

Entek Consulting Group, Inc.

4200 Rocklin Road, Suite 7, Rocklin, CA 95677 Telephone (916) 632-6800 Fax (916) 632-6812 www.entekgroup.com

May 4, 2016

Mr. Karl Kurka Environmental Program Manager City of Sacramento, Department of Public Works 915 I Street, 2nd Floor Sacramento, CA 95814

Re: Mangan Park & Mangan Rifle and Pistol Range, 2140 34th Avenue; Sacramento, CA 95822-

3157; Report of Assessment for Lead

Dear Mr Kurka:

This report presents results of a limited lead risk assessment by Entek Consulting Group, Inc. (Entek) at the Mangan Rifle and Pistol Range located at the above address in Sacramento. You requested our assistance in assessing potential lead dust levels on exterior sidewalk, road, and parking lot surfaces. You also requested assessment of lead in near surface soil at a distance of ten to fifteen feet from the exterior walls of the range building.

The lead assessment by Entek was limited in scope, and only included surface dust sampling of exterior concrete and asphalt surfaces and surface soil sampling surrounding the range building to determine lead loading on various surfaces and in surface soil composition. This investigation did not include lead in paint assessment or lead-based paint inspection of painted components associated with the building or testing of water at the facility.

Lead Risk Assessment

Lead hazards or "lead-contaminated dust" is defined by the California Department of Public Health (CDPH) Title 17 as dust that "contains an amount of lead equal to, or in excess of: (a) forty micrograms per square foot (40 ug/ft²) for interior floor surfaces; or (b) two hundred and fifty micrograms per square foot (250 ug/ft²) for interior horizontal surfaces; or (c) four hundred micrograms per square foot (400 ug/ft²) for exterior floor and exterior horizontal surfaces".

In addition, lead hazards in soil have been identified as lead equal to or in excess of 400 ppm in children's play areas, and 1,000 ppm in all other areas by the CDPH. The Department of Toxic Substances Control (DTSC) has screening levels for lead in soil defined as eighty milligrams per kilogram (80 mg/kg) for residential land use and three hundred and twenty milligrams per kilogram (320 mg/kg) for commercial and industrial land use. Parts per million and milligrams per kilogram are an equivalent measurement unit.

This limited lead risk assessment was conducted on April 28, 2016 by Mr. Blake Howes, a CDPH certified Lead Inspector/Assessor to evaluate lead hazards associated with lead dust on surfaces and in near surface soil composition. The lead risk assessment included collection of wipe samples of exterior sidewalk, parking lot, and road surfaces on the north and south side of 34th Avenue and in the south parking lot of the range building. Entek collected a total of 26 bulk samples of dust from these concrete and asphalt surfaces.

Generally speaking, surface wipe samples were collected from 50-foot increments along the sidewalks located on the north and south side of 34th Avenue. These increments were measured from the Mangan Rifle & Pistol Range main entry walkway. Samples were collected up to approximately 250-feet east and west of the entry walkway on the south side of 34th Avenue and up to approximately 200-feet east and west on the north side.

Surface wipe samples were collected using Ghost Wipe samples meeting the ASTM E 1792 materials for collection and analysis of wipe samples for lead. One blank Ghost Wipe sample was submitted for analysis in addition to the 26 samples collected at the project site.

ASBESTOS LEAD MOLD INDOOR AIR QUALITY NOISE MONITORING TRAINING HEALTH AND SAFETY AUDITS



Mr. Karl Kurka City of Sacramento May 4, 2016 Page Two

A total of 6 soil samples were collected from various locations surrounding the range building. These samples were taken primarily to determine if the placement of chain link fence around the range building was at a sufficient distance to limit access to areas of lead contaminated soil. These samples were collected at a distance of 10 to 15 feet from the exterior walls of the range building. Soil samples were obtained from the top one inch of surface soil in all locations.

All samples were delivered to Forensic Analytical Laboratories, Inc. (FALI) located in Hayward, California and were analyzed by flame atomic absorption spectroscopy (AAS). FALI is certified by the State of California Department of Public Health Environmental Laboratory Accreditation Program to analyze these types of samples and is accredited by the Environmental Lead Laboratory Accreditation Program (ELLAP) administered by the American Industrial Hygiene Associations (AIHA).

Observations

The City of Sacramento has installed a chain link fence around the Mangan Park Rifle & Pistol Range Building. This fence is set up along the concrete sidewalk on the north side of the building, along the south parking lot access road on the east side of the building, along the south parking lot access road and through the south parking lot on the south side of the building, and approximately 15 feet from the edge of the exterior building wall on the west side of the building. Please see attached sampling location diagram for a visual representation of the fence location.

This fence prevents any access to areas of dirt or grass within approximately 20 feet of the building on the north, east, and south sides of the structure and 15 feet on the west side.

Sampling Methods

Bulk samples were collected using Ghost Wipe sample media to collect the surface dust from each sample component. New nitrile gloves were worn for each sample and discarded after collection of each sample to minimize contamination of the samples. One square foot of surface was sampled. A pre-cut paper template 12" x 12" in size was secured to the surface to be tested and the interior of the template opening surface area was wiped with the Ghost Wipe horizontally, and vertically, after folding inward the used portion of the Ghost Wipe. Samples were placed into a plastic centrifuge container, sealed and labeled with a unique sample identification number. All sample locations, size of the sample, and surface components sampled are included in the chain of custody forms, which are attached to this report.

Surface soil samples were collected using pre-washed plastic spoons that were disposed of after each sample was collected. New nitrile gloves were worn for each sample and discarded after collection of each sample to minimize contamination of the samples. Each sample was placed into a plastic centrifuge container, sealed and labeled with a unique sample identification number. All sample locations, including latitude and longitude, are included in the chain of custody forms, which are attached to this report.

All wipe samples were analyzed for lead by the NIOSH 9100/7082 method by FALI with results reported in micrograms per square foot (ug/ft²). All soil samples were analyzed for lead by the EPA 3050B/7420 method by FALI with results reported in milligrams per kilogram (mg/kg). Mg/kg is an equivalent measurement to parts per million. Results of laboratory analysis are presented in the following tables:



Mr. Karl Kurka City of Sacramento May 4, 2016 Page Three

Table 1: List of sample results for lead by surface wipe sampling. Results expressed in micrograms per square foot (ug/ft^2).

Table 1 Lead Surface Wipe Samples					
Sample Number	Location of Wipe Sample	Results (ug/ft²)			
ECG-16-3934- 09Wipe	Lead Dust Wipe - Sidewalk on South Side of 34 th Avenue, Directly in Front of Mangan Rifle & Pistol Range Main Entry Walkway	930			
ECG-16-3934- 10Wipe	Lead Dust Wipe - ADA Access Ramp from North Parking Lot onto Sidewalk on South Side of 34 th Avenue, Directly in Front of Mangan Rifle & Pistol Range Main Entry Walkway	330			
ECG-16-3934- 11Wipe	Lead Dust Wipe - Sidewalk on South Side of 34 th Avenue, 50-feet East of Mangan Rifle & Pistol Range Main Entry Walkway	130			
ECG-16-3934- 12Wipe	Lead Dust Wipe - Access Road to South Parking Lot at North Parking Lot Entrance	31			
ECG-16-3934- 13Wipe	Lead Dust Wipe - Sidewalk on South Side of 34 th Avenue, 100-feet East of Mangan Rifle & Pistol Range Main Entry Walkway	21			
ECG-16-3934- 14Wipe	Lead Dust Wipe - Sidewalk on South Side of 34 th Avenue, 150-feet East of Mangan Rifle & Pistol Range Main Entry Walkway	16			
ECG-16-3934- 15Wipe	Lead Dust Wipe - Sidewalk on South Side of 34 th Avenue, 200-feet East of Mangan Rifle & Pistol Range Main Entry Walkway				
ECG-16-3934- 16Wipe	Lead Dust Wipe - Sidewalk on South Side of 34 th Avenue, 250-feet East of Mangan Rifle & Pistol Range Main Entry Walkway	< 8			
ECG-16-3934- 17Wipe	Lead Dust Wipe - Sidewalk on North Side of 34 th Avenue, Directly in Front of Mangan Rifle & Pistol Range Main Entry Walkway	13			
ECG-16-3934- 18Wipe	Lead Dust Wipe - Sidewalk on North Side of 34 th Avenue, 50-feet East of Mangan Rifle & Pistol Range Main Entry Walkway	35			
ECG-16-3934- 19Wipe	Lead Dust Wipe - Sidewalk on North Side of 34 th Avenue, 100-feet East of Mangan Rifle & Pistol Range Main Entry Walkway	10			
ECG-16-3934- 20Wipe	Lead Dust Wipe - Sidewalk on North Side of 34 th Avenue, 150-feet East of Mangan Rifle & Pistol Range Main Entry Walkway	< 8			
ECG-16-3934- 21Wipe	Lead Dust Wipe - Sidewalk on North Side of 34 th Avenue, 200-feet East of Mangan Rifle & Pistol Range Main Entry Walkway	< 8			
ECG-16-3934- 22Wipe	Lead Dust Wipe - Sidewalk on North Side of 34 th Avenue, 50-feet West of Mangan Rifle & Pistol Range Main Entry Walkway	< 8			
ECG-16-3934- 23Wipe	Lead Dust Wipe - Sidewalk on North Side of 34 th Avenue, 100-feet West of Mangan Rifle & Pistol Range Main Entry Walkway	< 8			
ECG-16-3934- 24Wipe	Lead Dust Wipe - Sidewalk on North Side of 34 th Avenue, 150-feet West of Mangan Rifle & Pistol Range Main Entry Walkway	9			



