Nicole E. Granquist
ngranquist@downeybrand.com
916/520-5369 Direct
916/520-5769 Fax

621 Capitol Mall, 18th Floor
Sacramento, CA 95814
916/444-1000 Main
916/444-2100 Fax
downeybrand.com

January 30, 2014

VIA U.S. MAIL AND ELECTRONIC MAIL

Ms. Dyan Whyte
Assistant Executive Officer
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, California 94612

Re: *Semi-Annual 2013 Monitoring Report – June 27, 2013 Amended Water Code section 13267 Order, Order No. R2-2013-1005-A1, Directive 11.*

Dear Ms. Whyte:

Enclosed, in accordance with the Regional Water Quality Control Board, San Francisco Bay Region's, ("Regional Water Board") June 27, 2013 amended Water Code section 13267 Order, Order No. R2-2013-1005-A1, ("Order"), Lehigh Southwest Cement Company ("Lehigh") provides and encloses the Semi-Annual Monitoring Report pursuant to Directive 11 of that Order.

If you or your staff have any questions regarding the above report or enclosed documents, please do not hesitate to contact me or Greg Knapp at Lehigh.

Very truly yours,

Nicole E. Granquist

Nicole E. Granquist

Enclosures

Cc: Brian Thompson, Regional Water Quality Control Board, San Francisco Bay Region
Greg Knapp, Director Environmental Region West, Lehigh
Scott Rickman, Regional Counsel, Lehigh Hanson

January 30, 2014 Project No. 063-7109-914

Ms. Dyan Whyte
Assistant Executive Officer
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, California 94612

RE: Order Item No. 11 Semi-Annual Sampling Results, Water Code Section 13267 Order No R2-2013-1005-A1, Lehigh Southwest Cement Company, Permanente Facility, 24001 Stevens Creek Boulevard, Cupertino, CA.

Dear Ms. Whyte:

Golder Associates Inc. (Golder), on behalf of Lehigh Southwest Cement Company (Lehigh), has prepared this report for the Lehigh Permanente Cement Plant and Quarry (Site) located at 24001 Stevens Creek Boulevard in Santa Clara County, California pursuant to Order Item No. 11 set forth in Water Code section 13267 Order No. R2-2013-1005-A1 (Order) amended by the San Francisco Bay Regional Water Quality Control Board (RWQCB) on June 27, 2013.

Per Item 11, Lehigh is to submit semi-annual sampling data within 30 days after the end of that period (e.g., July 30 and January 30), and submit an annual report within 90 days after completion of the first year's data collection, summarizing all the data collected for the first year. As the Order was finalized on June 24, 2013, the Order Item No. 11 sampling commenced during the second half of 2013. This report summarizes the data from July 1 to December 31, 2013.

1.0 MONITORING REQUIREMENTS

Order Item No. 11 requires the semi-annual sampling of locations specified on Table 1 below. Table 1 is derived from the Order Item No. 11 Table A.2 sample locations. The last column provides details as to when the semi-annual sampling occurred and other notes. Sample locations are depicted on Figure 1.

Table 1: Monitoring Requirements and Details for Order Table A.2

Sample Number[1]	Sample Description	Description	Constituents	Semi-Annual Sampling Date and Notes
3	Pond 14	Water from pond	Four major forms of selenium	9/4/2013
5	SL-26/Pond 22 outfall	Bottom of stairs where creek is diverted from Pond 22 around 14 (when flowing)	S&G CP plus CTR PP13 total metals	9/4/2013
7	Pond 22	Water from pond	Four major forms of selenium	9/4/2013
8	Pond 22 inflow	Permanente Creek after RR culvert	S&G CP plus CTR PP13 total metals	9/4/2013 and 11/20/13
9	Pond 21 outfall	Discharge from Ponds 19, 20, and 21 (when flowing)	S&G CP plus CTR PP13 total metals	11/20/2013
10	Pond 21	Water from pond (if flow exists from Pond 20)	Four major forms of selenium	12/17/2013

Golder Associates Inc.
425 Lakeside Drive
Sunnyvale, CA 94085 USA
Tel: (408) 220-9223 Fax: (408) 220-9224 www.golder.com

Sample Number[1]	Sample Description	Description	Constituents	Semi-Annual Sampling Date and Notes
25	Pond 13 outflow	Downstream of concrete weir This location is also the downstream RW location of Pond 13b Discharge, which is sampled under S&G permit and Order Item No. 7 (sample number 24)	S&G CP plus CTR PP13 total metals	The 7/29/13 monthly S&G CP results for July are included in this report. Metals not sampled as sample location was dry when attempted to sample in September and thereafter. Metals data from June 2013 is included in Order Item 7 2nd quarter report submitted to RWQCB (See sample number 24).
26	Pond 13	Water from Pond 13	Four major forms of selenium	9/4/2013
28	Pond 13 inflow	Inflow into Pond 13 This location is also the downstream RW location of Pond 4a Discharge, which is sampled under S&G permit and Order Item No. 7 (sample number 28)	S&G CP plus CTR PP13 total metals	The 7/29/13 monthly S&G CP results for July are included in this report. Metals not sampled as sample location was dry when attempted to sample in August and thereafter. Metals data from June 2013 is included in Order Item 7 2nd quarter report submitted to RWQCB (See sample number 28).

1: 13267 Order Table A.2 Sample Location Designation; RW = receiving water; S&G CP = sand and gravel conventional pollutants; CTR PP13 = California Toxic Rule Priority Pollutant Metals 1 through 13.

2.0 SAMPLING SUMMARY

The results from the Order Item No. 11 sampling are summarized on the attached tables:

- Table 2: Sand and Gravel CP Summary
- Table 3: Metals Summary
- Table 4: Selenium Speciation

The laboratory analytical reports are also attached.

As noted on Table 1, Pond 13 inflow (Sample Number 28) and Pond 13 outflow (Sample Number 25) are monitored as part of the Sand and Gravel permit and Order Item No. 7. The data from the Sand and Gravel routine monitoring for the 3rd and 4th Quarters 2013 are summarized in Lehigh's 2013 Self-Monitoring Reports (SMRs) and Order Item No. 7 Quarterly Reports. Data from the July 2013 Sand and Gravel monthly sampling event for Pond 13 inflow and Pond 13 outflow are included herein (Table 2). In the attached 7/29/13 laboratory report, Pond 13 inflow and Pond 13 outflow are noted as Pond 4A DN R-002A and Pond 13DN R-002C, respectively. The 7/29/13 laboratory report also contains additional Sand and Gravel routine monitoring data; however, this data is not summarized on Tables 2, 3, or 4 as it does not pertain to Order Item No. 11.

The Pond 22 inflow (Sample Number 8) was resampled on 11/20/2013 because the original sample from 9/4/2013 was collected too far downstream after where the flow from Ponds 19, 20, and 21 joins Permanente Creek. The 11/20/13 Pond 22 inflow (Sample Number 8) was from Permanente Creek after the railroad culvert and just prior to where flow from Ponds 19, 20, and 21 join Permanente Creek. The 11/20/13 Pond 21 discharge sample (Sample Number 9) was collected at the same time as the Pond 22

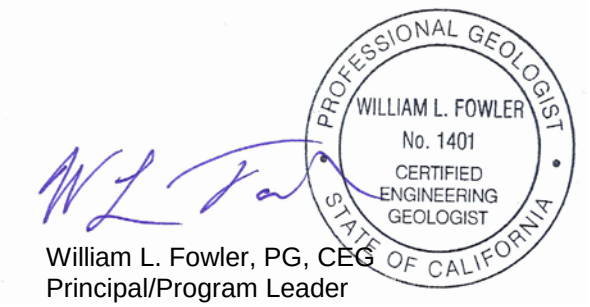
inflow sample during a rain event. Golder collected the Pond 21 sample for selenium speciation on 12/17/13; Pond 20 was not discharging into Pond 21 at the time.

Samples were collected in accordance to Golder's standard operating procedures. To the extent practical, the EPA recommended "clean hands/dirty hands" sampling protocol was followed for the collection of samples to be analyzed by EPA methods 1631 and 1638. Golder measured field parameters with a Myron Ultrameter II or YSI 556 water-quality meter, HACH chlorine test kit, and a LaMotte turbidity meter. Samples were submitted to Alpha Analytical Laboratories Inc. (Alpha) for laboratory analysis of the S&G CP, CTR PP13 total metals, and/or selenium speciation. Alpha subcontracted with Brooks Rand Labs for 1638 metals and selenium speciation analyses and McCampbell Analytical for hexavalent chromium analysis. The selenium speciation samples from 9/4/2013 were collected by Robertson-Bryant, Inc. (RBI) and were submitted to Applied Speciation and Consulting.

3.0 CLOSING

This report has been prepared and reviewed by the undersigned.

GOLDER ASSOCIATES INC.



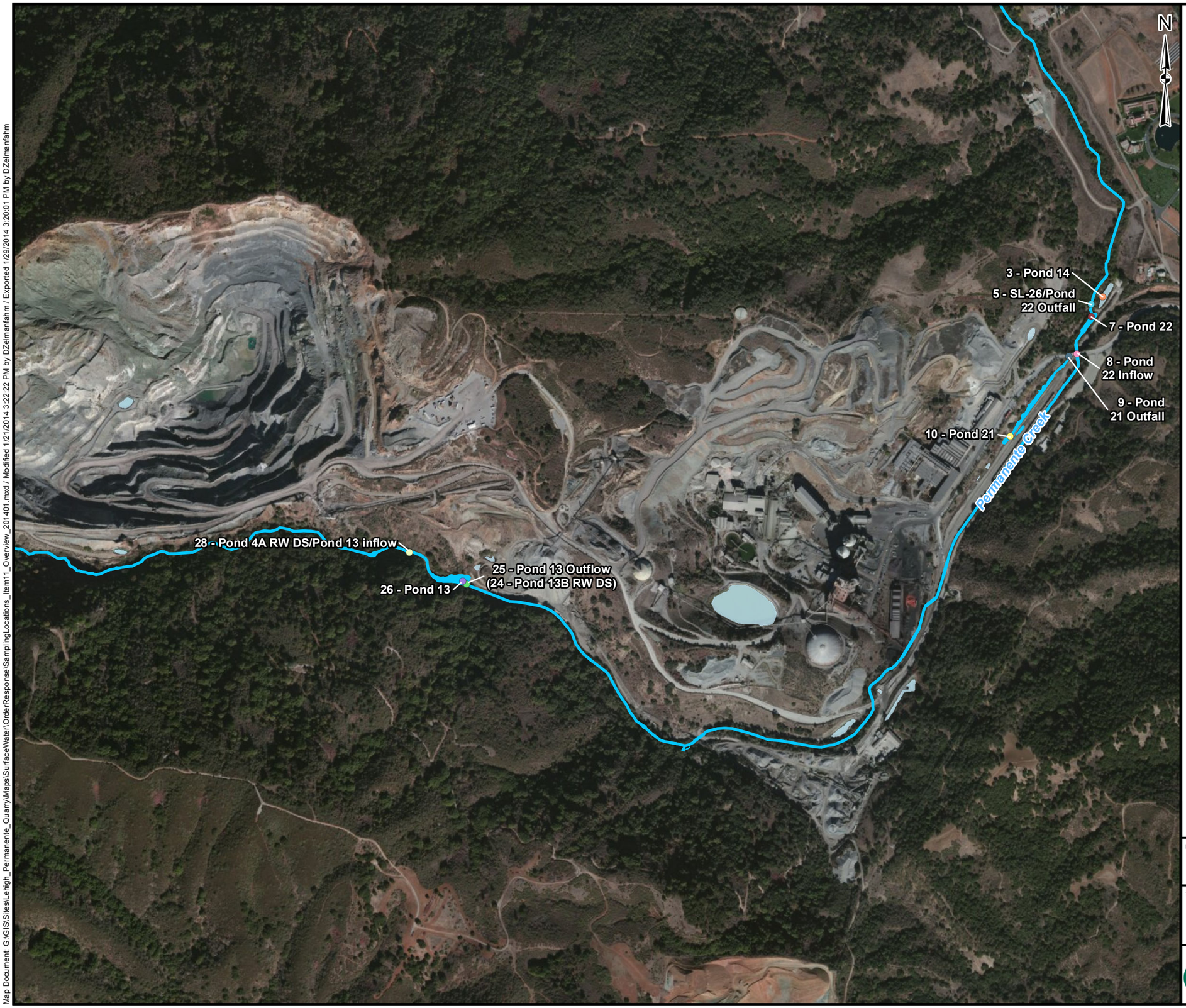
George C. Wegmann
Senior Geologist

William L. Fowler, PG, CEG
Principal/Program Leader

cc: Greg Knapp, Lehigh Southwest Cement Company
Nicole Granquist, Downey Brand LLP

Attachments: Figure 1: Item 11 Sample Locations
Table 2: Sand and Gravel CP Summary
Table 3: Metals Summary
Table 4: Selenium Speciation
Laboratory Analytical Reports

FIGURES



LEGEND

Item 11 Sample Locations

- 3 - Pond 14
- 5 - SL-26/Pond 22 Outfall
- 7 - Pond 22
- 8 - Pond 22 Inflow
- 9 - Pond 21 Outfall
- 10 - Pond 21
- 25 - Pond 13 Outflow (24- Pond 13B RW DS)
- 26 - Pond 13
- 28 - Pond 4A RW DS/Pond 13 Inflow
- Permanente Creek
- Pond

NOTES

REFERENCES

1) Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
2) On site ponds, wetlands, and stream data compiled from WRA, Lehigh, and Golder Associates. Off site hydrography from USGS NHD.
3) Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet

800 0 800
Ft
1 inch = 800 feet

PROJECT
LEHIGH SOUTHWEST CEMENT COMPANY
PERMANENTE QUARRY

TITLE
ITEM 11 SAMPLE LOCATIONS

Golder Associates

PROJECT No.		063-7109-913	FILE No. SamplingLocations_Item11_Overview_201401.mxd	
DESIGN	DZF	10/18/2013	SCALE: 1:9,600	REV. 0
GIS	DZF	1/21/2014		
CHECK	GW	1/21/2014		
REVIEW	XX	1/21/2014		

FIGURE 1

Map Document: G:\GIS\Sites\Lehigh_Permanente_Quarry\Maps\SurfaceWater\OrderResponse\SamplingLocations_Item11_Overview_201401.mxd / Modified 1/21/2014 3:22:22 PM by DZelmanfahm / Exported 1/29/2014 3:20:01 PM by DZelmanfahm

TABLES

Table 2: Sand and Gravel CP Data Summary
Order Item No. 11
Lehigh Southwest Cement Company Permanente Plant
Third and Fourth Quarters 2013

Sample Description	Sample Number	Units	Turbidity NTU	pH s.u.	Temp C	DO mg/L	Chloride mg/L EPA 300.0				TSS mg/L SM2540D				Total Set Mat mL/L/hr SM2540F			
		Test Method	Field	Field	Field	Field												
		Date	Result	Result	Result	Grab	Result	MDL	RL	Qualifier	Result	MDL	RL	Qualifier	Result	MDL	RL	Qualifier
Pond 22 outflow[1]	7	9/4/2013	0.56	8.08	19.91	7.10	81	0.60	10	-	0.60	0.30	0.50	-	ND	0.10	0.10	-
Pond 22 inflow [2]	8	9/4/2013	0.77	8.10	21.1	7.17	81	0.75	12	-	12	0.30	0.50	-	0.33	0.10	0.10	-
Pond 22 inflow	8	11/20/2013	6.83	8.08	14.40	7.62	110	0.75	12	-	-	-	-	-	-	-	-	-
Pond 21 outfall	9	11/20/2013	24.6	7.98	14.20	7.97	140	0.75	12	-	-	-	-	-	-	-	-	-
Pond 13 outflow	25	7/29/2013	1.06	7.94	18.39	9.56	21	0.30	5.0	-	-	-	-	-	-	-	-	-
Pond 13 inflow	28	7/29/2013	0.61	7.99	17.35	10.31	20	0.30	5.0	-	-	-	-	-	-	-	-	-

Notes:

All samples are grab samples.

J = Detected but below the Reporting Limit; therefore, result is an estimated concentration, detected but not quantified (DNQ).

MDL = method detection limit

RL = reporting limit

ND = Analyte not detected at or above the reporting limit.

^ Lab blank contained trace amount of oil & grease.

1 = 9/4/13 sample collected at bottom of stairs where creek is diverted from Pond 22 around 14 (on lab report noted as Pond 22)

2 = 9/4/13 sample collected upstream of Pond 22, but after the Ponds 19, 20, and 21 discharge joins Permanente Creek

Table 2: Sand and Gravel CP Data Summary
Order Item No. 11
Lehigh Southwest Cement Company Permanente Plant
Third and Fourth Quarters 2013

Sample Description	Sample Number	Units Test Method	TDS mg/L SM2540C				O&G mg/L EPA 1664				Hardness mg/L SM2340B				Salinity g/kg SM2520B			
		Date	Result	MDL	RL	Qualifier	Result	MDL	RL	Qualifier	Result	MDL	RL	Qualifier	Result	MDL	RL	Qualifier
Pond 22 outflow [1]	7	9/4/2013	1200	5.0	10	-	1.4	0.80	1.4	^	656	1	5	-	-	-	-	-
Pond 22 inflow [2]	8	9/4/2013	1100	5.0	10	-	1.0	0.80	1.4	J^	606	1	5	-	-	-	-	-
Pond 22 inflow	8	11/20/2013	1200	5.0	10	-	-	-	-	-	600	1	5	-	ND	2.0	2.0	-
Pond 21 outfall	9	11/20/2013	1200	5.0	10	-	-	-	-	-	678	1	5	-	ND	2.0	2.0	-
Pond 13 outflow	25	7/29/2013	890	5.0	10	-	-	-	-	-	531	1	5	-	-	-	-	-
Pond 13 inflow	28	7/29/2013	840	5.0	10	-	-	-	-	-	555	1	5	-	-	-	-	-

Notes:

All samples are grab samples.

J = Detected but below the Reporting Limit; therefore, result is an estimated concentration, detected but not quantified (DNQ).

MDL = method detection limit

RL = reporting limit

ND = Analyte not detected at or above the reporting limit.

^ Lab blank contained trace amount of oil & grease.

