Appendix G

Phase II Investigation

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Kentmaster Mfg. Co., Inc.
1801 South Mountain Avenue
Monrovia, California 91016

Report of Phase II Investigation
Northwest Corner of Milliken Avenue
and Jersey Boulevard
Rancho Cucamonga,
San Bernardino County, California

August 7, 2015

Submitted By:
Earth Systems Southwest
1680 Illinois Avenue, Suite 20
Perris, California, 92571

File No.: 08935-03
Doc. No.: 15-08-703

Earth Systems
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August 7, 2015

File No.: 08935-03
Doc. No.: 15-08-703

Kentmaster Mfg. Co., Inc.
1801 South Mountain Avenue
Monrovia, California 91016

Attention: Mr. Ralph Karubian

Subject: **Report of Phase II Investigation**

Project: **Northwest Corner of Milliken Avenue and Jersey Boulevard**
Rancho Cucamonga, San Bernardino County, California

Dear Mr. Karubian:

As you requested, Earth Systems Southwest has completed this Phase II Investigation of the site referenced above. This report was prepared for your exclusive use. It was prepared to stand as a whole and no part should be excerpted or used in exclusion of any other part. This project was conducted in accordance with our proposal dated May 13, 2015. This report completes the scope of services outlined in our proposal.

Thank you for this opportunity to be of service. If you have any questions regarding this report, or the information contained herein, please contact this office at your convenience.

Sincerely,
EARTH SYSTEMS SOUTHWEST

Scot Stormo, PG 4826, CHG 204
Associate Hydrogeologist

Reviewed and Approved

Lutz Kunze
Senior Engineer

ESE Report/sas/mls

Distribution: 5/Kentmaster MFG. Co., Inc.
1/Perris File
1/BD E-File

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1.0 Introduction and Background

Earth Systems Southwest [Earth Systems] is pleased to present this report regarding the Phase II Investigation we conducted on a portion of an underdeveloped lot located on the northwestern corner of Milliken Avenue and Jersey Boulevard in Rancho Cucamonga, California. Figures depicting the site location and layout are presented in Appendix A. This project was conducted for Kentmaster MFG. Co., Inc. in accordance with our proposal dated May 13, 2015.

An area containing slag was identified during a Phase I Environmental Site Assessment [ESA] and geotechnical study conducted for the site in 2002 by Earth Systems. The area of slag was evaluated further during two subsequent studies, as follows:

1. The Shaw Group [Shaw] evaluated the slag area in 2002. They observed that the area contained two materials; a material that appeared to be slag, and a finer-grained material mixed in with the slag. Shaw collected 9 samples, 8 of the mixture of the materials and one of just slag from a stockpile located in the middle of the area. The mixed materials were combined into 4 composites for analysis while the slag-only sample was analyzed individually. The samples were analyzed for pH, metals, and Semi-Volatile Organic Compounds [SVOCs] and the results were compared to “normal” slag. They found that metal concentrations were elevated compared to normal slag, and the slag-only sample had the lowest metal concentrations. The total lead concentrations exceeded 1,000 mg/kg in the 4 composite samples, but was only 227 mg/kg in the slag-only sample. Shaw hypothesized that the highest metal concentrations might be associated with the fine-grained material and not the slag.
2. GEOVision conducted a geophysical survey of the site as a subcontractor to CAPE in 2005. The geophysical survey consisted of using electromagnetic [EM] and ground-penetrating radar [GPR] methods. GEOVision found the lateral extent of EM anomalies to be generally consistent with the observed surface boundaries of the slag, with many isolated high-amplitude anomalies within the overall slag-containing area that were interpreted to be areas of iron-rich slag. Two roadways were also delineated in the EM survey, one coincident with the observed access road, and a fainter alignment leading southwest from the southeast corner of the affected area.

2.0 Purpose and Scope of Work

The purpose of this investigation was to evaluate whether the slag on site should be classified as a hazardous waste, and estimate the volume of slag present. One of the goals was to evaluate Shaw’s hypothesis regarding whether the fine-grained material was the source of the metals. The work was performed as a sequence of tasks, as follows:

Task 1 – Slag Characterization

On May 21, 2015, a total of 8 samples (S-1 through S-8) were collected from 5 locations within the slag area (Figure 3). The samples were collected from a depth of 0.5 feet to minimize the effect surface erosion or deposition may have had on the material, and this depth was reached using a shovel. As shown in Figure 3, three pairs of samples were collected: S-1 and S-2 were co-located in the southwest portion of the slag area; S-3 and S-4 were co-located in the northwest portion of the slag area; and S-5 and S-6 were co-located in the southeast portion of the slag area. One of each pair was primarily fine-grained material and was collected in a glass jar while the other sample was primarily chunks of slag material and were collected in plastic baggies (see Table 1A). The remaining two samples, S-7 and S-8, were collected in the northeastern and central portions of the slag area (respectively), and were primarily fine-grained material collected in glass jars.

The samples were transported to a California-certified testing laboratory and tested individually for CAM Metals using EPA Test Methods 6010B/7471. Due to the high concentrations detected, three samples (S-2, S-3 and S-8) were analyzed again for the soluble fraction of lead and chromium using the federal TCLP protocol to evaluate whether the material would be classified as a hazardous waste under RCRA. The results of the laboratory testing were compared to California (TTLC) and Federal (TCLP) regulatory values to evaluate whether this material exceeds the criteria for classifying a waste as hazardous.

Task 2 – Volume Evaluation

The volume of slag present at the site was estimated as follows:

1. The lateral extent was estimated from readily available aerial photographs available from the web site Google Earth. Google Earth photos over a period of 13 years show that vegetation has not grown over the slag area, and therefore the lack of vegetation appears to be a good indicator of the lateral extent of slag. These observations were compared to the results of GEOVision surveys to derive an opinion regarding the lateral extent of the slag.

2. The vertical extent of the slag was evaluated by probing the depth of the slag at 32 locations using a hollow-stem-auger drilling rig:

    - 28 borings were drilled in a grid pattern within the area with slag visible at the ground surface,
    - 1 boring was drilled just north of the visible slag area,
    - 1 boring was drilled just south of the visible slag area, and
    - 2 borings were drilled along the main access road alignment.

A drilling rig was used to minimize the amount of disturbance of the material. The slag was difficult to drill through but the underlying soil was not, and it was fairly easy to tell when the bottom of the slag layer had been reached.

Task 3 – Reporting

This report has been prepared to summarize out findings and conclusions.

3.0 Findings

The site consists of approximately 7.3 acres of undeveloped land located at the northwest corner of Milliken Avenue and Jersey Boulevard in Rancho Cucamonga, California (Figure 2, Appendix A). The site is bound by Jersey Boulevard to the south, Milliken Avenue to the east commercial/industrial developments to the north, and a BNSF Railroad spur right-of-way on the west. The site is relatively flat and elevated about 5 feet above Jersey Boulevard. An unpaved road bisects the property from north to south and leads to the slag area in the northeast quadrant of the site, which is devoid of vegetation (Figure 2).

