75 - 125	
Chromium	P9911039-01-MSD	0.5	0.499	100	75 - 125	0.8
Copper	P11039i-LCS	0.5	0.514	103	85 - 115	
Copper	P9911039-01-MS	0.5	16	200 C	75 - 125	
Copper	P9911039-01-MSD	0.5	15.4	80	75 - 125	85.7
Iron	P11039i-LCS	1	1.02	102	85 - 115	
Iron	P9911039-01-MS	1	1.02	102	75 - 125	
Iron	P9911039-01-MSD	1	1.03	103	75 - 125	1.
Lead	P11039i-LCS	1	1.07	107	85 - 115	
Lead	P9911039-01-MS	1	1.01	101	75 - 125	
Lead	P9911039-01-MSD	1	1.03	103	75 - 125	2.
Magnesium	P11039i-LCS	20	20.9	105	85 - 115	
Magnesium	P9911039-01-MS	20	247	135 C	75 - 125	
Magnesium	P9911039-01-MSD	20	236	80	75 - 125	51.2
Manganese	P11039i-LCS	0.5	0.52	104	85 - 115	
Manganese	P9911039-01-MS	0.5	6.77	134 C	75 - 125	
Manganese	P9911039-01-MSD	0.5	6.57	94	75 - 125	35.1
Nickel	P11039i-LCS	1	1.03	103	85 - 115	
Nickel	P9911039-01-MS	1	1.44	101	75 - 125	

ND - Not Detected

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# NEL LABORATORIES

CLIENT: Brown & Caldwell  
 PROJECT ID: BHP Florence  
 PROJECT #: 15942.004  
 TEST: Metals  
 MATRIX: Aqueous

<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Nickel	P9911039-01-MSD	1	1.43	100	75 - 125	1.
Potassium	P11039i-LCS	20	20.8	104	85 - 115	
Potassium	P9911039-01-MS	20	47.7	109	75 - 125	
Potassium	P9911039-01-MSD	20	46.2	101	75 - 125	7.2
Seleuium	P11039i-LCS	0.5	0.505	101	85 - 115	
Selenium	P9911039-01-MS	2.5	2.94	118	75 - 125	
Selenium	P9911039-01-MSD	2.5	2.91	116	75 - 125	0.
Silver	P11039i-LCS	0.5	0.573	115	85 - 115	
Silver	P9911039-01-MS	0.5	0.565	113	75 - 125	
Silver	P9911039-01-MSD	0.5	0.562	112	75 - 125	0.5
Sodium	P11039i-LCS	20	20.9	105	85 - 115	
Sodium	P9911039-01-MS	100	693	73 C	75 - 125	
Sodium	P9911039-01-MSD	20	687	67 C	75 - 125	8.6
Thallium	P11039i-LCS	2	2.04	102	85 - 115	
Thallium	P9911039-01-MS	2	1.88	94	75 - 125	
Thallium	P9911039-01-MSD	2	1.92	96	75 - 125	2.1
Zinc	P11039i-LCS	0.5	0.517	103	85 - 115	
Zinc	P9911039-01-MS	0.5	1.08	108	75 - 125	
Zinc	P9911039-01-MSD	0.5	1.05	102	75 - 125	5.7

ND - Not Detected

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# NEL LABORATORIES

CLIENT: Brown & Caldwell  
 PROJECT ID: BHP Florence  
 PROJECT #: 15942.004  
 TEST: TCLP/STLC Metals  
 MATRIX: Solid