1 = 9/4/13 sample collected at bottom of stairs where creek is diverted from Pond 22 around 14 (on lab report noted as Pond 22)

2 = 9/4/13 sample collected upstream of Pond 22, but after the Ponds 19, 20, and 21 discharge joins Permanente Creek

Table 3: Metals Summary
Order Item No. 11
Lehigh Southwest Cement Company Permanente Plant
Third and Fourth Quarters 2013

Sample Location	Sample Number	Sample Date	Antimony (ug/L)				Arsenic (ug/L)				Beryllium (ug/L)				Calcium (mg/L)				Cadmium (ug/L)				Copper (ug/L)			
			1638				1638 DRC				1638				200.7				1638				1638			
			Result	MDL	RL	Qualifier	Result	MDL	RL	Qualifier	Result	MDL	RL	Qualifier	Result	MDL	RL	Qualifier	Result	MDL	RL	Qualifier	Result	MDL	RL	Qualifier
Pond 22 outflow	5	9/4/13	0.288	0.010	0.040	J	0.600	0.006	0.025	-	ND	0.051	0.152	U	160	0.010	1.0	M	0.118	0.007	0.020	-	1.60	0.040	0.121	-
Pond 22 inflow	8	9/4/13	0.268	0.010	0.040	J	0.592	0.006	0.025	-	ND	0.051	0.152	U	150	0.010	1.0	M	0.088	0.007	0.020	-	1.73	0.040	0.121	-
Pond 22 inflow	8	11/20/13	0.835	0.053	0.211	-	0.616	0.009	0.032	-	ND	0.263	0.789	U	190	0.010	1.0	-	0.127	0.037	0.105	-	3.98	0.211	0.632	-
Pond 21 outflow	9	11/20/13	0.288	0.053	0.211	-	0.969	0.009	0.032	-	ND	0.263	0.789	U	180	0.010	1.0	-	0.121	0.037	0.105	-	7.37	0.211	0.632	-

Sample Location	Sample Number	Sample Date	Chromium (ug/L)				Hexachrome (ug/L)				Lead (ug/L)				Magnesium (mg/L)				Mercury (ng/L)				Nickel (ug/L)			
			1638 DRC				E218.6*				1638				200.7				1631E				1638 DRC			
			Result	MDL	RL	Qualifier	Result	MDL	RL	Qualifier	Result	MDL	RL	Qualifier	Result	MDL	RL	Qualifier	Result	MDL	RL	Qualifier	Result	MDL	RL	Qualifier
Pond 22 outflow	5	9/4/13	1.24	0.045	0.152	-	0.31	0.20	1	-	0.089	0.006	0.025	-	59	0.0080	1.0	QM-4X	2.56	0.200	0.500	-	7.57	0.237	1.01	-
Pond 22 inflow	8	9/4/13	1.37	0.045	0.152	-	0.42	0.20	1	-	0.113	0.006	0.025	-	58	0.0080	1.0	QM-4X	5.79	0.200	0.500	-	7.43	0.237	1.01	-
Pond 22 inflow	8	11/20/13	2.96	0.395	1.18	-	ND	5	10	-	0.171	0.032	0.132	-	31	0.0080	1.0	QM-4X	8.59	0.200	0.500	-	13.3	1.32	5.26	-
Pond 21 outflow	9	11/20/13	8.57	0.395	1.18	-	ND	5	10	-	0.733	0.032	0.132	-	56	0.0080	1.0	QM-4X	20.7	0.200	0.500	-	8.45	1.32	5.26	-

Sample Location	Sample Number	Sample Date	Selenium (ug/L)				Silver (ug/L)				Thallium (ug/L)				Zinc (ug/L)			
			1638 DRC				1638				1638				1638			
			Result	MDL	RL	Qualifier	Result	MDL	RL	Qualifier	Result	MDL	RL	Qualifier	Result	MDL	RL	Qualifier
Pond 22 outflow	5	9/4/13	1.84	0.023	0.069	-	0.008	0.005	0.020	B	0.086	0.003	0.010	-	3.49	0.06	0.20	-
Pond 22 inflow	8	9/4/13	2.05	0.023	0.069	-	ND	0.005	0.020	U	0.07	0.003	0.010	-	4.47	0.06	0.20	-
Pond 22 inflow	8	11/20/13	7.27	0.099	0.296	^	ND	0.026	0.105	U	0.235	0.016	0.053	-	12.3	0.32	1.05	-
Pond 21 outflow	9	11/20/13	1.55	0.099	0.296	^	ND	0.026	0.105	U	0.104	0.016	0.053	-	28.8	0.32	1.05	-

Notes:
All locations were grab samples collected via "clean hands/dirty hands" EPA sampling method
B = Detected by the instrument, the result is > the MDL but ≤ the MRL. Result is reported and considered an estimate.
J = Estimated value because blank spike analyses recovered low outside of control limits.
M = Method blank contained trace detection of this analyte.
MDL = Method detection limit; ND = Not detected above the indicated MDL; RL = reporting limit
ng/L = nanograms per Liter
QM-4X = Matrix spike or matrix spike duplicate recovery outside of QC acceptance limits.
ug/L = micrograms per Liter
*Hexachrome analyzed for samples from 11/20/13 using method SM3500-Cr B.
^ = Reporting limits raised due to detection in method blank.
Pond 22 inflow 9/4/13 sample was collected upstream of Pond 22, but after the Ponds 19, 20, and 21 discharge joins Permanente Creek
Pond 22 outflow 9/4/13 sample collected at bottom of stairs where creek is diverted from Pond 22 around 14 (on lab report noted as Pond 22)
U = Result is ≤ the MDL

Table 4: Selenium Speciation
Order Item No. 11
Lehigh Southwest Cement Company Permanente Plant
Third and Fourth Quarters 2013

Sample Location	Sample Number	Sample Date	Total Se (ug/L)				Dissolved Se (ug/L)				Se (IV) (ug/L)			
			ICP-DRC-MS				ICP-DRC-MS				IC-ICP-CRC-MS ^			
			Result	MDL	RL	Qualifier	Result	MDL	RL	Qualifier	Result	MDL	RL	Qualifier
Pond 14	3	9/4/13	2.27	0.14	0.40	-	1.36	0.039	0.40	-	0.461	0.064	0.56	J
Pond 22	7	9/4/13	1.59	0.14	0.40	-	1.42	0.039	0.40	-	0.428	0.064	0.56	J
Pond 21	10	12/17/2013	-	-	-	-	-	-	-	-	0.223	0.150	0.500	B
Pond 13	26	9/4/13	6.82	0.14	0.40	-	5.06	0.039	0.40	-	1.98	0.064	0.56	-

Sample Location	Sample Number	Sample Date	Se (VI) (ug/L)				Se CN (ug/L)				Additional Se Species (n) (ug/L)			
			IC-ICP-CRC-MS ^				IC-ICP-CRC-MS ^				IC-ICP-CRC-MS ^			
			Result	MDL	RL	Qualifier	Result	MDL	RL	Qualifier	Result	MDL	RL	Qualifier
Pond 14	3	9/4/13	ND	0.012	0.50	-	ND	0.003	0.46	-	0.216 (2)	-	-	-
Pond 22	7	9/4/13	0.427	0.012	0.50	J	ND	0.003	0.46	-	ND	-	-	-
Pond 21	10	12/17/2013	ND	0.150	0.500	U	0.27	0.150	0.500	J*, B	ND	0.150	0.500	U
Pond 13	26	9/4/13	1.683	0.012	0.50	-	ND	0.003	0.46	-	0.329 (1)	-	-	-

Notes:
All locations were grab samples
ICP-DRC-MS = inductively coupled plasma dynamic reaction cell mass spectrometry
IC-ICP-CRC-MS = ion chromatography inductively coupled plasma collision reaction cell mass spectrometry
^ = Analysis method for Pond 21 is SOP BR-0061 HPLC
B = Detected by the instrument, the result is > the MDL but ≤ the MRL. Result is reported and considered an estimate.
J = Estimated value between method detection limit and reporting limit.
* = One of the continuing calibration verification standards recovered below acceptance limits.
MDL = Method detection limit
ND = Not detected above the indicated MDL.
n = number of unknown Se species observed
ug/L = micrograms per Liter
RL = Reporting limit
Se CN = Selenocyanate
U = Result is ≤ the MDL.

LABORATORY ANALYTICAL REPORTS

Alpha Analytical Laboratories Inc.
e-mail: clientservices@alpha-labs.com
Corporate: 208 Mason St., Ukiah, CA 95482 • Phone: (707) 468-0401 • Fax: (707) 468-5267
Satellite Laboratory: 6398 Dougherty Rd., Suite 35, Dublin, CA 94568 • Phone: (925) 828-6226 • Fax: (925) 828-6309

ELAP Certificate Numbers 1551 and 2728

13 August 2013

Lehigh Southwest Cement Company
Attn: Chow Yip
PO Box 660140 / Attention SSC AP - CEMENT
Dallas, TX 75266-0140
RE: Lehigh S & G Permit
Work Order: 13G1487

Enclosed are the results of analyses for samples received by the laboratory on 07/29/13 22:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Sheri Speaks

Sheri L. Speaks For Robbie C. Phillips
Project Manager

Alpha Analytical Laboratories Inc.
e-mail: clientservices@alpha-labs.com
Corporate: 208 Mason St., Ukiah, CA 95482 • Phone: (707) 468-0401 • Fax: (707) 468-5267
Satellite Laboratory: 6398 Dougherty Rd., Suite 35, Dublin, CA 94568 • Phone: (925) 828-6226 • Fax: (925) 828-6309

CHEMICAL EXAMINATION REPORT

Lehigh Southwest Cement Company
PO Box 660140 / Attention SSC AP - CEMENT
Dallas, TX 75266-0140
Attn: Chow Yip

Report Date: 08/13/13 14:17
Project No: 063-7109 914
Project ID: Lehigh S & G Permit

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
13G1487	07/29/2013 22:45	SEL HANSONCUP	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Pond 4A EFF M-001	13G1487-01	Water	07/29/13 10:30	07/29/13 22:45
Pond 4A DN R-002A	13G1487-02	Water	07/29/13 12:30	07/29/13 22:45
Pond 9 EFF M-002	13G1487-03	Water	07/29/13 13:05	07/29/13 22:45
Pond 9UP R-001B	13G1487-04	Water	07/29/13 13:15	07/29/13 22:45
Pond 9DN R-002B	13G1487-05	Water	07/29/13 13:25	07/29/13 22:45
Pond 13 EFF M-003	13G1487-06	Water	07/29/13 11:30	07/29/13 22:45
Pond 13DN R-002C	13G1487-07	Water	07/29/13 12:00	07/29/13 22:45
Downstream	13G1487-08	Water	07/29/13 14:35	07/29/13 22:45
Duplicate	13G1487-09	Water	07/29/13 15:00	07/29/13 22:45

Bruce Gove
Laboratory Director

8/13/2013

Alpha Analytical Laboratories Inc.
e-mail: clientservices@alpha-labs.com
Corporate: 208 Mason St., Ukiah, CA 95482 • Phone: (707) 468-0401 • Fax: (707) 468-5267
Satellite Laboratory: 6398 Dougherty Rd., Suite 35, Dublin, CA 94568 • Phone: (925) 828-6226 • Fax: (925) 828-6309

CHEMICAL EXAMINATION REPORT

Lehigh Southwest Cement Company
PO Box 660140 / Attention SSC AP - CEMENT
Dallas, TX 75266-0140
Attn: Chow Yip

Report Date: 08/13/13 14:17
Project No: 063-7109 914
Project ID: Lehigh S & G Permit

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
13G1487	07/29/2013 22:45	SEL HANSONCUP	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOTE
Pond 4A EFF M-001 (13G1487-01)			**Sample Type: Water**			**Sampled: 07/29/13 10:30**		
Conventional Chemistry Parameters by APHA/EPA Methods								
Oil & Grease (HEM)	EPA 1664	AG33123	08/01/13 08:00	08/05/13 10:30	1	ND mg/l	5.0	
Total Dissolved Solids	SM2540C	AG33120	07/31/13 09:45	08/05/13 14:15	"	**760 "**	**10**	
Turbidity	SM2130B	AG33040	07/30/13 16:00	07/30/13 17:00	"	**1.7 NTU**	**0.10**	
Anions by EPA Method 300.0								
Chloride	EPA 300.0	AH30132	08/01/13 14:46	08/01/13 19:35	10	**18 mg/l**	**5.0**	
Pond 4A DN R-002A (13G1487-02)			**Sample Type: Water**			**Sampled: 07/29/13 12:30**		
Metals by EPA 200 Series Methods								
Calcium	EPA 200.7	AG33131	07/31/13 10:19	08/08/13 19:32	1	**140 mg/l**	**1.0**	
Magnesium	"	"	"	"	"	**47 "**	**1.0**	
Conventional Chemistry Parameters by APHA/EPA Methods								
Total Dissolved Solids	SM2540C	AG33120	07/31/13 09:45	08/05/13 14:15	1	**840 mg/l**	**10**	
Turbidity	SM2130B	AG33040	07/30/13 16:00	07/30/13 17:00	"	**0.56 NTU**	**0.10**	
Hardness, Total	SM2340B	AG33131	07/31/13 10:19	08/08/13 19:32	"	**555 mg/l**	**5**	
Anions by EPA Method 300.0								
Chloride	EPA 300.0	AH30132	08/01/13 14:46	08/01/13 20:36	10	**20 mg/l**	**5.0**	
Pond 9 EFF M-002 (13G1487-03)			**Sample Type: Water**			**Sampled: 07/29/13 13:05**		
Conventional Chemistry Parameters by APHA/EPA Methods								
Oil & Grease (HEM)	EPA 1664	AG33123	08/01/13 08:00	08/05/13 10:30	1	ND mg/l	5.0	
Total Dissolved Solids	SM2540C	AG33120	07/31/13 09:45	08/05/13 14:15	"	**1000 "**	**10**	
Turbidity	SM2130B	AG33040	07/30/13 16:00	07/30/13 17:00	"	**0.50 NTU**	**0.10**	
Total Settleable Solids	SM2540F	"	"	"	"	ND ml/l	0.10	

Bruce Gove
Laboratory Director

8/13/2013

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CHEMICAL EXAMINATION REPORT

Lehigh Southwest Cement Company
PO Box 660140 / Attention SSC AP - CEMENT
Dallas, TX 75266-0140
Attn: Chow Yip

Report Date: 08/13/13 14:17
Project No: 063-7109 914
Project ID: Lehigh S & G Permit

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
13G1487	07/29/2013 22:45	SEL HANSONCUP	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOTE
Pond 9 EFF M-002 (13G1487-03)			**Sample Type: Water**			**Sampled: 07/29/13 13:05**		
Anions by EPA Method 300.0								
Chloride	EPA 300.0	AH30132	08/01/13 14:46	08/01/13 20:51	10	**48 mg/l**	**5.0**	
Pond 9UP R-001B (13G1487-04)			**Sample Type: Water**			**Sampled: 07/29/13 13:15**		
Metals by EPA 200 Series Methods								
Calcium	EPA 200.7	AG33131	07/31/13 10:19	08/08/13 19:38	1	**170 mg/l**	**1.0**	
Magnesium	"	"	"	"	"	**48 "**	**1.0**	
Conventional Chemistry Parameters by APHA/EPA Methods								
Total Dissolved Solids	SM2540C	AG33120	07/31/13 09:45	08/05/13 14:15	1	**920 mg/l**	**10**	
Turbidity	SM2130B	AG33040	07/30/13 16:00	07/30/13 17:00	"	**0.13 NTU**	**0.10**	
Hardness, Total	SM2340B	AG33131	07/31/13 10:19	08/08/13 19:38	"	**613 mg/l**	**5**	
Anions by EPA Method 300.0								
Chloride	EPA 300.0	AH30132	08/01/13 14:46	08/01/13 21:06	10	**29 mg/l**	**5.0**	
Pond 9DN R-002B (13G1487-05)			**Sample Type: Water**			**Sampled: 07/29/13 13:25**		
Metals by EPA 200 Series Methods								
Calcium	EPA 200.7	AG33131	07/31/13 10:19	08/12/13 11:30	20	**170 mg/l**	**20**	
Magnesium	"	"	"	08/08/13 19:43	1	**56 "**	**1.0**	
Conventional Chemistry Parameters by APHA/EPA Methods								
Total Dissolved Solids	SM2540C	AG33120	07/31/13 09:45	08/05/13 14:15	1	**1100 mg/l**	**10**	
Turbidity	SM2130B	AG33040	07/30/13 16:00	07/30/13 17:00	"	**0.64 NTU**	**0.10**	
Hardness, Total	SM2340B	AG33131	07/31/13 10:19	08/12/13 12:02	"	**655 mg/l**	**5**	

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Attn: Chow Yip

Report Date: 08/13/13 14:17
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Project ID: Lehigh S & G Permit

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
13G1487	07/29/2013 22:45	SEL HANSONCUP	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOTE
Pond 9DN R-002B (13G1487-05)			**Sample Type: Water**			**Sampled: 07/29/13 13:25**		
Anions by EPA Method 300.0								
Chloride	EPA 300.0	AH30132	08/01/13 14:46	08/01/13 21:21	10	**40 mg/l**	**5.0**	
Pond 13 EFF M-003 (13G1487-06)			**Sample Type: Water**			**Sampled: 07/29/13 11:30**		
Conventional Chemistry Parameters by APHA/EPA Methods								
Oil & Grease (HEM)	EPA 1664	AG33123	08/01/13 08:00	08/05/13 10:30	1	ND mg/l	5.0	
Total Dissolved Solids	SM2540C	AG33120	07/31/13 09:45	08/05/13 14:15	"	**1300 "**	**10**	
Turbidity	SM2130B	AG33040	07/30/13 16:00	07/30/13 17:00	"	**10 NTU**	**0.10**	
Total Settleable Solids	SM2540F	"	"	"	"	ND ml/l	0.10	
Anions by EPA Method 300.0								
Chloride	EPA 300.0	AH30132	08/01/13 14:46	08/01/13 21:36	10	**68 mg/l**	**5.0**	
Pond 13DN R-002C (13G1487-07)			**Sample Type: Water**			**Sampled: 07/29/13 12:00**		
Metals by EPA 200 Series Methods								
Calcium	EPA 200.7	AG33131	07/31/13 10:19	08/12/13 11:35	20	**140 mg/l**	**20**	
Magnesium	"	"	"	08/08/13 20:06	1	**44 "**	**1.0**	
Conventional Chemistry Parameters by APHA/EPA Methods								
Total Dissolved Solids	SM2540C	AG33120	07/31/13 09:45	08/05/13 14:15	1	**890 mg/l**	**10**	
Turbidity	SM2130B	AG33040	07/30/13 16:00	07/30/13 17:00	"	**0.92 NTU**	**0.10**	
Hardness, Total	SM2340B	AG33131	07/31/13 10:19	08/12/13 12:02	"	**531 mg/l**	**5**	

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Project ID: Lehigh S & G Permit

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
13G1487	07/29/2013 22:45	SEL HANSONCUP	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOTE
Pond 13DN R-002C (13G1487-07)			**Sample Type: Water**			**Sampled: 07/29/13 12:00**		
Anions by EPA Method 300.0								
Chloride	EPA 300.0	AH30132	08/01/13 14:46	08/01/13 21:51	10	**21 mg/l**	**5.0**	
Downstream (13G1487-08)			**Sample Type: Water**			**Sampled: 07/29/13 14:35**		
Metals by EPA 200 Series Methods								
Calcium	EPA 200.7	AG33131	07/31/13 10:19	08/08/13 20:11	1	**160 mg/l**	**1.0**	
Magnesium	"	"	"	"	"	**56 "**	**1.0**	
Conventional Chemistry Parameters by APHA/EPA Methods								
Total Dissolved Solids	SM2540C	AG33120	07/31/13 09:45	08/05/13 14:15	1	**1100 mg/l**	**10**	
Turbidity	SM2130B	AG33040	07/30/13 16:00	07/30/13 17:00	"	**0.80 NTU**	**0.10**	
Hardness, Total	SM2340B	AG33131	07/31/13 10:19	08/08/13 20:11	"	**640 mg/l**	**5**	
Anions by EPA Method 300.0								
Chloride	EPA 300.0	AH30132	08/01/13 14:46	08/01/13 22:36	10	**55 mg/l**	**5.0**	
Duplicate (13G1487-09)			**Sample Type: Water**			**Sampled: 07/29/13 15:00**		
Metals by EPA 200 Series Methods								
Calcium	EPA 200.7	AG33131	07/31/13 10:19	08/08/13 20:16	1	**150 mg/l**	**1.0**	
Magnesium	"	"	"	"	"	**55 "**	**1.0**	
Conventional Chemistry Parameters by APHA/EPA Methods								
Total Dissolved Solids	SM2540C	AG33120	07/31/13 09:45	08/05/13 14:15	1	**1000 mg/l**	**10**	
Turbidity	SM2130B	AG33040	07/30/13 16:00	07/30/13 17:00	"	**0.51 NTU**	**0.10**	
Hardness, Total	SM2340B	AG33131	07/31/13 10:19	08/08/13 20:16	"	**607 mg/l**	**5**	

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8/13/2013

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CHEMICAL EXAMINATION REPORT

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Report Date: 08/13/13 14:17
Project No: 063-7109 914
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Order Number	Receipt Date/Time	Client Code	Client PO/Reference
13G1487	07/29/2013 22:45	SEL HANSONCUP	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOTE
Duplicate (13G1487-09)			**Sample Type: Water**			**Sampled: 07/29/13 15:00**		
Anions by EPA Method 300.0								
Chloride	EPA 300.0	AH30132	08/01/13 14:46	08/01/13 22:51	10	**54 mg/l**	**5.0**	

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Order Number	Receipt Date/Time	Client Code	Client PO/Reference
13G1487	07/29/2013 22:45	SEL HANSONCUP	

Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AG33131 - Metals Digest										
Blank (AG33131-BLK1)				Prepared: 07/31/13 Analyzed: 08/02/13						
Calcium	ND	1.0	mg/l							
Magnesium	ND	1.0	"							
LCS (AG33131-BS1)				Prepared: 07/31/13 Analyzed: 08/02/13						
Calcium	5.50	1.0	mg/l	6.00		91.7	85-115			
Magnesium	7.51	1.0	"	8.00		93.9	85-115			
Duplicate (AG33131-DUP1)	**Source: 13G1518-02**			Prepared: 07/31/13 Analyzed: 08/02/13						
Calcium	19.8	1.0	mg/l		19.6			1.37	20	
Magnesium	14.4	1.0	"		14.1			2.16	20	
Matrix Spike (AG33131-MS1)	**Source: 13G1518-02**			Prepared: 07/31/13 Analyzed: 08/02/13						
Calcium	25.0	1.0	mg/l	6.00	19.6	90.8	70-130			
Magnesium	21.2	1.0	"	8.00	14.1	88.8	70-130			
Matrix Spike (AG33131-MS2)	**Source: 13G1607-03**			Prepared: 07/31/13 Analyzed: 08/02/13						
Calcium	56.2	1.0	mg/l	6.00	50.0	103	70-130			
Magnesium	11.2	1.0	"	8.00	3.54	96.3	70-130			
Matrix Spike Dup (AG33131-MSD1)	**Source: 13G1518-02**			Prepared: 07/31/13 Analyzed: 08/02/13						
Calcium	24.6	1.0	mg/l	6.00	19.6	84.2	70-130	1.59	20	
Magnesium	20.9	1.0	"	8.00	14.1	84.6	70-130	1.61	20	

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Order Number	Receipt Date/Time	Client Code	Client PO/Reference
13G1487	07/29/2013 22:45	SEL HANSONCUP	

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AG33120 - General Preparation										
Blank (AG33120-BLK1)				Prepared: 07/31/13 Analyzed: 08/05/13						
Total Dissolved Solids	ND	10	mg/l							
Duplicate (AG33120-DUP1)	Source: 13G1487-01			Prepared: 07/31/13 Analyzed: 08/05/13						
Total Dissolved Solids	800	10	mg/l		756			5.66	30	
Duplicate (AG33120-DUP2)	Source: 13G1592-02			Prepared: 07/31/13 Analyzed: 08/05/13						
Total Dissolved Solids	9650	10	mg/l		9740			0.928	30	
Batch AG33123 - General Preparation										
Blank (AG33123-BLK1)				Prepared: 08/01/13 Analyzed: 08/05/13						
Oil & Grease (HEM)	ND	5.0	mg/l							
LCS (AG33123-BS1)				Prepared: 08/01/13 Analyzed: 08/05/13						
Oil & Grease (HEM)	39.5	5.0	mg/l	40.0		98.8	78-114			
LCS Dup (AG33123-BSD1)				Prepared: 08/01/13 Analyzed: 08/05/13						
Oil & Grease (HEM)	36.2	5.0	mg/l	40.0		90.5	78-114	8.72	18	
Matrix Spike (AG33123-MS1)	Source: 13G1487-01			Prepared: 08/01/13 Analyzed: 08/05/13						
Oil & Grease (HEM)	20.1	5.0	mg/l	20.0	ND	88.5	78-114			
Batch AG33131 - Metals Digest										
Blank (AG33131-BLK1)				Prepared: 07/31/13 Analyzed: 08/02/13						
Hardness, Total	ND	5	mg/l							

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13G1487	07/29/2013 22:45	SEL HANSONCUP	

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AG33131 - Metals Digest										
Duplicate (AG33131-DUP1)	**Source: 13G1518-02**		Prepared: 07/31/13 Analyzed: 08/02/13							
Hardness, Total	109	5	mg/l		107			1.80	20	

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13G1487	07/29/2013 22:45	SEL HANSONCUP	

Anions by EPA Method 300.0 - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AH30132 - General Preparation										
Blank (AH30132-BLK1)				Prepared & Analyzed: 08/01/13						
Chloride	ND	0.50	mg/l							
LCS (AH30132-BS1)				Prepared & Analyzed: 08/01/13						
Chloride	11.0	0.50	mg/l	11.1		99.0	90-110			
Duplicate (AH30132-DUP1)	**Source: 13G1487-01**			Prepared & Analyzed: 08/01/13						
Chloride	17.6	5.0	mg/l		17.9			1.69	20	
Matrix Spike (AH30132-MS1)	**Source: 13G1487-01**			Prepared & Analyzed: 08/01/13						
Chloride	28.7	5.0	mg/l	11.1	17.9	97.3	80-120			
Matrix Spike Dup (AH30132-MSD1)	**Source: 13G1487-01**			Prepared & Analyzed: 08/01/13						
Chloride	28.8	5.0	mg/l	11.1	17.9	98.1	80-120	0.309	20	

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Order Number	Receipt Date/Time	Client Code	Client PO/Reference
13G1487	07/29/2013 22:45	SEL HANSONCUP	

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
PQL	Practical Quantitation Limit

Bruce Gove
Laboratory Director

8/13/2013

Cancel TSS on Effluent Ponds 4, 9 and 13 Per Email 13G1487 Rup'd

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130/1388

Page 1 of 1

Quotation No. Invoice Lehigh

PROJECT NO.: 063-7109-914

SITE NAME: Lehigh S+G Monthly

SAMPLER(S): David Walter (printed) David C Walt (signature)

CONTRACT LABORATORY: Alpha

TURN-AROUND TIME: Standard

EDD required? ☑ Yes ☐ No

EDF required? ☑ Yes ☐ No

ANALYSES

Sample I.D.	Lab I.D.	Collection Date	Collection Time	Matrix	Depth	TSS	O+G	Turbidity	Chloride	Tot set mat	Hardness	TDS	Cont. Qty.	Remarks
Container Info: Type/Vol.						1L	1L	500ml	1L	1L	1L			
Filter						N	N	N	N	N	N			
Preserv.						–	H2SO4	–	–	–	–			
Pond 4A Eff M-001		7-29-13	1030	W		X	X	X	X	X		X	4	
Pond 4A DN R-002A		↓	1230	↓				X	X		X	X	4	
Pond 9Eff M-002		↓	1305	↓		X	X	X	X	X		X	4	
Pond P4P R-001B		↓	1315	↓				X	X		X	X	4	
Pond 9 DN R-002B		↓	1325	↓				X	X		X	X	4	
Pond 13 Eff M-003		↓	1130	↓		X	X	X	X	X		X	4	
Pond 13 DN R-002C		↓	1200	↓				X	X		X	X	4	
Downstream		↓	1435	↓				X	X		X	X	4	
Duplicate		↓	1500	↓				X	X		X	X	4	

Relinquished by: (signature)	Received by: (signature)	Date/Time
David C Walt	[signature]	7-29-13 1441
[signature]	[signature] 7-29-13 1905	7/29/13 4:40
[signature]	LAB R-[signature]	7-29-13 2215

SEND RESULTS TO:
Attn: George Wegmann, Greg Knapp, Chow Yip
Golder Associates Inc.
425 Lakeside Drive
Sunnyvale, CA 94085
Phone (408) 220-9223
Fax (408) 220-9224

white: lab copy yellow: project file

Gmail by Google

Sheri Speaaks < speaks78@gmail.com>

Fw: TSS sampling (Lehigh)

1 message

Robbie Phillips (Sample Traps) < robbie@sampletraps.com> Tue, Jul 30, 2013 at 1:59 PM
To: Sheri Speaks <speaks78@gmail.com>

-----Original Message----- From: Walter, David (Sunnyvale)
Sent: Tuesday, July 30, 2013 12:47 PM
To: Robbie Phillips ; Robbie Phillips
Cc: Wegmann, George
Subject: TSS sampling

Hi Robbie,

There was an error on yesrterday's COC. The TSS samples for the effluent at ponds 4, 9, and 13 are not to be analysed with yesterday's grab sample. They will be analysed today for TSS with the 24 hour composite samples. Also, disregard the bottles for O&G on the downstream sample. Follow the COC on all O&G sampling.

Sent from my iPhone

Alpha Analytical Laboratories Inc.
e-mail: clientservices@alpha-labs.com
Corporate: 208 Mason St., Ukiah, CA 95482 • Phone: (707) 468-0401 • Fax: (707) 468-5267
Satellite Laboratory: 6398 Dougherty Rd., Suite 35, Dublin, CA 94568 • Phone: (925) 828-6226 • Fax: (925) 828-6309

ELAP Certificate Numbers 1551 and 2728

18 September 2013

Lehigh Southwest Cement Company
Attn: Chow Yip
PO Box 660140 / Attention SSC AP - CEMENT
Dallas, TX 75266-0140
RE: Lehigh S & G Permit
Work Order: 13I0289

Enclosed are the results of analyses for samples received by the laboratory on 09/04/13 21:40. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jeanette L. Poplin For Robbie C. Phillips
Project Manager

Alpha Analytical Laboratories Inc.
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Dallas TX, 75266-0140	Project Manager: Chow Yip	
Lehigh Southwest Cement Company	Project: Lehigh S & G Permit	Reported:
PO Box 660140 / Attention SSC AP - CEMENT	Project Number: 063-7109-914	09/18/13 11:24

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Pond 22	13I0289-01	Water	09/04/13 15:00	09/04/13 21:40
Pond 22 Inflow	13I0289-02	Water	09/04/13 15:30	09/04/13 21:40

Alpha Analytical Laboratories, Inc.

Bruce L. Gove
Laboratory Director

9/18/2013

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Dallas TX, 75266-0140	Project Manager: Chow Yip	
Lehigh Southwest Cement Company	Project: Lehigh S & G Permit	Reported:
PO Box 660140 / Attention SSC AP - CEMENT	Project Number: 063-7109-914	09/18/13 11:24

Metals by EPA 200 Series Methods
Alpha Analytical Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Pond 22 (13I0289-01) Water Sampled: 09/04/13 15:00 Received: 09/04/13 21:40										
Calcium	**160**	0.010	1.0	mg/l	1	AI31143	09/11/13 11:24	09/12/13 14:18	EPA 200.7	
Magnesium	**59**	0.0080	1.0	"	"	"	"	"	"	
Pond 22 Inflow (13I0289-02) Water Sampled: 09/04/13 15:30 Received: 09/04/13 21:40										
Calcium	**150**	0.010	1.0	mg/l	1	AI31143	09/11/13 11:24	09/12/13 14:28	EPA 200.7	
Magnesium	**58**	0.0080	1.0	"	"	"	"	"	"	

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Dallas TX, 75266-0140	Project Manager: Chow Yip	
Lehigh Southwest Cement Company	Project: Lehigh S & G Permit	Reported:
PO Box 660140 / Attention SSC AP - CEMENT	Project Number: 063-7109-914	09/18/13 11:24

Metals by APHA/EPA Methods
Alpha Analytical Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Pond 22 (13I0289-01) Water Sampled: 09/04/13 15:00 Received: 09/04/13 21:40										
Mercury	**2.56**	0.200	0.500	ng/l	1	AI31631	09/13/13 17:00	09/16/13 17:30	EPA 1631E	
Pond 22 Inflow (13I0289-02) Water Sampled: 09/04/13 15:30 Received: 09/04/13 21:40										
Mercury	**5.79**	0.200	0.500	ng/l	1	AI31631	09/13/13 17:00	09/16/13 17:38	EPA 1631E	

Alpha Analytical Laboratories, Inc.

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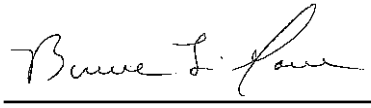
Dallas TX, 75266-0140	Project Manager: Chow Yip	
Lehigh Southwest Cement Company	Project: Lehigh S & G Permit	Reported:
PO Box 660140 / Attention SSC AP - CEMENT	Project Number: 063-7109-914	09/18/13 11:24

Conventional Chemistry Parameters by APHA/EPA Methods
Alpha Analytical Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Pond 22 (13I0289-01) Water Sampled: 09/04/13 15:00 Received: 09/04/13 21:40										
Oil & Grease (HEM)	**1.4**	0.80	1.4	mg/l	1	AI30522	09/05/13 08:30	09/06/13 14:00	EPA 1664	
Total Dissolved Solids	**1200**	5.0	10	"	"	AI31024	09/10/13 10:30	09/12/13 08:45	SM2540C	
Total Suspended Solids	**0.60**	0.30	0.50	"	"	AI30923	09/09/13 11:00	09/10/13 11:58	SM2540D	
Hardness, Total	**656**	1	5	"	"	AI31143	09/11/13 11:24	09/12/13 14:18	SM2340B	
Total Settleable Solids	ND	0.10	0.10	ml/l	"	AI30606	09/05/13 13:00	09/05/13 17:00	SM2540F	U
Pond 22 Inflow (13I0289-02) Water Sampled: 09/04/13 15:30 Received: 09/04/13 21:40										
Oil & Grease (HEM)	**1.0**	0.80	1.4	mg/l	1	AI30522	09/05/13 08:30	09/06/13 14:00	EPA 1664	J
Total Dissolved Solids	**1100**	5.0	10	"	"	AI31024	09/10/13 10:30	09/12/13 08:45	SM2540C	
Total Suspended Solids	**12**	0.30	0.50	"	"	AI30923	09/09/13 11:00	09/10/13 11:58	SM2540D	
Hardness, Total	**606**	1	5	"	"	AI31143	09/11/13 11:24	09/12/13 14:28	SM2340B	
Total Settleable Solids	**0.33**	0.10	0.10	ml/l	"	AI30606	09/05/13 13:00	09/05/13 17:00	SM2540F	

Alpha Analytical Laboratories, Inc.



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9/18/2013

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Dallas TX, 75266-0140	Project Manager: Chow Yip	
Lehigh Southwest Cement Company	Project: Lehigh S & G Permit	Reported:
PO Box 660140 / Attention SSC AP - CEMENT	Project Number: 063-7109-914	09/18/13 11:24

Anions by EPA Method 300.0
Alpha Analytical Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Pond 22 (13I0289-01) Water Sampled: 09/04/13 15:00 Received: 09/04/13 21:40										
Chloride	**81**	0.60	10	mg/l	20	AI31045	09/10/13 11:00	09/10/13 20:36	EPA 300.0	
Pond 22 Inflow (13I0289-02) Water Sampled: 09/04/13 15:30 Received: 09/04/13 21:40										
Chloride	**81**	0.75	12	mg/l	25	AI31045	09/10/13 11:00	09/10/13 20:51	EPA 300.0	

Alpha Analytical Laboratories, Inc.

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Laboratory Director

9/18/2013

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PO Box 660140 / Attention SSC AP - CEMENT	Project Number: 063-7109-914	09/18/13 11:24

Metals by EPA 200 Series Methods - Quality Control

Alpha Analytical Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch AI31143 - Metals Digest											
Blank (AI31143-BLK1)					Prepared: 09/11/13 Analyzed: 09/12/13						
Calcium	ND	0.010	1.0	mg/l							U
Magnesium	ND	0.0080	1.0	"							U
LCS (AI31143-BS1)					Prepared: 09/11/13 Analyzed: 09/12/13						
Calcium	5.12	0.010	1.0	mg/l	6.00		85.3	85-115			
Magnesium	7.19	0.0080	1.0	"	8.00		89.8	85-115			
Duplicate (AI31143-DUP1)		**Source: 13I0543-02**			Prepared: 09/11/13 Analyzed: 09/12/13						
Calcium	17.4	0.010	1.0	mg/l		17.6			0.999	20	
Magnesium	10.6	0.0080	1.0	"		11.5			8.03	20	
Matrix Spike (AI31143-MS1)		**Source: 13I0543-02**			Prepared: 09/11/13 Analyzed: 09/12/13						
Calcium	23.1	0.010	1.0	mg/l	6.00	17.6	90.7	70-130			
Magnesium	19.1	0.0080	1.0	"	8.00	11.5	94.7	70-130			
Matrix Spike (AI31143-MS2)		**Source: 13I0651-03**			Prepared: 09/11/13 Analyzed: 09/12/13						
Calcium	170	0.010	1.0	mg/l	6.00	156	240	70-130			QM-4X
Magnesium	45.8	0.0080	1.0	"	8.00	37.1	109	70-130			
Matrix Spike Dup (AI31143-MSD1)		**Source: 13I0543-02**			Prepared: 09/11/13 Analyzed: 09/12/13						
Calcium	23.1	0.010	1.0	mg/l	6.00	17.6	92.2	70-130	0.394	20	
Magnesium	18.6	0.0080	1.0	"	8.00	11.5	88.3	70-130	2.73	20	

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Bruce L. Gove 9/18/2013
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Dallas TX, 75266-0140	Project Manager: Chow Yip	
Lehigh Southwest Cement Company	Project: Lehigh S & G Permit	Reported:
PO Box 660140 / Attention SSC AP - CEMENT	Project Number: 063-7109-914	09/18/13 11:24

Metals by APHA/EPA Methods - Quality Control

Alpha Analytical Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch AI31631 - EPA 1631											
Blank (AI31631-BLK1)					Prepared: 09/13/13 Analyzed: 09/16/13						
Mercury	ND	0.200	0.500	ng/l							U
LCS (AI31631-BS1)					Prepared: 09/13/13 Analyzed: 09/16/13						
Mercury	4.98	0.200	0.500	ng/l	5.00		99.6	77-123			
Matrix Spike (AI31631-MS1)		**Source: 13I0217-03**			Prepared: 09/13/13 Analyzed: 09/16/13						
Mercury	30.0	0.200	0.500	ng/l	25.0	0.827	117	71-125			
Matrix Spike (AI31631-MS2)		**Source: 13I0825-02**			Prepared: 09/13/13 Analyzed: 09/16/13						
Mercury	30.0	0.200	0.500	ng/l	25.0	1.34	115	71-125			
Matrix Spike Dup (AI31631-MSD1)		**Source: 13I0217-03**			Prepared: 09/13/13 Analyzed: 09/16/13						
Mercury	31.2	0.200	0.500	ng/l	25.0	0.827	121	71-125	3.92	24	
Matrix Spike Dup (AI31631-MSD2)		**Source: 13I0825-02**			Prepared: 09/13/13 Analyzed: 09/16/13						
Mercury	30.5	0.200	0.500	ng/l	25.0	1.34	117	71-125	1.65	24	

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Dallas TX, 75266-0140	Project Manager: Chow Yip	
Lehigh Southwest Cement Company	Project: Lehigh S & G Permit	Reported:
PO Box 660140 / Attention SSC AP - CEMENT	Project Number: 063-7109-914	09/18/13 11:24

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Alpha Analytical Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch AI30522 - General Preparation											
Blank (AI30522-BLK1)					Prepared: 09/05/13 Analyzed: 09/06/13						
Oil & Grease (HEM)	1.00	0.80	1.4	mg/l							J
LCS (AI30522-BS1)					Prepared: 09/05/13 Analyzed: 09/06/13						
Oil & Grease (HEM)	38.4	0.80	1.4	mg/l	40.0		96.0	78-114		18	
LCS (AI30522-BS2)					Prepared: 09/05/13 Analyzed: 09/06/13						
Oil & Grease (HEM)	38.0	0.80	1.4	mg/l	40.0		95.0	78-114		18	
Matrix Spike (AI30522-MS1)		**Source: 13I0289-01**			Prepared: 09/05/13 Analyzed: 09/06/13						
Oil & Grease (HEM)	21.1	0.80	1.4	mg/l	20.0	1.40	98.5	78-114		18	
Batch AI30923 - General Preparation											
Blank (AI30923-BLK1)					Prepared: 09/09/13 Analyzed: 09/10/13						
Total Suspended Solids	ND	0.30	0.50	mg/l							U
Duplicate (AI30923-DUP1)		**Source: 13I0297-01**			Prepared: 09/09/13 Analyzed: 09/10/13						
Total Suspended Solids	172	0.30	0.50	mg/l		188			8.89	30	
Duplicate (AI30923-DUP2)		**Source: 13I0320-04**			Prepared: 09/09/13 Analyzed: 09/10/13						
Total Suspended Solids	2620	0.30	0.50	mg/l		2800			6.64	30	
Batch AI31024 - General Preparation											
Blank (AI31024-BLK1)					Prepared: 09/10/13 Analyzed: 09/12/13						
Total Dissolved Solids	ND	5.0	10	mg/l							U

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Dallas TX, 75266-0140	Project Manager: Chow Yip	
Lehigh Southwest Cement Company	Project: Lehigh S & G Permit	Reported:
PO Box 660140 / Attention SSC AP - CEMENT	Project Number: 063-7109-914	09/18/13 11:24

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Alpha Analytical Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch AI31024 - General Preparation											
Duplicate (AI31024-DUP1)		**Source: 13I0283-01**			Prepared: 09/10/13 Analyzed: 09/12/13						
Total Dissolved Solids	1220	5.0	10	mg/l		1220			0.327	30	
Duplicate (AI31024-DUP2)		**Source: 13I0314-08**			Prepared: 09/10/13 Analyzed: 09/12/13						
Total Dissolved Solids	204	5.0	10	mg/l		193			5.54	30	
Batch AI31143 - Metals Digest											
Blank (AI31143-BLK1)					Prepared: 09/11/13 Analyzed: 09/12/13						
Hardness, Total	ND	1	5	mg/l							U
Duplicate (AI31143-DUP1)		**Source: 13I0543-02**			Prepared: 09/11/13 Analyzed: 09/12/13						
Hardness, Total	87	1	5	mg/l		91			4.59	20	

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Dallas TX, 75266-0140	Project Manager: Chow Yip	
Lehigh Southwest Cement Company	Project: Lehigh S & G Permit	Reported:
PO Box 660140 / Attention SSC AP - CEMENT	Project Number: 063-7109-914	09/18/13 11:24

Anions by EPA Method 300.0 - Quality Control

Alpha Analytical Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch AI31045 - General Preparation											
Blank (AI31045-BLK1)					Prepared: 09/10/13 Analyzed: 09/11/13						
Chloride	ND	0.030	0.50	mg/l							U
LCS (AI31045-BS1)					Prepared & Analyzed: 09/10/13						
Chloride	2.94	0.030	0.50	mg/l	3.03		97.1	90-110			
Duplicate (AI31045-DUP1)		**Source: 13I0539-01**			Prepared & Analyzed: 09/10/13						
Chloride	4.86	0.030	0.50	mg/l		4.82			0.806	20	
Matrix Spike (AI31045-MS1)		**Source: 13I0539-01**			Prepared & Analyzed: 09/10/13						
Chloride	15.2	0.15	2.5	mg/l	11.1	4.82	93.0	80-120			
Matrix Spike Dup (AI31045-MSD1)		**Source: 13I0539-01**			Prepared & Analyzed: 09/10/13						
Chloride	15.3	0.15	2.5	mg/l	11.1	4.82	94.1	80-120	0.803	20	

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PO Box 660140 / Attention SSC AP - CEMENT	Project Number: 063-7109-914	09/18/13 11:24

Notes and Definitions

J	Detected but below the Reporting Limit; therefore, result is an estimated concentration, detected but not quantified (DNQ).
QM-4X	The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.
U	Analyte included in analysis, but not detected at or above MDL.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Alpha Analytical Laboratories, Inc.