3.1 Observations

The two types of material sampled on May 21, 2015, consisted of the following:

- The "slag" material was typically angular and very hard. Individual pieces were either vitreous (glassy), vesicular (frozen air bubbles) or a blend of granular materials. Color ranged from black to light green (see Photo 1). The vitreous and vesicular textures are indicative of having been melted and re-solidified.
- The fine-grained material was a blend of sand and finer grain sizes stuck together into gravel-sized pieces (see Photo 2). The gravel-sized pieces were too hard to break up by hand but were decomposing on their own, producing fine sand and dust. At ½ foot below the ground surface at the locations sampled, the fine-grained material appeared to be about 80 percent (by volume) of the total material. The fine-grained material was typically dark grey and fairly uniform in appearance.

3.2 Laboratory Results

The laboratory testing results are presented in Table 1, with the TTLC testing in Table 1A and the TCLP testing in Table 1B. The laboratory report is presented in Appendix B. The results are summarized as follows:

1. Fifteen of the 17 CAM heavy metals were detected in one or more of the samples. Five of the metals were detected at concentrations that exceeded a regulatory threshold.
2. Lead concentrations in all 5 fine-grained samples and 2 of the 3 slag samples exceeded the TTLC. The concentrations in the fine-grained samples were about double the concentration in the two slag samples with elevated lead.

3. Cadmium exceeded 10 times the STLC in all of the samples that had elevated lead.
4. Chromium did not exceed the TTLC or 10 times the STLC, but did exceed 20 times the TCLP in 5 of the 8 samples.
5. Copper exceeded 10 times the STLC in two samples.
6. Zinc exceeded 10 times the STLC in 5 of the 8 samples.

The TTLC [Total Threshold Limit Concentration] and STLC [Soluble Threshold Limit Concentration] are criteria used under California regulations for classifying wastes as hazardous. The TCLP [Toxicity Characteristic Leaching Procedure] is a criteria used under the federal RCRA statues for classifying wastes as hazardous. The TTLC is based on the total concentration in a material while the STLC and TCLP are based on the soluble fraction of the substance, and the soluble fraction is determined using specified dilution ratios and solute concentrations. Consequently, analysis protocols usually test for the total concentration first, and the soluble concentrations are evaluated only if total concentrations do not exceed the TTCL but do exceed the STLC and TCLP by 10 to 20 times (respectively), which is the dilution ratio specified in the corresponding test method. Note that the federal RCRA statues do not have a corresponding "total concentration" threshold; only the soluble fraction is relevant for RCRA.

For the subject site, lead exceeded the TTLC in 7 of the 8 samples. Therefore, these materials exceed one of the criteria for classifying a waste as hazardous under California regulations. Further testing for the STLC concentrations for the other metals is not warranted because those results would not change the classification of the material. Performing TCLP testing is warranted because the material can be classified as hazardous in California but not hazardous under federal RCRA statues (referred to as a non-RCRA hazardous waste).

Three samples, S-2, S-3 and S-8, were analyzed for lead and chromium using the TCLP protocols to allow comparison to the TCLP criteria because the total lead and chromium concentrations both exceeded 20 times their respective TCLP values. Lead and chromium were not detected in the TCLP tests. Therefore, this material would not be classified as a hazardous waste under federal RCRA statutes due to metals because the lead and chromium were not sufficiently leachable from the samples using the TCLP test protocols.

3.3 Historical Aerial Photos

Aerial photographs obtainable from the Google Earth website were reviewed to evaluate the lateral extent of the slag area. Approximately 20 sets of photos were available through Google Earth covering the years 1994 through 2014. The following information was obtained from this review:

- In 1994, the earliest photo on the Google Earth website, the site appears to be part of an undeveloped field that extends several hundred feet offsite to the north (Figure 5). No evidence of the slag material was observed. About half of the properties in the site vicinity were developed commercially.

- On June 4, 2002, the next available photo on the Google Earth website, the building immediately north of the site had been constructed, the access road that crossed the site in a north-south alignment was present, and the slag area appeared different than the other portions of the site (Figure 6). Note that the quality of the photo was poor, so details concerning the slag area cannot be discerned.
- On December 30, 2003, the first good-quality photo on the Google Earth website, the site is green with vegetation except in the slag area, which is grey (Figure 7). Two access roads are visible; the main one and a smaller one to the east. Both enter the site at the same point near the central portion of the south edge, but the eastern road leads to the approximate middle of the slag area. What appears to be a stockpile is located in the south-central portion of the slag area, though the stockpile is gone by the next photo (May 30, 2004). The boundaries of the slag area are not clearly demarcated.
- On January 30, 2006, the southern boundary of the slag area appears to be a relatively sharp, straight line, though this could be due to landscape/brush-control activities (Figure 8). The paths of the two access roads are visible as barren areas within an otherwise over-grown site. The eastern pathway turns east and parallels the southern edge of the slag area until connecting to the slag area at the southeast corner of the slag area.
- Subsequent photos show the site basically unchanged from 2006 to 2014 except that weed abatement activities periodically reduce the vegetation, and soil stockpiles occasionally appear onsite. The boundaries of the slag area appear to change slightly between photos, probably due to weed-abatement activities. The slag area is devoid of significant vegetation throughout this time period, which is probably the most reliable indicator of the extent of the slag.

3.4 Lateral Extent of Slag Area

Figure 1 of the geophysical investigation report prepared by GEOVision (2005) presents their interpretation of the extent of the slag area. That figure is generally consistent with the aerial photo review and drilling program performed as part of the report, though the drawn shape does not quite match the outline visible in the aerial photos. Given that geophysical surveys are based on tightly-spaced data points while drilling and trenching activities require interpolation between widely scattered points, it is our opinion that the geophysical survey provides the most accurate indication of the lateral extent of the slag area. The geophysical survey was the primary basis for the extent shown on Figures 2 through 4, except that the edges of the area were smoothed out and adjusted to match the outlines visible in the aerial photos along the eastern and southern sides.

Based on the aerial photos and the geophysical survey, the slag area is approximately 320 feet east-west and 120 feet north-south, with an uncertainty on the order of 20 to 30 feet in each direction (about 10 to 20 percent). The uncertainty is due primarily to limits on the precision of the geophysical methods; the magnetic field being measured is influenced by the amount of iron contained in the slag, which can vary randomly within the slag.

3.5 Slag Deposit Thickness

The thickness of the slag deposit (including both slag and the associated fine-grained material) was evaluated as part of this study by drilling borings at 32 locations in and around the known slag area. The results of the drilling are presented in Table 2 and Figure 3, and summarized as follows:

- Slag was encountered in all 28 borings drilled within the visible slag area, with total thicknesses ranging from 1.5 to 6 feet.
- The greatest thickness of slag was in the middle of the slag area while the smallest thickness was along the eastern edge. The thickness was fairly uniform in a north-south direction at any point in the slag area.
- The decrease in thickness along the northern and southern boundaries of the slag area was fairly abrupt, with up to 6 feet of slag within 10 feet of the edge of the area. The decrease in thickness along the eastern edge was more gradual. Drilling along the western edge was not performed to preclude the potential for damaging an existing sewer line.