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Table 1 (Continued) **Lead Surface Wipe Samples** Sample **Location of Wipe Sample** Results Number (uq/ft²) Lead Dust Wipe - Sidewalk on North Side of 34th Avenue. ECG-16-3934-21 200-feet West of Mangan Rifle & Pistol Range Main Entry Walkway 25Wipe Lead Dust Wipe - Sidewalk on South Side of 34th Avenue, ECG-16-3934-68 26Wipe 50-feet West of Mangan Rifle & Pistol Range Main Entry Walkway ECG-16-3934-Lead Dust Wipe- Sidewalk on South Side of 34th Avenue, 11 100-feet West of Mangan Rifle & Pistol Range Main Entry Walkway 27Wipe Lead Dust Wipe - Sidewalk on South Side of 34th Avenue. ECG-16-3934-< 8 150-feet West of Mangan Rifle & Pistol Range Main Entry Walkway 28Wipe Lead Dust Wipe - Sidewalk on South Side of 34th Avenue, ECG-16-3934-< 8 200-feet West of Mangan Rifle & Pistol Range Main Entry Walkway 29Wipe ECG-16-3934-Lead Dust Wipe - Sidewalk on South Side of 34th Avenue. < 8 30Wipe 250-feet West of Mangan Rifle & Pistol Range Main Entry Walkway Lead Dust Wipe - South Parking Lot, West Side 35-feet from Exterior ECG-16-3934-85 Wall of Mangan Rifle & Pistol Range 31Wipe ECG-16-3934-Lead Dust Wipe - South Parking Lot, Center of Lot at Drainage Inlet 970 32Wipe ECG-16-3934-Lead Dust Wipe - South Parking Lot, East Side 35-feet from Exterior 870 Wall of Mangan Rifle & Pistol Range 33Wipe ECG-16-3934-Lead Dust Wipe - South Parking Lot, Center 60-feet from Exterior Wall 180 of Mangan Rifle & Pistol Range 34Wipe ECG-16-3934-Blank Wipe < 8 35Wipe



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Table 2: List of sample results for lead by surface soil sampling. Results expressed in milligrams per kilogram (mg/kg).

Table 2 Lead Surface Soil Samples					
Sample Number	Location of Bulk Sample	Results (mg/kg)			
ECG-16-3934- 12Soil	Lead Surface Soil Sample - North Side of Mangan Rifle & Pistol Range Building, 10-feet from Building Exterior Wall	360			
ECG-16-3934- 13Soil	Lead Surface Soil Sample - North Side of Mangan Rifle & Pistol Range Building at West End, 10-feet from Building Exterior Wall	220			
ECG-16-3934- 14Soil	Lead Surface Soil Sample - Southeast Side of Mangan Rifle & Pistol Range Building, 10-feet from Building Exterior Wall	300			
ECG-16-3934- 15Soil	Lead Surface Soil Sample - East Side of Mangan Rifle & Pistol Range Building, East Side of Access Road to South Parking Lot	37			
ECG-16-3934- 16Soil	Lead Surface Soil Sample - West Side of Mangan Rifle & Pistol Range Building at South End Near Bullet Trap Access Hatch, 15-feet from Building Exterior Wall	38°31'17.4"N 121°29'27.5"W	100		
ECG-16-3934- 17Soil	Lead Surface Soil Sample - West Side of Mangan Rifle & Pistol Range Building at North End, 15-feet from Building Exterior Wall	38°31'17.8"N 121°29'27.6"W	86		

Discussions and Recommendations

This lead assessment identified lead in surface dust on 18 of the 26 wipe samples collected, with 3 samples identifying lead in surface dust in excess of 400 ug/ft². One of these samples, 09Wipe, was collected from the sidewalk on the south side of 34th Avenue directly in front of the main entrance to the range building and the other two, 32Wipe and 33Wipe, were collected from the south parking lot area.

Samples collected on the sidewalk located on the south side of 34th Avenue identified lead below the hazard level 50-feet east and west of the main entrance to the range building. At 250-feet east and west of the main entry no lead above the detection limit of 8 ug/ft² was identified on the south sidewalk. Samples taken from the sidewalk on the north side of 34th Avenue identified lead between 35 ug/ft² and 9 ug/ft² with 4 samples identifying no lead above the analysis method detection limit.

Lead content in the surface soil in the immediate surrounding area of the range building was identified from a concentration of 37 mg/kg to 360 mg/kg. Three samples were collected within the fenced off area surrounding the range building 10-feet from the edge of the nearest exterior wall. Two samples were collected from the west edge of the fence perimeter, approximately 15-feet from the building exterior wall. One sample was collected on the east side of the south parking lot access road. The one sample identified in excess of the DTSC screening level for lead in soil of 320 mg/kg was taken from the north side of the range building inside the currently fenced off perimeter.



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Concentrations of lead in surface dust immediately outside the main entrance to the Mangan Rifle & Pistol Range on the sidewalk surface located south of 34th Avenue and in the south parking lot of the range building exceed the CDPH criteria established in Title 17 as lead hazards, or "lead-contaminated dust". This criteria is defined as dust that "contains an amount of lead equal to, or in excess of: (c) four hundred micrograms per square foot (400 ug/ft²) for exterior floor and exterior horizontal surfaces".

The City of Sacramento should consider extending the currently fenced off perimeter to include the entire south parking lot and sections of the sidewalk located on the south side of 34th Avenue up to 50-feet east and west from the main entry walkway to the range building.

One near surface soil sample exceeded DTSC screening levels for lead in soil of 320 mg/kg for commercial and industrial land use. This sample was collected from the inside of the currently fenced off perimeter on the north side of the range building.

The City of Sacramento should consider remediation of soils extending farther than 10-feet from the building if soil remediation work will be performed in the future.

Attached to this report are the chain of custody (COC) forms, laboratory reports, schematics identifying sample locations, photographs of various test locations, laboratory accreditation information and certification of Entek staff.

Entek's policy is to retain a full copy of these written documents for three (3) years once the file is closed and final billed. At the end of the three (3) year period the written files will be destroyed without further notice. It is suggested copies of the file(s) are maintained per the City of Sacramento's policy.

Entek will be providing only this electronic copy of the report and its attachments for your use. However, if you would like a hard copy of this report please do not hesitate to ask. Entek will be happy to mail the report upon receipt of your request.

Please forward a copy of this report to all interested parties for review. Thank you for choosing Entek for your environmental needs. If you have any questions with this report please contact our office at (916) 632-6800.

Sincerely,

Blake Howes Project Manager

CDPH Lead Certification #23951

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Reviewed by:

Rick Beall, CIH, CSP

President

CDPH Lead Certification #769

Appendices

A. Lead Related Documents

B. Backup Documentation



APPENDIX A LEAD RELATED DOCUMENTS

- Lead Wipe Material Analysis Report Forms for Entek
- Lead Wipe Analysis Reports From Forensic Analytical
- Lead Wipe Material Analysis Request Forms for Entek
- Lead Soil Material Analysis Report Forms for Entek
- Lead Soil Analysis Reports From Forensic Analytical
- Lead Soil Material Analysis Request Forms for Entek
- Lead Bulk Sample Location Drawings
- Lead Hazard Evaluation Report (CDPH 8552)





BULK MATERIAL Analysis Report

ENTEK CONSULTING GROUP, INC.