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Bruce L. Gove 9/18/2013
Laboratory Director

McCampbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1309119

Report Created for: Alpha Analytical Laboratories
208 Mason Street
Ukiah, CA 95482

Project Contact: Robert C. Phillips
Project Name: #13I0289
Project P.O.:

Project Received: 09/06/2013

Analytical Report reviewed & approved for release on 09/12/2013 by:

Question about your data?

Click here to email McCampbell

Angela Rydelius,
Laboratory Manager

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Glossary of Terms & Qualifier Definitions

Client: Alpha Analytical Laboratories
Project: #13I0289
WorkOrder: 1309119

Glossary Abbreviation	Description
95% Interval	95% Confident Interval
DF	Dilution Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not detected at or above the indicated MDL or RL
NR	Analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
RL	Reporting Limit
RPD	Relative Percent Deviation
SPK Val	Spike Value
SPKRef Val	Spike Reference Value

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	Alpha Analytical Laboratories	**WorkOrder:**	1309119
Project:	#13I0289	**Extraction Method**	E218.6
Date Received:	9/6/13 9:03	**Analytical Method:**	E218.6
Date Prepared:	9/6/13	**Unit:**	µg/L

Hexachrome by IC

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
Pond 22	**1309119-001A**	**Water**	**09/04/2013 15:00**	**IC2**	**81411**

Analytes	Result	RL	DF	Date Analyzed
Hexachrome	**0.31**	0.20	1	09/06/2013 18:06

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
Pond 22 Inflow	**1309119-002A**	**Water**	**09/04/2013 15:30**	**IC2**	**81411**

Analytes	Result	RL	DF	Date Analyzed
Hexachrome	**0.42**	0.20	1	09/06/2013 19:04

CDPH ELAP 1644 ♦ NELAP 12283CA

TD Analyst's Initial

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

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Quality Control Report

Client:	Alpha Analytical Laboratories	**WorkOrder:**	1309119
Date Prepared:	9/6/13	**BatchID:**	81411
Date Analyzed:	9/6/13	**Extraction Method**	E218.6
Instrument:	IC2	**Analytical Method:**	E218.6
Matrix:	Water	**Unit:**	µg/L
Project:	#13I0289	**Sample ID:**	MB/LCS-81411

QC SUMMARY REPORT FOR E218.6

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Hexachrome	ND	27.01	0.20	25	-	108	90-110

October 10, 2013

Alpha Analytical Laboratories Inc.
ATTN: Robbie Phillips
208 Mason St.
Ukiah, CA 95482
robbie@alpha-labs.com

RE: Project AAL-DB1301 Client Project: 13I0289

Dear Mr. Phillips,

On September 10, 2013, Brooks Rand Labs (BRL) received two (2) water samples. The samples were logged-in for the contracted analyses of silver (Ag), arsenic (As), beryllium (Be), cadmium (Cd), chromium (Cr), copper (Cu), nickel (Ni), lead (Pb), antimony (Sb), selenium (Se), thallium (Tl), and zinc (Zn) according to the chain-of-custody (COC) forms. The samples were received, prepared, analyzed, and stored according to BRL SOPs and EPA methodology.

The results were blank-corrected as described in the calculations section of the relevant SOP(s) and may have been evaluated using reporting limits that have been adjusted to account for sample aliquot size. Please refer to the *Sample Results* page for sample-specific MDLs, MRLs, and other details.

In instances where the native sample result and/or the associated duplicate (DUP) result were below the MDL the RPD was not calculated (**N/C**).

The Be matrix spike/matrix spike duplicate (MS/MSD) set performed on sample 1337008-01 recovered low at 73% and 70%, respectively. The Be result for sample 1337008-01 was qualified **N** for inaccuracy.

The Sb blank spike (BS) B131502-BS1 had a low recovery of 70%. This was a third analysis of the blank spike and the samples. All previous analyses of the blank spike also recovered low. The matrix spikes and standard reference material (SRM) recovered well, however the BS is the only quality control sample that goes through the entire preparation and analysis process with the samples. As a result, all Sb sample results were qualified **J** for potential low bias.

The Ag MS/MSD set performed on sample 1337008-02 recovered low at 69% and 73%, respectively. The Ag result for sample 1337008-02 was qualified **N** for inaccuracy.

Aside from concentration qualifiers, all data was reported without further qualification and all other associated quality control sample results met the acceptance criteria.

BRL, an accredited laboratory, certifies that the reported results of all analyses for which BRL is NELAP accredited meet all NELAP requirements. For more information please see the *Report*

Information page in your report. Please feel free to contact us if you have any questions regarding this report.

Sincerely,

Lydia Greaves
Project Manager
lydia@brooksrand.com

Tiffany Stilwater
Client Services Manager
tiffany@brooksrand.com

Project ID: AAL-DB1301
PM: Lydia Greaves

Client PM: Robbie Phillips
Client PO: 130903RP-1

Report Information

Laboratory Accreditation

BRL is accredited by the *National Environmental Laboratory Accreditation Program* (NELAP) through the State of Florida Department of Health, Bureau of Laboratories (E87982) and is certified to perform many environmental analyses. BRL is also certified by many other states to perform environmental analyses. For a current list of our accreditations/certifications, please visit our website at <http://www.brooksrand.com/default.asp?contentID=586>. Results reported relate only to the samples listed in the report.

Field Quality Control Samples

Please be notified that certain EPA methods require the collection of field quality control samples of an appropriate type and frequency; failure to do so is considered a deviation from some methods and for compliance purposes should only be done with the approval of regulatory authorities. Please see the specific EPA methods for details regarding required field quality control samples.

Common Abbreviations

BLK	method blank	**MS**	matrix spike
BRL	Brooks Rand Labs	**MSD**	matrix spike duplicate
BS	laboratory fortified blank	**ND**	non-detect
CAL	calibration standard	**NR**	non-reportable
CCV	continuing calibration verification	**PS**	post preparation spike
COC	chain of custody record	**REC**	percent recovery
CRM	certified reference material	**RPD**	relative percent difference
D	dissolved fraction	**RSD**	relative standard deviation
DUP	duplicate	**SCV**	secondary calibration verification
ICV	initial calibration verification	**SOP**	standard operating procedure
MDL	method detection limit	**SRM**	standard reference material
MRL	method reporting limit	**T**	total recoverable fraction

Definition of Data Qualifiers

(Effective 9/23/09)

B Detected by the instrument, the result is > the MDL but ≤ the MRL. Result is reported and considered an estimate.
E An estimated value due to the presence of interferences. A full explanation is presented in the narrative.
H Holding time and/or preservation requirements not met. Result is estimated.
J Estimated value. A full explanation is presented in the narrative.
J-M Duplicate precision (RPD) for associated QC sample was not within acceptance criteria. Result is estimated.
J-N Spike recovery for associated QC sample was not within acceptance criteria. Result is estimated.
M Duplicate precision (RPD) was not within acceptance criteria. Result is estimated.
N Spike recovery was not within acceptance criteria. Result is estimated.
R Rejected, unusable value. A full explanation is presented in the narrative.
U Result is ≤ the MDL or client requested reporting limit (CRRL). Result reported as the MDL or CRRL.
X Result is not BLK-corrected and is within 10x the absolute value of the highest detectable BLK in the batch. Result is estimated.

These qualifiers are based on those previously utilized by Brooks Rand Labs, those found in the EPA SOW ILM03.0, Exhibit B, Section III, pg. B-18, and the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review; USEPA; January 2010. These supersede all previous qualifiers ever employed by BRL.

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Project ID: AAL-DB1301
PM: Lydia Greaves

Client PM: Robbie Phillips
Client PO: 130903RP-1

Sample Information

Sample	Lab ID	Report Matrix	Type	Sampled	Received
13I0289-01	1337009-01	Water	Sample	09/04/2013	09/10/2013
13I0289-02	1337009-02	Water	Sample	09/04/2013	09/10/2013

Batch Summary

Analyte	Lab Matrix	Method	Prepared	Analyzed	Batch	Sequence
Ag	Water	EPA 1638	09/23/2013	09/24/2013	B131582	1300649
As	Water	EPA 1638 DRC	09/16/2013	09/25/2013	B131502	1300653
Be	Water	EPA 1638	09/16/2013	09/18/2013	B131503	1300638
Cd	Water	EPA 1638	09/16/2013	09/18/2013	B131503	1300638
Cr	Water	EPA 1638 DRC	09/16/2013	09/19/2013	B131504	1300639
Cu	Water	EPA 1638	09/16/2013	09/18/2013	B131503	1300638
Ni	Water	EPA 1638 DRC	09/16/2013	09/19/2013	B131504	1300639
Pb	Water	EPA 1638	09/16/2013	09/18/2013	B131503	1300638
Sb	Water	EPA 1638	09/23/2013	09/24/2013	B131582	1300649
Se	Water	EPA 1638 DRC	09/16/2013	09/25/2013	B131502	1300653
Tl	Water	EPA 1638	09/16/2013	09/18/2013	B131503	1300638
Zn	Water	EPA 1638	09/16/2013	09/18/2013	B131503	1300638

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Sample Results

Sample	Analyte	Report Matrix	Basis	Result	Qualifier	MDL	MRL	Unit	Batch	Sequence
13I0289-01, Pond 22										
1337009-01	Ag	Water	T	0.008	B	0.005	0.020	µg/L	B131582	1300649
1337009-01	As	Water	T	0.600		0.006	0.025	µg/L	B131502	1300653
1337009-01	Be	Water	T	0.051	U	0.051	0.152	µg/L	B131503	1300638
1337009-01	Cd	Water	T	0.118		0.007	0.020	µg/L	B131503	1300638
1337009-01	Cr	Water	T	1.24		0.045	0.152	µg/L	B131504	1300639
1337009-01	Cu	Water	T	1.60		0.040	0.121	µg/L	B131503	1300638
1337009-01	Ni	Water	T	7.57		0.237	1.01	µg/L	B131504	1300639
1337009-01	Pb	Water	T	0.089		0.006	0.025	µg/L	B131503	1300638
1337009-01	Sb	Water	T	0.288	J	0.010	0.040	µg/L	B131582	1300649
1337009-01	Se	Water	T	1.84		0.023	0.069	µg/L	B131502	1300653
1337009-01	Tl	Water	T	0.086		0.003	0.010	µg/L	B131503	1300638
1337009-01	Zn	Water	T	3.49		0.06	0.20	µg/L	B131503	1300638
13I0289-02, Pond 22 Inflow										
1337009-02	Ag	Water	T	0.005	U	0.005	0.020	µg/L	B131582	1300649
1337009-02	As	Water	T	0.592		0.006	0.025	µg/L	B131502	1300653
1337009-02	Be	Water	T	0.051	U	0.051	0.152	µg/L	B131503	1300638
1337009-02	Cd	Water	T	0.088		0.007	0.020	µg/L	B131503	1300638
1337009-02	Cr	Water	T	1.37		0.045	0.152	µg/L	B131504	1300639
1337009-02	Cu	Water	T	1.73		0.040	0.121	µg/L	B131503	1300638
1337009-02	Ni	Water	T	7.43		0.237	1.01	µg/L	B131504	1300639
1337009-02	Pb	Water	T	0.113		0.006	0.025	µg/L	B131503	1300638
1337009-02	Sb	Water	T	0.268	J	0.010	0.040	µg/L	B131582	1300649
1337009-02	Se	Water	T	2.05		0.023	0.069	µg/L	B131502	1300653
1337009-02	Tl	Water	T	0.070		0.003	0.010	µg/L	B131503	1300638
1337009-02	Zn	Water	T	4.47		0.06	0.20	µg/L	B131503	1300638

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Project ID: AAL-DB1301
PM: Lydia Greaves

Client PM: Robbie Phillips
Client PO: 130903RP-1

Accuracy & Precision Summary

Batch: B131502
Lab Matrix: Water
Method: EPA 1638 DRC

Sample	Analyte	Native	Spike	Result	Units	REC & Limits	RPD & Limits
B131502-BS1	**Laboratory Fortified Blank (1337045)**						
	As		5.051	5.689	µg/L	113% 75-125	
	Se		6.061	6.601	µg/L	109% 75-125	
B131502-SRM1	**Certified Reference Material (1245010, NIST 1643e (for batch QC))**						
	As		60.45	62.98	µg/L	104% 75-125	
	Se		11.97	12.34	µg/L	103% 75-125	
B131502-DUP1	**Duplicate (1337008-01)**						
	As	0.507		0.492	µg/L		3% 20
	Se	1.965		1.978	µg/L		0.7% 20
B131502-MS1	**Matrix Spike (1337008-01)**						
	As	0.507	2.525	3.292	µg/L	110% 75-125	
	Se	1.965	10.10	13.83	µg/L	117% 75-125	
B131502-MSD1	**Matrix Spike Duplicate (1337008-01)**						
	As	0.507	2.525	3.283	µg/L	110% 75-125	0.3% 20
	Se	1.965	10.10	14.06	µg/L	120% 75-125	2% 20

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Project ID: AAL-DB1301
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Client PM: Robbie Phillips
Client PO: 130903RP-1

Accuracy & Precision Summary

Batch: B131503
Lab Matrix: Water
Method: EPA 1638

Sample	Analyte	Native	Spike	Result	Units	REC & Limits	RPD & Limits
B131503-BS1	**Laboratory Fortified Blank (1337045)**						
	Be		3.030	2.809	µg/L	93% 75-125	
	Cd		0.2020	0.202	µg/L	100% 75-125	
	Cu		2.020	1.990	µg/L	99% 75-125	
	Pb		0.5051	0.511	µg/L	101% 75-125	
	Tl		0.2020	0.220	µg/L	109% 75-125	
	Zn		4.040	4.01	µg/L	99% 75-125	
B131503-SRM1	**Certified Reference Material (1245010, NIST 1643e (for batch QC))**						
	Be		13.98	12.57	µg/L	90% 75-125	
	Cd		6.568	6.557	µg/L	100% 75-125	
	Cu		22.76	22.73	µg/L	100% 75-125	
	Pb		19.63	20.29	µg/L	103% 75-125	
	Tl		7.445	8.202	µg/L	110% 75-125	
	Zn		78.50	78.04	µg/L	99% 75-125	
B131503-DUP1	**Duplicate (1337008-01)**						
	Be	ND		ND	µg/L		N/C 20
	Cd	0.278		0.267	µg/L		4% 20
	Cu	0.880		0.870	µg/L		1% 20
	Pb	0.015		0.015	µg/L		2% 20
	Tl	0.067		0.067	µg/L		0.8% 20
	Zn	4.83		4.61	µg/L		5% 20
B131503-MS1	**Matrix Spike (1337008-01)**						
	Be	ND	0.2020	0.156	µg/L	*73%* 75-125	
	Cd	0.278	0.2020	0.459	µg/L	89% 75-125	
	Cu	0.880	2.020	2.558	µg/L	83% 75-125	
	Pb	0.015	0.5051	0.467	µg/L	90% 75-125	
	Tl	0.067	0.1010	0.163	µg/L	95% 75-125	
	Zn	4.83	10.10	13.30	µg/L	84% 75-125	

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Project ID: AAL-DB1301
PM: Lydia Greaves

Client PM: Robbie Phillips
Client PO: 130903RP-1

Accuracy & Precision Summary

Batch: B131503
Lab Matrix: Water
Method: EPA 1638

Sample	Analyte	Native	Spike	Result	Units	REC & Limits	RPD & Limits
B131503-MSD1	**Matrix Spike Duplicate (1337008-01)**						
	Be	ND	0.2020	0.150	µg/L	*70%* 75-125	4% 20
	Cd	0.278	0.2020	0.459	µg/L	90% 75-125	0.08% 20
	Cu	0.880	2.020	2.490	µg/L	80% 75-125	3% 20
	Pb	0.015	0.5051	0.459	µg/L	88% 75-125	2% 20
	Tl	0.067	0.1010	0.164	µg/L	95% 75-125	0.6% 20
	Zn	4.83	10.10	12.97	µg/L	81% 75-125	3% 20

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Project ID: AAL-DB1301
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Client PM: Robbie Phillips
Client PO: 130903RP-1

Accuracy & Precision Summary

Batch: B131504
Lab Matrix: Water
Method: EPA 1638 DRC

Sample	Analyte	Native	Spike	Result	Units	REC & Limits	RPD & Limits
B131504-BS1	**Laboratory Fortified Blank (1337045)**						
	Cr		3.030	2.987	µg/L	99% 75-125	
	Ni		4.040	4.139	µg/L	102% 75-125	
B131504-SRM1	**Certified Reference Material (1245010, NIST 1643e (for batch QC))**						
	Cr		20.40	20.55	µg/L	101% 75-125	
	Ni		62.41	58.87	µg/L	94% 75-125	
B131504-DUP1	**Duplicate (1337008-01)**						
	Cr	0.440		0.443	µg/L		0.6% 20
	Ni	1.901		2.094	µg/L		10% 20
B131504-MS1	**Matrix Spike (1337008-01)**						
	Cr	0.440	5.051	5.714	µg/L	104% 75-125	
	Ni	1.901	5.051	6.921	µg/L	99% 75-125	
B131504-MSD1	**Matrix Spike Duplicate (1337008-01)**						
	Cr	0.440	5.051	5.841	µg/L	107% 75-125	2% 20
	Ni	1.901	5.051	6.580	µg/L	93% 75-125	5% 20