3.6 Quantity Estimate

The volume of slag and fine-grained material was estimated by dividing the area of investigation into 2 zones based on the thickness observed, then multiplying the lateral dimensions of each zone by the average thickness of each zone, as shown in Figure 4 and summarized as follows:

Zone A – Main slag area, approximately 250 feet east-west and 100 feet north-south, with an average thickness of 5.2 feet. Total volume is approximately 4,800 cubic yards.

Zone B - Eastern Edge, approximately 40 feet east-west and 130 feet north-south, with an average thickness of about 2 feet. Total volume is approximately 400 cubic yards.

The two zones total approximately 5,200 cubic yards of slag and associated fine-grained material. Assuming a density of 1.5 tons per cubic yard, the total weight is approximately 7,800 tons. At 15 tons per truck-load, that is equivalent to 520 truck-loads of material. Due to the uncertainty inherent in this evaluation methodology, it may be prudent to “round up” for budgeting purposes, and use a volume of 6,000 cubic yards and a weight of 9,000 tons, which is equivalent to about 600 truck-loads of material.

4.0 Summary, Conclusions and Recommendations

This report presents the results of a Phase II investigation performed to evaluate the volume and metal content of an area of “slag” material observed in the northeastern portion of an undeveloped property located at the northwest corner of Milliken Avenue and Jersey Boulevard in Rancho Cucamonga, California. The scope of work included collecting and analyzing samples of the suspect material, reviewing prior reports and historical aerial photos

to evaluate the lateral extent, and drilling borings to evaluate the thickness of the deposit. The results of this work are summarized as follows:

1. Two types of material were observed to comprise the "slag" deposit: (1) a blocky material that probably is slag and (2) a grey, fine-grained material that is not similar to typical slag and looked more like a cohesive sand and silt matrix. Given the high metal content, the fine-grained material may be "foundry sand", which is a by-product of metal casting processes. The fine-grained material was the major constituent observed at a depth of 0.5 feet in the five locations sampled, comprising about 80 percent of the volume at those locations. The fine-grained material was fairly uniform in appearance while the slag ranged in appearance.
2. Both materials were found to contain elevated concentrations of metals, with lead exceeding the TTLC in 7 of the 8 samples. Based on the lead concentrations, this material exceeds the criteria for defining a waste as hazardous under California law.
3. TCLP testing of three of the samples was performed for lead and chromium. Soluble lead and chromium were not detected in those tests. Consequently, the material would not be classified as a RCRA hazardous waste for these two metals. Testing was not performed for the other criteria used to define a waste as hazardous under RCRA.
4. The material was deposited between 1994 and 2002, based on historical aerial photographs from Google Earth. It may be possible to narrow the time frame further by researching other sources of photographs. That time frame is coincident with the construction of the large commercial building adjacent to the north side of the site. The material was deposited in a relatively uniform excavation that was about 320 feet long by 100 feet wide and about 5 feet deep. The large size and uniform dimensions suggest that the soil was removed with scrappers. The scrappers were likely running in an east-west direction, with the southeast corner of Zone B being either the entry or exit point for the vehicles.
5. Given the coincident time frame and proximity to the building built along the northern property boundary, it is our opinion that the area was probably a borrow source for construction of the adjacent commercial building. At some point after enough soil had been removed, the borrow area was backfilled with the slag and associated fine-grained material. The slag and fine-grained material would have been brought onsite along the access roads leading from the center of the southern site boundary, with the central road likely the point of entry and the eastern road likely the point of exit. It is also possible that the slag portion was brought onto the site after the fine-grained material was deposited to serve as a gravel "topping".
6. The volume of slag and fine-grained material is estimated to total 5,200 cubic yards. At 1.5 tons per cubic yard, this volume would weigh 7,800 tons and fill 520 trucks (at 15 tons per truck). Given the uncertainty of this analysis, it would be prudent to "round up" and assume a volume of 6,000 cubic yards and 9,000 tons, filling about 600 trucks.
7. Moving the material to another site within California would require that it be disposed of as a hazardous waste. However, it may be possible to dispose of it as a non-hazardous waste by transporting it out of California. Additional testing for other

parameters (besides metals) would be needed to verify that it would not be classified as hazardous under RCRA.

8. Given the very large volume and very high cost of disposing of this material offsite, it may be worthwhile to obtain a variance from the applicable regulatory agencies regarding the need for offsite disposal. However, significant effort and additional studies would be needed to apply for that variance with no assurance that it would be granted. Once notified of the presence of the requiring material, the site might become subject to a cleanup order requiring prompt action.

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5.0 Limitations

This report has been prepared for the exclusive use of Kentmaster MFG. Co., Inc. The conclusions and recommendations rendered in this report are opinions based on readily available information obtained to date within the scope of the work authorized by the client. The scope of work for this project was developed to address the needs of the client and may not meet the needs of other users. Any other use of or reliance on the information and opinions contained in this report without the written authorization of Earth Systems is at the sole risk of the user.

It should be noted that any level of assessment cannot ascertain that a property is completely free of chemical or toxic substances. We believe the scope of work has been appropriate to allow the client to make an informed business decision.

The results contained in this report are based upon the information acquired during the assessment, including information obtained from third parties. Earth Systems makes no claim as to the accuracy of the information obtained from others. In addition, it is possible that variations exist beyond or between points explored during the course of the assessment, and the changes in conditions can occur in the future due to the works of man, contaminant migration, variations in rainfall, temperature, and/or other factors not apparent at the time of the field services.

Earth Systems has striven to perform these services in a manner consistent with the level of care and skill ordinarily exercised by members of our profession currently practicing under similar conditions at the time and in the site vicinity. No warranty is expressed or implied.

References

Earth Systems, 2002. Report of Phase I Environmental Site Assessment, Proposed Development, Northwest Corner of Milliken Avenue and Jersey Boulevard, Rancho Cucamonga, San Bernardino County, California, File Number 08935-01 and dated December 13, 2002.