4200 ROCKLIN ROAD, SUITE 7 PHONE (916) 632-6800 FAX (916) 632-6812 mainoffice@entekgroup.com

Date of Sampling: 4-28-16 **Lab:** Forensic Analytical Laboratories

Job Number: 16-3934 **Turnaround Time:** Monday, 5-2-16 by 5:00 pm

Client Name: City of Sacramento Collected by: Blake Howes

Site Address: Mangan Park Pistol & Rifle Range Analysis Conducted: Lead by Atomic Absorption

2140 34th Avenue Spectrometry Sacramento, CA 95822

SAMPLE#	RESULTS LEAD (μg/ft²)	MATERIAL DESCRIPTION and LOCATION	WIPE SAMPLE SIZE (SQUARE INCHES)
ECG-16-3934- 09Wipe	930	Lead Dust Wipe - Sidewalk on South Side of 34 th Avenue, Directly in Front of Mangan Rifle & Pistol Range Main Entry Walkway	144" - (12" X 12")
ECG-16-3934- 10Wipe	330	Lead Dust Wipe - ADA Access Ramp from North Parking Lot onto Sidewalk on South Side of 34 th Avenue, Directly in Front of Mangan Rifle & Pistol Range Main Entry Walkway	144" - (12" X 12")
ECG-16-3934- 11Wipe	130	Lead Dust Wipe - Sidewalk on South Side of 34 th Avenue, 50-feet East of Mangan Rifle & Pistol Range Main Entry Walkway	144" - (12" X 12")
ECG-16-3934- 12Wipe	31	Lead Dust Wipe - Access Road to South Parking Lot at North Parking Lot Entrance	144" - (12" X 12")
ECG-16-3934- 13Wipe	21	Lead Dust Wipe - Sidewalk on South Side of 34 th Avenue, 100-feet East of Mangan Rifle & Pistol Range Main Entry Walkway	144" - (12" X 12")
ECG-16-3934- 14Wipe	16	Lead Dust Wipe - Sidewalk on South Side of 34 th Avenue, 150-feet East of Mangan Rifle & Pistol Range Main Entry Walkway	144" - (12" X 12")
ECG-16-3934- 15Wipe	8	Lead Dust Wipe - Sidewalk on South Side of 34 th Avenue, 200-feet East of Mangan Rifle & Pistol Range Main Entry Walkway	144" - (12" X 12")
ECG-16-3934- 16Wipe	< 8	Lead Dust Wipe - Sidewalk on South Side of 34 th Avenue, 250-feet East of Mangan Rifle & Pistol Range Main Entry Walkway	144" - (12" X 12")
ECG-16-3934- 17Wipe	13	Lead Dust Wipe - Sidewalk on North Side of 34 th Avenue, Directly in Front of Mangan Rifle & Pistol Range Main Entry Walkway	144" - (12" X 12")





BULK MATERIAL Analysis Report

ENTEK CONSULTING GROUP, INC.

4200 ROCKLIN ROAD, SUITE 7 PHONE (916) 632-6800 FAX (916) 632-6812 mainoffice@entekgroup.com

Date of Sampling: 4-28-16 **Lab:** Forensic Analytical Laboratories

Job Number: 16-3934 **Turnaround Time:** Monday, 5-2-16 by 5:00 pm

Client Name: City of Sacramento Collected by: Blake Howes

Site Address: Mangan Park Pistol & Rifle Range Analysis Conducted: Lead by Atomic Absorption

2140 34th Avenue Spectrometry Sacramento, CA 95822

SAMPLE#	RESULTS LEAD (µg/ft²)	MATERIAL DESCRIPTION and LOCATION	WIPE SAMPLE SIZE (SQUARE INCHES)
ECG-16-3934- 18Wipe	35	Lead Dust Wipe - Sidewalk on North Side of 34 th Avenue, 50-feet East of Mangan Rifle & Pistol Range Main Entry Walkway	144" - (12" X 12")
ECG-16-3934- 19Wipe	10	Lead Dust Wipe - Sidewalk on North Side of 34 th Avenue, 100-feet East of Mangan Rifle & Pistol Range Main Entry Walkway	144" - (12" X 12")
ECG-16-3934- 20Wipe	< 8	Lead Dust Wipe - Sidewalk on North Side of 34 th Avenue, 150-feet East of Mangan Rifle & Pistol Range Main Entry Walkway	144" - (12" X 12")
ECG-16-3934- 21Wipe	< 8	Lead Dust Wipe - Sidewalk on North Side of 34 th Avenue, 200-feet East of Mangan Rifle & Pistol Range Main Entry Walkway	144" - (12" X 12")
ECG-16-3934- 22Wipe	< 8	Lead Dust Wipe - Sidewalk on North Side of 34 th Avenue, 50-feet West of Mangan Rifle & Pistol Range Main Entry Walkway	144" - (12" X 12")
ECG-16-3934- 23Wipe	< 8	Lead Dust Wipe - Sidewalk on North Side of 34 th Avenue, 100-feet West of Mangan Rifle & Pistol Range Main Entry Walkway	144" - (12" X 12")
ECG-16-3934- 24Wipe	9	Lead Dust Wipe - Sidewalk on North Side of 34 th Avenue, 150-feet West of Mangan Rifle & Pistol Range Main Entry Walkway	144" - (12" X 12")
ECG-16-3934- 25Wipe	21	Lead Dust Wipe - Sidewalk on North Side of 34 th Avenue, 200-feet West of Mangan Rifle & Pistol Range Main Entry Walkway	144" - (12" X 12")
ECG-16-3934- 26Wipe	68	Lead Dust Wipe - Sidewalk on South Side of 34 th Avenue, 50-feet West of Mangan Rifle & Pistol Range Main Entry Walkway	144" - (12" X 12")



BULK MATERIAL Analysis Report

LEAD WIPE

ENTEK CONSULTING GROUP, INC.

4200 ROCKLIN ROAD, SUITE 7 PHONE (916) 632-6800 FAX (916) 632-6812 mainoffice@entekgroup.com

Date of Sampling: 4-28-16 **Lab:** Forensic Analytical Laboratories

Job Number: 16-3934 **Turnaround Time:** Monday, 5-2-16 by 5:00 pm

Client Name: City of Sacramento Collected by: Blake Howes

Site Address: Mangan Park Pistol & Rifle Range Analysis Conducted: Lead by Atomic Absorption

2140 34th Avenue Spectrometry Sacramento, CA 95822

SAMPLE#	RESULTS LEAD (µg/ft²)	MATERIAL DESCRIPTION and LOCATION	WIPE SAMPLE SIZE (SQUARE INCHES)
ECG-16-3934- 27Wipe	11	Lead Dust Wipe- Sidewalk on South Side of 34 th Avenue, 100-feet West of Mangan Rifle & Pistol Range Main Entry Walkway	144" - (12" X 12")
ECG-16-3934- 28Wipe	< 8	Lead Dust Wipe - Sidewalk on South Side of 34 th Avenue, 150-feet West of Mangan Rifle & Pistol Range Main Entry Walkway	144" - (12" X 12")
ECG-16-3934- 29Wipe	< 8	Lead Dust Wipe - Sidewalk on South Side of 34 th Avenue, 200-feet West of Mangan Rifle & Pistol Range Main Entry Walkway	144" - (12" X 12")
ECG-16-3934- 30Wipe	< 8	Lead Dust Wipe - Sidewalk on South Side of 34 th Avenue, 250-feet West of Mangan Rifle & Pistol Range Main Entry Walkway	144" - (12" X 12")
ECG-16-3934- 31Wipe	85	Lead Dust Wipe - South Parking Lot, West Side 35-feet from Exterior Wall of Mangan Rifle & Pistol Range	144" - (12" X 12")
ECG-16-3934- 32Wipe	970	Lead Dust Wipe - South Parking Lot, Center of Lot at Drainage Inlet	144" - (12" X 12")
ECG-16-3934- 33Wipe	870	Lead Dust Wipe - South Parking Lot, East Side 35-feet from Exterior Wall of Mangan Rifle & Pistol Range	144" - (12" X 12")
ECG-16-3934- 34Wipe	180	Lead Dust Wipe - South Parking Lot, Center 60-feet from Exterior Wall of Mangan Rifle & Pistol Range	144" - (12" X 12")
ECG-16-3934- 35Wipe	< 8	Lead Dust Wipe- Blank Wipe Z:\Clients\City of Sacramento\16-3934 Mangan Park - Lead\Lead\	n/a

