Department of Toxic Substances Control

Matthew Rodriquez
Secretary for
Environmental Protection

Barbara A. Lee, Director
8800 Cal Center Drive
Sacramento, California 95826-3200

Edmund G. Brown Jr.
Governor

August 19, 2016

Robert Laughton, LEED AP
Director, Environmental Health and Safety
Los Angeles Unified School District
333 South Beaudry Avenue, Floor 21
Los Angeles, CA 90017

DTSC DETERMINATION REGARDING LEAD IN SOILS AT ROWAN AVENUE ELEMENTARY SCHOOL CAMPUS, LOS ANGELES UNIFIED SCHOOL DISTRICT

Dear Mr. Laughton,

The Department of Toxic Substances Control (DTSC or Department) has reviewed the results of the soil sampling conducted at the Rowan Avenue Elementary School Campus located at 600 South Rowan Street, Los Angeles, California (Rowan Avenue Campus). Background information regarding the results of sampling performed at this campus can be found in previous correspondence between DTSC and the Los Angeles Unified School District (LAUSD).[1,2]

The Department of Toxic Substances Control's (DTSC) sampling Contractor (Parsons Corporation) performed additional soil sampling on August 10, 2016 in accordance with the DTSC sampling work plan dated August 9, 2016. The results of that sampling effort are presented in the attached Parsons report.

DTSC's Human Health and Ecological Risk Office (HERO) has reviewed all the soil data collected for the Rowan Street Campus and a HERO memorandum that analyzes the potential risks is attached.

DTSC has determined that:

1) Lead in soils at the Rowan Avenue Campus is present at concentrations above 110 parts-per-million (ppm), which the Department has determined to be an appropriate and very conservative screening level (herein referred to as the soil screening level); it uses the same health-protective assumptions and parameters that established the 80 ppm residential threshold, except it assumes a toddler lives at the school five days per week, instead of seven days per week, for the entire year.

[1] DTSC; "*Results of Soil Sampling at Rowan Avenue Elementary School*"; June 21, 2016.
[2] DTSC; "*Preliminary Results of Soil Sampling Efforts at Lorena Avenue Elementary, Rowan Street Elementary, Fishburn Avenue Elementary, and Eastman Avenue Elementary School Campuses*"; August 15, 2016.

2) The temporary fencing installed by LAUSD around landscaped areas along the western boundary of the school (see Parsons report – Locations SCH-09-3D, SCH-09-4D, and SCH-09-11 through SCH-09-13) and a tree well location within the school yard (see Parsons report – Location SCH-09-07) is sufficient to isolate these areas and results in a low risk of any exposure to the soils.

3) Three samples collected at 0-1", 1-3" and 3-6" inches in soils located in the tree well at Location SCH-09-07 (southwest corner of the campus) had lead levels that exceeded the soil screening level. DTSC recommends leaving the temporary fencing in place until a grate is placed over the soils in the tree well or the soils are removed.

4) The lead in soils located within the landscaped area of the campus (Sample Locations SCH-09-3D and SCH-09-11) is higher than the soil screening level. While this area is not in a play area, it may receive some foot traffic from children coming to and from school. The grass in this area has some evidence of stress and the area does have some bare ground showing. Until grass covering is established and can be maintained, DTSC recommends leaving the temporary fencing in place.

5) Although a single sample at 3-6" below the ground within another landscaped area of the campus (Sample Location SCH-09-4D) exceeded the soil screening level, sampling of the upper three inches of soil in this area did not reveal concentrations of lead above the soil screening level. This area is located within the schoolyard and is an area that would be accessible to children if the fencing were removed. The grass in this area has some evidence of stress, but is showing signs of becoming re-established. Until grass covering is established and can be maintained, DTSC recommends leaving the temporary fencing in place.

Should conditions at the locations identified above change or future use of the campus property change, a supplemental analysis of the data may be warranted. If you have any questions regarding this letter, please contact me at (916) 255-3630 or at Peter.Ruttan@dtsc.ca.gov.

Sincerely,

Peter Ruttan
Project Manager
Exide Cleanup Project

Attachments (2)

cc: (via email)
Mr. Pat Schanen, LAUSD
Mr. Bill Piazza, LAUSD
Ms. Zoe Bayar, DTSC
Ms. Suhasini Patel, DTSC
Ms. Tamara Zielinski, DTSC
Dr. Shukla Roy-Semmen, DTSC

PARSONS

100 West Walnut Street • Pasadena, CA 91124 • (626) 440-2000 • Fax (626) 440-2993 • www.parsons.com

Technical Memorandum

Date: 17 August 2016

To: Ms. Sarah Cromie, Sr. Hazardous Substance Scientist
California Department of Toxic Substances Control
8800 Cal Center Drive
Sacramento, California 95826-3200

Subject: ***Supplemental Sampling Report for PIA School SCH-09***
Rowan Avenue Elementary School
600 S. Rowan Avenue
Los Angeles, California 90023

This Technical Memorandum presents a summary of the soil sample results for Rowan Avenue Elementary School, located at 600 South Rowan Avenue, Los Angeles, California (Property), designated as Preliminary Investigation Area (PIA) School number SCH-09 (Figure 1). This Property was sampled on August 10, 2016 by Parsons. A total of 8 borings were hand-augered up to a maximum depth of 6 inches (Figure 1). Samples were collected at depths of 0-1 inches, 1-3 inches, and 3-6 inches. Sampling equipment was decontaminated between samples and sample locations to avoid cross-contamination.