PARAMETER	NEL Sample ID	<u>Spike</u> Amount	<u>Spike</u> Result	<u>Percent</u> Recovery	<u>Acceptable</u> Range	RPD
Aluminum	P11039SPLP+-LCS	1	0.98	98	85 - 115	
Aluminum	P9911039-04-MS	1	1.04	104	75 - 125	
Aluminum	P9911039-04-MSD	1	1.04	104	75 - 125	0.
Arsenic	P11039SPLP+-LCS	0.5	0.496	99	85 - 115	
Arsenic	P9911039-04-MS	0.5	0.5	100	75 - 125	
Arsenic	P9911039-04-MSD	0.5	0.501	100	75 - 125	0.2
Calcium	P11039SPLP+-LCS	20	20.2	101	85 - 115	
Calcium	P9911039-04-MS	20	61.9	105	75 - 125	
Calcium	P9911039-04-MSD	20	61.6	103	75 - 125	1.4
Magnesium	P11039SPLP+-LCS	20	19.2	96	85 - 115	
Magnesium	P9911039-04-MS	20	28.2	96	75 - 125	
Magnesium	P9911039-04-MSD	20	28.1	95	75 - 125	0.5
Potassium	P11039SPLP+-LCS	20	19.4	97	85 - 115	
Potassium	P9911039-04-MS	20	20.4	102	75 - 125	
Potassium	P9911039-04-MSD	20	20.4	102	75 - 125	0.
Sodium	P11039SPLP+-LCS	20	22.7	114	85 - 115	
Sodium	P9911039-04-MS	20	55.5	93	75 - 125	
Sodium	P9911039-04-MSD	20	55.6	93	75 - 125	0.5
Antimony	P11039SPLP+-LCS	1	1	100	85 - 115	
Antimony	P9911039-04-MS	1	1	100	75 - 125	
Antimony	P9911039-04-MSD	1	1.01	101	75 - 125	1.
Beryllium	P11039SPLP+-LCS	0.1	0.102	102	85 - 115	
Beryllium	P9911039-04-MS	0.1	0.102	102	75 - 125	
Beryllium	P9911039-04-MSD	0.1	0.102	102	75 - 125	0.
Cadmium	P11039SPLP+-LCS	0.2	0.196	98	85 - 115	
Cadmium	P9911039-04-MS	0.2	0.196	98	75 - 125	
Cadmium	P9911039-04-MSD	0.2	0.196	98	75 - 125	0.
Chromium	P11039SPLP+-LCS	0.5	0.491	98	85 - 115	
Chromium	P9911039-04-MS	0.5	0.488	98	75 - 125	
Chromium	P9911039-04-MSD	0.5	0.489	98	75 - 125	0.2
Copper	P11039SPLP+-LCS	0.5	0.485	97	85 - 115	
Copper	P9911039-04-MS	0.5	0.492	98	75 - 125	
Copper	P9911039-04-MSD	0.5	0.493	99	75 - 125	0.2
Iron	P11039SPLP+-LCS	1	1.03	103	85 - 115	
Iron	P9911039-04-MS	1	0.994	99	75 - 125	
Iron	P9911039-04-MSD	1	0.994	99	75 - 125	0.
Lead	P11039SPLP+-LCS	1	1	100	85 - 115	
Lead	P9911039-04-MS	1	1.01	101	75 - 125	

ND - Not Detected

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# NEL LABORATORIES

CLIENT: Brown & Caldwell  
 PROJECT ID: BHP Florence  
 PROJECT #: 15942.004  
 TEST: TCLP/STLC Metals  
 MATRIX: Solid

<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Lead	P9911039-04-MSD	1	1	100	75 - 125	1.
Manganese	P11039SPLP+-LCS	0.5	0.504	101	85 - 115	
Manganese	P9911039-04-MS	0.5	0.502	98	75 - 125	
Manganese	P9911039-04-MSD	0.5	0.502	98	75 - 125	0.
Nickel	P11039SPLP+-LCS	1	1.01	101	85 - 115	
Nickel	P9911039-04-MS	1	1.01	101	75 - 125	
Nickel	P9911039-04-MSD	1	1.01	101	80 - 125	0.
Selenium	P11039SPLP+-LCS	0.5	0.519	104	85 - 115	
Selenium	P9911039-04-MS	0.5	0.521	104	75 - 125	
Selenium	P9911039-04-MSD	0.5	0.505	101	75 - 125	3.1
Silver	P11039SPLP+-LCS	0.5	0.476	95	85 - 115	
Silver	P9911039-04-MS	0.5	0.487	97	75 - 125	
Silver	P9911039-04-MSD	0.5	0.388	78	75 - 125	22.6
Thallium	P11039SPLP+-LCS	2	1.88	94	85 - 115	
Thallium	P9911039-04-MS	2	1.84	92	75 - 125	
Thallium	P9911039-04-MSD	2	1.95	98	75 - 125	5.8
Zinc	P11039SPLP+-LCS	0.5	0.51	102	85 - 115	
Zinc	P9911039-04-MS	0.5	0.546	109	75 - 125	
Zinc	P9911039-04-MSD	0.5	0.552	110	75 - 125	1.1