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Project ID: AAL-DB1301
PM: Lydia Greaves

Client PM: Robbie Phillips
Client PO: 130903RP-1

Accuracy & Precision Summary

Batch: B131582
Lab Matrix: Water
Method: EPA 1638

Sample	Analyte	Native	Spike	Result	Units	REC & Limits	RPD & Limits
B131582-BS1	**Laboratory Fortified Blank (1338039)**						
	Ag		0.4040	0.394	µg/L	98% 75-125	
	Sb		0.4040	0.284	µg/L	*70%* 75-125	
B131582-SRM1	**Certified Reference Material (1245010, NIST 1643e (for batch QC))**						
	Ag		1.062	0.998	µg/L	94% 75-125	
	Sb		58.30	57.48	µg/L	99% 75-125	
B131582-DUP1	**Duplicate (1337008-02)**						
	Ag	ND		ND	µg/L		N/C 20
	Sb	0.612		0.601	µg/L		2% 20
B131582-MS1	**Matrix Spike (1337008-02)**						
	Ag	ND	0.2020	0.140	µg/L	*69%* 75-125	
	Sb	0.612	4.040	4.710	µg/L	101% 75-125	
B131582-MSD1	**Matrix Spike Duplicate (1337008-02)**						
	Ag	ND	0.2020	0.147	µg/L	*73%* 75-125	5% 20
	Sb	0.612	4.040	4.751	µg/L	102% 75-125	0.9% 20

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Project ID: AAL-DB1301
PM: Lydia Greaves

Client PM: Robbie Phillips
Client PO: 130903RP-1

Method Blanks & Reporting Limits

Batch: B131502
Matrix: Water
Method: EPA 1638 DRC
Analyte: As 91

Sample	Result	Units
B131502-BLK1	-0.002	µg/L
B131502-BLK2	-0.003	µg/L
B131502-BLK3	-0.004	µg/L
B131502-BLK4	-0.005	µg/L

Average: -0.004 **Standard Deviation:** 0.001 **MDL:** 0.006
Limit: 0.025 **Limit:** 0.006 **MRL:** 0.025

Analyte: Se 78

Sample	Result	Units
B131502-BLK1	0.016	µg/L
B131502-BLK2	0.012	µg/L
B131502-BLK3	0.003	µg/L
B131502-BLK4	0.003	µg/L

Average: 0.009 **Standard Deviation:** 0.007 **MDL:** 0.023
Limit: 0.069 **Limit:** 0.023 **MRL:** 0.069

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Project ID: AAL-DB1301
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Client PM: Robbie Phillips
Client PO: 130903RP-1

Method Blanks & Reporting Limits

Batch: B131503
Matrix: Water
Method: EPA 1638
Analyte: Be

Sample	Result	Units
B131503-BLK1	0.043	µg/L
B131503-BLK2	0.027	µg/L
B131503-BLK3	0.022	µg/L
B131503-BLK4	0.026	µg/L

Average: 0.030 **Standard Deviation:** 0.009 **MDL:** 0.051
Limit: 0.152 **Limit:** 0.051 **MRL:** 0.152

Analyte: Cd 114

Sample	Result	Units
B131503-BLK1	-0.0005	µg/L
B131503-BLK2	0.0002	µg/L
B131503-BLK3	-0.00007	µg/L
B131503-BLK4	-0.0004	µg/L

Average: 0.000 **Standard Deviation:** 0.000 **MDL:** 0.007
Limit: 0.020 **Limit:** 0.007 **MRL:** 0.020

Analyte: Cu 63

Sample	Result	Units
B131503-BLK1	-0.003	µg/L
B131503-BLK2	-0.009	µg/L
B131503-BLK3	-0.012	µg/L
B131503-BLK4	-0.011	µg/L

Average: -0.009 **Standard Deviation:** 0.004 **MDL:** 0.040
Limit: 0.121 **Limit:** 0.040 **MRL:** 0.121

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Project ID: AAL-DB1301
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Client PO: 130903RP-1

Method Blanks & Reporting Limits

Analyte: Pb

Sample	Result	Units
B131503-BLK1	-0.001	µg/L
B131503-BLK2	-0.003	µg/L
B131503-BLK3	-0.004	µg/L
B131503-BLK4	-0.004	µg/L

Average: -0.003 **Standard Deviation:** 0.001 **MDL:** 0.006
Limit: 0.025 **Limit:** 0.006 **MRL:** 0.025

Analyte: Tl

Sample	Result	Units
B131503-BLK1	-0.001	µg/L
B131503-BLK2	-0.001	µg/L
B131503-BLK3	-0.001	µg/L
B131503-BLK4	-0.001	µg/L

Average: -0.001 **Standard Deviation:** 0.000 **MDL:** 0.003
Limit: 0.010 **Limit:** 0.003 **MRL:** 0.010

Analyte: Zn 66

Sample	Result	Units
B131503-BLK1	-0.09	µg/L
B131503-BLK2	-0.08	µg/L
B131503-BLK3	-0.08	µg/L
B131503-BLK4	-0.10	µg/L

Average: -0.09 **Standard Deviation:** 0.01 **MDL:** 0.06
Limit: 0.20 **Limit:** 0.06 **MRL:** 0.20

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Project ID: AAL-DB1301
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Client PM: Robbie Phillips
Client PO: 130903RP-1

Method Blanks & Reporting Limits

Batch: B131504
Matrix: Water
Method: EPA 1638 DRC
Analyte: Cr 52

Sample	Result	Units
B131504-BLK1	0.005	µg/L
B131504-BLK2	0.006	µg/L
B131504-BLK3	0.002	µg/L
B131504-BLK4	0.002	µg/L

Average: 0.004 **Standard Deviation:** 0.002 **MDL:** 0.009
Limit: 0.030 **Limit:** 0.009 **MRL:** 0.030

Analyte: Ni 62

Sample	Result	Units
B131504-BLK1	0.0004	µg/L
B131504-BLK2	-0.004	µg/L
B131504-BLK3	-0.005	µg/L
B131504-BLK4	-0.005	µg/L

Average: -0.003 **Standard Deviation:** 0.003 **MDL:** 0.047
Limit: 0.202 **Limit:** 0.047 **MRL:** 0.202

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Project ID: AAL-DB1301
PM: Lydia Greaves

Client PM: Robbie Phillips
Client PO: 130903RP-1

Method Blanks & Reporting Limits

Batch: B131582
Matrix: Water
Method: EPA 1638
Analyte: Ag 107

Sample	Result	Units
B131582-BLK1	-0.0005	µg/L
B131582-BLK2	-0.001	µg/L
B131582-BLK3	-0.002	µg/L
B131582-BLK4	-0.0008	µg/L

Average: -0.001 **Standard Deviation:** 0.001 **MDL:** 0.005
Limit: 0.020 **Limit:** 0.005 **MRL:** 0.020

Analyte: Sb

Sample	Result	Units
B131582-BLK1	0.00001	µg/L
B131582-BLK2	-0.0007	µg/L
B131582-BLK3	-0.0004	µg/L
B131582-BLK4	-0.00005	µg/L

Average: 0.000 **Standard Deviation:** 0.000 **MDL:** 0.010
Limit: 0.040 **Limit:** 0.010 **MRL:** 0.040

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Project ID: AAL-DB1301
PM: Lydia Greaves

Client PM: Robbie Phillips
Client PO: 130903RP-1

Sample Containers

Lab ID: 1337009-01
Sample: 13I0289-01
Report Matrix: Water
Sample Type: Sample
Collected: 09/04/2013
Received: 09/10/2013

Des	Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A	Bottle Glass	500mL	not provided	0.1% HNO3 (BRL)	1310013	<2	Cooler in box

Lab ID: 1337009-02
Sample: 13I0289-02
Report Matrix: Water
Sample Type: Sample
Collected: 09/04/2013
Received: 09/10/2013

Des	Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A	Bottle Glass	500mL	not provided	0.1% HNO3 (BRL)	1310013	<2	Cooler in box

Shipping Containers

Cooler in box

Received: September 10, 2013 10:00
Tracking No: 1Z8942500147335749 via UPS
Coolant Type: Blue Ice
Temperature: 0.4 °C

Description: Cooler in box
Damaged in transit? No
Returned to client? No

Custody seals present? No
Custody seals intact? No
COC present? Yes

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CHAIN OF CUSTODY

13I0289 Page 1 of 1

Quotation No. Invoice Lehigh

PROJECT NO.: 063-7109-914

SITE NAME: Lehigh

SAMPLER(S): David Walter, Ian Sharkey (printed) David C. Walter (signature)

CONTRACT LABORATORY: Alpha

TURN-AROUND TIME: Standard

EDD required? ✓ Yes No

EDF required? ✓ Yes No

Sample I.D.	Lab I.D.	Collection Date	Collection Time	Matrix	Depth	TSS	O+G	TDS, Chloride	Cr R913 1600 Series	Mercury 1631	Cr 6	Tot Set Mat	Hardness	Cont. Qty.	Remarks
Container Info: Type/Vol.						1L	1L	1L	500ml	500ml	250ml	1L	1L		
Filter						N	N	N	N	N	N	N	N		
Preserv.						—	HCL	—	—	—	$(NH_4)_2SO_4$	—	—		
Pond 22		9-4-13	1500	W		1	2	1	1	1	1	1	1	6	Include J flags
Pond 22 Inflow		9-4-13	1530	W		1	2	1	1	1	1	1	1	6	

Relinquished by: (signature)	Received by: (signature)	Date/Time
David C. Walter	[signature]	9-4-13 1624
[signature]	[signature]	9-4-13 1910
[signature]	[signature]	9-4-13 2140

SEND RESULTS TO:
Attn: George Wegmann, Greg Knapp, Chow Yip
Golder Associates Inc.
425 Lakeside Drive
Sunnyvale, CA 94085
Phone (408) 220-9223
Fax (408) 220-9224

white: lab copy yellow: project file

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ELAP Certificate Numbers 1551 and 2728

11 December 2013

Lehigh Southwest Cement Company
Attn: Chow Yip
PO Box 660140 / Attention SSC AP - CEMENT
Dallas, TX 75266-0140
RE: Lehigh Item 11
Work Order: 13K1491

Enclosed are the results of analyses for samples received by the laboratory on 11/21/13 21:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jeanette L. Poplin For Robbie C. Phillips
Project Manager

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Dallas TX, 75266-0140	Project Manager: Chow Yip	
Lehigh Southwest Cement Company	Project: Lehigh Item 11	Reported:
PO Box 660140 / Attention SSC AP - CEMENT	Project Number: 063-7109-914	12/11/13 15:23

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Pond 21 DN	13K1491-01	Water	11/20/13 15:40	11/21/13 21:50
Pond 22 UP	13K1491-02	Water	11/20/13 16:10	11/21/13 21:50

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Dallas TX, 75266-0140	Project Manager: Chow Yip	
Lehigh Southwest Cement Company	Project: Lehigh Item 11	Reported:
PO Box 660140 / Attention SSC AP - CEMENT	Project Number: 063-7109-914	12/11/13 15:23

Metals by EPA 200 Series Methods
Alpha Analytical Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Pond 21 DN (13K1491-01) Water Sampled: 11/20/13 15:40 Received: 11/21/13 21:50										
Calcium	**180**	0.010	1.0	mg/l	1	AL30532	12/05/13 12:01	12/10/13 19:03	EPA 200.7	
Magnesium	**56**	0.0080	1.0	"	"	"	"	"	"	
Pond 22 UP (13K1491-02) Water Sampled: 11/20/13 16:10 Received: 11/21/13 21:50										
Calcium	**190**	0.010	1.0	mg/l	1	AL30532	12/05/13 12:01	12/10/13 19:08	EPA 200.7	
Magnesium	**31**	0.0080	1.0	"	"	"	"	"	"	

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Dallas TX, 75266-0140	Project Manager: Chow Yip	
Lehigh Southwest Cement Company	Project: Lehigh Item 11	Reported:
PO Box 660140 / Attention SSC AP - CEMENT	Project Number: 063-7109-914	12/11/13 15:23

Metals by APHA/EPA Methods
Alpha Analytical Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Pond 21 DN (13K1491-01) Water Sampled: 11/20/13 15:40 Received: 11/21/13 21:50										
Chromium, hexavalent	ND	0.0050	0.010	mg/l	1	AL30354	12/03/13 14:00	12/03/13 15:40	SM3500-Cr B	U
Mercury	**20.7**	0.200	0.500	ng/l	"	AK32548	11/25/13 19:00	12/03/13 16:33	EPA 1631E	
Pond 22 UP (13K1491-02) Water Sampled: 11/20/13 16:10 Received: 11/21/13 21:50										
Chromium, hexavalent	ND	0.0050	0.010	mg/l	1	AL30354	12/03/13 14:00	12/03/13 15:40	SM3500-Cr B	U
Mercury	**8.59**	0.200	0.500	ng/l	"	AK32548	11/25/13 19:00	12/03/13 16:41	EPA 1631E	

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Dallas TX, 75266-0140	Project Manager: Chow Yip	
Lehigh Southwest Cement Company	Project: Lehigh Item 11	Reported:
PO Box 660140 / Attention SSC AP - CEMENT	Project Number: 063-7109-914	12/11/13 15:23

Conventional Chemistry Parameters by APHA/EPA Methods
Alpha Analytical Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Pond 21 DN (13K1491-01) Water Sampled: 11/20/13 15:40 Received: 11/21/13 21:50										
Salinity	ND	2.0	2.0	g/kg	1	AL31033	12/10/13 11:15	12/10/13 11:38	SM2520B	U
Total Dissolved Solids	**1200**	5.0	10	mg/l	"	AK32534	11/25/13 13:30	12/02/13 08:30	SM2540C	
Hardness, Total	**678**	1	5	"	"	AL30532	12/05/13 12:01	12/10/13 19:03	SM2340B	
Pond 22 UP (13K1491-02) Water Sampled: 11/20/13 16:10 Received: 11/21/13 21:50										
Salinity	ND	2.0	2.0	g/kg	1	AL31033	12/10/13 11:15	12/10/13 11:38	SM2520B	U
Total Dissolved Solids	**1200**	5.0	10	mg/l	"	AK32534	11/25/13 13:30	12/02/13 08:30	SM2540C	
Hardness, Total	**600**	1	5	"	"	AL30532	12/05/13 12:01	12/10/13 19:08	SM2340B	

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Dallas TX, 75266-0140	Project Manager: Chow Yip	
Lehigh Southwest Cement Company	Project: Lehigh Item 11	Reported:
PO Box 660140 / Attention SSC AP - CEMENT	Project Number: 063-7109-914	12/11/13 15:23

Anions by EPA Method 300.0
Alpha Analytical Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Pond 21 DN (13K1491-01) Water Sampled: 11/20/13 15:40 Received: 11/21/13 21:50										
Chloride	**140**	0.75	12	mg/l	25	AK32531	11/25/13 12:45	11/25/13 17:29	EPA 300.0	
Pond 22 UP (13K1491-02) Water Sampled: 11/20/13 16:10 Received: 11/21/13 21:50										
Chloride	**110**	0.75	12	mg/l	25	AK32531	11/25/13 12:45	11/25/13 17:44	EPA 300.0	

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Dallas TX, 75266-0140	Project Manager: Chow Yip	
Lehigh Southwest Cement Company	Project: Lehigh Item 11	Reported:
PO Box 660140 / Attention SSC AP - CEMENT	Project Number: 063-7109-914	12/11/13 15:23

Metals by EPA 200 Series Methods - Quality Control

Alpha Analytical Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch AL30532 - Metals Digest											
Blank (AL30532-BLK1)					Prepared: 12/05/13 Analyzed: 12/10/13						
Calcium	0.0163	0.010	1.0	mg/l							J
Magnesium	ND	0.0080	1.0	"							U
LCS (AL30532-BS1)					Prepared: 12/05/13 Analyzed: 12/10/13						
Calcium	6.13	0.010	1.0	mg/l	6.00		102	85-115			
Magnesium	7.92	0.0080	1.0	"	8.00		99.0	85-115			
Duplicate (AL30532-DUP1)		**Source: 13K1674-01**			Prepared: 12/05/13 Analyzed: 12/10/13						
Calcium	50.0	0.010	1.0	mg/l		47.3			5.60	20	
Magnesium	32.0	0.0080	1.0	"		30.8			3.77	20	
Matrix Spike (AL30532-MS1)		**Source: 13K1674-01**			Prepared: 12/05/13 Analyzed: 12/10/13						
Calcium	54.0	0.010	1.0	mg/l	6.00	47.3	112	70-130			
Magnesium	38.3	0.0080	1.0	"	8.00	30.8	94.5	70-130			
Matrix Spike (AL30532-MS2)		**Source: 13K1744-01**			Prepared: 12/05/13 Analyzed: 12/10/13						
Calcium	27.7	0.010	1.0	mg/l	6.00	21.9	95.7	70-130			
Magnesium	17.2	0.0080	1.0	"	8.00	8.95	103	70-130			
Matrix Spike Dup (AL30532-MSD1)		**Source: 13K1674-01**			Prepared: 12/05/13 Analyzed: 12/10/13						
Calcium	52.2	0.010	1.0	mg/l	6.00	47.3	80.7	70-130	3.54	20	
Magnesium	35.1	0.0080	1.0	"	8.00	30.8	54.5	70-130	8.71	20	QM-4X

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Dallas TX, 75266-0140	Project Manager: Chow Yip	
Lehigh Southwest Cement Company	Project: Lehigh Item 11	Reported:
PO Box 660140 / Attention SSC AP - CEMENT	Project Number: 063-7109-914	12/11/13 15:23

Metals by APHA/EPA Methods - Quality Control

Alpha Analytical Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch AK32548 - EPA 1631											
Blank (AK32548-BLK1)					Prepared: 11/25/13 Analyzed: 12/03/13						
Mercury	ND	0.200	0.500	ng/l							U
LCS (AK32548-BS1)					Prepared: 11/25/13 Analyzed: 12/03/13						
Mercury	4.91	0.200	0.500	ng/l	5.00		98.2	77-123			
Matrix Spike (AK32548-MS1)		**Source: 13K1127-03**			Prepared: 11/25/13 Analyzed: 12/03/13						
Mercury	25.2	0.200	0.500	ng/l	25.0	1.00	96.8	71-125			
Matrix Spike (AK32548-MS2)		**Source: 13K1488-05**			Prepared: 11/25/13 Analyzed: 12/03/13						
Mercury	51.5	0.200	0.500	ng/l	25.0	27.8	94.8	71-125			
Matrix Spike Dup (AK32548-MSD1)		**Source: 13K1127-03**			Prepared: 11/25/13 Analyzed: 12/03/13						
Mercury	25.0	0.200	0.500	ng/l	25.0	1.00	96.0	71-125	0.797	24	
Matrix Spike Dup (AK32548-MSD2)		**Source: 13K1488-05**			Prepared: 11/25/13 Analyzed: 12/03/13						
Mercury	49.9	0.200	0.500	ng/l	25.0	27.8	88.4	71-125	3.16	24	
Batch AL30354 - SM3500 Cr6 Water											
Blank (AL30354-BLK1)					Prepared & Analyzed: 12/03/13						
Chromium, hexavalent	ND	0.0050	0.010	mg/l							U
LCS (AL30354-BS1)					Prepared & Analyzed: 12/03/13						
Chromium, hexavalent	0.103	0.0050	0.010	mg/l	0.100		103	80-120			
Duplicate (AL30354-DUP1)		**Source: 13K1476-01**			Prepared & Analyzed: 12/03/13						
Chromium, hexavalent	0.111	0.0050	0.010	mg/l		0.109			1.82	20	

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Dallas TX, 75266-0140	Project Manager: Chow Yip	
Lehigh Southwest Cement Company	Project: Lehigh Item 11	Reported:
PO Box 660140 / Attention SSC AP - CEMENT	Project Number: 063-7109-914	12/11/13 15:23