Soil from each of the sample intervals (0-1 inches, 1-3 inches, and 3-6 inches) were submitted to an offsite laboratory for analysis of lead using United States Environmental Protection Agency (EPA) Method 6010. A total of 27 samples, including three duplicate samples, were collected and analyzed.

Analytical results for lead in the samples ranged from 18.9 to 333 milligrams per kilogram (mg/kg) as shown in Table 1. The highest concentration (333 mg/kg) was observed in the duplicate sample collected from Boring SCH-09-07 at a depth of 3-6 inches. The analytical laboratory report is provided in Attachment 1.

CLOSING

If you have any questions or require further information, please contact me directly.

Sincerely,

Shala Craig, P.E. #C-69804
Parsons Project Manager

Attachments: Table 1 – Laboratory Results for Soil Samples
Figure 1 – Soil Sample Map
Attachment 1 - Analytical Laboratory Report

cc: Peter Ruttan, DTSC

TABLE

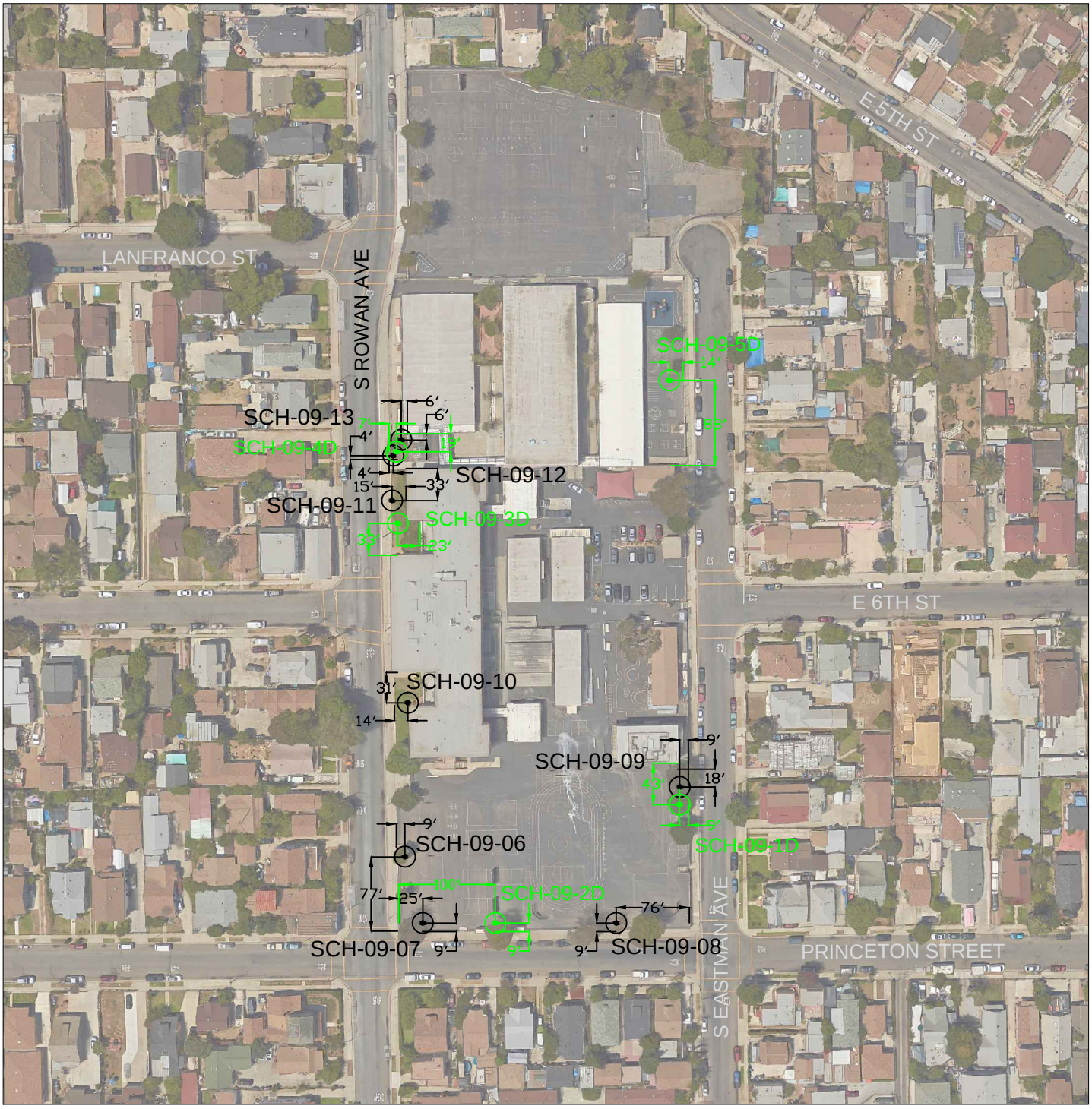
Table 1
Laboratory Results for Soil Samples
SCH No. 09