Z:\Clients\City of Sacramento\16-3934 Mangan Park - Lead\Lead Wipe\LeadWipeReport 04-28-16.wpc

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Metals Analysis of HUD Wipes

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Blake Howes

4200 Rocklin Road, Suite 7

Entek Consulting Group

Rocklin, CA 95677

 Report Number:
 M171550

 Date Received:
 04/29/16

 Date Analyzed:
 05/02/16

Client ID:

FALI Job ID:

Date Printed: 05/02/16 **First Reported:** 05/02/16

Job ID / Site: 16-3934, City of Sacramento, Mangan Park Pistol & Rifle Range 2140 34th

Avenue Sacramento, CA 95822

Date(s) Collected: 4/28/16

Total Samples Submitted: 11 **Total Samples Analyzed:** 11

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Sample Number	Lab Number	Area ft2	Analyte	Result	Result Units	Reporting Limit*	Method Reference
ECG-16-3934-09WIPE	30737738	1.00	Pb	930	ug/ft2	30	NIOSH 9100/7082
ECG-16-3934-10WIPE	30737739	1.00	Pb	330	ug/ft2	20	NIOSH 9100/7082
ECG-16-3934-11WIPE	30737740	1.00	Pb	130	ug/ft2	8	NIOSH 9100/7082
ECG-16-3934-12WIPE	30737741	1.00	Pb	31	ug/ft2	8	NIOSH 9100/7082
ECG-16-3934-13WIPE	30737742	1.00	Pb	21	ug/ft2	8	NIOSH 9100/7082
ECG-16-3934-14WIPE	30737743	1.00	Pb	16	ug/ft2	8	NIOSH 9100/7082
ECG-16-3934-15WIPE	30737744	1.00	Pb	8	ug/ft2	8	NIOSH 9100/7082
ECG-16-3934-16WIPE	30737745	1.00	Pb	< 8	ug/ft2	8	NIOSH 9100/7082
ECG-16-3934-17WIPE	30737746	1.00	Pb	13	ug/ft2	8	NIOSH 9100/7082
ECG-16-3934-18WIPE	30737747	1.00	Pb	35	ug/ft2	8	NIOSH 9100/7082
ECG-16-3934-19WIPE	30737748	1.00	Pb	10	ug/ft2	8	NIOSH 9100/7082

^{*} The Reporting Limit represents the lowest amount of analyte that the laboratory can confidently detect in the sample, and is not a regulatory level. The Units for the Reporting Limit are the same as the Units for the Final Results.



Daniele Siu, Laboratory Supervisor, Hayward Laboratory



Metals Analysis of HUD Wipes

Entek Consulting Group Client ID:

Entek Consulting Group

Blake Howes

Report Number: M171549

4200 Rocklin Road, Suite 7

Date Received: 04/29/16

Date Analyzed: 05/02/16
Rocklin, CA 95677
Date Printed: 05/02/16

First Reported: 05/02/16

Job ID / Site: 16-3934, City of Sacramento, Mangan Park Pistol & Rifle Range 2140 34th FALI Job ID: A31353

Avenue Sacramento, CA 95822

Date(s) Collected: 4/28/16

Total Samples Submitted: 11

Total Samples Analyzed: 11

						20002	Sumpres many rear
Sample Number	Lab Number	Area ft2	Analyte	Result	Result Units	Reporting Limit*	Method Reference
ECG-16-3934-20WIPE	30737727	1.00	Pb	< 8	ug/ft2	8	NIOSH 9100/7082
ECG-16-3934-21WIPE	30737728	1.00	Pb	< 8	ug/ft2	8	NIOSH 9100/7082
ECG-16-3934-22WIPE	30737729	1.00	Pb	< 8	ug/ft2	8	NIOSH 9100/7082
ECG-16-3934-23WIPE	30737730	1.00	Pb	< 8	ug/ft2	8	NIOSH 9100/7082
ECG-16-3934-24WIPE	30737731	1.00	Pb	9	ug/ft2	8	NIOSH 9100/7082
ECG-16-3934-25WIPE	30737732	1.00	Pb	21	ug/ft2	8	NIOSH 9100/7082
ECG-16-3934-26WIPE	30737733	1.00	Pb	68	ug/ft2	8	NIOSH 9100/7082
ECG-16-3934-27WIPE	30737734	1.00	Pb	11	ug/ft2	8	NIOSH 9100/7082
ECG-16-3934-28WIPE	30737735	1.00	Pb	< 8	ug/ft2	8	NIOSH 9100/7082
ECG-16-3934-29WIPE	30737736	1.00	Pb	< 8	ug/ft2	8	NIOSH 9100/7082
ECG-16-3934-30WIPE	30737737	1.00	Pb	< 8	ug/ft2	8	NIOSH 9100/7082

^{*} The Reporting Limit represents the lowest amount of analyte that the laboratory can confidently detect in the sample, and is not a regulatory level. The Units for the Reporting Limit are the same as the Units for the Final Results.



Daniele Siu, Laboratory Supervisor, Hayward Laboratory



Metals Analysis of HUD Wipes

Entek Consulting Group

Client ID: A31353

Blake Howes

Report Number: M171547

4200 Rocklin Road, Suite 7 **Date Received:** 04/29/16 **Date Analyzed:** 05/02/16

Rocklin, CA 95677 **Date Printed:** 05/02/16 **First Reported:** 05/02/16

Job ID / Site: 16-3934, City of Sacramento, Mangan Park Pistol & Rifle Range 2140 34th FALI Job ID: A31353

Avenue Sacramento, CA 95822

Date(s) Collected: 4/28/16

Total Samples Submitted: 5
Total Samples Analyzed: 5

Sample Number	Lab Number	Area ft2	Analyte	Result	Result Units	Reporting Limit*	Method Reference
ECG-16-3934-31WIPE	30737716	1.00	Pb	85	ug/ft2	8	NIOSH 9100/7082
ECG-16-3934-32WIPE	30737717	1.00	Pb	970	ug/ft2	40	NIOSH 9100/7082
ECG-16-3934-33WIPE	30737718	1.00	Pb	870	ug/ft2	30	NIOSH 9100/7082
ECG-16-3934-34WIPE	30737719	1.00	Pb	180	ug/ft2	8	NIOSH 9100/7082
ECG-16-3934-35WIPE	30737720		Pb	< 8	ug	8	NIOSH 9100/7082

^{*} The Reporting Limit represents the lowest amount of analyte that the laboratory can confidently detect in the sample, and is not a regulatory level. The Units for the Reporting Limit are the same as the Units for the Final Results.



Daniele Siu, Laboratory Supervisor, Hayward Laboratory



LEAD WIPE SAMPLING

ENTEK CONSULTING GROUP, INC.

4200 ROCKLIN ROAD, SUITE 7 ROCKLIN, CA 95677 (916) 632-6800 PHONE (916) 632-6812 FAX mainoffice@entekgroup.com

Date of Sampling:

4-28-16

Lab:

Forensic Analytical Laboratories

Job Number: 16-3934

Turnaround Time: Monday, 5-2-16 by 5:00 pm

Client Name: City of Sacramento

Collected by: Blake Howes

Site Address: Mangan Park Pistol & Rifle Range

Analysis Conducted: Lead by Atomic Absorption

2140 34th Avenue

Sacramento, CA 95822

Spectrometry

Special Instructions: Please email results to bhowes@entekgroup.com and mainoffice@entekgroup.com as soon as available.

