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 LORENA STREET 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 Lorena Street Elementary School Campus located at 1015 South Lorena Street, Los Angeles, California (Lorena Street 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 11, 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 Lorena Street Campus and has provided a memorandum regarding the risk posed to students. The HERO memorandum also is attached.

DTSC has determined that:

1) Lead in soils at the Lorena Street Campus is present at concentrations above 110 parts-per-million (ppm), which the Department has determined to be an appropriate screening level for a five days-per-week exposure scenario for a typical school child.

[1] DTSC; "*Results of Soil Sampling at Lorena Street Elementary School*"; June 29, 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 a landscaped area located at the front of the school (see attached Parsons report – Locations SCH-07-2D, SCH-07-3D, and SCH-07-12 through SCH-07-14), and a tree well location with the school yard (see attached Parsons report – Location SCH-07-11), is sufficient to isolate these areas and substantially minimize a student's exposure to the soils.

3) The lead in soils located within the landscaped area along the northeast corner of the campus, while elevated, would not pose a significant health concern provided that a good grass covering becomes established and maintained. In addition, this area is not in a play yard area, and is not located in area frequently trespassed by children. This area currently has a stressed and patchy grass covering and was recently reseeded by LAUSD. Until a substantial grass covering is established, DTSC recommends leaving the temporary fencing in place.

4) Lead above 110 ppm in soils located in the tree well at Location SCH-07-11, was found in a sample collected from 1-3 inches at 113 ppm Concentrations of lead at this location in the upper one-inch of soil and at six inches below the ground surface were found at 59.4 ppm and 86.6 ppm, respectively. In an abundance of caution, DTSC recommends leaving the temporary fencing in place until the soils in this tree well can be cleaned up. DTSC recommends removal of the soils in this tree well.

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-07***
Lorena Street Elementary School
1015 S. Lorena Street
Los Angeles, California 90023

This Technical Memorandum presents a summary of the soil sample results for Lorena Street Elementary School, located at 1015 South Lorena Street, Los Angeles, California (Property), designated as Preliminary Investigation Area (PIA) School number SCH-07 (Figure 1). This Property was sampled on August 10, 2016 by Parsons. A total of 9 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 30 samples, including three duplicate samples, were collected and analyzed.

Analytical results for lead in the samples ranged from 10.1 to 203 milligrams per kilogram (mg/kg) as shown in Table 1. The highest concentration (203 mg/kg) was observed in Boring SCH-07-12 at a depth of 0-1 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