Sample ID	Date	Laboratory Report	Matrix	Depth (in)	Lead
					mg/kg
SCH-09-06-01	8/10/2016	83955	Soil	0-1	**106**
SCH-09-06-03	8/10/2016	83955	Soil	1-3	**86.1**
SCH-09-06-06	8/10/2016	83955	Soil	3-6	**61.2**
SCH-09-07-01	8/10/2016	83955	Soil	0-1	**209**
SCH-09-07-03	8/10/2016	83955	Soil	1-3	**185**
SCH-09-07-06	8/10/2016	83955	Soil	3-6	**322**
SCH-09-07-06D	8/10/2016	83955	Soil	3-6	**333**
SCH-09-08-01	8/10/2016	83955	Soil	0-1	**28.9**
SCH-09-08-03	8/10/2016	83955	Soil	1-3	**29.0**
SCH-09-08-06	8/10/2016	83955	Soil	3-6	**39.4**
SCH-09-09-01	8/10/2016	83955	Soil	0-1	**23.1**
SCH-09-09-03	8/10/2016	83955	Soil	1-3	**29.0**
SCH-09-09-03D	8/10/2016	83955	Soil	1-3	**28.1**
SCH-09-09-06	8/10/2016	83955	Soil	3-6	**24.8**
SCH-09-10-01	8/10/2016	83955	Soil	0-1	**47.7**
SCH-09-10-03	8/10/2016	83955	Soil	1-3	**45.7**
SCH-09-10-06	8/10/2016	83955	Soil	3-6	**38.6**
SCH-09-11-01	8/10/2016	83955	Soil	0-1	**108**
SCH-09-11-03	8/10/2016	83955	Soil	1-3	**119**
SCH-09-11-06	8/10/2016	83955	Soil	3-6	**110**
SCH-09-11-06D	8/10/2016	83955	Soil	3-6	**94.7**
SCH-09-12-01	8/10/2016	83955	Soil	0-1	**49.4**
SCH-09-12-03	8/10/2016	83955	Soil	1-3	**46.5**
SCH-09-12-06	8/10/2016	83955	Soil	3-6	**18.9**
SCH-09-13-01	8/10/2016	83955	Soil	0-1	**99.6**
SCH-09-13-03	8/10/2016	83955	Soil	1-3	**101**
SCH-09-13-06	8/10/2016	83955	Soil	3-6	**90.3**

Notes:
Detection concentrations are in **BOLD** text
ND<____ = Non-detect at the laboratory reporting limit

Laboratory Detection Limits:
Lead = 0.5 to 50 mg/kg

FIGURE



Source: Google Earth, 2016

LEGEND

- SOIL SAMPLE LOCATIONS, 2015
- SOIL SAMPLE LOCATIONS, Aug. 2016

0 150

APPROXIMATE SCALE IN FEET

N

SOIL SAMPLE MAP

CLIENT: DTSC - EXIDE

LOCATION: Rowan Avenue Elementary School (SCH-09)
600 South Rowan Avenue, Los Angeles, CA

PARSONS

FIGURE: 1

K:\Depts\Dept42b\DTSC\Orphan Sites MSA\Exide\Sampling\Schools & Parks\Figures\CAD\Figure # Rowan Avenue ES.dwg

ATTACHMENT 1
ANALYTICAL LABORATORY REPORTS

American Environmental Testing Laboratory Inc.
2834 & 2908 North Naomi Street Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

Ordered By

Parsons **100 West Walnut Street** **Pasadena, CA 91124-**

Telephone: (626)440-6161
Attention: Shala Craig

Number of Pages 13 **Date Received 08/10/2016** **Date Reported 08/12/2016**

Job Number	Order Date	Client
83955	08/10/2016	PARSNS

Project ID: 449646-01017
Project Name: DTSC Exide Offsite Sampling
Site: Rowan Ave ES
600 S. Rowan Avenue
Los Angeles, CA 90023

Enclosed please find results of analyses of 27 soil samples which were analyzed as specified on the attached chain of custody. If there are any questions, please do not hesitate to call.

Checked By: _____ Approved By: C. Razmara

Cyrus Razmara, Ph.D.
Laboratory Director

Mobile American Environmental Testing Laboratory, Inc.
2834 North Naomi Street Burbank, CA 91504 - DOHS NO: 2402
Tel: (888) 288-AETL - (818) 845-8200 - Fax: (818) 845-8840 - www.aetlab.com

CHAIN OF CUSTODY RECORD

83955

COMPANY	Parsons	PHONE	626-440-6161
PROJECT MANAGER	Shala Craig	FAX	626-440-2993
PROJECT NAME	DTSC Exide Offsite Sampling	PROJECT #	449646-01017
SITE NAME AND ADDRESS	Rowan Ave ES 600 S Rowan Ave, LA		

	SAMPLE ID	LAB ID	DATE / TIME	MATRIX	CONTAINER NUMBER/ SIZE	PRES	Pb (6010B)	As,Cd, Cu,Sb,	Zn (6010B)											COMMENTS
1	SCH-09-06-01	83955-01	8/10/2016@ 1050	SOIL	1	ICE	X													
2	SCH-09-06-03	83955-02	8/10/2016@ 1052	SOIL	1	ICE	X													
3	SCH-09-06-06	83955-03	8/10/2016@ 1054	SOIL	1	ICE	X													
4	SCH-09-07-01	83955-04	8/10/2016@ 1055	SOIL	1	ICE	X													
5	SCH-09-07-03	83955-05	8/10/2016@ 1057	SOIL	1	ICE	X													H = hold
6	SCH-09-07-06	83955-06	8/10/2016@ 1059	SOIL	1	ICE	X													
7	SCH-09-07-06D	83955-07	8/10/2016@ 1059	SOIL	1	ICE	X													
8	SCH-09-08-01	83955-08	8/10/2016@ 1105	SOIL	1	ICE	X													
9	SCH-09-08-03	83955-09	8/10/2016@ 1107	SOIL	1	ICE	X													
10	SCH-09-08-06	83955-10	8/10/2016@ 1109	SOIL	1	ICE	X													
11	SCH-09-09-01	83955-11	8/10/2016@ 1112	SOIL	1	ICE	X													
12	SCH-09-09-03	83955-12	8/10/2016@ 1114	SOIL	1	ICE	X													
13	SCH-09-09-03D	83955-13	8/10/2016@ 1114	SOIL	1	ICE	X													
14	SCH-09-09-06	83955-14	8/10/2016@ 1116	SOIL	1	ICE	X													