SAMPLE #	MATERIAL DESCRIPTION and LOCATION	WIPE SAMPLE SIZE (SQUARE INCHES)			
ECG-16-3934- 09Wipe	Lead Dust Wipe - Sidewalk on South Side of 34 th Avenue, Directly in Front of Mangan Rifle & Pistol Range Main Entry Walkway	144 - (12"x12")			
ECG-16-3934- 10Wipe	Lead Dust Wipe - ADA Access Ramp from North Parking Lot onto Sidewalk on South Side of 34 th Avenue, Directly in Front of Mangan Rifle & Pistol Range Main Entry Walkway	144 - (12"x12")			
ECG-16-3934- 11Wipe	Lead Dust Wipe - Sidewalk on South Side of 34 th Avenue, 50-feet East of Mangan Rifle & Pistol Range Main Entry Walkway	144 - (12"x12")			
ECG-16-3934- 12Wipe	CG-16-3934- Lead Dust Wipe - Access Road to South Parking Lot at North				
ECG-16-3934- 13Wipe	- I - I - I - I - I - I - I - I - I - I				
ECG-16-3934- 14Wipe	Lead Dust Wipe - Sidewalk on South Side of 34 th Avenue, 150-feet East of Mangan Rifle & Pistol Range Main Entry Walkway	144 - (12"x12")			
ECG-16-3934 15Wipe	Lead Dust Wipe - Sidewalk on South Side of 34 th Avenue, 200-feet East of Mangan Rifle & Pistol Range Main Entry Walkway	144 - (12"x12")			
ECG-16-3934- 16Wipe	16-3934- Lead Dust Wipe - Sidewalk on South Side of 34th Avenue,				
ECG-16-3934- 17Wipe	G-16-3934- Lead Dust Wipe - Sidewalk on North Side of 34th Avenue,				
ECG-16-3934- 18Wipe	G-16-3934- Lead Dust Wipe - Sidewalk on North Side of 34 th Avenue,				
ECG-16-3934- 19Wipe	Lead Dust Wipe - Sidewalk on North Side of 34 th Avenue, 100-feet East of Mangan Rifle & Pistol Range Main Entry Walkway	144 - (12"x12")			

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Date:

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ENTEK CONSULTING GROUP, INC.

4200 ROCKLIN ROAD, SUITE 7 ROCKLIN, CA 95677 (916) 632-6800 PHONE (916) 632-6812 FAX mainoffice@entekgroup.com

Date of Sampling:

4-28-16

Lab:

Forensic Analytical Laboratories

Job Number: 16-3934

Turnaround Time: Monday, 5-2-16 by 5:00 pm

Client Name: City of Sacramento

Collected by: Blake Howes

Site Address: Mangan Park Pistol & Rifle Range

Analysis Conducted: Lead by Atomic Absorption

2140 34th Avenue

Sacramento, CA 95822

Spectrometry

Special Instructions: Please email results to bhowes@entekgroup.com and <a href="mailto:mail as available.

SAMPLE #	MATERIAL DESCRIPTION and LOCATION	WIPE SAMPLE SIZE (SQUARE INCHES)
ECG-16-3934- 20Wipe	Lead Dust Wipe - Sidewalk on North Side of 34 th Avenue, 150-feet East of Mangan Rifle & Pistol Range Main Entry Walkway	144 - (12"x12")
ECG-16-3934- 21Wipe	Lead Dust Wipe - Sidewalk on North Side of 34 th Avenue, 200-feet East of Mangan Rifle & Pistol Range Main Entry Walkway	144 - (12"x12")
ECG-16-3934- 22Wipe	Lead Dust Wipe - Sidewalk on North Side of 34 th Avenue, 50-feet West of Mangan Rifle & Pistol Range Main Entry Walkway	144 - (12"x12")
ECG-16-3934- 23Wipe	Lead Dust Wipe - Sidewalk on North Side of 34 th Avenue, 100-feet West of Mangan Rifle & Pistol Range Main Entry Walkway	144 - (12"x12")
ECG-16-3934- 24Wipe	Lead Dust Wipe - Sidewalk on North Side of 34 th Avenue, 150-feet West of Mangan Rifle & Pistol Range Main Entry Walkway	144 - (12"x12")
ECG-16-3934- 25Wipe	Lead Dust Wipe - Sidewalk on North Side of 34 th Avenue, 200-feet West of Mangan Rifle & Pistol Range Main Entry Walkway	144 - (12"x12")
ECG-16-3934- 26Wipe	Lead Dust Wipe - Sidewalk on South Side of 34 th Avenue, 50-feet West of Mangan Rifle & Pistol Range Main Entry Walkway	144 - (12"x12")
ECG-16-3934- 27Wipe	Lead Dust Wipe- Sidewalk on South Side of 34 th Avenue, 100-feet West of Mangan Rifle & Pistol Range Main Entry Walkway	144 - (12"x12")
ECG-16-3934- 28Wipe	Lead Dust Wipe - Sidewalk on South Side of 34 th Avenue, 150-feet West of Mangan Rifle & Pistol Range Main Entry Walkway	144 - (12"x12")
ECG-16-3934- 29Wipe	Lead Dust Wipe - Sidewalk on South Side of 34 th Avenue, 200-feet West of Mangan Rifle & Pistol Range Main Entry Walkway	144 - (12"×12")
ECG-16-3934- 30Wipe	Lead Dust Wipe - Sidewalk on South Side of 34 th Avenue, 250-feet West of Mangan Rifle & Pistol Range Main Entry Walkway	144 - (12"x12")

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LEAD WIPE SAMPLING

ENTEK CONSULTING GROUP, INC.

4200 ROCKLIN ROAD, SUITE 7 ROCKLIN, CA 95677 (916) 632-6800 PHONE (916) 632-6812 FAX mainoffice@entekgroup.com

Date of Sampling:

4-28-16

Lab:

Forensic Analytical Laboratories

Job Number: 16-3934

Turnaround Time: Monday, 5-2-16 by 5:00 pm

Client Name: City of Sacramento

Collected by: Blake Howes

Site Address: Mangan Park Pistol & Rifle Range

Analysis Conducted: Lead by Atomic Absorption

2140 34th Avenue

Sacramento, CA 95822

Spectrometry

Special Instructions: Please email results to bhowes@entekgroup.com and mainoffice@entekgroup.com as soon as available.

SAMPLE #	MATERIAL DESCRIPTION and LOCATION	WIPE SAMPLE SIZE (SQUARE INCHES)
ECG-16-3934- 31Wipe	Lead Dust Wipe - South Parking Lot, West Side 35-feet from Exterior Wall of Mangan Rifle & Pistol Range	144 - (12"x12")
ECG-16-3934- 32Wipe	Lead Dust Wipe - South Parking Lot, Center of Lot at Drainage Inlet	144 - (12"x12")
ECG-16-3934- 33Wipe	Lead Dust Wipe - South Parking Lot, East Side 35-feet from Exterior Wall of Mangan Rifle & Pistol Range	144 - (12"x12")
ECG-16-3934- 34Wipe	Lead Dust Wipe - South Parking Lot, Center 60-feet from Exterior Wall of Mangan Rifle & Pistol Range	144 - (12"x12")
ECG-16-3934- 35Wipe	Lead Dust Wipe- Blank Wipe	n/a

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BULK LEAD MATERIAL Analysis Report

LEAD SOIL SAMPLING

ENTEK CONSULTING GROUP, INC.