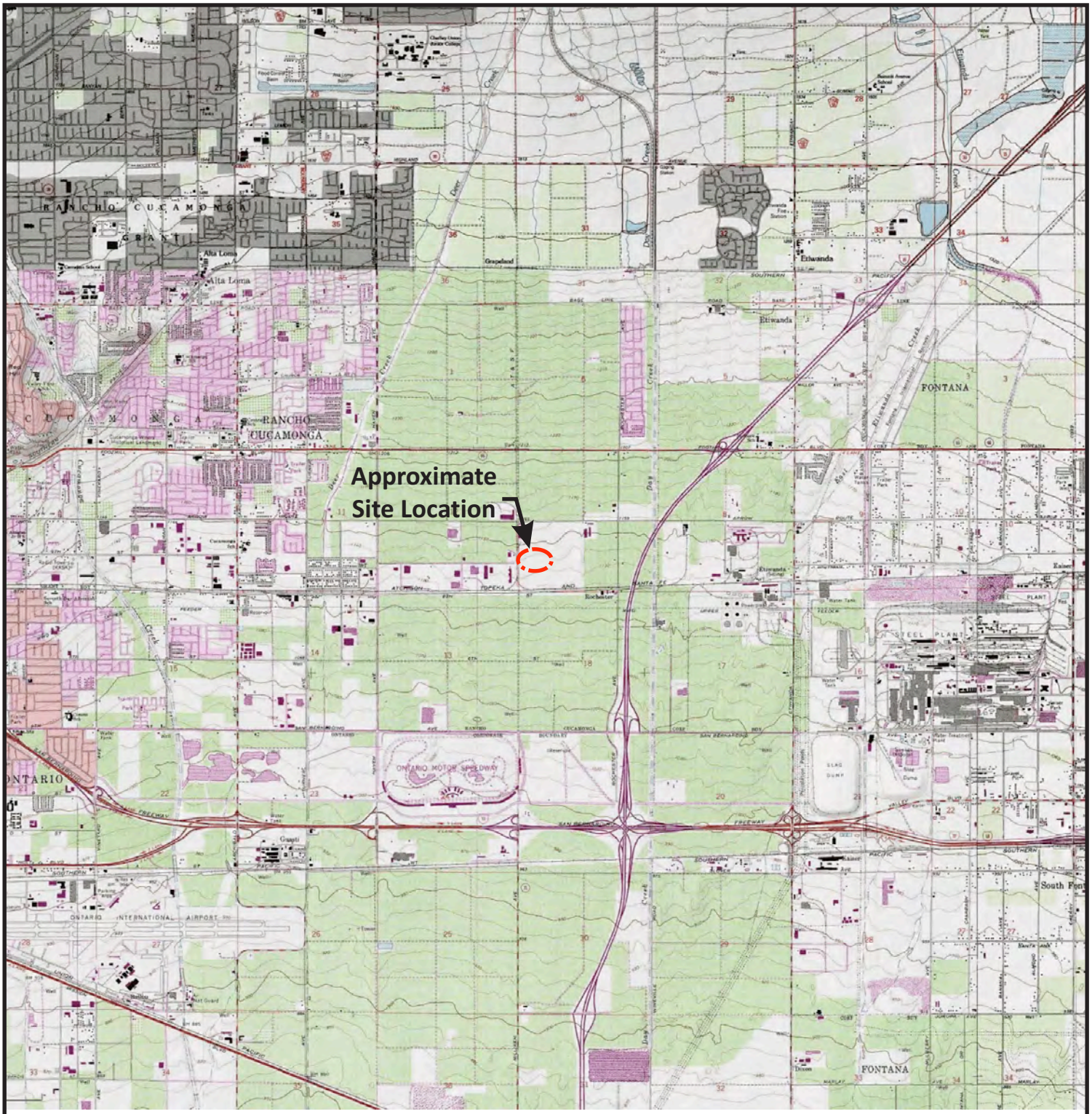
Shaw Environmental & Infrastructure Inc., 2003. Memorandum, RE: Evaluation of Slag-like Material at San Bernardino County Site, dated January 3, 2003.

GeoVision, 2005. Geophysical Investigation, Property at Northwest Corner of Milliken Ave and Jersey Blvd., Ontario, California, Project No., 5271 and dated April 18, 2005.

CAPE Environmental, 2006. *Environmental Services, Jersey and Milliken Property, Rancho Cucamonga, CA* Project Roll Up, Project No., 50101.00 and dated January 30, 2006.

APPENDIX A

Figures, Tables and Photographs



Base Map: USGS Historical Topography Map Guasti, California dated 1966, Photorevised 1981.

LEGEND

Approximate Site Location

Scale: 1" = 1 Mile

0 1 Mile 2 Miles

N

Figure 1
Site Location

Northwest Corner of Milliken and Jersey
Rancho Cucamonga, San Bernardino County, California

Earth Systems Southwest

8/7/2015

File No.: 08935-03

Reference: Google Earth, June 7, 2012

LEGEND

Site Boundary

Boundary of "Area of Concern"

Approximate Scale: 1" = 125'

0 125 250

N

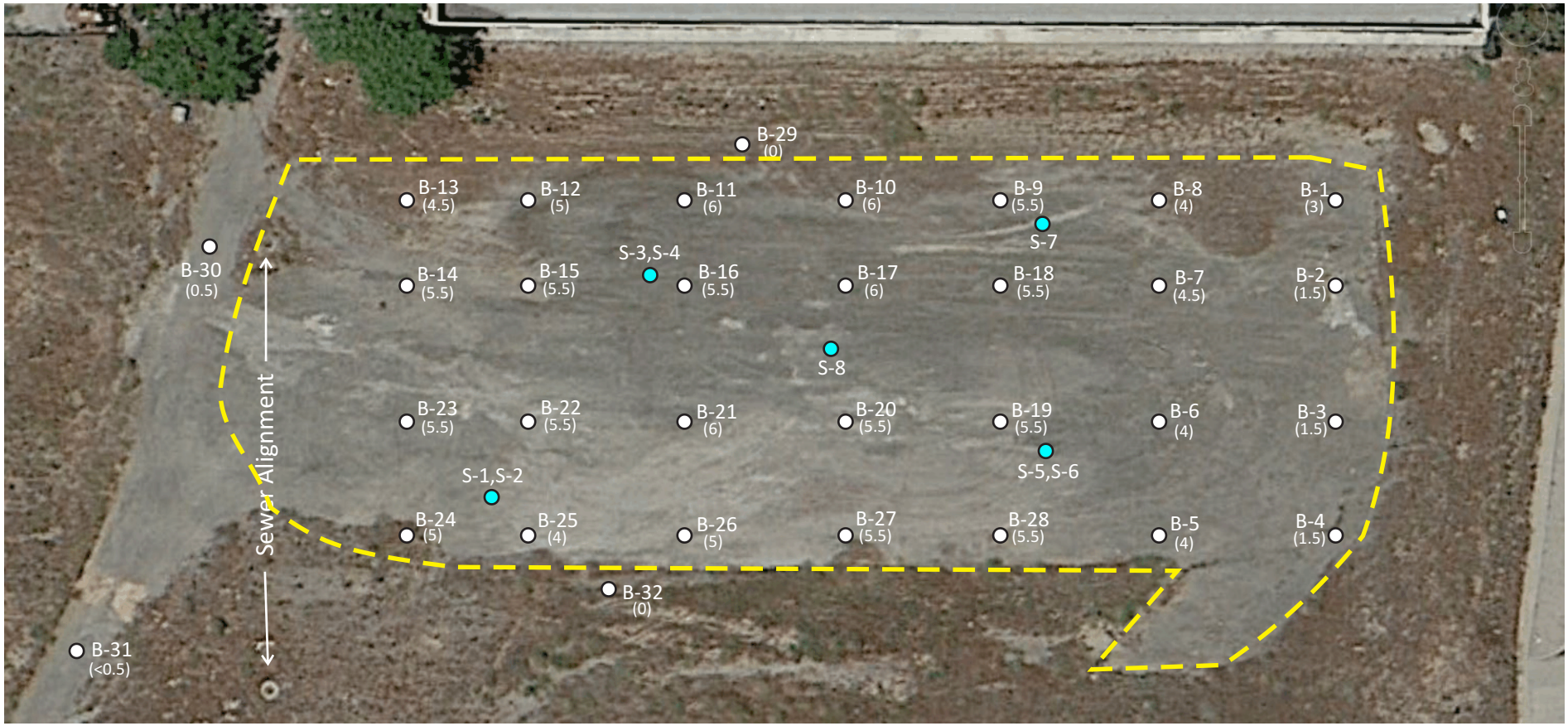
Figure 2
Site Layout

Northwest Corner of Milliken and Jersey
Rancho Cucamonga, San Bernardino County, California