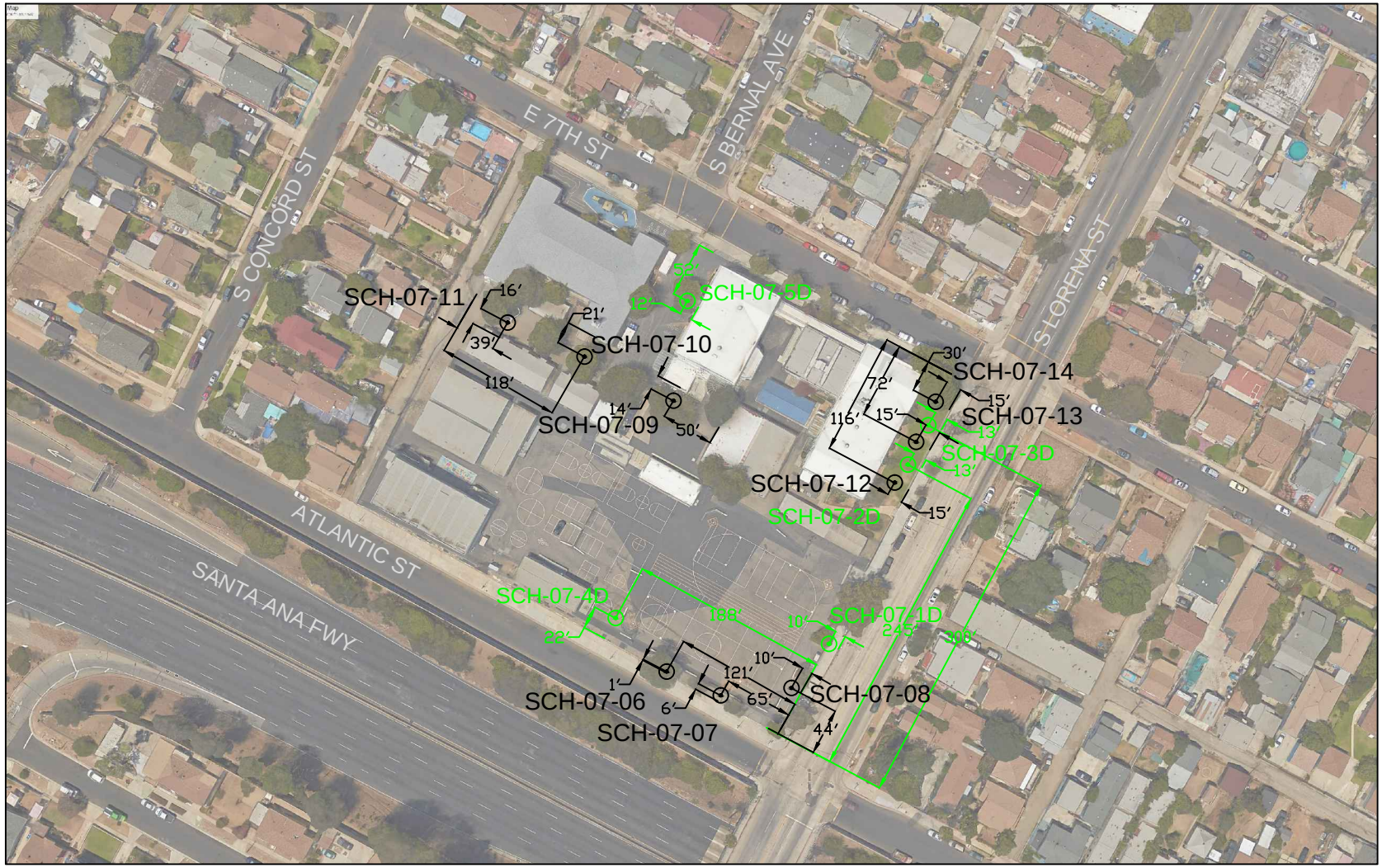
Table 1
Laboratory Results for Soil Samples
SCH No. 07

Sample ID	Date	Laboratory Report	Matrix	Depth (in)	Lead
					mg/kg
SCH-07-06-01	8/10/2016	83953	Soil	0-1	**80.1**
SCH-07-06-03	8/10/2016	83953	Soil	1-3	**39.3**
SCH-07-06-06	8/10/2016	83953	Soil	3-6	**22.5**
SCH-07-07-01	8/10/2016	83953	Soil	0-1	**31.7**
SCH-07-07-03	8/10/2016	83953	Soil	1-3	**65.5**
SCH-07-07-06	8/10/2016	83953	Soil	3-6	**88.9**
SCH-07-07-06D	8/10/2016	83953	Soil	3-6	**100**
SCH-07-08-01	8/10/2016	83953	Soil	0-1	**49.8**
SCH-07-08-03	8/10/2016	83953	Soil	1-3	**41.5**
SCH-07-08-06	8/10/2016	83953	Soil	3-6	**52.9**
SCH-07-09-01	8/10/2016	83953	Soil	0-1	**10.1**
SCH-07-09-03	8/10/2016	83953	Soil	1-3	**18.6**
SCH-07-09-03D	8/10/2016	83953	Soil	1-3	**16.4**
SCH-07-09-06	8/10/2016	83953	Soil	3-6	**42.2**
SCH-07-10-01	8/10/2016	83953	Soil	0-1	**45.2**
SCH-07-10-03	8/10/2016	83953	Soil	1-3	**33.2**
SCH-07-10-06	8/10/2016	83953	Soil	3-6	**47.1**
SCH-07-11-01	8/10/2016	83953	Soil	0-1	**59.4**
SCH-07-11-03	8/10/2016	83953	Soil	1-3	**113**
SCH-07-11-06	8/10/2016	83953	Soil	3-6	**83.6**
SCH-07-11-06D	8/10/2016	83953	Soil	3-6	**85**
SCH-07-12-01	8/10/2016	83953	Soil	0-1	**203**
SCH-07-12-03	8/10/2016	83953	Soil	1-3	**183**
SCH-07-12-06	8/10/2016	83953	Soil	3-6	**140**
SCH-07-13-01	8/10/2016	83953	Soil	0-1	**168**
SCH-07-13-03	8/10/2016	83953	Soil	1-3	**173**
SCH-07-13-06	8/10/2016	83953	Soil	3-6	**167**
SCH-07-14-01	8/10/2016	83953	Soil	0-1	**138**
SCH-07-14-03	8/10/2016	83953	Soil	1-3	**169**
SCH-07-14-06	8/10/2016	83953	Soil	3-6	**156**