4200 ROCKLIN ROAD, SUITE 7 ROCKLIN, CA 95677 (916) 632-6800 PHONE (916) 632-6812 FAX mainoffice@entekgroup.com

Date of Sampling: 4-28-16 Lab: Forensic Analytical Laboratories

Turnaround Time: Monday, 5-2-16 by 5:00 pm Job Number: 16-3934

Client Name: City of Sacramento Collected by: Blake Howes

Site Address: Mangan Park Pistol & Rifle Range 2140 34th Avenue Sacramento. CA 95822 **Analysis Conducted:** Lead by Atomic Absorption Spectrometry

	Sacramento	, CA 93022	
SAMPLE#	LEAD RESULT (mg/kg)	LEAD RESULT (ppm)	MATERIAL DESCRIPTION/LOCATION
ECG-16-3934- 12Soil	360		Lead Surface Soil Sample - North Side of Mangan Rifle & Pistol Range Building, 10-feet from Building Exterior Wall, 38°31'18.3"N 121°29'26.6"W
ECG-16-3934- 13Soil	220		Lead Surface Soil Sample - North Side of Mangan Rifle & Pistol Range Building at West End, 10-feet from Building Exterior Wall, 38°31'18.1"N 121°29'27.2"W
ECG-16-3934- 14Soil	300		Lead Surface Soil Sample - Southeast Side of Mangan Rifle & Pistol Range Building, 10-feet from Building Exterior Wall, 38°31'17.5"N 121°29'25.9"W
ECG-16-3934- 15Soil	37		Lead Surface Soil Sample - East Side of Mangan Rifle & Pistol Range Building, East Side of Access Road to South Parking Lot, 38°31'17.8"N 121°29'25.4"W
ECG-16-3934- 16Soil	100		Lead Surface Soil Sample - West Side of Mangan Rifle & Pistol Range Building at South End Near Bullet Trap Access Hatch, 15-feet from Building Exterior Wall, 38°31'17.4"N 121°29'27.5"W
ECG-16-3934- 17Soil	86		Lead Surface Soil Sample - West Side of Mangan Rifle & Pistol Range Building at North End, 15-feet from Building Exterior Wall, 38°31'17.8"N 121°29'27.6"W

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Metals Analysis of Soils - TTLC

Entek Consulting Group

Client ID: A31353

Blake Howes

Report Number: M171548

4200 Rocklin Road, Suite 7

Date Received: 04/29/16

 Date Analyzed:
 05/02/16

 Rocklin, CA 95677
 Date Printed:
 05/02/16

First Reported: 05/02/16

Job ID / Site: 16-3934, City of Sacramento, Mangan Park Pistol & Rifle Range 2140 34th FALI Job ID: A31353

Avenue Sacramento, CA 95822

Date(s) Collected: 4/28/16

Total Samples Submitted: 6

Total Samples Analyzed: 6

Sample Number	Lab Number	Analyte	Result	Result Units	Reporting Limit*	Method Reference
ECG-16-3934-12SOIL	30737721	Pb	360	mg/kg	30	EPA 3050B/7420
ECG-16-3934-13SOIL	30737722	Pb	220	mg/kg	20	EPA 3050B/7420
ECG-16-3934-14SOIL	30737723	Pb	300	mg/kg	20	EPA 3050B/7420
ECG-16-3934-15SOIL	30737724	Pb	37	mg/kg	6	EPA 3050B/7420
ECG-16-3934-16SOIL	30737725	Pb	100	mg/kg	6	EPA 3050B/7420
ECG-16-3934-17SOIL	30737726	Pb	86	mg/kg	6	EPA 3050B/7420

^{*} The Reporting Limit represents the lowest amount of analyte that the laboratory can confidently detect in the sample, and is not a regulatory level. The Units for the Reporting Limit are the same as the Units for the Final Results.



Daniele Siu, Laboratory Supervisor, Hayward Laboratory





ENTEK CONSULTING GROUP, INC.

4200 ROCKLIN ROAD, SUITE 7 ROCKLIN, CA 95677 (916) 632-6800 PHONE (916) 632-6812 FAX mainoffice@entekgroup.com

Date of Sampling:

4-28-16

Lab:

Forensic Analytical Laboratories

Turnaround Time: Monday, 5-2-16 by 5:00 pm

Job Number: 16-3934

Client Name: City of Sacramento

Site Address: Mangan Park Pistol & Rifle Range 2140 34th Avenue

Sacramento, CA 95822

Collected by: Blake Howes

Analysis Conducted: Lead by Atomic

Absorption Spectrometry

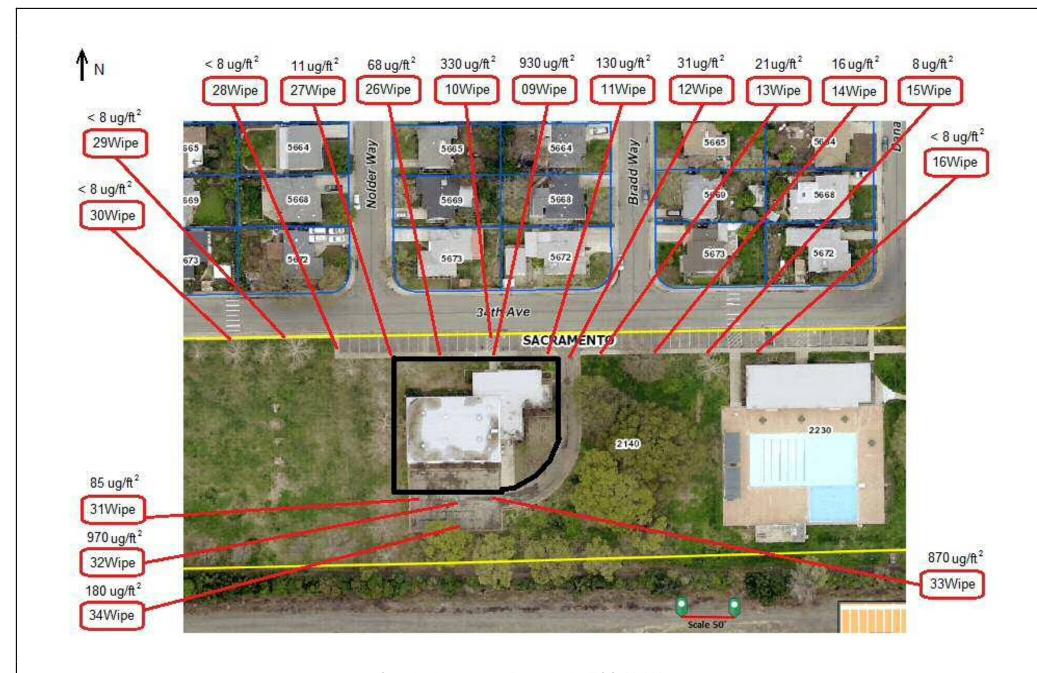
Special Instructions: Please email results to bhowes@entekgroup.com and mainoffice@entekgroup.com as soon as available.

SAMPLE #	MATERIAL DESCRIPTION/LOCATION
ECG-16-3934-12Soil	Lead Surface Soil Sample - North Side of Mangan Rifle & Pistol Range Building, 10-feet from Building Exterior Wall, 38°31'18.3"N 121°29'26.6"W
ECG-16-3934-13Soil	Lead Surface Soil Sample - North Side of Mangan Rifle & Pistol Range Building at West End, 10-feet from Building Exterior Wall, 38°31'18.1"N 121°29'27.2"W
ECG-16-3934-14Soil	Lead Surface Soil Sample - Southeast Side of Mangan Rifle & Pistol Range Building, 10-feet from Building Exterior Wall, 38°31'17.5"N 121°29'25.9"W
ECG-16-3934-15Soil	Lead Surface Soil Sample - East Side of Mangan Rifle & Pistol Range Building, East Side of Access Road to South Parking Lot, 38°31'17.8"N 121°29'25.4"W
ECG-16-3934-16Soil	Lead Surface Soil Sample - West Side of Mangan Rifle & Pistol Range Building at South End Near Bullet Trap Access Hatch, 15-feet from Building Exterior Wall, 38°31'17.4"N 121°29'27.5"W
ECG-16-3934-17Soil	Lead Surface Soil Sample - West Side of Mangan Rifle & Pistol Range Building at North End, 15-feet from Building Exterior Wall, 38°31'17.8"N 121°29'27.6"W

Z.\Clients\City of Sacramento\16-3934 Mangan Park - Lead\Soil Sample\LeadBulkRqtSoil 04-28-16.wpd



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Sample Numbers are Preceded by ECG-16-3934-

City of Sacramento Mangan Park Rifle & Pistol Range 2140 34th Avenue Sacramento, CA 95822-3157 Entek Consulting Group, Inc 4200 Rocklin Road, Suite 7 Rocklin, California 95677 Map Not to Scale Lead Wipe or Near Surface Dust Sample Locations Collected by: Blake Howes April 28, 2016 Project #16-3934



Sample Numbers are Preceded by ECG-16-3934-

City of Sacramento Mangan Park Rifle & Pistol Range 2140 34th Avenue Sacramento, CA 95822-3157

N

Entek Consulting Group, Inc 4200 Rocklin Road, Suite 7 Rocklin, California 95677 Map Not to Scale Lead Wipe or Near Surface Dust Sample Locations Collected by: Blake Howes April 28, 2016 Project #16-3934