Earth Systems Southwest

8/7/2015

File No.: 08935-03



Approximate Scale: 1" = 40'

0 40' 80'

Reference: Google Earth, June 7, 2012

N

LEGEND

Approximate Boundary of Slag Area

B-25 (4) Approximate Boring Locations (and Slag Thickness, in Feet)

S-8 Approximate Sample Locations

Figure 3
Sample and Boring Locations and Fill Thickness

Northwest Corner of Milliken and Jersey
Rancho Cucamonga, San Bernardino County, California

Earth Systems Southwest

8/7/2015 | File No.: 08935-03

Approximate Scale: 1" = 40'

0 40' 80'

N

Reference: Google Earth, June 7, 2012

LEGEND

Approximate Boundary of Fill Area

(4) Approximate Thickness in Feet at Boring Location

Approximate Boundary Between Thickness Zones

Figure 4
Fill Thickness Contours

Northwest Corner of Milliken and Jersey
Rancho Cucamonga, San Bernardino County, California

Earth Systems Southwest

8/7/2015 | File No.: 08935-03

Reference: Google Earth, May 31, 1994

LEGEND

Site Boundary

Boundary of "Area of Concern"

Approximate Scale: 1" = 125'

0 125 250

N

Figure 5
1994 Google Earth Photo

Northwest Corner of Milliken and Jersey
Rancho Cucamonga, San Bernardino County, California

Earth Systems Southwest

8/7/2015

File No.: 08935-03

Reference: Google Earth, June 4, 2002

LEGEND

Approximate Scale: 1" = 80’

0 80’ 160’

N

Figure 6
2002 Google Earth Photo

Northwest Corner of Milliken and Jersey
Rancho Cucamonga, San Bernardino County, California

Earth Systems Southwest

8/7/2015

File No.: 08935-03

Reference: Google Earth, December 30, 2003

LEGEND

Approximate Scale: 1" = 80’

0 80’ 160’

N

Figure 7
2003 Google Earth Photo

Northwest Corner of Milliken and Jersey
Rancho Cucamonga, San Bernardino County, California

Earth Systems Southwest

8/7/2015

File No.: 08935-03

Reference: Google Earth, January 30, 2006

LEGEND

Approximate Scale: 1" = 80’

0 80’ 160’

N

Figure 8
2006 Google Earth Photo

Northwest Corner of Milliken and Jersey
Rancho Cucamonga, San Bernardino County, California

Earth Systems Southwest

8/7/2015

File No.: 08935-03

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Table 1A - TTLC Testing

Sample ID	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8		TTLC	10x STLC	20x TCLP
Material Type	Fines	Slag	Fines	Slag	Slag	Fines	Fines	Fines				
Antimony	52.4	34.2	77.1	29.9	5.63	53.1	74.8	62.8		500	150	- -
Arsenic	7.54	5.72	13.5	4.05	2.94	7.56	16.4	7.83		500	50	100
Barium	250	208	252	142	171	214	240	214		10000	1000	2000
Beryllium	0.596	0.696	0.505	0.617	0.344	0.526	0.526	0.568		75	7.5	- -
Cadmium	16.1	14.2	16	10.5	0.714	15.4	15.3	18.7		100	10	20
Chromium	90.1	88	128	45.6	165	101	143	115		2500	5600	100
Cobalt	6.59	4.65	8.26	3.9	1.99	6.97	10.7	6.58		8000	800	- -
Copper	144	87.5	276	81.5	114	168	302	167		2500	250	- -
Lead	3710	2070	3930	1740	50.2	3520	3660	3940		1000	50	100
Mercury	0.31	0.22	0.32	0.22	ND <0.20	0.33	0.34	0.3		20	2	4
Molybdenum	2.8	1.38	6.59	0.996	2.57	4.27	8.3	4.51		3500	3500	- -
Nickel	25.5	26.2	73.9	32.3	27.9	46.4	71	41.2		2000	200	- -
Selenium	ND <1.00	ND <1.00	ND <1.00	ND <1.00	ND <1.00	ND <1.00	ND <1.00	ND <1.00		100	10	20
Silver	ND <1.00	ND <1.00	ND <1.00	ND <1.00	0.234	ND <1.00	ND <1.00	ND <1.00		500	50	100
Thallium	ND <1.00	ND <1.00	ND <1.00	ND <1.00	ND <1.00	ND <1.00	ND <1.00	ND <1.00		700	70	- -
Vanadium	38.8	34	47.2	22.1	29.1	39	49.6	41.4		2400	240	- -
Zinc	3170	1660	2750	1350	56.4	2860	2970	3100		5000	2500	- -

Table 1B - TCLP Testing

Sample ID	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8				TCLP
Chromium	- -	ND<0.0500	ND<0.0500	- -	- -	- -	- -	ND<0.0500				5.0
Lead	- -	ND<0.100	ND<0.100	- -	- -	- -	- -	ND<0.100				5.0

Table 2 - Fill Thickness

Boring No.	Thickness (feet)	Location (Zone)	Zone Average (feet)
B-1	3	Zone B	2
B-2	1.5		
B-3	1.5		
B-4	1.5		
B-5	4	Zone A	5.2
B-6	4		
B-7	4.5		
B-8	4		
B-9	5.5		
B-10	6		
B-11	6		
B-12	5		
B-13	4.5		
B-14	5.4		
B-15	5.5		
B-16	5.5		
B-17	6		
B-18	5.5		
B-19	5.5		
B-20	5.5		
B-21	6		
B-22	5.5		
B-23	5.5		
B-24	5		
B-25	4		
B-26	5		
B-27	5.5		
B-28	5.5		
B-29	0	N. Edge	0
B-30	0.5	Road	0.5
B-31	<0.5		
B-32	0	S. Edge	0

Table 3 - Volume Calculations

	Zone A	**Zone B**	**Totals**
East-West (ft)	250	40	
North-South (ft)	100	130	
Thickness (ft)	5.2	2	
Volume (cy)	**4,815**	**385**	**5,200**
Weight (tons)	**7,222**	**578**	**7,800**
Percent of Total	93%	7%	100%

Note: Distances and volumes are approximate

Photo 1: Examples of “slag” material.

Photo 2: Examples of “fine-grained” material associated with the slag.