ND - Not Detected

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# NEL LABORATORIES

CLIENT: Brown & Caldwell  
PROJECT ID: BHP Florence  
PROJECT #: 15942.004

CLIENT ID: Sludge-W  
DATE SAMPLED: 11/9/99  
NEL SAMPLE ID: P9911039-04

TEST: Metals  
MATRIX: Solid

ANALYST: JY - Reno Division

<u>PARAMETER</u>	<u>RESULT</u> <u>mg/kg</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>DIGESTED</u>	<u>ANALYZED</u>
Aluminum	780	2.5 mg/kg	50	EPA 6010	12/1/99	12/2/99
Antimony	ND	2.5 mg/kg	50	EPA 6010	12/1/99	12/2/99
Arsenic	ND	5. mg/kg	50	EPA 6010	12/1/99	12/2/99
Beryllium	0.38	0.25 mg/kg	50	EPA 6010	12/1/99	12/2/99
Cadmium	ND	0.5 mg/kg	50	EPA 6010	12/1/99	12/2/99
Calcium	910	25. mg/kg	50	EPA 6010	12/1/99	12/2/99
Chromium	ND	0.5 mg/kg	50	EPA 6010	12/1/99	12/2/99
Copper	3300	1.25 mg/kg	250	EPA 6010	12/1/99	12/2/99
Iron	17	5. mg/kg	50	EPA 6010	12/1/99	12/2/99
Lead	ND	2.5 mg/kg	50	EPA 6010	12/1/99	12/2/99
Magnesium	1600	25. mg/kg	50	EPA 6010	12/1/99	12/2/99
Manganese	170	0.25 mg/kg	50	EPA 6010	12/1/99	12/2/99
Mercury	ND	0.1 mg/kg	500	EPA 7471A	12/1/99	12/1/99
Nickel	16	2. mg/kg	50	EPA 6010	12/1/99	12/2/99
Selenium	ND	5. mg/kg	50	EPA 6010	12/1/99	12/2/99
Silver	ND	1. mg/kg	50	EPA 6010	12/1/99	12/2/99
Thallium	ND	5. mg/kg	50	EPA 6010	12/1/99	12/2/99
Zinc	23	5. mg/kg	50	EPA 6010	12/1/99	12/2/99

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: Brown & Caldwell  
PROJECT ID: BHP Florence  
PROJECT #: 15942.004

CLIENT ID: Sludge-C  
DATE SAMPLED: 11/9/99  
NEL SAMPLE ID: P9911039-05

TEST: Metals  
MATRIX: Solid

ANALYST: JY - Reno Division

<u>PARAMETER</u>	<u>RESULT</u> <u>mg/kg</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>DIGESTED</u>	<u>ANALYZED</u>
Aluminum	1200	2.5 mg/kg	50	EPA 6010	12/1/99	12/2/99
Antimony	ND	2.5 mg/kg	50	EPA 6010	12/1/99	12/2/99
Arsenic	ND	5. mg/kg	50	EPA 6010	12/1/99	12/2/99
Beryllium	ND	0.25 mg/kg	50	EPA 6010	12/1/99	12/2/99
Cadmium	ND	0.5 mg/kg	50	EPA 6010	12/1/99	12/2/99
Calcium	9900	25. mg/kg	50	EPA 6010	12/1/99	12/2/99
Chromium	ND	0.5 mg/kg	50	EPA 6010	12/1/99	12/2/99
Copper	1300	0.25 mg/kg	50	EPA 6010	12/1/99	12/2/99
Iron	280	5. mg/kg	50	EPA 6010	12/1/99	12/2/99
Lead	ND	2.5 mg/kg	50	EPA 6010	12/1/99	12/2/99
Magnesium	350	25. mg/kg	50	EPA 6010	12/1/99	12/2/99
Manganese	12	0.25 mg/kg	50	EPA 6010	12/1/99	12/2/99
Mercury	ND	0.1 mg/kg	500	EPA 7471A	12/1/99	12/1/99
Nickel	ND	2. mg/kg	50	EPA 6010	12/1/99	12/2/99
Selenium	ND	5. mg/kg	50	EPA 6010	12/1/99	12/2/99
Silver	ND	1. mg/kg	50	EPA 6010	12/1/99	12/2/99
Thallium	ND	5. mg/kg	50	EPA 6010	12/1/99	12/2/99
Zinc	ND	5. mg/kg	50	EPA 6010	12/1/99	12/2/99