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: Extera Public School No. 2 (SCH-41)
Lorena Street School (SCH-07)
1015 South Lorena Street, Los Angeles, CA

PARSONS

FIGURE: 1

K:\Depts\Dept42b\DTSC\Orphan Sites MSA\Exide\Sampling\Schools & Parks\Figures\CAD\Figure # Extera Public School No. 2 + Lorena Street 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
83953	08/10/2016	PARSNS

Project ID: 449646-01017
Project Name: DTSC Exide Offsite Sampling
Site: Lorena Street School
1015 S. Lorena St.
Los Angeles, CA 90023

Enclosed please find results of analyses of 30 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 COSTODY RECORD

83953

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	Lorena Street School 1015 S Lorena St, LA		

#	SAMPLE ID	LAB ID	DATE / TIME	MATRIX	CONTAINER NUMBER/ SIZE	PRES	Pb (6010B)	As,Cd, Cu,Sb, Zn (6010B)	COMMENTS
1	SCH-07-06-01	83953.01	8/10/2016@ 0840	SOIL	1	ICE	X		
2	SCH-07-06-03	83953.02	8/10/2016@ 0843	SOIL	1	ICE	X		
3	SCH-07-06-06	83953.03	8/10/2016@ 0846	SOIL	1	ICE	X		
4	SCH-07-07-01	83953.04	8/10/2016@ 0901	SOIL	1	ICE	X		
5	SCH-07-07-03	83953.05	8/10/2016@ 0903	SOIL	1	ICE	X		H = hold
6	SCH-07-07-06	83953.06	8/10/2016@ 0906	SOIL	1	ICE	X		
7	SCH-07-07-06D	83953.07	8/10/2016@ 0906	SOIL	1	ICE	X		
8	SCH-07-08-01	83953.08	8/10/2016@ 0910	SOIL	1	ICE	X		
9	SCH-07-08-03	83953.09	8/10/2016@ 0912	SOIL	1	ICE	X		
10	SCH-07-08-06	83953.10	8/10/2016@ 0914	SOIL	1	ICE	X		
11	SCH-07-09-01	83953.11	8/10/2016@ 0926	SOIL	1	ICE	X		
12	SCH-07-09-03	83953.12	8/10/2016@ 0928	SOIL	1	ICE	X		
13	SCH-07-09-03D	83953.13	8/10/2016@ 0928	SOIL	1	ICE	X		
14	SCH-07-09-06	83953.14	8/10/2016@ 0930	SOIL	1	ICE	X		

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 2 DAY

RELINQUISHED BY SAMPLER:	RELINQUISHED BY:	RELINQUISHED BY:
Signature: Pete Sh[illegible]	Signature:	Signature: [signature]
Printed Name: Peter Shair	Printed Name:	Printed Name: 8/10/16 1535
RECEIVED BY:	RECEIVED BY:	RECEIVED BY: AETL
Signature: [signature]	Signature:	Signature:
Printed Name: [illegible]	Printed Name:	Printed Name: [illegible]
Date / Time: 8/10/16 1505	Date / Time:	Date / Time: 8/10/16 1535

10

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

83953

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	Lorena St School 1015 S Lorena St, LA		

	SAMPLE ID	LAB ID	DATE / TIME	MATRIX	CONTAINER NUMBER/ SIZE	PRES	Pb (6010B)	As,Cd, Cu,Sb, Zn (6010B)	COMMENTS
1	SCH-07-10-01	83953.15	8/10/2016@ 0937	SOIL	1	ICE	X		
2	SCH-07-10-03	83953.16	8/10/2016@ 0939	SOIL	1	ICE	X		
3	SCH-07-10-06	83953.17	8/10/2016@ 0941	SOIL	1	ICE	X		
4	SCH-07-11-01	83953.18	8/10/2016@ 0947	SOIL	1	ICE	X		
5	SCH-07-11-03	83953.19	8/10/2016@ 0949	SOIL	1	ICE	X		H = hold
6	SCH-07-11-06	83953.20	8/10/2016@ 0951	SOIL	1	ICE	X		
7	SCH-07-11-06D	83953.21	8/10/2016@ 0951	SOIL	1	ICE	X		
8	SCH-07-12-01	83953.22	8/10/2016@ 1000	SOIL	1	ICE	X		
9	SCH-07-12-03	83953.23	8/10/2016@ 1002	SOIL	1	ICE	X		
10	SCH-07-12-06	83953.24	8/10/2016@ 1004	SOIL	1	ICE	X		
11	SCH-07-13-01	83953.25	8/10/2016@ 1008	SOIL	1	ICE	X		
12	SCH-07-13-03	83953.26	8/10/2016@ 1010	SOIL	1	ICE	X		
13	SCH-07-13-06	83953.27	8/10/2016@ 1011	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 2 DAY