APPENDIX B

Laboratory Reports

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CASE NARRATIVE

Authorized Signature Name / Title (print)	Ken Zheng, President
Signature / Date	Ken Zheng, President 05/26/2015 11:04:43
Laboratory Job No. (Certificate of Analysis No.)	1505-00103
Project Name / No.	8905-03
Dates Sampled (from/to)	05/21/15 To 05/21/15
Dates Received (from/to)	05/21/15 To 05/21/15
Dates Reported (from/to)	05/26/15 To 5/26/2015
Chains of Custody Received	Yes

Comments:

Subcontracting

Inorganic Analyses

No analyses sub-contracted

Sample Condition(s)

All samples intact

Positive Results (Organic Compounds)

None

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CERTIFICATE OF ANALYSIS

1505-00103

EARTH SYSTEMS
SCOT STORMO
79-811B COUNTRY CLUB DRIVE
INDIO, CA 92203

Project: 8905-03

Date Reported	05/26/15
Date Received	05/21/15
Invoice No.	73429
Cust #	1035
Permit Number	
Customer P.O.	

Analysis	Result	Qual	Units	Method	DF	RL	Date	Tech
Sample: 001 S1@6"					Date & Time Sampled:		05/21/15 @ 9:01	
Sample Matrix: Solid								
[Metals Title 22 no Hg]								
Metals Acid Digestion	Complete			EPA 3050B	1		05/21/15	TLB
Antimony	52.4		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB
Arsenic	7.54		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB
Barium	250		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Beryllium	0.596		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Cadmium	16.1		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Chromium	90.1		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Cobalt	6.59		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Copper	144		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Lead	3710		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Molybdenum	2.80		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Nickel	25.5		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Selenium	<1.00		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB
Silver	<1.00		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB
Thallium	<1.00		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB
Vanadium	38.8		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Zinc	3170		mg/Kg	EPA 6010B	1	5.00	05/21/15	TLB
[Mercury]								
Mercury Digestion	Complete			EPA 7471A	1		05/25/15	KZ
Mercury	0.31		mg/Kg	EPA 7471A	1	0.20	05/25/15	KZ
Sample: 002 S2					Date & Time Sampled:		05/21/15 @ 9:00	
Sample Matrix: Solid								
[Metals Title 22 no Hg]								
Metals Acid Digestion	Complete			EPA 3050B	1		05/21/15	TLB
Antimony	34.2		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB
Arsenic	5.72		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB
Barium	208		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Beryllium	0.696		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Cadmium	14.2		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Chromium	88.0		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB

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1505-00103

EARTH SYSTEMS
SCOT STORMO
79-811B COUNTRY CLUB DRIVE
INDIO, CA 92203

Project: 8905-03

Date Reported	05/26/15
Date Received	05/21/15
Invoice No.	73429
Cust #	1035
Permit Number	
Customer P.O.	

Analysis	Result	Qual	Units	Method	DF	RL	Date	Tech
Sample: 002 S2					Date & Time Sampled:		05/21/15 @ 9:00	
Sample Matrix: Solid								
.....continued								
Cobalt	4.65		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Copper	87.5		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Lead	2070		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Molybdenum	1.38		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Nickel	26.2		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Selenium	<1.00		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB
Silver	<1.00		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB
Thallium	<1.00		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB
Vanadium	34.0		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Zinc	1660		mg/Kg	EPA 6010B	1	5.00	05/21/15	TLB
[Mercury]								
Mercury Digestion	Complete			EPA 7471A	1		05/25/15	KZ
Mercury	0.22		mg/Kg	EPA 7471A	1	0.20	05/25/15	KZ
Sample: 003 S3					Date & Time Sampled:		05/21/15 @ 9:18	
Sample Matrix: Solid								
[Metals Title 22 no Hg]								
Metals Acid Digestion	Complete			EPA 3050B	1		05/21/15	TLB
Antimony	77.1		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB
Arsenic	13.5		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB
Barium	252		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Beryllium	0.505		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Cadmium	16.0		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Chromium	128		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Cobalt	8.26		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Copper	276		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Lead	3930		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Molybdenum	6.59		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Nickel	73.9		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Selenium	<1.00		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB
Silver	<1.00		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB

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EARTH SYSTEMS
SCOT STORMO
79-811B COUNTRY CLUB DRIVE
INDIO, CA 92203

Project: 8905-03

Date Reported	05/26/15
Date Received	05/21/15
Invoice No.	73429
Cust #	1035
Permit Number	
Customer P.O.	

Analysis	Result	Qual	Units	Method	DF	RL	Date	Tech
Sample: 003 S3					Date & Time Sampled:		05/21/15 @ 9:18	
Sample Matrix: Solid								
.....continued								
Thallium	<1.00		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB
Vanadium	47.2		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Zinc	2750		mg/Kg	EPA 6010B	1	5.00	05/21/15	TLB
[Mercury]								
Mercury Digestion	Complete			EPA 7471A	1		05/25/15	KZ
Mercury	0.32		mg/Kg	EPA 7471A	1	0.20	05/25/15	KZ
Sample: 004 S4					Date & Time Sampled:		05/21/15 @ 9:22	
Sample Matrix: Solid								
[Metals Title 22 no Hg]								
Metals Acid Digestion	Complete			EPA 3050B	1		05/21/15	TLB
Antimony	29.9		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB
Arsenic	4.05		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB
Barium	142		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Beryllium	0.617		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Cadmium	10.5		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Chromium	45.6		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Cobalt	3.90		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Copper	81.5		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Lead	1740		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Molybdenum	0.996		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Nickel	32.3		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Selenium	<1.00		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB
Silver	<1.00		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB
Thallium	<1.00		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB
Vanadium	22.1		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Zinc	1350		mg/Kg	EPA 6010B	1	5.00	05/21/15	TLB
[Mercury]								
Mercury Digestion	Complete			EPA 7471A	1		05/25/15	KZ
Mercury	0.22		mg/Kg	EPA 7471A	1	0.20	05/25/15	KZ

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SCOT STORMO
79-811B COUNTRY CLUB DRIVE
INDIO, CA 92203

Project: 8905-03

Date Reported	05/26/15
Date Received	05/21/15
Invoice No.	73429
Cust #	1035
Permit Number	
Customer P.O.	

Analysis	Result	Qual	Units	Method	DF	RL	Date	Tech
Sample: 005 S5					Date & Time Sampled:		05/21/15 @ 9:35	
Sample Matrix: Solid								
[Metals Title 22 no Hg]								
Metals Acid Digestion	Complete			EPA 3050B	1		05/21/15	TLB
Antimony	5.63		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB
Arsenic	2.94		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB
Barium	171		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Beryllium	<0.500		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Cadmium	0.714		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Chromium	165		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Cobalt	1.99		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Copper	114		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Lead	50.2		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Molybdenum	2.57		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Nickel	27.9		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Selenium	<1.00		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB
Silver	<1.00		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB
Thallium	<1.00		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB
Vanadium	29.1		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Zinc	56.4		mg/Kg	EPA 6010B	1	5.00	05/21/15	TLB
[Mercury]								
Mercury Digestion	Complete			EPA 7471A	1		05/25/15	KZ
Mercury	<0.20		mg/Kg	EPA 7471A	1	0.20	05/25/15	KZ
Sample: 006 S6					Date & Time Sampled:		05/21/15 @ 9:39	
Sample Matrix: Solid								
[Metals Title 22 no Hg]								
Metals Acid Digestion	Complete			EPA 3050B	1		05/21/15	TLB
Antimony	53.1		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB
Arsenic	7.56		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB
Barium	214		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Beryllium	0.526		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Cadmium	15.4		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Chromium	101		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB

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EARTH SYSTEMS
SCOT STORMO
79-811B COUNTRY CLUB DRIVE
INDIO, CA 92203

Project: 8905-03

Date Reported	05/26/15
Date Received	05/21/15
Invoice No.	73429
Cust #	1035
Permit Number	
Customer P.O.	