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: Brown & Caldwell  
PROJECT ID: BHP Florence  
PROJECT #: 15942.004

CLIENT ID: Sludge-E  
DATE SAMPLED: 11/9/99  
NEL SAMPLE ID: P9911039-06

TEST: Metals  
MATRIX: Solid

ANALYST: JY - Reno Division

<u>PARAMETER</u>	<u>RESULT</u> <u>mg/kg</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>DIGESTED</u>	<u>ANALYZED</u>
Aluminum	2600	2.5 mg/kg	50	EPA 6010	12/1/99	12/2/99
Antimony	ND	2.5 mg/kg	50	EPA 6010	12/1/99	12/2/99
Arsenic	ND	5. mg/kg	50	EPA 6010	12/1/99	12/2/99
Beryllium	0.46	0.25 mg/kg	50	EPA 6010	12/1/99	12/2/99
Cadmium	ND	0.5 mg/kg	50	EPA 6010	12/1/99	12/2/99
Calcium	22000	25. mg/kg	50	EPA 6010	12/1/99	12/2/99
Chromium	0.98	0.5 mg/kg	50	EPA 6010	12/1/99	12/2/99
Copper	3200	1.25 mg/kg	250	EPA 6010	12/1/99	12/2/99
Iron	530	5. mg/kg	50	EPA 6010	12/1/99	12/2/99
Lead	ND	2.5 mg/kg	50	EPA 6010	12/1/99	12/2/99
Magnesium	480	25. mg/kg	50	EPA 6010	12/1/99	12/2/99
Manganese	24	0.25 mg/kg	50	EPA 6010	12/1/99	12/2/99
Mercury	ND	0.1 mg/kg	500	EPA 7471A	12/1/99	12/1/99
Nickel	3.2	2. mg/kg	50	EPA 6010	12/1/99	12/2/99
Selenium	ND	5. mg/kg	50	EPA 6010	12/1/99	12/2/99
Silver	ND	1. mg/kg	50	EPA 6010	12/1/99	12/2/99
Thallium	ND	5. mg/kg	50	EPA 6010	12/1/99	12/2/99
Zinc	9.1	5. mg/kg	50	EPA 6010	12/1/99	12/2/99

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: Brown & Caldwell  
PROJECT ID: BHP Florence  
PROJECT #: 15942.004

CLIENT ID: Method Blank  
DATE SAMPLED: NA  
NEL SAMPLE ID: P11039-04-Hg-BLK

TEST: Metals

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<u>PARAMETER</u>	<u>RESULT</u> <u>mg/L</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>DIGESTED</u>	<u>ANALYZED</u>
Mercury	ND	0.1 mg/L	500	EPA 7471A	12/1/99	12/1/99

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: Brown & Caldwell  
PROJECT ID: BHP Florence  
PROJECT #: 15942.004