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: AETL
Signature:	Signature:	Signature:
Printed Name:	Printed Name:	Printed Name: Jeanne Laude
Date / Time: 8/10/16 1505	Date / Time:	Date / Time: 8/10/16 1535

10

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

83953

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	Lorena Street School 1015 S Lorena St, LA		

	SAMPLE ID	LAB ID	DATE / TIME	MATRIX	CONTAINER NUMBER/ SIZE	PRES	Pb (6010B)	As,Cd, Cu,Sb,	Zn (6010B)	COMMENTS
1	SCH-07-14-01	83953.28	8/10/2016@1012	SOIL	1	ICE	X			
2	SCH-07-14-03	83953.29	8/10/2016@ 1014	SOIL	1	ICE	X			
3	SCH-07-14-06	83953.30	8/10/2016@ 1016	SOIL	1	ICE	X			
4	~~SCH-07-15-01~~		~~8/10/2016@~~	~~SOIL~~	~~1~~	~~ICE~~	~~X~~	~~PS~~		
5	~~SCH-07-15-03~~		~~8/10/2016@~~	~~SOIL~~	~~1~~	~~ICE~~	~~X~~	~~PS~~		H = hold
6	~~SCH-07-15-06~~		~~8/10/2016@~~	~~SOIL~~	~~1~~	~~ICE~~	~~X~~	~~PS~~		
7										
8										
9										
10										
11										
12										
13										
14										

ANALYSIS REQUESTED

SAMPLE RECEIPT – TO BE FILLED BY LABORATORY

TOTAL NUMBER OF CONTAINERS	3	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 2 DAY

RELINQUISHED BY SAMPLER:	RELINQUISHED BY:	RELINQUISHED BY:
Signature: Peter Shair	Signature:	Signature:
Printed Name: Peter Shair	Printed Name:	Printed Name:
8/10/16 1505	Date / Time:	8/10/16 1535
RECEIVED BY:	**RECEIVED BY:**	**RECEIVED BY:** AETL
Signature:	Signature:	Signature:
Printed Name: CAROLINE RACHLIN	Printed Name:	Printed Name: Jean Claude
Date / Time: 8/10/16 1505	Date / Time:	Date / Time: 08/10/16 1535

10

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
83953	08/10/2016	PARSNS

CERTIFICATE OF ANALYSIS
CASE NARRATIVE

AETL received 30 samples with the following specification on 08/10/2016.

Lab ID	Sample ID	Sample Date	Matrix	Quantity Of Containers
83953.01	SCH-07-06-01	08/10/2016	Soil	1
83953.02	SCH-07-06-03	08/10/2016	Soil	1
83953.03	SCH-07-06-06	08/10/2016	Soil	1
83953.04	SCH-07-07-01	08/10/2016	Soil	1
83953.05	SCH-07-07-03	08/10/2016	Soil	1
83953.06	SCH-07-07-06	08/10/2016	Soil	1
83953.07	SCH-07-07-06D	08/10/2016	Soil	1
83953.08	SCH-07-08-01	08/10/2016	Soil	1
83953.09	SCH-07-08-03	08/10/2016	Soil	1
83953.10	SCH-07-08-06	08/10/2016	Soil	1
83953.11	SCH-07-09-01	08/10/2016	Soil	1
83953.12	SCH-07-09-03	08/10/2016	Soil	1
83953.13	SCH-07-09-03D	08/10/2016	Soil	1
83953.14	SCH-07-09-06	08/10/2016	Soil	1
83953.15	SCH-07-10-01	08/10/2016	Soil	1
83953.16	SCH-07-10-03	08/10/2016	Soil	1
83953.17	SCH-07-10-06	08/10/2016	Soil	1
83953.18	SCH-07-11-01	08/10/2016	Soil	1
83953.19	SCH-07-11-03	08/10/2016	Soil	1
83953.20	SCH-07-11-06	08/10/2016	Soil	1
83953.21	SCH-07-11-06D	08/10/2016	Soil	1
83953.22	SCH-07-12-01	08/10/2016	Soil	1
83953.23	SCH-07-12-03	08/10/2016	Soil	1
83953.24	SCH-07-12-06	08/10/2016	Soil	1