Sample Numbers are Preceded by ECG-16-3934-

City of Sacramento Mangan Park Rifle & Pistol Range 2140 34th Avenue Sacramento, CA 95822-3157 Entek Consulting Group, Inc 4200 Rocklin Road, Suite 7 Rocklin, California 95677 Map Not to Scale Lead Wipe or Near Surface Dust Sample Locations Collected by: Blake Howes April 28, 2016 Project #16-3934

LEAD HAZARD EVALUATION REPORT

Section 1 – Date of Lea	ad Hazard Evaluatio	on <u>4-28-16</u>				
Section 2 – Type of Lead	Hazard Evaluation (C	Check one box only)				
☐ Lead Inspection	Risk Assessment	Clearance Insp	ection	☐ Other (sp	pecify)	
Section 3–Structure Where	Lead Hazard Evaluation	Was Conducted				_
Address [number, street, apar	tment (if applicable)]	City			County	Zip Code
2140 34 TH Avenue		Sacramento			Sacramento	95822
Construction date (year)	Type of structure				Children living in struct	ure?
of structure	☐ Multi-unit building	☐ School or o	daycare		☐ Yes ■ No	
Late 1960's	☐ Single family dwe	lling	cify) <u>Firear</u>	m Range	☐ Don't Know	
Section 4–Owner of St	ructure (If business/	agency, list contac	ct person)			_
				Telephone N	lumber	
City of Sacramento, Dep	partment of Public W	orks, Mr. Karl Kurl	ka	(916) 808-	-8430	
Address [number, street, apar	tment (if applicable)]	City			State	Zip Code
915 I Street, 2 nd Floor		Sacramento			California	95814
Section 5–Results of Lea	d Hazard Evaluation	(Check all that apply	y)			
☐ No lead-based paint d	_	Intact lead-based particular inated dust found	_		teriorated lead-based pa	int detected
Section 6-Individual C	onducting Lead Ha	zard Evaluation				
Name				Telephone N	lumber	
Entek Consulting Group	, Inc Blake Howes			(916) 632-	-6800	
Address [number, street, apar	tment (if applicable)]	City	l		State	Zip Code
4200 Rocklin Road, Suit	te 7	Rocklin			CA	95677
CDPH certification number		Signature	16 11	12 13221		Date
23951		11.	ale Hon	ez		5-3-16
Name and CDPH certification	number of any other indiv	viduals conducting san	npling or test	ing (if applical	ole)	
N/A Section 7–Attachments						
A. A foundation diag lead-based paint;		ructure indicating th	e specific l	ocations of e	each lead hazard or pres	ence of
B. Each testing meth	nod, device, and sampl	ling procedure used	,			
C. All data collected	, including quality contr	ol data, laboratory r	esults, indi	cating labora	atory name, address, and	d phone number.
First copy and attachments reta	nined by inspector		Third copy	only (no attac	chments) mailed or faxed to	:
Second copy and attachments	retained by owner		Childhood 850 Marina	Lead Poisonii a Bay Parkwa , CA 94804-64	f Public Health ng Prevention Branch Repo y, Building P, Third Floor 403	rts

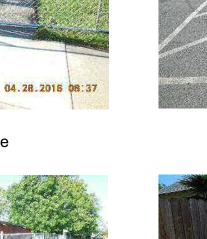


APPENDIX B BACK UP DOCUMENTATION

- Site Photographs
- Inspector Accreditations and Certifications
- Laboratory Accreditations for Lead Analysis



Sample 09Wipe



Sample 13Wipe



Sample 32Wipe



04.28.2018 08 41

Sample 17Wipe



Sample 16Soil







AIHA Laboratory Accreditation Programs, LLC

acknowledges that

Forensic Analytical Laboratories, Inc.

3777 Depot Road, Suite 409, Hayward, CA 94545

Laboratory ID: 101762

along with all premises from which key activities are performed, as listed above, has fulfilled the requirements of the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC accreditation to the ISO/IEC 17025:2005 international standard, *General Requirements for the Competence of Testing and Calibration Laboratories* in the following:

LABORATORY ACCREDITATION PROGRAMS

- ✓ INDUSTRIAL HYGIENE
- ✓ ENVIRONMENTAL LEAD
- ✓ ENVIRONMENTAL MICROBIOLOGY
- ☐ FOOD
- ✓ UNIQUE SCOPES

Accreditation Expires: 08/01/2016

Accreditation Expires: 08/01/2016

Accreditation Expires: 08/01/2016

Accreditation Expires:

Accreditation Expires: 08/01/2016

Specific Field(s) of Testing (FoT)/Method(s) within each Accreditation Program for which the above named laboratory maintains accreditation is outlined on the attached **Scope of Accreditation**. Continued accreditation is contingent upon successful on-going compliance with ISO/IEC 17025:2005 and AIHA-LAP, LLC requirements. This certificate is not valid without the attached **Scope of Accreditation**. Please review the AIHA-LAP, LLC website (www.aihaaccreditedlabs.org) for the most current Scope.

Gerald R Schult

Gerald Schultz, CIH
Chairperson, Analytical Accreditation Board

Cheryl O. Morton

Managing Director, AIHA Laboratory Accreditation Programs, LLC

Revision 14: 03/26/2014

Date Issued: 04/30/2014



Laboratory ID: **101762**

Issue Date: 04/30/2014

Forensic Analytical Laboratories, Inc.

3777 Depot Road, Suite 409, Hayward, CA 94545

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

Industrial Hygiene Laboratory Accreditation Program (IHLAP)

Initial Accreditation Date: 03/01/1990

IHLAP Scope Category	Field of Testing (FoT)	Technology sub-type/ Detector	Published Reference Method/Title of In-house Method	Method Description or Analyte (for internal methods only)
Chromatography	Ion Chromatography		NIOSH 7903	
Core	(IC)		OSHA ID 215 v2	
			NIOSH 6009	
Spectrometry Core		CVAA	OSHA ID-140	
	Atomic Absorption		OSHA ID-145	
	Atomic Absorption	FAA	NIOSH 7082	
		гаа	OSHA ID-121	
		GFAA	NIOSH 7105	
	Inductively-Coupled	ICP/AES	NIOSH 7303	
	Plasma	ICP/AES	OSHA ID-125G	
	UV/VIS (Colorimetric)		NIOSH 7600	
	D-1:11:-14		EPA/600/M4-82-020, 1982	
	Polarized Light		EPA/600/R-93/116, July	
	Microscopy (PLM)		1993	
	Phase Contrast Microscopy (PCM)		NIOSH 7400	
			EPA 600/R-93/116	SOP TEM 301
			EPA 600/R-93/116	SOP TEM 300
Asbestos/Fiber			EPA 600/R-93/116	SOP TEM 302
Microscopy Core			EPA 600/R-93/116	SOP TEM 303
viicioscopy core	Transmission Electron Microscopy (TEM)		EPA AHERA - 40 CFR Part 763	EPA AHERA Method (40 CFR 763, Subpart E, Appendix A, Mandatory Method
			NIOSH 7402	
			Yamate Level 1	
			Yamate Level 2	

Effective: 03/12/2013

101762_Scope_IHLAP_2014_04_30



IHLAP Scope Category	Field of Testing (FoT)	Technology sub-type/ Detector	Published Reference Method/Title of In-house Method	Method Description or Analyte (for internal methods only)
Miscellaneous Core	Gravimetric		NIOSH 0500	
Wilscenaneous Core	Gravillieure		NIOSH 0600	

A complete listing of currently accredited Industrial Hygiene laboratories is available on the AIHA-LAP, LLC website at: http://www.aihaaccreditedlabs.org

Effective: 03/12/2013

101762_Scope_IHLAP_2014_04_30 Page 2 of 2



Laboratory ID: **101762**

Issue Date: 04/30/2014

Forensic Analytical Laboratories, Inc.

3777 Depot Road, Suite 409, Hayward, CA 94545

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

The EPA recognizes the AIHA-LAP, LLC ELLAP program as meeting the requirements of the National Lead Laboratory Accreditation Program (NLLAP) established under Title X of the Residential Lead-Based Paint Hazard Reduction Act of 1992 and includes paint, soil and dust wipe analysis. Air analysis is not included as part of the NLLAP.