CLIENT ID: Method Blank  
DATE SAMPLED: NA  
NEL SAMPLE ID: P11039-04i-BLK

TEST: Metals

<u>PARAMETER</u>	<u>RESULT</u> <u>mg/kg</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>DIGESTED</u>	<u>ANALYZED</u>
Aluminum	ND	2.5 mg/kg	50	EPA 6010	12/1/99	12/2/99
Antimony	ND	2.5 mg/kg	50	EPA 6010	12/1/99	12/2/99
Arsenic	ND	5. mg/kg	50	EPA 6010	12/1/99	12/2/99
Beryllium	ND	0.25 mg/kg	50	EPA 6010	12/1/99	12/2/99
Cadmium	ND	0.5 mg/kg	50	EPA 6010	12/1/99	12/2/99
Calcium	ND	25. mg/kg	50	EPA 6010	12/1/99	12/2/99
Chromium	ND	0.5 mg/kg	50	EPA 6010	12/1/99	12/2/99
Copper	ND	0.25 mg/kg	50	EPA 6010	12/1/99	12/2/99
Iron	ND	5. mg/kg	50	EPA 6010	12/1/99	12/2/99
Lead	ND	2.5 mg/kg	50	EPA 6010	12/1/99	12/2/99
Magnesium	ND	25. mg/kg	50	EPA 6010	12/1/99	12/2/99
Manganese	ND	0.25 mg/kg	50	EPA 6010	12/1/99	12/2/99
Nickel	ND	2. mg/kg	50	EPA 6010	12/1/99	12/2/99
Selenium	ND	5. mg/kg	50	EPA 6010	12/1/99	12/2/99
Silver	ND	1. mg/kg	50	EPA 6010	12/1/99	12/2/99
Thallium	ND	5. mg/kg	50	EPA 6010	12/1/99	12/2/99
Zinc	ND	5. mg/kg	50	EPA 6010	12/1/99	12/2/99

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: Brown & Caldwell  
 PROJECT ID: BHP Florence  
 PROJECT #: 15942.004  
 TEST: Metals  
 MATRIX: Solid

<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Mercury	P11039-04-Hg-LCS	0.005	0.00511	102	85 - 115	
Mercury	P9911039-04-MS	2.5	2.22	89	80 - 120	
Mercury	P9911039-04-MSD	2.5	2.39	96	80 - 120	7.4

ND - Not Detected

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# NEL LABORATORIES

CLIENT: Brown & Caldwell  
PROJECT ID: BHP Florence  
PROJECT #: 15942.004  
TEST: Metals  
MATRIX: Solid

PARAMETER	NEL Sample ID	<u>Spike</u> Amount	<u>Spike</u> Result	<u>Percent</u> Recovery	<u>Acceptable</u> Range	RPD
Aluminum	P11039-04i-LCS	50	57.4	115	85 - 115	
Aluminum	P9911039-04-MS	250	984	82	75 - 125	
Aluminum	P9911039-04-MSD	250	978	79	75 - 125	3.
Antimony	P11039-04i-LCS	50	51	102	85 - 115	
Antimony	P9911039-04-MS	50	49.3	99	75 - 125	
Antimony	P9911039-04-MSD	50	50	100	75 - 125	1.4
Arsenic	P11039-04i-LCS	25	25.5	102	85 - 115	
Arsenic	P9911039-04-MS	25	24.7	99	75 - 125	
Arsenic	P9911039-04-MSD	25	24.8	99	75 - 125	0.4
Beryllium	P11039-04i-LCS	5	4.6	92	85 - 115	
Beryllium	P9911039-04-MS	5	5.65	105	75 - 125	
Beryllium	P9911039-04-MSD	5	5.84	109	75 - 125	3.5
Cadmium	P11039-04i-LCS	10	10.7	107	85 - 115	
Cadmium	P9911039-04-MS	10	10.2	102	75 - 125	
Cadmium	P9911039-04-MSD	10	10.5	105	75 - 125	2.9
Calcium	P11039-04i-LCS	1000	1060	106	85 - 115	
Calcium	P9911039-04-MS	1000	1920	101	75 - 125	
Calcium	P9911039-04-MSD	1000	1950	104	75 - 125	2.9
Chromium	P11039-04i-LCS	25	26	104	85 - 115	
Chromium	P9911039-04-MS	25	24.5	98	75 - 125	
Chromium	P9911039-04-MSD	25	24.6	98	75 - 125	0.4
Copper	P11039-04i-LCS	25	21.3	85	85 - 115	
Copper	P9911039-04-MS	125	3240	-48 C	75 - 125	
Copper	P9911039-04-MSD	125	3230	-56 C	75 - 125	-15.4
Iron	P11039-04i-LCS	50	54.9	110	85 - 115	
Iron	P9911039-04-MS	50	68.7	103	75 - 125	
Iron	P9911039-04-MSD	50	73.9	114	75 - 125	9.6
Lead	P11039-04i-LCS	50	53.2	106	85 - 115	
Lead	P9911039-04-MS	50	45	90	75 - 125	
Lead	P9911039-04-MSD	50	45.5	91	75 - 125	1.1
Magnesium	P11039-04i-LCS	1000	1100	110	85 - 115	
Magnesium	P9911039-04-MS	1000	2590	99	75 - 125	
Magnesium	P9911039-04-MSD	1000	2650	105	75 - 125	5.9
Manganese	P11039-04i-LCS	25	26.4	106	85 - 115	
Manganese	P9911039-04-MS	25	190	80	75 - 125	
Manganese	P9911039-04-MSD	50	197	108	75 - 125	29.8
Nickel	P11039-04i-LCS	50	52.7	105	85 - 115	
Nickel	P9911039-04-MS	50	64.7	97	75 - 125	