Analysis	Result	Qual	Units	Method	DF	RL	Date	Tech
Sample: 006 S6					Date & Time Sampled:		05/21/15 @ 9:39	
Sample Matrix: Solid								
.....continued								
Cobalt	6.97		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Copper	168		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Lead	3520		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Molybdenum	4.27		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Nickel	46.4		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Selenium	<1.00		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB
Silver	<1.00		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB
Thallium	<1.00		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB
Vanadium	39.0		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Zinc	2860		mg/Kg	EPA 6010B	1	5.00	05/21/15	TLB
[Mercury]								
Mercury Digestion	Complete			EPA 7471A	1		05/25/15	KZ
Mercury	0.33		mg/Kg	EPA 7471A	1	0.20	05/25/15	KZ
Sample: 007 S7					Date & Time Sampled:		05/21/15 @ 9:57	
Sample Matrix: Solid								
[Metals Title 22 no Hg]								
Metals Acid Digestion	Complete			EPA 3050B	1		05/21/15	TLB
Antimony	74.8		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB
Arsenic	16.4		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB
Barium	240		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Beryllium	0.526		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Cadmium	15.3		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Chromium	143		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Cobalt	10.7		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Copper	302		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Lead	3660		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Molybdenum	8.30		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Nickel	71.0		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Selenium	<1.00		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB
Silver	<1.00		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB

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INDIO, CA 92203

Project: 8905-03

Date Reported	05/26/15
Date Received	05/21/15
Invoice No.	73429
Cust #	1035
Permit Number	
Customer P.O.	

Analysis	Result	Qual	Units	Method	DF	RL	Date	Tech
Sample: 007 S7					Date & Time Sampled:		05/21/15 @ 9:57	
Sample Matrix: Solid								
.....continued								
Thallium	<1.00		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB
Vanadium	49.6		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Zinc	2970		mg/Kg	EPA 6010B	1	5.00	05/21/15	TLB
[Mercury]								
Mercury Digestion	Complete			EPA 7471A	1		05/25/15	KZ
Mercury	0.34		mg/Kg	EPA 7471A	1	0.20	05/25/15	KZ
Sample: 008 S8					Date & Time Sampled:		05/21/15 @ 10:04	
Sample Matrix: Solid								
[Metals Title 22 no Hg]								
Metals Acid Digestion	Complete			EPA 3050B	1		05/21/15	TLB
Antimony	62.8		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB
Arsenic	7.83		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB
Barium	214		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Beryllium	0.568		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Cadmium	18.7		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Chromium	115		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Cobalt	6.58		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Copper	167		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Lead	3940		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Molybdenum	4.51		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Nickel	41.2		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Selenium	<1.00		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB
Silver	<1.00		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB
Thallium	<1.00		mg/Kg	EPA 6010B	1	1.00	05/21/15	TLB
Vanadium	41.4		mg/Kg	EPA 6010B	1	0.500	05/21/15	TLB
Zinc	3100		mg/Kg	EPA 6010B	1	5.00	05/21/15	TLB
[Mercury]								
Mercury Digestion	Complete			EPA 7471A	1		05/25/15	KZ
Mercury	0.30		mg/Kg	EPA 7471A	1	0.20	05/25/15	KZ

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FOOD · COSMETICS · WATER · SOIL · SOIL VAPOR · WASTES

Respectfully Submitted: Ken Zheng

Ken Zheng - Lab Director

QUALIFIERS

B = Detected in the associated Method Blank at a concentration above the routine RL.
B1 = BOD dilution water is over specifications . The reported result may be biased high.
D = Surrogate recoveries are not calculated due to sample dilution.
E = Estimated value; Value exceeds calibration level of instrument.
H = Analyte was prepared and/or analyzed outside of the analytical method holding time
I = Matrix Interference.
J = Analyte concentration detected between RL and MDL.
Q = One or more quality control criteria did not meet specifications. See Comments for further explanation.
S = Customer provided specification limit exceeded.

ABBREVIATIONS

DF = Dilution Factor
RL = Reporting Limit, Adjusted by DF
MDL = Method Detection Limit, Adjusted by DF
Qual = Qualifier
Tech = Technician

As regulatory limits change frequently, A & R Laboratories advises the recipient of this report to confirm such limits with the appropriate federal, state, or local authorities before acting in reliance on the regulatory limits provided.

For any feedback concerning our services, please contact Jenny Jiang, Project Manager at 951.779.0310. You may also contact Ken Zheng, President at office@arlaboratories.com.

A & R Laboratories

Formerly Microbac Southern California

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FDA#	2030513
LA City#	10261
ELAP#'s	2789
	2790
	2122

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QUALITY CONTROL DATA REPORT

EARTH SYSTEMS
INDIO, CA 92203

1505-00103

Date Reported	**05/26/2015**
Date Received	**05/21/2015**
Date Sampled	**05/21/2015**
Invoice No.	**73429**
Customer #	**1035**
Customer P.O.	

Project: 8905-03

Method # EPA 6010B
QC Reference # 47342 Date Analyzed: 5/21/2015 Technician: TLB
Samples 001 002 003 004 005 006 007 008

Results	LCS %REC	LCS %DUP	LCS %RPD	Control Ranges LCS %REC	Control Ranges LCS %RPD
Antimony	101	100	1.0	75 - 125	0 - 20
Arsenic	107	105	1.5	75 - 125	0 - 20
Barium	88	88	0.1	75 - 125	0 - 20
Beryllium	101	102	0.6	75 - 125	0 - 20
Cadmium	103	104	1.6	75 - 125	0 - 20
Chromium	102	103	1.5	75 - 125	0 - 20
Cobalt	102	102	0.1	75 - 125	0 - 20
Copper	102	104	1.9	75 - 125	0 - 20
Lead	101	99	1.7	75 - 125	0 - 20
Molybdenum	99	99	0.8	75 - 125	0 - 20
Nickel	103	105	1.9	75 - 125	0 - 20
Selenium	103	102	0.4	75 - 125	0 - 20
Silver	110	110	0.0	75 - 125	0 - 20
Thallium	104	103	1.2	75 - 125	0 - 20
Vanadium	103	104	1.1	75 - 125	0 - 20
Zinc	104	105	1.7	75 - 125	0 - 20

Method # EPA 7471A
QC Reference # 47394 Date Analyzed: 5/25/2015 Technician: KZ
Samples 001 002 003 004 005 006 007 008

Results	LCS %REC	LCS %DUP	LCS %RPD	Control Ranges LCS %REC	Control Ranges LCS %RPD
Mercury	81	86	6	75 - 125	0 - 25