ANALYSIS REQUESTED

SAMPLE RECEIPT – TO BE FILLED BY LABORATORY

TOTAL NUMBER OF CONTAINERS	14	PROPERLY COOLED Y / N / NA	
CUSTODY SEALS Y / N / NA		SAMPLES INTACT Y / N / NA	
RECEIVED IN GOOD COND. Y / N		SAMPLES ACCEPTED Y / N	

TURN AROUND TIME

o NORMAL x RUSH 7 DAY

RELINQUISHED BY SAMPLER:	RELINQUISHED BY:	RELINQUISHED BY:
Signature: Pete Shair	Signature:	Signature:
Printed Name: Peter Shair	Printed Name:	Printed Name: 8/10/16 1535
RECEIVED BY:	RECEIVED BY:	RECEIVED BY: AETL
Signature:	Signature:	Signature:
Printed Name: CHARLIAN RAMIREZ	Printed Name:	Printed Name: Jean Claude
Date / Time: 8/10/16 1505	Date / Time:	Date / Time: 8/10/16 1535

Mobile American Environmental Testing Laboratory, Inc.
2834 North Naomi Street Burbank, CA 91504 - DOHS NO: 2402
Tel: (888) 288-AETL - (818) 845-8200 - Fax: (818) 845-8840 - www.aetlab.com

CHAIN OF CUSTODY RECORD

83955

COMPANY	Parsons	PHONE	626-440-6161
PROJECT MANAGER	Shala Craig	FAX	626-440-2993
PROJECT NAME	DTSC Exide Offsite Sampling	PROJECT #	449646-01017
SITE NAME AND ADDRESS	Rowan Ave ES 600 S Rowan Ave, LA		

	SAMPLE ID	LAB ID	DATE / TIME	MATRIX	CONTAINER NUMBER/ SIZE	PRES	Pb (6010B)	As,Cd, Cu,Sb,	Zn (6010B)	COMMENTS
1	SCH-09-10-01	83955.15	8/10/2016@ 1031	SOIL	1	ICE	X			
2	SCH-09-10-03	83955.16	8/10/2016@ 1033	SOIL	1	ICE	X			
3	SCH-09-10-06	83955.17	8/10/2016@ 1035	SOIL	1	ICE	X			
4	SCH-09-11-01	83955.18	8/10/2016@ 1140	SOIL	1	ICE	X			
5	SCH-09-11-03	83955.19	8/10/2016@ 1142	SOIL	1	ICE	X			H = hold
6	SCH-09-11-06	83955.20	8/10/2016@ 1144	SOIL	1	ICE	X			
7	SCH-09-11-06D	83955.21	8/10/2016@ 1144	SOIL	1	ICE	X			
8	SCH-09-12-01	83955.22	8/10/2016@ 1200	SOIL	1	ICE	X			
9	SCH-09-12-03	83955.23	8/10/2016@ 1202	SOIL	1	ICE	X			
10	SCH-09-12-06	83955.24	8/10/2016@ 1204	SOIL	1	ICE	X			
11	SCH-09-13-01	83955.25	8/10/2016@ 1206	SOIL	1	ICE	X			
12	SCH-09-13-03	83955.26	8/10/2016@ ~~1208~~ 1208	SOIL	1	ICE	X			
13	SCH-09-13-06	83955.27	8/10/2016@ 1210	SOIL	1	ICE	X			
14										

ANALYSIS REQUESTED

SAMPLE RECEIPT – TO BE FILLED BY LABORATORY

TOTAL NUMBER OF CONTAINERS	13	PROPERLY COOLED Y / N / NA	
CUSTODY SEALS Y / N / NA		SAMPLES INTACT Y / N / NA	
RECEIVED IN GOOD COND. Y / N		SAMPLES ACCEPTED Y / N	

TURN AROUND TIME

o NORMAL

x RUSH 2day

RELINQUISHED BY SAMPLER:	RELINQUISHED BY:	RELINQUISHED BY:
Signature: Peter Shair	Signature:	Signature:
Printed Name: Peter Shair	Printed Name:	Printed Name: 8/10/16 1535
RECEIVED BY:	RECEIVED BY:	RECEIVED BY: AECL
Signature:	Signature:	Signature:
Printed Name: CHARLES PADILLA	Printed Name:	Printed Name:
Date / Time: 8/10/16 1505	Date / Time:	Date / Time: 8/10/16 1535

American Environmental Testing Laboratory Inc.
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Ordered By

Parsons
100 West Walnut Street
Pasadena, CA 91124-

Telephone: (626)440-6161
Attention: Shala Craig

Project ID: 449646-01017
Date Received 08/10/2016
Date Reported 08/12/2016

Job Number	Order Date	Client
83955	08/10/2016	PARSNS

CERTIFICATE OF ANALYSIS
CASE NARRATIVE

AETL received 27 samples with the following specification on 08/10/2016.