Environmental Lead Laboratory Accreditation Program (ELLAP)

Initial Accreditation Date: 06/26/1995

Field of Testing (FoT)	Method	Method Description (for internal methods only)
Paint	EPA SW-846 3050B	
raint	EPA SW-846 7420	
Sail	EPA SW-846 3050B	
Soil	EPA SW-846 7420	
	HUD App. 14.2	IN HOUSE METHOD
Sottled Dust by Wine	NIOSH 7082	
Settled Dust by Wipe	NIOSH 9100	
	OSHA ID-105 Modified	
	NIOSH 7082	
Airborne Dust	NIOSH 7105	
	NIOSH 7303	

A complete listing of currently accredited Environmental Lead laboratories is available on the AIHA-LAP, LLC website at: http://www.aihaaccreditedlabs.org

Effective: 03/12/2013

101762 Scope ELLAP 2014 04 30



Laboratory ID: **101762**

Issue Date: 04/30/2014

Forensic Analytical Laboratories, Inc.

3777 Depot Road, Suite 409, Hayward, CA 94545

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

Environmental Microbiology Laboratory Accreditation Program (EMLAP)

Initial Accreditation Date: 11/01/2003

EMLAP Category	Field of Testing (FoT)	Method	Method Description (for internal methods only)
	Air - Culturable	SOP IAQ 100	Analysis of Viable Air Samples for Identification of Fungal Mycota
	Bulk - Culturable	SOP IAQ 103	Analysis of Viable Bulk Samples for Identification of Fungal Mycota
	Surface - Culturable	SOP IAQ 103	Analysis of Viable Bulk Samples for Identification of Fungal Mycota
Fungal	Air - Direct Examination	SOP IAQ 101	Analysis of Non-Viable Air Samples for Identification of Fungal Mycota
	Bulk - Direct Examination	SOP IAQ 102	Analysis of Non-Viable Bulk Samples for Identification of Fungal Mycota
	Surface - Direct Examination	SOP IAQ 102	Analysis of Non-Viable Bulk Samples for Identification of Fungal Mycota
Bacterial	Legionella	IAQ 214	Recovery of Legionellae from Swab Samples

A complete listing of currently accredited Environmental Microbiology laboratories is available on the AIHA-LAP, LLC website at: http://www.aihaaccreditedlabs.org

Effective: 03/12/2013

101762 Scope EMLAP 2014 04 30



Forensic Analytical Laboratories, Inc.

3777 Depot Road, Suite 409, Hayward, CA 94545

Laboratory ID: **101762**Issue Date: 04/30/2014

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

Unique Scopes Laboratory Accreditation Program (Unique Scopes)

Initial Accreditation Date: 05/01/2014

Unique Scope Category	Field of Testing (FoT)	Method	Method Description (for internal methods only)
		16 C.F.R 1303 CPSC-CH- E1003-09	MET 213
Consumer Product Testing	Lead in Paint and Other Similar Surface Coatings	16 C.F.R 1303 CPSC-CH- E1001.08.1	MET 214
		16 C.F.R 1303 CPSC-CH- E1002.08.1	MET 215

A complete listing of currently accredited Food laboratories is available on the AIHA-LAP, LLC website at: http://www.aihaaccreditedlabs.org

101762_Scope_Unique Scopes 2014 04 30

Effective: 03/26/2013





CALIFORNIA STATE

ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM BRANCH

CERTIFICATE OF ENVIRONMENTAL LABORATORY ACCREDITATION

Is hereby granted to

Forensic Analytical Laboratories, Inc.

Hayward Laboratory

3777 Depot Road, #409 Hayward, CA 94545

Scope of the certificate is limited to the "Fields of Testing" which accompany this Certificate.

Continued accredited status depends on successful completion of on-site. proficiency testing studies, and payment of applicable fees.

This Certificate is granted in accordance with provisions of Section 100825, et seg. of the Health and Safety Code.

Certificate No.:

1202

Expiration Date: 05/31/2016

Effective Date:

06/01/2014

Richmond, California subject to forfeiture or revocation David Mazzera, Ph.D., Assistant Division Chief

Division of Drinking Water and Environmental Management



CALIFORNIA DEPARTMENT OF PUBLIC HEALTH ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM Accredited Fields of Testing



Forensic Analytical Laboratories, Inc.

Hayward Laboratory 3777 Depot Road, #409 Hayward, CA 94545

Phone: (510) 887-8828

Certificate No.:

1202

Renew Date: 5/31/2014

Field of Testi	ng: 101 - Microbiology of Drinking Water	
101.060 002		SM9223
101.060 003		SM9223
101.160 001	Total Coliform (Enumeration)	SM9223
101.200 001	, ,	SM9223B
Field of Testi	ng: 103 - Toxic Chemical Elements of Drinking W	/ater
103.040 010		SM3113B
103.130 001	Aluminum	EPA 200.7
103.130 003	Barium	EPA 200.7
103.130 004	Beryllium	EPA 200.7
103.130 005	Cadmium	EPA 200.7
103.130 007	Chromium	EPA 200.7
103.130 008	Copper	EPA 200.7
103.130 009	Iron	EPA 200.7
103.130 011	Manganese	EPA 200.7
103.130 012	Nickel	EPA 200.7
103.130 015	Silver	EPA 200.7
103.130 017	Zinc	EPA 200.7
103.160 001	Mercury	EPA 245.1
103.300 001	Asbestos	EPA 100.1
103.301 001	Asbestos	EPA 100.2
Field of Testi	ng: 107 - Microbiology of Wastewater	
107.242 001	Enterococci	Enterolert
107.245 001	E. coli	SM9223
Field of Testi	ng: 109 - Toxic Chemical Elements of Wastewate	er
109.010 001	Aluminum	EPA 200.7
109.010 002	Antimony	EPA 200.7
109.010 003	Arsenic	EPA 200.7
109.010 004	Barium	EPA 200.7
109.010 005	Beryllium	EPA 200.7
109.010 007	Cadmium	EPA 200.7
109.010 009	Chromium	EPA 200.7
109.010 010	Cobalt	EPA 200.7

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109.010		Copper	EPA 200.7
109.010		Iron	EPA 200.7
109.010	013	Lead	EPA 200.7
109.010	015	Manganese	EPA 200.7
109.010	016	Molybdenum	EPA 200.7
109.010	017	Nickel	EPA 200.7
109.010	019	Selenium	EPA 200.7
109.010	021	Silver	EPA 200.7
109.010	023	Thallium	EPA 200.7
109.010	024	Tin	EPA 200.7
109.010	026	Vanadium	EPA 200.7
109.010	027	Zinc	EPA 200.7
109.190	001	Mercury	EPA 245.1
109.370	010	Lead	SM3111B
Field of	Testing	: 114 - Inorganic Chemistry of Hazardous Wast	е
114.010	001	Antimony	EPA 6010B
114.010	002	Arsenic	EPA 6010B
114.010	003	Barium	EPA 6010B
114.010	004	Beryllium	EPA 6010B
114.010	005	Cadmium	EPA 6010B
114.010	006	Chromium	EPA 6010B
114.010	007	Cobalt	EPA 6010B
114.010	800	Copper	EPA 6010B
114.010	009	Lead	EPA 6010B
114.010	010	Molybdenum	EPA 6010B
114.010	011	Nickel	EPA 6010B
114.010	012	Selenium	EPA 6010B
114.010	013	Silver	EPA 6010B
114.010	014	Thallium	EPA 6010B
114.010	015	Vanadium	EPA 6010B
114.010	016	Zinc	EPA 6010B
114.130	001	Lead	EPA 7420
114.140	001	Mercury	EPA 7470A
114.141	001	Mercury	EPA 7471A
114.240	001	Corrosivity - pH Determination	EPA 9040B
114.241	001	Corrosivity - pH Determination	EPA 9045C
Field of	Testing	: 115 - Extraction Test of Hazardous Waste	
115.021	001	TCLP Inorganics	EPA 1311
115.030		Waste Extraction Test (WET)	CCR Chapter11, Article 5, Appendix II
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Field of Testing: 121 - Bulk Asbestos Analysis of Hazardous Waste

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121.010 001 Bulk Asbestos EPA 600/M4-82-020

Field of Testing	g: 126 - Microbiology of Recreations	al Water	
126.050 001	Total Coliform and E. coli	SM9223	
126.080 001	Enterococci	IDEXX	