Metals by APHA/EPA Methods - Quality Control

Alpha Analytical Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch AL30354 - SM3500 Cr6 Water											
Matrix Spike (AL30354-MS1)		**Source: 13K1476-01**			Prepared & Analyzed: 12/03/13						
Chromium, hexavalent	0.203	0.0050	0.010	mg/l	0.100	0.109	93.6	0-200			
Matrix Spike (AL30354-MS2)		**Source: 13L0127-01**			Prepared & Analyzed: 12/03/13						
Chromium, hexavalent	0.105	0.0050	0.010	mg/l	0.100	ND	105	0-200			
Matrix Spike Dup (AL30354-MSD1)		**Source: 13K1476-01**			Prepared & Analyzed: 12/03/13						
Chromium, hexavalent	0.202	0.0050	0.010	mg/l	0.100	0.109	92.6	0-200	0.494	20	

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Dallas TX, 75266-0140	Project Manager: Chow Yip	
Lehigh Southwest Cement Company	Project: Lehigh Item 11	Reported:
PO Box 660140 / Attention SSC AP - CEMENT	Project Number: 063-7109-914	12/11/13 15:23

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Alpha Analytical Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch AK32534 - General Preparation											
Blank (AK32534-BLK1)					Prepared: 11/25/13 Analyzed: 12/02/13						
Total Dissolved Solids	ND	5.0	10	mg/l							U
Duplicate (AK32534-DUP1)		**Source: 13K1425-01**			Prepared: 11/25/13 Analyzed: 12/02/13						
Total Dissolved Solids	352	5.0	10	mg/l		340			3.47	30	
Duplicate (AK32534-DUP2)		**Source: 13K1491-01**			Prepared: 11/25/13 Analyzed: 12/02/13						
Total Dissolved Solids	1080	5.0	10	mg/l		1240			14.2	30	
Batch AL30532 - Metals Digest											
Blank (AL30532-BLK1)					Prepared: 12/05/13 Analyzed: 12/10/13						
Hardness, Total	ND	1	5	mg/l							U
Duplicate (AL30532-DUP1)		**Source: 13K1674-01**			Prepared: 12/05/13 Analyzed: 12/10/13						
Hardness, Total	257	1	5	mg/l		245			4.65	20	

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Dallas TX, 75266-0140	Project Manager: Chow Yip	
Lehigh Southwest Cement Company	Project: Lehigh Item 11	Reported:
PO Box 660140 / Attention SSC AP - CEMENT	Project Number: 063-7109-914	12/11/13 15:23

Anions by EPA Method 300.0 - Quality Control

Alpha Analytical Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch AK32531 - General Preparation											
Blank (AK32531-BLK1)					Prepared & Analyzed: 11/25/13						
Chloride	ND	0.030	0.50	mg/l							U
LCS (AK32531-BS1)					Prepared & Analyzed: 11/25/13						
Chloride	11.2	0.030	0.50	mg/l	11.1		101	90-110			
Duplicate (AK32531-DUP1)		**Source: 13K1422-01**			Prepared & Analyzed: 11/25/13						
Chloride	17.0	0.15	2.5	mg/l		17.0			0.176	20	
Matrix Spike (AK32531-MS1)		**Source: 13K1422-01**			Prepared & Analyzed: 11/25/13						
Chloride	28.9	0.15	2.5	mg/l	11.1	17.0	106	80-120			
Matrix Spike (AK32531-MS2)		**Source: 13K1623-01**			Prepared & Analyzed: 11/25/13						
Chloride	27.7	0.060	1.0	mg/l	11.1	16.3	103	80-120			
Matrix Spike Dup (AK32531-MSD1)		**Source: 13K1422-01**			Prepared & Analyzed: 11/25/13						
Chloride	28.9	0.15	2.5	mg/l	11.1	17.0	107	80-120	0.250	20	

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Dallas TX, 75266-0140	Project Manager: Chow Yip	
Lehigh Southwest Cement Company	Project: Lehigh Item 11	Reported:
PO Box 660140 / Attention SSC AP - CEMENT	Project Number: 063-7109-914	12/11/13 15:23

Notes and Definitions

J	Detected but below the Reporting Limit; therefore, result is an estimated concentration, detected but not quantified (DNQ).
QM-4X	The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.
U	Analyte included in analysis, but not detected at or above MDL.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

January 8, 2014

Alpha Analytical Laboratories Inc.
ATTN: Robbie Phillips
208 Mason St.
Ukiah, CA 95482
robbie@alpha-labs.com

RE: Project AAL-DB1301 Client Project: 13K1491

Dear Mr. Phillips,

On November 26, 2013, Brooks Rand Labs (BRL) received two (2) water samples. The samples were logged-in for the contracted analyses of silver (Ag), arsenic (As), beryllium (Be), cadmium (Cd), chromium (Cr), copper (Cu), nickel (Ni), lead (Pb), antimony (Sb), selenium (Se), thallium (Tl), and zinc (Zn) according to the chain-of-custody (COC) forms. The samples were received, prepared, analyzed, and stored according to BRL SOPs and EPA methodology.

For Se analysis, the method blanks (BLKs) BLK1 and BLK2 exceeded the limit, as did the average of the BLKs (0.069 µg/L) and the standard deviation (0.031 µg/L). This was cause for elevated reporting limits. The MDL was set at 3x the standard deviation (0.099 µg/L) and the MRL was set at 3x the MDL (0.296 µg/L).

The blank spike (BS) B132147-BS1 had low recoveries for Cr and Ni. The BS was re-analyzed as B132147-BS2 and B132147-BS3 and met acceptance criteria. Since both re-analyses met acceptance criteria and all other quality control samples met acceptance criteria, no qualifications were necessary.

The results were blank-corrected as described in the calculations section of the relevant SOP(s) and may have been evaluated using reporting limits that have been adjusted to account for sample aliquot size. Please refer to the *Sample Results* page for sample-specific MDLs, MRLs, and other details. Aside from concentration qualifiers, all data was reported without qualification and all other associated quality control sample results met the acceptance criteria.

BRL, an accredited laboratory, certifies that the reported results of all analyses for which BRL is NELAP accredited meet all NELAP requirements. For more information please see the *Report Information* page in your report. Please feel free to contact us if you have any questions regarding this report.

Sincerely,

Lydia Greaves
Project Manager
lydia@brooksrand.com

Tiffany Stilwater
Client Services Manager
tiffany@brooksrand.com

Project ID: AAL-DB1301
PM: Lydia Greaves

Client PM: Robbie Phillips
Client PO: 130903RP-1

Report Information

Laboratory Accreditation

BRL is accredited by the *National Environmental Laboratory Accreditation Program* (NELAP) through the State of Florida Department of Health, Bureau of Laboratories (E87982) and is certified to perform many environmental analyses. BRL is also certified by many other states to perform environmental analyses. For a current list of our accreditations/certifications, please visit our website at <http://www.brooksrand.com/default.asp?contentID=586>. Results reported relate only to the samples listed in the report.

Field Quality Control Samples

Please be notified that certain EPA methods require the collection of field quality control samples of an appropriate type and frequency; failure to do so is considered a deviation from some methods and for compliance purposes should only be done with the approval of regulatory authorities. Please see the specific EPA methods for details regarding required field quality control samples.

Common Abbreviations

BLK	method blank	**MS**	matrix spike
BRL	Brooks Rand Labs	**MSD**	matrix spike duplicate
BS	laboratory fortified blank	**ND**	non-detect
CAL	calibration standard	**NR**	non-reportable
CCV	continuing calibration verification	**PS**	post preparation spike
COC	chain of custody record	**REC**	percent recovery
CRM	certified reference material	**RPD**	relative percent difference
D	dissolved fraction	**RSD**	relative standard deviation
DUP	duplicate	**SCV**	secondary calibration verification
ICV	initial calibration verification	**SOP**	standard operating procedure
MDL	method detection limit	**SRM**	standard reference material
MRL	method reporting limit	**T**	total recoverable fraction
IBL	instrument blank		

Definition of Data Qualifiers

(Effective 9/23/09)

B Detected by the instrument, the result is > the MDL but ≤ the MRL. Result is reported and considered an estimate.
E An estimated value due to the presence of interferences. A full explanation is presented in the narrative.
H Holding time and/or preservation requirements not met. Result is estimated.
J Estimated value. A full explanation is presented in the narrative.
J-M Duplicate precision (RPD) for associated QC sample was not within acceptance criteria. Result is estimated.
J-N Spike recovery for associated QC sample was not within acceptance criteria. Result is estimated.
M Duplicate precision (RPD) was not within acceptance criteria. Result is estimated.
N Spike recovery was not within acceptance criteria. Result is estimated.
R Rejected, unusable value. A full explanation is presented in the narrative.
U Result is ≤ the MDL or client requested reporting limit (CRRL). Result reported as the MDL or CRRL.
X Result is not BLK-corrected and is within 10x the absolute value of the highest detectable BLK in the batch. Result is estimated.

These qualifiers are based on those previously utilized by Brooks Rand Labs, those found in the EPA SOW ILM03.0, Exhibit B, Section III, pg. B-18, and the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review; USEPA; January 2010. These supersede all previous qualifiers ever employed by BRL.

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Project ID: AAL-DB1301
PM: Lydia Greaves

Client PM: Robbie Phillips
Client PO: 130903RP-1

Sample Information

Sample	Lab ID	Report Matrix	Type	Sampled	Received
13K1491-01 Pond 21 DN	1348006-01	Water	Sample	11/20/2013	11/26/2013
13K1491-02 Pond 22 UP	1348006-02	Water	Sample	11/20/2013	11/26/2013

Batch Summary

Analyte	Lab Matrix	Method	Prepared	Analyzed	Batch	Sequence
Ag	Water	EPA 1638	12/10/2013	12/17/2013	B132212	1300885
As	Water	EPA 1638 DRC	12/10/2013	12/11/2013	B132146	1300850
Be	Water	EPA 1638	12/10/2013	12/17/2013	B132212	1300885
Cd	Water	EPA 1638	12/10/2013	12/17/2013	B132212	1300885
Cr	Water	EPA 1638 DRC	12/10/2013	12/17/2013	B132147	1300887
Cu	Water	EPA 1638	12/10/2013	12/17/2013	B132212	1300885
Ni	Water	EPA 1638 DRC	12/10/2013	12/17/2013	B132147	1300887
Pb	Water	EPA 1638	12/10/2013	12/17/2013	B132212	1300885
Sb	Water	EPA 1638	12/10/2013	12/17/2013	B132212	1300885
Se	Water	EPA 1638 DRC	12/10/2013	12/11/2013	B132146	1300850
Tl	Water	EPA 1638	12/10/2013	12/17/2013	B132212	1300885
Zn	Water	EPA 1638	12/10/2013	12/17/2013	B132212	1300885

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Sample Results

Sample	Analyte	Report Matrix	Basis	Result	Qualifier	MDL	MRL	Unit	Batch	Sequence
13K1491-01 Pond 21 DN										
1348006-01	Ag	Water	T	0.026	U	0.026	0.105	µg/L	B132212	1300885
1348006-01	As	Water	T	0.969		0.009	0.032	µg/L	B132146	1300850
1348006-01	Be	Water	T	0.263	U	0.263	0.789	µg/L	B132212	1300885
1348006-01	Cd	Water	T	0.121		0.037	0.105	µg/L	B132212	1300885
1348006-01	Cr	Water	T	8.57		0.395	1.18	µg/L	B132147	1300887
1348006-01	Cu	Water	T	7.37		0.211	0.632	µg/L	B132212	1300885
1348006-01	Ni	Water	T	8.45		1.32	5.26	µg/L	B132147	1300887
1348006-01	Pb	Water	T	0.733		0.032	0.132	µg/L	B132212	1300885
1348006-01	Sb	Water	T	0.288		0.053	0.211	µg/L	B132212	1300885
1348006-01	Se	Water	T	1.55		0.099	0.296	µg/L	B132146	1300850
1348006-01	Tl	Water	T	0.104		0.016	0.053	µg/L	B132212	1300885
1348006-01	Zn	Water	T	28.8		0.32	1.05	µg/L	B132212	1300885
13K1491-02 Pond 22 UP										
1348006-02	Ag	Water	T	0.026	U	0.026	0.105	µg/L	B132212	1300885
1348006-02	As	Water	T	0.616		0.009	0.032	µg/L	B132146	1300850
1348006-02	Be	Water	T	0.263	U	0.263	0.789	µg/L	B132212	1300885
1348006-02	Cd	Water	T	0.127		0.037	0.105	µg/L	B132212	1300885
1348006-02	Cr	Water	T	2.96		0.395	1.18	µg/L	B132147	1300887
1348006-02	Cu	Water	T	3.98		0.211	0.632	µg/L	B132212	1300885
1348006-02	Ni	Water	T	13.3		1.32	5.26	µg/L	B132147	1300887
1348006-02	Pb	Water	T	0.171		0.032	0.132	µg/L	B132212	1300885
1348006-02	Sb	Water	T	0.835		0.053	0.211	µg/L	B132212	1300885
1348006-02	Se	Water	T	7.27		0.099	0.296	µg/L	B132146	1300850
1348006-02	Tl	Water	T	0.235		0.016	0.053	µg/L	B132212	1300885
1348006-02	Zn	Water	T	12.3		0.32	1.05	µg/L	B132212	1300885

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Project ID: AAL-DB1301
PM: Lydia Greaves

Client PM: Robbie Phillips
Client PO: 130903RP-1

Accuracy & Precision Summary

Batch: B132146
Lab Matrix: Water
Method: EPA 1638 DRC

Sample	Analyte	Native	Spike	Result	Units	REC & Limits	RPD & Limits
B132146-BS1	**Laboratory Fortified Blank (1337045)**						
	As		5.263	5.052	µg/L	96% 75-125	
	Se		6.316	6.107	µg/L	97% 75-125	
B132146-SRM1	**Certified Reference Material (1323040, NIST 1643e)**						
	As		60.45	60.42	µg/L	100% 75-125	
	Se		11.97	11.93	µg/L	100% 75-125	
B132146-DUP4	**Duplicate (1348005-01)**						
	As	6.115		5.836	µg/L		5% 20
	Se	15.77		15.87	µg/L		0.7% 20
B132146-MS4	**Matrix Spike (1348005-01)**						
	As	6.115	26.32	34.59	µg/L	108% 75-125	
	Se	15.77	52.63	72.71	µg/L	108% 75-125	
B132146-MSD4	**Matrix Spike Duplicate (1348005-01)**						
	As	6.115	26.32	34.30	µg/L	107% 75-125	0.8% 20
	Se	15.77	52.63	71.29	µg/L	106% 75-125	2% 20
B132146-DUP5	**Duplicate (1348007-01)**						
	As	5.338		5.545	µg/L		4% 20
	Se	49.45		48.36	µg/L		2% 20
B132146-MS5	**Matrix Spike (1348007-01)**						
	As	5.338	26.32	31.38	µg/L	99% 75-125	
	Se	49.45	52.63	100.4	µg/L	97% 75-125	
B132146-MSD5	**Matrix Spike Duplicate (1348007-01)**						
	As	5.338	26.32	32.88	µg/L	105% 75-125	5% 20
	Se	49.45	52.63	104.0	µg/L	104% 75-125	4% 20

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Project ID: AAL-DB1301
PM: Lydia Greaves

Client PM: Robbie Phillips
Client PO: 130903RP-1

Accuracy & Precision Summary

Batch: B132147
Lab Matrix: Water
Method: EPA 1638 DRC

Sample	Analyte	Native	Spike	Result	Units	REC & Limits	RPD & Limits
B132147-BS1	**Laboratory Fortified Blank (1337045)**						
	Cr		3.158	1.525	µg/L	*48%* 75-125	
	Ni		4.211	1.833	µg/L	*44%* 75-125	
B132147-BS2	**Laboratory Fortified Blank (1337045)**						
	Cr		3.158	3.532	µg/L	112% 75-125	
	Ni		4.211	3.780	µg/L	90% 75-125	
B132147-BS3	**Laboratory Fortified Blank (1337045)**						
	Cr		3.158	3.529	µg/L	112% 75-125	
	Ni		4.211	3.833	µg/L	91% 75-125	
B132147-SRM1	**Certified Reference Material (1323040, NIST 1643e)**						
	Cr		20.40	18.20	µg/L	89% 75-125	
	Ni		62.41	55.98	µg/L	90% 75-125	
B132147-SRM2	**Certified Reference Material (1323040, NIST 1643e)**						
	Cr		20.40	16.40	µg/L	80% 75-125	
	Ni		62.41	50.75	µg/L	81% 75-125	
B132147-DUP1	**Duplicate (1348005-01)**						
	Cr	188.2		189.9	µg/L		0.9% 20
	Ni	135.4		135.7	µg/L		0.3% 20
B132147-MS1	**Matrix Spike (1348005-01)**						
	Cr	188.2	263.2	422.2	µg/L	89% 75-125	
	Ni	135.4	263.2	366.2	µg/L	88% 75-125	
B132147-MSD1	**Matrix Spike Duplicate (1348005-01)**						
	Cr	188.2	263.2	430.7	µg/L	92% 75-125	2% 20
	Ni	135.4	263.2	384.6	µg/L	95% 75-125	5% 20

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Accuracy & Precision Summary

Batch: B132147
Lab Matrix: Water
Method: EPA 1638 DRC

Sample	Analyte	Native	Spike	Result	Units	REC & Limits	RPD & Limits
B132147-DUP2	**Duplicate (1348007-01)**						
	Cr	149.1		148.8	µg/L		0.2% 20
	Ni	210.5		202.6	µg/L		4% 20
B132147-MS2	**Matrix Spike (1348007-01)**						
	Cr	149.1	263.2	376.0	µg/L	86% 75-125	
	Ni	210.5	263.2	430.4	µg/L	84% 75-125	
B132147-MSD2	**Matrix Spike Duplicate (1348007-01)**						
	Cr	149.1	263.2	409.5	µg/L	99% 75-125	9% 20
	Ni	210.5	263.2	460.1	µg/L	95% 75-125	7% 20

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Project ID: AAL-DB1301
PM: Lydia Greaves

Client PM: Robbie Phillips
Client PO: 130903RP-1

Accuracy & Precision Summary

Batch: B132212
Lab Matrix: Water
Method: EPA 1638

Sample	Analyte	Native	Spike	Result	Units	REC & Limits	RPD & Limits
B132212-BS1	**Laboratory Fortified Blank (1337045)**						
	Ag		0.4211	0.428	µg/L	102% 75-125	
	Be		3.158	3.236	µg/L	102% 75-125	
	Cd		0.2105	0.220	µg/L	105% 75-125	
	Cu		2.105	2.265	µg/L	108% 75-125	
	Pb		0.5263	0.535	µg/L	102% 75-125	
	Sb		0.4211	0.412	µg/L	98% 75-125	
	Tl		0.2105	0.216	µg/L	103% 75-125	
	Zn		4.211	4.17	µg/L	99% 75-125	
B132212-SRM1	**Certified Reference Material (1323040, NIST 1643e)**						
	Ag		1.062	0.983	µg/L	93% 75-125	
	Be		13.98	13.73	µg/L	98% 75-125	
	Cd		6.568	6.543	µg/L	100% 75-125	
	Cu		22.76	22.26	µg/L	98% 75-125	
	Pb		19.63	19.05	µg/L	97% 75-125	
	Sb		58.30	52.85	µg/L	91% 75-125	
	Tl		7.445	7.206	µg/L	97% 75-125	
	Zn		78.50	76.68	µg/L	98% 75-125	
B132212-DUP1	**Duplicate (1348005-01)**						
	Ag	0.323		0.337	µg/L		4% 20
	Be	0.399		0.378	µg/L		5% 20
	Cd	2.487		2.442	µg/L		2% 20
	Cu	48.07		46.53	µg/L		3% 20
	Pb	12.70		12.69	µg/L		0.02% 20
	Sb	1.146		1.135	µg/L		1% 20
	Tl	1.273		1.299	µg/L		2% 20
	Zn	195.2		193.9	µg/L		0.7% 20