Lab ID	Sample ID	Sample Date	Matrix	Quantity Of Containers
83955.01	SCH-09-06-01	08/10/2016	Soil	1
83955.02	SCH-09-06-03	08/10/2016	Soil	1
83955.03	SCH-09-06-06	08/10/2016	Soil	1
83955.04	SCH-09-07-01	08/10/2016	Soil	1
83955.05	SCH-09-07-03	08/10/2016	Soil	1
83955.06	SCH-09-07-06	08/10/2016	Soil	1
83955.07	SCH-09-07-06D	08/10/2016	Soil	1
83955.08	SCH-09-08-01	08/10/2016	Soil	1
83955.09	SCH-09-08-03	08/10/2016	Soil	1
83955.10	SCH-09-08-06	08/10/2016	Soil	1
83955.11	SCH-09-09-01	08/10/2016	Soil	1
83955.12	SCH-09-09-03	08/10/2016	Soil	1
83955.13	SCH-09-09-03D	08/10/2016	Soil	1
83955.14	SCH-09-09-06	08/10/2016	Soil	1
83955.15	SCH-09-10-01	08/10/2016	Soil	1
83955.16	SCH-09-10-03	08/10/2016	Soil	1
83955.17	SCH-09-10-06	08/10/2016	Soil	1
83955.18	SCH-09-11-01	08/10/2016	Soil	1
83955.19	SCH-09-11-03	08/10/2016	Soil	1
83955.20	SCH-09-11-06	08/10/2016	Soil	1
83955.21	SCH-09-11-06D	08/10/2016	Soil	1
83955.22	SCH-09-12-01	08/10/2016	Soil	1
83955.23	SCH-09-12-03	08/10/2016	Soil	1
83955.24	SCH-09-12-06	08/10/2016	Soil	1

Continued

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Ordered By

Parsons 100 West Walnut Street Pasadena, CA 91124-

Project ID: 449646-01017 Date Received 08/10/2016 Date Reported 08/12/2016

Telephone: (626)440-6161
Attention: Shala Craig

Job Number	Order Date	Client
83955	08/10/2016	PARSNS

CERTIFICATE OF ANALYSIS

CASE NARRATIVE

83955.25	SCH-09-13-01	08/10/2016	Soil	1
83955.26	SCH-09-13-03	08/10/2016	Soil	1
83955.27	SCH-09-13-06	08/10/2016	Soil	1

Method ^ Submethod	Req Date	Priority	TAT	Units
(6010B.LEAD)	08/12/2016	3	Rush	mg/Kg

The samples were analyzed as specified on the enclosed chain of custody.
No analytical non-conformances were encountered.

Unless otherwise noted, all results of soil and solid samples are based on wet weight.

Checked By: _____ Approved By: C. Razmara

Cyrus Razmara, Ph.D.
Laboratory Director

American Environmental Testing Laboratory Inc.
2834 & 2908 North Naomi Street Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
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ANALYTICAL RESULTS

Ordered By

Parsons
100 West Walnut Street
Pasadena, CA 91124-

Site

Rowan Ave ES
600 S. Rowan Avenue
Los Angeles, CA 90023

Telephone: (626)440-6161
Attn: Shala Craig
Page: **2**

Project ID: 449646-01017
Project Name: DTSC Exide Offsite Sampling

AETL Job Number	Submitted	Client
83955	08/10/2016	PARSNS

Method: (6010B.LEAD), Lead, ICP

QC Batch No: 0810162C5

Our Lab I.D.			Method Blank	83955.01	83955.02	83955.03	83955.04
Client Sample I.D.				SCH-09-06-01	SCH-09-06-03	SCH-09-06-06	SCH-09-07-01
Date Sampled				08/10/2016	08/10/2016	08/10/2016	08/10/2016
Date Prepared			08/10/2016	08/10/2016	08/10/2016	08/10/2016	08/10/2016
Preparation Method			3050B	3050B	3050B	3050B	3050B
Date Analyzed			08/11/2016	08/11/2016	08/11/2016	08/11/2016	08/11/2016
Matrix			Soil	Soil	Soil	Soil	Soil
Units			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Dilution Factor			1	1	1	1	1
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	**Results**
Lead	2.5	5.0	ND	106	86.1	61.2	209

American Environmental Testing Laboratory Inc.
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ANALYTICAL RESULTS

Ordered By

Parsons
100 West Walnut Street
Pasadena, CA 91124-

Site

Rowan Ave ES
600 S. Rowan Avenue
Los Angeles, CA 90023

Telephone: (626)440-6161
Attn: Shala Craig
Page: **3**

Project ID: 449646-01017
Project Name: DTSC Exide Offsite Sampling

AETL Job Number	Submitted	Client
83955	08/10/2016	PARSNS

Method: (6010B.LEAD), Lead, ICP

QC Batch No: 0810162C5

Our Lab I.D.			**83955.05**				
Client Sample I.D.			SCH-09-07-03				
Date Sampled			08/10/2016				
Date Prepared			08/10/2016				
Preparation Method			3050B				
Date Analyzed			08/11/2016				
Matrix			Soil				
Units			mg/Kg				
Dilution Factor			1				
Analytes	**MDL**	**PQL**	**Results**				
Lead	2.5	5.0	185				