ND - Not Detected

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# NEL LABORATORIES

CLIENT: Brown & Caldwell  
 PROJECT ID: BHP Florence  
 PROJECT #: 15942.004  
 TEST: Metals  
 MATRIX: Solid

<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Nickel	P9911039-04-MSD	50	66	100	75 - 125	2.6
Selenium	P11039-04i-LCS	25	27.8	111	85 - 115	
Selenium	P9911039-04-MS	25	26	104	75 - 125	
Selenium	P9911039-04-MSD	25	26.8	107	75 - 125	3.
Silver	P11039-04i-LCS	25	26.5	106	85 - 115	
Silver	P9911039-04-MS	125	151	121	75 - 125	
Silver	P9911039-04-MSD	125	150	120	75 - 125	0.7
Thallium	P11039-04i-LCS	100	84.9	85	85 - 115	
Thallium	P9911039-04-MS	100	82.2	82	75 - 125	
Thallium	P9911039-04-MSD	100	80.3	80	75 - 125	2.3
Zinc	P11039-04i-LCS	25	26	104	85 - 115	
Zinc	P9911039-04-MS	25	47.2	97	75 - 125	
Zinc	P9911039-04-MSD	25	48.8	103	75 - 125	6.4

ND - Not Detected

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Reno • Las Vegas  
Phoenix • So. California

Phoenix Division • 3021 S. 35th St., Bldg. B, Suite 6 • Phoenix, AZ 85034  
(602) 437-0099 • Fax: (602) 437-2225 • 1-888-238-2514

Company: Brown + Caldwell Attention: Barb Sylvester  
Address: 3636 N Central Ave Suite 200  
Phoenix AZ 85012  
Phone Number: 602-222-4476 Fax Number: 602-222-4466  
Billing Address: BHP-Tucson Expected Due Date: 11/01/99

Requested Turnaround: ☒ 5-day ☐ 2-day ☐ 1-day ☐ OtherTime/Date  
Sampled

### Customer Sample Identification

N.E.L.  
Identification

# of Containers

Matrix (Box #1)

Preservative (Box #2)

## Analysis

Analysis

Remarks

Custody Seal intact? Y N None Temp. 90  
Condition when received good

Box #1	DW - Drinking Water	SD - Solid
	WW - Waste Water	AQ - Aqueous
	OL - Oil/Organic Liquid	A - Air

Box #2      A. HCl      E. Ice Only  
                  B.  $\text{HNO}_3$       F. Other \_\_\_\_\_  
                  C.  $\text{H}_2\text{SO}_4$       G. Not Preserved \_\_\_\_\_  
                  D. NaOH

Relinquished by (Print)		(Signature)	Date/Time		Received by (Print)		(Signature)	Date/Time	
1	Jim McEwen	BHO-Currier	11-9-99	1445	B. Sylvestr	Barbara C. Sylvestr	11-9-99	1445	
2	Barbara Sylvestr	Barbara C. Sylvestr	11-9-99	1400	W. ABER	W. ABER	11/9/99	1400	
3	Kristin Piror	Kristin Piror	11-9-99/1030	TO UPS	T. S. S. S. S.	T. S. S. S. S.	11-10-99	1015	

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