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Client PO: 130903RP-1

Accuracy & Precision Summary

Batch: B132212
Lab Matrix: Water
Method: EPA 1638

Sample	Analyte	Native	Spike	Result	Units	REC & Limits	RPD & Limits
B132212-MS1	**Matrix Spike (1348005-01)**						
	Ag	0.323	2.632	2.722	µg/L	91% 75-125	
	Be	0.399	4.211	4.562	µg/L	99% 75-125	
	Cd	2.487	26.32	26.33	µg/L	91% 75-125	
	Cu	48.07	631.6	592.8	µg/L	86% 75-125	
	Pb	12.70	105.3	118.6	µg/L	101% 75-125	
	Sb	1.146	10.53	10.35	µg/L	87% 75-125	
	Tl	1.273	10.53	11.12	µg/L	94% 75-125	
	Zn	195.2	2105	2058	µg/L	88% 75-125	
B132212-MSD1	**Matrix Spike Duplicate (1348005-01)**						
	Ag	0.323	2.632	2.587	µg/L	86% 75-125	5% 20
	Be	0.399	4.211	4.370	µg/L	94% 75-125	4% 20
	Cd	2.487	26.32	25.08	µg/L	86% 75-125	5% 20
	Cu	48.07	631.6	570.7	µg/L	83% 75-125	4% 20
	Pb	12.70	105.3	113.4	µg/L	96% 75-125	4% 20
	Sb	1.146	10.53	9.865	µg/L	83% 75-125	5% 20
	Tl	1.273	10.53	10.64	µg/L	89% 75-125	4% 20
	Zn	195.2	2105	1999	µg/L	86% 75-125	3% 20
B132212-DUP2	**Duplicate (1348007-01)**						
	Ag	0.263		0.292	µg/L		10% 20
	Be	0.536		0.521	µg/L		3% 20
	Cd	2.037		1.999	µg/L		2% 20
	Cu	62.68		63.44	µg/L		1% 20
	Pb	6.092		6.240	µg/L		2% 20
	Sb	1.288		1.268	µg/L		2% 20
	Tl	0.373		0.384	µg/L		3% 20
	Zn	157.3		160.0	µg/L		2% 20

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Accuracy & Precision Summary

Batch: B132212
Lab Matrix: Water
Method: EPA 1638

Sample	Analyte	Native	Spike	Result	Units	REC & Limits	RPD & Limits
B132212-MS2	**Matrix Spike (1348007-01)**						
	Ag	0.263	2.632	2.821	µg/L	97% 75-125	
	Be	0.536	4.211	5.002	µg/L	106% 75-125	
	Cd	2.037	26.32	26.67	µg/L	94% 75-125	
	Cu	62.68	631.6	637.2	µg/L	91% 75-125	
	Pb	6.092	105.3	120.3	µg/L	109% 75-125	
	Sb	1.288	10.53	10.88	µg/L	91% 75-125	
	Tl	0.373	10.53	11.03	µg/L	101% 75-125	
	Zn	157.3	2105	2150	µg/L	95% 75-125	
B132212-MSD2	**Matrix Spike Duplicate (1348007-01)**						
	Ag	0.263	2.632	2.817	µg/L	97% 75-125	0.1% 20
	Be	0.536	4.211	5.214	µg/L	111% 75-125	4% 20
	Cd	2.037	26.32	26.87	µg/L	94% 75-125	0.7% 20
	Cu	62.68	631.6	640.0	µg/L	91% 75-125	0.4% 20
	Pb	6.092	105.3	121.0	µg/L	109% 75-125	0.5% 20
	Sb	1.288	10.53	11.15	µg/L	94% 75-125	2% 20
	Tl	0.373	10.53	11.15	µg/L	102% 75-125	1% 20
	Zn	157.3	2105	2153	µg/L	95% 75-125	0.2% 20

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Project ID: AAL-DB1301
PM: Lydia Greaves

Client PM: Robbie Phillips
Client PO: 130903RP-1

Method Blanks & Reporting Limits

Batch: B132146
Matrix: Water
Method: EPA 1638 DRC
Analyte: As 91

Sample	Result	Units
B132146-BLK1	0.004	µg/L
B132146-BLK2	0.004	µg/L
B132146-BLK3	0.005	µg/L
B132146-BLK4	0.005	µg/L

Average: 0.005 **Standard Deviation:** 0.001 **MDL:** 0.009
Limit: 0.032 **Limit:** 0.009 **MRL:** 0.032

Analyte: Se 78

Sample	Result	Units
B132146-BLK1	0.109	µg/L
B132146-BLK2	0.073	µg/L
B132146-BLK3	0.060	µg/L
B132146-BLK4	0.034	µg/L

Average: 0.069 **Standard Deviation:** 0.031 **MDL:** 0.099
Limit: 0.296 **Limit:** 0.099 **MRL:** 0.296

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Method Blanks & Reporting Limits

Batch: B132147
Matrix: Water
Method: EPA 1638 DRC
Analyte: Cr 52

Sample	Result	Units
B132147-BLK1	0.008	µg/L
B132147-BLK2	0.008	µg/L
B132147-BLK3	0.009	µg/L
B132147-BLK4	0.008	µg/L

Average: 0.008 **Standard Deviation:** 0.000 **MDL:** 0.016
Limit: 0.047 **Limit:** 0.016 **MRL:** 0.047

Analyte: Ni 62

Sample	Result	Units
B132147-BLK1	0.013	µg/L
B132147-BLK2	0.010	µg/L
B132147-BLK3	0.016	µg/L
B132147-BLK4	0.013	µg/L

Average: 0.013 **Standard Deviation:** 0.002 **MDL:** 0.053
Limit: 0.211 **Limit:** 0.053 **MRL:** 0.211

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Method Blanks & Reporting Limits

Batch: B132212
Matrix: Water
Method: EPA 1638
Analyte: Ag 107

Sample	Result	Units
B132212-BLK1	0.0002	µg/L
B132212-BLK2	0.0007	µg/L
B132212-BLK3	-0.00006	µg/L
B132212-BLK4	0.00003	µg/L

Average: 0.000 **Standard Deviation:** 0.000 **MDL:** 0.005
Limit: 0.021 **Limit:** 0.005 **MRL:** 0.021

Analyte: Be

Sample	Result	Units
B132212-BLK1	-0.004	µg/L
B132212-BLK2	-0.005	µg/L
B132212-BLK3	-0.003	µg/L
B132212-BLK4	-0.005	µg/L

Average: -0.004 **Standard Deviation:** 0.001 **MDL:** 0.053
Limit: 0.158 **Limit:** 0.053 **MRL:** 0.158

Analyte: Cd 114

Sample	Result	Units
B132212-BLK1	-0.0005	µg/L
B132212-BLK2	-0.0007	µg/L
B132212-BLK3	-0.0009	µg/L
B132212-BLK4	-0.0007	µg/L

Average: -0.001 **Standard Deviation:** 0.000 **MDL:** 0.007
Limit: 0.021 **Limit:** 0.007 **MRL:** 0.021

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Project ID: AAL-DB1301
PM: Lydia Greaves

Client PM: Robbie Phillips
Client PO: 130903RP-1

Method Blanks & Reporting Limits

Analyte: Cu 63

Sample	Result	Units
B132212-BLK1	-0.004	µg/L
B132212-BLK2	-0.008	µg/L
B132212-BLK3	-0.009	µg/L
B132212-BLK4	-0.009	µg/L

Average: -0.008 **Standard Deviation:** 0.002 **MDL:** 0.042
Limit: 0.126 **Limit:** 0.042 **MRL:** 0.126

Analyte: Pb

Sample	Result	Units
B132212-BLK1	-0.002	µg/L
B132212-BLK2	-0.002	µg/L
B132212-BLK3	-0.002	µg/L
B132212-BLK4	-0.003	µg/L

Average: -0.002 **Standard Deviation:** 0.001 **MDL:** 0.006
Limit: 0.026 **Limit:** 0.006 **MRL:** 0.026

Analyte: Sb

Sample	Result	Units
B132212-BLK1	-0.003	µg/L
B132212-BLK2	-0.003	µg/L
B132212-BLK3	-0.003	µg/L
B132212-BLK4	-0.002	µg/L

Average: -0.003 **Standard Deviation:** 0.001 **MDL:** 0.011
Limit: 0.042 **Limit:** 0.011 **MRL:** 0.042

Analyte: Tl

Sample	Result	Units
B132212-BLK1	-0.0009	µg/L
B132212-BLK2	-0.001	µg/L
B132212-BLK3	-0.001	µg/L
B132212-BLK4	-0.0009	µg/L

Average: -0.001 **Standard Deviation:** 0.000 **MDL:** 0.003
Limit: 0.011 **Limit:** 0.003 **MRL:** 0.011

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Project ID: AAL-DB1301
PM: Lydia Greaves

Client PM: Robbie Phillips
Client PO: 130903RP-1

Method Blanks & Reporting Limits

Analyte: Zn 66

Sample	Result	Units
B132212-BLK1	0.06	µg/L
B132212-BLK2	0.06	µg/L
B132212-BLK3	0.05	µg/L
B132212-BLK4	0.05	µg/L

Average: 0.06 **Standard Deviation:** 0.01 **MDL:** 0.06
Limit: 0.21 **Limit:** 0.06 **MRL:** 0.21

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Project ID: AAL-DB1301
PM: Lydia Greaves

Client PM: Robbie Phillips
Client PO: 130903RP-1

Sample Containers

Lab ID: 1348006-01
Sample: 13K1491-01 Pond 21 DN
Report Matrix: Water
Sample Type: Sample
Collected: 11/20/2013
Received: 11/26/2013

Des	Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A	Client-Provided	500mL	not provided	0.1% HNO3 (BRL)	1331069	<2	Cooler

Comments: glass container

Lab ID: 1348006-02
Sample: 13K1491-02 Pond 22 UP
Report Matrix: Water
Sample Type: Sample
Collected: 11/20/2013
Received: 11/26/2013

Des	Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A	Client-Provided	500mL	not provided	0.1% HNO3 (BRL)	1331069	<2	Cooler

Comments: glass container

Shipping Containers

Cooler

Received: November 26, 2013 14:42
Tracking No: 1Z8942500147255657 via UPS
Coolant Type: Ice
Temperature: 1.4 °C

Description: Cooler
Damaged in transit? No
Returned to client? No

Custody seals present? No
Custody seals intact? No
COC present? Yes

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SUBCONTRACT ORDER

Alpha Analytical Laboratories, Inc.

13K1491

1348006 ERL Report 1348006

SENDING LABORATORY:

Alpha Analytical Laboratories, Inc.
208 Mason St.
Ukiah, CA 95482
Phone: (707)468-0401
Fax: (707)468-5267
Project Manager: Robbie C. Phillips

RECEIVING LABORATORY:

Brooks Rand Labs, LLC
3958 6th Avenue NW
Seattle, WA 98107
Phone :(206) 632-6206
Fax: (206) 632-6017
Terms: Net 30

Analysis	Due	Expires	Comments
13K1491-01 Pond 21 DN [Water] Sampled 11/20/13 15:40 Pacific			
1638 Zn Total ICPMS	12/10/13 12:00	05/19/14 15:40	
1638 As Total ICPMS	12/10/13 12:00	05/19/14 15:40	
1638 Be Total ICPMS	12/10/13 12:00	05/19/14 15:40	
1638 Cd Total ICPMS	12/10/13 12:00	05/19/14 15:40	
1638 Cr Total ICPMS	12/10/13 12:00	05/19/14 15:40	
1638 Cu Total ICPMS	12/10/13 12:00	05/19/14 15:40	
1638 Ni Total ICPMS	12/10/13 12:00	05/19/14 15:40	
1638 Pb Total ICPMS	12/10/13 12:00	05/19/14 15:40	
1638 Sb Total ICPMS	12/10/13 12:00	05/19/14 15:40	
1638 Se Total ICPMS	12/10/13 12:00	05/19/14 15:40	
1638 Ag Total ICPMS	12/10/13 12:00	05/19/14 15:40	
1638 Tl Total ICPMS	12/10/13 12:00	05/19/14 15:40	
Containers Supplied:	glass (2)		
~~500 mL Poly HNO3 (C)~~			
13K1491-02 Pond 22 UP [Water] Sampled 11/20/13 16:10 Pacific			
1638 Zn Total ICPMS	12/10/13 12:00	05/19/14 16:10	
1638 Ni Total ICPMS	12/10/13 12:00	05/19/14 16:10	
1638 Cr Total ICPMS	12/10/13 12:00	05/19/14 16:10	
1638 Cu Total ICPMS	12/10/13 12:00	05/19/14 16:10	
1638 Ag Total ICPMS	12/10/13 12:00	05/19/14 16:10	
1638 As Total ICPMS	12/10/13 12:00	05/19/14 16:10	
1638 Be Total ICPMS	12/10/13 12:00	05/19/14 16:10	
1638 Pb Total ICPMS	12/10/13 12:00	05/19/14 16:10	
1638 Sb Total ICPMS	12/10/13 12:00	05/19/14 16:10	
1638 Se Total ICPMS	12/10/13 12:00	05/19/14 16:10	
1638 Tl Total ICPMS	12/10/13 12:00	05/19/14 16:10	
1638 Cd Total ICPMS	12/10/13 12:00	05/19/14 16:10	
Containers Supplied:	glass (2)		
~~500 mL Poly HNO3 (C)~~			

Released By	Date	Received By	Date
	11-22-13	Lori Wright	11/26/13 1442
Released By	Date	Received By	Date

SUBCONTRACT ORDER

BRL Report 1348006

Alpha Analytical Laboratories, Inc.

13K1491

☐ *Report to State*

System Name: _____ **Employed by:** _____

User ID: _____ **Sampler:** _____

System Number: _____

+QC

+J-Flags

Released By	Date	Received By	Date
	11-22-13		11/26/13 1442
Released By	Date	Received By	Date

Golder Associates
CHAIN OF CUSTODY

Temp 4° 13K1491 Page 1 of 1

Quotation No. Invoice Lehigh

PROJECT NO.:	SITE NAME:
063-7109-914	Lehigh Item 11

SAMPLER(S): David Walter / Ian Sharkey (printed) David C. Stabl (signature)

CONTRACT LABORATORY: Alpha

TURN-AROUND TIME: Standard

ANALYSES: TDS, Chloride, Hardness Salinity, CTR PP13, 1600 Series, Mercury 1631, Cr 6

EDD required? ✓ Yes No

EDF required? Yes ✓ No

Sample I.D	Lab I.D.	Collection Date	Collection Time	Matrix	Depth	Container Info: Type/Vol. / Filter / Preserv.	Cont. Qty.	Remarks
						1L 1L 500ml 500ml 250ml; N N N N N; – – – – $(NH_4)_2SO_4$		
Pond 21 DN		11-20-13	1540	W		x x x x x	4	Include J-flags
Pond 22 UP		↓	1610	W		x x x x x	4	
~~Field Blank~~ QW								CTR Metals List: Hg, As, Be, Cd, Cr, Cu, Ni, Pb, Sb, Se, Tl, Zn

PO# 4500540429

Relinquished by: (signature)	Received by: (signature)	Date/Time:
David C. Stabl		11-21 15:15
Relinquished by: (signature)	Received by: (signature)	Date/Time:
	R. Lucco	11-21-13 1855
Relinquished by: (signature)	Received by: (signature)	Date/Time:
R. Lucco	MB R. Lucco	11-21-13 2150

SEND RESULTS TO:
Attn: George Wegmann, Greg Knapp, Chow Yip
Golder Associates Inc.
425 Lakeside Drive
Sunnyvale, CA 94085
Phone (408) 220-9223
Fax (408) 220-9224

white: lab copy yellow: project file

January 9, 2014

Alpha Analytical Laboratories Inc.
ATTN: Robbie Phillips
208 Mason St.
Ukiah, CA 95482
robbie@alpha-labs.com

RE: Project AAL-DB1302 Client Project: 13L1266

Dear Mr. Phillips,

On December 20, 2013, Brooks Rand Labs (BRL) received one (1) water sample. The sample was logged-in for the contracted analyses selenite [Se(IV)], selenate [Se(VI)], selenocyanate [Se(CN)], and unidentified Se species (Unk Sp) according to the chain-of-custody (COC) form. The samples were received, prepared, analyzed, and stored according to BRL SOPs and EPA methodology.

In instances where the native sample result and/or the associated duplicate (DUP) result were below the MDL the RPD was not calculated (**N/C**).

The native result for sample *13L1266-01 Pond 21 EFF* (1351035-01) and its associated duplicate (DUP) result yielded a RPD above the acceptance limit (39%). The sample result and the associated DUP met the secondary criteria of being less than 5x the MRL and within one MRL of each other. No qualifications were necessary.

Due to the potential for matrix-induced conversions, evaluation of matrix spike recoveries based on the total spike added for all species and the sum of the results is generally recommended. The tables below show the individual and sum of species spike recoveries.

B132253-MS/MSD1

Species	1351035-01 (µg/L)	Spike Level (µg/L)	MS Result (µg/L)	MS Recovery	MSD Result (µg/L)	MSD Recovery
Se(IV)	0.223	10.01	11.38	111%	11.54	113%
Se(VI)	*0.149*	10.00	11.47	113%	11.72	116%
SeCN	0.27	9.78	9.57	95%	10.81	108%
Sum	**0.642**	**29.79**	**32.42**	**107%**	**34.07**	**112%**

One of the continuing calibration verification (CCV) standards recovered below the acceptance limits (Limit: 75%, Recovery: 71%) for Se(CN). The Se(CN) results for samples bracketed by this CCV were reported qualified **J**. It should be noted that the matrix spike/matrix spike

duplicate (MS/MSD) set also bracketed by this CCV (MS1/MSD1) recovered within acceptance criteria.

Aside from concentration qualifiers, all data was reported without further qualification. All other associated quality control sample results met the acceptance criteria.

BRL, an accredited laboratory, certifies that the reported results of all analyses for which BRL is NELAP accredited meet all NELAP requirements. For more information please see the *Report Information* page in your report. Please feel free to contact us if you have any questions regarding this report.

Sincerely,

Lydia Greaves
Project Manager
lydia@brooksrand.com

Project ID: AAL-DB1302
PM: Lydia Greaves

Client PM: Robbie Phillips

Report Information

Laboratory Accreditation

BRL is accredited by the *National Environmental Laboratory Accreditation Program* (NELAP) through the State of Florida Department of Health, Bureau of Laboratories (E87982) and is certified to perform many environmental analyses. BRL is also certified by many other states to perform environmental analyses. For a current list of our accreditations/certifications, please visit our website at <http://www.brooksrand.com/default.asp?contentID=586>. Results reported relate only to the samples listed in the report.

Field Quality Control Samples

Please be notified that certain EPA methods require the collection of field quality control samples of an appropriate type and frequency; failure to do so is considered a deviation from some methods and for compliance purposes should only be done with the approval of regulatory authorities. Please see the specific EPA methods for details regarding required field quality control samples.

Common Abbreviations

BLK	method blank	**MS**	matrix spike
BRL	Brooks Rand Labs	**MSD**	matrix spike duplicate
BS	laboratory fortified blank	**ND**	non-detect
CAL	calibration standard	**NR**	non-reportable
CCV	continuing calibration verification	**PS**	post preparation spike
COC	chain of custody record	**REC**	percent recovery
CRM	certified reference material	**RPD**	relative percent difference
D	dissolved fraction	**RSD**	relative standard deviation
DUP	duplicate	**SCV**	secondary calibration verification
ICV	initial calibration verification	**SOP**	standard operating procedure
MDL	method detection limit	**SRM**	standard reference material
MRL	method reporting limit	**T**	total recoverable fraction
IBL	instrument blank		

Definition of Data Qualifiers

(Effective 9/23/09)

B Detected by the instrument, the result is > the MDL but ≤ the MRL. Result is reported and considered an estimate.
E An estimated value due to the presence of interferences. A full explanation is presented in the narrative.
H Holding time and/or preservation requirements not met. Result is estimated.
J Estimated value. A full explanation is presented in the narrative.
J-M Duplicate precision (RPD) for associated QC sample was not within acceptance criteria. Result is estimated.
J-N Spike recovery for associated QC sample was not within acceptance criteria. Result is estimated.
M Duplicate precision (RPD) was not within acceptance criteria. Result is estimated.
N Spike recovery was not within acceptance criteria. Result is estimated.
R Rejected, unusable value. A full explanation is presented in the narrative.
U Result is ≤ the MDL or client requested reporting limit (CRRL). Result reported as the MDL or CRRL.
X Result is not BLK-corrected and is within 10x the absolute value of the highest detectable BLK in the batch. Result is estimated.