American Environmental Testing Laboratory Inc.
2834 & 2908 North Naomi Street Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

ANALYTICAL RESULTS

Ordered By

Parsons
100 West Walnut Street
Pasadena, CA 91124-

Site

Rowan Ave ES
600 S. Rowan Avenue
Los Angeles, CA 90023

Telephone: (626)440-6161
Attn: Shala Craig
Page: **4**

Project ID: 449646-01017
Project Name: DTSC Exide Offsite Sampling

AETL Job Number	Submitted	Client
83955	08/10/2016	PARSNS

Method: (6010B.LEAD), Lead, ICP

QC Batch No: 0810162C5

Our Lab I.D.			83955.06	83955.07			
Client Sample I.D.			SCH-09-07-06	SCH-09-07-06D			
Date Sampled			08/10/2016	08/10/2016			
Date Prepared			08/10/2016	08/10/2016			
Preparation Method			3050B	3050B			
Date Analyzed			08/11/2016	08/11/2016			
Matrix			Soil	Soil			
Units			mg/Kg	mg/Kg			
Dilution Factor			10	10			
Analytes	**MDL**	**PQL**	**Results**	**Results**			
Lead	25	50	322	333			

American Environmental Testing Laboratory Inc.
2834 & 2908 North Naomi Street Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

ANALYTICAL RESULTS

Ordered By

Parsons
100 West Walnut Street
Pasadena, CA 91124-

Site

Rowan Ave ES
600 S. Rowan Avenue
Los Angeles, CA 90023

Telephone: (626)440-6161
Attn: Shala Craig
Page: **5**

Project ID: 449646-01017
Project Name: DTSC Exide Offsite Sampling

AETL Job Number	Submitted	Client
83955	08/10/2016	PARSNS

Method: (6010B.LEAD), Lead, ICP

QC Batch No: 0810162C5

Our Lab I.D.			83955.08	83955.09	83955.10		
Client Sample I.D.			SCH-09-08-01	SCH-09-08-03	SCH-09-08-06		
Date Sampled			08/10/2016	08/10/2016	08/10/2016		
Date Prepared			08/10/2016	08/10/2016	08/10/2016		
Preparation Method			3050B	3050B	3050B		
Date Analyzed			08/11/2016	08/11/2016	08/11/2016		
Matrix			Soil	Soil	Soil		
Units			mg/Kg	mg/Kg	mg/Kg		
Dilution Factor			1	1	1		
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**		
Lead	2.5	5.0	28.9	29.0	39.4		

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ANALYTICAL RESULTS

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Attn: Shala Craig
Page: 6

Project ID: 449646-01017
Project Name: DTSC Exide Offsite Sampling

AETL Job Number	Submitted	Client
83955	08/10/2016	PARSNS

Method: (6010B.LEAD), Lead, ICP

QC Batch No: 0810162C6

Our Lab I.D.			Method Blank	83955.11	83955.12	83955.13	83955.14
Client Sample I.D.				SCH-09-09-01	SCH-09-09-03	SCH-09-09-03D	SCH-09-09-06
Date Sampled				08/10/2016	08/10/2016	08/10/2016	08/10/2016
Date Prepared			08/10/2016	08/10/2016	08/10/2016	08/10/2016	08/10/2016
Preparation Method			3050B	3050B	3050B	3050B	3050B
Date Analyzed			08/11/2016	08/11/2016	08/11/2016	08/11/2016	08/11/2016
Matrix			Soil	Soil	Soil	Soil	Soil
Units			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Dilution Factor			1	1	1	1	1
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	**Results**
Lead	2.5	5.0	ND	23.1	29.0	28.1	24.8

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Page: **7**

Project ID: 449646-01017
Project Name: DTSC Exide Offsite Sampling

AETL Job Number	Submitted	Client
83955	08/10/2016	PARSNS

Method: (6010B.LEAD), Lead, ICP

QC Batch No: 0810162C6

Our Lab I.D.			83955.15	83955.16	83955.17	83955.18	83955.19
Client Sample I.D.			SCH-09-10-01	SCH-09-10-03	SCH-09-10-06	SCH-09-11-01	SCH-09-11-03
Date Sampled			08/10/2016	08/10/2016	08/10/2016	08/10/2016	08/10/2016
Date Prepared			08/10/2016	08/10/2016	08/10/2016	08/10/2016	08/10/2016
Preparation Method			3050B	3050B	3050B	3050B	3050B
Date Analyzed			08/11/2016	08/11/2016	08/11/2016	08/11/2016	08/11/2016
Matrix			Soil	Soil	Soil	Soil	Soil
Units			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Dilution Factor			1	1	1	1	1
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	**Results**
Lead	2.5	5.0	47.7	45.7	38.6	108	119

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Page: **8**

Project ID: 449646-01017
Project Name: DTSC Exide Offsite Sampling

AETL Job Number	Submitted	Client
83955	08/10/2016	PARSNS

Method: (6010B.LEAD), Lead, ICP

QC Batch No: 0810162C6

Our Lab I.D.			**83955.20**				
Client Sample I.D.			SCH-09-11-06				
Date Sampled			08/10/2016				
Date Prepared			08/10/2016				
Preparation Method			3050B				
Date Analyzed			08/11/2016				
Matrix			Soil				
Units			mg/Kg				
Dilution Factor			1				
Analytes	**MDL**	**PQL**	**Results**				
Lead	2.5	5.0	110				