No method blank results were above reporting limit

Respectfully Submitted: Ken Zheng

Ken Zheng - President

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ARL

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CHAIN OF CUSTODY

A & R Work Order #: 1505-103

Page 1 of 1

Client Name: Earth Systems
E-mail: SStormo@earthsystems.com

Address: 79811B Country Club Dr Bermuda Dunes, CA 92203

Report Attention: Scott Stormo
Phone #: 760-345-1588
Fax: #: 760-345-7315
Sampled By: Steve C

Project No./ Name: 8905-03
Project Site: NWC Jersey Blvd & Miller Ave

☒ Chilled
☒ Intact
☐ Sample Seal

Turn Around Time Requested: ☐ Rush 8 12 24 48 Hours ☒ Normal

Lab # (Lab use)	Client Sample ID	Sample Collection Date	Sample Collection Time	Matrix Type	Sample Preserve	No., type* & size of container	EPA8260B (VOCs & Oxygenates)	EPA8260B(BTEX & Oxygenates)	LUFT / 8015 (Gasoline)	LUFT / 8015 (Diesel)	EPA8081A (Organochlorine Pesticides)	EPA 8082 (PCBs)	EPA 8015M (Carbon Chain C4-C40)	EPA 6010B/7000 (CAM 17 Metals)	Micro: Plate Cnt., Coliform, E-Coli	Remarks
1	SIC 6"	5-21-15	9:01	Soil	IC	1-4oz Jar								/		
2	S2	5-21-15	9:00	"	"	Baggie								/		
3	S3	"	9:18	"	"	1-4oz Jar								/		
4	S4	"	9:22	Chunks	"	Baggie								/		
5	S5	"	9:35	"	"	Baggie								/		
6	S6	"	9:39	Soil	"	1-4oz Jar								/		
7	S7	"	9:57	"	"	"								/		
8	S8	"	10:04	"	"	"								/		

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
Steven Clarken	ESSW	5-21-15	11:20				
Relinquished By	Company	Date	Time	Received By	Company	Date	Time
					A+R	5-21-15	1120

Note: Samples are discarded 30 days after results are reported unless other arrangements are made.

Matrix Code: DW=Drinking Water; GW=Ground Water; WW=Waste Water; SD=Solid Waste; SL=Sludge; SS=Soil/Sediment; AR=Air; PP=Pure Product

Preservative Code: IC=Ice; HC=HCl; HN=HNO_3; SH=NaOH; ST=$Na_2S_2O_3$; HS=H_2SO_4

* Sample Container Types: T=Tedlar Air Bag; G=Glass Container; ST= Steel Tube; B= Brass Tube; P=Plastic Bottle; V=VOA Vial; E= EnCore

cc: ykuwzc@earthsystems.com

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CASE NARRATIVE

Authorized Signature Name / Title (print)	Ken Zheng, President
Signature / Date	Ken Zheng, President 06/04/2015 13:50:49
Laboratory Job No. (Certificate of Analysis No.)	1506-00002
Project Name / No.	8905-03
Dates Sampled (from/to)	05/21/15 To 05/21/15
Dates Received (from/to)	06/01/15 To 06/01/15
Dates Reported (from/to)	06/04/15 To 6/4/2015
Chains of Custody Received	Yes

Comments:

Subcontracting

Inorganic Analyses

No analyses sub-contracted

Other Analyses

No analyses sub-contracted

Sample Condition(s)

All samples intact

Positive Results (Organic Compounds)

None

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CERTIFICATE OF ANALYSIS

1506-00002

EARTH SYSTEMS
SCOT STORMO
79-811B COUNTRY CLUB DRIVE
INDIO, CA 92203

Project: 8905-03

Date Reported	06/04/15
Date Received	06/01/15
Invoice No.	73479
Cust #	1035
Permit Number	
Customer P.O.	

Analysis	Result	Qual	Units	Method	DF	RL	Date	Tech
Sample: 001 S2					Date & Time Sampled:		05/21/15 @ 9:00	
Sample Matrix: Soil								
[Metals]								
TCLP	Complete			EPA 1311	5		06/04/15	TLB
Chromium	<0.0500		mg/L	EPA 6010B	5	0.0500	06/04/15	TLB
Lead	<0.100		mg/L	EPA 6010B	5	0.100	06/04/15	TLB
Sample: 002 S3					Date & Time Sampled:		05/21/15 @ 9:18	
Sample Matrix: Soil								
[Metals]								
TCLP	Complete			EPA 1311	5		06/04/15	TLB
Chromium	<0.0500		mg/L	EPA 6010B	5	0.0500	06/04/15	TLB
Lead	<0.100		mg/L	EPA 6010B	5	0.100	06/04/15	TLB
Sample: 003 S8					Date & Time Sampled:		05/21/15 @ 10:04	
Sample Matrix: Soil								
[Metals]								
TCLP	Complete			EPA 1311	5		06/04/15	TLB
Chromium	<0.0500		mg/L	EPA 6010B	5	0.0500	06/04/15	TLB
Lead	<0.100		mg/L	EPA 6010B	5	0.100	06/04/15	TLB

Respectfully Submitted: Ken Zheng

Ken Zheng - Lab Director

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B1 = BOD dilution water is over specifications . The reported result may be biased high.
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QUALITY CONTROL DATA REPORT

EARTH SYSTEMS
INDIO, CA 92203

1506-00002

Date Reported 06/04/2015
Date Received 06/01/2015
Date Sampled 05/21/2015
Invoice No. 73479
Customer # 1035
Customer P.O.

Project: 8905-03

Method # EPA 6010B
QC Reference # 47559 Date Analyzed: 6/4/2015 Technician: TLB
Samples 001 002 003

Results	LCS %REC	LCS %DUP	LCS %RPD	Control Ranges LCS %REC	Control Ranges LCS %RPD
Chromium	94	95	0.4	75 - 125	0 - 20
Lead	93	92	0.9	75 - 125	0 - 20

No method blank results were above reporting limit

Respectfully Submitted: Ken Zheng

Ken Zheng - President

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CHAIN OF CUSTODY

A & R Work Order #: 1506-00002

Page 1 of 1

Client Name: Earth Systems
E-mail: SStormo@earthsystems.com

Address: 79811B Country Club Dr Bermuda Dunes, CA 92203

Report Attention: Scot Stormo
Phone #: 760-345-1588
Fax: # 760-345-7315
Sampled By: Steve C

Project No./ Name: 8905-03

Project Site: NWC Jersey Blvd & Millikan Ave

☒ Chilled
☒ Intact
☐ Sample Seal

Turn Around Time Requested
☐ Rush 8 12 24 48 Hours
☒ Normal

Analyses Requested

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1	S2	5-21-15	9:00	"	"	Baggie								/		⊗	
2	S3	"	9:18	"	"	1-4oz Jar								/		⊗	
	S4	"	9:22	Chunks	"	Baggie								/			
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	S7	"	9:57	"	"	"								/			
3	S8	"	10:04	"	"	"								/		⊗	

Previous work order # 1505-00103, Added by Scot A. Stormo 6/1/15 CR

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
Steven Clarken	ESSW	5-21-15	11:20				
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					A&R	5-21-15	1120

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cc: ykunze@earthsystems.com

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