Continued

American Environmental Testing Laboratory Inc.
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Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

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
83953	08/10/2016	PARSNS

CERTIFICATE OF ANALYSIS

CASE NARRATIVE

83953.25	SCH-07-13-01	08/10/2016	Soil	1
83953.26	SCH-07-13-03	08/10/2016	Soil	1
83953.27	SCH-07-13-06	08/10/2016	Soil	1
83953.28	SCH-07-14-01	08/10/2016	Soil	1
83953.29	SCH-07-14-03	08/10/2016	Soil	1
83953.30	SCH-07-14-06	08/10/2016	Soil	1

Method ^ Submethod	Req Date	Priority	TAT	Units
(6010B.LEAD)	08/10/2016	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
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-

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

Site

Lorena Street School
1015 S. Lorena St.
Los Angeles, CA 90023

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

AETL Job Number	Submitted	Client
83953	08/10/2016	PARSNS

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

QC Batch No: 0810162C2

Our Lab I.D.			Method Blank	83953.01	83953.02	83953.03	83953.04
Client Sample I.D.				SCH-07-06-01	SCH-07-06-03	SCH-07-06-06	SCH-07-07-01
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	80.1	39.3	22.5	31.7

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-

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

Site

Lorena Street School
1015 S. Lorena St.
Los Angeles, CA 90023

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

AETL Job Number	Submitted	Client
83953	08/10/2016	PARSNS

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

QC Batch No: 0810162C2

Our Lab I.D.			83953.05	83953.06	83953.07	83953.08	83953.09
Client Sample I.D.			SCH-07-07-03	SCH-07-07-06	SCH-07-07-06D	SCH-07-08-01	SCH-07-08-03
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	65.5	88.9	100	49.8	41.5

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Site

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Telephone: (626)440-6161
Attn: Shala Craig
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Project ID: 449646-01017
Project Name: DTSC Exide Offsite Sampling

AETL Job Number	Submitted	Client
83953	08/10/2016	PARSNS

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

QC Batch No: 0810162C2

Our Lab I.D.			**83953.10**				
Client Sample I.D.			SCH-07-08-06				
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	52.9				

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

AETL Job Number	Submitted	Client
83953	08/10/2016	PARSNS

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

QC Batch No: 0810162C3

Our Lab I.D.			Method Blank	83953.11	83953.12	83953.13	83953.14
Client Sample I.D.				SCH-07-09-01	SCH-07-09-03	SCH-07-09-03D	SCH-07-09-06
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	10.1	18.6	16.4	42.2

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

AETL Job Number	Submitted	Client
83953	08/10/2016	PARSNS

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

QC Batch No: 0810162C3

Our Lab I.D.			83953.15	83953.16	83953.17	83953.18	83953.19
Client Sample I.D.			SCH-07-10-01	SCH-07-10-03	SCH-07-10-06	SCH-07-11-01	SCH-07-11-03
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	45.2	33.2	47.1	59.4	113

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

AETL Job Number	Submitted	Client
83953	08/10/2016	PARSNS

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

QC Batch No: 0810162C3

Our Lab I.D.			**83953.20**				
Client Sample I.D.			SCH-07-11-06				
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	83.6				

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

AETL Job Number	Submitted	Client
83953	08/10/2016	PARSNS

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

QC Batch No: 0810162C4

Our Lab I.D.			Method Blank	83953.21	83953.22	83953.23	83953.24
Client Sample I.D.				SCH-07-11-06D	SCH-07-12-01	SCH-07-12-03	SCH-07-12-06
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	85.0	203	183	140

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

AETL Job Number	Submitted	Client
83953	08/10/2016	PARSNS

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

QC Batch No: 0810162C4

Our Lab I.D.			83953.25	83953.26	83953.27	83953.28	83953.29
Client Sample I.D.			SCH-07-13-01	SCH-07-13-03	SCH-07-13-06	SCH-07-14-01	SCH-07-14-03
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	168	173	167	138	169