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Project ID: 449646-01017
Project Name: DTSC Exide Offsite Sampling

AETL Job Number	Submitted	Client
83955	08/10/2016	PARSNS

Method: (6010B.LEAD), Lead, ICP

QC Batch No: 0810162C7

Our Lab I.D.			Method Blank	83955.21	83955.22	83955.23	83955.24
Client Sample I.D.				SCH-09-11-06D	SCH-09-12-01	SCH-09-12-03	SCH-09-12-06
Date Sampled				08/10/2016	08/10/2016	08/10/2016	08/10/2016
Date Prepared			08/10/2016	08/10/2016	08/10/2016	08/10/2016	08/10/2016
Preparation Method			3050B	3050B	3050B	3050B	3050B
Date Analyzed			08/11/2016	08/11/2016	08/11/2016	08/11/2016	08/11/2016
Matrix			Soil	Soil	Soil	Soil	Soil
Units			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Dilution Factor			1	1	1	1	1
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	**Results**
Lead	2.5	5.0	ND	94.7	49.4	46.5	18.9

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Page: **10**

Project ID: 449646-01017
Project Name: DTSC Exide Offsite Sampling

AETL Job Number	Submitted	Client
83955	08/10/2016	PARSNS

Method: (6010B.LEAD), Lead, ICP

QC Batch No: 0810162C7

Our Lab I.D.			83955.25	83955.26	83955.27		
Client Sample I.D.			SCH-09-13-01	SCH-09-13-03	SCH-09-13-06		
Date Sampled			08/10/2016	08/10/2016	08/10/2016		
Date Prepared			08/10/2016	08/10/2016	08/10/2016		
Preparation Method			3050B	3050B	3050B		
Date Analyzed			08/11/2016	08/11/2016	08/11/2016		
Matrix			Soil	Soil	Soil		
Units			mg/Kg	mg/Kg	mg/Kg		
Dilution Factor			1	1	1		
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**		
Lead	2.5	5.0	99.6	101	90.3		

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QUALITY CONTROL RESULTS

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Page: **11**

Project ID: 449646-01017
Project Name: DTSC Exide Offsite Sampling

AETL Job Number	Submitted	Client
83955	08/10/2016	PARSNS

Method: (6010B.LEAD), Lead, ICP

QC Batch No: 0810162C5; Dup or Spiked Sample: 83955.01; LCS: Clean Sand; QC Prepared: 08/10/2016; QC Analyzed: 08/11/2016; Units: mg/Kg

Analytes	Sample Result	MS Concen	MS Recov	MS % REC	MS DUP Concen	MS DUP Recov	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit
Lead	106	50.0	150	88.0	50.0	149	86.0	2.30	75-125	<15

QC Batch No: 0810162C5; Dup or Spiked Sample: 83955.01; LCS: Clean Sand; QC Prepared: 08/10/2016; QC Analyzed: 08/11/2016; Units: mg/Kg

Analytes	LCS Concen	LCS Recov	LCS % REC	LCS DUP Concen	LCS DUP Recov	LCS DUP % REC	LCS RPD % REC	LCS/LCSD % Limit	LCS RPD % Limit	
Lead	50.0	55.1	110	50.0	55.5	111	<1	75-125	<15	

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Page: **12**

Project ID: 449646-01017
Project Name: DTSC Exide Offsite Sampling

AETL Job Number	Submitted	Client
83955	08/10/2016	PARSNS

Method: (6010B.LEAD), Lead, ICP

QC Batch No: 0810162C6; Dup or Spiked Sample: 83955.11; LCS: Clean Sand; QC Prepared: 08/10/2016; QC Analyzed: 08/11/2016; Units: mg/Kg

Analytes	Sample Result	MS Concen	MS Recov	MS % REC	MS DUP Concen	MS DUP Recov	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit
Lead	23.1	50.0	70.6	95.0	50.0	72.8	99.4	4.53	75-125	<15

QC Batch No: 0810162C6; Dup or Spiked Sample: 83955.11; LCS: Clean Sand; QC Prepared: 08/10/2016; QC Analyzed: 08/11/2016; Units: mg/Kg

Analytes	LCS Concen	LCS Recov	LCS % REC	LCS DUP Concen	LCS DUP Recov	LCS DUP % REC	LCS RPD % REC	LCS/LCSD % Limit	LCS RPD % Limit	
Lead	50.0	53.9	108	50.0	53.2	106	1.87	75-125	<15	

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Page: **13**

Project ID: 449646-01017
Project Name: DTSC Exide Offsite Sampling

AETL Job Number	Submitted	Client
83955	08/10/2016	PARSNS

Method: (6010B.LEAD), Lead, ICP

QC Batch No: 0810162C7; Dup or Spiked Sample: 83955.21; LCS: Clean Sand; QC Prepared: 08/10/2016; QC Analyzed: 08/11/2016; Units: mg/Kg

Analytes	Sample Result	MS Concen	MS Recov	MS % REC	MS DUP Concen	MS DUP Recov	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit
Lead	94.7	50.0	136	82.6	50.0	136	82.6	<1	75-125	<15

QC Batch No: 0810162C7; Dup or Spiked Sample: 83955.21; LCS: Clean Sand; QC Prepared: 08/10/2016; QC Analyzed: 08/11/2016; Units: mg/Kg