These qualifiers are based on those previously utilized by Brooks Rand Labs, those found in the EPA SOW ILM03.0, Exhibit B, Section III, pg. B-18, and the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review; USEPA; January 2010. These supersede all previous qualifiers ever employed by BRL.

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Project ID: AAL-DB1302
PM: Lydia Greaves

Client PM: Robbie Phillips

Sample Information

Sample	Lab ID	Report Matrix	Type	Sampled	Received
13L1266-01 Pond 21 EFF	1351035-01	Water	Sample	12/17/2013	12/20/2013

Batch Summary

Analyte	Lab Matrix	Method	Prepared	Analyzed	Batch	Sequence
Se(IV)	Water	SOP BR-0061 HPLC	12/30/2013	01/01/2014	B132253	1300913
Se(VI)	Water	SOP BR-0061 HPLC	12/30/2013	01/01/2014	B132253	1300913
SeCN	Water	SOP BR-0061 HPLC	12/30/2013	01/01/2014	B132253	1300913
Unk Sp	Water	SOP BR-0061 HPLC	12/30/2013	01/01/2014	B132253	1300913

Sample Results

Sample	Analyte	Report Matrix	Basis	Result	Qualifier	MDL	MRL	Unit	Batch	Sequence
13L1266-01 Pond 21 EFF										
1351035-01	Se(IV)	Water	D	0.223	B	0.150	0.500	µg/L	B132253	1300913
1351035-01	Se(VI)	Water	D	0.150	U	0.150	0.500	µg/L	B132253	1300913
1351035-01	SeCN	Water	D	0.27	J, B	0.15	0.50	µg/L	B132253	1300913
1351035-01	Unk Sp	Water	D	0.150	U	0.150	0.500	µg/L	B132253	1300913

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Project ID: AAL-DB1302
PM: Lydia Greaves

Client PM: Robbie Phillips

Accuracy & Precision Summary

Batch: B132253
Lab Matrix: Water
Method: SOP BR-0061 HPLC

Sample	Analyte	Native	Spike	Result	Units	REC & Limits	RPD & Limits
B132253-BS1	**Laboratory Fortified Blank (1401004)**						
	Se(IV)		9.990	9.729	µg/L	97% 75-125	
	Se(VI)		9.800	9.022	µg/L	92% 75-125	
	SeCN		18.07	18.45	µg/L	102% 0-200	
B132253-DUP1	**Duplicate (1351035-01)**						
	Se(IV)	0.223		0.189	µg/L		16% 20
	Se(VI)	ND		ND	µg/L		N/C 20
	SeCN	0.27		0.18	µg/L		*39%* 20
	Unk Sp	ND		ND	µg/L		N/C 20
B132253-MS1	**Matrix Spike (1351035-01)**						
	Se(IV)	0.223	10.01	11.38	µg/L	111% N/A	
	Se(VI)	ND	10.00	11.47	µg/L	115% N/A	
	SeCN	0.27	9.780	9.57	µg/L	95% N/A	
B132253-MSD1	**Matrix Spike Duplicate (1351035-01)**						
	Se(IV)	0.223	10.01	11.54	µg/L	113% N/A	1% 20
	Se(VI)	ND	10.00	11.72	µg/L	117% N/A	2% 20
	SeCN	0.27	9.780	10.81	µg/L	108% N/A	12% 20

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Project ID: AAL-DB1302
PM: Lydia Greaves

Client PM: Robbie Phillips

Method Blanks & Reporting Limits

Batch: B132253
Matrix: Water
Method: SOP BR-0061 HPLC
Analyte: Se(IV) 78

Sample	Result	Units
B132253-BLK1	0.008	µg/L
B132253-BLK2	0.00	µg/L
B132253-BLK3	0.00	µg/L
B132253-BLK4	0.00	µg/L

Average: 0.002 **Standard Deviation:** 0.004 **MDL:** 0.030
Limit: 0.100 **Limit:** 0.030 **MRL:** 0.100

Analyte: Se(VI) 78

Sample	Result	Units
B132253-BLK1	0.009	µg/L
B132253-BLK2	0.006	µg/L
B132253-BLK3	0.006	µg/L
B132253-BLK4	0.007	µg/L

Average: 0.007 **Standard Deviation:** 0.001 **MDL:** 0.030
Limit: 0.100 **Limit:** 0.030 **MRL:** 0.100

Analyte: SeCN

Sample	Result	Units
B132253-BLK1	0.00	µg/L
B132253-BLK2	0.00	µg/L
B132253-BLK3	0.00	µg/L
B132253-BLK4	0.00	µg/L

Average: 0.00 **Standard Deviation:** 0.00 **MDL:** 0.03
Limit: 0.10 **Limit:** 0.03 **MRL:** 0.10

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Project ID: AAL-DB1302
PM: Lydia Greaves

Client PM: Robbie Phillips

Method Blanks & Reporting Limits

Analyte: Unk Sp

Sample	Result	Units
B132253-BLK1	0.000	µg/L
B132253-BLK2	0.000	µg/L
B132253-BLK3	0.000	µg/L
B132253-BLK4	0.000	µg/L

Average: 0.000 **Standard Deviation:** 0.000 **MDL:** 0.030
Limit: 0.100 **Limit:** 0.030 **MRL:** 0.100

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Project ID: AAL-DB1302
PM: Lydia Greaves

Client PM: Robbie Phillips

Sample Containers

Lab ID: 1351035-01
Sample: 13L1266-01 Pond 21 EFF

Report Matrix: Water
Sample Type: Sample

Collected: 12/17/2013
Received: 12/20/2013

Des	Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A	Client-Provided	500 mL	n/a	none	n/a		Cooler

Shipping Containers

Cooler

Received: December 20, 2013 10:58
Tracking No: 1Z8942500147942128 via
Coolant Type: None
Temperature: -0.8 °C

Description: Cooler
Damaged in transit? No
Returned to client? No

Custody seals present? Yes
Custody seals intact? Yes
COC present? Yes

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Golder Associates
CHAIN OF CUSTODY

Temp 4° 13L1266

Page 1 of 1

Quotation No. Invoice Lehigh

PROJECT NO.:	SITE NAME:	ANALYSES	EDD required?	EDF required?
063-7109	Item 11 Lehigh	Four forms of Se	☑ Yes ☐ No	☐ Yes ☑ No

SAMPLER(S): David Walter, Ian Sharkey (printed) David G Walter / Ian Sharkey (signature)

CONTRACT LABORATORY: Alpha

TURN-AROUND TIME: Standard

Sample I.D.	Lab I.D.	Collection Date	Collection Time	Matrix	Depth	Container Info: Type/Vol.	Filter	Preserv.	Four forms of Se	Cont. Qty.	Remarks
Pond 21 Eff		12-17-13	1450	W		500ml	N	N	1	1	

Relinquished by: (signature)	Received by: (signature)	Date/Time:	SEND RESULTS TO:
David G Walter		12-17-13 1600	Attn: George Wegmann, Greg Knapp, Chow Yip
Relinquished by: (signature)	Received by: (signature)	Date/Time: 12/17/13 1835	Golder Associates Inc.
Relinquished by: (signature)	Received by: (signature) LAB	Date/Time: 12/17/13 2120	425 Lakeside Drive Sunnyvale, CA 94085 Phone (408) 220-9223 Fax (408) 220-9224

white: lab copy yellow: project file

APPLIED SPECIATION
AND CONSULTING, LLC

18804 Northcreek Parkway Bothell, WA, 98011
Tel: (425) 483-3300 Fax: (425) 483-9818
www.appliedspeciation.com

October 3, 2013

Greg Knapp
Lehigh Hanson
(925) 244-6570

Re: Lehigh Selenium Impact Study

Mr. Knapp,

Attached is the report associated with three (3) aqueous samples submitted for total (filtered and unfiltered) selenium and selenium speciation analyses on September 5, 2013. The samples were received on September 6, 2013 in a sealed cooler at -0.3°C. Selenium speciation analysis was performed by ion chromatography inductively coupled plasma collision reaction cell mass spectrometry (IC-ICP-CRC-MS). Total selenium analysis was performed via inductively coupled plasma dynamic reaction cell mass spectrometry (ICP-DRC-MS). Any issues associated with the analyses are addressed in the following report.

If you have any questions, please feel free to contact me at your convenience.

Sincerely,

Ben Wozniak
Project Manager
Applied Speciation and Consulting, LLC

Applied Speciation and Consulting, LLC

Report Prepared for:

Greg Knapp
Lehigh Hanson

October 3, 2013

1. Sample Reception

Three (3) aqueous samples were submitted for total (filtered and unfiltered) selenium and selenium speciation analyses on September 5, 2013. The samples were received in acceptable condition on September 6, 2013 in a sealed cooler at -0.3°C, as recorded on the attached chain of custody (COC) forms.

The samples were received in a laminar flow clean hood, void of trace metals contamination and ultra-violet radiation, and designated discrete sample identifiers. Immediately upon reception each field-filtered aqueous sample for selenium speciation was stored in a secure, monitored cryofreezer (maintained at a temperature of <-70°C) until the analyses could be performed. Each field-filtered aqueous sample for dissolved selenium and each aqueous sample for total selenium were then preserved with 1% HNO_3 (v/v) to a pH < 2. All acidified aqueous samples were stored in a secure enclosed container, known to be free from trace metals contamination, until digestion and/or analysis could be performed.

It should be noted that although additional samples were submitted on September 5th, the client requested that only results for the samples identified as Pond 22, Pond 13, and Pond 14 be included in the attached report.

2. Sample Preparation

All sample preparation is performed in laminar flow clean hoods known to be free from trace metals contamination. All applied water for dilutions and sample preservatives are monitored for contamination to account for any biases associated with the sample results.

Selenium Speciation Analysis by IC-ICP-CRC-MS (Aqueous) Each sample submitted for selenium speciation had been filtered prior to reception at Applied Speciation and Consulting. No further sample preparation was performed as any chemical alteration of a sample may shift the equilibrium of the system, resulting in changes in speciation ratios.

Total (Unfiltered and Filtered) Selenium Quantitation by ICP-DRC-MS (Aqueous) An aliquot of each acidified sample fraction for total selenium was further digested on a hotblock apparatus with aliquots of 50% HNO_3 (v/v) and 50% HCl (v/v), in accordance with the

digestion procedure specified in EPA Method 200.8. Each acidified sample fraction for dissolved selenium was directly analyzed without further digestion.

3. Sample Analysis

All sample analysis is preceded by a minimum of a five-point calibration curve spanning the entire concentration range of interest. All calibration curves, associated with each species of interest, are standardized by linear regression resulting in a response factor. All sample results are **instrument blank corrected** to account for any operational biases associated with the analytical platform.

Prior to sample analysis, all calibration curves are verified using second source standards which are identified as initial calibration verification standards (ICV).

Ongoing instrument performance is identified by the analysis of continuing calibration verification standards (CCV) and continuing calibration blanks (CCB) at a minimum interval of every ten analytical runs.

Selenium Speciation Analysis by IC-ICP-CRC-MS The samples submitted for selenium speciation were analyzed by ion chromatography inductively coupled plasma collision reaction cell mass spectrometry (IC-ICP-CRC-MS) on September 11, 2013. Aliquots of each sample are injected onto an anion exchange column and are mobilized by an alkaline (pH > 7) gradient. The eluting selenium species are then introduced into a radio frequency (RF) plasma where energy-transfer processes cause desolvation, atomization, and ionization. The ions are extracted from the plasma through a differentially-pumped vacuum interface and travel through a pressurized chamber (CRC) containing a specific reaction gas which preferentially reacts with interfering ions of the same target mass to charge ratios (m/z). A solid-state detector detects ions transmitted through the mass analyzer and the resulting current is processed by a data handling system.

Retention times for each eluting species are compared to known standards for species identification.

Total Selenium Quantitation by ICP-DRC-MS All samples for selenium quantitation were analyzed by inductively coupled plasma dynamic reaction cell mass spectrometry (ICP-DRC-MS). All aqueous samples for total and dissolved selenium were analyzed on October 1 – 2, 2013. Aliquots of each sample are introduced into a radio frequency (RF) plasma where energy-transfer processes cause desolvation, atomization, and ionization. The ions are extracted from the plasma through a differentially-pumped vacuum interface and travel through a pressurized chamber (DRC) containing a specific reaction gas which preferentially reacts with interfering ions of the same target mass to charge ratios (m/z). A solid-state detector detects ions transmitted through the mass analyzer, on the basis of their mass-to-charge ratio (m/z), and the resulting current is processed by a data handling system.

4. Analytical Issues

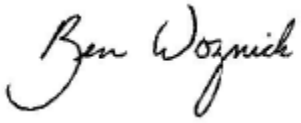
No significant analytical issues were encountered during the requested analyses. All quality control parameters associated with these samples were within acceptance limits with the following exception:

The internal standard recovery associated with the first continuing calibration verification (CCV) standard bracketing the dissolved selenium sample batch was below the control limit of 60% (58.8%). The internal standard recoveries associated with all other samples in this analytical batch were within control but similarly biased low (ranging from 61.1% - 68.9%). Since the recovery of selenium in the first CCV standard was acceptable (at 97.6%), demonstrating the accuracy of the applied internal standard corrections, no corrective action was necessary. The reported results are deemed representative of the submitted samples.

The estimated method detection limits (eMDLs) for selenite, selenate, and selenocyanate are generated from replicate analyses of the lowest standard in the calibration curve. Not all selenium species are present in preparation blanks; therefore, eMDL calculations based on preparation blanks may be artificially biased low for individual species. The eMDLs for total and dissolved selenium have been calculated using the standard deviation of the method blanks prepared and analyzed concurrently with the submitted samples.

If you have any questions or concerns regarding this report, please feel free to contact me.

Sincerely,



Ben Wozniak
Project Manager
Applied Speciation and Consulting, LLC

Selenium Results for Lehigh Hanson
Project: Lehigh Selenium Impact Study
Contact: Greg Knapp

Date: October 3, 2013
Report Generated by: Ben Wozniak
Applied Speciation and Consulting, LLC

Sample Results

Sample ID	Date Collected	Units	Total Se	Diss. Se	Se(IV)	Se(VI)	SeCN	Additional Se Species (n)
Pond 13	9/4/2013	µg/L	6.82	5.06	1.98	1.68	< 0.003 U	0.329 (1)
Pond 14	9/4/2013	µg/L	2.27	1.36	0.461 J	< 0.012 U	< 0.003 U	0.216 (2)
Pond 22	9/4/2013	µg/L	1.59	1.42	0.428 J	0.427 J	< 0.003 U	0 (0)

All results reflect the applied dilution and are reported in µg/L
U = Sample concentration is below the estimated method detection limit (eMDL)
J = Sample concentration is between the eMDL and the reporting limit (RL)
SeCN = Selenocyanate
Additional Se Species = Sum of all additional Se species observed by IC-ICP-MS
n = number of unknown Se species observed

Selenium Results for Lehigh Hanson
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Quality Control Summary - Preparation Blank Summary

Analyte	Units	PB1	PB2	PB3	PB4	Mean	StdDev	eMDL* 10x	RL 10x
Total Se	µg/L	0.11	0.21	0.11	0.14	0.14	0.05	0.14	0.40
Diss Se	µg/L	0.033	0.030	0.004	0.027	0.023	0.013	0.039	0.40
Se(IV)	µg/L	0.000	0.000	0.000	0.000	0.000	0.000	0.064	0.56
Se(VI)	µg/L	0.000	0.000	0.000	0.000	0.000	0.000	0.012	0.50
SeCN	µg/L	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.46

eMDL = Estimated Method Detection Limit; RL = Reporting Limit

*Please see narrative regarding eMDL calculations

Selenium Results for Lehigh Hanson
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Quality Control Summary - Certified Reference Materials

Analyte	Units	CRM	True Value	Result	Recovery
Total Se	µg/L	LCS	400.0	434.4	108.6
Total Se	µg/L	TMDA-70	25.9	26.11	100.8
Diss Se	µg/L	TMDA-70	25.9	26.33	101.6
Se(IV)	µg/L	LCS	4.785	4.727	98.8
Se(VI)	µg/L	LCS	4.740	4.481	94.5
SeCN	µg/L	LCS	4.460	4.356	97.7

Selenium Results for Lehigh Hanson
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Quality Control Summary - Matrix Duplicates

Analyte	Units	Sample ID	Rep 1	Rep 2	Mean	RPD
Total Se	µg/L	Pond 22	1.59	1.64	1.61	3.1
Diss Se	µg/L	Pond 22	1.420	1.381	1.400	2.8
Se(IV)	µg/L	Pond 22	0.428	0.436	0.432	1.9
Se(VI)	µg/L	Pond 22	0.427	0.386	0.407	10.1
SeCN	µg/L	Pond 22	< 0.003 U	< 0.003 U	NC	NC

NC = Not calculated due to one or more concentrations below the eMDL

Quality Control Summary - Matrix Spike/ Matrix Spike Duplicate

Analyte	Units	Sample ID	Spike Conc	MS Result	Recovery	Spike Conc	MSD Result	Recovery	RPD
Total Se	µg/L	Pond 22	400.0	425.7	106.0	400.0	397.8	99.0	6.8
Diss Se	µg/L	Pond 22	100.0	107.2	105.8	100.0	110.4	109.0	2.9
Se(IV)	µg/L	Pond 22	55.60	56.44	100.7	55.60	55.90	99.8	1.0
Se(VI)	µg/L	Pond 22	50.45	50.54	99.4	50.45	50.69	99.7	0.3
SeCN	µg/L	Pond 22	45.75	45.53	99.5	45.75	45.43	99.3	0.2

APPLIED SPECIATION AND CONSULTING, LLC

1 of 1

*special additional sample

18804 Northcreek Parkway
Bothell, WA 98011

Phone (425) 483-3300
Fax (425) 483-9818

Company Name: Robertson-Bryan, Inc.
Contact Person: Ben Giudice, Paul Bedore
Address: 9888 Kent St. Elk Grove, CA 95624

Phone Number: 916-405-8918 8943
Fax Number: 916-714-1804
Email Address: ben@robertson-bryan.com, paul@robertson-bryan.com
Project Name: Lehigh Selenium Impact Study
Project Number:
PO Number:

ASC Project Manager: Ben Wozniak

By submitting of samples the client agrees to all terms and conditions set forth in the quotation provided by the ASC project manager. If you are not familiar with the term and conditions associated with your project, please contact your ASC representative as soon as possible (425) 483-3300.

Requested Turn Around Time: Normal
Method of Sample Delivery: FedEx
Currier Tracking Number:
Confirmation of Sample Reception: ☐ Yes ☐ No

Sample ID	Bottle ID	Date and Time	Matrix*	Volume	Preservative	Initials	Requested Analytes and Methods	Comments
POND ZZ		9/4/13 12:05	FW	125 ml	None	PB	Tot. Se	Samples are to be reported separately from the others. Please call Ben or Paul Bedore for more info.
POND ZZ		9/4/13 12:05	FW	15 ml	↓	PB	Diss. Se	
POND ZZ		9/4/13 12:05	FW	15 ml	↓	PB	Se. Spec.	
							Sample is not part of the Se Impact Study on Permanente Creek, however we would like the work billed to the Se Impact Study PO. PB 9/5/13	

Relinquished by: (sign) Paul Bedore (print) PAUL BEDORE Date/Time: 9/5/13 1017
Received by: (sign) Nancy Cullinan (print) Nancy Cullinan Date/Time: 9/6/13 8:30

Comments:
Temp: ~0.3°

Relinquished by: (sign)_____ (print)_____ Date/Time:_____
Received by: (sign)_____ (print)_____ Date/Time:_____

Comments:
Temp:

Please account for each sample bottle as a seperate line item for verification purposes.

*Matrix: Air, Freshwater (FW), seawater (SW), groundwater (GW), wastewater (WW), soil (SL), sediment (SD), tissue (TS), product (P), other (O)