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

AETL Job Number	Submitted	Client
83953	08/10/2016	PARSNS

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

QC Batch No: 0810162C4

Our Lab I.D.			83953.30				
Client Sample I.D.			SCH-07-14-06				
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	156				

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

AETL Job Number	Submitted	Client
83953	08/10/2016	PARSNS

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

QC Batch No: 0810162C2; Dup or Spiked Sample: 83953.01; 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	80.1	50.0	129	97.8	50.0	130	99.8	2.02	75-125	<15

QC Batch No: 0810162C2; Dup or Spiked Sample: 83953.01; 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	54.9	110	50.0	55.4	111	<1	75-125	<15	

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

AETL Job Number	Submitted	Client
83953	08/10/2016	PARSNS

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

QC Batch No: 0810162C3; Dup or Spiked Sample: 83953.11; 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	10.1	50.0	53.3	86.4	50.0	53.0	85.8	<1	75-125	<15

QC Batch No: 0810162C3; Dup or Spiked Sample: 83953.11; 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	57.8	116	50.0	57.7	115	<1	75-125	<15	

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

AETL Job Number	Submitted	Client
83953	08/10/2016	PARSNS

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

QC Batch No: 0810162C4; Dup or Spiked Sample: 83953.21; 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	85.0	50.0	124	78.0	50.0	123	76.0	2.60	75-125	<15

QC Batch No: 0810162C4; Dup or Spiked Sample: 83953.21; 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	55.6	111	50.0	55.2	110	<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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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 Lorena Street Elementary School, located in the vicinity of the former Exide secondary smelter in Vernon, California.

PCA: 11006 Site Code: 900291-00

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 Lorena Street School, located on 1015 South Lorena Street, 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). Lorena Street 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-07-1D to SCH-07-5D) 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 three of the composite samples were found to slightly exceed the residential screening level of 80 ppm: 81.7 ppm @0-1", 87.3 ppm @

1-3" and 81.5 ppm @ 3-6". To further investigate the source of these elevated levels, the discrete soils samples collected from these three depths were analyzed for lead. Lead concentrations at two locations (SCH07-2D and SCH-07-3D) were significantly above 80 ppm at the three re-sampled depths (213 ppm, 219 ppm and 217 ppm at SCH07-2D 0-1", SCH07-2D 1-3" and SCH07-2D 3-6"; and 170 ppm, 158 ppm and 171 ppm @ SCH07-3D 0-1", SCH07-3D 1-3" and SCH07-3D 3-6"). These levels were also higher than a lead soil screening level of 110 mg/kg, derived for a five days per week exposure, typical of a school child.

A review of the figure provided in the report indicates that the Lorena Street School is largely paved with soils accessible for sampling present only in planter and grassy areas. The locations with higher lead levels (SCH07-2D and SCH07-3D) were present in the grassy area on the left side of the school. Since some of these concentrations were significantly above the screening level for a residential scenario (80 ppm) and a school child (110 mg/kg), and are concentrated within the two sampling locations, HERO recommended further sampling (to delineate the extent of the elevated concentrations) to determine whether further action is necessary.

In August of 2016, soil samples were collected from 9 different locations (SCH-07-06 through SCH-07-14) 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 soil samples from three (3) of these locations (SCH-07-12 through SCH-07-14) had elevated lead levels, and that these three locations were also from the grassy area where elevated lead levels were found in the first round of sampling, in 2015. All of the other locations had lead levels that are either below or similar to 110 ppm, with four additional soil samples exceeding a residential soil screening level for lead of 80 ppm. However, since the school has no plans to change site use to a residential setting, comparison to a screening level derived for a school child (110 ppm) is sufficiently protective.

In order to determine the exposure point concentration (EPC) of lead in the grassy area, a 95% UCL of the mean of all soils data collected in this area was calculated using USEPA's ProUCL 5.1.002 software. The 95% UCL of the mean was estimated to be 188 ppm, which is significantly higher than 110 ppm. Based on this analysis, HERO recommends that actions be taken to minimize exposure of school children to contaminated soils in this area. Photographs of this area sent to DTSC by LASUD shows that the grass is dried out and barely covers the surface soils. Therefore, in its current condition it does not appear to provide much of a barrier against direct exposure (of a child) to the underlying contaminated soils.

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.