Analytes	LCS Concen	LCS Recov	LCS % REC	LCS DUP Concen	LCS DUP Recov	LCS DUP % REC	LCS RPD % REC	LCS/LCSD % Limit	LCS RPD % Limit	
Lead	50.0	54.0	108	50.0	53.9	108	<1	75-125	<15	

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Data Qualifiers and Descriptors

Data Qualifier:

#:	Recovery is not within acceptable control limits.
*:	In the QC section, sample results have been taken directly from the ICP reading. No preparation factor has been applied.
B:	Analyte was present in the Method Blank.
D:	Result is from a diluted analysis.
E:	Result is beyond calibration limits and is estimated.
H:	Analysis was performed over the allowed holding time due to circumstances which were beyond laboratory control.
J:	Analyte was detected . However, the analyte concentration is an estimated value, which is between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL).
M:	Matrix spike recovery is outside control limits due to matrix interference. Laboratory Control Sample recovery was acceptable.
MCL:	Maximum Contaminant Level
NS:	No Standard Available
S6:	Surrogate recovery is outside control limits due to matrix interference.
S8:	The analysis of the sample required a dilution such that the surrogate concentration was diluted below the method acceptance criteria.
X:	Results represent LCS and LCSD data.

Definition:

%Limi:	Percent acceptable limits.
%REC:	Percent recovery.
Con.L:	Acceptable Control Limits
Conce:	Added concentration to the sample.
LCS:	Laboratory Control Sample
MDL:	Method Detection Limit is a statistically derived number which is specific for each instrument, each method, and each compound. It indicates a distinctively detectable quantity with 99% probability.

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Data Qualifiers and Descriptors

MS:	Matrix Spike
MS DU:	Matrix Spike Duplicate
ND:	Analyte was not detected in the sample at or above MDL.
PQL:	Practical Quantitation Limit or ML (Minimum Level as per RWQCB) is the minimum concentration that can be quantified with more than 99% confidence. Taking into account all aspects of the entire analytical instrumentation and practice.
Recov:	Recovered concentration in the sample.
RPD:	Relative Percent Difference

Department of Toxic Substances Control

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Environmental Protection

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Governor

TO: Peter Ruttan, P.G.
Project Manager
Department of Toxic Substances Control
Sacramento, California

FROM: Shukla Roy-Semmen, Ph.D.
Staff Toxicologist
Human and Ecological Risk Office

DATE: August 16, 2016

SUBJECT: Review of soils data collected from Rowan Avenue Elementary School, located in the vicinity of the former Exide secondary smelter in Vernon, California.

PCA: 11006 Site Code: 900219-00

At the request of the Brownfields and Environmental Restoration Program, the Human and Ecological Risk Office (HERO) reviewed soils data collected from the elementary school called Rowan Avenue School located on 600 South Rowan Avenue, Los Angeles, California. Soils data were collected on two separate sampling events: one in July of 2015 and another in August 2016. The July 2015 data were presented in the document titled "Attachment 1, July 2015 Soil Sampling Field Activities Report, Los Angeles Unified School District Schools, July 31, 2015". That report was prepared for Exide Technologies, by Advanced GeoServices and Avocet, and is dated July 30, 2015. Data for the second sampling event (August 2016) were submitted electronically to DTSC on August 12, 2016, in a summary table (prepared by Parsons) and in the original laboratory report (prepared by American Environmental Testing Laboratory Inc). Rowan Avenue School was one of eleven (11) schools evaluated for lead contamination as part of environmental investigations conducted for the secondary lead smelter, Exide Technologies, located in Vernon California.

In 2015, five soil samples from five locations (SCH-09-1D to SCH-09-5D) were collected from five depths (0-1", 1-3", 3-6", 6-12" and 12-18") below ground surface (bgs) at each location, and composited by depth to obtain five composite samples. These composite samples were analyzed for lead and one of the composite samples collected from 3"-6" was found have lead levels (112 ppm) above the residential screening level of 80 ppm.

To further investigate the source of these elevated levels, the discrete soils samples collected from this depth were analyzed for lead. Lead concentrations at two locations at the 3-6" depth (SCH-09-3D and SCH-09-4D) were 139 ppm and 163 ppm, respectively. These levels are higher than a soil screening level of 80 ppm for an unrestricted land use scenario, as well as a soil screening level of 110 ppm for a five days per week exposure period, which was derived for a school child.

A review of the figure provided in the report indicates that the Rowan Avenue School is largely paved with soils accessible for sampling, present only in planter areas. HERO recommended additional discrete sampling in these locations to delineate the extent of the contamination.

In August of 2016, soil samples were collected from 9 distinct locations (SCH-09-06 through SCH-09-14) on the schools site, from 3 different depths at each location (0"-1", 1" to 3" and 3" to 6"), resulting in a total of 27 soil samples. A review of these data revealed that 13 of the 27 soil samples had lead concentrations above 80 ppm, of which five samples (from 2 locations SCH-09-07 and SCH-09-11) had lead levels at or above 110 ppm (a lead soil screening level derived for a school child exposure scenario). Since the school has no plans to change site use to a residential scenario, HERO recommends that mitigation measures be taken only in areas with lead levels significantly above 110 ppm, such as SCH-09-07 area.

HERO notes that the decisions made in this document are site specific and should not be construed as a policy decision applicable to other sites. If you have additional questions please feel free to contact me at (714) 484-5448 or SRoysemm@dtsc.ca.gov.

Reviewed by: Jim Polisini, Ph.D.
Supervising Toxicologist
Human and Ecological Risk Office

For J.P.